

C-16

July 14, 2020

HONORABLE MAYOR AND CITY COUNCIL
City of Long Beach
California

RECOMMENDATION:

Request the City Attorney to prepare an Ordinance establishing the weight limit on The Toledo Bridges not to exceed 19 tons. (District 3)

DISCUSSION

City Council approval is requested to set a weight limit not exceed 19 tons on The Toledo East Bridge over Rivo Alto Canal and The Toledo West Bridge over Rivo Alto Canal (Attachment A).

As a result of a recent inspection and load rating analysis (Attachment B) routinely provided by the County of Los Angeles (County), reported bridge ratings have changed for the subject The Toledo Bridges, and weight limits are being imposed as per Code of Federal Regulations Title 23, Part 650 Subpart C – National Bridge Inspection Standards. The recent load rating analysis finds the capacity of the bridges to be less than previously reported due to a more refined analysis of the bridges' structural composition. The maximum allowable loads must now be adjusted based on this analysis. As per Section 35751 (b) of the California Vehicle Code, the City Council is requested to determine and post the weight limit as not to exceed 19 tons based on recommendations from the County for safety considerations, and an Ordinance is required for enforcement purposes.

This matter was reviewed by Deputy City Attorney Amy R. Webber on June 16, 2020 and by Revenue Management Officer Julissa José-Murray on June 26, 2020.

TIMING CONSIDERATIONS

City Council is requested on July 14, 2020, to allow timely implementation of weight limits to preserve the integrity of the bridges.

FISCAL IMPACT

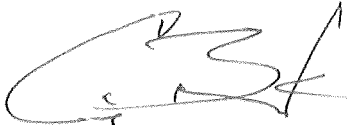
There is no fiscal or local job impact associated with this recommendation. This recommendation has no staffing impact beyond the normal budgeted scope of duties and is consistent with existing City Council priorities.

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SUGGESTED ACTION:

Approve recommendation.

Respectfully submitted



CRAIG A. BECK
DIRECTOR OF PUBLIC WORKS

APPROVED:

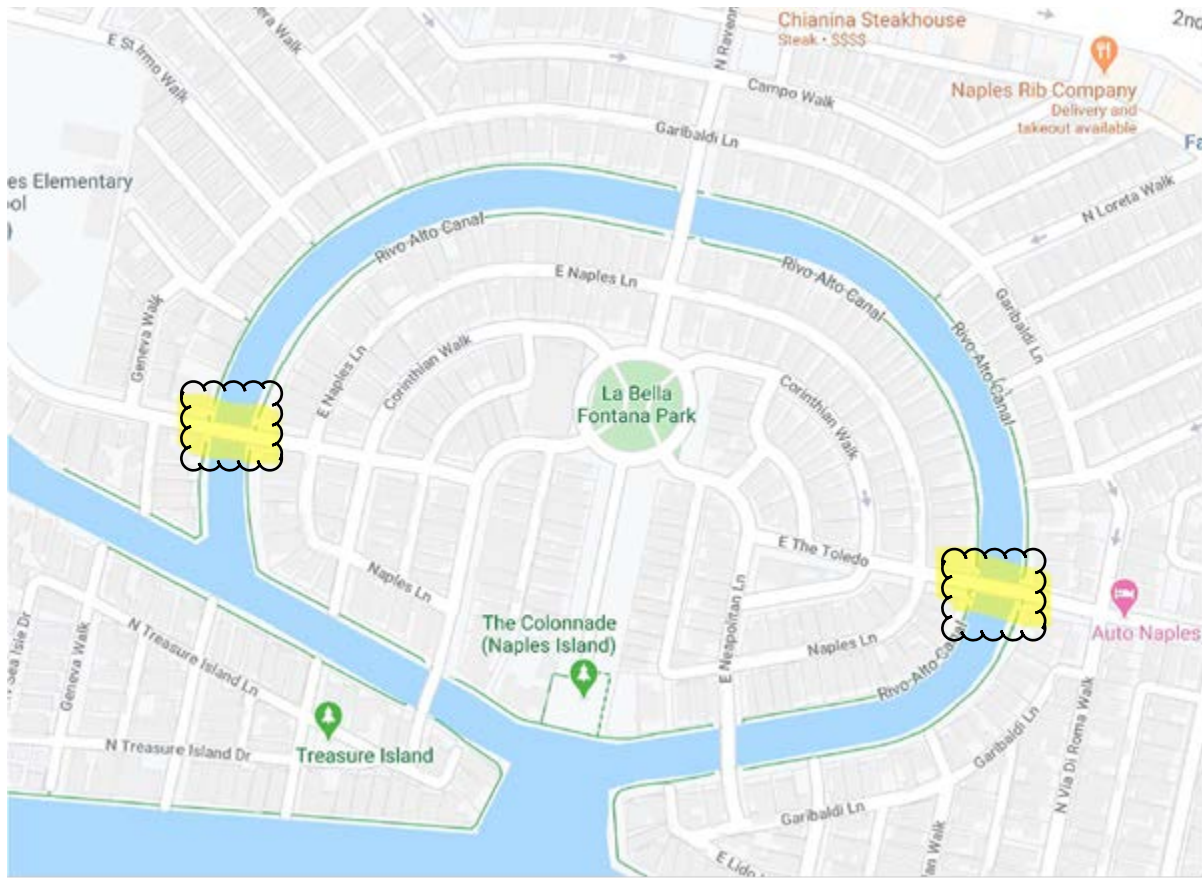


THOMAS B. MODICA
CITY MANAGER

CB:LL:tl:ll

ATTACHMENTS: A – MAP OF BRIDGES
B – LOAD RATING ANALYSIS

Attachment A- Map of Bridges



STRUCTURE RATING DATA SHEET

BRIDGE NO: 53C0022
Facility Carried : THE TOLEDO E
Location : 0.1MI E/O RAVENNA DR
BRIDGE NAME: RIVO ALTO CANAL

LA County Br. No : 2974

Structural Elements Rated :

Single Span RC Tee-Beam Rigid Frame Superstructure

DESIGN LOADING

	<u>Rating</u> <u>Factor</u>	<u>Metric</u> <u>Tons</u>	<u>CRITICAL LOCATION</u>			
			<u>Structure</u>	<u>Control Element</u>	<u>Load Action</u>	<u>Location</u>
HS20 Inventory	0.37	12.0	Superstructure	Interior Girder	Design Flexure - Concrete	Span 1 - 50%
HS20 Operating	0.61	19.8	Superstructure	Interior Girder	Design Flexure - Concrete	Span 1 - 50%

LEGAL RATING

	<u>Rating</u>	<u>Posting</u> <u>US Tons</u>	<u>Structure</u>	<u>Control Element</u>	<u>Load Action</u>	<u>Location</u>
Type 3 (25T)	0.79	19	Superstructure	Interior Girder	Design Flexure - Concrete	Span 1 - 50%
Type 3S2 (36T)	0.82	29	Superstructure	Interior Girder	Design Flexure - Concrete	Span 1 - 50%
Type 3-3 (40T)	0.94	37	Superstructure	Interior Girder	Design Flexure - Concrete	Span 1 - 50%
NRL (40T)	0.53	21	Superstructure	Interior Girder	Design Flexure - Concrete	Span 1 - 50%
SHV - SU4 (27T)	0.68	18	Superstructure	Interior Girder	Design Flexure - Concrete	Span 1 - 50%
SHV - SU5 (31T)	0.63	19	Superstructure	Interior Girder	Design Flexure - Concrete	Span 1 - 50%
SHV - SU6 (34.75T)	0.58	20	Superstructure	Interior Girder	Design Flexure - Concrete	Span 1 - 50%
SHV - SU7 (38.75T)	0.55	21	Superstructure	Interior Girder	Design Flexure - Concrete	Span 1 - 50%
FAST - EV2 (28.75T)	0.66	18	Superstructure	Interior Girder	Design Flexure - Concrete	Span 1 - 50%
FAST - EV3 (43T)	0.44	18	Superstructure	Interior Girder	Design Flexure - Concrete	Span 1 - 50%

PERMIT RATING

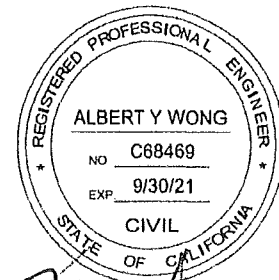
	<u>Rating</u>	<u>Permit</u> <u>Rating</u>	<u>Structure</u>	<u>Control Element</u>	<u>Load Action</u>	<u>Location</u>
P5 Split	0.43	X	Superstructure	Interior Girder	Design Flexure - Concrete	Span 1 - 50%
P7 Split	0.40	X	Superstructure	Interior Girder	Design Flexure - Concrete	Span 1 - 50%
P9 Split	0.40	X	Superstructure	Interior Girder	Design Flexure - Concrete	Span 1 - 50%
P11 Split	0.40	X	Superstructure	Interior Girder	Design Flexure - Concrete	Span 1 - 50%
P13 Split	0.40	X	Superstructure	Interior Girder	Design Flexure - Concrete	Span 1 - 50%

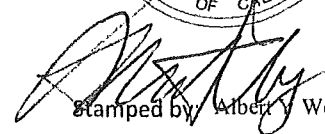
RELEVANT LOAD RATING INFORMATION

Notes:

Load rating calculations were completed by Albert Wong on November 4, 2019. Bridge Inspection Report dated 1/22/2019 was used to verify that the physical conditions assumed in the above referenced load rating calculations.

Overlay Used in Rating: None
 Rating Type: Calculated
 Rating Date: 11/04/2019
 Rating Method: 1 (LF Load Factor) Inventory (65)
 1 (LF Load Factor) Operating (63)
 Control Rating By: Albert Wong
 Rating Checked By: David Chan
 Analysis Tool: BrR 6.7.0 AASHTO
 Rating File Location: LA County Department of Public Works, Design Division
 Summary Prepared By: Albert Y Wong
 Summary Date: 11/21/2019




 Stamped by Albert Y Wong 11/21/19

STRUCTURE RATING DATA SHEET

BRIDGE NO: 53C0023
Facility Carried : THE TOLEDO, W
Location : 0.2MI W/O RAVENNA DR
BRIDGE NAME: RIVO ALTO CANAL

LA County Br. No : 2973

Structural Elements Rated :

Single Span RC Tee-Beam Rigid Frame Superstructure

DESIGN LOADING

	Rating Factor	Metric Tons	CRITICAL LOCATION			
			Structure	Control Element	Load Action	Location
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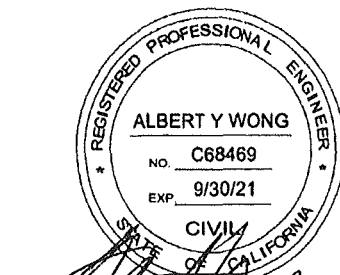
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 Rating Checked By: David Chan
 Analysis Tool: BrR 6.7.0 AASHTO
 Rating File Location: LA County Department of Public Works, Design Division
 Summary Prepared By: Albert Y Wong
 Summary Date: 12/17/2019



Albert Y Wong 12/17/19
 Stamped by: Albert Y Wong