TRANSPORTATION CABINET
Frankfort, Kentucky 40622
www.transportation.ky.gov/

Steven L. Beshear
Governor

Joseph W. Prather
Secretary

September 17, 2009

Ms. Lee Anne Devine
Chief South Regulatory Section
U.S. Army Corps of Engineers – Louisville District
600 Dr. Martin Luther King Jr. Place
Louisville, Kentucky 40202

Mr. Alan Grant
Kentucky Division of Water
200 Fair Oaks
Frankfort, Kentucky 40601

Subject: **Application for Section 404 NWP Permit & Section 401 Water Quality Certification Casey County, Kentucky KY 1649 KYTC Item No: 8-273.00**

Dear Ms. Devine and Mr. Grant:

The Kentucky Transportation Cabinet respectfully submits this Application for a Section 404 Nationwide Permit & Section 401 Water Quality Certification for the KY 1649 horizontal curvature correction and improvement of vertical grade in Casey County, Kentucky. The approximately 1.00 mile realignment will result in unavoidable impacts (see application).

Section 106 of the National Historic Preservation Act will be addressed through consultation with the KY SHPO through due process. This project is state-funded and, as such, the KYTC is currently addressing issues related to the NHPA through their due process. Upon receipt of the approval it will be provided to your office.

Section 7 of the Endangered Species Act (ESA) will be addressed through consultation with the US Fish and Wildlife Service. This project is state funded and, as such, the KYTC is currently addressing issues related to the ESA. Attached for your consideration is a copy of the endangered species list for Casey County, provided by USFWS. Once concurrence is received it will be provided to your office.

Enclosed you should find all necessary information in order to make a permit determination. If anything is missing that you need to assist you or you have any questions please contact me by email RoyC.Collins@ky.gov or by phone 502-564-7250.

Sincerely,

Roy Collins III

Roy Collins
Permit Coordinator

RECEIVED
SEP 21 2009
WATER QUALITY BRANCH

Kentucky UNBRIDLED SPIRIT

An Equal Opportunity Employer M/F/D

U.S. Fish & Wildlife Service
Kentucky Ecological Services Field Office

U.S. Fish & Wildlife Service
3761 Georgetown Rd.
Frankfort, KY 40601
Phone: 502-695-0468
Fax: 502-695-1024

Endangered, Threatened, & Candidate Species in _____CASEY_____ County, KY

Group	Species	Common name	Legal* Status	Known** Potential	Special Comments
Mammals	***Myotis sodalis***	**Indiana bat**	**E**	**P**	

NOTES:

* Key to notations: E = Endangered, T = Threatened, C = Candidate, CH = Critical Habitat

**Key to notations: K = Known occurrence record within the county, P = Potential for the species to occur within the county based upon historic range, proximity to known occurrence records, biological, and physiographic characteristics.

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT (33 CFR 325)	OMB APPROVAL NO. 0710-0003 Expires December 31, 2004

The public reporting burden for this collection of information is estimated to average 10 hours per response, although the majority of applications should require 5 hours or less. This includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003), Washington, DC 20503. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdic- tion over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies. Submission of requested information is voluntary, however, if information is not provided, the permit application cannot be processed nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE		4. DATE APPLICATION COMPLETED

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME KY Transportation Cabinet Department of Highways	8. AUTHORIZED AGENT'S NAME AND TITLE (an agent is not required) Roy Collins
6. APPLICANT'S ADDRESS Kentucky Transportation Office Building 200 Mero Street Frankfort, Kentucky 40622	9. AGENT'S ADDRESS Division of Environmental Analysis KY Transportation Office Bldg, Station W5-22-02 200 Mero Street, Frankfort, Kentucky 40622
7. APPLICANT'S PHONE NUMBERS WITH AREA CODE a. Residence b. Business (502)564-3730	10. AGENT'S PHONE NUMBERS WITH AREA CODE a. Residence b. Business (502) 564-7250

11. **STATEMENT OF AUTHORIZATION**

I hereby authorize Roy Collins to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

APPLICANT'S SIGNATURE — DATE 9/17/09

NAME, LOCATION AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)
KY 1649 Relocation & Widening Project, Casey County

13. NAME OF WATERBODY, IF KNOWN (if applicable) U.T. of Green River	14. PROJECT STREET ADDRESS (if applicable) N/A
15. LOCATION OF PROJECT Casey (COUNTY) KY (STATE)	

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)
Project begins at the KY-70 & KY 1649 intersection and proceeds southeast about 1 mile.

17. DIRECTIONS TO THE SITE
Begin at Liberty and take KY 70 to the intersection of KY 1649

RECEIVED SEP 21 2009 WATER QUALITY BRANCH

18. Nature of Activity (Description of project, include all features)

The relocation and widening construction of KY 1649 involves the construction of 7 culverts.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

See Attachment

USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

To necessitate the construction of KY 1649, the placement of culverts is required

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards

The material will be native rock and soils from the project site. Approximately 250 CY of rock will be placed for the culverts.

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Roadway fill = 0.243 acres. See "Summary" sheets for individual site acreages.

23. Is Any Portion of the Work Already Complete? Yes____ No __x__ IF YES, DESCRIBE THE COMPLETED WORK

24. Addresses of Adjoining Property Owners, Lessees, etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

See Attachment

25. List of Other Certifications or Approvals/Denials Received from other Federal, State, or Local Agencies for Work Described in This Application

AGENCY	TYPE APPROVAL *	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

*Would include but is not restricted to zoning, building and flood plain permits

26. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT — DATE 9/17/09

SIGNATURE OF AGENT — DATE 9/17/09

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States, knowingly and willfully falsifies, conceals, or covers up any trick scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

Attachment Block 19

Casey County
KY 1649 Relocation &Widening
Item No. 8-273.0

Project Purpose:
The purpose of the project is to reduce current and future traffic congestion, correct existing roadway deficiencies, and provide for acceptable access management, in order to facilitate the safe and efficient movement of people and goods along this section of KY 1649 in Casey County.

Attachment Block 24

Casey County
KY 1649 Relocation &Widening
Item No. 8-273.0

George S. and Emma Martin
1163 Dry Ridge Rd
Liberty, KY 42539

Kenneth and Geneva Grider
31 Bowman Trl
Liberty, KY 42539

Robert and Violet Lynn
787 Dry Ridge Rd
Liberty, KY 42539

Anna Patterson
1386 E Ky #70
Liberty, KY 42539

Roscoe and Evaline Godbey

Mattie Fair

Anthony and Verna Richardson

Walter E. Thomas

Cecil R. Rodgers

Norma J. Watson

SUMMARY OF SECTION 404 IMPACTS

Casey County
KY 1649 Relocation &Widening
Item No. 8-273.0

Impacts by Proposed KY 1649 Relocation To Streams

[Please note: Impacts are arranged below in the order that the sites occur moving along the project from south to north.]

1. **STA 208+00** – Construct roadway impacting **193'** of an U.T. of Green River at approximate location: latitude N 37.307186, longitude E - 84.916824. This portion of the stream is within the footprint of the roadway and will be filled with excavated material, and the drainage conveyed to a roadside ditch. Field investigations indicate this stream is **ephemeral** in nature with a watershed of 4.3 acres. The impact to the water is **0.010 acre**. (Nationwide 14)

2. **STA 210+90** – Construct roadway impacting **308'** of an U.T. of Green River at approximate location: latitude N 37.307708, longitude E - 84.917729. After construction this portion of the stream will be conveyed through 328' of new culvert pipe and inlet/outlet channel to connect the water flow. Field investigations indicate this stream is **ephemeral** in nature with a watershed of 3.6 acres. The impact to the water is **0.015 acre**. (Nationwide 14)

3. **STA 211+00** – Construct roadway impacting **170'** of an U.T. of Green River at approximate location: latitude N 37.308077, longitude E - 84.917153. After construction this portion of the stream will be conveyed through 127' of constructed channel to connect the water flow. Field investigations indicate this stream is **intermittent** in nature with a watershed of 28.5 acres. The impact to the water is **0.018 acre**. (Nationwide 14)

4. **STA 220+00** – Construct roadway impacting **269'** of an U.T. of Green River at approximate location: latitude N 37.310372, longitude E - 84.917360. After construction this portion of the stream will be conveyed through 194' of constructed channel to connect the water flow. Field investigations indicate this stream is **intermittent** in nature with a watershed of 49.7 acres. The impact to the water is **0.034 acre**. (Nationwide 14)

5. **STA 221+00** – Construct roadway impacting **284'** of an U.T. of Green River at approximate location: latitude N 37.310426, longitude E - 84.917921. After construction this portion of the stream will be conveyed through 326' of

new culvert pipe and inlet/outlet channel to connect the water flow. Field investigations indicate this stream is **ephemeral** in nature with a watershed of 5.0 acres. The impact to the water is **0.015 acre**. (Nationwide 14)

6. **STA 226+60** – Construct roadway impacting **127'** of U.T. of Green River at approximate location: latitude N 37.311534, longitude E - 84.916521. After construction this portion of the stream will be conveyed through 122' of constructed channel to connect the water flow. Field investigations indicate this stream is **intermittent** in nature with a watershed of 70.4 acres. The impact to the water is **0.019 acre**. (Nationwide 14)

7. **STA 227+00** – Construct roadway impacting **436'** of U.T. of Green River at approximate location: latitude N 37.311910, longitude E - 84.917036. After construction this portion of the stream will be conveyed through 416' of new culvert pipe and inlet/outlet channel to connect the water flow. Field investigations indicate this stream is **ephemeral** in nature with a watershed of 14.1 acres. The impact to the water is **0.035 acre**. (Nationwide 14)

8. **STA 230+00** – Construct roadway impacting **73'** of U.T. of Green River at approximate location: latitude N 37.312351, longitude E - 84.915971. After construction this portion of the stream will be conveyed through 57' of constructed channel to connect the water flow. Field investigations indicate this stream is **intermittent** in nature with a watershed of 76.8 acres. The impact to the water is **0.011 acre.** (Nationwide 14)

9. **STA 230+95** – Construct roadway impacting **439'** of U.T. of Green River at approximate location: latitude N 37.312946, longitude E - 84.916335. After construction this portion of the stream will be conveyed through 316' of new culvert pipe and inlet/outlet channel to connect the water flow. Field investigations indicate this stream is **ephemeral** in nature with a watershed of 6.1 acres. The impact to the water is **0.025 acre.** (Nationwide 14)

10. **STA 244+00** – Construct roadway impacting **265'** of U.T. of Green River at approximate location: latitude N 37.316031, longitude E - 84.916990. After construction this portion of the stream will be conveyed through 260' of new culvert pipe and inlet/outlet channel to connect the water flow. Field investigations indicate this stream is **ephemeral** in nature with a watershed of 2.0 acres. The impact to the water is **0.010 acre**. (Nationwide 14)

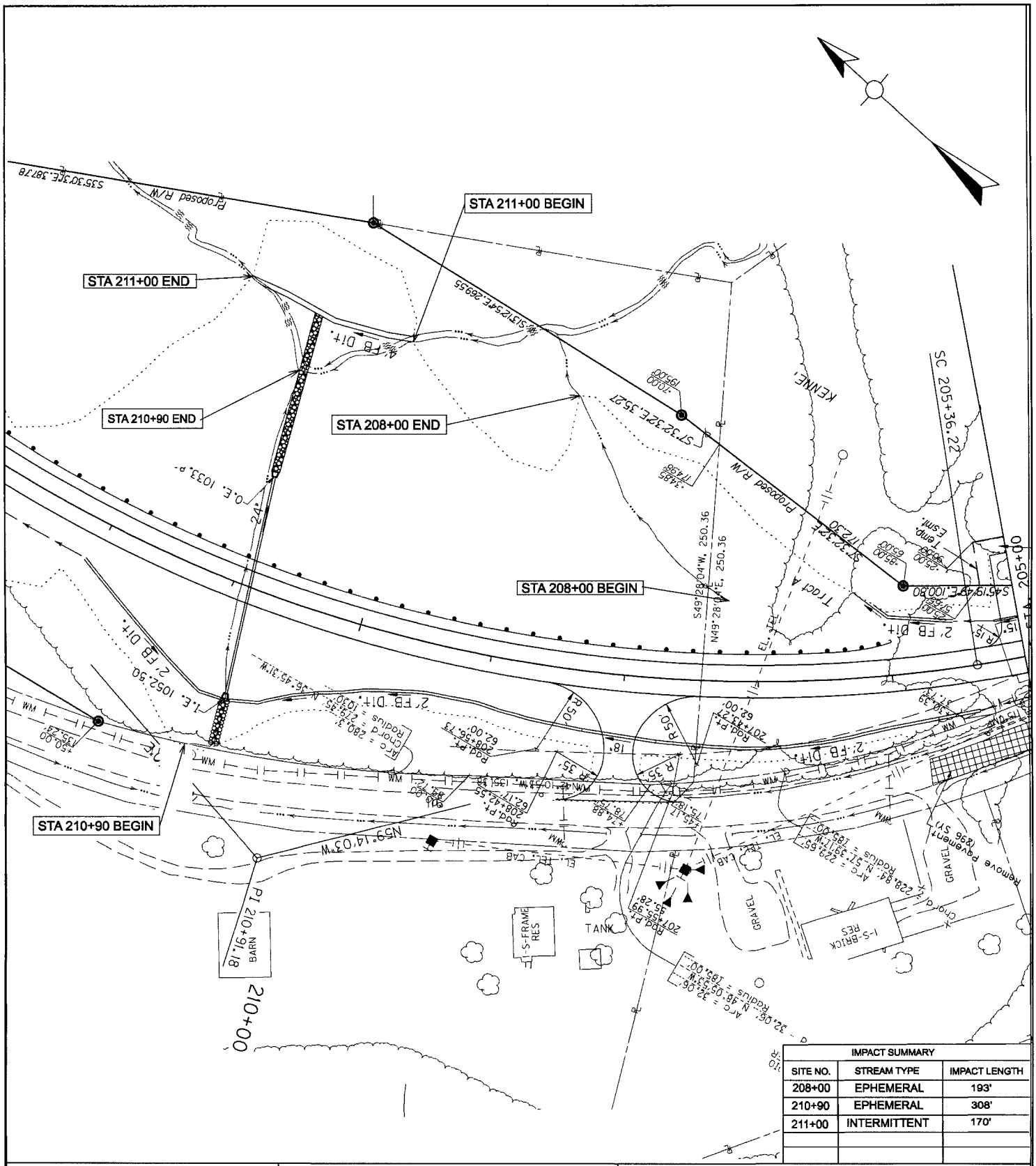
11. **STA 247+00** – Construct roadway impacting **53'** of U.T. of Green River at approximate location: latitude N 37.316661, longitude E - 84.917513. This portion of the stream is within the footprint of the roadway and will be filled with excavated material, and the drainage conveyed to a roadside ditch. Field investigations indicate this stream is **ephemeral** in nature with a watershed of 1.0 acres. The impact to the water is **0.002 acre** (Nationwide 14)

12. **STA 248+70** – Construct roadway impacting **104'** of U.T. of Green River at approximate location: latitude N 37.316936, longitude E - 84.918124. This portion of the stream is within the footprint of the roadway and will be filled with excavated material, and the drainage conveyed to a roadside ditch. Field investigations indicate this stream is **ephemeral** in nature with a watershed of 1.1 acres. The impact to the water is **0.003 acre** (Nationwide 14)

13. **STA 249+50** – Construct roadway impacting **157'** of U.T. of Green River at approximate location: latitude N 37.317107, longitude E - 84.918271. After construction this portion of the stream will be conveyed through 150' of new culvert pipe and inlet/outlet channel to connect the water flow. Field investigations indicate this stream is **ephemeral** in nature with a watershed of 5.8 acres. The impact to the water is **0.009 acre** (Nationwide 14)

14. **STA 15+60** – Construct roadway impacting **177'** of U.T. of Green River at approximate location: latitude N 37.320620, longitude E - 84.919524. After construction this portion of the stream will be conveyed through 200' of new culvert pipe and inlet/outlet channel to connect the water flow. Field investigations indicate this stream is **intermittent** in nature with a watershed of 172.8 acres. The impact to the water is **0.036 acre** (Nationwide 14)

15. **STA 12+70** – Construct roadway impacting **62'** of U.T. of Green River at approximate location: latitude N 37.320575, longitude E - 84.920457. This portion of the stream is within the footprint of the roadway and will be filled with excavated material, and the drainage conveyed to a roadside ditch. Field investigations indicate this stream is **ephemeral** in nature with a watershed of 2.2 acres. The impact to the water is **0.002 acre** (Nationwide 14)



IMPACT SUMMARY		
SITE NO.	STREAM TYPE	IMPACT LENGTH
208+00	EPHEMERAL	193'
210+90	EPHEMERAL	308'
211+00	INTERMITTENT	170'

~NOTES~

Stream Impact STA 208+00
Stream Impact STA 210+90
Stream Impact STA 211+00

SCALE 1" = 100'

APPLICATION BY

KENTUCKY

TRANSPORTATION CABINET

DEPARTMENT OF HIGHWAYS

STA 208+00 TO 211+00 IMPACT PLAN

PROPOSED ACTIVITIES:

U.T. GREEN RIVER — STREAM NAME:

LIBERTY — AT OR NEAR:

CASEY — COUNTY OF:

KENTUCKY — STATE OF:

MILE POINT:

8-273.00 — ITEM NO.:

2 — SHEET NO.:

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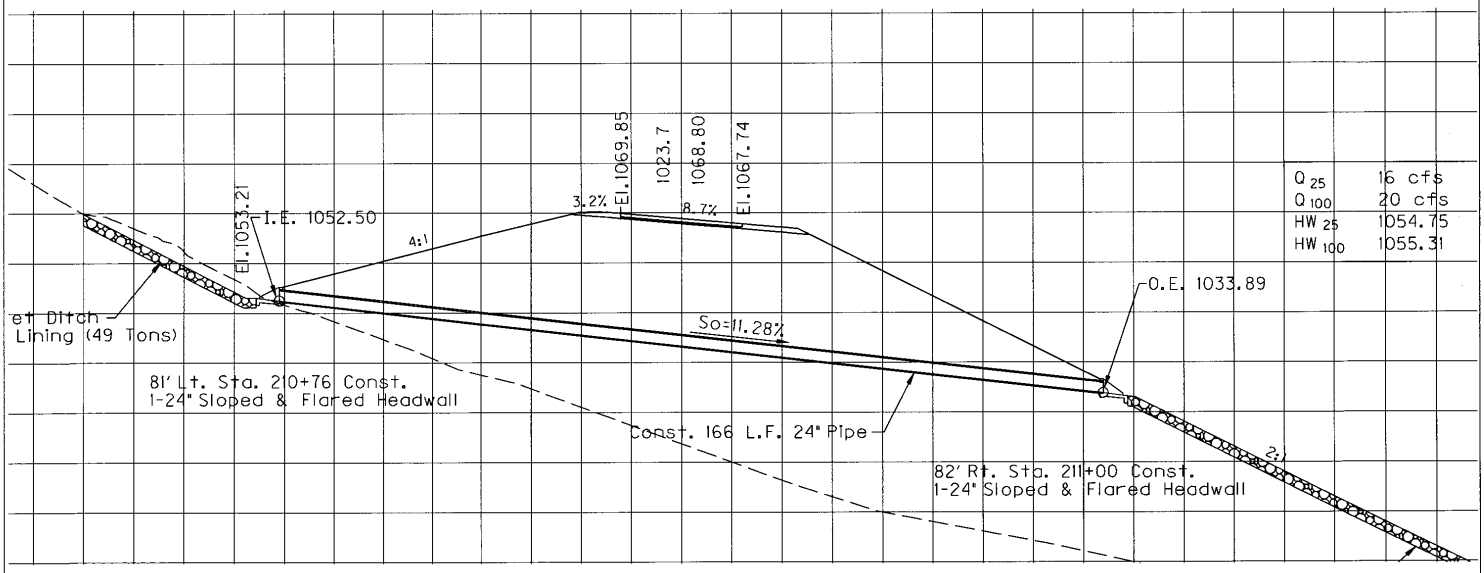

~NOTES~

Stream Impact STA 210+90

SCALE 1" = 30'

APPLICATION BY

KENTUCKY

TRANSPORTATION CABINET

DEPARTMENT OF TRANSPORTATION

STA 210+90 IMPACT PLAN PROPOSED ACTIVITIES:		
U.T. GREEN RIVER STREAM NAME:	LIBERTY AT OR NEAR:	
CASEY COUNTY OF:	KENTUCKY STATE OF:	
MILE POINT:	8-273.00 ITEM NO.:	3 SHEET NO.:

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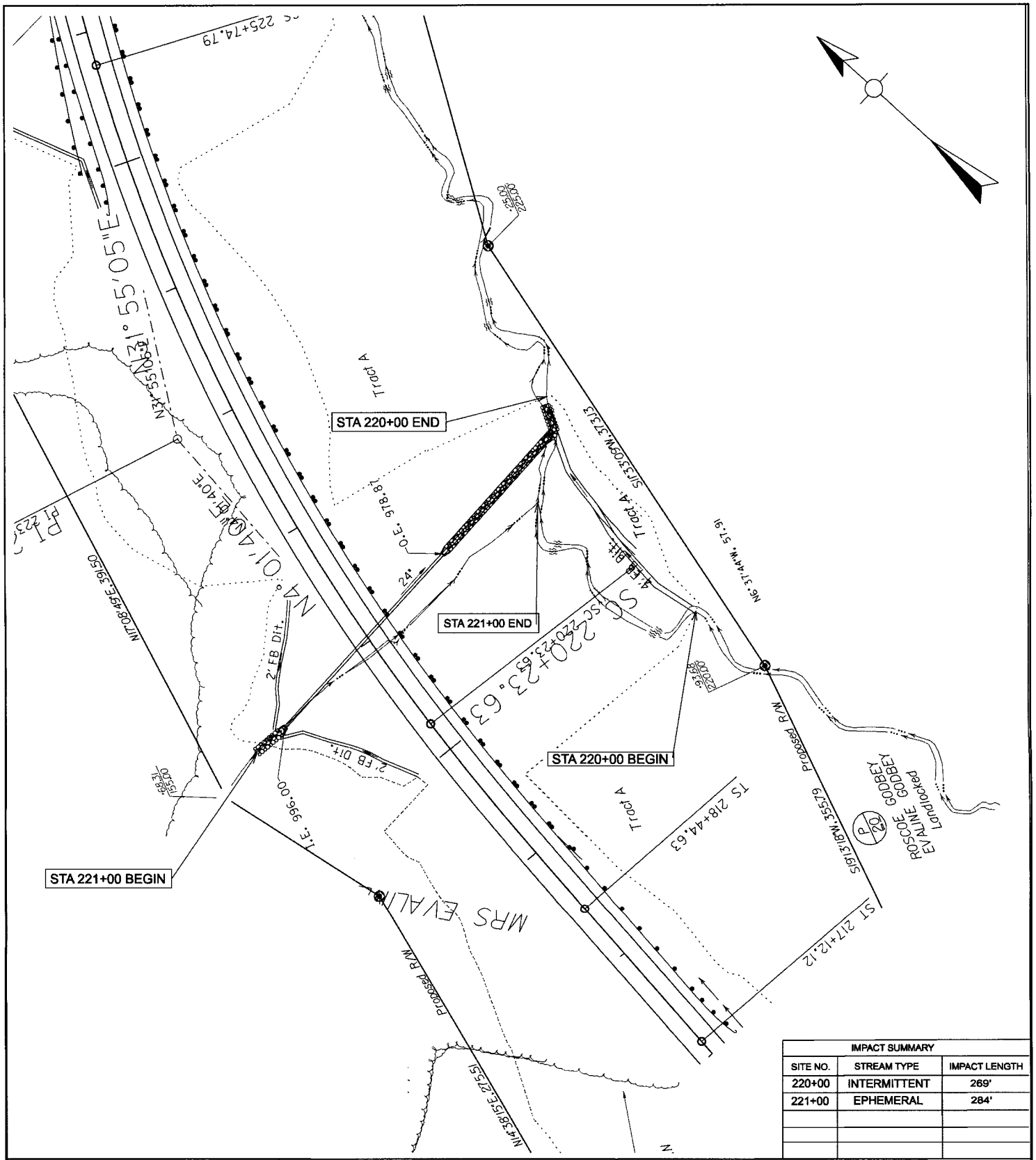

IMPACT SUMMARY		
SITE NO.	STREAM TYPE	IMPACT LENGTH
220+00	INTERMITTENT	269'
221+00	EPHEMERAL	284'

~NOTES~

Stream Impact STA 220+00
Stream Impact STA 221+00

SCALE 1" = 100'

APPLICATION BY
KENTUCKY
TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

STA 220+00 TO 221+00 IMPACT PLAN

PROPOSED ACTIVITIES:

STREAM NAME: U.T. GREEN RIVER
AT OR NEAR: LIBERTY

COUNTY OF: CASEY
STATE OF: KENTUCKY

MILE POINT:
ITEM NO.: 8-273.00
SHEET NO.: 4

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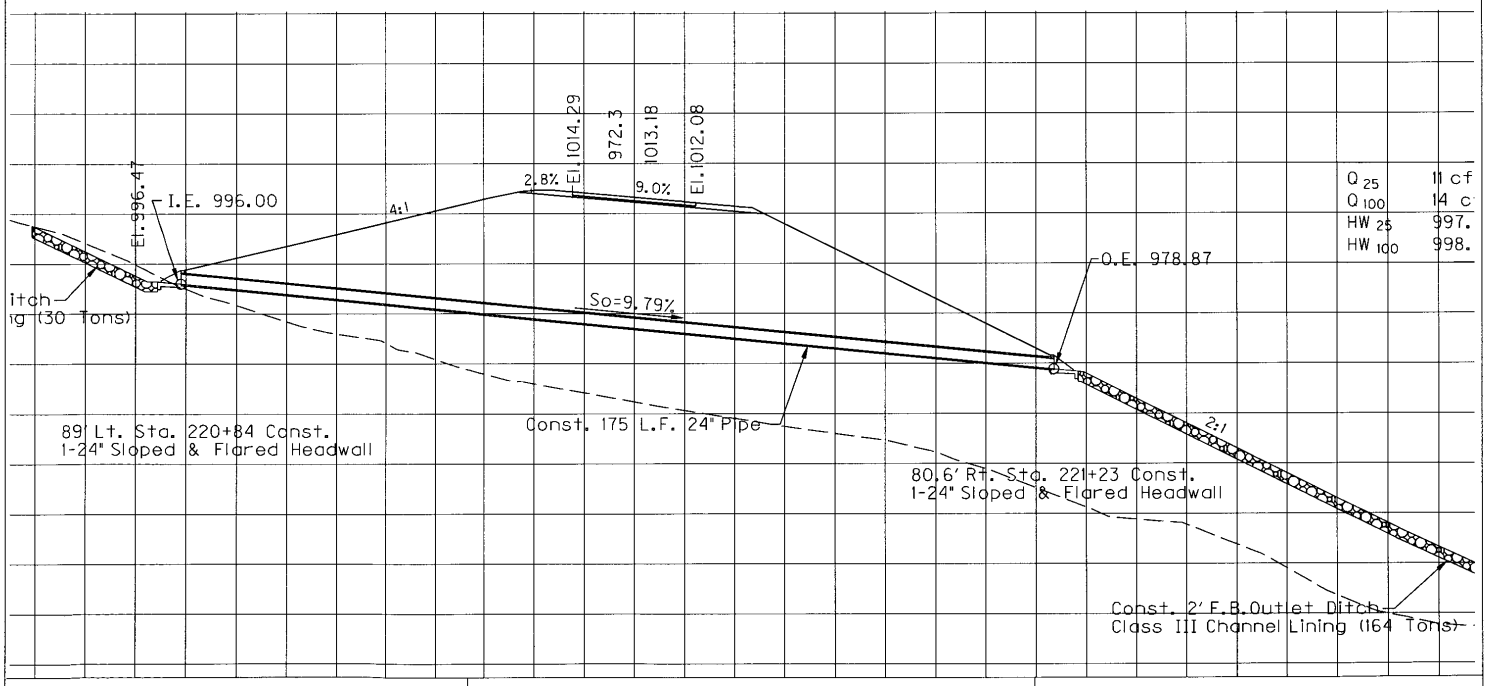

~NOTES~

Stream Impact STA 221+00

SCALE 1" = 30'

APPLICATION BY

KENTUCKY

TRANSPORTATION CABINET

DEPARTMENT OF TRANSPORTATION

STA 221+00 IMPACT PLAN	
PROPOSED ACTIVITIES:	
U.T. GREEN RIVER	LIBERTY
STREAM NAME:	AT OR NEAR:
CASEY	KENTUCKY
COUNTY OF:	STATE OF:
MILE POINT:	8-273.00 ITEM NO.: / 5 SHEET NO.:

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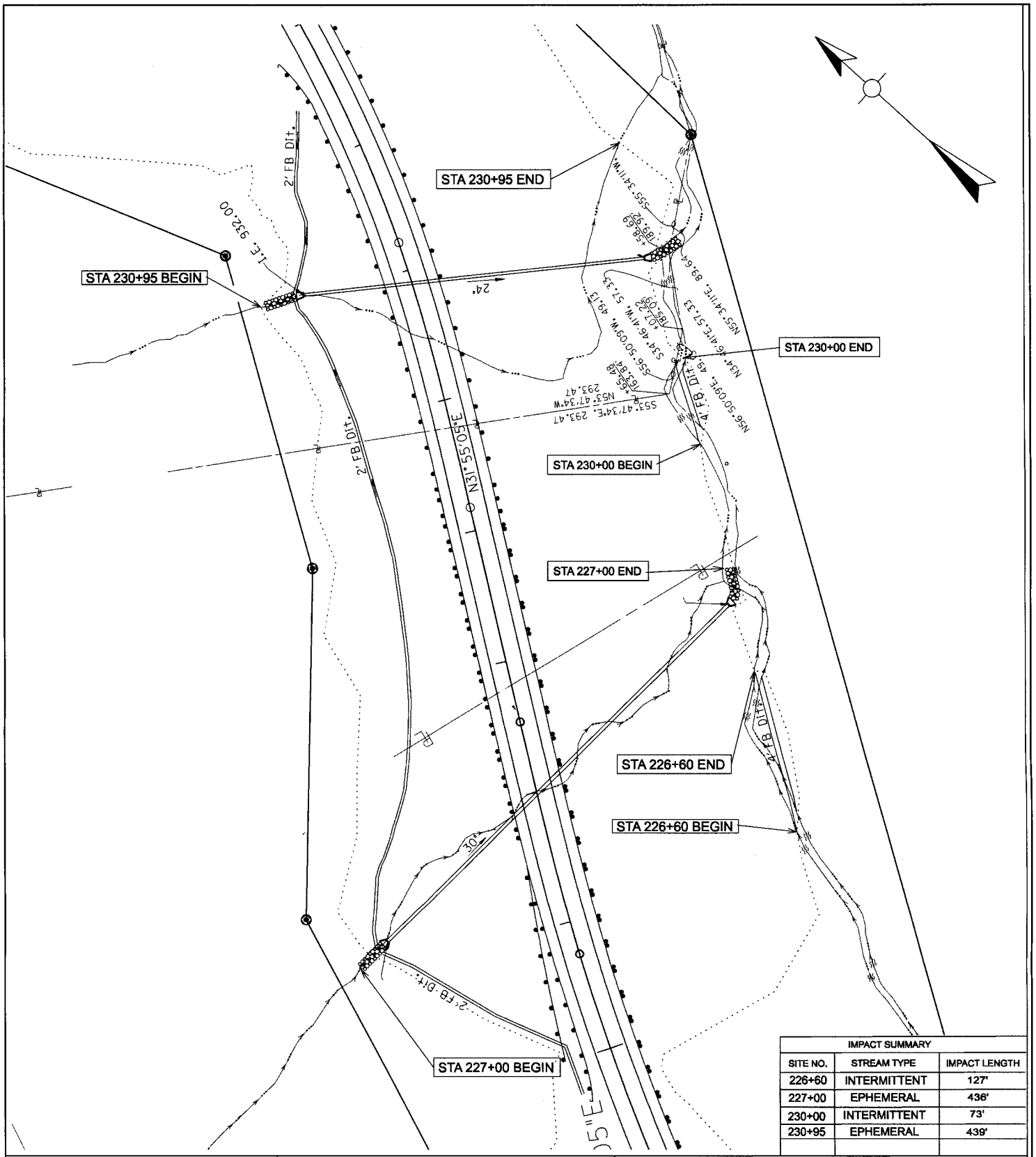

IMPACT SUMMARY		
SITE NO.	STREAM TYPE	IMPACT LENGTH
226+60	INTERMITTENT	127'
227+00	EPHEMERAL	436'
230+00	INTERMITTENT	73'
230+95	EPHEMERAL	439'

~NOTES~

Stream Impact STA 226+60
Stream Impact STA 227+00
Stream Impact STA 230+00
Stream Impact STA 230+95

SCALE 1" = 100'

APPLICATION BY
KENTUCKY
TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

STA 226+60 TO 230+95 IMPACT PLAN

PROPOSED ACTIVITIES:

STREAM NAME: U.T. GREEN RIVER
AT OR NEAR: LIBERTY

COUNTY OF: CASEY
STATE OF: KENTUCKY

MILE POINT:
ITEM NO.: 8-273.00
SHEET NO.: 6

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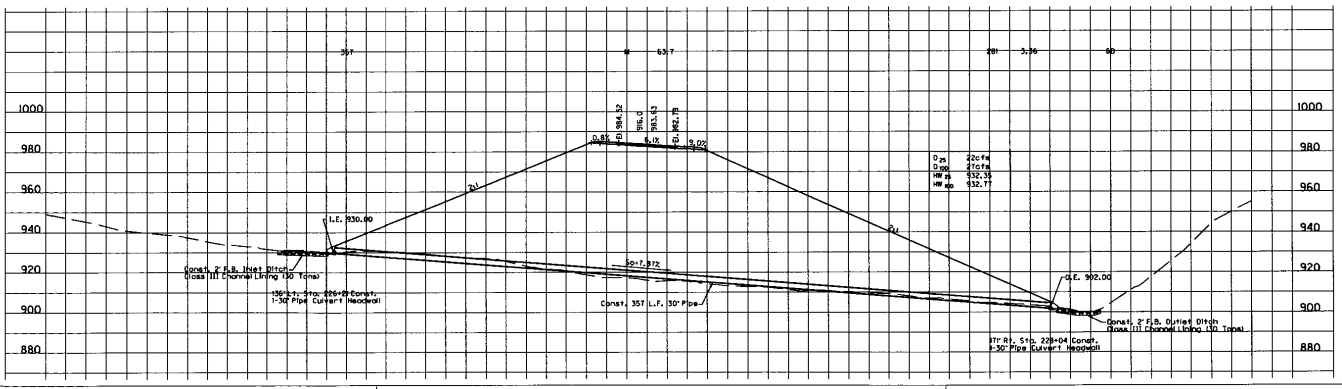

~NOTES~

Stream Impact STA 227+00

SCALE 1" = 30'

APPLICATION BY

KENTUCKY

TRANSPORTATION CABINET

DEPARTMENT OF TRANSPORTATION

PROPOSED ACTIVITIES:	STA 227+00 IMPACT PLAN
STREAM NAME:	U.T. GREEN RIVER
AT OR NEAR:	LIBERTY
COUNTY OF:	CASEY
STATE OF:	KENTUCKY
MILE POINT:	
ITEM NO.:	8-273.00
SHEET NO.:	7

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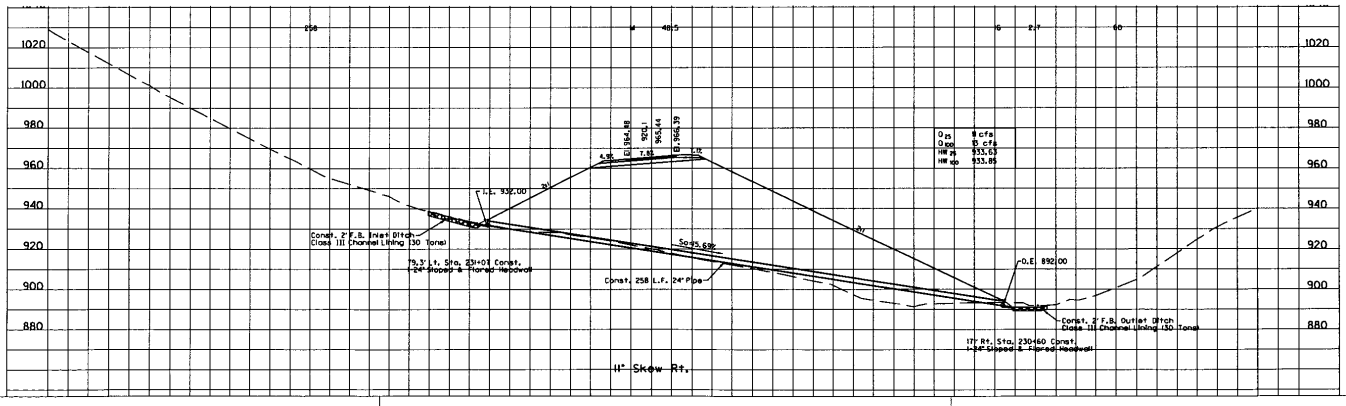

~NOTES~

Stream Impact STA 230+95

SCALE 1" = 30'

APPLICATION BY

KENTUCKY

TRANSPORTATION CABINET

DEPARTMENT OF TRANSPORTATION

STA 230+95 IMPACT PLAN

PROPOSED ACTIVITIES:

U.T. GREEN RIVER	LIBERTY
STREAM NAME:	AT OR NEAR:
CASEY	KENTUCKY
COUNTY OF:	STATE OF:

	8-273.00	8
MILE POINT:	ITEM NO.:	SHEET NO.:

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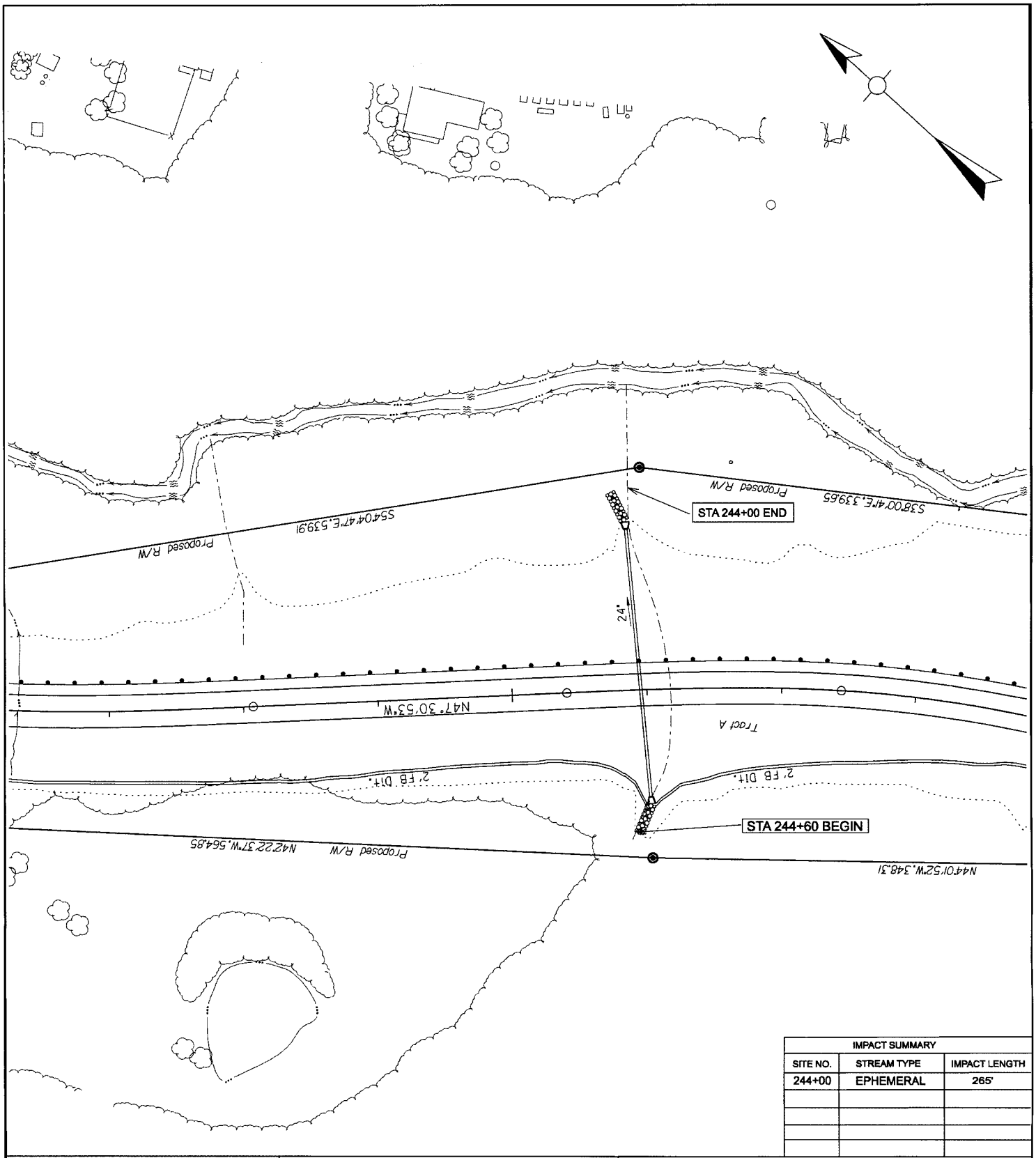

IMPACT SUMMARY		
SITE NO.	STREAM TYPE	IMPACT LENGTH
244+00	EPHEMERAL	265'

~NOTES~

Stream Impact STA 244+00

SCALE 1" = 100'

APPLICATION BY

KENTUCKY

TRANSPORTATION CABINET

DEPARTMENT OF HIGHWAYS

STA 244+00 IMPACT PLAN

PROPOSED ACTIVITIES:

U.T. GREEN RIVER — STREAM NAME:

LIBERTY — AT OR NEAR:

CASEY — COUNTY OF:

KENTUCKY — STATE OF:

MILE POINT:

8-273.00 — ITEM NO.:

9 — SHEET NO.:

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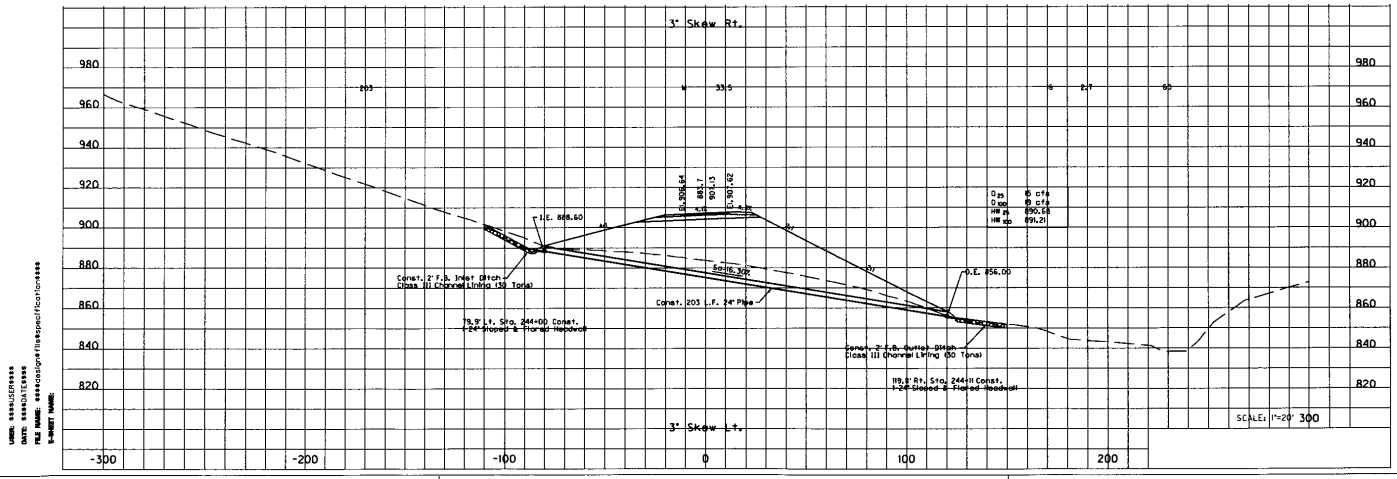

~NOTES~

Stream Impact STA 244+00

SCALE 1" = 30'

APPLICATION BY

KENTUCKY

TRANSPORTATION CABINET

DEPARTMENT OF TRANSPORTATION

STA 244+00 IMPACT PLAN	
PROPOSED ACTIVITIES:	
U.T. GREEN RIVER	LIBERTY
STREAM NAME:	AT OR NEAR:
CASEY	KENTUCKY
COUNTY OF:	STATE OF:
	8-273.00 / 10
MILE POINT:	ITEM NO.: / SHEET NO.:

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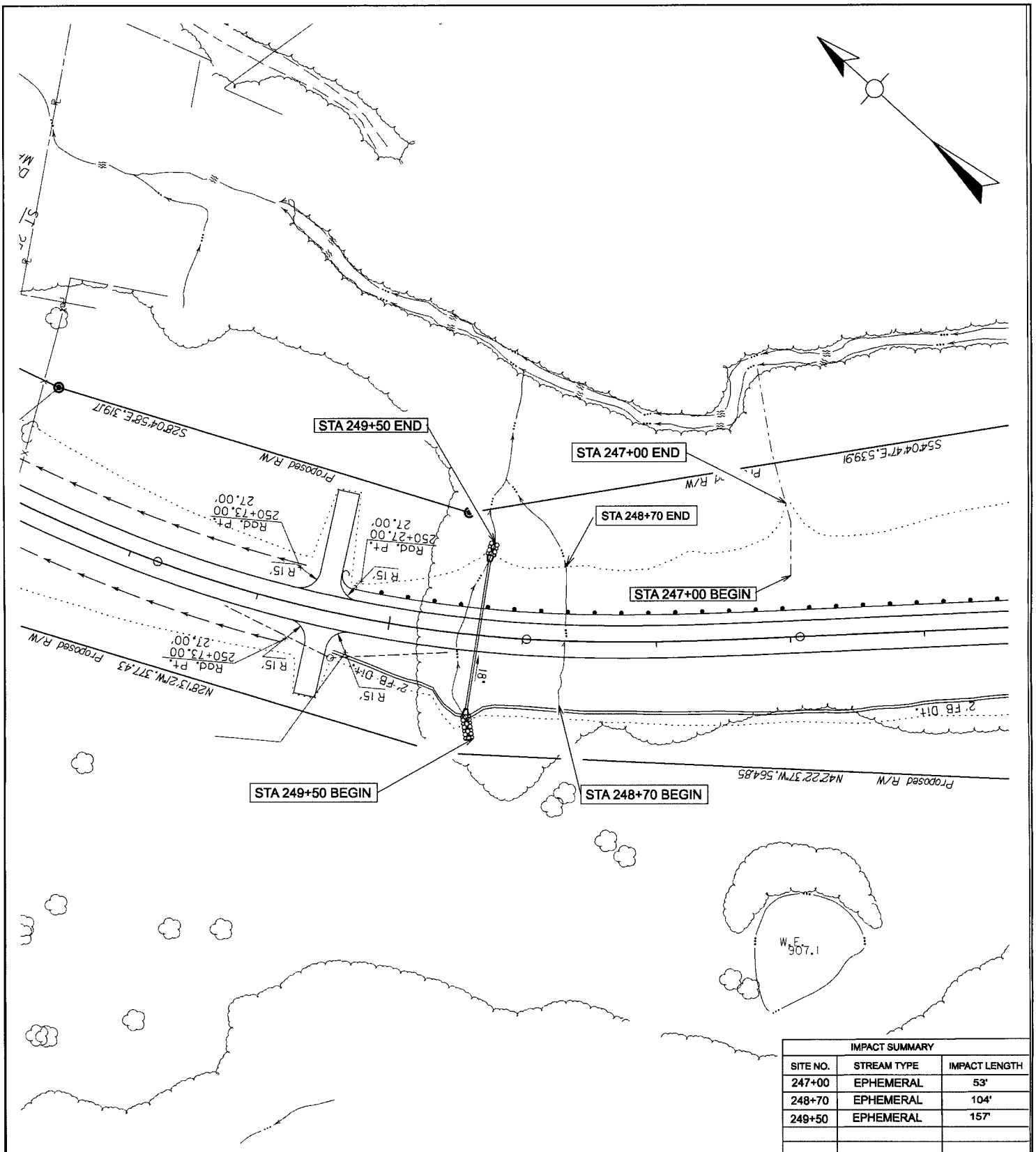

IMPACT SUMMARY		
SITE NO.	STREAM TYPE	IMPACT LENGTH
247+00	EPHEMERAL	53'
248+70	EPHEMERAL	104'
249+50	EPHEMERAL	157'

~NOTES~

Stream Impact STA 247+00
Stream Impact STA 248+70
Stream Impact STA 249+50

SCALE 1" = 100'

APPLICATION BY
KENTUCKY
TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

STA 247+00 TO 249+50 IMPACT PLAN

PROPOSED ACTIVITIES:

U.T. GREEN RIVER — STREAM NAME:
LIBERTY — AT OR NEAR:
CASEY — COUNTY OF:
KENTUCKY — STATE OF:
MILE POINT:
8-273.00 — ITEM NO.:
11 — SHEET NO.:

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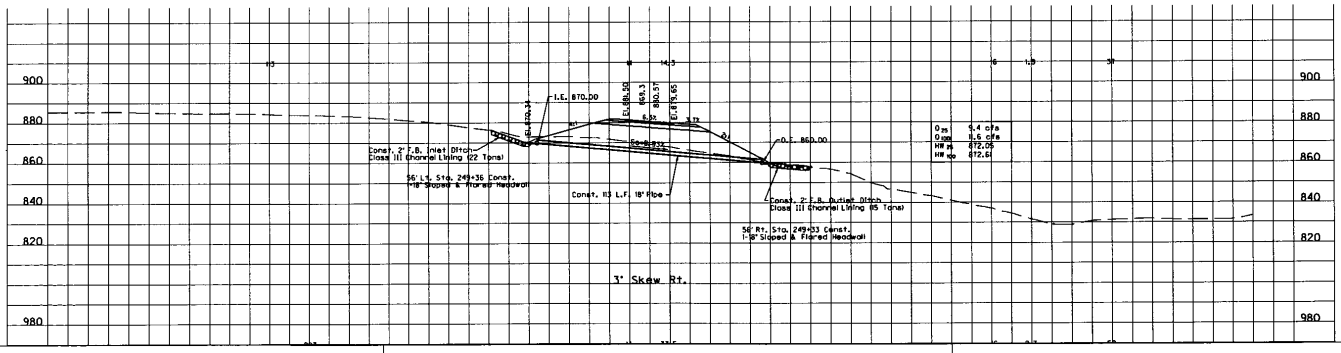

~NOTES~

Stream Impact STA 249+50

SCALE 1" = 30'

APPLICATION BY

KENTUCKY

TRANSPORTATION CABINET

DEPARTMENT OF TRANSPORTATION

STA 249+50 IMPACT PLAN	
PROPOSED ACTIVITIES:	
U.T. GREEN RIVER	LIBERTY
STREAM NAME:	AT OR NEAR:
CASEY	KENTUCKY
COUNTY OF:	STATE OF:
	8-273.00	12
MILE POINT:	ITEM NO.:	SHEET NO.:

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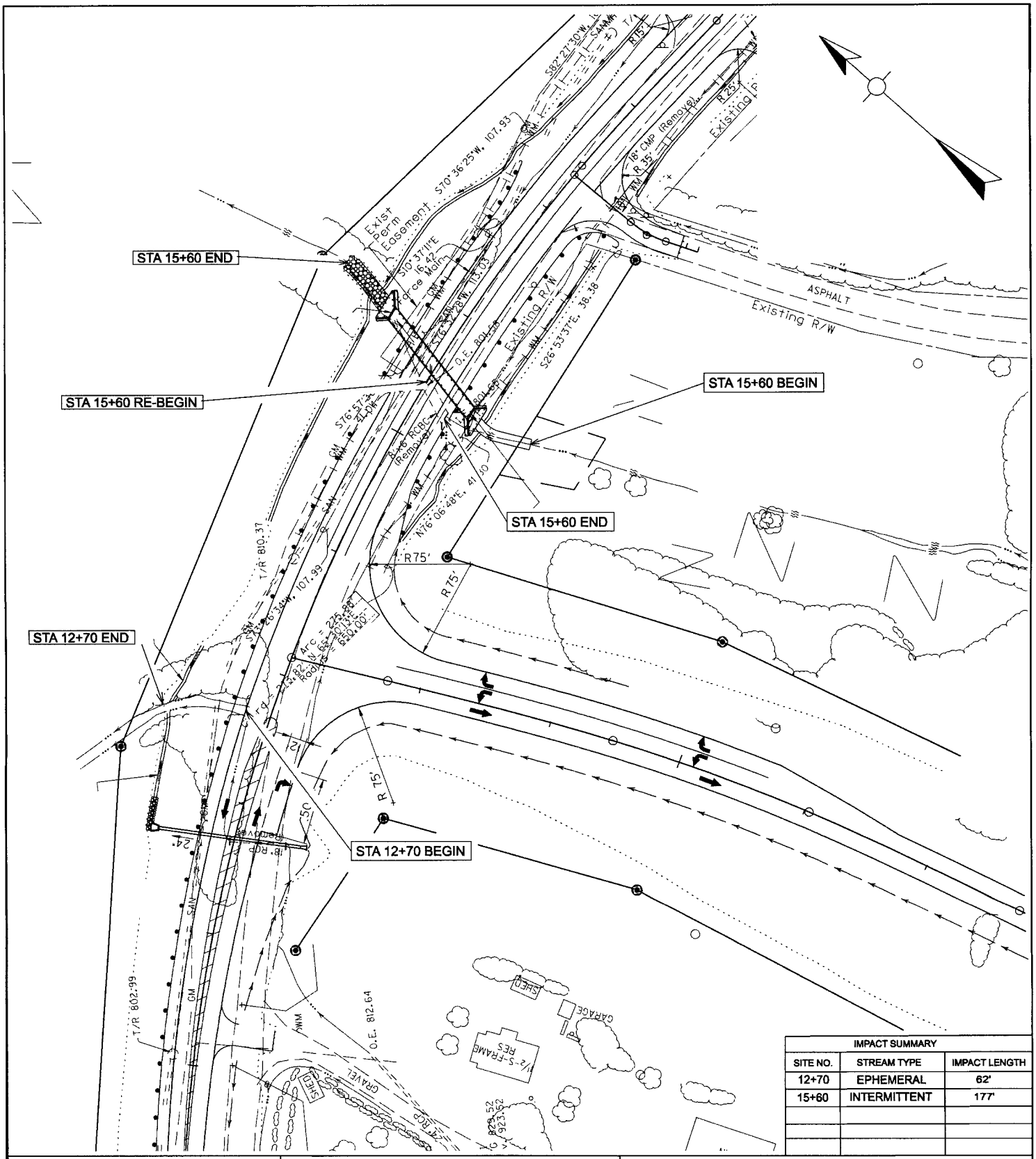

IMPACT SUMMARY		
SITE NO.	STREAM TYPE	IMPACT LENGTH
12+70	EPHEMERAL	62'
15+60	INTERMITTENT	177'

~NOTES~

Stream Impact STA 12+70
Stream Impact STA 15+60

SCALE 1" = 100'

APPLICATION BY
KENTUCKY
TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

STA 12+70 TO 15+60 IMPACT PLAN

PROPOSED ACTIVITIES:

STREAM NAME: U.T. GREEN RIVER
AT OR NEAR: LIBERTY

COUNTY OF: CASEY
STATE OF: KENTUCKY

MILE POINT: 8-273.00
ITEM NO.:
SHEET NO.: 13

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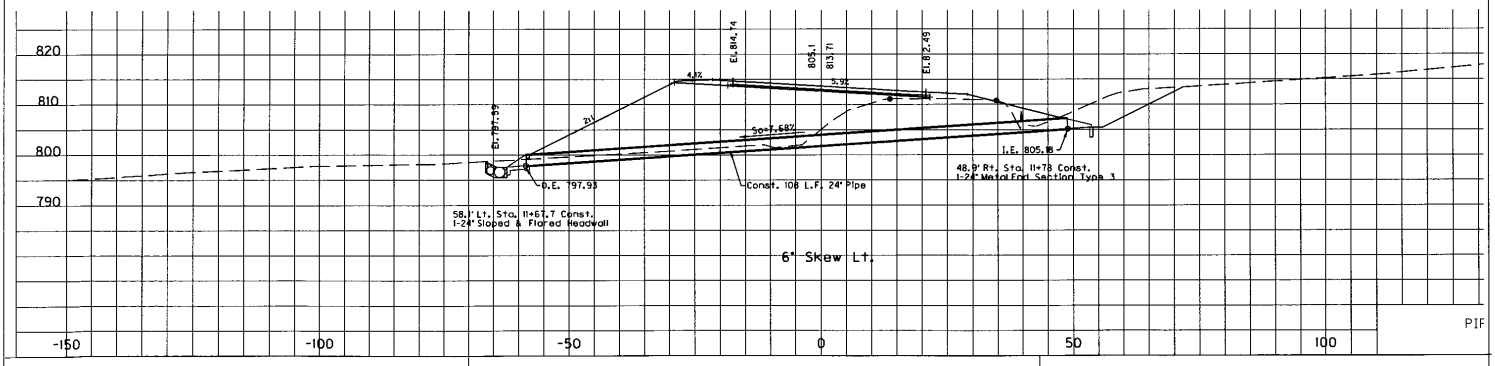

~NOTES~

Stream Impact STA 15+60

SCALE 1" = 30'

APPLICATION BY

KENTUCKY

TRANSPORTATION CABINET

DEPARTMENT OF TRANSPORTATION

STA 15+60 IMPACT PLAN	
PROPOSED ACTIVITIES:	
U.T. GREEN RIVER	LIBERTY
STREAM NAME:	AT OR NEAR:
CASEY	KENTUCKY
COUNTY OF:	STATE OF:
MILE POINT:	8-273.00 ITEM NO.:	14 SHEET NO.:

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Mitigation

Streams
Tables 1 and 2 (following pages) list all stream impacts, and whether mitigation is required. No mitigation is required.

TABLE 1: KY 1649 - Casey County Item No. 8-273.00 - Stream Impact Summary

Site	HUC #	Name	Lat-Long	Sheet No.	Impact Category	Flow Regime	Permit Type	Watershed (acres)	Stream Impact (ft)	Stream Impact (acres)	RBP Score	Quality	Riffle-Pool Complex	Mitigation Required
STA 208+00	5110001010270	UT GREEN RIVER	N 37.307186; E -84.916824	2	Fill	Eph	NW14	4.3	193	0.010	NA	NA	No	No
STA 210+90	5110001010270	UT GREEN RIVER	N 37.307708; E -84.917729	2,3	Culvert & Inlet/Outlet Channel	Eph	NW14	3.6	308	0.015	NA	NA	No	No
STA 211+00	5110001010270	UT GREEN RIVER	N 37.308077; E -84.917153	2	Channel Change	Int	NW14	28.5	170	0.018	NA	NA	No	No
STA 220+00	5110001010270	UT GREEN RIVER	N 37.310372; E -84.917360	4	Channel Change	Int	NW14	49.7	269	0.034	NA	NA	No	No
STA 221+00	5110001010270	UT GREEN RIVER	N 37.310426; E -84.917921	4,5	Culvert & Inlet/Outlet Channel	Eph	NW14	5.0	264	0.015	NA	NA	No	No
STA 226+60	5110001010270	UT GREEN RIVER	N 37.311534; E -84.916521	6	Channel Change	Int	NW14	70.4	127	0.019	NA	NA	No	No
STA 227+00	5110001010270	UT GREEN RIVER	N 37.311910; E -84.917036	6,7	Culvert & Inlet/Outlet Channel	Eph	NW14	14.1	436	0.035	NA	NA	No	No
STA 230+00	5110001010270	UT GREEN RIVER	N 37.312351; E -84.915971	8	Channel Change	Int	NW14	76.8	73	0.011	NA	NA	No	No
STA 230+95	5110001010270	UT GREEN RIVER	N 37.312946; E -84.916335	8,9	Culvert & Inlet/Outlet Channel	Eph	NW14	6.1	439	0.025	NA	NA	No	No
STA 244+00	5110001010270	UT GREEN RIVER	N 37.316031; E -84.916990	9,10	Culvert & Inlet/Outlet Channel	Eph	NW14	2.0	265	0.010	NA	NA	No	No
STA 247+00	5110001010270	UT GREEN RIVER	N 37.316661; E -84.917513	11	Fill	Eph	NW14	1.0	53	0.002	NA	NA	No	No
STA 248+70	5110001010270	UT GREEN RIVER	N 37.316936; E -84.918124	11	Fill	Eph	NW14	1.1	104	0.003	NA	NA	No	No
STA 249+50	5110001010270	UT GREEN RIVER	N 37.317107; E -84.918271	11,12	Culvert & Inlet/Outlet Channel	Eph	NW14	5.8	157	0.009	NA	NA	No	No
STA 15+60	5110001010270	UT GREEN RIVER	N 37.320620; E -84.919524	13,14	Culvert & Inlet/Outlet Channel	Int	NW14	172.8	177	0.036	NA	NA	No	No
STA 12+70	5110001010270	UT GREEN RIVER	N 37.320575; E -84.920457	13	Fill	Eph	NW14	2.2	62	0.002	NA	NA	No	No

TABLE 2: KY 1649 - CASEY COUNTY ITEM NO. 8-273.00 - STREAM IMPACT AND MITIGATION SUMMARY

			Before Impact										After Impact				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Site #	Stream Type	Type of Impact	Acreage of Impact	Watershed size in acres	Initial RBP Score	Initial Quality	Impact Length	Ratio	Debit	Mitigation Required?	Predicted RBP score	Predicted Quality	Final Length	Final Ratio	Credits	Balance	In-Lieu Fee
208+00	Eph	Fill	0.010	4.3	NA	NA	193	NA	NA	No	0	NA	0	0.00	0	0	$0.00
210+90	Eph	Culvert	0.015	3.6	NA	NA	308	NA	NA	No	0	NA	0	0.00	0	0	$0.00
211+00	Int	Channel Change	0.018	28.5	NA	NA	170	NA	NA	No	0	NA	0	0.00	0	0	$0.00
220+00	Int	Channel Change	0.034	49.7	NA	NA	269	NA	NA	No	0	NA	0	0.00	0	0	$0.00
221+00	Eph	Culvert	0.015	5.0	NA	NA	284	NA	NA	No	0	NA	0	0.00	0	0	$0.00
226+60	Int	Channel Change	0.019	70.4	NA	NA	127	NA	NA	No	0	NA	0	0.00	0	0	$0.00
227+00	Eph	Culvert	0.035	14.1	NA	NA	436	NA	NA	No	0	NA	0	0.00	0	0	$0.00
230+00	Int	Channel Change	0.011	76.8	NA	NA	73	NA	NA	No	0	NA	0	0.00	0	0	$0.00
230+95	Eph	Culvert	0.025	6.1	NA	NA	439	NA	NA	No	0	NA	0	0.00	0	0	$0.00
244+00	Eph	Culvert	0.010	2.0	NA	NA	265	NA	NA	No	0	NA	0	0.00	0	0	$0.00
247+00	Eph	Fill	0.002	1.0	NA	NA	53	NA	NA	No	0	NA	0	0.00	0	0	$0.00
248+70	Eph	Fill	0.003	1.1	NA	NA	104	NA	NA	No	0	NA	0	0.00	0	0	$0.00
249+50	Eph	Culvert	0.009	5.8	NA	NA	157	NA	NA	No	0	NA	0	0.00	0	0	$0.00
15+60	Int	Culvert	0.036	172.8	NA	NA	177	NA	NA	No	0	NA	0	0.00	0	0	$0.00
12+70	Eph	Fill	0.002	2.2	NA	NA	62	NA	NA	No	0	NA	0	0.00	0	0	$0.00
																Total:	$0.00