



CUY-90-14.90

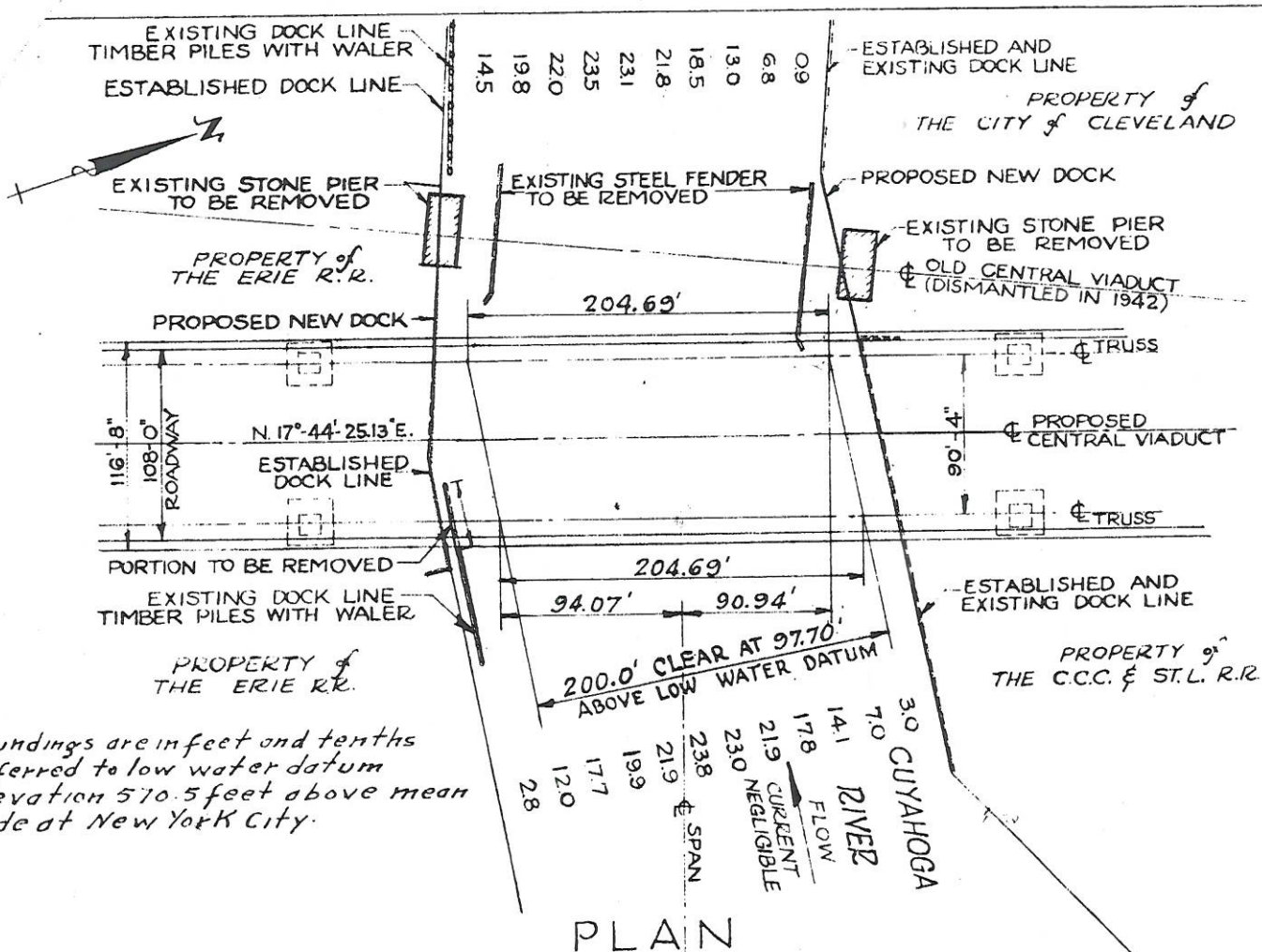
PID 77332/85531

APPENDIX EC-08

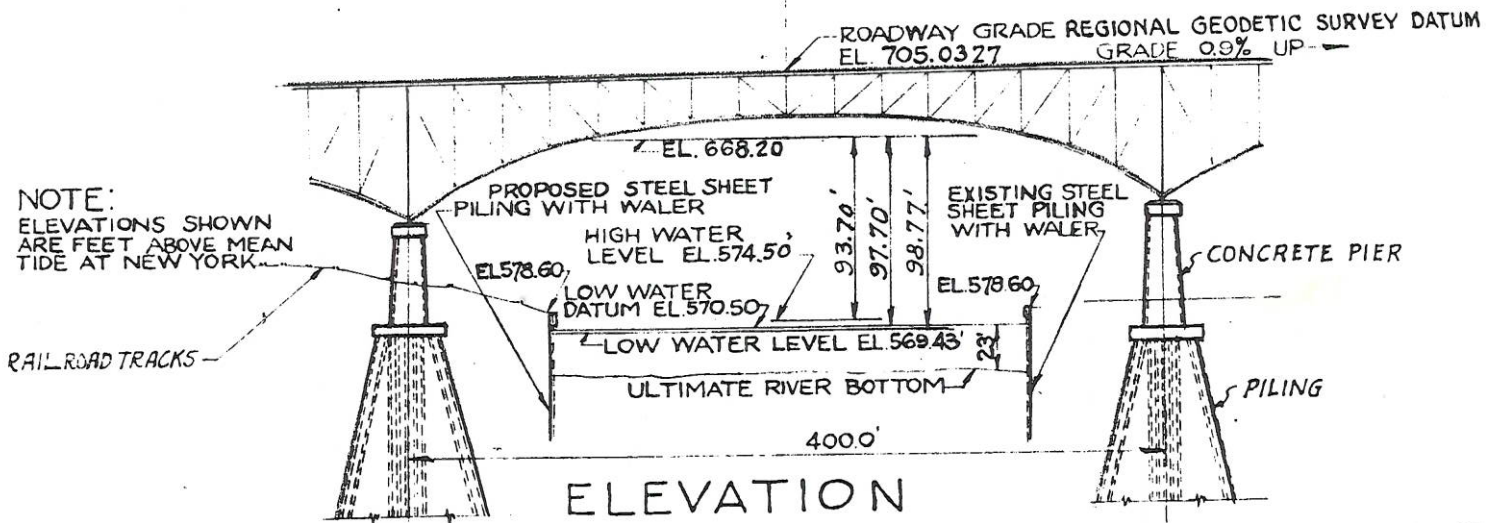
**USCG Coordination Information
(Contract Document)**

State of Ohio
Department of Transportation
Jolene M. Molitoris, Director

**Innerbelt Bridge
Construction Contract Group 1 (CCG1)**

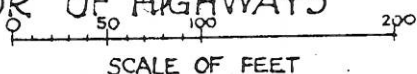


Soundings are in feet and tenths referred to low water datum elevation 570.5 feet above mean tide at New York City.



APPLICATION BY STATE OF OHIO

[Signature] AUG. 7, 1952
DIRECTOR OF HIGHWAYS DATE



PROPOSED VIADUCT
over the Cuyahoga River
at Cleveland
County of Cuyahoga State of Ohio
Application by State Highway Director
Sheet 2 of 2

Gluck, Paul

From: Tim.Keller@dot.state.oh.us
Sent: Thursday, October 22, 2009 5:15 PM
To: Gluck, Paul
Subject: Fw: USCG Terms
Attachments: Innerbelt-Permit.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: CV DB Comments

Thank You

Tim Keller
State Bridge Engineer
Ohio Department of Transportation
Telephone No. (614) 466-2463
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e-mail: Tim.Keller@dot.state.oh.us

----- Forwarded by Tim Keller/Structures/CEN/ODOT on 10/22/2009 05:13 PM -----

Bill Cody/Environmental/CEN/ODOT

To Tim Keller/Structures/CEN/ODOT@ODOT

cc Michael Wawszkiewicz/Production/CEN/ODOT@ODOT, Dave
Lastovka/Production/D12/ODOT@ODOT

10/22/2009 01:30 PM

Subject Fw: USCG Terms

Tim,
Here is the email from Scott Striffler of the USCG in Cleveland. I believe he responded to all your questions. Should you need anything else give me a call.
Bill

William R. Cody, L.A.
Assistant Environmental Administrator
Office of Environmental Services
Phone (614)466-5198 Fax (614) 728-7368

----- Forwarded by Bill Cody/Environmental/CEN/ODOT on 10/22/2009 01:27 PM -----

"Striffler, Scot" <Scot.M.Striffler@uscg.mil>

Sent by: Scot.M.Striffler@uscg.mil

To <Bill.Cody@dot.state.oh.us>

cc "Stanifer, William" <William.B.Stanifer@uscg.mil>, "Soule, Lee"
<Lee.D.Soule@uscg.mil>

10/22/2009 01:12 PM

Subject RE: USCG Terms

Bill,

Good afternoon. The first question is easy enough, and leads into the second question. LWD stands for Low Water Datum at the project location. More specifically, this refers to the current vertical datum system used by the Army Corp of Engineers for the Great Lakes - International Great Lakes Datum of 1985 (IGLD85). The elevation that is used in

IGLD85 for Low Water Datum for Lake Erie is 569.2 feet. The elevation that was used for Low Water Datum at the time the existing bridge was built was 570.50 feet. I've scanned and attached the drawings we have on file for the existing bridge to help illustrate.

The short answer to your second question is; yes, the lights on the existing bridge indicate the center of the channel, channel edges, and the minimum clearance at the lowest point over the channel (200-foot horizontal and 97.7 feet vertical - referred to the Low Water Datum used at the time. With the revised Low Water Datum elevation of 569.2 feet, the vertical clearance is 99.0 feet at the lowest point over the channel.).

There is additional vertical clearance available at the center of the span and navigation channel due to the arch of the span.

The minimum vertical clearance on the existing bridge is shown as 97.70 feet to Low Water Datum elevation of 570.5 feet. Our earlier correspondence outlines maintaining, at a minimum, the existing clearances. The Final EIS states that at least 100 feet vertical clearance will be provided for any additional or replacement bridges over the Cuyahoga River. That translates to 100 feet of vertical clearance from Low Water Datum for Lake Erie, IGLD85, elevation 569.2 feet. This is the minimum clearance we would accept. All of the conceptual drawings we've seen so far call for a new/replacement structure that has no arch in the span over the river. That design should provide even greater vertical clearance over the river.

As I stated in my email on August 7, 2009, the 100 feet vertical clearance must be provided for the full 200-foot horizontal clearance in the channel, with no piers in the river. Providing greater vertical clearance with a non-arch type structure is even better, and any design-build drawings submitted must satisfy these minimum requirements.

If you have questions, and something tells me you may, please call so we can discuss.

Scot

-----Original Message-----

From: Bill.Cody@dot.state.oh.us [mailto:Bill.Cody@dot.state.oh.us]
Sent: Thursday, October 22, 2009 9:02 AM
To: Striffler, Scot
Subject: USCG Terms

Scot,

I have a couple of hopefully easy questions for you.

In looking on the Guard website I came upon an acronym that I could not find a definition of; specifically 'LWD'. What is LWD?

Also, the ODOT Bridge Design folks ask me about the required shipping clearance under the Cleveland Viaduct. If I remember correctly, at the field meeting we had earlier this year, you said the existing lights define the shipping channel, both vertical and horizontally. Correct?

Thanks,
Bill

William R. Cody, L.A.
Assistant Environmental Administrator
Office of Environmental Services
Phone (614)466-5198 Fax (614) 728-7368

USCG NAVIGATION LIGHTING

Excerpts from CFR

Coast Guard, DHS

§ 118.65

§ 118.40 Modification of requirements.

(a) The District Commander may modify the requirements for the display of lights and other signals on any bridge when a change in local conditions warrants the modification.

(b) The District Commander may exempt bridges over waterways with no significant nighttime navigation from the lighting or other signal requirements in this part.

(c) The District Commander may prescribe special lighting or other signals in specific cases when the lighting or other signals in this part may not provide adequately for the safe passage of vessels.

(d) While a bridge is under construction, the District Commander prescribes the temporary lights and other signals to be displayed for the protection of navigation.

[CGD 84-022, 51 FR 16313, May 2, 1986]

§ 118.45 Lighting for the protection of aerial navigation.

The owner of a bridge which constitutes a hazard to aerial navigation should maintain, in addition to the lights prescribed in this part, such lights as may be prescribed by the Administrator, Federal Aviation Administration.

[40 FR 24898, June 11, 1975, as amended by CGD 75-046a, 42 FR 56954, Oct. 31, 1977]

§ 118.50 Inspection.

Lights and other signals required or authorized under this part are subject to inspection at any time by Coast Guard personnel or authorized agents.

[CGD 84-022, 51 FR 16313, May 2, 1986]

§ 118.55 Periods of operation.

(a) Lights shall be displayed from sunset to sunrise and at other times when the visibility is less than one mile.

(b) Operators shall not be required to exhibit the prescribed lights during seasons when vessels are unable to navigate in the vicinity of the bridge.

(c) The operation of signals other than lights shall be as prescribed by the District Commander. Each case shall be considered individually.

§ 118.60 Characteristics of lights.

All lights required or authorized under this part must be securely attached to the structure and of sufficient candlepower as to be visible against the background lighting at a distance of at least 2,000 yards 90 percent of the nights of the year. Lights must meet the requirements of this part. Lights shall be fixed lights excepting as provided in §§ 118.95, 118.110 and 118.150 of this part. Color specifications are not prescribed for bridge lights, however, the chromaticity standards for navigation lights in 33 CFR Part 84—Annex I are recommended.

[CGD 84-022, 51 FR 16313, May 2, 1986, as amended by USCG-1998-3799, 63 FR 35530, June 30, 1998]

§ 118.65 Lights on fixed bridges.

(a) Each fixed bridge span over a navigable channel shall be lighted so that the center of the navigable channel under each span will be marked by a range of two green lights, and each margin of each navigable channel will be marked by a red light: *Provided*, That when a margin of a channel is limited by a pier, only those lights prescribed in paragraph (b) of this section shall be required to mark such channel margin. The green lights shall each show through a horizontal arc of 360°; they shall be securely mounted just below the outermost edge of the bridge span structure so as to be visible from an approaching vessel. Each red light shall show through a horizontal arc of 180°, and shall be securely mounted just below the outermost edge of the bridge span structure to show 90° on either side of a line parallel to the axis of the channel so as to be visible from an approaching vessel.

NOTE: Until such time that major repairs to or replacements of existing fixed span navigation lights colored green are made, it is permitted that only one of these lights marking the centerline of the same channel under a span shall be visible to an approaching vessel. When major repairs to or replacement of such existing green lights are made they shall conform with this paragraph.

(b) *Pier lights*. When the navigable channel extends from pier to pier or

when piers are located within the navigable channel, each end of such piers shall be lighted with a red light. Each such light shall show through a horizontal arc of 180°, and shall be securely fastened at the end of the pier as low as practicable but not lower than 2 feet above navigable high water to show 90° on either side of a line parallel to the axis of the channel so as to be visible from an approaching vessel.

(c) *Main channel.* When necessary, the District Commander may prescribe that fixed bridges having two or more spans over a navigable channel shall have the main channel span marked with a set of three white lights arranged in a vertical line directly above each green light on the main channel span. Each white light shall show through a horizontal arc of 180°, and shall be mounted so that ½ of the horizontal arc will show on either side of a line parallel to the axis of the channel. These three white lights shall be securely mounted on the bridge structure and spaced as nearly 15 feet apart as the structure of the bridge will permit, with a minimum spacing of 7 feet. The lowest white light in the line of three lights shall be placed not less than 10 nor more than 15 feet above each green light on the main channel span.

NOTE: Until such time that major repairs to or replacements of existing main channel lights showing white are made, it is permitted that these lights show through a horizontal arc of not less than 60° nor more than 180° with ½ of such arc showing either side of a line parallel to the axis of the main channel. When major repairs or replacement of such existing white lights are made, they shall conform with this paragraph.

[40 FR 24898, June 11, 1975, as amended by CGD 75-046a, 42 FR 56954, Oct. 31, 1977]

§ 118.70 Lights on swing bridges.

(a) *Swing span lights on through bridges.* Each swing span of every through swing bridge shall be lighted with three lanterns so that when viewed from an approaching vessel the swing span when closed will display three red lights on top of the span structure, one at each end of the span on the same level and one at the center of the span no less than 10 feet above the other two lights, and when open for navigation will display three green

lights on top of the span structure in a line parallel to and directly above the long axis of the span, one at each end of the span on the same level, and one at the center of the span no less than 10 feet above the other two lights. Each lantern shall show through alternate red and green horizontal arcs of 60° each, the axis of adjacent arcs to be 90° from each other; each light shall be securely mounted with the axis of the green arcs parallel to the long axis of the swing span.

(b) *Swing span lights on deck and half-through bridges.* Each swing span of every deck, half-through, girder, or similar type swing bridge shall be lighted with four lanterns so that when viewed from an approaching vessel the swing span when closed will display one red light at each end, and when open to navigation will display two green lights from each end. Each lantern shall show through one red and two green horizontal arcs of 60° each, the axis of each green arc to be 90° from the axis of the red arc; each light shall be securely mounted at the floor level of the span as near to the side of the span as practicable with the axis of the red light normal to the long axis of the swing span and so that the red light will be visible from an approaching vessel when the span is closed.

(c) *Pier lights.* Every swing bridge shall be lighted so that each end of the piers adjacent to the navigable channel (draw piers) or each end of their protection piers (draw pier protection piers) and each end of the piers protecting the pivot pier (pivot protection pier) will be marked by a red light. Each of these lights shall show through a horizontal arc of 180° and shall be mounted as low as practicable below the floor level of the swing span to show 90° on either side of a line parallel to the axis of the channel so as to be visible from an approaching vessel.

(d) *Axis lights.* Every swing bridge shall be lighted so that the intersection of the bridge axis with each side of the pivot pier and the channel side of each draw pier which has a protection pier will be marked by a red light: *Provided,* That if the draw and draw protection piers are straight along their channel faces these lights shall not be required. Each such light shall show

Navigation Lighting on Existing I-90 Central Viaduct Bridge

