

②

AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG	649 0'
VERTICAL CLEARANCE AT POOL STAGE	83.0'
VERTICAL CLEARANCE - 1861 H W	61.3'

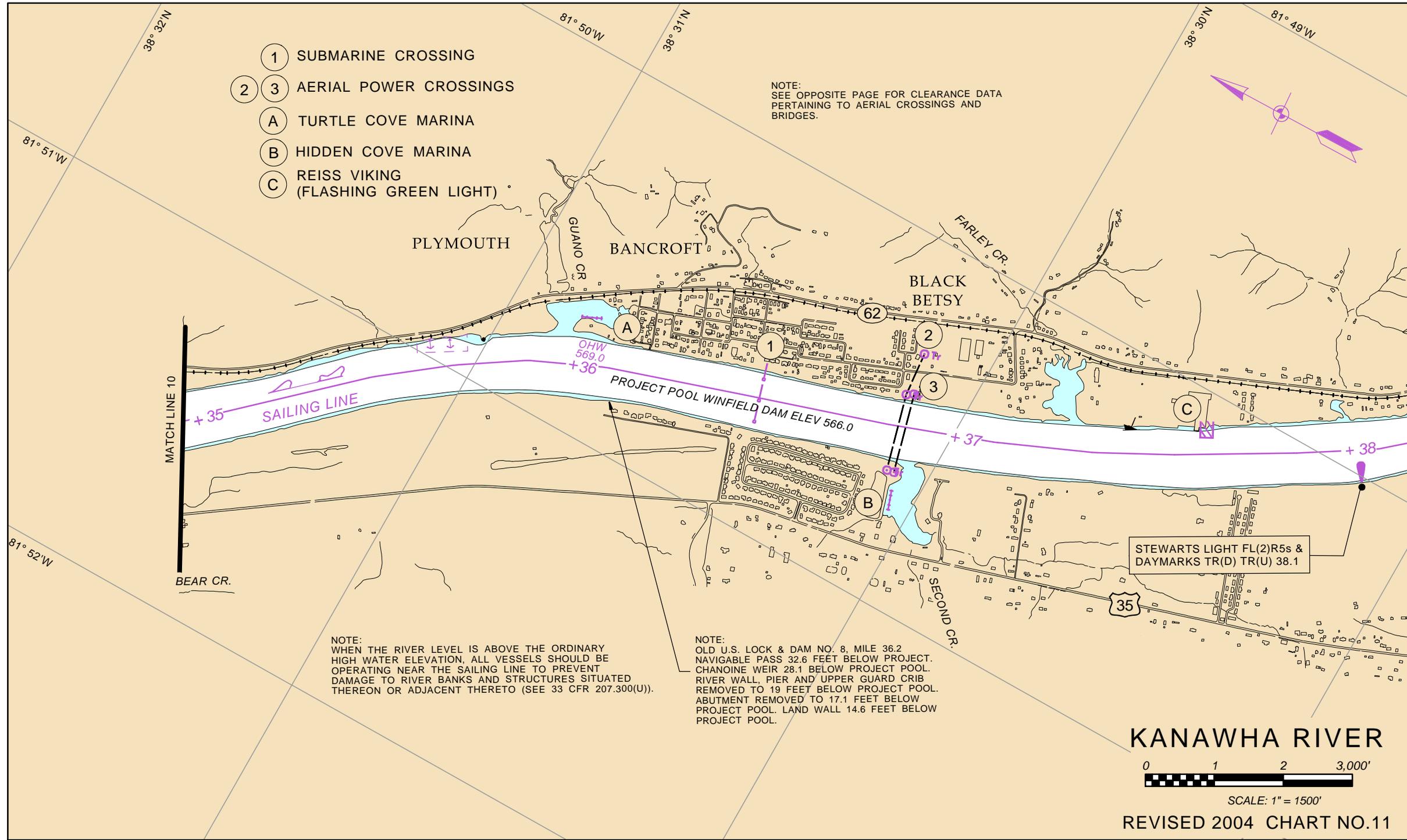
③

AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG	683 5'
VERTICAL CLEARANCE AT POOL STAGE	117 5'
VERTICAL CLEARANCE - 1861 H W.	95 8'

- ① SUBMARINE CROSSING
- ② ③ AERIAL POWER CROSSINGS
- Ⓐ TURTLE COVE MARINA
- Ⓑ HIDDEN COVE MARINA
- Ⓒ REISS VIKING (FLASHING GREEN LIGHT)

NOTE:
SEE OPPOSITE PAGE FOR CLEARANCE DATA
PERTAINING TO AERIAL CROSSINGS AND
BRIDGES.



①

AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG	671.0'
VERTICAL CLEARANCE AT POOL STAGE	105.0'
VERTICAL CLEARANCE - 1861 H.W.	81.4'

②

AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG	656.0'
VERTICAL CLEARANCE AT POOL STAGE	90.0'
VERTICAL CLEARANCE - 1861 H.W.	65.1'

③

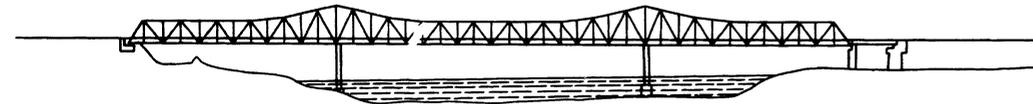
AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG	648.0'
VERTICAL CLEARANCE AT POOL STAGE	82.0'
VERTICAL CLEARANCE - 1861 H.W.	57.1'

④

AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG	648.0'
VERTICAL CLEARANCE AT POOL STAGE	82.0'
VERTICAL CLEARANCE - 1861 H.W.	57.1'



⑥

AERIAL POWER CROSSING

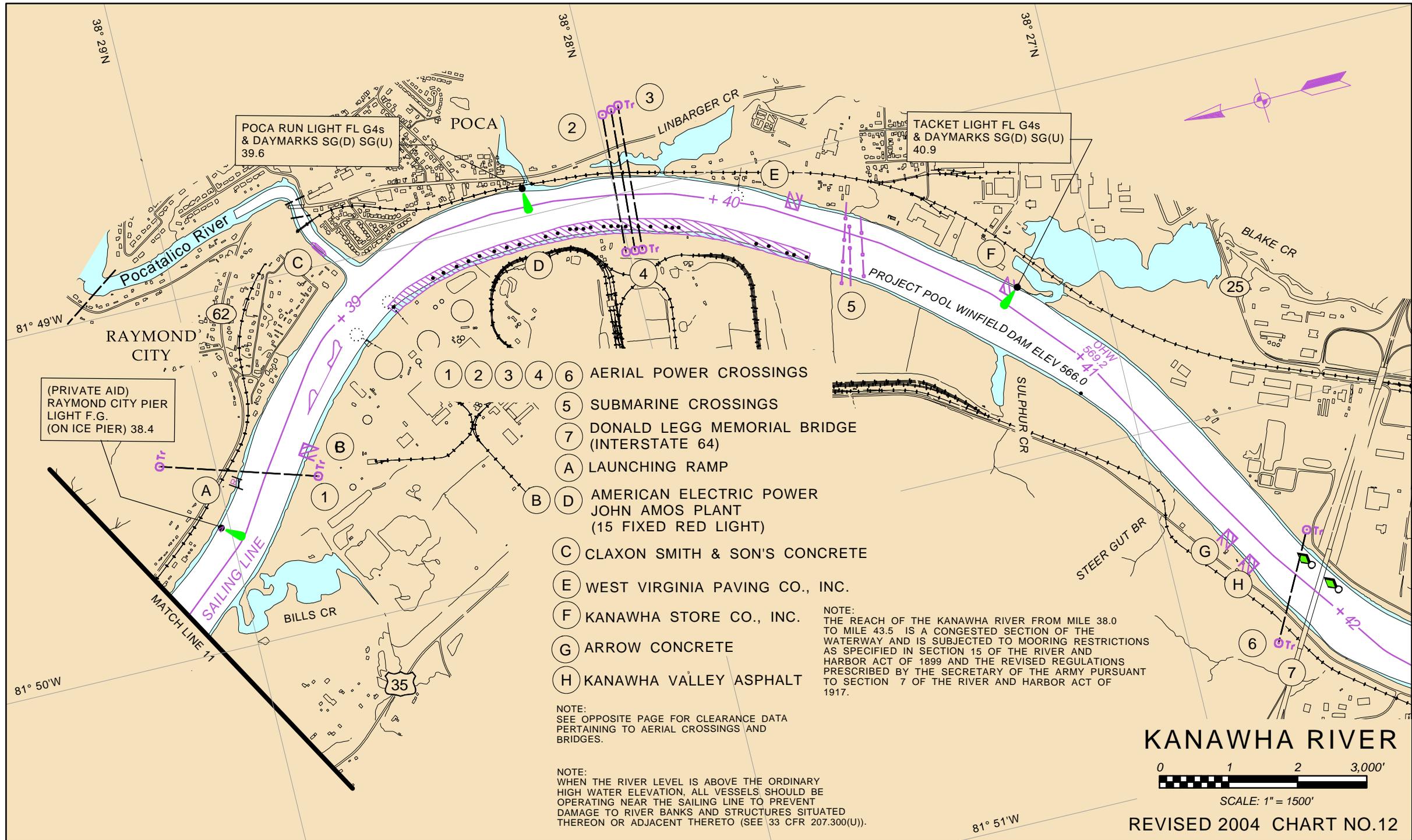
ELEVATION LOW POINT OF SAG	646.5'
VERTICAL CLEARANCE AT POOL STAGE	80.5'
VERTICAL CLEARANCE - 1861 H.W.	53.7'

⑦

DONALD LEGG MEMORIAL BRIDGE

INTERSTATE ROUTE SIXTY-FOUR (LOOKING DOWNSTREAM)

ELEVATION OF LOW STEEL	631.0'
VERTICAL CLEARANCE AT POOL STAGE	65.0'
VERTICAL CLEARANCE - 1861 H.W.	38.0'
HORIZONTAL CLEARANCE:	
RIGHT ANGLE TO CHANNEL	453.5,
ACTUAL	548.5'



POCA RUN LIGHT FL G4s
& DAYMARKS SG(D) SG(U)
39.6

TACKET LIGHT FL G4s
& DAYMARKS SG(D) SG(U)
40.9

(PRIVATE AID)
RAYMOND CITY PIER
LIGHT F.G.
(ON ICE PIER) 38.4

- 1 2 3 4 6 AERIAL POWER CROSSINGS
- 5 SUBMARINE CROSSINGS
- 7 DONALD LEGG MEMORIAL BRIDGE
(INTERSTATE 64)
- A LAUNCHING RAMP
- D AMERICAN ELECTRIC POWER
JOHN AMOS PLANT
(15 FIXED RED LIGHT)
- C CLAXON SMITH & SON'S CONCRETE
- E WEST VIRGINIA PAVING CO., INC.
- F KANAWHA STORE CO., INC.
- G ARROW CONCRETE
- H KANAWHA VALLEY ASPHALT

NOTE:
SEE OPPOSITE PAGE FOR CLEARANCE DATA
PERTAINING TO AERIAL CROSSINGS AND
BRIDGES.

NOTE:
WHEN THE RIVER LEVEL IS ABOVE THE ORDINARY
HIGH WATER ELEVATION, ALL VESSELS SHOULD BE
OPERATING NEAR THE SAILING LINE TO PREVENT
DAMAGE TO RIVER BANKS AND STRUCTURES SITUATED
THEREON OR ADJACENT THERETO (SEE 33 CFR 207.300(U)).

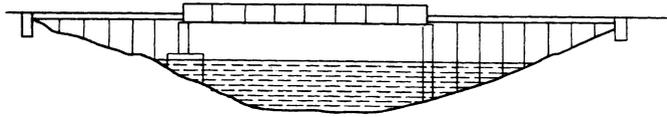
NOTE:
THE REACH OF THE KANAWHA RIVER FROM MILE 38.0
TO MILE 43.5 IS A CONGESTED SECTION OF THE
WATERWAY AND IS SUBJECT TO MOORING RESTRICTIONS
AS SPECIFIED IN SECTION 15 OF THE RIVER AND
HARBOR ACT OF 1899 AND THE REVISED REGULATIONS
PRESCRIBED BY THE SECRETARY OF THE ARMY PURSUANT
TO SECTION 7 OF THE RIVER AND HARBOR ACT OF
1917.

KANAWHA RIVER



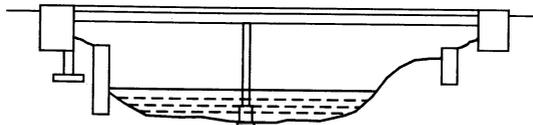
SCALE: 1" = 1500'

REVISED 2004 CHART NO.12



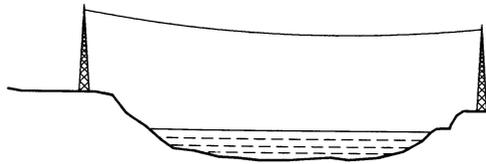
5

N. Y. C. R. R. BRIDGE
(LOOKING UPSTREAM)



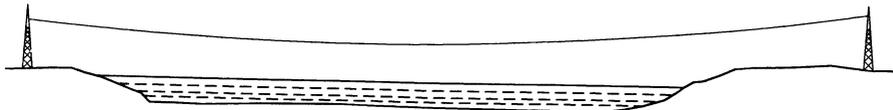
7

ROUTE #62 HIGHWAY BRIDGE
(LOOKING UPSTREAM)



11

AERIAL POWER CROSSING
(LOOKING UPSTREAM)



17

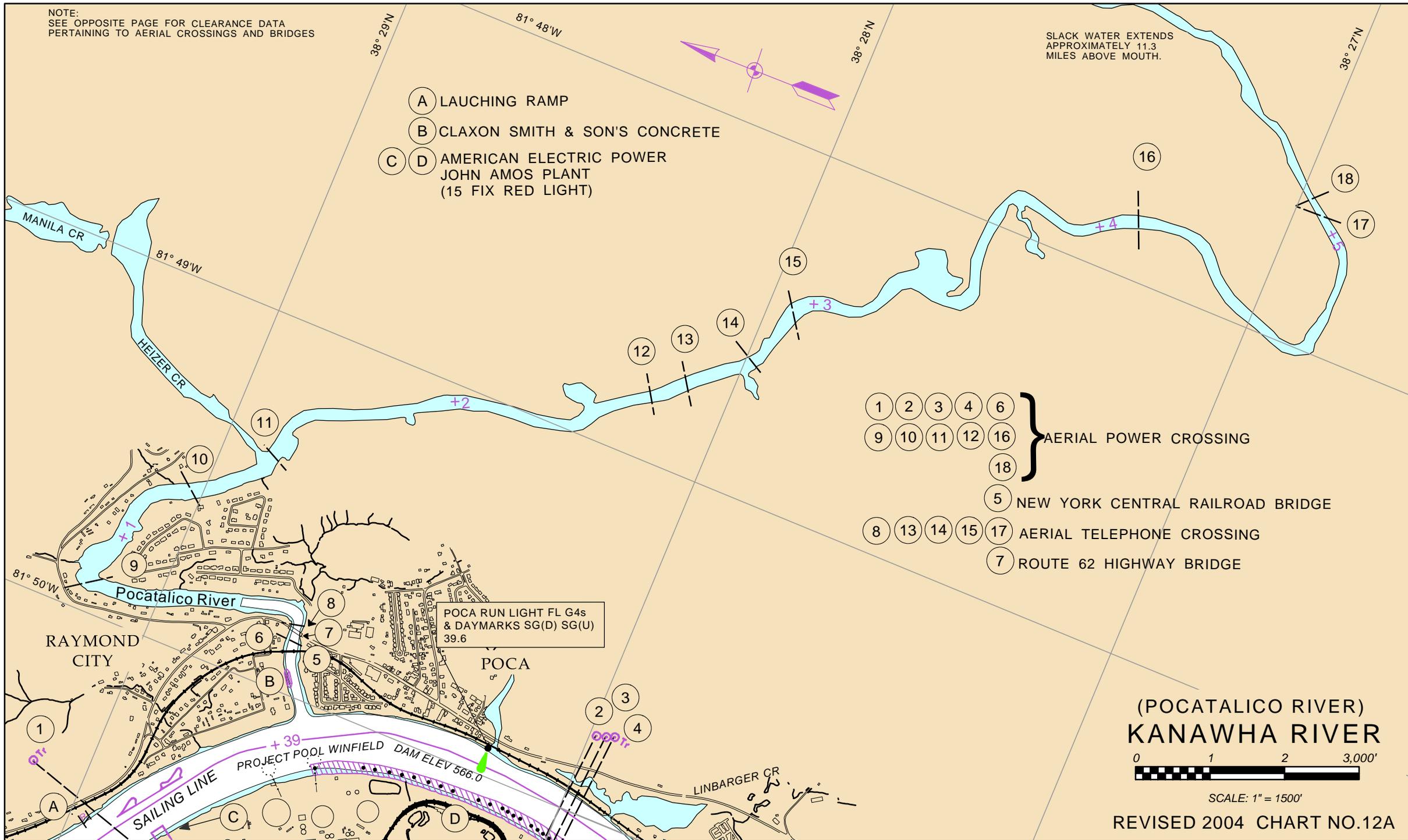
AERIAL POWER CROSSING
(LOOKING UPSTREAM)

NO.	TYPE	ELEV. LOW STEEL OR LOW POINT OF SAG	CLEARANCE		
			PROJECT POOL	1861 HIGH WATER	HORIZONTAL
4	TELEPHONE	599.7'	33.7'	9.7'	-
5	BRIDGE	585.0'	19.0'	- 5.0'	114.55'
6	POWER	586.3'	20.3'	- 3.7'	-
7	BRIDGE				
8	TELEPHONE	607.0'	41.0'	17.0'	-
9	POWER	591.1'	25.1'	1.1'	-
10	POWER	599.7'	33.7'	9.7'	-
11	POWER	648.6'	82.6'	58.6'	-
9	POWER	600.1'	34.1'	10.1'	-
13	POWER	586.0'	20.0'	- 4.0'	-
14	POWER	620.3'	54.3'	30.0'	-
15	POWER	589.4'	23.4'	- 0.6'	-
16	TELEPHONE	615.3'	49.3'	25.3'	-
17	POWER	584.9'	18.9'	- 5.1'	-
18	TELEPHONE	589.8'	23.3'	- 0.2'	-
19	POWER	607.1'	41.1'	17.1'	-
20	POWER	600.2'	34.2'	10.2'	-

NOTE:
SEE OPPOSITE PAGE FOR CLEARANCE DATA
PERTAINING TO AERIAL CROSSINGS AND BRIDGES

- (A) LAUNCHING RAMP
- (B) CLAXON SMITH & SON'S CONCRETE
- (C) AMERICAN ELECTRIC POWER
- (D) JOHN AMOS PLANT
(15 FIX RED LIGHT)

SLACK WATER EXTENDS
APPROXIMATELY 11.3
MILES ABOVE MOUTH.



POCA RUN LIGHT FL G4s
& DAYMARKS SG(D) SG(U)
39.6

(POCOTALICO RIVER)
KANAWHA RIVER



SCALE: 1" = 1500'

REVISED 2004 CHART NO.12A

5

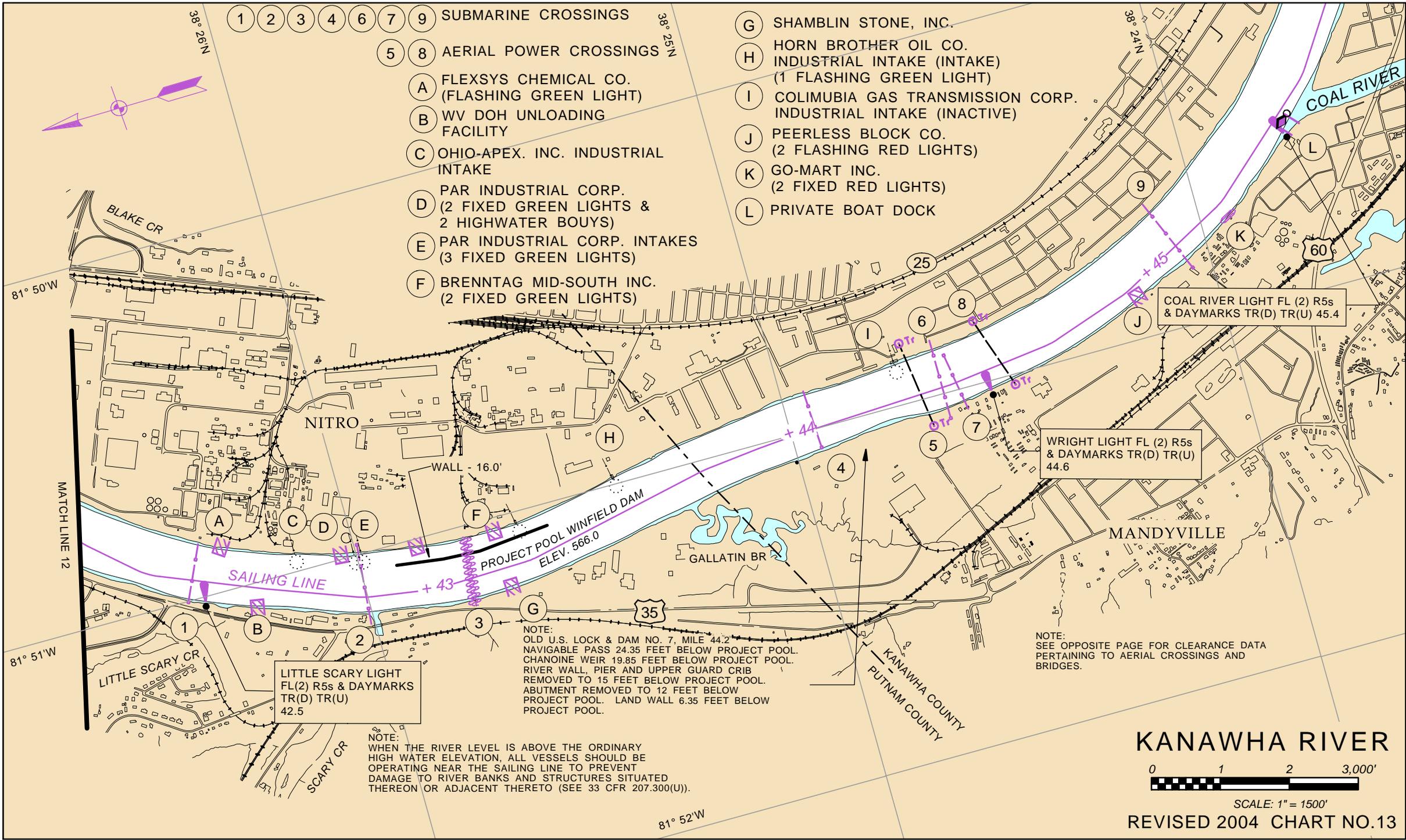
AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG	632.8'
VERTICAL CLEARANCE AT POOL STAGE	66.8'
VERTICAL CLEARANCE-1861 H.W.	37.7'

8

AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG	649.0'
VERTICAL CLEARANCE AT POOL STAGE	83.0'
VERTICAL CLEARANCE-1861 H.W.	53.7'



- 1 2 3 4 6 7 9 SUBMARINE CROSSINGS
- 5 8 AERIAL POWER CROSSINGS
- A FLEXSYS CHEMICAL CO. (FLASHING GREEN LIGHT)
 - B WV DOH UNLOADING FACILITY
 - C OHIO-APEX, INC. INDUSTRIAL INTAKE
 - D PAR INDUSTRIAL CORP. (2 FIXED GREEN LIGHTS & 2 HIGHWATER BOUYS)
 - E PAR INDUSTRIAL CORP. INTAKES (3 FIXED GREEN LIGHTS)
 - F BRENTAG MID-SOUTH INC. (2 FIXED GREEN LIGHTS)

- G SHAMBLIN STONE, INC.
- H HORN BROTHER OIL CO. INDUSTRIAL INTAKE (INTAKE) (1 FLASHING GREEN LIGHT)
- I COLIMUBIA GAS TRANSMISSION CORP. INDUSTRIAL INTAKE (INACTIVE)
- J PEERLESS BLOCK CO. (2 FLASHING RED LIGHTS)
- K GO-MART INC. (2 FIXED RED LIGHTS)
- L PRIVATE BOAT DOCK



MATCH LINE 12

LITTLE SCARY LIGHT
FL(2) R5s & DAYMARKS
TR(D) TR(U)
42.5

NOTE:
WHEN THE RIVER LEVEL IS ABOVE THE ORDINARY
HIGH WATER ELEVATION, ALL VESSELS SHOULD BE
OPERATING NEAR THE SAILING LINE TO PREVENT
DAMAGE TO RIVER BANKS AND STRUCTURES SITUATED
THEREON OR ADJACENT THERETO (SEE 33 CFR 207.300(U)).

NOTE:
OLD U.S. LOCK & DAM NO. 7, MILE 44.2
NAVIGABLE PASS 24.35 FEET BELOW PROJECT POOL.
CHANOINE WEIR 19.85 FEET BELOW PROJECT POOL.
RIVER WALL, PIER AND UPPER GUARD CRIB
REMOVED TO 15 FEET BELOW PROJECT POOL.
ABUTMENT REMOVED TO 12 FEET BELOW
PROJECT POOL. LAND WALL 6.35 FEET BELOW
PROJECT POOL.

WRIGHT LIGHT FL (2) R5s
& DAYMARKS TR(D) TR(U)
44.6

COAL RIVER LIGHT FL (2) R5s
& DAYMARKS TR(D) TR(U) 45.4

KANAWHA RIVER



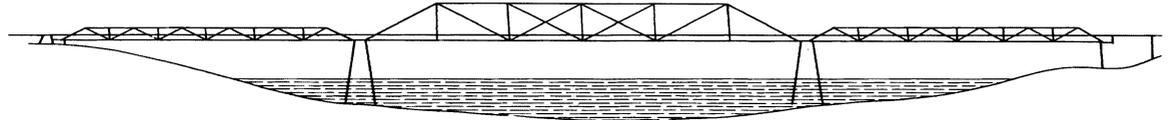
SCALE: 1" = 1500'

REVISED 2004 CHART NO.13



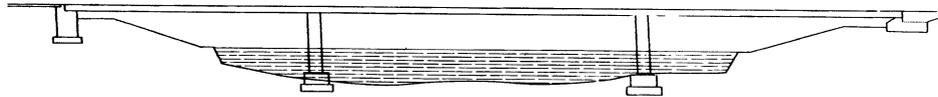
①

ST. ALBANS HIGHWAY BRIDGE
(LOOKING UPSTREAM)



③

C. & O. RY. BRIDGE
(LOOKING UPSTREAM)



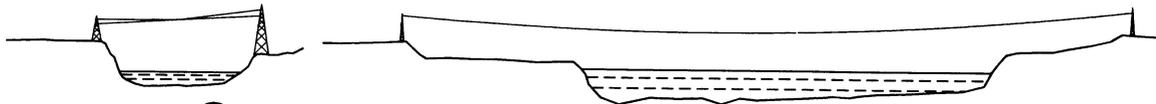
⑥

MAIN STREET BRIDGE
(LOOKING UPSTREAM)



⑬

PEDESTRIAN BRIDGE
(LOOKING UPSTREAM)



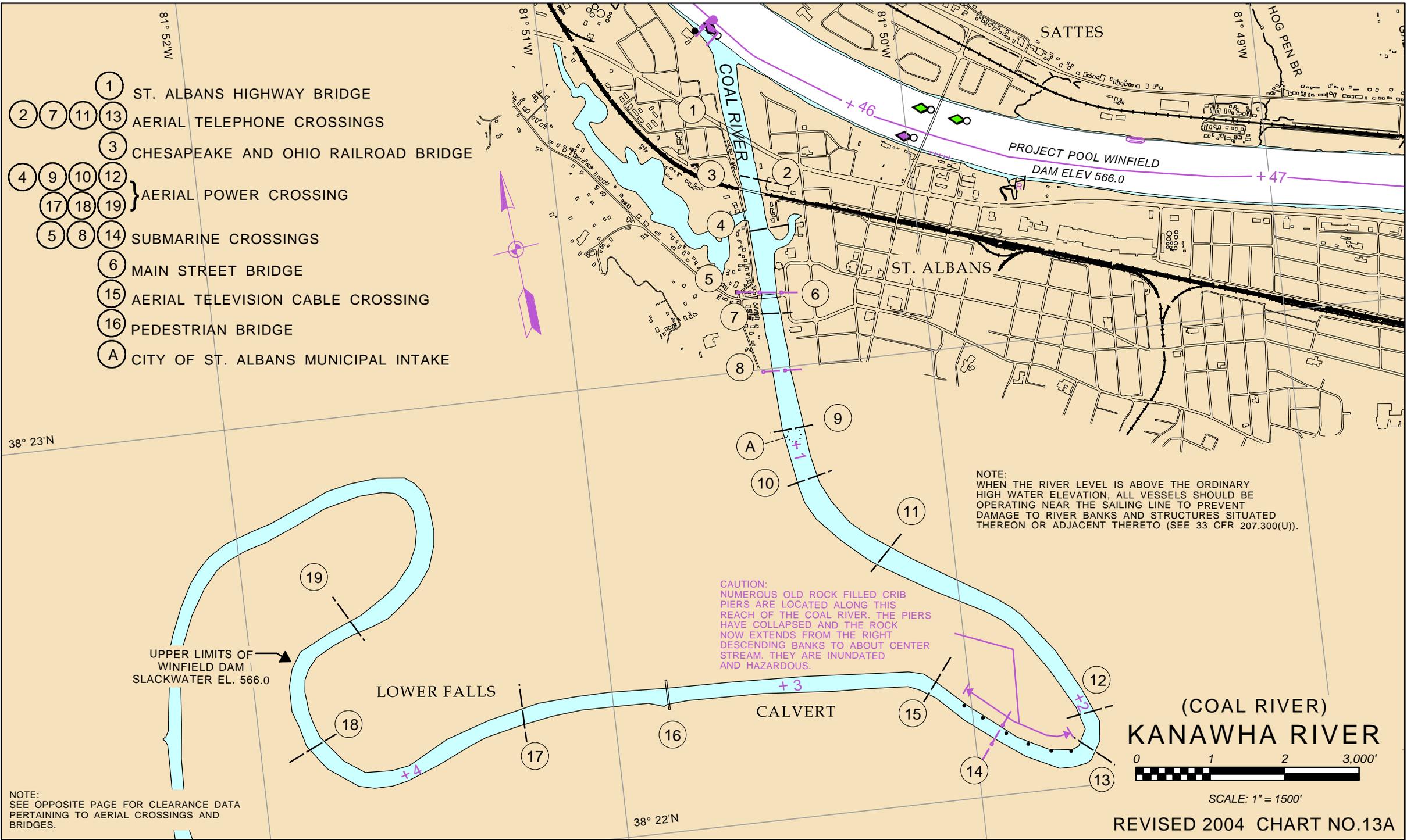
⑫

AERIAL POWER CROSSING
(LOOKING UPSTREAM)

⑪

AERIAL POWER CROSSING
(LOOKING UPSTREAM)

NO.	TYPE	ELEV. LOW STEEL OR LOW POINT OF SAG	CLEARANCE		
			PROJECT POOL	1861 HIGH WATER	HORIZONTAL
1	BRIDGE	587.5'	21.5'	- 8.5'	111.0'
2	TELEPHONE	600.7'	34.7'	4.7'	-
3	BRIDGE	590.9'	24.9'	5.1'	144.5'
4	POWER	617.5'	51.5'	21.5'	-
6	BRIDGE	587.5'	21.5'	8.5'	111.0'
7	TELEPHONE	596.5'	30.5'	0.5'	-
9	POWER	607.8'	41.8'	11.6'	-
10	POWER	605.5'	39.5'	9.3'	-
11	TELEPHONE	605.0'	39.0'	8.9'	-
12	TELEPHONE	618.5'	52.5'	22.3'	-
13	TV CABLE	601.4'	35.4'	5.2'	-
15	POWER	609.6'	43.6'	13.4'	-
16	BRIDGE	597.8'	31.8'	1.6'	246.5'
17	POWER	635.2'	69.2'	39.0'	-
18	POWER	599.2'	33.2'	3.0'	-
19	POWER	615.5'	49.5'	19.3'	-



- ① ST. ALBANS HIGHWAY BRIDGE
- ② ⑦ ⑪ ⑬ AERIAL TELEPHONE CROSSINGS
- ③ CHESAPEAKE AND OHIO RAILROAD BRIDGE
- ④ ⑨ ⑩ ⑫ } AERIAL POWER CROSSING
- ⑰ ⑱ ⑲ } AERIAL POWER CROSSING
- ⑤ ⑧ ⑭ SUBMARINE CROSSINGS
- ⑥ MAIN STREET BRIDGE
- ⑮ AERIAL TELEVISION CABLE CROSSING
- ⑯ PEDESTRIAN BRIDGE
- Ⓐ CITY OF ST. ALBANS MUNICIPAL INTAKE

NOTE:
 WHEN THE RIVER LEVEL IS ABOVE THE ORDINARY
 HIGH WATER ELEVATION, ALL VESSELS SHOULD BE
 OPERATING NEAR THE SAILING LINE TO PREVENT
 DAMAGE TO RIVER BANKS AND STRUCTURES SITUATED
 THEREON OR ADJACENT THERETO (SEE 33 CFR 207.300(U)).

CAUTION:
 NUMEROUS OLD ROCK FILLED CRIB
 PIERS ARE LOCATED ALONG THIS
 REACH OF THE COAL RIVER. THE PIERS
 HAVE COLLAPSED AND THE ROCK
 NOW EXTENDS FROM THE RIGHT
 DESCENDING BANKS TO ABOUT CENTER
 STREAM. THEY ARE INUNDATED
 AND HAZARDOUS.

UPPER LIMITS OF
 WINFIELD DAM
 SLACKWATER EL. 566.0

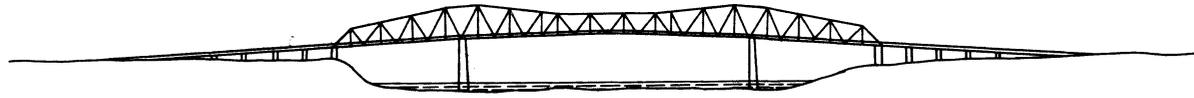
NOTE:
 SEE OPPOSITE PAGE FOR CLEARANCE DATA
 PERTAINING TO AERIAL CROSSINGS AND
 BRIDGES.

(COAL RIVER)
KANAWHA RIVER



SCALE: 1" = 1500'

REVISED 2004 CHART NO.13A



①

SAINT ALBANS, NITRO BRIDGE (LOOKING DOWNSTREAM)

CHANNEL SPAN

ELEVATION OF LOW STEEL	626.5'
VERTICAL CLEARANCE AT POOL STAGE	60.5'
VERTICAL CLEARANCE -1861 H.W.	29.5'
HORIZONTAL CLEARANCE	430.0'

②

AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG	663.0'
VERTICAL CLEARANCE AT POOL STAGE	97.0'
VERTICAL CLEARANCE -1861 H.W.	64.7'

③

AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG	654.9'
VERTICAL CLEARANCE AT POOL STAGE	88.9'
VERTICAL CLEARANCE -1861 H.W.	56.6'

④

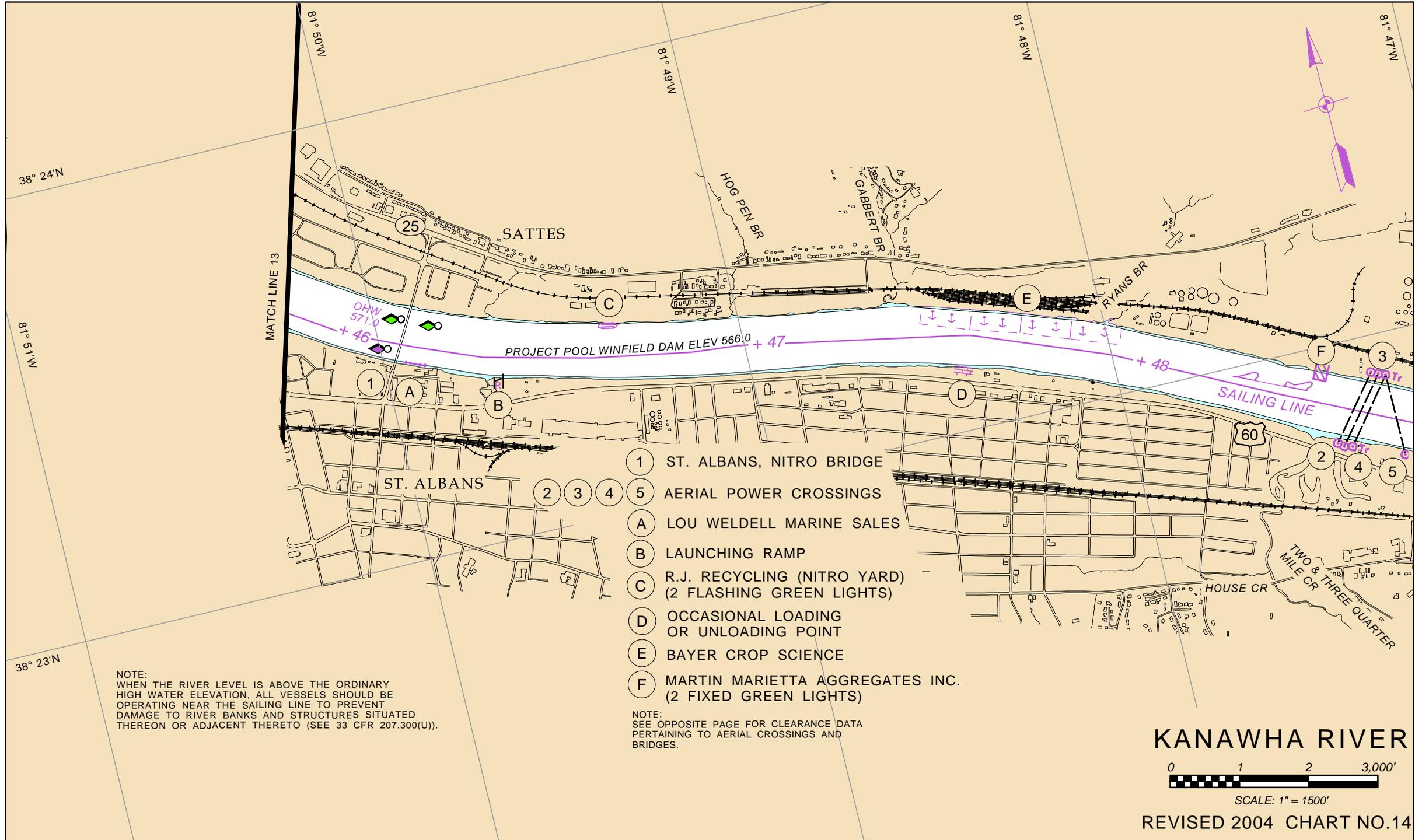
AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG	658.9'
VERTICAL CLEARANCE AT POOL STAGE	92.9'
VERTICAL CLEARANCE -1861 H.W.	60.6'

⑤

AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG	641.0'
VERTICAL CLEARANCE AT POOL STAGE	75.0'
VERTICAL CLEARANCE -1861 H.W.	42.7'



38° 24'N

81° 51'W

38° 23'N

MATCH LINE 13

81° 50'W

81° 49'W

81° 48'W

81° 47'W

SATTES

ST. ALBANS

PROJECT POOL WINFIELD DAM ELEV 566.0 + 47

SAILING LINE

- 1 ST. ALBANS, NITRO BRIDGE
- 2 3 4 5 AERIAL POWER CROSSINGS
- A LOU WELDELL MARINE SALES
- B LAUNCHING RAMP
- C R.J. RECYCLING (NITRO YARD)
(2 FLASHING GREEN LIGHTS)
- D OCCASIONAL LOADING
OR UNLOADING POINT
- E BAYER CROP SCIENCE
- F MARTIN MARIETTA AGGREGATES INC.
(2 FIXED GREEN LIGHTS)

NOTE:
WHEN THE RIVER LEVEL IS ABOVE THE ORDINARY
HIGH WATER ELEVATION, ALL VESSELS SHOULD BE
OPERATING NEAR THE SAILING LINE TO PREVENT
DAMAGE TO RIVER BANKS AND STRUCTURES SITUATED
THEREON OR ADJACENT THERETO (SEE 33 CFR 207.300(U)).

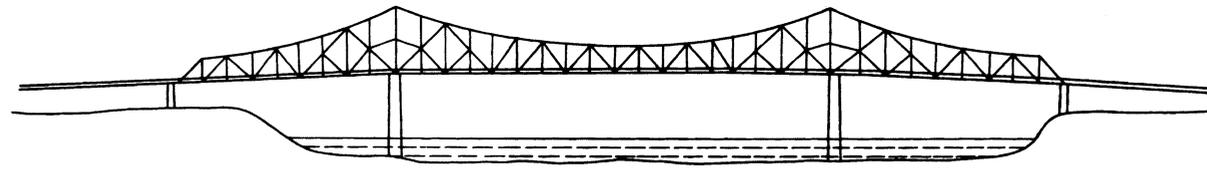
NOTE:
SEE OPPOSITE PAGE FOR CLEARANCE DATA
PERTAINING TO AERIAL CROSSINGS AND
BRIDGES.

KANAWHA RIVER



SCALE: 1" = 1500'

REVISED 2004 CHART NO.14

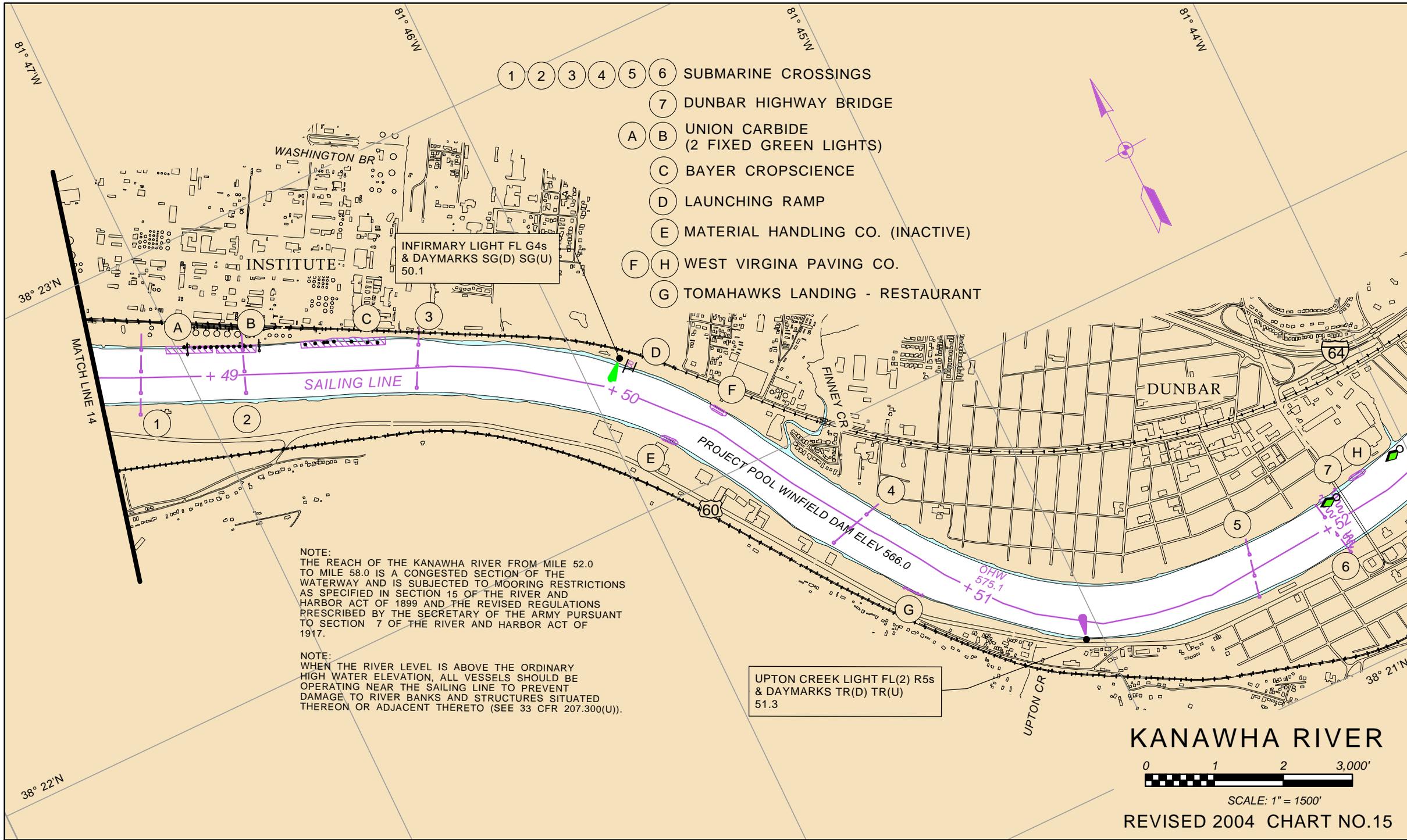


7

DUNBAR HIGHWAY BRIDGE (LOOKING DOWNSTREAM)

CHANNEL SPAN

	MIDDLE OF SPAN AT CENTER 400' WIDTH	
ELEVATION OF LOW STEEL	635.5'	630.5'
VERTICAL CLEARANCE AT POOL STAGE	69.5'	64.5'
VERTICAL CLEARANCE-1861 H.W.	34.9'	29.9'
HORIZONTAL CLEARANCE	441.0'	



- 1 2 3 4 5 6 SUBMARINE CROSSINGS
- 7 DUNBAR HIGHWAY BRIDGE
- A B UNION CARBIDE (2 FIXED GREEN LIGHTS)
- C BAYER CROPSCIENCE
- D LAUNCHING RAMP
- E MATERIAL HANDLING CO. (INACTIVE)
- F H WEST VIRGINIA PAVING CO.
- G TOMAHAWKS LANDING - RESTAURANT

NOTE:
 THE REACH OF THE KANAWHA RIVER FROM MILE 52.0 TO MILE 58.0 IS A CONGESTED SECTION OF THE WATERWAY AND IS SUBJECT TO MOORING RESTRICTIONS AS SPECIFIED IN SECTION 15 OF THE RIVER AND HARBOR ACT OF 1899 AND THE REVISED REGULATIONS PRESCRIBED BY THE SECRETARY OF THE ARMY PURSUANT TO SECTION 7 OF THE RIVER AND HARBOR ACT OF 1917.

NOTE:
 WHEN THE RIVER LEVEL IS ABOVE THE ORDINARY HIGH WATER ELEVATION, ALL VESSELS SHOULD BE OPERATING NEAR THE SAILING LINE TO PREVENT DAMAGE TO RIVER BANKS AND STRUCTURES SITUATED THEREON OR ADJACENT THERETO (SEE 33 CFR 207.300(U)).

UPTON CREEK LIGHT FL(2) R5s & DAYMARKS TR(D) TR(U) 51.3

INFIRMARY LIGHT FL G4s & DAYMARKS SG(D) SG(U) 50.1

KANAWHA RIVER
 0 1 2 3,000'
 SCALE: 1" = 1500'
 REVISED 2004 CHART NO.15

④

AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG
VERTICAL CLEARANCE AT POOL STAGE
VERTICAL CLEARANCE - 1861 H.W.

664.5'
98.5'
62.3'

⑨

AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG
VERTICAL CLEARANCE AT POOL STAGE
VERTICAL CLEARANCE - 1861 H.W.

667.4'
101.4'
64.8'

⑩

AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG
VERTICAL CLEARANCE AT POOL STAGE
VERTICAL CLEARANCE - 1861 H.W.

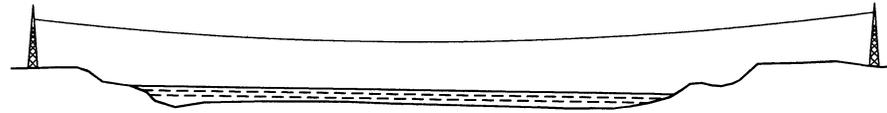
661.5'
95.5'
58.5'

⑪

AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG
VERTICAL CLEARANCE AT POOL STAGE
VERTICAL CLEARANCE - 1861 H.W.

636.7'
70.7'
33.8'



⑫

AERIAL POWER CROSSING
(LOOKING DOWNSTREAM)

⑫

AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG
VERTICAL CLEARANCE AT POOL STAGE
VERTICAL CLEARANCE - 1861 H.W.

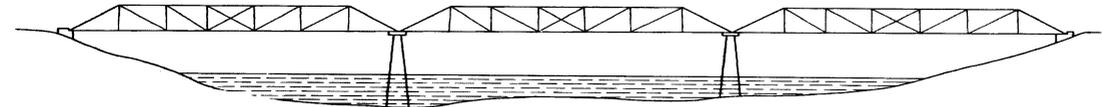
620.3'
54.3'
17.8'

NO.	TYPE	ELEV. LOW STEEL OR LOW POINT OF SAG	CLEARANCE		
			PROJECT POOL	1861 HIGH WATER	HORIZONTAL
1	BRIDGE	630.5'	64.5'	39.5'	400.0'
12	BRIDGE	600.1'	34.1'	- 2.9'	126.0'



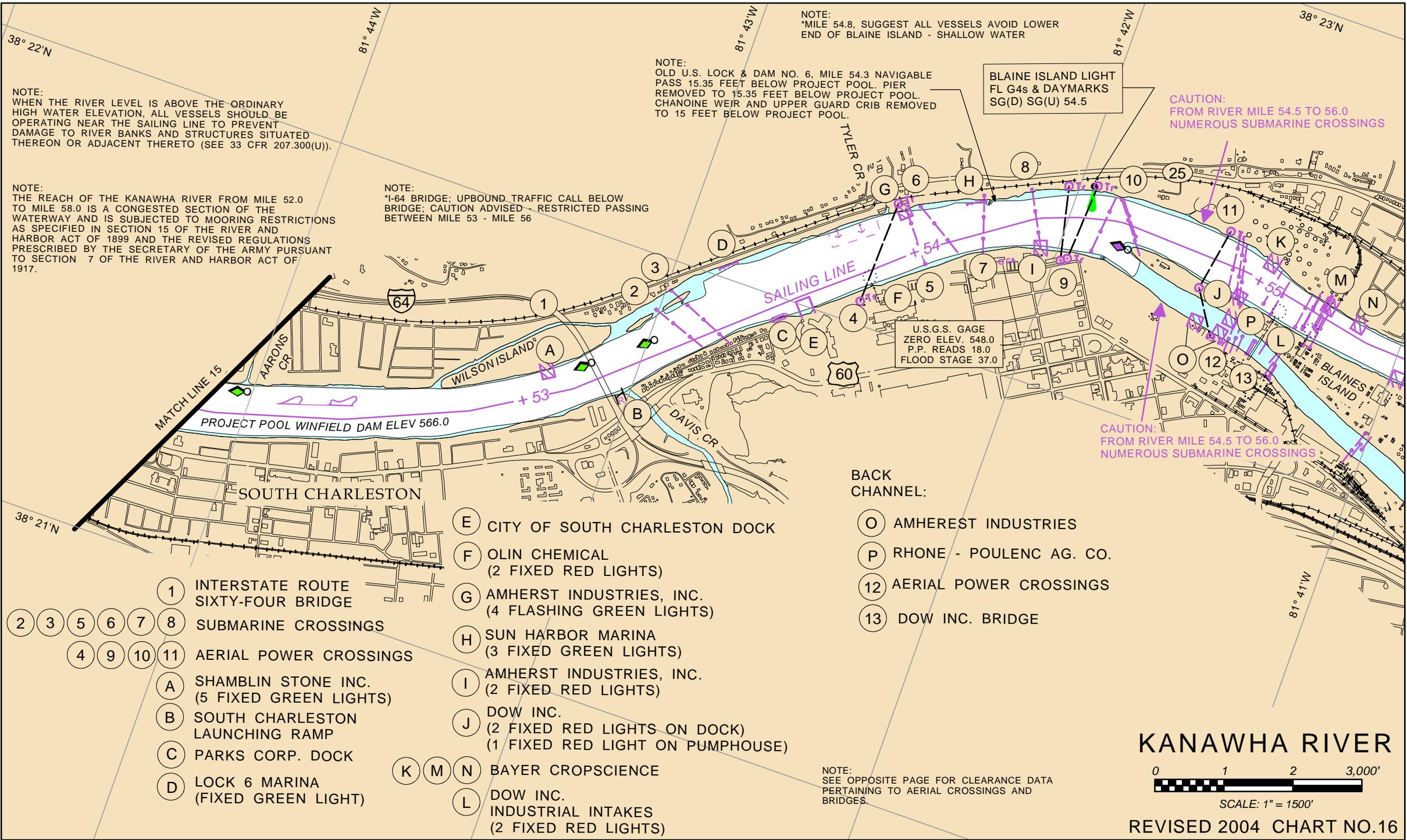
①

INTERSTATE ROUTE SIXTY-FOUR BRIDGE
(LOOKING DOWNSTREAM)



⑬

DOW INC. BRIDGE
(LOOKING DOWNSTREAM)



NOTE:
WHEN THE RIVER LEVEL IS ABOVE THE ORDINARY HIGH WATER ELEVATION, ALL VESSELS SHOULD BE OPERATING NEAR THE SAILING LINE TO PREVENT DAMAGE TO RIVER BANKS AND STRUCTURES SITUATED THEREON OR ADJACENT THERETO (SEE 33 CFR 207.300(U)).

NOTE:
THE REACH OF THE KANAWHA RIVER FROM MILE 52.0 TO MILE 58.0 IS A CONGESTED SECTION OF THE WATERWAY AND IS SUBJECT TO MOORING RESTRICTIONS AS SPECIFIED IN SECTION 15 OF THE RIVER AND HARBOR ACT OF 1899 AND THE REVISED REGULATIONS PRESCRIBED BY THE SECRETARY OF THE ARMY PURSUANT TO SECTION 7 OF THE RIVER AND HARBOR ACT OF 1917.

NOTE:
*I-64 BRIDGE; UPBOUND TRAFFIC CALL BELOW BRIDGE; CAUTION ADVISED - RESTRICTED PASSING BETWEEN MILE 53 - MILE 56

NOTE:
*MILE 54.8, SUGGEST ALL VESSELS AVOID LOWER END OF BLAINE ISLAND - SHALLOW WATER

NOTE:
OLD U.S. LOCK & DAM NO. 6, MILE 54.3 NAVIGABLE PASS 15.35 FEET BELOW PROJECT POOL. PIER REMOVED TO 15.35 FEET BELOW PROJECT POOL. CHANOINE WEIR AND UPPER GUARD CRIB REMOVED TO 15 FEET BELOW PROJECT POOL.

BLAINE ISLAND LIGHT
FL G4s & DAYMARKS
SG(D) SG(U) 54.5

CAUTION:
FROM RIVER MILE 54.5 TO 56.0
NUMEROUS SUBMARINE CROSSINGS

U.S.G.S. GAGE
ZERO ELEV. 548.0
P.P. READS 18.0
FLOOD STAGE 37.0

CAUTION:
FROM RIVER MILE 54.5 TO 56.0
NUMEROUS SUBMARINE CROSSINGS

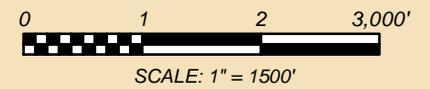
BACK CHANNEL:

- 1 INTERSTATE ROUTE SIXTY-FOUR BRIDGE
- 2 3 5 6 7 8 SUBMARINE CROSSINGS
- 4 9 10 11 AERIAL POWER CROSSINGS
- A SHAMBLIN STONE INC. (5 FIXED GREEN LIGHTS)
- B SOUTH CHARLESTON LAUNCHING RAMP
- C PARKS CORP. DOCK
- D LOCK 6 MARINA (FIXED GREEN LIGHT)
- E CITY OF SOUTH CHARLESTON DOCK
- F OLIN CHEMICAL (2 FIXED RED LIGHTS)
- G AMHERST INDUSTRIES, INC. (4 FLASHING GREEN LIGHTS)
- H SUN HARBOR MARINA (3 FIXED GREEN LIGHTS)
- I AMHERST INDUSTRIES, INC. (2 FIXED RED LIGHTS)
- J DOW INC. (2 FIXED RED LIGHTS ON DOCK) (1 FIXED RED LIGHT ON PUMPHOUSE)
- K M N BAYER CROPSCIENCE
- L DOW INC. INDUSTRIAL INTAKES (2 FIXED RED LIGHTS)

- O AMHERST INDUSTRIES
- P RHONE - POULENC AG. CO.
- 12 AERIAL POWER CROSSINGS
- 13 DOW INC. BRIDGE

NOTE:
SEE OPPOSITE PAGE FOR CLEARANCE DATA PERTAINING TO AERIAL CROSSINGS AND BRIDGES.

KANAWHA RIVER



3

AERIAL POWER CROSSING

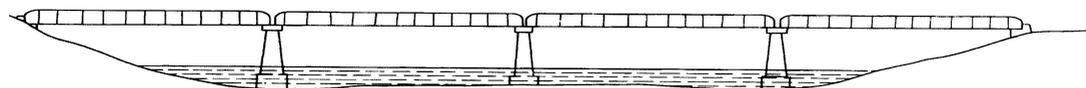
ELEVATION LOW POINT OF SAG 652.0'
 VERTICAL CLEARANCE AT POOL STAGE 86.0'
 VERTICAL CLEARANCE -1861 H.W. 48.4'

6

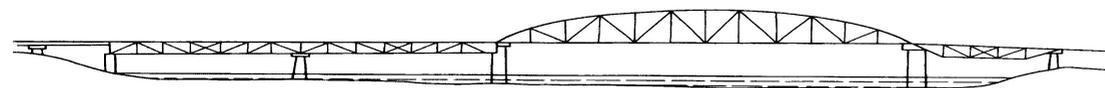
AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG 657.0'
 VERTICAL CLEARANCE AT POOL STAGE 91.0'
 VERTICAL CLEARANCE -1861 H.W. 53.8'

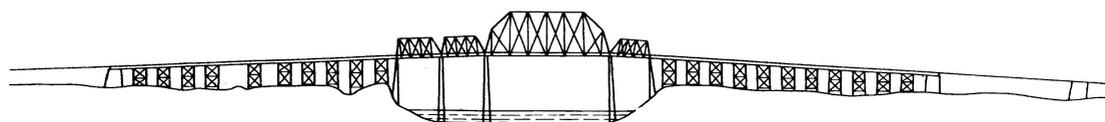
NO.	TYPE	ELEV. LOW STEEL OR LOW POINT OF SAG	CLEARANCE		
			PROJECT POOL	1861 HIGH WATER	HORIZONTAL
1	BRIDGE	599.4'	33.4'	- 4.0'	90.0'
7	BRIDGE	632.1'	66.1'	28.1'	400.0'
10	BRIDGE	635.7'	69.7'	31.4'	405.0'
13	BRIDGE	633.0'	67.0'	28.0'	400.0'



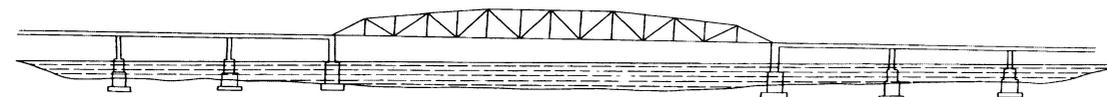
1
DOW INC. RAILROAD BRIDGE
 (LOOKING DOWNSTREAM)



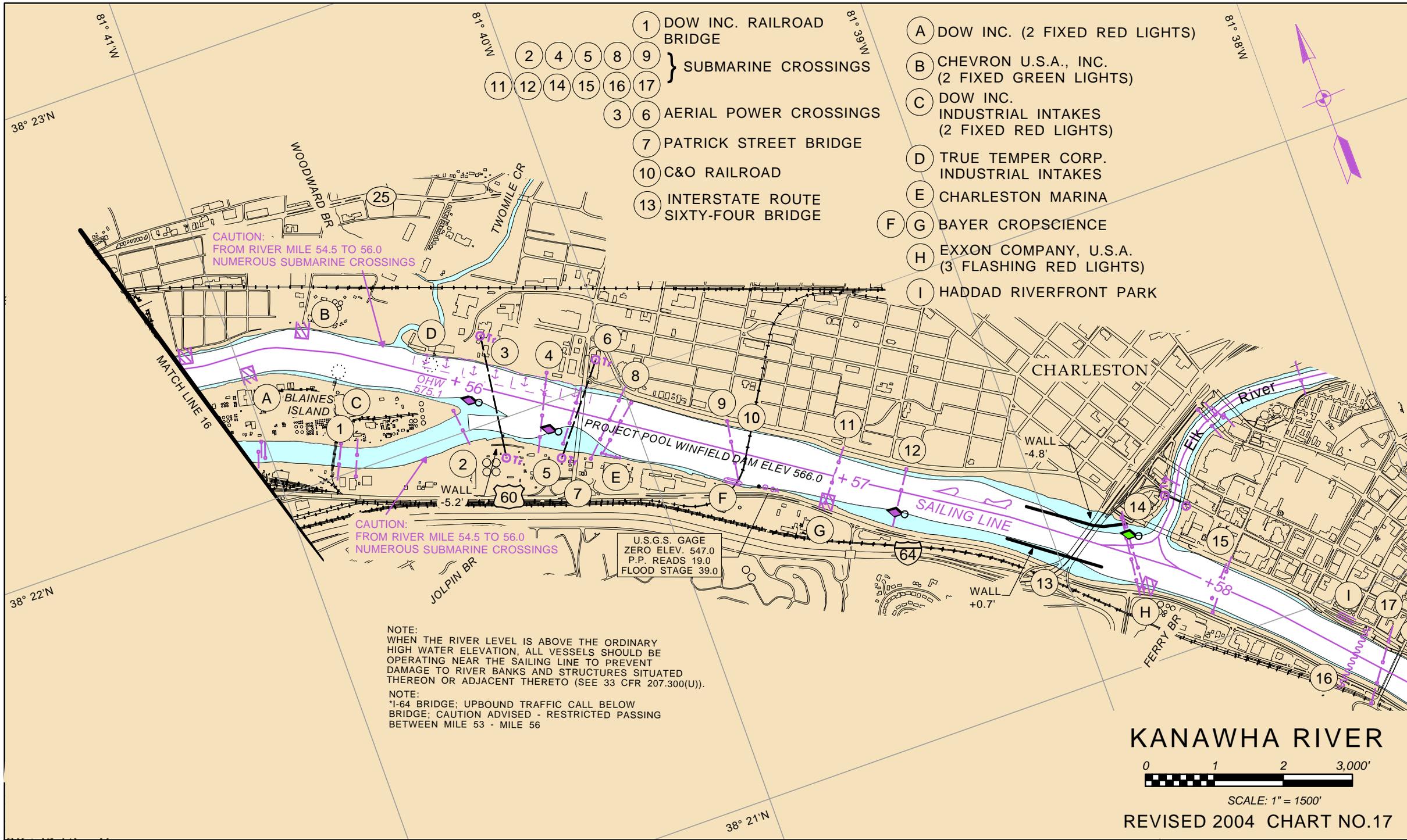
7
PATRICK STREET BRIDGE
 (LOOKING DOWNSTREAM)



10
C & O RY. BRIDGE
 (LOOKING DOWNSTREAM)



13
INTERSTATE ROUTE SIXTY-FOUR BRIDGE
 (LOOKING DOWNSTREAM)



- 1 DOW INC. RAILROAD BRIDGE
- 2 4 5 8 9 } SUBMARINE CROSSINGS
- 11 12 14 15 16 17 }
- 3 6 AERIAL POWER CROSSINGS
- 7 PATRICK STREET BRIDGE
- 10 C&O RAILROAD
- 13 INTERSTATE ROUTE SIXTY-FOUR BRIDGE

- A DOW INC. (2 FIXED RED LIGHTS)
- B CHEVRON U.S.A., INC. (2 FIXED GREEN LIGHTS)
- C DOW INC. INDUSTRIAL INTAKES (2 FIXED RED LIGHTS)
- D TRUE TEMPER CORP. INDUSTRIAL INTAKES
- E CHARLESTON MARINA
- F G BAYER CROPSCIENCE
- H EXXON COMPANY, U.S.A. (3 FLASHING RED LIGHTS)
- I HADDAD RIVERFRONT PARK

CAUTION:
FROM RIVER MILE 54.5 TO 56.0
NUMEROUS SUBMARINE CROSSINGS

CAUTION:
FROM RIVER MILE 54.5 TO 56.0
NUMEROUS SUBMARINE CROSSINGS

U.S.G.S. GAGE
ZERO ELEV. 547.0
P.P. READS 19.0
FLOOD STAGE 39.0

NOTE:
WHEN THE RIVER LEVEL IS ABOVE THE ORDINARY
HIGH WATER ELEVATION, ALL VESSELS SHOULD BE
OPERATING NEAR THE SAILING LINE TO PREVENT
DAMAGE TO RIVER BANKS AND STRUCTURES SITUATED
THEREON OR ADJACENT THERETO (SEE 33 CFR 207.300(U)).

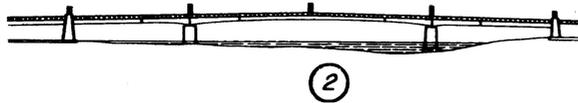
NOTE:
*1-64 BRIDGE; UPBOUND TRAFFIC CALL BELOW
BRIDGE; CAUTION ADVISED - RESTRICTED PASSING
BETWEEN MILE 53 - MILE 56

KANAWHA RIVER



SCALE: 1" = 1500'

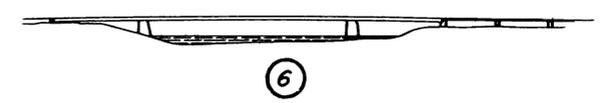
REVISED 2004 CHART NO.17



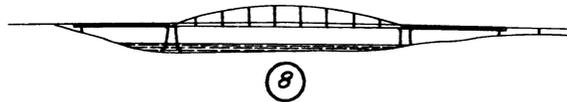
2
KANAWHA BOULEVARD BRIDGE
(LOOKING UPSTREAM)



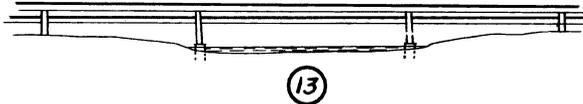
4
VIRGINIA STREET BRIDGE
(LOOKING UPSTREAM)



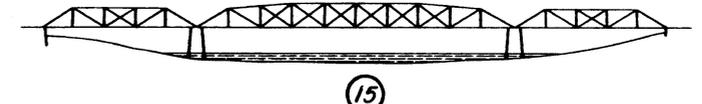
6
QUARRIER STREET BRIDGE
(LOOKING UPSTREAM)



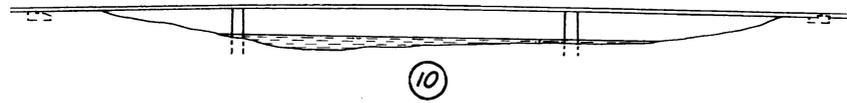
8
LEE STREET BRIDGE
(LOOKING UPSTREAM)



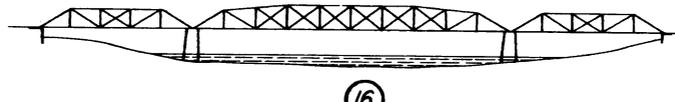
13
INTERSTATE ROUTE SEVENTY-SEVEN TWIN BRIDGES
(LOOKING UPSTREAM)



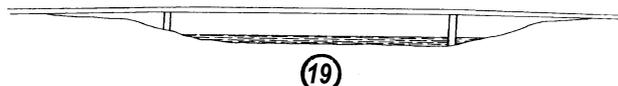
15
CHARLESTON INTERURBAN BRIDGE
(LOOKING UPSTREAM)



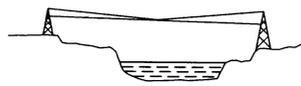
10
WASHINGTON STREET BRIDGE
(LOOKING UPSTREAM)



16
NEW YORK CENTRAL R.R. BRIDGE
(LOOKING UPSTREAM)



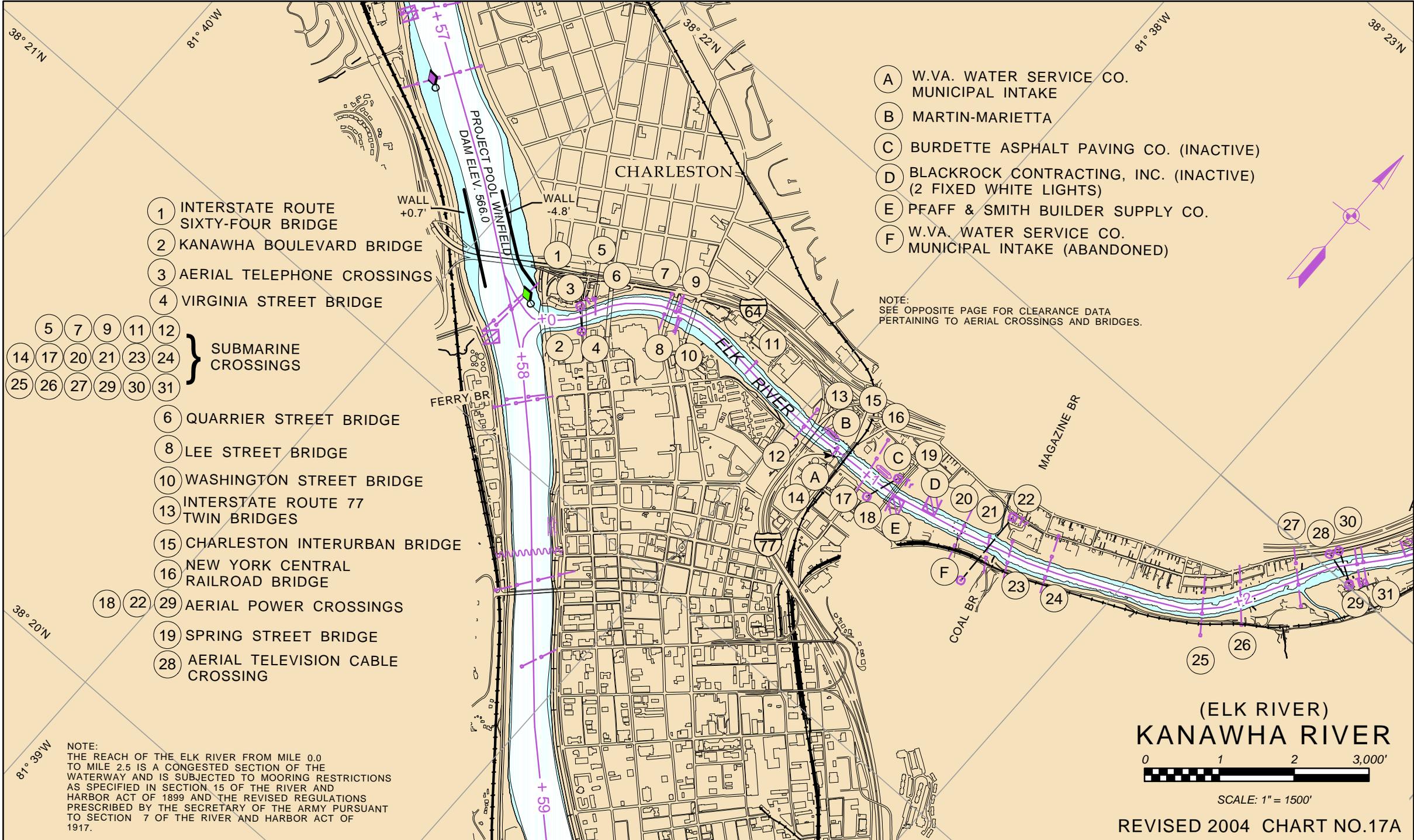
19
SPRING STREET BRIDGE
(LOOKING UPSTREAM)



18
AERIAL POWER CROSSING
(LOOKING UPSTREAM)

NO.	TYPE	ELEV. LOW STEEL OR LOW POINT OF SAG	CLEARANCE		
			PROJECT POOL	1861 HIGH WATER	HORIZONTAL
2	BRIDGE	606.0'	40.0'	1.3'	238.6'
3	TELEPHONE	606.0'	40.0'	1.0'	-
4	BRIDGE	600.3 *	34.3 *	-5.6'	215.0
6	BRIDGE	601.0'	35.0'	-3.9'	209.2'
8	BRIDGE	600.7'	34.7'	-4.4'	225.3'
10	BRIDGE	601.0'	35.0'	-5.8'	210.0'
13	BRIDGE	610.5'	44.5'	4.7'	210.0'
15	BRIDGE	600.8'	34.8'	-5.0'	200.8'
16	BRIDGE	600.8'	34.8'	-5.1'	200.8'
18	POWER	-	-	-	-
19	BRIDGE	601.11'	35.11'	-5.0'	215. '
22	POWER	641.3'	75.3'	35.1'	-
28	TV CABLE	631.8'	65.8'	24.8'	-
29	POWER	650.0'	84.0'	2.8'	-

* 15" WATER LINE SUSPENDED UNDER BRIDGE CONSIDERED IN VERTICAL CLEARANCE



- 1 INTERSTATE ROUTE SIXTY-FOUR BRIDGE
- 2 KANAWHA BOULEVARD BRIDGE
- 3 AERIAL TELEPHONE CROSSINGS
- 4 VIRGINIA STREET BRIDGE
- 5 7 9 11 12 } SUBMARINE CROSSINGS
- 14 17 20 21 23 24 }
- 25 26 27 29 30 31 }
- 6 QUARRIER STREET BRIDGE
- 8 LEE STREET BRIDGE
- 10 WASHINGTON STREET BRIDGE
- 13 INTERSTATE ROUTE 77 TWIN BRIDGES
- 15 CHARLESTON INTERURBAN BRIDGE
- 16 NEW YORK CENTRAL RAILROAD BRIDGE
- 18 22 29 AERIAL POWER CROSSINGS
- 19 SPRING STREET BRIDGE
- 28 AERIAL TELEVISION CABLE CROSSING

- A W.VA. WATER SERVICE CO. MUNICIPAL INTAKE
- B MARTIN-MARIETTA
- C BURDETTE ASPHALT PAVING CO. (INACTIVE)
- D BLACKROCK CONTRACTING, INC. (INACTIVE) (2 FIXED WHITE LIGHTS)
- E PFAFF & SMITH BUILDER SUPPLY CO.
- F W.VA. WATER SERVICE CO. MUNICIPAL INTAKE (ABANDONED)

NOTE:
SEE OPPOSITE PAGE FOR CLEARANCE DATA
PERTAINING TO AERIAL CROSSINGS AND BRIDGES.

NOTE:
THE REACH OF THE ELK RIVER FROM MILE 0.0 TO MILE 2.5 IS A CONGESTED SECTION OF THE WATERWAY AND IS SUBJECT TO MOORING RESTRICTIONS AS SPECIFIED IN SECTION 15 OF THE RIVER AND HARBOR ACT OF 1899 AND THE REVISED REGULATIONS PRESCRIBED BY THE SECRETARY OF THE ARMY PURSUANT TO SECTION 7 OF THE RIVER AND HARBOR ACT OF 1917.

(ELK RIVER)
KANAWHA RIVER

0 1 2 3,000'

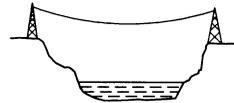
SCALE: 1" = 1500'

REVISED 2004 CHART NO.17A

4

AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG	632.7'
VERTICAL CLEARANCE AT POOL STAGE	66.7'
VERTICAL CLEARANCE - 1861 H.W.	25.5'

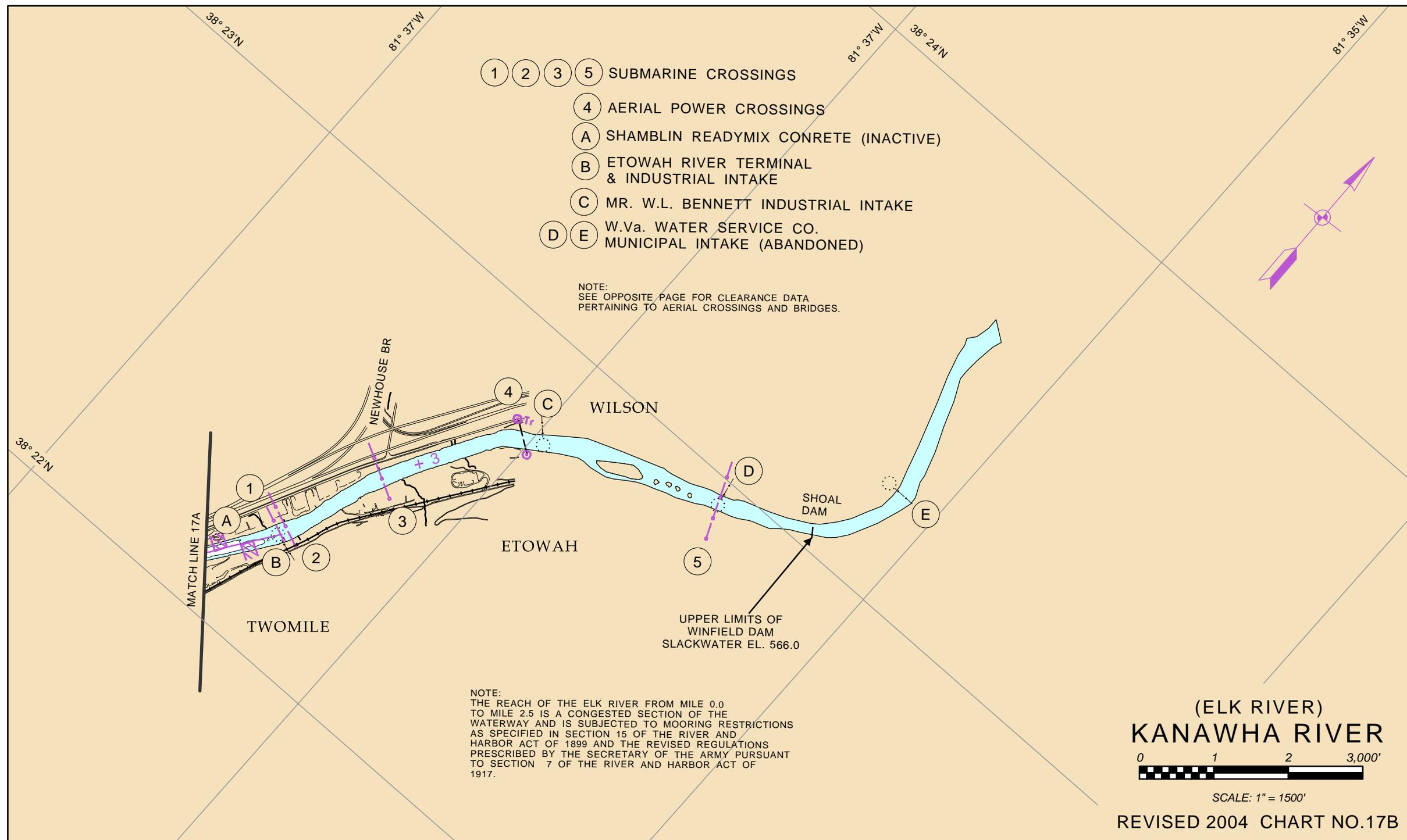
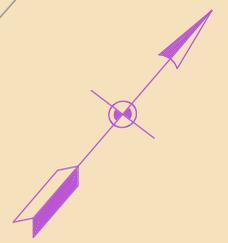


4

AERIAL POWER CROSSING
(LOOKING UPSTREAM)

- ① ② ③ ⑤ SUBMARINE CROSSINGS
- ④ AERIAL POWER CROSSINGS
- Ⓐ SHAMBLIN READYMIX CONCRETE (INACTIVE)
- Ⓑ ETOWAH RIVER TERMINAL & INDUSTRIAL INTAKE
- Ⓒ MR. W.L. BENNETT INDUSTRIAL INTAKE
- Ⓓ Ⓔ W.Va. WATER SERVICE CO. MUNICIPAL INTAKE (ABANDONED)

NOTE:
SEE OPPOSITE PAGE FOR CLEARANCE DATA
PERTAINING TO AERIAL CROSSINGS AND BRIDGES.



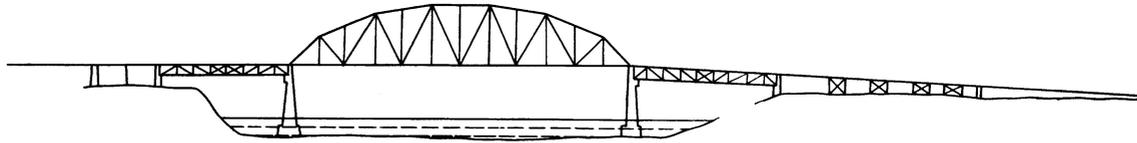
NOTE:
THE REACH OF THE ELK RIVER FROM MILE 0.0
TO MILE 2.5 IS A CONGESTED SECTION OF THE
WATERWAY AND IS SUBJECT TO MOORING RESTRICTIONS
AS SPECIFIED IN SECTION 15 OF THE RIVER AND
HARBOR ACT OF 1899 AND THE REVISED REGULATIONS
PRESCRIBED BY THE SECRETARY OF THE ARMY PURSUANT
TO SECTION 7 OF THE RIVER AND HARBOR ACT OF
1917.

(ELK RIVER)
KANAWHA RIVER



SCALE: 1" = 1500'

REVISED 2004 CHART NO.17B

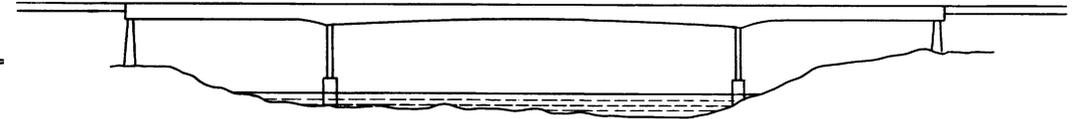


①

CHARLESTON AND SOUTHSIDE BRIDGE (LOOKING DOWNSTREAM)

CHANNEL SPAN

ELEVATION OF LOW STEEL	635.0'
VERTICAL CLEARANCE AT POOL STAGE	69.0'
VERTICAL CLEARANCE-1861 H.W.	29.4'
HORIZONTAL CLEARANCE	400.0'

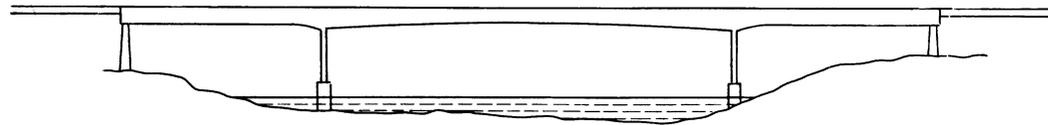


⑦

NEW 35th STREET BRIDGE (LOOKING DOWNSTREAM)

CHANNEL SPAN

ELEVATION OF LOW STEEL	633.0'
VERTICAL CLEARANCE AT POOL STAGE	67.0'
VERTICAL CLEARANCE-1861 H.W.	26.8'
HORIZONTAL CLEARANCE	402.0'



⑧

36th STREET BRIDGE (LOOKING DOWNSTREAM)

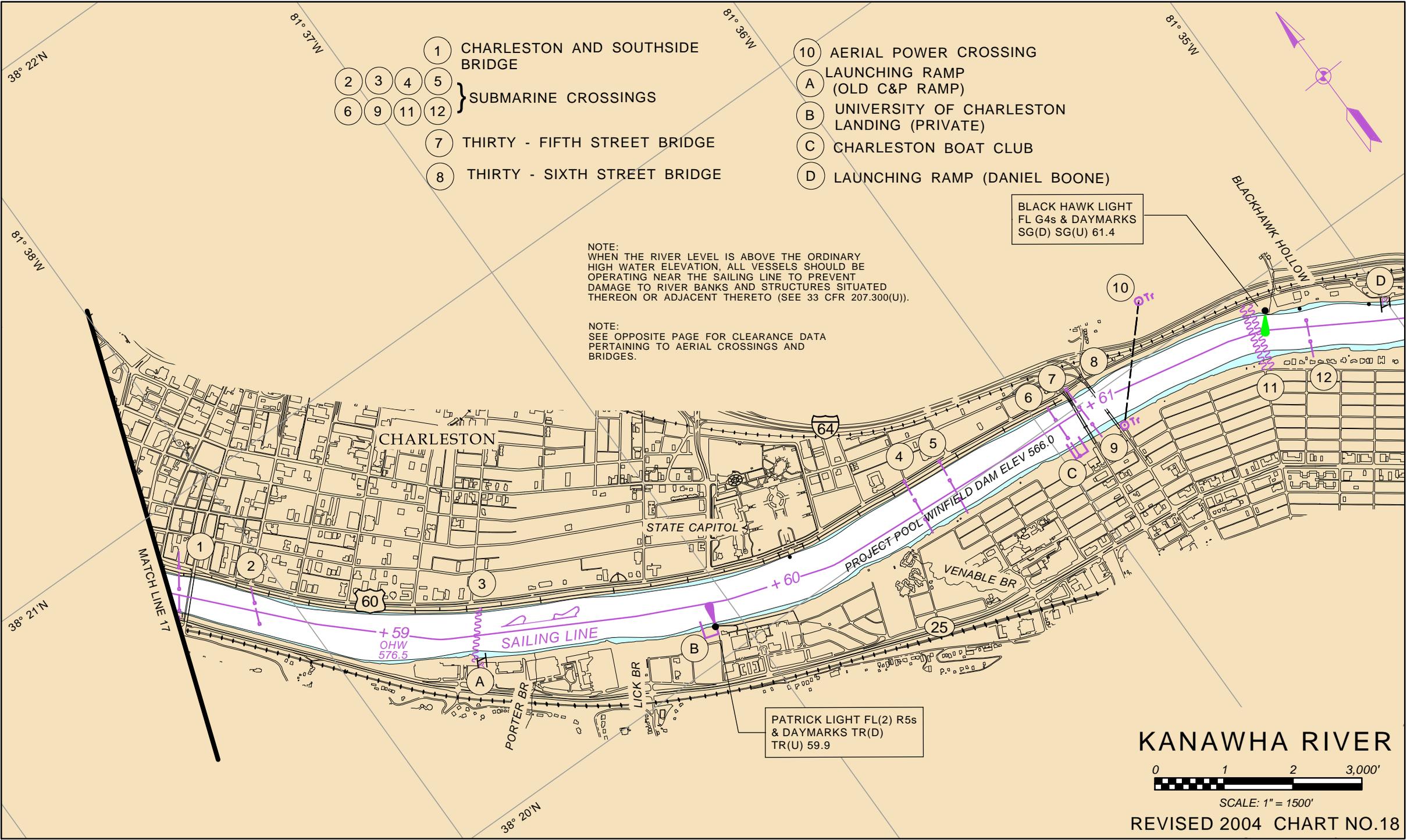
CHANNEL SPAN

ELEVATION OF LOW STEEL	633.0'
VERTICAL CLEARANCE AT POOL STAGE	67.0'
VERTICAL CLEARANCE-1861 H.W.	26.8'
HORIZONTAL CLEARANCE	402.0

⑩

AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG	666.2'
VERTICAL CLEARANCE AT POOL STAGE	100.2'
VERTICAL CLEARANCE-1861 H.W.	59.7'



- ① CHARLESTON AND SOUTHSIDE BRIDGE
- ② ③ ④ ⑤ } SUBMARINE CROSSINGS
- ⑥ ⑨ ⑪ ⑫ } SUBMARINE CROSSINGS
- ⑦ THIRTY - FIFTH STREET BRIDGE
- ⑧ THIRTY - SIXTH STREET BRIDGE

- ⑩ AERIAL POWER CROSSING
- A LAUNCHING RAMP (OLD C&P RAMP)
- B UNIVERSITY OF CHARLESTON LANDING (PRIVATE)
- C CHARLESTON BOAT CLUB
- D LAUNCHING RAMP (DANIEL BOONE)

NOTE:
 WHEN THE RIVER LEVEL IS ABOVE THE ORDINARY HIGH WATER ELEVATION, ALL VESSELS SHOULD BE OPERATING NEAR THE SAILING LINE TO PREVENT DAMAGE TO RIVER BANKS AND STRUCTURES SITUATED THEREON OR ADJACENT THERETO (SEE 33 CFR 207.300(U)).

NOTE:
 SEE OPPOSITE PAGE FOR CLEARANCE DATA PERTAINING TO AERIAL CROSSINGS AND BRIDGES.

BLACK HAWK LIGHT
 FL G4s & DAYMARKS
 SG(D) SG(U) 61.4

PATRICK LIGHT FL(2) R5s
 & DAYMARKS TR(D)
 TR(U) 59.9

KANAWHA RIVER



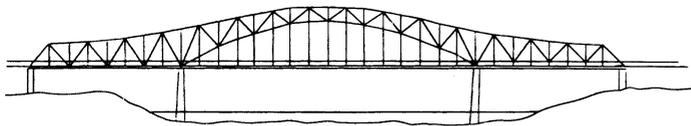
SCALE: 1" = 1500'

REVISED 2004 CHART NO.18

3

AERIAL POWER CROSSING

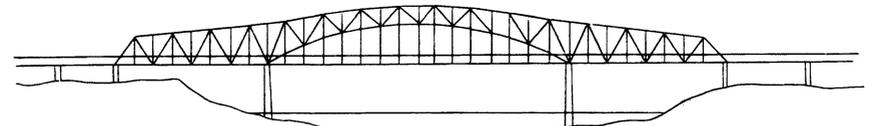
ELEVATION LOW POINT OF SAG	677.0'
VERTICAL CLEARANCE AT POOL STAGE	111.0'
VERTICAL CLEARANCE-1861 H.W.	69.6'



5

INTERSTATE ROUTE 77/64 BRIDGE (LOOKING DOWNSTREAM)

ELEVATION OF LOW STEEL	638.5'
VERTICAL CLEARANCE AT POOL STAGE	72.5'
VERTICAL CLEARANCE-1878 H.W.	31.0'
HORIZONTAL CLEARANCE	450.0'



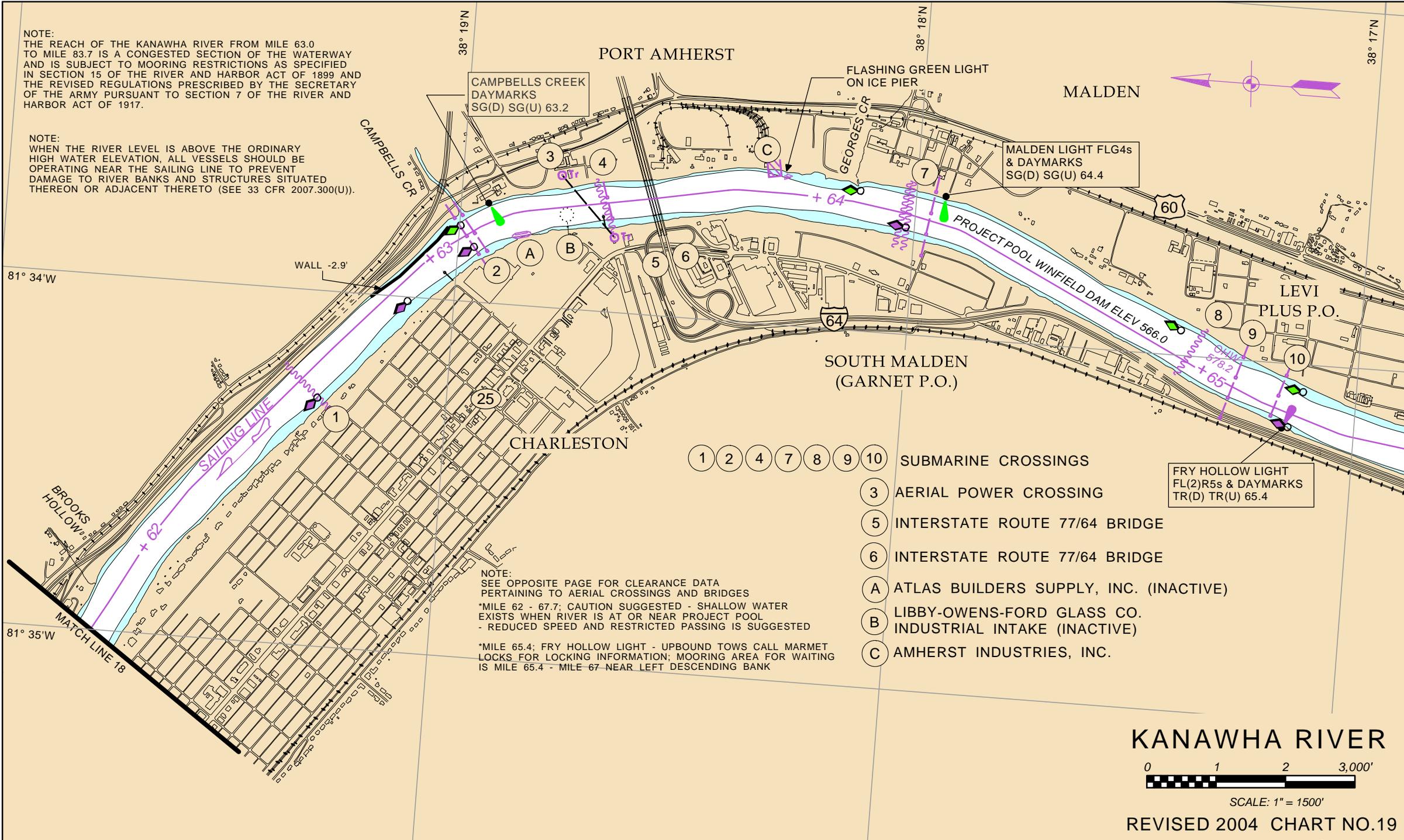
6

INTERSTATE ROUTE 77/64 BRIDGE (LOOKING DOWNSTREAM)

ELEVATION OF LOW STEEL	638.5'
VERTICAL CLEARANCE AT POOL STAGE	72.5'
VERTICAL CLEARANCE-1878 H.W.	31.0'
HORIZONTAL CLEARANCE	450.0'

NOTE:
THE REACH OF THE KANAWHA RIVER FROM MILE 63.0 TO MILE 63.7 IS A CONGESTED SECTION OF THE WATERWAY AND IS SUBJECT TO MOORING RESTRICTIONS AS SPECIFIED IN SECTION 15 OF THE RIVER AND HARBOR ACT OF 1899 AND THE REVISED REGULATIONS PRESCRIBED BY THE SECRETARY OF THE ARMY PURSUANT TO SECTION 7 OF THE RIVER AND HARBOR ACT OF 1917.

NOTE:
WHEN THE RIVER LEVEL IS ABOVE THE ORDINARY HIGH WATER ELEVATION, ALL VESSELS SHOULD BE OPERATING NEAR THE SAILING LINE TO PREVENT DAMAGE TO RIVER BANKS AND STRUCTURES SITUATED THEREON OR ADJACENT THERETO (SEE 33 CFR 2007.300(U)).



NOTE:
SEE OPPOSITE PAGE FOR CLEARANCE DATA PERTAINING TO AERIAL CROSSINGS AND BRIDGES
*MILE 62 - 67.7; CAUTION SUGGESTED - SHALLOW WATER EXISTS WHEN RIVER IS AT OR NEAR PROJECT POOL - REDUCED SPEED AND RESTRICTED PASSING IS SUGGESTED
*MILE 65.4: FRY HOLLOW LIGHT - UPBOUND TOWS CALL MARMET LOCKS FOR LOCKING INFORMATION; MOORING AREA FOR WAITING IS MILE 65.4 - MILE 67 NEAR LEFT DESCENDING BANK

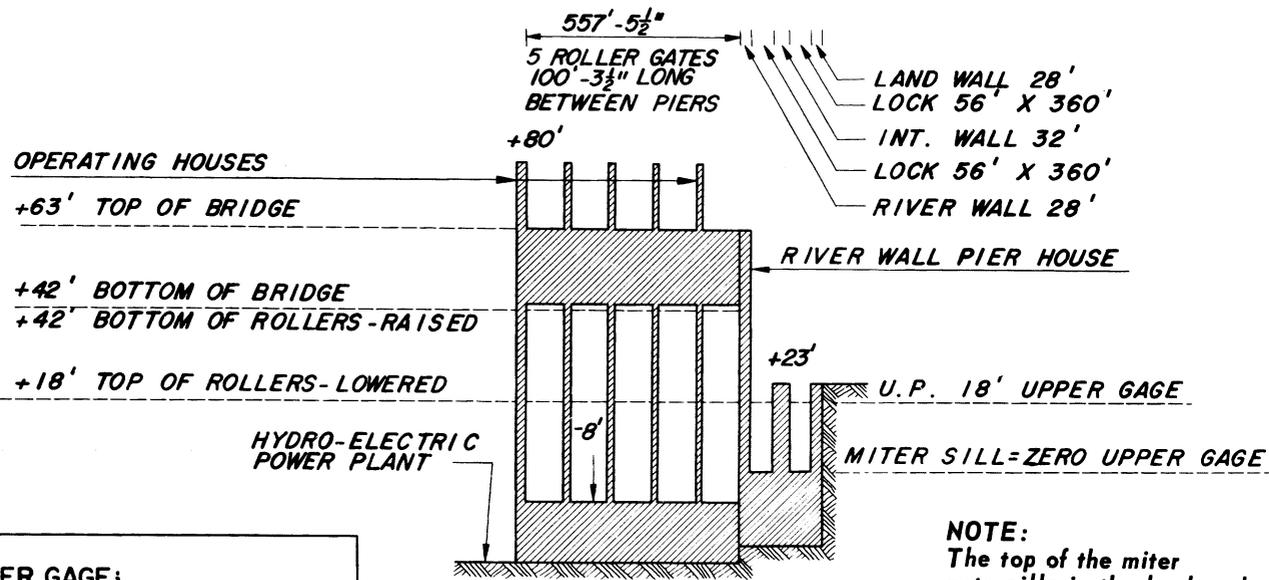
- 1 2 4 7 8 9 10 SUBMARINE CROSSINGS
- 3 AERIAL POWER CROSSING
- 5 INTERSTATE ROUTE 77/64 BRIDGE
- 6 INTERSTATE ROUTE 77/64 BRIDGE
- A ATLAS BUILDERS SUPPLY, INC. (INACTIVE)
- B LIBBY-OWENS-FORD GLASS CO. INDUSTRIAL INTAKE (INACTIVE)
- C AMHERST INDUSTRIES, INC.

KANAWHA RIVER



SCALE: 1" = 1500'

REVISED 2004 CHART NO.19



ELEVATION LOOKING DOWNSTREAM
No Scale

NOTE:
The top of the miter gate sills in the landward and riverward locks are upper- 572.0 feet m.s.l. lower- 554.0 feet m.s.l.

UPPER GAGE:	
ZERO EL.	572.0
P.P. READS	18.0
LOWER GAGE:	
ZERO EL.	557.0
P.P. READS	9.0

②

AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG 673.7'
VERTICAL CLEARANCE AT POOL STAGE 83.7'
VERTICAL CLEARANCE -1861. H.W. 63.7'

④

AERIAL POWER CROSSING

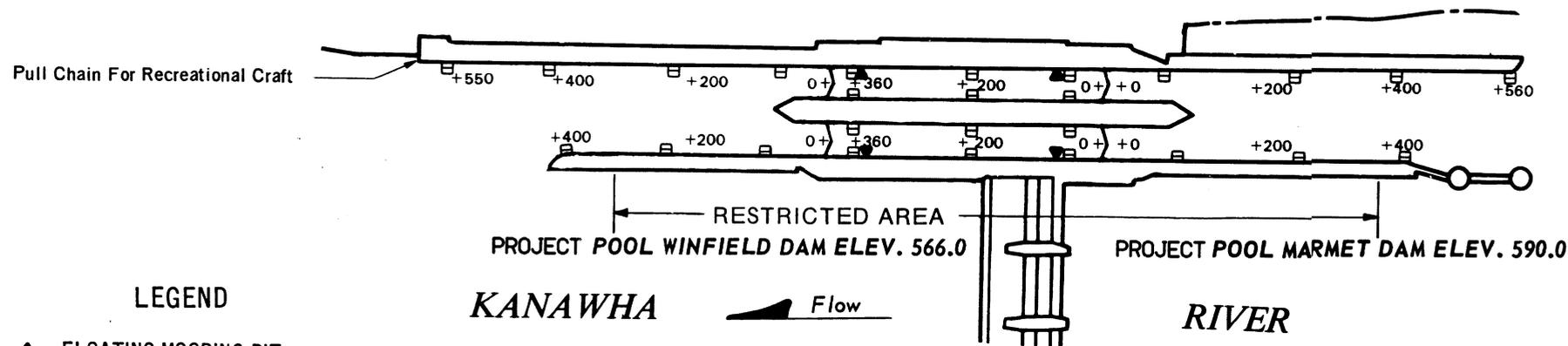
ELEVATION LOW POINT OF SAG 652.6'
VERTICAL CLEARANCE AT POOL STAGE 62.6'
VERTICAL CLEARANCE -1861 H.W. 42.6'

⑤

AERIAL POWER CROSSING

ELEVATION LOW POINT OF SAG 670.0'
VERTICAL CLEARANCE AT POOL STAGE 80.0'
VERTICAL CLEARANCE -1861 H.W. 60.0'

WEST VIRGINIA



LEGEND

- ▲ FLOATING MOORING BIT
- ▣ LADDERS—Black and White striped.
- 200 + Distance in feet from gate.

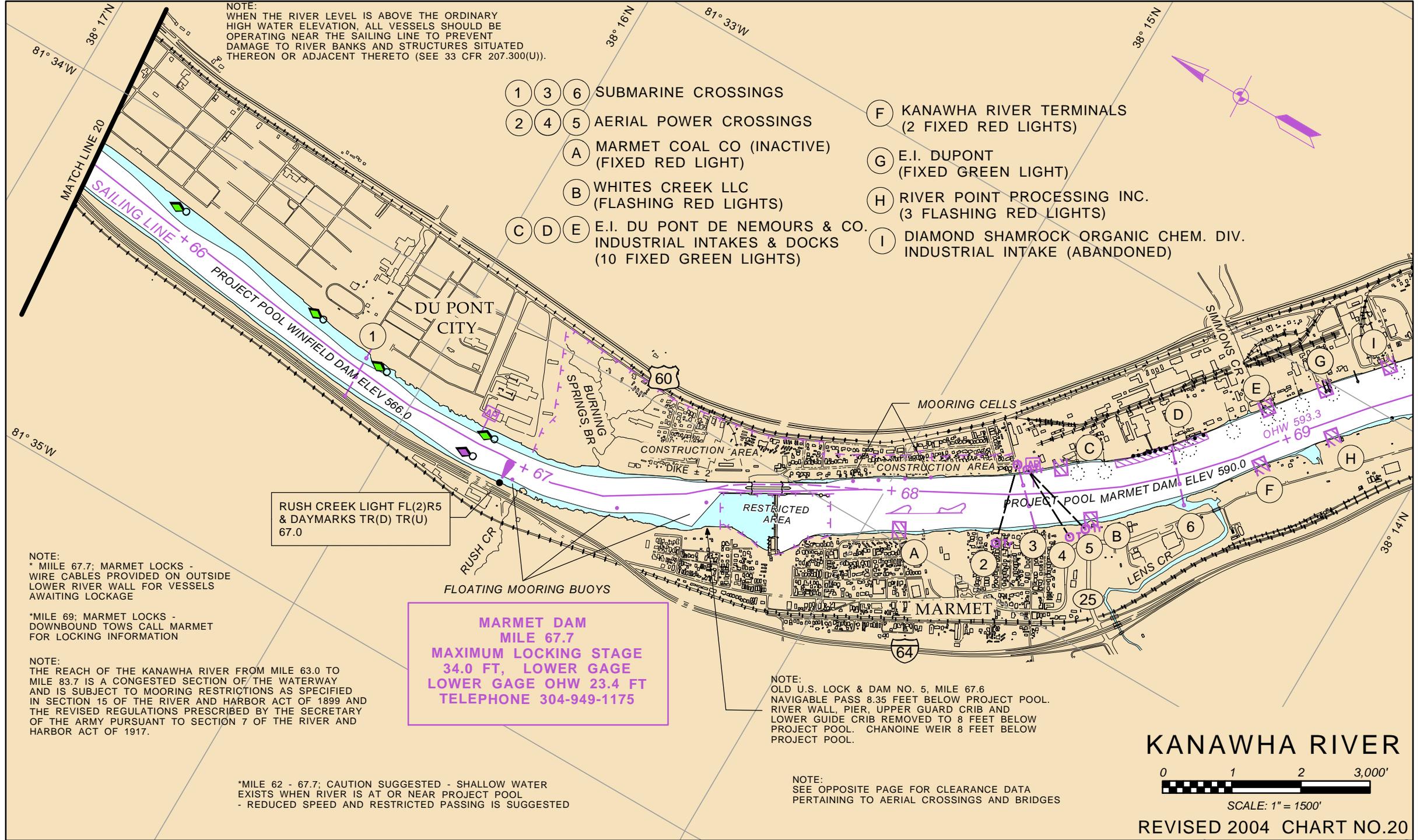
Scale: 1 inch equals 250 feet.

NOTE:
Ordinary high water lower gage - 23.4'
Maximum Locking stage 34.0' lower gage

MARMET
Locks And Dam
Mile 67.7

NOTE:
WHEN THE RIVER LEVEL IS ABOVE THE ORDINARY
HIGH WATER ELEVATION, ALL VESSELS SHOULD BE
OPERATING NEAR THE SAILING LINE TO PREVENT
DAMAGE TO RIVER BANKS AND STRUCTURES SITUATED
THEREON OR ADJACENT THERETO (SEE 33 CFR 207.300(U)).

- (1) (3) (6) SUBMARINE CROSSINGS
- (2) (4) (5) AERIAL POWER CROSSINGS
- (A) MARMET COAL CO (INACTIVE)
(FIXED RED LIGHT)
- (B) WHITES CREEK LLC
(FLASHING RED LIGHTS)
- (C) (D) (E) E.I. DU PONT DE NEMOURS & CO.
INDUSTRIAL INTAKES & DOCKS
(10 FIXED GREEN LIGHTS)
- (F) KANAWHA RIVER TERMINALS
(2 FIXED RED LIGHTS)
- (G) E.I. DUPONT
(FIXED GREEN LIGHT)
- (H) RIVER POINT PROCESSING INC.
(3 FLASHING RED LIGHTS)
- (I) DIAMOND SHAMROCK ORGANIC CHEM. DIV.
INDUSTRIAL INTAKE (ABANDONED)



RUSH CREEK LIGHT FL(2)R5
& DAYMARKS TR(D) TR(U)
67.0

**MARMET DAM
MILE 67.7
MAXIMUM LOCKING STAGE
34.0 FT, LOWER GAGE
LOWER GAGE OHW 23.4 FT
TELEPHONE 304-949-1175**

NOTE:
* MILE 67.7; MARMET LOCKS -
WIRE CABLES PROVIDED ON OUTSIDE
LOWER RIVER WALL FOR VESSELS
AWAITING LOCKAGE

*MILE 69; MARMET LOCKS -
DOWNBOUND TOWS CALL MARMET
FOR LOCKING INFORMATION

NOTE:
THE REACH OF THE KANAWHA RIVER FROM MILE 63.0 TO
MILE 83.7 IS A CONGESTED SECTION OF THE WATERWAY
AND IS SUBJECT TO MOORING RESTRICTIONS AS SPECIFIED
IN SECTION 15 OF THE RIVER AND HARBOR ACT OF 1899 AND
THE REVISED REGULATIONS PRESCRIBED BY THE SECRETARY
OF THE ARMY PURSUANT TO SECTION 7 OF THE RIVER AND
HARBOR ACT OF 1917.

*MILE 62 - 67.7; CAUTION SUGGESTED - SHALLOW WATER
EXISTS WHEN RIVER IS AT OR NEAR PROJECT POOL
- REDUCED SPEED AND RESTRICTED PASSING IS SUGGESTED

NOTE:
OLD U.S. LOCK & DAM NO. 5, MILE 67.6
NAVIGABLE PASS 8.35 FEET BELOW PROJECT POOL.
RIVER WALL, PIER, UPPER GUARD CRIB AND
LOWER GUIDE CRIB REMOVED TO 8 FEET BELOW
PROJECT POOL. CHANOINE WEIR 8 FEET BELOW
PROJECT POOL.

NOTE:
SEE OPPOSITE PAGE FOR CLEARANCE DATA
PERTAINING TO AERIAL CROSSINGS AND BRIDGES

KANAWHA RIVER



SCALE: 1" = 1500'

REVISED 2004 CHART NO.20