

Design Memorandum No. 19-90

TO: Chief District Engineers  
Preconstruction Engineers  
Design Engineers  
Active Consultants

FROM: Charles S. Raymer, Director  
Division of Design



DATE: December 20, 1990

SUBJECT: Section 404 Permit Drawings  
and Identifying Permit Situations

Due to recent changes in guidelines relating to the Section 404 Permit process, in particular relative to wetlands, there has been a substantial increase in the number of permits required. This increase, plus added responsibilities have severely limited the ability of the Permit Coordinator to prepare the drawings required to accompany the permit application.

#### DRAWING RESPONSIBILITY

Effective January 1, 1991, the designer responsible for preparing the Roadway Plans shall also be responsible for preparing the drawings required to accompany the Section 404 Permit applications. This includes only those projects that have not progressed beyond the final plans-in-hand inspection stage and for all new projects thereafter. Temporary and permanent fill quantities placed below the O.H.W. elevation shall also be estimated. The alternative avoidance and minimization impact analyses prepared in compliance with the Section 404 (b)(1) guidelines shall be provided.

The designer will be expected to identify Section 404 Permit situations plus identify Section 401 Certification (Division of Water) and Section 26a Permit (Tennessee Valley Authority) situations and furnish plans for each situation. The Permit Coordinator will still be responsible for preparing the application packages and all communication with the Corps of Engineers and other affected agencies.

It should be noted that a six month review process is involved. In order to avoid delays to the letting the required information should be submitted to the Permit Coordinator no less than 9 months prior to the scheduled letting. Earlier submittal is encouraged in order to allow incorporation of other agencies recommendations in the final plans.

#### DESIGN CHANGES

When substantial changes are made to the plans affecting the permit area, it will be the responsibility of the District Preconstruction Engineer to see that the Permit Coordinator is notified. The designer shall also be responsible for making these changes on the Section 404 Permit drawings and submitting revised plans for the Section 401 Certifications and Section 26a Permits.

#### PROCEDURE

The designer (Department or Consultant) will be responsible and expected to identify all Corps of Engineers-Section 404 Permit situations and furnish the drawings required to accompany the permit applications. A list of the fill materials and their quantities being placed below the O.H.W. elevation should be submitted with these drawings.

When determining whether a certain situation on a project will require a Section 404 Permit the designer must first see if the work is being done above or below the stream's headwaters.

Should work be above the headwaters and disturbs one acre or more of the stream or adjacent wetlands then an individual permit is required. If the disturbance is less than one acre then the work is normally authorized under a nationwide permit, but must comply with the special conditions attached.

Any work being done below the headwaters and involves discharging 200 cubic yards or more of fill material below the O.H.W. elevation of the stream or disturbs any adjacent wetlands will require an individual permit. If the fill is less than 200 c.y. and not disturbing any wetlands then it is normally authorized under a nationwide permit. This should include temporary fill crossings or pads deemed essential for construction purposes and determined by the designer at this time. The O.H.W. elevation must be established for determining any of these situations.

The fill materials and their quantities estimated below the O.H.W. elevation normally include: excavation, embankment, backfill, concrete, channel lining, temporary fill and channel habitat improvement devices. These quantities should be calculated into cubic yards, only.

All situations determined to require a permit will also require the following analyses: Alternative Avoidance, Minimization of Impacts and Mitigation of Impacts.

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Any proposed work involving (a) discharge into 1 acre or more of wetlands, and (b) discharges into 200 linear feet or more of any stream and/or disturbance to 200 linear feet or more of stream bank, being either above or below the headwaters, will require an individual Section 401-Water Quality Certification or waiver from the Division of Water. These situations are to be identified and listed by the designer.

In addition, designers that have a project in District One are to identify and list any situation involving crossing or disturbing the Kentucky Lake, Tennessee River below the Kentucky Lake Dam, Clarks River and tributaries of the three. This information is necessary in complying with Tennessee Valley Authority's Section 26a Permit.

#### DEFINITIONS

\* Ordinary Highwater Elevation (O.H.W.)- The line on the bank established by the fluctuation of water and indicated by physical characteristics such as a vegetation line or shelving.

\* Headwaters- The point on a stream which the average annual flow is 5 c.f.s.

\* Wetlands- Those areas that are inundated or saturated by water and sufficient to support vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Please feel free to address any questions you have regarding the implementation of this policy to Ricky Young or Randy Gnau of this office.

CSR/RY/mlw

Attachments: Permit Checklist  
Determination of Headwater Procedure  
Sample Drawings  
Sample Calculations  
Section 404 (b)(1) Guidelines

PERMIT CHECKLIST  
for  
Corps of Engineers  
Tennessee Valley Authority  
and  
Water Quality

COUNTY \_\_\_\_\_ ITEM NO. \_\_\_\_\_

ROAD NAME \_\_\_\_\_ ROUTE NO. \_\_\_\_\_

\_\_\_\_\_ Federal Aid Project (Environmental Statement):  
\_\_\_\_\_ EIS \_\_\_\_\_ EA/FONSI \_\_\_\_\_ CE \_\_\_\_\_ None

\_\_\_\_\_ State Funded Project (Environmental Concerns):  
\_\_\_\_\_ Archaeological \_\_\_\_\_ Biological \_\_\_\_\_ Historical \_\_\_\_\_ None

1. Answer the following for any project:

- (a) Does any activity involve the disturbance of 200 linear feet or more of a blue line stream or stream bank? \_\_\_\_\_ YES \_\_\_\_\_ NO
- (b) Does any activity involve the discharge or disturbance to 1 acre or more of a stream or wetlands? \_\_\_\_\_ YES \_\_\_\_\_ NO
- (c) Does any activity involve crossing or disturbing the Kentucky Lake, Tennessee River below the Kentucky Lake Dam, Clarks River and tributaries of the three (TVA's Jurisdiction)? \_\_\_\_\_ YES \_\_\_\_\_ NO

2. Answer the following only if the project has a situation with a drainage area of 5 sq.mi.(or normal flow is 5 cfs.) or greater and has not been classified as categorical exclusion:

- (a) Will the contractor possibly require some type of temporary equipment pad or stream crossing necessary for construction and completing project? \_\_\_\_\_ YES \_\_\_\_\_ NO
- (b) Does any activity involve the discharge of 200 cu.yds. or more of fill material below the O.H.W. elevation of a stream including any temporary fill crossing or equipment pads? \_\_\_\_\_ YES \_\_\_\_\_ NO
- (c) Does any activity involve filling or disturbing any adjacent wetlands? \_\_\_\_\_ YES \_\_\_\_\_ NO
- (d) Does any activity involve crossing or disturbing a stream determined to be a "Navigable Stream"? \_\_\_\_\_ YES \_\_\_\_\_ NO
- (e) Does any activity involve a stream considered to be a "Wild and Scenic River"? \_\_\_\_\_ YES \_\_\_\_\_ NO

3. List all situations with "YES" as the answer for any question above. Include the drainage areas and explain what is involved.

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

DETERMINATION OF THE HEADWATER  
FOR  
A SELECTED STREAM

"The Headwater for a stream is the site where the normal flow is 5 cubic feet per second (cfs).

$$Q_a = 0.290 * A^{1.01} * E^{0.25} * I^{1.27}$$

where  $Q_a$  is the mean annual discharge or the normal flow

$A$  is the drainage area in square miles

$E$  is the mean elevation of the basin in thousands of feet. This is determined by laying a grid on the and determining the elevation of five to ten uniformly spaced points. The average of these elevations is  $E$

$I$  is the maximum 24-hour 2-year rainfall

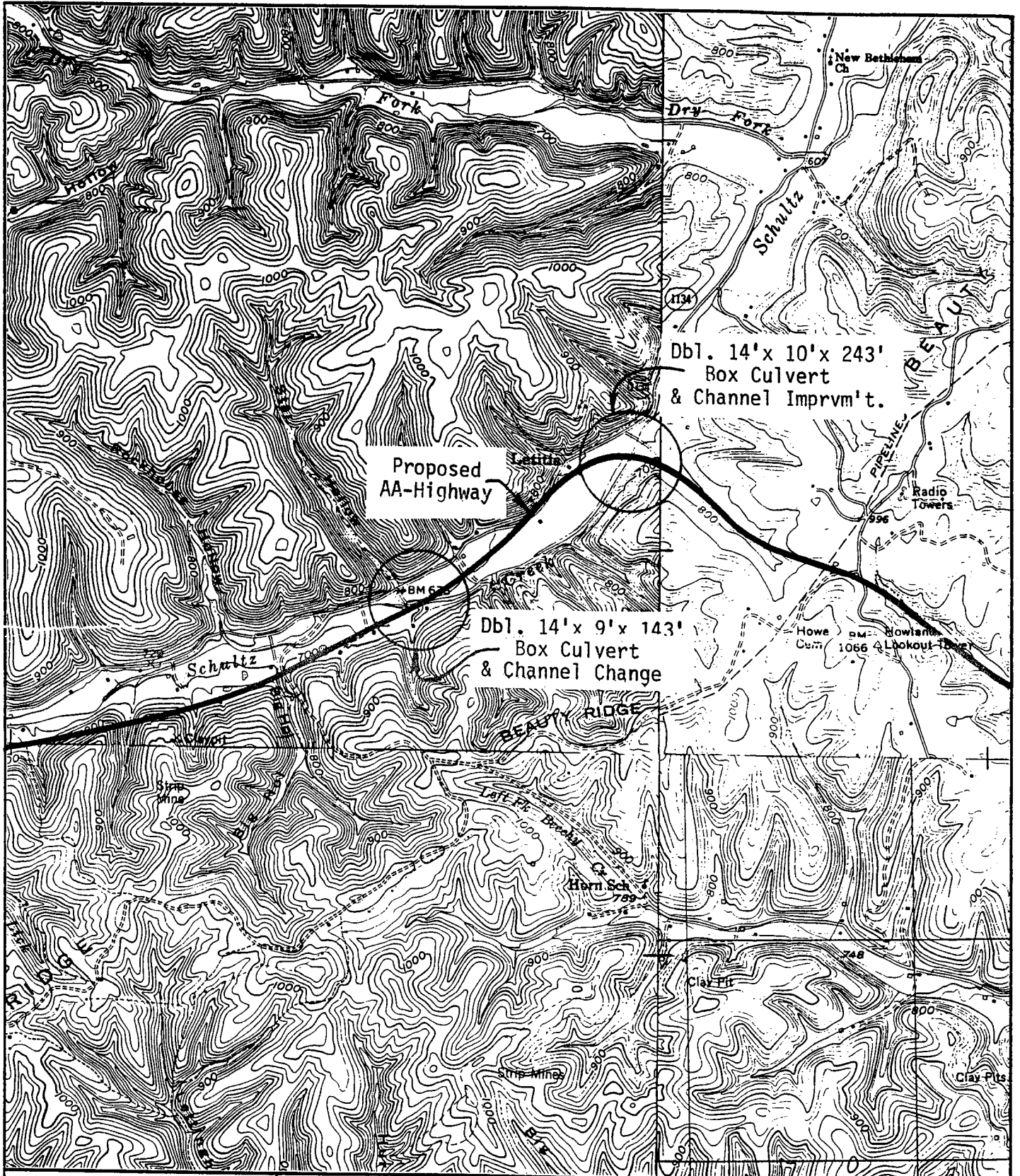
1. Determine  $A$  for site from USGS quad sheet(s)
2. Determine  $E$  for the watershed.
3. Determine  $I$  from attached chart.
4. Solve equation for  $Q_a$ .
5. If  $Q_a \geq 5$  cfs; site is below Headwaters for the stream.

DIVISION OF WATER, KENTUCKY DEPARTMENT OF NATURAL RESOURCES  
 ENGINEERING MEMORANDUM NO. 2 (4-30-71)

24 HOUR RAINFALL (INCHES)

PAGE 1 OF 3

		FREQUENCY (YEARS)			
COUNTY	2	COUNTY	2	COUNTY	2
ADAIR	3.3	GRANT	3.1	MASON	2.9
ALLEN	3.4	GRAVES	3.6	MEADE	3.2
ANDERSON	3.1	GRAYSON	3.3	MENIFEE	2.9
BALLARD	3.6	GREEN	3.3	MERCER	3.2
BARREN	3.3	GREENUP	2.8	METCALFE	3.3
BATH	3.0	HANCOCK	3.3	MONROE	3.4
BELL	3.1	HARDIN	3.2	MONTGOMERY	3.0
BOONE	3.0	HARLAN	3.0	MORGAN	2.9
BOURBON	3.0	HARRISON	3.0	MUHLENBERG	3.4
BOYD	2.7	HART	3.3	NELSON	3.2
BOYLE	3.2	HENDERSON	3.4	NICHOLAS	3.0
BRACKEN	3.0	HENRY	3.1	OHIO	3.3
BREATHITT	3.0	HICKMAN	3.6	OLDHAM	3.2
BRECKINRIDGE	3.3	HOPKINS	3.4	OWEN	3.1
BULLITT	3.2	JACKSON	3.1	OWSLEY	3.0
BUTLER	3.4	JEFFERSON	3.2	PENDLETON	3.0
CALDWELL	3.4	JESSAMINE	3.1	PERRY	3.0
CALLOWAY	3.5	JOHNSON	2.8	PIKE	2.9
CAMPBELL	3.0	KENTON	3.0	POWELL	3.0
CARLISLE	3.6	KNOTT	2.9	PULASKI	3.2
CARROLL	3.1	KNOX	3.1	ROBERTSON	3.0
CARTER	2.8	LARUE	3.2	ROCKCASTLE	3.1
CASEY	3.2	LAUREL	3.1	ROWAN	2.9
CHRISTIAN	3.4	LAWRENCE	2.8	RUSSELL	3.3
CLARK	3.0	LEE	3.0	SCOTT	3.1
CLAY	3.0	LESLIE	3.0	SHELBY	3.2
CLINTON	3.3	LETCHER	2.9	SIMPSON	3.4
CRITTENDEN	3.5	LEWIS	2.8	SPENCER	3.2
CUMBERLAND	3.3	LINCOLN	3.2	TAYLOR	3.2
DAVISS	3.3	LIVINGSTON	3.5	TODD	3.4
EDMONSON	3.3	LOGAN	3.4	TRIGG	3.5
ELLIOTT	2.8	LYON	3.5	TRIMBLE	3.1
ESTILL	3.0	MCCRACKEN	3.6	UNION	3.4
FAYETTE	3.1	MCCREARY	3.2	WARREN	3.4
FLEMING	2.9	MCLEAN	3.4	WASHINGTON	3.2
FLOYD	2.9	MADISON	3.1	WAYNE	3.3
FRANKLIN	3.1	MAGOFFIN	2.9	WEBSTER	3.4
FULTON	3.7	MARION	3.2	WHITLEY	3.2
GALLATIN	3.1	MARSHALL	3.5	WOLFE	2.9
GARRARD	3.1	MARTIN	2.8	WOODFORD	3.1



**.. NOTES ..**

DATUM — 1927 North American Datum.

Temporary Fill and Excavated Material to be removed and used as Fill elsewhere on project.

All work shall comply with the current edition of KYTC's "Standard Specifications for Road and Bridge Construction."

APPLICATION BY  
**KENTUCKY**  
 TRANSPORTATION CABINET  
 DEPARTMENT OF HIGHWAYS



**BOX CULVERTS & CHANNEL CHANGES**

PROPOSED ACTIVITIES:

**SCHULTZ CREEK**

STREAM NAME:

**GREENUP**

COUNTY OF:

**7.8 & 8.5**

MILE POINT:

**LETITIA**

AT OR NEAR:

**KENTUCKY**

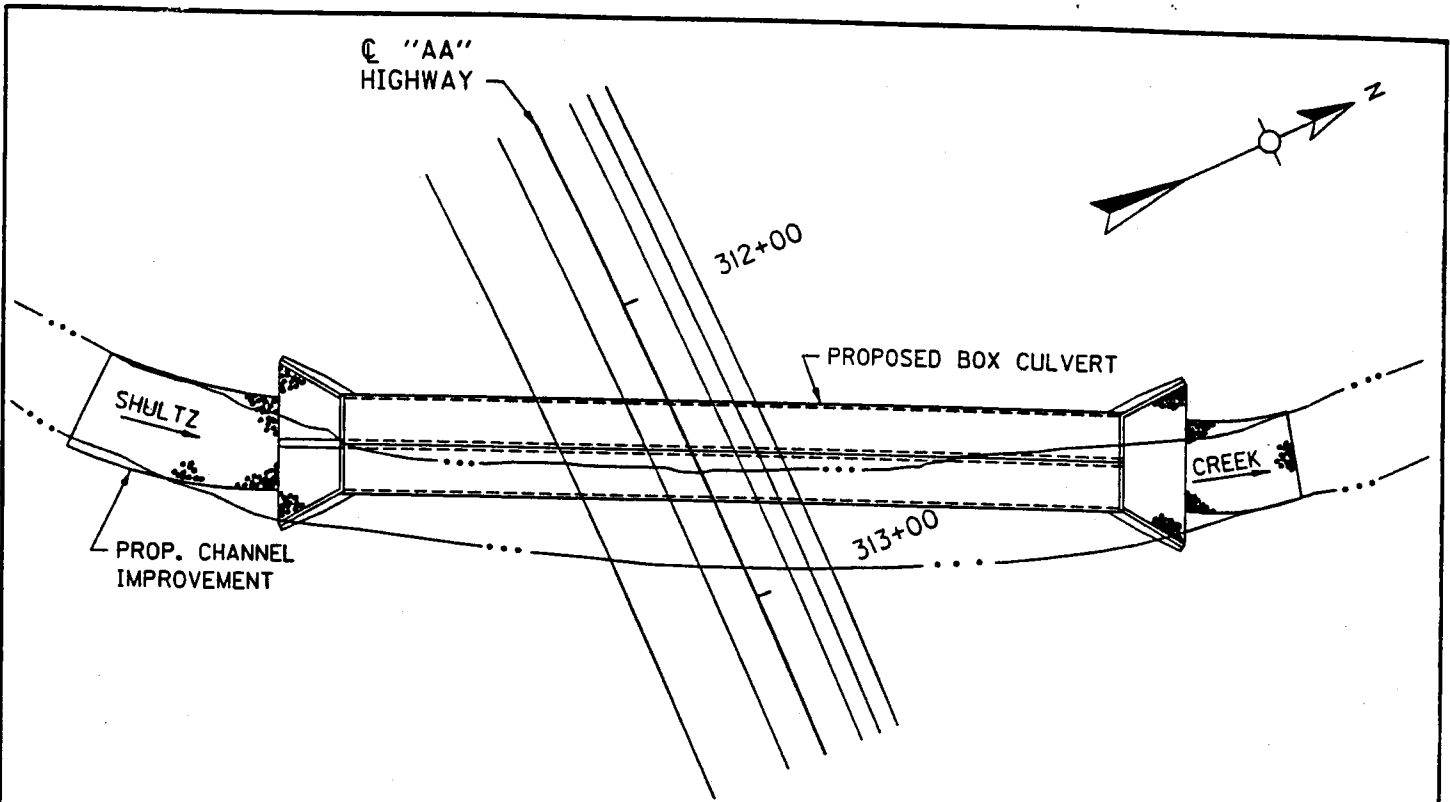
STATE OF:

**9 - 222.0**

ITEM NO.:

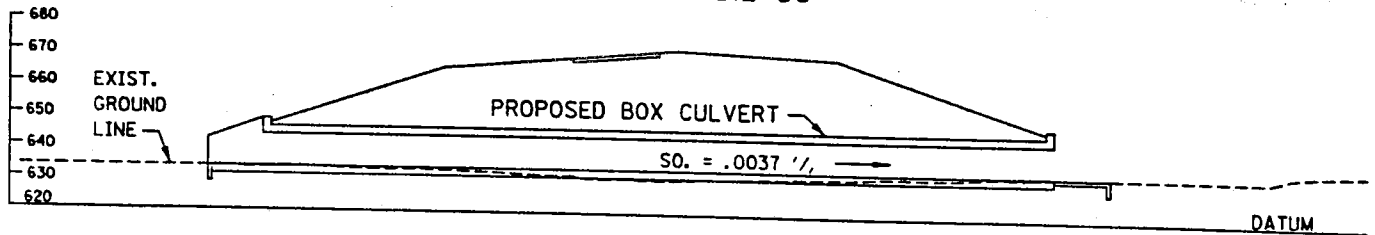
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SHEET NO.:

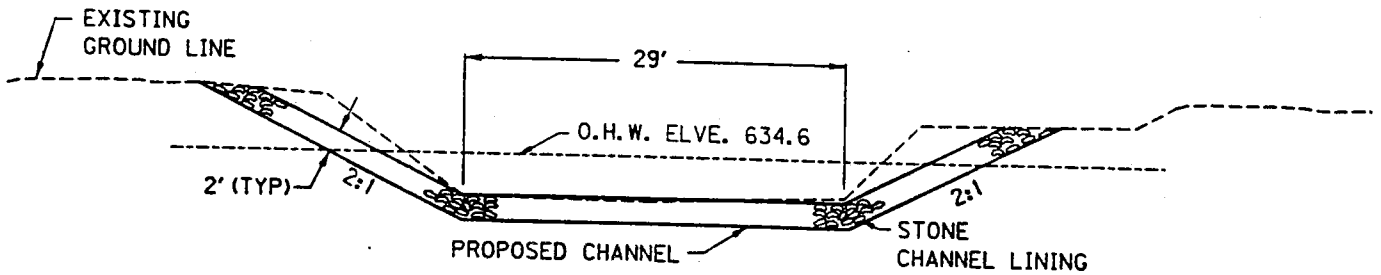


**PLAN VIEW**

DBL. 14'x10'x243' RCBC  
 @ STA. 312+50



**PROPOSED CULVERT SECTION**



**TYPICAL CHANNEL SECTION**

**~NOTES~**

DATUM: 1927 North American Datum.  
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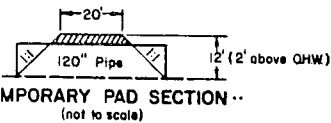
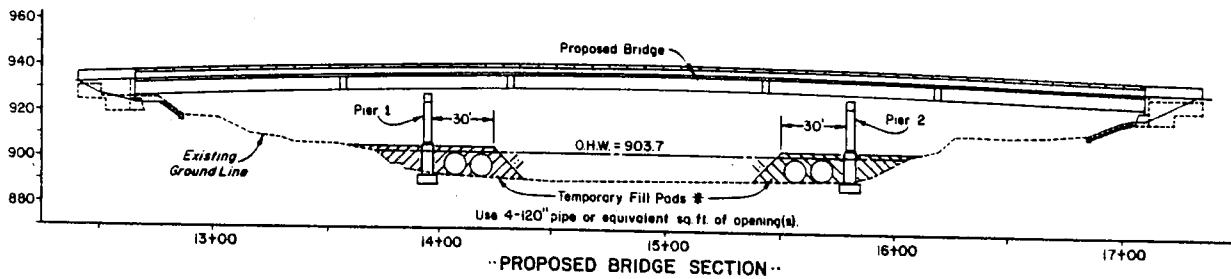
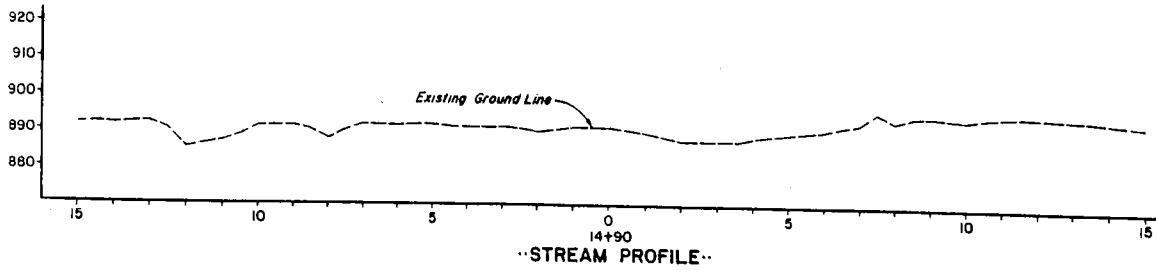
APPLICATION BY  
**KENTUCKY**  
**TRANSPORTATION CABINET**  
 DEPARTMENT OF HIGHWAYS

**PROPOSED BOX CULVERT & CHANNEL IMPROVEMENT**  
 PROPOSED ACTIVITIES:

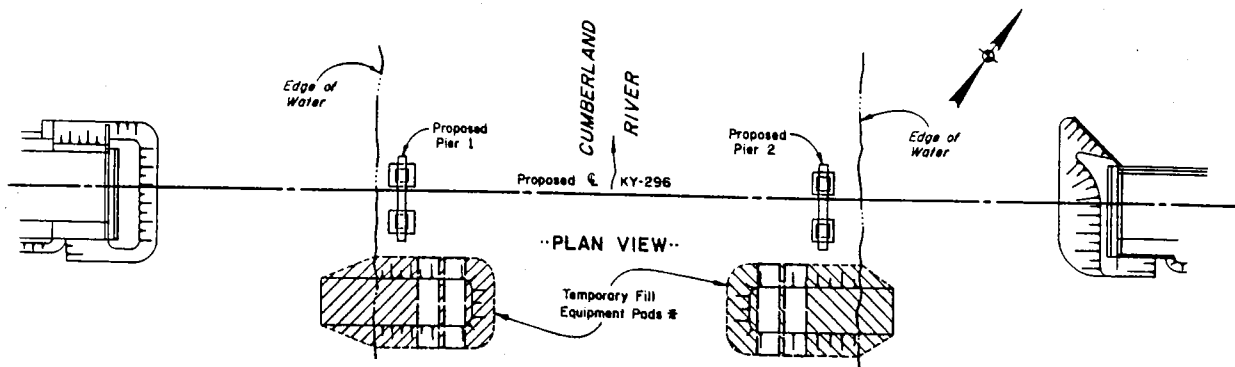
SHULTZ CREEK		LETITIA	
STREAM NAME:		AT OR NEAR:	
GREENUP		KENTUCKY	
COUNTY OF:		STATE OF:	
MILE POINT:		9-222.09	3 of 7
		ITEM NO.:	SHEET NO.:

SDSTD. PERMIT. 1000. 1000





\* Temporary Fill Equipment Pads are shown to be placed upstream of bridge, but can be placed downstream if desired. And both pads may be placed in stream simultaneously.



.. NOTES ..

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APPLICATION BY  
**KENTUCKY**  
 TRANSPORTATION CABINET  
 DEPARTMENT OF HIGHWAYS



PROPOSED BRIDGE REPLACEMENT

PROPOSED ACTIVITIES:

CUMBERLAND RIVER

WILLIAMSBURG

STREAM NAME:

AT OR NEAR:

WHITLEY

KENTUCKY

COUNTY OF:

STATE OF:

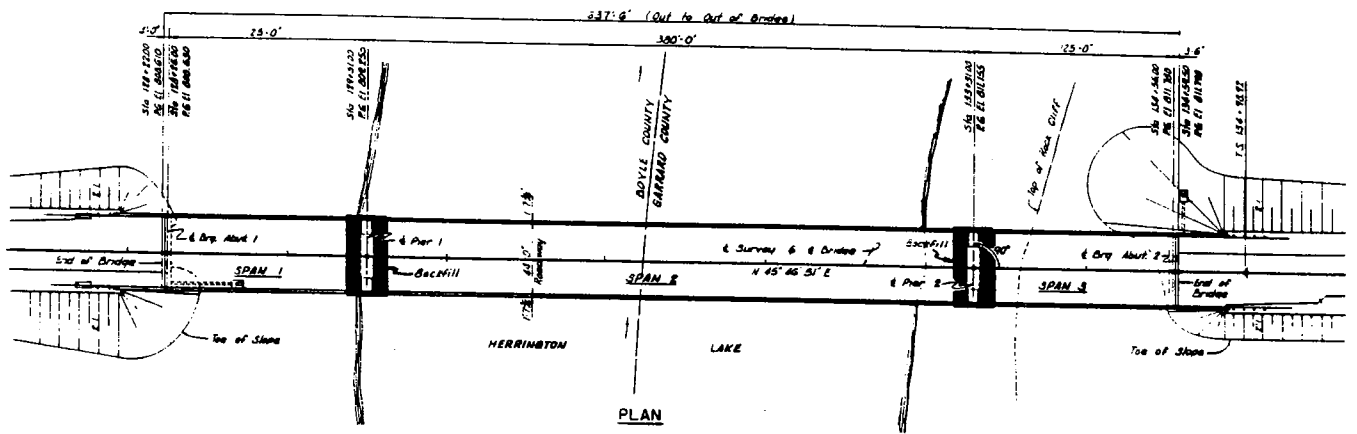
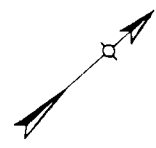
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11-984.0

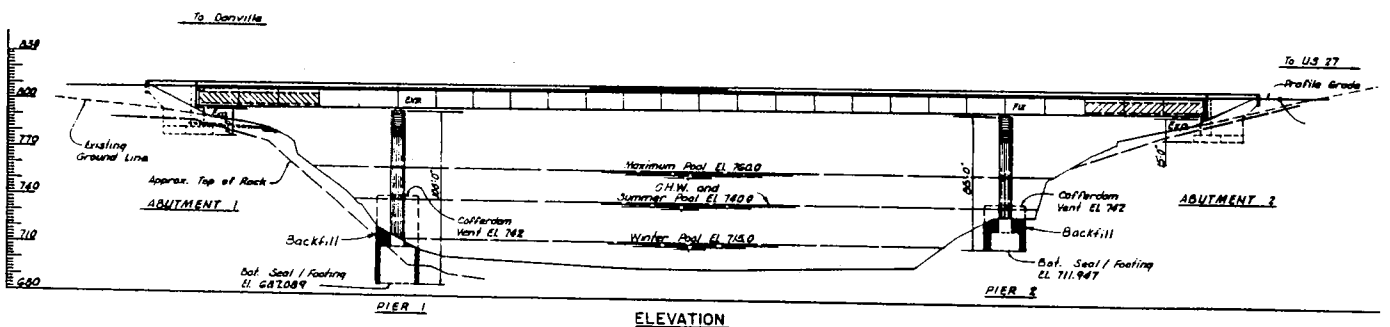
2 of 2

ITEM NO.:

SHEET NO.:



PLAN



ELEVATION

NOTES

DATUM — 1927 North American Datum.  
 Temporary Fill and Excavated Material to be removed and used as FILL elsewhere on project.

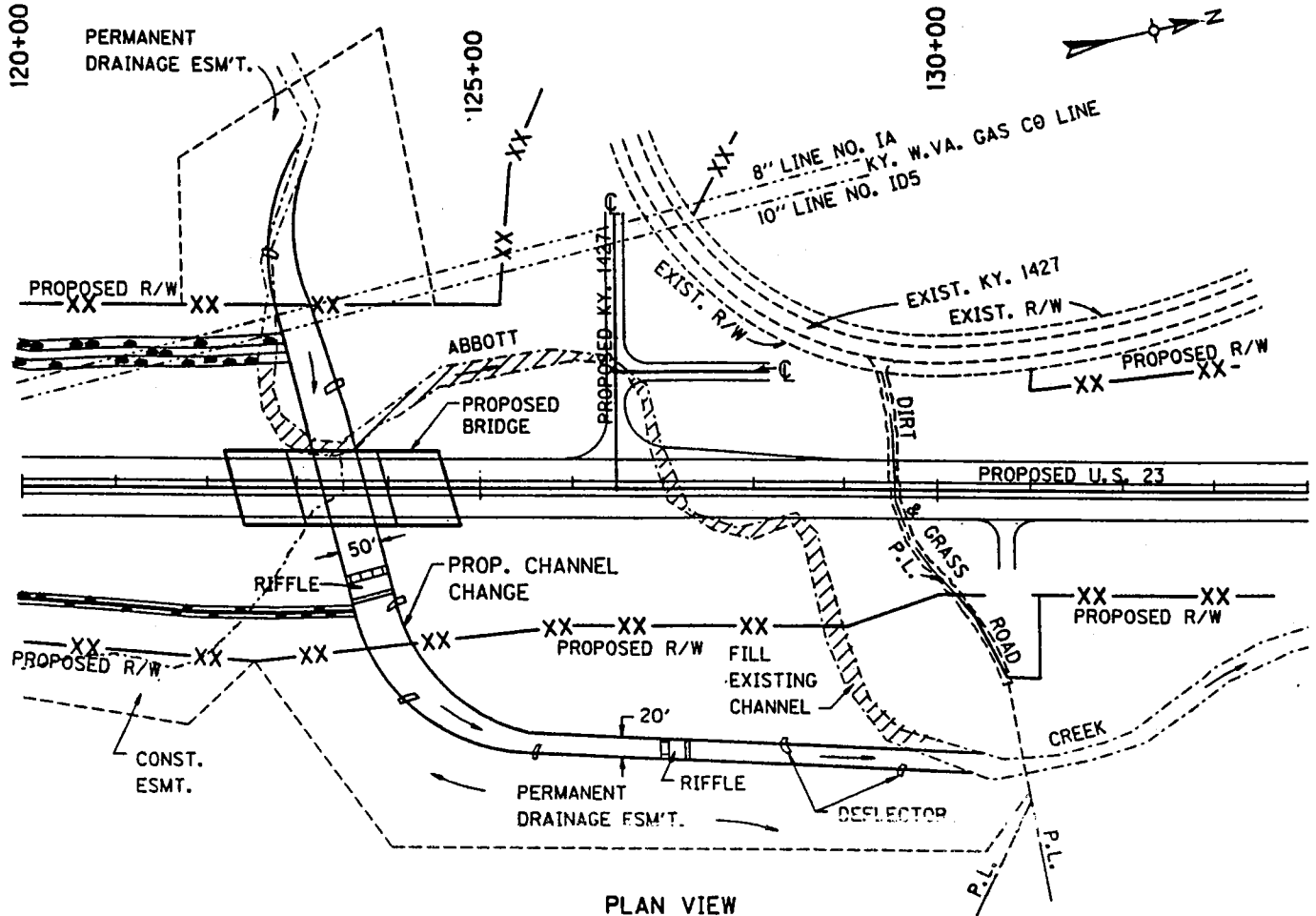
All work shall comply with the current edition of KYTC's "Standard Specifications for Road and Bridge Construction."

APPLICATION BY  
**KENTUCKY**  
 TRANSPORTATION CABINET  
 DEPARTMENT OF HIGHWAYS

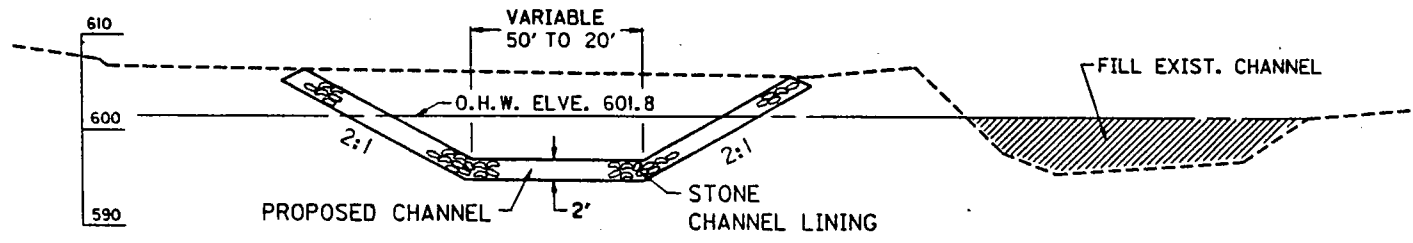


PROPOSED BRIDGE REPLACEMENT

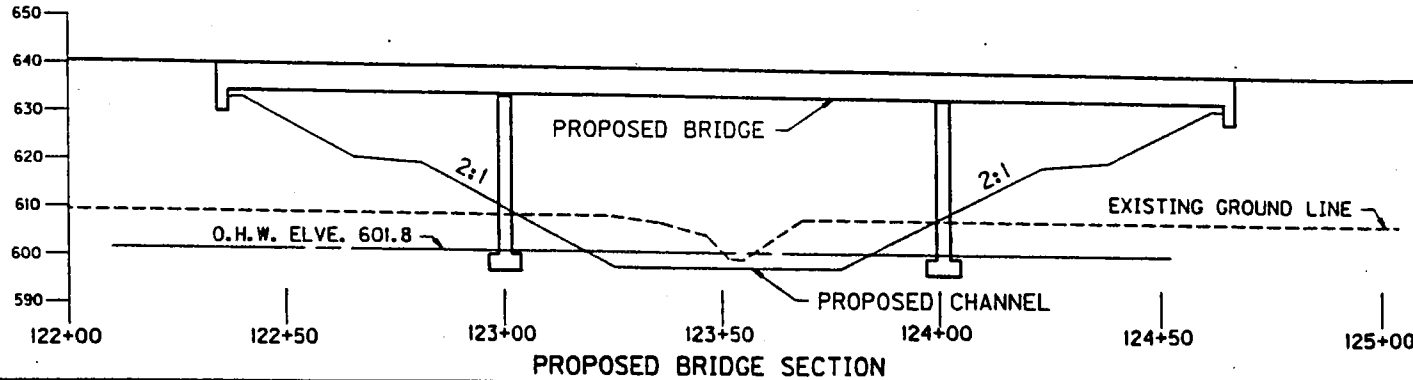
PROPOSED ACTIVITIES:	
HERRINGTON LAKE	MARCELLUS
STREAM NAME:	AT OR NEAR:
BOYLE-GARRARD	KENTUCKY
COUNTY OF:	STATE OF:
MILE POINT:	7 - 139.02
ITEM NO.:	2 of 2
SHEET NO.:	



PLAN VIEW



TYPICAL CHANNEL SECTION



PROPOSED BRIDGE SECTION

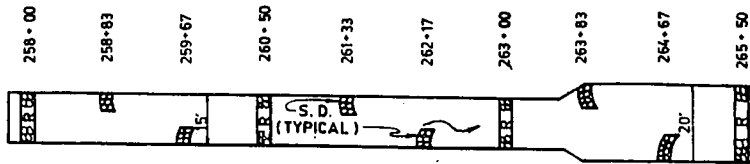
~NOTES~

DATUM: 1927 North American Datum.  
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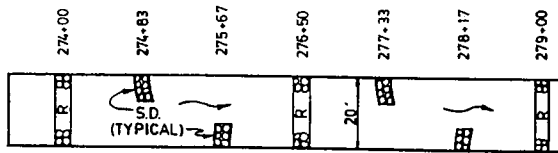
APPLICATION BY  
**KENTUCKY**  
 TRANSPORTATION CABINET  
 DEPARTMENT OF HIGHWAYS

PROPOSED BRIDGE & CHANNEL CHANGE		
PROPOSED ACTIVITIES:		
ABBOTT CREEK	PRESTONSBURG	
STREAM NAME:	AT OR NEAR:	
FLOYD	KENTUCKY	
COUNTY OF:	STATE OF:	
0.8	12-713.02	of
MILE POINT:	ITEM NO.:	SHEET NO.:

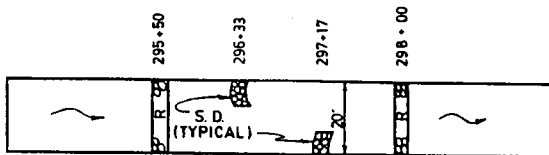
SDSTD, PERMIT, 1000, 1200



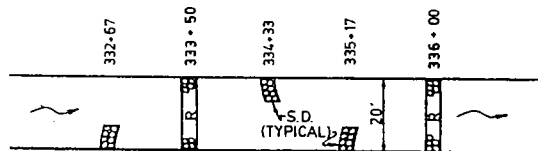
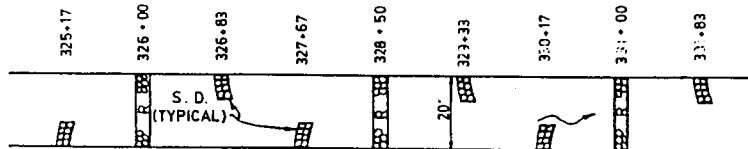
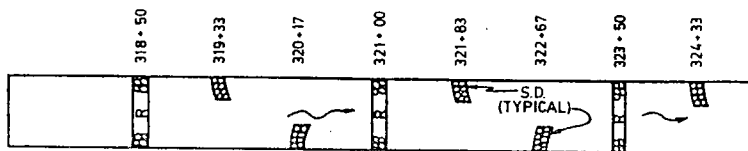
Channel Change Rt. Sta. 256+00 to Sta. 267+00



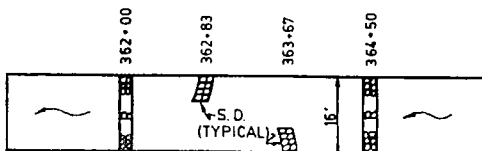
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Channel Change Rt. Sta. 294+60 to Sta. 299+40



Channel Change Rt. Sta. 316+50 to Sta. 337+25



Channel Change Rt. of Sta. 361+00 to Sta. 366+00

**LEGEND**  
*R* = Riffle Structure  
*S.D.* = Dumped Stone Deflector

**.. NOTES ..**

DATUM — 1927 North American Datum.

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APPLICATION BY  
**KENTUCKY**  
**TRANSPORTATION CABINET**  
 DEPARTMENT OF HIGHWAYS



**PROPOSED CHANNEL CHANGES**

PROPOSED ACTIVITIES:

**LITTLE PAINT CREEK**

STREAM NAME:

**PRESTONSBURG**

AT OR NEAR:

**FLOYD**

COUNTY OF:

**KENTUCKY**

STATE OF:

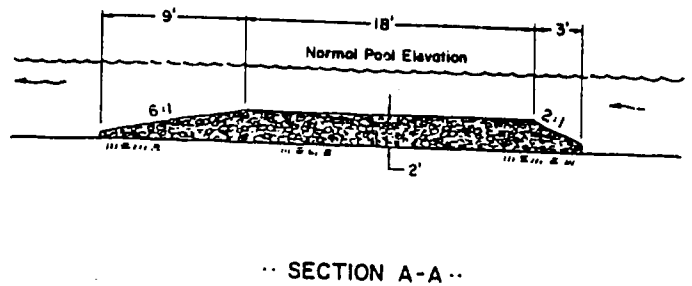
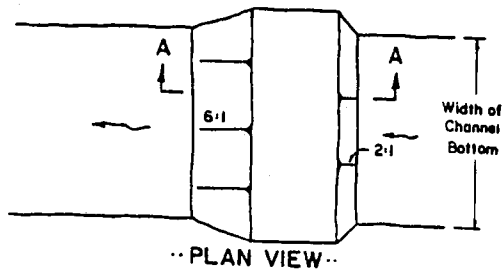
MILE POINT:

**12-713.05**

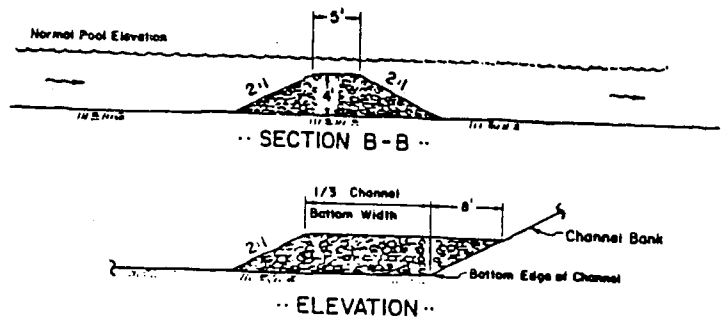
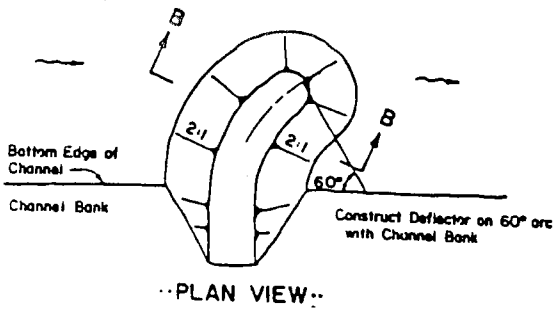
ITEM NO.:

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SHEET NO.:



... RIFFLE STRUCTURE ...  
(no scale)



... DUMPED STONE DEFLECTOR ...  
(no scale)

.. NOTES ..

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APPLICATION BY  
**KENTUCKY**  
TRANSPORTATION CABINET  
DEPARTMENT OF HIGHWAYS



PROPOSED CHANNEL CHANGES

PROPOSED ACTIVITIES:

MIDDLE ABBOTT &  
LITTLE PAINT CREEKS

PRESTONSBURG

STREAM NAME:

AT OR NEAR:

FLOYD

KENTUCKY

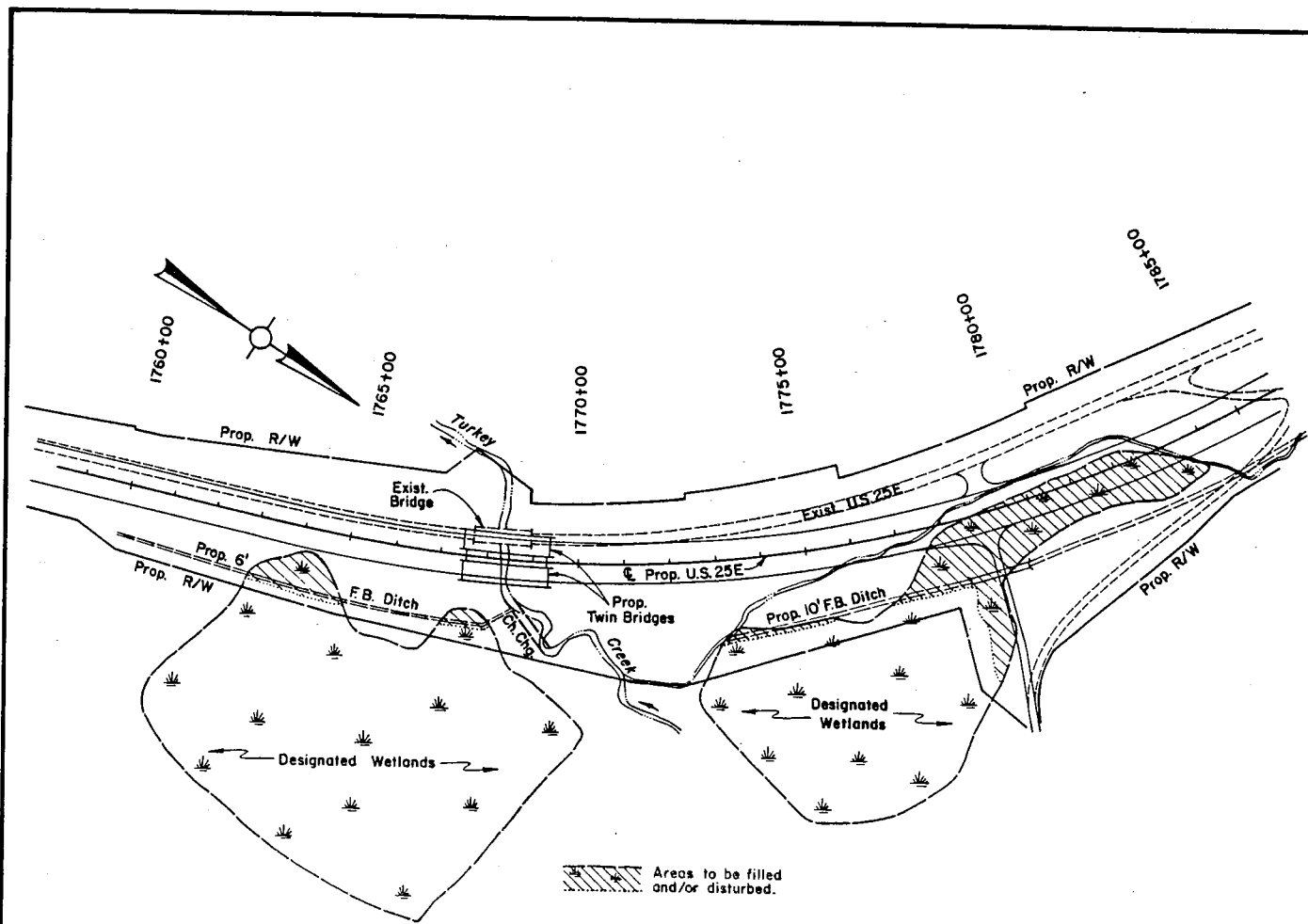
COUNTY OF:

STATE OF:

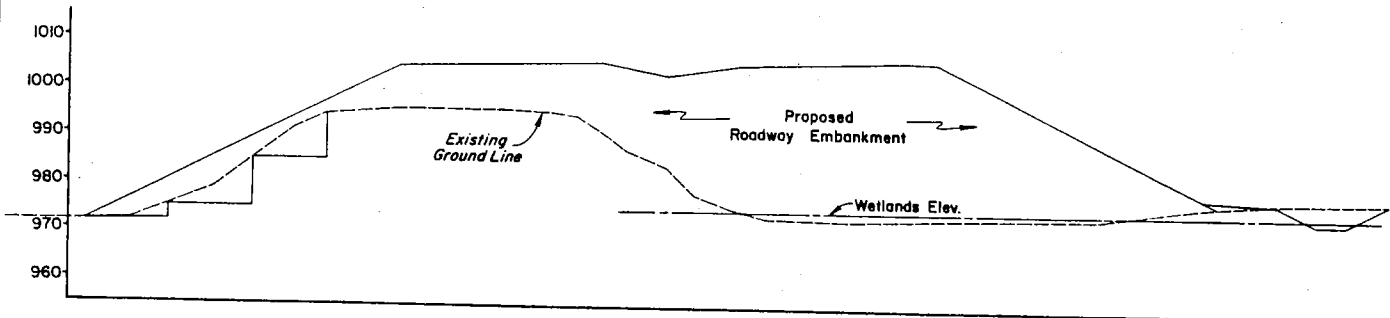
12-713.0

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MILE POINT:



--PLAN VIEW--



--TYPICAL CROSS SECTION--

-- NOTES --

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APPLICATION BY  
**KENTUCKY**  
TRANSPORTATION CABINET  
DEPARTMENT OF HIGHWAYS



PROPOSED ACTIVITIES:		
STREAM NAME:	AT OR NEAR:	
COUNTY OF:	<b>KENTUCKY</b>	
MILE POINT:	ITEM NO.:	SHEET NO.:

Channel Change Location	Width (ft.)	O.H.W. Elev.	Length of Prop. Ch.Ch. (ft.)	Length Channel to be Filled	Exc. Below O.H.W. (c.y.)	Emb. Below O.H.W. (c.y.)	Exist. Channel to be Filled (c.y.)	Class IV Ch. Lining Below O.H.W. (c.y.)	Riffles and Deflectors (c.y.)
10+50 to 22+98 *	35	601.3	1248	1713	12,763	0	10,590	2,173	166
M.L. 125+00	20	601.8	1225	1447	9,114	0	6,791	3,365	196
134+10 to 138+40	20	601.8	520	625	2,065	0	2,691	792	166
256+00 to 267+00 Rt. Mainline	15 & 20	632	1100	1488	5051	230	2046	787	345
263+31.60 App. Lt.	14	628	480	0	1393	91	424	214	0
273+23 to 279+25 Rt.	20	622.5	602	700	1575	0	1666	402	271
48+70 to 52+10 M.L. 283+18* Rt.	20	620	340	420	1884	0	1213	511	0
289+25 to 292+00 Rt.	20	616	275	350	633	0	437	190	0
294+60 to 299+40 Rt.	20	615.5	480	663	1067	138	1908	297	158
310+10 to 311+75 Rt.	20	608.5	200	275	713	31	828	148	0
316+50 to 337+25 Rt.	20	605	2075	2663	15777	1885	7633	2054	836
361+00 to 365+90 Rt.	16	598	829	660	2203	0	1504	285	142

\* Temporary Fill (Construction Haul Road) = 366 c.y.

**ENVIRONMENTAL PROTECTION AGENCY INTERIM REGULATIONS  
ON DISCHARGE OF DREDGED OR FILL MATERIAL  
INTO NAVIGABLE WATERS**

**(40 CFR 230; 40 FR 41291, September 5, 1975; Revised by 45 FR 85344,  
December 24, 1980, Effective March 23, 1981)**

*[Editor's note: These regulations will apply to certain federal construction and civil works projects after April 1, 1981, and October 1, 1981, respectively. See effective date note below.]*

**Effective date note:** (1) In the case of civil works projects of the United States Army Corps of Engineers involving the discharge of dredged or fill material for which there is no permit application or permit as such, these Guidelines will apply to all projects on which construction or dredging contracts are issued, or on which dredging is initiated for Corps operations not performed under contract, after October 1, 1981. In the case of Federal construction projects meeting the criteria in section 404(r), these Guidelines will apply to all projects for which a final environmental impact statement is filed with EPA after April 1, 1981.

(2) The effective date of this Part for projects not affected by paragraph (1) was extended an additional 60 days by a presidential memorandum published February 6 (46 FR 11227).]

**PART 230—SECTION 404(b)(1)  
GUIDELINES FOR SPECIFICATION OR  
DISPOSAL SITES FOR DREDGED OR  
FILL MATERIAL**

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230.80 Advanced identification of disposal areas.

**Authority:** This regulation is issued under authority of Sections 404(b) and 501(a) of the Clean Water Act of 1977, 33 U.S.C. § 1344(b) and § 1361(a).

**Subpart A—General**

**§23.1 [230.1] Purpose and policy.**

(a) The purpose of these Guidelines is to restore and maintain the chemical, physical, and biological integrity of waters of the United States through the control of discharges of dredged or fill material.

(b) Congress has expressed a number of policies in the Clean Water Act. These Guidelines are intended to be consistent with and to implement those policies.

(c) Fundamental to these Guidelines is the precept that dredged or fill material should not be discharged into the aquatic ecosystem, unless it can be demonstrated that such a discharge will not have an unacceptable adverse impact either individually or in combination with known and/or probable impacts of other activities affecting the ecosystems of concern.

(d) From a national perspective, the degradation or destruction of special aquatic sites, such as filling operations in wetlands, is considered to be among the most severe environmental impacts covered by these Guidelines. The guiding principle should be that degradation or destruction of special sites may represent an irreversible loss of valuable aquatic resources.

**§ 230.2 Applicability.**

(a) These Guidelines have been developed by the Administrator of the Environmental Protection Agency in conjunction with the Secretary of the Army acting through the Chief of

[Sec. 230.2(a)]



Engineers under section 404(b)(1) of the Clean Water Act (33 U.S.C. 1344). The Guidelines are applicable to the specification of disposal sites for discharges of dredged or fill material into waters of the United States. Sites may be specified through:

(1) The regulatory program of the U.S. Army Corps of Engineers under sections 404(a) and (e) of the Act (see 33 CFR 320, 323 and 325);

(2) The civil works program of the U.S. Army Corps of Engineers (see 33 CFR 209.145 and section 150 of Pub. L. 94-587, Water Resources Development Act of 1976);

(3) Permit programs of States approved by the Administrator of the Environmental Protection Agency in accordance with sections 404(g) and (h) of the Act (see 40 CFR 122, 123 and 124);

(4) Statewide dredged or fill material regulatory programs with best management practices approved under section 208(b)(4)(B) and (C) of the Act (see 40 CFR 35.1560);

(5) Federal construction projects which meet criteria specified in section 404(r) of the Act.

(b) These Guidelines will be applied in the review of proposed discharges of dredged or fill material into navigable waters which lie inside the baseline from which the territorial sea is measured, and the discharge of fill material into the territorial sea, pursuant to the procedures referred to in paragraphs (a)(1) and (a)(2) above. The discharge of dredged material into the territorial sea is governed by the Marine Protection, Research, and Sanctuaries Act of 1972, Pub. L. 92-532, and regulations and criteria issued pursuant thereto (40 CFR Part 220-228).

(c) Guidance on interpreting and implementing these Guidelines may be prepared jointly by EPA and the Corps at the national or regional level from time to time. No modifications to the basic application, meaning, or intent of these Guidelines will be made without rulemaking by the Administrator under the Administrative Procedure Act (5 U.S.C. 551 *et seq.*).

### § 230.3 Definitions.

For purposes of this Part, the following terms shall have the meanings indicated:

(a) The term "Act" means the Clean Water Act (also known as the Federal Water Pollution Control Act or FWPCA) Pub. L. 92-500, as amended by Pub. L. 95-217, 33 U.S.C. 1251, *et seq.*

(b) The term "adjacent" means bordering, contiguous, or neighboring. Wetlands separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach

dunes, and the like are "adjacent wetlands."

(c) The terms "aquatic environment" and "aquatic ecosystem" mean waters of the United States, including wetlands, that serve as habitat for interrelated and interacting communities and populations of plants and animals.

(d) The term "carrier of contaminant" means dredged or fill material that contains contaminants.

(e) The term "contaminant" means a chemical or biological substance in a form that can be incorporated into, onto or be ingested by and that harms aquatic organisms, consumers of aquatic organisms, or users of the aquatic environment, and includes but is not limited to the substances on the 307(a)(1) list of toxic pollutants promulgated on January 31, 1978 (43 FR 4109).

(f) [Reserved]

(g) [Reserved]

(h) The term "discharge point" means the point within the disposal site at which the dredged or fill material is released.

(i) The term "disposal site" means that portion of the "waters of the United States" where specific disposal activities are permitted and consist of a bottom surface area and any overlying volume of water. In the case of wetlands on which surface water is not present, the disposal site consists of the wetland surface area.

(j) [Reserved]

(k) The term "extraction site" means the place from which the dredged or fill material proposed for discharge is to be removed.

(l) [Reserved]

(m) The term "mixing zone" means a limited volume of water serving as a zone of initial dilution in the immediate vicinity of a discharge point where receiving water quality may not meet quality standards or other requirements otherwise applicable to the receiving water. The mixing zone should be considered as a place where wastes and water mix and not as a place where effluents are treated.

(n) The term "permitting authority" means the District Engineer of the U.S. Army Corps of Engineers or such other individual as may be designated by the Secretary of the Army to issue or deny permits under section 404 of the Act; or the State Director of a permit program approved by EPA under § 404(g) and § 404(h) or his delegated representative.

(o) The term "pollutant" means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials not covered by the Atomic

Energy Act, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water. The legislative history of the Act reflects that "radioactive materials" as included within the definition of "pollutant" in section 502 of the Act means only radioactive materials which are not encompassed in the definition of source, byproduct, or special nuclear materials as defined by the Atomic Energy Act of 1954, as amended, and regulated under the Atomic Energy Act. Examples of radioactive materials not covered by the Atomic Energy Act and, therefore, included within the term "pollutant", are radium and accelerator produced isotopes. See *Train v. Colorado Public Interest Research Group, Inc.*, 426 U.S. 1 (1976).

(p) The term "pollution" means the man-made or man-induced alteration of the chemical, physical, biological or radiological integrity of an aquatic ecosystem.

(q) The term "practicable" means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

(q-1) "Special aquatic sites" means those sites identified in Subpart E. They are geographic areas, large or small, possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values. These areas are generally recognized as significantly influencing or positively contributing to the general overall environmental health or vitality of the entire ecosystem of a region. (See 230.10(a)(3))

(r) The term "territorial sea" means the belt of the sea measured from the baseline as determined in accordance with the Convention on the Territorial Sea and the Contiguous Zone and extending seaward a distance of three miles.

(s) The term "waters of the United States" means:

(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(2) All interstate waters including interstate wetlands;

(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:

