US Army Corps of Engineers
New England District

U.S. ARMY

PUBLIC NOTICE

Comment Period Begins: February 6, 2024
Comment Period Ends: March 7, 2024
File Number: NAE-2017-00772
In Reply Refer to: Michael S. Adams
Phone: (802) 872-2893
Email: michael.s.adams@usace.army.mil

The District Engineer, U.S. Army Corps of Engineers, New England District (USACE), has received a permit application, file number NAE-2017-00772 to conduct work in waters of the United States from Vermont Agency of Transportation located at 219 North Main Street, Barre, Vermont. This work is proposed in the Missisquoi River, Charcoal Creek, five unnamed streams, and wetlands adjacent to these waterways and Lake Champlain off VT Route 78 in Swanton, Vermont. The coordinates for the west end of the project are Latitude 44.96948° N, Longitude -73.20761° W and the coordinates for the east end of the project are Latitude 44.92343° N, Longitude -73.12745° W.

The work involves the placement of fill in a total of 9.17 acres of rivers, streams and adjacent wetlands in conjunction with the full depth roadway reconstruction of 5.7 miles of VT Route 78 between the Missisquoi Bay Bridge and Swanton Village in Swanton, Vermont.

Widening the road to the standard National Highway System width of two 12’ wide travel lanes and two 6’ wide shoulders, and minor modification to the roadway alignment to improve the geometry and safety of the road will impact a total of 388,734 sq. ft. (8.92 acres) of scrub-shrub, forested and emergent wetlands, and 849 sq. ft. (0.02 acre) of the Missisquoi River. This includes 170,443 sq. ft (3.91 acres) permanent impact and 218,291 sq. ft (5.01 acre) temporary impact to wetlands. About 82 sq. ft. (0.001 acre) of permanent and about 767 sq. ft. (0.02 acre) of temporary fill will be placed below the ordinary high water mark (OHWM) of the river. Temporary roadway relocation is planned to bypass traffic during construction and accounts for the majority of temporary wetland impacts associated with the project. Five 4’ x 4’ precast concrete culverts will be installed between Station 148+41 and Station 159+00 to provide animal passage beneath the road.

The work will involve the replacement of an existing 13.5’ x 8’ culvert with a new 10’ x 14’ precast concrete box culvert with wing walls in Charcoal Creek. This culvert will be embedded 2’. About 5,346 sq. ft. (0.12 acre) of permenat fill and about 2,969 sq. ft. (0.07 acre) of temporary fill will be placed below OHWM. In addition, about 1,090 sq. ft. (0.03 acre) of permanent fill and about 383 sq. ft. (0.01 acre) of temporary fill will be placed below the OHWM of five unnamed streams to replace existing deficient culverts with new structures.

The basic purpose of the project is to reconstruct an existing Vermont highway to comply with current safety and design standards.

The work is shown on the enclosed plans titled “SWANTON NH 036-1(9),” on twenty-four sheets, and dated “11/4/2023”, “9/28/2022”, and “8/31/2022.”

The applicant has stated that it has avoided and minimized waterway/wetland impacts to the maximum extent practicable. To compensate for unavoidable impacts to waterways/wetlands, the applicant proposes a one-time payment to the Ducks Unlimited Vermont In-Lieu Fee Program.

AUTHORITY
Permits are required pursuant to:
__X__ Section 10 of the Rivers and Harbors Act of 1899
__X__ Section 404 of the Clean Water Act
____ Section 103 of the Marine Protection, Research and Sanctuaries Act.

The decision whether to issue a permit will be based on an evaluation of the probable impact of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which may reasonably accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are: conservation, economics, aesthetics, general environmental concerns, wetlands, cultural value, fish and wildlife values, flood hazards, flood plain value, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people.

The USACE is soliciting comments from the public; federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. The USACE will consider all comments received to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an environmental assessment and/or an environmental impact statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

NATIONAL HISTORIC PRESERVATION ACT

Based on our initial review of the proposed project, historic properties were identified within the permit area and the area of potential effects. However, the applicant currently proposes to avoid all effects to known historic properties. Additional review and consultation to fulfil requirements under Section 106 of the National Historic

Preservation Act of 1966, as amended, will be ongoing as part of the permit review process.

ENDANGERED SPECIES CONSULTATION

The USACE is reviewing the application for the potential impact on federally-listed threatened or endangered species and their designated critical habitat pursuant to section 7 of the Endangered Species Act as amended. Our review will be concluded prior to the final decision.

The following authorizations have been applied for, or have been, or will be obtained:
(X) Permit, license or assent from State.
( ) Permit from local wetland agency or conservation commission.
(X) Water Quality Certification in accordance with Section 401 of the Clean Water Act.

COMMENTS

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity. People submitting comments are advised that all comments received will be available for public review in their entirety and will be considered a matter of public record.

Comments should be submitted in writing by the above date. If you have any questions, please contact Michael S. Adams, Regulatory Division, at michael.s.adams@usace.army.mil, (802) 872-2893.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for a public hearing shall specifically state the reasons for holding a public hearing. The USACE holds public hearings for the purpose of obtaining public comments when that is the best means for understanding a wide variety of concerns from a diverse segment of the public.

The initial determinations made herein will be reviewed in light of facts submitted in response to this notice. Copies of letters of objection will be forwarded to the applicant who will normally be requested to contact objectors directly in an effort to reach an understanding.

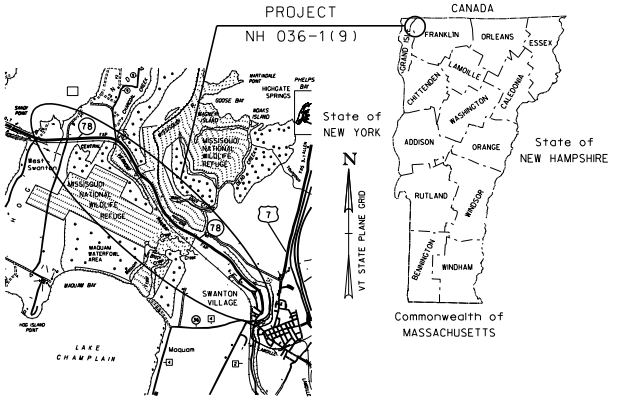
THIS NOTICE IS <u>NOT</u> AN AUTHORIZATION TO DO ANY WORK.

Frank J Del Giudice
Digitally signed by Frank J Del Giudice
Date: 2024.02.01 06:17:21 -05'00'

Frank J. Del Giudice
Chief, NH & VT Section
Regulatory Division

Please contact Ms. Tina Chaisson at bettina.m.chaisson@usace.army.mil or (978) 318-8058 if you would like to be removed from our public notice mailing list.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

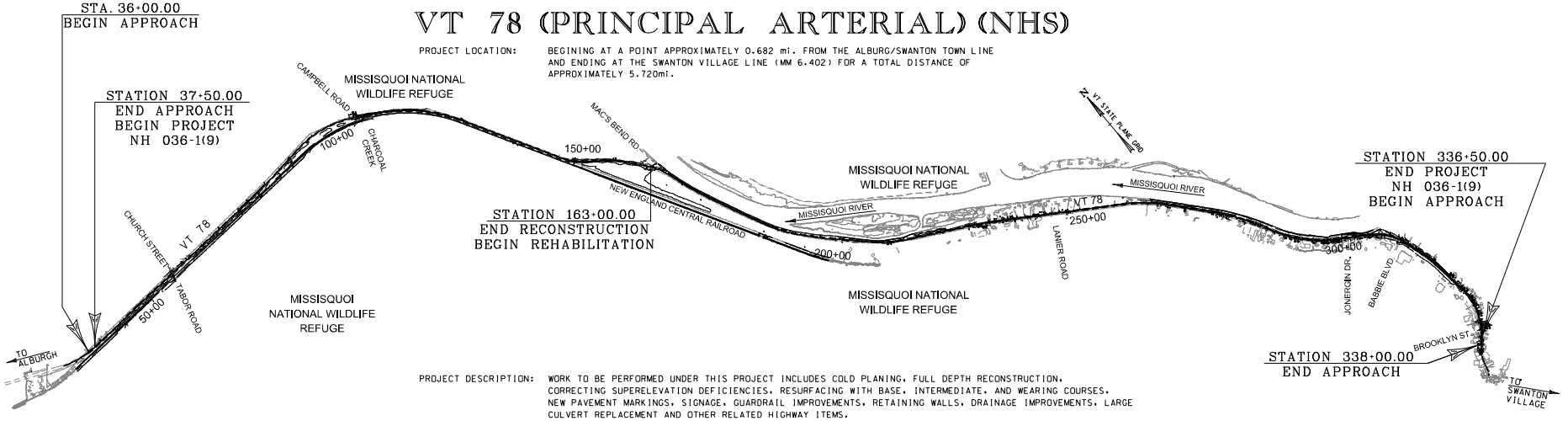


VICINITY MAP

0 1 2 3
SCALE IN MILES

PROPOSED IMPROVEMENT
ROADWAY PROJECT
TOWN OF SWANTON
COUNTY OF FRANKLIN
VT 78 (PRINCIPAL ARTERIAL) (NHS)

PROJECT LOCATION: BEGINING AT A POINT APPROXIMATELY 0.682 mi. FROM THE ALBURG/SWANTON TOWN LINE AND ENDING AT THE SWANTON VILLAGE LINE (MM 6.402) FOR A TOTAL DISTANCE OF APPROXIMATELY 5.720mi.



PROJECT DESCRIPTION: WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES COLD PLANING, FULL DEPTH RECONSTRUCTION, CORRECTING SUPERELEVATION DEFICIENCIES, RESURFACING WITH BASE, INTERMEDIATE, AND WEARING COURSES, NEW PAVEMENT MARKINGS, SIGNAGE, GUARDRAIL IMPROVEMENTS, RETAINING WALLS, DRAINAGE IMPROVEMENTS, LARGE CULVERT REPLACEMENT AND OTHER RELATED HIGHWAY ITEMS.

LENGTH OF ROADWAY: 5.72 MILES
LENGTH OF BRIDGE: 0 ft
LENGTH OF PROJECT: 5.67 MILES

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2018, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON APRIL 13, 2018 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

0 2000 4000 6000
SCALE IN FEET

Date: 11/4/2023

QUALITY ASSURANCE PROGRAM : LEVEL I
SURVEYED BY : VTRANS SURVEYED DATE : 2/2002 & 8/2018
DATUM VERTICAL NAVD 88 HORIZONTAL NAD 83 (92)

PROJECT MANAGER : KEN UPMAL, P.E.
PROJECT NAME : SWANTON PROJECT NUMBER : NH 036-1(9) 404 PERMIT IMPACT COVER SHEET SHEET 1 OF 39 SHEETS

GENERAL INFORMATION

SYMBOLOGY LEGEND NOTE

THE SYMBOLOGY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLOGY. THE SYMBOLOGY IS USED FOR EXISTING & PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROJECT ANNOTATION, AS NOTED ON PROJECT PLAN SHEETS. THIS LEGEND SHEET COVERS THE BASICS. SYMBOLOGY ON PLANS MAY VARY, PLAN ANNOTATIONS AND NOTES SHOULD BE USED TO CLARIFY AS NEEDED.

PERMIT SYMBOLOGY

WETLAND I.D. (101)

PERMANENT WETLAND IMPACT

TEMPORARY WETLAND IMPACT

PERMANENT O.H.W. IMPACT

TEMPORARY O.H.W. IMPACT

WETLAND BOUNDARY

R.O.W. ABBREVIATIONS (CODES) & SYMBOLS

POINT	CODE	DESCRIPTION
	CH	CHANNEL EASEMENT
	CONST	CONSTRUCTION EASEMENT
	CUL	CULVERT EASEMENT
	D&C	DISCONNECT & CONNECT
	DIT	DITCH EASEMENT
	DR	DRAINAGE EASEMENT
	DRIVE	DRIVEWAY EASEMENT
	EC	EROSION CONTROL
	HWY	HIGHWAY EASEMENT
	I&M	INSTALL & MAINTAIN EASEMENT
	LAND	LANDSCAPE EASEMENT
	R&RES	REMOVE & RESET
	R&REP	REMOVE & REPLACE
	R.T.&I.	RIGHT, TITLE, AND INTEREST
	SR	SLOPE RIGHT
	UE	UTILITY EASEMENT
	(P)	PERMANENT EASEMENT
	(T)	TEMPORARY EASEMENT
■	BNDNS	BOUND SET
⊡	BNDNS	BOUND TO BE SET
◎	IPNF	IRON PIN FOUND
●	IPNS	IRON PIN TO BE SET
⊠	CALC	EXISTING ROW POINT
○	PROW	PROPOSED ROW POINT
[LENGTH]		LENGTH CARRIED ON NEXT SHEET

COMMON TOPOGRAPHIC POINT SYMBOLS

POINT	CODE	DESCRIPTION
⌗	APL	BOUND APPARENT LOCATION
▫	BM	BENCHMARK
▫	BND	BOUND
⧈	CB	CATCH BASIN
✿	COMB	COMBINATION POLE
⧈	DITHR	DROP INLET THROATED DNC
✿	EL	ELECTRIC POWER POLE
⚑	FPOLE	FLAGPOLE
⊙	GASFIL	GAS FILLER
⊙	GP	GUIDE POST
⋇	GSO	GAS SHUT OFF
⚬	GUY	GUY POLE
⚬	GUYW	GUY WIRE
⋇	GV	GATE VALVE
❁	H	TREE HARDWOOD
△	HCTRL	CONTROL HORIZONTAL
⧋	HVCTRL	CONTROL HORIZ. & VERTICAL
◇	HYD	HYDRANT
●	IP	IRON PIN
●	IPIPE	IRON PIPE
✿	LI	LIGHT - STREET OR YARD
✉	MB	MAILBOX
○	MH	MANHOLE (MH)
▫	MM	MILE MARKER
⚬	PM	PARKING METER
▫	PMK	PROJECT MARKER
⚬	POST	POST STONE/WOOD
⚑	RRSIG	RAILROAD SIGNAL
◆	RRSL	RAILROAD SWITCH LEVER
✳	S	TREE SOFTWOOD
⌓	SAT	SATELLITE DISH
❁	SHRUB	SHRUB
⚬	SIGN	SIGN
⅄	STUMP	STUMP
⟡	TEL	TELEPHONE POLE
⚬	TIE	TIE
⚬⚬	TSIGN	SIGN W/DOUBLE POST
⅄	VCTRL	CONTROL VERTICAL
⚬	WELL	WELL
⋇	WSO	WATER SHUT OFF

THESE ARE COMMON VAOT SURVEY POINT SYMBOLS FOR EXISTING FEATURES, ALSO USED FOR PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROPOSED ANNOTATION.

PROPOSED GEOMETRY CODES

CODE	DESCRIPTION
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
CC	CENTER OF CURVE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVE
PRC	POINT OF REVERSE CURVE
POB	POINT OF BEGINNING
POE	POINT OF ENDING
STA	STATION PREFIX
AH	AHEAD STATION SUFFIX
BK	BACK STATION SUFFIX
D	CURVE DEGREE OF (100FT)
R	CURVE RADIUS OF
T	CURVE TANGENT LENGTH
L	CURVE LENGTH OF
E	CURVE EXTERNAL DISTANCE
CB	CHORD BEARING

UTILITY SYMBOLOGY

UNDERGROUND UTILITIES

UTILITY (GENERIC-UNKNOWN)
UT TELEPHONE
UE ELECTRIC
UC CABLE (TV)
UEC ELECTRIC+CABLE
UET ELECTRIC+TELEPHONE
UCT CABLE+TELEPHONE
UECT ELECTRIC+CABLE+TELEPHONE
G GAS LINE
W WATER LINE
S SANITARY SEWER (SEPTIC)

ABOVE GROUND UTILITIES (AERIAL)

UTILITY (GENERIC-UNKNOWN)
T TELEPHONE
E ELECTRIC
C CABLE (TV)
EC ELECTRIC+CABLE
ET ELECTRIC+TELEPHONE
AER E&T ELECTRIC+TELEPHONE
CT CABLE+TELEPHONE
ECT ELECTRIC+CABLE+TELEPHONE
UTILITY POLE GUY WIRE

PROJECT CONSTRUCTION SYMBOLOGY

PROJECT DESIGN & LAYOUT SYMBOLOGY

CZ CLEAR ZONE
PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

TOP OF CUT SLOPE
TOE OF FILL SLOPE
STONE FILL
BOTTOM OF DITCH ℄
CULVERT PROPOSED
STRUCTURE SUBSURFACE
PDF PROJECT DEMARCATION FENCE
BF BARRIER FENCE
TREE PROTECTION ZONE (TPZ)
STRIPING LINE REMOVAL
SHEET PILES

CONVENTIONAL BOUNDARY SYMBOLOGY

BOUNDARY LINES

TOWN BOUNDARY LINE
COUNTY BOUNDARY LINE
STATE BOUNDARY LINE
PROPOSED STATE R.O.W. (LIMITED ACCESS)
PROPOSED STATE R.O.W.
STATE ROW (LIMITED ACCESS)
STATE ROW
TOWN ROW
PERMANENT EASEMENT LINE (P)
TEMPORARY EASEMENT LINE (T)
SURVEY LINE
PROPERTY LINE (P/L)
SR SLOPE RIGHTS
6F 6F PROPERTY BOUNDARY
4F 4F PROPERTY BOUNDARY
HAZ HAZARDOUS WASTE

EPSC LAYOUT PLAN SYMBOLOGY

EPSC MEASURES

FILTER CURTAIN
SILT FENCE
SILT FENCE WOVEN WIRE
CHECK DAM
FR FIBER ROLL (EROSION LOG)
DISTURBED AREAS REQUIRING RE-VEGETATION
EROSION MATTING

SEE EPSC DETAIL SHEETS FOR ADDITIONAL SYMBOLOGY

ENVIRONMENTAL RESOURCES

WETLAND BOUNDARY
RIPARIAN BUFFER ZONE
WETLAND BUFFER ZONE
SOIL TYPE BOUNDARY
T&E THREATENED & ENDANGERED SPECIES
HAZ HAZ HAZARDOUS WASTE AREA
AG AGRICULTURAL LAND
HABITAT FISH & WILDLIFE HABITAT
FLOOD PLAIN FLOOD PLAIN
OHW ORDINARY HIGH WATER (OHW)
STORM WATER
USDA FOREST SERVICE LANDS
WILDLIFE HABITAT SUIT/CONN

ARCHEOLOGICAL & HISTORIC

ARCH ARCHEOLOGICAL BOUNDARY
HISTORIC DIST HISTORIC DISTRICT BOUNDARY
HISTORIC HISTORIC AREA
(H) HISTORIC STRUCTURE

CONVENTIONAL TOPOGRAPHIC SYMBOLOGY

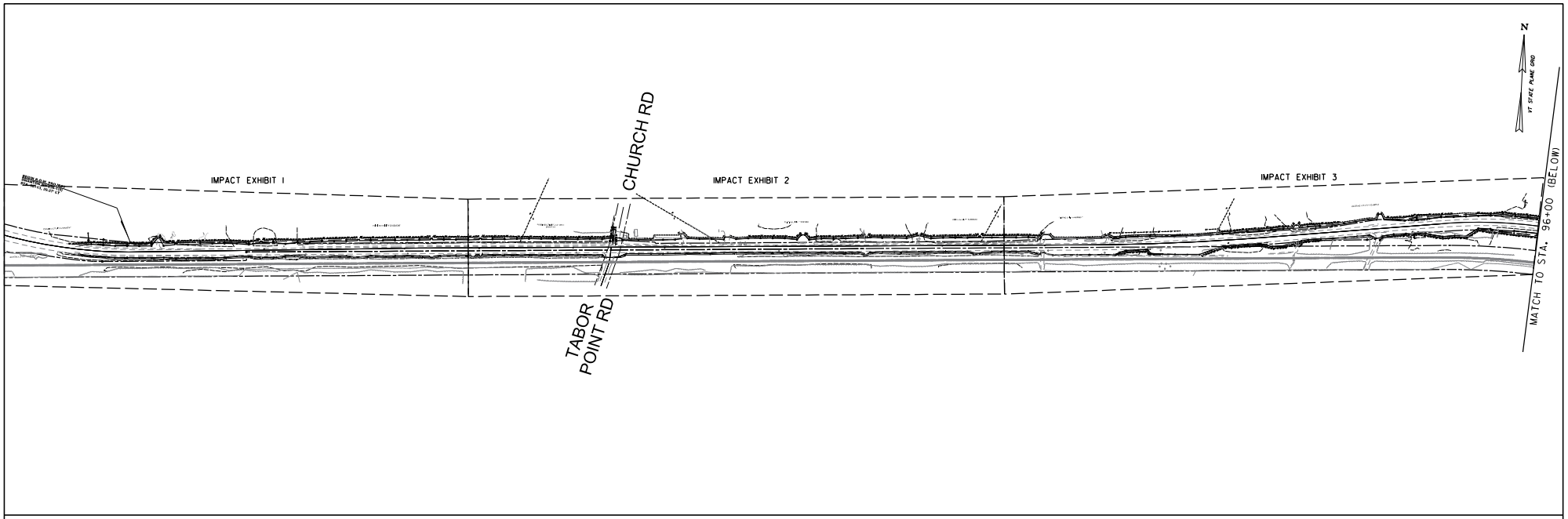
EXISTING FEATURES

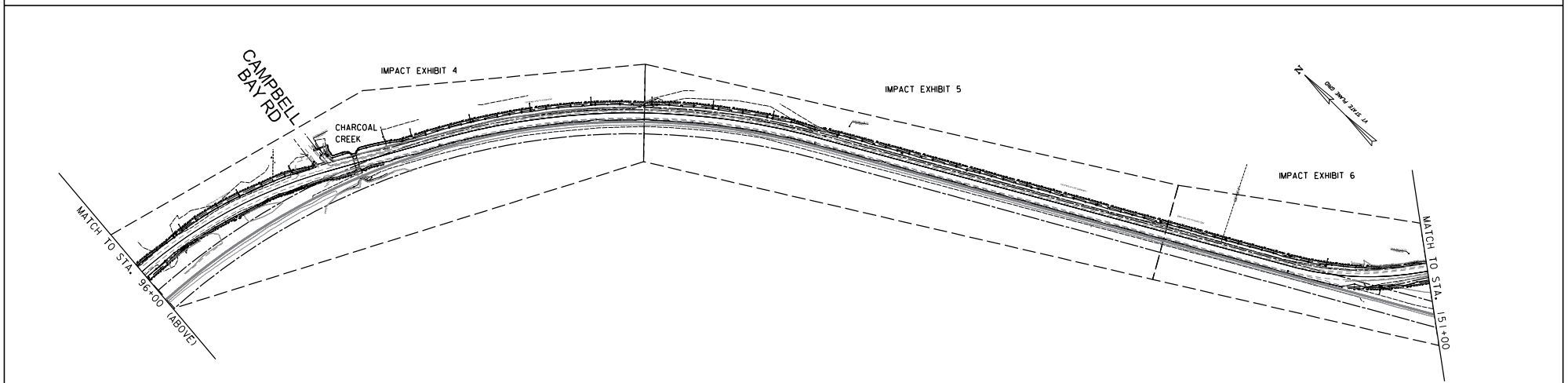
ROAD EDGE PAVEMENT
ROAD EDGE GRAVEL
DRIVEWAY EDGE
DITCH
FOUNDATION
FENCE (EXISTING)
FENCE WOOD POST
FENCE STEEL POST
GARDEN
ROAD GUARDRAIL
RAILROAD TRACKS
CULVERT (EXISTING)
STONE WALL
WALL
WOOD LINE
BRUSH LINE
HEDGE
BODY OF WATER EDGE
LEDGE EXPOSED

vhb

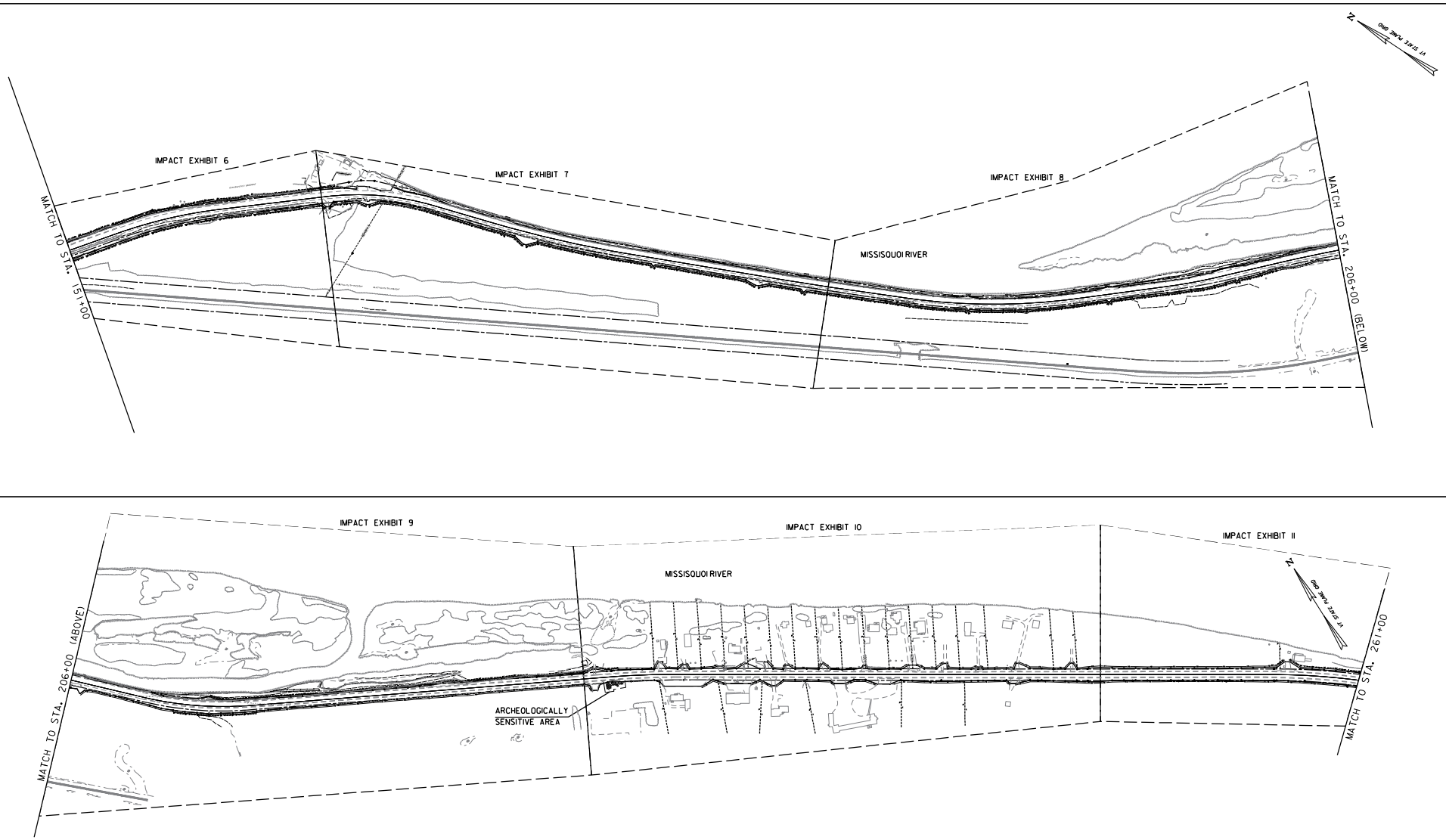
PROJECT NAME: SWANTON
PROJECT NUMBER: NH 036-1(9)

FILE NAME: z96b032_Sym_Corps.dgn PLOT DATE: 11/4/2023
PROJECT LEADER: G. BAKOS DRAWN BY: C.CILLEY
DESIGNED BY: M.BOGUE CHECKED BY: G. BAKOS
404 PERMIT CONVENTIONAL SYMBOLOGY LEGEND SHEET 2 OF 39





PROJECT NAME:	SWANTON
PROJECT NUMBER:	NH 036-1(9)
FILE NAME: z96b032bdr_index_Corps.dgn	PLOT DATE: 11/4/2023
PROJECT LEADER: G. BAKOS	DRAWN BY: C. CILLEY
DESIGNED BY: M. BOGUE	CHECKED BY: G. BAKOS
404 PERMIT IMPACT INDEX SHEET (1 OF 3)	SHEET 3 OF 39



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FILE NAME: z96b032bdr_index_Corps.dgn	PLOT DATE: 11/4/2023
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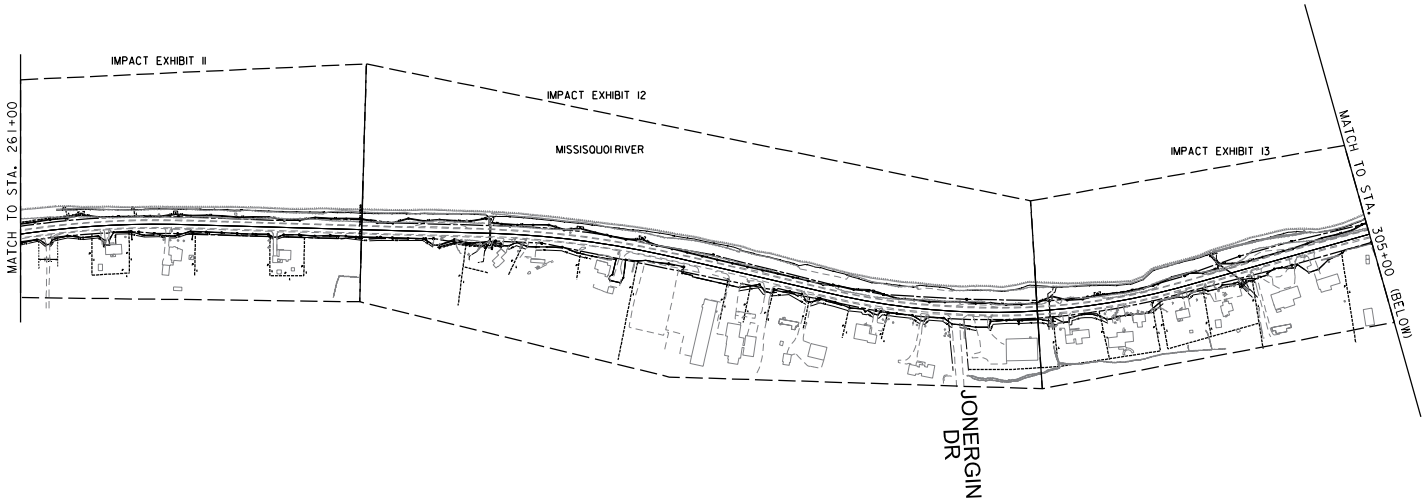
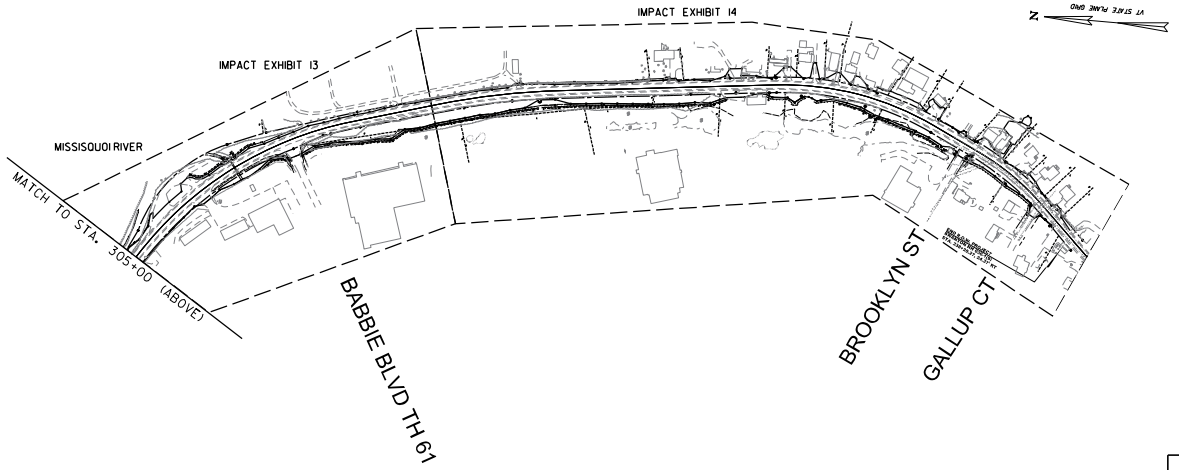
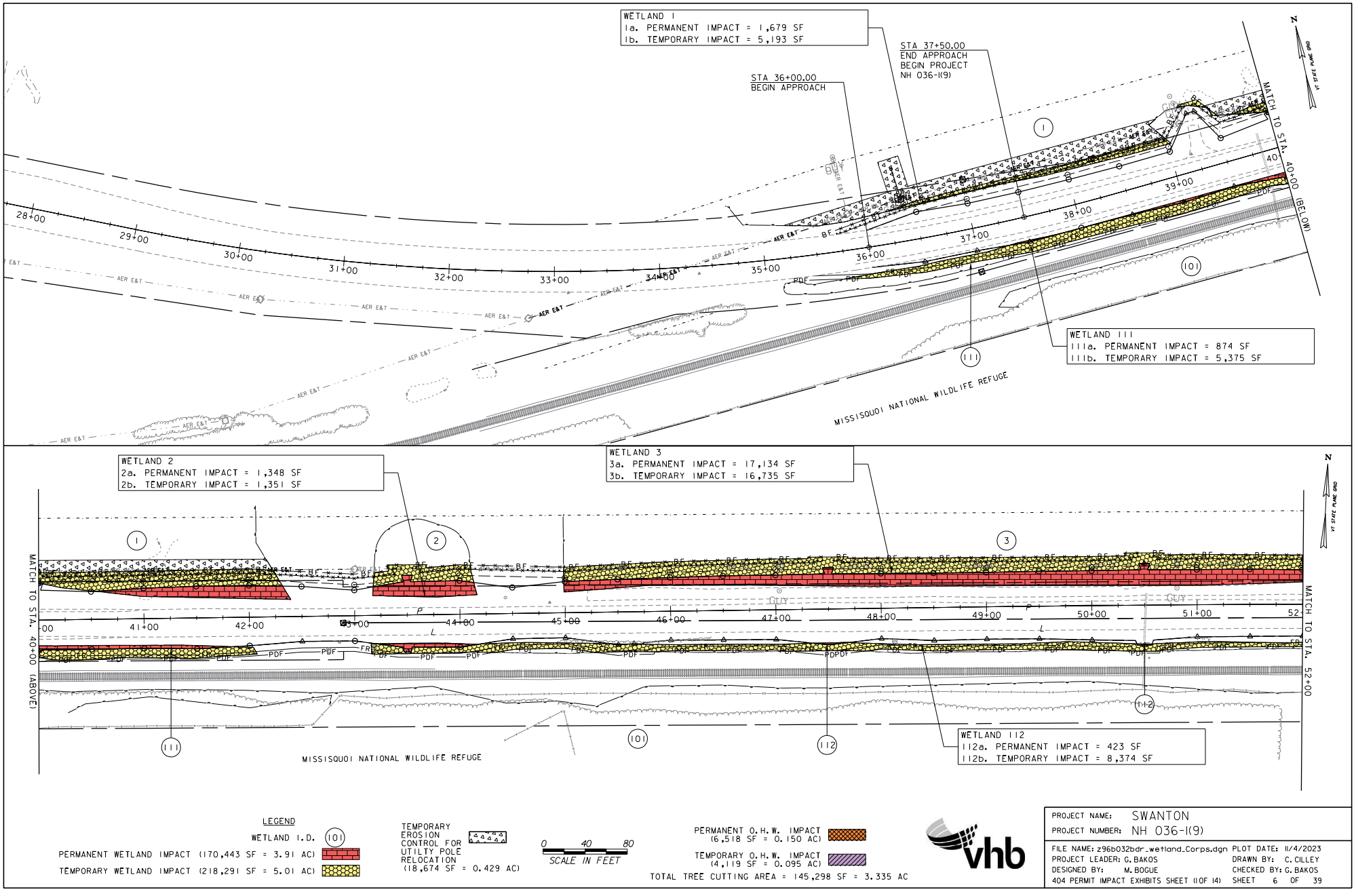
DESIGNED BY: M. BOGUE	CHECKED BY: G. BAKOS
404 PERMIT IMPACT INDEX SHEET (2 OF 3)	SHEET 4 OF 39

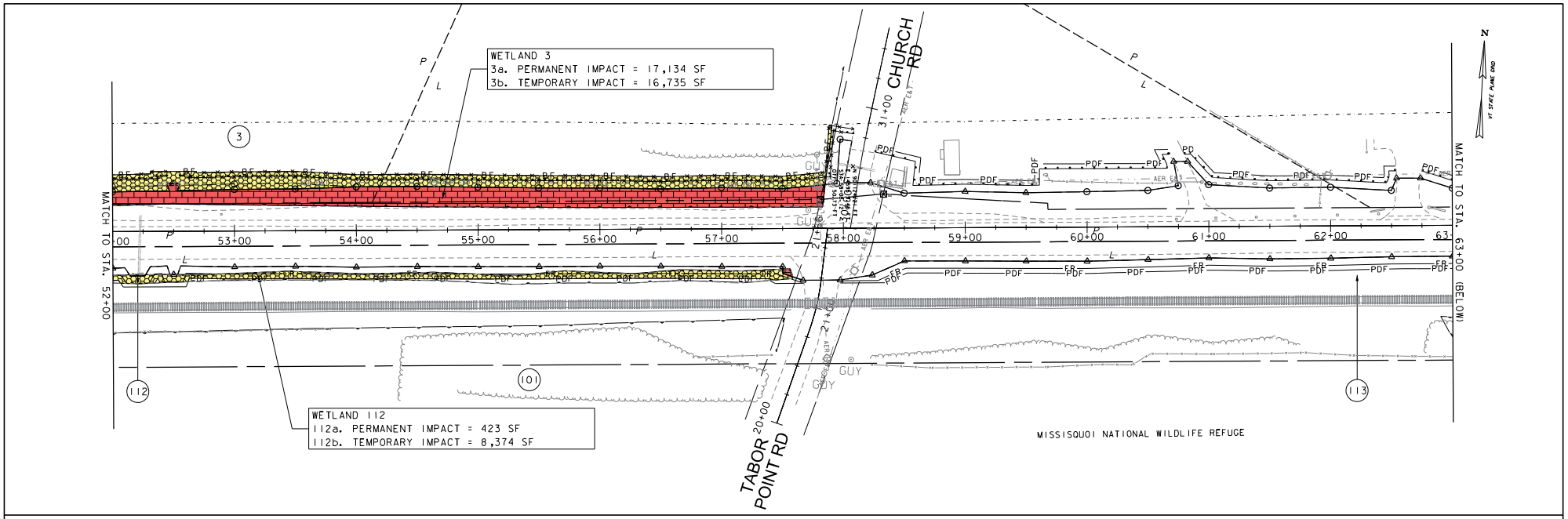


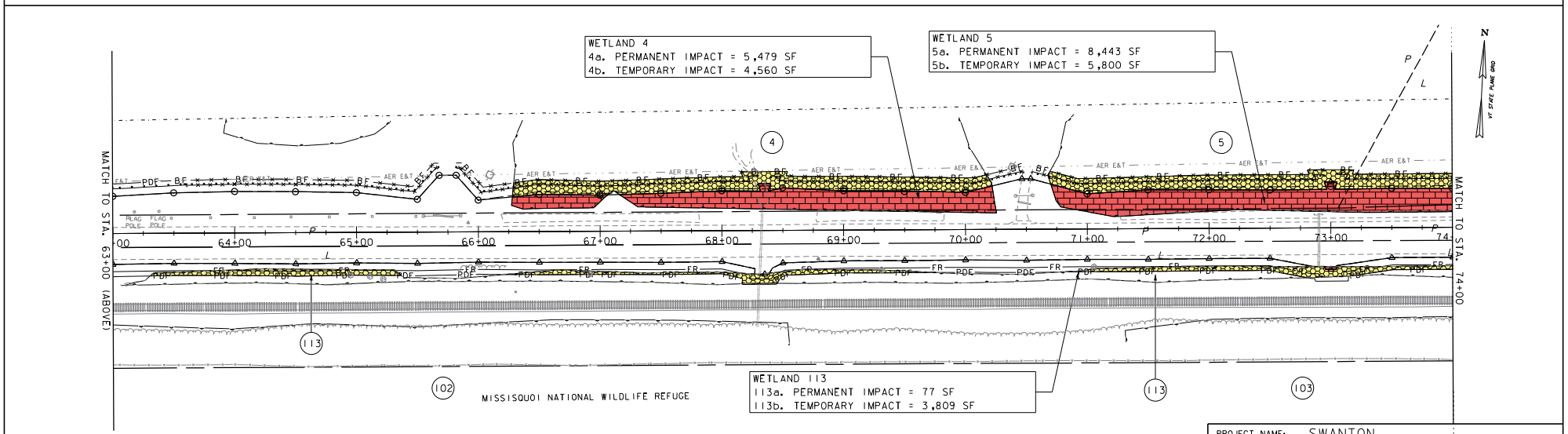


0 200 400
SCALE IN FEET

PROJECT NAME:	SWANTON
PROJECT NUMBER:	NH 036-1(9)
FILE NAME: z96b032bdr_index_Corps.dgn	PLOT DATE: 11/4/2023
PROJECT LEADER: G. BAKOS	DRAWN BY: C. CILLEY
DESIGNED BY: M. BOGUE	CHECKED BY: G. BAKOS
404 PERMIT IMPACT INDEX SHEET (3 OF 3)	SHEET 5 OF 39


WETLAND 1
1a. PERMANENT IMPACT = 1,679 SF
1b. TEMPORARY IMPACT = 5,193 SF
STA 36+00.00
BEGIN APPROACH
STA 37+50.00
END APPROACH
BEGIN PROJECT
NH 036-1(9)
MATCH TO STA. 40+00 (BELOW)
WETLAND 111
111a. PERMANENT IMPACT = 874 SF
111b. TEMPORARY IMPACT = 5,375 SF
MISSISQUOI NATIONAL WILDLIFE REFUGE
WETLAND 2
2a. PERMANENT IMPACT = 1,348 SF
2b. TEMPORARY IMPACT = 1,351 SF
WETLAND 3
3a. PERMANENT IMPACT = 17,134 SF
3b. TEMPORARY IMPACT = 16,735 SF
MATCH TO STA. 40+00 (ABOVE)
MATCH TO STA. 52+00
WETLAND 112
112a. PERMANENT IMPACT = 423 SF
112b. TEMPORARY IMPACT = 8,374 SF
MISSISQUOI NATIONAL WILDLIFE REFUGE
LEGEND
WETLAND I.D.
PERMANENT WETLAND IMPACT (170,443 SF = 3.91 AC)
TEMPORARY WETLAND IMPACT (218,291 SF = 5.01 AC)
TEMPORARY EROSION CONTROL FOR UTILITY POLE RELOCATION (18,674 SF = 0.429 AC)
0 40 80
SCALE IN FEET
PERMANENT O.H.W. IMPACT (6,518 SF = 0.150 AC)
TEMPORARY O.H.W. IMPACT (4,119 SF = 0.095 AC)
TOTAL TREE CUTTING AREA = 145,298 SF = 3.335 AC
vhb
PROJECT NAME: SWANTON
PROJECT NUMBER: NH 036-1(9)
FILE NAME: z96b032bdr_wetland_Corps.dgn PLOT DATE: 11/4/2023
PROJECT LEADER: G. BAKOS DRAWN BY: C. CILLEY
DESIGNED BY: M. BOGUE CHECKED BY: G. BAKOS
404 PERMIT IMPACT EXHIBITS SHEET (1OF 14) SHEET 6 OF 39





LEGEND

WETLAND I.D. (101)

PERMANENT WETLAND IMPACT (170,443 SF = 3.91 AC)

TEMPORARY WETLAND IMPACT (218,291 SF = 5.01 AC)

TEMPORARY EROSION CONTROL FOR UTILITY POLE RELOCATION (18,674 SF = 0.429 AC)

0 40 80
SCALE IN FEET

PERMANENT O.H.W. IMPACT (6,518 SF = 0.150 AC)

TEMPORARY O.H.W. IMPACT (4,119 SF = 0.095 AC)

TOTAL TREE CUTTING AREA = 145,298 SF = 3.335 .

vhb

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PROJECT NUMBER: NH 036-1(9)

FILE NAME: z96b032bdr_wetland_Corps.dgn PLOT DATE: 11/4/2023
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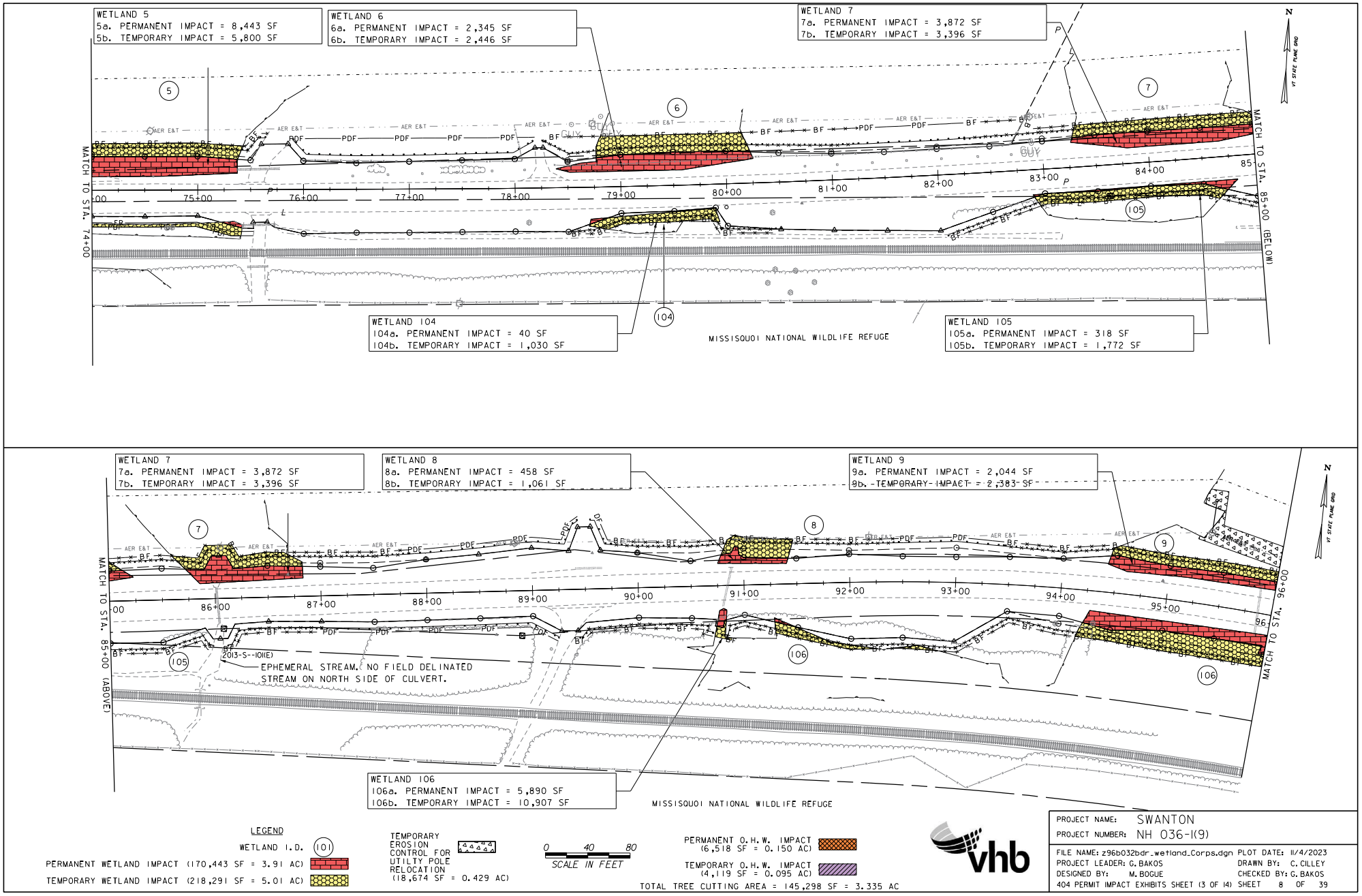
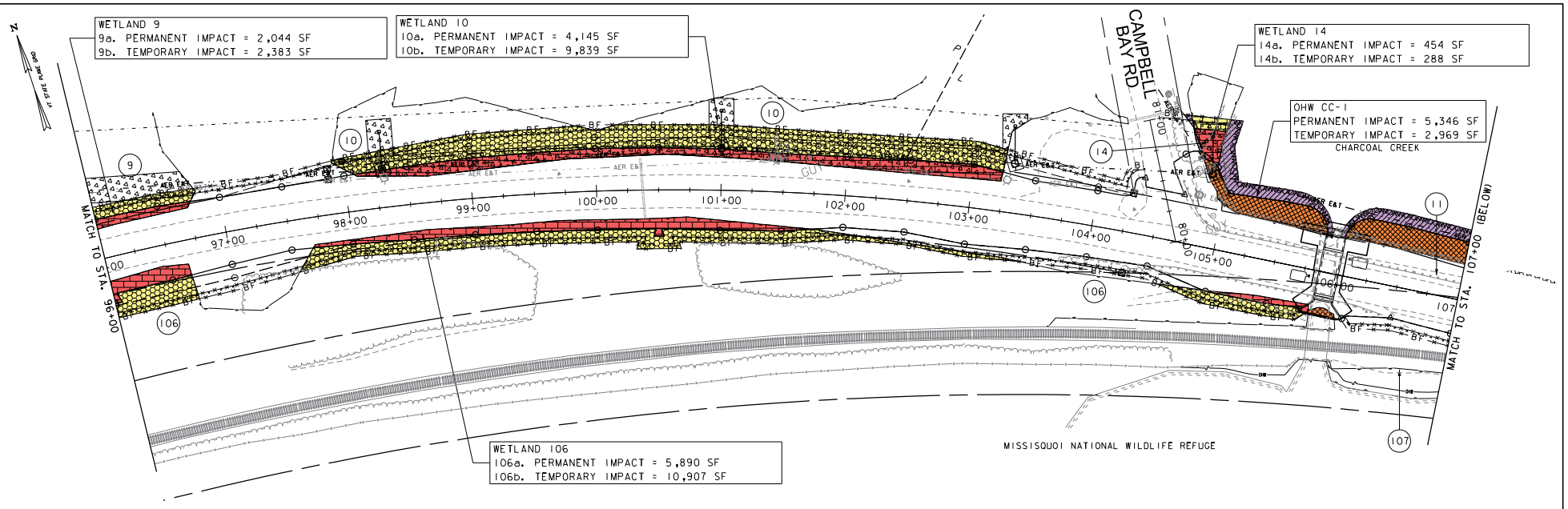
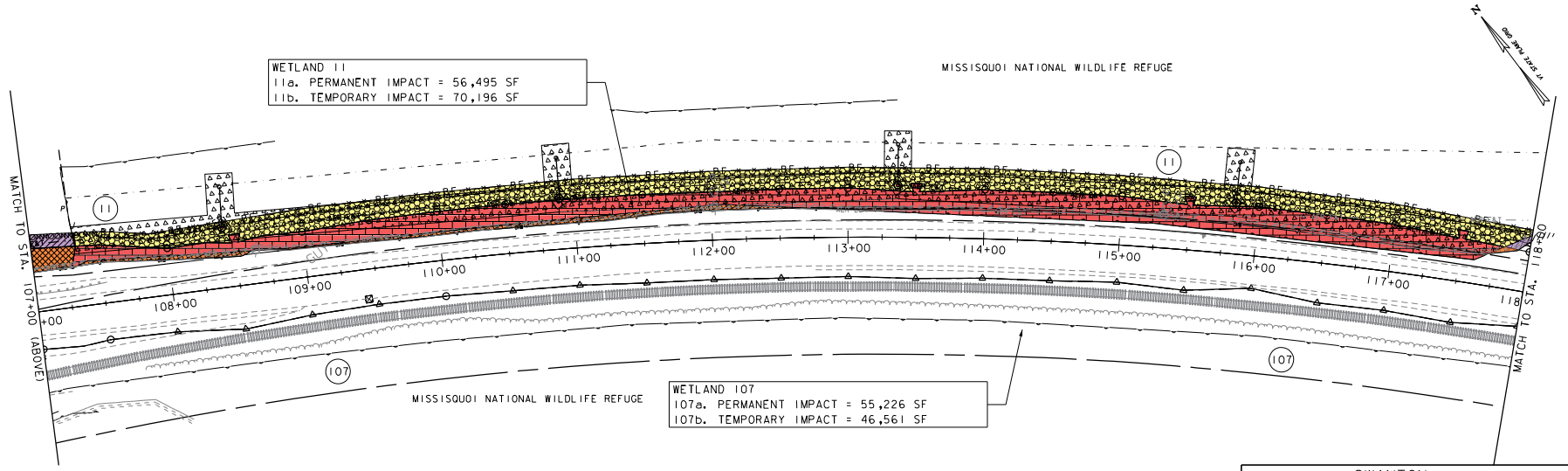
DESIGNED BY: M. BOGUE CHECKED BY: G. BAKOS
404 PERMIT IMPACT EXHIBITS SHEET (2 OF 14) SHEET 7 OF 39


WETLAND 5
5a. PERMANENT IMPACT = 8,443 SF
5b. TEMPORARY IMPACT = 5,800 SF
WETLAND 6
6a. PERMANENT IMPACT = 2,345 SF
6b. TEMPORARY IMPACT = 2,446 SF
WETLAND 7
7a. PERMANENT IMPACT = 3,872 SF
7b. TEMPORARY IMPACT = 3,396 SF
MATCH TO STA. 74+00
MATCH TO STA. 85+00 (BELOW)
WETLAND 104
104a. PERMANENT IMPACT = 40 SF
104b. TEMPORARY IMPACT = 1,030 SF
MISSISQUOI NATIONAL WILDLIFE REFUGE
WETLAND 105
105a. PERMANENT IMPACT = 318 SF
105b. TEMPORARY IMPACT = 1,772 SF
WETLAND 7
7a. PERMANENT IMPACT = 3,872 SF
7b. TEMPORARY IMPACT = 3,396 SF
WETLAND 8
8a. PERMANENT IMPACT = 458 SF
8b. TEMPORARY IMPACT = 1,061 SF
WETLAND 9
9a. PERMANENT IMPACT = 2,044 SF
9b. TEMPORARY IMPACT = 2,383 SF
MATCH TO STA. 85+00 (ABOVE)
MATCH TO STA. 96+00
2013-S-10(E)
EPHEMERAL STREAM. NO FIELD DELINATED STREAM ON NORTH SIDE OF CULVERT.
WETLAND 106
106a. PERMANENT IMPACT = 5,890 SF
106b. TEMPORARY IMPACT = 10,907 SF
MISSISQUOI NATIONAL WILDLIFE REFUGE
LEGEND
WETLAND I.D. (101)
PERMANENT WETLAND IMPACT (170,443 SF = 3.91 AC)
TEMPORARY WETLAND IMPACT (218,291 SF = 5.01 AC)
TEMPORARY EROSION CONTROL FOR UTILITY POLE RELOCATION (18,674 SF = 0.429 AC)
0 40 80
SCALE IN FEET
PERMANENT O.H.W. IMPACT (6,518 SF = 0.150 AC)
TEMPORARY O.H.W. IMPACT (4,119 SF = 0.095 AC)
TOTAL TREE CUTTING AREA = 145,298 SF = 3.335 AC
vhb
PROJECT NAME: SWANTON
PROJECT NUMBER: NH 036-1(9)
FILE NAME: z96b032bdr_wetland_Corps.dgn PLOT DATE: 11/4/2023
PROJECT LEADER: G. BAKOS DRAWN BY: C. CILLEY
DESIGNED BY: M. BOGUE CHECKED BY: G. BAKOS
404 PERMIT IMPACT EXHIBITS SHEET (3 OF 14) SHEET 8 OF 39





LEGEND

WETLAND I.D. (101)

PERMANENT WETLAND IMPACT (170,443 SF = 3.91 AC)

TEMPORARY WETLAND IMPACT (218,291 SF = 5.01 AC)

TEMPORARY EROSION CONTROL FOR UTILITY POLE RELOCATION (18,674 SF = 0.429 AC)

0 40 80
SCALE IN FEET

PERMANENT O.H.W. IMPACT (6,518 SF = 0.150 AC)

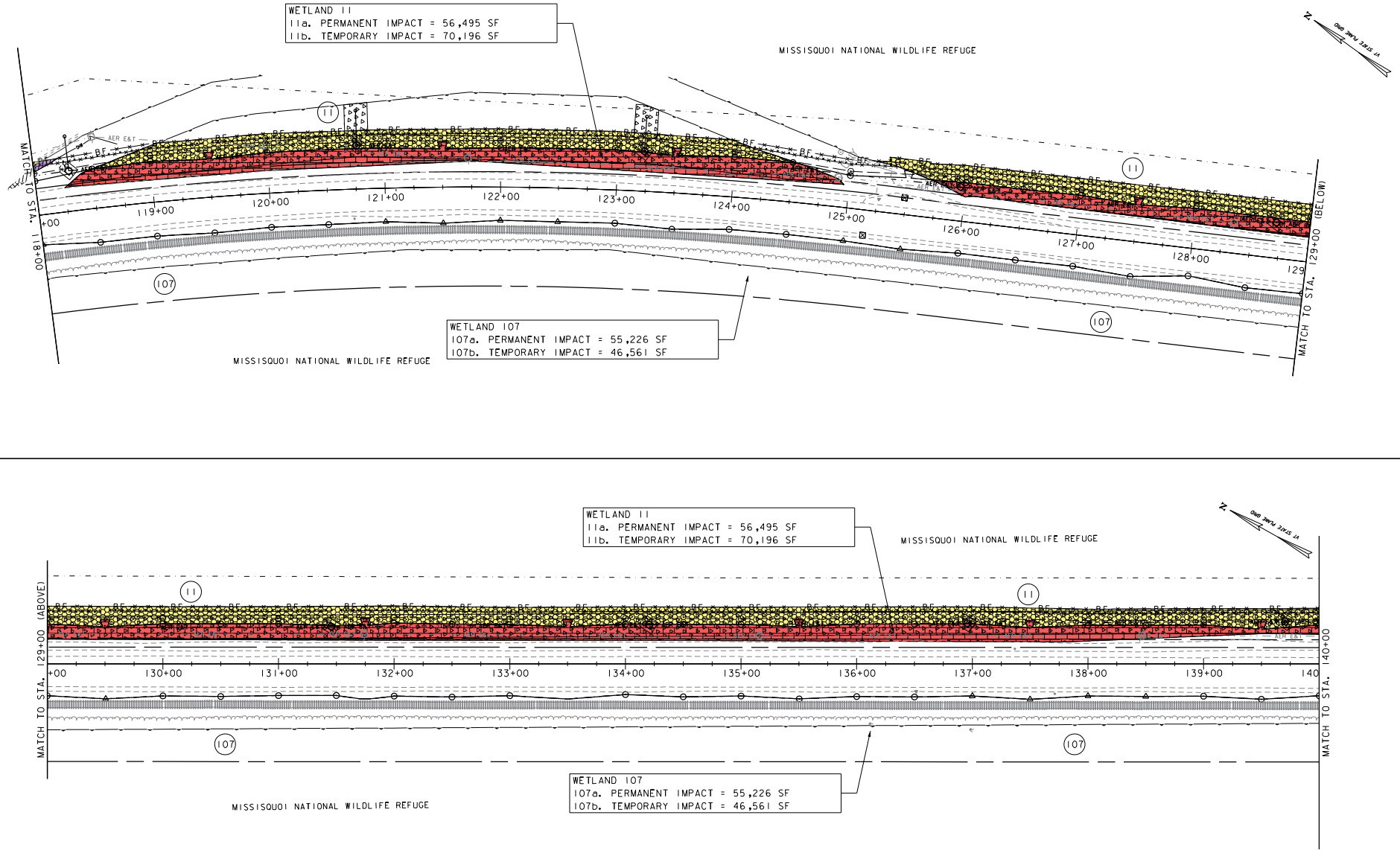
TEMPORARY O.H.W. IMPACT (4,119 SF = 0.095 AC)

TOTAL TREE CUTTING AREA = 145,298 SF = 3.335 AC

vhb

PROJECT NAME: SWANTON
PROJECT NUMBER: NH 036-1(9)

FILE NAME: z96b032bdr_wetland_Corps.dgn PLOT DATE: 11/4/2023
PROJECT LEADER: G. BAKOS DRAWN BY: C. CILLEY
DESIGNED BY: M. BOGUE CHECKED BY: G. BAKOS
404 PERMIT IMPACT EXHIBITS SHEET (4 OF 14) SHEET 9 OF 39



LEGEND

WETLAND I.D. (101)

PERMANENT WETLAND IMPACT (170,443 SF = 3.91 AC)

TEMPORARY WETLAND IMPACT (218,291 SF = 5.01 AC)

TEMPORARY EROSION CONTROL FOR UTILITY POLE RELOCATION (18,674 SF = 0.429 AC)

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vhb

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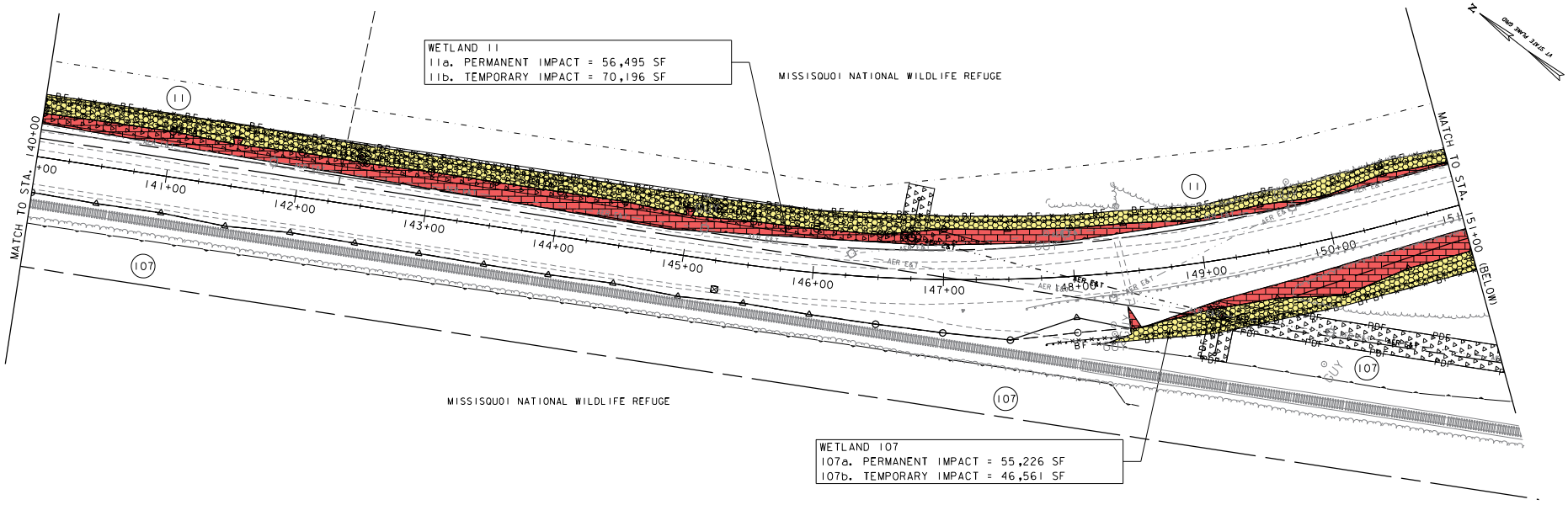
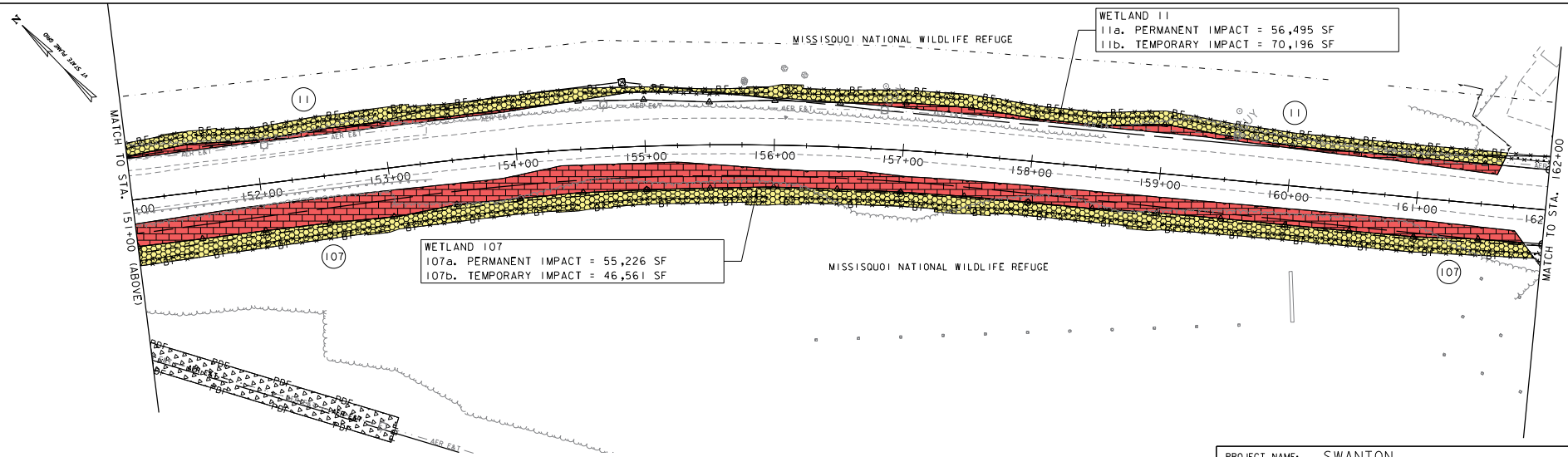
PROJECT NUMBER: NH 036-1(9)

FILE NAME: z96b032bdr_wetland_Corps.dgn PLOT DATE: 11/4/2023
PROJECT LEADER: G. BAKOS DRAWN BY: C. CILLEY
DESIGNED BY: M. BOGUE CHECKED BY: G. BAKOS
404 PERMIT IMPACT EXHIBITS SHEET (5 OF 14) SHEET 10 OF 39





LEGEND

WETLAND I.D. (101)

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TEMPORARY WETLAND IMPACT (218,291 SF = 5.01 AC)

TEMPORARY EROSION CONTROL FOR UTILITY POLE RELOCATION (18,674 SF = 0.429 AC)

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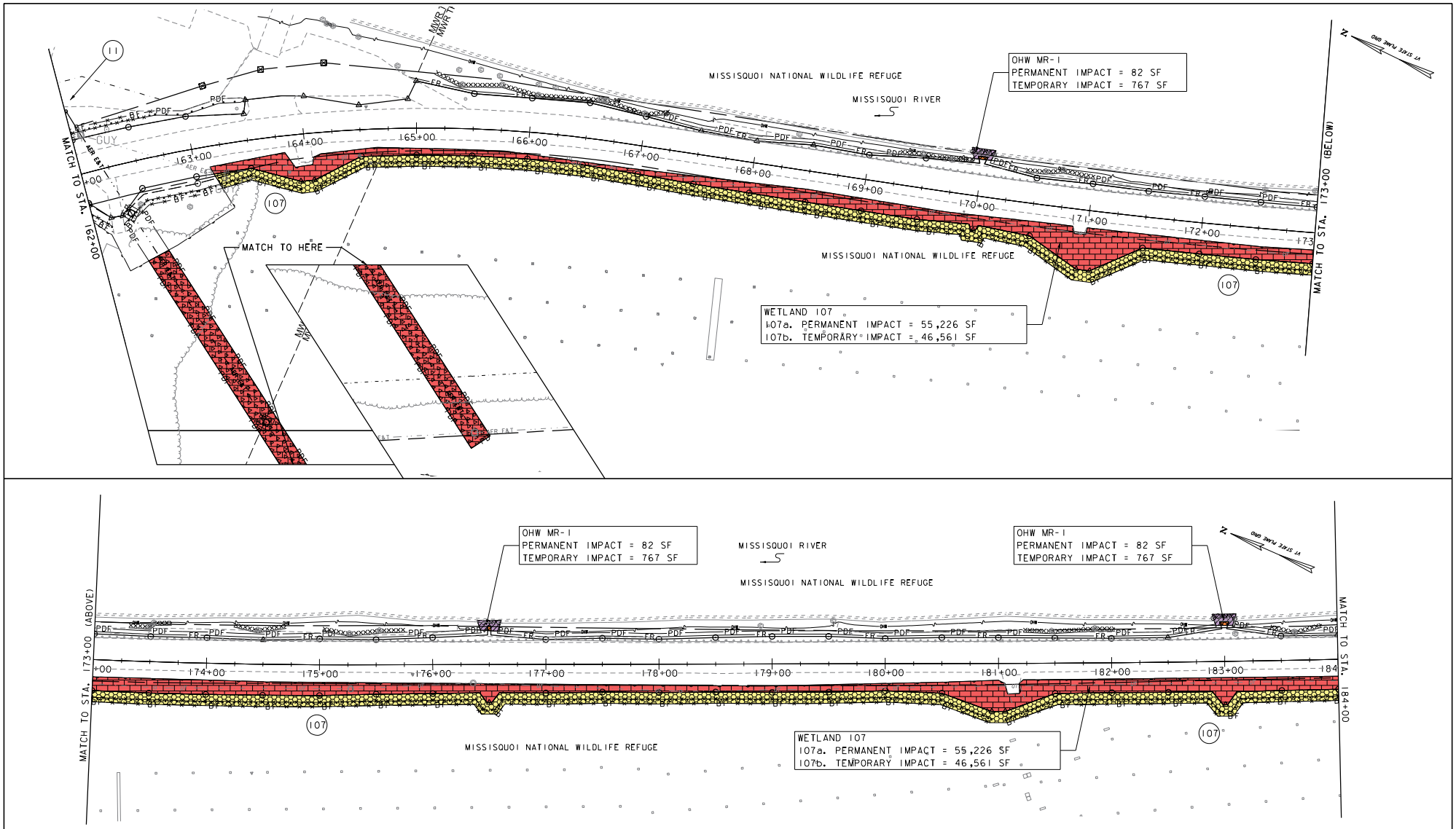
PROJECT NAME: SWANTON
PROJECT NUMBER: NH 036-1(9)

FILE NAME: z96b032bdr_wetland_Corps.dgn PLOT DATE: 11/4/2023
PROJECT LEADER: G. BAKOS DRAWN BY: C. CILLEY
DESIGNED BY: M. BOGUE CHECKED BY: G. BAKOS
404 PERMIT IMPACT EXHIBITS SHEET (6 OF 14) SHEET 11 OF 39



LEGEND

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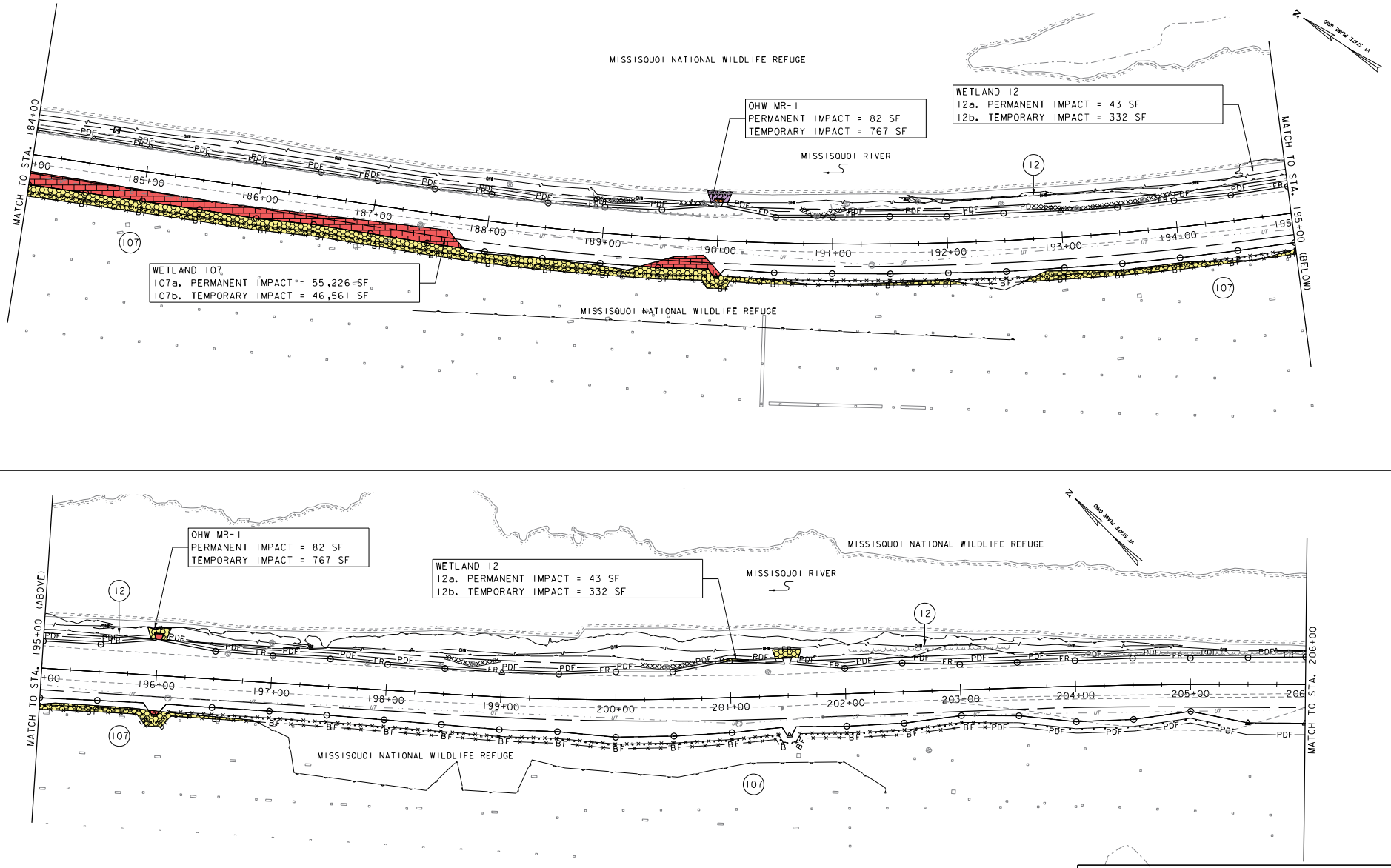
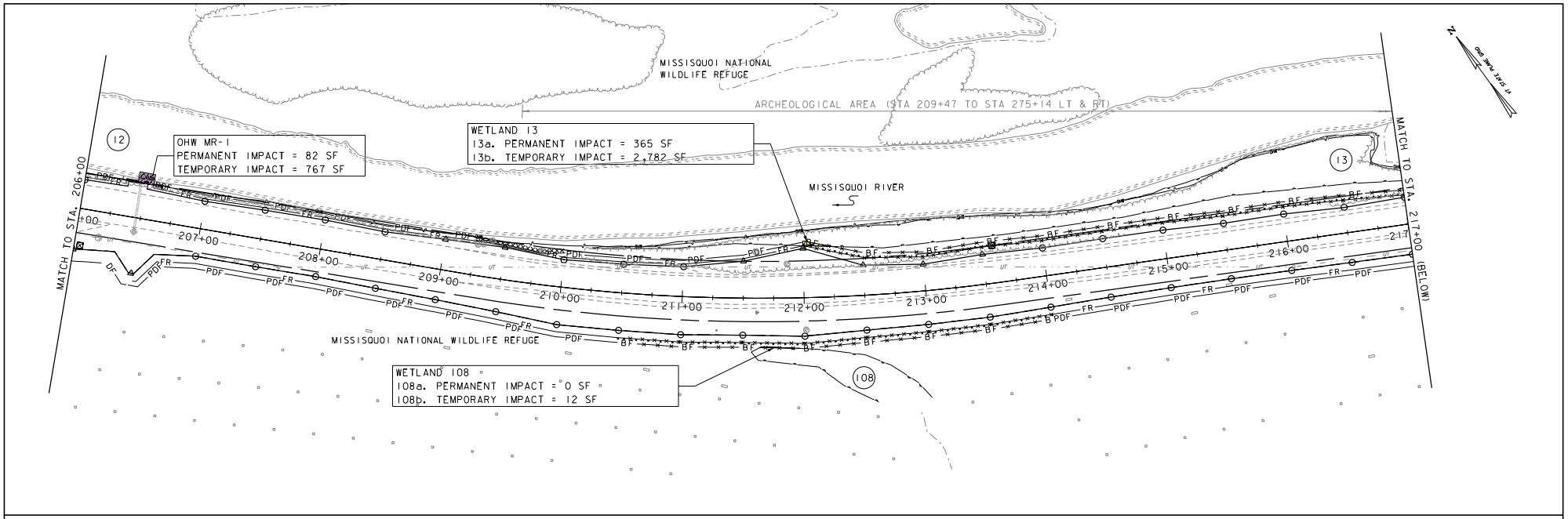
PROJECT NUMBER: NH 036-1(9)

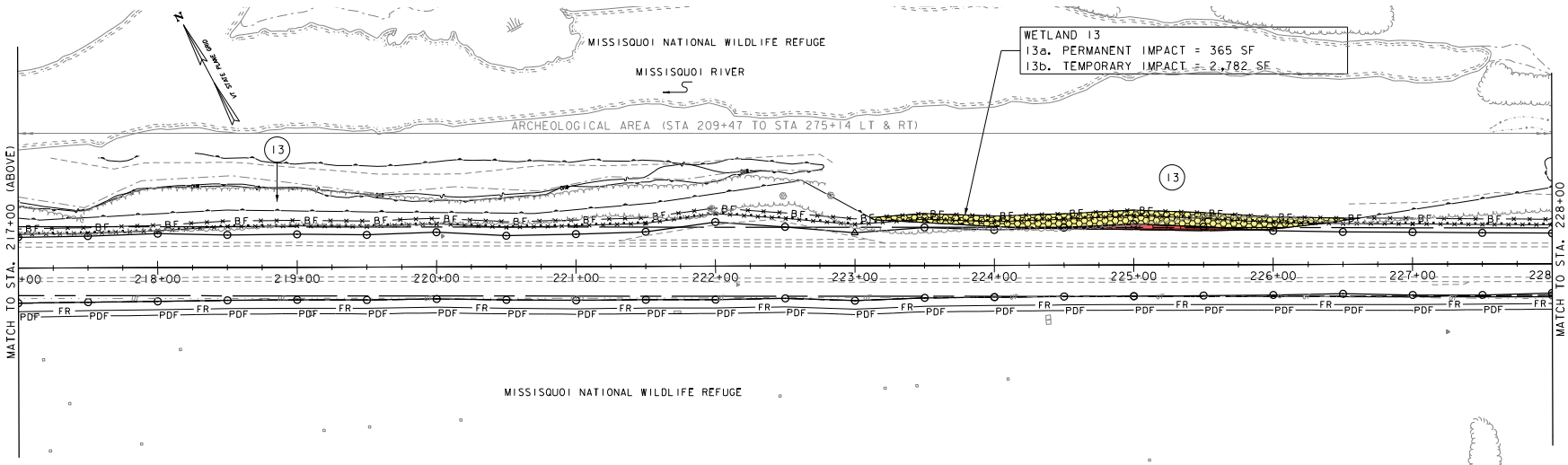
FILE NAME: z96b032bdr_wetland_Corps.dgn PLOT DATE: 11/4/2023
PROJECT LEADER: G. BAKOS DRAWN BY: C. CILLEY
DESIGNED BY: M. BOGUE CHECKED BY: G. BAKOS
404 PERMIT IMPACT EXHIBITS SHEET (7 OF 14) SHEET 12 OF 39



PROJECT NAME: SWANTON
PROJECT NUMBER: NH 036-1(9)

FILE NAME: z96b032bdr_wetland_Corps.dgn PLOT DATE: 11/4/2023
PROJECT LEADER: G. BAKOS DRAWN BY: C. CILLEY
DESIGNED BY: M. BOGUE CHECKED BY: G. BAKOS
404 PERMIT IMPACT EXHIBITS SHEET (8 OF 14) SHEET 13 OF 39





LEGEND

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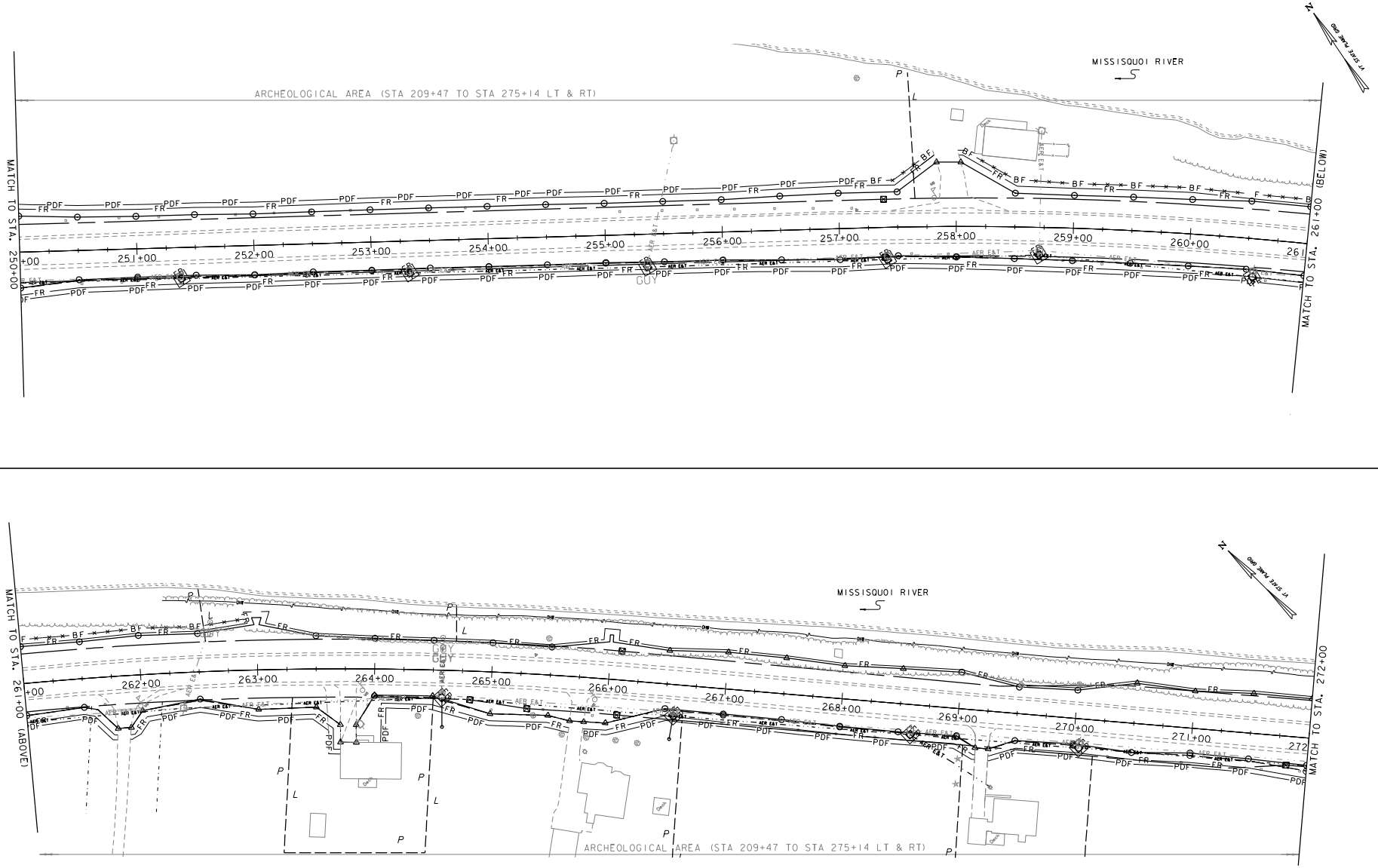
TOTAL TREE CUTTING AREA = 145,298 SF = 3.335

vhb

PROJECT NAME:	SWANTON
PROJECT NUMBER:	NH 036-1(9)
FILE NAME: z96b032bdr_wetland_Corps.dgn	PLOT DATE: 11/4/2023
PROJECT LEADER: G. BAKOS	DRAWN BY: C. CILLEY
DESIGNED BY: M. BOGUE	CHECKED BY: G. BAKOS
404 PERMIT IMPACT EXHIBITS SHEET (9 OF 14)	SHEET 14 OF 39



LEGEND

WETLAND I.D. (101)

PERMANENT WETLAND IMPACT (170,443 SF = 3.91 AC)

TEMPORARY WETLAND IMPACT (218,291 SF = 5.01 AC)

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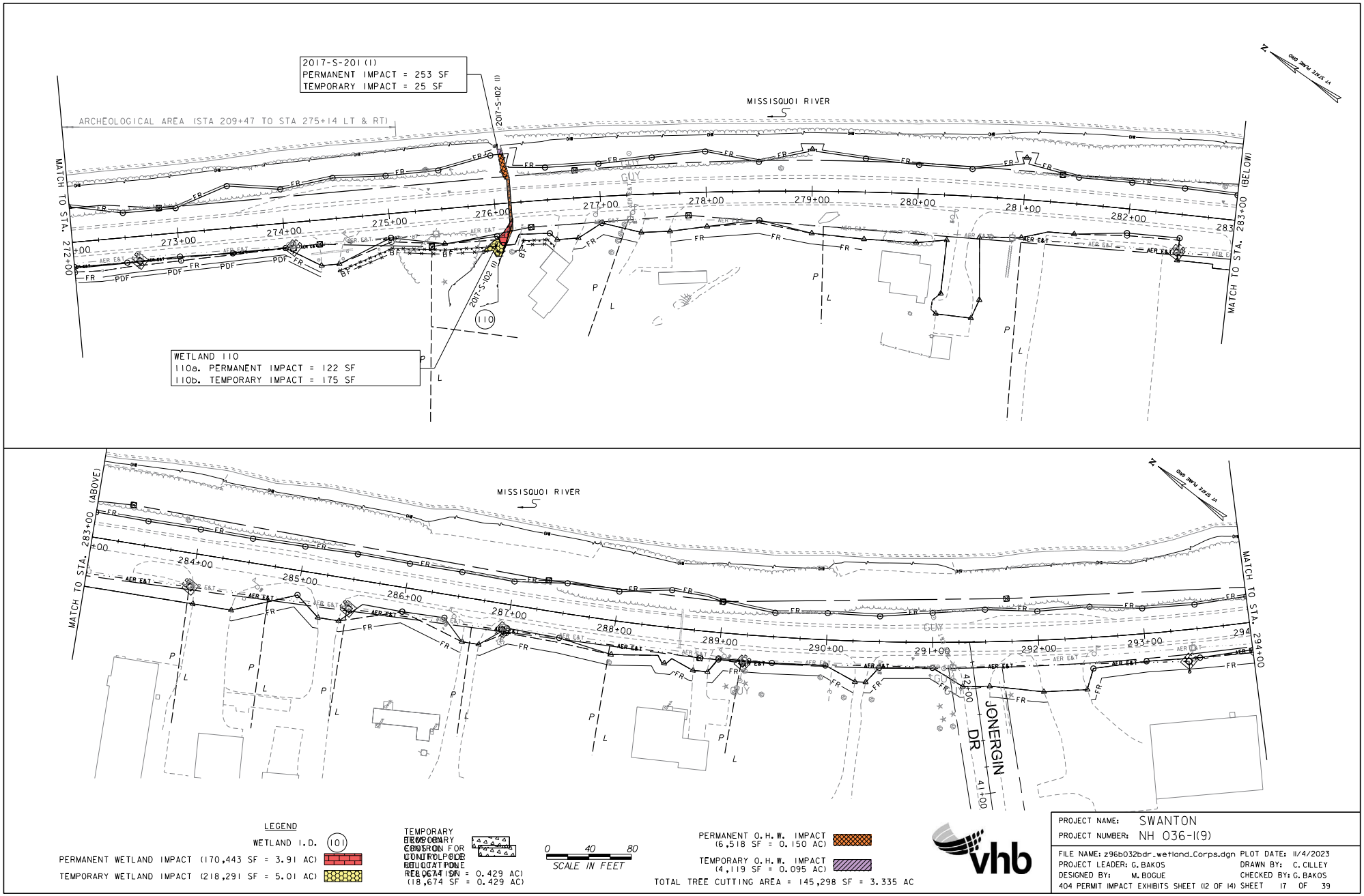
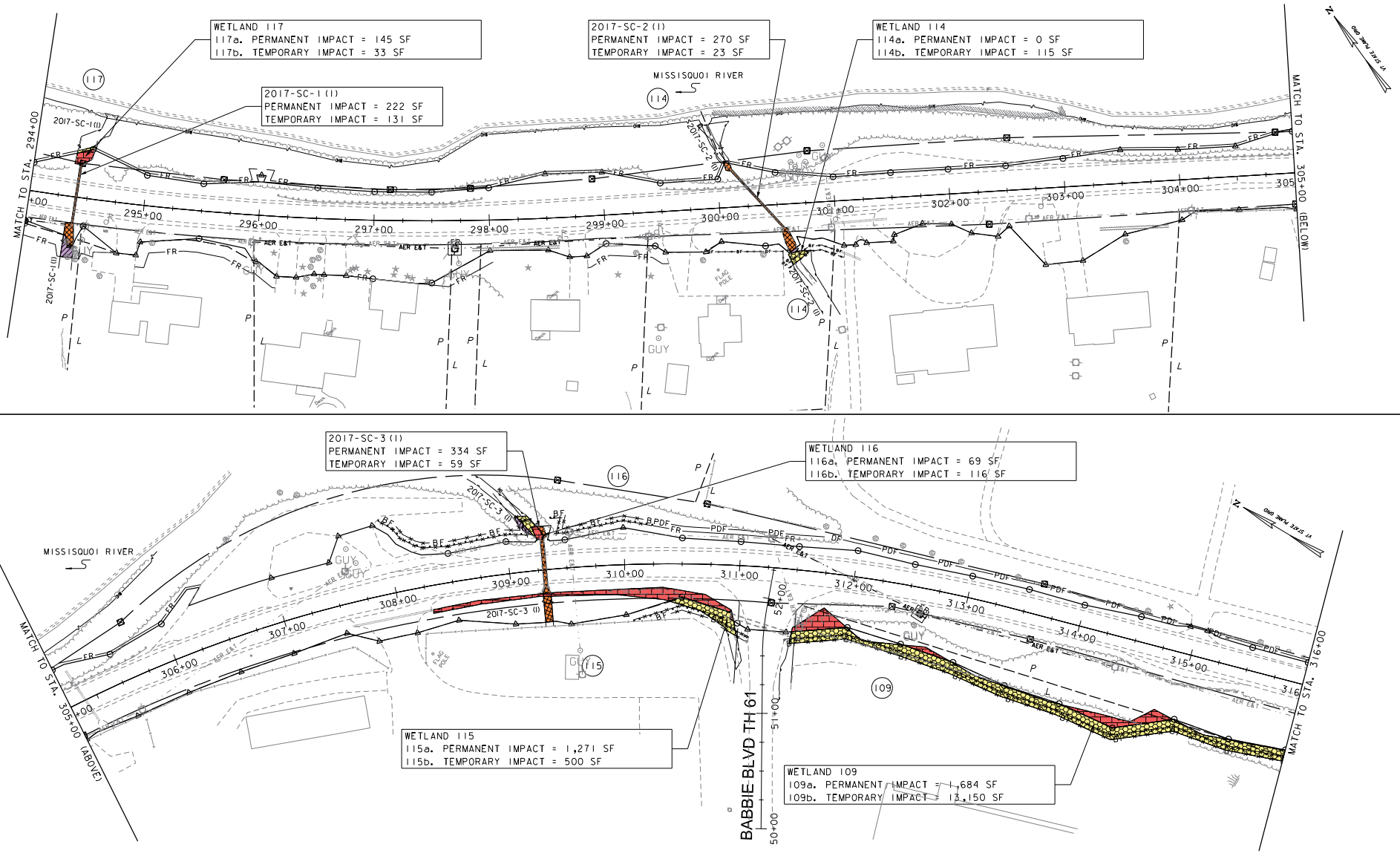
vhb

PROJECT NAME:	SWANTON
PROJECT NUMBER:	NH 036-1(9)
FILE NAME: z96b032bdr_wetland_Corps.dgn	PLOT DATE: 11/4/2023
PROJECT LEADER: G. BAKOS	DRAWN BY: C. CILLEY
DESIGNED BY: M. BOGUE	CHECKED BY: G. BAKOS
404 PERMIT IMPACT EXHIBITS SHEET (11 OF 14)	SHEET 16 OF 39



PROJECT NAME:	SWANTON
PROJECT NUMBER:	NH 036-1(9)
FILE NAME:	z96b032bdr_wetland_Corps.dgn
PLOT DATE:	11/4/2023
PROJECT LEADER:	G. BAKOS
DRAWN BY:	C. CILLEY
DESIGNED BY:	M. BOGUE
CHECKED BY:	G. BAKOS
404 PERMIT IMPACT EXHIBITS SHEET (12 OF 14)	SHEET 17 OF 39



LEGEND

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SCALE IN FEET

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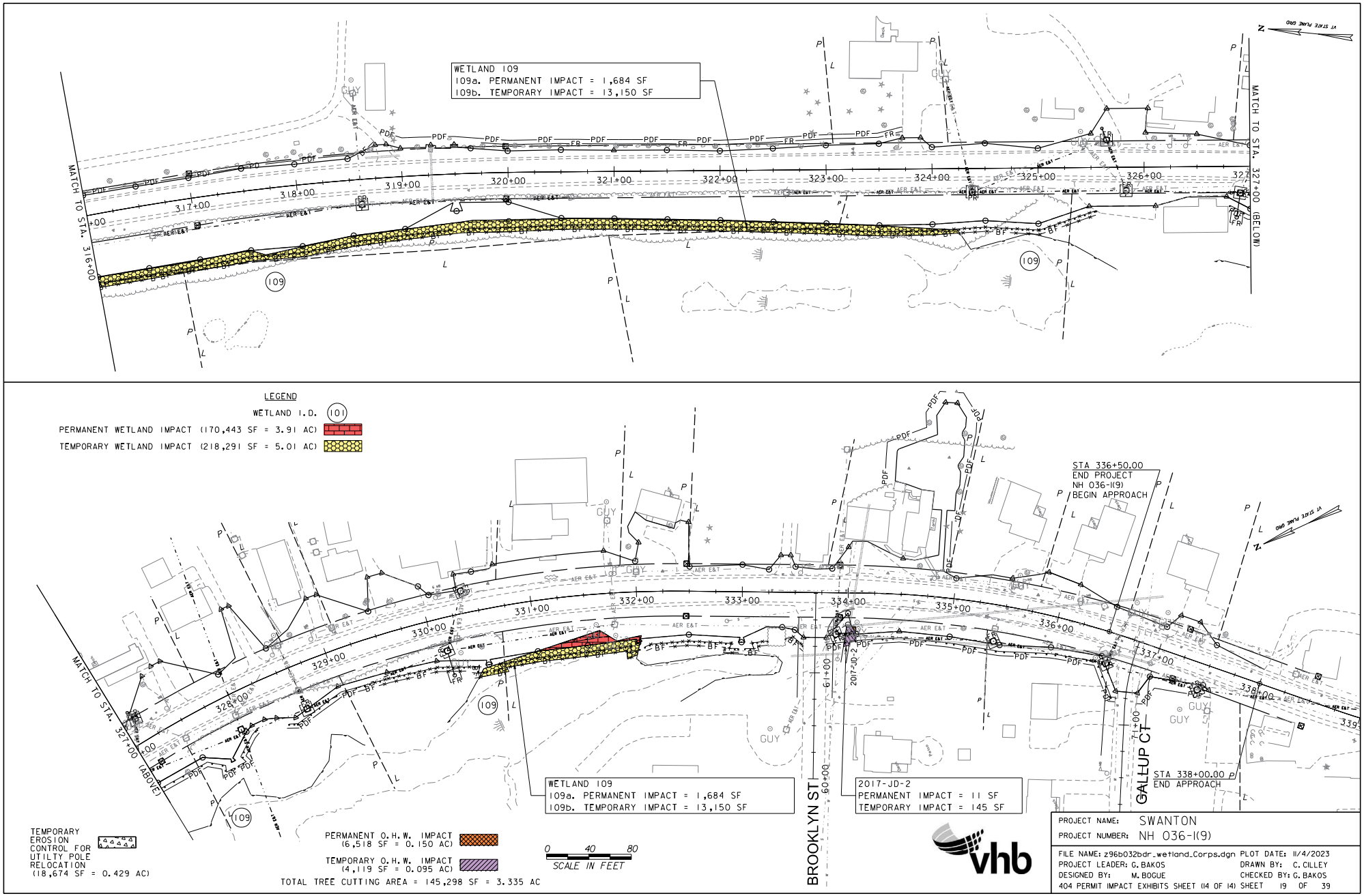
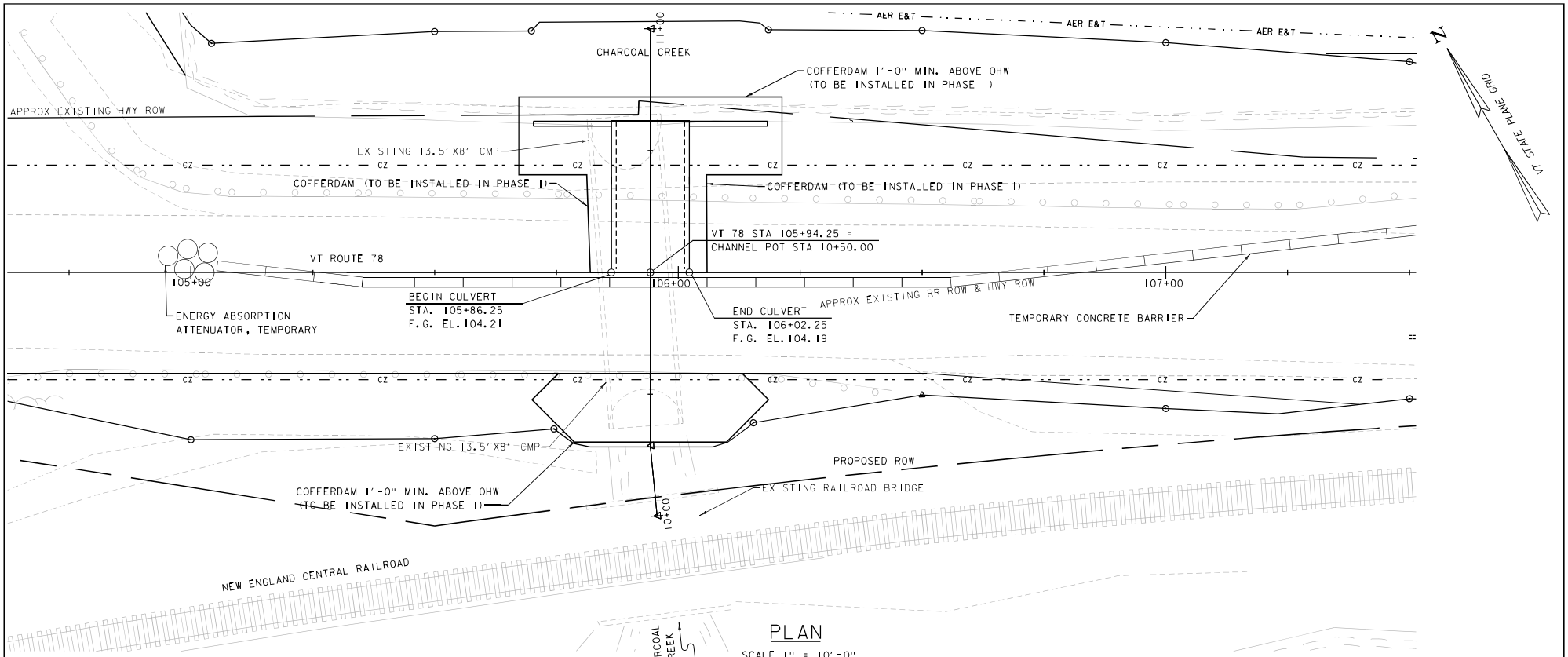
vhb

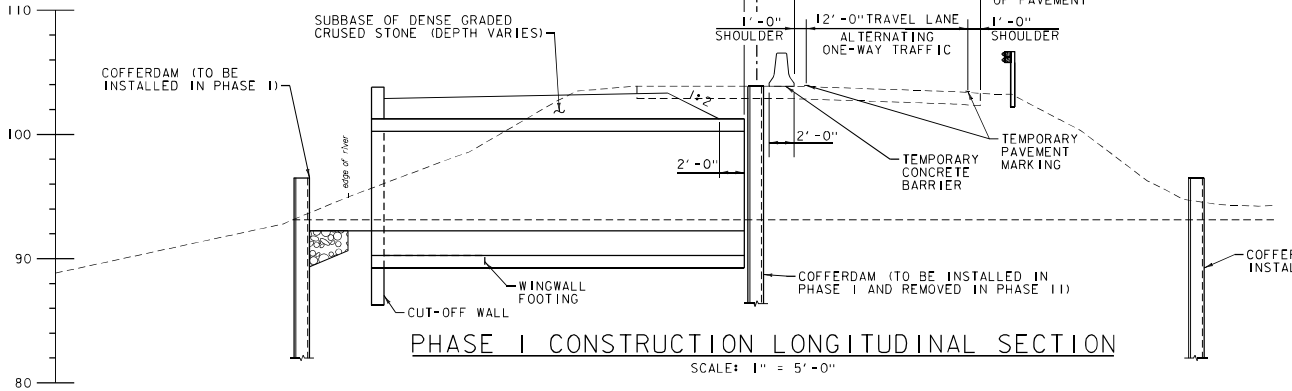
PROJECT NAME:	SWANTON
PROJECT NUMBER:	NH 036-1(9)
FILE NAME:	z96b032bdr_wetland_Corps.dgn
PLOT DATE:	11/4/2023
PROJECT LEADER:	G. BAKOS
DRAWN BY:	C. CILLEY
DESIGNED BY:	M. BOGUE
CHECKED BY:	G. BAKOS
404 PERMIT IMPACT EXHIBITS SHEET (13 OF 14)	SHEET 18 OF 39


WETLAND 109
109a. PERMANENT IMPACT = 1,684 SF
109b. TEMPORARY IMPACT = 13,150 SF
MATCH TO STA. 316+00
MATCH TO STA. 327+00 (BELOW)
LEGEND
WETLAND I.D. (101)
PERMANENT WETLAND IMPACT (170,443 SF = 3.91 AC)
TEMPORARY WETLAND IMPACT (218,291 SF = 5.01 AC)
STA 336+50.00
END PROJECT
NH 036-I(9)
BEGIN APPROACH
MATCH TO STA. 327+00 (ABOVE)
BROOKLYN ST
GALLUP CT
2017-JD-2
PERMANENT IMPACT = 11 SF
TEMPORARY IMPACT = 145 SF
STA 338+00.00
END APPROACH
TEMPORARY EROSION CONTROL FOR UTILITY POLE RELOCATION (18,674 SF = 0.429 AC)
PERMANENT O.H.W. IMPACT (6,518 SF = 0.150 AC)
TEMPORARY O.H.W. IMPACT (4,119 SF = 0.095 AC)
TOTAL TREE CUTTING AREA = 145,298 SF = 3.335 AC
0 40 80
SCALE IN FEET
PROJECT NAME: SWANTON
PROJECT NUMBER: NH 036-I(9)
FILE NAME: z96b032bdr_wetland_Corps.dgn PLOT DATE: 11/4/2023
PROJECT LEADER: G. BAKOS DRAWN BY: C. CILLEY
DESIGNED BY: M. BOGUE CHECKED BY: G. BAKOS
404 PERMIT IMPACT EXHIBITS SHEET (14 OF 14) SHEET 19 OF 39



PLAN

SCALE 1" = 10'-0"



PHASE I CONSTRUCTION LONGITUDINAL SECTION

SCALE: 1" = 5'-0"

PHASING NOTES

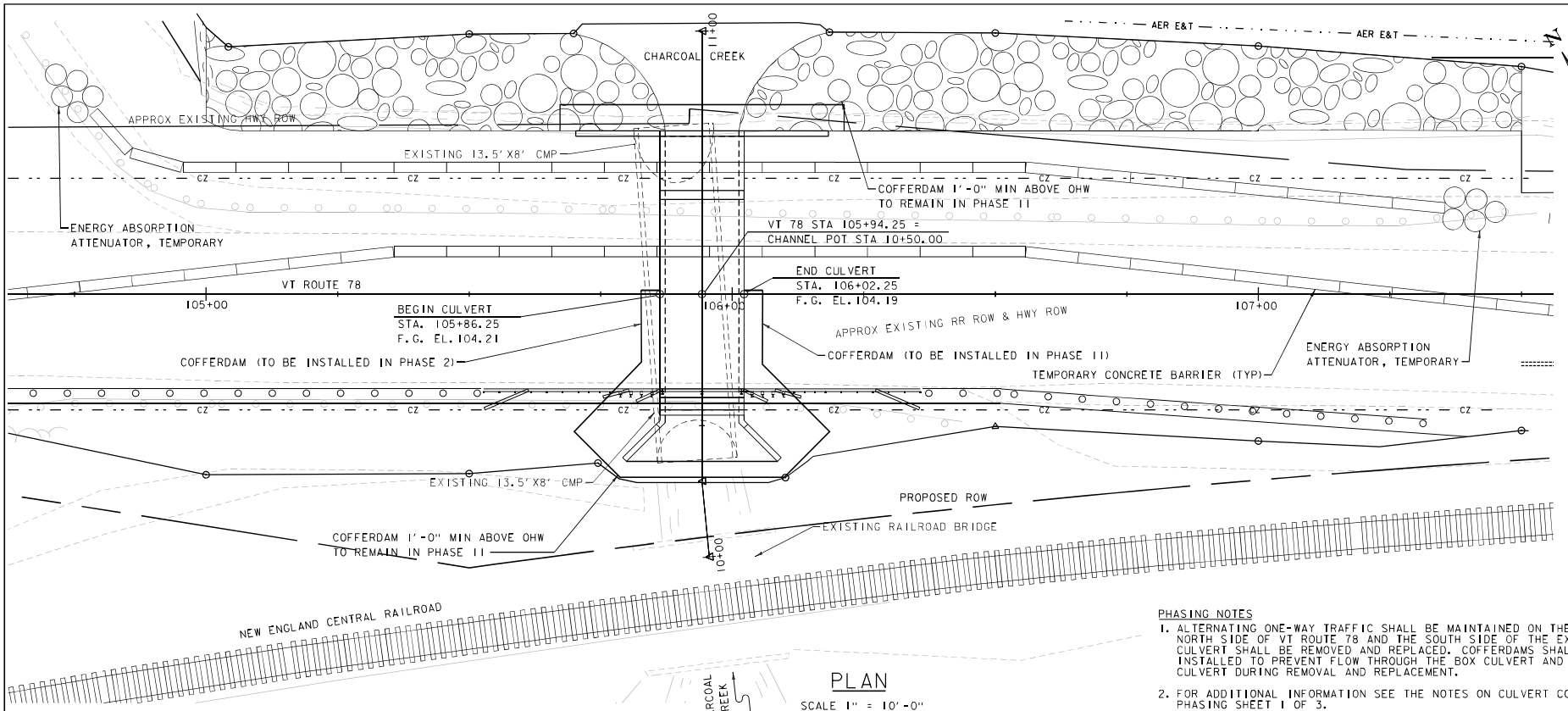
1. ALTERNATING ONE-WAY TRAFFIC SHALL BE MAINTAINED ON THE SOUTH SIDE OF VT ROUTE 78 AND THE NORTH SIDE OF THE EXISTING CULVERT SHALL BE REMOVED AND REPLACED. COFFERDAMS SHALL BE INSTALLED TO PREVENT FLOW THROUGH THE EXISTING CULVERT DURING REMOVAL AND REPLACEMENT.

2. TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL MEASURES INCLUDING TEMPORARY CONCRETE BARRIER AND TEMPORARY ATTENUATORS. ATTENUATOR SHALL BE DESIGNED BY THE CONTRACTOR. ALL COSTS ASSOCIATED WITH DESIGNING, IMPLEMENTING, AND MAINTAINING TRAFFIC CONTROL WILL BE INCIDENTAL TO ITEM 641.11, "TRAFFIC CONTROL, ALL-INCLUSIVE". ALL COSTS FOR TEMPORARY TRAFFIC BARRIER AND ENERGY ABSORPTION ATTENUATOR, TEMPORARY WILL BE PAID FOR SEPARATELY UNDER THEIR RESPECTIVE ITEM NUMBER. SEE TRAFFIC CONTROL NARRATIVE AND TRAFFIC CONTROL PLANS FOR ADDITIONAL INFORMATION.

3. THE CONTRACTOR SHALL REVIEW THE PERMITS FOR THIS PROJECT AND SPECIFICALLY FOR THE REMOVAL AND REPLACEMENT OF THIS CULVERT AS TIME OF YEAR RESTRICTIONS WILL APPLY FOR WORK IN THE CHANNEL AS WELL AS TO VERIFY THE PERMIT REQUIREMENTS FOR PUMPING WATER FROM ONE SIDE TO THE OTHER TO MAINTAIN WATER LEVELS IN CHARCOAL BROOK.

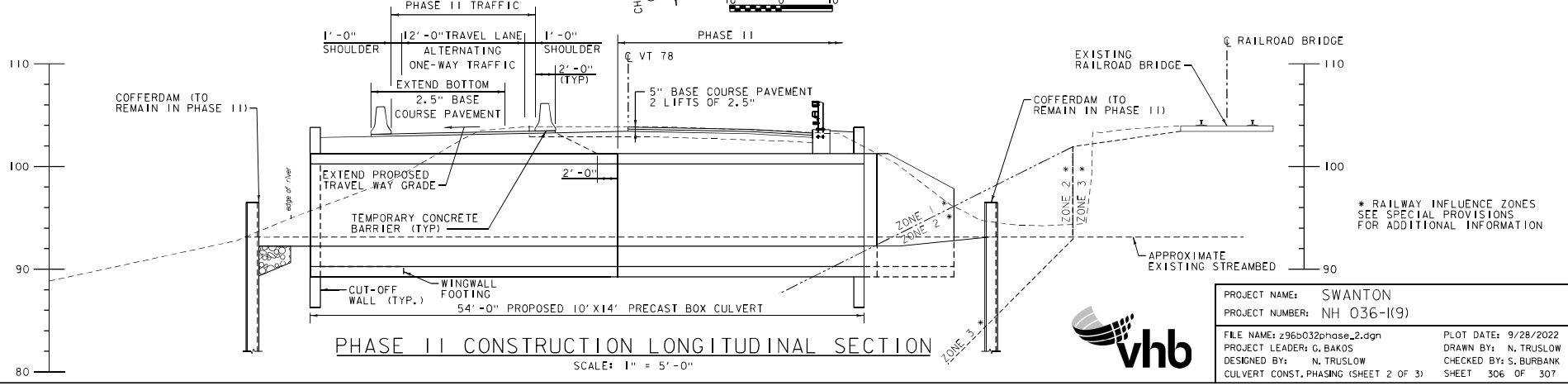
vhb

PROJECT NAME:	SWANTON
PROJECT NUMBER:	NH 036-I(9)
FILE NAME: z96b032phase_1.dgn	PLOT DATE: 9/28/2022
PROJECT LEADER: G. BAKOS	DRAWN BY: N. TRUSLOW
DESIGNED BY: N. TRUSLOW	CHECKED BY: S. BURBANK
CULVERT CONST. PHASING (SHEET 1 OF 3)	SHEET 305 OF 307



PLAN

SCALE 1" = 10'-0"



PHASE II CONSTRUCTION LONGITUDINAL SECTION

SCALE: 1" = 5'-0"

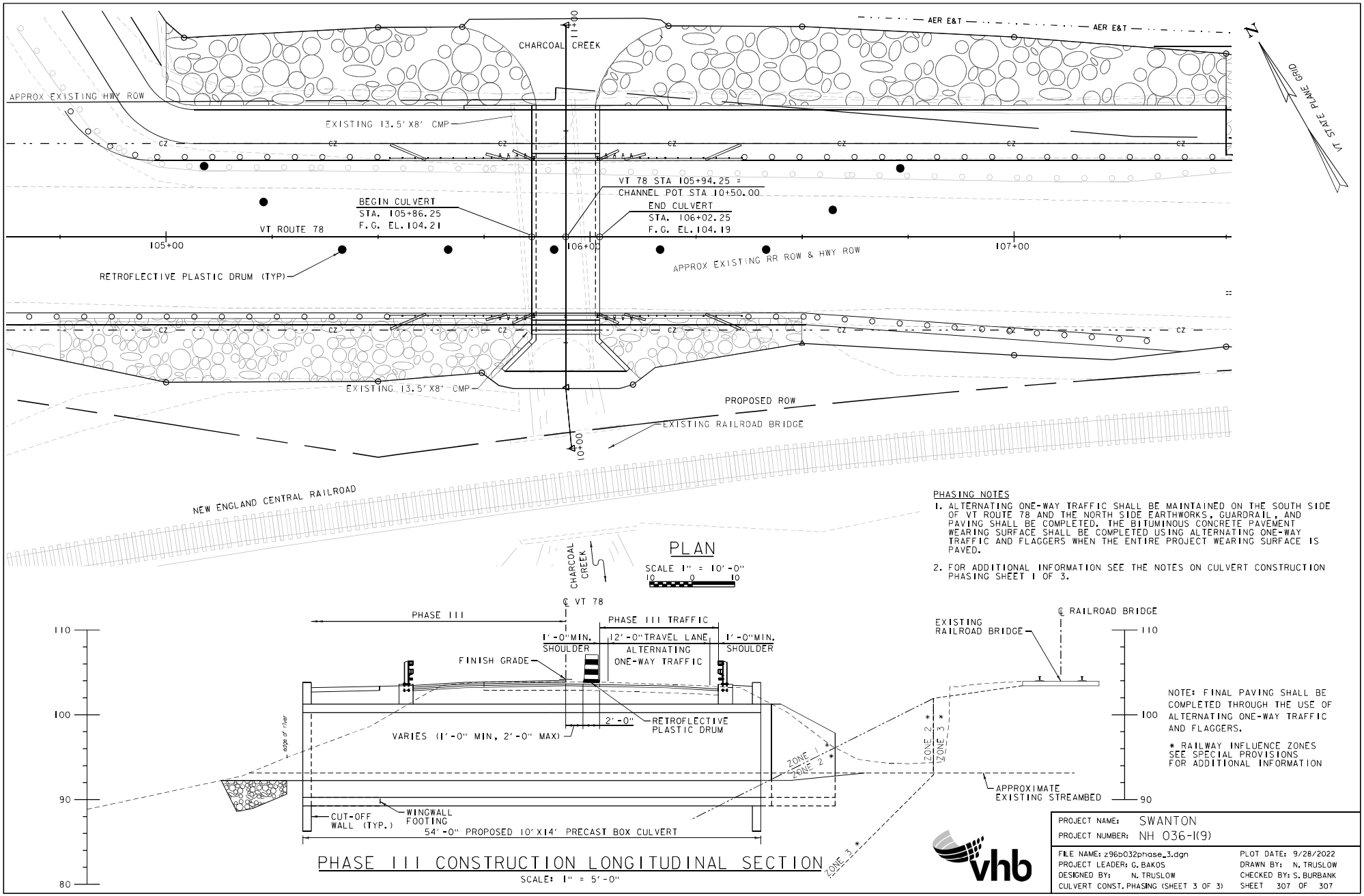
* RAILWAY INFLUENCE ZONES SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION

PHASING NOTES

1. ALTERNATING ONE-WAY TRAFFIC SHALL BE MAINTAINED ON THE WIDENED NORTH SIDE OF VT ROUTE 78 AND THE SOUTH SIDE OF THE EXISTING CULVERT SHALL BE REMOVED AND REPLACED. COFFERDAMS SHALL BE INSTALLED TO PREVENT FLOW THROUGH THE BOX CULVERT AND THE EXISTING CULVERT DURING REMOVAL AND REPLACEMENT.
2. FOR ADDITIONAL INFORMATION SEE THE NOTES ON CULVERT CONSTRUCTION PHASING SHEET 1 OF 3.

vhb

PROJECT NAME:	SWANTON
PROJECT NUMBER:	NH 036-1(9)
FILE NAME: z96b032phase_2.dgn	PLOT DATE: 9/28/2022
PROJECT LEADER: G. BAKOS	DRAWN BY: N. TRUSLOW
DESIGNED BY: N. TRUSLOW	CHECKED BY: S. BURBANK
CULVERT CONST. PHASING (SHEET 2 OF 3)	SHEET 306 OF 307



PLAN

SCALE 1" = 10'-0"

PHASE III CONSTRUCTION LONGITUDINAL SECTION

SCALE: 1" = 5'-0"

PHASING NOTES

1. ALTERNATING ONE-WAY TRAFFIC SHALL BE MAINTAINED ON THE SOUTH SIDE OF VT ROUTE 78 AND THE NORTH SIDE EARTHWORKS, GUARDRAIL, AND PAVING SHALL BE COMPLETED. THE BITUMINOUS CONCRETE PAVEMENT WEARING SURFACE SHALL BE COMPLETED USING ALTERNATING ONE-WAY TRAFFIC AND FLAGGERS WHEN THE ENTIRE PROJECT WEARING SURFACE IS PAVED.
2. FOR ADDITIONAL INFORMATION SEE THE NOTES ON CULVERT CONSTRUCTION PHASING SHEET 1 OF 3.

NOTE: FINAL PAVING SHALL BE COMPLETED THROUGH THE USE OF ALTERNATING ONE-WAY TRAFFIC AND FLAGGERS.

* RAILWAY INFLUENCE ZONES SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION

vhb

PROJECT NAME: SWANTON
PROJECT NUMBER: NH 036-I(9)

FILE NAME: z96b032phase_3.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: N. TRUSLOW
CULVERT CONST. PHASING (SHEET 3 OF 3)

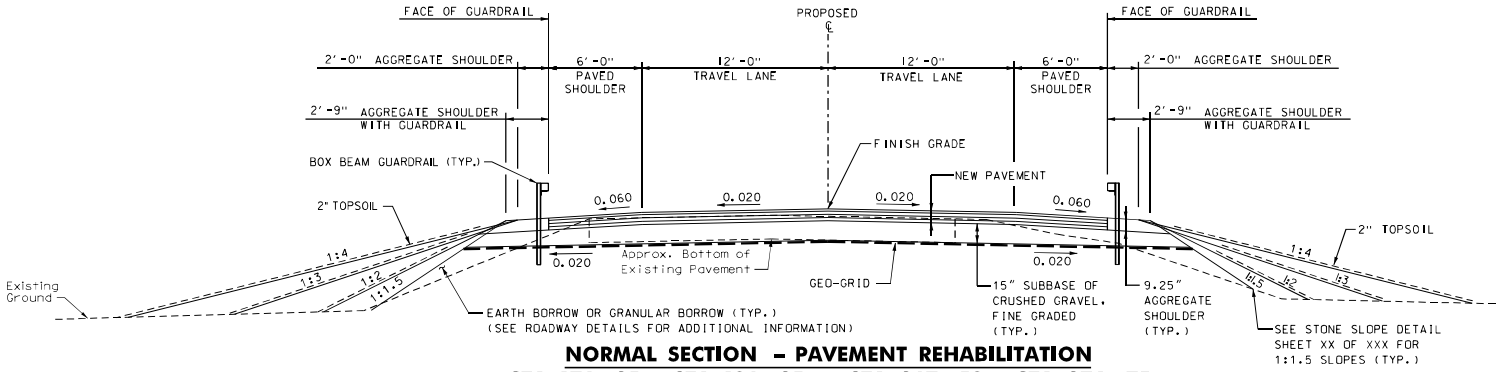
PLOT DATE: 9/28/2022
DRAWN BY: N. TRUSLOW
CHECKED BY: S. BURBANK
SHEET 307 OF 307

MATERIAL TOLERANCES	
MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT (TOTAL DEPTH)	1/4"
SUBBASE (TOTAL DEPTH)	1"
SAND (TOTAL DEPTH)	1"

TYPICAL SECTIONS

VT ROUTE 78

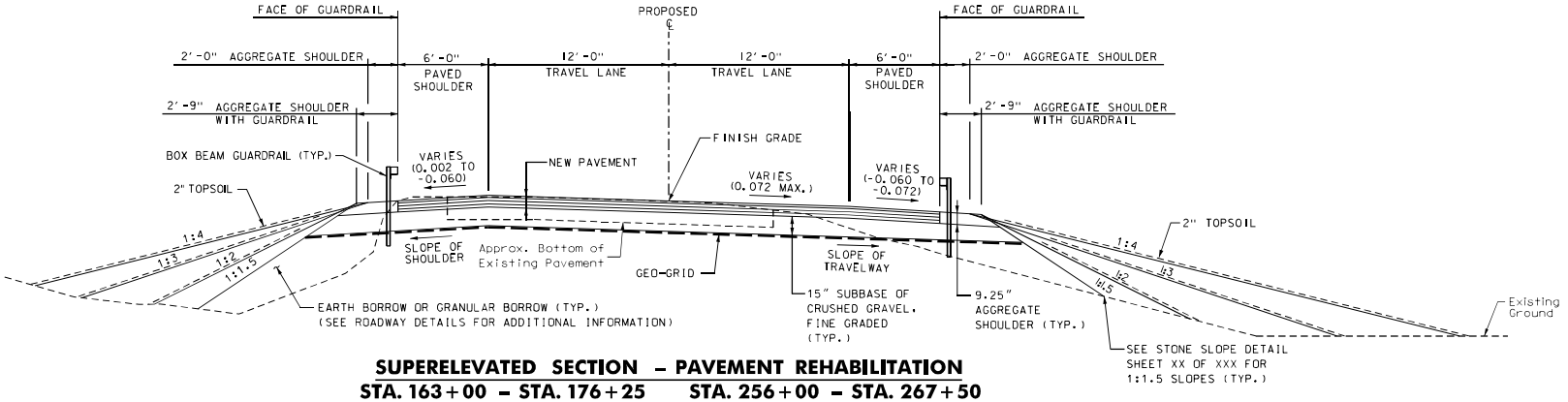
1.75" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT - TYPE IIIS (PG 70-28)
2.50" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT - TYPE IIS (PG 70-28)
2.50" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT - TYPE IIS (PG 70-28)
2.50" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT - TYPE IIS (PG 70-28)
15" SUBBASE OF CRUSHED GRAVEL, FINE GRADED (FOR WIDENED SECTIONS)
GEO-GRID



NORMAL SECTION – PAVEMENT REHABILITATION

STA. 176+25 – STA. 186+25
STA. 195+75 – STA. 197+25
STA. 215+50 – STA. 228+00
STA. 232+75 – STA. 256+00
STA. 267+50 – STA. 274+75
STA. 283+50 – STA. 286+25
STA. 300+00 – STA. 303+75

NTS



SUPERELEVATED SECTION – PAVEMENT REHABILITATION

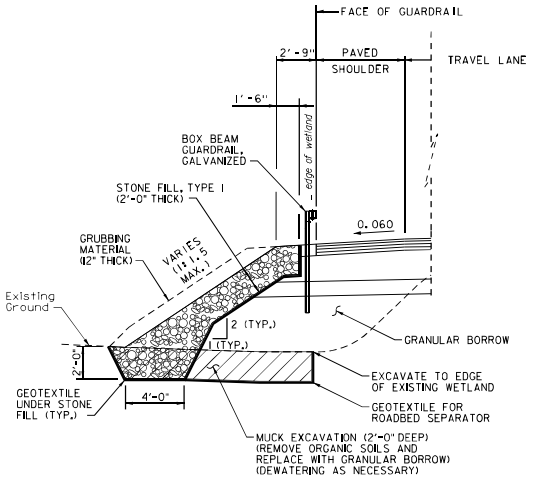
STA. 163+00 – STA. 176+25
STA. 186+25 – STA. 195+75
STA. 197+25 – STA. 215+50
STA. 228+00 – STA. 232+75
STA. 256+00 – STA. 267+50
STA. 274+75 – STA. 283+50
STA. 286+25 – STA. 300+00
STA. 303+75 – STA. 309+50

NTS

vhb

PROJECT NAME:	SWANTON
PROJECT NUMBER:	NH 036-1(9)
FILE NAME: z96b032typ_03.dgn	PLOT DATE: 8/31/2022
PROJECT LEADER: G. BAKOS	DRAWN BY: C.CILLEY
DESIGNED BY: M.BOGUE	CHECKED BY: G. BAKOS
TYPICAL SECTION 3	SHEET 6 OF 306

DETAILS



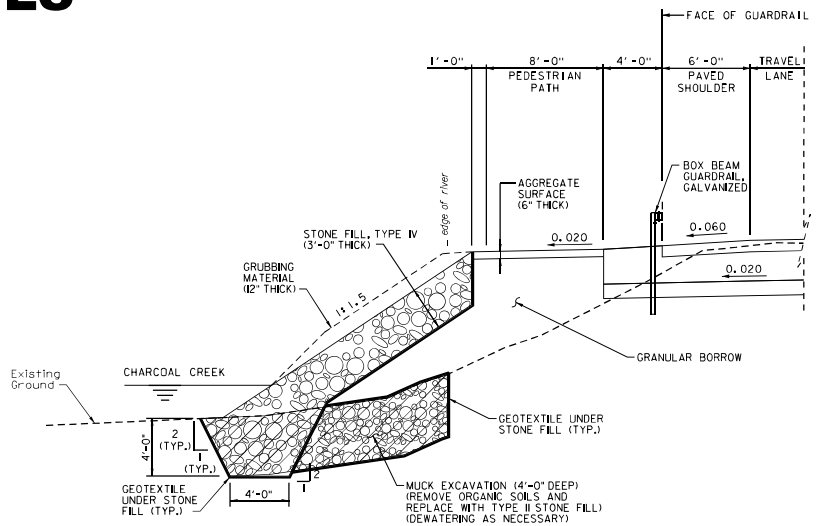
STONE SLOPE DETAIL

STA. 45+25 – STA. 56+75 LT

STA. 45+25 – STA. 45+75 RT

STA. 68+10 – STA. 68+60 LT

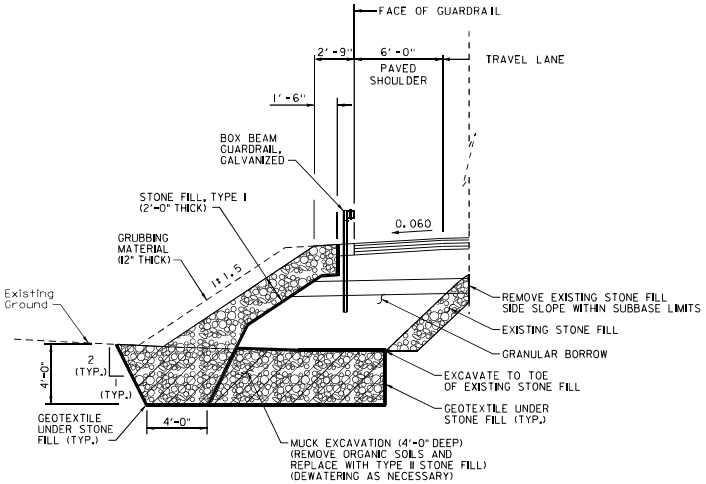
NTS



CHARCOAL CREEK FOOTPATH DETAIL

STA. 105+00.00 TO STA. 107+50.00 LT

NTS

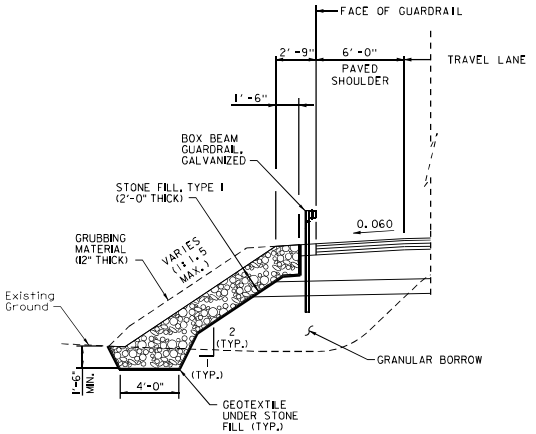


WETLAND STONE SLOPE DETAIL

STA. 107+50 – STA. 124+75 LT

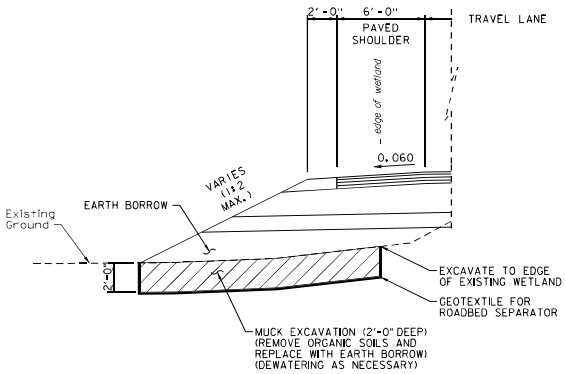
STA. 125+75 – STA. 147+50 LT

NTS



TYPICAL STONE SLOPE DETAIL

NTS



TYPICAL MUCK EXCAVATION DETAIL

NTS

vhb

PROJECT NAME: SWANTON	
PROJECT NUMBER: NH 036-1(9)	
FILE NAME: z96b032det_01.dgn	PLOT DATE: 8/31/2022
PROJECT LEADER: G. BAKOS	DRAWN BY: C.CILLEY
DESIGNED BY: M.BOGUE	CHECKED BY: G. BAKOS
ROADWAY DETAILS I	SHEET 9 OF 306