MnDOT paid $4.3M to remove digital billboard

by Brian Johnson

Published: February 4th, 2014

A billboard condemnation case related to the $130.4 million Lafayette Bridge project is attracting the attention of a Washington, D.C.-based organization dedicated to preserving scenic highways.

Citing court documents from last fall, the group Scenic America says the state of Minnesota is spending $4.3 million to take down a digital billboard in the way of the new bridge, which carries Highway 52 over the Mississippi River in St. Paul.

A Scenic America spokesman said Tuesday the group believes it's the first time a U.S. road construction project has required condemnation of an electronic billboard, and that the case illustrates the potential costs of allowing such signs to go up in the first place.

Scenic America, a group that opposes digital highway billboards, says it cost the state $4.3 million to remove a digital billboard as part of the Lafayette Bridge project over the Mississippi River in St. Paul. (File photo: Bill Klotz)

"If this sets a precedent ... that is something they need to consider before letting these signs go up," said Max Ashburn, communications director for Scenic America, which opposes digital billboards along highways.

In an email, Minnesota Department of Transportation communications director Kevin Gutknecht said, "by state law, whenever MnDOT acquires private property for a project, it needs to compensate the property owner."

Gutknecht said all the money has been paid, and he believes it is the first digital billboard condemnation for a road construction project in Minnesota.

Ashburn said the added cost to the Lafayette Bridge is noteworthy, given the mounting needs of the state's transportation system and the lack of available funding to address those needs.

In a press release, Scenic America urged the Minnesota Legislature and MnDOT to "consider legal reforms to address these unnecessary costs," including a potential ban on digital billboards along highways.

In September 2013, a Ramsey County District Court judge ordered the state to pay Clear Channel Outdoors $4.321 million in compensation for removal of the billboard near the Lafayette Bridge project site, according to court documents.

The court also awarded $441,840 in compensation to Holiday Station Stores Inc.

Ashburn said removal of condemned billboards is costly because the billboard companies can request lost revenues going four to five years out, as well as the billboard cost.

Citing a March 2010 New York Times story, the group said the initial cost of a digital billboard is about $250,000 to $300,000.

In a lawsuit, Scenic America is challenging a 2007 Federal Highway Administration ruling that the organization says led to the growth of digital billboards across the country.

The group says such billboards pose a threat to safety and aesthetics, as well as potential costs to taxpayers.

"The lesson here is: knowing what you are getting into when you allow billboards to go up along your highways, because they are going to be a financial liability for taxpayers," he said.

Scenic America is "dedicated to preserving and enhancing the visual character of America's roadways, communities and countryside," according to the group's website.

The new Lafayette Bridge is scheduled for completion in 2015.

Complete URL: **http://finance-commerce.com/2014/02/mndot-paid-4-3m-to-remove-digital-billboard/**

MnDOT's cost to remove digital billboard: $4.3M

Clear Channel paid after site was condemned for Lafayette Bridge project

BY BRIAN JOHNSON
Staff Writer

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BILLBOARDS TO PAGE 32A

FILE PHOTO: BILL KLOTZ

Scenic America, a group that opposes digital highway billboards, says it cost the state $4.3 million to remove a digital billboard as part of the Lafayette Bridge project over the Mississippi River in St. Paul.

Billboards Companies can request lost revenues going 4 to 5 years out

Continued from page 1A

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Nic on Fifth
Opus starts leasing apartment tower and releases interior renderings.
Page 2A

LRT tunnel
Park board to push for new Southwest LRT tunnel option.
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FINANCE & COMMERCE

PERIODICALS POSTAGE | $1.50
VOL. 127 NO. 25
FINANCE-COMMERCE.COM
Wednesday | February 5, 2014

From Block E to Mayo Clinic Square

Timberwolves, medical giant team up for redevelopment

BY ADAM VOGE AND ART HUGHES
Staff Writers

Mayo Clinic and the Minnesota Timberwolves and Lynx basketball teams will cover nearly half the $50 million-plus needed to revive the Block E building in downtown Minneapolis.

Representatives from Rochester-based Mayo and the teams gathered Tuesday in the former movie theater lobby of Block E to announce a $25 million-plus partnership to create a sports medicine center, practice courts and basketball offices on the third floor of the building, at 600 Hennepin Ave.

Mayo Clinic and the teams are the first major tenants to commit to the 213,000-square-foot building since AMC Entertainment pulled out in September 2012 after a contentious lease dispute.

Along with the clinic and practice facility, the group and building owners Camelot LLC announced that they will shed the Block E name and call the structure "Mayo Clinic Square."

"Our mission is to add long-term vitality to this great location in downtown Minneapolis," said Phillip Jaffe, a principal with Provident Real Estate Ventures, the asset manager of Block E owner Camelot LLC. (Provident's principals and Alatus LLC's Bob Lux are partners in Camelot.)

Rochester-based Mayo Clinic will operate a 20,000-square-foot sports medicine center in the former Block E building – to be renamed Mayo Clinic Square – at 600 Hennepin Ave. in downtown Minneapolis.

Mayo Clinic Square will house the roughly 20,000-square-foot sports medicine center, about 52,000 square feet for the Timberwolves and Lynx basketball operations, and another 23,000 square feet for the teams' office space on its third and fourth floors.

Carl Runck, director of real estate development for Alatus, said after the announcement that the entire project will cost "north of $50 million," but that final costs can't be determined until office and restaurant spaces are leased.

Timberwolves and Lynx team representatives said they will spend more than $20 million on their new facilities. Mayo Clinic will pay between $5 million and $7 million for its sports medicine clinic.

Jaffe said Tuesday that the building's second floor will be used primarily as office space for other tenants and that Camelot is seeking "signature restaurants" for the ground floor.

"Our goal is to animate the street and make it more pedestrian-friendly than it is today," Jaffe said.

Nearly 120,000 square feet of space on the building's first and second floors is still available. Jon Dahl and Brent Robertson of Jones Lang LaSalle are handling office leasing and CBRE Group's Chicago office will work on attracting the restaurants.

This is Mayo Clinic's second swing at establishing a presence in the Twin Cities. The clinic until 2012 was expected to serve as an anchor tenant in a 140,000-square-foot office space expansion at the Mall of America in Bloomington. But in 2012, the clinic said it had evaluated all planned capital projects and decided to pull back.

In early 2013, Mayo announced it would leave the Mall of America altogether.

It closed the Mayo Clinic

BLOCK E TO PAGE 32A

MnDOT's cost to remove digital billboard: $4.3M

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BILLBOARDS TO PAGE 32A

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Filed in Second Judicial District Court
9/26/2013 11:45:22 AM
Ramsey County Civil, MN

CONDEMNATION

STATE OF MINNESOTA

IN DISTRICT COURT

COUNTY OF RAMSEY

SECOND JUDICIAL DISTRICT
Court File No.: 62-CV-10-6746

- - - - -

State of Minnesota, by its Commissioner of Transportation,

Petitioner,

vs.

Randall R. Grilz, Sharon Grilz, Donald M. Grilz, Union Pacific Railroad Company, successor in interest by merger to the Chicago and North Western Railway Company, Maytag Corporation, successor in interest to Chicago Pacific Corporation and to Chicago, Rock Island and Pacific Railroad Company, Northern States Power Company, doing business as Xcel Energy, Qwest Corporation, successor in interest to U S West Communications, Inc. and to Northwestern Bell Telephone Company, Unknown successors in interest to Pier Foundry & Pattern Shop, Inc., a statutorily dissolved Minnesota corporation, City of St. Paul, County of Ramsey, CHS Inc., Donerly, Inc., Clear Channel Outdoor, Inc., J.M. Keefe Co., doing business as Keefe Co. Parking, 444 Lafayette, LLC, State of Minnesota Department of Natural Resources, LaSalle Bank, National Association, NGP Lafayette Portfolio Owner Corp., Meritex Enterprises, Inc., Holiday Stationstores, Inc., Naegele Realty of Minnesota, Inc., formerly known as Naegele Outdoor Advertising, Inc., a statutorily dissolved Minnesota corporation, J-Mont, Inc., Anchor Bank, National Association, successor in interest by corporate merger, consolidation, amendment, or conversion to The Bank of Saint Paul, Judith A. Kaufman, Jay W. Montpetit, Michelle Montpetit, Port Authority of the City of St. Paul, BNSF Railway Company, formerly known as The Burlington Northern and Santa Fe Railway Company, and as Burlington Northern Railway Company successor in interest to the Northern Pacific Railway Company, and to The First Division of the St. Paul and Pacific Railroad Company, and to The St. Paul, Minneapolis, and Manitoba Railway Company, City of Minneapolis, also all other persons unknown claiming any right, title, estate, interest or lien in the real estate described in the Petition herein,

Respondents.

- - - - -

IN THE MATTER OF THE CONDEMNATION OF
CERTAIN LANDS FOR TRUNK HIGHWAY PURPOSES

- - - - -

REPORT OF COMMISSIONERS

- - - - -

REPORT OF COMMISSIONERS

To the Court above named:

The undersigned Commissioners appointed by this Court in the above entitled matter by Order of the Court, do hereby report as follows:

I.

We met at the time and place appointed by the Court, in the office of the Court Administrator, and took the oath prescribed by law.

II.

We make the following award for the damages sustained by the several respondents by reason of the taking.

As to the property interests described as Parcel 251E, C.S. 6283 (94=392) 901:

Holiday Stationstores, Inc.	)	$441,840.00
Clear Channel Outdoor, Inc.	)	$4,321,000.00
Naegele Realty of Minnesota, Inc., formerly known as Naegele Outdoor Advertising, Inc.	)	NONE
State of Minnesota Department of Natural Resources	)	NONE
Northern States Power Company, doing business as Xcel Energy	)	NONE
City of St. Paul	)	NONE
J-Mont, Inc.	)	NONE
County of Ramsey	)	NONE

The above award is made on the basis and condition that the date of passage of title and right of possession and the date of valuation is October 8, 2010, pursuant to Minn. Stat. § 117.042.

The above award of commissioners is based on the condition that the real estate taxes due and payable 2010 or in prior years on the lands acquired by the State and all unpaid special assessments and future installments thereof, as well as pending assessments, are the responsibility of the owners or lessees herein, except that petitioner is responsible for and will pay real estate taxes, if any, payable in 2011 on the real estate acquired herein by petitioner.

As a further basis and condition of this award, Holiday Stationstores acknowledges the receipt of $160,000.00 on or about October 8, 2010. Clear Channel Outdoor, Inc. acknowledges the receipt of $500,000.00 on or about October 8, 2010. Said funds were paid to owners pursuant to Minn. Stat. § 117.042. These previous payments will be credited against full payment of the above amounts.

The above award is made on the basis and condition that the State of Minnesota and the owners have agreed to said award and that interest shall be paid on said award at the statutory rate.

The commission has not considered the impact of pollutants, contaminants, or hazardous materials on the subject property, if any, in its assessment of damages.

III.

We further report that in the performance of our duties as Commissioners we were occupied for ____ day(s).

Dated: 9-26-2013

SIGNED:

Marilyn Michales

Stephanie Warne

Richard Black COMMISSIONERS

subsection does not apply to a question if the date that the question must be submitted to the city clerk is governed by subsection 3 of NRS 293.481.

(Added to NRS by 1999, 2119; A 2001, 647, 1976; 2003, 1695, 3201; 2005, 2845; 2007, 1144, 2545; 2011, 1210; 2013, 652)

NRS CROSS REFERENCES.
Population defined, NRS 0.050

ATTORNEY GENERAL'S OPINIONS.
Committee to be appointed pursuant to section would not be a "public body" and thus would not be subject to open meeting law. Where a committee to be appointed pursuant to NRS 295.217 would neither: (1) expend, disburse or be supported in whole or in part by tax revenue; nor (2) give advice or make recommendations to a public body subject to the open meeting law (see NRS 241.020), such a committee would not be a "public body" as that term is defined in NRS 241.015 and thus, the committee would not be subject to the open meeting law. However, if a committee appointed pursuant to NRS 295.217 does meet the definition of a "public body" as that term is defined in NRS 241.015, such a committee would be subject to the open meeting law. AGO 2000-18 (6-2-2000), cited, AGO 2002-06 (2-8-2002)

NRS 295.220 Results of election.

1. If a majority of the registered voters voting on a proposed initiative ordinance vote in its favor, it shall be considered adopted upon certification of the election results and shall be treated in all respects in the same manner as ordinances of the same kind adopted by the council. If conflicting ordinances are approved at the same election, the one receiving the greatest number of affirmative votes shall prevail to the extent of such conflict.

2. If a majority of the registered voters voting on a referred ordinance vote against it, it shall be considered repealed upon certification of the election results.

(Added to NRS by 1967, 379)

COUNTY AND CITY ADVISORY QUESTIONS

NRS 295.230 Submission of advisory questions by certain governmental entities; prerequisites to placement on ballot; description of anticipated financial effect; appearance on sample ballot; preparation of sample questions.

1. The governing body of a county or city may, at any general election or general city election, ask the advice of the registered voters within its jurisdiction on any question which it has under consideration. No other political subdivision, public or quasi-public corporation, or other local agency may ask the advice of the registered voters within its jurisdiction on any question which it has under consideration.

2. To place an advisory question on the ballot at a general election or general city election, the governing body of a county or city must:

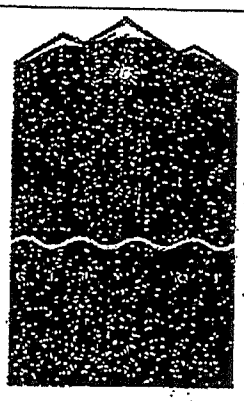
(a) Adopt a resolution that:

(1) Sets forth:

(I) The question, in language indicating clearly that the question is advisory only.

(II) An explanation of the question that is written in easily understood language and includes a digest. The digest must include a concise and clear summary of any existing laws related to the measure proposed by the question and a summary of how the measure proposed by the question adds to, changes or repeals such existing laws. For a measure that creates, generates, increases or decreases any

Donald J. Cook
City Clerk
(775) 334-2030
dcook@ci.reno.nv.us



Office of the City Clerk
Central Cashiering - (775) 334-2032
Parking Tickets - (775) 334-2279
Steven D. Whitaker, CRM
Records Systems Manager
(775) 326-6633

November 17, 2000

Dan Burke
Washoe County
Registrar of Voters
P. O. Box 11130
Reno, NV 89520

RE: Canvass of Votes - November 7, 2000, City of Reno General Election

Dear Mr. Burke:

At a regular meeting held November 14, 2000, the City Council certified the results of the November 7, 2000, City of Reno General Election.

Sincerely,

Donald J. Cook
City Clerk

DJC:cdg

United States District Court
District of Nevada (Reno)
CIVIL DOCKET FOR CASE #: 3:99-cv-00668-ECR-RAM

OUTDOOR MEDIA DIMENSONS V. CITY OF RENO
Assigned to: Judge Edward C. Reed, Jr
Referred to: Magistrate Judge Robert A McQuaid, Jr
Cause: 42:1983

Date Filed: 12/21/1999
Date Terminated: 12/13/2000
Jury Demand: Defendant
Nature of Suit: 440 Civil Rights: Other
Jurisdiction: Federal Question

Plaintiff

Outdoor Media Dimensions

represented by **Michael D Stein**
Snell & Wilmer
3883 Howard Hughes Parkway
Suite 1100
Las Vegas, NV 89169
(702) 784-5200
Fax: (702) 784-5252
Email: mstein@swlaw.com
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

V.

Defendant

Reno, City Of

represented by **Marilyn D. Craig**
.
P.O. Box 1900
1 E. First Street, 3rd Floor
Reno, NV 89501-
775-334-2050
Fax: 775-334-2450
Email: craigm@reno.gov
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

Michael K. Halley
Reno City Attorney's Office
P.O. Box 1900
1 E. First Street, 3rd Floor
Reno, NV 89501-
775-334-2050
Fax: 775-334-2450

LEAD ATTORNEY
ATTORNEY TO BE NOTICED

Date Filed	#	Docket Text
		MISCELLANEOUS DOCUMENT ORIGINAL HARD COPY DOCKET SHEET (Entered: 03/13/2003)
12/21/1999	1	COMPLAINT obo p. (Entered: 02/10/2003)
12/21/1999		SUMMONS ISSUED no text (Entered: 02/10/2003)
12/21/1999	2	SCHEDULING ORDER preliminry. (Entered: 02/10/2003)
12/26/1999	13	SUMMONS RETURNED EXECUTED as to D City of Reno by svg Kris Forest at Reno City Mngrs office on 12/23/99. (p) (Entered: 02/10/2003)
12/27/1999	3	ORDER actn reassgnd to RAM for all furth procedngs consistnt w/ his jurisdictn; Clsn advised that all furthr docs sh bear correct case #CV-N-99-0668-ECR(RAM); Clk directed to change file/docket to reflct reassgnmt. (Entered: 02/10/2003)
12/28/1999	4	CERTIFICATE OF INTERESTED PARTIES obo P. (Entered: 02/10/2003)
12/28/1999	5	CERTIFICATE OF SERVICE as to Cert 10-6 (#4) obo P (m) (Entered: 02/10/2003)
01/03/2000	6	CERTIFICATE OF SERVICE as to prelimnry scheduling ord (#2) on city atty of Reno obo P (m) (Entered: 02/10/2003)
01/11/2000	7	CERTIFICATE OF INTERESTED PARTIES obo all Ds (m) (Entered: 02/10/2003)
01/11/2000	8	ANSWER TO COMPLAINT & JURY DEMAND obo all Ds (m) (Entered: 02/10/2003)
02/25/2000		MISCELLANEOUS DOCUMENT stip discovery plan/sched ord (orig in chmbrs for appvl) (Entered: 02/10/2003)
03/02/2000	14	SCHEDULING ORDER Stip disc c/o 07/10/00; disp mtns due 08/09/00; jnt PTO due 09/08/00 (Entered: 02/10/2003)
03/09/2000	9	MOTION FOR PRELIMINARY INJUNCTION obo P (m); #19-Oppo; (Entered: 02/10/2003)
03/09/2000	10	NOTICE (OTHER) EXHIBITS in sppt of mtn P/I (#9) obo PLOCATED IN SPT FOLDR DUE TO SIZE. (Entered: 02/10/2003)
03/09/2000	12	CERTIFICATE OF SERVICE as to Itms #9 #10 #11 #12 obo P (m) (Entered: 02/10/2003)
03/09/2000	11	AFFIDAVIT of Jeffrey Herson in sppt of mtn P/I (#9) obo P. (Entered: 02/10/2003)
03/10/2000		MISCELLANEOUS DOCUMENT no text (Entered: 02/10/2003)

03/15/2000	15	MOTION FOR EXTENSION OF TIME to file an oppo to Pltf's mtn for P/I (#9) obo D. (Entered: 02/10/2003)
03/16/2000	16	ORDER ON MOTION FOR EXTENSION OF TIME TO FILE RESPONSE/REPLY tht emergency mtn for extn of tm to file oppo to pltf's mtn for P/I (#15) fld 3/15/00 is granted. Deft will hv til 4/24/00 w/in wh to file its oppo. The extn of tm is not excessive in view of (Entered: 02/10/2003)
03/20/2000	18	CERTIFICATE OF SERVICE re cpy #17 mld on 3/16/00 obo Pltf. (m) (Entered: 02/10/2003)
03/20/2000	17	RESPONSE IN OPPOSITION TO MOTION to emergency mtn for extn of tm to file an oppo to pltf's mtn for P/I (#15) obo Pltf. (m) {Moot per #16} (Entered: 02/10/2003)
04/24/2000	19	RESPONSE IN OPPOSITION TO MOTION to mtn for P/I (#9) obo D. (m) (Located in a spt fldr.) (Entered: 02/10/2003)
05/08/2000		MISCELLANEOUS DOCUMENT stip to ext tm by wh P may file its reply to Ds oppo to mtn for P/I (orig in chambers for apprvl.) (Entered: 02/10/2003)
05/09/2000	20	ORDER ON MOTION FOR EXTENSION OF TIME TO FILE RESPONSE/REPLY Pltf granted extn of tm to reply to mtn for P/I (#9) up to & incldng 5/10/00. (Entered: 02/10/2003)
05/11/2000	21	REPLY TO RESPONSE TO MOTION to mtn for P/I (#9) obo P. (m) (Entered: 02/10/2003)
05/15/2000		MISCELLANEOUS DOCUMENT stip to extn tm til 6/1/00 to srvd D w/caroll's expert witness report & deft to hv til 6/22/00 to disclose its rebuttal expert. (m) (Entered: 02/10/2003)
05/16/2000	22	MOTION TO STRIKE mtn to strk Pltf's reply #21 for mtn for P/I. obo D. (m) (Entered: 02/10/2003)
05/17/2000	23	ORDER ON MOTION FOR EXTENSION OF TIME TO FILE RESPONSE/REPLY P shl hv til 6/1/00 to srvd D with Dr. Thomas Caroll's expert witns report & deft shl hv til 6/22/00 to disclose its rebuttal expert. (Entered: 02/10/2003)
05/24/2000	25	MOTION FOR MISCELLANEOUS RELIEF Pltf's reply #21 for mtn for P/I. obo D. (m) (Entered: 02/10/2003)
05/24/2000	24	RESPONSE IN OPPOSITION TO MOTION to deft's mtn to strk (#22) obo P. (Entered: 02/10/2003)
06/05/2000	30	MOTION FOR EXTENSION OF TIME mtn for lv to refile reply brf to comply with LR 7-4- obo Ds.; (Entered: 02/10/2003)
06/05/2000	27	REPLY TO RESPONSE TO MOTION to Pltf's response to Deft's mtn to strk Pltf's reply (#22) obo D. (m) (Entered: 02/10/2003)

06/05/2000	28	RESPONSE IN OPPOSITION TO MOTION to cntermtn for an ord permitting longer oppo brf or lv to refile reply brf to comply with LR 7-4 obo Ds; (Entered: 02/10/2003)
06/05/2000	29	RESPONSE IN OPPOSITION TO MOTION Pltf's index & table of authorities in supprt of Reply to Oppo to mtn for P/I (#9) obo Ds. (m) (Entered: 02/10/2003)
06/05/2000	26	STATUS REPORT obo D. (m) (Entered: 02/10/2003)
06/09/2000	31	ORDER On 5/24/00, Pltf fld a mtn for an ord permitting longer brf or lv to refile reply brf to comply with LR 7-4 (#25). The Crt will allow Pltf to file the longer reply brf submitted to the Crt. ORD tht sd mtn is granted. FUR ORD tht defts' mtn (#22) (Entered: 02/10/2003)
06/21/2000	32	SCHEDULING ORDER disc extn to c/o 8/10/00; dispstv mtns due 9/9/00; Joint Pretrial ord due 10/8/00 (Entered: 02/10/2003)
06/22/2000		MISCELLANEOUS DOCUMENT no text (Entered: 02/10/2003)
07/28/2000	33	SCHEDULING ORDER disc extn to 8/21/00; dispstv mtns 9/20/00; Jnt Pretrial Ord 10/20/00. (Entered: 02/10/2003)
07/28/2000		MISCELLANEOUS DOCUMENT stip to am stipulated disc plan & S/O obo Pltf. (Orig in chambers for apprvl.) (Entered: 02/10/2003)
09/05/2000	34	ORDER the pltf has fld a mtn for a P/I (#9). The deft fld an oppo (#19) & pltf replied (#21). Oral argument on the mtn for P/I is set for Wednesday, 10/11/00 @ 10am., (furth specs in Ord.) see #42 amend/ord (Entered: 02/10/2003)
09/20/2000	35	MOTION FOR SUMMARY JUDGMENT obo D. (LOCATED IN A SEPARATE FOLDER DUE TO SIZE) (Entered: 02/10/2003)
09/20/2000	36	MOTION FOR PARTIAL SUMMARY JUDGMENT as to liability under Fed.R.Civ.P.56(a),(c) and (d); obo Pltf. (LOCATED IN A SEPARATE FOLDER DUE TO SIZE) (Entered: 02/10/2003)
09/22/2000	37	MISCELLANEOUS DOCUMENT Depo Transcripts in supprt of Pltf's mtn for an Interlocutory Part mtn for S/J (#36) obo Pltf. (LOCATED IN A SEPARATE FOLDER DUE TO SIZE) (Entered: 02/10/2003)
09/22/2000	38	MISCELLANEOUS DOCUMENT Original Videos Exhbts 17 and Exhbt 19 in supprt of pltf's mtn for part S/J (#36)(LOCATED IN A SEPARATE FOLDER) (Entered: 02/10/2003)
09/28/2000	39	MISCELLANEOUS DOCUMENT to exhbts in supprt of motion pltf's mtn for an interclocutory part mtn for S/J as to liability (#36) obo Pltf. (m) (Entered: 02/10/2003)
09/28/2000	40	CERTIFICATE OF SERVICE tht on 9/25/00 doc #39 was mld obo Pltf. (m) (Entered: 02/10/2003)

09/28/2000	41	CERTIFICATE OF SERVICE tht on 9/20/00 pltf's mtn for an interlocutory part mtn for S/J (#36) obo Pltf. (m) (Entered: 02/10/2003)
10/04/2000	43	MISCELLANEOUS DOCUMENT APPRISAL of the status of city council's adoptn of an amend/zoning code & initiation of adoption of a billboard ordinance in ths matr obo D. (m) (Entered: 02/10/2003)
10/04/2000	42	ORDER our ord #34 fld Sept 5, 2000 is amended to read as follows: the P has fld a mtn for a prelim/injunctn #9; the D fld an oppo #19 and P replied #21; a hrng on the mtn for replim injunctn is set for October 11, 2000 @ 10am; see ord for further specs. ((Entered: 02/10/2003)
10/10/2000	49	MISCELLANEOUS DOCUMENT 2nd erratum to pltf's mtn for S/J (#36) & addendum to Pltf's rsponse (#45) to deft's mtn for S/J (#35) obo pltf. (m) (Entered: 02/10/2003)
10/10/2000	44	RESPONSE IN OPPOSITION TO MOTION to mtn for S/J (#36) obo D. (m) (LOCATED IN A SEPARATE FOLDER) (Entered: 02/10/2003)
10/10/2000	45	RESPONSE IN OPPOSITION TO MOTION rsponse to deft's mtn for S/J (#35) obo Pltf. (m) (LOCATED IN A SEPARATE FOLDER) (Entered: 02/10/2003)
10/10/2000	48	CERTIFICATE OF SERVICE in supprt of Pltf's rsponse (#45), affid (#46), 2nd affid (#47) obo Pltf. (m) (Entered: 02/10/2003)
10/10/2000	46	AFFIDAVIT of Jeffrey Herson in supprt of rsponse (#45) obo Pltf. (m) (Entered: 02/10/2003)
10/10/2000	47	AFFIDAVIT Second affid of Jeffrey Herson in supprt of Pltf's rsponse (#46) to deft's mtn for S/J (#35) obo Pltf. (m) (Entered: 02/10/2003)
10/11/2000	51	STATUS REPORT obo D. (fld in open Crt on 10/11/00 by City of Reno) (Entered: 02/10/2003)
10/11/2000	52	NOTICE (OTHER) Proposed ordinance obo Ds. (Fld in open Crt, Presented by City of Reno) (Entered: 02/10/2003)
10/12/2000	53	MISCELLANEOUS HEARING The Crt had tentatively sched today, 10/12/00 @ 4pm., as the time for the Crt's announced dec on the mattr of the Pltf's mtn for P/I (#9). Said hrg is vacated & contined. The Crt will announce its dec on this mattr Friday 10/13/0 (Entered: 02/10/2003)
10/12/2000	50	MISCELLANEOUS HEARING (Dated 10/11/00) ORD Re: Mtn for P/I (#9). The matter stands submitted. The Crt tentatively schedules this mattr for 10/12/00 # 4pm., cnsl may appear telephonically. (C/R: Cathy worken) (Entered: 02/10/2003)
10/16/2000	54	MISCELLANEOUS HEARING (dated 10/13/00) ORD the Pltf's mtn for P/I (#9) is granted. ORD tht deft is prelim enjoined & restrained pending the furth procdngs in this case frm enforcing Reno Municipal Code Sections 18.06.400 & 18.06.500 to deny pltf's sign p (Entered: 02/10/2003)
10/19/2000	55	NOTICE (OTHER) of absence from office obo D. (m) (Entered: 02/10/2003)

10/23/2000	56	REPLY TO RESPONSE TO MOTION to deft's oppo to mtn for SJ (#36) obo Pltf. (m) (Entered: 02/10/2003)
10/23/2000	58	RESPONSE IN OPPOSITION TO MOTION (Response) to Pltf's rsponse to deft's mtn for S/J (#36) obo Ds. (m) (Entered: 02/10/2003)
10/23/2000	57	CERTIFICATE OF SERVICE of doc #56 mld on 10/23/00 obo Pltf. (m) (Entered: 02/10/2003)
10/31/2000	59	MISCELLANEOUS DOCUMENT to mtn #36 obo D. (m) (Entered: 02/10/2003)
11/01/2000	61	MOTION FOR MISCELLANEOUS RELIEF Emergency mtn to contin hrg set forth in the Crt's ord of 10/13/00 til cnsl returns to the Office obo Deft: City of Reno. (m) (Entered: 02/10/2003)
11/01/2000	60	MOTION FOR MISCELLANEOUS RELIEF request to set a hrg to comply with the Crt's order, in the afternoon 13, 2000, or ITA, contin the hrg til cnsl has rturned as more fully set forth inCity's mtn to contin fld contemporaneously with this request obo D: City (Entered: 02/10/2003)
11/01/2000	62	MOTION FOR MISCELLANEOUS RELIEF request to shorten time in wh pltf may answ mtn to no later than 11/7/00 obo Deft: City of Reno. (m) (Entered: 02/10/2003)
11/01/2000	64	TRANSCRIPT re Decision of the Crt on mtn for P/I on 10/13/00, in Reno, NV. (C/R: Cathy M. Worken) (Entered: 02/10/2003)
11/01/2000	65	TRANSCRIPT re Hrg pltf's mtn for P/I on 10/11/00, in Reno, NV. (C/R: Cathy M. Worken) (Entered: 02/10/2003)
11/02/2000	63	ORDER tht mtn fld by deft on 11/1/00 (#60) is denied as moot in light of the mtn fld by deft on 11/1/00 (#61). Mtn for ord shortening time (#62) fld by deft on 11/2/00 is granted. Pltf shl hv til 11/7/00 @ 4pm., to rspond to the mtn (#61). The rsponse (Entered: 02/10/2003)
11/07/2000	68	MOTION FOR MISCELLANEOUS RELIEF Countermotion seeking an ord for deft to iss all sign & special use permits applied for by pltf obo Pltf. (m) (Entered: 02/10/2003)
11/07/2000	67	RESPONSE IN OPPOSITION TO MOTION to deft's mtn (#61) obo Pltf. (m) (Entered: 02/10/2003)
11/07/2000	66	MISCELLANEOUS DOCUMENT Receipt of cpy of pltf's reply to deft's mtn (#61) Cntrmtn seeking an ord for def to iss all sign & special use permits applied for by pltf is hereby acknowledged obo Pltf. (Entered: 02/10/2003)
11/09/2000	69	RESPONSE TO MOTION no text (Entered: 02/10/2003)
11/09/2000	70	MOTION FOR MISCELLANEOUS RELIEF Emergency mtn for an extn of tm to file an opp to pltf's countermotion seeking an ord for deft to issue all sign & Special use permits applied for by pltf obo D. (m) (Entered: 02/10/2003)

11/09/2000	71	ORDER In our order (#63) fld on 11/2/00, we stated tht a hrg would be held on 11/29/00, commencing @ 10am., (if Pltf did not oppose) to permit deft to show tht if any sd applications for billboards hv been denied, tht they were denied on a constitutional (Entered: 02/10/2003)
11/09/2000	72	ORDER ON MOTION FOR EXTENSION OF TIME TO FILE RESPONSE/REPLY tht deft's mtn for extn of tm is granted. deft shl hv til 4:00pm., November 27, 2000, to file a rsponse to the counter-motion (#68). (faxed & mld.) (Entered: 02/10/2003)
11/09/2000	73	LETTER Dated 11/6/00 add to ECR re M/O (#63) re Rsponse brief obo Cnsl Michael D. Stein. (Entered: 02/10/2003)
11/28/2000	74	ORDER settle docs due 12/8/00, 4pm; prev hearing set 11/29/00 is cont to 12/11/00, 10am. if settle doc filed as required by ths ord hrng will be vacated; if settlement doc not filed then in lieu of Ds sh file its showing in accord with out ords entered 1 (Entered: 02/10/2003)
11/28/2000	75	LETTER faxed cpy dtd 11/27/00 add to Hon. ECR re reached a settlement agreement obo Michael stein & Assoc. Ltd. (Entered: 02/10/2003)
12/08/2000	78	ORDER The ord of the crt fld 12/8/00 (#77) is am to read as follows: ORD tht emergency mtn to contin hrg fld 11/8/00 (#76) is granted. The hrg provided for in the ord of the Crt on 11/28/00, is contin to 12/14/00 @ 1:30pm., If settlement docs are fld wi (Entered: 02/10/2003)
12/08/2000	76	MOTION FOR MISCELLANEOUS RELIEF Emergency mtn to contin hrg set forth in the Crt's ord of 11/28/00 til 12/14/00 to allow cnsl to complete the settlement docs obo D. (m) (Entered: 02/10/2003)
12/08/2000	77	ORDER tht emergency mtn to contin hrg fld 11/8/00 (#76) is granted. The hrg provided for in the ord of the crt of 11/28/00, is contin to 12/11/00 @ 1:30pm., If settlement docs are fld w/the Clrk prior to tht time, the hrg will be vacated. (cc: faxed & ml (Entered: 02/10/2003)
12/13/2000	80	ORDER ON STIPULATION the above actn is dimissed w/prej. (See Ord for specs.) (Entered: 02/10/2003)
12/13/2000	79	ORDER In light of the settlement of this actn by stip fld 12/13/00, IT IS ORDERED AS FOLLOWS: l) The hrg set for 12/14/00, is VACATED. 2) The injunction prev entered by the Crt on 10/13/200, is terminated. 3) All other mtns fld in the actn are rendered (Entered: 02/10/2003)
10/23/2001	81	ORDER tht the parties hv 20 dys frm the dte of this ord w/in wh to clm the exhbts frm the Clerk of Crt in accord with sd LR or sd exhbts shl be destroyed by the Crt. (Entered: 02/10/2003)
12/06/2001		MISCELLANEOUS DOCUMENT Remaining exhibits destroyed. (Entered: 02/10/2003)

all upto mtn of 3rpo

SETTLEMENT AGREEMENT AND MUTUAL RELEASE

This Settlement Agreement ("Agreement") is entered into this ____ day of December, 2000, by and between OUTDOOR MEDIA DIMENSIONS, a Nevada corporation ("OMD") and THE CITY OF RENO, a municipal corporation (the "City"). OMD and the City shall collectively be referred to herein as the "Settling Parties" or the "Parties".

RECITALS

A. OMD filed a complaint captioned *Outdoor Media Dimensions, a Nevada corporation v. The City o Reno, a municipal corporation*, Case Number CV-N-99-0668 ECR-RAM, in United States District Court, District of Nevada (the " Federal Action") on December 21, 1999, alleging various counts against the City;

B. The Settling Parties now seek to fully and finally compromise, settle, and resolve any and all claims and disputes relating to the allegations, claims and cause of actions filed in the Federal Action by and between the parties hereto on the terms and conditions contained in this Agreement.

NOW, THEREFORE, all parties to this Settlement Agreement and Mutual Release agree as follows:

SECTION 1

Payment

1.1 The City shall pay OMD a total sum of Fifty Thousand and No/100 U.S. Dollars ($50,000.00) (the "Settlement Amount") for OMD's attorneys' fees and costs.

1.2 All payments due and owing under this Agreement shall be paid by a check made

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payable to OMD and Michael Stein & Associate, Ltd. and delivered to 1771 E. Flamingo Road, Suite 211B, Las Vegas, Nevada 89119 on or before December 20, 2000.

SECTION 2

Construction, Erection and Maintenance of Off-Premises Advertising Displays

2.1 Pursuant to the terms, covenants, conditions and restrictions set forth below, OMD shall be entitled to construct, erect and maintain off-premises advertising displays at the following locations:

CASE NUMBER	DESCRIPTION	LOCATION
21-00	Union Pacific Railroad (0021)	This site is located on railroad right-of-way, on the west side of U.S. 395.
22-00	500 Stoker Avenue	This site is located at the southeast corner of I-80 and Stoker Avenue.
30-00	2790 East Fifth Street	This site is located on the East Fifth Street Mobile Home Park, located on the southwest corner of I-80 and East Fifth Street.
31-00	2061 East Fourth Street	This site is located at the Tap' n' Tavern, located on the northwest corner of I-80 and East Fourth Street.
LDC 01-00141 (consisting of r/o (2) off-premises advertising displays)	9190 South Virginia Street	This site is located between South Virginia Street and U.S. 395, on the south side of the southbound on-ramp.
LDC01-00142	255 Crummer Lane	This site is located on the northeast corner of U.S. 395 and Crummer Lane.
LDC01-00143	7800 North Virginia Street	This site is located between N. Virginia Street and U.S. 395.
LDC01-00145	2900 Clearacre Lane	This site is located at the southeast corner of Clearacre Lane and U.S. 395.

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✓ Permits that have not been issued

LDC01-00146	U.S. 395	This site is located on the northeast side of U.S. 395, at the point where Offenhauser Drive becomes Gateway Drive.
LDC01-00150	1201 Stardust Street	This site is located at the northwest corner of Stardust Street and Keystone Avenue.
LDC01-00161	U-Haul - 10405 Old Virginia Road	This site is located on the east side of South Virginia Street south of its intersection of South Meadows Parkway.

2.2 The issuance of the off-premises advertising display special use permits and sign/building permits for said off-premises advertising display permits by the City is conditioned upon the following:

2.2.1 The project shall comply with all applicable City codes, and plans, reports, materials, etc., as submitted. In the event of a conflict between said plans, reports and materials and City codes, City codes in effect at the time the building permit is applied for, shall prevail;

2.2.2 The applicant shall apply for a sign permit for the project within eighteen (18) months of the date of City Council approval, and continuously maintain the validity of that permit, or this approval shall be null and void;

2.2.3 The off-premises advertising displays shall be a monopole structure. Illumination shall shine upward and directed at the sign face only, and if legible from residentially used properties, the lights shall be turned off by 11:00 p.m.;

2.2.4 Prior to the issuance of a building permit, the applicant shall submit a notarized statement from the property owner authorizing the installation of an off-premises

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advertising display(s). Attached to the statement shall be a map, also signed by the property owner, detailing the exact location of the proposed off-premises advertising display(s);

2.2.5 Prior to the issuance of a sign permit, the applicant shall submit the special use permit application fee after receiving credit for the six (6) applications previously denied;

2.2.6 In order to minimize visual clutter, each off-premises advertising display must maintain 500 feet spacing from any proposed or existing board on the same side of the street;

2.2.7 On developed parcels, an off-premises advertising display may not occupy required parking or landscaping. If the off-premises advertising display is located in existing landscaping, the landscaping must be relocated elsewhere on site. No tree may be removed for the installation of an off-premises advertising display;

2.2.8 On any developed site, the location of an off-premises advertising display shall not interfere with existing driveways;

2.2.9 Prior to the issuance of a sign permit, the applicant shall demonstrate that any off-premises advertising display will have a ten (10) foot setback from a sidewalk or bus stop. Notwithstanding the foregoing, case number 150-00 shall only require a five (5) foot setback from a sidewalk or bus stop;

2.2.10 All billboards, which require electrical service, shall provide underground service to the pole, with all wiring located inside the pole. There shall be no overhead power, or exterior wiring.

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2.2.11 All sign structures shall be painted pale blue;

2.2.12 Prior to the issuance of a sign permit, the applicant shall demonstrate that legal access can be provided to the site;

2.2.13 The bottom of a sign face shall not exceed fifteen (15) feet above said rail or sound wall;

2.2.14 The bottom of the off-premises advertising display for Case number LDC01-00142 shall be no more than 10 feet taller than the roofline of the J.C. Penney Furniture Store. The sign face shall not exceed fourteen (14) feet in height by forty-eight (48) feet in width; and

2.2.15 The off-premises advertising display displays in case numbers 21-00, 22-00 and LDC01-00150 shall not exceed twelve (12) feet in height by thirty-six (36) feet in width;

2.2.16 The off premises advertising display in case number 31-00 shall be located to the far north end of the parcel;

2.2.17 The sign face of the off-premises advertising display in case number LDC01-00145 shall be orientated to minimize the impact on nearby residences;

2.2.18 Maintenance of the sign shall occur only during daylight hours;

2.2.19 The off-premises advertising display shall be maintained or repaired within 36 hours of the sign company being notified;

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2.2.20 The structures shall be galvanized;

2.3 OMD shall withdraw the requests for special use permits for case numbers 19-00, 20-00, 26-00, LDC01-00144; LDC01-00152, LDC01-00153, LDC01-00154, LDC01-00155, LDC01-00156, LDC01-00160 and LDC01-00162.

SECTION 3

Mutual Releases and Dismissal

3.1 The Settling Parties, and each of them, do hereby, for themselves, and for their current and/or former partners, members, officers, directors, shareholders, and, if any, affiliated corporations, employees, agents, spouses, representatives, attorneys, legal successors and assigns, and each of them, expressly release and absolutely and forever discharge each other and their current and/or former members, officers, directors, shareholders, partners, and, if any, employees, agents, spouses, representatives, attorneys, legal successors and assigns, and each of them, of and from any and all claims, demands, damages, debts, liabilities, obligations, costs, expenses, liens, actions and causes of action of every kind and nature whatsoever, whether known or unknown, suspected or unsuspected, that each Party now has, owns or holds, or at any time heretofore ever had, owned or held, or could, shall or may hereafter have, own or hold against each other, based upon or related to the Federal Action.

3.5 Upon execution of this Agreement, payment of the FIFTY THOUSAND and NO/100 DOLLARS and issuance of the special use permits, sign permits and building permits, OMD shall prepare and file a stipulation for dismissal, with prejudice, for the Federal Action. The parties hereby stipulate to the retention of jurisdiction by the United States District Court for

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enforcement of the terms of this Agreement by any available remedy, including injunctive relief, fines or contempt proceedings.

SECTION 4

No Third-Party Beneficiaries

4.1 Except as otherwise provided in this Agreement, nothing expressed or implied herein is intended, or shall be construed, to confer upon or give any person or entity not a party to this Agreement any rights or remedies under, or by reason of, any term, provision, condition, undertaking, warranty, representation or agreement contained herein.

SECTION 5

Time of the Essence

5.1 Time is of the essence for this Agreement and all of its terms, provisions, conditions, and covenants.

SECTION 6

Successors and Assigns

6.1 This Agreement shall be binding upon and inure to the benefit of the Settling Parties hereto, and each of them, and each and all of their respective representatives, successors, assigns, employees and agents.

SECTION 7

Contract Execution

7.1 This Agreement may be executed in any number of counterparts with the same force and effect as if all signatures were set forth in a single instrument. Each counterpart when

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duly executed and delivered shall be an original, but all such counterparts shall constitute one and the same agreement. Any signature page of this Agreement may be detached from any counterpart without impairing the legal effect of any signatures, and may be attached to another counterpart, identical in form, but having attached to it one or more additional signature pages. This Agreement and any counterpart may be executed by signatures provided by electronic facsimile transmission (also known as "fax" copies), which facsimile signatures shall be as binding and effective as original signatures. Any Party providing a signature by fax copy shall promptly thereafter deliver to the attorney for the other side a counterpart of this Agreement bearing the original signature of that Party.

SECTION 8

Integration Clause

8.1 This written Agreement represents and contains the entire understanding between the Parties in connection with the subject matter of this Agreement. This Agreement shall not be altered or varied except by a writing duly signed by all of the Parties, and the Parties acknowledge and agree that, in the absence of such a writing signed by the Parties, they will make no claim that this Agreement has been orally altered or modified in any respect whatsoever. The Parties each acknowledge that no Party, nor any agent or attorney of any Party or any other individual, has made any promise, representation or warranty whatsoever, express or implied, which is not contained herein concerning the subject matter hereof to induce any Party to execute this Agreement. Except for the foregoing, the Parties further acknowledge that they have not executed this Agreement or any other such document in reliance on any promise,

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representation or warranty not contained herein. The waiver of any breach of this Agreement by any Party shall not be a waiver of any subsequent or prior breach. All amendments, modifications and waivers of this Agreement must be in writing and signed by all Parties.

SECTION 9

Governing Law and Exclusive Choice of Forum

9.1 The laws of the State of Nevada applicable to contracts made or to be wholly performed there (without giving effect to the choice of law or conflict of law principles) shall govern the validity, construction, performance, effect and enforcement of this Agreement. The United States District Court, District of Nevada, shall maintain jurisdiction of Case No. CV-N-99-0668 ECR for the purpose of enforcing this Agreement. To the extent the Court refuses to exercise jurisdiction to enforce this Agreement, any lawsuit to interpret or enforce this Agreement may be brought only in a court of competent jurisdiction in the State of Nevada.

SECTION 10

Attorneys' Fees

10.1 If there is any legal action or proceeding, including any mediation or arbitration proceeding, to enforce or interpret any provision of this Agreement or to protect or establish any right or remedy of any Party, the unsuccessful Party to such action or proceeding, whether such action or proceeding is settled or prosecuted to final judgment, shall pay to the prevailing Party as finally determined, all costs and expenses, including reasonable attorneys' fees and costs, incurred by such prevailing Party in such action or proceeding, in enforcing such judgment, and in connection with any appeal from such judgment. Reasonable attorneys' fees and costs

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incurred in enforcing any judgment or in connection with any appeal shall be recoverable separately from and in addition to any other amount included in such judgment. The prevailing Party's rights under this Section 9 shall not merge into any judgment and shall survive until all such fees and costs have been paid.

SECTION 11

Construction; Joint Drafting

11.1 The terms and conditions of this Agreement shall be construed as a whole according to its fair meaning, and not strictly for or against any Party. The Settling Parties acknowledge that each of them has reviewed this Agreement and has had the opportunity to have it reviewed by their attorneys, and that any rules or construction to the effect that ambiguities are to be resolved against the drafting Party shall not apply in the interpretation of this Agreement.

SECTION 12

Authority to Execute Agreement

12.1 The persons signing this Agreement each warrant that they have the authority to sign this Agreement individually, or on behalf of the entity for which they are signing, as the case may be.

SECTION 13

Necessary Action

13.1 Each of the Parties shall do any act or thing and execute any or all documents or instruments necessary or proper to effectuate the provisions and intent of this Agreement.

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SECTION 14

Miscellaneous

14.1 The captions appearing at the commencement of the sections of this Agreement are descriptive only and for convenience in reference to this Agreement and shall not define, limit or describe the scope or intent of this Agreement, nor in any way effect this Agreement.

14.2 Masculine or feminine pronouns shall be substituted for the neuter form and vice versa, and the plural shall be substituted for the singular form and vice versa, in any place or places in this Agreement in which the context requires such substitution or substitutions.

14.3 If any one or more of the provisions of this Agreement shall be held to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions of this Agreement shall not be affected thereby, and the Parties will use all reasonable efforts to substitute for such invalid, illegal or unenforceable provisions one or more valid, legal and enforceable provisions which, insofar as practicable, implement the purposes and intents hereof. To the extent permitted by applicable law, each Party waives any provision of law, which renders any provision of this Agreement invalid, illegal or unenforceable in any respect.

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14.4 Notices. Any and all notices and demands required or desired to be given pursuant to this Section shall be in writing and shall be validly given or made if served either personally or deposited with the United States Postal Service, in certified or registered mail, postage prepaid, return receipt requested and addressed as hereinafter provided. If such notice or demand be served by registered or certified mail in the manner provided above, service shall be conclusively deemed given one (1) business day after mailing or upon receipt, whichever is sooner.

(a) To OMD: C/O Michael Stein, Esq.
1771 E. Flamingo Rd., Suite 211B
Las Vegas, Nevada 89119

(b) To City of Reno: Reno City Attorneys Office
490 South Center Street, Room 204
Reno, Nevada 89505-1900

IN WITNESS WHEREOF, the Parties have entered into this Agreement as of the date first written above.

OUTDOOR MEDIA DIMENSIONS

By: _____
Jeffrey Henson, authorized officer

THE CITY OF RENO

By: _____
Vice-Mayor

APPROVED AS TO FORM AND CONTENT:

MICHAEL STEIN & ASSOCIATES, LTD.

By: _____
Michael Stein, Esq., counsel for
Outdoor Media Dimensions

RENO CITY ATTORNEYS OFFICE

By: _____
Patricia Lynch, Esq., Reno City
Attorney

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LAW OFFICES OF
ROBISON, BELAUSTEGUI, SHARP & LOW
A PROFESSIONAL CORPORATION
71 WASHINGTON STREET
RENO, NEVADA 89503
TELEPHONE (775) 329-3151
FACSIMILE (775) 329-7169
(775) 329-7941

KENT R. ROBISON
THOMAS L. BELAUSTEGUI
F. DEARMOND SHARP
KEEGAN G. LOW
BARRY L. BRESLOW
MARK G. SIMONS
MICHAEL E. SULLIVAN

CLAYTON P. BRUST
STEFANIE T. SHARP

FRANK C. GILMORE
MICHAEL A. BURKE
KRISTEN L. MARTINI

September 4, 2012

VIA FIRST CLASS MAIL
AND EMAIL: craigm@reno.gov
Marilyn Craig, Esq.
Reno City Attorney's Office
One E. First St., 3rd Floor
Reno, NV 89503

Re: Saunders Outdoor Advertising

Dear Marilyn,

I write regarding the communications and conversations you and I have had regarding Saunders Outdoor Advertising's inventory of standing billboards and banked receipts. As you know, Saunders had inquired of the City for an accounting of the 12 sign locations (built and unbuilt) identified on the *OMD v. City of Reno* Settlement Agreement of December 2000.

In reviewing the information provided by the City, Saunders can confirm that it claims an interest in only 8 of the 12 locations. Of those, 7 are the existing signs (known as SAU1/7; SAU2; SAU3; SAU4; SAU5/6; OM6; OM8), and one is banked (OM10). Saunders does not claim an interest in any other signs related to the OMD Settlement.

Thank you for your efforts in assisting me in clearing up the confusion. Please call or email if you would like to discuss further.

Sincerely,

FRANK C. GILMORE

FCG/xx
cc: Client
Claudia Hanson (hansonc@reno.gov)

J:\WPData\FDS\8742.001 Saunders Outdoor Advertising\L-Craig.9-4-12.wpd

Outdoor Media Dimensions, Inc. (NV)
1010 S. 336th Street Suite 312
Federal Way, WA 98003
(253) 815-1400
(253) 815-1401 fax

January 28, 2003

TO: CITY OF RENO

Please be advised that Saunders Outdoor Advertising, Inc., a Utah corporation [illegible] all of the assets of Outdoor Media Dimensions, Inc., a Nevada corporation, [illegible] premises advertising display business in the State of Nevada, including all rights [illegible] such displays in the City of Reno, Nevada.

Outdoor Media Dimensions, Inc. (NV)

By: Alexander DW Kim, President

Reno Sign Identifier Code	Settlement Agreement Case #	Description	Location	Now Located, Permit State & City	Banked or Active
OM10	21-00	Union Pacific Railroad	West side U.S 395	Un built	Banked
SAU2/OMI	22-00	500 Stoker	This site located at southeast corner of I-80 and Stoker Ave.	Still Existing Saunders Sign #226/227 State permit #4604 City LDP01-03992	(2) active
Unknown	300-00 Banked?	2790 East Fifth Street Maybe 4th?	Near Mobile Home Park Located on Southwest corner of I-80 and East 5th	Un built by Saunders or OMD Should have been banked for Saunders/OMD	Unknown
SAU3/OM2	31-00	2061 East 4th Street	Northeast Corner of I-80 at Tap N' Tavern	Saunders Location #220/221 State Permit # 4605 City Permit #LDP01-05814	(3) active
SAU4/OM4 & OM3	LDC -01-00141 Two off premises advertising displays	9190 South Virginia Street	Between South Virginia And US 395 on the south side of the Southbound ramp	One of these is un built by Saunders or OMD Should be banked for Saunders/OMD The other location is Saunders Location #230/231 State Permit #4602	(4) active OMD did not build OM3 and should be banked
OM6	LDC 01-00142	255 Crummer Lane	Northeast Corner of US 395 and Crummer Lane	Moved to Snider US 395 Neil Rd. Saunders # 234/235 State Permit #4613 City LDP01-07357	(6) active

SAV1/SAV 7 OM5	LDC01-00143	7800 North Virginia Street	Located Between N. Virginia Street and U.S. 395	Re-located to Longley (Huffaker) (also SAV7) 7691 S. Virginia State Saunders # 232/233 Permit # 4659 City LDP05-12187	(1) active
OM8	LDC01-00145	2900 Clearacre Lane	Southeast corner of Clearacre and US 395	Saunders #222/223 State Permit #4609 City LDP01-0569	(7) active
(OM7?)	LDC01-00146(01146) 164-290-04	US 395 TACCHINO pulled the cut-out permit as the identified owner; Senobar was issued the permit as the owner; Heath was the contractor; Desert Outdoor is the tenant	US 395 where offenhauser meets Gateway drive	Un-built by Saunders or OMD Should be Saunders OMD Bank	(X) did not build
OM9	LDC01-00150	1201 Stardust Street	Southwest corner Stardust Street and Keystone(Bowling Alley)	Un-built by Saunders OMD (We think there was a sign here that take down belongs to owner of the sign there should be an [illegible]	(X) OMD did not build
SAU5/SAU 6 &OM11	LDC01-00161	U-Haul 1045 Old Virginia	East Side of South Virginia South of intersection of South Meadows Parkway	U-Haul Now 1075 Matley Lane Saunders Location#218/219 State Permit 4814	√ (5) active

Reno City Attorney

MEMORANDUM

Date: May 8, 2003

To: Mayor, City Council and City Manager

From: Randall Edwards, Chief Deputy City

Through: Patricia Lynch, Reno City Attorney

Subject: Constitutionality of Billboard Regulation and Legality of Ordinance Allowing Relocation of Billboards

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I. INTRODUCTION

The City Council has asked this office for further legal guidance as to the constitutional limits on billboards (off-premises advertising displays)[1] in general, and the discretion of the City Council to regulate billboards in Reno in light of the initiative petition prohibiting the construction of new billboards. This memorandum confirms the opinion of this office previously given in connection with billboard regulation.

With regard to the general question, it is the position of this office that the City Council has broad discretion to regulate billboards under both the U.S. and Nevada constitutions. With regard to the specific question of the City Council's discretion in light of the initiative petition, it is our opinion that the language of that petition is ambiguous, and may be read to allow the City to relocate billboards *or* to allow the City to refuse to relocate billboards.

Thus, it is our opinion that the issue of billboard regulation – in particular, billboard relocation – is a policy matter for the Council's determination.

II. GENERAL CONSTITUTIONAL STANDARDS REGARDING BILLBOARD REGULATION

Provided it meets the test set forth by the U.S. Supreme Court, a city's regulation of *commercial*[2]

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1 Reno Municipal Code Section 18.06.1202(gg) defines an "off-premises advertising display" as "[a]ny arrangement of material, words, symbols or any other display erected, constructed, carved, painted, shaped or otherwise created for the purpose of advertising or promoting the interests of any person, persons, firm, corporation or other entity, located in view of the general public, which is not principally sold, available or otherwise provided on the premises on which the display is located. Any off-premises advertising display which can carry a commercial message may also carry a non-commercial message. Any display which is composed of at least 80 percent of on-premises display is an on-premises sign. Off-premise advertising display does not include governmental, traffic, directional, or safety signs."

2 Signs containing a non-commercial message are subject to stricter standards. Non-commercial speech includes political, religious, social and other forms of expression. The discussion in this memorandum is limited to restrictions on commercial speech.

billboards may range from no or minimal regulation to an outright ban on billboards. In order to be considered constitutionally valid, a sign regulation must (1) seek to implement a substantial government interest, (2) directly advance that interest, and (3) reach no further than necessary to accomplish the given objectives. *Ackerley Communications of the Northwest, Inc. v. Krochalis*, 108 F.3d 1095, Fn. 3, (9th Cir. 1997), citing *Metromedia Inc. v. City of San Diego*, 453 U.S. 490 (1981).

Under this test, an outright prohibition on all commercial billboards has been upheld in the interest of traffic safety and aesthetics. *National Advertising Company v. City of Orange*, 861 F.2d 246 (9th Cir. 1988), citing *Metromedia Inc. v. City of San Diego*, 453 U.S. 490 (1981) and *Members of the City Council v. Taxpayers for Vincent*, 466 U.S. 789 (1984):

> [T]he twin goals that the ordinance seeks to further – traffic safety and the appearance of the city – are substantial governmental goals.... If the city has a sufficient basis for believing that billboards are traffic hazards and are unattractive, then obviously the most direct and perhaps the only effective approach to solving the problems they create is to prohibit them. The city has gone no further than necessary in seeking to meet its ends.

Metromedia, supra at 507-508.

Likewise, a Seattle ordinance restricting the relocation of existing billboards has been upheld under this test. *Ackerley Communications of the Northwest, Inc. v. Krochalis*, 108 F.3d 1095 (1997). The City of Seattle has banned the construction of new billboards and regulated the relocation of existing billboards since 1977. *Id.* at 1097. Concerned about proliferation despite the cap on legal billboards, the Seattle City Council adopted an ordinance during 1993 to tighten the restrictions on relocation. *Id.* at 1097. The restrictions permit only the relocation and reconstruction of signs which do not conform to Seattle's zoning code. Conforming signs may not be relocated. The practical effect of this is a net reduction in the number of billboards. *Id.* at 1097. Whenever a billboard owner loses a lease on property on which a conforming sign is located, it will lose the right to maintain that sign forever. Because Seattle also prohibits the construction of new billboards, the gradual loss of leases to property on which conforming signs are located will reduce the overall number of billboards. *Id.* at 1097.

Applying the above constitutional test, the *Ackerley* court concluded that the restrictions on relocation: (1) consider the substantial government interests of traffic safety and aesthetics; (2) directly further those interests; and (3) reach no further than necessary to accomplish those interests. *Id.* at 1098-1099. Additionally, the *Ackerley* court determined that the restrictions were constitutional even without detailed evidence that they directly furthered the city's interests of traffic safety and aesthetics. *Id.* at 1099-1100. "We ... hesitate to disagree with the accumulated, common-sense judgments of local lawmakers and of the many reviewing courts that billboards are real and substantial hazards to traffic safety... [To do so] would be trespassing on one of the most intensely local and specialized of all municipal problems ... ." Further, "[i]t is not speculative to recognize that billboards by their very nature, wherever located and however constructed, can be perceived as an

3 Additionally, the First Amendment to the U.S. Constitution and cases interpreting it mandate that billboards may not be regulated on the basis of their content.

"esthetic harm." *Id.* at 1098, citing *Metromedia, supra* at 509-510.

In short, a city has wide latitude to regulate billboards, including the relocation of existing billboards, provided that the above-mentioned constitutional requirements are met.[4]

III. BILLBOARD RELOCATION AND OTHER REGULATION UNDER THE INITIATIVE PETITION AND THE RENO ORDINANCE.

Reno Municipal Code Section 18.06.920, which codifies the initiative petition concerning billboards (Question R-1, passed by the voters during 2000), provides:

> The construction of new off-premises advertising displays/billboards is prohibited, and the City of Reno may not issue permits for their construction.

Subsection B of Section 18.06.920, which was added to the Code after the initiative petition passed, goes on to state:

> In no event shall the number of off-premises advertising displays exceed the number of existing off-premises advertising displays located within the city on November 14, 2000.

There exists substantial debate regarding the meaning of Question R-1, and whether its language can be read to allow the relocation of an existing billboard. Doug Smith, Chairman of Scenic Nevada, has adamantly insisted that relocation of existing billboards is prohibited under the initiative, and that it was never the intent of the drafters of the initiative to merely place a cap on the number of billboards. *See* letter from Doug Smith, dated January 8, 2003 (Exhibit A). The billboard industry has just as adamantly stated that the language of the initiative requires the allowance of relocation of billboards. In our opinion, the language, which states only that "new" billboards are prohibited, without any definition of what "new" billboards means, is ambiguous in this regard.

Generally, when the meaning of a statute or ordinance is not clearly manifest from its plain meaning, it is necessary to look outside the language to the history of the statute or ordinance in order to divine the intent of the drafters of the law. *Sandoval v. Board of Regents,* 2003 WL 2012425 (Nev. 2003). In the instant case, recourse to the arguments of the parties on the merits of the ballot initiative is probably the best indicator of the intent of the initiative. Unfortunately, these arguments appear to be as ambiguous on the issue of relocation as is the language of the initiative.

The "Argument for Passage" drafted by the proponents of the initiative, and contained in the Sample Ballot and Voter Information Pamphlet distributed by the Registrar of Voters, states, in pertinent part:

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4 It should be noted that restrictions on relocation may raise issues under the Fifth Amendment to the U.S. Constitution which prohibits uncompensated "takings." For example, if Council were to approve a new project on land where a pre-existing billboard is located, restricting the sign owner's ability to relocate that non-conforming billboard could constitute a taking for which compensation may be required.

> There are 278 off-premises billboards existing in the City. This Initiative Petition ... would *prohibit any increase in the present number of billboards.* This Initiative *does not ban existing billboards, but it does place a cap on their numbers.* Voters approval of this Initiative would therefore have *no significant effect on the current level of business of the billboard industry* in the City of Reno.
>
> ***
>
> Stopping the *growth of new billboards* in Reno will help preserve the distinctive character and natural scenic beauty of the Truckee Meadows.

(Exhibit B; emphasis added.)

This language is subject to various interpretations.

The "no relocation" interpretation:

The "Argument for Passage" language can be read to ban relocation of any billboards in order that the "distinctive character and natural scenic beauty of the Truckee Meadows" be preserved. Arguably, it is impossible to preserve the beauty of the Truckee Meadows if it is possible to place billboards where they were not placed before, whether as "new" billboards or as "relocated" billboards. For purposes of this interpretation, the placement of any billboard in a location where it had not previously been located would be a "new" billboard – certainly new to that location. Whether a billboard is placed in a location where no billboard had before been placed is classified as a "relocated" or as a "new" billboard, its construction would require a new building permit and compliance with zoning ordinances, hallmarks of "new" construction. (The initiative specifically prohibits the issuance of building permits for "new" billboards). Under this interpretation, billboard relocation would be prohibited.

Interestingly, the "no relocation" interpretation is supported more by language drafted by the initiative's *opponents* than by that of the initiative's supporters. From their "Rebuttal by Opponents," it is clear that the opponents understood the initiative to prohibit placing billboards in locations where they had not previously been placed, with the ultimate effect of banning billboards:

> The proponents of the Initiative are *incorrect when they state that the Initiative will merely place a cap on the number of billboards* allowed in Reno. The wording on this Initiative *specifically prohibits building permits for any new billboards.*
>
> ***
>
> While many communities, including Reno, regulate billboards, *very few communities have banned billboards* and *none have banned billboards* where their primary business is gaming and tourism.

(Emphasis added).

The "relocation allowed" interpretation:

On the other hand, the "Argument for Passage" speaks in terms of a "cap" on the "numbers" of billboards, (the actual number of billboards is provided in the "Argument"), speaks of stopping the *growth* of new billboards, and states simply that the initiative provides that an increase in the *number* of billboards would be prohibited, not that it is anticipated that the number will decrease. It further states that passage of the initiative will have "no significant effect on the current level of business of the billboard industry." (Arguably, relocation of billboards is more consistent with the position that there will be no significant impact on the current level of billboard business than is the "no relocation" option, which would ultimately result in a diminution of the number of billboards, and an eventual "significant effect" on the level of business). For purposes of this interpretation, the meaning of "new billboard" would not relate to the location of a billboard, but instead to whether a proposed billboard would increase the overall number of billboards currently in the Truckee Meadows. Under this interpretation, billboard relocation may not be prohibited.

Ambiguity in the history of the initiative provides flexibility in interpretation:

Because, the "legislative history" of the initiative petition, as set forth in the explicative arguments for and against its passage, is ambiguous, as pointed out above, it is the opinion of this office that the City Council has great flexibility in interpreting the meaning of the initiative's language. Thus, the current City ordinance, which allows relocation of billboards, is not inconsistent with a reasonable interpretation of the requirements of the initiative and is defensible against a legal challenge.[5]

On the other hand, a determination by the Council that relocation of billboards is not in the public interest could also be defended against a legal challenge.

IV. CONCLUSION

The courts have consistently held that the decision whether and to what extent to regulate billboards rests with the local law and policy makers. A municipality's determination that billboards create traffic safety problems and/or are unattractive ("esthetic harm") will generally not be questioned by the courts. The courts consider traffic safety and aesthetics to be "substantial government interests" which support billboard regulation. Additionally, the Ninth Circuit has found that restrictions on the relocation of billboards directly advance those interests without impermissibly infringing on protected speech. Of course, any ordinance which seeks to restrict billboards needs to be carefully crafted to ensure that it meets all of the constitutional requirements.

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5 Presently, RMC Section 18.06.950 allows a legally-established, off-premises display to be relocated to one of the following districts: the I (Industrial), IB (Industrial Business), IC (Industrial Commercial), AC (Arterial Commercial), CC (Community Commercial) and HDC (Hotel/Casino Downtown) district when within 100 feet of a major or minor arterial road or freeway unless otherwise prohibited. The present billboard ordinance also allows for the replacement (in its original position) and repair of an existing, legally-established billboard. RMC Sections 18.06.922 and 18.06.930(E). Further, Section 18.06.970 sets forth the circumstances under which a billboard will be deemed to be "abandoned," and provides that any abandoned billboard shall reduce the total number of off-premises advertising displays allowed.

The language of the 2000 billboard initiative is ambiguous, and lends itself to two equally reasonable interpretations. There is support for the interpretation that the initiative prohibits the relocation of existing billboards. There is also support for the interpretation that the initiative allows for the relocation of existing billboards. This ambiguity provides great flexibility to the Council in allowing or disallowing billboard relocation.

In the final analysis, the determination as to what, if anything, should be done further with regard to billboard regulation, is driven more by policy than legal considerations. As the law currently stands, this Council has wide latitude in determining the extent and basis for further regulation of billboards.

118 Nev. 767, *; 59 P.3d 437, **;
2002 Nev. LEXIS 91, ***; 118 Nev. Adv. Rep. 77

4 of 18 DOCUMENTS

ELLER MEDIA COMPANY, A DELAWARE CORPORATION QUALIFIED TO DO BUSINESS IN THE STATE OF NEVADA, FORMERLY DR PARTNERS, A NEVADA GENERAL PARTNERSHIP D/B/A DONREY OUTDOOR ADVERTISING COMPANY, Appellant, vs. THE CITY OF RENO, A MUNICIPAL CORPORATION; AND CITIZENS FOR A SCENIC RENO, A NEVADA NON-PROFIT CORPORATION, Respondents.

No. 37369

SUPREME COURT OF NEVADA

118 Nev. 767; 59 P.3d 437; 2002 Nev. LEXIS 91; 118 Nev. Adv. Rep. 77

December 17, 2002, Decided

SUBSEQUENT HISTORY: Petition for Rehearing Denied February 6, 2003.

PRIOR HISTORY: [***1] Appeal from a district court decision denying appellant's petition for a writ of mandamus. Second Judicial District Court, Washoe County; Jerome Polaha, Judge.

DISPOSITION: Affirmed.

COUNSEL: McDonald Carano Wilson LLP and John Frankovich and Scott A. Gronek, Reno, for Appellant.

Patricia A. Lynch, City Attorney, and Marilyn D. Craig, Deputy City Attorney, Reno, for Respondent City of Reno.

Woodburn & Wedge and W. Chris Wicker, Reno, for Respondent Citizens for a Scenic Reno.

JUDGES: BEFORE YOUNG, C.J., ROSE and AGOSTI, JJ.

OPINION

[**438] [*769] PER CURIAM:

Appellant Eller Media Company, f/k/a DR Partners d/b/a Donrey Outdoor Advertising Company, petitioned for a writ of mandamus to compel the City Clerk for the respondent City of Reno to remove from the November 2000 general election ballot an initiative petition submitted by respondent Citizens for a Scenic Reno. The proposed initiative sought to prohibit the City of Reno from issuing permits for the construction of new off-premise advertising displays/billboards. The district court denied Eller Media's application for a writ of mandamus, and subsequently, the initiative was passed during the 2000 general election. On appeal, Eller Media argues that the [***2] district court erred because: (1) the City Clerk failed to comply with the statutory provisions requiring him to conduct random sampling of initiative petition signatures for verification; and (2) the subject of the proposed initiative was administrative, and thus, an improper matter for an initiative petition. We conclude that Eller Media's arguments are without merit, and therefore, the district court's

order should be affirmed. FACTS

On March 29, 2000, Citizens for a Scenic Reno ("Citizens") filed a "Notice of Intent: Initiative Petition Affidavit" with the City Clerk for the City of Reno pursuant to *NRS 295.205*, [1] indicating their intent to submit the following initiative to the voters at the next general election:

THE PEOPLE OF THE CITY OF RENO DO ENACT AS FOLLOWS: Initiative Petition: The construction of new off-premise advertising displays/billboards is prohibited, and the City of Reno may not issue permits for their construction.

1 *NRS 295.205* permits any five voters of a city to commence initiative proceedings by filing an affidavit with the city clerk. The statute requires initiative petitions to be signed by "a number of registered voters of the city equal to 15 percent or more of the number of voters who voted at the last preceding city election." *NRS 295.205(2)*.

[***3] Thereafter, Citizens circulated the initiative petition, collecting approximately 9,525 signatures, and submitted the completed initiative petition to the City Clerk's office. The City Clerk forwarded the initiative petition to the Washoe County Registrar of Voters, indicating that the City Clerk had performed a "raw count" of the signatures to verify that the initiative petition contained the minimum required by *NRS 295.205(2)*. The City Clerk [*770] requested that the Registrar conduct random sampling for verification of the signatures on the initiative petition. After completing a random validation of the signatures, the Registrar sent a "certificate of sufficiency" to the Mayor and City Council of Reno, stating that he found the petition sufficient pursuant to *NRS 295.210*. Eller Media argues that the City Clerk's obligation to verify the signatures by conducting a random sampling is a non-delegable duty.

Eller Media filed a complaint against the City of Reno and Citizens alleging that the City Clerk's certification of the initiative petition was insufficient and further that the initiative ordinance was not a proper subject for initiative. [***4] The complaint sought a writ of mandamus compelling the City of Reno to remove the initiative from the ballot for the November 2000 general election. Following a hearing on the matter, the district court concluded that the City of Reno had substantially complied with the statutory certification requirements for initiative petitions. Additionally, the district court concluded that the initiative petition sought to establish new public policy within the city, and therefore, the billboard ordinance was a proper subject for initiative. On appeal, Eller Media asserts that the City Clerk improperly delegated to the Washoe County Registrar of Voters his duty to verify the signatures on the initiative petition in contravention of *NRS 295.210(2)*. At the time in question, [2] *NRS 295.210* stated, [**439] in pertinent part, that "the city clerk must examine the signatures by sampling them randomly for verification."

2 The pertinent election statutes were revised in 2001. *NRS 295.210(2)* no longer exists in the form quoted here. *See* 2001 Nev. Stat., ch. 581, § 52, at 2968-69.

[***5] "When the language of a statute is plain and unambiguous, a court should give that language its ordinary meaning and not go beyond it." [3] However, when more than one interpretation of a statute can reasonably be drawn from its language, it is ambiguous and the plain meaning rule has no application. [4] The entire subject matter of and the policy behind a statute may aid in its interpretation, and statutes should always be construed so as to avoid absurd or unreasonable results. [5]

3 *City Council of Reno v. Reno Newspapers, 105 Nev. 886, 891, 784*

P.2d 974, 977 (1989).

4 *Hotel Employees v. State, Gaming Control Bd., 103 Nev. 588, 591, 747 P.2d 878, 879-80 (1987).*

5 *Welfare Div. v. Washoe Co. Welfare Dep't, 88 Nev. 635, 637-38, 503 P.2d 457, 459 (1972).*

We conclude that the district court did not err when it found that the City Clerk had substantially complied with *NRS 295.210* [*771] because, while *NRS 295.210(2)* [***6] requires the City Clerk to "examine the signatures by sampling them randomly for verification," it contains no language requiring the City Clerk to personally examine the signatures or prohibiting him from delegating that duty to the County Registrar of Voters. Eller Media's narrow interpretation of the statute is unreasonable. Moreover, it conflicts with *NRS 277.180*, which permits interlocal contracts between public agencies for the performance of governmental services. Here, the City of Reno and Washoe County had entered into an interlocal agreement, whereby the County Registrar agreed to be responsible for the performance of all acts and functions necessary to conduct efficient elections. Additionally, *NRS 293.127* requires that NRS Title 24, which includes *NRS 295.210*, be liberally construed to ensure that the real will of the electors is not defeated by informality or failure to substantially comply with the provisions of the title.

Second, Eller Media asserts that the prohibition of off-premise billboards is not the proper subject of an initiative petition because it is administrative in character. [***7] Citing our decision in *Forman v. Eagle Thrifty Drugs & Markets*, [6] Eller Media argues that the initiative was administrative in character because the City of Reno had already adopted a comprehensive zoning plan, which includes regulations of off-premise advertising. Additionally, Eller Media argues that the initiative was invalid because it attempted to initiate rezoning in the City of Reno outside of the zoning statute requirements in *NRS Chapter 278*.

6 *89 Nev. 533, 516 P.2d 1234 (1973)*, overruled in part by *Garvin v. District Court, 2002 Nev. LEXIS 90, 118 Nev. Adv. Rep. 76, 59 P.3d 1180, ___* (Adv. Op. No. 76, December 17, 2002).

While portions of our original holding in *Forman* may be read to support Eller Media's contentions, we recently reexamined *Forman* in *Garvin v. District Court*. [7] In *Garvin*, we overruled *Forman* to the extent it held that: (1) the initiative power does not extend to the zoning processes of counties and cities, or other matters legislatively delegated to local governments; [***8] (2) due process requirements of notice and hearing apply to general zoning legislation by initiative; and (3) all changes to established zoning policies are administrative in nature. [8] Despite the limitations placed on *Forman*, *Garvin* reaffirmed the central test that *Forman* enunciated for determining whether an initiative is administrative or legislative in character. [9] In *Forman*, we expressed this central test as follows:

[*772] "An ordinance originating or enacting a permanent law or laying down a rule of conduct or course of policy for the guidance of the citizens or their officers and agents is purely legislative in character and referable, but an ordinance which simply puts into execution previously-declared policies, or previously-enacted laws, is administrative [**440] or executive in character, and not referable." [10]

7 118 Nev. at 76, 59 P.3d at 1180.

8 See id. at *59 P.3d 1180, 118 Nev. Adv. Rep. 76*, ___ P.3d at ___.

9 See id. at *59 P.3d 1180, 118 Nev. Adv. Rep. 76*, ___ P.3d at ___.

10 *Forman*, 89 Nev. at 537, 516 P.2d at 1236 (quoting *Denman v. Quin, 116 S.W.2d 783, 786 (Tex. Civ. App. 1938)).*

[***9] Eller Media's reliance upon

Forman is misplaced to the extent that it relies upon those portions of *Forman* that go beyond the central test and that were overruled by this court in *Garvin*.

Applying this test, as articulated in *Forman* and clarified in *Garvin*, we conclude that the initiative prohibiting off-premises billboards was legislative in character. The billboard petition did not merely apply previously declared policies or laws; rather, it articulated an entirely new policy-it prohibited construction of new off-premise billboards throughout the City of Reno. Although the City of Reno had regulated off-premise advertising, prohibiting such advertising was a complete change in policy. [11] Additionally, unlike the situations in *Citizens for Train Trench Vote v. Reno* [12] and *Glover v. Concerned Citizens for Fuji Park*, [13] the billboard initiative does not concern a specific project, but enacts a city-wide change in policy towards off-premise advertising. As a result, we conclude that the billboard petition was legislative in character and a proper subject for an initiative petition.

11 *See* Reno Municipal Code 18.06.500 (2000).

[***10]

12 118 Nev. ___, *53 P.3d 387 (2002)*, *disapproved in part by Garvin*, 118 Nev. ___, *53 P.3d 387*.

13 118 Nev. ___, *50 P.3d 546 (2002)*, *disapproved in part by Garvin*, 118 Nev. ___, *50 P.3d 546*.

Accordingly, we affirm the district court's order denying the appellant's petition for a writ of mandamus.

1090
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SCENIC NEVADA, INC.

IN THE SECOND JUDICIAL DISTRICT COURT OF THE STATE OF NEVADA

IN AND FOR THE COUNTY OF WASHOE

SCENIC NEVADA, INC.,

Plaintiff,

vs.

CITY OF RENO, a political subdivision of the State of Nevada, and the CITY COUNCIL thereof,

Defendant.
_____/

Case No. CV12-02863

Dept. 7

FIRST AMENDED COMPLAINT TO INVALIDATE CITY OF RENO DIGITAL BILLBOARD ORDINANCE

COMES NOW Plaintiff Scenic Nevada, Inc., pursuant to NRS 30.040, and for its First Amended Complaint against Defendant City of Reno and the City Council thereof, to invalidate the City of Reno digital billboard ordinance, alleges:

NATURE OF THE CASE

1. The citizens of Reno passed an initiative prohibiting new billboard construction and banning issuance of any building permits for billboard construction. The citizens acted because their elected city officials would not. Since the citizens

passed the law, the Defendant City Council has flouted the citizens' vote by allowing billboard companies to "bank" and relocate each billboard that is removed and to construct new billboards using the banked receipts. Most recently, the Defendant City Council has adopted an ordinance that permits and expands construction of new billboards by allowing billboard companies to construct electronic, or digital, billboards, further violating the voter's mandate, sections of the Reno Municipal Code, the Constitution of Nevada, and provisions of state and federal law concerning billboards on public highways.

PARTIES

2. Plaintiff Scenic Nevada, Inc. is a non-profit Nevada corporation with a principal place of business at 150 Ridge Street, Reno, Nevada. Its principal activity is to educate the general public on the economic, social, and cultural benefits of scenic preservation by means of encouraging billboard and sign control, among other issues.

3. Scenic Nevada is an aggrieved party and has exhausted its administrative remedies before bringing this action pursuant to NRS 30.040.

4. Defendant City of Reno is a political subdivision of the State of Nevada located in the County of Washoe and the Defendant City Council thereof is a public body composed solely of elected officials.

RELIEF SOUGHT

5. Scenic Nevada seeks a judgment declaring void and of no force or effect the ordinance of the Defendant City of Reno adopted October 24, 2012 that approved a text amendment to the Reno sign code, allowing the new construction of off-premise electronic signs, also known as digital billboards.

FACTS

6. Following repeated attempts by Reno citizens to persuade the Reno Planning Commission and Reno City Council to enact stronger billboard controls, a grassroots, volunteer organization called "Citizens for a Scenic Reno" ("CFASR") formed on January 20, 2000.

7. CFASR filed nonprofit articles of incorporation with the Nevada Secretary of State on March 27, 2000.

8. On March 29, 2000, CFASR filed an Initiative Petition with the Reno City Clerk which stated: "New off-premise advertising displays/billboards in the City of Reno are prohibited, and the City of Reno may not issue permits for their construction."

9. On June 26, 2000 opponents filed an initiative petition which stated: "Off-Premise Advertising Displays (billboards) in the City of Reno shall only be permitted on property zoned commercial and industrial."

10. By July 25, 2000, CFASR had collected 7,381 valid signatures, above the required minimum of 6,790 signatures, which represented 15% of the votes cast in the previous citywide election, in order to qualify its initiative for the 2000 general election ballot. Ballot Question R-1 read:

> **"The construction of new off-premises advertising displays/billboards is prohibited, and the City of Reno may not issue permits for their construction."**

11. On July 29, 2000, opponents withdrew their initiative petition from circulation stating, "The dueling petition drive confused voters. The group will now concentrate its efforts on defeating the referendum."

12. CFASR spent about $3,000 in its successful fight for passage of Question R-1. Opponents, calling themselves "Nevadans to Save Jobs and Fight Extremism" spent $226,823 in a losing effort.

13. On August 24, 2000, the opponents, led by Eller Media Co. as plaintiff, filed a lawsuit asking the Court to remove the initiative from the ballot.

14. On October 14, 2000, the Hon. Jerome Polaha, District Judge, Second Judicial District Court, found in favor of the City and against Eller Media. The initiative remained on the ballot.

15. At the polls on November 7, 2000, of the 57,782 votes cast, 32,765, or 57%, voted in favor of Ballot Question R-1.

16. The results were certified by the Defendant City Council on November 14, 2000, and Ballot Question R-1 became Reno Municipal Code ("RMC") §18.16.902 (a), entitled "Restrictions on Permanent Off-Premises Advertising Displays". RMC §18.16.902 (a) states:

> **"The construction of new off-premises advertising displays/billboards is prohibited, and the City of Reno may not issue permits for their construction."**

17. Notwithstanding the mandate of the voters enacted into law as RMC §18.16.902 (a), on or about January 22, 2002, a majority of the Defendant City Council voted to amend the municipal code to create a billboard "banking" and relocation system, allowing a billboard company to remove a billboard in one location and "bank" the permit for up to 10 years (later increased to 15 years) until a new permitted location could be found. Using these "banked" receipts, a billboard company could construct a new billboard, often in a new location, where no billboard stood before, by obtaining a new building permit for the new billboard, contrary to the plain mandate of the voters in passing Ballot Question R-1.

18. The Defendant City Council's adoption of the "banking" and relocation system now codified in RMC §18.16.908 effectively repealed the ballot initiative barely 14 months after it was approved by the voters. RMC §18.16.908 purportedly gave staff of the Defendant City of Reno the authority to issue permits for new billboard construction when existing billboards are removed. Specifically, the ordinance provided that a billboard "may be relocated to a permitted location" as long as two permits are obtained; one to remove the old billboard and one to relocate the new billboard to a new location. The Defendant City Council again amended the municipal sign ordinance shortly thereafter, to formally establish a billboard permit "bank" and provide city staff a mechanism for tracking permits of removed billboards.

19. CFASR changed its name to "Citizens For A Scenic Northern Nevada" and in September 2002, adopted its current name, "Scenic Nevada".

20. Eller Media had appealed Judge Polaha's decision to the Nevada Supreme Court. On Dec. 17, 2002, the Supreme Court affirmed, in *Eller Media Co. v. City of Reno,* 118 Nev. 767, 59 P.3d 437 (2002), holding that the billboard petition was legislative in character, a proper subject for an initiative petition, and reflected a citywide change in policy towards off-premise advertising. On Feb. 6, 2003, the Supreme Court denied Eller Media's petition for rehearing.

21. During the years 2000 through 2012, all billboard lighting was required to be directed toward the billboard, and not toward the street. This requirement was codified in RMC§18.16.905 (l), which effectively prevented digital billboards in the City of Reno. In contrast to a traditional billboard where lights shine onto the display, the lighting of a digital billboard shines toward the public roads. RMC §18.16.905 (l) effectively made digital billboards illegal in the City of Reno by prohibiting light shining toward the public roads.

22. On February 13, 2008, a majority of the Reno City Council, led by Councilman Dwight Dortch, voted to direct Reno City staff to initiate a text amendment that would eliminate RMC §18.16.905 (l) and allow the construction and permitting of new digital billboards.

23. Digital billboards are computer controlled variable message electronic signs whose informational content can be changed or altered by means of computer-driven electronic impulses (including "light emitting diodes" or "LED" light bulbs). LED bulbs turn off and on every eight seconds to display a different advertisement in a sequence of eight rotating advertisements, day and night.

24. Digital billboard displays are by definition a new type of billboard, using new technology, and requiring mostly new construction and new building permits.

25. On April 25, 2008 the Community Development Department held a workshop to gather suggestions, ideas and recommendations for inclusion in the proposed draft digital billboard ordinance. Representatives from the billboard industry and Scenic Nevada attended.

26. At all times since the initial draft proposed in 2008, the text amendment for the proposed digital billboard ordinance was based upon, and indeed, dependent upon, the Defendant City Council's adoption of the 2002 ordinance creating the "banking" and relocation system, which purported to allow billboard companies to "bank" receipts for billboards and move them to new locations within the city.

27. Due to meddling by some City Council members, the proposed digital billboard ordinance became bogged down in a series of continuances. On March 12, 2009, the city staff circulated a draft ordinance with the intent of having it reviewed by the Planning Commission on April 1, 2009, but the draft was pulled by Director of Community Development John Hester, who explained to staff in an email that the draft's restrictions on digital billboards were not in accord with the intentions of Councilman Dortch. Dortch was pushing the interests of the billboard industry by seeking to lessen or even eliminate any new restrictions on new digital billboard construction.

28. A new draft was circulated to be reviewed at the May 6, 2009 Planning Commission meeting, but on April 29, 2009, the new draft was pulled from the May 6 agenda, because city staff reported that it was awaiting the results of a federal study on the safety impacts of digital billboards. Two weeks later, at the May 13 City Council meeting, members of the Defendant City Council instructed Hester that regardless of the safety studies, he was to move forward and present a draft ordinance to the Planning Commission.

29. On October 13, 2009 the Community Development Department released another draft ordinance that was to be reviewed at the November Planning Commission meeting. At the hearing on November 5, billboard company Clear Channel Outdoor, appearing by its attorney John Frankovich, requested a continuance, due to Clear Channel's objections to restrictions on digital billboards contained in the proposed draft. The Planning Commission voted to continue the public hearing, but not before members of Scenic Nevada were allowed to address the Commissioners and point out that the 2000

ballot initiative prohibited the city from allowing new billboard construction, including new construction of digital billboards.

30. Citizen opposition to new billboards remained strong. In April, 2011, Scenic Nevada commissioned a poll that asked registered voters within Reno a series of questions about traditional and digital billboards. The results showed that 55% of the voters were opposed to the Defendant City Council's effort to add text changes to the sign code allowing digital billboards within the Reno city limits. Further, 66% said they would not want to view a digital billboard from their home or office window; 80% said that Reno had enough or too many billboards; and almost 90% were concerned about distracted driving.

31. The proposed digital billboard ordinance did not resurface until May 24, 2011, when city staff held another stakeholders meeting at the Community Development office. Scenic Nevada attended and again spoke in opposition to the new ordinance, citing the prohibition against new billboard construction and adding that the direction to include digital billboards was moving the city farther away from the law contained in the ballot initiative.

32. On September 20, 2011 the Planning Commission held a public workshop on the proposed digital billboard ordinance. Scenic Nevada attended, testifying that the city's banking and relocation system violated the ballot initiative and that digital billboards are new construction, prohibited by city code and a further departure from the voters' intent to reduce billboard blight.

33. At the October 2011 Planning Commission meeting, Scenic Nevada was present during a discussion by commissioners who questioned whether the City should be proceeding with a draft billboard ordinance in light of the 2000 ballot initiative. Commissioners directed city staff to return at the next meeting with two alternative recommendations: one continuing the prohibition of digital billboards and one permitting digital billboards.

34. At the November 2, 2011 Planning Commission hearing on the draft ordinance, a motion to continue prohibiting digital billboards within the city limits based on the ballot initiative failed by a 2-3 vote. City staff then was directed to return with new changes to the draft ordinance.

35. On November 14, 2011, Scenic Nevada timely appealed the vote of the Planning Commission from the November 2nd hearing.

36. Prior to the December 2011 Planning Commission meeting, Scenic Nevada presented evidence and argument in writing, followed by testimony at the public hearing, that digital billboards would violate not only existing municipal code but state and federal law as well. In November 2011, the court in *Scenic Arizona v. City of Phoenix Board of Adjustment,* 268 P.3d 370 (Ariz.App. 2011) had issued an opinion that digital technology uses "intermittent lighting", which is prohibited adjacent to interstate and other highways. The Arizona court had stricken down a Phoenix ordinance that would have allowed the construction of digital billboards on grounds that the ordinance violated the proscription against intermittent lighting.

37. At the December Planning Commission meeting, Scenic Nevada also repeated that the banking system violated the voter initiative and should be abandoned instead of expanding its use by allowing digital billboards.

38. Based on the presentation by Scenic Nevada, Planning Commissioners postponed discussion of the ordinance and asked the city attorney for a legal opinion and report.

39. On January 4, 2012, after a lengthy public hearing extending past 10 p.m., with few members of the public still present, by a 4-2 vote, the Planning Commission recommended a draft digital billboard ordinance allowing new construction of digital billboards within the city limits.

40. On January 9, 2012, Scenic Nevada timely appealed the January 4, 2012 recommendation of the Planning Commission.

41. At the Feb. 8, 2012 public hearing before the Defendant City Council, Scenic Nevada appeared to present its appeals. Members of the City Council expressed dissatisfaction with the draft ordinance recommended by the Planning Commission, and postponed the public hearing as well as Scenic Nevada's appeal.

42. Instead of hearing Scenic Nevada's appeals, the City Council scheduled and held two more public workshops. Scenic Nevada attended both workshops (March 6 and April 25, 2012) and opposed adoption of the new ordinance on numerous grounds, including the violation of the 2000 voter initiative and the ban on intermittent lighting. Scenic Nevada also asked the city council to consider eliminating the billboard banking and relocation system to help reduce billboard blight.

43. After the workshops, members of the City Council and representatives of the billboard industry came to an understanding on how they wished to proceed and the City Council held a public hearing on the draft ordinance on July 18, 2012, where Scenic Nevada's appeal finally would be heard. Consistent with its opposition at hearings for the past four years, Scenic Nevada opposed the draft and presented arguments against its passage. The city council approved the first reading of the draft ordinance over Scenic Nevada's objections.

44. The second reading of the ordinance was scheduled for August 22, 2012. In a letter dated Aug. 16, 2012, Scenic Nevada opposed the draft, only to learn that the second reading was postponed because the Defendant City Council was considering substantial changes to the draft that had been made since the first reading.

45. Scenic Nevada opposed the substantially revised draft in a letter dated September 6, 2012, but when the revised ordinance came before the Defendant City Council for a "first reading" on September 12, 2012, the Defendant City Council approved it over Scenic Nevada's opposition.

46. On October 5, 2012, city staff notified representatives of the billboard industry and Scenic Nevada that there were more substantial changes to the draft and that another "first reading" was scheduled for October 10, 2012.

47. On October 10, 2012, Scenic Nevada appeared again to challenge the ordinance as violating the voter initiative, city code and the ban on intermittent lighting adjacent to highways. The Defendant City Council again approved the "first reading" of the ordinance and the second reading was scheduled for October 24, 2012.

48. The agenda for the October 24 meeting included a proposed moratorium and resolution to prohibit staff from issuing digital billboard building permits. According to the city attorney, in the event of a lawsuit and subsequent court decision invalidating the new digital billboard ordinance, a moratorium on issuing new permits for billboards would avoid the expense of having to remove digital billboards that were subsequently found by a court to be unlawfully constructed.

49. Scenic Nevada appeared at the City Council meeting on October 24, 2012, to protest the adoption of the digital billboard ordinance but also to support the moratorium, which obviously would be beneficial to the citizens of Reno in light of Scenic Nevada's intention of filing the instant complaint in this action. Scenic Nevada supported its position with approximately 50 letters in support of the moratorium. No one in attendance at the City Council meeting opposed a moratorium. In yet another twist, without explanation to Scenic Nevada or the public, the Defendant City Council did not adopt a moratorium. Instead, the Defendant City Council approved the second reading of the ordinance along with an effective date of January 24, 2013.

50. Scenic Nevada's objections to the digital billboard ordinance are long-standing and consistent. During the past four years, as a result of Scenic Nevada's unswerving attention to the important public issue of digital billboards, the City Clerk has a massive administrative record. The physical size of the administrative record amounts to thousands of pages of evidence, including staff reports, public hearing recordings and transcripts, workshop presentations, letters, emails, photographs, videos, scientific studies, power point presentations, voter survey results, related court cases, and other evidence. All of the evidence has been part of one or more presentations, communications, workshops, hearings or appeals involving city staff, City Clerk,

Planning Commission or the Defendant City Council, and shall be referenced and utilized by Scenic Nevada in the briefing of this action on the merits.

VIOLATION OF THE VOTER INITIATIVE

51. Scenic Nevada is the author and proponent of the billboard initiative adopted as RMC§18.16.902. Scenic Nevada has devoted more than four years to exhausting its administrative remedies by opposing the new digital billboard ordinance in workshops, public hearings and appeals and is an aggrieved party.

52. The Nevada Constitution guarantees the right of the citizens to resort to the initiative process where their elected officials have failed to act. Nevada Constitution Article 19, §2(1) states:

> Notwithstanding the provisions of Section 1 of Article 4 of this Constitution, but subject to the limitations of Section 6 of this Article, the people reserve to themselves the power to propose, by initiative petition, statutes and amendments to statutes and amendments to this Constitution, and to enact or reject them at the polls.

53. Once the citizens have passed an initiative, the governing body of the local government is prohibited from amending, annulling or repealing that initiative law for a period of not less than three (3) years. Nevada Constitution Article 19, §3, states, in pertinent part:

> If a majority of the voters voting on such question at such election votes approval of such statute or amendment to a statute, it shall become law and take effect upon completion of the canvass of votes by the Supreme Court. An initiative measure so approved by the voters shall not be amended, annulled, repealed, set aside or suspended by the Legislature within 3 years from the date it takes effect. If a majority of such voters votes disapproval of such statute or amendment to a statute, no further action shall be taken on such petition.

54. The same initiative powers that the citizens possess with respect to statutes and constitutional provisions also can be exercised with respect to municipal ordinances. Nevada Constitution Article 19, §4 states:

> The initiative and referendum powers provided for in this article are further reserved to the registered voters of each county and each municipality as to all local, special and municipal legislation of every kind in or for such county or

municipality. In counties and municipalities initiative petitions may be instituted by a number of registered voters equal to 15 percent or more of the voters who voted at the last preceding general county or municipal election. Referendum petitions may be instituted by 10 percent or more of such voters.

55. The voter initiative of 2000, codified as RMC §18.16.902, prohibited new construction of billboards and banned the issuance of building permits for their construction. Since RMC §18.16.902 resulted from an initiative petition, the Defendant City Council had no authority to "amend, annul, repeal, set aside or suspend" the voter initiative for a period of three years following its adoption on Nov. 7, 2000.

56. By adopting the "banking" and relocation system in 2002, which allowed billboard companies to "bank" receipts for existing billboards and obtain building permits for billboards in new locations, the Defendant City of Reno and City Council violated the rights of Scenic Nevada and the citizens of Reno under the Nevada Constitution by amending, annulling, repealing and setting aside the voter initiative codified as RMC §18.16.902 less than three years after the initiative had passed.

57. The digital billboard ordinance of 2012 is entirely dependent upon the unconstitutional underpinning of a "banking" and relocation system adopted by the Defendant City Council in violation of Article 19 of the Nevada Constitution. Without the unconstitutional banking and relocation system embedded in the new ordinance, there can be no digital billboard ordinance, and the ordinance therefore must be invalidated in its entirety.

58. Scenic Nevada is entitled to a judicial determination that the digital billboard ordinance is unconstitutional.

59. Scenic Nevada is entitled to a judgment and decree that the digital billboard ordinance is void and of no force and effect as a matter of law.

VIOLATION OF HIGHWAY BEAUTIFICATION ACT

60. The Federal Highway Beautification Act of 1965 provides that billboards should be controlled to "protect the public investment in such highways, to promote the

safety and recreational value of public travel, and to preserve natural beauty." 23 U.S.C. § 131(a) (2002).

61. The Nevada Legislature adopted NRS 410.220 to 410.410 requiring Nevada to enter into a federal-state agreement, or "FSA" with the federal government. In 1972, Nevada entered into an FSA to ensure continued federal funding of highways.

62. Nevada statutes state that the regulations in the FSA must be consistent with federal highway standards, on "spacing, size and lighting."

63. Nevada's FSA states that billboards: "shall not include or be illuminated by flashing, intermittent or moving lights (except that part necessary to give public service information such as time, date, temperature, weather or similar information) and shall not cause beams or rays of light to be directed at the traveled way if such light is of such intensity or brilliance or is likely to be mistaken for a warning or danger signal as to cause glare or impair vision of any driver, or to interfere with a driver's operation of a motor vehicle."

64. In addition, regulations found in NAC 410.350 state: "Signs must not include or be illuminated by flashing, intermittent or moving lights" and also electronic signs may be approved, "if the sign does not contain flashing, intermittent or moving lights ...", similar to the language upon which the court in *Scenic Arizona* declared the Phoenix ordinance invalid.

65. In addition, NRS 410.220 (b) states:

> The erection and maintenance of such advertising in such locations must be regulated:
>
> (1) To prevent unreasonable distraction of operators of motor vehicles, confusion with regard to traffic lights, signs or signals and other interference with the effectiveness of traffic regulations;
>
> (2) To promote the safety, convenience and enjoyment of travel on the state highways;
>
> (3) To attract tourists and promote the prosperity, economic well-being and general welfare of the State;

(4) For the protection of the public investment in the state highways; and

(5) To preserve and enhance the natural scenic beauty and aesthetic features of the highways and adjacent areas.

66. The City of Reno digital billboard ordinance is void and should be declared of no force and effect because it violates Nevada law as adopted by the FSA, for the same reasons enunciated by the court in *Scenic Arizona v City of Phoenix Board of Adjustment*, 268 P.3d 370 (Ariz.App. 2011).

VIOLATION OF RENO SIGN CODE

67. RMC §18.16.901(a) addresses the need to restrict billboards to ensure public safety, preserve scenic beauty and protect the environment. The ordinance states:

> Recognizing that the City of Reno is a unique city in which **public safety, maintenance, and enhancement of the city's esthetic qualities** are important and effective in promoting quality of life for its inhabitants and the City of Reno's 24-hour gaming/ entertainment/ recreation/ tourism economy; recognizing that the promotion of tourism generates a commercial interest in the environmental attractiveness of the community; and recognizing that the visual landscape is more than a passive backdrop in that it shapes the character of our city, community, and region, the purpose of this article is to establish a comprehensive system for the regulation of the commercial use of off-premises advertising displays. It is intended that these regulations impose reasonable standards on the number, size, height, and location of off-premises advertising displays to prevent and alleviate needless distraction and clutter resulting from excessive and confusing off-premises advertising displays; to safeguard and enhance **property values**; and to promote the general welfare and **public safety** of the city's inhabitants and to promote the maintenance and enhancement of the city's **esthetic qualities** and improve the character of our city. It is further intended that these regulations provide one of the tools essential to the preservation and enhancement of the environment, thereby protecting an important aspect of the economy of the city which is instrumental in attracting those who come to visit, vacation, live, and trade and to permit noncommercial speech on any otherwise permissible sign.

(Emphasis added)

68. As the administrative record proves, at every public hearing and workshop and in written testimony, members of Scenic Nevada offered evidence that digital billboards mar scenic mountain views, blight neighborhoods, lower property values, harm

the environment by wasting energy, and cause safety issues for drivers on public streets and highways.

69. The Defendant City Council has no evidence to rebut or refute the fact that digital billboards are harmful to the citizens of Reno, including injurious to public safety, property values and esthetics.

70. Indeed, in hearing after hearing, Planning Commissioners and City Council members alike reaffirmed that billboards, especially digital billboards, cause all of the harms to which Scenic Nevada testified, and these city officials and elected representatives declared over and over that nobody wants billboards in Reno because they are a blight on the city.

71. Based on the undisputed evidence in the administrative record that billboards are contrary to the general welfare, including the admissions by members of the Planning Commission and City Council that nobody wants the myriad of harms associated with billboards, Scenic Nevada is entitled to a judgment that the digital billboard ordinance exceeds the powers of the Defendant City Council in that it adopts a law that is concededly unhealthy, unsafe, unaesthetic, anti-environmental and injurious to public welfare.

72. Not possessing the nerve to admit that they were repealing the voter initiative, the Defendant City Council left §18.16.902 (a) intact. Thus, the current ordinance retains RMC§18.16.902 (a), which states:

The construction of new off-premises advertising displays/billboards is prohibited, and the City of Reno may not issue permits for their construction. (Approved by the voters at the November 7, 2000, General Election, Question R_1 – The results were certified by the city council on November 14, 2000).

73. New digital billboards are "new off-premises advertising displays" for which the billboard industry must apply for and obtain "permits for their construction." In combination with the banking and relocation system, the digital billboard ordinance of 2012 creates a contradiction in which the voter's mandate, as expressed in

RMC§18.16.902 (a), that no permits shall be issued and no construction shall take place, is in the same code as the new digital ordinance allowing permits for digital billboards. Under such circumstances, the voter's initiative addresses with specificity the prohibition on issuing permits for new construction of billboards, and the voter initiative is entitled to prevail.

74. Additionally, the definitions section of the sign code states advertising "display means any arrangement of materiel or symbols erected...for the purpose of advertising...This definition shall include signs, **billboards**, posters..." and the code further clarifies by stating: **"Flashing sign means a sign which uses blinking, flashing or intermittent illumination, either direct, or indirect or internal."** (RMC §18.24.203.4570, emphasis added).

75. Based on these definitions, the digital ordinance violates city code with respect to flashing or intermittent lights in that RMC §18.16.905(n)(5) states that: "**Displays shall not flash** or move during a display period." (Emphasis added). Flashing is defined as intermittent illumination, which includes digital billboards, as established in the *Scenic Arizona* case. Accordingly, in addition to violating RMC §18.16.901 and 902(a) of the off-premise sign code, the digital ordinance violates the law against LED bulbs using flashing, intermittent lights to display advertising messages.

WHEREFORE, Plaintiff Scenic Nevada, Inc. requests:

1. A judgment declaring that the October 24, 2012 vote of the Reno City Council adopting Ordinance No. 6258 entitled "Digital Off-Premises Advertising Displays, including Light-Emitting Diode (LED)" is unlawful, void, and of no force and effect, and that the ordinance purportedly adopted thereunder is unlawful, void, and of no force and effect;

2. That the Defendant City of Reno be ordered to prepare, index and produce to Scenic Nevada the complete administrative record of all papers, photographs, recordings, communications, notes, emails, letters, faxes, memos, files and other

documents and evidence maintained, collected or compiled by any and all public officials and their agents relating to the digital sign ordinance from 2008 to present;

3. Costs of suit;

4. Reasonable attorneys fees; and

5. All other relief, which the court deems just, and proper.

Dated this 15th day of April, 2013.

LAW OFFICES OF MARK WRAY

By _____
MARK WRAY
Attorney for Plaintiff SCENIC NEVADA

VERIFICATION

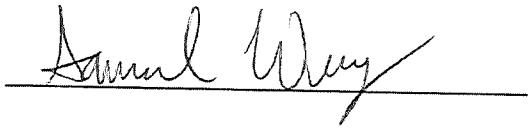
I, Mark Wray, am the attorney for the Plaintiff. I have read the foregoing First Amended Complaint and am familiar with its contents. The facts stated in the foregoing Complaint are true of my own knowledge, information and belief. I declare under the penalty of perjury under the laws of the State of Nevada that the foregoing is true and correct and that this verification was executed on April 15, 2013 at Reno, Nevada.

MARK WRAY

CERTIFICATE OF SERVICE

The undersigned employee of the Law Offices of Mark Wray certifies that a true copy of the foregoing document was sealed in an envelope with first class postage prepaid thereon and deposited in the U.S. Mail at Reno, Nevada on 4/15/13, 2013 addressed as follows:

Marilyn Craig, Asst City Attorney
Reno City Hall
One East First Street
Reno, NV 89501



AFFIRMATION

The undersigned certifies that the foregoing document does not contain the Social Security number of any person.

DATED: April 15, 2013

MARK WRAY

CITIZENS FOR A SCENIC NORTHERN NEVADA

THE BILLBOARD CONTROVERSY IN RENO

Introduction

In late 1999 a billboard company filed a lawsuit against the City of Reno, claiming that the Billboard Ordinance then in effect allowed too much discretion to those charged with its implementation and, therefore, the ordinance violated the company's rights under the First and Fourteenth Amendments. With a lawsuit hanging over their heads, City Council members were ready to listen attentively to the billboard company's lobbyists as to how best to revise the troublesome ordinance. However, this time, things didn't work out quite as planned by the sign people. A small group of Reno citizens banded together and crashed the party. What follows is the story of Citizens for a Scenic Reno. It is, we believe, a classic example of how the billboard industry uses lawsuits and massive amounts or money to cow citizens and politicians alike to achieve its ends.

Charles F. Swezey

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April 1, 2002

THE BILLBOARD CONTROVERSY IN RENO

Background

It all began in late 1999 with a dispute between the City of Reno and a billboard company, Outdoor Media Dimension (OMD). That company came to Reno and signed leases for 35 new billboards. Reno, following its Billboard Ordinance as amended in 1989, only allowed one of the new billboards and rejected the other 34 because the proposed sites were not in Industrial zoned areas. OMD then filed suit in the U.S. District Court to strike down Reno's existing Billboard Ordinance, claiming it gave the City too much discretion in the disposition of billboard applications. OMD contended that the existing ordinance led to arbitrary decisions on the part of city staff to the point it violated OMD's rights to free speech and due process. OMD's position was that the ordinance did indeed permit new billboards in Commercial zones, as well as Industrial zoned areas of the city. About the same time, Donrey Outdoor Advertising was appealing the rejection of its application for new billboards along I-395 South in an IC zone.

A lawsuit against the City was enough to spur the Reno City Council into action. In December 1999, the City Council established a Billboard Sub-Committee to decide what to do about the existing Ordinance. The Sub-Committee was composed of five of the seven members of the City Council plus the City's Planning Commissioner. It was charged with preparing revisions to the 1989 Ordinance and presenting them to the Council by March 1, 2000, clearly a "fast-track" process. There was no provision made for public input. Doug Smith, a former member of the Reno City Planning Commission and one who helped draft the 1989 revisions to the city's Billboard Ordinance, smelled a rat. Smith and other Reno residents voiced their concerns over the makeup of the Sub-Committee, the "fast-track" nature of the process and what they considered the obvious deference paid to the advice provided to

the Sub-Committee by lawyers and lobbyists hired by and representing the billboard interests. Of course, the pending lawsuit that these same lawyers had filed against the City could explain some of that deference. Their objections ignored, Smith and his associates decided to act.

On January 18, 2000, at a breakfast meeting at a local restaurant, Doug Smith and other concerned residents formed "Citizens for a Scenic Reno." Doug Smith was chosen as chairperson; other officers were elected and initial donations were made by several in attendance. Its first order of business was to turn out as many people as possible at the Billboard Sub-Committee meeting on January 31, 2000 to speak against the industry's proposed changes to the Billboard Ordinance. One proposal, for example, would have allowed a 300% increase in the area within the city on which billboards could be erected without any public input. CFASR, on its part, began a media campaign that included letters to the editor, public interest television programs, and presentations to the seven Neighborhood Advisory Boards (NABs) in the five wards of the City of Reno.

At the January 31, 2000 meeting of the Billboard Sub-Committee, the battle was first joined. Needless to say, the billboard industry representatives and CFASR were very far apart in their respective positions. It was at this meeting that CFASR first advanced the concept of no more new billboards in the City. Moreover, it was our view that all billboards should be a conditional use, not a permitted use, and a Special Use Permit should be required on all billboards. The billboard industry representatives were stunned. This was their first organized opposition. The Sub-Committee reluctantly decided that a new ordinance needed to be written and called on interested parties to submit their proposals at its next meeting on February 28, 2000. Four widely contrasting proposals were submitted at that meeting, including our draft ordinance. Resentful that an upstart group of citizens would stand in the way of a quick resolution of this issue, some Sub-Committee members began to show where their sympathies lay. We were treated as a nuisance factor in the proceedings. The same thing happened at the March 27, 2000 meeting of the Sub-Committee. It was clear to us by that time that, if nothing was done, the billboard industry's position would very likely prevail in the end. Some City Council members were pushing for a quick resolution to this issue because those up for re-election did not want billboards to be an issue in their campaigns.

Immediately following the March 27th meeting, Doug Smith and his friends adjourned to a nearby pub to discuss things. The feeling in the group was that they were fed up and they weren't going to take it anymore. It was decided that evening to embark on a petition drive to let the Reno voters decide. No time was wasted. In less than a week, the group was collecting petition signatures at a Home and Garden Show at the Reno/Sparks Convention Center.

The Petition Drive

CFASR filed a non-profit Article of Incorporation with the Secretary of State's office on March 27, 2000. With a membership of about 25 individuals and a bank balance of around $500, we organized for a drive to secure the required 6,790 signatures of Reno registered voters (15% of the votes cast in the previous city-wide election) by the deadline of July 31, 2000.

The initiative petition was filed with the Reno City Clerk on March 29, 2000. It read as follows: "The construction of new off-premises advertising displays/billboards is prohibited, and the City of Reno may not issue permits for their construction." This wording was specifically intended to avoid a takings claim by the industry and only dealt with new billboards.

To make allowances for invalid signatures, we set as our goal 10,000 signatures. The drive would begin April 1 and end July 31, the deadline set by the City Clerk's office. Therefore, we had 122 days to secure 10,000 signatures. That worked out to about 574 signatures per week each week.

On July 25th, CFASR delivered 9,561 signatures to the City Clerk's office. The Office of the Registrar of Voters soon thereafter validated 7,381 signatures, a surplus of 951. On August 14th, the City Clerk's office certified the sufficiency of the petition. Ten days later, on August 24th, the billboard industry filed a Strategic Lawsuit Against Public Participation (SLAPP) lawsuit against the City of Reno and CFASR for a writ of mandamus to remove the

initiative from consideration on the ballot in the upcoming general election. The industry claimed that the City failed to follow required procedure in certifying the petition and signatures were sufficient to place the initiative on the ballot. More importantly, the industry claimed that the ballot language was an "administrative act" and not legislation as required by the Nevada Constitution. The CFASR acted immediately to obtain legal counsel, the prominent firm of Woodburn and Wedge, who opposed the industry's last ditch effort to keep the proposed billboard restriction from the voters. They failed in every respect when Judge Polaha, of the Second Judicial District of Washoe County, Nevada, ruled in favor of CFASR and the City of Reno. He ruled that CFASR and the City of Reno substantially complied with all legal requirements to place the initiative on the ballot and ruled the initiative was legislation, not an administrative act. The vote was on!

Eller Media/Clear Channel Communications has appealed the decision of the Second Judicial District Court order denying the writ of mandamus to the Nevada Supreme Court. The case was still pending as of March 2002.

The fight over ballot question R-1 began in earnest as soon as the initiative was certified on August 14th. From that time until the election the billboard industry pulled out all the stops. The billboard industry spared no expense to defeat the initiative on the legal front and with the voters. They sent a slick and misleading mailing to all Reno households. They created a fiction with no basis, whatsoever, that if the initiative was approved by the voters, businesses would fail and 5,000 jobs would be lost. They claimed, by name, non-profits would be hurt due to lost billboard placement. They claimed that passage of the initiative would result in all billboards being eliminated. There was no tale too tall to tell, for the industry which repeatedly labeled the organizers as anti-business, anti-jobs "extremists". They even started a counter petition drive using hired signature gatherers. The industry's petition drive was publicly exposed as clearly fraudulent, so they withdrew it.

Their campaign slogan was "Nevadans to Save Jobs and Fight Extremism." Eller Media reported spending $226,823 to defeat R-1. CFASR spent a total of $3,221. Another way to look at it is that CFASR spent 9 cents per "Yes" vote while the billboard industry spent 9 dollars per "No" vote. CFASR was outspent by a ratio of 70 to 1 by the industry.

On November 7th, 2000, R-1 was approved by the voters of Reno. The vote was 32,765 to 25,017 (57% to 43%).

Looking Back On The Petition Drive

Core Group

A major reason we were successful is that we had a solid core group within our organization comprised of people who could be counted upon to be at their station on time and for as long as they had committed. Getting out to the supermarket, setting up the tables and easels and approaching strangers in all kinds of weather to sign the petition is not easy or fun work.

Leadership

A second major reason for our success was the outstanding leadership our organization has in Doug Smith. This was his inspiration and his success really. The rest of us were inspired by him to press forward and stay with it until our cause prevailed.

Unity

The organization has been in existence now since January 2000, just over two years. It has functioned all that time with an unusual degree of unity.

Timing

The Outdoor Media Dimension lawsuit against the city in late 1999 compelled the City Council to take a look at the City's "restrictive" billboard regulation. Then, CFASR's intervention in early 2000 prevented a "slam dunk" disposition of the matter by a City Council

replete with industry sympathizers. When it became very clear to us what was afoot, we had the time to carry out a successful ballot initiative petition drive in time for the general election of 2000.

Industry Dirty Tricks

Dueling Petition

When the billboard forces realized that Billboard Ballot Question R-1 might possibly succeed, they filed a "dueling" petition on July 6, 2000 which stated: "off-premise advertising displays (billboards) in the City of Reno shall only be permitted on property zoned commercial and industrial." The actual effect of this wording would have been to increase the area available to new billboards, but that part wasn't mentioned to prospective signers. These people were assured by those circulating the petition that its purpose was to limit the number of billboards. The billboard people hired a company in Sacramento to blanket the City with signature gatherers who were paid $2 or $3 per signature. These people had other petitions as well, such as the "Defense of Marriage" petition. With the City's deadline on the ballot initiatives a month away, there was no prospect for this initiative to succeed. The real purpose of it was to confuse Reno voters (which it did) and to slow down our own efforts in acquiring the necessary numbers of signatures (which it did). When our petition was certified by the City, the billboard people withdrew their phony petition.

Truth Squads

Industry flacks would approach our tables and displays and deliberately pick arguments with us in order to scare off prospective signers. Some of them would have the audacity to tell prospective signers not to sign our petition. They would call us liars and extremists. On at least one occasion, one of them went into the store and falsely complained to the manager that one of us had pursued him into the store. This resulted in our being asked to leave.

Petition Circulation - Local People Do It Better

We want to emphasize that our entire signature-gathering effort was done on a volunteer basis. All of the petition circulating was done by members of CFASR or Reno residents known to us. This gave the correct impression that here was a group of local people trying to do something for the community. We wore 3" diameter badges inscribed with "NO MORE BILLBOARDS". People looked for our badges to make sure they were signing the right petition. In our opinion, we were a very believable group.

Non-Partisan

There is nothing political about the distaste for billboards among Americans. The absence of a political aspect in the petition drive was a big positive for us during that election cycle.

Display

At every location, we set up an easel and two tables for our petitions and other materials. The easel was used to display a map of Reno showing proposed locations of new billboards. We used to great effect pictures of local billboards advertising breast implants and liposuction.

Successive Approximation

A technique for weekly recomputing the additional signatures required was employed. At the end of each week, we would calculate the total number of signatures obtained thus far. We then subtracted that number from 10,000 and divided the result by the number of days remaining in the drive. This told us immediately if we were ahead or if we were losing ground. If the latter, we would try to schedule more petition gatherers during the following week. We strongly recommend doing this weekly recomputation.

Campaign 2000

With a limited budget for reaching voters, we had to make maximum use of low-cost campaign methods. These included: letters to the editor, ads in alternative local newspapers, TV talk shows, radio shows, appearing before service organizations, senior groups and Neighbor Advisory Boards for the five city wards. We created a website (www.scenicnorthnevada.org) and compiled an extensive E-mail list (currently almost 300 addresses). To mobilize our supporters, we issued "Billboard Alerts" by E-mail. Another technique was the press conference which worked even better when held outside with billboards as a background. Last, but not least, we had behind-the-scenes help from friendly people in the media.

The billboard industry's campaign against R-1 consisted primarily of deception and scare tactics. The biggest exaggeration was the assertion that passage of R-1 would cause the loss of 5,000 jobs directly or indirectly related to the billboard industry. Also, they led voters to believe, incorrectly, that R-1 banned all billboards. They tried hard to show that the health of Reno's tourism industry is tied directly to billboards. They claimed that with fewer billboards, local non-profit organizations would be hurt because there wouldn't be any billboard space for them.

Within the limited resources available to us, we were quick to answer their charges. It is absolutely necessary in this kind of campaign to retort quickly and aggressively to every lie and distortion put out by the billboard people.

We were honored and pleased to welcome Meg Maguire, President of Scenic America, to Reno in October 22-24, 2000. Meg gave a presentation on billboard blight at a Seminar Series at the University of Nevada, Reno. She toured the arterials where billboards are concentrated and took pictures which she used in her presentations. Meg's presence here just two weeks before the election gave us a real morale boost and we appreciated her visit very much.

Events Since Election 2000

The Relocation Issue

For all of 2001 the struggle over a new billboard ordinance for the City continued. All parties agreed that the effect of the voter-approved initiative established a cap of 289 billboards with the City limits (that being the number of billboards extant or approved). However, the most acrimonious debate occurred over the question: Is a relocated billboard a new billboard? That is, if an old billboard is torn down, does this give the companies the right to install in its place a new billboard in a better location? Since the wording of the ballot initiative did not address relocation per se, the industry lobbyists argued that "relocation" is not prohibited by the initiative. In short, they were saying a relocated billboard is not a new billboard. Of course, CFASR countered that a relocated billboard is most certainly a new billboard and that the industry's position was completely contrary to the will of a majority of Reno voters in the last election.

In January 2002, the Reno City Council sided with the industry and approved a new Billboard Ordinance that places a cap of 289 billboards but allows them to be relocated, thus locking in blight. The City Council focused on the issue of whether the initiative prohibited relocation. A majority, caving in to the industry, determined that it did not expressly prohibit relocation. They would not even discuss the fact that even if the initiative did not prohibit relocation, as representatives of the people, the City Council could prevent relocation.

Dealing with the relocation issue is crucial, because if you lose this battle, then your successful ballot initiative is weakened. This is what happened in Reno.

To assist other communities that may be considering a "no new billboard" ballot petition drive, we are including in the following four paragraphs a portion of a letter dated July 9, 2001, from our attorney, Buffy Dreiling, to Laura Tuttle, the Reno City Planning Manager.

> Simply stated, relocation of off-premises advertising displays is prohibited by the initiative that was passed by the voters of the City of Reno in November 2000. The initiative states, "The construction of new off-premises advertising displays/billboards is prohibited." In the arguments for passage it is

stated, "The purpose of this Initiative Petition is to preserve and enhance the natural scenic beauty of the Reno area . . ." The term "new" means a display that was not there before. If the initiative was for the sole purpose of placing a cap on the number of billboards, the language would have read, "The construction of more off-premises advertising displays/billboards is prohibited." Citizens for a Scenic Northern Nevada take the position that a new off-premises advertising display is one that is in a location where there was not one before, one that is of greater size that the one previously in existence, or one that is greater height than the previous one.

By the way of example, suppose citizen A walks out his front door this morning and he can see Mount Rose in the distance, unobstructed by a billboard. However, tomorrow he walks out his front door and in the middle of his view of Mount Rose is a 672 square foot billboard in the near distance. To him and to everyone else who goes by, this billboard is new. It does not matter that a billboard was removed from Fourth Street.

The off-premises advertising display industry (hereinafter "industry") is urging the Planning Commission and City Council to view the initiative as merely a cap on the number of billboards. This interpretation is directly contrary to the language of the initiative. The industry refers to alleged comments made by some members of the Citizens for a Scenic Reno in promoting the initiative in which the focus was on a cap of initiative itself. Although the arguments in favor of passage do indicate that there would be a cap on the number of billboards, the arguments do not state that a cap is the only effect. To the contrary, the Rebuttal by Opponents, which was crafted largely by the industry representatives, makes it clear that the initiative is not just a cap. This initiative was passed by 57% of the voters in the City of Reno. This sends a clear message to the city leaders.

Permitting a "cap and relocate" system would be contrary to the wishes of the citizens of Reno. The effect of prohibiting the construction of new billboards is to prevent billboards from being constructed in areas that do not already have billboards. It would be the natural desire for the industry to want to replace existing billboards in the older parts of town and relocate to the newer areas where new shopping centers and other commercial business are located. This is exactly what the voters did not want. The voters have accepted the current billboards in their current locations but have directed the City of Reno to not permit billboards in any other locations.

Judicial Appeal

The billboard interests appealed Judge Polaha's October 14, 2000 favorable ruling on the legitimacy of the ballot initiative R-1 to the Nevada Supreme Court. Their hope here, of course, is that Nevada's highest court will do what they were not able to do with a campaign expenditure of close to a quarter million dollars.

They undoubtedly also hope that the legal bill will become so high CFASR will no longer be able to defend itself. Since the industry intimidates with lawsuits (5 in Reno alone within a couple years) it is vital to find sympathetic attorneys. Even with reduced rates, the

unpaid legal bill will be many tens of thousands of dollars. Although it is clear that a citizen group such as CFASR cannot pay the bills, sympathetic attorneys will continue working to prevent an injustice.

State Legislature

The Nevada State Legislature held its biennial session during the first half of 2001. Two bills of interest to CFASR were introduced and passed:

Senate Bill 265

The Nevada Legislature enacted SB 265, drafted and introduced by the Nevada Outdoor Media Association (NOMA), which limits local control of billboards by prohibiting amortization. The City of Henderson was in the eighth year of a ten-year amortization schedule to remove approximately 75 billboards. As a consequence of this legislation, any billboards removed in the State of Nevada henceforth will require the owners to be paid just compensation, the law requiring the compensation to be calculated in a way most favorable to the industry.

Assembly Bill 443

Assemblywoman Vivian Freeman (Reno) introduced AB443 in response to problems that CFASR encountered while collecting signatures for its initiative petition. We were not allowed to use any public buildings at any government level. Also, we were harassed on occasion by the opposing side. With the passage of AB443, citizens may circulate petitions on city, county or state property after first gaining permission from a supervisor. Enforcement of this law rests with the Office of the Secretary of State. In addition, that office is charged with developing a code of ethics which would govern the circulation process.

CFASR Changes Name

At its monthly meeting on May 21, 2002, the Board of Directors approved a motion to change the name of the organization to: Citizens for a Scenic Northern Nevada (CFASNN). This larger area of coverage enables us to apply a county-wide approach to billboard control and other scenic issues within the Reno-Sparks population center. CFASNN now represents

the northern half of Nevada, which includes 12 of Nevada's 17 counties. Also, we anticipate that eventually there will be established a counterpart organization to CFASNN representing the southern half of the State.

Tax-Exempt Status

In a letter from the IRS dated September 28, 2001, CFASNN was granted tax-exempt status under the provisions of Section 501(c)(3) of the Internal Revenue Code.

Attachments

Reno City Planning Commission

WORKSHOP

MINUTES

Tuesday, September 20, 2011 ~ 5:00 p.m.

Reno City Hall – Council Chambers

One East First Street, Reno, Nevada

MEMBERS

Kevin Weiske, Chair
Dennis Romeo, Vice-Chair
Doug Coffman
Patrick Egan
Max Haltom
Dagny Stapleton
Jason Woosley

I. PLEDGE OF ALLEGIANCE

Chair Weiske led the Pledge of Allegiance.

II. ROLL CALL

Chair Weiske called the meeting to order at 5:03 p.m. A quorum was established

PRESENT: Doug Coffman, Patrick Egan, Max Haltom, Dennis Romeo, Dagny Stapleton, Kevin Weiske and Jason Woosley.

ABSENT: None.

Marilyn Craig – Deputy City Attorney, was also present.

Chair Weiske stated the purpose of this workshop is for the Planning Commission and the City of Reno Planning Staff to gather information regarding the future of electronic billboards in the City of Reno. It is not to make a recommendation to the City Council or to take a vote. It is not to discuss on-site building or property signage.

III. PUBLIC COMMENT - This item is for either general public comment or for public comment on an action item. If commenting on an action item, please place the Agenda Item number on the Request to Speak form.

None.

Chair Weiske asked if there was a common spokesman for the billboard industry.

Aaron West – Clear Channel Outdoor, stated that he would be speaking on Item No. VII of the agenda and would be the only one presenting.

Lori Wray – Scenic Nevada, stated that Chris Wicker and Mark Wray would be speaking on behalf of Scenic Nevada.

Chair Weiske stated that he would allow 30 minutes from each group to make their presentations combined or individual. Public Comments will be allowed after the break. The general public will be allowed 3 minutes each for their comments. The meeting will be stopped at 8:00 p.m. Another meeting will be scheduled if more time is needed.

when someone asks about construction of new billboards going up behind my business when there was a ballot question prohibiting construction of off premises advertising displays/billboards. That is the relocation policy enacted by City Council. If the Scenic Nevada group had funds, we would have taken it to court at that time, but we don't have unlimited funds as the billboard industry seems to have.

Marilyn mentioned that these billboards would be relocated and the same billboard reconstructed somewhere else. With all due respect, that is not true. A new billboard is constructed at the new location. You have all seen the new billboards go up with sturdy single pillar steel structures that require a structural permit and a permit from the City of Reno. They were put in place where no billboards were ever put before. It is a clear violation of the ordinance.

Digital billboards were prohibited because it requires lighting of sign to be oriented toward the display. The more important restriction on the construction of billboards is back in the ballot question "Construction of new off premises advertising displays/billboards is prohibited and the City may not issue permits for their construction".

If somebody comes before this board and asks to construct a digital billboard, and they are going to tear down an existing billboard and construct a digital billboard, how is that not a new off premises advertising display? It becomes a completely different type of advertising display which defies logic and the English language. City ordinance 18.16.902(a) absolutely prohibits construction of digital billboards. If the Planning Commission was to devise an ordinance that would allow construction of digital billboards, setting forth all of the different conditions, such as flip times, lumens of light, exchange rate and size of display, that is going to be a new off premises advertising display/billboard, and that is prohibited by Reno city ordinances.

I am here to ask you and give you my opinion that digital billboards should be a non starter unless you change the ordinance that was enacted by the City of Reno. If you are going to do that, the Planning Commission should be honest, and say well this is a new time and we are going to go against the will of the voters and enact a new ordinance and throw out the one passed by the citizens in 2000. The City Council should take the same bull by the horns. I think it is a travesty for the Planning Commission or the City Council to try to pretend that digital billboards are not new off premise advertising displays/billboards because they are prohibited under current law by ordinance as voted by the citizens of Reno.

Mark Wray, attorney by profession in Reno, spoke next. He is a civil business lawyer and also a member of Scenic Nevada. He has attended workshops with billboard industry reps and Scenic Nevada and others. Questions by city staff by Ms. Hanson was series of questions, such as do we want electronic billboards, where, spacing, caps, exchange rates, standing or banked ones that get exchanged, flip time? Her first question is the controlling one, "Do we want electronic billboards"? Who is we? You know what the voters want – no new billboards. They said it in their ordinance.

NAME: CITIZENS FOR A SCENIC RENO

FILE TYP/NR C 8378-2000 ST NEVADA INC ON MAR 27, 2000 FOR PERPETUAL
STATUS: ARTICLES FILED : 03-27-00 NUMBER OF PAGES FILED: 3 DMC
TYPE: NON-PROFIT NRS 082.006 - 082.541
PURPOSE: ALL LEGAL ACTIVITIES
REG 1CC FEE 25.00

RA NBR: 105981
NO OFFICERS LISTED ARTICLES F
RA MARIALICE GALT ACCEPTED 032700
557 CALIFORNIA AVE RENO NV 89509
FILER MARIALICE K GALT
557 CALIFORNIA AVE RENO NV 89509

CMD?
PA1=MENU PF2=NEXT CORP PF5=END INQ PF7=LOOKUP
4-© 1 Sess-1 10.135.1.32 TP02SX60 1/8

FILED # 37

FEB 0 5 2001

IN THE OFFICE OF
DEAN HELLER SECRETARY OF STATE

NAME: SCENIC NEVADA

FILE TYP/NR R01 037082338 TP CORP RESRVD FEB 5, 2001
STATUS: NAME RESERVED UNTIL : 05-06-01 LJF

RA NBR:

MAIL CITIZENS FOR A SCENIC RENO DOUGLAS SMITH
PO BOX 32 RENO NV 89504

CONTACT
DOUGLAS SMITH

CMD?
PA1=MENU PF5=END INQ

DEAN HELLER
Secretary of State

202 North Carson Street
Carson City, Nevada 89701-4201
(775) 684 5708

Nonprofit Amendment
(PURSUANT TO NRS 81.010, 81.410, 81.170 and 82.356)

Office Use Only:

Important: Read attached instructions before completing form.

Certificate of Amendment to Articles of Incorporation For Nonprofit Corporations

(NRS Chapters 81.010, 81.410, 81.170 and 82.356 - After First Meeting of Directors)
- Remit in Duplicate -

1. Name of corporation: Citizens for a Sane Northern Nevada

2. The articles have been amended as follows (provide article numbers, if available):
Article XXVIII Page 8 + 9 per attached Citizens for a Sane Northern Nevada, By-Laws entitled Agreement to Amend.

3. The directors (or trustees) and the members, if any, and such other persons or public officers, if any, as may be required by the articles have approved the amendment. The vote by which the amendment was adopted by the directors and members, if any, is as follows: directors 6, and members 6.*

4. Officer Signature (Required):

Douglas L. Smith — **Signature**
(President or Vice President must sign if corporation is governed by NRS 81.010 or 81.410)

Chairman — **Title**

*A majority of a quorum of the voting power of the members or as may be required by the articles, must vote in favor of the amendment. If any proposed amendment would alter of change any preference or any relative or other right given to any class of members, then the amendment must be approved by the vote, in addition to the affirmative vote otherwise required, of the holders of a majority of a quorum of the voting power of each class of members affected by the amendment regardless of limitations or restrictions on their voting power.

FILING FEE: $25.00

IMPORTANT: Failure to include any of the above information and remit the proper fees may cause this filing to be rejected.

DEAN HELLER
Secretary of State

101 North Carson Street, Suite 3
Carson City, Nevada 89701-4786
(775) 684 5708

Nonprofit Articles of Incorporation
(PURSUANT TO NRS 82)

Office FILED # C 12444-2001

MAY 14 2001

IN THE OFFICE OF
Dean Heller
DEAN HELLER SECRETARY OF STATE

Important: Read attached instructions before completing form.

1. Name of Corporation:
SCENIC NEVADA, INC.

2. Resident Agent Name and Street Address: (must be a Nevada address where process may be served)
FRANK R. CARROLL
Name
1525 SUNRISE CIR BOULDER CITY, NEVADA 89005
Street Address City Zip Code

3. Names, Addresses, Number of Board of Directors/Trustees:
The First Board of Directors/Trustees shall consist of 2 members whose names and addresses are as follows:
1. FRANK R CARROLL
Name
1525 SUNRISE CIR BOULDER CITY, NV 89005
Street Address City State Zip Code
2. DOUG SMITH
Name
2845 Idlewild Dr. #111 RENO, NV 89509
Street Address City State Zip Code
3.
Name
Street Address City State Zip Code
4.
Name
Street Address City State Zip Code

4. Purpose:
The purpose of this Corporation shall be: TO PROMOTE AND CARRYOUT PROGRAMS WHICH HELP PROTECT, PRESERVE, AND ENHANCE THE NATURAL BEAUTY OF NEVADA

5. Other Matters: (see instructions)
Number of additional pages attached: 1

6. Names, Addresses and Signatures of Incorporators: attach additional pages if there are more than 2 incorporators.
FRANK R. CARROLL — Frank R Carroll
Name Signature
1525 SUNRISE CIR. BOULDER CITY, NV 89005
Address City State Zip Code
Doug Smith — Doug Smith
Name Signature
2845 Idlewild Dr. #111 Reno, NV 89509
Address City State Zip Code

7. Certificate of Acceptance of Appointment of Resident Agent:
I, FRANK R. CARROLL hereby accept appointment as Resident Agent for the above named corporation.
Frank R Carroll — 4/30/2001
Authorized Signature of R.A. or On Behalf of R.A. Company Date

This form must be accompanied by appropriate fees. See attached fee schedule.

Nevada Secretary of State Form NONPROFART1999.01
Revised on: 02/06/01

05/14/2001 08:43:30 AM FROM: FAX 888-729867

C12444-2001

DEAN HELLER
Secretary of State

202 North Carson Street
Carson City, Nevada 89701-4201
(775) 684 5708

Certificate of Change of Resident Agent and/or Location of Registered Office

Office Use Only:

FILED
OCT 11 2002
Dean Heller
Secretary of State

General instructions for this form:

1. Please print legibly or type; Black Ink Only.
2. Complete all fields.
3. The *physical Nevada* address of the resident agent must be set forth; PMB's are not acceptable.
4. Ensure that document is signed in signature fields.
5. Include the filing fee of *$30.00.*

Scenic Nevada
Name of Entity

The change below is effective upon the filing of this document with the Secretary of State.

Reason for change: (check one) [X] Change of Resident Agent [ ] Change of Location of Registered Office

The former resident agent and/or location of the registered office was:

Resident Agent: Frank R. Carroll
Street No.: 1525 Peninsula Circle
City, State, Zip: Boulder City Nevada 89005

The resident agent and/or location of the registered office is changed to:

Resident Agent: Douglas G. Smith
Street No.: 9545 Gilcrease Drive #111
City, State, Zip: Reno, Nv. 89509 / 138494
Optional Mailing Address: P.O. Box 32 Reno Nv. 89504

NOTE: For an entity to file this certificate, the signature of one officer is required.

The certificate *does not* need to be notarized.

Douglas G. Smith, Chairman
Signature/Title

Certificate of Acceptance of Appointment by Resident Agent:

I, Douglas G. Smith, hereby accept the appointment as Resident Agent for the above-named business entity.

Douglas G. Smith
Authorized Signature of R.A. or On Behalf of R.A. Company

8/20/02
Date

Nevada Secretary of State Form RA CHANGE1999.01
Revised on: 08/20/01

SCENIC NEVADA, INC.

Business Entity Information

Status:	Active	File Date:	5/14/2001
Type:	Domestic Non-Profit Corporation	Corp Number:	C12444-2001
Qualifying State:	NV	List of Officers Due:	5/31/2008
Managed By:		Expiration Date:	

Resident Agent Information

Name:	LORI WRAY	Address 1:	2802 OUTLOOK DR.
Address 2:		City:	RENO
State:	NV	Zip Code:	89509
Phone:		Fax:	
Email:		Mailing Address 1:	PO BOX 32
Mailing Address 2:		Mailing City:	RENO
Mailing State:	NV	Mailing Zip Code:	89504

Financial Information

No Par Share Count:	0	Capital Amount:	$ 0

No stock records found for this company

Officers

☐ Include Inactive Officers

Director - NEAL COBB			
Address 1:	7660 HILLVIEW DR	Address 2:	
City:	RENO	State:	NV
Zip Code:	89506	Country:	
Status:	Active	Email:	
Secretary - DOUGLAS G SMITH			
Address 1:	2845 IDLEWILD DR STE 111	Address 2:	
City:	RENO	State:	NV
Zip Code:	89519	Country:	
Status:	Active	Email:	
Treasurer - CHARLES F SWEZEY			
Address 1:	5401 BRITTANIA	Address 2:	
City:	RENO	State:	NV
Zip Code:	89523	Country:	
Status:	Active	Email:	
President - LORI WRAY			
Address 1:	2802 OUTLOOK DR	Address 2:	
City:	RENO	State:	NV
Zip Code:	89509	Country:	
Status:	Active	Email:	

Actions\Amendments

Action Type:	Articles of Incorporation		
Document Number:	C12444-2001-001	# of Pages:	2
File Date:	05/14/2001	Effective Date:	
(No notes for this action)			
Action Type:	Initial List		
Document Number:	C12444-2001-005	# of Pages:	1

File Date:	06/25/2001	Effective Date:	
(No notes for this action)			
Action Type:	Resident Agent Change		
Document Number:	C12444-2001-003	# of Pages:	1
File Date:	10/11/2002	Effective Date:	
FRANK R CARROLL			
1525 SUNSRISE CIR BOULDER CITY NV 89005 APN			
Action Type:	Annual List		
Document Number:	C12444-2001-004	# of Pages:	1
File Date:	06/12/2003	Effective Date:	
(No notes for this action)			
Action Type:	Annual List		
Document Number:	C12444-2001-002	# of Pages:	1
File Date:	04/07/2004	Effective Date:	
List of Officers for 2004 to 2005			
Action Type:	Annual List		
Document Number:	20050144428-20	# of Pages:	1
File Date:	04/21/2005	Effective Date:	
(No notes for this action)			
Action Type:	Annual List		
Document Number:	20060345061-77	# of Pages:	1
File Date:	05/31/2006	Effective Date:	
(No notes for this action)			
Action Type:	Annual List		
Document Number:	20070179276-51	# of Pages:	1
File Date:	03/12/2007	Effective Date:	
(No notes for this action)			
Action Type:	Resident Agent Change		
Document Number:	20070384976-76	# of Pages:	1
File Date:	05/29/2007	Effective Date:	
(No notes for this action)			

From: Tara Moran ()
To: Tara Moran
Date: Friday, April 4, 2008 12:34:05 PM
Subject: LED Off-Premise Signs 'Workshop'

To all Interested Parties,

A "Workshop" has been scheduled to discuss LED Off-Premise Signs. You are being notified of this meeting because you have asked to be included in the reviewing process. The workshop is scheduled for Friday, April 25, 2008 at 1:00 PM at the Community Development Department, 450 Sinclair Street, Reno, Nevada in the 3rd Floor Conference Room.

Please forward this email to any other interested parties or representatives on your behalf regarding this Workshop.

If you have questions please contact me at 333-7798 or email at morant@ci.reno.nv.us .

Thank you.

Tara Moran
Assistant Planner
City of Reno - Community Development
P- (775) 333-7798
F- (775) 334-2343

From: Tara Moran ()
To: Tara Moran
Date: Friday, April 18, 2008 10:56:42 AM
Subject: LED Workshop 'Agenda' and 'Discussion Items'

For your review, attached is the 'agenda' and a 'handout' of items to be discussed at the LED Workshop scheduled for 4/25/08 at 1PM - 3PM. Please note, any additional items of interest related to this topic, which are not listed, may also be discussed at the workshop.

Please let me know if you have any questions.

Thank you.

Tara Moran
Assistant Planner
City of Reno - Community Development
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April 25, 2008

1 PM – 3 PM

LED - WORKSHOP AGENDA

I. - Introduction

II. - Status of Review

III.- Presentation by Scenic Nevada – Limited to no more than ±10 minutes.

IV. - Discussion of:

a) General Standards

b) Luminance

c) Locational Criteria

d) Removal Requirement

e) Enforcement

f) Definitions

V. - Question and Answer Session

April 25, 2008

WORKSHOP DISCUSSION ITEMS

In addition to general standards for off-premise signs in RMC 18.16, 'digital' billboards shall comply with the following standards:

(a) Shall only be allowed in permitted locations per Section 18.16.904(a), when within 100 feet of a freeway, or a major/minor arterial road *(current code, discussion on should this item be changed)* unless otherwise prohibited by this section.

(b) Each message or copy shall remain fixed for at least eight (8) seconds.

(c) Maximum time allowed for message display to change shall be one (1) second.

(d) The following types of illuminated display are prohibited:

(1) That is in motion or appears to be in motion, is animated, or contains full motion video display.

(2) Any illumination that changes in intensity during the static display period.

(3) Any illumination that flashes intermittently or moves.

(e) Such advertising devices shall contain a default design that will freeze the device in one position if a malfunction occurs.

(f) Advertisements shall incorporate *10% (discussion item)* of display time for Public Service Announcements, which shall occur on a recurring basis per minute.

(g) No cutouts shall be permitted.

Luminance:

(a) Signs shall be effectively shielded as to prevent beams or rays of light from being directed at any portion of the travel lanes as to cause glare or to impair the vision of the driver of any motor vehicle, or which otherwise interferes with any driver's operation of a motor vehicle.

(b) No sign shall be so illuminated that it interferes with the effectiveness of, or obscures an official traffic sign, device, or signal.

(c) Daytime maximum brightness levels shall be no greater than 6,000 nits (candles per square meter) and nighttime maximum brightness levels shall be no greater then 300 nits (*discussion item*).

(d) A digital sign shall be equipped with both a dimmer control and a photocell which automatically adjusts the displays intensity according to natural ambient light conditions.

(e) Prior to the issuance of a sign permit, the applicant shall provide a written certification from the sign manufacturer that the light intensity has been

factory pre-set not to exceed the levels specified in (c) above.

Additional locational criteria:

(a) The distance between LED or digital billboards shall be no less then *1,000 (current code, discussion on should this item be changed)* lineal feet facing the same travel direction.

(b) A minimum spacing of *1,000 (current code, discussion on should this item be changed)* lineal feet is required between a digital billboard and a changeable face (tri-vision) billboard.

(c) The distance between LED or digital billboards from any residential use shall be no less then *300 (current code, discussion on should this item be changed)* lineal feet

(d) The LED display shall not face a primary or secondary school (public or private). *(discussion item)*

(e) Shall not be located in a Historic or Conservation District *(discussion item)*.

Removal Requirement (*discussion item*)

Upon approval of a permit for an LED or digital off-premise sign, documentation of the following shall be provided:

1) Removal of 1 existing off-premise sign or redemption of 3 bank-receipts.

2) The maximum size of a digital billboard sign shall be equal to or less than the removed off-premise signs (or bank receipts), but shall not exceed the maximum size for off-premise signs in this title.

3) Off-premise signs removed under this section shall be deleted from the Citys billboard inventory of off-premise signs.

Enforcement – (*if NIT meter is not purchased by City*)

Owner of the sign shall provide the city a readout of NIT levels within no less than two business days.

Definitions

Nit - A unit measure of luminance or brightness equal to one candela per square meter, measured perpendicular to the rays of the source.

Changeable message sign (multi or tri-vision) – Any off premise advertising sign, display or devise which changes the message or copy on a sign by means of electronic rotation or horizontal or vertical slats. These signs do not utilize direct illumination.

Electronic sign (LED or Digital Billboard)– Any off-premise advertising sign, display or device that changes the message copy on the sign by means of light emitting diodes (LED's), fiber optics, light bulbs or other illumination device within the display area which utilize direct illumination. Electronic signs do not include official time and temperature signs.

Direct Illumination – illumination by light sources which are effectively visible, either directly of through a translucent material as part of a sign and illuminate outward.

Indirect Illumination – illumination being directed at a signs reflective face.

Poll: Most residents oppose digital billboards in Reno

By Brian Duggan
bduggan@rgj.com

An anti-billboard group released the results of a poll this week that asked Reno voters if they want the City Council to change city code to allow off-premise digital billboards.

Those opposed amounted to 55 percent, while 28 percent said yes, and 17 percent were undecided, according to the telephone poll conducted by Portland, Ore.-based M.J. Ross Group. It was paid for using a grant from the John Ben Snow Foundation.

The poll has a margin of error of about 4 percentage points. It asked 600 registered Reno voters in April, "Do you think the city of Reno should change the law and allow digital billboards within the Reno city limits?"

Reno officials have been eyeing a change to city code to allow off-premise digital billboards for three years now.

The city's planning commission postponed its decision in November 2009 to study the issue more and is expected to take it up again later next month.

Off-premise digital billboards already exist along freeways in Sparks and on tribal land near Reno. They differ from on-premise signs, which businesses use to advertise on their own land, such as the digital sign at the Grand Sierra Resort and Casino.

Digital billboards use LED lights and can change messages every eight seconds.

Councilman Dwight Dortch said he wouldn't be swayed by one poll that came out in opposition to digital billboards.

"If you go back and ask them another question, if companies think digital billboards are important to economic development and promoting the region, would you support them?" Dortch said. "There are all kinds of questions you can ask in a poll. I don't think it's ever wise to base your voting decisions on a poll of 600 people."

Scenic Nevada is an affiliate of Scenic America, which is involved in anti-billboard fights around the country.

Reno already has a ban on any new billboards that stems from a ballot measured approved by voters in 2000. Right now, the city allows advertisers to "bank" billboards and put them in other approved areas within city limits.

James Barnes, a local attorney and chairman of Scenic Nevada, said digital billboards would amount to new construction, which he argues violates the 2000 ballot initiative.

"The vote in 2000 was 57 percent in favor of banning new billboard construction," he said. "And, of course, digital billboards would be new construction."

BRIEFLY

CHECK VOTER STATUS link or call 775-328-3670.

Scenic Nevada's
Preserving Our Scenic Heritage Project
Reno Billboard Survey Results
An Analysis by M.J. Ross Group, Inc.

Scenic Nevada, a Reno based nonprofit organization affiliated with Scenic America with a mission to preserve and protect Nevada's scenic heritage, commissioned an April survey of Reno voters' attitudes about billboards. The survey findings confirm that the public continues to object to the visual presence of billboards and supports regulations to restrict the proliferation of digital billboards. Scenic Nevada board members believe the survey was necessary for the organization to decide its next steps.

Digital billboards are signs that are computer controlled and can change images every six to eight seconds. The survey results provide Scenic Nevada with assurance that Reno voters remain concerned about billboard signage. The April survey was also seen important as technological advances have radically changed the nature of the sign industry since 2000.

In 2000, Scenic Nevada was instrumental in the passage of a ballot question that banned new billboards within the city. The ballot question was ultimately upheld by the Nevada Supreme Court.

Billboards are generally defined as signs that advertise services and goods not available on the same premises of the property upon which the billboard is located. In addition, political campaign signs and public service announcements are also featured on billboards. Signs that identify businesses available on the premises are not billboards and are defined as "on-premise signs" by the City of Reno zoning ordinance. The ballot question did not apply to on-premise signs.

The City's administration of the billboard ban has been problematic to Scenic Nevada as the City created a "bank program" that allows billboards to be relocated to other permitted locations. Scenic Nevada feels this program is not consistent with the intent of the ballot question. The banking program did not follow the spirit or intent of the law and has proven a failure to protect scenic Reno, according to board members and board chairman James Barnes.

Scenic Nevada's digital billboard survey was conducted on April 16-19, 2011. It was a telephone survey of 600 registered voters who reside within the city of Reno, Nevada. The survey was conducted by call takers working for M. J. Ross Group, Inc., a Portland, Oregon based communications and polling firm. For more information about survey methodology please contact Moses Ross, M. J. Ross Group, Inc. President, at 503-309-7985.

In the overall poll results most responses carry a 4% margin of error at the 95% confidence level (The final question was added on the last day of polling, resulting in fewer respondents, and a plus or minus 5.74% error at 95% confidence). This means there is a 95% probability that the responses of ALL voters would fall within plus or minus 4% of the response gained in this poll. Regarding the demographic profile of poll respondents, respondents were slightly more likely to be women, Democratic, and over 49 than the overall population. The poll responses provided here are not adjusted to

reflect the variance of respondents from the population. An analysis of adjusted numbers shows that the difference from the unadjusted numbers is less than 2% in all cases and less than 1% in nearly all cases so use of the unadjusted numbers is considered reliable.

It is clear to conclude from this survey that a majority of voters oppose changes that would allow digital billboards. The groups most likely to be opposed to digital billboards are women, voters who identify as "Other", college or higher educated voters, voters with an income of $80,000 to $99,999 and voters aged 50 to 69. The number of respondents whose race was other than "White" was too few to give a reliable indication of voter differences on this issue by race.

The concerns about digital billboards that appear to resonate most strongly with voters are their strong objection to seeing a digital billboard from their own window (2/3rds would object), and their concern about driver distraction (only 11% felt it was not important).

Respondent Profile:

GENDER	Respondents	Population
Men	46%	49%
Women	54%	51%

POLITICAL AFFILIATION	Respondents	Population
Democratic	31%	39%
Republican	28%	39%
Independent	23%	16%
Other	14%	6%
Declined to Respond	5%	

RACE/ETHNICITY	Respondents
White	83%
Black	3%
Latino	3%
Asian	3%
Other	5%
Declined to Respond	3%

EDUCATION ACHIEVEMENT	Respondents
High School or less	17%
Some College	29%
College Degree	29%
Graduate Degree	22%
Declined to Respond	3%

HOUSEHOLD INCOME	Respondents
$39,000 or less	36%
$40,000-$59,999	25%
$60,000-$79,999	16%
$80,000-$99,999	11%
$100,000 or more	11%
Declined to Respond	0%

AGE	Respondents	Population
18-29	7%	19%
30-49	29%	33%
50-69	45%	38%
70+	18%	14%
Declined to Respond	1%	

QUESTION 1: Do you either own billboards, lease property to a billboard company or advertise on billboards? 1966 respondents.			
YES 3%	NO 28%	Declined to Say 32%	No Surveys 37%

Note: Only those who responded Yes or No to Question 1 continued with the remaining questions.

QUESTION 2: Did you know that electronic or digital billboards are outdoor advertisements displayed on a screen that flip every 6 to 8 seconds night and day? 600 respondents.		
YES 64%	NO 33%	NOT SURE 3%

QUESTION 3: If you were looking outside your window, either from home or your work place, would you object to seeing a digital billboard. 600 respondents.		
YES 66%	NO 28%	NOT SURE 6%

QUESTION 4: Generally speaking, do you think Reno has enough, too many, or not enough billboards now. 600 respondents.			
ENOUGH 54%	TOO MANY 26%	NOT ENOUGH 6%	NOT SURE 14%

QUESTION 5: As you may know, except for land designated to Native Americans, digital billboards are not allowed in the Reno city limits. The City of Reno is considering changing the law to allow new construction of digital billboards. Do you think the City of Reno should change the law and allow digital billboards within the Reno city limits? 600 respondents.		
YES 28%	NO 55%	NOT SURE 17%

QUESTION 6: How important is it to you that you and other drivers are not distracted while driving? 600 respondents.		
IMPORTANT 36%	VERY IMPORTANT 53%	NOT IMPORTANT 11%

QUESTION 7: How important is it for Reno to strive to preserve, protect and enhance its scenic character similar to communities such as Santa Barbara or Carmel? 600 respondents.		
IMPORTANT 40%	VERY IMPORTANT 40%	NOT IMPORTANT 21%

Note: Question Number 8 was only asked on the last day of calling so the number of respondents is lower than for the other questions.

QUESTION 8: Digital billboards use far more energy than traditional billboards. In fact, the carbon footprint of one digital billboard is equal to 49 traditional billboards, according to a recent study. How important is it for the City of Reno to adopt energy efficient billboard sign laws? 291 respondents.		
IMPORTANT 40%	VERY IMPORTANT 41%	NOT IMPORTANT 19%

In reviewing these results the following conclusions are reasonable to infer:

1) Two thirds of Reno voters are familiar with electronic billboards.

2) Two thirds also would object to seeing an electronic billboard from their home or office window.
3) 80% of Reno voters feel that Reno already has enough or too many billboards. Over half state that Reno has enough billboards, while roughly one quarter feel there are too many billboards. Less than 10% state that there are not enough billboards.
4) 55% stated that Reno should NOT allow new construction of digital billboards.
5) Only 11% said driver distraction is not an important concern.
6) 80% said it is either important or very important for Reno to preserve, protect or enhance its scenic character.
7) Over 80% support energy efficient billboard sign laws.
8) While roughly equal percentages of women and men feel Reno has "too many" (26% and 27%) or "not enough" (6% and 5%) billboards, a larger percentage of women than men feel Reno has "enough" (58% vs 49%) billboards, as opposed to being unsure (10% and 19%). Women appear to be more certain in their feeling about billboards.
9) Men were more likely than women to support changing the law to allow digital billboards within the Reno city limits, although still more than half of all men opposed the change.
10) Among all respondents, Republicans were least likely to consider driver distraction to be "Very Important" and most likely to rate it "Not Important".
11) Those identifying themselves as Independent were the most likely to state that Reno should "strive to preserve, protect and enhance its scenic character" is "Important", and the least likely to rank it as "Not Important".
12) The higher the level of education, the more likely the respondent is to object to digital billboards.
13) Those with higher education are more likely to consider driver distraction "Very Important" and to feel it is "Very Important" that Reno "strive to preserve, protect and enhance its scenic character".
14) Those 70 or older are least likely to be aware of digital billboards.
15) While no age category significantly felt there were "Not Enough" billboards, those Under 30 were the most likely to say there are "Enough" as opposed to "Too Many".
16) Those voters Under 30 were less likely than older age groups to state that Reno should not change the law to allow digital billboards.
17) Regarding both driver distraction and scenic character, voters Under 30 more often ranked these as "Important" while older voters more often ranked them as "Very Important".

Lori Wray

From: Lori Wray
Sent: Monday, December 05, 2011 1:42 PM
To: 'fournierm@reno.gov'
Cc: 'Claudia Hanson'; Mark Wray; 'Doug Smith'; 'Chris Wicker'; 'petercneumann@sbcglobal.net'; 'Scenic Nevada Admin'; 'John Hara'
Subject: Arizona Court of Appeals Decision on Digital Billboards
Attachments: Nevada Federal-State Agreement (FSA).pdf; NAC 410.docx

Dear Planning Commissioners,

An Arizona appellate court in November ruled that digital billboards are illegal along federal highways because digitals use intermittent lighting. The ruling could have a profound impact on the proposed ordinance you are about to review for the City of Reno. Also, the court's opinion directly contradicts statements made by Clear Channel Outdoor at recent planning commission meetings here that digital billboards do not violate federal laws.

In *Scenic Arizona v City of Phoenix Board of Adjustment*, the Arizona Court of Appeals rejected arguments of American Outdoor Advertising, holding that the Phoenix Board exceeded its authority in granting a permit for digital billboards because digitals require use of intermittent lighting, a violation of Arizona state law and an agreement between Arizona and the federal government.

Like Arizona and many other states, Nevada entered into an agreement in 1972 with the federal government to ensure continued federal funding of highways. The federal-state agreements, or "FSA's", enforce regulations for billboards on size, spacing and lighting. The purpose is to "protect the public investment in such highways, to promote the safety and recreational value of public travel and to preserve natural beauty." 23 U.S.C. § 131(a) (2002).

Nevada's agreement with the federal government (attached) states that billboards:

"**shall not include or be illuminated by flashing, intermittent or moving lights** (except that part necessary to give public service information such as time, date, temperature, weather or similar information) and shall not cause beams or rays of light to be directed at the traveled way if such light is of such intensity or brilliance or is likely to be mistaken for a warning or danger signal as to cause glare or impair vision of any driver, **or to interfere with an driver's operation of a motor vehicle**." *See,* Agreement, attached, p. 7 (emphasis supplied).

Nevada's Legislature adopted statutes requiring Nevada to enter into its FSA with the federal government. NRS 410.220 to 410.410 require the state to enter into an agreement with the federal government and have the force of law. The statutes say the regulations in the agreement must be consistent with federal highway standards, on "spacing, size and lighting." *See,* Agreement, attached.

The regulations are included in the Nevada Administrative Code (NAC) which says in part:

"**Signs must not include or be illuminated by flashing, intermittent or moving lights** and also electronic signs may be approved, "**if the sign does not contain flashing, intermittent or moving lights** ..." *See,* NAC 410.350, attached, (emphasis supplied).

In its 51-page decision, the Arizona Court of Appeals held that digital billboards use intermittent lighting because the images flip every eight seconds from one advertisement to another.

"Because the combination of LEDs used to display each brightly lit image on the billboard changes every eight seconds, the billboard's lighting necessarily is intermittent under the plain meaning of the statute. Thus, we are not persuaded by American Outdoor's attempt to exempt its billboard from the bar on intermittent lighting. The billboard uses multiple arrangements of lighting to display images that stop and start at regular intervals, which means it uses intermittent lighting." *Scenic Arizona v City of Phoenix Board of Adjustment*, page 22.

As currently proposed, the new Reno ordinance would permit digitals within the McCarran Ring road. Sections of Interstate 80 and US 395 (part of the National Highway System governed by federal and state laws) are located within the McCarran Ring.

In recent Planning Commission public hearings, Clear Channel Outdoor testified that digital billboards aren't in violation of federal laws. Apparently, Clear Channel bases this claim on a 2007 Federal Highway Administration (FHWA) guidance memo that says digital billboards "do not violate a prohibition against 'intermittent,' or 'flashing' or 'moving' lights as those terms are used in the various (federal-state agreements)."

The Arizona court said that there were no rules, laws or formal regulations changed to allow intermittent light and the memo from FHWA did not replace the 40-year old laws on the books regulating lighting.

"Similarly, we are unaware of any authority suggesting that a guidance memorandum from the FHWA has binding legal effect on the states, and the memorandum itself includes a disclaimer that it is 'not intended to amend applicable legal requirements.' In a nutshell, the only purpose of the memorandum was to open the door to individual states to work with the FHWA to find acceptable solutions for allowing digital billboards, in the discretion of each sate. The memorandum did not eliminate (Arizona's) prohibition of intermittent lighting." *Scenic Arizona v City of Phoenix Board of Adjustment*, page 31.

Scenic Nevada is opposed to digital billboards. The proposed city ordinance allowing digital billboards would violate city, state and federal law. We believe digitals include intermittent lighting; they are a distraction to drivers; they obstruct scenic views and detract from highway beautification; and they are new construction, which is prohibited. Reno city code says: "The construction of new off-premises advertising displays/billboards is prohibited, and the City of Reno may not issue permits for their construction."

The people voted 11 years ago to prohibit new construction and reaffirmed that vote in a recent survey, with 55% saying the Reno city codes should not be changed to allow digital billboards. When the time comes, please uphold the vote of the people and the laws of this state by voting no on allowing digital billboards within Reno.

Sincerely,

Lori Wray
Member, Board of Directors, Scenic Nevada
775 348-8877 work
775 848-8288 cell

Claudia Hanson – Planning and Engineering Manager, stated that staff can support the project.

Hearing no one wishing to speak Chair Weiske closed the public comment and asked for disclosures.

Commissioners Egan, Romeo, Stapleton and Chair Weiske disclosed receiving emails for this project.

Commissioner Stapleton had a question regarding the height of the existing units.

Ms. Lindell stated there are a mix of 2 and 3 stories with studio, 1, 2 and 3 bedroom units. She stated a chart was provided in the application that showed the height changes.

Chair Weiske asked for a motion.

It was moved by Commissioner Egan, seconded by Commissioner Stapleton, to approve the special use permit, subject to conditions. Commissioner Egan stated he could make the Findings. The motion carried: Commissioners Egan, Romeo, Stapleton and Chair Weiske assenting; Commissioner Coffman and Woosley absent.

VII. UPDATE, DISCUSSION AND POSSIBLE DIRECTION TO STAFF REGARDING ELECTRONIC BILLBOARD ORDINANCE. (For Possible Action)

Claudia Hanson – Planning and Engineering Manager, stated that Planning Commission asked for this item to be brought back for discussion, additional questions and/or direction to staff regarding the draft ordinance that will be presented at the next meeting. Ms. Hanson provided the ballot question R-1 regarding billboards to the Planning Commission.

Lori Wray – Scenic Nevada, stated there is a new issue regarding intermittent lighting which is currently prohibited by Federal and State Law. The Arizona Court of Appeal has ruled that digital billboards that use intermittent lighting are illegal along highways now. She stated that this isn't only a text amendment; they are abandoning a State and Federal agreement that has been in place for 40 years to protect the citizens. This agreement is meant to enforce the Highway Beautification Act and to protect the public's investment in highways, to promote safety and recreational value of public travel, and to preserve natural beauty. The McCarran ring is where the digital billboards are supposed to go. This will include Hwy 395 and I-80. Scenic Nevada is asking the Planning Commission not to abandon the State and Federal agreement and not to abandon the vote of 2000. She stated that one of the reasons the City of Reno wants to do this is to get rid of the clutter and in her opinion there are other ways to reduce clutter. She discussed the bank receipts and stated that as long as there is a bank, billboards can be placed in that bank to be relocated at a later date. She stated that there are unresolved issues with technology that the City of Reno hasn't considered or addressed.

Danny Schulte – YESCO Outdoor Media, stated there is a billboard ordinance that has been in place since 2000. They have operated under this ordinance for more than 11 years without any problems. They have taken boards down that were banked and have found new locations that were allowed by the current ordinance. In the current ordinance there is spacing requirements of 750 feet and changeable message signs/billboards. It's the same type of changeable message that the new LED technology provides, is recognized by NDOT which allows a minimum 6 second turn. YESCO has

AGREEMENT

STATE OF NEVADA

FOR CARRYING OUT NATIONAL POLICY RELATIVE TO CONTROL OF OUTDOOR ADVERTISING IN AREAS ADJACENT TO THE NATIONAL SYSTEM OF INTERSTATE AND DEFENSE HIGHWAYS AND THE FEDERAL-AID PRIMARY SYSTEM

THIS AGREEMENT made and entered into this 21st day of January, 1972, by and between the United States of America represented by the Secretary of Transportation acting by and through the Federal Highway Administrator, hereinafter referred to as the "Administrator," and the State of Nevada, acting by and through its Board of Directors of Department of Highways, hereinafter referred to as the "State."

WITNESSETH:

WHEREAS, Congress has declared that Outdoor Advertising in areas adjacent to the Interstate and Federal-aid primary systems should be controlled in order to protect the public investment in such highways, to promote the safety and recreational value of public travel and to preserve natural beauty; and

WHEREAS, Section 131(d) of Title 23, United States Code, authorizes the Secretary of Transportation to enter into agreements with the several States to determine the size, lighting, and spacing of signs, displays, and devices, consistent with customary use, which may be erected and maintained within 660 feet of the nearest edge of the right-of-way within areas adjacent to the Interstate and Federal-aid Primary Systems which are zoned industrial or commercial under authority of State law or in unzoned commercial or industrial areas, also to be determined by agreement; and

WHEREAS, the purpose of said agreement is to promote the reasonable, orderly, and effective display of outdoor advertising while remaining consistent with the national policy to protect the public

investment in the Interstate and Federal-aid primary highways, to promote the safety and recreational value of public travel and to preserve natural beauty; and

WHEREAS, Section 131(b) of Title 23, United States Code, provides that Federal-aid highway funds apportioned on or after January 1, 1968, to any State which the Secretary determines has not made provision for effective control of the erection and maintenance along the Interstate System and the Primary System of outdoor advertising signs, displays, and devices which are within six hundred sixty feet of the nearest edge of the right-of-way and visible from the main traveled way of the system, shall be reduced by amounts equal to 10 per centum of the amounts which would otherwise be apportioned to such State under Section 104 of Title 23, United States Code, until such time as such State shall provide for such effective control; and

WHEREAS, the State of Nevada desires to implement and carry out the provisions of Section 131 of Title 23, United States Code, and the national policy in order to remain eligible to receive the full amount of all Federal-aid highway funds to be apportioned to such State on or after January 1, 1968, under Section 104 of Title 23, United States Code; and

NOW, THEREFORE, the parties hereto do mutually agree as follows:

SECTION I.

1. Definitions

A. Act means Section 131 of Title 23, United States Code (1965) commonly referred to as Title I of the Highway Beautification Act of 1965.

B. Commercial or industrial activities for purposes of unzoned commercial or industrial areas mean those activities generally recognized as commercial or industrial by zoning authorities in this State, except that none of the following activ-

ities shall be considered commercial or industrial:

1. Outdoor advertising structures.

2. Agricultural, forestry, ranching, grazing, farming, and related activities, including, but not limited to, wayside fresh produce stands.

3. Transient or temporary activities.

4. Activities not visible from the main traveled way.

5. Activities more than 660 feet from the nearest edge of the right-of-way.

6. Activities conducted in a building principally used as a residence.

7. Railroad tracks and minor sidings.

C. Zoned commercial or industrial areas mean those areas which are zoned for business, industry, commerce, or trade pursuant to a State or local zoning ordinance or regulation.

D. Unzoned commercial or industrial areas mean those areas which are not zoned by State or local law, regulation, or ordinance, and on which there is located one or more permanent structures devoted to a commercial or industrial activity or on which a commercial or industrial activity is actually conducted, whether or not a permanent structure is located thereon, and the area along the highway extending 600 feet from and beyond the edge of such activity. In addition, lands on the opposite side of the highway to the extent of the same dimensions will be considered as an unzoned commercial or industrial area provided those lands on such opposite side are not deemed scenic or as having aesthetic value. In the event the area on the opposite side of the highway is deemed scenic, then only the side of the highway having a commercial activity located thereon will be said to be unzoned commercial or industrial for the purpose of this Agreement.

All measurements shall be from the outer edges of the regularly used buildings, parking lots, storage or processing, and

landscaped areas of the commercial or industrial activities, not from the property lines of the activities, and shall be along or parallel to the edge of pavement of the highway.

E. National System of Interstate and Defense Highways and Interstate System means the system presently defined in and designated pursuant to subsection (d) of Section 103 of Title 23, United States Code.

F. Federal-aid primary highway means any highway within that portion of the State highway system as designated, or as may hereafter be so designated by the State, which has been approved by the Secretary of Transportation pursuant to subsection (b) of Section 103 of Title 23, United States Code.

G. Traveled way means the portion of a roadway for the movement of vehicles, exclusive of shoulders.

H. Main-traveled way means the traveled way of a highway on which through traffic is carried. In the case of a divided highway the traveled way of each of the separate roadways for traffic in opposition is a main-traveled way. It does not include such facilities as frontage roads, turning roadways, or parking areas.

I. Sign means any outdoor sign, display, device, figure, painting, drawing, message, placard, poster, billboard, or other thing which is designed, intended, used to advertise or inform, any part of the advertising or information contents which is visible from any place on the main-traveled way of the Interstate or Federal-aid Primary Highway Systems.

J. Erect means to construct, build, raise, assemble, place, affix, attach, create, paint, draw, or in any other way bring into being or establish, but it shall not include any of the foregoing activities when performed as an incident to the change of advertising message or normal maintenance or repair of a sign structure.

K. Maintain means to allow to exist.

L. Safety rest area means an area or site established and maintained within or adjacent to the highway right-of-way by or under public supervision or control, for the convenience of the traveling public.

M. Visible means that the advertising copy or informative contents are capable of being seen without visual aid by a person of normal visual acuity.

SECTION II. SCOPE OF AGREEMENT

This Agreement shall apply to the following areas:

A. All zoned and unzoned commercial and industrial areas within 660 feet of the nearest edge of the right-of-way of all portions of the Interstate and Primary Systems within the State of Nevada in which outdoor advertising signs may be visible from the main-traveled way of either or both of said systems.

SECTION III: STATE CONTROL

The State hereby agrees that, in all areas within the scope of this agreement, the State shall effectively control, or cause to be controlled, the erection and maintenance of outdoor advertising signs, displays, and devices erected subsequent to the effective date of this agreement other than those advertising the sale or lease of the property on which they are located, or activities conducted thereon, in accordance with the following criteria:

A. In zoned commercial and industrial areas, the State may notify the Administrator as notice of effective control that there has been established within such areas regulations which are enforced with respect to the size, lighting, and spacing of outdoor advertising signs consistent with the intent of the Highway Beautification Act of 1965 and with customary use. In such areas, the size, lighting, and spacing requirements set forth below shall not apply.

B. In all other zoned and unzoned commercial and industrial areas, the criteria set forth below shall apply.

Size of Signs

1. The maximum area for any one sign shall be 1,200

square feet with a maximum height of 30 feet and maximum length of 60 feet, inclusive of any border and trim but excluding the base or apron, supports, and other structural members.

2. The area shall be measured by the smallest square, rectangle, triangle, circle, or combination thereof which will encompass the entire sign.

3. The maximum size limitations shall apply to each side of a sign structure; and signs may be placed back-to-back, side-by-side, or in V-type construction with not more than two displays to each facing, and such sign structure shall be considered as one sign.

Spacing of Signs

1. Interstate and Federal-aid Primary Highways

a. Signs may not be located in such a manner as to obscure, or otherwise physically interfere with the effectiveness of an official traffic sign, signal, or device, obstruct or physically interfere with the driver's view of approaching, merging, or intersecting traffic.

2. Interstate Highways and Freeways on the Federal-aid Primary System

a. No two structures shall be spaced less than 500 feet apart.

b. Outside of incorporated villages and cities, no structure may be located adjacent to or within 500 feet of an interchange, intersection at grade, or safety rest area. Said 500 feet to be measured along the Interstate or freeway from the beginning or ending of pavement widening at the exit from or entrance to the main-traveled way.

3. Nonfreeway Federal-aid Primary Highways

a. Outside of incorporated villages and cities - no two structures shall be spaced less than 300 feet apart.

b. Within incorporated villages and cities - no two structures shall be spaced less than 100 feet apart.

4. The above spacing-between-structures provisions do not apply to structures separated by buildings or other obstructions in such a manner that only one sign facing located within the above spacing distances is visible from the highway at any one time.

5. Explanatory Notes

a. Official and "on-premise" signs, as defined in Section 131(c) of Title 23, United States Code, and structures that are not lawfully maintained shall not be counted nor shall measurements be made from them for purposes of determining compliance with spacing requirements.

b. The minimum distance between structures shall be measured along the nearest edge of the pavement between points directly opposite the signs along each side of the highway and shall apply only to structures located on the same side of the highway.

Lighting

Signs shall not be placed with illumination that interferes with the effectiveness of, or obscures any official traffic sign, device or signal; shall not include or be illuminated by flashing, intermittent or moving lights (except that part necessary to give public service information such as time, date, temperature, weather or similar information) and shall not cause beams or rays of light to be directed at the traveled way if such light is of such intensity or brilliance or is likely to be mistaken for a warning or danger signal as to cause glare or impair the vision of any driver, or to interfere with any driver's operation of a motor vehicle.

At any time that a bona fide county or local zoning authority adopts regulations which include the size, lighting, and spacing of outdoor advertising, the State may so notify the Administrator and control of outdoor advertising in the commercial or industrial zones within the geographical jurisdiction of said

authority will transfer to subsection A of this section.

Application to Existing Signs

The standards and criteria set forth in this Section III shall apply to signs erected in zoned and unzoned commercial and industrial areas on or after April 27, 1971. Signs lawfully erected in zoned and unzoned commercial and industrial areas prior to April 27, 1971, will be considered to be conforming to the standards and criteria and will not be required to be removed if they are in conformity with the laws relating to such signs enacted by the Nevada Legislature and in effect at that time.

SECTION IV. INTERPRETATION

The provisions contained herein shall constitute the standards for effective control of signs, displays, and devices within the scope of this agreement.

The provisions contained herein pertaining to the size, lighting, and spacing of outdoor advertising signs permitted in zoned and unzoned commercial and industrial areas shall apply only to those signs erected subsequent to the effective date of this agreement except for those signs erected within 6 months after the effective date of this agreement in zoned or unzoned commercial or industrial areas on land leased prior to such effective date, provided that a copy of such lease be filed with the State highway department within 30 days following such effective date.

The State and local political subdivisions thereof shall have full authority respectively, to zone areas for commercial or industrial purposes, and the acts of the State or local political subdivisions in this regard will be accepted for the purpose of this agreement. Whenever a bona fide state, county, or local zoning authority has made a determination of customary use, such determination will be accepted in lieu of controls by agreement in the zoned commercial and industrial areas within the geographical

jurisdiction of such authority. Nothing in this section shall apply to signs, displays and devices, advertising the sale or lease of, or advertising activities conducted on, the property on which they are located.

In the event the provisions of the Highway Beautification Act of 1965 are amended by subsequent action of Congress or the State legislation is amended, the parties reserve the right to renegotiate this agreement or to modify it to conform with any amendment.

Tourist-oriented signs will not be required to be removed until the Highway Beautification Commission, established by Public Law 91-605, December 31, 1970, under Section 123, has submitted its report.

SECTION V. EFFECTIVE DATE

This Agreement shall have an effective date of April 27, 1971.

IN WITNESS WHEREOF the parties hereto have executed this Agreement the day and year first above written.

ATTEST:

Secretary to the Board

Presented by:

State Highway Engineer

Approved as to Legality and Form:

Deputy Attorney General
Asst. ~~Chief~~ Counsel, Department of Highways

BOARD OF DIRECTORS, STATE OF NEVADA DEPARTMENT OF HIGHWAYS

Chairman

Member

Member

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION

Federal Highway Administrator

IN THE SUPREME COURT OF THE STATE OF NEVADA

SCENIC NEVADA, INC.

Appellant,

Case No. 65364

v.

CITY OF RENO, a Political Subdivision of the State of Nevada,

Respondent.

_____/

JOINT APPENDIX

VOL. 8

Mark Wray, #4425
Law Offices of Mark Wray
608 Lander Street
Reno, Nevada 89509
(775) 348-8877
(775) 348-8351 fax
Attorney for Appellant
SCENIC NEVADA, INC.

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5	First Amended Answer to First Amended Complaint	8/6/2013	1	068-077
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BUILDING PERMIT APPLICATION Rev 09/11

SIGNS

City of Reno
Community Development Department
450 Sinclair Street – P.O. Box 1900, Reno, NV 89505
(775) 334-2063 · www.reno.gov
Fax (775) 334-2043

Case No.: B-00046

Rec'd By:

511

Parcel Number: 019-351-05 **Address:** 501 W. MOANA LANE **Suite:**

Description of Work:

NEW BILLBOARD STRUCTURE TO REPLACE 2 UNITS REMOVED BY MOANA LANE WIDENING. STRUCTURE TO HAVE 2-300 SF FACES EACH SIDE; USING BANKED RECEIPTS CC-3 & CC-4, AND ASSOCIATED ELECTRICAL

Contractor Information:

Contractor: CLEAR CHANNEL OUTDOOR Contact Name: AARON WEST
Address: 4945 JOULE ST, RENO NV 89502
Phone No.: 775-353-5255 Fax No.: 775-856-7595
Email address: AARONWEST@CLEARCHANNEL.COM
Nevada License #: 51604 City License #: 15892

Project Information:

Valuation: $ 100,000 Zoning: CC MF-14
Occupancy: N/A
Planning Case Number: N/A No. of Proposed Exterior Signs N/A
No. of Proposed Interior Signs N/A Existing Signs Sq. Footage N/A
Proposed Sign Sq. Footage 600 EACH SIDE Total Sq. Footage of all Signs N/A
Banner Sq. Footage N/A
Linear Feet of Business on Street Frontage: N/A

Illuminated ? Yes ☒ No ☐ Type of Illumination:

Electrical: Existing ☐ New ☒ Not Applicable ☐
Amps: 100 Volts: 120/240
Mounted: TO COLUMN Sign Face Material: N/A
Sign Thickness: N/A

RECEIVED
JUL 03 2012
CITY OF RENO
PERMIT PLACE

Plan Requirements

The Information provided on the Plans should include:

1) A site Plan indicating in detail the proposed location (s) of the sign (s).
2) A representation to scale of the height, width, depth of the sign with all copy to be displayed on sign.
3) Site plans which show the distance from pole/monument signs to adjacent driveways and lot lines.
4) Detailed method of attachment.
5) An electrical load including the voltage and amperage.

Note: It is the responsibility of the applicant to provide all applicable information upon submittal of each sign permit. Failure to accurately provide the above information as it applies to this application may delay the processing and approval of the sign permit.

Applicant (print) A. West (sign) AARON WEST

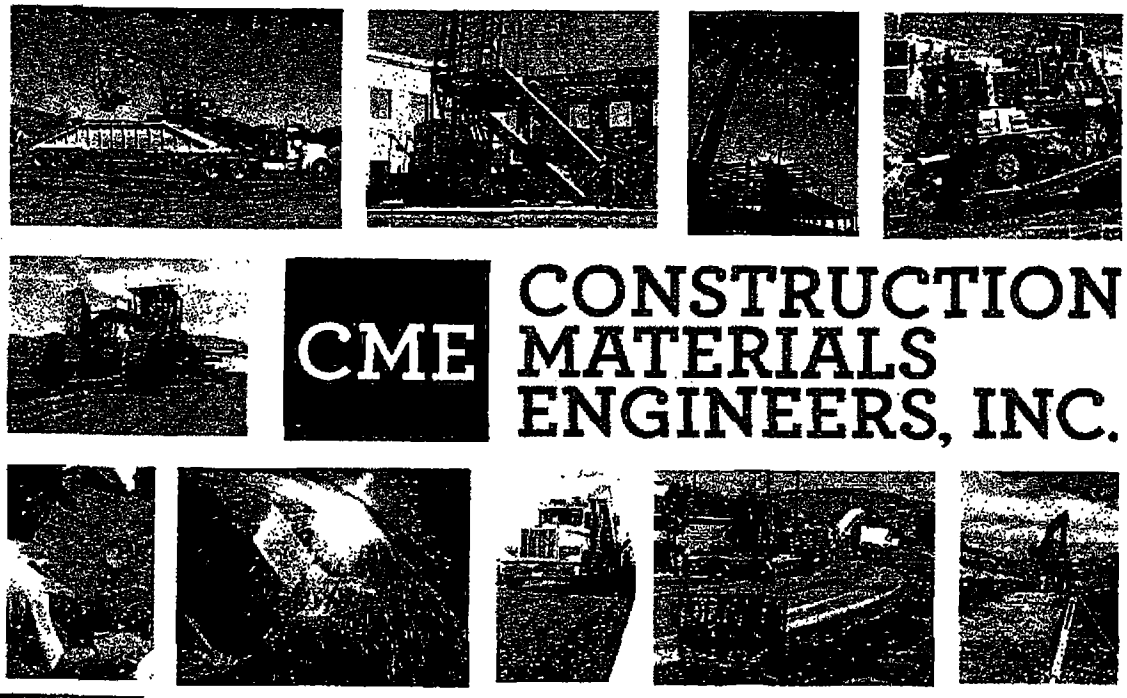
JA 1651 SN 1207

SGN13-000046

GEOTECHNICAL INVESTIGATION

MOANA LANE WIDENING BILLBOARD RELOCATION – SITES 1 AND 2

RENO, NEVADA



CME CONSTRUCTION MATERIALS ENGINEERS, INC.

PREPARED FOR:

CLEAR CHANNEL OUTDOOR

JANUARY 2012
FILE: 1360

JA 1652

SN 1208

CME CONSTRUCTION MATERIALS ENGINEERS, INC.

6980 Sierra Center Parkway, Suite 90
Reno, NV 89511

January 31, 2012
File: 1360

Mr. Aaron West
CLEAR CHANNEL OUTDOOR
4945 Joule Street
Reno, Nevada 89502

RE: **Geotechnical Investigation**
Moana Lane Widening Project Billboard Relocation Sites 1 & 2
Reno, Nevada

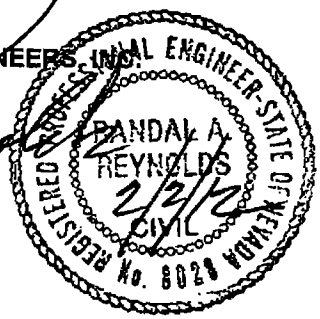
Dear Mr. West:

Construction Materials Engineers, Inc. is pleased to submit our geotechnical investigation for the Moana Lane Widening Project Billboard Relocation for Sites 1 & 2 in Reno, Nevada.

The following report includes the results of our field and laboratory investigations and presents our recommendations for the design and construction of the project. We wish to thank you for the opportunity to provide our services and look forward to working with you on future endeavors. Please feel free to call us should you have any questions or require additional information.

Sincerely,

CONSTRUCTION MATERIALS ENGINEERS, INC.



Exp. 12-31-13

Randal A. Reynolds, PE
Senior Geotechnical Engineer
rreynolds@cme-corp.com
Direct: 775-737-7576
Direct Fax: 775-737-7607

RAR:rar:jwl
Enclosures

V:\Active\1360\geo report\cvr_ltr.docx

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Appendix C

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SSRBC - Section 509

GEOTECHNICAL INVESTIGATION
MOANA LANE WIDENING BILLBOARD RELOCATION - SITES 1 AND 2
RENO, NEVADA

1.0 INTRODUCTION

Presented herein are the results of Construction Materials Engineers Inc. (CME) geotechnical exploration, laboratory testing, and associated geotechnical design recommendations for the billboard relocations (Sites 1 & 2) as part of the Moana Lane Widening Project. These recommendations are based on surface and subsurface conditions encountered in our explorations, and on details of the proposed project as described in this report. The objectives of this study were to:

1. Investigate general soil and ground water conditions pertaining to design and construction of the proposed project.

2. Provide recommendations for design and construction of the project, as related to these geotechnical and ground water conditions.

The area covered by this report is shown on Plate A-1 (Site Map and Exploration Locations) in Appendix A. The proposed project is located in Section 24, Township 19N, Range 19E M.D.M.

Our study included field exploration, laboratory testing, and engineering analysis to identify the physical and mechanical properties of the various on-site materials. Results of our field exploration and testing programs are included in this report and form the basis for all conclusions and recommendations.

2.0 PROJECT DESCRIPTION

It is understood that the billboards will be relocated to accommodate the proposed widening of Moana lane. Moana lane will be widened approximately 50 feet along the south side of the existing roadway. The billboards and proposed relocation areas are as follows:

- **Site 1:** The existing billboard located near La Vecchia Restaurant (southwest corner of South Virginia Street and Moana Lane) will be relocated south of its current location.

- **Site 2:** The existing billboard located at the northwest corner of South Virginia Street and Moana Lane will be relocated near Green Acres Mobile Home Park located on the north side of Moana Lane near Lymberry Street.

All billboards will be supported on single pole structures with drilled shaft foundations. Structural loading for the billboards was provided by GRC Engineering, Inc. Anticipated loads are as follows:

- Maximum axial load: 40 kips

- Maximum wind load (perpendicular to billboard face): 28 kips

- Maximum moment (dead and wind combined): 1100 ft-kips

The billboards will have a maximum height of 35 feet with a front face dimension of 14 feet by 48 feet.

3.0 SITE CONDITIONS

3.1 Site 1

Site 1 is located near La Vecchia Restaurant at the southwest corner of South Virginia Street and West Moana Lane. Currently, two structures and an existing billboard are located on this property. It is understood that the existing structures will be demolished and removed to provide access for the Moana Lane Widening Project. Paved parking and access roads are also located on the property.

3.2 Site 2

Site 2 is located at the Green Acres Trailer Park near the northwest corner of Lymberry Street and West Moana Lane. The trailer park has several mobile homes located along the western and eastern boundaries of the property. A partially paved roadway is located in the center of the mobile home park providing access to West Moana Lane. Several small to medium-sized trees are located along the western and eastern boundaries of the property.

4.0 RESEARCH

SEA Engineers Inc. completed a geotechnical investigation for the Peppermill Hotel and Casino Expansion in 1985. The project is located immediately north of Sites 1 & 2 and is located in a similar geologic formation. The geotechnical information from this report was used to supplement the field exploration completed with this investigation.

5.0 EXPLORATION

5.1 Drilling

The proposed sites were explored in October 2011 by drilling 2 test borings (one boring per site location). The borings were drilled using a truck-mounted CME 75 soil sampling drill rig with 6-inch outside-diameter (O.D.), 3¼-inch inside-diameter (I.D.), continuous-flight augers. The maximum depth of exploration was 30 feet below the existing ground surface. The approximate locations of the test borings are shown on Plate A-1: Site Plan.

The native soils were sampled in-place every 2 to 5 feet using a standard 2-inch OD split-spoon sampler driven by a standard 140-pound drive hammer with a 30-inch stroke, which is known as the Standard Penetration Test (SPT) - ASTM D 1586. The number of blows to drive the sampler the final 12 inches of an 18-inch penetration into undisturbed soil provides an indication of the density or consistency of the material.

A 3-inch O.D. split-spoon sampler was also used to sample soils containing gravel or where approximate in-place densities of subsurface materials were required. Sampling methods used were similar to the SPT but also include the use of 2½-inch diameter, 6 inch long brass sampling tubes placed inside the split-spoon sampler. Because of the larger diameter of the sampler, blow counts are typically higher than those obtained with the SPT and should not be directly equated to SPT blow counts. The logs indicate the type of sampler used for each sample.

Due to the relatively small diameter of the SPT sampler, the maximum particle size that could be recovered was approximately 1¼ inches. The final logs may not, therefore, adequately represent the actual quantity or presence of gravels, cobbles, or boulders.

5.2 Material Classification

Soils were examined and classified during exploration in general accordance with ASTM D 2488 (Description and Identification of Soils). During exploration, representative bulk samples were placed in sealed plastic bags and returned to our laboratory for testing. Upon completion of laboratory testing, additional soil classification and verification of the field classifications were subsequently performed in

accordance with the Unified Soil Classification System (USCS), as presented in ASTM D 2487. Boring logs are presented on Plate A-2 and a Graphic Soils Classification Chart is presented on Plate A-3.

6.0 LABORATORY TESTING

All soil testing performed in the CME's soils laboratory is conducted in accordance with the standards and methodologies described in Volume 4.08 (Soil and Rock; Dimension Stone; Geosynthetics) of the ASTM Standards.

6.1 Index Testing

Samples of significant soil types were analyzed to determine their in situ moisture content (ASTM D 2216), grain size distribution (ASTM D 422), and plasticity index (ASTM D 4318). Results of these tests were used to classify the soils according to ASTM D 2487 and to check the field logs, which were then updated as appropriate. Test results are presented on Plate B-1.

7.0 GEOLOGIC AND GENERAL SOIL PROFILE DESCRIPTIONS

Sedimentation in the Truckee Meadows has been in progress at varying rates since the formation of the block faulted basin. Most of the sediments, including the coarse grain, gravelly sands that underlie the majority of the Truckee Meadows, were deposited quite abruptly in the post-glacial period during torrential flooding. With the advent of a warm, drier climate, the volume and size distribution of sediment transported was greatly reduced and the sedimentation process became largely limited to the reworking of earlier deposits.

Based on a review of a published Geologic Map that incorporates the project area, *Geologic Map of the Mount Rose NE Quadangle* (Bonham and Rogers 1983), Sites 1 and 2 are located in the Donner Lake Outwash Formation. This formation is a glacial outwash deposit of Pleistocene age characterized as a heterogeneous mixture of sands, gravels, cobbles and boulders. Boulder-sized particles up to 16 feet in diameter have been encountered in this deposit (Bingler, 1975). Typically, this formation has a well-developed argillic horizon consisting of clayey sands and gravels with high plastic soil characteristics.

7.1 Site 1

The uppermost soil stratum encountered to a depth of about 3½ feet below the existing ground surface (bgs) was clayey sand with gravel **(SC)**. Underlying this uppermost soil stratum to a depth of 8 feet bgs, silty sand with gravel **(SM)** was encountered. Poorly graded sand with silt and gravels **(SP-SM)** was encountered from about 8 to 12 feet bgs. Based on SPT blow counts, the relative density of the soil strata encountered from 3½ to 12 feet bgs was medium dense to dense. Poorly graded gravel with sand and silt **(GP-GM)** was encountered from 12 to 20 feet bgs. Based on SPT blow counts, the relative density of this soil stratum was dense to very dense. The lowermost soil horizon encountered to depth of exploration was poorly graded sand with silt **(SP-SM)**.

Borings completed for the referenced Peppermill Hotel were drilled to depths of up to 47 feet bgs. Geologically, the Peppermill Hotel is located in the Donner Lake Formation. The soil profile encountered is similar to Sites 1 & 2 consisting of dense poorly graded sands with silts and gravels **(SP-SM)** and poorly graded gravels with sand and cobbles **(GP-GM)**. These borings indicate that this soil profile extends below the exploration depths completed with this investigation.

7.2 Site 2

The uppermost soil stratum encountered to a depth of about 2 feet bgs was clayey sand **(SC)**. Underlying this uppermost soil stratum to a depth of 5 feet bgs was silty sand with gravel **(SM)**. Poorly graded sands with silt and gravel **(SP-SM)** were encountered to depths of 15 feet bgs. The lowermost soil stratum encountered to the depth of exploration was poorly graded gravel with sand, silt, and cobbles **(GP-GM)**. Based on SPT blow counts, the relative density of the soil strata encountered from 2 feet bgs to the depth of exploration was very dense.

7.3 Soil Moisture and Groundwater Conditions

Generally, soils were encountered in a slightly moist to moist soil condition. Ground water was encountered at 21 feet below the existing ground surface at Site 1 and was not encountered to the depth of exploration at Site 2. The ground water level measured during this investigation may fluctuate and be encountered at different depths during construction.

8.0 SEISMIC HAZARDS

8.1 Seismicity

Much of the Western United States is a region of moderate to intense seismicity related to movement of the crustal masses (plate tectonics). By far, the most active regions, outside of Alaska, are along the San Andreas Fault zone of western California. Other seismically active areas include the Wasatch Front in Salt Lake City, Utah, which forms the eastern boundary of the Basin and Range physiographic province, and the eastern front of the Sierra Nevada Mountains, which is the western margin of the province. The project site lies near the eastern base of the Sierra Nevada, within the western extreme of the Basin and Range.

It is generally accepted that the maximum credible earthquake in this area would be in the range of magnitude 7 to 7.5 originating from the frontal fault system of the Eastern Sierra Nevada. The most active segment of this fault system that is closest to the Reno area is located at the base of the eastern flank of the Carson Range near Thomas Creek, Whites Creek and Mt. Rose Highway, some 8 miles south of the project sites.

8.2 Faults

To determine the location of mapped earthquake faulting at or near the project sites, a review of the Mount Rose NE Quadrangle Earthquake Hazards Map (Szecsody, 1983) was conducted. This map indicates that no mapped faults traverse through the project sites. The closest mapped fault is located approximately 300 west of the Green Acres Trailer Park and trends in a northerly direction.

It should be noted that there may be other buried faults close to the project site. Fault scarps are likely buried by recent glacial outwash deposits that cover the majority of central and eastern parts of the Reno Basin (dePolo, 1996). The information presented in this section represents the available existing fault information, but does preclude the presence of other faults.

Quaternary earthquake fault evaluation criterion has been formulated by a professional committee for the State of Nevada Seismic Safety Council. These guidelines are consistent with the State of California Alquist-Priolo Act of 1972, which defines Holocene Active Faults as those with evidence of displacement within the past 10,000 years (Holocene time). Those faults with evidence of displacement during Pleistocene time (10,000 to 1,600,000 years before present) are classified as either late Quaternary Active Fault (10,000 to 130,000 years) or Quaternary Active Fault (> 130,000 years). Both of the latter fault designations are considered to have a decreased potential for activity than the Holocene Active Fault. An inactive fault is considered is a fault that does not comply with these age groups.

Based on the referenced fault map, the faults in the vicinity of the project are considered either late Quaternary Active Fault or Quaternary Active Fault.

8.3 Liquefaction

Liquefaction is a nearly complete loss of soil shear strength that can occur during an earthquake, as cyclic shear stresses generate excessive pore water pressure between the soil grains. The higher the ground acceleration caused by a seismic event, or the longer the duration of shaking, the more likely liquefaction is to occur. Severe liquefaction can result in catastrophic settlements of large civil structures. Liquefaction is generally limited to depths of 50 feet or less below the existing ground surface.

Because the project sites are underlain by dense to very dense granular soils, only localized amplification of ground motion would be expected during an earthquake. Liquefaction potential in our opinion is minimal due to the types of materials present.

9.0 SEISMIC DESIGN PARAMETERS

Seismic design parameters are based on site-specific estimates of spectral response ground acceleration as designated in the 2006 IBC. The benefit of this approach is that a response spectrum can be developed from this data and based on the period of the structure, a spectral acceleration for that structure can be determined. These values are based on two criteria: site classification and site location (latitude and longitude). Site classification is based on the substrata soil profile type, as presented in Table 1.

Table 1 – Site Classification Definitions

Site Classification	Soil Profile Type Description
A	Hard Rock
B	Rock
C	Very Dense Soil and Soft Rock
D	Stiff Soil Profile
E	Soft Soil Profile
F	Soil Type Requiring Site-Specific Evaluation

The soil/bedrock profile classification is based on two criteria: density (primarily for soils based on SPT blow count data) or hardness (based on shear wave velocity primarily for bedrock sites). These two criteria have to be determined to a depth of 100 feet below the ground surface. A 100-foot deep boring is required to define the soil profile in sufficient detail to determine the site classification. A 100-foot boring was not part of our scope of services for this project. However, the IBC allows the use of a default site classification of D if the soil profile to a depth of 100-feet is not characterized and other geologic conditions do not exist that would justify a site classification of E or F. Based on the SPT blow count data, the geotechnical profile is classified as a stiff soil profile and it is our opinion that a default Site Classification of D is appropriate to use in the design of the structures.

Spectral response acceleration values (S_s & S_1) are based on structures underlain by bedrock with a site classification of B. Acceleration values may amplify or attenuate depending on the subsurface geologic conditions. Therefore, the building code provides correction factors to modify the acceleration values depending on the subsurface geologic conditions. These correction factors (F_a & F_v) are used if the site is located overlying subsurface geologic conditions with a site classification other than B. Spectral response acceleration values were determined from the USGS website: *Earthquake Hazards program to determine Seismic Design Values for Buildings.* Table 2 provides a summary of seismic design parameters including correction factors F_a & F_v.

Table 2 – Seismic Design Parameters[1]	
Design Parameters	**Design Values**
Spectral Response at Short period (S_s), percent of gravity	1.57
Spectral Response at 1-second Period (S_1), percent of gravity	0.62
Site Class	D
Site Coefficient F_a, decimal	1.0
Site Coefficient Fv, decimal	1.5
Notes: 1) Based on 2006 IBC 2) lat.=39. 492^0 long= 119.796^0	

10.0 DISCUSSION AND RECOMMENDATIONS

The soil profiles encountered at Sites 1 and 2 are similar, predominantly consisting of poorly graded sands with silt or poorly graded gravels with sand and cobbles. These soils will provide good foundation support for the billboards. Because these soils are cohesionless, they will be prone to sloughing which may cause construction difficulties.

10.1 General Information

The recommendations provided herein are intended to reduce risks of structural distress related to consolidation or expansion of native soils and/or structural fills. These recommendations, along with proper design and construction of the planned structures and associated improvements, work together as a system to improve overall performance. If any aspect of this system is ignored or poorly implemented, the performance of the project will suffer. Sufficient construction observation and testing should be performed to document that the recommendations presented in this report are followed.

Any evaluation of the site for the presence of *surface or* subsurface hazardous substances is beyond the scope of this study. When suspected hazardous substances are encountered during *routine* geotechnical investigations, they are noted in the exploration logs and reported to the client. No such substances were identified during our exploration.

10.2 Drilled Shaft Design

Billboards will be supported on drilled shaft foundations. Because of the high lateral loads and moderate axial loads, the primary diameter and length determination of the drilled shaft is the resistance to lateral loads. LPILE analysis will initially be completed to determine the minimum length and diameter requirements of the drilled shaft to resist anticipated lateral loads. Axial load capacity will then be determined based on the anticipated dimensions of the drilled shaft obtained from the LPILE analysis.

10.2.1 LPILE Analysis

The computer software LPILE, Ensoft 2011, was used to determine the deflection of the drilled shaft in response to anticipated lateral loading. LPILE computes deflection, shear, bending moment, and soil response with respect to depth in nonlinear soils. The soil profile is modeled using lateral load transfer curves (p-y curves).

LPILE requires 4 different input parameters including anticipated loading, support soil strength properties, drilled shaft dimensions, and structural reinforcement.

10.2.1.1 Anticipated Loading

A shear load was applied on the drilled shaft for free head conditions. Based on a maximum moment of 1,100 foot-kips, a shear load of 44 kips was applied at a height of 25 feet above the ground surface. It is our understanding that this shear load represents the worst case load scenario that could be imposed on the drilled shaft.

10.2.1.2 Support Soil Strength Properties

The lateral support characteristics of the representative soil layers encountered at each billboard site were modeled using support soil deformation information (p-y curves) provided by the software program. Granular soil p-y curves input information requires 3 different soil parameters: unit weight, internal friction angle, and soil modulus. Table 3 presents the different soil layers and assumed strength properties for each billboard site.

Table 3 – Soil Model Layering and Strength Properties

Site	Soil Layer Depth (feet)	Soil Type	Unit Weight (pcf)	Internal Friction Angle (Φ)	Soil Modulus Parameter (k)
1	0 - 3 ½	SC	120	31	90
	3 ½ - 8	SM	120	37	225
	8 - 12	SP-SM	120	40	225
	12 - 20	GP-GM	120	42	225
	20 - 25	SP-SM	120	40	225
2	0 - 2	SC	120	31	90
	2 - 5	SM	120	40	225
	5 - 15	SP-SM	120	40	225
	15 to 20	GP-GM	120	42	225

10.2.1.3 Drilled Shaft Dimensions and Structural Reinforcement

A drilled shaft diameter of 48 inches was assumed for the analysis. LPILE requires that the drilled shaft reinforcement is input into the analysis. Our analysis assumed that the reinforcement consists of 24 equally spaced #10 bars with a minimum concrete cover of 3 inches.

10.2.1.4 LPILE Calculated Deflections

Deflections at the top of the drilled shaft were determined with different drilled shaft lengths. The top two feet of the soil profile was ignored to account for possible erosion and soil softening from frost/thaw effects. The optimum drilled shaft length was determined by assuming a maximum deflection of about ¾ inches at the top of the drilled shaft. Drilled shaft lengths in relationship to calculated deflections are presented in Table 4.

Table 4 – Drilled Shaft Lengths in Relationship to Calculated Deflections			
Site	**Drilled Shaft Length (feet)**	**Measured Deflection at Ground Surface (inches)**	**Measured Deflection at 25 feet above the Ground Surface (top of pole) (inches)**
1	19	1.2	4.7
	21	0.8	3.8
	25	0.7	3.4
2	17	1.8	6.0
	20	0.8	3.6
	25	0.7	3.2

Deflections are based on the soil reaction to the applied loads and structural strength and dimensions of the drilled shaft. It should be advised that other rebar configurations and sizes may cause different deflections then those presented in Table 4. The structural engineer will design the drilled shaft reinforcement. If the reinforcement is different, additional analysis incorporating the design reinforcement can be performed to determine if the deflection is different than calculated by this analysis.

LPILE deflection output results are presented in Appendix C. These results are presented graphically and include anticipated deflections with depths for different shaft lengths. Two different lateral loads were assumed in our analysis: maximum wind load or a combined dead and maximum wind load (worst case scenario). A summary of measured deflections at the top of the pole (deflection at 25 feet above the ground surface) versus drilled shaft length for each billboard site is also presented. The summary shows that as the drilled shaft length is shortened the deflections increase significantly. However, as the drilled shaft lengths are increased the deflections are reduced and a near steady state deflection of about 3 inches is obtained. The 3 inch deflection at the top of pole corresponds to a deflection of about ¾ inches at the ground surface. Therefore, if the deflection at the top of the drilled shaft is required to be reduced, the drilled shaft diameter will need to be increased. A preliminary analysis indicates that a drilled shaft diameter of 5 feet would decrease the deflection to about ½ inches.

Based on an allowable deflection of about ¾ inches, the recommended drilled shaft lengths for Sites 1 and 2 are 21 and 20 feet, respectively.

10.2.2 Axial Load Capacities

Axial load capacities were determined based on sidewall resistance. End bearing was not included because anticipated designed axial load capacity is obtained with sidewall resistance based on the required length and diameter of the drilled shaft. By not including end bearing, thoroughly cleaning the bottom of the drilled shaft is not required, which would be difficult for the material types encountered below or near the water table. Straight-shafted drilled shaft axial capacities are presented in Table 5.

Table 5 – Allowable Drilled Shaft Dimensions with Corresponding Axial Capacities			
Site	**Length (feet)**	**Diameter (feet)**	**Maximum Soil Net Allowable Axial Capacities (kips) [1]**
1	21	4	100
2	20	4	100

NOTES:
1. The net allowable axial capacity is that pressure at the base of the footing in excess of the adjacent overburden pressure.

The drilled shaft axial capacities presented in Table 5 are based on the following conditions:

- The allowable capacities applied to full dead plus live loads and a one-third increase is recommended when considering transient loadings, such as those resulting from wind or seismic forces.

- The capacities apply to the allowable soil supporting capacity and do not consider the structural strength of the piers.

10.2.3 Settlements

Total settlements are anticipated to be on the order of 1 inch or less. Due to the presence of granular native soils, an elastic settlement response is expected and the majority of the settlement will occur rapidly, generally during the construction time frame for the billboard.

10.3 Drilled Shaft Construction Recommendations

Typically, Section 509 of the SSRBC (Standard Specifications for Road and Bridge Construction-NDOT 2001) is utilized to provide construction procedures for drilled shaft installations. Unless stated in this report, construction procedures given in Section 509 should be followed. A copy of Section 509 is presented in Appendix D. It is anticipated that a large bucket auger will be utilized to drill the pier foundations and is the basis for our construction recommendations.

Predominantly poorly graded sands with silt and gravels and poorly graded gravels with sand and silt were encountered. Because these soils are cohesionless, it is anticipated that sidewall sloughing will occur with open holed drilling techniques. The degree of sloughing also depends on the time period between when the hole is drilled and when the concrete is placed. As the pier sidewall soils dry, they will become more friable and sloughing will be more prevalent. Temporary casing could be used to reduce sloughing and would be advanced in the hole as the drilling proceeded. This technique is more costly then open holed drilling techniques and would require specialized equipment. Another option that could be considered would be to drill the hole without casing and allow the sidewall soils to slough. After the hole is cleaned, a low strength, excavatable concrete would be poured into the hole. Once this concrete is cured, the hole would be redrilled and a neatline, stable sidewall will be obtained. The amount of sloughing and related concrete volumes is difficult to predict with technique. Also, excessive sloughing in the hole may reduce the viability of this option and a test hole should be considered.

Occasional large boulders are common in this geologic formation and depending on the size of the boulder could cause drilling difficulties. Boulders may need to be broken in-place or the drilled shaft may have to be widened to remove boulders.

10.3.1 Concrete Placement Recommendations

If temporary casing is required, it shall be pulled from the hole during concrete placement. Before concrete is placed, the bottom of the drilled shaft should be inspected by a geotechnical representative of CME to determine if loose or sloughed material will impede the placement of the rebar cage and if required clearance between the drilled shaft sidewalls and rebar cage is present. Additional cleaning may be required prior to placement of concrete. Unless the hole is cased, it is recommended that the rebar cage is set the same day as the concrete placement.

Concrete should be placed in one continuous operation through a hopper and tremie or other device so that it is channeled in such a manner to clear the walls of the excavation and reinforcing steel. Concrete should be vibrated in order to achieve proper compaction and minimize rock particles. If self-consolidating concrete is used, vibration will not be necessary. The slump of the concrete depends on the construction conditions. If the casing is pulled, the concrete slump should be between 5 to 7 inches. For concrete placed by pumping or tremie methods, the concrete slump should be between 7 to 9 inches. A concrete mix design should be submitted for approval two weeks prior to concrete placement.

For casing that is pulled during concrete placement, the concrete should be kept above the bottom of the casing at all times. An adequate head of concrete should be maintained at all times to exceed outside soil pressures during the casing withdrawal.

10.4 Site Drainage

Adequate surface drainage shall be constructed and maintained to drain away from the structure foundation. It is recommended that the permanent finish slope grade away from the structure foundation should be at least 2 percent for a minimum distance of 10 feet.

11.0 CONSTRUCTION OBSERVATION AND TESTING SERVICES

The recommendations presented in this report are based on the assumption that the owner/project manager provides sufficient field testing and construction review during all phases of construction. Prior to construction, the owner/project manager should schedule a pre-job conference to include, but not be limited to: owner/project manager, project engineer, general contractor, earthwork and materials subcontractors, and geotechnical engineer. It is the owner's/project manager's responsibility to set-up this meeting and contact all responsible parties. The conference will allow parties to review the project plans, specifications, and recommendations presented in this report, and discuss applicable material quality and mix design requirements. All quality control reports should be submitted to the owner/project manager for review and distributed to the appropriate parties.

12.0 STANDARD LIMITATION CLAUSE

This report has been prepared in accordance with generally accepted local geotechnical practices. The analyses and recommendations submitted are based upon field exploration performed at the locations shown on Plate A-1 – Site Plan of this report. This report does not reflect soils variations that may become evident during the construction period, at which time re-evaluation of the recommendations may be necessary. Sufficient construction observation should be completed in all phases of the project related to geotechnical factors to document compliance with our recommendations. The owner/project manager is responsible for distribution of this geotechnical report to all designers and contractors whose work is related to geotechnical factors.

All plans and specifications should be reviewed by the design engineer responsible for this geotechnical report, to determine if they have been completed in accordance with the recommendations contained herein, prior to submitting to the building department for review. It is the owner's/project manager's responsibility to provide the plans and specifications to the engineer.

This report has been prepared to provide information allowing the engineer to design the project. The owner/project manager is responsible for distribution of this report to all designers and contractors whose work is affected by geotechnical recommendations. In the event of changes in the design, location, or ownership of the project after presentation of this report, our recommendations should be reviewed and possibly modified by the geotechnical engineer. If the geotechnical engineer is not accorded the privilege of making this recommended review, he can assume no responsibility for misinterpretation or misapplication of his recommendations or their validity in the event changes have been made in the original design concept without his prior review. The engineer makes no other warranties, either expressed or implied, as to the professional advice provided under the terms of this agreement and included in this report.

This report was prepared by CME for the account of the Clear Channel Outdoor. The material in it reflects our best judgment in light of the information available to us at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based upon it, are the responsibility of such third parties. Construction Materials Engineers Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

REFERENCES

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Site 1: La Vecchia at SW Corner S.Virginia and W. Moana

CME CONSTRUCTION MATERIALS ENGINEERS INC.

Clear Channel Outdoor

Moana Lane Widening Billboard Relocation

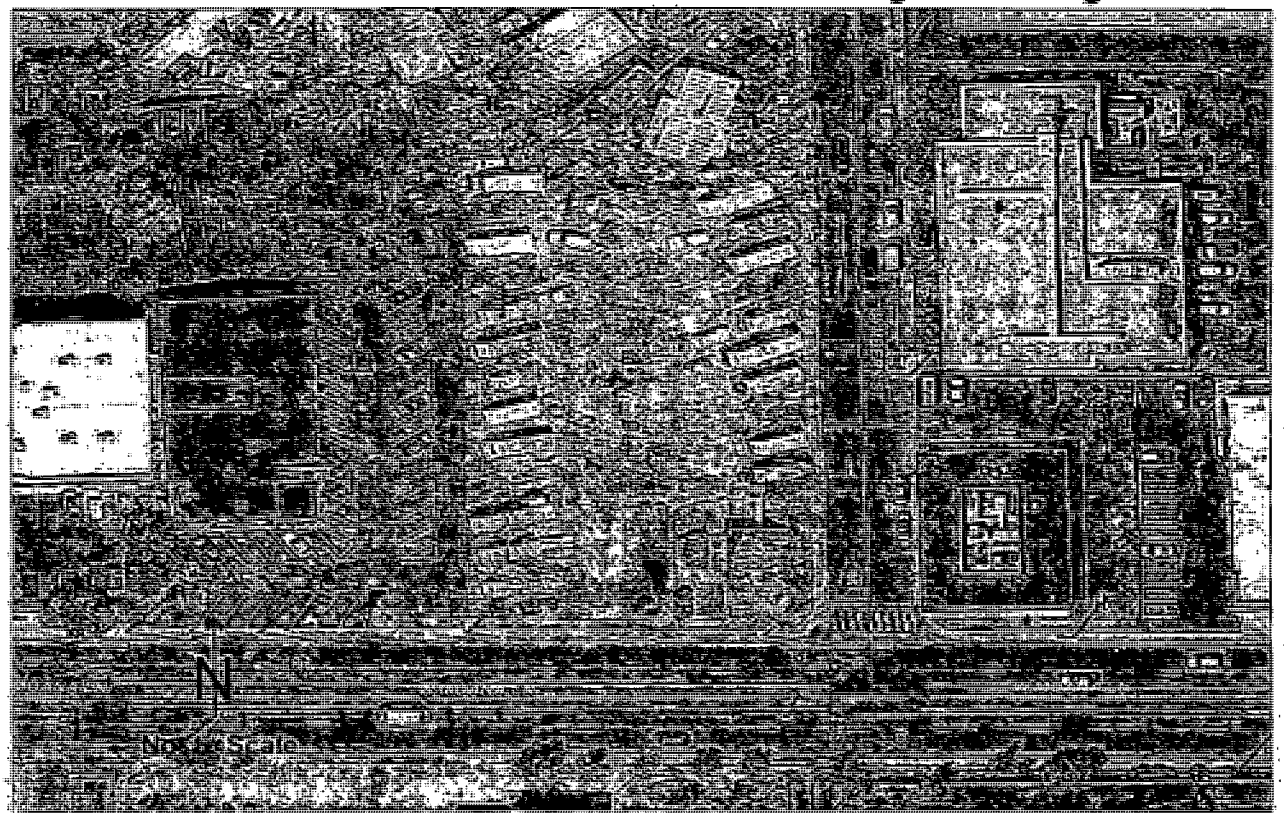
Site Plan Showing Exploration Location

● **(B-1) Approx. Boring Location**

Project No: 1360

Plate A-1a

Site 2: NW Corner W. Moana & Lymberry Street



CME CONSTRUCTION MATERIALS ENGINEERS INC.

Clear Channel Outdoor

Moana Lane Widening Billboard Relocations

Site Plan Showing Exploration Location

● **(B-2) Approx. Boring Location**

Project No: 1360

Plate A-1b

LOG OF TEST BORING NO. B-1

PROJECT MOANA LANE WIDENING
BILLBOARD RELOCATION
PROJECT NO. 1360 **DATE** 10/1/11
RIG & BORING TYPE HAZTECH BK-81
LOCATION LA VECCHIA RESTAURANT
LOGGED BY: RAR **SURFACE ELEVATION**

Depth in Feet	Unified Soil Classification	Graphical Log	Sample	Sample Type	Sample No.	Blow Counts (SPTs)	Consistency/ Density	Moisture	Visual Description	Dry Density (lbs. per cubic foot)	Moisture Content Percent of Dry Weight	Laboratory Tests
0									0-10": 4" AC OVER 6" BASE AGGREGATE MATERIAL			
	SC			S	1A	30	MED. DENSE	MOIST	10"-3 1/2': CLAYEY SAND WITH GRAVEL, mostly fine to coarse sand, some fine to coarse gravels, low plasticity, dark brown.		13.5	A, G
2.5				S	1B	31						
	SM			S	1C	50/1"	MED. DENSE	MOIST	3 1/2-8': SILTY SAND WITH GRAVEL, mostly very fine to medium sand, some fine to coarse gravels, few cobbles, non plastic, brown.			
5				S	1D	24						
7.5				U	1E	50/4"						
	SP-SM						DENSE	MOIST	8-12': POORLY GRADED SAND WITH SILT AND GRAVEL, mostly fine to coarse sands, some fine to coarse gravels, occasional cobbles, non plastic, brown.			
10				S	1F	39					3.9	A, G
	GP-GM						VERY DENSE	MOIST	12-20': POORLY GRADED GRAVEL WITH SILT AND SAND, mostly fine to coarse gravels, few cobbles, some fine to coarse sands, non plastic, brown.			
12.5				U	1G	104				115	3.5	A, MD
15				S	1H	74		TO				
17.5								VERY MOIST				

GROUNDWATER

	DEPTH	HOUR	DATE
▽	21'		10/1/11
▽			

SAMPLE TYPE
A - Drill Cuttings. B. Bag sample.
S - 2" O.D. 1.38" I.D. tube sample.
U - 3" O.D. 2.42" I.D. tube sample.
T - 3" O.D. thin-walled Shelby tube.
C - CME sample. R - Rotary Cuttings.

LABORATORY TESTS
A - Atterberg Limits
G - Grain Size
C - Consolidation
MD - Moisture/Density

PLATE NO.: A-2a

CME CONSTRUCTION MATERIALS ENGINEERS, INC.

JA 1669

SN 1225

LOG OF TEST BORING NO. B-1

PROJECT MOANA LANE WIDENING
BILLBOARD RELOCATION
RIG & BORING TYPE HAZTECH BK-81
LOCATION LA VECCHIA RESTAURANT
PROJECT NO. 1360 **DATE** 10/1/11 **LOGGED BY:** RAR **SURFACE ELEVATION**

Depth In Feet	Unified Soil Classification	Graphical Log	Sample	Sample Type	Sample No.	Blow Counts (SPTs)	Consistency/ Density	Moisture	Visual Description	Dry Density (lbs. per cubic foot)	Moisture Content Percent of Dry Weight	Laboratory Tests
20	SP-SM			S	II	32	DENSE	VERY MOIST	20-31 1/2': POORLY GRADED SAND WITH SILT, mostly medium to coarse sand, little fine to coarse gravels, gray.			
22.5				S	IJ	28		TO				
25				S	IK	30		WET				
27.5				S	IL	37						
30				S	IM	61						
32.5									End of hole 30 feet. End of samples at 31 1/2 feet.			
35												

GROUNDWATER

	DEPTH	HOUR	DATE
▽	21'		10/1/11
▼			

SAMPLE TYPE

A - Drill Cuttings. B. Bag sample.
S - 2" O.D. 1.38" I.D. tube sample.
U - 3" O.D. 2.42" I.D. tube sample.
T - 3" O.D. thin-walled Shelby tube.
C - CME sample. R - Rotary Cuttings.

LABORATORY TESTS

A - Atterberg Limits
G - Grain Size
C - Consolidation
MD - Moisture/Density

PLATE NO.: A-2a

CME CONSTRUCTION MATERIALS ENGINEERS, INC.

JA 1670 SN 1226

LOG OF TEST BORING NO. B-2

PROJECT MOANA LANE WIDENING
BILLBOARD RELOCATION
RIG & BORING TYPE CME 75
LOCATION SITE 2 - LYMBERRY & MOANA
PROJECT NO. 1360 **DATE** 10/25/11 **LOGGED BY:** RAR **SURFACE ELEVATION**

Depth in Feet	Unified Soil Classification	Graphical Log	Sample	Sample Type	Sample No.	Blow Counts (SPTs)	Consistency/ Density	Moisture	Visual Description	Dry Density (lbs. per cubic foot)	Moisture Content Percent of Dry Weight	Laboratory Tests
0	SM						MED. DENSE	SL. MOIST	0-3/4': SILTY SAND FILL, DG			
	SC			S	2A	21	MED. DENSE	MOIST	3/4-2': CLAYEY SAND, with mostly fine to coarse sands, few gravels, high plasticity, brown.			
2.5	SM			U	2B	93/11"	VERY DENSE	MOIST	2-5': SILTY SAND WITH GRAVEL, mostly fine coarse sands, some fine to coarse gravels, few cobbles, non plastic, brown.			
5	SP-SM			U	2C	62	VERY DENSE	MOIST	5-15': POORLY GRADED AND WITH SILT AND GRAVEL, mostly fine to coarse sands, some fine to coarse gravels, few cobbles, gray/ brown.		3.2	G
7.5				S	2D	64/11"						
10				S	2E	46						
12.5				U	2F	50/5"						G
15	GP			S	2G	79/11"	VERY DENSE	MOIST	15-19': POORLY GRADED GRAVELS WITH SAND AND COBBLES, mostly fine to coarse gravels, few cobbles, some fine to coarse sands, non plastic, brown.			
17.5												

GROUNDWATER

	DEPTH	HOUR	DATE
▽		N.E.	10/25/11
▼			

SAMPLE TYPE

A - Drill Cuttings. B. Bag sample.
S - 2" O.D. 1.38" I.D. tube sample.
U - 3" O.D. 2.42" I.D. tube sample.
T - 3" O.D. thin-walled Shelby tube.
C - CME sample. R - Rotary Cuttings.

LABORATORY TESTS

A - Atterberg Limits
G - Grain Size
C - Consolidation
MD - Moisture/Density

PLATE NO.: A-2b

CME CONSTRUCTION MATERIALS ENGINEERS, INC.

JA 1671 SN 1227

LOG OF TEST BORING NO. B-2

PROJECT MOANA LANE WIDENING
BILLBOARD RELOCATION
RIG & BORING TYPE CME 75
LOCATION SITE 2 - LYMBERRY & MOANA
PROJECT NO. 1360 **DATE** 10/25/11 **LOGGED BY:** RAR **SURFACE ELEVATION**

Depth In Feet	Unified Soil Classification	Graphical Log	Sample	Sample Type	Sample No.	Blow Counts (SPTs)	Consistency/ Density	Moisture	Visual Description	Dry Density (lbs. per cubic foot)	Moisture Content Percent of Dry Weight	Laboratory Tests
									End of hole at 19 feet - refusal on dense gravels and cobbles, possible boulders.			
20												
22.5												
25												
27.5												
30												
32.5												
35												

GROUNDWATER

	DEPTH	HOUR	DATE
▽		N.E.	10/25/11
▼			

SAMPLE TYPE

A - Drill Cuttings. B. Bag sample.
S - 2" O.D. 1.38" I.D. tube sample.
U - 3" O.D. 2.42" I.D. tube sample.
T - 3" O.D. thin-walled Shelby tube.
C - CME sample. R - Rotary Cuttings.

LABORATORY TESTS

A - Atterberg Limits
G - Grain Size
C - Consolidation
MD - Moisture/Density

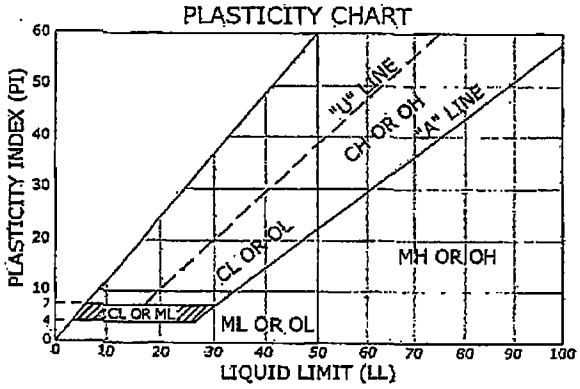
PLATE NO.: A-2b

CME CONSTRUCTION MATERIALS ENGINEERS, INC.

JA 1672 SN 1228

MAJOR DIVISION				TYPICAL NAMES
COARSE-GRAINED SOILS MORE THAN HALF IS COARSER THAN NO. 200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW	WELL GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
			GP	POORLY GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
		GRAVELS WITH OVER 12% FINES	GM	SILTY GRAVELS, SILTY GRAVELS WITH SAND
			GC	CLAYEY GRAVELS, CLAYEY GRAVELS WITH SAND
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS WITH LITTLE OR NO FINES	SW	WELL GRADED SANDS WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
			SP	POORLY GRADED SAND WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
		SANDS WITH OVER 12% FINES	SM	SILTY SANDS WITH OR WITHOUT GRAVEL
			SC	CLAYEY SANDS WITH OR WITHOUT GRAVEL
FINE-GRAINED SANDS MORE THAN HALF IS FINER THAN NO. 200 SIEVE	SILT AND CLAYS LIQUID LIMIT 50% OR LESS		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTS WITH SANDS AND GRAVELS
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, CLAYS WITH SANDS AND GRAVELS, LEAN CLAYS
			OL	ORGANIC SILTS OR CLAYS OF LOW PLASTICITY
	SILT AND CLAYS LIQUID LIMIT GREATER THAN 50%		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS, FINE SANDY OR SILTY SOLID, ELASTIC SILTS
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH	ORGANIC SILTS OR CLAYS MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS			Pt	PEAT AND OTHER HIGHLY ORGANIC SOILS

PLASTICITY CHART



CONSISTENCY		RELATIVE DENSITY	
SILTS & CLAYS	SPT BLOW* COUNTS (N)	SANDS & GRAVELS	SPT BLOW* COUNTS (N)
VERY SOFT	0-2	VERY LOOSE	0-4
SOFT	3-4	LOOSE	5-10
MEDIUM STIFF	5-8	MEDIUM DENSE	11-30
STIFF	9-15	DENSE	31-50
VERY STIFF	16-30	VERY DENSE	50+
HARD	30+		

* The Standard Penetration Resistence (N) in blows per foot is obtained by the ASTM D1585 procedure using 2" O.D., 1 3/8" I.D. samplers.

DESCRIPTION OF ESTIMATED PERCENTAGES OF GRAVEL, SAND, AND FINES	
TRACE	Particles are present but est. < 5%
FEW	5%-10%
LITTLE	15%-20%
SOME	30%-45%
MOSTLY	50%-100%

NOTE: Percentages are presented within soil description for soil horizon with laboratory tested soil samples.

DEFINITIONS OF SOIL FRACTIONS	
SOIL COMPONENT	PARTICLE SIZE RANGE
COBBLES	ABOVE 3 INCHES
GRAVEL	3 IN. TO NO. 4 SIEVE
COARSE GRAVEL	3 IN. TO 3/4 IN.
FINE GRAVEL	3/4 IN. TO NO. 4 SIEVE
SAND	NO. 4 TO NO. 200
COARSE SAND	NO. 4 TO NO. 10
MEDIUM SAND	NO. 10 TO NO. 40
FINE SAND	NO. 40 TO NO. 200
FINES (SILTS OR CLAYS)	BELOW NO. 200 SIEVE

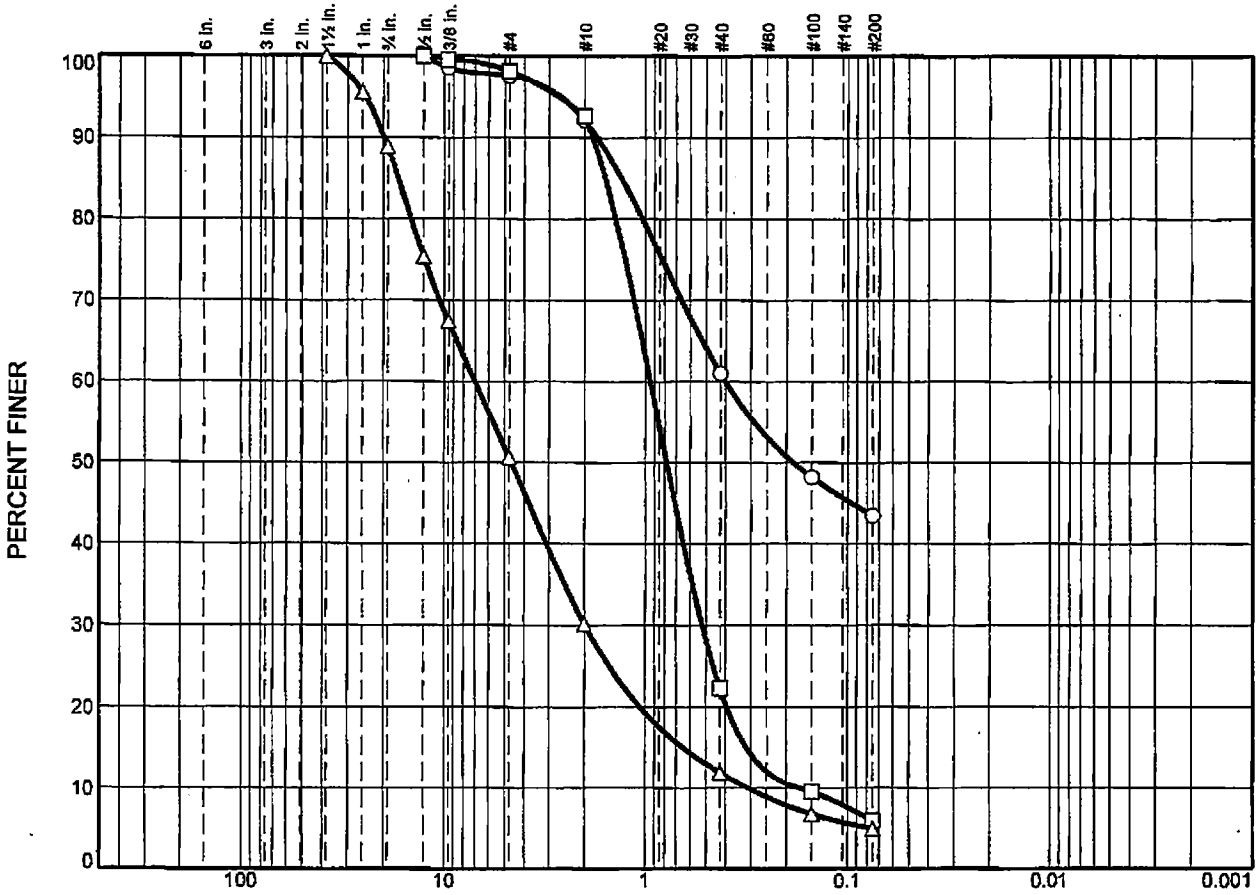
CME CONSTRUCTION MATERIALS ENGINEERS INC.

UNIFIED SOIL CLASSIFICATION SYSTEM AND KEY TO SOIL DESCRIPTION

PLATE NO. A-3

JA 1673 SN 1229

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	2.4	5.5	31.0	17.6	43.5	
□	0.0	0.0	1.9	5.4	70.4	16.3	6.0	
△	0.0	11.1	38.2	20.5	18.2	7.0	5.0	

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	Material Description	USCS
○	Boring 1	B-1B	2.5'-4.0'	clayey sand	SC
□	Boring 1	B-1F	10.0'-11.5'	poorly graded sand with silt	SP-SM
△	Boring 1	B-1G	13.5'-14.5'	well-graded gravel with silt and sand	GW-GM

CME

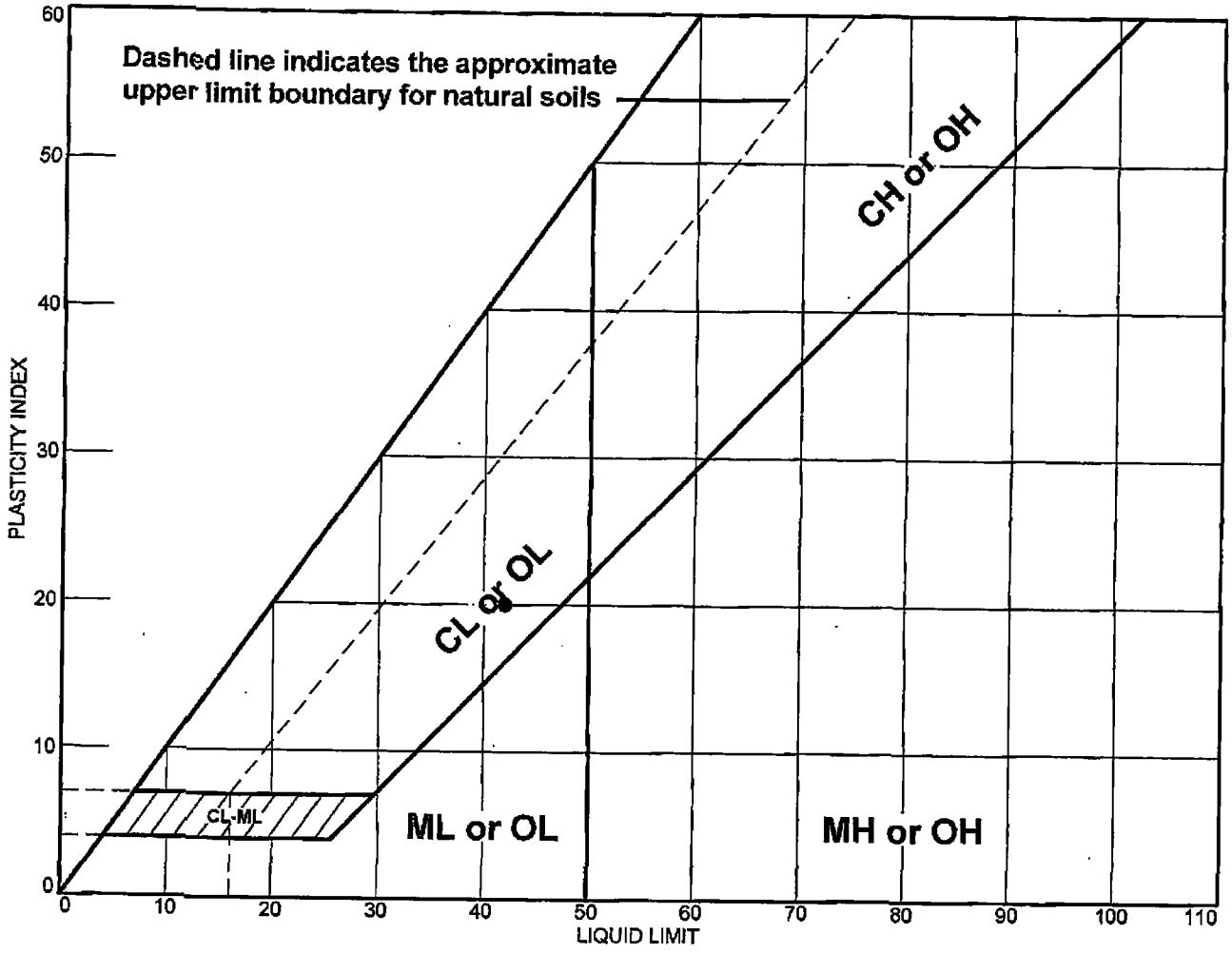
Client: Clear Channel

Project: Moana Lane Widening - Billboard Relocation

Project No.: 1360 **Plate** B-1a

JA 1674 SN 1230

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	clayey sand	42	22	20	61.1	43.5	SC
■	poorly graded sand with silt	NV	NP	NP	22.3	6.0	SP-SM
▲	well-graded gravel with silt and sand	NV	NP	NP	12.0	5.0	GW-GM

Project No. 1360 **Client:** Clear Channel

Project: Moana Lane Widening - Billboard Relocation

● **Sample Source:** Boring 1 **Depth:** 2.5'-4.0' **Sample No.:** B-1B

■ **Sample Source:** Boring 1 **Depth:** 10.0'-11.5' **Sample No.:** B-1F

▲ **Sample Source:** Boring 1 **Depth:** 13.5'-14.5' **Sample No.:** B-1G

Remarks:

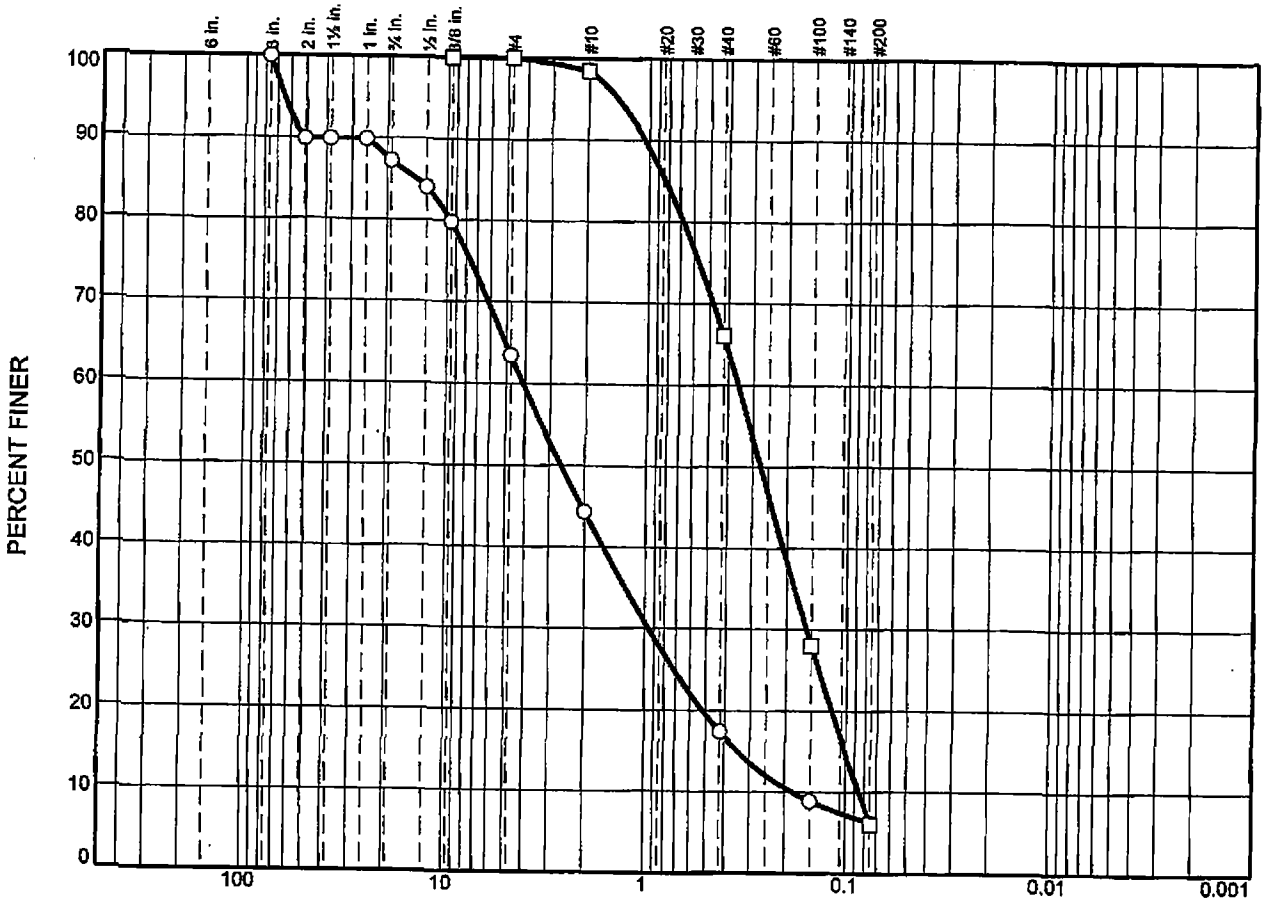
● Laboratory Number 26574

CME

Plate B-1b

JA 1675 SN 1231

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	12.8	23.7	19.1	26.9	11.3	6.2	
□	0.0	0.0	0.1	1.4	32.4	60.1	6.0	

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	Material Description	USCS
○	Boring 2	B-2C	5.0'-6.5'	well-graded sand with silt and gravel	SW-SM
□	Boring 2	B-2F	13.5'-14.0'	poorly graded sand with silt	SP-SM

CME

Client: Clear Channel

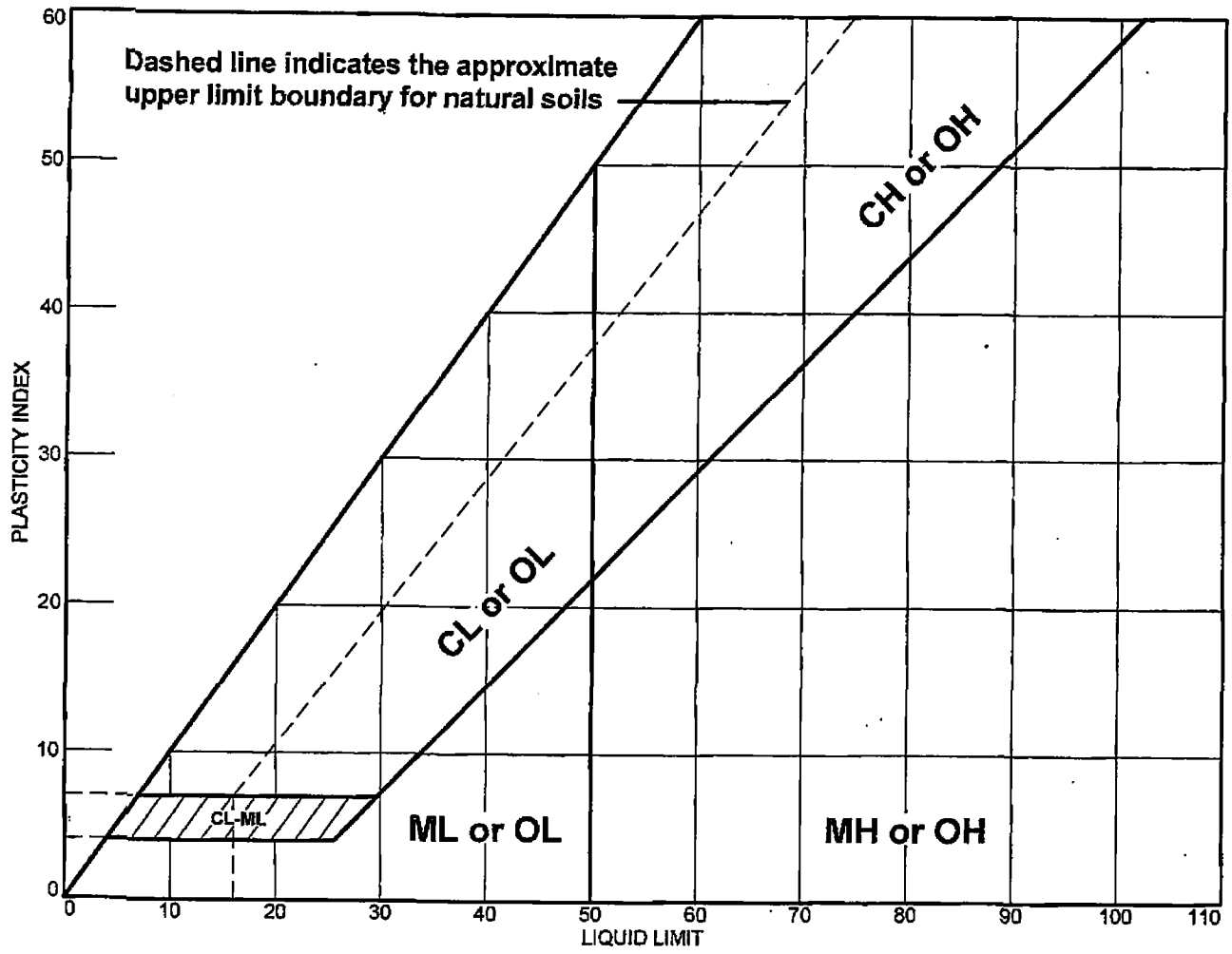
Project: *Moana Lane Widening - Billboard Relocation*

Project No.: 1360 **Plate** B-1c

JA 1676

SN 1232

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	well-graded sand with silt and gravel	NV	NP	NP	17.5	6.2	SW-SM
■	poorly graded sand with silt	NV	NP	NP	66.1	6.0	SP-SM

Project No. 1360 **Client:** Clear Channel

Project: Moana Lane Widening - Billboard Relocation

● **Sample Source:** Boring 2 **Depth:** 5.0'-6.5' **Sample No.:** B-2C

■ **Sample Source:** Boring 2 **Depth:** 13.5'-14.0' **Sample No.:** B-2F

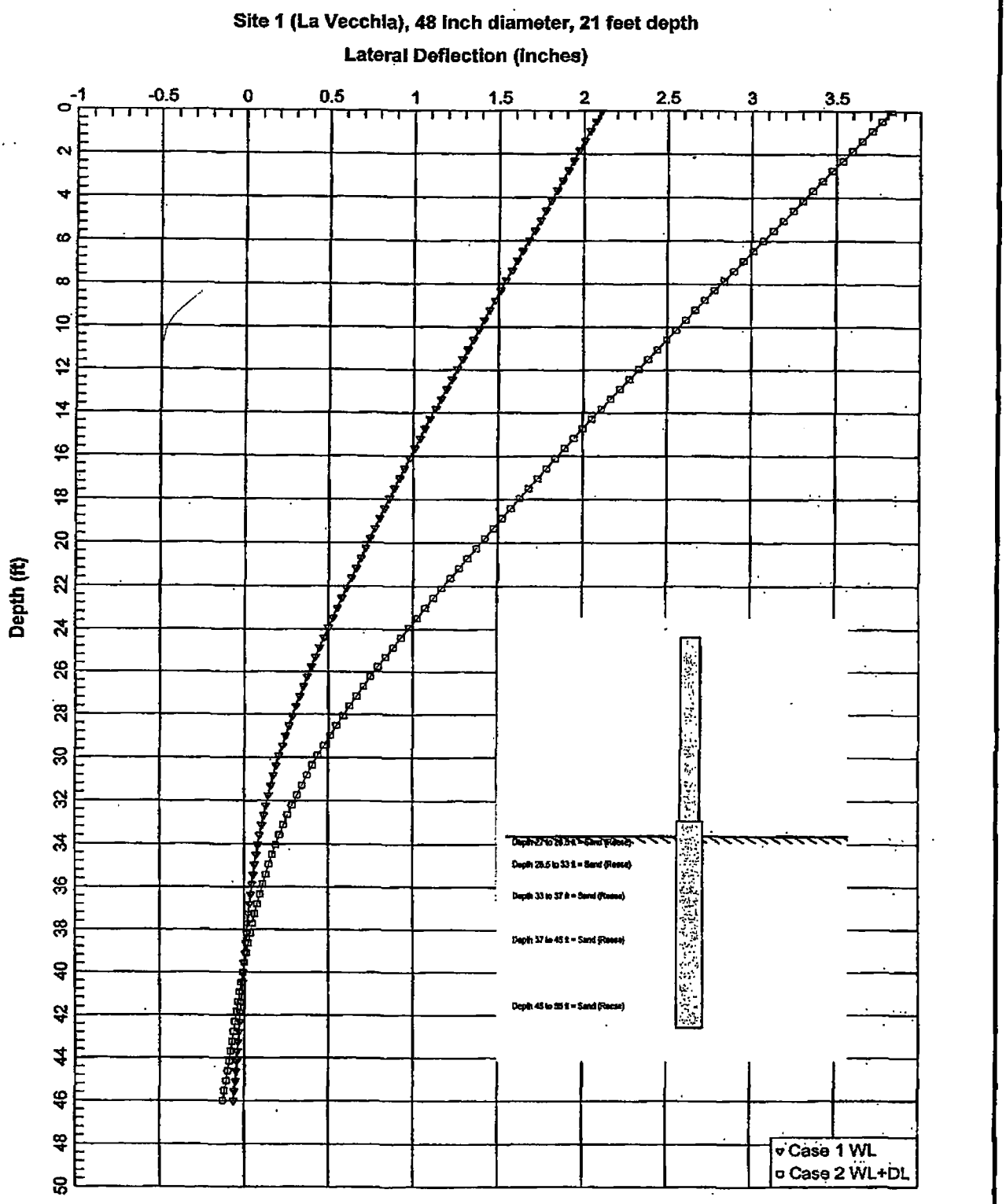
Remarks:

● Laboratory Number 26634

CME

Plate B-1d

JA 1677 SN 1233



CME CONSTRUCTION MATERIALS ENGINEERS INC.

LPILE Lateral Deflections Site 1 (21 foot depth)

Clear Channel Outdoor

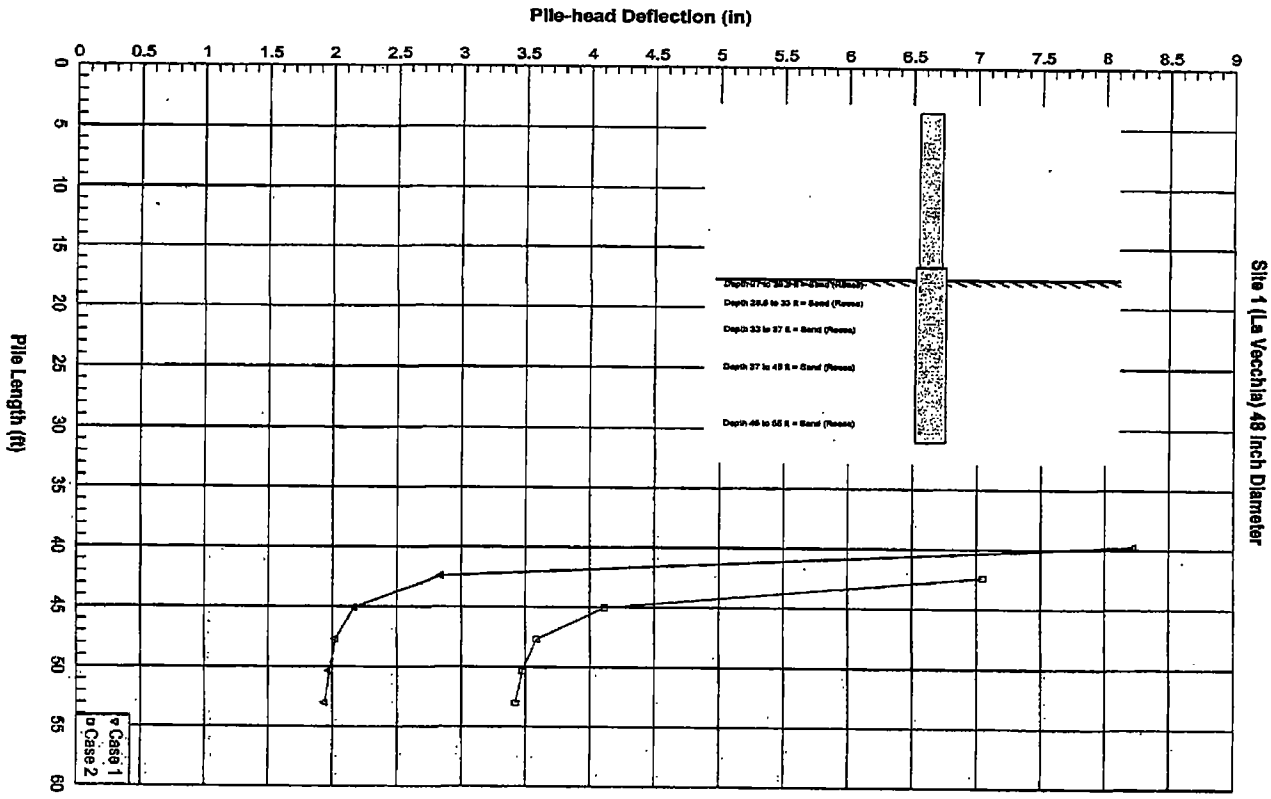
Billboard Relocations Moana Lane Widening Project

PROJECT NO. 1360

PLATE NO. C-1

JA 1678

SN 1234



CME CONSTRUCTION MATERIALS ENGINEERS INC.

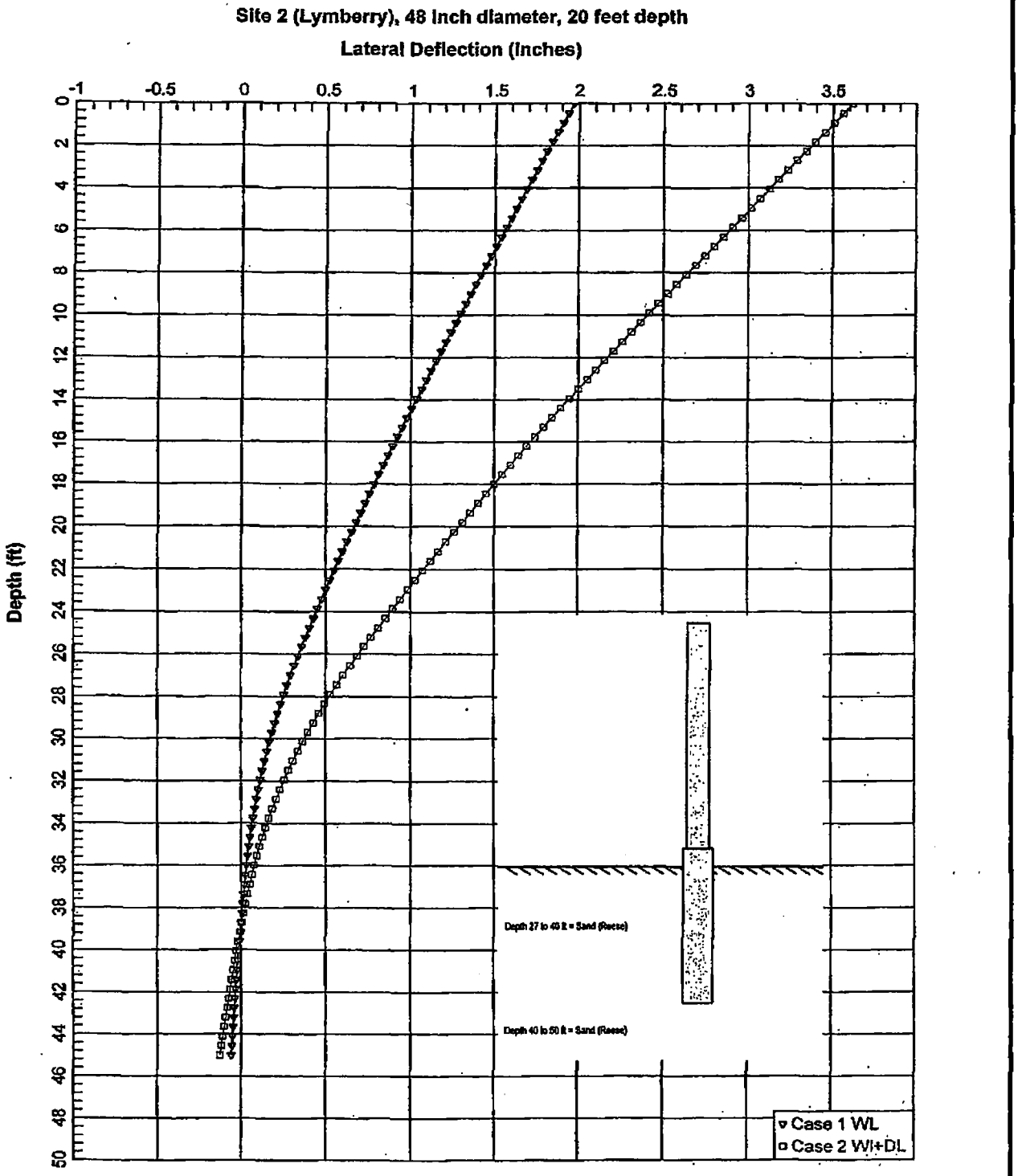
LPILE Lateral Deflections Summary Sheet Site 1

Clear Channel Outdoor

Billboard Relocations Moana Lane Widening Project

Project No: 1360

Plate C-2



CME CONSTRUCTION MATERIALS ENGINEERS INC.

LPILE Lateral Deflections Site 2 (20 foot depth)

Clear Channel Outdoor

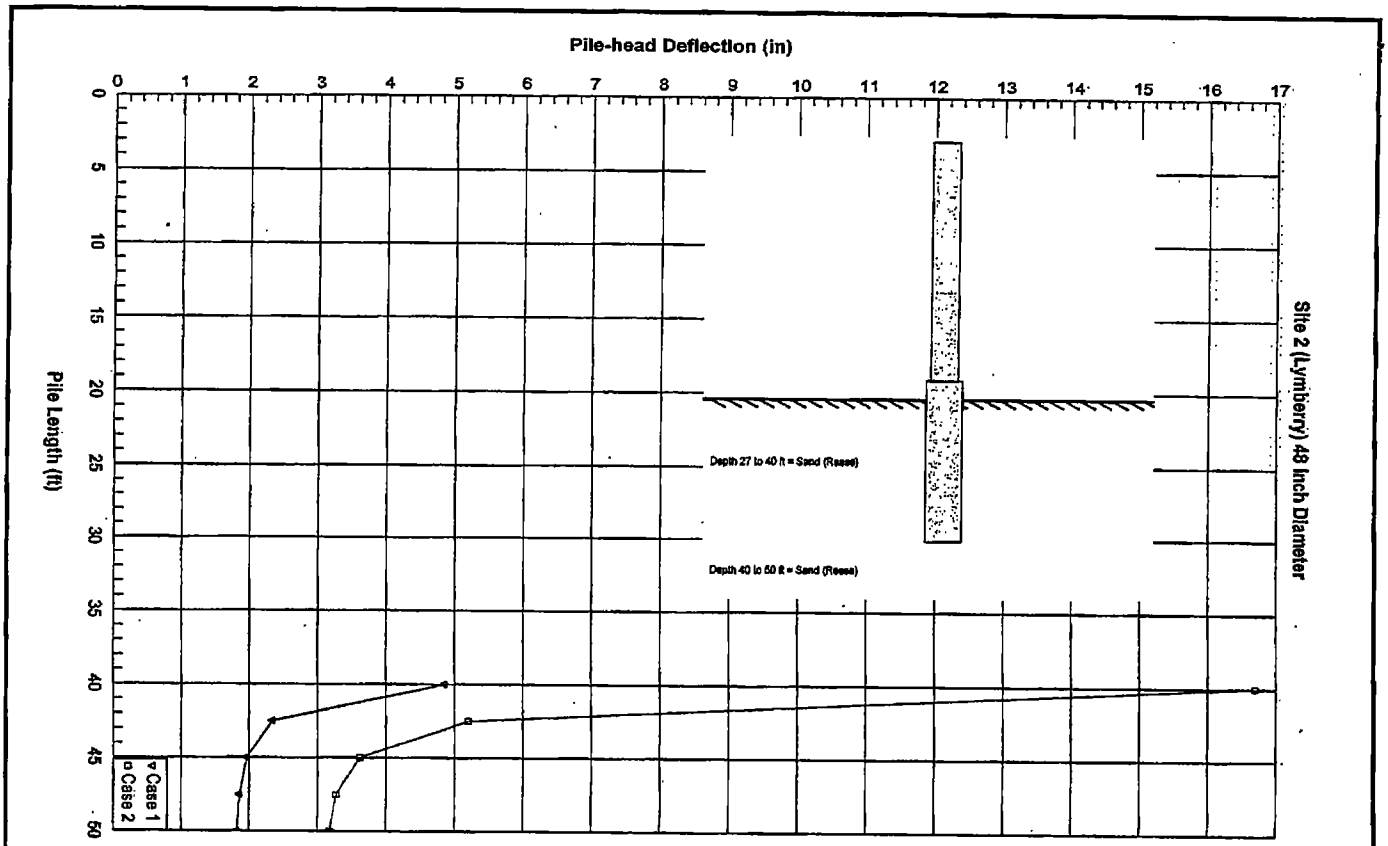
Billboard Relocations Moana Lane Widening Project

PROJECT NO. 1360

PLATE NO. C-3

JA 1680

SN 1236



CME CONSTRUCTION MATERIALS ENGINEERS INC.

LPILE Lateral Deflections Summary Sheet Site 2

Clear Channel Outdoor

Billboard Relocations Moana Lane Widening Project

Project No: 1360

Plate C-4

SECTION 509

DRILLED SHAFT FOUNDATIONS

DESCRIPTION

509.01.01 General. *This work consists of constructing drilled shaft foundations.*

509.01.02 Qualifications of Drilled Shaft Contractors. No later than 30 days prior to constructing drilled shafts, submit in writing, qualifications to perform the drilled shaft construction as specified and provide a list of 4 projects successfully completed using drilled shaft construction. The list of projects shall contain names and current phone numbers of owner's representatives who can verify participation on those projects.

A minimum of one year experience installing drilled shafts of both diameter and length similar to those shown on the plans is required for signal, soundwall and overhead sign foundations.

A minimum of 3 years experience installing drilled shafts of both diameter and length similar to those shown on the plans is required for retaining wall and bridge foundations. In addition, the drilled shaft installations must also have been in conditions similar to those indicated by the contract documents and a site inspection.

509.01.03 Submittals. Provide a signed statement from the drilling contractor that inspection has been made of both the project site and all the subsurface information made available, including any soil or rock samples referenced in the contract documents. Submit this statement as part of the installation plan required herein.

Submit an installation plan for review a minimum of 15 days prior to constructing drilled shafts. This plan shall provide information on the following:

(a) Name and experience record of the drilled shaft superintendent who will be in charge of the drilled shaft operations.

(b) List of proposed equipment to be used, including, but not limited to: cranes, drills, augers, bailing buckets, final cleaning equipment, desanding equipment, slurry pumps, core sampling equipment, tremies or concrete pumps, casing, etc.

(c) Details of overall construction operation sequence and sequence of shaft construction in bents or groups.

(d) Details of shaft excavation methods and procedures.

(e) When the use of slurry is anticipated, details of the mix design and its suitability for the subsurface conditions at the construction site, mixing and storage methods, maintenance methods, and disposal procedures.

(f) Discussion of methods to clean the shaft excavation.

(g) Details of reinforcement placement, including support and centralization methods.

(h) Details of concrete placement, including concrete delivery schedule and proposed operational procedures for tremie and pumping methods.

(i) Details of casing installation and removal methods.

The drilled shaft installation plan will be evaluated for conformance with the contract requirements. Notification will be given within 14 days after receipt of the installation plan of any additional information required and/or changes necessary. Approval of the plan shall not operate to relieve the responsibility under the contract for the successful completion of the work, nor shall approval of the plan operate as a warranty that the plan will succeed or will be the most economical or efficient method of completing the work. Adhere to the approved plan for the remainder of the contract. Subject to acceptable field performance, or if changes in equipment or construction methods occur, submit a revised plan for review and approval.

MATERIALS

509.02.01 General. Material shall conform to the following Sections:

Portland Cement Concrete	Section 501
Reinforcing Steel	Section 505
Concrete Curing Materials and Admixtures	Section 702

Concrete shall be Class D Portland cement concrete with the following exceptions:

Minimum Compressive Strength	28 MPa (4,000 psi)
Maximum Aggregate Size	100% passing 19 mm (3/4 in.) Sieve
Maximum Water/Cement Ratio	0.45
Slump	175 to 225 mm (7 to 9 in.)*

*Test Method No. Nev. T438. In addition, the concrete shall maintain a minimum slump of 150 mm (6 in.) at 2 hours and 100 mm (4 in.) at 3 hours. For 2 hour, 3 hour or extended time slump tests, store a sufficient quantity of concrete in sealed five gallon buckets at room temperature.

CONSTRUCTION

509.03.01 Construction Sequence. Complete excavation to top of shaft elevation before shaft construction begins, unless otherwise noted or approved. Recompact and regrade any disturbance to the footing or pile cap area prior to the footing or pile cap concrete placement.

When drilled shafts are to be installed in conjunction with embankment placement, construct drilled shafts after the placement of embankment, unless otherwise noted or approved. In the case of drilled shafts constructed prior to the completion of the embankment, place pile caps or footings after the embankment has been placed as near to final grade as possible. Leave only the necessary work room for construction of the caps or footings.

509.03.02 Construction Methods. Perform excavations required for shafts, and bell footings if shown on the plans, through whatever materials are encountered to the dimensions and elevations shown in the plans or as required. Use construction methods suitable for the intended purpose and materials encountered. The permanent casing method shall be used only at locations shown on the plans or when authorized. Blasting will not be permitted unless noted on the plans or authorized in writing. Construct drilled shaft foundations according to the following methods:

(a) Dry Construction Method. The dry construction method consists of drilling the shaft excavation, removing accumulated water and loose material from the excavation, placement of the reinforcing cage, and placement of concrete in a relatively dry excavation. Use the dry construction method only when: less than 0.3 m (1 ft) of ground water accumulates above the base of the excavation over a one hour period when no pumping is permitted; the sides and bottom of the excavation remain stable, with no detrimental caving, sloughing, or swelling occurring prior to placement of reinforcement; the sides and bottom of the shaft can be visually inspected prior to placement of reinforcing steel and/or concrete.

(b) Wet Construction Method. The wet construction method consists of using water or mineral slurry to maintain stability of the borehole perimeter while advancing the excavation to the specified bottom elevation, placement of the reinforcing cage, and concreting the shaft. Where drilled shafts are located in open water areas, extend exterior casings from above the water elevation into the ground to protect the shaft concrete from water action during placement and curing. Install exterior casings in a manner that will produce a positive seal at the bottom of the casing so that no piping of water or other materials occurs into or from the shaft excavation. Use the wet construction method at sites where a dry excavation can not be maintained for placement of the shaft concrete.

(c) Casing Construction Method. The casing construction method consists of placing a casing into a predrilled hole or advancing a casing through the ground by twisting, driving or vibration before being cleaned out. Use the casing method when shown on the plans or at sites where the dry or wet construction methods are inadequate to prevent caving or excessive deformation of the hole.

Method (c) Casing Construction Method may be used in conjunction with Method (a) Dry Construction Method or Method (b) Wet Construction Method.

509.03.03 Excavation and Drilling Equipment. Use excavation and drilling equipment having adequate capacity, including power, torque and down thrust to excavate a shaft of the required diameter and to a depth 20% greater than required. Excavation and overreaming tools shall be of adequate design, size and strength to perform the work.

When the material encountered cannot be drilled using conventional earth augers with soil or rock teeth, drill buckets, grooving tools, and/or overreaming tools, provide special excavation equipment, including but not lim-

ited to: rock core barrels, rock tools, air tools, blasting materials, and other equipment as necessary to construct the shaft excavation to the size and depth required.

509.03.04 Excavations. Excavate shafts at locations and to the top of shaft elevations, estimated bottom of shaft elevations, shaft geometry and dimensions shown in the contract documents. Extend drilled shaft tip (base) elevations as directed, when the material encountered during excavation is determined to be unsuitable.

Excavate bells by mechanical methods to form the height and bearing area of the size and shape shown.

Overream sidewalls of shafts when the sidewalls have either softened due to excavation methods, swelled due to delays in concreting, or degraded due to slurry cake buildup. Overream to a minimum thickness of 13 mm (1/2 in.) and a maximum thickness of 75 mm (3 in.). Accomplish overreaming with a grooving tool, overreaming bucket or other approved equipment. The thickness and limits of sidewall overreaming will be determined.

Utilize suitable excavated material for backfilling or in embankments. Dispose of unsuitable or surplus material according to Subsection 107.14.

509.03.05 Excavation Inspection. Provide all equipment for checking the dimensions and alignment of each shaft excavation. This may include, but is not limited to: lights, mirrors, weighted tape, weighted probe, personnel, and all assistance required to perform inspection of the drilled shaft construction. Use the equipment to obtain all measurements as directed.

Measure final shaft depth with a suitable weighted tape or other approved methods after final cleaning. The maximum depth of sediment or any debris at any place on the base of the shaft shall not exceed 25 mm (1 in.). For dry shafts, remove all cuttings that may have been smeared on the sidewalls during the insertion and removal of drilling tools. In addition, for dry excavations, the maximum depth of water shall not exceed 75 mm (3 in.) prior to concrete placement. Shaft inspection will be made after final cleaning by visual inspection for dry shafts or other methods deemed appropriate for wet shafts, such as sounding with a weighted tape or probe. Do not proceed with shaft construction until the shaft has been inspected and accepted.

509.03.06 Obstructions. Remove surface and subsurface obstructions at drilled shaft locations. Such obstructions may include, but are not limited to, man-made materials such as old foundations or construction debris and natural materials such as cobbles, boulders, or cemented soils. Employ special procedures and/or tools when the shaft cannot be advanced using augers, drilling buckets, and/or overreaming tools. Such special procedures and/or tools may include, but are not limited to: chisels, boulder breakers, core barrels, air tools, hand excavation, temporary casing, and increasing the shaft diameter. Do not blast to remove obstructions unless specifically approved in writing.

Retrieve and dispose of all excavating equipment and tools lost during shaft excavation.

509.03.07 Exploration (Shaft Excavation). Obtain soil samples or rock cores to determine the character of the material directly below the completed shaft excavation where shown on the plans or as directed. Extract soil samples with a split spoon sampler or undisturbed sample tube, using the designated soil sampling technique. Cut rock cores with an approved double or triple tube core barrel to a minimum of 3 m (10 ft) below the shaft excavation either before the excavation is made or at the time the shaft excavation is approximately complete. Extend the depth of coring to 6 m (20 ft) below the bottom of the shaft when directed. Measure, visually identify, and record rock core samples in an appropriate field log. Also, describe and record standard penetration test blow counts and samples in the log.

Place samples in suitable containers, identified by shaft location, elevation, and contract number and deliver with the field log to the Engineer. When samples are obtained after completion of the shaft excavation, deliver the field log and samples immediately upon completion of sampling. The material will be inspected and a decision will be made on the suitability of the bearing stratum within 2 days. When samples are obtained prior to excavating the shaft, deliver the samples and field log within 24 hours of sampling. Inspection of the samples/cores will be made and the final depth of required excavation will be determined within 3 days. Furnish 2 typed copies of the final log at the time the shaft excavation is completed and accepted.

509.03.08 Casings. Use steel casings which are smooth, clean, watertight, and of sufficient strength to withstand both handling and driving stresses and the pressure of both concrete and the surrounding earth materials. The outside diameter of the casing and the diameter of any excavation made below the casing shall not be less than the specified diameter of the shaft, or greater than 150 mm (6 in.) than the specified diameter of the shaft at no cost to the Department. Remove all casings, except permanent casings, from shaft excavations. Any length of permanent casing installed below the shaft cutoff elevation shall remain in place.

Extract casing prior to initial set to allow the concrete cast against the surrounding soil to develop the designed skin friction. Leave casing not extracted within the allotted time in the excavation. If casing is not extracted from the excavation, the shaft will be reevaluated to determine if any loss of capacity has occurred. Any loss of capacity may be grounds for the shaft to be considered defective. If any shaft is determined to be defective, submit a plan for remedial action for approval.

(a) Temporary Casing. All subsurface casing shall be considered temporary unless specifically shown as permanent casing in the contract documents. Remove temporary casing before completion of concreting the shaft. Telescoping, predrilling with slurry, and/or overreaming to beyond the outside diameter of the casing may be required during installation.

If electing to remove a casing and substitute a longer or larger-diameter casing through caving soils, the excavation shall be either stabilized with slurry or backfilled before the new casing is installed. Other methods may be used to control the stability of the excavation and protect the integrity of the foundation materials when approved.

As the casing is withdrawn, maintain an adequate level of concrete within the casing so that fluid trapped behind the casing is displaced upward and discharged at the ground surface without contaminating or displacing the shaft concrete.

Temporary casings which become bound or fouled during shaft construction and cannot be practically removed shall constitute a defect in the shaft. Submit a plan for approval to correct such defective shafts. Such improvement may consist of, but is not limited to, removing the shaft concrete and extending the shaft deeper to compensate for loss of frictional capacity in the cased zone, providing straddle shafts to compensate for capacity loss, or providing a replacement shaft. Any foundation redesign must be performed by a Registered Professional Engineer, licensed to practice in the State of Nevada.

(b) Permanent Casing. Use permanent casing when shown in the contract documents. Provide continuous full length casing between the top and bottom elevations of the shaft. Cut off permanent casing, after installation is complete, at the prescribed elevation, and complete the shaft construction by installing necessary reinforcing steel and concrete in the casing.

509.03.09 Slurry. If electing to use slurry, use mineral slurry in the drilling process unless other drilling fluids are specified in the Special Provisions. Mineral slurry shall have both a mineral grain size that will remain in suspension and sufficient viscosity and gel characteristics to transport excavated material to a suitable screening system. The percentage and specific gravity of the material used to make the mineral suspension shall be sufficient to maintain the stability of the excavation and to allow proper concrete placement.

During construction, maintain the level of the slurry at a height sufficient to prevent caving of the hole. In the event of a sudden significant loss of slurry in the hole, cease construction of the foundation until either a method to stop slurry loss or an alternate construction procedure has been approved.

Premix mineral slurry thoroughly with clean water and allow adequate time (as prescribed by the mineral slurry manufacturer) for hydration prior to introduction into the shaft excavation. Provide slurry tanks of adequate capacity for slurry circulation, storage, and treatment. Do not use excavated slurry pits in lieu of slurry tanks without written permission. Provide desanding equipment to control slurry sand content to less than 4 % by volume at any point in the borehole at the time slurry is introduced, including situations in which temporary casing is used. Take all steps necessary to prevent the slurry from "setting up" in the shaft. Such methods may include, but are not limited to: agitation, circulation and/or adjusting the properties of the slurry. Dispose of all slurry material according to Subsection 107.14.

Perform control tests on the mineral slurry using suitable apparatus to determine density, viscosity and pH. The range of values for those physical properties is shown in the following table:

MINERAL SLURRY (Sodium Bentonite or Attapulgite in Fresh Water)			
Acceptable Range of Values			
Property	At the Time of Slurry Introduction	In Hole at Time of Concreting	Test Method
Density kN/m³ (lb/ft³)	10.1 - 10.8 (64.0 - 68.8)	10.1 - 11.8 (64.0 - 74.6)	Density Method API 13B-1 Section 1
Viscosity (seconds/quart)*	(28 - 45)	(28 - 45)	Marsh Funnel and Cup API 13B-1 Section 2.2
pH	8 - 11	8 - 11	pH Paper Glass Electrode pH Meter
Notes: Testing shall be performed when the slurry temperature is above 4 °C (40 °F). The sand content shall not exceed 4% (by volume) at any point in the bore hole as determined by the American Petroleum Institute sand content test. *The Marsh Funnel Test is conducted using one quart of fluid, not one liter.			

Perform tests during the shaft excavation to determine density, viscosity and pH values to ensure material consistency. Conduct a minimum of 4 sets of tests during the first 8 hours of slurry use. When the results show consistent behavior the testing frequency may be decreased to 1 set every 4 hours of slurry use.

Do not use water only as a drilling fluid, unless approved in writing. When water only is approved for use, all of the provisions in the table shown above for mineral slurries shall be met, except that the maximum density shall not exceed 11.0 kN/m³ (70 lb/ft³). Consider naturally occurring water as drilling fluid.

Insure that a heavily contaminated slurry suspension, which could impair the free flow of concrete, has not accumulated in the bottom of the shaft. Prior to placing concrete in any shaft excavation, take slurry samples using an approved sampling tool. Extract slurry samples from the base of the shaft and at intervals not exceeding 3 m (10 ft) up the slurry column in the shaft, until two consecutive sets of samples produce acceptable values for density, viscosity, and pH.

When any slurry samples are found to be unacceptable, take whatever action is necessary to bring the slurry within specification requirements. Do not place concrete until the slurry in the hole is re-sampled and test results produce acceptable values.

Furnish signed test reports of all tests required above upon completion of each drilled shaft.

509.03.10 Construction Tolerances. Construct shaft foundations to plan dimensions within the following tolerances:

(a) The diameter of the shaft shall not be less than the specified diameter and shall not be more than 150 mm (6 in.) greater than the specified diameter.

(b) Construct the center of the drilled shaft within 75 mm (3 in.) of plan position in the horizontal plane at the plan elevation for the top of the shaft.

(c) The vertical alignment of a vertical shaft excavation shall not vary from the plan alignment by more than 20 mm per m (¼ in. per ft) of depth.

(d) After concrete placement, the top of the reinforcing steel cage shall be no more than 150 mm (6 in.) above and no more than 75 mm (3 in.) below plan position. Provide minimum cover of 150 mm (6 in.) for all reinforcing steel for shafts 1.5 m (5 ft) or larger in diameter, and a minimum cover of 100 mm (4 in.) for all reinforcing steel for shafts less than 1.5 m (5 ft) in diameter.

(e) A casing larger in diameter than shown in the plans may be used only when approved.

(f) Excavate bells to the plan bearing area and height shown on the contract plans as a minimum. The actual diameter of the bells shall not exceed 3 times the specified shaft diameter. All other plan dimensions shown for the bells may be varied to accommodate the excavation equipment when approved.

(g) The top elevation of the shaft shall not be less than 75 mm (3 in.) below the plan top-of-shaft elevation and shall not be more than 25 mm (1 in.) above the plan top-of-shaft elevation.

(h) Employ excavation equipment and methods so that the completed shaft excavation will have a planar bottom. The cutting edges of excavation equipment shall be normal to the vertical axis of the equipment within a tolerance of ± 30 mm per m (0.375 in. per ft) of diameter.

Drilled shaft excavations and completed shafts not constructed within the required tolerances are unacceptable. Correct all unacceptable shaft excavations and completed shafts by approved methods. Engineering analysis and/or drilled shaft redesign to correct out-of-tolerance drilled shafts shall be performed by a Registered Professional Engineer, licensed to practice in the State of Nevada. Submit proposed corrective measures for approval.

509.03.11 Reinforcing Steel Cage Construction and Placement. Reinforcing steel shall conform with the details shown on the plans and the requirements of Section 505. Double tie, with double wires, every other intersecting vertical and spiral or hoop members of the reinforcing cage in each direction. Assemble and place the reinforcing steel cage, consisting of longitudinal bars, spiral or hoop reinforcement, cage stiffeners, spacers, centralizers, and other necessary appurtenances, as a unit within 30 minutes after the shaft excavation is inspected and accepted. Remove internal stiffeners as the cage is placed in the shaft so as not to interfere with the placement of concrete. Support the reinforcing steel cage from the top at all times until completion of concrete placement.

Tie and support the reinforcing steel in the shaft so that the reinforcing steel will remain within allowable tolerances given in Subsection 509.03.10. Use non corrosive rollers near the bottom and at intervals not exceeding 3 m (10 ft) up the shaft to ensure concentric spacing for the entire cage length in the excavation. Use rollers of adequate dimension to ensure a minimum of 150 mm (6 in.) annular space between the outside of the reinforcing cage and the side of the excavation for shafts 1.5 m (5 ft) or larger in diameter. Provide rollers of adequate dimension to ensure a minimum of 100 mm (4 in.) annular space between the outside of the reinforcing cage and the side of the excavation for shafts less than 1.5 m (5 ft) in diameter. Provide approved cylindrical feet (bottom supports) to ensure that the bottom of the cage is maintained the proper distance above the base.

Verify the elevation of the top of the steel cage before and during the concrete placement. If the upward displacement of the rebar cage exceeds 50 mm (2 in.) or if the downward displacement exceeds 150 mm per 6.1 m (6 in. per 20 ft) of shaft length, the drilled shaft will be considered defective. Submit correction procedure for approval. Cease shaft construction until the method of supporting the reinforcing steel cage is modified to produce acceptable results.

509.03.12 Concrete Placement. Place concrete within 1 hour after the shaft excavation is inspected and accepted. If this 1 hour limit is exceeded, remove the reinforcing cage to allow for reinspection as directed. The use of a tremie to place concrete is mandatory. Place concrete continuously from the bottom to the top elevation of the shaft. Concrete placement shall be continuous from the bottom elevation to the top of the shaft, and shall continue after the shaft excavation is filled until quality concrete is evident at the top of the shaft.

If casing is utilized, vibrate the concrete during withdrawal of the last 4.5 m (15 ft) of the casing. Keep the vibrator below the bottom of the casing during removal. Where steel casings have been used to support the excavation walls, withdraw the casing as the concrete is being placed within the limits previously specified in Subsection 509.03.08. Remove the steel liner in a manner so that the lower edge of the steel liner always remains a minimum of 1.5 m (5 ft) below the surface of the concrete being placed to prevent water or soil from entering the shaft excavation from below the bottom of the casing. Submit for approval, appropriate procedures and methods of withdrawal of steel liners to ensure that the concrete is not being lifted or contaminated as the steel liner is being withdrawn.

Do not exceed 3 hours from the beginning of concrete placement in the shaft to the completion of concrete placement. A longer placement time may be approved, when requested, provided that the supplied concrete mix maintain a slump of 100 mm (4 in.) or greater over the longer placement time. The slump test will be performed according to Subsection 509.02.01.

Pump debris, mud, water and contaminated concrete forced up during concrete placement directly into a truck for disposal unless alternate methods are approved.

Cure the top surface of the pile as prescribed in Subsection 501.03.09.

509.03.13 Tremies. Use tremies and concrete pumps for concrete placement. Use tremies consisting of a tube of sufficient length, weight, and diameter to discharge concrete at the shaft base elevation. Do not use a tremie having aluminum parts that will come into contact with the concrete. The tremie inside diameter shall be at least six times the maximum size of aggregate used in the concrete mix but shall not be less than 125 mm (5 in.). The inside and outside surfaces of the tremie shall be clean and smooth to permit both flow of concrete and unimpeded withdrawal during concreting. The wall thickness of the tremie shall be adequate to prevent crimping or sharp bends, which restrict concrete placement.

Use a watertight tremie for wet excavation concrete placement. Do not begin underwater or under-slurry concrete placement until the tremie is placed to the shaft base elevation. Keep the concrete completely separated from the water or slurry prior to the time it is discharged. Valves, bottom plates or plugs may be used for this purpose only if concrete discharge can begin within one tremie diameter of the base of the drilled shaft. Remove plugs from the excavation or provide plugs of an approved material which will not cause a defect in the shaft, if not removed. Construct the discharge end of the tremie to permit the free radial flow of concrete during placement operations. Immerse the tremie discharge end at least 1.5 m (5 ft) in concrete at all times after starting the flow of concrete. Maintain a continuous flow of concrete and keep the level of the concrete in the tremie above the level of slurry or water in the shaft at all times to prevent water or slurry intrusion into the shaft concrete.

If at any time during the concrete pour the tremie line orifice is removed from the fluid concrete column and/or discharges concrete above the rising concrete level, the shaft, as determined by the Engineer, will be considered defective. All costs of testing, mitigation and/or replacement of defective shafts shall be at no cost to the Department.

509.03.14 Inspection Report. Provide any assistance that may be required for the Engineer to prepare and submit daily reports for the complete drilled shaft construction program. The reports will include: logging all excavated soils, concrete quantities and rate of delivery, description of tools and drill rigs used and any changes necessitated by changing ground conditions, recording actual elevations at top and bottom of each drilled shaft, elevation of rock (if any), plumbness of casing and rebar cages, seepage of water, elevation of top and bottom of any casing left in place, any unusual conditions, and any other pertinent information deemed necessary.

509.03.15 Crosshole Sonic Log (CSL) Testing. All completed drilled shafts may be tested with a nondestructive testing (NDT) method called Crosshole Sonic Logging (CSL). CSL tests will be performed by an approved independent testing organization under a separate contract with the Department. Final approval for the first drilled shaft constructed for bridge foundations will be given within 10 days after placement of concrete. Concrete placement in subsequent bridge foundation shaft excavations will not be allowed until the first shaft has been approved.

For the purposes of the above tests, install tubes to permit access for the CSL test probes. The tubes shall have an inside diameter of 50 mm (2 in.) ± 6 mm (1/4 in.) and shall be constructed of ASTM D1785 Schedule 80 PVC plastic pipe. The tubes shall have a round, regular inside diameter free of defects or obstructions, including obstructions at any pipe joints, in order to permit the free, unobstructed passage of a 35 mm (1.375 in.) diameter or smaller source and receiver probes used for the CSL tests. The tubes shall be watertight, free from corrosion with clean internal and external faces to insure good bond between the concrete and the tubes. Fit the tubes with a watertight cap on the bottom and a removable watertight cap on the top.

Securely attach the CSL tubes at equal spacings along the interior circumference of the reinforcement cage of each drilled shaft or as shown in the plans. Install CSL tubes at least 0.9 m (3 ft) above the shaft top to within 25 mm (1 in.) of the actual drilled shaft tip elevation. Make any joints in the tubes watertight. Roughen up the surface of PVC CSL test pipes to reduce the potential of the test pipes de-bonding. Hand sand, using 50 grit sandpaper to de-gloss the PVC pipe. Take care to prevent damaging the tubes during reinforcement cage installation operations in the drilled shaft excavation. Fill the tubes with potable water as soon as possible after concrete placement (but no later than 2 hours) and cap the tube tops. Refer to Section 722 for water requirements.

If any shaft is determined to be unacceptable, submit a plan for remedial action for approval. Furnish satisfactory materials and work necessary, including engineering analysis and redesign, to mitigate shaft defects at no cost to the Department. Any modifications to the dimensions of the drilled shafts shown on the contract

plans caused by remedial action will require calculations and working drawings stamped by a Registered Professional Engineer licensed to practice in the State of Nevada. Drill a core hole in any shaft of questionable quality (as determined from the CSL test results or by observation of the Engineer) to explore the shaft condition. Use a coring method that provides complete core recovery and minimizes abrasion and erosion of the core (i.e., double or triple core barrels). If a defect is confirmed, the Contractor shall pay for all coring costs. If no defect is encountered, the State will pay for all coring costs, and compensation for the delay will be granted by an appropriate time extension and payment.

If the inspection equipment cannot pass through the full length of the inspection tube, core a 50 mm (2 in.) diameter hole through the concrete for the full length of the pile to replace the defective tube at own expense. Locate the core hole at a designated location.

After completion of the CSL testing and acceptance of the shaft foundation, cut off the testing tubes flush with the top of the shaft foundation. Fill all core holes and testing tubes with grout, from the bottom up. Grout according to Subsection 503.03.08.

509.03.16 Scheduling and Restrictions. After the first drilled shaft has been successfully constructed, make no significant change in construction methods, equipment, or materials to be used in the construction of such shafts unless approved. The first bridge foundation drilled shaft must be approved before proceeding with concrete placement in remaining shafts.

For a period of at least 24 hours after drilled shaft concrete has been placed, do not excavate adjacent shafts, do not place excessive wheel loads, and do not allow vibration to occur or be felt at any point within 3 m (10 ft) or 3 times the shaft diameter, whichever is greater, from the periphery of the drilled shaft.

Failure to satisfactorily perform the procedures described above may result in shut down of the construction operation and/or rejection of the drilled shaft. If the integrity of the drilled shaft is in question, employ core drilling, CSL, or other approved methods as directed. Backfill core-drilled holes with grout or mortar. Perform remedial measures as approved or as directed.

No compensation will be made for costs, losses or damages due to remedial work or any testing required on drilled shafts due to not meeting the requirements.

Do not cast pile caps or the footings of pier columns on the drilled shafts until at least 7 days have elapsed, or 80% of the compressive strength is obtained.

509.03.17 Load Testing. When the contract documents include static load testing of shafts, complete all load tests before construction of any production drilled shafts. Allow 5 working days after the last load test for the analysis of the load test data and final determination of base elevations, by the Engineer, before receiving authorization to proceed with the construction of production shafts. The number and locations of load tests will be as shown on the plans or as designated. Unless specified otherwise, load the test shafts to a maximum test load corresponding to failure. Failure is defined as a deflection of the shaft head equal to 5% of the shaft diameter.

Provide notification 10 days before conducting load tests.

Do not begin static load testing until the concrete has attained a compressive strength of 23.4 MPa (3,400 psi) as determined from cylinder breaks. Drilled shafts shall be load tested in the order as directed. Perform static load tests in compliance with ASTM D1143 for axial load testing, and ASTM D3966 for lateral load testing. Supply all equipment necessary to conduct the static test, including equipment to measure loads and deflections as shown on the plans. Design the loading frame apparatus to safely accommodate the maximum load to be applied.

Load cells will be required to measure applied load during the drilled shaft load tests. Provide load cells of adequate size to measure the maximum load applied to the shaft and equip with an adequate readout device. Before load testing begins, furnish a certificate of calibration for the load cell from an NDOT approved testing laboratory. The calibration shall have been completed for all ranges of proposed loading within the 6 months preceding the load tests. The certified accuracy of the load cell shall be within one percent of the true load.

After testing is completed, cut off the non production test shafts (and any reaction shafts) at an elevation 0.6 m (2 ft) below the finished ground surface. Remove and dispose the portion of the shafts that were cut off.

METHOD OF MEASUREMENT

509.04.01 Measurement. Drilled shafts will be measured by the linear meter (linear foot), measured from the top of shaft elevation to the bottom of shaft elevation. When bells are present the shaft will be measured to the bottom of the bell.

Exploration (Shaft Excavation) will be measured by the linear meter (linear foot), measured for the length explored.

Bell excavations will be measured by the each.

Load tests will be measured by the each.

BASIS OF PAYMENT

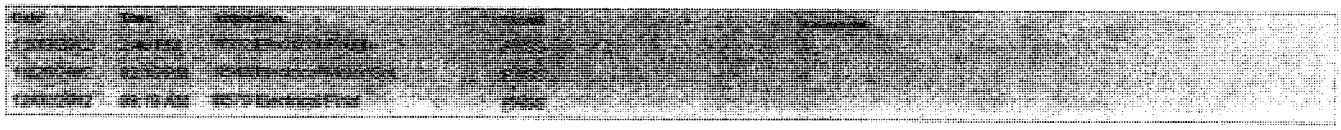
509.05.01 Payment. The accepted quantities, measured as provided above, will be paid for at the contract price per unit of measurement for the pay items listed below that are shown in the proposal. Payment will be full compensation for the work prescribed in this Section.

Payment will be made under:

Pay Item	Pay Unit
Drilled Shaft Foundation (size)	Linear Meter (Linear Foot)
Bell Excavations	Each
Exploration (Shaft Excavation)	Linear Meter (Linear Foot)
Load Test	Each

CITY OF RENO

Inspector CAP Number	Contact Name	Address	Work Description
KENNEDY, BILL			
SGN13-00046		511 W MOANA LN BB	BILLBOARD. RELOCATE MOANA BILLBOARD DOUBLE SIDE W ELECTRICAL BANKED CC-3,CC-4



City of Reno Building Permit

Permit Number: SGN13-00046

Total Fees Due: $845.13

Total VMTs:

Address: 511 W MOANA LN UNIT BB

Owner Information:
GREEN ACRES MOBILEHOME PRK LLC
6170 RIDGEVIEW CT STE E ,
RENO, NV 89519

Job Type: Building/Sign/NA/NA

Parcel No: 019-351-05
Zoning: MF-30
Type:
Dwelling Units: 0
Height:
Area(Sq.Ft.):
Subdivision:
Lot:

Valuation: $ 100,000.00
Occupancy:
Group:
Fire Sprinklers:
Fire Alarm:
Stories:

Tenant Information:
CLEAR CHANNEL BILLBOARD

Description of Work to Be Done
BILLBOARD..
RELOCATE MOANA BILLBOARD DOUBLE SIDE W ELECTRICAL
BANKED CC-3,CC-4

Builder / General Contractor:
CLEAR CHANNEL OUTDOOR INC
2880 B MEADE AVENUE
LAS VEGAS, NV 89102
702- 23-8720
NV Lic.: 0051604

The undersigned hereby agrees to defend, indemnify and hold harmless the City of Reno, its officers, employees and agents from and against all demands, claims or liabilities that are asserted against the City of Reno arising from the undersigned's construction activities performed pursuant to the issuance of this permit (including but not limited to the undersigned's failure to perform in accordance with the approved permit and plans), save and except such demands, claims or liability that arise from the City of Reno's sole negligence or willful misconduct.

The undersigned agrees to obtain/maintain commercial liability insurance covering it during the term of the construction authorized by this permit, in an amount no less that the total construction cost of the work to be performed, and warrants that such liability policy shall include completed operations coverage as well as an additional insured endorsement naming the City of Reno as an additional insured with respect to operations performed by or for the undersigned for which the City of Reno has issued a building permit, without exclusion for bodily injury or property damage within the completed operations of hazard.

By _____ Date 9/4/12
Builder/General Contractor or the Authorized Agent

Building Permit
Permission is hereby granted to execute the work described in this application in accordance with the Rules, Regulations, and Ordinances of the City of Reno.

APPROVED
CITY OF RENO
BUILDING DEPT.
Building and Safety Division

PAID
SEP 04 2012
CITY OF RENO
PERMIT PLACE

ALL INSPECTIONS MUST BE COMPLETED

511 W MOANA LN UNIT BB LOT:

Inspection Record

	Inspector Signature	Date
Building Inspections		
B403 Footing		
Electrical Inspections		
B543 Electrical Meter Set		
B552 Electrical Rough		
Sign Inspections		
S826 Sign Final		
Final Inspections		
B579 Electrical Final		
B637 1704 Spec Insp Final Rep		

PERMIT NUMBER: SGN13-00046

POST THIS PERMIT IN A CONSPICUOUS PLACE

Permit Inspection Record
City of Reno Building Permit

GENERAL NOTES:

It is unlawful to remove this record from the job site until all final inspections have been made.

For inspections, please call the Building Div. automated phone line at (775) 334-2396 at any time, 24 hours a day. Contractors may also schedule inspections on-line at anytime once a registered account is established at the Virtual Permit Place at http://applications.cityofreno.com/accela/. Inspections may be set until 5:00 am of the day the inspection is to be performed. On the day of the inspection, you may call the Building Inspector directly or through an operator at (775) 334-2060 from 7:30 a.m. to 8:00 a.m. to request an inspection time.

Fire Department Inspections:
After the Fire Department inspections are scheduled, the Fire Inspector will telephone the contact number provided on the automated inspection dispatch within 48 hours to schedule an inspection time.

Please refer to the Fire Department comments posted on the back front page of the approved plans for additional information and requirements.

NOTICE:

This Form shall be a permanent part of approved plans attached hereto. Approved plans must be on the job site at all times and the inspection card posted for inspection purposes. Plans are approved in accordance the IBC except that noted structural details shall be provided before construction is initiated in noted areas. The Reno Building Division shall receive a copy of all testing and field reports. Any changes in the approved drawings shall be submitted in writing for approval. Provide or repair, as required, sidewalks, curbs and gutters in accordance with RMC. Excavation, fill, compaction and drainage shall comply with the IBC 90% minimum compaction under all concrete slabs.

Corrections and modifications as noted on plans and provisions of building codes and ordinances as adopted by the City of Reno whether specified on plans or not, shall be complied with.

PERMIT EXPIRATION:

In accordance with the IBC, this permit shall expire if work is not commenced within 180 days from the issue date or if work is suspended or abandoned at any time after the work is commenced for a period of 180 days.

On-line inspection scheduling now available on the City of Reno's website www.reno.gov > Online Services Menu > Community Development Permits > Virtual Permit Place. Contractors may create an account and schedule inspections or check plan status.

SGN 13-00046

ClearChannel OUTDOOR

4945 Joule Street, Reno, NV 89502
T 775.856.0220 F 775.856.7595

REV

RECEIVED
AUG 21 2012
CITY OF RENO
PERMIT PLACE

August 16, 2012

City of Reno
Building & Safety Division – Plan Review Section
Attn: Daniela Monteiro
1 East First St.
Reno, NV 89505

RE: Correction required letter for permit application # SGN13-00046

Dear Ms. Monteiro,

Please find the responses following the items requested:

1) Please provide banked receipt for CC-3 and CC-4. – Emailed to Daniale and Claudia on 8/2/12

2) Site plan must demonstrate side property and front property setbacks will be met. – Depicted on revised site plan delivered to building department on 7/30/12.

3) Demonstrate that billboard structure is more than 300' away from residential zoned property per RMC 18.16.904(b)(4) – Depicted on revised site plan delivered to building department on 7/30/12.

4) Notarized owner consent for billboard installation must be provided per RMC 18.16.904(b)(2) – Copy of lease provided to Daniela on 7/10/12 explaining power of attorney issued to Clear Channel for application purposes.

5) Please demonstrate distance on plans to billboards in all directions. – Depicted on revised site plan delivered to building department on 7/30/12.

6) Please revise application to remove reference of "new" billboard as no new billboards are allowed in the City. – Emailed revised application to Daniela on 7/10/12.

Thank you, let me know if you have any questions or require additional information.

Sincerely,

Aaron West

ClearChannel OUTDOOR

4945 Joule Street, Reno, NV 89502
T 775.856.0220 F 775.856.7595

SGN 13-00046
REV

RECEIVED
JUL 19 2012
CITY OF RENO
PERMIT PLACE

July 16, 2012

City of Reno
Building & Safety Division – Plan Review Section
Attn: Arvil Singleton
450 Sinclair St.
Reno, NV 89501

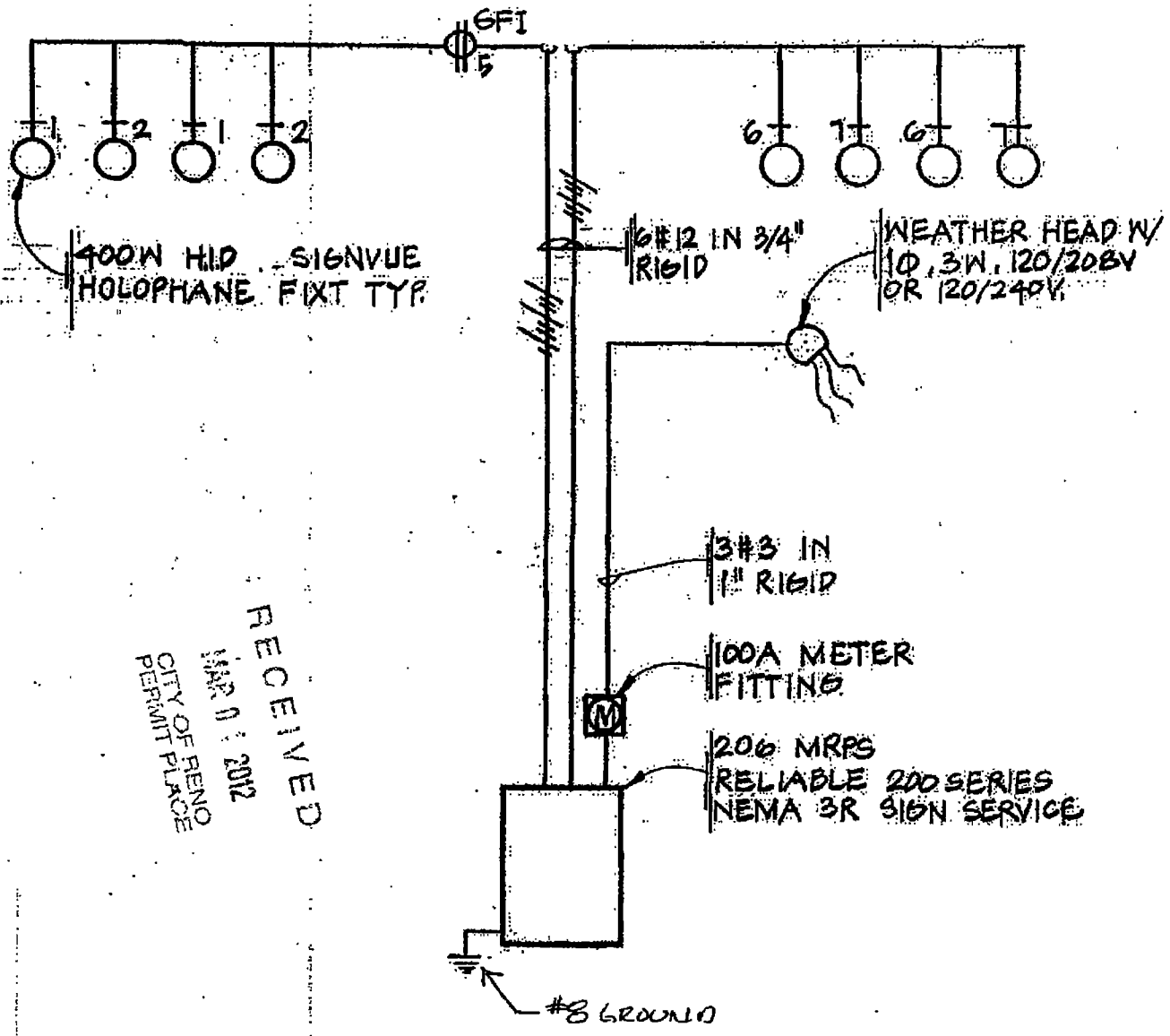
RE: Correction required letter for permit application # SGN13-00046

Dear Mr. Singleton,

Please find the attached corrected special inspection agreement; per your request. Please let me know if you have any questions or require additional information.

Sincerely,

Aaron West



4 TYPICAL TWO - 14 x 48
NTS

SGN13-00046

GRC ENGINEERING, INC.

5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL

GRC NO.

JOB

DATE 4/24/12 ENG. FV

DESCRIPTION: REDESIGN FOUNDATION PER VALUES PRESENTED IN SOIL REPORT BY CONSTRUCTION MATERIALS ENGINEERS, INC. FILE: 1360

→ WORK THIS SET WITH 10-2307 SET DATED 4/4/12

SOIL PROPERTIES:

DEPTH	DESC.	γ_m	ϕ	K_p
0'-2'	SC	120	31°	3.12
2'-5'	SM	120	40°	4.60
5'-15'	SP-SM	120	40°	4.60
15'-20'	GP-GM	120	42°	5.04

PROFESSIONAL ENGINEER, STATE OF NEVADA — GERALD R. CARSTENS — CIVIL / STRUCTURAL — 4-24-12 — No. 4548

BROM'S: $p_{all} = \frac{3 K_p \sigma_v'}{FS: 2.0}$

→ $\frac{120 pcf (3.12)(3)}{3} = 374 psf/ft$

USE 300psf/ft FOR DESIGN

REDUCE FOUNDATION TO 5'-0"ϕx19'-0" DEEP

GRC ENGINEERING, INC.

5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL

GRC NO. 12-017-206

JOB 10-2207

DATE 4/24/2012 ENG. FV

Augered Footings

Inputs

Building Code 2006 International Building Code

Augered Foundation Calculations

Inputs	
Moment (ft k)	1404.434
Total Shear (k)	25.15734
Depth (ft)	19
Depth of ignore (ft)	0
Dia (ft)	5

WIND INCREASE
1

soil bearing 300 psf/ft

Outputs	
H (ft)	55.82601
S allowable (ksf)	3.80
S Required (ksf)	2.94

3.8

0.774399 0.774399

Concrete Vol (cu yd) 13.81719

JA 1698 SN 1254

SGN13-00046

GRC ENGINEERING, INC.

5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT Clear Channel

GRC NO. 12-017-2006

JOB 10-2207

DATE 4/4/12 ENG. FV

1/44

LOCATION: 501 W Moana Ln.
Reno, NV

PROFESSIONAL ENGINEER STATE OF NEVADA
GERALD R. CARSTENS
CIVIL / STRUCTURAL
12-24-12
No 4548

12-31-12

BUILDING CODE: 2006 IBC
w/ Northern NV Amendments

WIND: 100 MPH, Exp 'C', I_w = 0.87
per ASCE 7-05

SEISMIC: S_S = 1.602g S_1 = 0.636g
S_{DS} = 1.068 S_{D1} = 0.636

DESCRIPTION: Design Bill Board Structure to
replace Existing Structure
Due to Road Widening

14x48, SBS Posters, FF, 20' Non Vee, 35' OAH

- Design to be capable of supporting
faces weighing up to 15psf
each in any combination
12x24'6" → 4400#
14x48 → 10,000#

Lighthouse Printing, Inc. 708-479-7776

JA 1699

SN 1255

GRC
ENGINEERING, INC.
5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL
GRC NO. 12-017-206
JOB 10-2207
DATE 4/5/2012 ENG. FV 2/44

Seismic Design Criteria

Building Code: 2006 International Building Code
Subsection: 1603.1.5 - Earthquake Design Data

1. Seismic importance Factor: I_E = **1.00**
   Occupancy Category (Table 1604.5): **I**

2. Mapped Spectral Response accelerations (From USGS Website):
   Latitude: 39.4914 S_S **1.602 g**
   Longitude: -119.8031 S_1 **0.636 g**

3. Site Class: **D**

4. Spectral Response Coefficients:
   S_{DS} **1.068**
   S_{D1} **0.636**

5. Seismic Design Category: **D**
   S_{DS} S_{DC} D
   S_{D1} S_{DC} D

6. Basic Seismic Force Resisting System:
   Non-Building Structures Not Similar to Buildings - Signs and Billboards

7. Design Base Shear: $V = C_S * W$ = **14.43** kips

8. Seismic Response Coefficient, C_S = **0.253**

9. Reponse Modification Factor (ASCE 7-05, Table 15.4-2)
   R = **3**
   Note: Using R = 3 to avoid detailing requirements of AISC *Seismic Provisions*

10. Analysis Procedure Used: **Equivalent Lateral Force Method**

$0.7E = \frac{10.1^K}{E_S}$ W/ NO GOVERNS ⊥ TO T.P.
EQ GOVERNS ∥ TO T.P.
EQ+X MUST BE CONSIDERED.

Conterminous 48 States
2006 International Building Code
Latitude = 39.4914
Longitude = -119.80306500000002
Spectral Response Accelerations Ss and S1
Ss and S1 = Mapped Spectral Acceleration Values
Site Class B - Fa = 1.0 ,Fv = 1.0
Data are based on a 0.01 deg grid spacing

Period (sec)	Sa (g)
0.2	1.602 (Ss, Site Class B)
1.0	0.636 (S1, Site Class B)

Conterminous 48 States
2006 International Building Code
Latitude = 39.4914
Longitude = -119.80306500000002
Spectral Response Accelerations SMs and SM1
SMs = Fa x Ss and SM1 = Fv x S1
Site Class D - Fa = 1.0 ,Fv = 1.5

Period (sec)	Sa (g)
0.2	1.602 (SMs, Site Class D)
1.0	0.955 (SM1, Site Class D)

Conterminous 48 States
2006 International Building Code
Latitude = 39.4914
Longitude = -119.80306500000002
Design Spectral Response Accelerations SDs and SD1
SDs = 2/3 x SMs and SD1 = 2/3 x SM1
Site Class D - Fa = 1.0 ,Fv = 1.5

Period (sec)	Sa (g)
0.2	1.068 (SDs, Site Class D)
1.0	0.636 (SD1, Site Class D)

GRC ENGINEERING, INC.
5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL
GRC NO. 12-017-206
JOB 10-2207
DATE 4/5/2012 ENG. FV

Seismic Design Calculations

Building Code: 2006 International Building Code
Subsection: 1603.1.5 - Earthquake Design Data

Site Coefficients, Fa, Fv

Site Coefficient, Fa	1 (interpolated from Table 11.4-1 in ASCE 7-05)
Site Coefficient, Fv	1.5 (interpolated from Table 11.4-2 in ASCE 7-05)

Natural Period of Structure

Approximate Period, T_a	0.288	sec
Upper Limit Coefficient, C_u	1.400	(interpolated from Table 12.8-1 in ASCE 7-05)
Maximim period, T_{max}	0.403	sec
T_{actual}	0.838	sec (from analysis, computer or by hand)

Calculation of Seismic Response Coefficient

$C_s = S_{DS} / (R/I) =$	0.3560	Equation 12.8-2
need not exceed $S_{DS} / (T (R/I)) =$	0.2531	Equation 12.8-3
$C_{s\,min} =$	0.03	Equation 15.4-1
If $S_1 \geq 0.6g$, $C_{s\,min} = 0.8\ S_1/(R/I) =$	0.1696	Equation 15.4-2

Governing C_s = 0.2531

Seismic W

Appx Head Weight =	52 kips
Appx Column Weight =	5 kips
W =	**57 kips**

JA 1702 SN 1258

GRC ENGINEERING, INC.

5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL

GRC NO. 12-017-206

JOB 10-2207

DATE 4/5/2012 ENG. FV

5/44

Overall Data Sheet

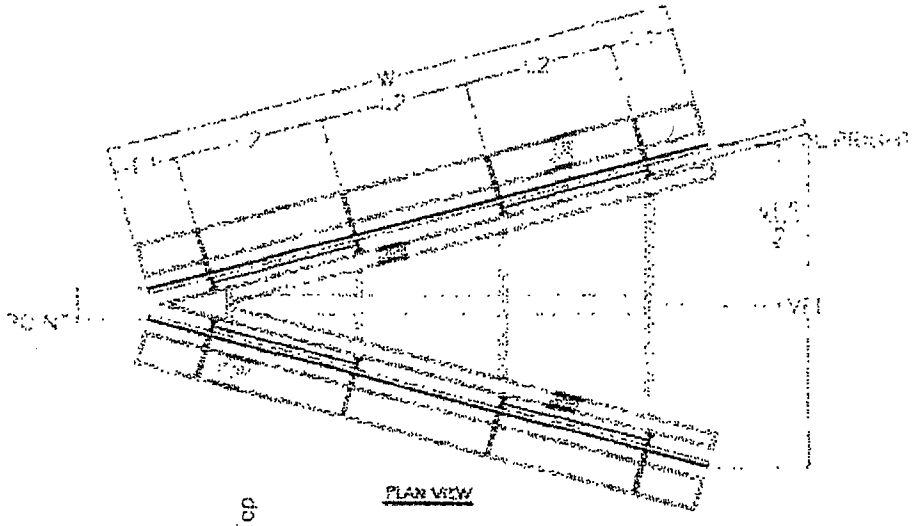
Location: 501 W Moana Lane, Reno, NV

Building Code: 2006 International Building Code

Wind Code: ASCE 7-05

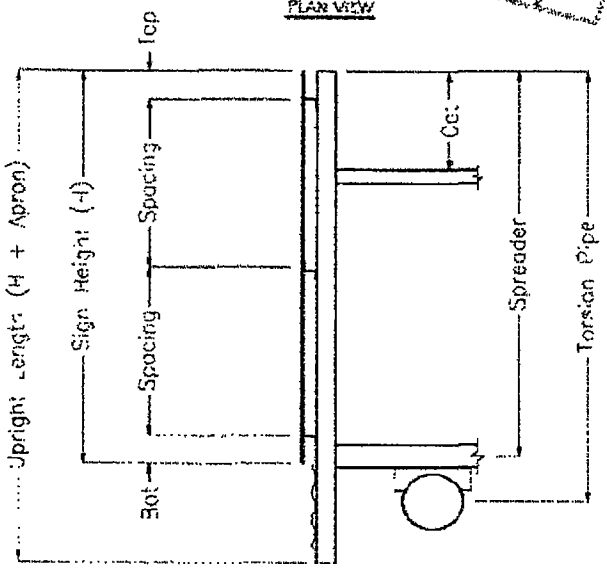
Wind Speed (V):	100 mph	3 Second Gust	ASIF = 1
Wind Exposure:	C		
Wind Importance (I_w):	0.87		

Max Overall Height:	35.0 ft
Sign Height (H):	14.0 ft
Sign Width (W):	48.0 ft
Apron plus extra:	3.5 ft
Flag (CL face to CL column)	23.0 ft
Offset (CL torsion pipe to CL Column)	.0 ft



Superstructure Layout

Cantilever (L1)	4.0 ft
Upright Spacing (L2)	8.0 ft
Point width (Point)	7.0 ft
Vee width (Vee)	22.0 ft
Upright (Upright)	40.0 in
Number of Uprights	6
Spreader	13.0 ft
Torsion Pipe	15.5 ft
Catwalk location (Cat)	3.83 ft
Top Stringer (Top)	.75 ft
Bot Stringer (Bot)	.25 ft
Number of stringers	4
Stringer Spacing (Spacing)	4.33 ft



Various Other Data

Wall Thickness factor	0.93
Poff Multiplier	1

JA 1703 SN 1259

GRC
ENGINEERING, INC.
5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL
GRC NO. 12-017-206
JOB 10-2207
DATE 4/5/2012 ENG. FV

Wind Design Data

Building Code: 2006 International Building Code
Wind Code: ASCE 7-05
Wind Speed (V): 100 mph 3 Second Gust
Wind Exposure: C
Wind Importance (I_w): 0.87
Max Overall Height: 35.0 ft

Coefficients

Kz	1.014652	G	0.85
Kzt	1	Cf	1.697218
Kd	0.85	ω	1

Load Cases to check
Load Case 1: Wind load applied at centroid of Sign area
Load Case 2: Wind load at 0.2*Sign Width from Centroid of Sign area
Figure 6-20, Footnote 3
Load Case 3: Case C, Fig 6-20, Computed elsewhere

qs = 19.21 psf
pw = 27.71 psf
ω pw = 27.7 psf

Therefore, use 27.71 psf for design
with 1.00 ASIF (Allowable Stress Increase Factor)

Wind applied to computer model with torsion pipe along global X axis:

Wind Pressure perpendicular to sign Face

Sign face angle from Global X-Axis: 8.99 degrees
pz 27.4 psf
px 4.3 psf

Wind pressure, 60% perpendicular, 30% transverse (used sometimes to size crossbracing)
pz 17.7 psf
px 10.8 psf

GRC ENGINEERING, INC.

5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL

GRC NO. 12-017-206

JOB 10-2207

DATE 4/5/2012 ENG. FV

7/44

ASCE 7-05/ASCE 7-10 Wind Pressure Calculations

V, mph	100
OAH, ft	35
Exp	C
Kz	1.014652
Kzt	1
ortance Fa	0.87
Cf	1.2
Kd	0.85
G	0.85
Cf	1.697218
ω	1
LF	1

q	19.20858
Design	27.71098
Pressure	27.71098

s/h	0.5	0.5	0.5
B/s	2.742857	2.742857	2.742857
Cf	1.697218		

Cf(rounded to nearest 0.05 as table below) 1.7

Supporting Tables and Calculations

Table 6-2 - Terrain Exposure Constants

Exposure	α	z_g (ft)	â	b hat	alpha bar	b bar	c	ℓ (ft)	eps bar	z min (ft)
B	7	1200	0.142857	0.84	0.25	0.45	0.3	320	0.333333	30
C	9.5	900	0.105263	1	0.153846	0.65	0.2	500	0.2	15
D	11.5	700	0.086957	1	0.111111	0.8	0.15	650	0.125	7

Cf, Case A and Case B

Clearance Ratio, s/h	Aspect Ratio, B/s											
	<0.05	0.1	0.2	0.5	1	2	4	5	10	20	30	>45
1	1.8	1.7	1.65	1.55	1.45	1.4	1.35	1.35	1.3	1.3	1.3	1.3
0.9	1.85	1.75	1.7	1.6	1.55	1.5	1.45	1.45	1.4	1.4	1.4	1.4
0.7	1.9	1.85	1.75	1.7	1.65	1.6	1.6	1.55	1.55	1.55	1.55	1.55
0.5	1.95	1.85	1.8	1.75	1.75	1.7	1.7	1.7	1.7	1.7	1.7	1.75
0.3	1.95	1.9	1.85	1.8	1.8	1.8	1.8	1.8	1.8	1.85	1.85	1.85
0.2	1.95	1.9	1.85	1.8	1.8	1.8	1.8	1.8	1.85	1.9	1.9	1.95
<.16	1.95	1.9	1.85	1.85	1.8	1.8	1.85	1.85	1.85	1.9	1.9	1.95

Cf, Case C

Region	Aspect Ratio, B/s									Region	Aspect Ratio, B/s	
	2	3	4	5	6	7	8	9	10		13	>45
0 to s	2.25	2.6	2.9	3.1	3.3	3.4	3.55	3.65	3.75	0 to s	4	4.3
s to 2s	1.5	1.7	1.9	2	2.15	2.25	2.3	2.35	2.45	s to 2s	2.6	2.55
2s to 3s		1.15	1.3	1.45	1.55	1.65	1.7	1.7	1.85	2s to 3s	2	1.95
3s to 10s			1.1	1.05	1.05	1.05	1.05	1.05	0.95	3s to 4s	1.5	1.85
										4s to 5s	1.35	1.85
										5s to 10s	0.9	1.1
										>10s	0.55	0.55

Case C wind pressures

Region	Cf	pw
0 to s	2.510	40.98
s to 2s	1.649	26.92
2s to 3s	1.150	18.78
3s to 10s	0.000	0.00

Case B vs Case C

	p_{max}		P_{total}
B	46.28	psf	23.28 kips
C	40.98	psf	25.07 kips
	Case B Governs		Case C Governs

1.076824

JA 1705 SN 1261

GRC ENGINEERING, INC.

5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL

GRC NO. 12-017-206

JOB 10-2207

DATE 4/5/2012 ENG. FV 8/44

Dead Load Computation

Sign Dimensions (ft)

Width	48
Height	14
Apron	3

	Number	Load	Area/Length	Total
Faces	2	3.00	672	4032
Uprights	12	18	17.5	3780
Stringers	8	8.2	48	3148.8
Hangrail/lat brace	4	4.9	48	940.8
Ledgers	12	9	6.5	702
WW Angles	12	6	56	4032
Grating	1	3	858.592	2575.776
Apron	2	2.5	144	720
Lights	4	50	1	200
Upper CW Beams	6	15	11.17	1005.3
Spreaders	6	30	11.17	2010.6
Torsion Pipe	1	221.82	46	10203.74

For two faces with different weights:

	Face 1	Face 2
Weight	3.0 psf	3.0 psf
Stringers	8.2 plf	8.2 plf
Face Weight	2016	2016
Total Weight	3590	3590
Avg offset from CL	7.25 ft	7.25 ft
Net weight Offset	0.00 ft	(face only)
Net weight Offset	0.00 ft	(total)

ALL STD FACES

Total Dead Load 33351

5% MISC 1668

Total Load 35019

Load per upright (without faces, torsion pipe, stringers, uprights, cw beams, spreaders, and apron) 739.4254

JA 1706 SN 1262

GRC ENGINEERING, INC.

5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL

GRC NO. 12-017-206

JOB 10-2207

DATE 4/5/2012 ENG. FV

9/44

Dead Load Computation

Sign Dimensions (ft)

Width	48
Height	14
Apron	3

	Number	Load	Area/Length	Total
Faces	2	9.00	672	12096
Uprights	12	18	17.5	3780
Stringers	8	8.2	48	3148.8
Hangrail/lat brace	4	4.9	48	940.8
Ledgers	12	9	6.5	702
WW Angles	12	6	56	4032
Grating	1	3	858.592	2575.776
Apron	2	2.5	144	720
Lights	4	50	1	200
Upper CW Beams	6	15	11.17	1005.3
Spreaders	6	30	11.17	2010.6
Torsion Pipe	1	221.82	46	10203.74

For two faces with different weights:

	Face 1	Face 2
Weight	3.0 psf	15.0 psf
Stringers	8.2 plf	8.2 plf
Face Weight	2016	10080
Total Weight	3590	11654
Avg offset from CL	7.25 ft	7.25 ft
Net weight Offset	3.84 ft	(face only)
Net weight Offset	1.41 ft	(total)

1 FULL HEAVY FACE

Total Dead Load 41415

5% MISC 2071

Total Load 43486

Load per upright (without faces, torsion pipe, stringers, uprights, cw beams, spreaders, and apron) 739.4254

GRC ENGINEERING, INC.

5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL

GRC NO. 12-017-206

JOB 10-2207

DATE 4/5/2012 ENG. FV 10/44

Dead Load Computation

Sign Dimensions (ft)

Width	48
Height	14
Apron	3

	Number	Load	Area/Length	Total
Faces	2	15.00	672	20160
Uprights	12	18	17.5	3780
Stringers	8	8.2	48	3148.8
Hangrail/lat brace	4	4.9	48	940.8
Ledgers	12	9	6.5	702
WW Angles	12	6	56	4032
Grating	1	3	858.592	2575.776
Apron	2	2.5	144	720
Lights	4	50	1	200
Upper CW Beams	6	15	11.17	1005.3
Spreaders	6	30	11.17	2010.6
Torsion Pipe	1	221.82	46	10203.74

For two faces with different weights:

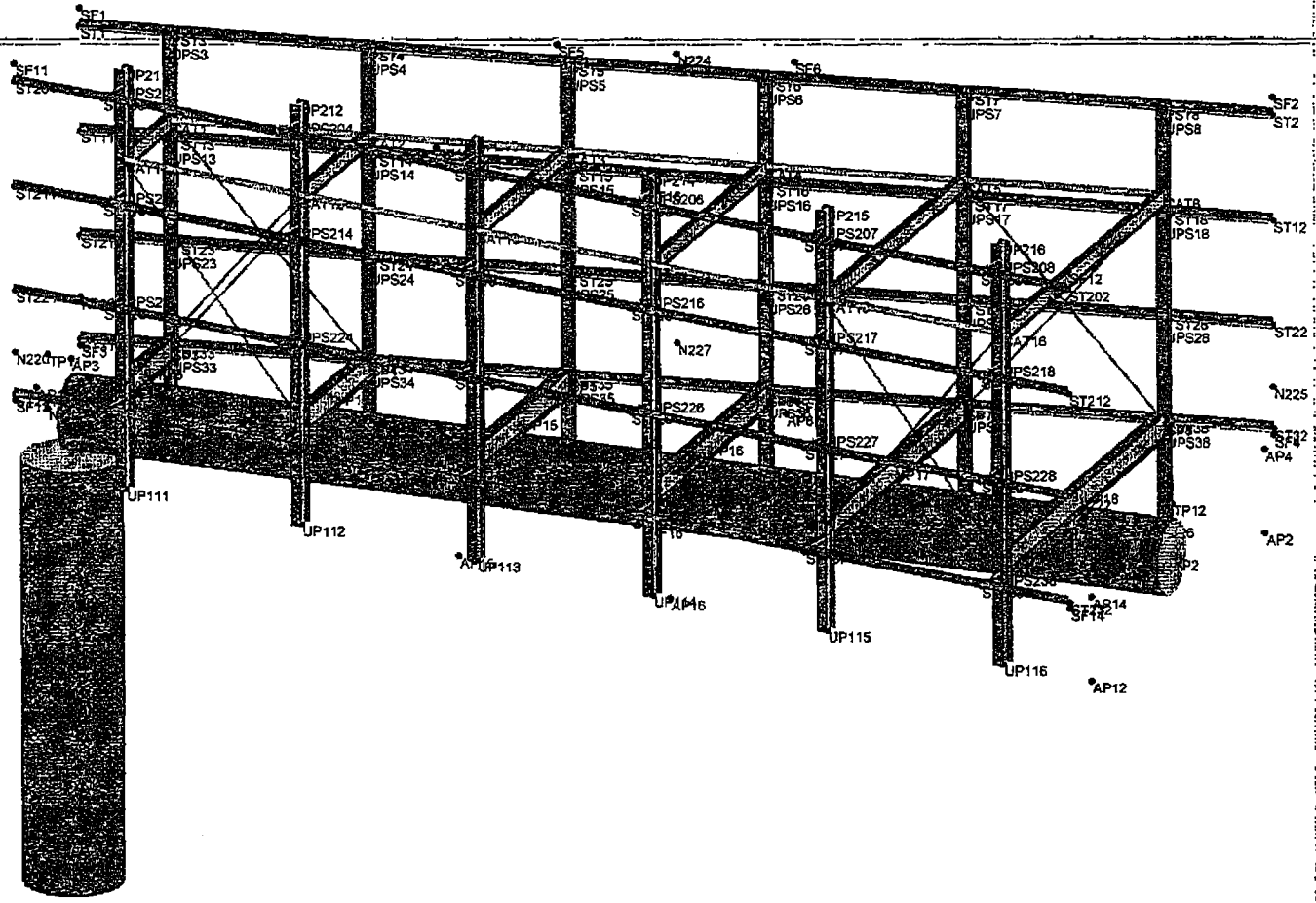
	Face 1	Face 2
Weight	15.0 psf	15.0 psf
Stringers	8.2 plf	8.2 plf
Face Weight	10080	10080
Total Weight	11654	11654
Avg offset from CL	7.25 ft	7.25 ft
Net weight Offset	0.00 ft	(face only)
Net weight Offset	0.00 ft	(total)

ALL HEAVY FACES

Total Dead Load	**49479**
5% MISC	**2474**
Total Load	**51953**

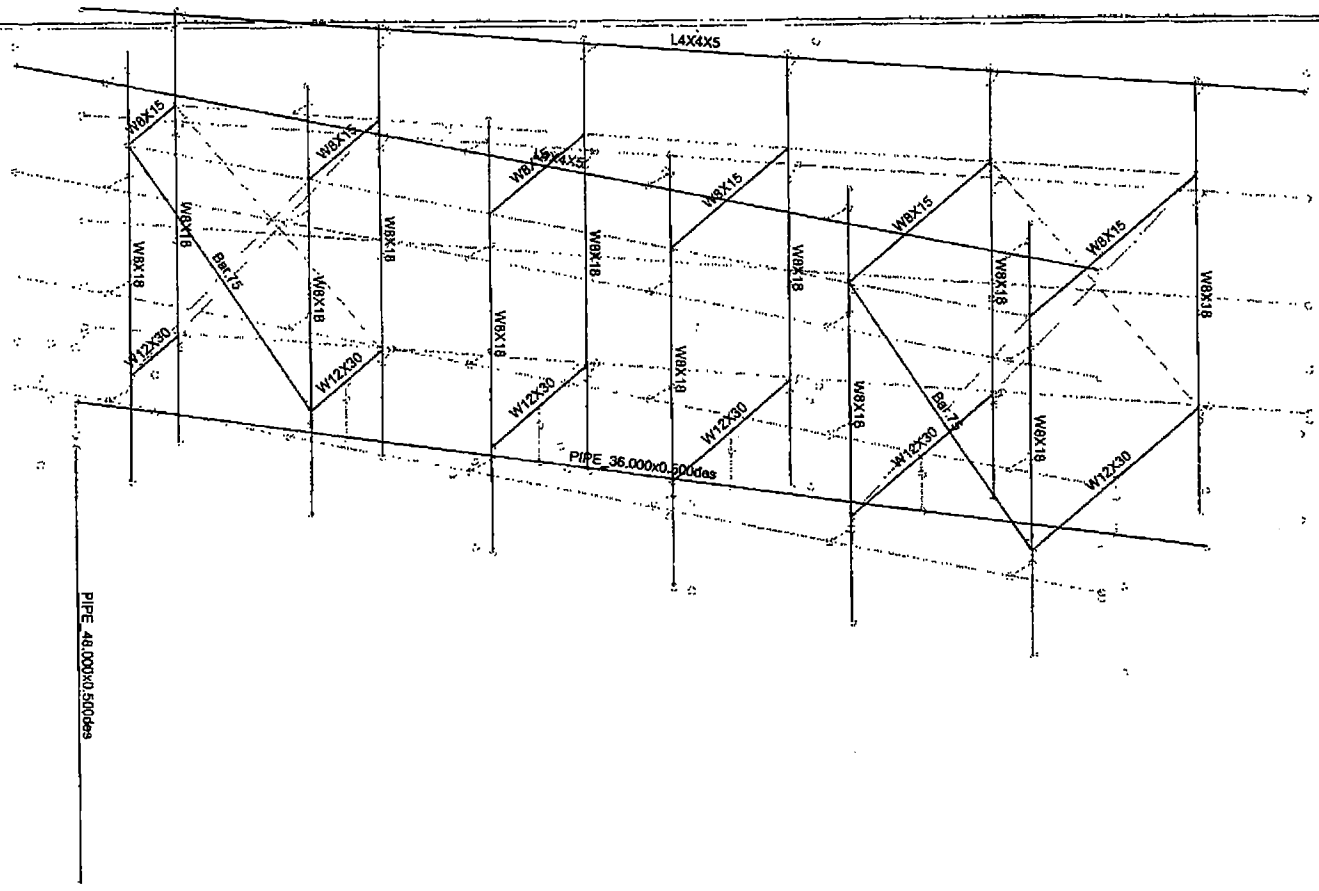
Load per upright (without faces, torsion pipe, stringers, uprights, cw beams, spreaders, and apron) 739.4254

11/44



Solution: Envelope

GRC Engineering, Inc.	SK - 1
Frank Voss	Apr 5, 2012 at 8:08 AM
Rendered View of 3D Model	Model 10-2207.r3d



Solution: Envelope

GRC Engineering, Inc.		SK - 2
Frank Voss		Apr 5, 2012 at 8:09 AM
	Member Shapes in 3D Model	Model 10-2207.r3d

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E..	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
2	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	58	1.2
3	A992	29000	11154	.3	.65	.49	50	1.1	58	1.2
4	A500 Gr.42	29000	11154	.3	.65	.49	42	1.3	58	1.1
5	A500 Gr.46	29000	11154	.3	.65	.49	46	1.2	58	1.1
6	API 5L-X42	29000	11154	.3	.65	.49	42	1.3	58	1.1
7	API 5L-X52	29000	11154	.3	.65	.49	52	1.1	58	1.2
8	API 5L-X60	29000	11154	.3	.65	.49	60	1.1	58	1.2
9	API 5L-X70	29000	11154	.3	.65	.49	70	1.1	58	1.2
10	A252 Gr. 2	29000	11154	.3	.65	.49	35	1.5	58	1.2
11	A252 Gr. 3	29000	11154	.3	.65	.49	45	1.3	58	1.1
12	XRod	29000	11154	.3	.65	0	36	1.5	58	1.2
13	A36 Gr.36_1	29000	11154	.3	.65	.49	36	1.5	58	1.2
14	A572 Gr.50_1	29000	11154	.3	.65	.49	50	1.1	58	1.2
15	A992_1	29000	11154	.3	.65	.49	50	1.1	58	1.2
16	A500 Gr.42_1	29000	11154	.3	.65	.49	42	1.3	58	1.1
17	A500 Gr.46_1	29000	11154	.3	.65	.49	46	1.2	58	1.1

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rul...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Uprights	W8X18	Column	Wide Flange	A992	Typical	5.26	7.97	61.9	.172
2	Spreaders	W12X30	Beam	Wide Flange	A992	Typical	8.79	20.3	238	.457
3	Cat beams	W8X15	Beam	Wide Flange	A992	Typical	4.44	3.41	48	.137
4	Stringer1	L4X4X5	Beam	Single Angle	A36 Gr.36	Typical	2.4	3.67	3.67	.0832
5	Stringer2	L4X4X5	Beam	Single Angle	A36 Gr.36	Typical	2.4	3.67	3.67	.0832
6	Lat Braces	L3X3X4	HBrace	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.0313
7	Torsion	PIPE_36.000x0.500des	Beam	Pipe	API 5L-X52	Typical	51.911	8195.1359	8195.1359	16390.27...
8	Column	PIPE_48.000x0.500des	Beam	Pipe	API 5L-X42	Typical	69.4411	19615.29...	19615.29...	39230.59...
9	X brace	Bar.75	HBrace	None	XRod	Typical	.4418	.0155	.0155	.0311

Member Area Loads (BLC 1 : Dead Load)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	SF1	SF3	SF4	SF2	Y	A-B	-.003
2	AP3	AP4	AP2	AP1	Y	A-B	-.003
3	SF11	SF13	SF14	SF12	Y	A-B	-.003
4	AP13	AP14	AP12	AP11	Y	A-B	-.003

Member Area Loads (BLC 2 : Wind Front)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	SF11	SF13	SF14	SF12	Z	A-B	-.0274
2	AP13	AP14	AP12	AP11	Z	A-B	-.0274
3	SF11	SF13	SF14	SF12	X	A-B	.0043
4	AP13	AP14	AP12	AP11	X	A-B	.0043

Member Area Loads (BLC 3 : Wind Rear)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	SF1	SF3	SF4	SF2	Z	A-B	.0274
2	AP3	AP4	AP2	AP1	Z	A-B	.0274
3	SF1	SF3	SF4	SF2	X	A-B	.0043
4	AP3	AP4	AP2	AP1	X	A-B	.0043

Member Area Loads (BLC 4 : Wind Front Rt)

Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]

Member Area Loads (BLC 4 : Wind Front Rt) (Continued)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	SF15	SF17	SF14	SF12	Z	A-B	-.0456
2	AP17	AP14	AP12	AP15	Z	A-B	-.0456
3	SF15	SF17	SF14	SF12	X	A-B	.0072
4	AP17	AP14	AP12	AP15	X	A-B	.0072

Member Area Loads (BLC 5 : Wind Front Lt)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	SF11	SF13	SF18	SF16	Z	A-B	-.0456
2	AP13	AP18	AP16	AP11	Z	A-B	-.0456
3	SF11	SF13	SF18	SF16	X	A-B	.0072
4	AP13	AP18	AP16	AP11	X	A-B	.0072

Member Area Loads (BLC 6 : Wind Rear Rt)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	SF5	SF7	SF4	SF2	Z	A-B	.0456
2	AP7	AP4	AP2	AP5	Z	A-B	.0456
3	SF5	SF7	SF4	SF2	X	A-B	.0072
4	AP7	AP4	AP2	AP5	X	A-B	.0072

Member Area Loads (BLC 7 : Wind Rear Lt)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	SF1	SF3	SF8	SF6	Z	A-B	.0456
2	AP3	AP8	AP6	AP1	Z	A-B	.0456
3	SF1	SF3	SF8	SF6	X	A-B	.0072
4	AP3	AP8	AP6	AP1	X	A-B	.0072

Member Area Loads (BLC 8 : 1 Heavy 14x48)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	SF11	SF13	SF14	SF12	Y	A-B	-.012

Member Area Loads (BLC 9 : Other Heavy 14x48)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	SF1	SF3	SF4	SF2	Y	A-B	-.012

Member Area Loads (BLC 10 : 1 Heavy Poster)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N218	N221	N219	SF12	Y	A-B	-.012

Member Area Loads (BLC 11 : 2 Heavy Posters)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N218	N221	N219	SF12	Y	A-B	-.012
2	N224	N227	N225	SF2	Y	A-B	-.012

Member Area Loads (BLC 12 : 2 Heavy Posters-2)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N218	N221	N219	SF12	Y	A-B	-.012
2	SF1	N226	N227	N224	Y	A-B	-.012

Member Area Loads (BLC 14 : EQ+X)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	SF11	SF13	SF14	SF12	X	A-B	.0084
2	SF1	SF3	SF4	SF2	X	A-B	.0084
3	AP13	AP14	AP12	AP11	X	A-B	.0084

Member Area Loads (BLC 14 : EQ+X) (Continued)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
4	AP3	AP4	AP2	AP1	X	A-B	.0084

Joint Loads and Enforced Displacements (BLC 1 : Dead Load)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft...
1	UP216	L	Y	-.7394
2	UP215	L	Y	-.7394
3	UP214	L	Y	-.7394
4	UP213	L	Y	-.7394
5	UP212	L	Y	-.7394
6	UP211	L	Y	-.7394
7	UP16	L	Y	-.7394
8	UP15	L	Y	-.7394
9	UP14	L	Y	-.7394
10	UP13	L	Y	-.7394
11	UP12	L	Y	-.7394
12	UP11	L	Y	-.7394
13	UPS8	L	Y	0

Load Combinations

	Description	Sol..	PD..	SR..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..
1	DL + WL Fr	Yes	Y		1	1	2	1			8	1								
2	DL + WL Rr	Yes	Y		1	1	3	1			8	1								
3	DL + WL Fr Rt	Yes	Y		1	1	4	1			8	1								
4	DL + WL Fr Lt	Yes	Y		1	1	5	1			8	1								
5	DL + WL Rr Rt	Yes	Y		1	1	6	1			8	1								
6	DL + WL Rr Lt	Yes	Y		1	1	7	1			8	1								
7	Wind Into Vee	Yes	Y		1	1	2	-1.4...	3	-1.4...	8	1					13	-1		
8	Wind at Point	Yes	Y		1	1	2	1.46...	3	1.46...	8	1					13	1		
9	DL + 0.7 EQ	Yes	Y		1	1.15	14	.7			8	1.15								
10	DL + WL Fr	Yes	Y		1	1	2	1			8	1	9	1						
11	DL + WL Rr	Yes	Y		1	1	3	1			8	1	9	1						
12	DL + WL Fr Rt	Yes	Y		1	1	4	1			8	1	9	1						
13	DL + WL Fr Lt	Yes	Y		1	1	5	1			8	1	9	1						
14	DL + WL Rr Rt	Yes	Y		1	1	6	1			8	1	9	1						
15	DL + WL Rr Lt	Yes	Y		1	1	7	1			8	1	9	1						
16	Wind Into Vee	Yes	Y		1	1	2	-1.4...	3	-1.4...	8	1	9	1	13	-1				
17	Wind at Point	Yes	Y		1	1	2	1.46...	3	1.46...	8	1	9	1	13	1				
18	DL + 0.7 EQ	Yes	Y		1	1.15	14	.7			8	1.15	9	1.15						
19	DL + WL Fr	Yes	Y		1	1	2	1			10	1								
20	DL + WL Rr	Yes	Y		1	1	3	1			10	1								
21	DL + WL Fr Rt	Yes	Y		1	1	4	1			10	1								
22	DL + WL Fr Lt	Yes	Y		1	1	5	1			10	1								
23	DL + WL Rr Rt	Yes	Y		1	1	6	1			10	1								
24	DL + WL Rr Lt	Yes	Y		1	1	7	1			10	1								
25	Wind Into Vee	Yes	Y		1	1	2	-1.4...	3	-1.4...	10	1			13	-1				
26	Wind at Point	Yes	Y		1	1	2	1.46...	3	1.46...	10	1			13	1				
27	DL + 0.7 EQ	Yes	Y		1	1.15	14	.7			10	1.15								
28	DL + WL Fr	Yes	Y		1	1	2	1			11	1								
29	DL + WL Rr	Yes	Y		1	1	3	1			11	1								
30	DL + WL Fr Rt	Yes	Y		1	1	4	1			11	1								
31	DL + WL Fr Lt	Yes	Y		1	1	5	1			11	1								
32	DL + WL Rr Rt	Yes	Y		1	1	6	1			11	1								
33	DL + WL Rr Lt	Yes	Y		1	1	7	1			11	1								
34	Wind Into Vee	Yes	Y		1	1	2	-1.4	3	-1.4	11	1			13	-1				
35	Wind at Point	Yes	Y		1	1	2	1.46...	3	1.46...	11	1			13	1				

TC/44

Load Combinations (Continued)

	Description	Sol.	PD.	SR.	BLC	Fact.	BLC	Fact.	BLC	Fact.	BLC	Fact.	BLC	Fact.	BLC	Fact.	BLC	Fact.
36	DL + 0.7 EQ	Yes	Y		1	1	15	14	.7			11	1.15					
37	DL + WL Fr	Yes	Y		1	1	2	1				12	1					
38	DL + WL Rr	Yes	Y		1	1	3	1				12	1					
39	DL + WL Fr Rt	Yes	Y		1	1	4	1				12	1					
40	DL + WL Fr Lt	Yes	Y		1	1	5	1				12	1					
41	DL + WL Rr Rt	Yes	Y		1	1	6	1				12	1					
42	DL + WL Rr Lt	Yes	Y		1	1	7	1				12	1					
43	Wind Into Vee	Yes	Y		1	1	2	-1.4...	3	-1.4...		12	1			13	-1	
44	Wind at Point	Yes	Y		1	1	2	1.46...	3	1.46...		12	1			13	1	
45	DL + 0.7 EQ	Yes	Y		1	1.15	14	.7				12	1.15					
46	DL Only	Yes	Y		1	1	8	1	9	1								

Envelope Joint Reactions

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N217	max	12.35	25	61.939	18	24.768	1	628.628	12	771.109	41	1593.993	18
2		min	-12.35	35	41.184	25	-24.769	11	-687.527	5	-771.105	3	617.539	25
3	Totals:	max	12.35	25	61.939	18	24.768	1						
4		min	-12.35	35	41.184	25	-24.769	11						

ACCEPT

Envelope AISC 13th(360-05): ASD Steel Code Checks

	Member	Shape	Code	Loc[ft]	LC	Shear	Loc[ft]	Dir	LC	Pnc/om	Pnt/om [k]	Mnyy/o...	Mnzz/o...	Cb	Eqn
1	Tor1	PIPE_36.000x0.500des	1.037	0	14	.253	0		5	1320.816	1616.389	1360.091	1360.091	2...	H1-1b
2	M95	PIPE_48.000x0.500des	.929	17.625	14	.423	17.625		41	1593.85	1746.422	1953.523	1953.523	1	H3-6
3	M112	Bar.75	.805	0	18	.009	0		8	.106	9.524	.119	.119	1	H1-1a
4	M108	Bar.75	.805	0	18	.008	0		17	.106	9.524	.119	.119	1	H1-1a
5	UPR5	W8X18	.726	4.309	14	.652	4.221	z	14	142.198	157.485	11.627	38.688	1	H1-1b
6	UPR15	W8X18	.726	4.309	12	.652	4.221	z	12	142.198	157.485	11.627	38.688	1	H1-1b
7	SPR1	W12X30	.644	2.491	31	.126	2.441	y	33	244.61	263.174	23.852	107.535	1...	H1-1b
8	STGR3	L4X4X5	.605	43.899	42	.061	20.02	y	41	37.6	51.737	3.422	3.422	1	H2-1
9	STGR2	L4X4X5	.605	43.899	42	.059	20.02	y	41	37.6	51.737	3.422	3.422	1	H2-1
10	STGR13	L4X4X5	.605	4.101	13	.060	27.98	y	30	37.6	51.737	3.422	3.422	1	H2-1
11	STGR12	L4X4X5	.605	4.101	13	.058	27.98	y	12	37.6	51.737	3.422	3.422	1	H2-1
12	UPR4	W8X18	.579	4.309	14	.644	4.221	z	14	142.198	157.485	11.627	38.688	1	H1-1b
13	UPR14	W8X18	.579	4.309	12	.644	4.221	z	12	142.198	157.485	11.627	38.688	1	H1-1b
14	UPR6	W8X18	.545	3.781	18	1.423	4.221	z	18	145.474	157.485	11.627	38.688	1	H1-1b
15	UPR16	W8X18	.545	3.781	18	1.423	4.221	z	18	145.474	157.485	11.627	38.688	1	H1-1b
16	UPR12	W8X18	.523	4.309	13	.435	12.487	z	36	142.198	157.485	11.627	38.688	1	H1-1b
17	UPR2	W8X18	.523	4.309	15	.438	12.487	z	9	142.198	157.485	11.627	38.688	1	H1-1b
18	UPR3	W8X18	.502	4.309	15	.425	4.221	y	15	142.198	157.485	11.627	38.688	1	H1-1b
19	UPR13	W8X18	.502	4.309	13	.425	4.221	y	13	142.198	157.485	11.627	38.688	1	H1-1b
20	SPR6	W12X30	.500	8.685	5	.053	8.773	y	5	184.902	263.174	23.852	107.535	1	H1-1b
21	SPR5	W12X30	.472	7.441	16	.122	7.441	y	18	200.977	263.174	23.852	107.535	2	H1-1b
22	M107	Bar.75	.422	0	12	.027	0		18	.106	9.524	.119	.119	1	H1-1a
23	M111	Bar.75	.422	0	14	.027	0		18	.106	9.524	.119	.119	1	H1-1a
24	CW6	W8X15	.412	17.458	6	.025	17.019	y	5	11.679	132.934	6.662	22.632	2	H1-1b
25	STGR1	L4X4X5	.410	43.899	42	.041	20.02	y	5	37.6	51.737	3.422	3.422	1	H2-1
26	STGR11	L4X4X5	.410	4.101	13	.040	27.98	y	12	37.6	51.737	3.422	3.422	1	H2-1
27	STGR14	L4X4X5	.401	27.98	12	.041	43.899	y	12	37.6	51.737	3.422	3.422	1	H2-1
28	STGR4	L4X4X5	.401	20.02	14	.041	4.101	y	14	37.6	51.737	3.422	3.422	1	H2-1
29	SPR2	W12X30	.377	3.748	15	.154	3.748	y	18	237.413	263.174	23.852	107.535	1...	H1-1b
30	UPR1	W8X18	.370	4.309	6	.668	4.221	z	12	142.198	157.485	11.627	38.688	1	H1-1b
31	UPR11	W8X18	.367	4.309	40	.668	4.221	z	14	142.198	157.485	11.627	38.688	1	H1-1b
32	SPR4	W12X30	.363	6.26	7	.099	6.198	y	12	215.82	263.174	23.852	107.535	1...	H1-1b
33	SPR3	W12X30	.330	5.004	6	.104	4.954	y	13	227.568	263.174	23.852	107.535	1...	H1-1b
34	CW5	W8X15	.323	0	5	.028	13.605	y	5	15.909	132.934	6.662	26.312	2	H1-1b

JA 1714 SN 1270

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code	Loc[ft]	LC	Shear	Loc[ft]	Dir	LC	Pnc/om	Pnt/om [k]	Mnyy/o...	Mnzz/o...	Cb	Eqn
35	CW1	W8X15	.274	0	40	.093	2.392	y	40	94.908	132.934	6.662	33.932	2...	H1-1b
36	CW2	W8X15	.262	7.458	40	.062	3.335	y	40	62.017	132.934	6.662	33.932	2...	H1-1b
37	CW4	W8X15	.248	0	5	.032	10.204	y	5	22.935	132.934	6.662	33.716	2...	H1-1b
38	CW3	W8X15	.242	0	6	.041	6.505	y	6	35.897	132.934	6.662	33.932	2...	H1-1b
39	M104	L3X3X4	.180	4.02	18	.007	0	y	5	8.037	31.042	1.123	2.004	1...	H2-1
40	M99	L3X3X4	.180	4.02	18	.007	0	y	5	8.037	31.042	1.123	2.004	1...	H2-1
41	M113	Bar.75	.170	0	43	.006	0		16	.106	9.524	.119	.119	1	H1-1b
42	M103	L3X3X4	.165	4.02	18	.008	0	y	41	8.037	31.042	1.123	2.004	1...	H2-1
43	M98	L3X3X4	.165	4.02	18	.007	0	y	41	8.037	31.042	1.123	2.004	1...	H2-1
44	M102	L3X3X4	.152	3.98	18	.006	8	y	40	8.037	31.042	1.123	2.004	1...	H2-1
45	M97	L3X3X4	.152	4.02	18	.006	8	y	15	8.037	31.042	1.123	2.004	1...	H2-1
46	M109	Bar.75	.149	0	7	.007	0		7	.106	9.524	.119	.119	1	H1-1b
47	M105	L3X3X4	.110	4.02	43	.005	8	y	5	8.037	31.042	1.123	2.004	1...	H2-1
48	M101	L3X3X4	.101	4.02	16	.006	0	y	5	8.037	31.042	1.123	2.004	1...	H2-1
49	M96	L3X3X4	.101	3.98	16	.006	0	y	12	8.037	31.042	1.123	2.004	1...	H2-1
50	M100	L3X3X4	.097	3.98	36	.005	8	y	5	8.037	31.042	1.123	2.004	1...	H2-1
51	M106	Bar.75	.000	0	1	.000	0		1	.106	9.524	.119	.119	1	H1-1a
52	M110	Bar.75	.000	0	1	.000	0		1	.106	9.524	.119	.119	1	H1-1a

GRC ENGINEERING, INC.

5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL

GRC NO. 12-017-206

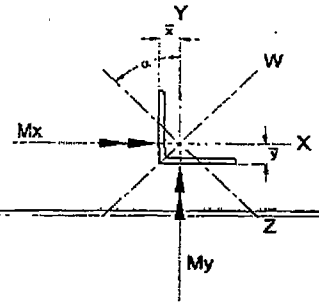
JOB 10-2207

DATE 4/5/2012 ENG. FV

Single Angle Design Checks - Equal Leg Angles

Angle L4X4X5/16 Fy 36 ksi

E 29000 ksi



General Properties

L	8 ft	t	0.3125 in
d	4 in	b	4 in
k	0.688 in	J	0.0832 in^4
Weight	8.2 lb/ft	C_w	0.0963 in^6
Area	2.4 in^2	r_o_bar	2.21 in
tan α	1	Qs	1

Geometric Axes Properties

I_x	3.67 in^4	I_y	3.67 in^4
S_x	1.27 in^3	S_y	1.27 in^3
$S_{x\,max}$	3.31 in^3	$S_{y\,max}$	3.31 in^3
r_x	1.24 in	r_y	1.24 in
y_bar_x	1.11 in	x_bar_y	1.11 in
Z_x	2.26 in^3	Z_y	2.26 in^3
y_{p_x}	0.3 in	x_{p_y}	0.3 in

Principal Axes Properties

I_z	1.46 in^4	I_w	5.88 in^6
$S_{z\,heel}$	0.99 in^3 (heel)	$S_{w\,min}$	2.08 in^3 (toe)
$S_{z\,toe}$	0.93 in^3 (toes)	$S_{w\,max}$	2.08 in^3 (toe)
r_z	0.781 in	r_w	1.56 in
c_{z_heel}	1.57 in	c_{w_min}	2.83 in
c_{z_toe}	1.48 in	c_{w_max}	2.83 in

Loading Criteria (approximate)

Wind on only top & bot strgrs? n

Wind	46.28 psf	
DL Face	3 psf	
Width	4.333333 ft	
Lcant	4 ft	Cantilever Governs
Lspan	8 ft	
Mx	0.1696	DL Moment
My	1.604281	WL Moment
Mx	0.1696	DL Moment
My	1.604281	WL Moment

Loading on Angle to use below (from RISA or appx)

Mx	0.70 ft-kips	(positive causes compression in horizontal leg - like gravity load on a cantilever)	
My	-1.98 ft-kips	(positive causes tension in vertical leg)	
Mres	2.10 ft-kips	θ	160.4 degrees (right from vert)
Cb	1.00	α – θ	-115.4 degrees (left from W-W)

14x48 STRINGERS → USE FOR HEAVY + STD FACES

Moments about Geometric Axis

Mr_w	-0.90 ft-kips	(positive causes compression in bottom toe)
Mr_z	-1.90 ft-kips	(positive causes compression in toes)

Yielding

M_{y_w}	6.23 ft-kips	Mn_{y_w}	9.35 ft-kips	Mc_{y_w}	5.60 ft-kips
$M_{y\_z\text{-}heel}$	2.97 ft-kips	$Mn_{y\_z\text{-}heel}$	4.45 ft-kips	$Mc_{y\_z\text{-}heel}$	2.67 ft-kips
$M_{y\_z\text{-}toe}$	2.80 ft-kips	$Mn_{y\_z\text{-}toe}$	4.20 ft-kips	$Mc_{y\_z\text{-}toe}$	2.51 ft-kips

Lateral-Torsional Buckling

M_{e_w}	18.09 ft-kips	Mn_{LTB_w}	7.69 ft-kips	(F10-3)	Mc_{LTB_w} 4.60 ft-kips

Leg Local Buckling

b/t	12.80	λp	15.33	λr	25.83 Compact
Mn_{LB_w}	9.35 ft-kips	Mn_{LB_z}	4.20 ft-kips		
Mc_{LB_w}	5.60 ft-kips	Mc_{LB_z}	2.51 ft-kips		

Stresses at Specific Locations on Angle (positive is compression, negative is tension)

Top Toe -19.20 ksi Bot Toe -29.61 ksi Heel 23.00 ksi

Governing Capacities

Top Toe:	Mc_w	4.60 ft-kips	Mc_z	2.51 ft-kips	IC	0.95
Bot Toe:	Mc_w	4.60 ft-kips	Mc_z	2.51 ft-kips	IC	0.95
Heel:	Mc_w	4.60 ft-kips	Mc_z	2.67 ft-kips	IC	0.91

Governing IC 0.95

JA 1716 SN 1272

GRC ENGINEERING, INC.

5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL

GRC NO. 12-017-206

JOB 10-2207

DATE 4/5/2012 ENG. FV

Stringer Clip Connection Design

Stringer	L4X4X5/16	Fy	36	ksi
		E	29000	ksi

General Properties of Stringer - assumes LLH if applicable

Weight	8.2 lb/ft	t	0.3125 in	k	0.688 in
d	4 in	b	4 in	g	2.5 in

Clip	L4X4X1/2	Fy	36	ksi
		E	29000	ksi

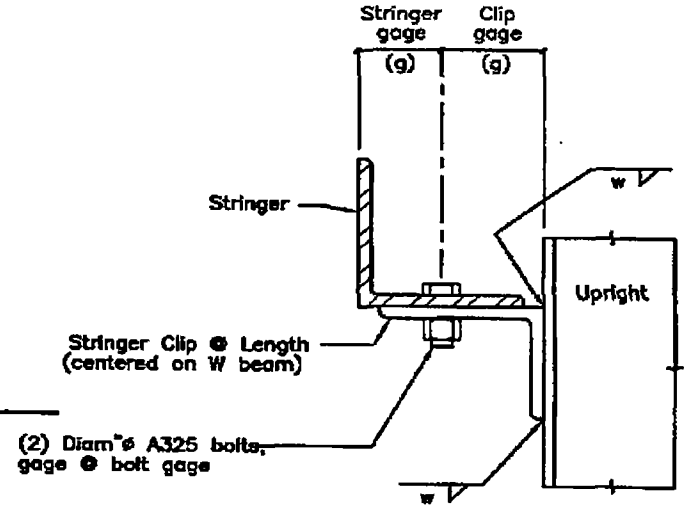
General Properties of Clip - assumes LLH if applicable

Weight	12.8 lb/ft	t	0.5 in	k	0.875 in
d	4 in	b	4 in	g	2.5 in

Check Leg without gussets in Stringer Clip

P_{DL}	704 lb	arm	4.5625 in
P_{WL}	1978 lb	arm	2.375 in
M_{leg}	7.91 in-kips		
$b_{req'd}$	5.85 in	b_{actual}	6.00 in

USE L4X4X1/2 CLIP @ 0'-6.0"
WITHOUT GUSSETS



STRINGER MOUNTING DETAIL

GRC ENGINEERING, INC.

5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL

GRC NO. 12-017-206

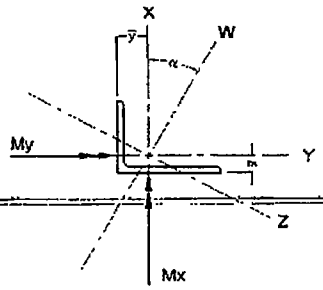
JOB 10-2207

DATE 4/5/2012 ENG. FV

Single Angle Design Checks - Unequal Leg Angles (LLH)

Angle L5X3-1/2X3/8 Fy 36 ksi

E 29000 ksi



General Properties

L	8 ft	t	0.375 in
d	5 in	b	3.5 in
k	0.813 in	J	0.15 in^4
Weight	10.4 lb/ft	C_w	0.217 in^6
Area	3.05 in^2	r_{o_bar}	2.45 in
tan α	0.485	Qs	0.98

Geometric Axes Properties

I_x	7.75 in^4
S_x	2.28 in^3
$S_{x\ max}$	4.84 in^3
r_x	1.59 in
y_bar_x	1.6 in
Z_x	4.09 in^3
y_{p_x}	0.933 in
I_y	3.15 in^4
S_y	1.19 in^3
$S_{y\ max}$	3.69 in^3
r_y	1.02 in
x_bar_y	0.854 in
Z_y	2.12 in^3
x_{p_y}	0.305 in

Principal Axes Properties

I_z	1.739 in^4
$S_{z\ heel}$	1.185 in^3
$S_{z\ short\ toe}$	0.975 in^3
$S_{z\ long\ toe}$	1.756 in^3
r_z	0.755 in
c_{z_heel}	1.467 in
$c_{z\_short\ toe}$	1.784 in
$c_{z\_long\ toe}$	0.990 in
I_w	9.161 in^4
$S_{w\ short\ toe}$	2.670 in^3
$S_{w\ long\ toe}$	3.531 in^3
r_w	1.733 in
$c_{w\_short\ toe}$	3.432 in
$c_{w\_long\ toe}$	2.594 in
c_{w_heel}	1.067 in

Loading Criteria (approximate)

Wind on only top & bot strgrs? n

Wind	46.28	psf
DL Face	3	psf
Width	4.333333	ft
Lcant	4	ft
Lspan	8	ft

3ps f (12)(24.5) ÷ 4 = 221 #
10.4(24.5) ÷ 2 = 127 #
DL = Σ = F 348#

Cantilever Governs
WL = 46.3 (1.0)(24.5)(12) = 13612#
×$\frac{4.75}{12}$ ÷ 3 = 1800#

My	0.1872	DL Moment
Mx	1.604281	WL Moment

$M_{req} = .3 \pi e(6-1) + 1.8(2.125)$
$= 5.57$ in-k

$b = \frac{6(6.559)}{3(1.625)^2} = 2.6$

STD $\frac{6.5}{1.625} = 4$

POSTER 2-SPLIT OR 3-SPLIT

My	0.1872	DL Moment
Mx	1.604281	WL Moment

Loading on Angle to use below (from RISA or appx)

My	0.50 ft-kips	(positive causes compression in horizontal leg - like gravity load on a cantilever)			
Mx	-2.77 ft-kips	(positive causes tension in vertical leg)			
Mres	2.81 ft-kips	θ	169.8 degrees (right from vert)	α	25.87339
Cb	1.00	α − θ	-143.9 degrees (left from W-W)		

Moments about Geometric Axis

Mr_w	-2.27 ft-kips	(positive causes compression in long toe)		β_w	-2.400
Mr_z	-1.66 ft-kips	(positive causes compression in both toes)			

Yielding

M_{y_w}	8.01 ft-kips	Mn_{y_w}	12.01 ft-kips	Mc_{y_w}	7.19 ft-kips
$M_{y\_z\text{-}heel}$	3.56 ft-kips	$Mn_{y\_z\text{-}heel}$	5.33 ft-kips	$Mc_{y\_z\text{-}heel}$	3.19 ft-kips
$M_{y\_z\text{-}toe}$	2.92 ft-kips	$Mn_{y\_z\text{-}toe}$	4.39 ft-kips	$Mc_{y\_z\text{-}toe}$	2.63 ft-kips

Lateral-Torsional Buckling

M_{e_w}	19.51 ft-kips	Mn_{LTB_w}	9.37 ft-kips	(F10-3)	Mc_{LTB_w} 5.61 ft-kips

Leg Local Buckling

b/t	13.33	λp	15.33	λr	25.83 Compact
Mn_{LB_w}	12.01 ft-kips	Mn_{LB_z}	4.39 ft-kips		
Mc_{LB_w}	7.19 ft-kips	Mc_{LB_z}	2.63 ft-kips		

Stresses at Specific Locations on Angle (positive is compression, negative is tension)

Short Toe -10.20 ksi Long Toe -19.06 ksi Heel 19.97 ksi

Governing Capacities

Short Toe:	Mc_w	5.61 ft-kips	Mc_z	2.63 ft-kips	IC	1.04
Long Toe:	Mc_w	5.61 ft-kips	Mc_z	2.63 ft-kips	IC	1.04
Heel:	Mc_w	5.61 ft-kips	Mc_z	3.19 ft-kips	IC	0.92

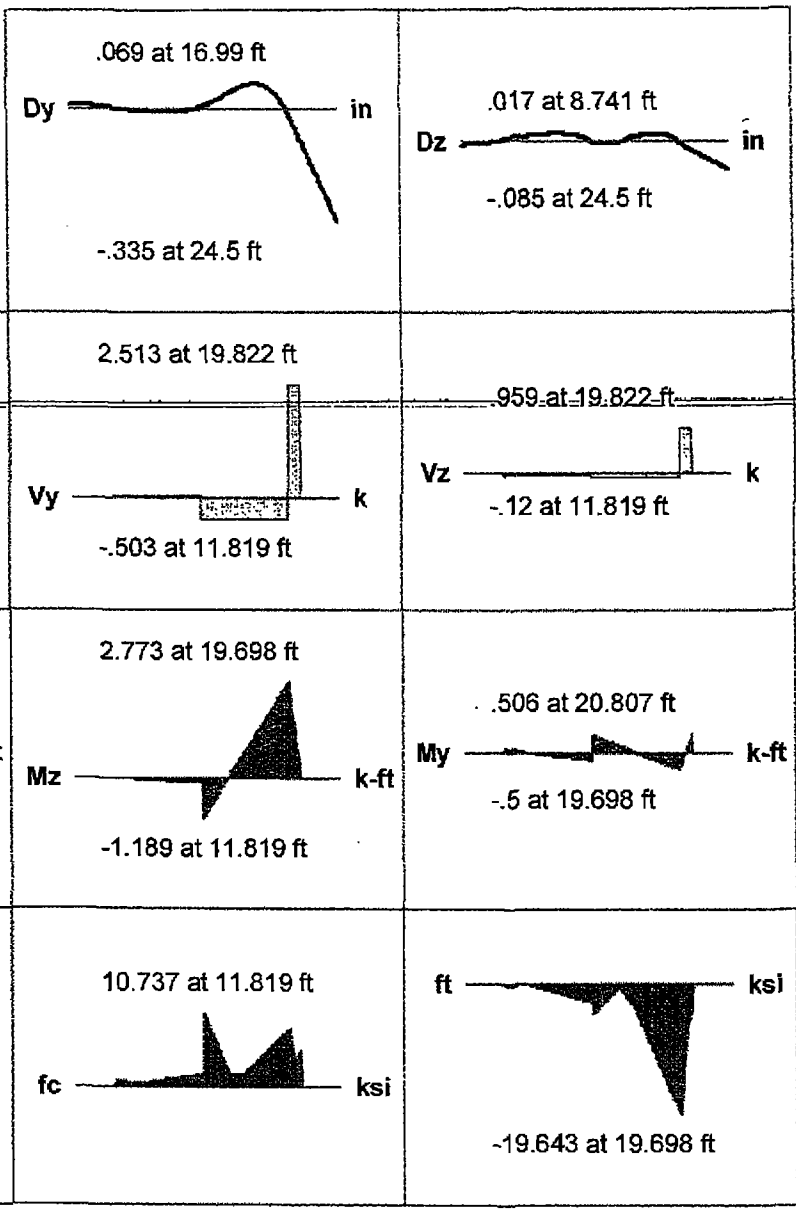
Governing IC 1.04

USE L5x5x½ @ 0'-6" LONG CLIPS FOR STD ANG POSTER CLIPS

JA 1718 SN 1274

Beam: ***M15***

Shape: **L5X3.5X6**
Material: **A36 Gr.36**
Length: **24.5 ft**
I Joint: **N49**
J Joint: **N50**
LC 2: DL + Oblique Wind
Code Check: **0.608 (bending)**
Report Based On 200 Sections



AISC 13th(360-05): ASD Code Check

Direct Analysis Method

Max Bending Check	**0.608**	Max Shear Check	**0.109 (y)**	
Location	**19.698 ft**	Location	**19.822 ft**	
Equation	**H2-1**	Max Defl Ratio	**L/857**	
Bending Flange	**Compact**	Compression Flange	**Non-Slender**	**Qs=.983**
Bending Web	**Compact**	Compression Web	**Slender**	**Qa=1**

Fy	**36 ksi**
Pnc/om	**40.727 k**
Pnt/om	**65.749 k**
Mny/om	**3.208 k-ft**
Mnz/om	**6.142 k-ft**
Vny/om	**24.251 k**
Vnz/om	**16.976 k**
Cb	**1**

	y-y	z-z
Lb	**8 ft**	**8 ft**
KL/r	**94.464**	**60.224**
Sway	**No**	**No**

L Comp Flange	**0 ft**
Torque Length	**NC**
Tau_b	**1**

21/44

JA 1719

SN 1275

GRC ENGINEERING, INC.

5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL

GRC NO. 12-017-206

JOB 10-2207

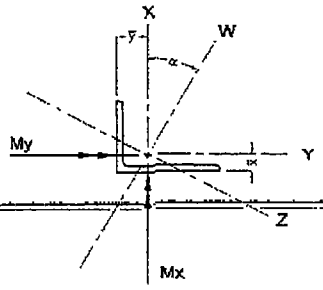
DATE 4/5/2012 ENG. FV

22/44

Single Angle Design Checks - Unequal Leg Angles (LLH)

Angle L5X3-1/2X3/8 Fy 36 ksi

E 29000 ksi



General Properties

L	8 ft	t	0.375 in
d	5 in	b	3.5 in
k	0.813 in	J	0.15 in^4
Weight	10.4 lb/ft	C_w	0.217 in^6
Area	3.05 in^2	r_o_bar	2.45 in
tan α	0.485	Qs	0.98

Geometric Axes Properties

I_x	7.75 in^4
S_x	2.28 in^3
$S_{x\,max}$	4.84 in^3
r_x	1.59 in
y_bar_x	1.6 in
Z_x	4.09 in^3
y_{p_x}	0.933 in
I_y	3.15 in^4
S_y	1.19 in^3
$S_{y\,max}$	3.69 in^3
r_y	1.02 in
x_bar_y	0.854 in
Z_y	2.12 in^3
x_{p_y}	0.305 in

Principal Axes Properties

I_z	1.739 in^4
$S_{z\,heel}$	1.185 in^3
$S_{z\,short\,toe}$	0.975 in^3
$S_{z\,long\,toe}$	1.756 in^3
r_z	0.755 in
c_{z_heel}	1.467 in
$c_{z\_short\,toe}$	1.784 in
$c_{z\_long\,toe}$	0.990 in
I_w	9.161 in^4
$S_{w\,short\,toe}$	2.670 in^3
$S_{w\,long\,toe}$	3.531 in^3
r_w	1.733 in
$c_{w\_short\,toe}$	3.432 in
$c_{w\_long\,toe}$	2.594 in
c_{w_heel}	1.067 in

Loading Criteria (approximate)

Wind on only top & bot strgrs? n

Wind	46.28	psf
DL Face	3	psf
Width	4.333333	ft
Lcant	4	ft
Lspan	8	ft

Cantilever Governs

My	0.1872	DL Moment
Mx	1.604281	WL Moment

My	0.1872	DL Moment
Mx	1.604281	WL Moment

POSTEN 2-SPLIT

Loading on Angle to use below (from RISA or appx)

My	1.41 ft-kips	(positive causes compression in horizontal leg - like gravity load on a cantilever)			
Mx	-1.98 ft-kips	(positive causes tension in vertical leg)			
Mres	2.43 ft-kips	θ	144.4 degrees (right from vert)	α	25.87339
Cb	1.00	α – θ	-118.6 degrees (left from W-W)		

Moments about Geometric Axis

Mr_w	-1.16 ft-kips	(positive causes compression in long toe)		β_w	-2.400
Mr_z	-2.14 ft-kips	(positive causes compression in both toes)			

Yielding

M_{y_w}	8.01 ft-kips	Mn_{y_w}	12.01 ft-kips	Mc_{y_w}	7.19 ft-kips
$M_{y\_z\text{-}heel}$	3.56 ft-kips	$Mn_{y\_z\text{-}heel}$	5.33 ft-kips	$Mc_{y\_z\text{-}heel}$	3.19 ft-kips
$M_{y\_z\text{-}toe}$	2.92 ft-kips	$Mn_{y\_z\text{-}toe}$	4.39 ft-kips	$Mc_{y\_z\text{-}toe}$	2.63 ft-kips

Lateral-Torsional Buckling

M_{e_w}	19.51 ft-kips	Mn_{LTB_w}	9.37 ft-kips	(F10-3)	Mc_{LTB_w}	5.61 ft-kips

Leg Local Buckling

b/t	13.33	λp	15.33	λr	25.83	Compact	
Mn_{LB_w}	12.01 ft-kips	Mn_{LB_z}	4.39 ft-kips				
Mc_{LB_w}	7.19 ft-kips	Mc_{LB_z}	2.63 ft-kips				

Stresses at Specific Locations on Angle (positive is compression, negative is tension)

Short Toe -21.06 ksi Long Toe -18.55 ksi Heel 23.24 ksi

Governing Capacities

Short Toe:	Mc_w	5.61 ft-kips	Mc_z	2.63 ft-kips	IC	1.02
Long Toe:	Mc_w	5.61 ft-kips	Mc_z	2.63 ft-kips	IC	1.02
Heel:	Mc_w	5.61 ft-kips	Mc_z	3.19 ft-kips	IC	0.88

Governing IC 1.02

JA 1720 SN 1276

GRC ENGINEERING, INC.

5544 W. 147TH STREET DAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL

GRC NO. 12-017-206

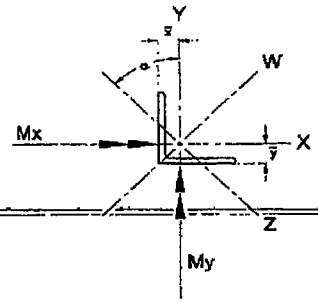
JOB 10-2207

DATE 4/5/2012 ENG. FV

Single Angle Design Checks - Equal Leg Angles

Angle L4X4X3/8 Fy 36 ksi

E 29000 ksi



General Properties

L	8 ft	t	0.375 in
d	4 in	b	4 in
k	0.75 in	J	0.141 in^4
Weight	9.8 lb/ft	C_w	0.162 in^6
Area	2.86 in^2	r_o_bar	2.19 in
tan α	1	Qs	1

Geometric Axes Properties

I_x	4.32 in^4
S_x	1.5 in^3
$S_{x\,max}$	3.82 in^3
r_x	1.23 in
y_bar$_x$	1.13 in
Z_x	2.69 in^3
y_{p_x}	0.357 in
I_y	4.32 in^4
S_y	1.5 in^3
$S_{y\,max}$	3.82 in^3
r_y	1.23 in
x_bar$_y$	1.13 in
Z_y	2.68 in^3
x_{p_y}	0.357 in

Principal Axes Properties

I_z	1.74 in^4	
$S_{z\,heel}$	1.16 in^3	(heel)
$S_{z\,toe}$	1.09 in^3	(toes)
r_z	0.779 in	
c_{z_heel}	1.60 in	
c_{z_toe}	1.50 in	
I_w	6.90 in^4	
$S_{w\,min}$	2.44 in^3	(toe)
$S_{w\,max}$	2.44 in^3	(toe)
r_w	1.55 in	
c_{w_min}	2.83 in	
c_{w_max}	2.83 in	

Loading Criteria (approximate)

Wind on only top & bot strgrs? n

Wind	46.28	psf
DL Face	3	psf
Width	4.333333	ft
Lcant	4	ft
Lspan	8	ft

Cantilever Governs

Mx	0.1824	DL Moment
My	1.604281	WL Moment
Mx	0.1824	DL Moment
My	1.604281	WL Moment

Loading on Angle to use below (from RISA or appx)

Mx	0.51 ft-kips	(positive causes compression in horizontal leg - like gravity load on a cantilever)	
My	-2.44 ft-kips	(positive causes tension in vertical leg)	
Mres	2.49 ft-kips	θ	168.3 degrees (right from vert)
Cb	1.00	α – θ	-123.3 degrees (left from W-W)

POSTER HEAVY FACE

↳ USE SAME CLIP AS 14x40 HEAVY FACE

Moments about Geometric Axis

Mr_w	-1.37 ft-kips	(positive causes compression in bottom toe)
Mr_z	-2.08 ft-kips	(positive causes compression in toes)

Yielding

M_{y_w}	7.32 ft-kips	Mn_{y_w}	10.98 ft-kips	Mc_{y_w}	6.58 ft-kips
$M_{y\_z\text{-}heel}$	3.48 ft-kips	$Mn_{y\_z\text{-}heel}$	5.22 ft-kips	$Mc_{y\_z\text{-}heel}$	3.13 ft-kips
$M_{y\_z\text{-}toe}$	3.26 ft-kips	$Mn_{y\_z\text{-}toe}$	4.89 ft-kips	$Mc_{y\_z\text{-}toe}$	2.93 ft-kips

Lateral-Torsional Buckling

M_{e_w}	26.05 ft-kips	Mn_{LTB_w}	9.52 ft-kips	(F10-3)	Mc_{LTB_w} 5.70 ft-kips

Leg Local Buckling

b/t	10.67	λp	15.33	λr	25.83 Compact
Mn_{LB_w}	10.98 ft-kips	Mn_{LB_z}	4.89 ft-kips		
Mc_{LB_w}	6.58 ft-kips	Mc_{LB_z}	2.93 ft-kips		

Stresses at Specific Locations on Angle (positive is compression, negative is tension)

Top Toe -16.30 ksi Bot Toe -29.72 ksi Heel 21.53 ksi

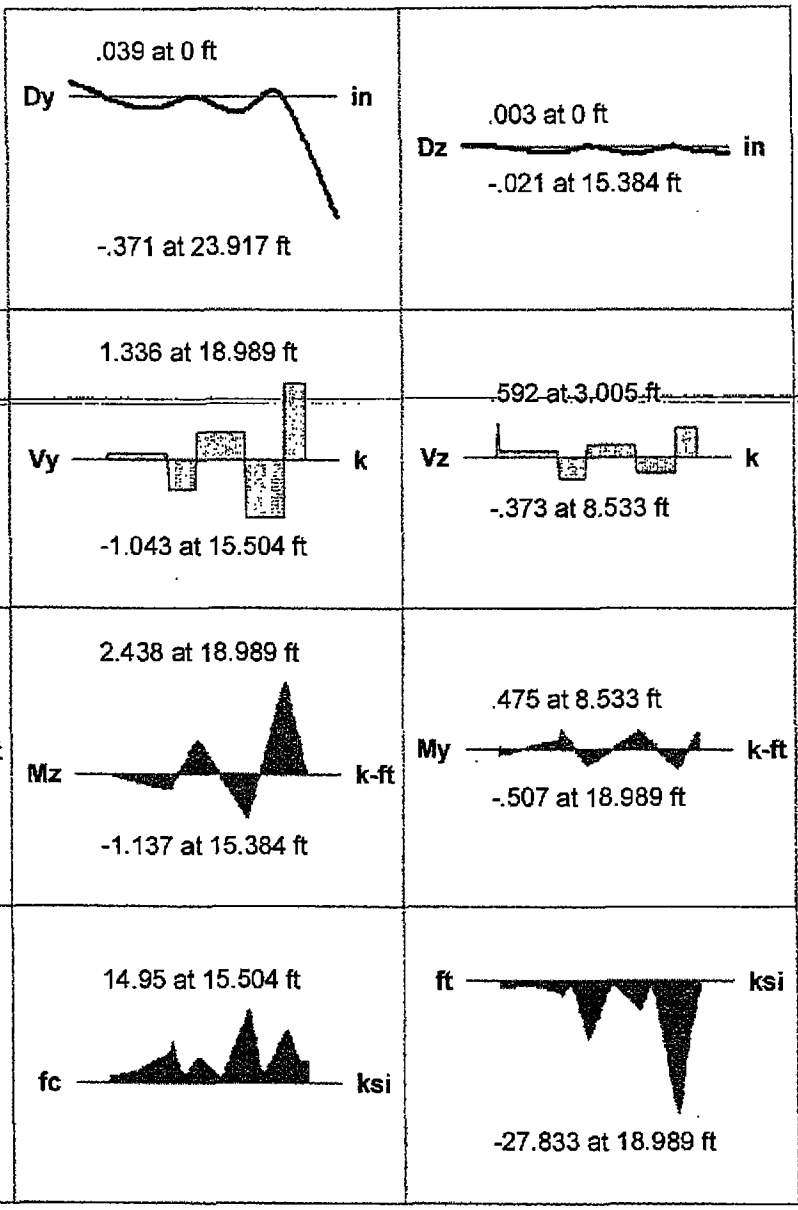
Governing Capacities

Top Toe:	Mc_w	5.70 ft-kips	Mc_z	2.93 ft-kips	IC	0.95
Bot Toe:	Mc_w	5.70 ft-kips	Mc_z	2.93 ft-kips	IC	0.95
Heel:	Mc_w	5.70 ft-kips	Mc_z	3.13 ft-kips	IC	0.91

Governing IC 0.95

Beam: ***M115***

Shape: **L4X4X5**
Material: **A36 Gr.36**
Length: **23.917 ft**
I Joint: **N360**
J Joint: **N361**
LC 2: DL + Oblique Wind
Code Check: **0.861 (bending)**
Report Based On 200 Sections



AISC 13th(360-05): ASD Code Check

Direct Analysis Method

Max Bending Check	**0.861**	Max Shear Check	**0.083 (y)**	
Location	**18.989 ft**	Location	**18.989 ft**	
Equation	**H2-1**	Max Defl Ratio	**L/700**	
Bending Flange	**Compact**	Compression Flange	**Slender**	**Qs=.997**
Bending Web	**Compact**	Compression Web	**Slender**	**Qa=1**

			y-y	z-z
Fy	**36 ksi**	Lb	**1.86 ft**	**1.86 ft**
Pnc/om	**50.719 k**	KL/r	**18.053**	**18.053**
Pnt/om	**51.737 k**	Sway	**No**	**No**
Mny/om	**3.422 k-ft**			
Mnz/om	**3.422 k-ft**	L Comp Flange	**0 ft**	
Vny/om	**16.168 k**	Torque Length	**NC**	
Vnz/om	**16.168 k**	Tau_b	**1**	
Cb	**1**			

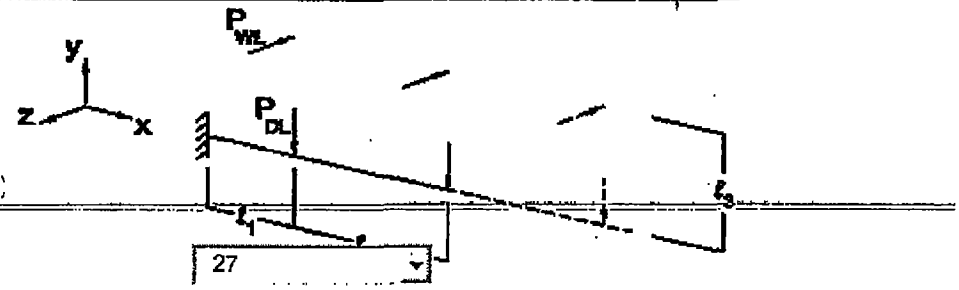
24/44

JA 1722 SN 1278

GRC ENGINEERING, INC.
5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL
GRC NO. 12-017-206
JOB 10-2207
DATE 4/5/2012 ENG. FV

Torsion Pipe



Pr	-3.629	kips	(axial)	
Mrx	161.062	ft-kips	(torsion)	
Mry	770.982	ft-kips	(WL)	
Mrz	1179.073	ft-kips	(DL)	
Mres	1408.768	ft-kips		
Vres	54.50437	kips		
IC Gov	0.973002			

LC 14
Member Tor1
Section 1

Pipe Properties

E (ksi)	Fy (ksi)	Diameter D (in)	Ins. Diam. D_i (in)	Wall thickness t (in)	t_{eff} (in)	D/t	rad. of gyr. r (in)	Weight (lb/ft)
29000	56	36	35.07	0.5	0.465	77.42	12.56	189.75

Area A (in^2)	I (ksi)	S (in^3)	Z (in^3)	J (in^4)	C (in^3)	Bending Compact?	Axial Compact?
51.91	8195.1	455.3	587.2	16390.1	910.6	Noncompact	Slender

λ_p bending 36.25 λ_r bending 160.54
λ_p axial - λ_r axial 56.96

Axial Checks

r_{eff} from above (in)	Length above (for r) (ft)	Length of this pipe (ft)	Total Length (ft)	r_{eff} (in)	K	Kl/r	Fe (ksi)
12.56	0	28.83	28.83	12.564546	2.1	57.8227019	85.605365

Ω_c 1.67

Flexural buckling Limit State Use Q

Q=Qa 0.920848

F_{cr} -56 ksi Ft -33.532934 ksi P_n/Ω_c = -1740.727 kips

Flexure

Ω_b 1.67 D/t max 233.035714

Applicable Limit States: Yielding, Local Buckling

Yielding "Fb" = 43.24922 ksi (= Fy/Ωb*Z/C) M_n/Ω_b = 1450.9664 ft-kips

Local Buckling "Fb" = 38.243263

Torsion and Shear

Shear yielding and shear buckling

Ω_v 1.67

F_{cr}/Ω_v = "Fv" = 20.11976048 $V_c = V_n/\Omega_v$ 522.2181 kips

Torsion

Ω_T 1.67

F_{cr}/Ω_T = "Fv_T" = 20.11976048 $T_c = T_n/\Omega_T$ 1526.693 ft-kips

Identity Checks

H2

Pr/Pc 0.002085 Use H2-1 Axial Tension

H3:

Tr/Tc 0.10549729 Need Not consider Torsion Effects, use H1 only

IC = 1.01704624

IC = 0.973002

USE 36" diam x 0.5" thick, Fy = 56 ksi

JA 1723 SN 1279

26/44

Member Section Forces (By Combination)

	LC	Member Label	Sec	Axial[k]	y Shear[k]	z Shear[k]	Torque[k-ft]	y-y Moment[k-...	z-z Moment[k-...
1	1	Tor1	1	-3.612	41.381	22.99	99.157	-549.437	994.232
2			2	0	0	0	0	0	0
3	2	Tor1	1	-3.612	41.38	-22.991	-218.502	549.368	994.44
4			2	0	0	0	0	0	0
5	3	Tor1	1	-3.629	41.381	22.946	100.355	-771.105	993.689
6			2	0	0	0	0	0	0
7	4	Tor1	1	-3.629	41.38	22.967	98.045	-326.582	995.093
8			2	0	0	0	0	0	0
9	5	Tor1	1	-3.629	41.38	-22.948	-220.054	771.051	994.03
10			2	0	0	0	0	0	0
11	6	Tor1	1	-3.629	41.38	-22.966	-217.005	326.437	995.169
12			2	0	0	0	0	0	0
13	7	Tor1	1	10.595	41.514	0	-58.027	103	903.502
14			2	0	0	0	0	0	0
15	8	Tor1	1	-10.595	41.289	0	-60.508	-.162	1038.026
16			2	0	0	0	0	0	0
17	9	Tor1	1	-9.878	47.497	0	-68.261	-.186	1179.59
18			2	0	0	0	0	0	0
19	10	Tor1	1	-3.612	49.439	22.99	159.534	-549.297	1179.746
20			2	0	0	0	0	0	0
21	11	Tor1	1	-3.612	49.438	-22.991	-159.546	549.345	1179.708
22			2	0	0	0	0	0	0
23	12	Tor1	1	-3.629	49.439	22.946	161.048	-770.92	1179.111
24			2	0	0	0	0	0	0
25	13	Tor1	1	-3.629	49.438	22.967	158.1	-326.476	1180.679
26			2	0	0	0	0	0	0
27	14	Tor1	1	-3.629	49.438	-22.948	-161.062	770.982	1179.073
28			2	0	0	0	0	0	0
29	15	Tor1	1	-3.629	49.438	-22.966	-158.099	326.466	1180.677
30			2	0	0	0	0	0	0
31	16	Tor1	1	10.595	49.6	0	0	-.004	1089.88
32			2	0	0	0	0	0	0
33	17	Tor1	1	-10.595	49.333	0	0	-.006	1222.947
34			2	0	0	0	0	0	0
35	18	Tor1	1	-9.878	56.749	0	.001	-.009	1392.724
36			2	0	0	0	0	0	0
37	19	Tor1	1	-3.612	36.775	22.99	126.269	-549.418	929.751
38			2	0	0	0	0	0	0
39	20	Tor1	1	-3.612	36.775	-22.991	-190.819	549.397	929.89
40			2	0	0	0	0	0	0
41	21	Tor1	1	-3.629	36.775	22.946	127.519	-771.082	929.277
42			2	0	0	0	0	0	0
43	22	Tor1	1	-3.629	36.774	22.967	125.103	-326.556	930.548
44			2	0	0	0	0	0	0
45	23	Tor1	1	-3.629	36.774	-22.948	-192.343	771.086	929.495
46			2	0	0	0	0	0	0
47	24	Tor1	1	-3.629	36.774	-22.966	-189.342	326.471	930.607
48			2	0	0	0	0	0	0

(24

GRC ENGINEERING, INC.
5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL
GRC NO. 12-017-206
JOB 10-2207
DATE 4/5/2012 ENG. FV

Extended End Plate Moment Connection per AISC Design Guide 16

Upright-to-Upper-Spreader Connection

Upright

Size W8X18 ASIF .1

Vertical load on Conn.	2.069757	kips	V_{nom}	(Shear into beam)			LC	6
Tension on Conn.	0.226909	kips	T_{nom}	M_{add}	0.076676	ft-kips	Member	CW2
Moment into spreader	8.101	ft-kips	$M_{nom-RISA}$	M_{nom}	8.177676	ft-kips	Sec	1

b_{fc}	5.25 in	Flange width	k	0.63 in		
d_c	8.14 in	Depth	k1	0.5625 in		
t_{fc}	0.33 in	Flange thickness	t_{wc}	0.23 in		

Upper Spreader

Size W8X15

b_{fb}	4.01 in	Flange width	t_{fb}	0.315 in	Flange thickness
d	8.11 in	Depth	t_{wb}	0.245 in	Web thickness

Plate Properties

b_p	5 in	(Plate width)	t_p	0.5 in	
d_p	14 in	(Plate length)	$D_{req'd}$	1.61	Sixteenths of an inch of weld req'd
w	0.25 in	(Weld size)		OK	

Bolts

Number	8	First bolt	2.375	in "A"	$F_{t,nom}$	90	ksi
Grade	A325	Spacing	3	in "B"	Tightening	Fully Tightened	
diameter	0.5 inch "C"	gage	2.75	in "Gage"	Tb	12	kips
As	0.196 in^2				Pt	17.67146	kips
fv	1.32 ksi		F_f	12.59 kips			
Ft	43.9133 ksi		Tbolt =	3.15 kips			
ft	16.02895 ksi	OK	IC =	0.365			

Design Checks

F_{yc}, F_{yb}	50 ksi	F_{uc}, F_{ub}	65 ksi	w'	1.9375 in		
F_{yp}	36 ksi	F_{up}	58 ksi				
p_{ext}	2.945 in	d_e	1.63 in	s	0.67 in		
$p_{f,o}$ =	1.32 in	a_o	1.625 in	$Q_{max,o}$	2.5103294 kips	F'o	7.100921 kips
$p_{f,i}$ =	1.365 in	a_i	3.60 in	$Q_{max,i}$	1.1392907 kips	F'i	6.866825 kips

End Plate Yield

$p_{f,i}$ (alt)=	0.67 in	h_i	6.43 in	h_o	9.43 in
Y=	70.60	d_i	6.2725 in	d_o	9.2725 in

ϕMn =	47.66 ft-kips	Mu = 12.26651 ft-kips	OK

Bolt Rupture with Prying Action

ϕMn=Max(30.5349493 ft-kips, 26.9814464 ft-kips, 26.8710029 ft-kips, 23.3175 ft-kips) = ϕMn = 30.53495 ft-kips

Mu = 12.26651 ft-kips	OK	

Bolt Rupture without Prying Action

ϕMn = 34.34 ft-kips	Mu = 12.26651 ft-kips	OK

Check Uprights with (or without) Prying Action

Without Prying action:

b	1.26 in	b'	1.01 in	ρ	0.6733333	p	3.0 in
a	1.25 in	a'	1.5 in	d'	0.625 in		
t_{min}	0.329 in	Flange OK - No Prying Action					

With Prying Action:

δ	0.792	B	8.62 kips	β	2.5835997
α'	1				
t_{min}	0.246 in	Flange OK without Stiffeners	(Still need to check for Compression below)		

Check Uprights with Stiffeners - Model as stiffened extended end plate connection

t_f'	0.375 in (Stiffener thickness)			s 1.899836 in	set $d_{e,eff}$ = s
b_f'	5.25 in (Use stiffeners extending to end of upright flange)			h	8.125 in
d_e'	1.89983552 in	$p_{f,i} = p_{f,o}$=	1.125 in	p_{ext}	3.0248355 in
h_i	6.625 in	h_o	9.625 in	Y	89.4679
d_i	6.4375 in	d_o	9.4375 in		

Thin End Plate procedure

$t_{p,req'd}$ 0.191 in — No Stiffeners Required from above

Check Web Yielding

Rn	51.3475 kips	Rc	34.23167 kips	OK

Web Crippling

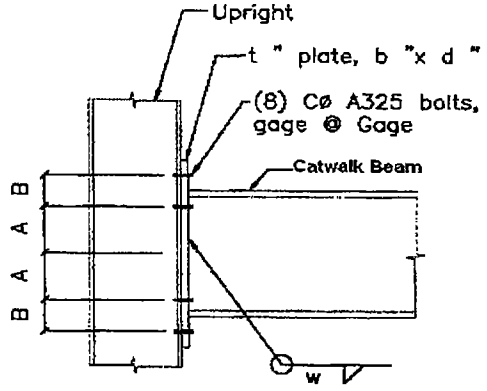
Rn	78.2545308 kips	Rc	39.12727 kips	OK

Web Compression Buckling

Rn	51.1081679 kips	Rc	29.03873 kips	OK

Web Panel Zone Shear (Assumes Pr < 0.4 Pc)

Rn	56.166 kips	Rc	33.63234 kips	OK



See Previous Page for Definitions of Nomenclature in Sketch

29/44

Member Section Forces (By Combination)

	LC	Member Label	Sec	Axial[k]	y Shear[k]	z Shear[k]	Torque[k-ft]	y-y Moment[k-...	z-z Moment[k-...
1	1	CW6	1	.647	.527	0	0	-.01	3.639
2			2	.647	.25	0	0	-.01	-3.143
3	1	CW5	1	.081	.572	-.001	-.002	-.001	2.91
4			2	.081	.334	-.001	-.002	-.017	-3.865
5	1	CW2	1	.376	1.115	-.012	.003	.015	3.674
6			2	.376	.997	-.012	.003	-.071	-4.2
7	1	CW1	1	.799	1.443	-.016	.018	.011	3.75
8			2	.799	1.364	-.016	.018	-.07	-3.206
9	2	CW6	1	.631	-.421	-.001	0	0	-4.63
10			2	.631	.697	-.001	0	-.021	5.128
11	2	CW5	1	.068	-.501	0	0	-.008	-5.114
12			2	.068	.739	0	0	-.01	4.161
13	2	CW2	1	.364	-1.318	.014	-.003	-.078	-5.398
14			2	.364	1.436	.014	-.003	.022	4.869
15	2	CW1	1	.786	-1.87	.027	-.015	-.097	-4.461
16			2	.786	1.948	.027	-.015	.039	5.004
17	3	CW6	1	1.334	.84	.002	0	-.038	6.371
18			2	1.334	.563	.002	0	.001	-5.873
19	3	CW5	1	.631	.943	0	-.002	-.024	5.649
20			2	.631	.706	0	-.002	-.012	-6.688
21	3	CW2	1	-.597	.217	-.023	-.004	.044	.366
22			2	-.597	.099	-.023	-.004	-.124	-.813
23	3	CW1	1	-.186	-.469	-.039	-.003	.055	-.927
24			2	.186	.547	-.039	-.003	-.138	1.592
25	4	CW6	1	-.366	.031	-.003	0	.024	-.677
26			2	-.366	-.245	-.003	0	-.03	1.191
27	4	CW5	1	-.885	.109	-.003	0	.025	-.493
28			2	-.885	-.128	-.003	0	.026	.347
29	4	CW2	1	.941	1.832	-.001	.009	-.012	6.324
30			2	.941	1.714	-.001	.009	-.02	-6.901
31	4	CW1	1	1.463	2.657	.002	.03	-.022	6.717
32			2	1.463	2.579	.002	.03	-.011	-6.262
33	5	CW6	1	1.312	-.734	-.004	0	.013	-7.369
34			2	1.312	-1.011	-.004	0	-.048	7.87
35	5	CW5	1	.613	-.874	-.002	.001	-.001	-7.942
36			2	.613	-1.111	-.002	.001	-.033	6.907
37	5	CW2	1	-.604	-.419	.024	.004	-.13	-2.009
38			2	-.604	-.538	.024	.004	.051	1.56
39	5	CW1	1	-.191	.042	.05	.005	-.164	.341
40			2	-.191	-.036	.05	.005	.082	.327
41	6	CW6	1	-.373	.077	.002	0	-.018	-.282
42			2	-.373	-.2	.002	0	.014	.795
43	6	CW5	1	-.893	-.038	.002	0	-.016	-1.59
44			2	-.893	-.275	.002	0	-.015	.749
45	6	CW2	1	.925	-2.035	.003	-.01	-.026	-8.101
46			2	.925	-2.154	.003	-.01	-.005	7.52
47	6	CW1	1	1.445	-3.085	.009	-.027	-.038	-7.518
48			2	1.445	-3.163	.009	-.027	.005	7.97

Gov.

GRC ENGINEERING, INC.
5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL
GRC NO. 12-017-206
JOB 10-2207
DATE 4/5/2012 ENG. FV

Extended End Plate Moment Connection per AISC Design Guide 16

Upright-Spreader Connection

Upright

Size W8X18 ASIF 1

Vertical load on Conn. 4.758545 kips V_{nom} (Shear into beam) LC 14

Tension on Conn. 6.877091 kips T_{nom} M_{add} 3.524509 ft-kips Member SPR5

Moment into spreader 14.855 ft-kips $M_{nom-RISA}$ M_{nom} 18.37951 ft-kips Sec 1

b_{fc}	5.25 in	Flange width	k	0.63 in	
d_c	8.14 in	Depth	k1	0.5625 in	
t_{fc}	0.33 in	Flange thickness	t_{wc}	0.23 in	

Spreader

Size W12X30

b_{fb}	6.52 in	Flange width	t_{fb}	0.44 in	Flange thickness
d	12.3 in	Depth	t_{wb}	0.26 in	Web thickness

Plate Properties

b_p	7 in	(Plate width)	t_p	0.5 in
d_p	18 in	(Plate length)	$D_{req'd}$	1.47 Sixteenths of an inch of weld req'd
w	0.25 in	(Weld size)		OK

Bolts

Number	8	First bolt	4.5	in "A"	$F_{t,nom}$	90 ksi	
Grade	A325	Spacing	3	in "B"	Tightening	Fully Tightened	
diameter	0.5	inch "C"	gage	2.75	in "Gage"	Tb	12 kips
As	0.196	in^2				Pt	17.67146 kips
fv	3.03 ksi			F_f	18.60 kips		
Ft	43.53978 ksi			Tbolt =	4.65 kips		
ft	23.67776 ksi	OK		IC =	0.544		

Design Checks

F_{yc}, F_{yb}	50 ksi	F_{uc}, F_{ub}	65 ksi	w'	2.9375 in		
F_{yp}	36 ksi	F_{up}	58 ksi				
p_{ext}	2.85 in	d_e	1.50 in	s	0.80 in		
$p_{f,o}$ =	1.35 in	a_o	1.5 in	$Q_{max,o}$	4.1782304 kips	F'o	9.693123 kips
$p_{f,i}$ =	1.21 in	a_i	3.60 in	$Q_{max,i}$	1.7183032 kips	F'i	10.81464 kips

End Plate Yield

$p_{f,i}$ (alt)=	0.80 in	h_i	10.65 in	h_o	13.65 in		
Y=	139.45	d_i	10.43 in	d_o	13.43 in		
ϕMn =	94.13 ft-kips	Mu =	27.56926 ft-kips		OK		

Bolt Rupture with Prying Action

ϕMn=Max(43.4506835 ft-kips, 38.296757 ft-kips, 40.9439265 ft-kips, 35.79 ft-kips) = ϕMn = 43.45068 ft-kips

Mu = 27.56926 ft-kips OK

Bolt Rupture without Prying Action

ϕMn = 52.71 ft-kips Mu = 27.56926 ft-kips OK

Check Uprights with (or without) Prying Action

Without Prying action:

b	1.26 in	b'	1.01 in	ρ	0.6733333	p	3.0 in
a	1.25 in	a'	1.5 in	d'	0.625 in		
t_{min}	0.400 in	Need to Check Prying Action					

With Prying Action:

δ	0.792	B	8.55 kips	β	1.2458126
α'	1				
t_{min}	0.299 in	Flange OK without Stiffeners	(Still need to check for Compression below)		

Check Uprights with Stiffeners - Model as stiffened extended end plate connection

t_f'	0.375 in (Stiffener thickness)		s 1.899836 in		set $d_{e,eff}$ = s
b_f'	5.25 in (Use stiffeners extending to end of upright flange)			h	12.375 in
d_e'	1.89983552 in	$p_{f,i} = p_{f,o}$ =	1.125 in	p_{ext}	3.0248355 in
h_i	10.875 in	h_o	13.875 in	Y	136.80854
d_i	10.6875 in	d_o	13.6875 in		

Thin End Plate procedure

$t_{p,req'd}$	0.232 in	No Stiffeners Required from above	

Check Web Yielding

Rn	52.785 kips	Rc	35.19 kips	OK

Web Crippling

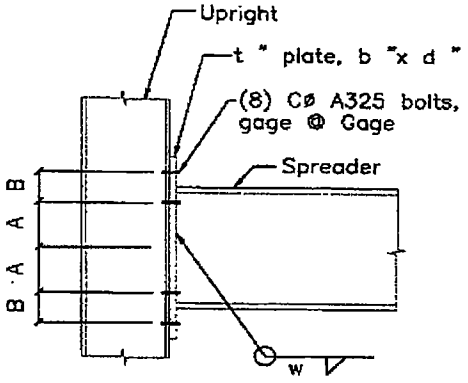
Rn	79.8907837 kips	Rc	39.94539 kips	OK

Web Compression Buckling

Rn	51.1081679 kips	Rc	29.03873 kips	OK

Web Panel Zone Shear (Assumes Pr < 0.4 Pc)

Rn	56.166 kips	Rc	33.63234 kips	OK



See Previous Page for Definitions of Nomenclature in Sketch

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Member Section Forces (By Combination)

	LC	Member Label	Sec	Axial[k]	y Shear[k]	z Shear[k]	Torque[k-ft]	y-y Moment[k-...	z-z Moment[k-...
1	1	SPR5	1	-.126	-3.795	.08	.049	.013	-1.063
2			2	3.633	4.697	.003	-.053	.505	-9.874
3	2	SPR5	1	3.625	-3.071	-.001	.05	.48	-10.742
4			2	-.094	5.396	-.082	-.052	.035	-.155
5	3	SPR5	1	-.756	-4.135	.013	.053	-.085	2.37
6			2	5.521	4.472	.125	-.056	.758	-13.099
7	4	SPR5	1	.705	-3.415	.153	.044	.141	-5.48
8			2	.761	4.927	-.166	-.049	.156	-5.735
9	5	SPR5	1	5.518	-2.829	-.122	.053	.732	-13.959
10			2	-.718	5.738	-.015	-.056	-.064	3.293
11	6	SPR5	1	.75	-3.328	.165	.047	.133	-6.616
12			2	.731	5.014	-.154	-.047	.162	-4.593
13	7	SPR5	1	-2.056	-3.339	.53	.043	.027	-6.757
14			2	-2.038	4.905	-.528	.045	.049	-5.894
15	8	SPR5	1	3.619	-3.467	-.181	.051	.362	-5.463
16			2	3.64	5.102	.18	-.054	.385	-4.563
17	9	SPR5	1	.936	-4.061	-.097	.062	-.049	-7.325
18			2	.963	5.895	.094	-.064	-.026	-6.304
19	10	SPR5	1	.141	-5.565	.123	.058	.056	-1.886
20			2	3.868	4.852	.032	.06	.533	-11.631
21	11	SPR5	1	3.868	-4.851	.032	.06	.533	-11.631
22			2	.141	-5.565	-.123	-.058	.056	-1.884
23	12	SPR5	1	-.484	-5.905	.057	.062	-.044	1.564
24			2	5.756	4.614	.093	-.063	.787	-14.854
25	13	SPR5	1	.966	-5.186	.193	.053	.185	-6.321
26			2	1	-5.101	.204	-.056	.182	-7.504
27	14	SPR5	1	5.756	-4.614	-.093	.063	.788	-14.855
28			2	-.484	5.905	.057	-.062	-.044	1.566
29	15	SPR5	1	1	-5.102	.204	.056	.182	-7.503
30			2	.966	5.186	-.193	-.053	.185	-6.321
31	16	SPR5	1	-1.8	-5.089	.565	.052	.069	-7.626
32			2	-1.8	5.089	-.565	-.052	.069	-7.627
33	17	SPR5	1	3.873	-5.246	-.143	.061	.411	-6.301
34			2	3.873	5.246	.143	-.061	.411	-6.302
35	18	SPR5	1	1.231	-6.089	-.049	.072	-.001	-8.305
36			2	1.231	6.089	.049	-.072	-.001	-8.306
37	19	SPR5	1	-.154	-3.742	.071	.047	.008	-.818
38			2	3.606	4.456	.009	-.05	.497	-9.896
39	20	SPR5	1	3.601	-3.022	-.01	.048	.474	-10.505
40			2	.122	5.158	.075	-.049	.028	-.178
41	21	SPR5	1	-.784	-4.082	.003	.051	-.089	2.617
42			2	5.495	4.229	.131	-.053	.75	-13.122
43	22	SPR5	1	.678	-3.361	.144	.042	.135	-5.238
44			2	.734	4.687	-.159	-.047	.148	-5.753
45	23	SPR5	1	5.494	-2.783	-.13	.051	.726	-13.725
46			2	.747	5.501	.007	-.053	-.07	3.267
47	24	SPR5	1	.724	-3.272	.156	.045	.127	-6.373
48			2	.703	4.776	-.147	-.044	.155	-4.613

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GRC ENGINEERING, INC.
5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL
GRC NO. 12-017-206
JOB 10-2207
DATE 4/5/2012 ENG. FV

Spreader/Moonbeam

Size W12X30 ASIF 1

Shear load on Conn.	8.49 kips		Load Case	Member	Section
Tension on Connection	0.95 kips	0	6	MOON11	1
Torsion on Conn.	6.45 ft-kips				
Strong Axis Moment	45.69 ft-kips				
Weak-Axis Moment	5.13 ft-kips				

b_f	6.52 in	Flange width	k	0.74 in	
d	12.3 in	Depth	k1	0.75 in	
t_f	0.44 in	Flange thickness	g	3.5 in	
t_w	0.26 in		Fy	50 ksi	
			Fu	65 ksi	

Bolts - Loading without prying action

Number	8		First bolt	14.5	in "A"	$F_{t,nom}$	90 ksi
Grade	A325		Spacing	3	in "B"	Tightening	Fully Tightened
diameter	0.75	inch "C"	gage	3.5	in GAGE	Tb	28 kips
I_{st}	2066	in^2	I_{wk}	24.5	in^2	Pt	39.76 kips
As	0.442	in^2				F_{nv}	48 ksi
fv	3.88 ksi		Vbolt =	1.71 kips			
Ft	45.00 ksi		Tbolt =	9.16 kips			
ft	20.73 ksi	OK	IC =	0.461			

Check Flange without stiffeners

Without Prying action:

b	1.62 in	b'	1.245 in	ρ	0.660477	p	3.0 in
a	1.51 in	a'	1.885 in	d'	0.875 in		
t_{min}	0.624 in	Need to Check Prying Action					

With Prying Action:

δ	0.708	B	19.88 kips	β	1.772395
α'	1				
t_{min}	0.477 in	Need Stiffeners			

Check Uprights with Stiffeners - Model as stiffened extended end plate connection

t_f'	0.375 in (Stiffener thickness)			s	2.388514 in
b_f'	6.52 in (Use stiffeners extending to end of spreader/moonbeam)			h	32.375 in
d_e'	2 in	$p_{f,i} = p_{f,o}$ =	1.3125 in	p_{ext}	3.701014 in
h_i	30.6875 in	h_o	33.6875 in	Y	353.4345
d_i	30.5 in	d_o	33.5 in		

Find Effective Moment in "Plate"

$T_{bolt,Mstrong}$	4.64 k/bolt	$T_{bolt,rem}$	4.51 k/bolt
M_{add}	48.15 ft-kips	M_{nom}	93.85 ft-kips
$M_{u,eff}$	140.77 ft-kips		

Thin End Plate procedure

$t_{p,req'd}$ 0.326 in — OK, Use Stiffeners — IC = 0.548607

Check Bolt Rupture with Prying Action

w'	2.4475 in	a_i	0.658461	F_i'	11.55943 kips
		a_o	0.658461	F_o'	11.55943 kips

$Q_{max,i}$	8.350179 kips				
$Q_{max,o}$	8.350179 kips				

ϕM_q=max(251.28 ft-kips, 238.28 ft-kips, 237.00 ft-kips, 224.00 ft-kips

ϕM_q = 251.28 ft-kips

OK for Bolt Rupture with Prying Action

M_u = 140.77 ft-kips

JA 1731 SN 1287

GRC ENGINEERING, INC.
5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL
GRC NO. 12-017-206
JOB 10-2207
DATE 4/5/2012 ENG. FV

Spreader/Moonbeam

Size W12X30

ASIF 1

			Load Case	Member	Section
Shear load on Conn.	8.49	kips			
Tension on Connection	0.95	kips	0	6 MOON11	1
Torsion on Conn.	6.45	ft-kips			
Strong Axis Moment	45.69	ft-kips			
Weak Axis Moment	5.13	ft-kips			

b_f	6.52	in	Flange width	k	0.74 in
d	12.3	in	Depth	k1	0.75 in
t_f	0.44	in	Flange thickness	g	3.5 in
t_w	0.26	in		Fy	50 ksi
				Fu	65 ksi

Bolts - Loading without prying action

Number	8		First bolt	14.5	in "A"	$F_{t,nom}$	90 ksi
Grade	A325		Spacing	3	in "B"	Tightening	Fully Tightened
diameter	0.75	inch "C"	gage	3.5	in GAGE	Tb	28 kips
I_{st}	2066	in^4	I_{wk}	24.5	in^4	Pt	39.76 kips
As	0.442	in^2				F_{nv}	48 ksi
fv	3.88	ksi		Vbolt =	1.71 kips		
Ft	45.00	ksi		Tbolt =	9.16 kips		
ft	20.73	ksi	OK	IC =	0.461		

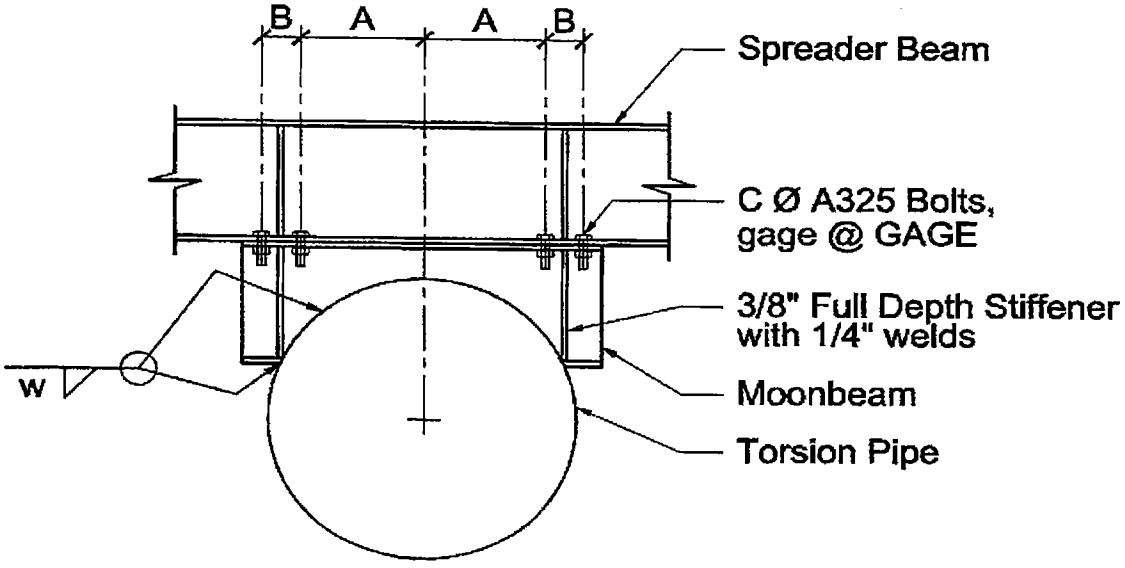
Check Panel Zone Shear - Using "Factored" ASD loads to be consistent with DG 16 checks

Factored "Flange Force" 52.79 kips ("Flange Force" is applied through the stiffeners, based on Mu,eff)

Assume Pr < 0.4*Pc for the spreader (this shape is governed by bending moments, not axial loads)

Rn 95.94 kips ϕ 0.9 ϕRn 86.35 kips

IC 0.611 OK



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Member Section Forces (By Combination)

	LC	Member Label	Sec	Axial[k]	y Shear[k]	z Shear[k]	Torque[k-ft]	y-y Moment[k-...	z-z Moment[k-...
1	1	MOON16	1	1.846	-1.678	4.094	2.144	-12.997	-1.29
2			2	1.846	-1.678	4.094	2.144	-9.926	-.032
3	1	MOON15	1	8.978	.104	3.809	-.131	-4.919	-.024
4			2	8.978	.104	3.809	-.131	-2.062	-.102
5	1	MOON12	1	11.782	.122	4.046	-2.063	-6.173	.031
6			2	11.782	.122	4.046	-2.063	-3.139	-.06
7	1	MOON11	1	-1.142	5.686	3.484	-8.738	-20.25	5.256
8			2	-1.142	5.686	3.484	-8.738	-17.638	.992
9	2	MOON16	1	1.848	-1.678	-4.117	-.999	39.758	-1.29
10			2	1.848	-1.678	-4.117	-.999	36.67	-.032
11	2	MOON15	1	8.976	.101	-3.813	.178	30.832	-.026
12			2	8.976	.101	-3.813	.178	27.972	-.102
13	2	MOON12	1	11.797	.102	-4.07	2.034	20.803	.018
14			2	11.797	.102	-4.07	2.034	17.751	-.059
15	2	MOON11	1	-1.16	5.716	-3.527	8.503	31.71	5.281
16			2	-1.16	5.716	-3.527	8.503	29.065	.993
17	3	MOON16	1	1.667	-1.692	6.809	3.179	-30.401	-1.306
18			2	1.667	-1.692	6.809	3.179	-25.294	-.037
19	3	MOON15	1	9.119	.208	6.345	-.19	-17.707	.047
20			2	9.119	.208	6.345	-.19	-12.948	-.109
21	3	MOON12	1	11.975	-.197	.523	-1.203	12.634	-.176
22			2	11.975	-.197	.523	-1.203	13.026	-.028
23	3	MOON11	1	-1.32	5.745	-.854	-10.493	1.893	5.353
24			2	-1.32	5.745	-.854	-10.493	1.252	1.044
25	4	MOON16	1	2.065	-1.715	-.056	1.313	12.485	-1.312
26			2	2.065	-1.715	-.056	1.313	12.444	-.026
27	4	MOON15	1	8.813	-.086	.091	.111	10.985	-.158
28			2	8.813	-.086	.091	.111	11.053	-.094
29	4	MOON12	1	11.572	.368	6.415	-2.278	-21.097	.19
30			2	11.572	.368	6.415	-2.278	-16.286	-.086
31	4	MOON11	1	-.944	5.555	6.373	-6.742	-34.226	5.126
32			2	-.944	5.555	6.373	-6.742	-29.446	.959
33	5	MOON16	1	1.671	-1.693	-6.833	-2.018	57.335	-1.306
34			2	1.671	-1.693	-6.833	-2.018	52.211	-.037
35	5	MOON15	1	9.116	.204	-6.348	.231	43.766	.044
36			2	9.116	.204	-6.348	.231	39.005	-.109
37	5	MOON12	1	11.998	-.215	-.548	1.185	1.929	-.188
38			2	11.998	-.215	-.548	1.185	1.518	-.027
39	5	MOON11	1	-1.348	5.78	.81	10.266	9.562	5.381
40			2	-1.348	5.78	.81	10.266	10.17	1.046
41	6	MOON16	1	2.065	-1.714	.035	-.196	14.029	-1.312
42			2	2.065	-1.714	.035	-.196	14.055	-.026
43	6	MOON15	1	8.81	-.086	-.097	-.055	14.702	-.158
44			2	8.81	-.086	-.097	-.055	14.629	-.094
45	6	MOON12	1	11.579	.367	-6.436	2.311	35.765	.19
46			2	11.579	.367	-6.436	2.311	30.939	-.086
47	6	MOON11	1	-.952	5.558	-6.418	6.451	45.692	5.128
48			2	-.952	5.558	-6.418	6.451	40.878	.96

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GRC ENGINEERING, INC.

5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL
GRC NO. 12-017-206
JOB 10-2207
DATE 4/5/2012 ENG. FV

Head Plate Connection Design

Design Loads

Mx	204.7 ft-kips	(about torsion pipe CL)
My	771. ft-kips	(torsion)
Mz	1186.9 ft-kips	(perp to TP)
Px	4.2 kips	
Py	kips	(use only for tension)
Pz	23.3 kips	

Total Number of Bolts	20
X axis	
Spacing of Bolts	7
Distance to first bolt	10.5
Z axis (stronger axis, if applicable)	
Spacing of Bolts	7
Distance to first bolt	10.5

28 8

LC	Member	Section
14	M94	2

Ix	8869 in^4	c_x	24.5 in
Iz	8869 in^4	c_z	24.5 in
J = Ix + Iz	17738 in^2	C	34.65 in

Bolt Design Checks

Tx	6.783978 k/bolt		
Tz	39.34435 k/bolt	Ttotal	46.12833 kips
Tadd	0 k/bolt		
Vtotal	19.25684 k/bolt		

Bolt Grade A325 ASIF 1
Bolt diam 1.5
ft 26.10 ksi
fv 10.90 ksi

Fnt 90 Pt 159.0431 Ft 38.06786 ksi IC= 0.686 Therefore OK
Fnv 48 Tb 103
Tightening Fully Tightened

1.5" Ø A325 Bolts OK

Head Plate Design Checks

Fy Plate 36 ksi Fu 58 ksi t_{plate} 1.5 in

Thickness to prevent Prying action:

b	3.125 in	b'	2.375 in	ρ	0.510067114	p	7.0 in
a	3.90625 in	a'	4.65625 in	d'	1.625 in		
tmin	1.341 in	Plate OK - No Prying Action					

1.5" Plate Thickness OK

Gussets

a = 16 b = 11.5 z = 0.372007

T_{gusset} 45.15919 kips $t_{req'd}$ 0.466701

M_{gusset} 386.0337 in-kips $t_{req'd}$ 0.418873

Use 3/4" Gussets 16" x Fit, 4 per corner

t_{gusset} 0.75

ℓ_{weld} **0.3125 Each Side**

JA 1734 SN 1290

GRC ENGINEERING, INC.

5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL
GRC NO. 12-017-206
JOB 10-2207
DATE 4/5/2012 ENG. FV

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Head Plate Connection Design

Gussets

a =	9	b =	6	z =	0.413704	**Use 3/4" Gussets 9" x 6", 3 per corner**
T_{gusset}	35.8559 kips			$t_{req'd}$	0.668754	t_{gusset} 0.75
M_{gusset}	116.5317 in-kips			$t_{req'd}$	0.399629	ℓ_{weld} **0.375 Each Side**

Gussets

a =	11	b =	8.5	z =	0.332976	**Use 3/4" Gussets 11" x 8.5", 3 per corner**
T_{gusset}	29.26647 kips			$t_{req'd}$	0.478723	t_{gusset} 0.75
M_{gusset}	182.9154 in-kips			$t_{req'd}$	0.419916	ℓ_{weld} **0.375 Each Side**

$T_w = 117(3)/92 = 4.33^k/in$
$V_w = 36/18 = 2^k/in$
NET $= 4.77^k/in$
$\theta = \text{ATAN}\frac{4.33}{2} = 65.2°$
FACTOR $= 1+0.5\sin^{1.5}(65.2) = 1.43$

$4.77/.3(70)(.707)(1.43) = 0.22"$

$\frac{5}{16}$ welds OK

$T_w = 182.9(3)/12 = 4.57^k/in$
$V_w = 29.2/22 = 1.33^k/in$
NET $= 4.72^k/in$
$\theta = 75.6°$
FACTOR $= 1.47$

$4.72/.3(70)(.707)(1.47) = 0.22$

$\frac{5}{16}$ welds OK

Member Section Forces (By Combination)

	LC	Member Label	Sec	Axial[k]	y Shear[k]	z Shear[k]	Torque[k-ft]	y-y Moment[k-...	z-z Moment[k-...
1	1	M94	1	41.422	-3.995	23.143	-549.437	99.157	994.232
2			2	41.422	-3.995	23.312	-549.437	142.709	1001.722
3	2	M94	1	41.421	-3.995	-23.188	549.368	-218.502	994.44
4			2	41.421	-3.995	-23.357	549.368	-262.138	1001.93
5	3	M94	1	41.422	-4.012	23.109	-771.105	100.355	993.689
6			2	41.422	-4.012	23.277	-771.105	143.842	1001.211
7	4	M94	1	41.421	-4.012	23.11	-326.582	98.045	995.093
8			2	41.421	-4.012	23.279	-326.582	141.534	1002.616
9	5	M94	1	41.421	-4.011	-23.154	771.051	-220.054	994.03
10			2	41.421	-4.011	-23.323	771.051	-263.627	1001.552
11	6	M94	1	41.421	-4.012	-23.154	326.437	-217.005	995.169
12			2	41.421	-4.012	-23.322	326.437	-260.577	1002.691
13	7	M94	1	41.42	10.305	-.021	.103	-58.027	903.502
14			2	41.42	10.474	-.021	.103	-58.067	884.022
15	8	M94	1	41.422	-11.024	-.022	-.162	-60.508	1038.026
16			2	41.422	-11.193	-.022	-.162	-60.549	1058.854
17	9	M94	1	47.635	-10.426	-.029	-.186	-68.261	1179.59
18			2	47.635	-10.426	-.029	-.186	-68.315	1199.139
19	10	M94	1	49.487	-4.152	23.195	-549.297	159.534	1179.746
20			2	49.487	-4.152	23.364	-549.297	-203.183	1187.53
21	11	M94	1	49.486	-4.152	-23.196	549.345	-159.546	1179.708
22			2	49.486	-4.152	-23.365	549.345	-203.197	1187.492
23	12	M94	1	49.487	-4.168	23.161	-770.92	161.048	1179.111
24			2	49.487	-4.168	23.33	-770.92	204.633	1186.927
25	13	M94	1	49.486	-4.169	23.162	-326.476	158.1	1180.679
26			2	49.486	-4.169	23.33	-326.476	201.686	1188.496
27	14	M94	1	49.486	-4.168	-23.162	770.982	-161.062	1179.073
28			2	49.486	-4.168	-23.331	770.982	-204.65	1186.888
29	15	M94	1	49.486	-4.169	-23.162	326.466	-158.099	1180.677
30			2	49.486	-4.169	-23.33	326.466	-201.685	1188.493
31	16	M94	1	49.484	10.166	0	-.004	0	1089.88
32			2	49.484	10.335	0	-.004	.001	1070.661
33	17	M94	1	49.487	-11.19	0	-.006	0	1222.947
34			2	49.487	-11.359	0	-.006	0	1244.087
35	18	M94	1	56.91	-10.642	0	-.009	.001	1392.724
36			2	56.91	-10.642	0	-.009	.002	1412.677
37	19	M94	1	36.814	-3.931	23.137	-549.418	126.269	929.751
38			2	36.814	-3.931	23.306	-549.418	169.81	937.122
39	20	M94	1	36.813	-3.931	-23.16	549.397	-190.819	929.89
40			2	36.813	-3.931	-23.328	549.397	-234.402	937.26
41	21	M94	1	36.814	-3.948	23.103	-771.082	127.519	929.277
42			2	36.814	-3.948	23.272	-771.082	170.995	936.679
43	22	M94	1	36.813	-3.948	23.104	-326.556	125.103	930.548
44			2	36.813	-3.948	23.273	-326.556	168.582	937.95
45	23	M94	1	36.813	-3.948	-23.126	771.086	-192.343	929.495
46			2	36.813	-3.948	-23.294	771.086	-235.862	936.896
47	24	M94	1	36.813	-3.948	-23.125	326.471	-189.342	930.607
48			2	36.813	-3.948	-23.294	326.471	-232.86	938.009

GRC ENGINEERING, INC.
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Connection Plates

Head Plate Dimensions

B	55.00	in
N	55.00	in
$t_{head\ plate}$	1.500	in

Connection Plate Dimensions

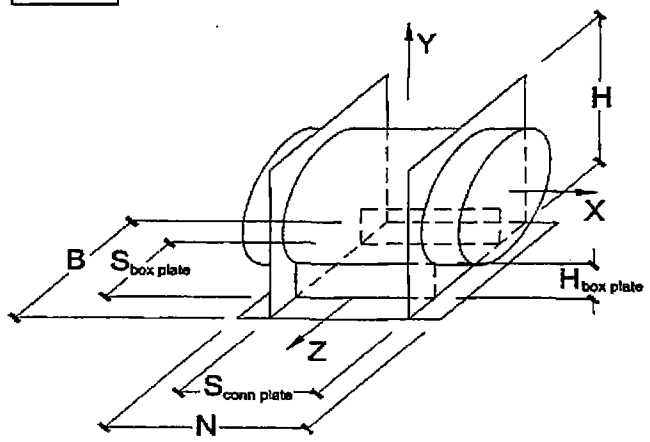
B	55.00	in
H	42.00	in
$t_{conn\ plate}$	1.000	in
$S_{conn\ plate}$	42.00	inches

Pipe Dimensions

D	36.00	in
t_{wall}	0.500	in

Box Plates

Present	yes	
$S_{box\ plate}$	36.00	in
$L_{box\ plate}$	41.00	in
$H_{box\ plate}$	18.00	in



Loads on Connection

Mx	204.65	ft-kips
My	770.98	ft-kips
Mz	1186.89	ft-kips
Px	4.17	kips
Py	56.91	kips
Pz	23.33	kips

Welds from Connection Plate to Torsion Pipe

Assume all torsion pipe torsion is resisted by 1 plate? y (sometimes "yes" for flag orientations)

M_{plate}	204.65 ft-kips	Vw_{tors}	0.603 k/in		
P_{Zplate}	231.95 kips	Vw_{PZ}	1.025 k/in	Net Weld	3.263 k/in
P_{YPlate}	367.57 kips	Vw_{PY}	1.625 k/in	lweld	0.25 in both sides
P_{xPlate}	2.084 kips	Vw_{PX}	0.009 k/in		

Welds from Connection Plate to Head Plate

without considering box plates:

Tw	5.777 k/in	Factor?	y
Vw	2.128 k/in	Factor	1.454509
Net:	6.156 k/in	lweld	0.28508
θ	69.8 °		

considering box plates welded outside only

Tw	3.423 k/in	Factor?	n
Vw	1.373 k/in		
Net:	3.688 k/in	lweld	0.24843
θ	68.1 °		

lwx 141175	cweld 27.50	Sweld 5134
lwz 108507	cweld 21.00	Sweld 5167
Jweld 249682	cweld 34.60	SJ 7216

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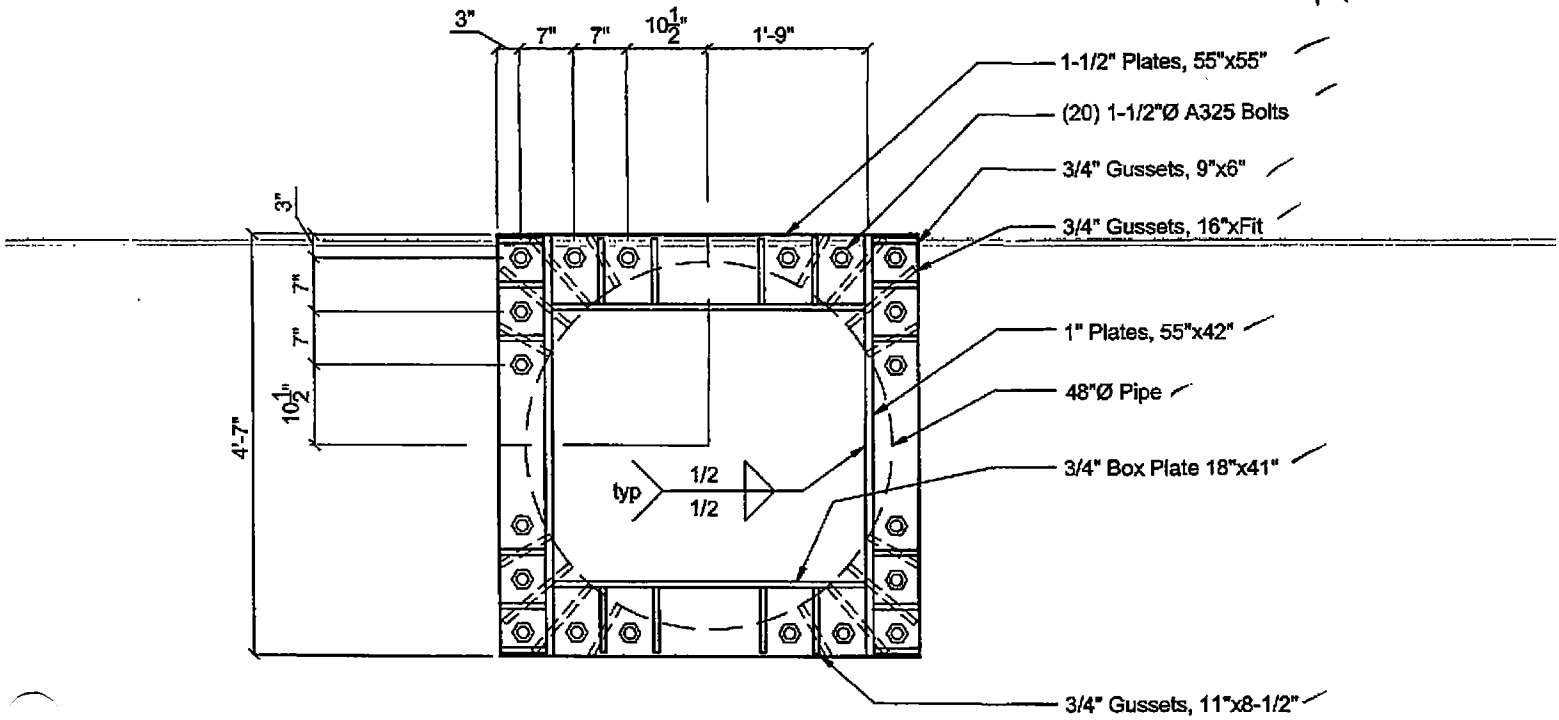

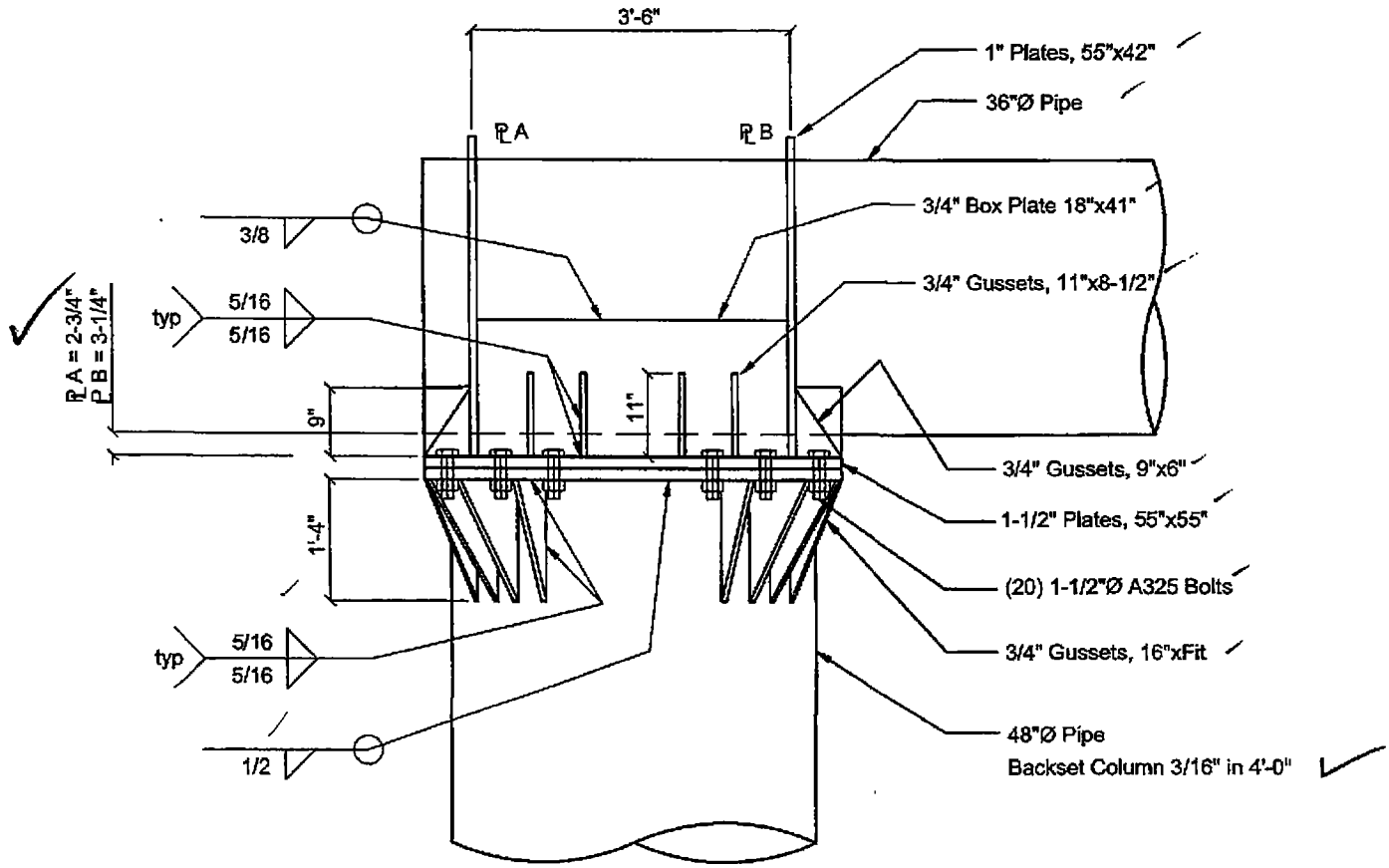

JA 1738 SN 1294

GRC ENGINEERING, INC.

5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL

GRC NO. 12-017-206

JOB 10-2207

DATE 4/5/2012 ENG. FV

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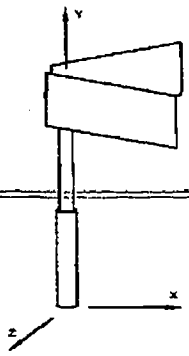
Inputs



Overall Height: 35 ft

Building Code: 2006 International Building Code

Wind: 100 mph Exp. C

Sign Height 14.00 ft **Vee (Wide End)** 22.00 ft **Point** 7.00 ft

Sign Width 48.00 ft **Flag (CL Face to CL Column)** 23.00 ft θ 8.8806

Apron (plus extra) 3.50 ft **Offset (CL torsion to CL Col.)** 0.25 ft

Loads Applied to Sign

Wind Pressure	27.71 psf	Factor	1
ASCE Wind Pressure	27.710979	(uses ASCE 7 Figure 6-20 Note 4.b)	
ω	1	Iw =	0.87

Fundamental Period Determination - per ASCE §15.4.4

$$T = 2\pi\sqrt{\frac{\sum_{i=1}^{n} w_i\delta_i^2}{g\sum_{i=1}^{n} f_i\delta_i}}$$

$\sum_{i=1}^{n} w_i\delta_i^2 =$ 0.417723855 T = 0.74288715 sec

f = 1.34609947 Hz

$\sum_{i=1}^{n} f_i\delta_i =$ 0.077333239

Case A & B Column Loading Conditions

Loads at base of head

Pz	Px	Py (head weight)	Mx	My	Mz
23.0 k	3.6 k	50.4 k	213.8 ft-k	775.9 ft-k	1190.8 ft-k

$h\text{-bar}_{Mx}$	$h\text{-bar}_{Mz}$	$h\text{-bar}_{My}$	r_{equiv}	$length_{equiv}$
9.30 ft	330.47 ft	33.74 ft	0.00 in	0.00 ft

Column 1

Length	Fy	Diam	$Width_{eff}$	$Length_{exp}$	Lb	Total length	t
17.50 ft	42 ksi	48.000 in.	3.20 ft	17.50 ft	17.50 ft	39.5	0.500"

Height Above Grade	Pz	Px	Py (axial load)	Mx	My	Mz	IC
0.00 ft	24.55 k	3.6 k	54.85 k	629.9 ft-k	775.9 ft-k	1253.9 ft-k	0.9328768

$h\text{-bar}_{Mx}$	$h\text{-bar}_{Mz}$	$h\text{-bar}_{My}$	r_{equiv}	$length_{equiv}$	Total wieght this pipe
25.66 ft	347.97 ft	31.60 ft	16.81 in	17.50 ft	10.03 k

B_1	1.0007	B_2	1.0030	$B_2(Mx_{tot})$	631.8 ft-k	$B_2(Mz_{tot})$	1257.7 ft-k

JA 1739 SN 1295

GRC ENGINEERING, INC.

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CLIENT CLEAR CHANNEL

GRC NO. 12-017-206

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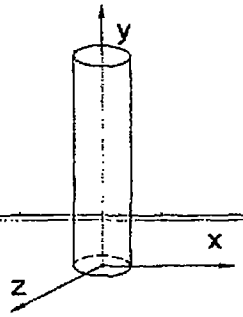
DATE 4/5/2012 ENG. FV

Column Pipe 1

Good to 35 ft overall height

Pr	53.859 kips	(axial)	28		
Mrx	628.671 ft-kips	(WL)			
Mry	770.982 ft-kips	(torsion)			
Mrz	1255.869 ft-kips	(DL)	LC	14	
Mres	1404.434 ft-kips		Member	M95	
Vres	25.15734 kips		Section	2	



IC Gov 0.933

Pipe Properties

E (ksi)	Fy (ksi)	Diameter D (in)	Ins. Diam. D_i (in)	Wall thickness t (in)	t_{eff} (in)	D/t	rad. of gyr. r (in)	Weight (lb/ft)
29000	42	48	47.07	0.5	0.465	103.23	16.81	253.89

Area A (in^2)	I (ksi)	S (in^3)	Z (in^3)	J (in^4)	C (in^3)	Bending Compact?	Axial Compact?
69.44	19615.1	817.3	1050.7	39230.3	1634.6	Noncompact	Slender

λ_p bending 48.33 λ_r bending 214.05

λ_p axial - λ_r axial 75.95

Axial Checks

r_{eff} from above (in)	Length above (for r) (ft)	Length of this pipe (ft)	Total Length (ft)	r_{eff} (in)	K_2	Kl/r	Fe (ksi)
0.00	0	17.5	17.5	16.8068986	2.1	26.2392254	415.71503

Ω_c 1.67

Flexural buckling Limit State Use Q

Q=Qa 0.920848

F_{cr} 37.07427 ksi "Fa" 22.2001595 ksi

P_n/Ω_c = 1541.60255 kips

Flexure

Ω_b 1.67 D/t max 310.714286

Applicable Limit States: Yielding, Local Buckling

Yielding

"Fb" = 32.33277 ksi (= Fy/Ωb*Z/C) M_n/Ω_b = 1953.52337 ft-kips

Local Buckling

"Fb" = 28.68245

Torsion and Shear

Shear yielding and shear buckling

Ω_v 1.67

F_{cr}/Ω_v = "Fv" = 15.08982 $V_c = V_n/\Omega_v$ 523.926539 kips

Torsion

Ω_T 1.67

F_{cr}/Ω_T = "Fv_T" = 15.08982 $T_c = T_n/\Omega_T$ 2055.47907 ft-kips

Identity Checks

H1:

Pr/Pc 0.034937 Use H1-1b

IC = 0.736392 H1-1b

H3

Tr/Tc 0.375086 Use checks Below

IC = 0.932877

USE 48" diam x 0.5" thick, Fy = 42 ksi

JA 1740 SN 1296

Member Section Forces (By Combination)

	LC	Member Label	Sec	Axial[k]	y Shear[k]	z Shear[k]	Torque[k-ft]	y-y Moment[k-...	z-z Moment[k-...
1	1	M95	1	41.422	-3.816	23.268	-549.437	142.709	1001.722
2			2	45.795	-3.816	24.854	-549.437	566.785	1068.987
3	2	M95	1	41.421	-3.816	-23.292	549.368	-262.138	1001.93
4			2	45.794	-3.816	-24.878	549.368	-686.641	1069.192
5	3	M95	1	41.422	-3.833	23.233	-771.105	143.842	1001.211
6			2	45.795	-3.833	24.82	-771.105	567.31	1068.772
7	4	M95	1	41.421	-3.833	23.235	-326.582	141.534	1002.616
8			2	45.794	-3.833	24.821	-326.582	565.032	1070.179
9	5	M95	1	41.421	-3.833	-23.258	771.051	-263.627	1001.552
10			2	45.794	-3.833	-24.844	771.051	-687.527	1069.109
11	6	M95	1	41.421	-3.833	-23.258	326.437	-260.577	1002.691
12			2	45.794	-3.833	-24.844	326.437	-684.475	1070.25
13	7	M95	1	41.42	10.62	-.011	.103	-58.067	884.022
14			2	45.793	12.206	-.011	.103	-58.261	682.874
15	8	M95	1	41.422	-10.998	-.012	-.162	-60.549	1058.854
16			2	45.795	-12.585	-.012	-.162	-60.753	1266.68
17	9	M95	1	47.635	-10.175	-.015	-.186	-68.315	1199.139
18			2	52.664	-10.175	-.015	-.186	-68.579	1378.482
19	10	M95	1	49.487	-3.897	23.298	-549.297	203.183	1187.53
20			2	53.86	-3.897	24.884	-549.297	627.785	1256.22
21	11	M95	1	49.486	-3.897	-23.299	549.345	-203.197	1187.492
22			2	53.859	-3.897	-24.885	549.345	-627.82	1256.179
23	12	M95	1	49.487	-3.914	23.263	-770.92	204.633	1186.927
24			2	53.86	-3.914	24.85	-770.92	628.628	1255.912
25	13	M95	1	49.486	-3.914	23.265	-326.476	201.686	1188.496
26			2	53.859	-3.914	24.851	-326.476	625.707	1257.486
27	14	M95	1	49.486	-3.914	-23.265	770.982	-204.65	1186.668
28			2	53.859	-3.914	-24.851	770.982	-628.671	1255.869
29	15	M95	1	49.486	-3.914	-23.265	326.466	-201.685	1188.493
30			2	53.859	-3.914	-24.851	326.466	-625.704	1257.479
31	16	M95	1	49.484	10.55	0	-.004	.001	1070.661
32			2	53.857	12.136	0	-.004	.004	870.742
33	17	M95	1	49.487	-11.085	0	-.006	0	1244.087
34			2	53.86	-12.671	0	-.006	.001	1453.439
35	18	M95	1	56.91	-10.287	0	-.009	.002	1412.677
36			2	61.939	-10.287	0	-.009	.004	1593.993
37	19	M95	1	36.814	-3.784	23.263	-549.418	169.81	937.122
38			2	41.187	-3.784	24.85	-549.418	593.808	1003.807
39	20	M95	1	36.813	-3.783	-23.276	549.397	-234.402	937.26
40			2	41.186	-3.783	-24.862	549.397	-658.615	1003.942
41	21	M95	1	36.814	-3.8	23.229	-771.082	170.995	936.679
42			2	41.187	-3.8	24.815	-771.082	594.384	1003.661
43	22	M95	1	36.813	-3.8	23.231	-326.556	168.582	937.95
44			2	41.186	-3.8	24.817	-326.556	592	1004.933
45	23	M95	1	36.813	-3.8	-23.242	771.086	-235.862	936.896
46			2	41.186	-3.8	-24.828	771.086	-659.473	1003.873
47	24	M95	1	36.813	-3.8	-23.242	326.471	-232.86	938.009
48			2	41.186	-3.8	-24.828	326.471	-656.471	1004.988

GDV

GRC ENGINEERING, INC.

5544 W. 147TH STREET OAK FOREST, ILLINOIS 60452

CLIENT CLEAR CHANNEL

GRC NO. 12-017-206

JOB 10-2207

DATE 4/5/2012 ENG. FV 44/44

Augered Footings

Inputs

Building Code 2006 International Building Code

Augered Foundation Calculations

Inputs	
Moment (ft k)	1404.434
Total Shear (k)	25.15734
Depth (ft)	22.5
Depth of ignore (ft)	0
Dia (ft)	5

WIND INCREASE
1

soil bearing 150 psf/ft

Outputs	
T (ft)	5.582601
S allowable (ksf)	2.25
S Required (ksf)	2.18

2.25

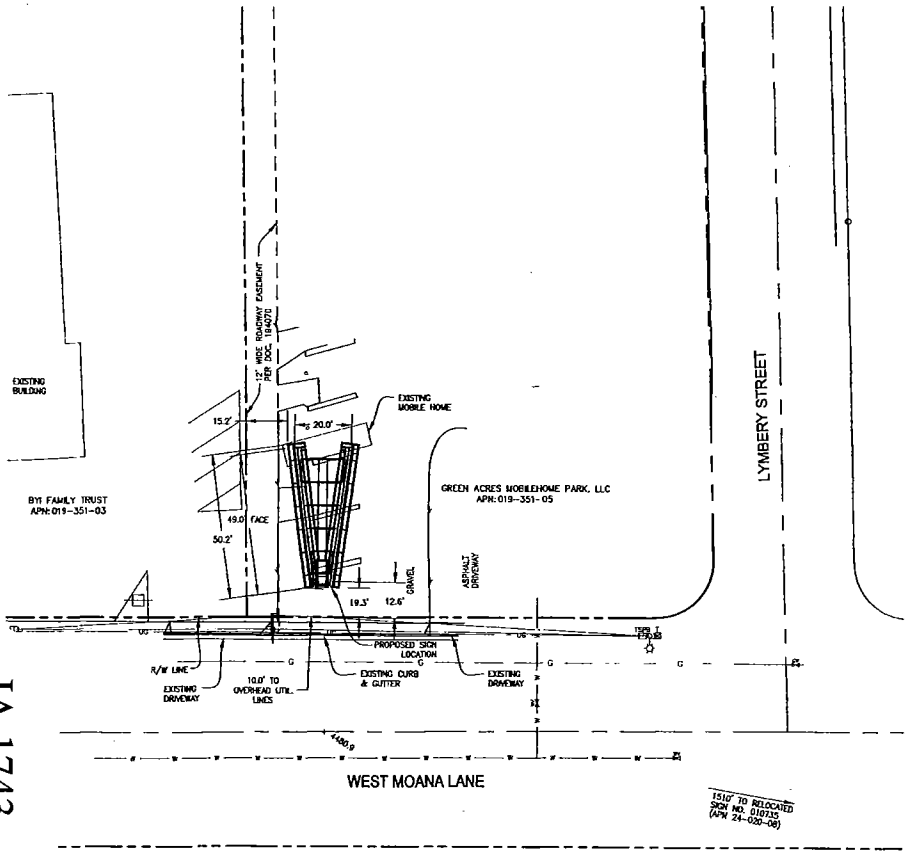
Concrete Vol (cu yd) 16.36246

0.970823 0.970823

USE 5'-0"ϕ x 22'-6" DEEP FDN

JA 1742 SN 1298

SGN 13-00046



JA 1743

SN 1299

PROPERTY INFORMATION:

ASSESSOR'S PARCEL NO. 19-351-05
OWNER: GREEN ACRES MOBILEHOME PARK, LLC
PROPERTY ADDRESS: 501 WEST MOANA LANE, RENO, NEVADA 89502
A PORTION OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 24, TOWNSHIP 19 NORTH, RANGE 19 EAST, MOUNT DIABLO MERIDIAN

ZONE: AC, ARTERIAL COMMERCIAL AND MF-14, MULTI-FAMILY RESIDENTIAL

NO SETBACK REQUIREMENTS ARE LISTED UNDER CITY OF RENO CODE, SECTION 18.16, ARTICLE II, COVERNING OFF-PREMISES ADVERTISING DISPLAYS AT THE TIME OF THIS SURVEY.

RECEIVED
JUL 03 2012
CITY OF RENO
PERMIT PLACE

CERTIFICATE:

I, JAMES R. BEDARD DO HEREBY CERTIFY THAT THIS MAP IS A TRUE AND ACCURATE PLAT OF THE LAND SURVEYED BY ME OR UNDER MY SUPERVISION AND WAS COMPLETED ON DECEMBER 12, 2011.

JAMES R. BEDARD
PROFESSIONAL LAND SURVEYOR 17044

7/6/12

2 SET

UNDERGROUND UTILITY NOTE:

The types, location, sizes, and/or depths of existing underground utilities as shown on this survey were obtained in part from field and office compilation, the latter being a source of varying reliability. A reasonable effort has been made to locate and delineate all known utilities. However, the surveyor can assume no responsibility for the completeness or accuracy of the delineation of such underground utilities nor for the existence of other buried objects or utilities which may be encountered but which are not shown on this drawing.

Stantec Consulting
6980 Sierra Center Parkway, Suite 100
Reno NV U.S.A.
89511
Tel. 775.850.0777
Fax. 775.850.0787
www.stantec.com

Stantec

Consultants

Legend

- GAS VALVE
- WATER VALVE
- TELEPHONE VAULT
- POWER POLE
- STREET LIGHT
- TRAFFIC SIGNAL PULLBOX
- SIGN
- UNDERGROUND GAS
- UNDERGROUND WATER LINE
- UNDERGROUND ELECTRIC OR SIGNAL
- OVERHEAD ELECTRIC
- EDGE OF ASPHALT PAVING

Notes

Revision	By	Appd.	YY.MM.DD

Issued	By	Appd.	YY.MM.DD

File Name:	Dsn.	Chkd.	Dwg.	YY.MM.DD

Permit Seal

Client/Project
CLEARCHANNEL

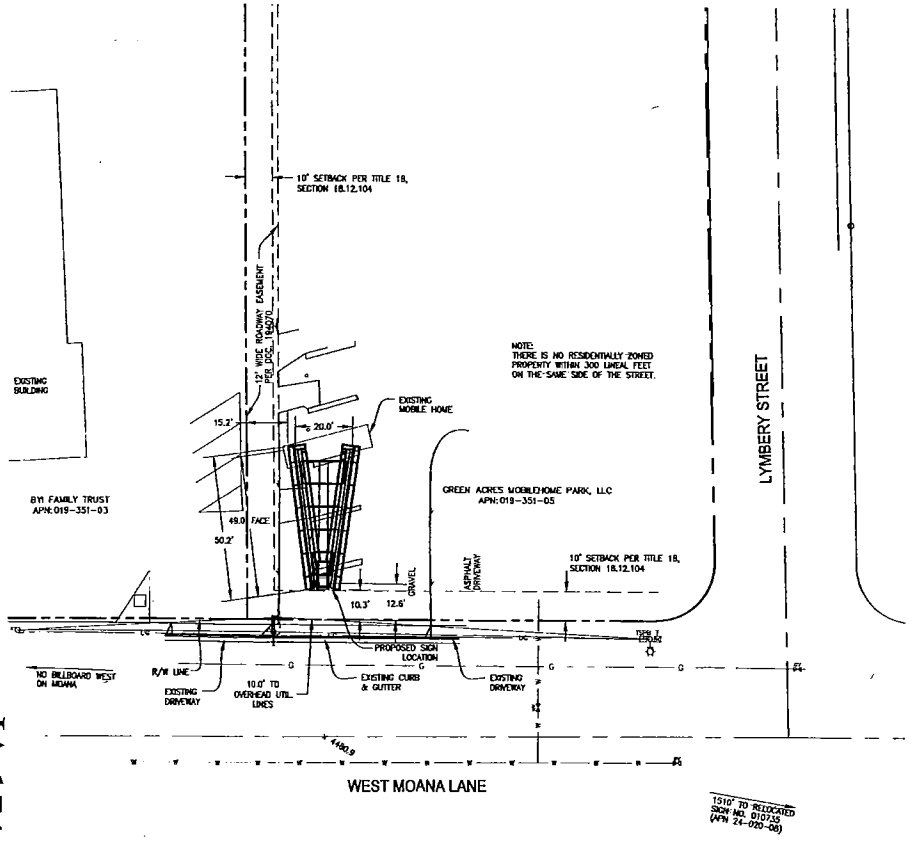
BILLBOARD SITE
APN 19-351-05
Reno NV U.S.A.

OLD

Title
TOPOGRAPHIC SURVEY
GREEN ACRES MOBILEHOME PARK, LLC
501 WEST MOANA LANE

Project No.	Scale	
180401404	1"=20'	
Drawing No.	Sheet	Revision
	1 of 1	0

S6N13-00046



PROPERTY INFORMATION:

ASSESSOR'S PARCEL NO. 19-351-05
OWNER: GREEN ACRES MOBILEHOME PARK, LLC
PROPERTY ADDRESS: 501 WEST MOANA LANE, RENO, NEVADA 89502
A PORTION OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 24, TOWNSHIP 19 NORTH, RANGE 19 EAST, MOUNT DIABLO MERIDIAN

ZONE: AC, ARTERIAL COMMERCIAL AND MF-14, MULTI-FAMILY RESIDENTIAL

10' FRONT, SIDE AND REAR SETBACK REQUIREMENTS ARE LISTED UNDER CITY OF RENO CODE, SECTION TITLE 18, SECTION 18.12.104 FOR ARTERIAL COMMERCIAL (AC ZONING)

CERTIFICATE:

I, JAMES R. BEDARD DO HEREBY CERTIFY THAT THIS MAP IS A TRUE AND ACCURATE PLAT OF THE LAND SURVEYED BY ME OR UNDER MY SUPERVISION AND WAS COMPLETED ON DECEMBER 12, 2011.

JAMES R. BEDARD
PROFESSIONAL LAND SURVEYOR 17044

NEVADA PROFESSIONAL LAND SURVEYOR GERALD D. JUAREZ No. 12140 STATE OF NEVADA 7/27/2012

UNDERGROUND UTILITY NOTE:

The types, location, sizes, and/or depths of existing underground utilities as shown on this survey were obtained in part from field and office compilation, the latter being a source of varying reliability. A reasonable effort has been made to locate and delineate all known utilities. However, the surveyor can assume no responsibility for the completeness or accuracy of the delineation of such underground utilities nor for the existence of other buried objects or utilities which may be encountered but which are not shown on this drawing.

JA 1744 SN 1300

Stantec Consulting
6980 Sierra Center Parkway, Suite 100
Reno NV U.S.A.
89511
tel. 775.850.0777
fax. 775.850.0787
www.stantec.com

Stantec

Consultants

Legend

- GAS VALVE
- WATER VALVE
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- TRAFFIC SIGNAL PULLBOX
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- UNDERGROUND WATER LINE
- UNDERGROUND ELECTRIC OR SIGNAL
- OVERHEAD ELECTRIC
- EDGE OF ASPHALT PAVING

Notes

Revision	By	Appd.	YY.MM.DD
1 COMMENTS ADDRESSED PER CITY OF RENO	JDJ		12.07.26

Issued	By	Appd.	YY.MM.DD

File Name:	Dsn.	Chkd.	Dept.	YY.MM.DD

Permit Seal

Client/Project
CLEARCHANNEL

BILLBOARD SITE
APN 19-351-05
Reno NV U.S.A.

REVISED
JUL 30 2012
CITY OF RENO
Community Development Dept.

Title
TOPOGRAPHIC SURVEY
GREEN ACRES MOBILEHOME PARK, LLC
501 WEST MOANA LANE

Project No.	Scale	
180401404	1"=20'	
Drawing No.	Sheet	Revision
	1 of 1	0

Plan Review Tracking Sheet
City of Reno, Nevada

Case Number: SGN13-00048

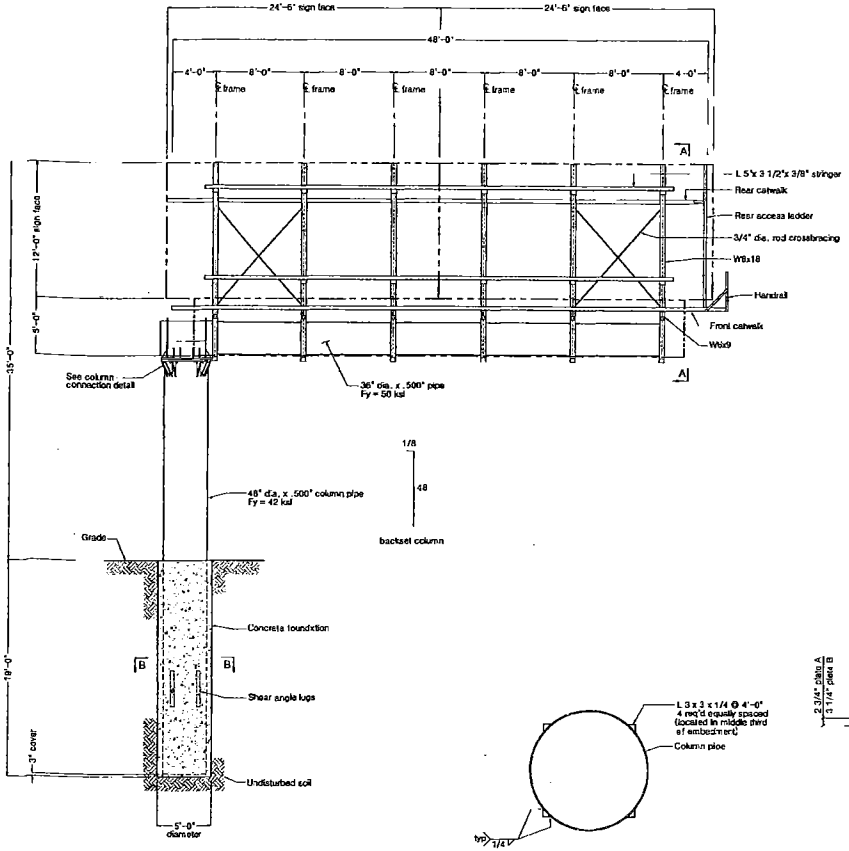
Owner: GREEN ACRES MOBILEHOME PRK LLC
5170 RIDGEVIEW CT STE E
RENO, NV 89519

Tenant: CLEAR CHANNEL BILLBOARD

Job Site: 511 W MOANA LN BB Lot:
Parcel Number: 019-351-05
Application Type: Building/Sign/MA/NA
Type: Group:
Fire Sprinklers: Fire Alarm:
Occupancy Use:
Valuation: $ 150,000.00 Number of Units: 0
Builder Contractor: CLEAR CHANNEL OUTDOOR INC
Accepted By: MCCULLOG Date: 07/03/2013

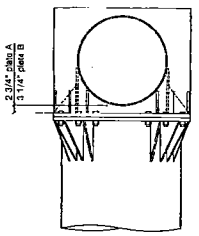
Description of Work to be Done:
BILLBOARD.
RELOCATE MOANA BILLBOARD DOUBLE SIDE W ELECTRICAL
TANKED CC-3 CC-4

Approved Plan Check Review	Date	O.T. Hours
Building	/ /	/
Plumbing	/ /	/
Mechanical	/ /	/
Electrical	/ /	/
Structural	/ /	/
C.P. Planning DGH	08/21/13	/
Fire	/ /	/
C.D. Engineering	/ /	/
Environmental Control	/ /	/
Health	/ /	/
Downtown Redevelopment	/ /	/
Landscaping Review	/ /	/
Outside Plan Review	/ /	/
Urban Forester	/ /	/
Traffic Impact Fee Review	/ /	/
SWF Fee Review	/ /	/
Signs AT	/ 7-2013	/
Permit Technician Approval	/ /	/
Charge Out	/ /	/
Scanning	/ /	/

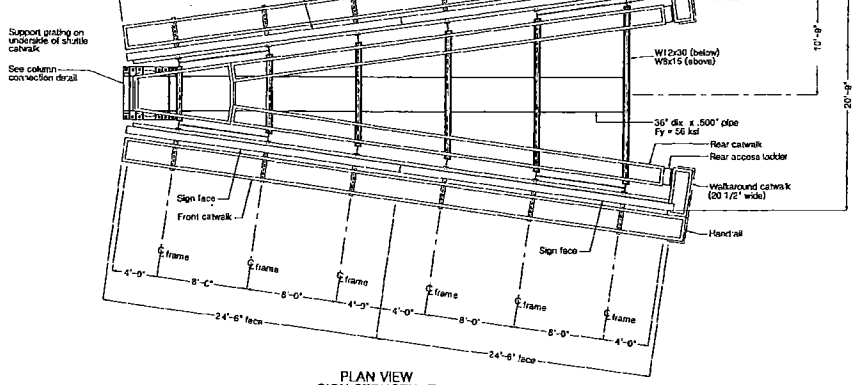


SIGN FACE ELEVATION

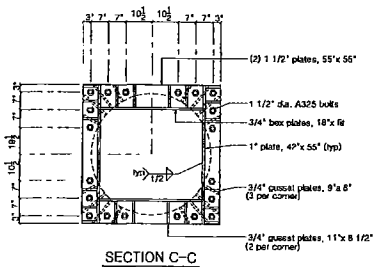
SECTION B-B



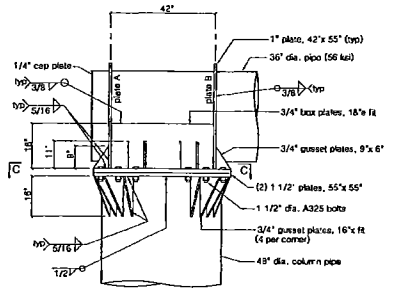
end view



PLAN VIEW
SIGN STRUCTURE



SECTION C-C



COLUMN CONNECTION DETAIL

NOTES
- Structural design conforms to the 2006 International Building Code with Northern Nevada Amendments.
- Design standard is ASCE 7-05.
- Design dead load of the superstructure without faces is 31,900 pounds.
- Superstructure can accommodate digital displays each face.

WIND
- Design winds – 100 mph. (3 sec. gust) Exposure C
- Structure is classified occupancy category I.
- Wind importance factor – Iw = 0.87
- Design wind pressure is 27.7 p.s.f.

SEISMIC
- Seismic load importance factor: Is = 1.0
- Structure is classified occupancy category I.
- Mapped spectral response accelerations:
  Ss = 1.602 g
  S1 = 0.636 g
- Site class : D
- Spectral response coefficients:
  Sds = 1.068
  Sd1 = 0.636
- Seismic design category is D.
- Seismic basic force resisting system:
  Non-buildings structure not similar to building – signs and billboards.
- Design base sheer : 14.43 kips
- Seismic response coefficient: Cs = 0.253
- Response modification factor : R = 3.
- Analysis procedure used: Equivalent lateral force method.

STEEL
- Structural steel pipe shall conform to ASTM A252 or API 5L, with grade that corresponds to the specified yield stress.
- Structural steel plate, rods, angles, and channels shall conform to ASTM A36.
- Structural steel wide flange shapes shall conform to ASTM A992.
- High strength bolts shall conform to ASTM A325 (unless noted otherwise)
- Nuts shall conform to ASTM A563.
- A325 bolts and nuts to be cadmium plated.
- High strength A325 bolts shall be installed according to the latest RCSC specifications.
- Bolt holes shall be the AISC standard size (unless noted otherwise).
- All high strength bolts shall be fully pretensioned (unless noted otherwise).
- Steel shall be primed and painted, except for the embedded portions of members.
- Steel welding shall be in accordance with AWS standards.
- Steel members and elements of the structure shall be fabricated and erected according to the latest AISC specifications and standard practice.

FOUNDATION & CONCRETE
- Concrete shall attain a 28-day compressive strength of f'c = 3000 p.s.i.
- Soil report – Construction Materials Engineers, Inc.
  File No. 1360

GENERAL
- The contractor shall verify all dimensions and conditions in the field and notify the engineer of any discrepancies.
- GRC Engineering, Inc. will not be supervising or monitoring the erection/installation of this structure.

GRC ENGINEERING, INC.
5544 W. 147TH STREET
OAK FOREST, ILLINOIS 60452
708.429.0400

seal

PROFESSIONAL ENGINEER STATE OF NEBRASKA GERALD A CARSTENS CIVIL / STRUCTURAL No. 4548

Drawn/Ck'd	DATE	
GAC	4-21-12	for approval
GAC	4-21-12	revised per soil information

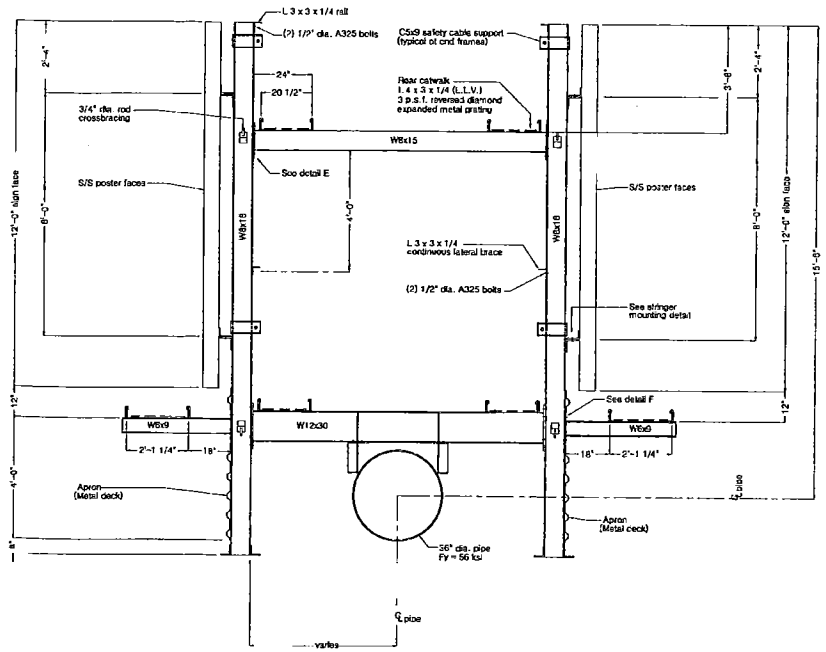
QUANTUM STRUCTURE & DESIGN
515.744.8882

CLEARCHANNEL OUTDOOR

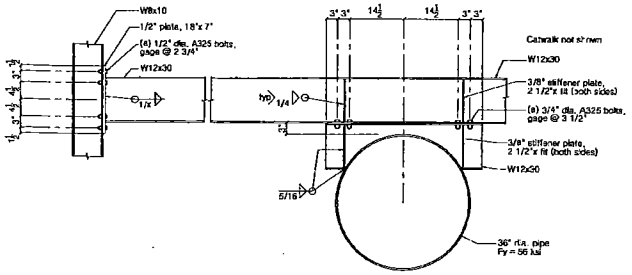
12'-0" x 24'-6" SIDE BY SIDE
MONOPOLE SIGN STRUCTURE
FULL FLAG Y
35'-0" OVERALL HEIGHT
DIGITAL DISPLAY CAPABLE
501 W. MOANA LANE
RENO, NEVADA

CLIENT NO. 10-2207
GRC NO. 12-017-206
DRAWING NO. 10-2207
SHEET 1 of 2

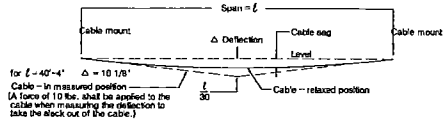
JA 1746 - SN 1302



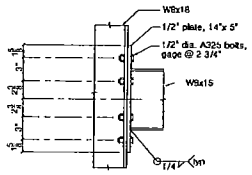
SECTION A-A
FRAME DETAIL



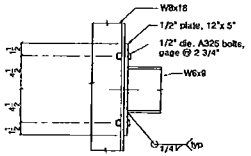
FRAME MOUNTING DETAIL



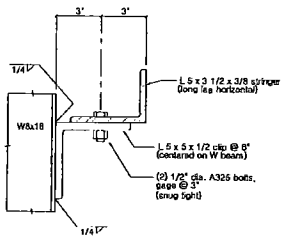
SAFETY CABLE INSTALLATION CRITERIA



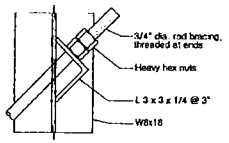
DETAIL E



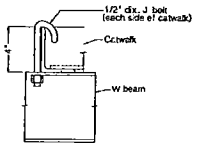
DETAIL F



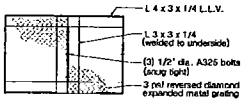
STRINGER MOUNTING DETAIL



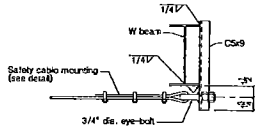
CROSSBRACING DETAIL



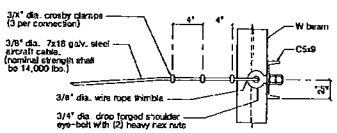
CATWALK MOUNTING DETAIL



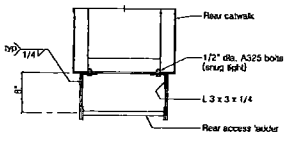
CATWALK SPLICE DETAIL



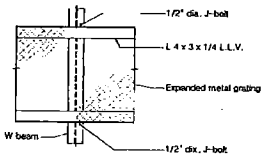
TOP VIEW



SAFETY CABLE MOUNTING



REAR LADDER MOUNTING DETAIL



CATWALK DETAIL

GRC ENGINEERING, INC.
3544 W. 147TH STREET
OAK FOREST, ILLINOIS 60452
708.482.0400

ENGINEER	BY	CHD	etc
SEAL	DATE	REMARKS	
00	4-11-12	for approval	
01	4-24-12	revised per add'l information	

QUANTUM Structure & Design
815.744.8883

CLEAR CHANNEL OUTDOOR

12'-0" x 24'-6" SIDE BY SIDE
MONOPOLE SIGN STRUCTURE
FULL FLAG V
35'-0" OVERALL HEIGHT
DIGITAL DISPLAY CAPABLE
501 W. MOANA LANE
RENO, NEVADA

CLIENT NO. 10-2207
GRC NO. 12-017-206
DRAWING NO. 10-2207
SHEET 2 of 2

JA 1747

SN 1303

SGN13-00046
REV

RECEIVED
JUL 19 2012
CITY OF RENO
PERMIT PLACE

City of Reno
Department of Community Development
Division of Building and Safety

Acceptance or non-acceptance of application for special inspector, tester, or registered professional as being a qualified person pursuant to the International Building Code § 1704.1
(For use only by the City of Reno)

Permit number: SGN 13-00046
Project address: 501 West Moana Lane
Application Number:
Applicant: Construction Materials Engineers, Inc.

APPLICATION ACCEPTED BY BUILDING OFFICIAL

ARVIL SINGLETON
(Print name)

Arvil Singleton 7-20-12
(Signature and date)

APPLICATION NOT ACCEPTED BY BUILDING OFFICIAL

(Print name)

(Signature and date)

City of Reno
Department of Community Development
Building & Safety Division

Application to Perform Special Inspection and Testing Services
(Chapter 17 of the International Building Code)

Permit number: SGN 13-00046
Project address: 501 West Moana Lane
Application number:

1. Name of applicant Construction Materials Engineers, Inc.

2. List the special inspection and testing service duties you will perform based upon tables 1704.3 thru 1708.1.4 of the International Building Code.
1704.3.3 - High Strength Bolting; 1704.3.1 - Welding; 1704.4 - Reinforced Concrete; 1704.7 - Soils

3. List and attach copies of all professional license(s) which demonstrate your competence to perform the special inspection and testing services listed in Question 2:
David P. Jones -ICC special inspection certification for structural steel and bolting, reinforced concrete, structural welding, soils

4. List all disciplinary actions and outcomes.
None

Each person signing below verifies that the above-named applicant meets or exceeds the International Building Code qualifications to perform each listed inspection above and will comply with all local, state, and federal laws. Each person signing below understands and agrees that the project owner or contractor or the engineer of record or architect of record acting as the owner's agent is responsible for funding the special inspection and testing services.

Owner or Contractor	**Project Engineer/Architect**	**Special Inspector/Tester Registered Professional**
Aaron West, Rem	Gerald R. Carstens PE.	Jon A. Del Santo, PE, Project Manager
(Print name and Title)	(Print name and Title)	(Print name and Title)
7/17/12	7/17/12	6-18-12
(Signature and Date)	(Signature and Date)	(Signature and Date)

INDIVIDUAL SPECIAL INSPECTOR QUALIFICATION FORM

Project Name: Moana Lane Widening Billboard Relocation

Project Address: 501 West Moana Lane

Each special inspector shall complete this form and enclose a photocopy of their current special inspection pocket certificate card(s) for each inspection category desired.

STATEMENT OF UNDERSTANDING

I, **David P. Jones**
(print name)

hereby affirm that I have been employed by

Construction Materials Engineers, Inc.
(name of Special Inspection Agency)

6980 Sierra Center Parkway, Suite 90

Reno, NV 89511
(address, city, state and zip code)

to perform special inspection at the above stated project and that I am aware that in performing this inspection, I am acting as an agent for the jurisdiction and responsible to the Building Official. I am aware that my duties include assurance of compliance with the approved (stamped) plans, specifications, the International Building Code and local ordinances and recognized construction practices which do not conflict with any of the aforementioned documents. I will submit written reports to the Building Official as required.

David P. Jones
(Signature)

SPECIAL INSPECTION CATEGORIES

☒	STRUCTURAL MASONRY	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)
☒	STRUCTURAL STEEL AND BOLTING	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)
☒	COMMERCIAL BUILDING INSPECTOR	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)
☒	REINFORCED CONCRETE	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)
☒	PRESTRESSED CONCRETE	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)
☒	STRUCTURAL WELDING	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)
☒	SPRAY-APPLIED FIREPROOFING	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)
☒	SOILS	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)

☐ When I.C.C. does not have a certification exam category for the proposed special inspection(s), or when special consideration for the registered professional. [See Section 6, a, b and c, pages 4 and 5.]

International Code Council
500 New Jersey Avenue, NW
Washington, DC 20001

The individual named hereon is CERTIFIED in the categories shown, having been so certified pursuant to successful completion of the prescribed written examinations.

David P. Jones

Not valid unless signed by certificate holder.
ICC Certification attests to competent knowledge of codes and standards.

David P Jones - 5173018
Commercial Building Inspector - Exp. 03/31/2014
Reinforced Concrete Special Inspector - Exp. 03/31/2014
Spray-applied Fireproofing Special Inspector - Exp. 03/31/2014
Structural Steel and Bolting Special Inspector - Exp. 03/31/2014

INTERNATIONAL CODE COUNCIL

International Code Council
500 New Jersey Avenue, NW
Washington, DC 20001

The individual named hereon is CERTIFIED in the categories shown, having been so certified pursuant to successful completion of the prescribed written examinations.

David P. Jones

Not valid unless signed by certificate holder.
ICC Certification attests to competent knowledge of codes and standards.

David P Jones - 5173018
Prestressed Concrete Special Inspector - Exp. 03/31/2014
Soils Special Inspector - Exp. 03/31/2014
Structural Masonry Special Inspector - Exp. 03/31/2014
Structural Welding Special Inspector - Exp. 03/31/2014

INTERNATIONAL CODE COUNCIL

INTERNATIONAL BUILDING CODE SPECIAL INSPECTION SCHEDULE
To be completed by Project Design Engineer/Architect

REQUIRED		CONTINUOUS	PERIODIC	IBC
	1. Inspection of fabricators			1704.2
	2. Wood construction			1704.6
X	3. Soils		X	1704.7
	4. Pile foundations			1704.8
X	5. Pier foundations		X	1704.9
	6. Sprayed fire-resistant materials			1704.11
	a. Surface Conditions			1704.11.1
	b. Applications (temp)			1704.11.2
	c. Thickness			1704.11.3
	d. Density			1704.11.4
	e. Bond Strength			1704.11.5
	7. Exterior insulation and finish systems			1704.12
	8. Special cases (e.g. epoxy, hardy panels, ICF, SIPS)			1704.13
	Smoke control 909 IBC			1704.14
	a.			
	b.			
	c.			
	d.			
	e.			

SEISMIC RESISTANCE SPECIAL INSPECTIONS REQUIRED

REQUIRED		CONTINUOUS	PERIODIC	IBC
	Structural steel			1707.2
	Structural wood			1707.3
	Cold-formed steel framing			1707.4
	Storage racks& access floors			1707.5
	Architectural components			1707.6
	Mechanical & electrical components			1707.7
	Seismic isolation systems			1707.8

1704.3

REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION

REQ'D	VERIFICATION AND INSPECTION	CONT.	PERIODIC	IBC REF.
	1. Material verification of high-strength bolts, nuts and washers:			
	a. Identification markings to conform to ASTM standards specified in the approved construction documents.		X	
	b. Manufacturers certificate of compliance required.		X	
X	2. Inspection of high-strength bolting:		X	
	a. Slip critical connections			1704.3.3
	3. Material verification of structural steel:			
	a. Identification markings to conform to ASTM standards specified in the approved construction documents.			1708.4
	4. Material verification of weld filler materials:			
	a. Identification markings to conform to AWS specification in the approved construction documents.			
	5. Inspection of welding:			
	a. Structural Steel:			
	1) Complete and partial penetration groove welds	X		1704.3.1
	2) Multi-pass fillet welds.	X		1704.3.1
	3) Single-pass fillet weld v> 5/16"	X		1704.3.1
	4) Single-pass fillet weld v< 5/16"		X	1704.3.1
	5) Floor and deck welds			
	b. Reinforcing steel:			
	1) Verification of weldability of reinforcing steel other than ASTM A 706			1903.5.2
	2) Reinforcing steel-resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special reinforced concrete shear walls and shear reinforcement.			1903.5.2
	3) Shear reinforcement			1903.5.2
	4) Other reinforcing steel.			1903.5.2
	6. Inspection of steel frame joint details for compliance with approved construction documents: Details such as bracing and stiffening. Member locations. Application of joint details at each connection.		X	1704.3.2

TABLE 1704.4
REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

REQ'D	VERIFICATION AND INSPECTION	CONT.	PERIODIC	IBC REF.
	1. Inspection of reinforcing steel, including pre-stressing tendons, and placement.			1903.5 1907.1 1907.7 1914.4
	2. Inspection of reinforcing steel welding in accordance with Table 1704.3, *Item 5B*			1903.5.2
	3. Inspect bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased.			1912.5
X	4. Verifying use of required design mix.		X	1904 1905.2- 1905.4 1914.2 1914.3
	5. At the time fresh concrete is sampled to *fabricate specimens for strength tests*, perform slump and air content tests, and determine the temperature of the concrete.			1905.6 1914.10
	6. Inspection of concrete and shotcrete placement for proper application techniques.	X		1905.9 1905.10 1914.6 1914.7 1914.8
	7. Inspection for maintenance of specified curing temperature and techniques.			1905.11 1905.13 1914.9
	8. Inspection of pre-stressed concrete:			
	9. Application of pre-stressing forces.			
	10. Grouting of bonded pre-stressing tendons in the seismic-force-resisting system.			
	11. Erection of pre-cast concrete members.			
	12. Verification of in-situ concrete strength, prior to stressing of tendons in post tensioned concrete and prior to removal of shores and forms from beams and structural slabs.			1906.2

TABLE 1704.5.1
LEVEL 1 SPECIAL INSPECTIONS

REQ'D	INSPECTION TASK	CONT.	PERIODIC	IBC REF.
	1. As masonry construction begins the following shall be verified to ensure compliance:			
	a. Proportions of site-prepared mortar.			
	b. Construction of mortar joints.			
	c. Location of reinforcement and connectors.			
	d. Pre-stressing technique			
	e. Grade and size of pre-stressing tendons and anchorages.			
	2. The inspection program shall verify:			
	a. Size and location of structural elements.			
	b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.			
	c. Specified size, grade and type of reinforcement.			
	d. Welding of reinforcing bars.			
	e. Protection of masonry during cold weather (temperature below 40° F) or hot weather (temperature above 90°F).			Sec 2104.3 2104.4
	f. Application and measurement of pre-stressing force.			
	3. Prior to grouting, the following shall be verified to ensure compliance:			
	a. Grout space is clean			
	b. Placement of reinforcement and connectors and pre-stressing grout for bonded tendons.			
	c. Proportions of site-prepared grout and pre-stressing grout for bonded tendons.			
	d. Construction of mortar joints.			
	4. Grout placement shall be verified to ensure compliance with code and construction document provisions.			
	a. Grouting of pre-stressing bonded tendons.			
	5. Preparation of any required grout specimens, mortar specimens and/or prisms shall be observed.			Sec. 2105.2.2 2105.3
	6. Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified.			

Statement of Special Inspections

Project: Billboard Structure, GRC Drawing Number 10-2207
Location: 501 W Moana Ln, Reno, NV
Owner: Clear Channel Outdoor
Design Professional in Responsible Charge: Gerald Carstens, GRC Engineering, Inc.

This *Statement of Special Inspections,* which encompasses the structural discipline only, is submitted as a condition for permit issuance in accordance with the Special Inspection and Structural Testing requirements of the Building Code. It includes both a schedule of Special Inspection services applicable to this project and a schedule of Inspection and Testing Agencies which has not been completed at the time of submission. The Owner or Owner's Agent shall complete the Schedule of Inspection and Testing Agencies, and the Building Official shall approve the individuals and firms listed as well as their individual qualifications prior to construction and/or permit issuance. GRC Engineering, Inc. is not responsible for selecting and approving individuals or firms performing the special inspections or tests.

The Special Inspection Coordinator shall keep records of all inspections and shall furnish inspection reports to the Building Official and to GRC Engineering, Inc., the Registered Design Professional in Responsible Charge. Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official and the Registered Design Professional in Responsible Charge. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

Interim reports shall be submitted to the Building Official and the Registered Design Professional in Responsible Charge. Interim report frequency shall be as required by the Building Official.

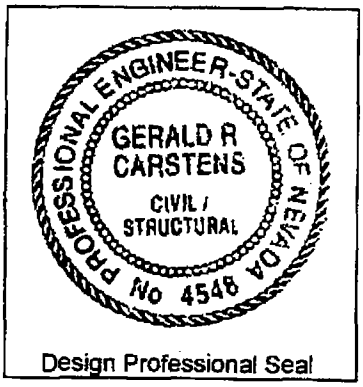
A *Final Report of Special Inspections* documenting completion of all required Special Inspections, testing, and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy.

Job site safety as well as means and methods of construction are solely the responsibility of the Contractor.

Registered Design Professional in Responsible Charge:

Gerald Carstens, GRC Engineering, Inc.

G.R.C. 4-30-12
Signature Date



Design Professional Seal

Owners Authorization:

6/18/12
Signature Date

Building Official's Acceptance:

Signature Date

Modeled after CASE Form 101

Schedule of Inspection and Testing Agencies

This Statement of Special Inspections / Quality Assurance Plan includes the following building systems:

- ☒ Soils and Foundations
- ☒ Cast-in-Place Concrete
- ☐ Precast Concrete
- ☐ Masonry
- ☒ Structural Steel
- ☐ Cold-Formed Steel Framing
- ☐ Wood Construction
- ☐ Special Cases:

Special Inspection Agencies	Firm	Address, Telephone, e-mail
1. **Special Inspection Coordinator**		
2. Inspector/Agency Items Inspecting:		
3. Inspector/Agency Items Inspecting:		
4. Inspector/Agency Items Inspecting:		
5. Inspector/Agency Items Inspecting:		
6. Other Items Inspecting:		

Note: The inspectors and testing agencies shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official, prior to commencing work.

Required Verification and Inspection of Steel Construction

Verification and Inspection	Continuous	Periodic	Referenced Standard	IBC Reference
1. Material verification of high-strength bolts, nuts and washers:				
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	-	X	Applicable ASTM material specifications, AISC 360 Section A3.3	-
b. Manufacturer's certificate of compliance required.	-	X	-	-
2. Inspection of high strength bolting:				
a. Snug-tight connections.	-	X	AISC 360, Section M2.5	1704.3.3
b. Fully-Tensioned connections.	X	X		
3. Material verification of structural steel:				
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	-	-	ASTM A 6 or ASTM A 568	1708.4
b. Manufacturers' certified mill test reports.	-	-	ASTM A 6 or ASTM A 568	
4. Material verification of weld filler materials:				
a. Identification markings to conform to AWS specification in the approved construction documents.	-	-	AISC 360, Section A3.5	-
b. Manufacturer's certificate of compliance required.	-	-	-	-
5. Inspection of welding :				
a. Structural Steel				
1) Complete and partial penetration groove welds.	X	-	AWS D1.1	1704.3.1
2) Multipass fillet welds.	X	-		
3) Single-pass fillet welds > 5/16"	X	-		
4) Single-pass fillet welds ≤ 5/16"	-	X		
6. Inspection of steel frame joint details for compliance with approved construction documents:				
a. Details such as bracing and stiffening.	-	X	-	1704.3.2
b. Member locations.	-	-		
c. Application of joint details at each connection.	-	-		

Required Verification and Inspection of Concrete Construction

Verification and Inspection	Continuous	Periodic	Referenced Standard	IBC Reference
1. Verifying use of required design mix	-	X	ACI 318: Ch. 4, 5.2-5.4	1904.2.2, 1913.2, 1913.3
2. Inspection of concrete and shotcrete placement for proper application techniques.	X	-	ACI 318: 5.9, 5.10	1913.6, 1913.7, 1913.8
3. Inspect formwork for shape, location and dimensions of the concrete member being formed.	-	X	ACI 318: 6.1.1	-

Required Verification and Inspection of Soils

Verification and Inspection Task	Continuous During Task Listed	Periodically During Task Listed
1. Verify material below footings are adequate to achieve the design bearing capacity.		X
2. Verify excavations are extended to proper depth and have reached proper material.		X
3. Perform classification and testing of controlled fill materials.		X
4. Verify use of proper materials, densities and lift thicknesses during placement and compaction of controlled fill.	X	
5. Prior to placement of controlled fill, observe subgrade and verify that site has been prepared properly.		X

Required Verification and Inspection of Pier Foundations

	Verification and Inspection Task	Continuous During Task Listed	Periodically During Task Listed
1.	Observe drilling operations and maintain complete and accurate records for each pier.	X	-
2.	Verify placement locations and plumbness, confirm pier diameters, bell diameters (If applicable), lengths, embedment into bedrock (if applicable) and adequate end bearing strata capacity.	X	-
3.	For concrete piers, perform additional inspections in accordance with section 1704.4	-	-

SGN13-00046

Statement of Special Inspections

OLD

Project: Billboard Structure, GRC Drawing Number 10-2207
Location: 501 W Moana Ln, Reno, NV
Owner: Clear Channel Outdoor
Design Professional in Responsible Charge: Gerald Carstens, GRC Engineering, Inc.

This *Statement of Special Inspections,* which encompasses the structural discipline only, is submitted as a condition for permit issuance in accordance with the Special Inspection and Structural Testing requirements of the Building Code. It includes both a schedule of Special Inspection services applicable to this project and a schedule of Inspection and Testing Agencies which has not been completed at the time of submission. The Owner or Owner's Agent shall complete the Schedule of Inspection and Testing Agencies, and the Building Official shall approve the individuals and firms listed as well as their individual qualifications prior to construction and/or permit issuance. GRC Engineering, Inc. is not responsible for selecting and approving individuals or firms performing the special inspections or tests.

The Special Inspection Coordinator shall keep records of all inspections and shall furnish inspection reports to the Building Official and to GRC Engineering, Inc., the Registered Design Professional in Responsible Charge. Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official and the Registered Design Professional in Responsible Charge. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

Interim reports shall be submitted to the Building Official and the Registered Design Professional in Responsible Charge. Interim report frequency shall be as required by the Building Official.

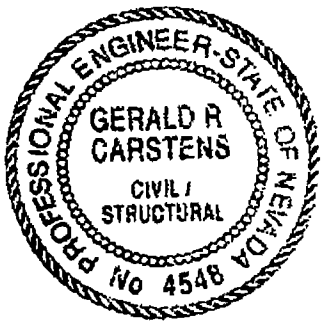
A *Final Report of Special Inspections* documenting completion of all required Special Inspections, testing, and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy.

Job site safety as well as means and methods of construction are solely the responsibility of the Contractor.

Registered Design Professional in Responsible Charge:

Gerald Carstens, GRC Engineering, Inc.

G.R. C—t 4-30-12
Signature Date



Design Professional Seal

Owners Authorization:

[signature] 6/18/12
Signature Date

Building Official's Acceptance:

Signature Date

Modeled after CASE Form 101

Schedule of Inspection and Testing Agencies

This Statement of Special Inspections / Quality Assurance Plan includes the following building systems:

- ☒ Soils and Foundations
- ☒ Cast-in-Place Concrete
- ☐ Precast Concrete
- ☐ Masonry
- ☒ Structural Steel
- ☐ Cold-Formed Steel Framing
- ☐ Wood Construction
- ☐ Special Cases:

Special Inspection Agencies	Firm	Address, Telephone, e-mail
1. **Special Inspection Coordinator**		
2. Inspector/Agency Items Inspecting:		
3. Inspector/Agency Items Inspecting:		
4. Inspector/Agency Items Inspecting:		
5. Inspector/Agency Items Inspecting:		
6. Other Items Inspecting:		

Note: The inspectors and testing agencies shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official, prior to commencing work.

Required Verification and Inspection of Steel Construction

Verification and Inspection	Continuous	Periodic	Referenced Standard	IBC Reference
1. Material verification of high-strength bolts, nuts and washers:				
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	-	X	Applicable ASTM material specifications, AISC 360 Section A3.3	-
b. Manufacturer's certificate of compliance required.	-	X	-	-
2. Inspection of high strength bolting:				
a. Snug-tight connections.	-	X	AISC 360, Section M2.5	1704.3.3
b. Fully-Tensioned connections.	X	X		
3. Material verification of structural steel:				
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	-	-	ASTM A 6 or ASTM A 568	1708.4
b. Manufacturers' certified mill test reports.	-	-	ASTM A 6 or ASTM A 568	
4. Material verification of weld filler materials:				
a. Identification markings to conform to AWS specification in the approved construction documents.	-	-	AISC 360, Section A3.5	-
b. Manufacturer's certificate of compliance required.	-	-	-	-
5. Inspection of welding :				
a. Structural Steel				
1) Complete and partial penetration groove welds.	X	-	AWS D1.1	1704.3.1
2) Multipass filet welds.	X	-		
3) Single-pass fillet welds > 5/16"	X	-		
4) Single-pass fillet welds ≤ 5/16"	-	X		
6. Inspection of steel frame joint details for compliance with approved construction documents:				
a. Details such as bracing and stiffening.	-	X	-	1704.3.2
b. Member locations.	-	-		
c. Application of joint details at each connection.	-	-		

Required Verification and Inspection of Concrete Construction

Verification and Inspection	Continuous	Periodic	Referenced Standard	IBC Reference
1. Verifying use of required design mix	-	X	ACI 318: Ch. 4, 5.2-5.4	1904.2.2, 1913.2, 1913.3
2. Inspection of concrete and shotcrete placement for proper application techniques.	X	-	ACI 318: 5.9, 5.10	1913.6, 1913.7, 1913.8
3. Inspect formwork for shape, location and dimensions of the concrete member being formed.	-	X	ACI 318: 6.1.1	-

Required Verification and Inspection of Soils

Verification and Inspection Task	Continuous During Task Listed	Periodically During Task Listed
1. Verify material below footings are adequate to achieve the design bearing capacity.		X
2. Verify excavations are extended to proper depth and have reached proper material.		X
3. Perform classification and testing of controlled fill materials.		X
4. Verify use of proper materials, densities and lift thicknesses during placement and compaction of controlled fill.	X	
5. Prior to placement of controlled fill, observe subgrade and verify that site has been prepared properly.		X

Required Verification and Inspection of Pier Foundations

	Verification and Inspection Task	Continuous During Task Listed	Periodically During Task Listed
1.	Observe drilling operations and maintain complete and accurate records for each pier.	X	-
2.	Verify placement locations and plumbness, confirm pier diameters, bell diameters (If applicable), lengths, embedment into bedrock (if applicable) and adequate end bearing strata capacity.	X	-
3.	For concrete piers, perform additional inspections in accordance with section 1704.4	-	-

City of Reno
Department of Community Development
Division of Building and Safety

Acceptance or non-acceptance of application for special inspector, tester, or registered professional as being a qualified person pursuant to the International Building Code § 1704.1
(For use only by the City of Reno)

Permit number: _____
Project address: 501 West Moana Lane
Application Number: _____
Applicant: Construction Materials Engineers, Inc.

APPLICATION ACCEPTED BY BUILDING OFFICIAL

_____ _____
(Print name) (Signature and date)

APPLICATION NOT ACCEPTED BY BUILDING OFFICIAL

_____ _____
(Print name) (Signature and date)

City of Reno
Department of Community Development
Building & Safety Division

Application to Perform Special Inspection and Testing Services
(Chapter 17 of the International Building Code)

Permit number: _____
Project address: 501 West Moana Lane
Application number: _____

1. Name of applicant Construction Materials Engineers, Inc.

2. List the special inspection and testing service duties you will perform based upon *tables 1704.3 thru 1708.1.4 of the International Building Code.*
1704.3.3 - High Strength Bolting; 1704.3.1 - Welding; 1704.4 - Reinforced Concrete; 1704.7 - Soils

3. List and attach copies of all professional license(s) which demonstrate your competence to perform the special inspection and testing services listed in Question 2:
David P. Jones -ICC special inspection certification for structural steel and bolting, reinforced concrete, structural welding, soils

4. List *all disciplinary actions and outcomes.*
None

Each person signing below verifies that the above-named applicant meets or exceeds the International Building Code qualifications to perform each listed inspection above and will comply with all local, state, and federal laws. Each person signing below understands and agrees that the project owner or contractor or the engineer of record or architect of record acting as the owner's agent is responsible for funding the special inspection and testing services.

Owner or Contractor	**Project Engineer/Architect**	**Special Inspector/Tester Registered Professional**
_____	_____	Jon A. Del Santo, PE, Project Manager
(Print name and Title)	(Print name and Title)	(Print name and Title)
_____	_____	6-18-12
(Signature and Date)	(Signature and Date)	(Signature and Date)

INDIVIDUAL SPECIAL INSPECTOR QUALIFICATION FORM

Project Name: Moana Lane Widening Billboard Relocation

Project Address: 501 West Moana Lane

Each special inspector shall complete this form and enclose a photocopy of their current special inspection pocket certificate card(s) for each inspection category desired.

STATEMENT OF UNDERSTANDING

I, **David P. Jones**
(print name)

hereby affirm that I have been employed by

Construction Materials Engineers, Inc.
(name of Special Inspection Agency)

6980 Sierra Center Parkway, Suite 90

Reno, NV 89511
(address, city, state and zip code)

to perform special inspection at the above stated project and that I am aware that in performing this inspection, I am acting as an agent for the jurisdiction and responsible to the Building Official. I am aware that my duties include assurance of compliance with the approved (stamped) plans, specifications, the International Building Code and local ordinances and recognized construction practices which do not conflict with any of the aforementioned documents. I will submit written reports to the Building Official as required.

David P. Jones
(Signature)

SPECIAL INSPECTION CATEGORIES

☒	STRUCTURAL MASONRY	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)
☒	STRUCTURAL STEEL AND BOLTING	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)
☒	COMMERCIAL BUILDING INSPECTOR	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)
☒	REINFORCED CONCRETE	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)
☒	PRESTRESSED CONCRETE	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)
☒	STRUCTURAL WELDING	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)
☒	SPRAY-APPLIED FIREPROOFING	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)
☒	SOILS	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)

☐ When I.C.C. does not have a certification exam category for the proposed special inspection(s), or when special consideration for the registered professional. [See Section 6, a, b and c, pages 4 and 5.]

International Code Council
500 New Jersey Avenue, NW
Washington, DC 20001

The individual named hereon is CERTIFIED in the categories shown, having been so certified pursuant to successful completion of the prescribed written examinations.

Not valid unless signed by certificate holder.
ICC Certification attests to competent knowledge of codes and standards.

David P. Jones - 5173018
Commercial Building Inspector - Exp. 03/31/2014
Reinforced Concrete Special Inspector - Exp. 03/31/2014
Spray-applied Fireproofing Special Inspector - Exp. 03/31/2014
Structural Steel and Bolting Special Inspector - Exp. 03/31/2014

International Code Council
500 New Jersey Avenue, NW
Washington, DC 20001

The individual named hereon is CERTIFIED in the categories shown, having been so certified pursuant to successful completion of the prescribed written examinations.

Not valid unless signed by certificate holder.
ICC Certification attests to competent knowledge of codes and standards.

David P Jones - 5173018
Prestressed Concrete Special Inspector - Exp. 03/31/2014
Soils Special Inspector - Exp. 03/31/2014
Structural Masonry Special Inspector - Exp. 03/31/2014
Structural Welding Special Inspector - Exp. 03/31/2014

INTERNATIONAL BUILDING CODE SPECIAL INSPECTION SCHEDULE
To be completed by Project Design Engineer/Architect

REQUIRED		CONTINUOUS	PERIODIC	IBC
	1. Inspection of fabricators			1704.2
	2. Wood construction			1704.6
	3. Soils			1704.7
	4. Pile foundations			1704.8
	5. Pier foundations			1704.9
	6. Sprayed fire-resistant materials			1704.11
	a. Surface Conditions			1704.11.1
	b. Applications (temp)			1704.11.2
	c. Thickness			1704.11.3
	d. Density			1704.11.4
	e. Bond Strength			1704.11.5
	7. Exterior insulation and finish systems			1704.12
	8. Special cases (e.g. epoxy, hardy panels, ICF, SIPS)			1704.13
	Smoke control 909 IBC			1704.14
	a.			
	b.			
	c.			
	d.			
	e.			

SEISMIC RESISTANCE SPECIAL INSPECTIONS REQUIRED

REQUIRED		CONTINUOUS	PERIODIC	IBC
	Structural steel			1707.2
	Structural wood			1707.3
	Cold-formed steel framing			1707.4
	Storage racks& access floors			1707.5
	Architectural components			1707.6
	Mechanical & electrical components			1707.7
	Seismic isolation systems			1707.8

1704.3

REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION

REQ'D	VERIFICATION AND INSPECTION	CONT.	PERIODIC	IBC REF.
	1. Material verification of high-strength bolts, nuts and washers:			
	a. Identification markings to conform to ASTM standards specified in the approved construction documents.		X	
	b. Manufacturers certificate of compliance required.		X	
	2. Inspection of high-strength bolting:			
	a. Slip critical connections	X	X	1704.3.3
	3. Material verification of structural steel:			
	a. Identification markings to conform to ASTM standards specified in the approved construction documents.			1708.4
	4. Material verification of weld filler materials:			
	a. Identification markings to conform to AWS specification in the approved construction documents.			
	5. Inspection of welding:			
	a. Structural Steel:			
	1) Complete and partial penetration groove welds	X		1704.3.1
	2) Multi-pass fillet welds.	X		1704.3.1
	3) Single-pass fillet weld v> 5/16"	X		1704.3.1
	4) Single-pass fillet weld v< 5/16"		X	1704.3.1
	5) Floor and deck welds		X	
	b. Reinforcing steel:			
	1) Verification of weldability of reinforcing steel other than ASTM A 706		X	1903.5.2
	2) Reinforcing steel-resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special reinforced concrete shear walls and shear reinforcement.	X		1903.5.2
	3) Shear reinforcement	X		1903.5.2
	4) Other reinforcing steel.		X	1903.5.2
	6. Inspection of steel frame joint details for compliance with approved construction documents: Details such as bracing and stiffening. Member locations. Application of joint details at each connection.		X	1704.3.2

TABLE 1704.4
REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

REQ'D	VERIFICATION AND INSPECTION	CONT.	PERIODIC	IBC REF.
	1. Inspection of reinforcing steel, including pre-stressing tendons, and placement.		X	1903.5 1907.1 1907.7 1914.4
	2. Inspection of reinforcing steel welding in accordance with Table 1704.3, Item 5B			1903.5.2
	3. Inspect bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased.	X		1912.5
	4. Verifying use of required design mix.		X	1904 1905.2- 1905.4 1914.2 1914.3
	5. At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X		1905.6 1914.10
	6. Inspection of concrete and shotcrete placement for proper application techniques.	X		1905.9 1905.10 1914.6 1914.7 1914.8
	7. Inspection for maintenance of specified curing temperature and techniques.		X	1905.11 1905.13 1914.9
	8. Inspection of pre-stressed concrete:			
	9. Application of pre-stressing forces.	X		
	10. Grouting of bonded pre-stressing tendons in the seismic-force-resisting system.	X		
	11. Erection of pre-cast concrete members.		X	
	12. Verification of in-situ concrete strength, prior to stressing of tendons in post tensioned concrete and prior to removal of shores and forms from beams and structural slabs.		X	1906.2

TABLE 1704.5.1
LEVEL 1 SPECIAL INSPECTIONS

REQ'D	INSPECTION TASK	CONT.	PERIODIC	IBC REF.
	1. As masonry construction begins the following shall be verified to ensure compliance:			
	a. Proportions of site-prepared mortar.		X	
	b. Construction of mortar joints.		X	
	c. Location of reinforcement and connectors.		X	
	d. Pre-stressing technique		X	
	e. Grade and size of pre-stressing tendons and anchorages.		X	
	2. The inspection program shall verify:			
	a. Size and location of structural elements.		X	
	b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.		X	
	c. Specified size, grade and type of reinforcement.		X	
	d. Welding of reinforcing bars.	X		
	e. Protection of masonry during cold weather (temperature below 40° F) or hot weather (temperature above 90°F).		X	Sec 2104.3 2104.4
	f. Application and measurement of pre-stressing force.		X	
	3. Prior to grouting, the following shall be verified to ensure compliance:			
	a. Grout space is clean		X	
	b. Placement of reinforcement and connectors and pre-stressing grout for bonded tendons.		X	
	c. Proportions of site-prepared grout and pre-stressing grout for bonded tendons.		X	
	d. Construction of mortar joints.		X	
	4. Grout placement shall be verified to ensure compliance with code and construction document provisions.	X		
	a. Grouting of pre-stressing bonded tendons.	X		
	5. Preparation of any required grout specimens, mortar specimens and/or prisms shall be observed.	X		Sec. 2105.2.2 2105.3
	6. Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified.		X	

SGN13-00046

Statement of Special Inspections

Project: Billboard Structure, GRC Drawing Number 10-2207
Location: 501 W Moana Ln, Reno, NV
Owner: Clear Channel Outdoor
Design Professional in Responsible Charge: Gerald Carstens, GRC Engineering, Inc.

This *Statement of Special Inspections,* which encompasses the structural discipline only, is submitted as a condition for permit issuance in accordance with the Special Inspection and Structural Testing requirements of the Building Code. It includes both a schedule of Special Inspection services applicable to this project and a schedule of Inspection and Testing Agencies which has not been completed at the time of submission. The Owner or Owner's Agent shall complete the Schedule of Inspection and Testing Agencies, and the Building Official shall approve the individuals and firms listed as well as their individual qualifications prior to construction and/or permit issuance. GRC Engineering, Inc. is not responsible for selecting and approving individuals or firms performing the special inspections or tests.

The Special Inspection Coordinator shall keep records of all inspections and shall furnish inspection reports to the Building Official and to GRC Engineering, Inc., the Registered Design Professional in Responsible Charge. Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official and the Registered Design Professional in Responsible Charge. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

Interim reports shall be submitted to the Building Official and the Registered Design Professional in Responsible Charge. Interim report frequency shall be as required by the Building Official.

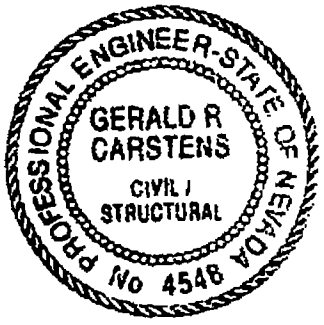
A *Final Report of Special Inspections* documenting completion of all required Special Inspections, testing, and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy.

Job site safety as well as means and methods of construction are solely the responsibility of the Contractor.

Registered Design Professional in Responsible Charge:

Gerald Carstens, GRC Engineering, Inc.

G.R. C—t 4-30-12
Signature Date



Design Professional Seal

Owners Authorization:

[signature] 6/18/12
Signature Date

Building Official's Acceptance:

Signature Date

Modeled after CASE Form 101

Schedule of Inspection and Testing Agencies

This Statement of Special Inspections / Quality Assurance Plan includes the following building systems:

- ☒ Soils and Foundations
- ☒ Cast-in-Place Concrete
- ☐ Precast Concrete
- ☐ Masonry
- ☒ Structural Steel
- ☐ Cold-Formed Steel Framing
- ☐ Wood Construction
- ☐ Special Cases:

Special Inspection Agencies	Firm	Address, Telephone, e-mail
1. **Special Inspection Coordinator**		
2. Inspector/Agency Items Inspecting:		
3. Inspector/Agency Items Inspecting:		
4. Inspector/Agency Items Inspecting:		
5. Inspector/Agency Items Inspecting:		
6. Other Items Inspecting:		

Note: The inspectors and testing agencies shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official, prior to commencing work.

Required Verification and Inspection of Steel Construction

Verification and Inspection	Continuous	Periodic	Referenced Standard	IBC Reference
1. Material verification of high-strength bolts, nuts and washers:				
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	-	X	Applicable ASTM material specifications, AISC 360 Section A3.3	-
b. Manufacturer's certificate of compliance required.	-	X	-	-
2. Inspection of high strength bolting:				
a. Snug-tight connections.	-	X	AISC 360, Section M2.5	1704.3.3
b. Fully-Tensioned connections.	X	X		
3. Material verification of structural steel:				
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	-	-	ASTM A 6 or ASTM A 568	1708.4
b. Manufacturers' certified mill test reports.	-	-	ASTM A 6 or ASTM A 568	
4. Material verification of weld filler materials:				
a. Identification markings to conform to AWS specification in the approved construction documents.	-	-	AISC 360, Section A3.5	-
b. Manufacturer's certificate of compliance required.	-	-	-	-
5. Inspection of welding :				
a. Structural Steel				
1) Complete and partial penetration groove welds.	X	-	AWS D1.1	1704.3.1
2) Multipass filet welds.	X	-		
3) Single-pass fillet welds > 5/16"	X	-		
4) Single-pass fillet welds ≤ 5/16"	-	X		
6. Inspection of steel frame joint details for compliance with approved construction documents:				
a. Details such as bracing and stiffening.	-	X	-	1704.3.2
b. Member locations.	-	-		
c. Application of joint details at each connection.	-	-		

Required Verification and Inspection of Concrete Construction

Verification and Inspection	Continuous	Periodic	Referenced Standard	IBC Reference
1. Verifying use of required design mix	-	X	ACI 318: Ch. 4, 5.2-5.4	1904.2.2, 1913.2, 1913.3
2. Inspection of concrete and shotcrete placement for proper application techniques.	X	-	ACI 318: 5.9, 5.10	1913.6, 1913.7, 1913.8
3. Inspect formwork for shape, location and dimensions of the concrete member being formed.	-	X	ACI 318: 6.1.1	-

Required Verification and Inspection of Soils

Verification and Inspection Task	Continuous During Task Listed	Periodically During Task Listed
1. Verify material below footings are adequate to achieve the design bearing capacity.		X
2. Verify excavations are extended to proper depth and have reached proper material.		X
3. Perform classification and testing of controlled fill materials.		X
4. Verify use of proper materials, densities and lift thicknesses during placement and compaction of controlled fill.	X	
5. Prior to placement of controlled fill, observe subgrade and verify that site has been prepared properly.		X

Required Verification and Inspection of Pier Foundations

	Verification and Inspection Task	Continuous During Task Listed	Periodically During Task Listed
1.	Observe drilling operations and maintain complete and accurate records for each pier.	X	-
2.	Verify placement locations and plumbness, confirm pier diameters, bell diameters (If applicable), lengths, embedment into bedrock (if applicable) and adequate end bearing strata capacity.	X	-
3.	For concrete piers, perform additional inspections in accordance with section 1704.4	-	-

City of Reno
Department of Community Development
Division of Building and Safety

Acceptance or non-acceptance of application for special inspector, *tester, or registered professional as being a qualified* person pursuant to the International Building Code § 1704.1
(For use only by the City of Reno)

Permit number:
Project address: 501 West Moana Lane
Application Number:
Applicant: Construction Materials Engineers, Inc.

APPLICATION ACCEPTED BY BUILDING OFFICIAL

(Print name) (Signature and date)

APPLICATION NOT ACCEPTED BY BUILDING OFFICIAL

(Print name) (Signature and date)

City of Reno
Department of Community Development
Building & Safety Division

Application to Perform Special Inspection and Testing Services
(Chapter 17 of the International Building Code)

Permit number: _____
Project address: 501 West Moana Lane
Application number: _____

1. Name of applicant Construction Materials Engineers, Inc.

2. List the special inspection and testing service duties you will perform based upon tables 1704.3 thru 1708.1.4 of the International Building Code.
1704.3.3 - High Strength Bolting; 1704.3.1 - Welding; 1704.4 - Reinforced Concrete; 1704.7 - Soils

3. List and attach copies of all professional license(s) which demonstrate your competence to perform the special inspection and testing services listed in Question 2:
David P. Jones -ICC special inspection certification for structural steel and bolting, reinforced concrete, structural welding, soils

4. List all disciplinary actions and outcomes.
None

Each person signing below verifies that the above-named applicant meets or exceeds the International Building Code qualifications to perform each listed inspection above and will comply with all local, state, and federal laws. Each person signing below understands and agrees that the project owner or contractor or the engineer of record or architect of record acting as the owner's agent is responsible for funding the special inspection and testing services.

Owner or Contractor	**Project Engineer/Architect**	**Special Inspector/Tester Registered Professional**
		Jon A. Del Santo, PE, Project Manager
(Print name and Title)	(Print name and Title)	(Print name and Title)
		6-18-12
(Signature and Date)	(Signature and Date)	(Signature and Date)

INDIVIDUAL SPECIAL INSPECTOR QUALIFICATION FORM

Project Name: **Moana Lane Widening Billboard Relocation**

Project Address: **501 West Moana Lane**

Each special inspector shall complete this form and enclose a photocopy of their current special inspection pocket certificate card(s) for each inspection category desired.

STATEMENT OF UNDERSTANDING

I, **David P. Jones**
(print name)

hereby affirm that I have been employed by

Construction Materials Engineers, Inc.
(name of Special Inspection Agency)

6980 Sierra Center Parkway, Suite 90

Reno, NV 89511
(address, city, state and zip code)

to perform special inspection at the above stated project and that I am aware that in performing this inspection, I am acting as an agent for the jurisdiction and responsible to the Building Official. I am aware that my duties include assurance of compliance with the approved (stamped) plans, specifications, the International Building Code and local ordinances and recognized construction practices which do not conflict with any of the aforementioned documents. I will submit written reports to the Building Official as required.

David P. Jones
(Signature)

SPECIAL INSPECTION CATEGORIES

☒	STRUCTURAL MASONRY	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)
☒	STRUCTURAL STEEL AND BOLTING	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)
☒	COMMERCIAL BUILDING INSPECTOR	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)
☒	REINFORCED CONCRETE	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)
☒	PRESTRESSED CONCRETE	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)
☒	STRUCTURAL WELDING	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)
☒	SPRAY-APPLIED FIREPROOFING	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)
☒	SOILS	**5173018** I.C.C. (certificate no.)	**March 31, 2014** (expiration date)

☐ When I.C.C. does not have a certification exam category for the proposed special inspection(s), or when special consideration for the registered professional. [See Section 6, a, b and c, pages 4 and 5.]

International Code Council
500 New Jersey Avenue, NW
Washington, DC 20001

The individual named hereon is CERTIFIED in the categories shown, having been so certified pursuant to successful completion of the prescribed written examinations.

David P. Jones

Not valid unless signed by certificate holder.
ICC Certification attests to competent knowledge of codes and standards.

David P Jones - 5173018
Commercial Building Inspector - Exp. 03/31/2014
Reinforced Concrete Special Inspector - Exp. 03/31/2014
Spray-applied Fireproofing Special Inspector - Exp. 03/31/2014
Structural Steel and Bolting Special Inspector - Exp. 03/31/2014

International Code Council
500 New Jersey Avenue, NW
Washington, DC 20001

The individual named hereon is CERTIFIED in the categories shown, having been so certified pursuant to successful completion of the prescribed written examinations.

David P. Jones

Not valid unless signed by certificate holder.
ICC Certification attests to competent knowledge of codes and standards.

David P Jones - 5173018
Prestressed Concrete Special Inspector - Exp. 03/31/2014
Soils Special Inspector - Exp. 03/31/2014
Structural Masonry Special Inspector - Exp. 03/31/2014
Structural Welding Special Inspector - Exp. 03/31/2014

INTERNATIONAL BUILDING CODE SPECIAL INSPECTION SCHEDULE
To be completed by Project Design Engineer/Architect

REQUIRED		CONTINUOUS	PERIODIC	IBC
	1. Inspection of fabricators			1704.2
	2. Wood construction			1704.6
	3. Soils			1704.7
	4. Pile foundations			1704.8
	5. Pier foundations			1704.9
	6. Sprayed fire-resistant materials			1704.11
	a. Surface Conditions			1704.11.1
	b. Applications (temp)			1704.11.2
	c. Thickness			1704.11.3
	d. Density			1704.11.4
	e. Bond Strength			1704.11.5
	7. Exterior insulation and finish systems			1704.12
	8. Special cases (e.g. epoxy, hardy panels, ICF, SIPS)			1704.13
	Smoke control 909 IBC			1704.14
	a.			
	b.			
	c.			
	d.			
	e.			

SEISMIC RESISTANCE SPECIAL INSPECTIONS REQUIRED

REQUIRED		CONTINUOUS	PERIODIC	IBC
	Structural steel			1707.2
	Structural wood			1707.3
	Cold-formed steel framing			1707.4
	Storage racks& access floors			1707.5
	Architectural components			1707.6
	Mechanical & electrical components			1707.7
	Seismic isolation systems			1707.8

1704.3

REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION

REQ'D	VERIFICATION AND INSPECTION	CONT.	PERIODIC	IBC REF.
	1. Material verification of high-strength bolts, nuts and washers:			
	a. Identification markings to conform to ASTM standards specified in the approved construction documents.		X	
	b. Manufacturers certificate of compliance required.		X	
	2. Inspection of high-strength bolting:			
	a. Slip critical connections	X	X	1704.3.3
	3. Material verification of structural steel:			
	a. Identification markings to conform to ASTM standards specified in the approved construction documents.			1708.4
	4. Material verification of weld filler materials:			
	a. Identification markings to conform to AWS specification in the approved construction documents.			
	5. Inspection of welding:			
	a. Structural Steel:			
	1) Complete and partial penetration groove welds	X		1704.3.1
	2) Multi-pass fillet welds.	X		1704.3.1
	3) Single-pass fillet weld v> 5/16"	X		1704.3.1
	4) Single-pass fillet weld v< 5/16"		X	1704.3.1
	5) Floor and deck welds		X	
	b. Reinforcing steel:			
	1) Verification of weldability of reinforcing steel other than ASTM A 706		X	1903.5.2
	2) Reinforcing steel-resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special reinforced concrete shear walls and shear reinforcement.	X		1903.5.2
	3) Shear reinforcement	X		1903.5.2
	4) Other reinforcing steel.		X	1903.5.2
	6. Inspection of steel frame joint details for compliance with approved construction documents: Details such as bracing and stiffening. Member locations. Application of joint details at each connection.		X	1704.3.2

TABLE 1704.4
REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

REQ'D	VERIFICATION AND INSPECTION	CONT.	PERIODIC	IBC REF.
	1. Inspection of reinforcing steel, including pre-stressing tendons, and placement.		X	1903.5 1907.1 1907.7 1914.4
	2. Inspection of reinforcing steel welding in accordance with Table 1704.3, Item 5B			1903.5.2
	3. Inspect bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased.	X		1912.5
	4. Verifying use of required design mix.		X	1904 1905.2- 1905.4 1914.2 1914.3
	5. At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X		1905.6 1914.10
	6. Inspection of concrete and shotcrete placement for proper application techniques.	X		1905.9 1905.10 1914.6 1914.7 1914.8
	7. Inspection for maintenance of specified curing temperature and techniques.		X	1905.11 1905.13 1914.9
	8. Inspection of pre-stressed concrete:			
	9. Application of pre-stressing forces.	X		
	10. Grouting of bonded pre-stressing tendons in the seismic-force-resisting system.	X		
	11. Erection of pre-cast concrete members.		X	
	12. Verification of in-situ concrete strength, prior to stressing of tendons in post tensioned concrete and prior to removal of shores and forms from beams and structural slabs.		X	1906.2

TABLE 1704.5.1
LEVEL 1 SPECIAL INSPECTIONS

REQ'D	INSPECTION TASK	CONT.	PERIODIC	IBC REF.
	1. As masonry construction begins the following shall be verified to ensure compliance:			
	a. Proportions of site-prepared mortar.		X	
	b. Construction of mortar joints.		X	
	c. Location of reinforcement and connectors.		X	
	d. Pre-stressing technique		X	
	e. Grade and size of pre-stressing tendons and anchorages.		X	
	2. The inspection program shall verify:			
	a. Size and location of structural elements.		X	
	b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.		X	
	c. Specified size, grade and type of reinforcement.		X	
	d. Welding of reinforcing bars.	X		
	e. Protection of masonry during cold weather (temperature below 40° F) or hot weather (temperature above 90°F).		X	Sec 2104.3 2104.4
	f. Application and measurement of pre-stressing force.		X	
	3. Prior to grouting, the following shall be verified to ensure compliance:			
	a. Grout space is clean		X	
	b. Placement of reinforcement and connectors and pre-stressing grout for bonded tendons.		X	
	c. Proportions of site-prepared grout and pre-stressing grout for bonded tendons.		X	
	d. Construction of mortar joints.		X	
	4. Grout placement shall be verified to ensure compliance with code and construction document provisions.	X		
	a. Grouting of pre-stressing bonded tendons.	X		
	5. Preparation of any required grout specimens, mortar specimens and/or prisms shall be observed.	X		Sec. 2105.2.2 2105.3
	6. Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified.		X	

Task	Status Date	Record Date/Time	Action By	Status	Comments
Application Accepted	7/3/2012	7/3/2012 13:26	Terry McCullogh	Accepted w/ Review Fee	
Plan Review Routing 1	7/5/2012	7/5/2012 8:18	Julie Steinlage	Activate Review Process	
Sign Review	7/10/2012	7/10/2012 6:30	Arvil Singleton	On Hold	With respect to the proposed project, these notes identify additional information needed to complete the review process: (1) The Special Inspection package submitted is incomplete. Provide a completed Special Inspection package including signatures of the project engineer, owner or contractor, copies of individual inspectors ICC certifications. Also identify the required inspections on the Special Inspection package schedule of inspections. (2) Provide a cover letter addressing the listed comment and how the comment is addressed. Contact Clear Channel Outdoor/Aaron West fax 775-856-7595, ph 775-853-5255, e-mail aaronwest@clearchannel.com
Planning Review	7/10/2012	7/10/2012 14:33	Daniela Monteiro	On Hold	With respect to the proposed project, these notes identify additional information needed to complete the review process: 1) Please provide banked receipt for CC-3 and CC-4. 2) Site plan must demonstrate side property and front property setbacks will be met. 3) Demonstrate that billboard structure is more than 300' away from residential zoned property per RMC 18.16.904(b)(4) 4) Notarized owner consent for billboard installation must be provided per RMC 18.16.904(b)(2) 5) Please demonstrate distance on plans to billboards in all directions.
Miscellaneous Activity (Last)	7/10/2012	7/10/2012 15:12	Julie Steinlage	Plans on Hold	Plans in SIGN hold bin awaiting Plan & Sign rev. 7/10/12. jms
Miscellaneous Activity (Last)	7/19/2012	7/19/2012 8:34	Julie Steinlage	Revisions Received	1704 Special Inspection and Testing Agreement rec'd 7/19/12. Did not receive Planning rev. jms
Sign Review	7/20/2012	7/20/2012 8:45	Arvil Singleton	Approved w/ Revisions	
Miscellaneous Activity (Last)	7/20/2012	7/20/2012 9:12	Julie Steinlage	Plans on Hold	Plans in SIGN hold bin awaiting Plan rev. 7/20/12. jms
Miscellaneous Activity (Last)	7/30/2012	7/30/2012 13:18	Julie Steinlage	Revisions Received	Plan rev. rec'd 7/30/12. jms
Planning Review	8/16/2012	8/16/2012 11:31	Daniela Monteiro	On Hold	With respect to the proposed project, these notes identify additional information needed to complete the review process: Awaiting revision letter.
Miscellaneous Activity (Last)	8/16/2012	8/16/2012 14:03	Julie Steinlage	Plans on Hold	Plans in SIGN hold bin awaiting Plan rev. 8/16/12. jms
Miscellaneous Activity (Last)	8/21/2012	8/21/2012 9:42	Julie Steinlage	Revisions Received	Planning cover letter rec'd 8/21/12. jms
Planning Review	8/21/2012	8/21/2012 14:47	Daniela Monteiro	Approved	All items reviewed and addressed through Claudia Hanson
Miscellaneous Activity (Last)	8/21/2012	8/21/2012 15:07	Julie Steinlage	Plans Approved	IN ROUTE to Charge Out 08/21/12. Please allow some time for staff to process the plans. The applicant will be called with the price as soon as it is available. Thank you.
Final Charge Out	9/4/2012	9/4/2012 7:56	Julie Steinlage	Print Permit	
Final Charge Out	9/4/2012	9/4/2012 12:17	Len Lipnisky	Print Permit	could not locate other
Permit Issued	9/4/2012	9/4/2012 15:49	Holly Miller	issue Permit	
Inspection	7/31/2013	7/31/2013 11:14	Terry McCullogh	inspections Completed	
Permit Closure	7/31/2013	7/31/2013 11:14	Terry McCullogh	Completed	