



16591
11 DEC 2025

Mr. Brian Wolfe, P. E.
Director of Project Development
Maryland Transportation Authority (MDTA)
2310 Broening Highway
Baltimore, MD 21224

Dear Mr. Wolfe:

Enclosed is Coast Guard Bridge Permit Amendment (1a-25-5) dated December 11, 2025, approving the proposed construction of the highway fixed bridge – Francis Scott Key Bridge across Patapsco River, mile 5.2, between Baltimore County and Baltimore City, MD. Coast Guard Bridge Permit (1-25-5) dated March 21, 2025, remains in force, as amended by Coast Guard Bridge Permit Amendment (1a-25-5) dated December 11, 2025. The following stipulations shall be adhered to:

- a. The contractor shall submit the plans and schedule of operation for approval at least 45 days prior to commencement of work in the waterway. One copy of such information shall be submitted concurrently to this office at the address above and Commander, U. S. Coast Guard Sector Maryland-National Capital Region, 2401 Hawkins Point Road, Baltimore, MD 21226-1791. The information shall include a sketch of the waterway; the bridge; the location of any restrictions that will be placed in the waterway such as barges, anchors, and anchor lines; the location and height above mean high water and detailed description of any scaffolding or netting; and a detailed description indicating the placement, type and dimension of any cofferdams, if used. The schedule should also include the hours of operation and whether the equipment will be moved at night. No deviation from the approved plans and schedule of operation may be made unless the modification has previously been submitted to and approved by the Coast Guard. The contractor shall submit to this office a copy of all correspondence with the Coast Guard concerning this project.
- b. The contractor shall comply with all provisions of the Navigation Rules International - Inland, available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C.
- c. At no time during the work will the waterway be closed to navigation without prior approval from the Coast Guard. The bridge owner or contractor is required to maintain close and regular contact with Coast Guard Sector Maryland-National Capital Region at (571) 608-9871 or D05-DG-SectorMD-NCR-Prevention-WWM@uscg.mil to keep them informed of activities on the waterway.
- d. Barges that are used in the waterway during the project must be marked. Enclosure (2) outlines temporary marking and lighting requirements for barges and structures not part of the bridge that will be used during construction. If barge or float anchor lines are used, they must be

marked by buoys, which should be lighted. If you should have any questions, regarding lights on the barges or work floats, please contact the Chief, Waterways Management Section, at (571) 608-6242. Floating equipment shall have a radiotelephone capable of operation from its main control station in accordance with Part 26 of Title 33, Code of Federal Regulations and shall be monitored during all periods the floating equipment is on station.

e. During the progress of work, while the channel is in operation, should any material, machinery or equipment be lost, dumped, thrown overboard, sunk or misplaced which may be dangerous to or obstruct navigation, immediate notice shall be given to the Coast Guard and the object removed with the utmost dispatch. Until removal can be effected, the objects shall be properly marked in order to protect navigation. Notice to the Coast Guard shall give a description and location of any such object and the action taken or being taken to protect navigation. Except as shown on the plans, no dredging, excavation, filling, rip-rap, or other work affecting the bottoms, shall be done in conjunction with this work.

f. If during the periods of construction, permanent lighting cannot be maintained operable, the fenders of each pier shall be marked with a battery or power operated white light of not less than 60 flashes per minute and visible for a range of 2,000 yards on 90% of the nights of the year. Generally, a lamp of 20-candle power will meet these requirements. If necessary to obtain the coverage required, a light or lights on the upstream and downstream sides shall be installed. The piers shall be so marked until the construction has been completed and permanent navigational lighting has been installed and determined to be operating satisfactorily. Written approval from the Coast Guard of temporary lighting during periods of construction is required. No existing bridge navigation lights shall be impaired or blocked during darkness or periods of reduced visibility.

g. Compliance with the requirements stated herein does not relieve the bridge owner or contractor of the obligation or responsibility for compliance with the provisions of any other law or regulation, as may be under the jurisdiction of any other federal, state or local authority having cognizance over any aspect of the location, construction or maintenance of the authorized structure. The Coast Guard can levy monetary civil penalties for violations of bridge statutes and regulations.

h. In accordance with Title 33 Code of Federal Regulations Part 118.25 – Application procedure, approval of lights and other signals required shall be obtained prior to construction. Application shall be by letter accompanied by duplicate sets of drawings showing (1) the plan and elevation of the structure showing lights and signals proposed, and (2) a small scale vicinity chart showing the proposed bridge and all other bridges within 1,000 feet above or below the proposed bridge.

i. Upon completion of the proposed project, an inspection of the waterway bottom shall be performed to ensure that all construction waste materials have been completely removed. Certification will be required in writing by a licensed engineer or licensed surveyor that the waterways have not been impaired and that all construction related debris has been cleared from it. The certification shall include the actual method(s) used to conduct the inspection. The

contractor shall remove any bridge related debris, resulting from the current or prior work or occurrences, discovered during this survey.

j. Upon completion of the bridgework, a responsible official of the bridge owner or a licensed surveyor or registered professional engineer shall submit to this office certified as-built drawings or certification of the following:

- (1) Bridge name
- (2) Action type (new construction, modification, relocation, (fixed/draw), etc.)
- (3) Dates (commenced and completed)
- (4) Location (latitude and longitude at bridge center and centerline of channel, statute miles above mouth of waterway, and bridge or causeway orientation or geographic positions of approaches)
- (5) Type of bridge (fixed, vertical lift, bascule, suspension, swing, trestle, pontoon, etc.)
- (6) Navigation clearances (vertical at mean high water and horizontal)
(Moveable – vertical at mean high water in open and closed positions)
- (7) Whether or not the bridge is fitted with clearance gauges
- (8) Whether or not the bridge has pier protection and/or fender system.
- (9) Type of land traffic (highway, railroad, pedestrian, pipeline, etc.)

This office shall be notified immediately upon completion of the project. If you should have any questions regarding this matter, please contact me at the above telephone number or email address or Mr. James Moore, project officer, at (571) 608-4719 or James.M.Moore2@uscg.mil.

Sincerely,

 Digitally signed by
PITTS.HAL.R. PITTS.HAL.R.11212672
1121267272 72 Date: 2025.12.11
11:51:02 -05'00'

HAL R. PITTS
Bridge Program Manager
By direction

Encl: (1) Bridge Permit (1a-25-5) dated December 11, 2025
(2) Coast Guard Bridge Lighting & Other Signals

LIGHTING REQUIREMENTS FOR BARGES AND STRUCTURES NOT PART OF A BRIDGE OR APPROACH STRUCTURE

33 CFR 83.30 Lights on barges.

- (h) The following barges shall display at night and if practicable in periods of restricted visibility the lights described in paragraph (b) of this section:
 - (1) Every barge projecting into a buoied or restricted channel.
 - (2) Every barge so moored that it reduces the available navigable width of any channel to less than 80 meters.
 - (3) Barges moored in group's more than two barges wide or to a maximum width of over 25 meters.
 - (4) Every barge not moored parallel to the bank or dock.
- (i) Barges described in paragraph (h) of this section shall carry two unobstructed all-round white lights of an intensity to be visible for at least 1 nautical mile and meeting the technical requirements as prescribed in Annex I (33 CFR part 84).
- (j) A barge or group of barges at anchor or made fast to one or more mooring buoys or other similar device, in lieu of the provisions of Inland Navigation Rule 30, may carry unobstructed all-round white lights of an intensity to be visible for at least 1 nautical mile that meet the requirements of Annex I (33 CFR part 84) and shall be arranged as follows:
 - (i) Any barge that projects from a group formation shall be lighted on its outboard corners.
 - (ii) On a single barge moored in water where other vessels normally navigate on both sides of the barge, lights shall be placed to mark the corner extremities of the barge.
 - (iii) On barges moored in group formation, moored in water where other vessels normally navigate on both sides of the group, lights shall be placed to mark the corner extremities of the group.
- (k) The following are exempt from the requirements of this Rule:
 - (1) A barge or group of barges moored in a slip or slough used primarily for mooring purposes.
 - (2) A barge or group of barges moored behind a pier head.
 - (3) A barge less than 20 meters in length when moored in a special anchorage area designated in accordance with §109.10 of this chapter.

33 CFR 118.95 Lights on structures not part of a bridge or approach structure.

Lights on sheer booms, isolated piers, obstructions, and other structures not part of a bridge or approach structure must meet the requirements for aids to navigation in Subpart 66.01 of Part 66 of this chapter.



BRIDGE PERMIT

11 DEC 2025

AMENDMENT (1a-25-5)

WHEREAS by a permit issued on 21 March 2025, the Commandant of the Coast Guard approved the location and plans of a bridge to be constructed by the Maryland Transportation Authority across the Patapsco River between Baltimore County and Baltimore City, Maryland, under authority of the General Bridge Act of 1946, as amended;

AND WHEREAS condition 1 of the permit provided that no deviation from the approved plans may be made either before or after completion of the structure unless the modification of said plans has previously been submitted to and receive the approval of the Commandant and the - **MARYLAND TRANSPORTATION AUTHORITY** - now has submitted for approval plans indicating modification to the previously approved plans;

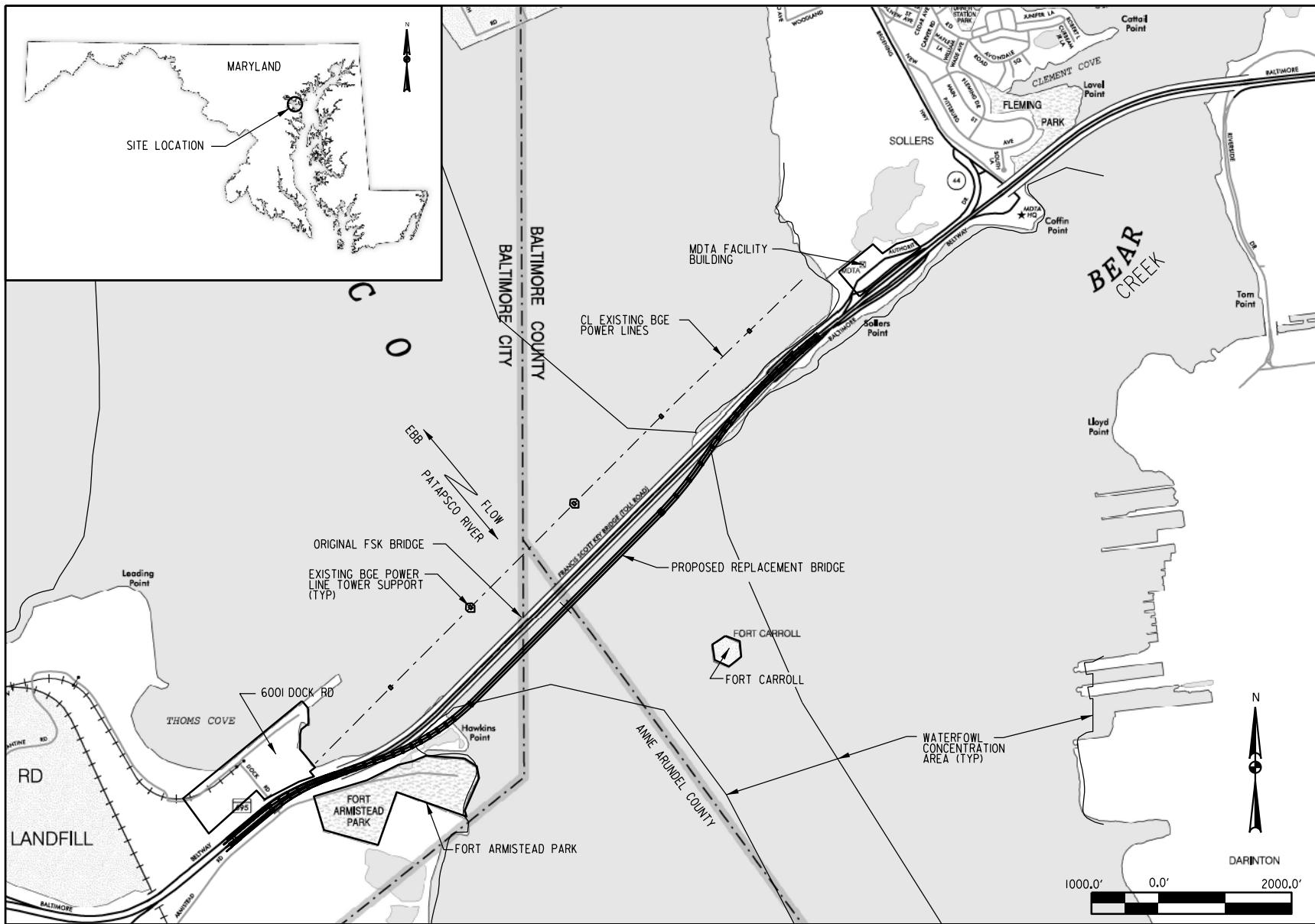
NOW THEREFORE, This is to certify that the location and plans dated 20 August 2025, hereby approved, supersede the plans previously approved. In granting this approval, all conditions to which the original permit was subject remain in force with conditions 4 and 5 modified as follows:

4. Prior to commencement of construction, the permittee shall submit to the District Commander for approval, plans showing the final design chosen for the construction of the bridge. The final design chosen shall, at a minimum, provide the navigational clearances as shown on the approved plan sheet 3 (of 4) dated 20 August 2025. Failure by the permittee to adhere to any part of this condition renders this permit amendment null and void.

5. The location of, and materials to be used in construction of, the bridge protective system as shown on the approved plan sheet 2 and 3 (of 4) dated 20 August 2025, shall be submitted to the District Commander for approval prior to commencing construction of such system.

A handwritten signature in blue ink that reads "Brian L. Dunn".

Brian L. Dunn
Chief, Office of Bridge Programs
U.S. Coast Guard
By direction of the Commandant

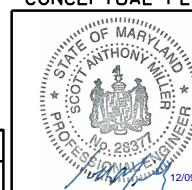


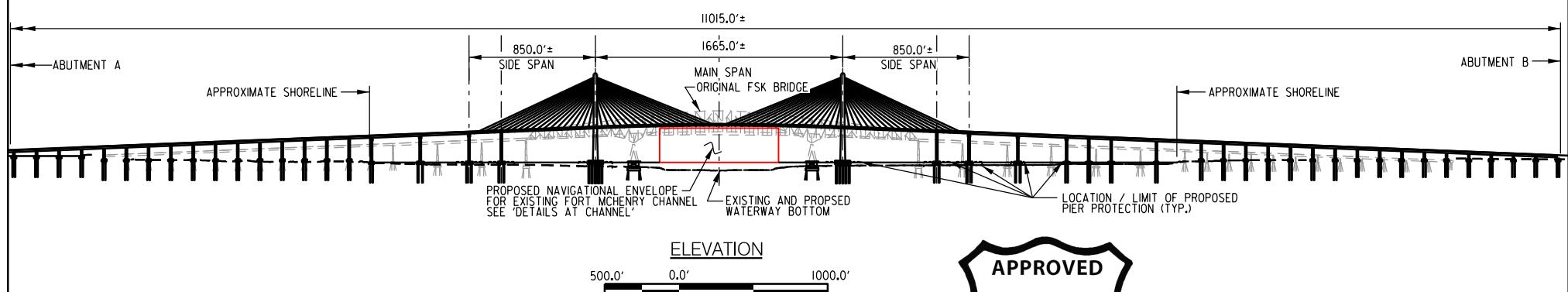
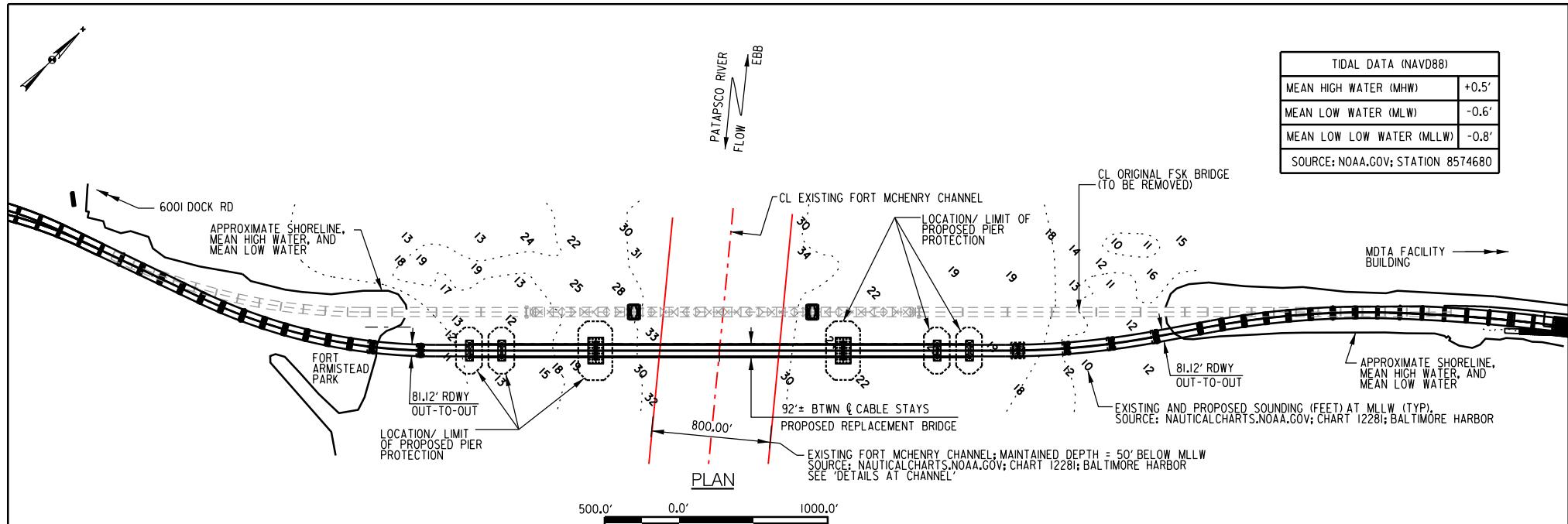
BASE MAP: MARYLAND GENERAL HIGHWAY
STATEWIDE GRID MAP D-13C (2024)



"I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 26377, Expiration Date: 12/31/2026."

HORIZONTAL DATUM	NAD83
VERTICAL DATUM	NAVD88





NOTES:

- DEMOLITION OF REMAINING PORTIONS OF ORIGINAL FSK BRIDGE WILL BEGIN PRIOR TO CONSTRUCTION OF THE NEW BRIDGE.
- FOUNDATIONS OF EXISTING MAIN SPAN PIERS (PIERS 17 AND 18) WILL REMAIN AT ELEVATION 10' ABOVE MHW FOR VESSEL PROTECTION.
- PIER FOUNDATIONS AND CONCRETE VESSEL COLLISION PROTECTION FENDERS FOR NEW BRIDGE ARE PILE SUPPORTED AND THEREFORE NO EXCAVATION WILL BE REQUIRED.
- CONCRETE VESSEL COLLISION PROTECTION FENDERS TO BE PROVIDED FOR MAIN SPAN AND SIDE SPAN PIERS (PIERS 22-27).
- APPROXIMATELY 15,800 CY OF FILL MATERIAL BELOW MEAN HIGH WATER IS ASSOCIATED WITH THE PILES, FOUNDATIONS AND FENDERS FOR THE NEW BRIDGE.
- 100 YEAR FLOOD ELEVATION: 8.0' +/-
- SOURCE MATERIALS FOR DATA IS AS NOTED ON THE PLANS.

ABBREVIATIONS:

BTWN	BETWEEN
CL	CENTERLINE
CLR	CLEAR
CUYD	CUBIC YARDS
DIA	DIAMETER
EL	ELEVATION
FSK	FRANCIS SCOTT KEY
HORIZ	HORIZONTAL
MAX	MAXIMUM
MHW	MEAN HIGH WATER
MIN	MINIMUM
MLLW	MEAN LOW LOW WATER
MLW	MEAN LOW WATER
NTS	NOT TO SCALE
SYM	SYMMETRIC
TGL	THEORETICAL GRADE LINE
TYP	TYPICAL
VERT	VERTICAL

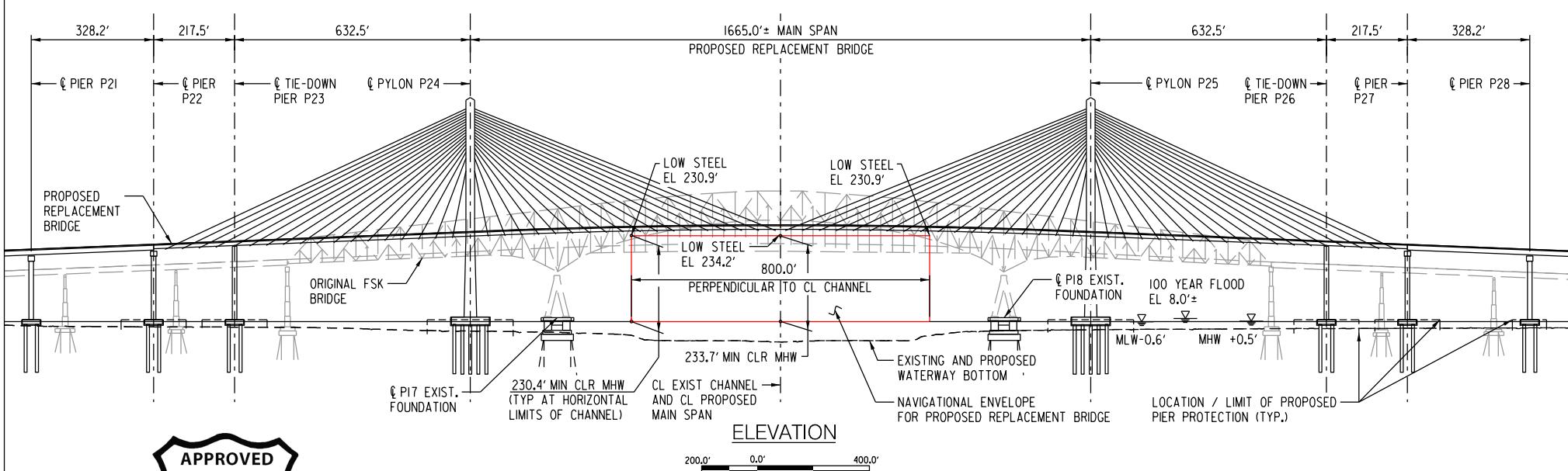
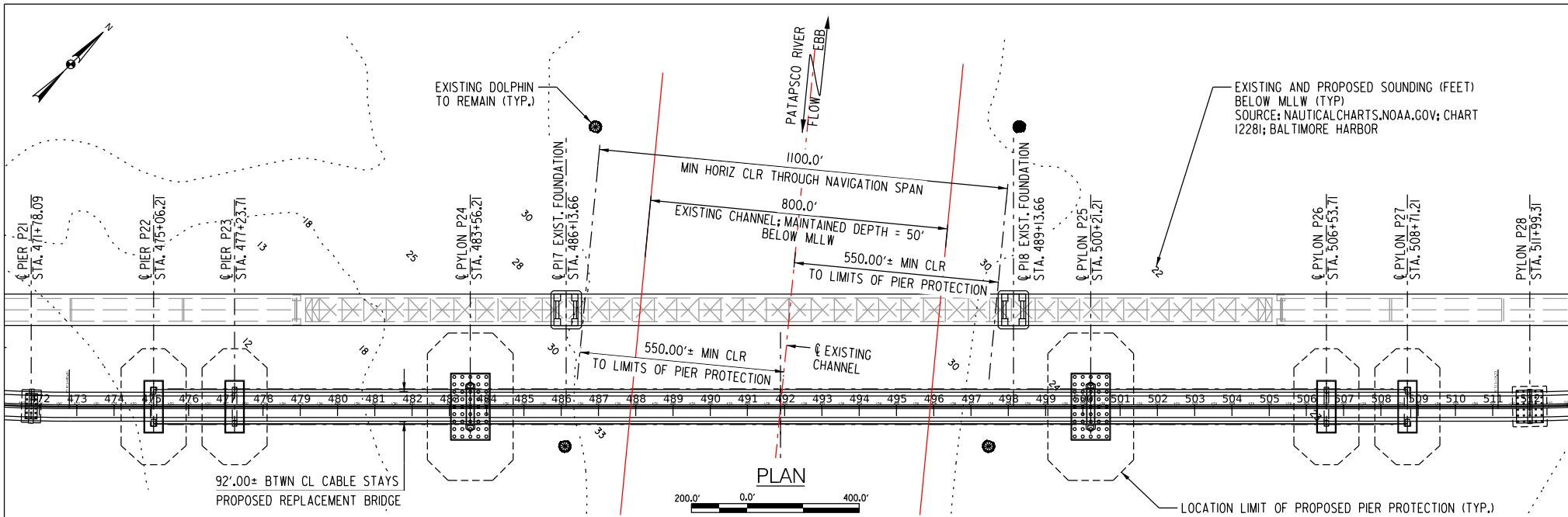
"I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 26377, Expiration Date: 12/31/2026."

HORIZONTAL DATUM	NAD83
VERTICAL DATUM	NAVD88



CONCEPTUAL PLANS UTILIZED FOR COAST GUARD BRIDGE PERMIT

	PATAPSCO RIVER APPROXIMATE MILE MARKER: 5.2 STATUTE MILES	
	FRANCIS SCOTT KEY BRIDGE BETWEEN BALTIMORE COUNTY AND BALTIMORE CITY MD	
APPLICATION BY MDTA CONSULTATION BY WSP / RK&K / JMT 08/20/2025		
SHEET 2 OF 4		



PIERS 21-28 BETWEEN BALTIMORE COUNTY AND BALTIMORE CITY MD

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 26377, Expiration Date: 12/31/2025.

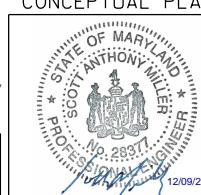
HORIZONTAL DATUM	NAD83
VERTICAL DATUM	NAVD88

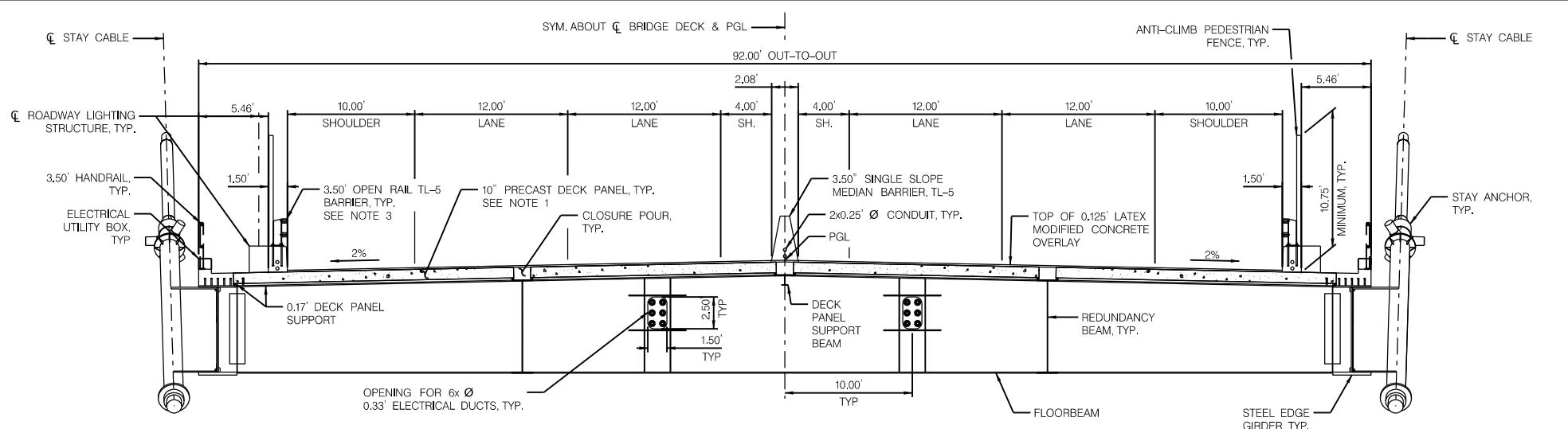
CONCEPTUAL PLANS UTILIZED FOR COAST GUARD BRIDGE PERMIT

PATAPSCO RIVER
APPROXIMATE MILE MARKER:
5.2 STATUTE MILES

FRANCIS SCOTT KEY BRIDGE
BETWEEN BALTIMORE COUNTY AND BALTIMORE CITY MD

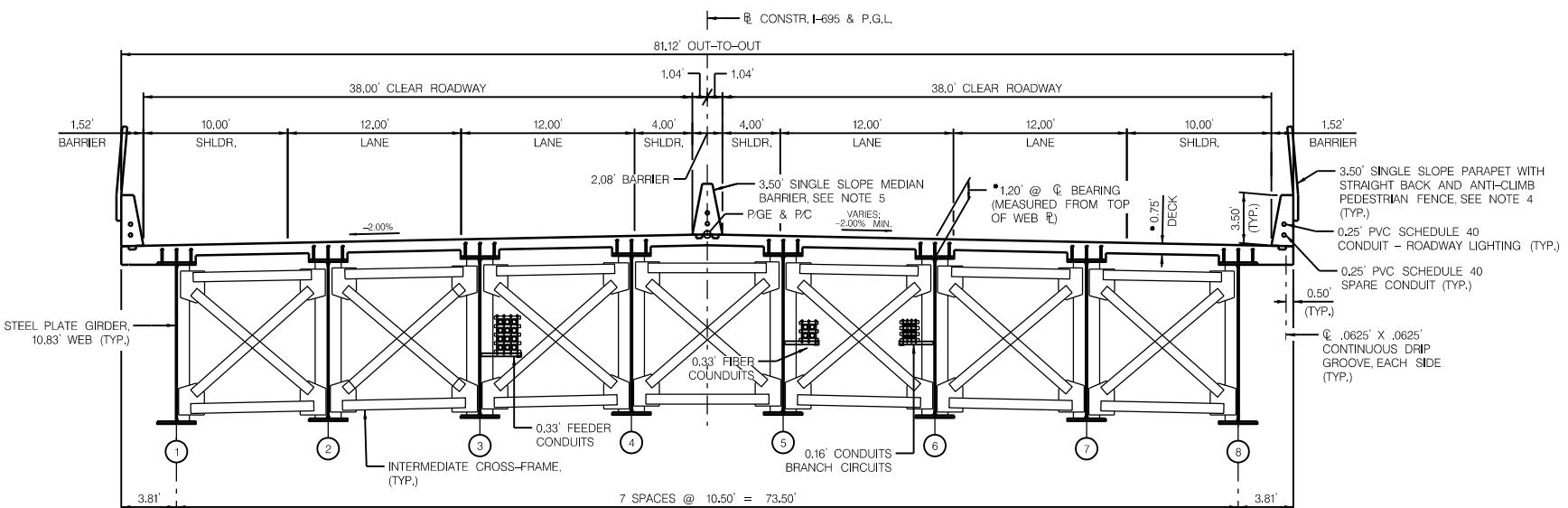
APPLICATION BY MDTA
CONSULTATION BY WSP / RK&K / JMT
08/20/2025





TYPICAL SECTION (MAIN SPAN)

2'-0" 4'-0"
SCALE: 1/2" = 1'-0"



TYPICAL SECTION (APPROACH SPANS)

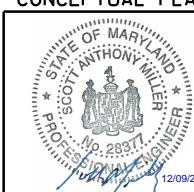
2'-0" 4'-0"
SCALE: 1/2" = 1'-0"

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HORIZONTAL DATUM	NAD83
VERTICAL DATUM	NAVD88



CONCEPTUAL PLANS UTILIZED FOR COAST GUARD BRIDGE PERMIT



PATAPSCO RIVER
APPROXIMATE MILE MARKER:
5.2 STATUTE MILES

FRANCIS SCOTT KEY BRIDGE
BETWEEN BALTIMORE COUNTY AND BALTIMORE CITY MD
APPLICATION BY MDTA
CONSULTATION BY WSP / RK&K / JMT
08/20/2025 SHEET 4 OF 4



Homeland
Security



UNITED STATES COAST GUARD
BRIDGE PROGRAM OFFICE



**BRIDGE LIGHTING
AND
OTHER SIGNALS**



DEPARTMENT OF HOMELAND SECURITY
UNITED STATES COAST GUARD
BRIDGE PROGRAM OFFICE
MINIMUM LIGHTING FOR FIXED BRIDGES
33 CFR 118

All persons owning or operating bridges over the navigable waters of the United States or any international bridge constructed after March 23, 1906, shall maintain at their own expense the lights and other signals required.

Any person required to maintain lights and other signals upon any bridge or abutment over or in the navigable waters of the United States who fails or refuses to maintain such lights and other signals, or to obey any of the lawful rules and regulations relating to the same is subject to a penalty as provided in 14 U.S.C. 544.

No person shall obstruct or interfere with any lights or signals maintained in accordance with the regulations prescribed.

Any person violating the provisions of §118 shall be deemed guilty of a misdemeanor and be subject to a fine not exceeding \$500 for each offense. Each day during which such violation shall continue shall be considered a new offense.

Approval of lights and other signals required shall be obtained, prior to construction, from the District Commander of the area in which the structure will be situated. Application shall be by letter accompanied by duplicate sets of drawings showing (a) plan and elevation of the structure showing lights and signals proposed, and (b) small scale vicinity chart showing proposed bridge and all other bridges within 1,000 feet above or below the proposed bridge.

The Coast Guard District Commander receiving the application will review it and approve the lights and other signals proposed, or mark on the drawings, the lights and other signals required, and in the case of lights, cite the applicable section of this chapter which prescribes the lights required for the particular type bridge.

Upon approval, one set of drawings will be returned to the applicant with the notation "navigational lights and/or other signals approved as shown", date, name and title of the District Commander.

The Coast Guard 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.

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

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

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

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

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

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.

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.

Bridges crossing a body of water at an angle other than 90° with the axis of the channel shall be lighted in accordance with the regulations in this part with such modifications as are necessary in each particular case.

Lights on sheer booms, isolated piers, obstructions, and other structures not part of a bridge or approach structure must meet the requirements for aids to navigation in Subpart 66.01 of Part 66 of this chapter.

The District Commander may require painting the sides of bridge channel piers below the superstructure facing traffic white or yellow when they are significantly darkened by weathering or other causes so as to be poorly visible against a dark background.

When necessary for reasons of safety of navigation, the Coast Guard District Commander may require or authorize the installation of clearance gauges. Except as specified in §117.47(b) of this chapter for certain drawbridges, clearance gauges must meet the requirements of this section.

Clearance gauges must indicate the vertical distance between "low steel" of the bridge channel span (in the closed to navigation position for drawbridges) and the level of the water, measured to the bottom of the foot marks, read from top to bottom. Each gauge must be installed on the end of the right channel pier or pier protection structure facing approaching vessels and extend to a reasonable height above high water so as to be meaningful to the viewer. Other or additional locations may be prescribed by the District Commander if particular conditions or circumstances warrant.

Construction. Each gauge must be permanently fixed to the bridge pier or pier protection structure and made of a durable material of sufficient strength to provide resistance to weather, tide, and current. Gauges may be painted directly on the bridge channel pier or pier protection structure if the surface is suitable and has sufficient width to accommodate the foot marks (graduations) and numerals.

Numerals. (1) Each gauge must be marked by black numerals and foot marks on a white background. Paint, if used, must be of good exterior quality, resistant to excessive chalking or bleeding. Manufactured numerals and background material may be used.

The length of the foot marks must be no less than the width of a single numeral used (except numerals 1 and 4), be the same thickness as the width of stroke of the numeral, and extend to the nearest margin of the white background. Foot marks must be spaced every foot for nominal day visibility of less than 500 feet, every two feet for a nominal day visibility of more than 500 feet but less than 1,000 feet, and every five feet for nominal day visibility of more than 1,000 feet.

Intermediate foot marks may be used when more precise determination of actual clearance is necessary. Such intermediate foot marks must have a width of stroke one-half the width of the stroke required for the numeral and shall be three-quarters as long as the primary foot marks.

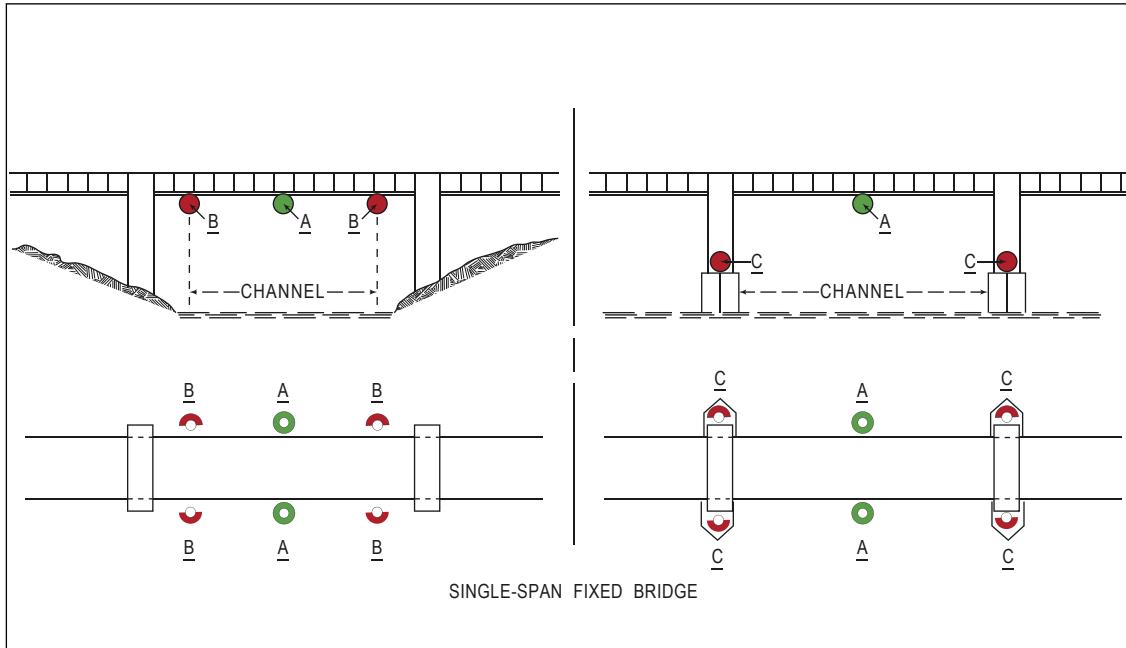
The horizontal distance between the numeral and nearest edge of the white background shall be no less than one-half the width of a single numeral (excepting numerals 1 and 4).

The minimum width of the white background shall be no less than three times the width of a single numeral (excepting numerals 1 and 4) plus the widths of each additional numeral (when multiple numerals are used plus numeral spacing).

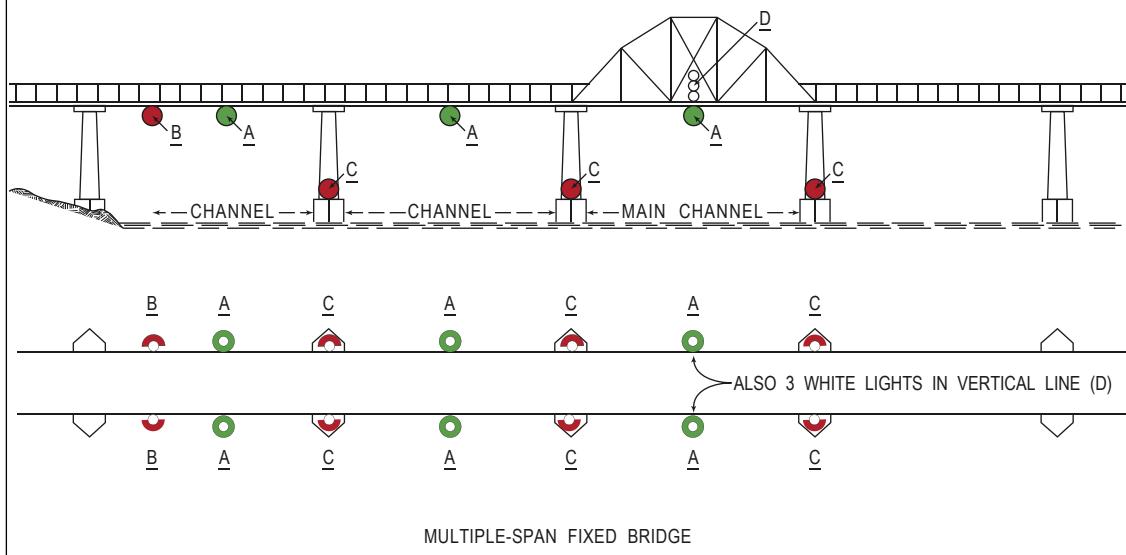
Maintenance. The owner or operator of the bridge shall maintain each gauge in good repair and legible condition. The bridge owner or operator is responsible for the accuracy of the gauge and shall remeasure the vertical distance of the numerals and foot marks below "low steel" of the bridge whenever the gauge is repainted or the structure is repaired.



DEPARTMENT OF HOMELAND SECURITY
UNITED STATES COAST GUARD
BRIDGE PROGRAM OFFICE
MINIMUM LIGHTING FOR FIXED BRIDGES
33 CFR 118.65



SINGLE-SPAN FIXED BRIDGE



MULTIPLE-SPAN FIXED BRIDGE

LIGHT COLORS AND HORIZONTAL ARCS OF VISIBILITY

A CHANNEL CENTER—360° GREEN (180° GREEN ON BRIDGES LIGHTED PRIOR TO JAN 1, 1947, UNTIL LIGHTS ARE REPAIRED OR REPLACED).

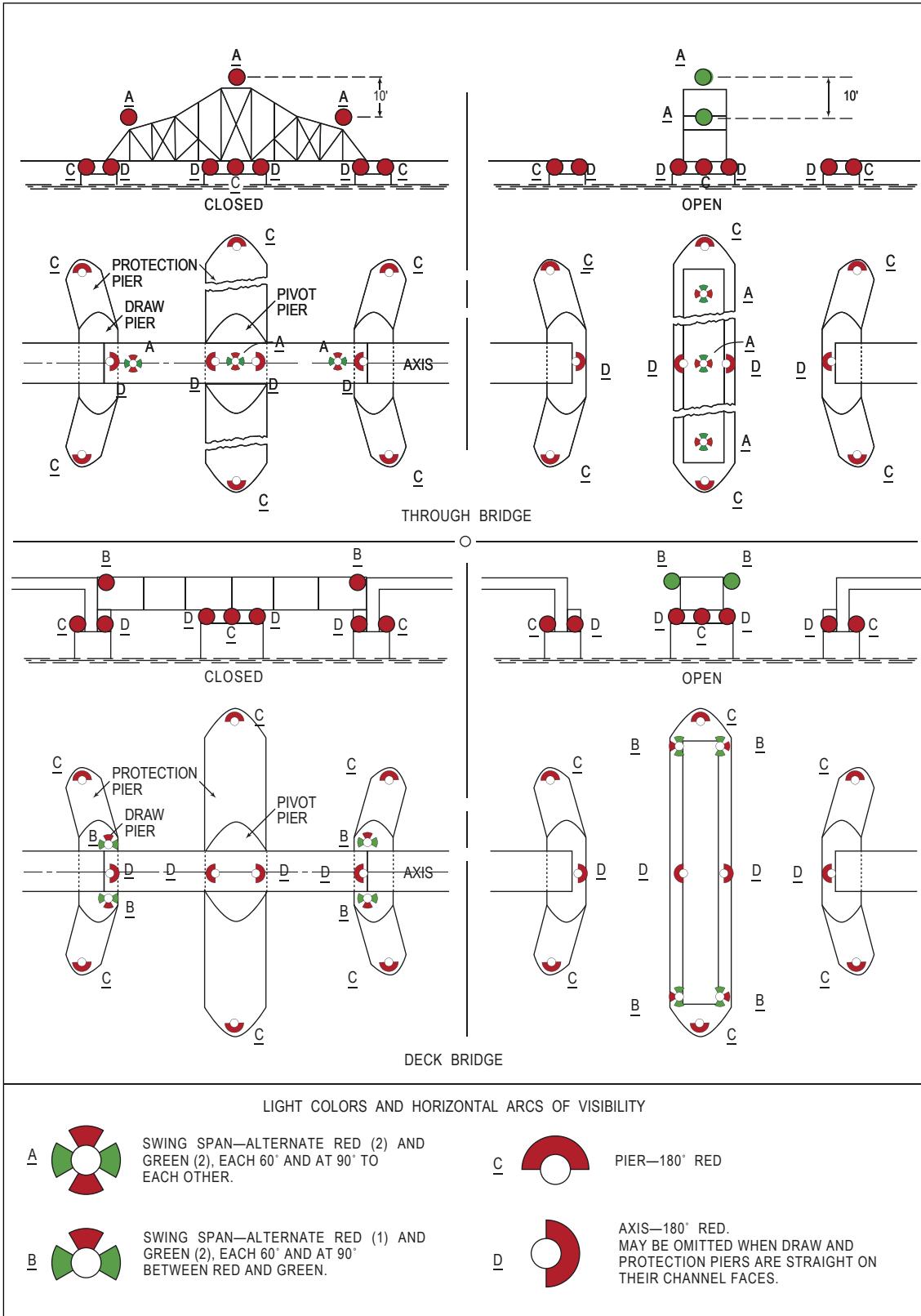
C PIER—180° RED

B CHANNEL MARGIN—180° RED

D MAIN CHANNEL—180° WHITE, 3 LIGHTS IN VERTICAL LINE (60°—180° ON BRIDGES LIGHTED PRIOR TO JAN. 1, 1953, UNTIL LIGHTS ARE REPAIRED OR REPLACED).

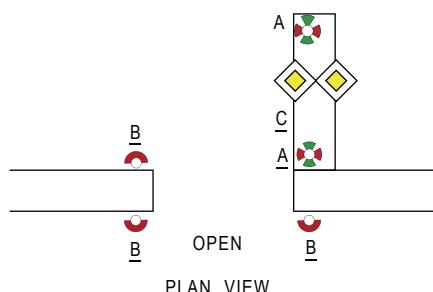
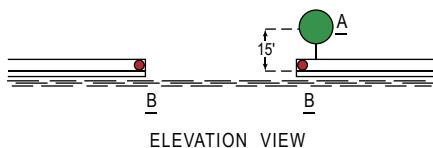
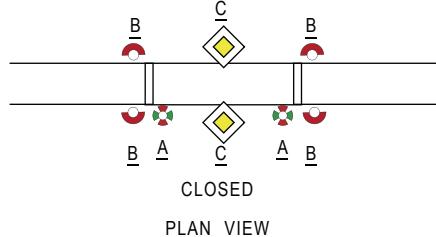
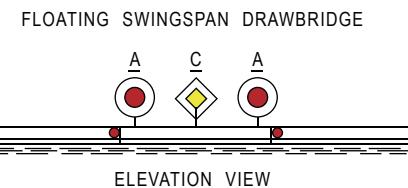


DEPARTMENT OF HOMELAND SECURITY
UNITED STATES COAST GUARD
BRIDGE PROGRAM OFFICE
MINIMUM LIGHTING FOR DOUBLE-OPENING SWING BRIDGES
33 CFR 118.70

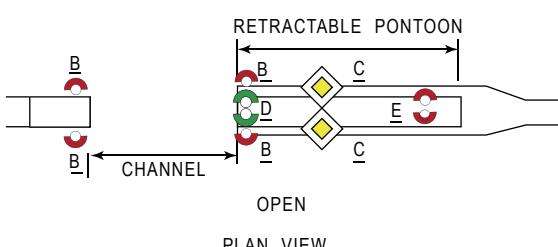
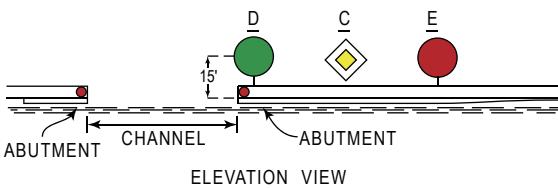
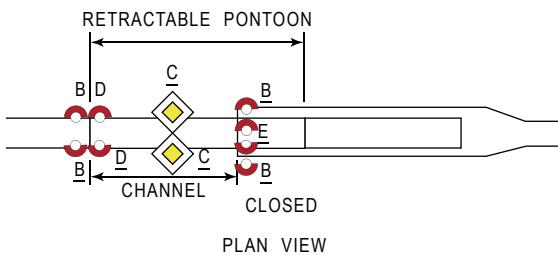
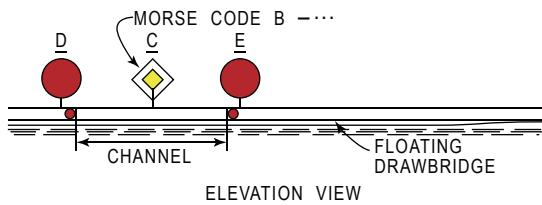




DEPARTMENT OF HOMELAND SECURITY
UNITED STATES COAST GUARD
BRIDGE PROGRAM OFFICE
MINIMUM LIGHTING FOR SINGLE-OPENING DRAWBRIDGES
33 CFR 118.75



FLOATING RETRACTABLE DRAWBRIDGE



LIGHT COLORS AND HORIZONTAL ARCS OF VISIBILITY



DRAW SPAN—ALTERNATE RED (2) AND GREEN (2), EACH 60° AND AT 90° TO EACH OTHER.



PIER OR ABUTMENT—180° RED



AT CENTERLINE OF THE NAVIGATION CHANNEL DRAWSPAN OF FLOATING DRAWBRIDGES, DIAMOND IN SHAPE, YELLOW IN COLOR WITH HIGH INTENSITY RETROREFLECTIVE MATERIAL BORDER AND MAY EXHIBIT A MORSE CODE B YELLOW LIGHT. THE MARK SHALL NOT BE VISIBLE WHEN THE DRAWSPAN IS IN THE OPEN POSITION.
(33 CFR 118.110(c)).



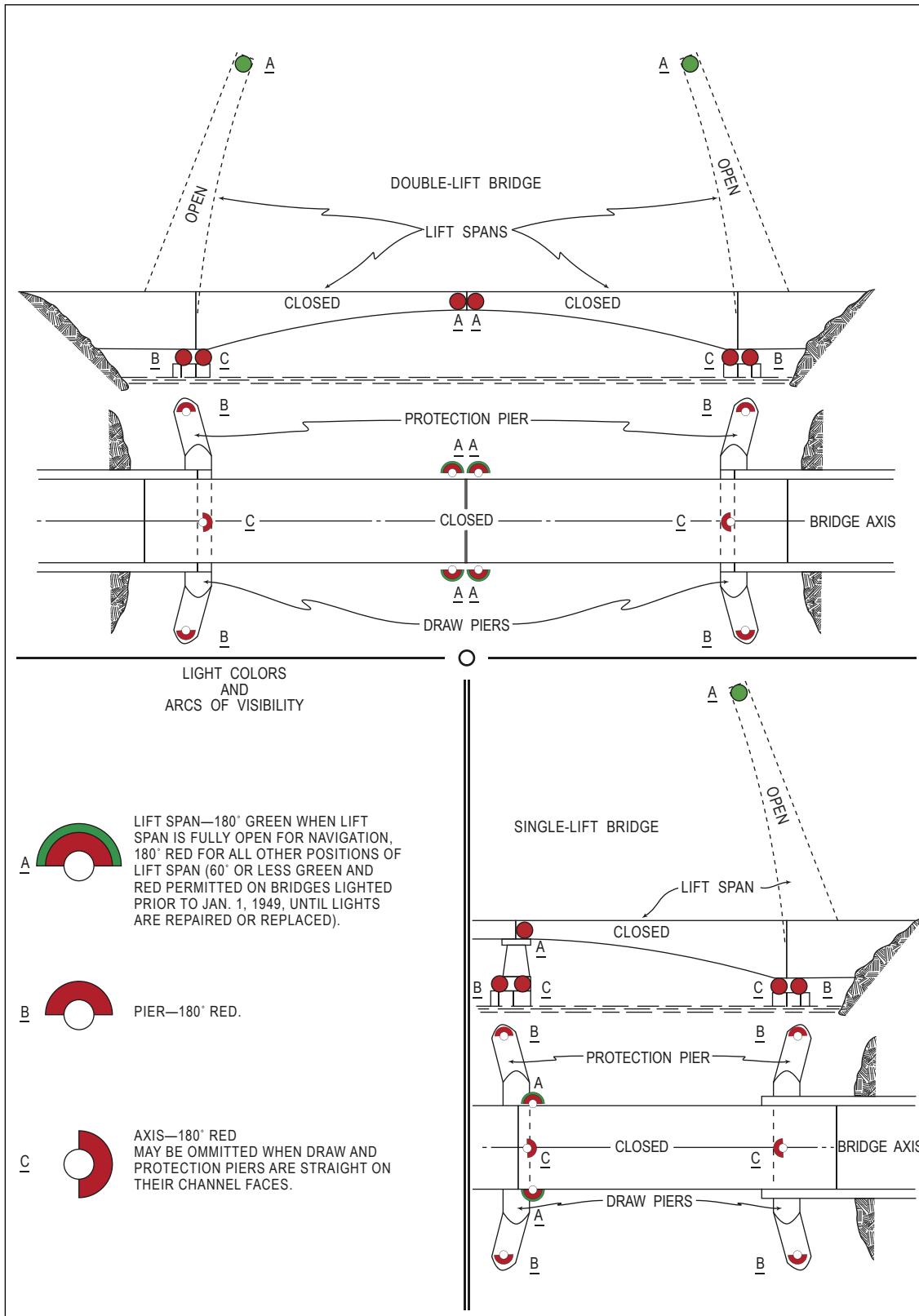
RETRACTABLE PONTOON
—DRAWSPAN CLOSED—180° RED
—DRAWSPAN OPEN—180° GREEN



RETRACTABLE PONTOON
—DRAWSPAN CLOSED—180° RED
—DRAWSPAN—LIGHT OFF

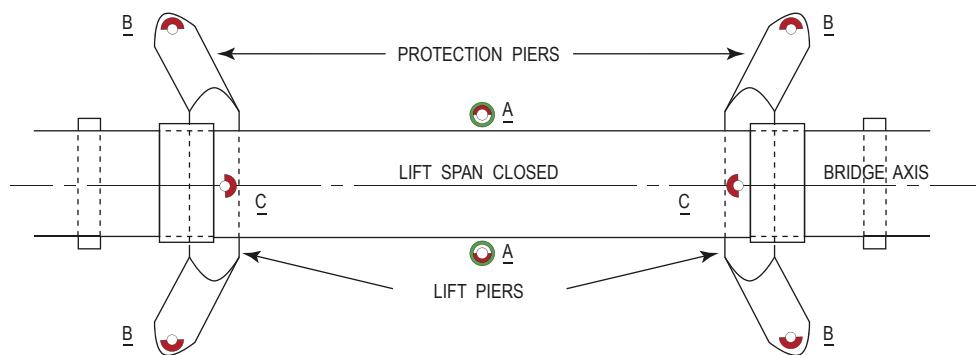
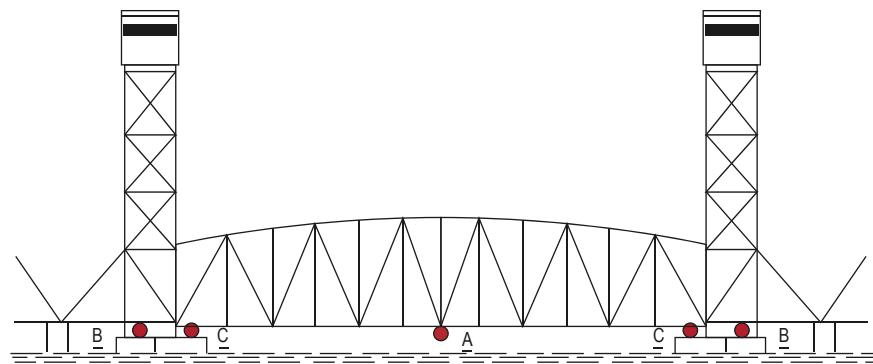
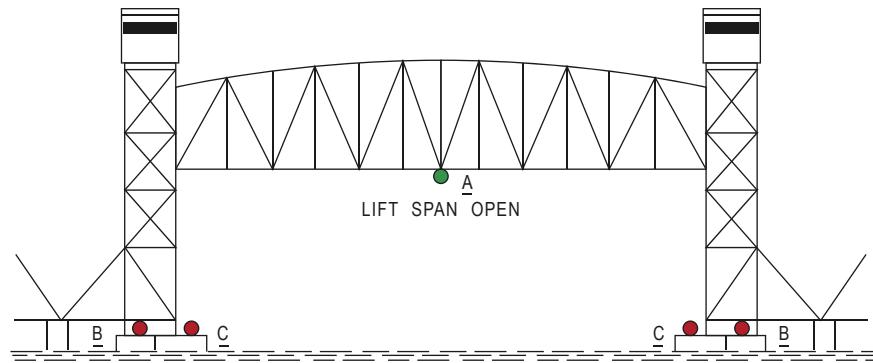


DEPARTMENT OF HOMELAND SECURITY
UNITED STATES COAST GUARD
BRIDGE PROGRAM OFFICE
MINIMUM LIGHTING FOR BASCULE BRIDGES
33 CFR 118.80





DEPARTMENT OF HOMELAND SECURITY
UNITED STATES COAST GUARD
BRIDGE PROGRAM OFFICE
MINIMUM LIGHTING FOR VERTICAL LIFT BRIDGES
33 CFR 118.85



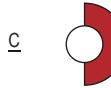
LIGHT COLORS AND HORIZONTAL ARCS OF VISIBILITY



LIFT SPAN—360° GREEN WHEN LIFT SPAN IS FULLY OPEN FOR NAVIGATION, 180° RED FOR ALL OTHER POSITIONS OF LIFT SPAN (180° GREEN AND RED PERMITTED ON BRIDGES LIGHTED PRIOR TO JAN 1, 1949, UNTIL LIGHTS ARE REPAIRED OR REPLACED).



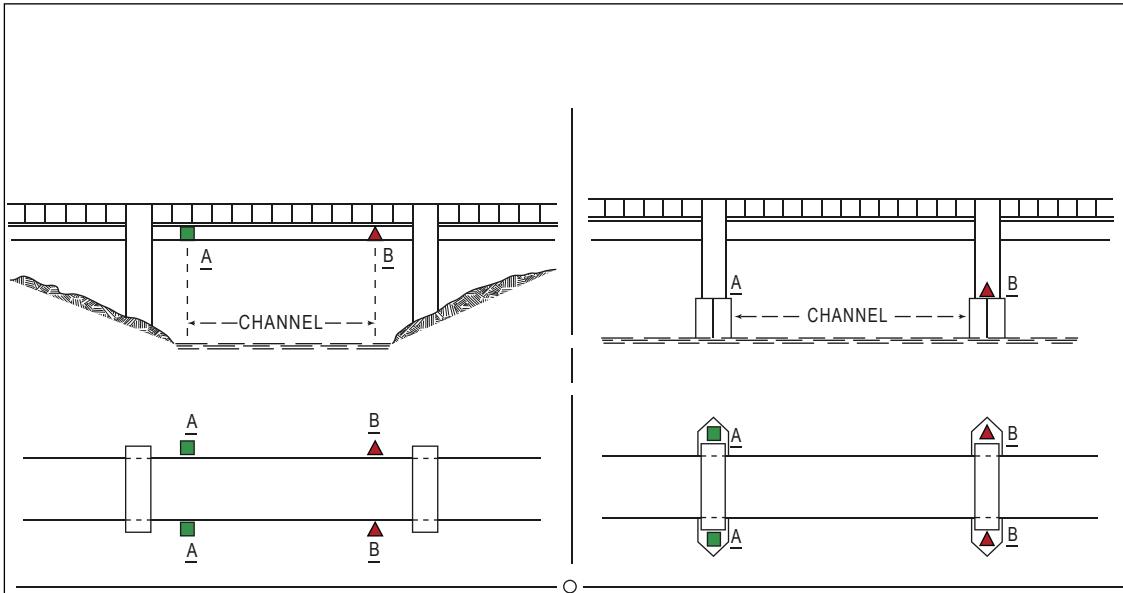
PIER—180° RED



BRIDGE AXIS—180° RED.
MAY BE OMITTED WHEN LIFT AND PROTECTION PIERS ARE STRAIGHT ON THEIR CHANNEL FACES.



DEPARTMENT OF HOMELAND SECURITY
UNITED STATES COAST GUARD
BRIDGE PROGRAM OFFICE
RETROREFLECTIVE PANELS ON BRIDGE PIERS
33 CFR 118.100



PANEL SIZE AND COLORS



A GREEN SQUARE RETROREFLECTIVE PANELS SHALL BE USED. THE PANELS SHALL BE AT LEAST 36 SQUARE INCHES IN AREA TO PROVIDE A NOMINAL NIGHTTIME VISIBILITY DISTANCE OF AT LEAST ONE-HALF MILE.

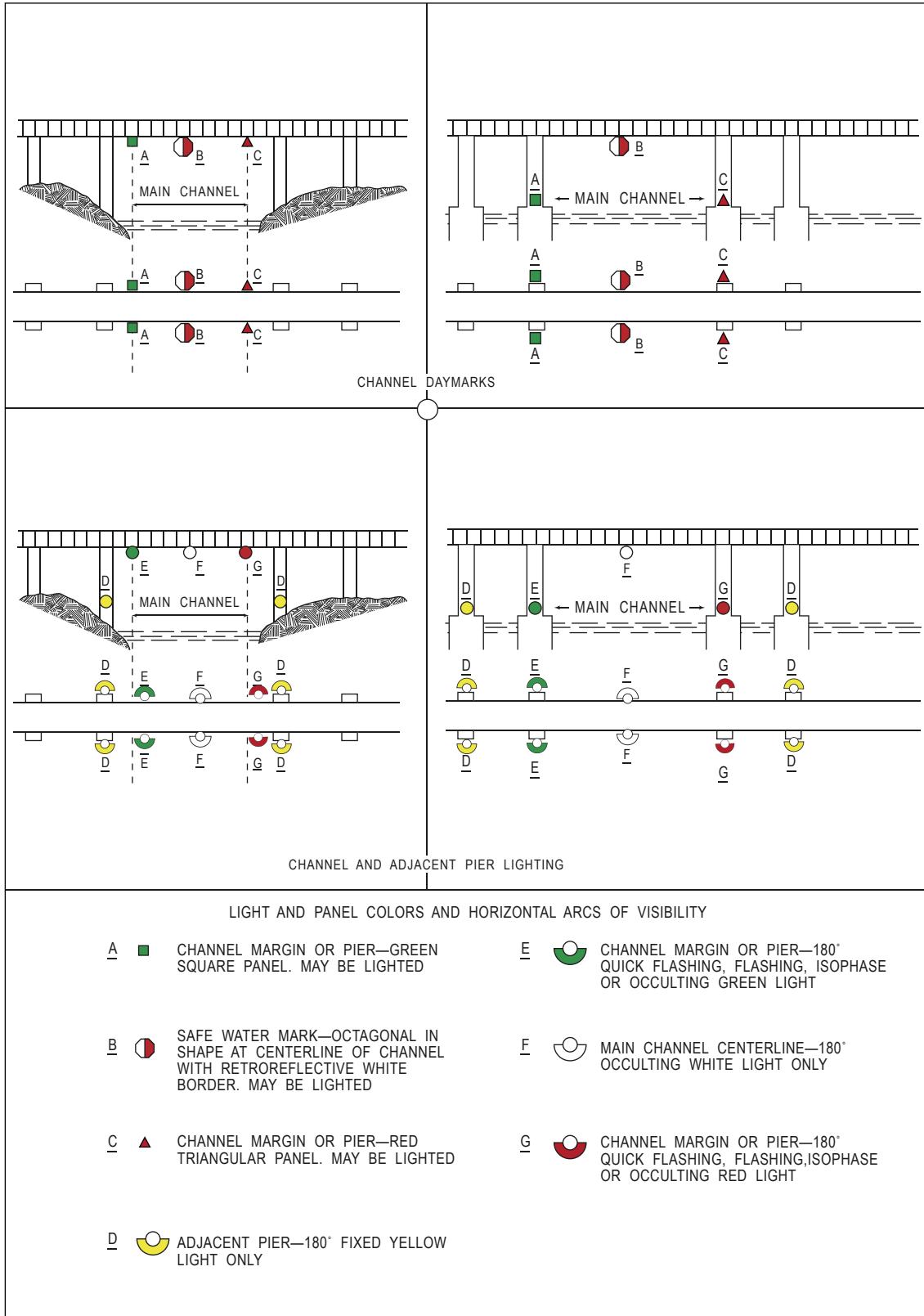


B RED TRIANGULAR RETROREFLECTIVE PANELS SHALL BE USED. THE PANELS SHALL BE AT LEAST 36 SQUARE INCHES IN AREA TO PROVIDE A NOMINAL NIGHTTIME VISIBILITY DISTANCE OF AT LEAST ONE-HALF MILE.

NOTE: RETROREFLECTIVE PANELS MAY ALSO BE REQUIRED OR AUTHORIZED AS A BACK UP FOR BRIDGE LIGHTING (SEE 33CFR 118.100(b)).



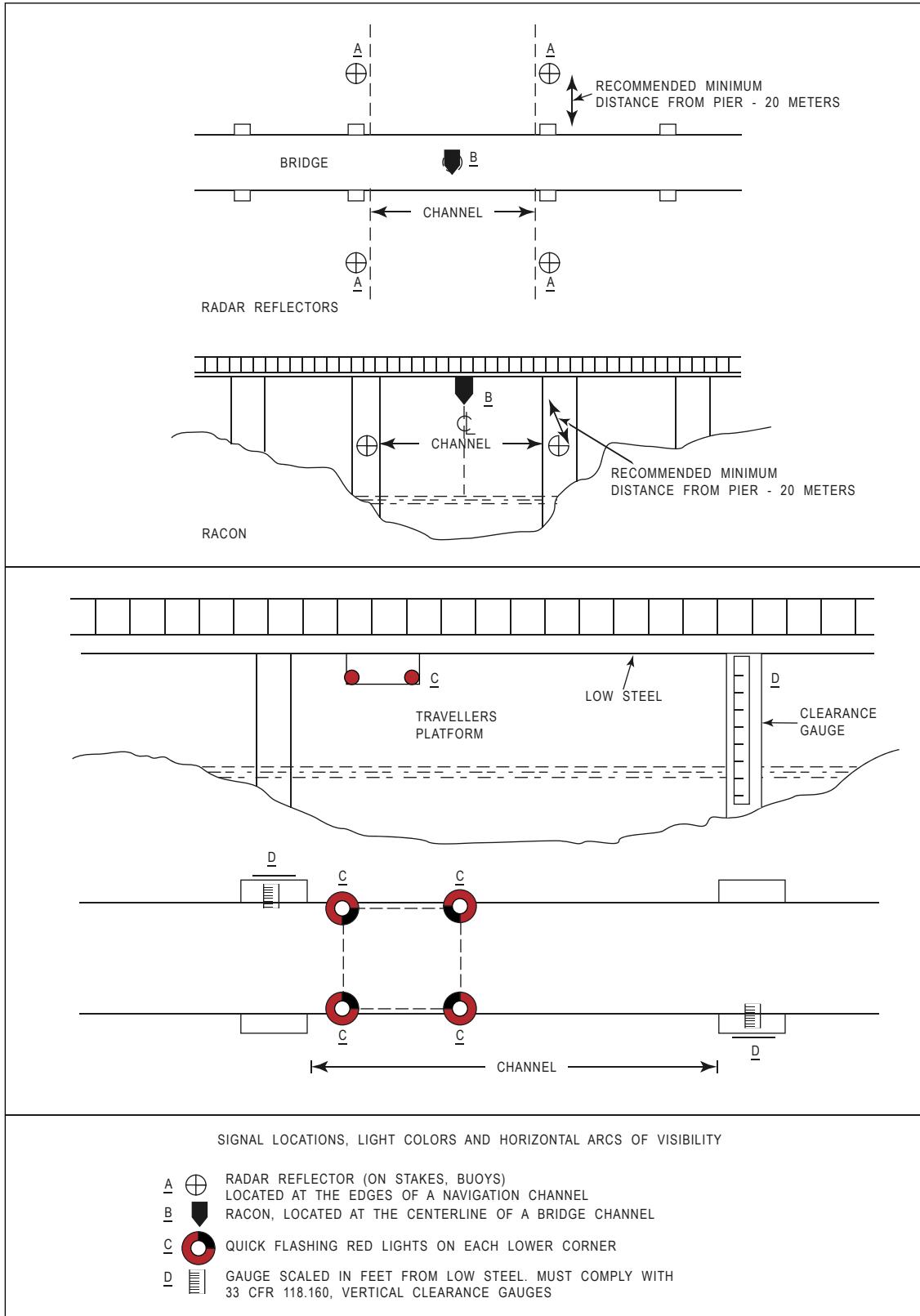
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BRIDGE PROGRAM OFFICE
DAYMARKS AND LATERAL LIGHTING ON BRIDGES
33 CFR 118.110





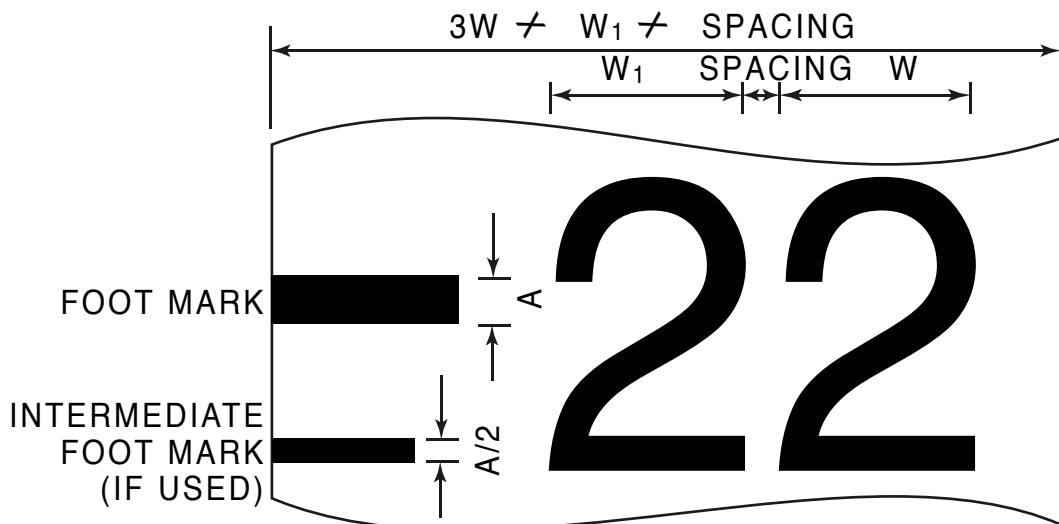
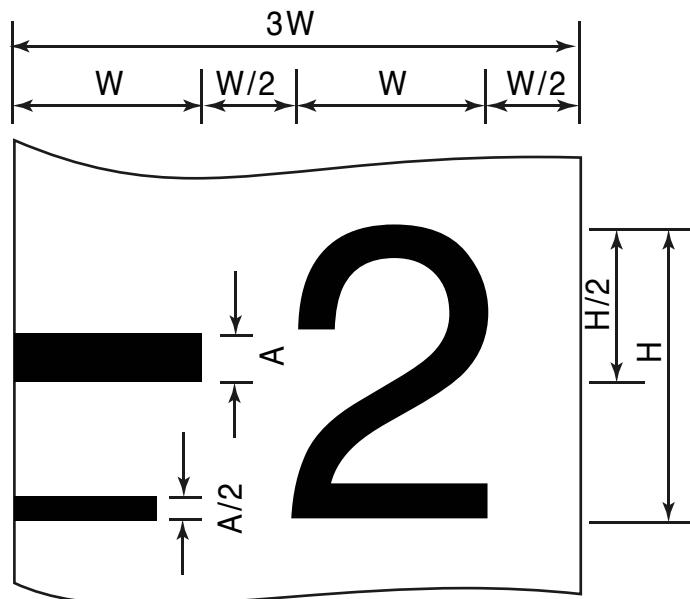
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BRIDGE PROGRAM OFFICE

RADAR REFLECTORS AND RACONS 33 CFR 118.120
TRAVELLER PLATFORMS 33 CFR 118.150
CLEARANCE GAUGES 33 CFR 118.160





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UNITED STATES COAST GUARD
BRIDGE PROGRAM OFFICE
STANDARD BRIDGE CLEARANCE GAUGE
33 CFR 118.160



LEGEND

NOTE: SIZE, TYPE AND SPACING
OF NUMERALS SHALL
CONFORM TO THE
FEDERAL HIGHWAY
ADMINISTRATION
"STANDARD ALPHABET
FOR HIGHWAY SIGNS"

W WIDTH OF WIDEST SINGLE
NUMERAL EXCLUDING NUMERAL 4

H HEIGHT OF NUMERAL
PRESCRIBED FOR DISTANCE
VISIBILITY

A WIDTH OF STROKE



DEPARTMENT OF HOMELAND SECURITY
UNITED STATES COAST GUARD
BRIDGE PROGRAM OFFICE
HEIGHT AND VERTICAL SPACING
FOR CLEARANCE GAUGE NUMERALS
33 CFR 118.160

