



# PUBLIC NOTICE

US Army Corps  
of Engineers  
New York District, CENAN-OP-R  
Upstate Regulatory Field Office  
1 Buffington Street, Bldg. 10, 3<sup>rd</sup> Floor  
Watervliet, New York 12189-4000

**In reply to:**

Public Notice Number: NAN-2007-00147-WDE

Issue Date: March 31, 2008

Expiration Date: April 30, 2008

To Whom It May Concern:

The New York District, Corps of Engineers has received an application for a Department of the Army permit pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) and Section 404 of the Clean Water Act (33 U.S. C. 1344).

**APPLICANT:**

Marble River, LLC

3 Columbia Place

Albany, New York 12207

**ACTIVITY:**

Discharge fill material into waters of the United States to facilitate the construction and operation of a 218 megawatt (MW) wind-powered electric generating facility.

**WATERWAY:**

Wetlands and tributaries within the Lake Champlain and St. Lawrence River watersheds.

**LOCATION:**

Towns of Clinton and Ellenburg, Clinton County, New York.

A detailed description and plans of the applicant's activity are enclosed to assist in your review.

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts 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 reasonably may be expected to 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, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

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 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.

ALL COMMENTS REGARDING THE PERMIT APPLICATION MUST BE PREPARED IN WRITING AND MAILED TO THE ATTENTION OF CHRISTINE DELORIER AT THE ABOVE ADDRESS, OR SENT VIA ELECTRONIC MAIL TO [christine.delorier@usace.army.mil](mailto:christine.delorier@usace.army.mil) TO REACH THIS OFFICE BY THE EXPIRATION DATE OF THIS NOTICE, otherwise, it will be presumed that there are no objections to the activity.

Any person may request, in writing, before this public notice expires, that a public hearing be held to collect information necessary to consider this application. Requests for public hearings shall state, with particularity, the reasons why a public hearing should be held. It should be noted that information submitted by mail is considered just as carefully in the permit decision process and bears the same weight as that furnished at a public hearing.

Our preliminary determination is that the activity for which authorization is sought herein is not likely to affect any Federally endangered or threatened species or their critical habitat. However, pursuant to Section 7 of the Endangered Species Act (16 U.S.C. 1531), the District Engineer is consulting with the appropriate Federal agency to determine the presence of and potential impacts to listed species in the project area or their critical habitat.

Based upon information supplied by the New York State Office of Parks, Recreation and Historic Preservation (SHPO), 65 properties exist within the project vicinity that meet the criteria for inclusion in the National Register of Historic Places. Presently unknown archeological, scientific, prehistorical, or historical data may be lost by work accomplished under the required permit. This office will continue to coordinate with the SHPO to ensure that the requirements of Section 106 of the National Historic Preservation Act are satisfied.

Reviews of activities pursuant to Section 404 of the Clean Water Act will include application of the guidelines promulgated by the Administrator, U.S. Environmental Protection Agency, under authority of Section 404 (b) of the Clean Water Act and the applicant will obtain a water quality certificate or waiver from the appropriate state agency in accordance with Section 401 of the Clean Water Act prior to a permit decision.

In addition to any required water quality certificate, the applicant has obtained or requested the following governmental authorization for the activity under consideration: local approvals from Towns of Clinton and Ellenburg; Planning Board approval, PILOT approval and highway work permits from Clinton County; SPDES authorization and Article 15 and 24 permits from the NYSDEC; Highway Work permits from the NYSDOT; certification from the New York State Public Service Commission; and approvals from the Federal Aviation Administration.

It is requested that you communicate the foregoing information concerning the activity to any persons known by you to be interested and who did not receive a copy of this notice. If you have any questions concerning this application, you may contact Christine Delorier of this office at (518) 266-6354.

For more information on New York District Corps of Engineers programs, visit our website at <http://www.nan.usace.army.mil>



FOR / *Richard L. Tomer*  
Chief, Regulatory Branch

Enclosures

## WORK DESCRIPTION

The applicant, Marble River, LLC, has requested Department of the Army (DA) authorization to discharge fill material into waters of the United States to facilitate the construction and operation of a 218 megawatt (MW) wind-powered electric generating facility throughout the Towns of Clinton and Ellenburg, Clinton County, New York.

Proposed activities requiring DA authorization would result in permanent impacts to a total of 8.22 acres of wetlands (2.86 acres forested, 2.40 acres scrub shrub and 2.96 acres emergent) and 870.40 linear feet of streams. An additional 32.24 acres of wetlands (9.09 acres forested, 12.11 acres scrub shrub and 11.04 acres emergent) and 1,888.69 linear feet of streams would be temporarily impacted to facilitate the construction of the project. Last, a total of 21.36 acres of forested wetlands would be permanently converted to either scrub shrub or emergent wetlands as described below. The following is a breakdown of activities involving impacts to Department of the Army jurisdictional areas:

**Turbines/Crane Pads:** A total of 109 wind turbine generators would be constructed as part of this project, with 88 located in the Town of Clinton and 21 in the Town of Ellenburg. Each turbine has a generating capacity of 2 MW. The construction of each turbine requires a 200 foot radius cleared area centered at the unit. The applicant proposes temporary impacts to 2.80 acres of wetlands to provide this cleared area at several of the proposed turbines. The cleared area would allow for the turbine's blades to be assembled on the ground and then erected as one unit. A permanent, 60 foot by 100 foot crane pad would be left behind in the cleared area of each turbine. The establishment of the crane pads would not result in the permanent loss of waters of the United States.

**Access Roads:** Approximately 42 miles of gravel access roads would be constructed to provide access to the wind turbine generators. The discharge of fill material to construct these access roads would result in 8.01 acres of permanent wetlands impacts and 870.40 linear feet of permanent stream impacts, as well as 12.66 acres of temporary wetland impacts and 1,003.44 linear feet of temporary stream impacts. The width of each access road would either be 16, 20 or 34 feet. To adequately install the roads in terms of appropriate clearing and grubbing widths, erosion and sedimentation controls, adequately sized culverts, vertical slopes and ditch lines, the 16 foot wide road would have a temporary impact width of 36 feet, and a permanent impact width of 22 feet. The 20 foot wide access road would have a temporary impact width of 40 feet and a permanent impact width of 26 feet. The 34 foot wide road would have a temporary impact width of 54 feet and a permanent impact width of 40 feet. To reduce the number of new access roads to be constructed, the applicant proposes to upgrade existing public roads, including Jones Road, Merchia Road, Scoucia Road, Patnode Road and Liberty Pole Road. An additional 0.10 acre of temporary wetland impacts are proposed to facilitate these road improvements, which consist of culvert replacements, intersection improvements and the widening of roads.

**Underground Electrical Collection System:** Approximately 55 miles of underground electric collection cables, rated at 34.5kV, would be installed to connect the turbines to the proposed substation. A total of 13.65 acres of wetlands and 686.77 linear feet of streams would be temporarily impacted to facilitate the installation of these utility lines. The underground electrical collection system is designed by circuits, with each separate circuit requiring a separate trench for installation. A single trench installation would have a 35 foot wide cleared area to complete the work. For areas

where there are multiple trenches, an additional 10 feet of temporary impact would be required per trench. When the underground collection system is co-located with the proposed access roads, the temporary impact width is reduced to 10 feet from the edge of the proposed road.

**Overhead Electrical Collection System:** Approximately 10 miles of overhead electric collection cables, also rated at 34.5kV, would be installed to connect the turbines to the proposed substation. A total of 0.02 acre of wetlands would be permanently filled as a result. Temporary impacts to 2.58 acres of wetlands and 198.48 linear feet of streams are also proposed to facilitate the installation of these utility lines. The permanent impacts are associated with the installation of utility poles. Each impact is 4 feet in diameter. The temporary impacts are associated with the construction of 12 foot wide access roads needed to install the poles, string the poles and clear an 80 foot wide right-of-way (ROW). This ROW would be maintained by utilizing non-jurisdictional vegetation removal methods on an as needed basis to ensure that the growth of trees does not reach a height that would impede the overhead collection system. A total of 21.36 acres of forested wetlands would be converted to scrub shrub or emergent wetland cover types in order to maintain the ROW.

**Substation:** A combined interconnection and step-up substation would be constructed off of Patnode Road. The power generated by the turbines and brought to the substation through the collection system would be stepped up from 34.5 kV to 230 kV. Then, it would be delivered into the New York Power Authority transmission system on an existing 230 KV line that passes through the project site. The construction of the 5.79 acre substation would result in permanent impacts to 0.19 acre of wetlands and temporary impacts to 0.45 acre of wetlands.

Wetlands and streams temporarily impacted for the above activities would be restored to preconstruction contours and re-vegetated with native plant species after the construction activities are complete. The maximum duration of any proposed temporary impact is one year. With the exception of the forested conversion areas described above, all wetlands would be restored to pre-existing cover types. Temporary cofferdams would also be used to facilitate in-stream construction activities at road and underground electrical transmission line crossings.

The construction of the remaining project components, including construction laydown and staging areas, three meteorological towers and an operations and maintenance facility would occur in uplands. The anticipated life of the project is 20 years, after which the applicant would review the existing technology to determine whether it is reliable, evaluate the option to “re-power” with more efficient wind turbines, or the applicant would implement a decommission plan and remove the wind turbines.

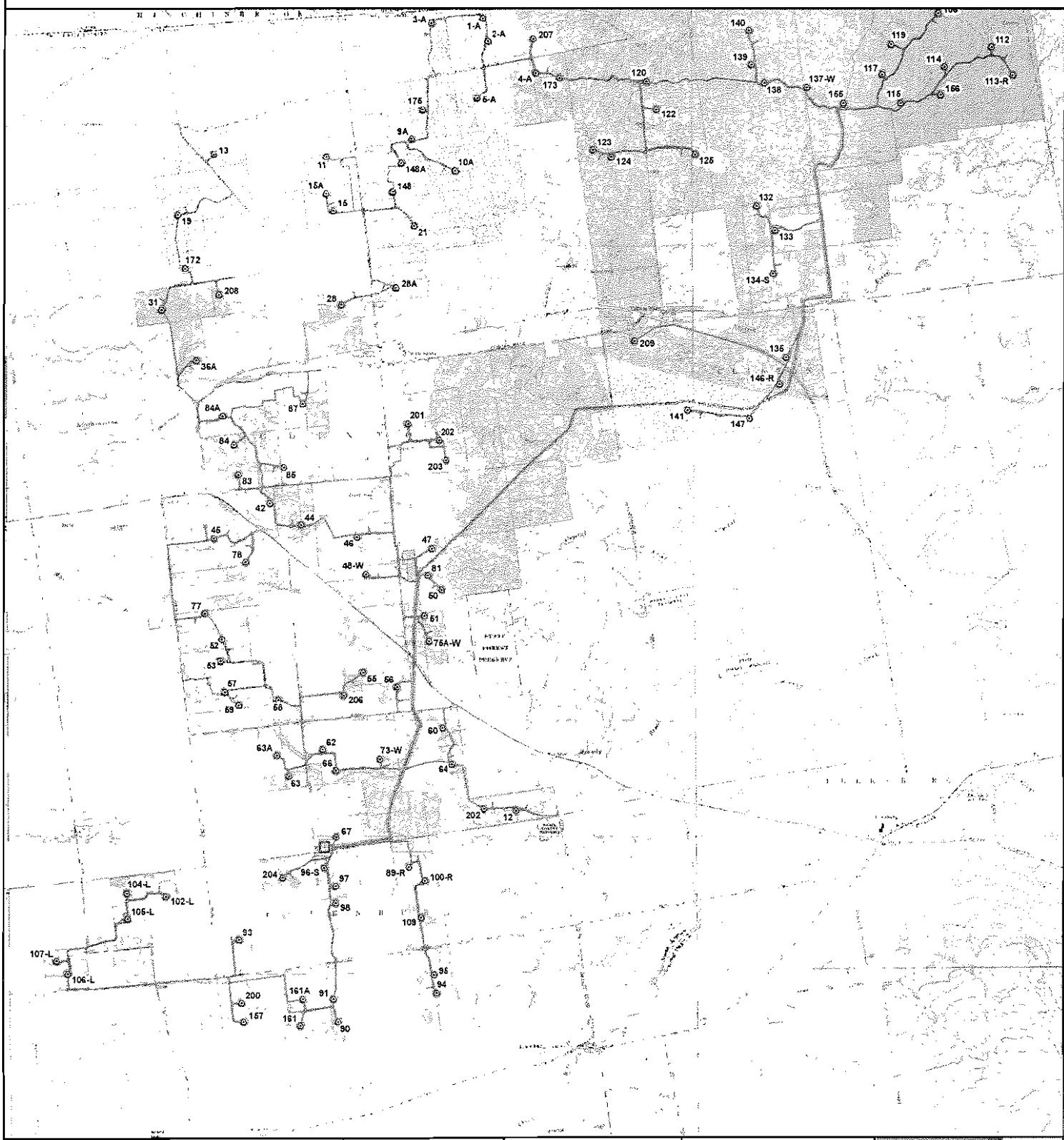
As mitigation for the permanent impacts to wetlands, the applicant proposes to establish, restore and enhance a total of 11.05 acres of wetlands (4.61 acres forested, 3.48 acres scrub shrub and 2.96 acres emergent) at six sites throughout the project area. The applicant also proposes to establish 0.44 acre of wetlands (0.43 acre forested and 0.01 acre emergent) at the Clookey I mitigation site to be credited towards any unforeseen permit modifications. As mitigation for the conversion of forested wetlands to other cover types, the applicant proposes to establish 10.83 acres of forested wetlands from uplands, restore 3.62 acres of disturbed forested wetlands, and enhance 4.49 acres of existing emergent and scrub shrub wetlands through the planting of trees, all at the six mitigation sites mentioned above. Therefore, the total wetland mitigation proposed at the six sites would consist of the following: the enhancement of 0.59 acres of emergent wetlands, the restoration of 1.47 acres of

emergent wetlands, the establishment of 0.91 acres of emergent wetlands, the establishment of 3.48 acres of scrub shrub wetlands and the establishment of 2.18 acres of forested wetlands at the Clookey I mitigation site; the enhancement of 1.84 acres of forested wetlands and the establishment of 0.82 acres of forested wetlands at the Clookey II mitigation site; the restoration of 1.31 acres of forested wetlands and the establishment of 4.38 acres of forested wetlands at the Matthews mitigation site; the enhancement of 1.48 acres of forested wetlands, the restoration of 2.31 acres of forested wetlands and the establishment of 2.45 acres of forested wetlands at the Cole mitigation site; the enhancement of 0.48 acres of forested wetlands and the establishment of 2.45 acres of forested wetlands at the Spoor mitigation site; and the enhancement of 0.69 acre of forested wetlands and the establishment of 3.59 acre of forested wetlands at the McNeil mitigation site. Comprehensive plans for the mitigation described above have not been finalized to date.

As mitigation for the permanent impacts to streams, the applicant proposes to install environmentally friendly culverts (i.e. bottomless or oversized culverts with a gravel base) at all proposed surface water body crossings, and install environmentally friendly culverts along 458.16 linear feet of currently affected surface water bodies that have inadequately sized culverts or where no culverts were installed at the road crossing. In addition, 125 linear feet of stream bank along the English River at the Spoor mitigation site and 400 linear feet of stream bank along an unnamed tributary to Brandy Brook at the McNeil mitigation site would be restored, a cattle crossing would be constructed across the Hinchinbrook Brook at the Matthews mitigation site and a watering area would be constructed along the English River at the Spoor mitigation site. Detailed plans for the stream mitigation effort have also not been finalized to date.

The applicant's stated purpose of the proposed work is to construct access roads, underground and overhead collection systems, public road upgrades, and turbine construction areas to facilitate the development and construction of a wind farm electric generating facility consisting of 109 wind turbine generators.

## MARBLE RIVER WIND FARM



**Legend**

- Turbine Location
- Project Layout
- Substation
- Leydown Area
- Project Boundary

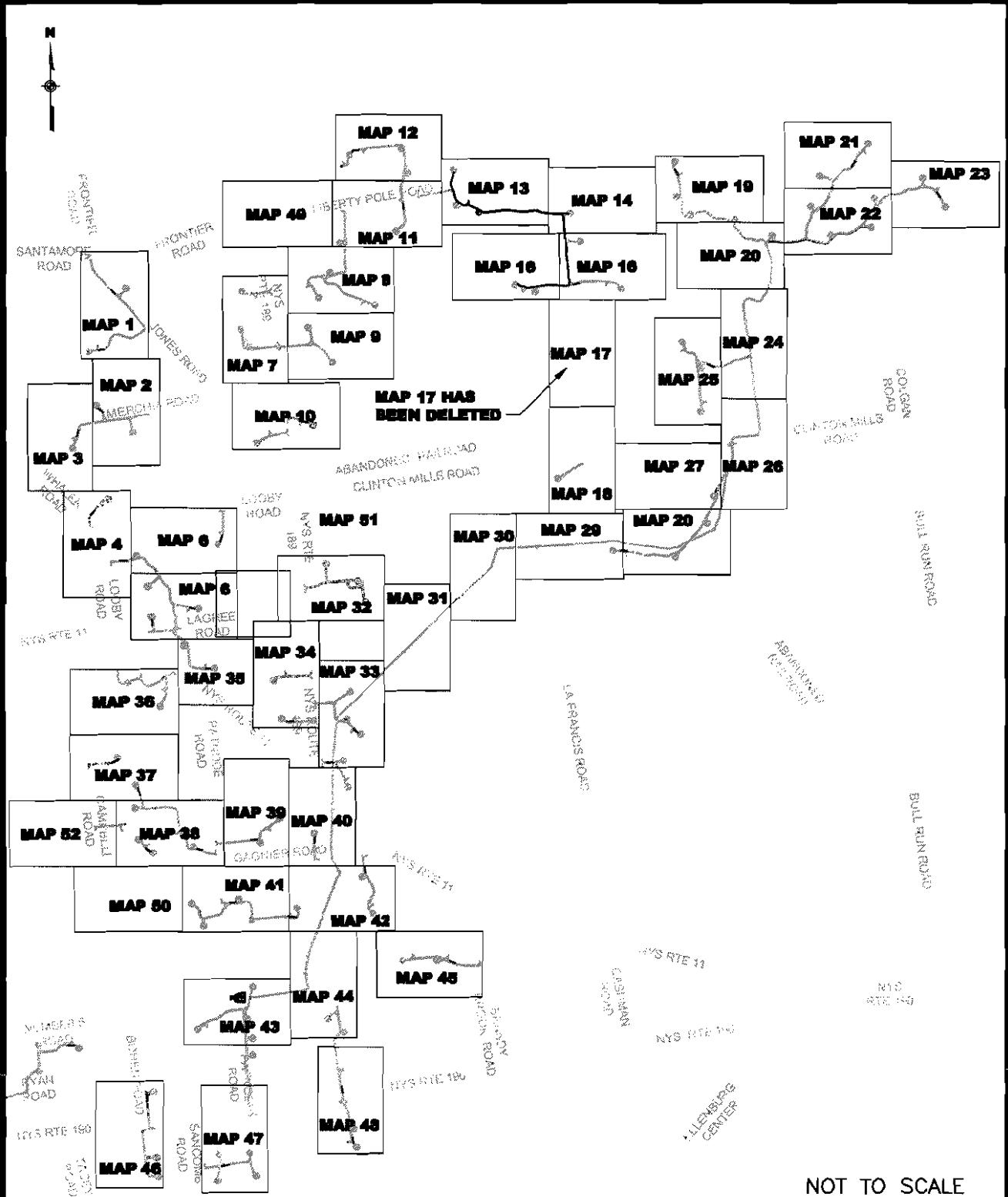
**Marble River Wind Farm**

**Project Layout over USGS Topo**

**Scale:** 0 1,500 3,000 6,000 Feet  
0 0.25 0.5 1 Miles

**Source:** USGS Topographic Maps Chittenango, Ellenburg Center, Ellenburg Depot, Elsingburg Mt, Bainbridgeville, Chatugay  
**Project Layout:** URS/Horizon Wind Energy and TETRATECH Inc.

I:\11174823.00000\CAD\WETLAND EXHIBIT REV5\KEYMAP.dwg 1=1 3/3/08-1 ELB



NOT TO SCALE

REV. 1 03/04/08 MAP 17 DELETED

## MARBLE RIVER WIND FARM

GIANT

## MARBLE RIVER, LLC

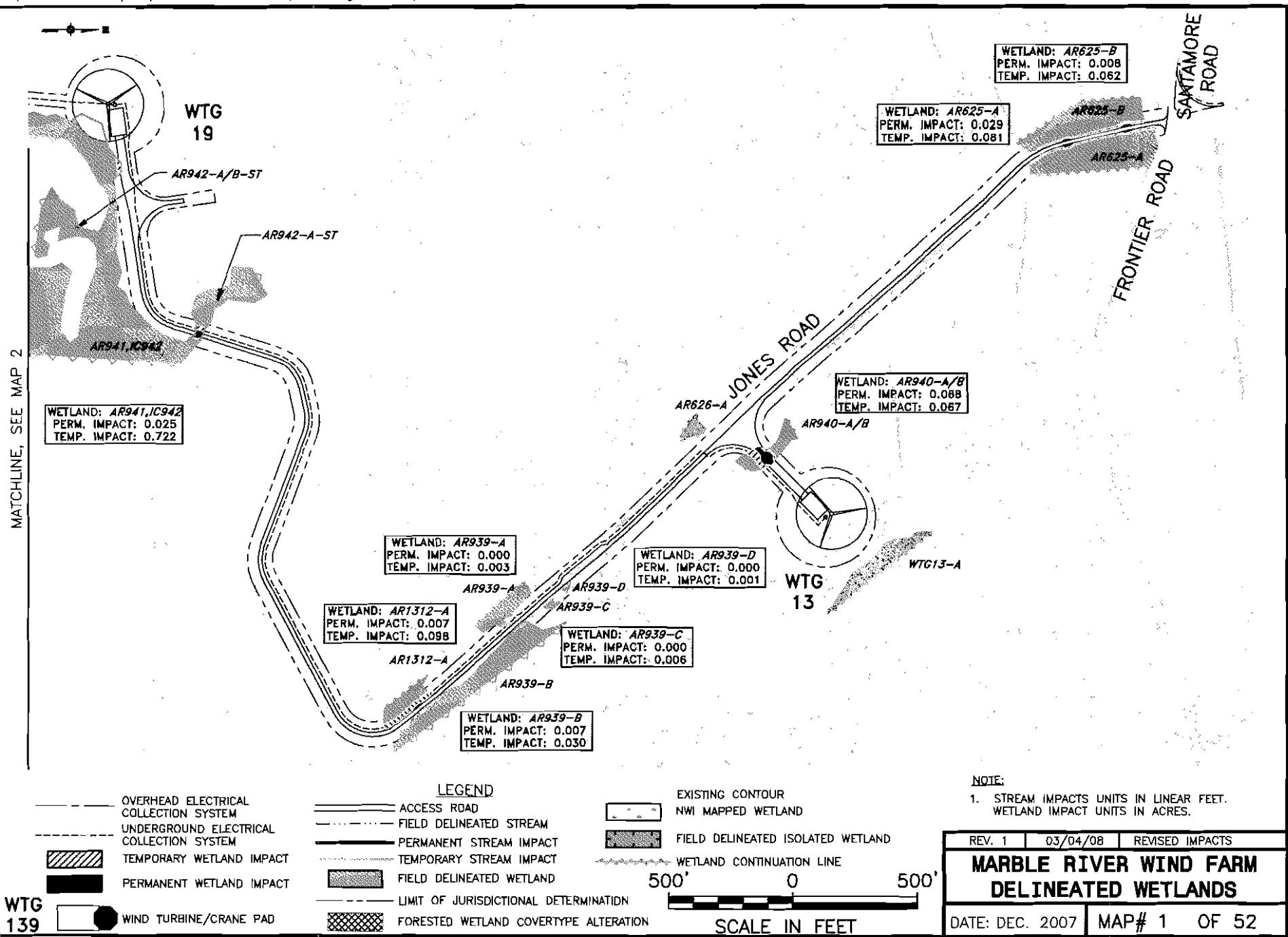
**URS Corporation**

**77 Goodell Street, Buffalo, New York 14203**  
**(716)856-5636 - (716)856-2545 fax**

## KEY MAP

DATE: DECEMBER 2007

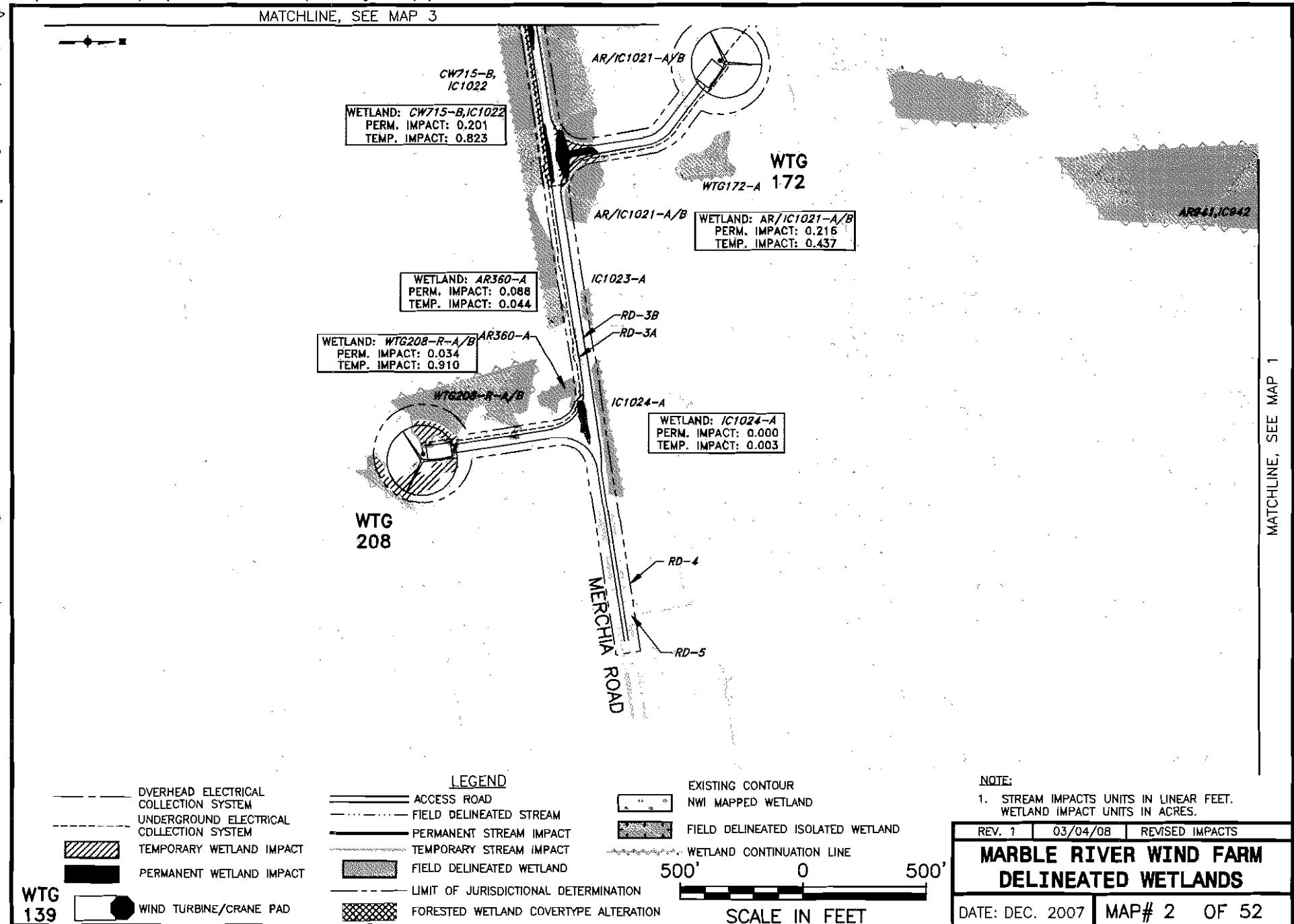
## FIGURE 1

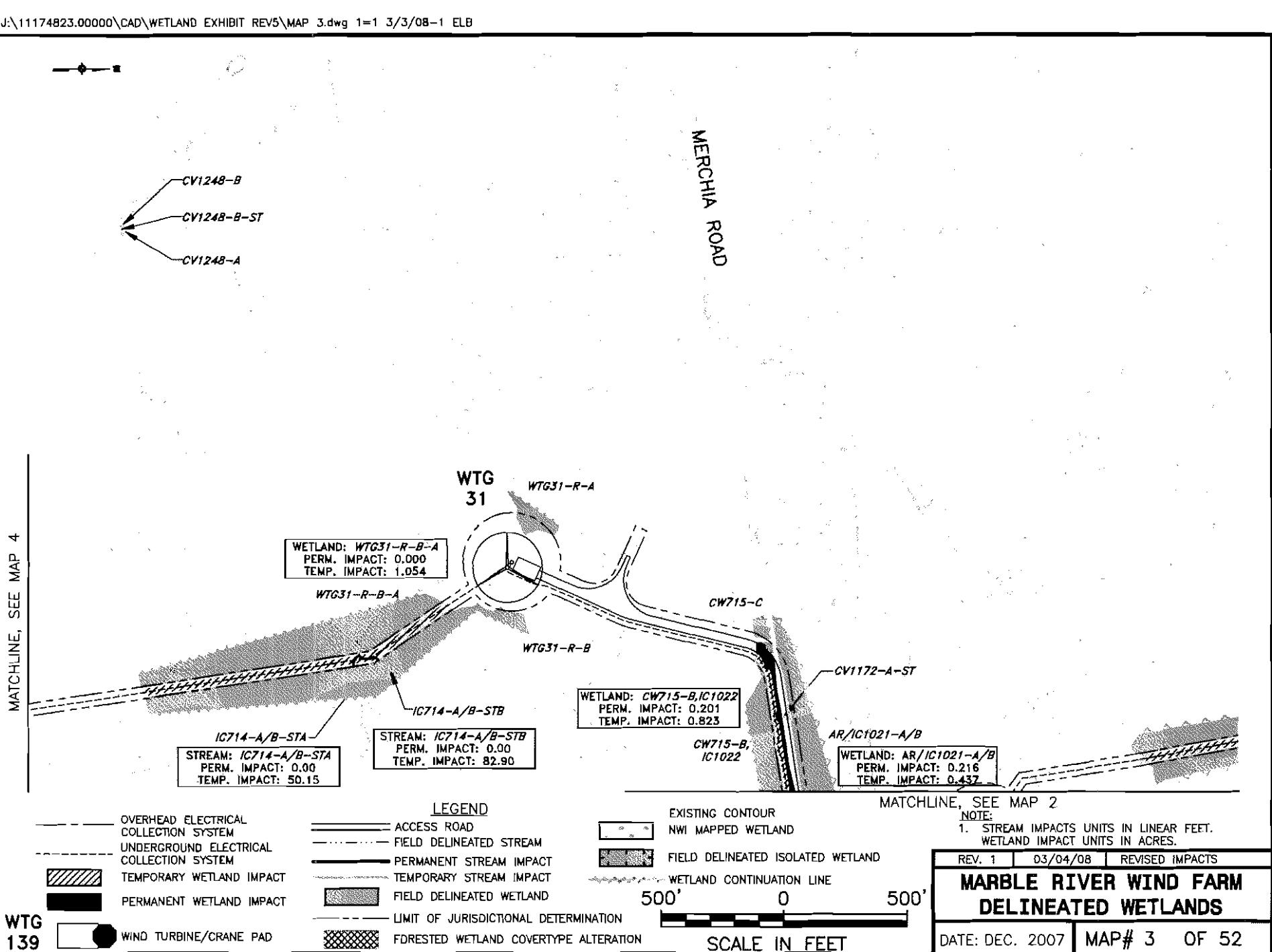


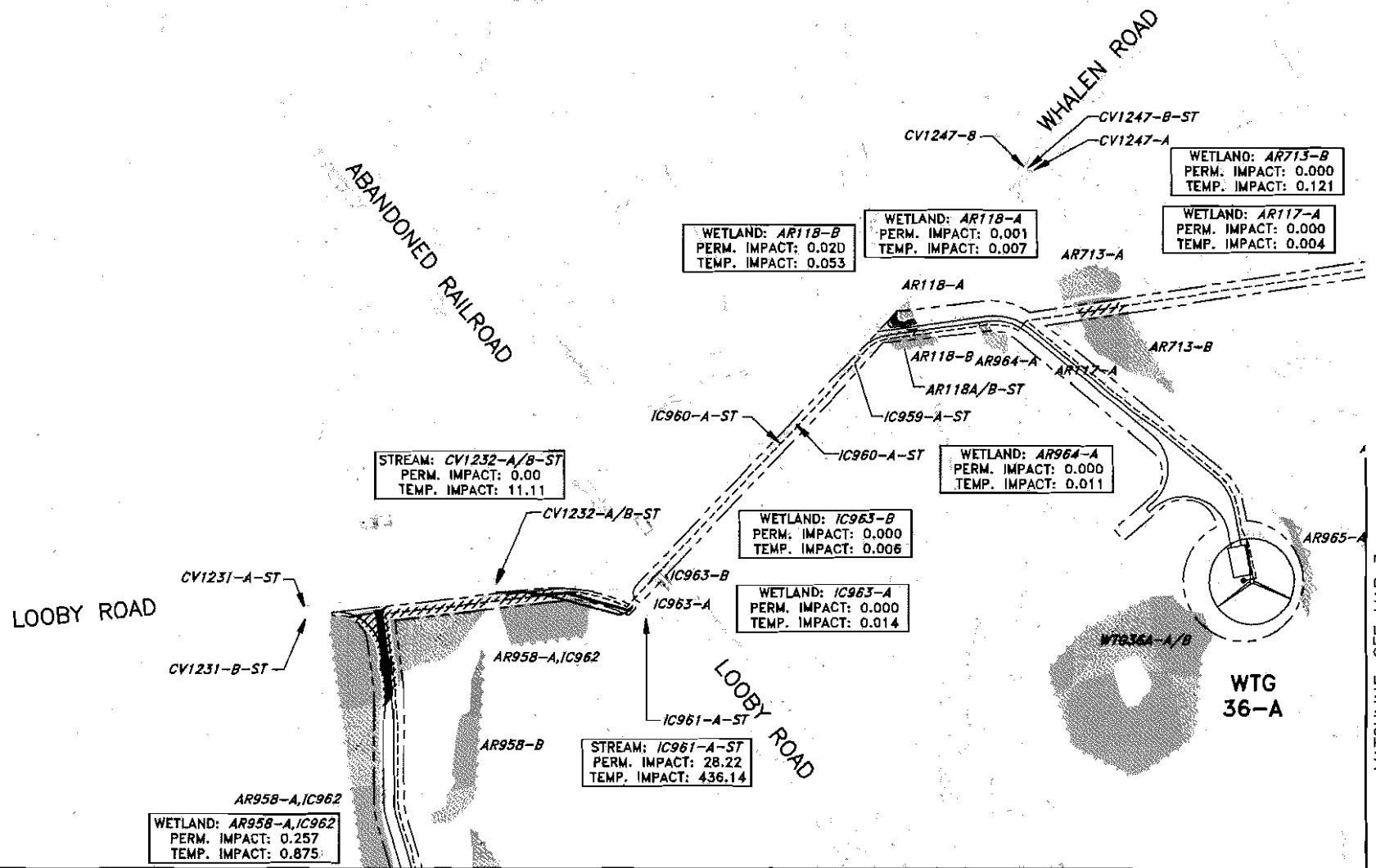
MATCHLINE, SEE MAP 3

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MATCHLINE, SEE MAP 6

— OVERHEAD ELECTRICAL  
COLLECTION SYSTEM  
- - - UNDERGROUND ELECTRICAL  
COLLECTION SYSTEM  
 TEMPORARY WETLAND IMPACT  
 PERMANENT WETLAND IMPACT

WTG  
139

WIND TURBINE/CRANE PAD

## LEGEND

————— ACCESS ROAD  
 - - - - FIELD DELINEATED STREAM  
 ————— PERMANENT STREAM IMPACT  
 ————— TEMPORARY STREAM IMPACT  
 ■■■■■ FIELD DELINEATED WETLAND  
 ————— LIMIT OF JURISOCTIONAL DETERMINATION  
 ■■■■■ FORESTED WETLAND COVERTYPE ALTERATION

MATCHLINE SEE MAP 5

EXISTING CONTOUR  
NWI MAPPED WETLAND  
 FIELD DELINEATED ISOLATED WETLAND  
 WETLAND CONTINUATION LINE

8 500

SCALE IN FEET

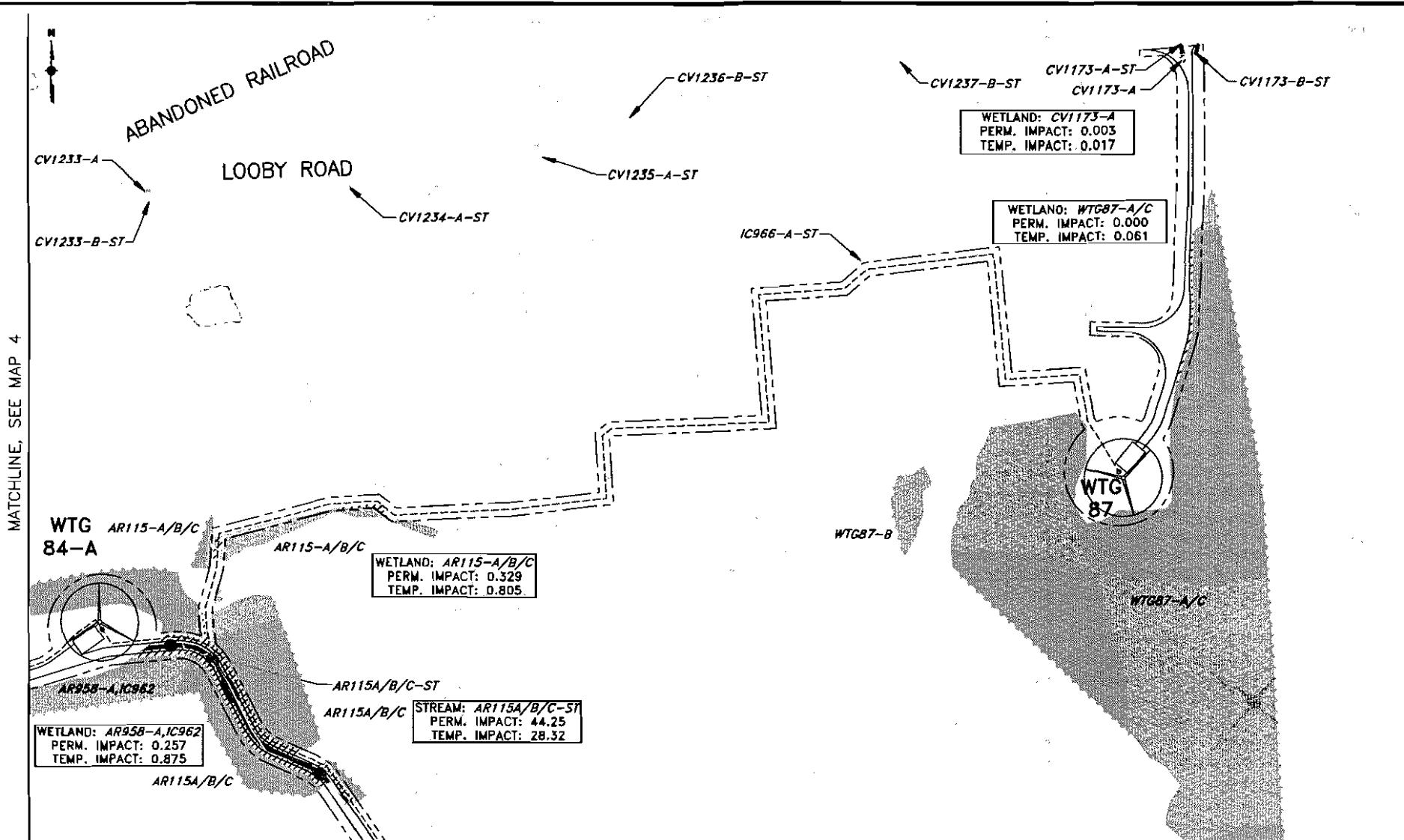
### NOTE

1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

REV. 1 03/04/08 REVISED IMPACTS

# MARBLE RIVER WIND FARM DEPARTMENT OF LANDS

DATE: DEC. 2007 MAP# 4 OF 52



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WIND TURBINE/CRANE PAD

NOTE:

1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

**MARBLE RIVER WIND FARM  
DELINNEATED WETLANDS**

DATE: DEC. 2007 | MAP# 5 OF 52

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MATCHLINE, SEE MAP 5

MATCHLINE SEE MAP 4

MATCHLINE, SEE MAP 5

**WTG 83**

- WETLAND: IC973-A  
PERM. IMPACT: 0.001  
TEMP. IMPACT: 0.001
- WETLAND: IC972-A  
PERM. IMPACT: 0.001  
TEMP. IMPACT: 0.020

**WTG 84**

- STREAM: AR114-A/B-ST  
PERM. IMPACT: 68.24  
TEMP. IMPACT: 26.32
- WETLAND: IC970-A  
PERM. IMPACT: 0.013  
TEMP. IMPACT: 0.052
- WETLAND: IC970-B  
PERM. IMPACT: 0.024  
TEMP. IMPACT: 0.035
- WETLAND: AR114-A/B  
PERM. IMPACT: 0.024  
TEMP. IMPACT: 0.039
- IC969-A/B-ST
- WETLAND: IC969-A/B  
PERM. IMPACT: 0.350  
TEMP. IMPACT: 0.012
- WETLAND: AR967-D  
PERM. IMPACT: 0.031  
TEMP. IMPACT: 0.085
- WETLAND: AR967-E  
PERM. IMPACT: 0.052  
TEMP. IMPACT: 0.147

**WTG 85**

- STREAM: AR967-A-ST  
PERM. IMPACT: 18.58  
TEMP. IMPACT: 33.32
- WETLAND: IC919-A  
PERM. IMPACT: 0.077  
TEMP. IMPACT: 0.043
- AR1312-A
- AR967-E
- AR967-D
- AR967-C
- AR967-B
- AR967-A
- AR119-A/B-ST
- AR119-A/B
- AR918-B
- WTG85-A/B
- AR968-A
- CV1230-B
- CV1230-A-ST
- CV1230-A
- IC971-A
- WETLAND: AR968-A  
PERM. IMPACT: 0.000  
TEMP. IMPACT: 0.043
- WETLAND: IC971-A  
PERM. IMPACT: 0.001  
TEMP. IMPACT: 0.010
- WETLAND: CW829-A  
PERM. IMPACT: 0.161  
TEMP. IMPACT: 0.127

LAGREE ROAD

## LEGEND

- EXISTING CONTOUR  
NWI MAPPED WETLAND  
  
FIELD DELINEATED ISOLATED WETLAND  
  
WETLAND CONTINUATION LINE

NOTE MATCHLINE SEE MAP 35

- NOTE: MATCH LINE, SEE MAP 33

REV. 1 03/04/08 REVISED IMPACTS

## **MARBLE REVERSED MIND GAME**

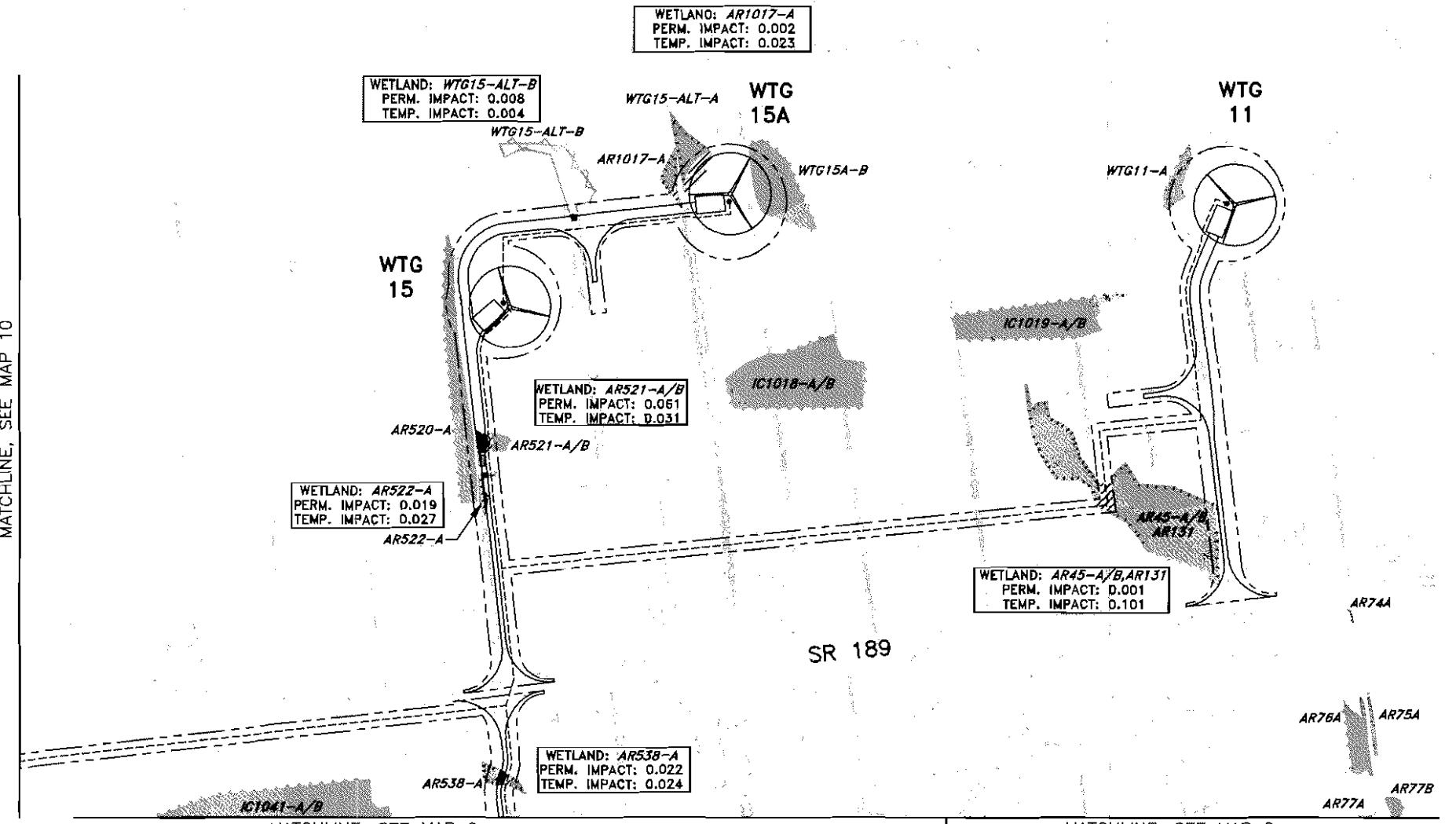
## MARBLE RIVER WIND FARM DELINEATED WETLANDS

DATE: DEC. 2007 | MAP# 6 OF 52

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MATCHLINE, SEE MAP 10

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LEGEND

- OVERHEAD ELECTRICAL COLLECTION SYSTEM
- UNDERGROUND ELECTRICAL COLLECTION SYSTEM
- TEMPORARY WETLAND IMPACT
- PERMANENT WETLAND IMPACT

- ACCESS ROAD
- FIELD DELINEATED STREAM
- PERMANENT STREAM IMPACT
- TEMPORARY STREAM IMPACT
- FIELD DELINEATED WETLAND
- LIMIT OF JURISDICTIONAL DETERMINATION
- FORESTED WETLAND COVERTYPE ALTERATION

EXISTING CONTOUR

NWI MAPPED WETLAND

FIELD DELINEATED ISOLATED WETLAND

WETLAND CONTINUATION LINE

500' 0 500'

SCALE IN FEET

MATCHLINE, SEE MAP 8

## NOTE:

- STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

REV. 1 03/04/08 REVISED IMPACTS

**MARBLE RIVER WIND FARM  
DELINERATED WETLANDS**

DATE: DEC. 2007 MAP# 7 OF 52

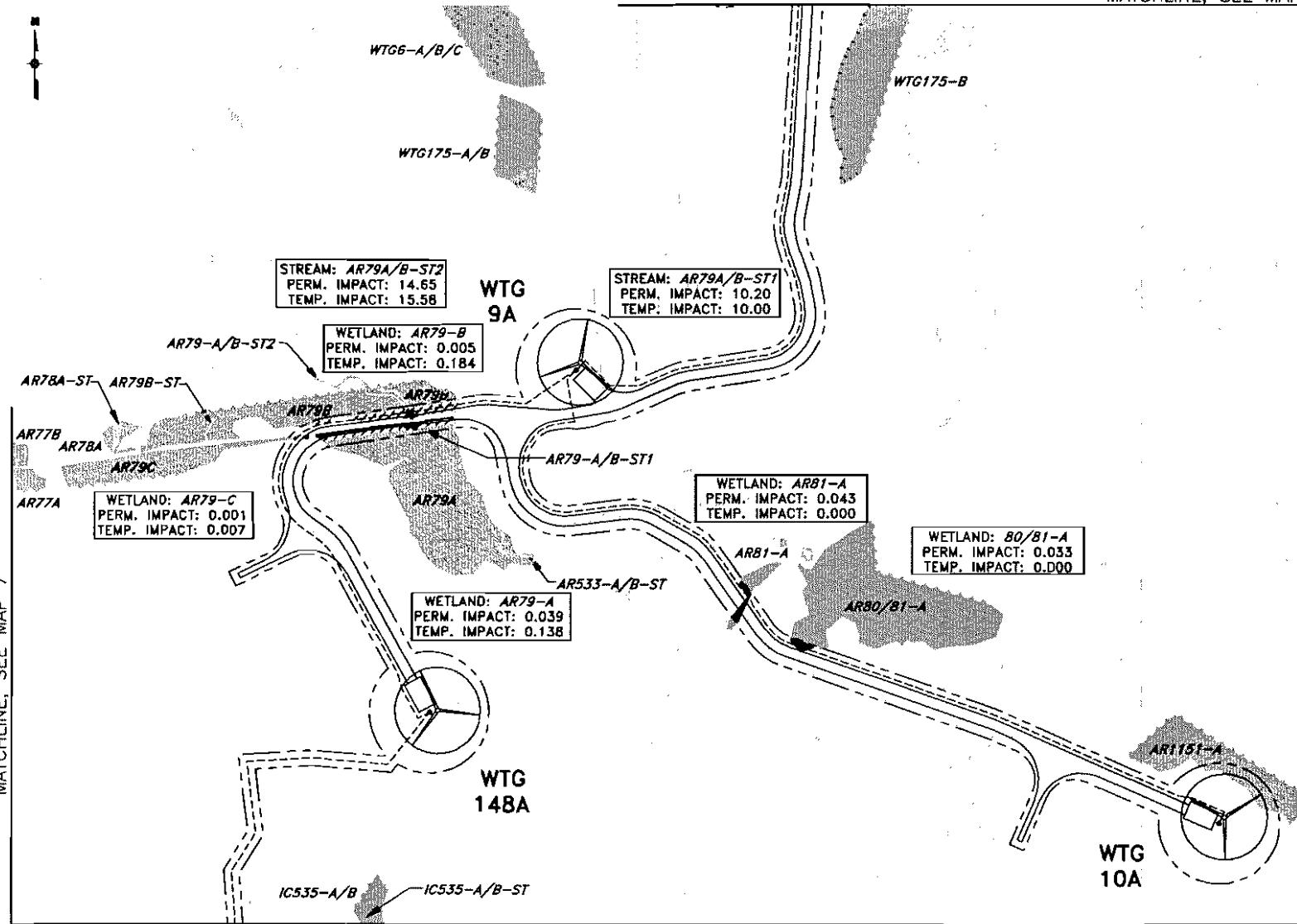
WTG  
139

MATCHLINE, SEE MAP 11

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MATCHLINE, SEE MAP 7

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MATCHLINE, SEE MAP 9

LEGEND

- OVERHEAD ELECTRICAL COLLECTION SYSTEM
- UNDERGROUND ELECTRICAL COLLECTION SYSTEM
- TEMPORARY WETLAND IMPACT
- PERMANENT WETLAND IMPACT
- WTG 139
- WIND TURBINE/CRANE PAD

EXISTING CONTOUR

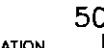
NW MAPPED WETLAND



FIELD DELINEATED ISOLATED WETLAND



WETLAND CONTINUATION LINE



500'

0

500'

SCALE IN FEET

NOTE:

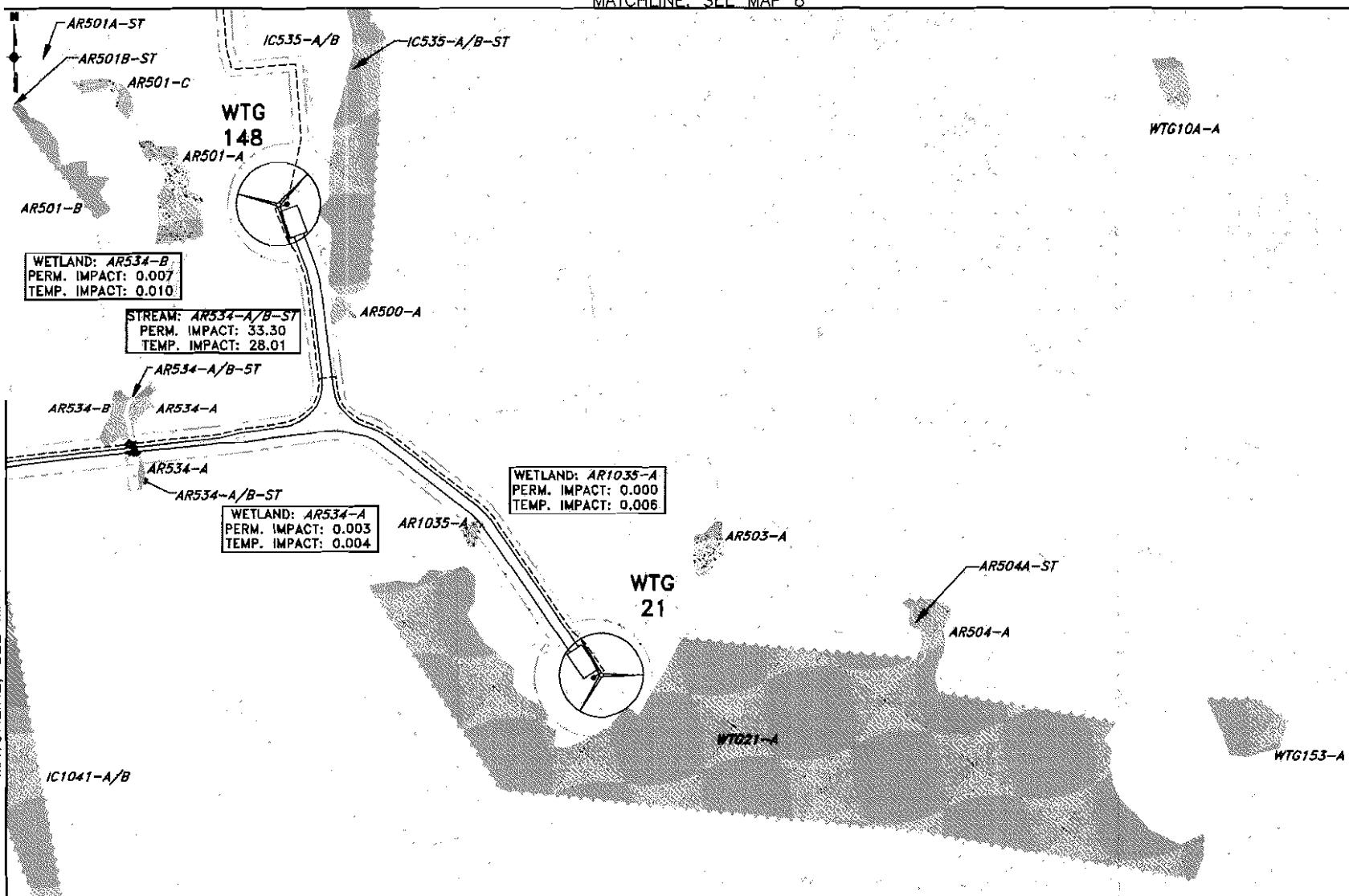
1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

**MARBLE RIVER WIND FARM  
DELINNEATED WETLANDS**

DATE: DEC. 2007 MAP# 8 OF 52

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MATCHLINE. SEE MAP 7



MATCHLINE, SEE MAP 9

## OVERHEAD ELECTRICAL COLLECTION SYSTEM

## UNDERGROUND ELECTRICAL COLLECTION SYSTEM

**COLLECTION SYSTEM  
TEMPORARY WETLAND IMPACT**

**TOP SECRET//COMINT**

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139

WIND TURBINE/CRANE PAD

ACCESS ROAD  
FIELD DELINEATED STREAM

— FIELD DELINEATED STREAM  
— PERMANENT STREAM IMPACT

**PERMANENT STREAM IMPACT**  
**TEMPORARY STREAM IMPACT**

#### FIELD DELINEATED WETLAND

**LIMIT OF JURISDICTIONAL PERTINENCE**

**LIMIT OF JURISDICTIONAL DETERMINATION**

**FORESTED WETLAND COVERTYPE ALTERATION**

### EXISTING CONTOUR

NWI MAPPED WETLAND

**FIELD DELINEATED ISOLATED WETLAND**

#### WEB AND CONTINUATION LINE

- WETLAND CONTINUATION LINE

— 1 —

卷之三十一

SCALE IN FEET

NOTE -

1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

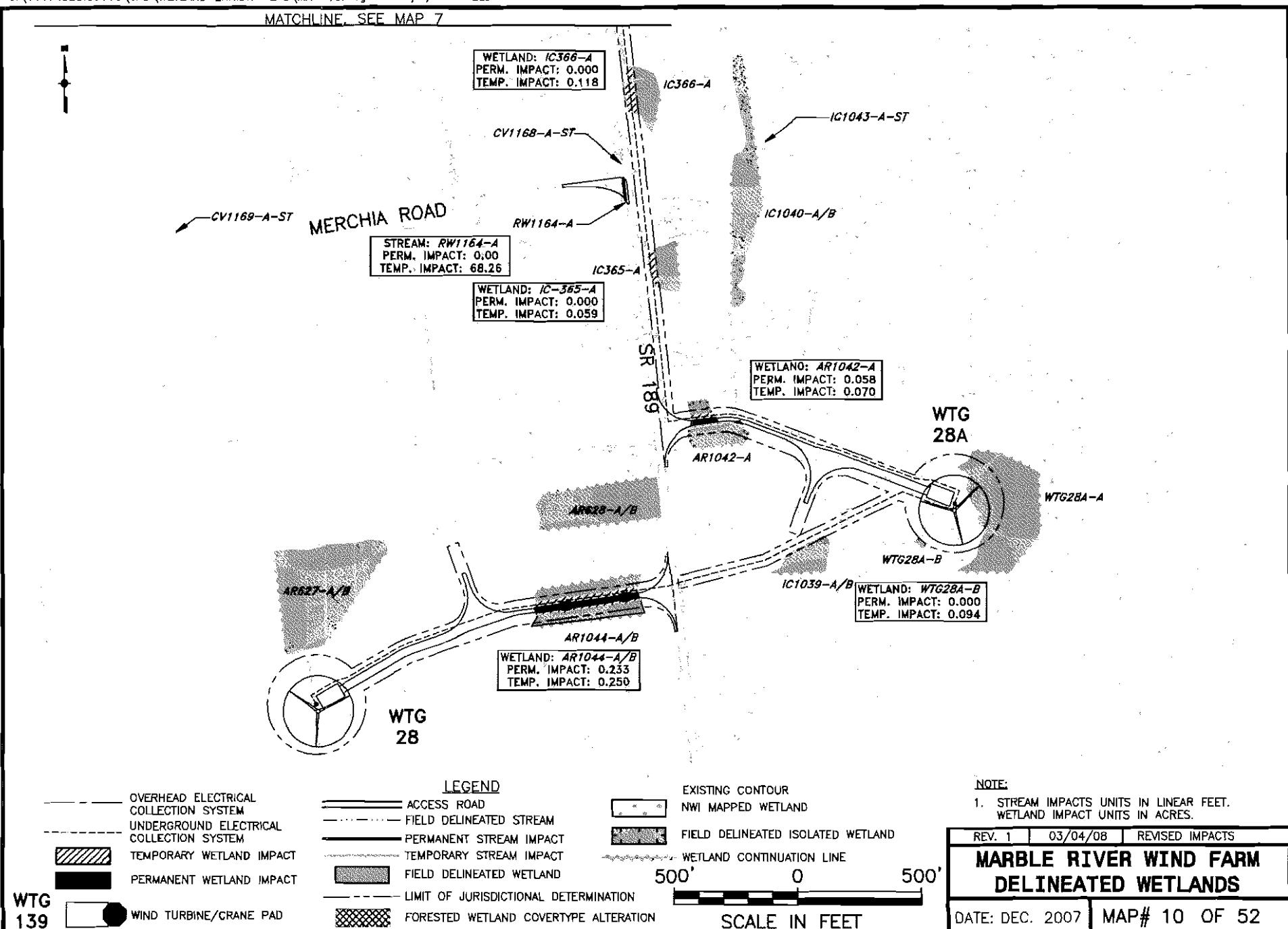
REV. 1 03/04/08 REVISED IMPACTS

**HARBLE RIVER WIND. EA**

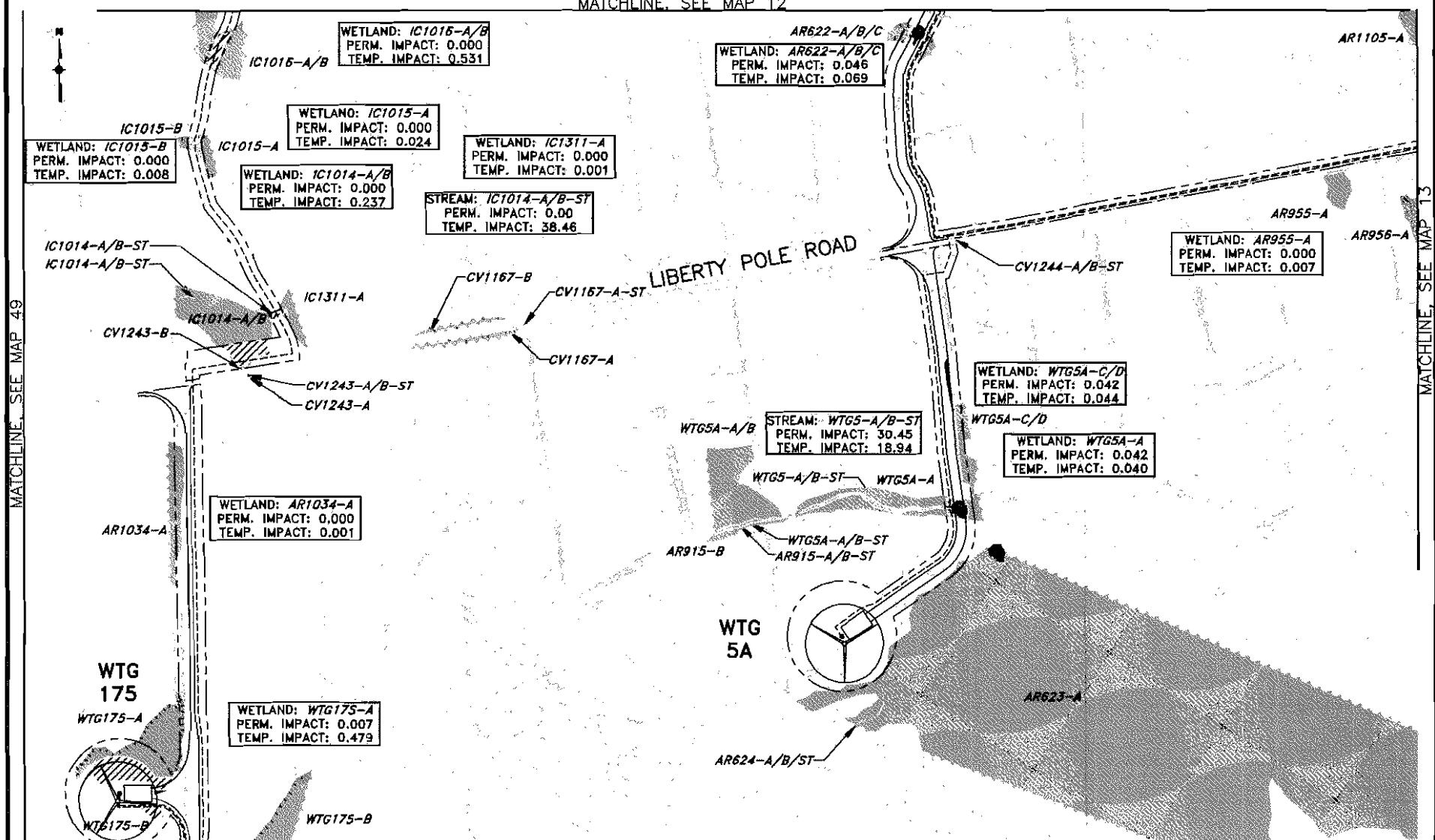
## MARBLE RIVER WIND FARM DELINEATED WETLANDS

DATE: DEC 2007

MATCHLINE SEE MAP 7



## MATCHLINE, SEE MAP 12



MATCHLINE SEE MAP 8

## LEGEND

- OVERHEAD ELECTRICAL COLLECTION SYSTEM
- - - UNDERGROUND ELECTRICAL COLLECTION SYSTEM
- TEMPORARY WETLAND IMPACT
- PERMANENT WETLAND IMPACT

WTG  
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- WIND TURBINE/CRANE PAD

- ACCESS ROAD
- - - FIELD DELINEATED STREAM
- PERMANENT STREAM IMPACT
- TEMPORARY STREAM IMPACT
- FIELD DELINEATED WETLAND
- LIMIT OF JURISDICTIONAL DETERMINATION
- FORESTED WETLAND COVERTYPE ALTERATION

EXISTING CONTOUR

NWI MAPPED WETLAND

FIELD DELINEATED ISOLATED WETLAND

WETLAND CONTINUATION LINE

500' 0 500'

SCALE IN FEET

## NOTE:

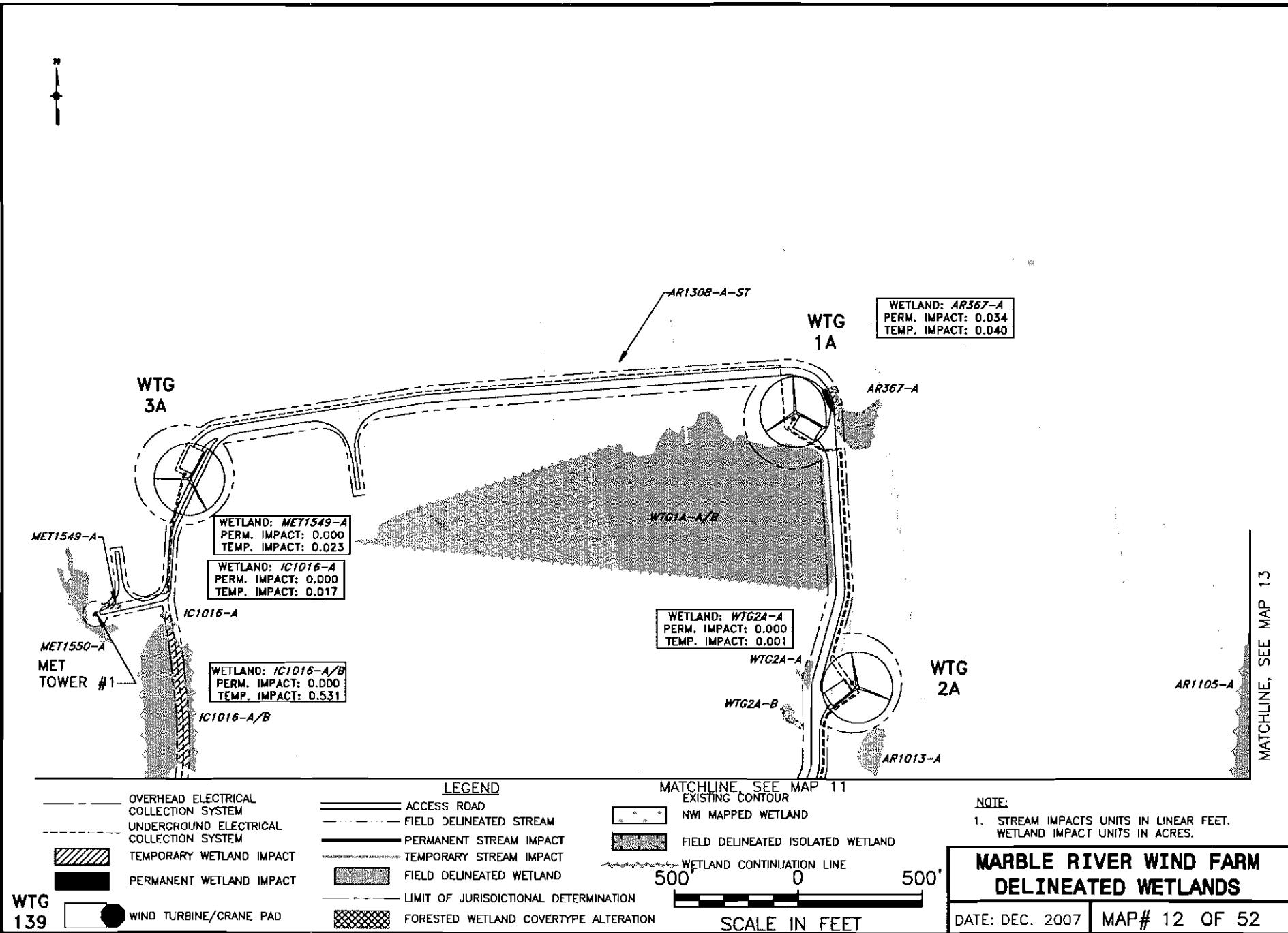
1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

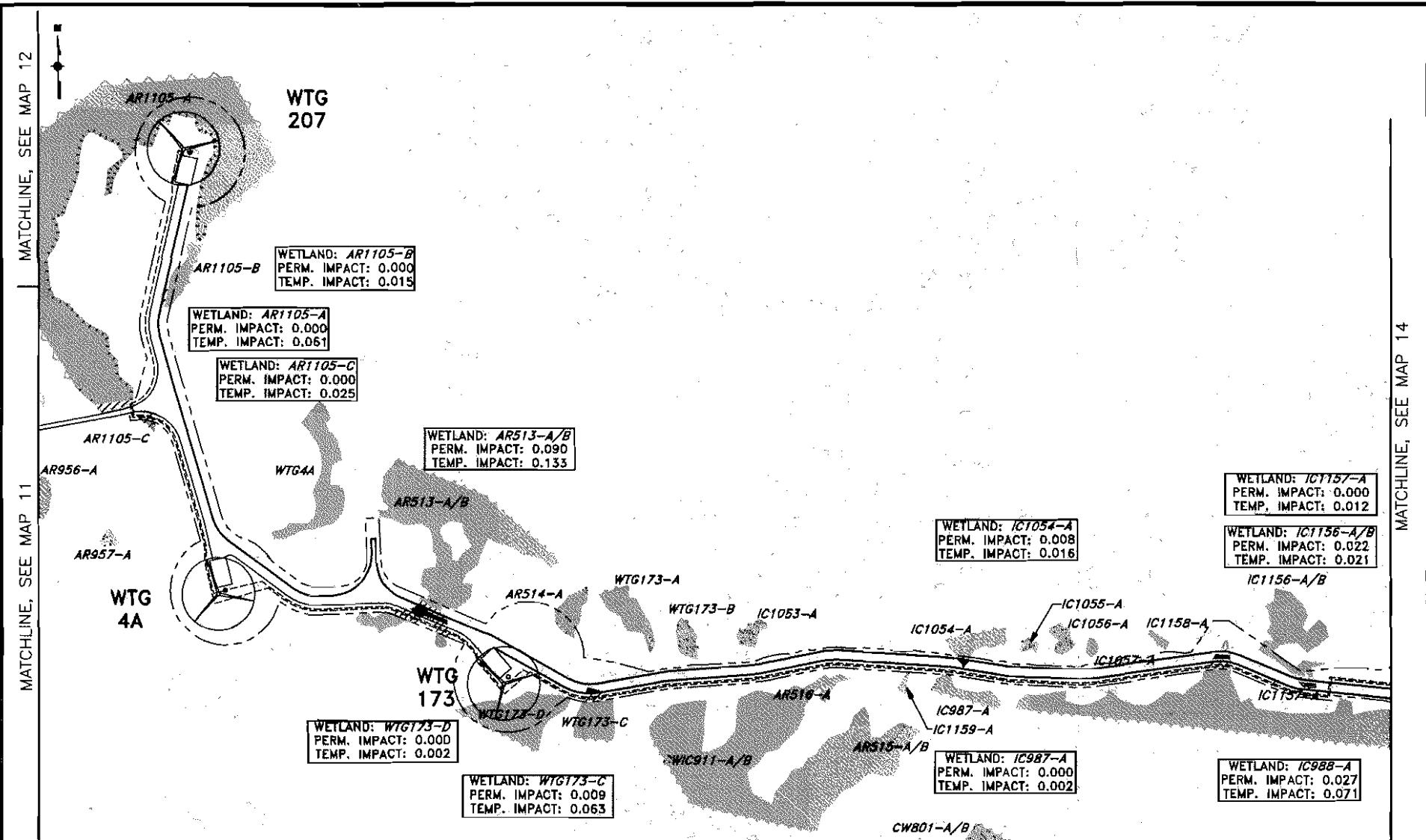
REV. 1 03/04/08 REVISED IMPACTS

MARBLE RIVER WIND FARM  
DELINERATED WETLANDS

DATE: DEC. 2007 MAP# 11 OF 52

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OVERHEAD ELECTRICAL  
COLLECTION SYSTEM  
UNDERGROUND ELECTRICAL  
COLLECTION SYSTEM  
TEMPORARY WETLAND IMPACT  
PERMANENT WETLAND IMPACT

WTG  
139

LEGEND

- OVERHEAD ELECTRICAL COLLECTION SYSTEM
- - - UNDERGROUND ELECTRICAL COLLECTION SYSTEM
- TEMPORARY WETLAND IMPACT
- PERMANENT WETLAND IMPACT
- ACCESS ROAD
- - - FIELD DELINEATED STREAM
- PERMANENT STREAM IMPACT
- TEMPORARY STREAM IMPACT
- FIELD DELINEATED WETLAND
- LIMIT OF JURISDICTIONAL DETERMINATION
- FORESTED WETLAND COVERTYPE ALTERATION
- EXISTING CONTOUR
- NWI MAPPED WETLAND
- FIELD DELINEATED ISOLATED WETLAND
- WETLAND CONTINUATION LINE

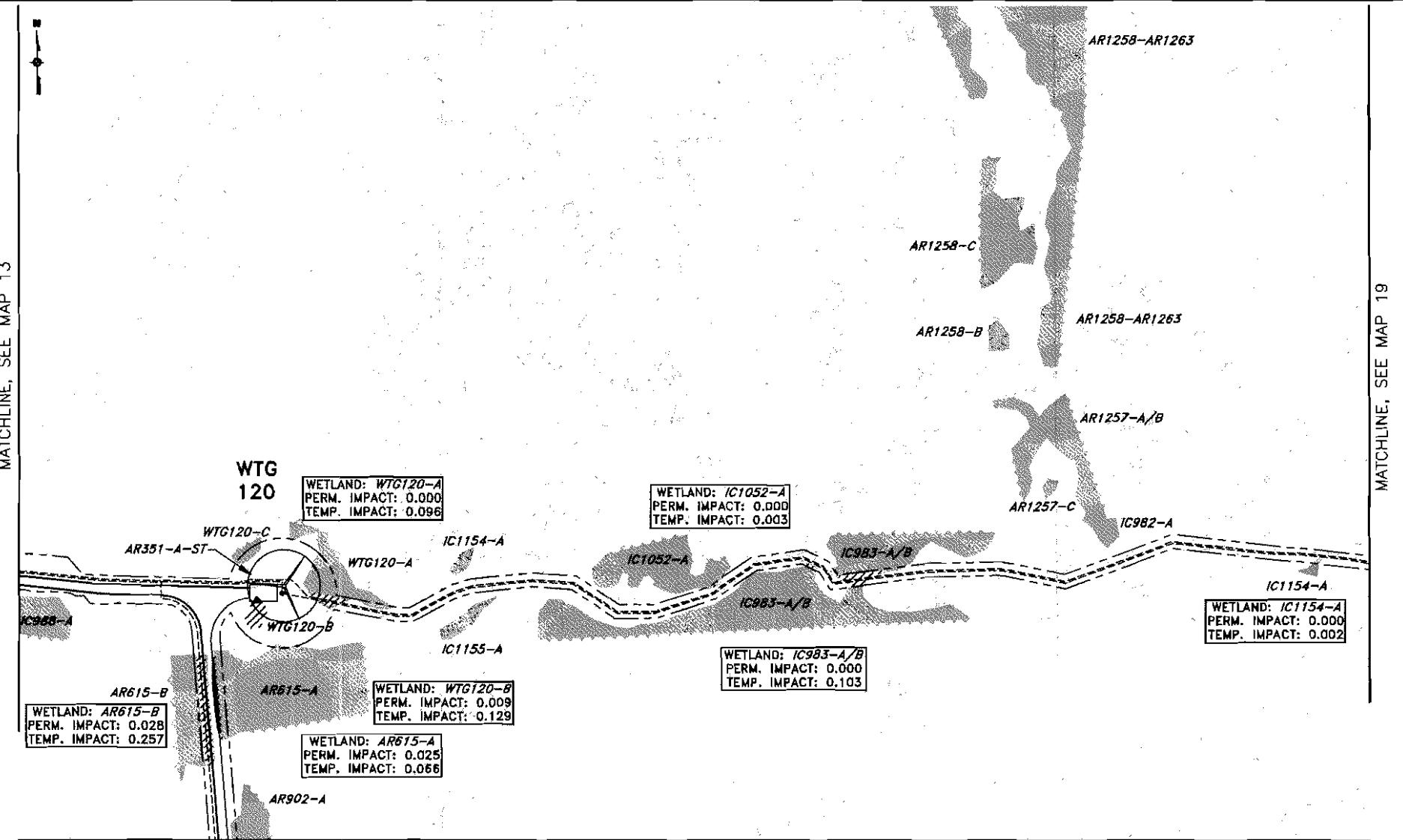
500' 0 500'  
SCALE IN FEET

REV. 1	03/04/08	REVISED IMPACTS
<b>MARBLE RIVER WIND FARM DELINEATED WETLANDS</b>		
DATE: DEC. 2007	MAP# 13 OF 52	

NOTE:  
1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

Application No. NAN-2007-00147-WDE

MATCHLINE, SEE MAP 13

MATCHLINE,  
SEE MAP 16

- OVERHEAD ELECTRICAL COLLECTION SYSTEM
- UNDERGROUND ELECTRICAL COLLECTION SYSTEM
- TEMPORARY WETLAND IMPACT
- PERMANENT WETLAND IMPACT

WTG  
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WIND TURBINE/CRANE PAD

LEGEND

- ACCESS ROAD
- - - FIELD DELINEATED STREAM
- PERMANENT STREAM IMPACT
- TEMPORARY STREAM IMPACT
- FIELD DELINEATED WETLAND
- LIMIT OF JURISDICTIONAL DETERMINATION
- FORESTED WETLAND COVERTYPE ALTERATION

MATCHLINE, SEE MAP 15

EXISTING CONTOUR

NWI MAPPED WETLAND

FIELD DELINEATED ISOLATED WETLAND

WETLAND CONTINUATION LINE

500' 0 500'

SCALE IN FEET

## NOTE:

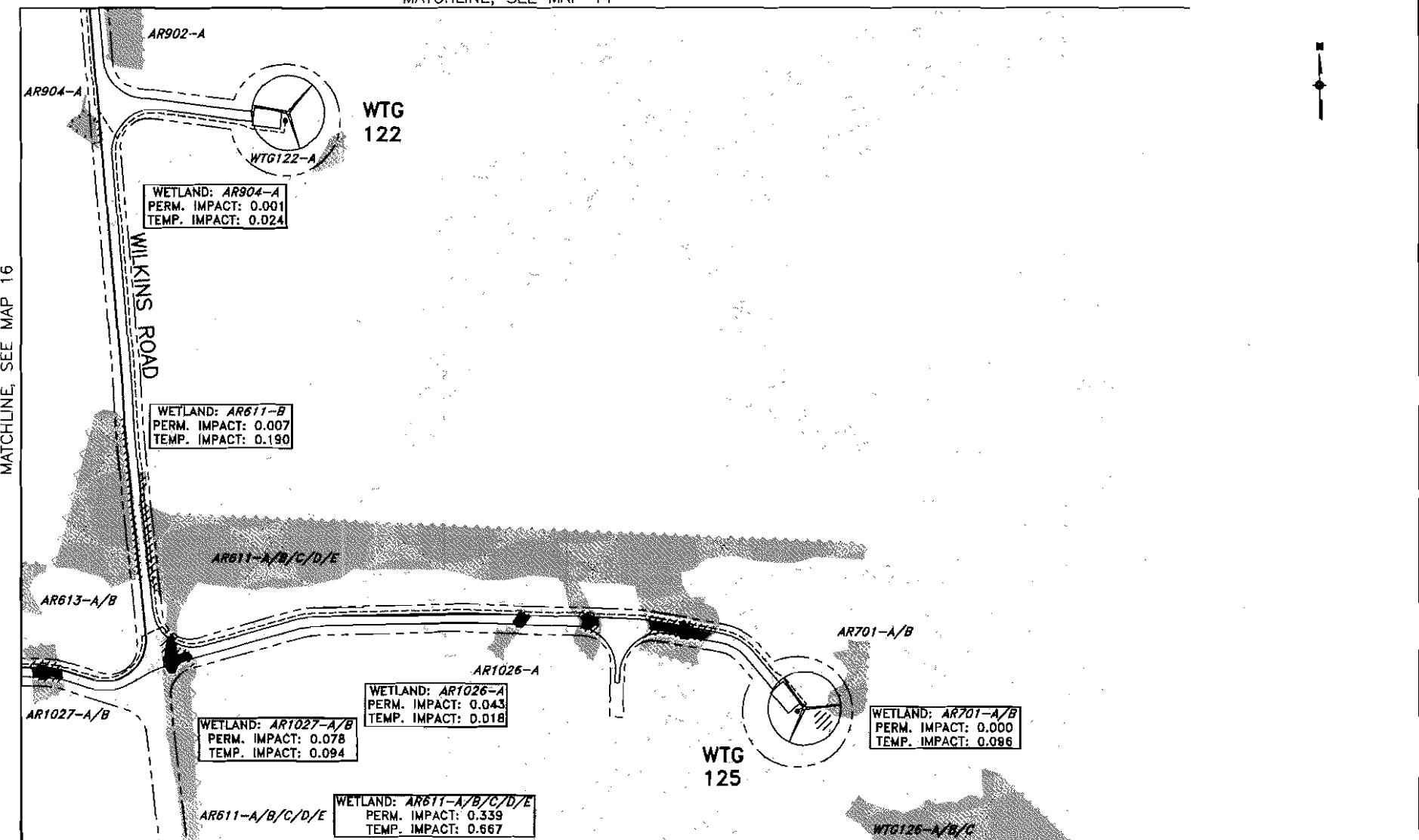
- STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

REV. 1 03/04/08 REVISED IMPACTS

**MARBLE RIVER WIND FARM  
DELINERATED WETLANDS**

DATE: DEC. 2007 MAP# 14 OF 52

## MATCHLINE, SEE MAP 14



## MATCHLINE, SEE MAP 17

## LEGEND

- OVERHEAD ELECTRICAL COLLECTION SYSTEM
- UNDERGROUND ELECTRICAL COLLECTION SYSTEM
- TEMPORARY WETLAND IMPACT
- PERMANENT WETLAND IMPACT

- ACCESS ROAD
- FIELD DELINEATED STREAM
- PERMANENT STREAM IMPACT
- TEMPORARY STREAM IMPACT
- FIELD DELINEATED WETLAND
- LIMIT OF JURISDICTIONAL DETERMINATION
- FORESTED WETLAND COVERTYPE ALTERATION

EXISTING CONTOUR

NWI MAPPED WETLAND

FIELD DELINEATED ISOLATED WETLAND

WETLAND CONTINUATION LINE

500' 0 500'

SCALE IN FEET

## NOTE:

1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

REV. 1 03/04/08 REVISED IMPACTS

**MARBLE RIVER WIND FARM  
DELINEATED WETLANDS**

DATE: DEC. 2007 MAP# 15 OF 52

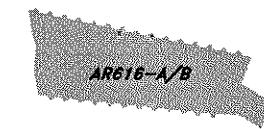
WTG  
139

WIND TURBINE/CRANE PAD

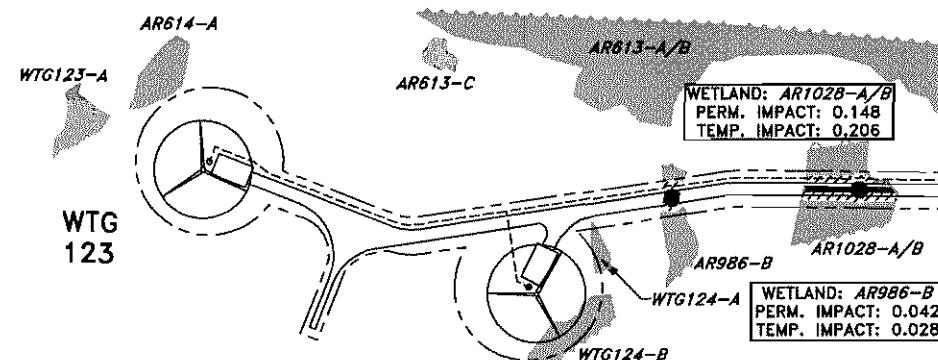
MATCHLINE, SEE MAP 14



CW800-A



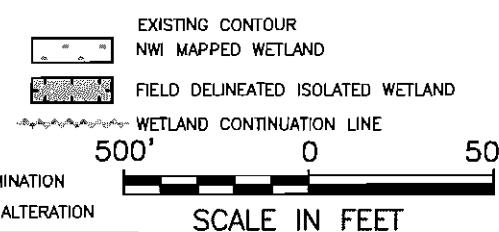
AR613-A/B



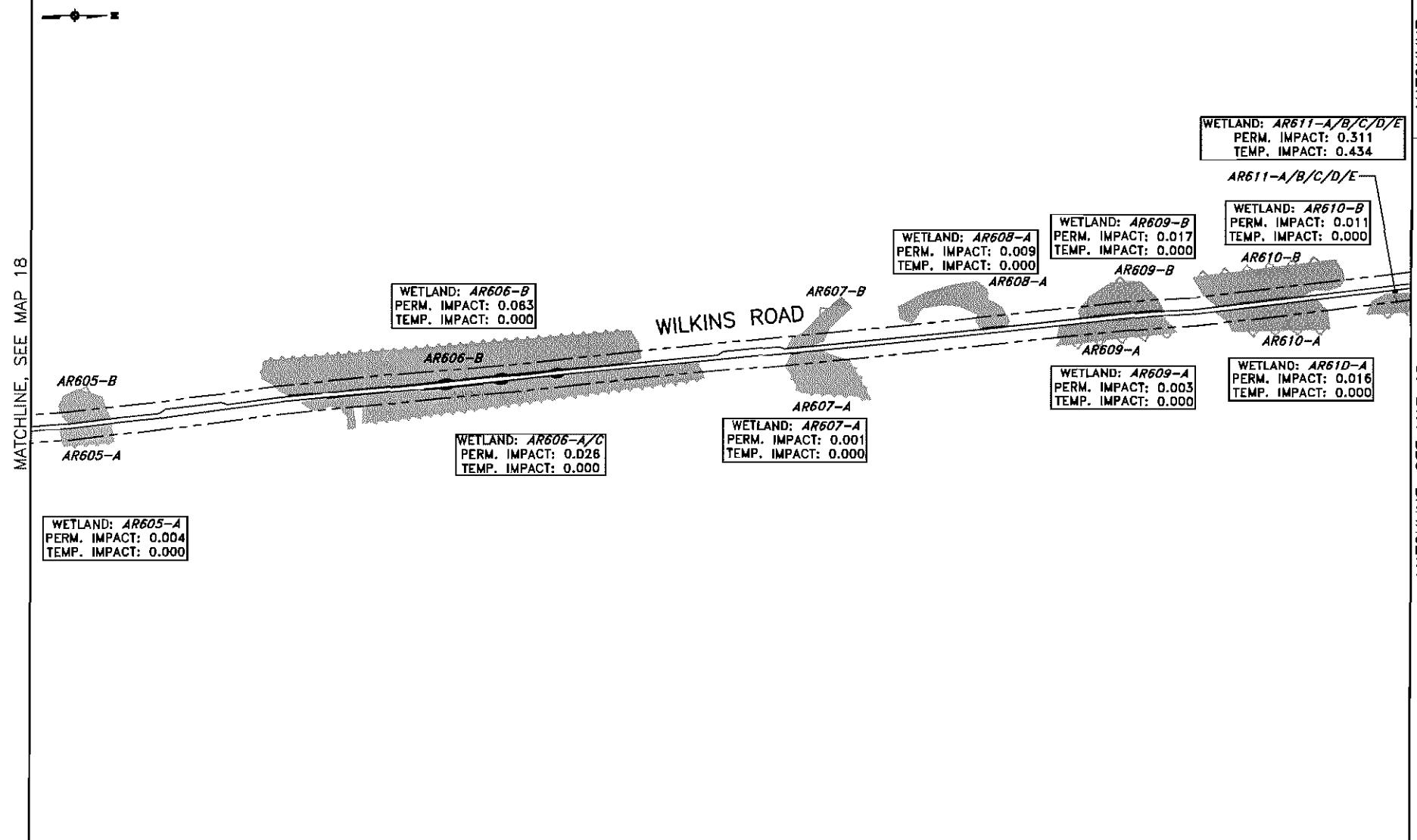
MATCHLINE, SEE MAP 15

	OVERHEAD ELECTRICAL COLLECTION SYSTEM
	UNDERGROUND ELECTRICAL COLLECTION SYSTEM
	TEMPORARY WETLAND IMPACT
	PERMANENT WETLAND IMPACT
WTG 139	WIND TURBINE/CRANE PAD

<u>LEGEND</u>	
	ACCESS ROAD
	FIELD DELINEATED STREAM
	PERMANENT STREAM IMPACT
	TEMPORARY STREAM IMPACT
	FIELD DELINEATED WETLAND
	LIMIT OF JURISDICTIONAL DETERMINATION
	FORESTED WETLAND COVERTYPE ALTERATION



NOTE:	
1.	STREAM IMPACTS UNITS IN LINEAR FEET. WETLAND IMPACT UNITS IN ACRES.
<b>MARBLE RIVER WIND FARM DELINEATED WETLANDS</b>	
DATE: DEC. 2007   MAP# 16 OF 52	



WTG  
139

OVERHEAD ELECTRICAL COLLECTION SYSTEM

UNDERGROUND ELECTRICAL COLLECTION SYSTEM

TEMPORARY WETLAND IMPACT

PERMANENT WETLAND IMPACT

WIND TURBINE/CRANE PAD

LEGEND

— ACCESS ROAD

- - - FIELD DELINEATED STREAM

— PERMANENT STREAM IMPACT

— TEMPORARY STREAM IMPACT

— FIELD DELINEATED WETLAND

— LIMIT OF JURISDICTIONAL DETERMINATION

FORESTED WETLAND COVERTYPE ALTERATION

EXISTING CONTOUR  
NWI MAPPED WETLAND

FIELD DELINEATED ISOLATED WETLAND

WETLAND CONTINUATION LINE

500' 0 500'

SCALE IN FEET

NOTE:  
1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

**MARBLE RIVER WIND FARM  
DELINEATED WETLANDS**

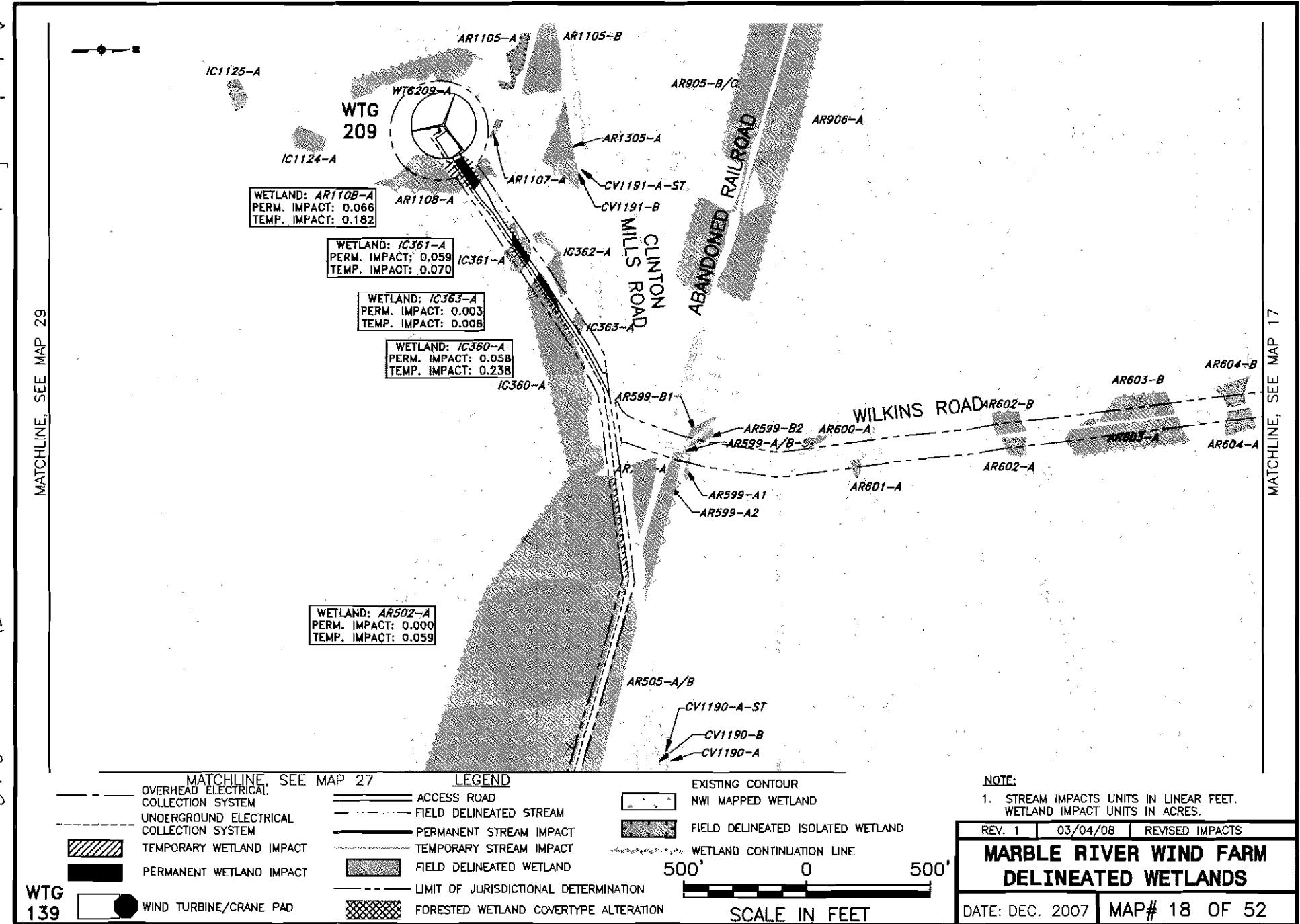
DATE: DEC. 2007 MAP# 17 OF 52

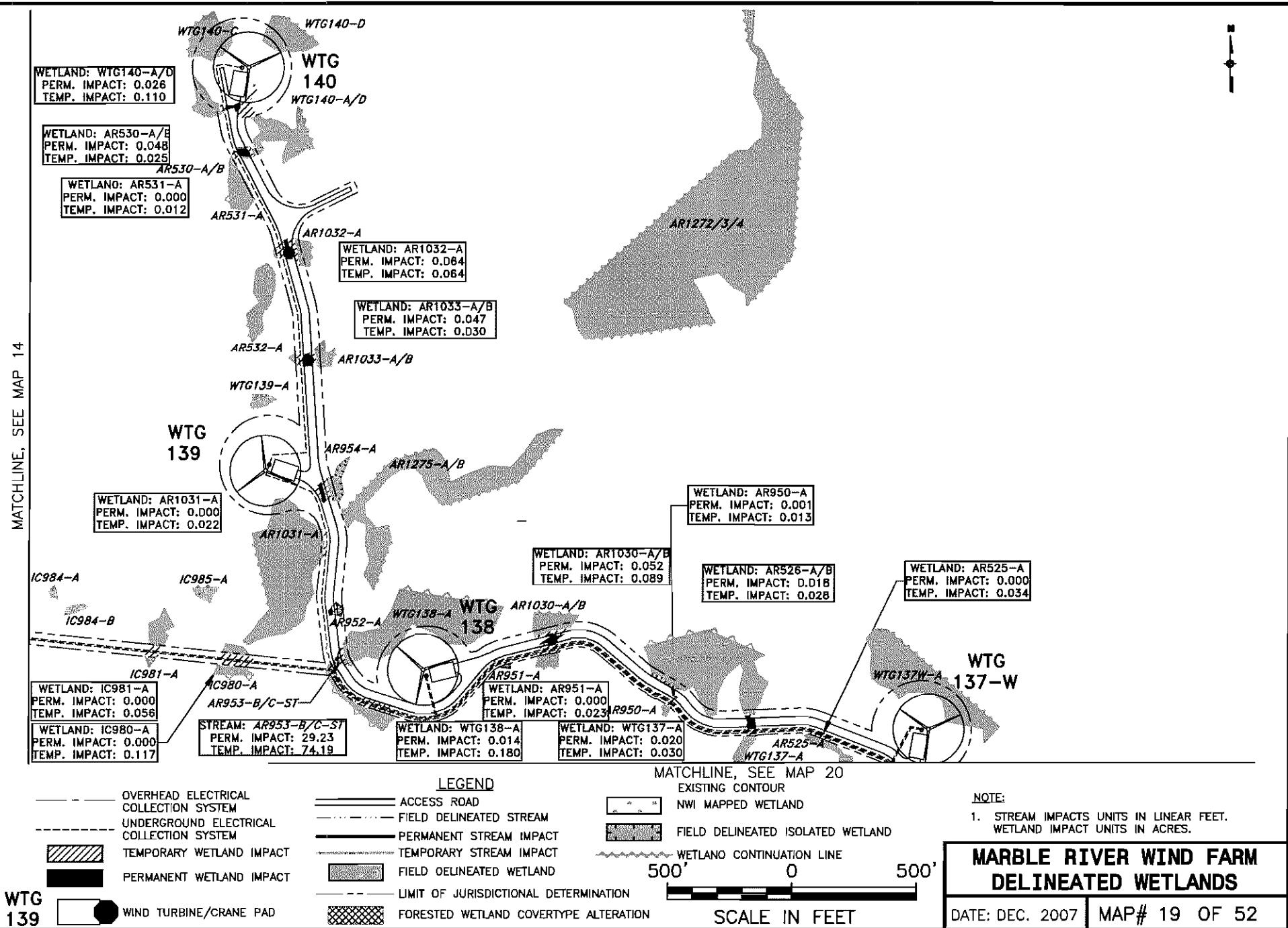
Application No. NAN-2007-00147-WDE

MATCHLINE, SEE MAP 29

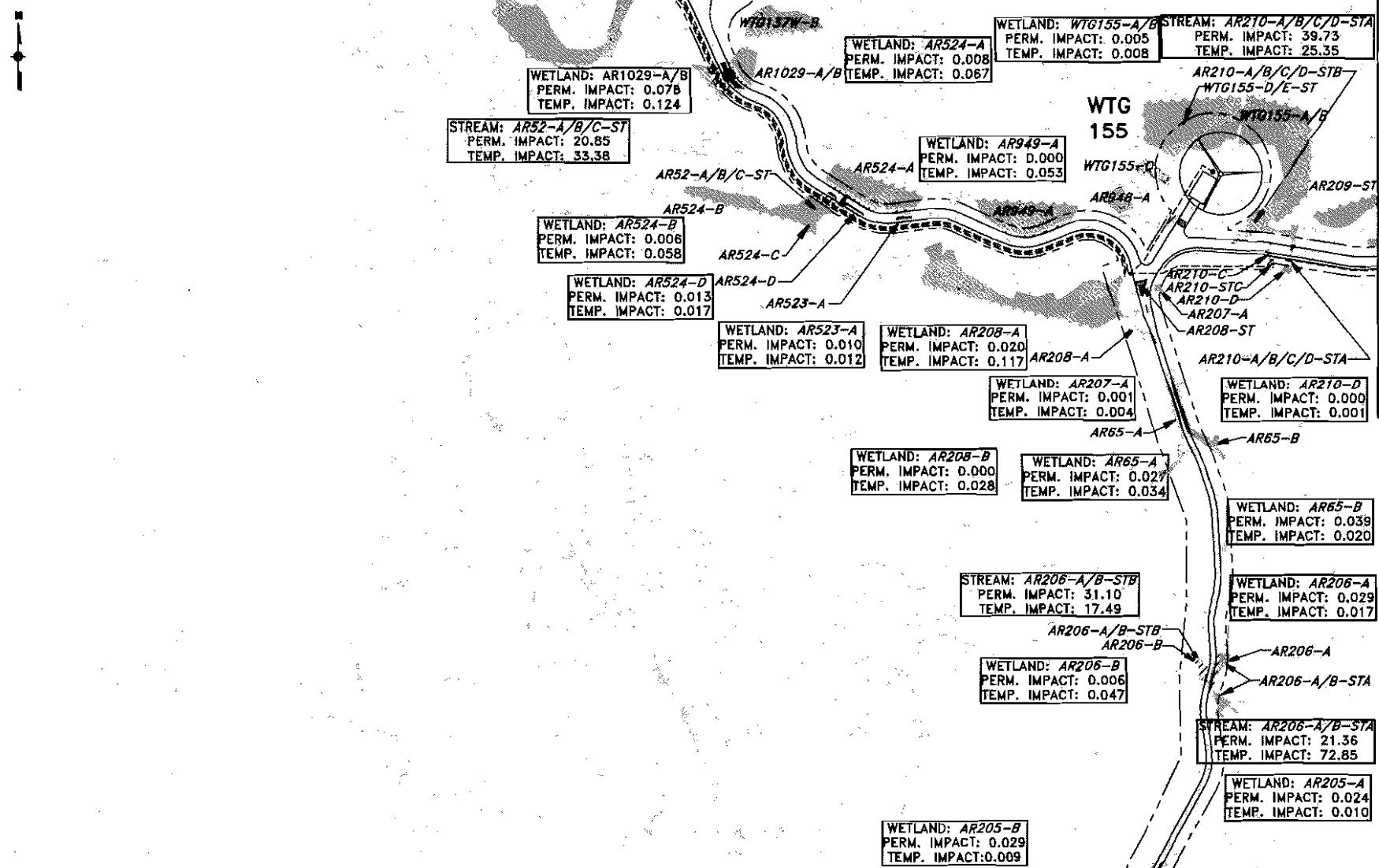
MATCHLINE, SEE MAP 17

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MATCHLINE, SEE MAP 19



OVERHEAD ELECTRICAL  
COLLECTION SYSTEM  
UNDERGROUND ELECTRICAL  
COLLECTION SYSTEM  
TEMPORARY WETLAND IMPACT  
PERMANENT WETLAND IMPACT

WTG 139

WIND TURBINE/CRANE PAD

LEGEND

- ACCESS ROAD
- FIELD DELINEATED STREAM
- PERMANENT STREAM IMPACT
- TEMPORARY STREAM IMPACT
- FIELD DELINEATED WETLAND
- LIMIT OF JURISDICTIONAL DETERMINATION
- FORESTED WETLAND COVERTYPE ALTERATION

EXISTING CONTOUR

NWI MAPPED WETLAND

FIELD DELINEATED ISOLATED WETLAND

WETLAND CONTINUATION LINE

MATCHLINE, SEE MAP 24

NOTE:

1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

REV. 1 03/04/08 REVISED IMPACTS

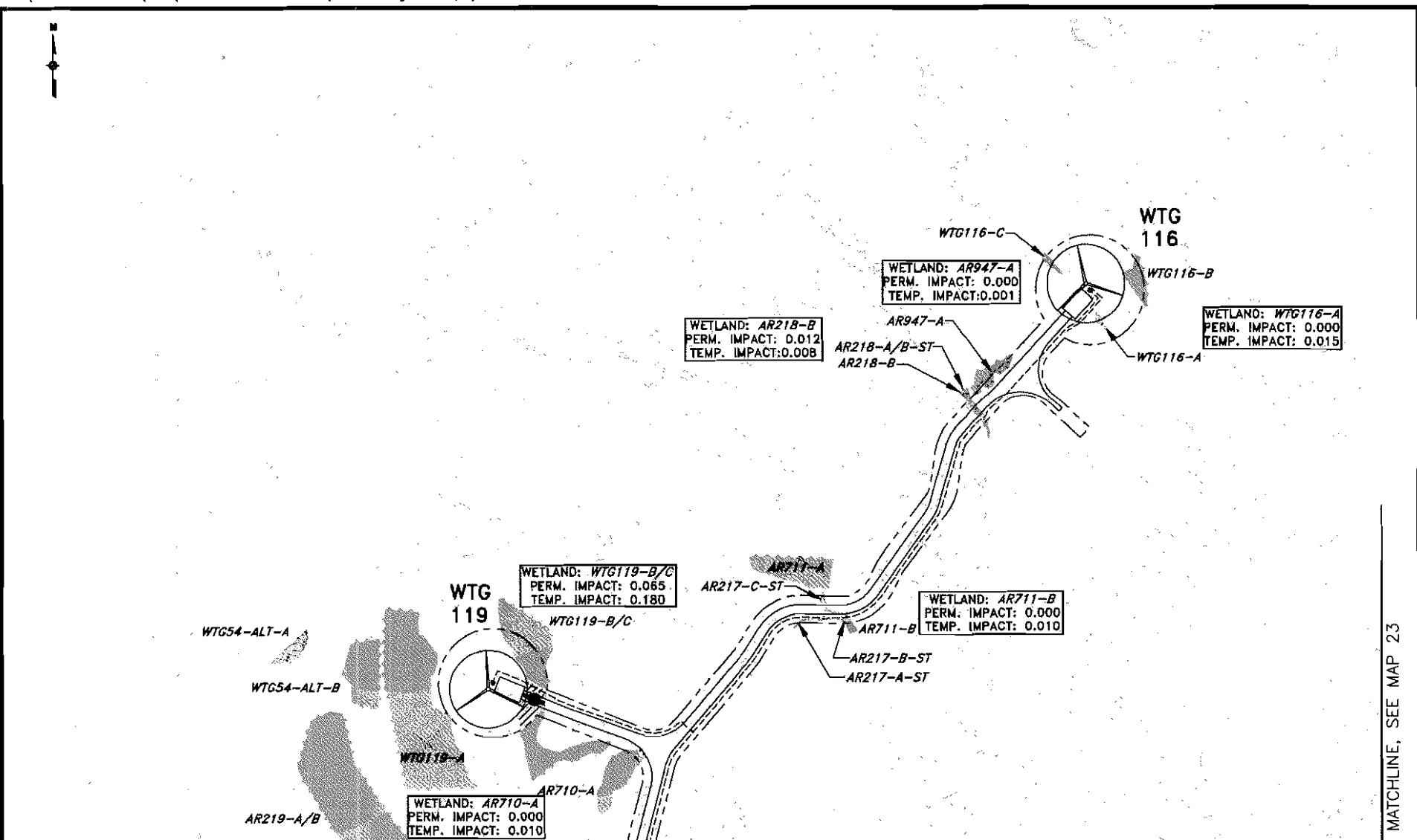
**MARBLE RIVER WIND FARM  
DELINEATED WETLANDS**

DATE: DEC. 2007 MAP# 20 OF 52

500' 0 500'

SCALE IN FEET

MATCHLINE, SEE MAP 22

WTG  
139

OVERHEAD ELECTRICAL  
COLLECTION SYSTEM  
UNDERGROUND ELECTRICAL  
COLLECTION SYSTEM  
TEMPORARY WETLAND IMPACT  
PERMANENT WETLAND IMPACT

WIND TURBINE/CRANE PAD

LEGEND

- OVERHEAD ELECTRICAL COLLECTION SYSTEM
- - - UNDERGROUND ELECTRICAL COLLECTION SYSTEM
- ▨ TEMPORARY WETLAND IMPACT
- PERMANENT WETLAND IMPACT
- ACCESS ROAD
- - - FIELD DELINEATED STREAM
- PERMANENT STREAM IMPACT
- - - TEMPORARY STREAM IMPACT
- ▨ FIELD DELINEATED WETLAND
- LIMIT OF JURISDICTIONAL DETERMINATION
- ▨ FORESTED WETLAND COVERTYPE ALTERATION

MATCHLINE, SEE MAP 22

EXISTING CONTOUR  
NWI MAPPED WETLAND  
FIELD DELINEATED ISOLATED WETLAND  
WETLAND CONTINUATION LINE

500' 0 500'

SCALE IN FEET

## NOTE:

1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

REV. 1 03/04/08 REVISED IMPACTS

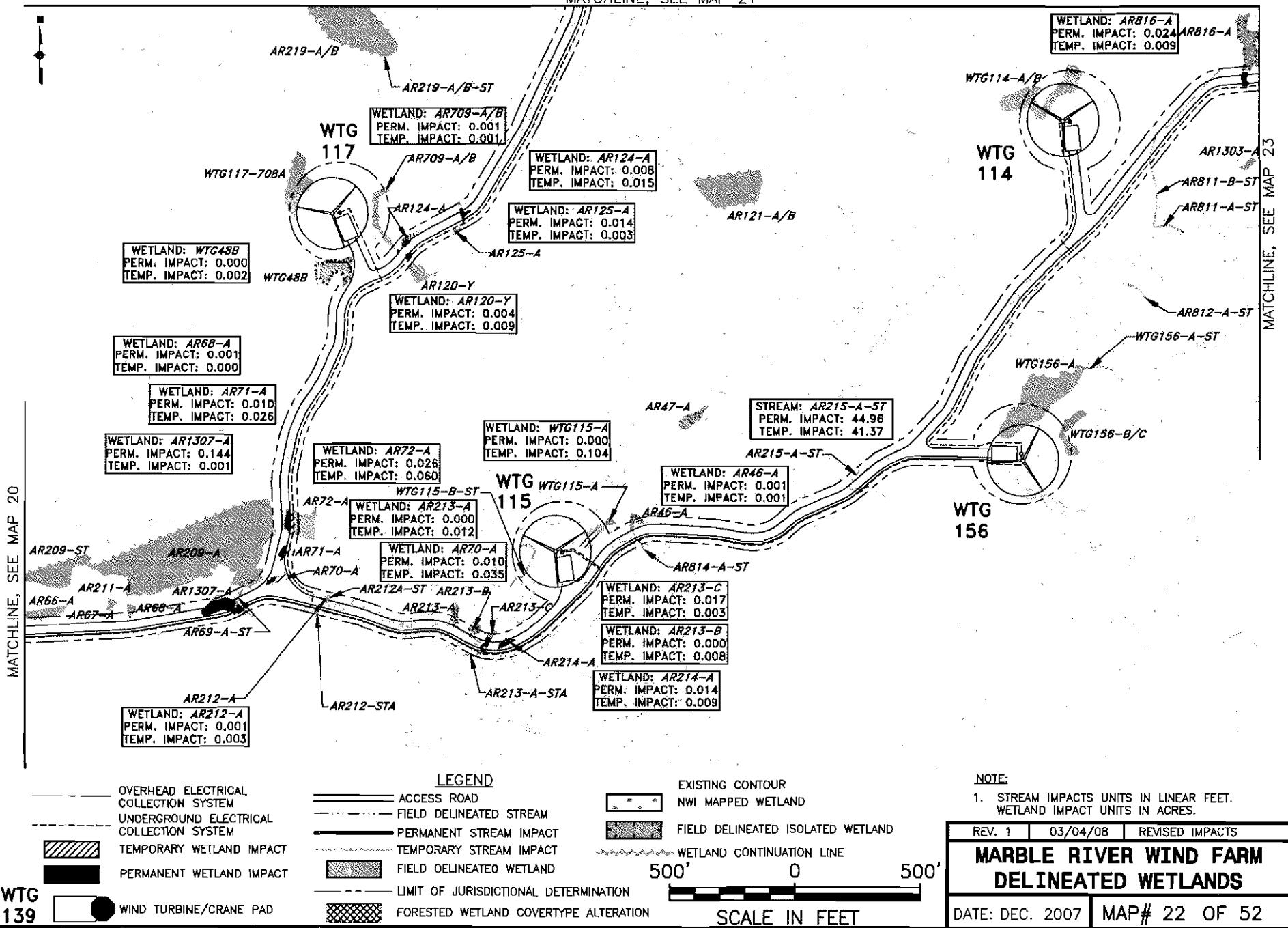
**MARBLE RIVER WIND FARM  
DELINATE WETLANDS**

DATE: DEC. 2007 MAP# 21 OF 52

Application No. NAN-2007-00147-WDE

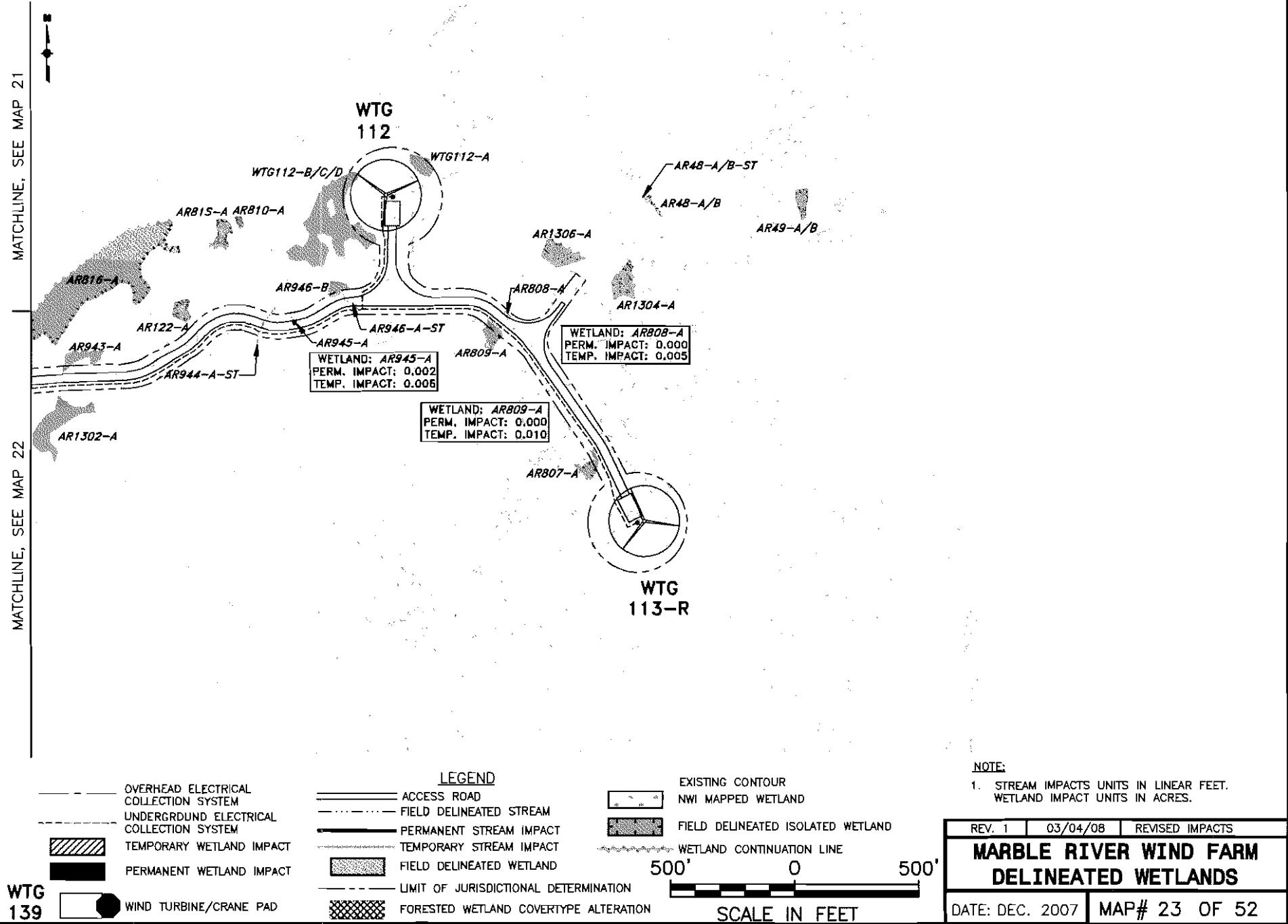
MATCHLINE, SEE MAP 20

MATCHLINE, SEE MAP 21



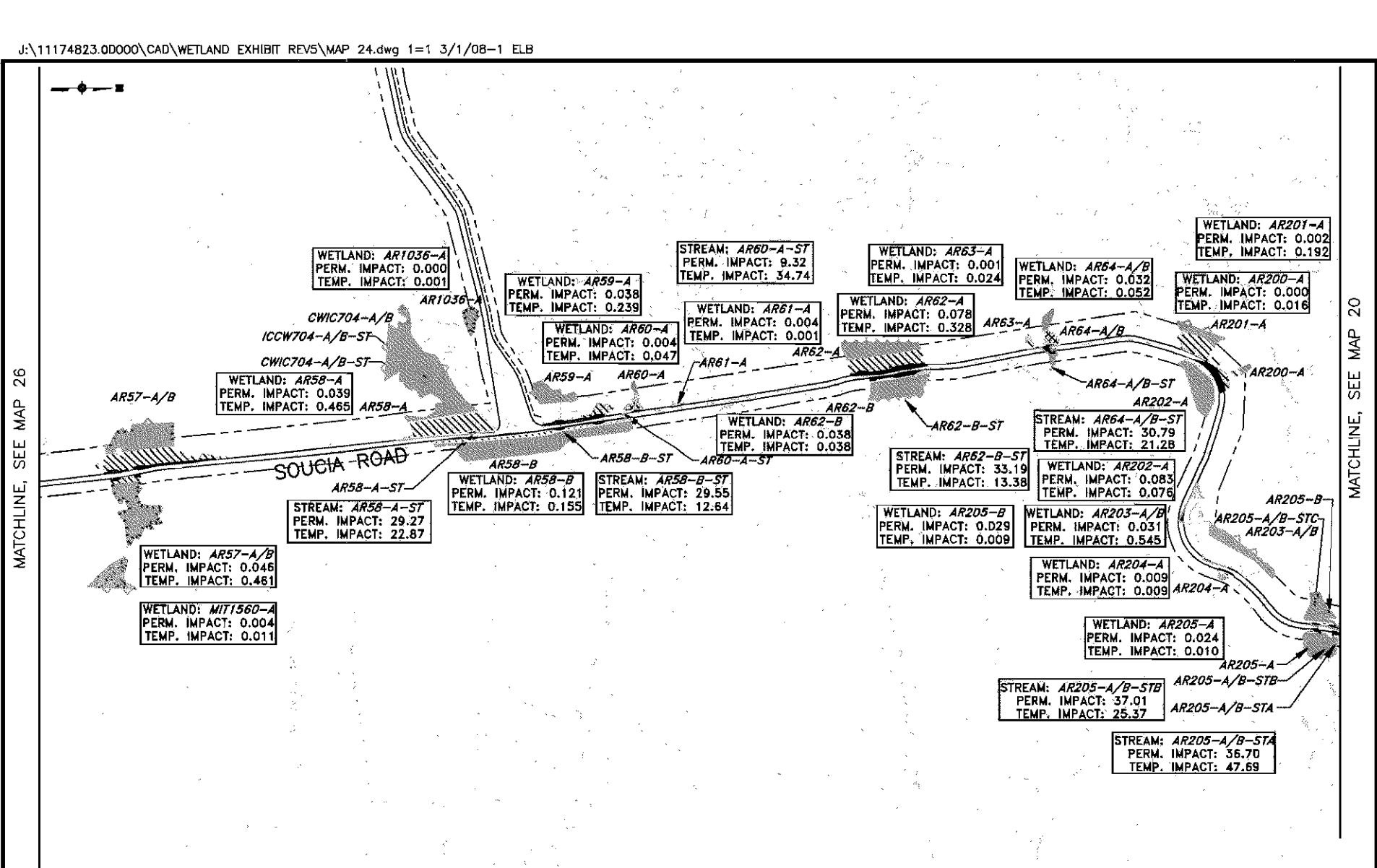
Application No. NAN-2007-0014-WD

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Application No. NAA-N-002-00144-0000

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LEGEND

- OVERHEAD ELECTRICAL COLLECTION SYSTEM
- - - UNDERGROUND ELECTRICAL COLLECTION SYSTEM
- TEMPORARY WETLAND IMPACT
- PERMANENT WETLAND IMPACT
- WTG 139 ■■■■■ WIND TURBINE/CRANE PAD

- ACCESS ROAD
- - - FIELD DELINEATED STREAM
- PERMANENT STREAM IMPACT
- TEMPORARY STREAM IMPACT
- FIELD DELINEATED WETLAND
- LIMIT OF JURISDICTIONAL DETERMINATION
- FORESTED WETLAND COVERTYPE ALTERATION

EXISTING CONTOUR  
NWI MAPPED WETLAND

FIELD DELINEATED ISOLATED WETLAND

WETLAND CONTINUATION LINE

500' 0 500'

SCALE IN FEET

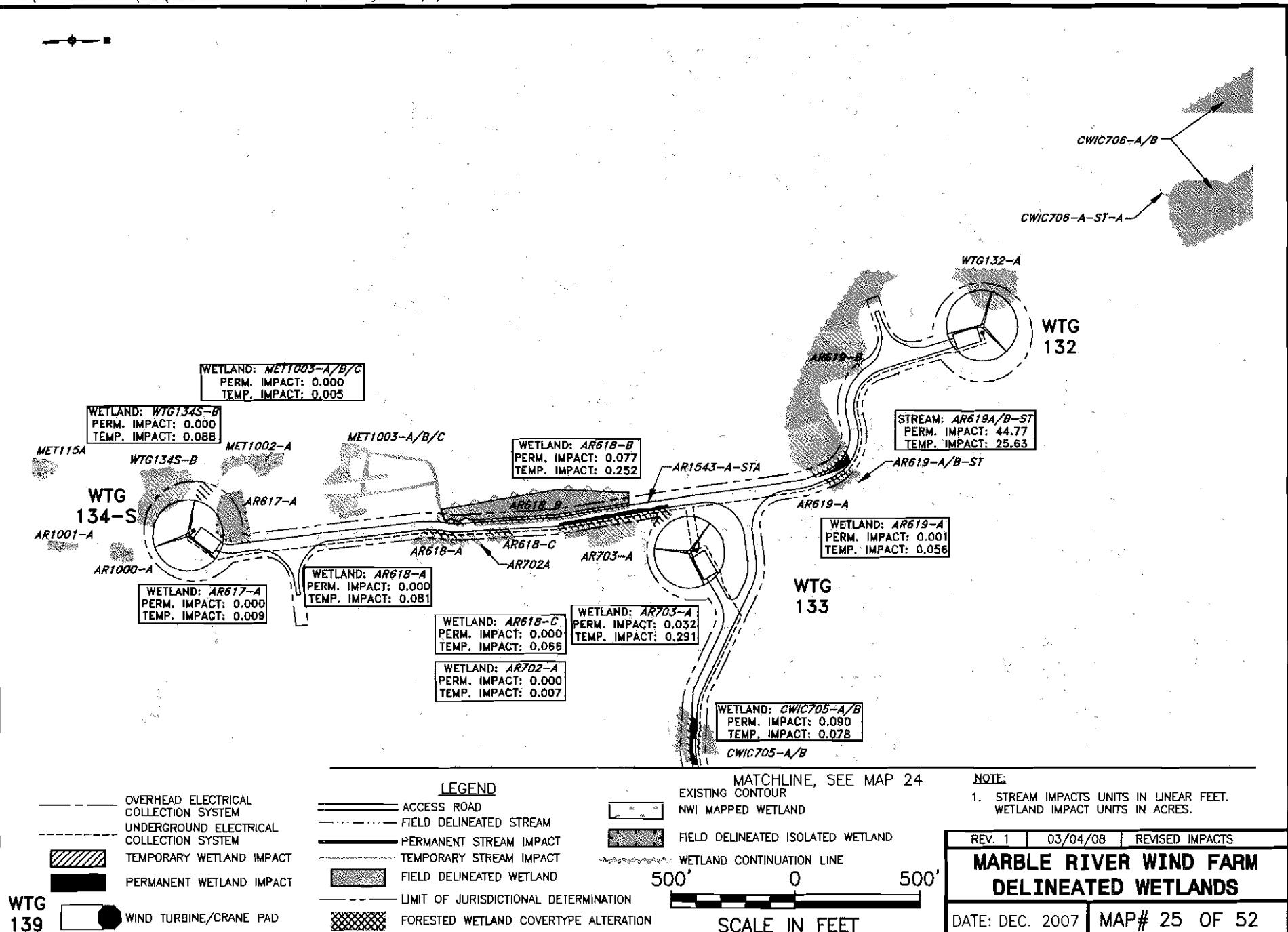
NOTE:

1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

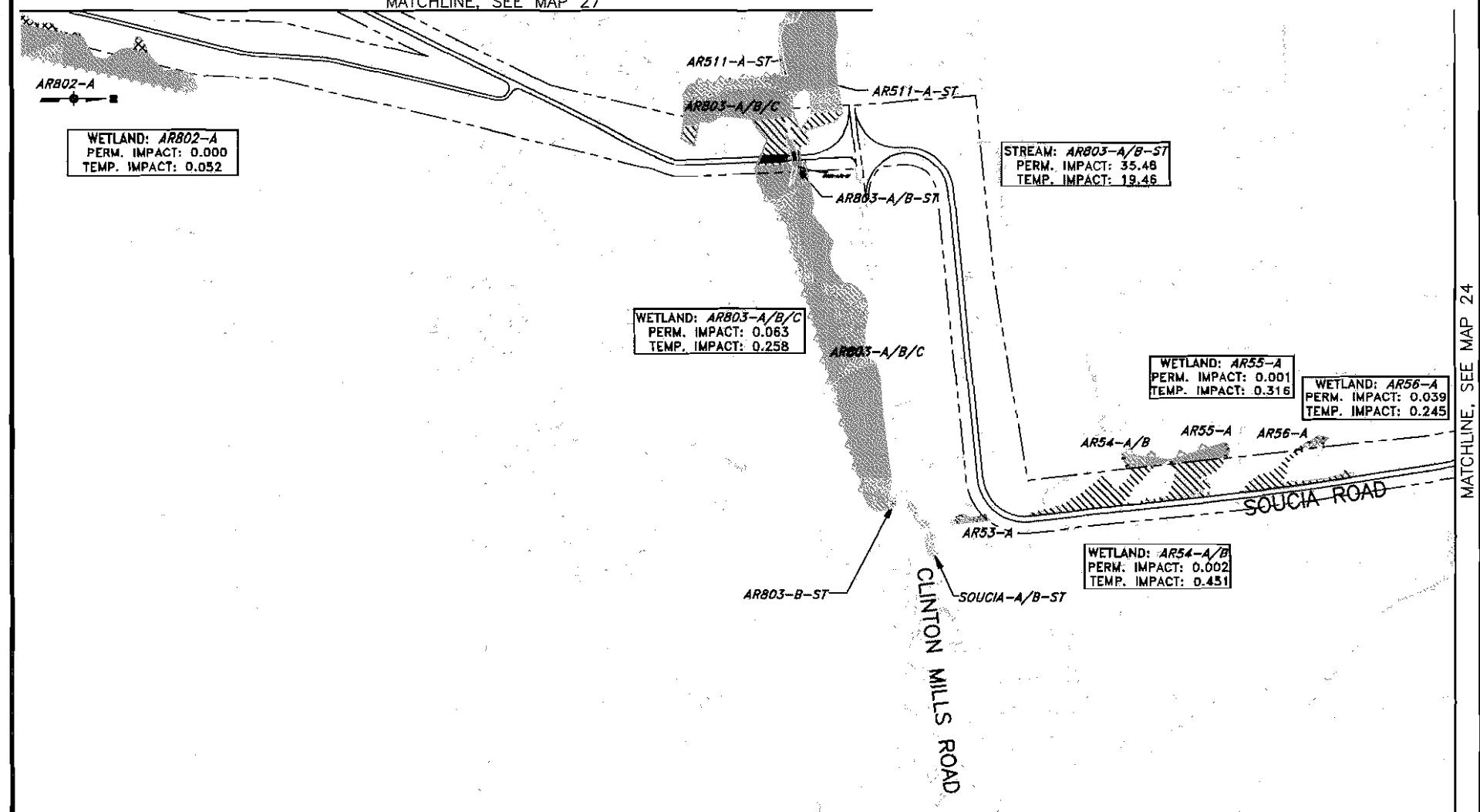
REV. 1 03/04/08 REVISED IMPACTS

## MARBLE RIVER WIND FARM DELINEATED WETLANDS

DATE: DEC. 2007 MAP# 24 OF 52



MATCHLINE, SEE MAP 27



WTG 139

OVERHEAD ELECTRICAL COLLECTION SYSTEM  
UNDERGROUND ELECTRICAL COLLECTION SYSTEM  
TEMPORARY WETLAND IMPACT  
PERMANENT WETLAND IMPACT  
WIND TURBINE/CRANE PAD

LEGEND

- OVERHEAD ELECTRICAL COLLECTION SYSTEM
- - - UNDERGROUND ELECTRICAL COLLECTION SYSTEM
- TEMPORARY WETLAND IMPACT
- PERMANENT WETLAND IMPACT
- WIND TURBINE/CRANE PAD
- ACCESS ROAD
- - - FIELD DELINEATED STREAM
- PERMANENT STREAM IMPACT
- TEMPORARY STREAM IMPACT
- FIELD DELINEATED WETLAND
- LIMIT OF JURISDICTIONAL DETERMINATION
- FORESTED WETLAND COVERTYPE ALTERATION

EXISTING CONTOUR  
NWI MAPPED WETLAND

FIELD DELINEATED ISOLATED WETLAND

WETLAND CONTINUATION LINE

500' 0 500'  
SCALE IN FEET

**NOTE:**

1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

REV. 1 03/04/08 | REVISED IMPACTS

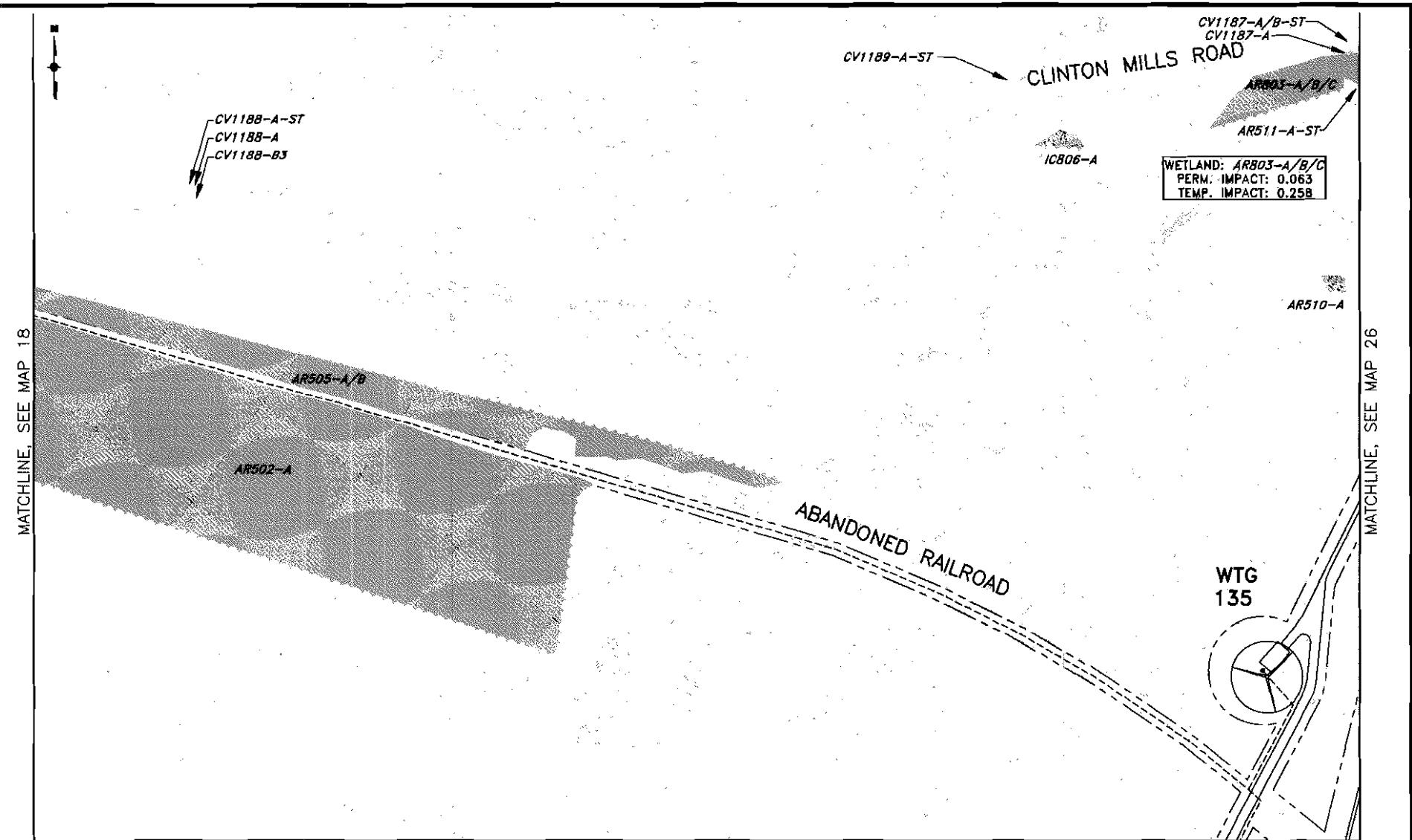
**MARBLE RIVER WIND FARM  
DELINERATED WETLANDS**

DATE: DEC. 2007 | MAP# 26 OF 52

MATCHLINE, SEE MAP 24

Application No. NIAN-2007-00147-WDE

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— — — OVERHEAD ELECTRICAL COLLECTION SYSTEM	<u>LEGEND</u>	— — — ACCESS ROAD
- - - UNDERGROUND ELECTRICAL COLLECTION SYSTEM		- - - FIELD DELINEATED STREAM
■ ■ ■ TEMPORARY WETLAND IMPACT		— — — PERMANENT STREAM IMPACT
■ ■ ■ PERMANENT WETLAND IMPACT		— — — TEMPORARY STREAM IMPACT
WTG 139		■ ■ ■ FIELD DELINEATED WETLAND
WIND TURBINE/CRANE PAD		- - - LIMIT OF JURISDICTIONAL DETERMINATION

MATCHLINE, SEE MAP 28

EXISTING CONTOUR
NWI MAPPED WETLAND
FIELD DELINEATED ISOLATED WETLAND
WETLAND CONTINUATION LINE
500'      0      500'
SCALE IN FEET

NOTE:

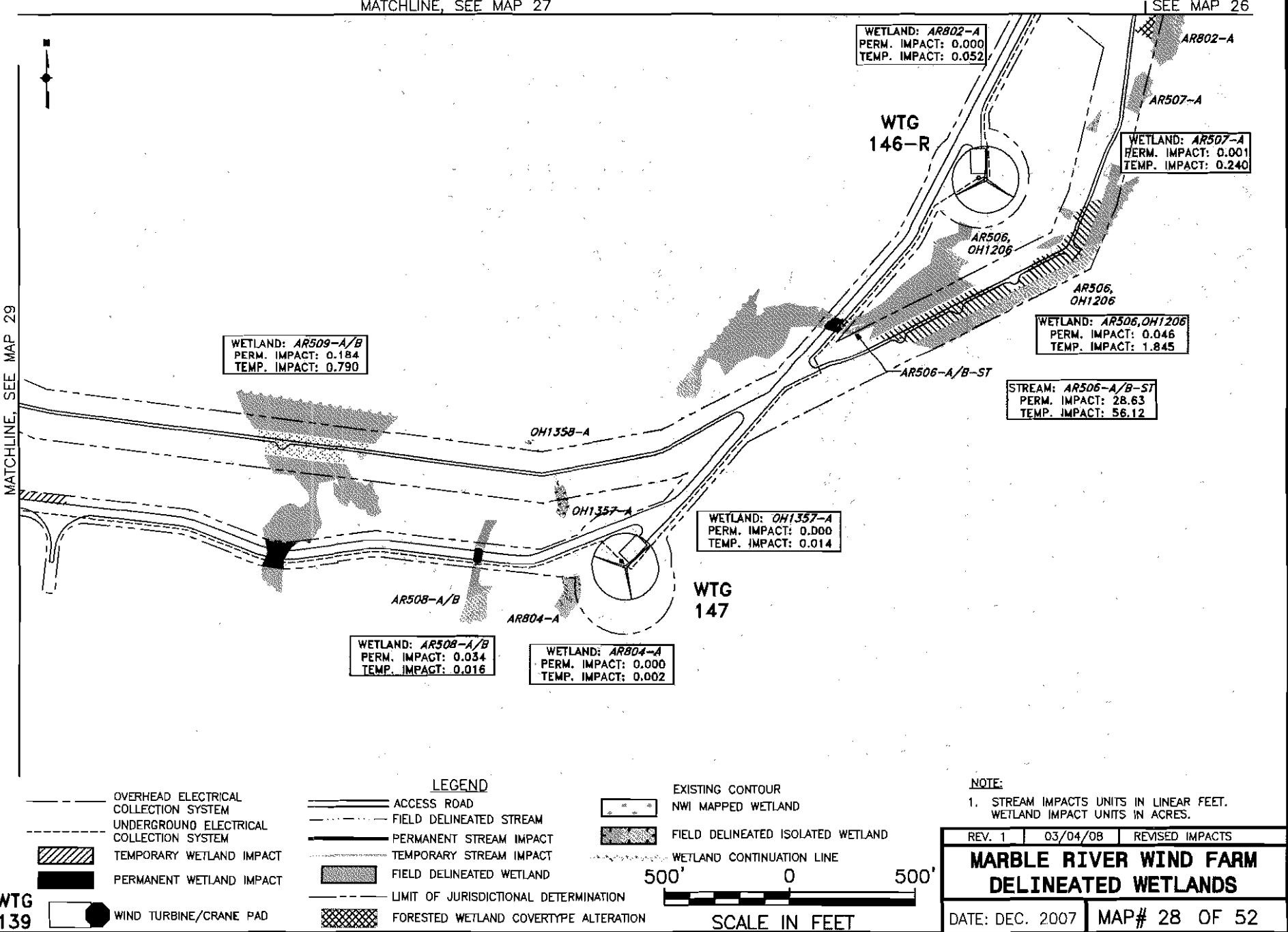
1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

REV. 1 03/04/08 REVISED IMPACTS

MARBLE RIVER WIND FARM DELINERATED WETLANDS	
DATE: DEC. 2007	MAP# 27 OF 52

MATCHLINE, SEE MAP 27

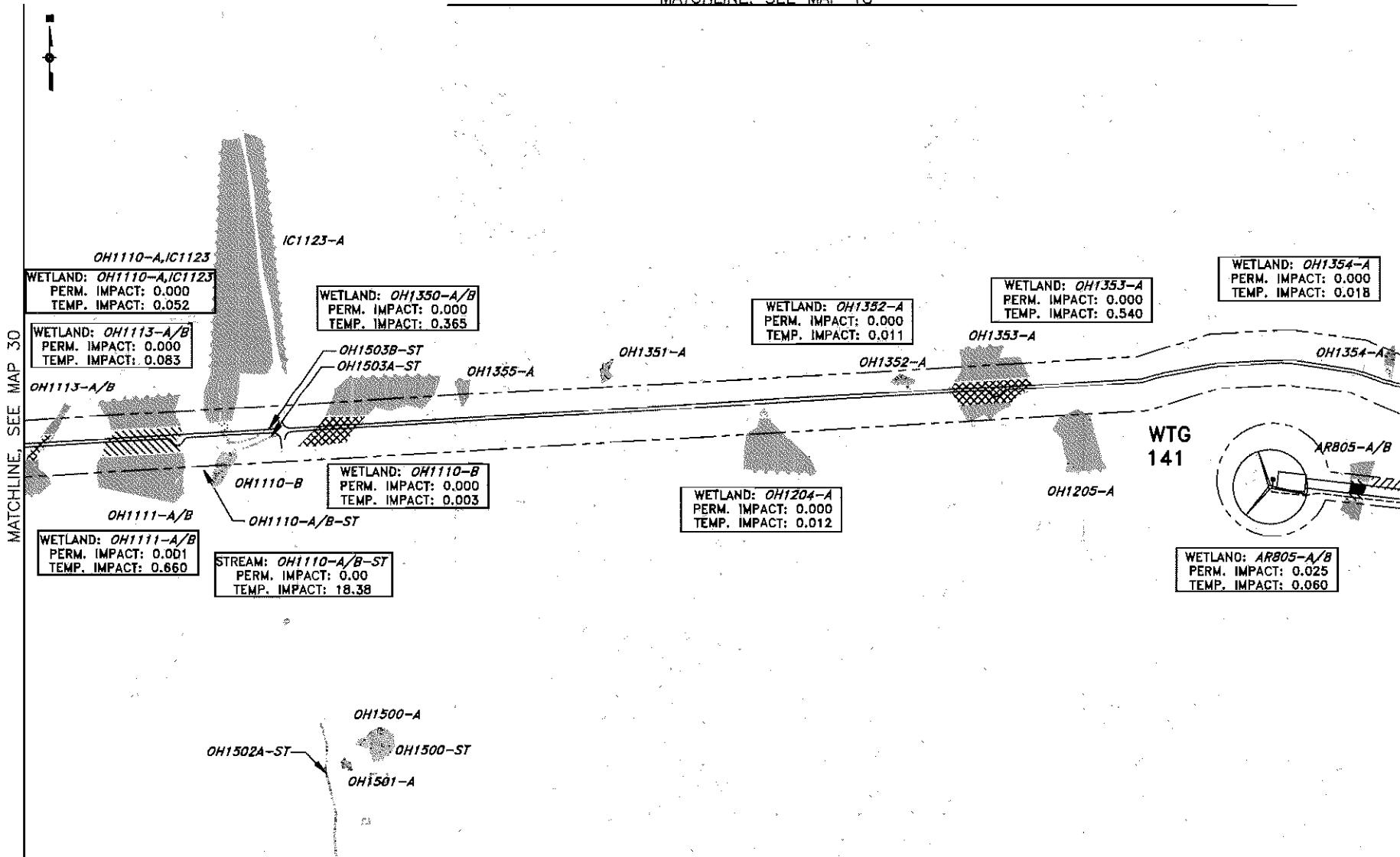
SEE MAP 26



MATCHLINE, SEE MAP 18

MATCHLINE, SEE MAP 30

MATCHLINE, SEE MAP 28



OVERHEAD ELECTRICAL  
COLLECTION SYSTEM  
UNDERGROUND ELECTRICAL  
COLLECTION SYSTEM  
TEMPORARY WETLAND IMPACT  
PERMANENT WETLAND IMPACT

WTG  
139

WIND TURBINE/CRANE PAD

LEGEND

— ACCESS ROAD  
- - - FIELD DELINEATED STREAM  
— PERMANENT STREAM IMPACT  
- - - TEMPORARY STREAM IMPACT  
— FIELD DELINEATED WETLAND  
— LIMIT OF JURISDICTIONAL DETERMINATION

EXISTING CONTOUR  
NWI MAPPED WETLAND  
■ FIELD DELINEATED ISOLATED WETLAND  
— WETLAND CONTINUATION LINE  
500' 0 500'  
SCALE IN FEET

NOTE:

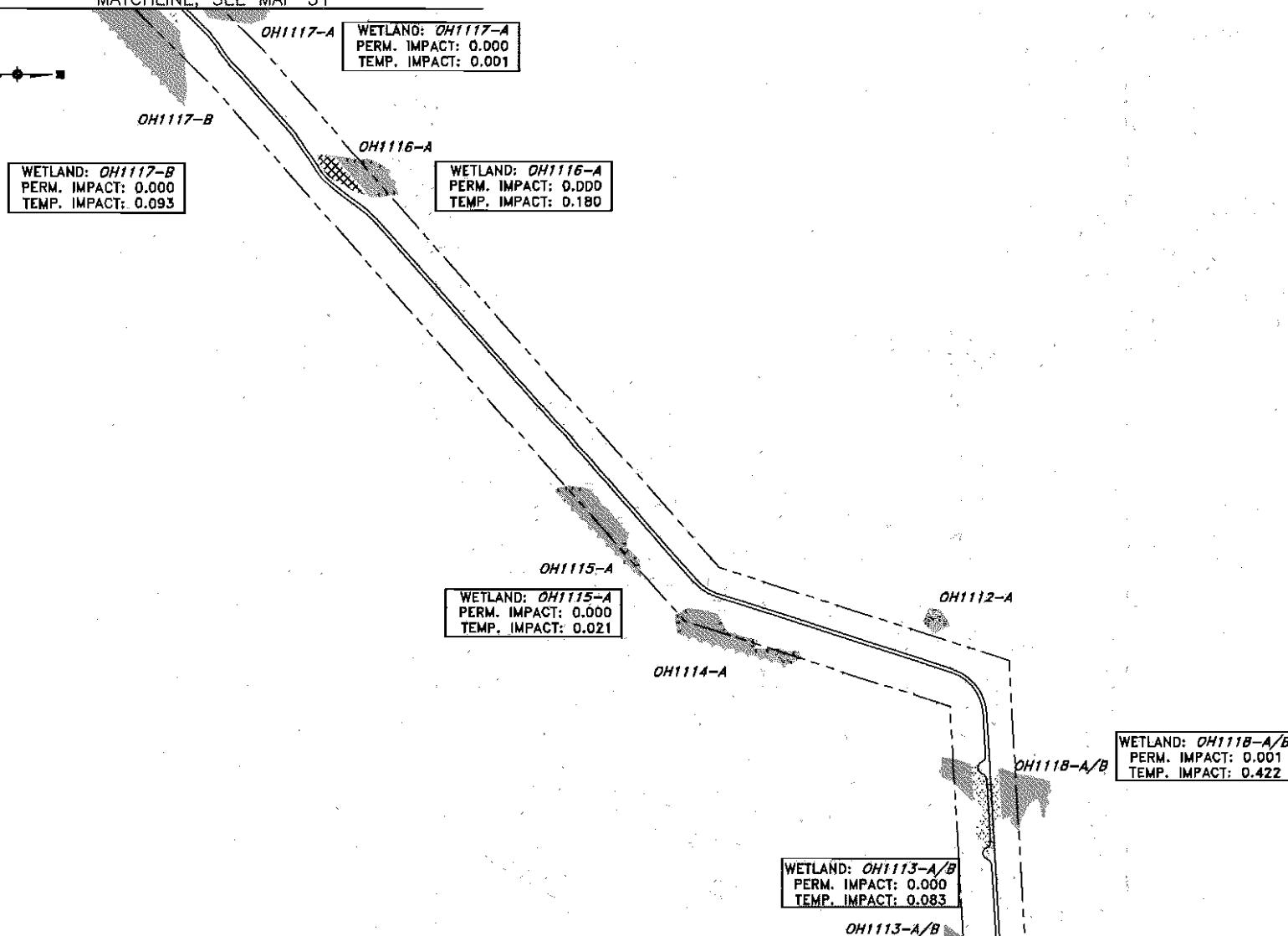
1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

REV. 1 03/04/08 REVISED IMPACTS

**MARBLE RIVER WIND FARM  
DELINEATED WETLANDS**

DATE: DEC. 2007 MAP# 29 OF 52

MATCHLINE, SEE MAP 31



## LEGEND

- OVERHEAD ELECTRICAL COLLECTION SYSTEM
- UNDERGROUND ELECTRICAL COLLECTION SYSTEM
- TEMPORARY WETLAND IMPACT
- PERMANENT WETLAND IMPACT

WTG  
139

WIND TURBINE/CRANE PAD

- ACCESS ROAD
- FIELD DELINEATED STREAM
- PERMANENT STREAM IMPACT
- TEMPORARY STREAM IMPACT
- FIELD DELINEATED WETLAND
- LIMIT OF JURISDICTIONAL DETERMINATION
- FORESTED WETLAND COVERTYPE ALTERATION

EXISTING CONTOUR

NWI MAPPED WETLAND

FIELD DELINEATED ISOLATED WETLAND

WETLAND CONTINUATION LINE

500' 0 500'

SCALE IN FEET

MATCHLINE, SEE MAP 29 NOTE:  
1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

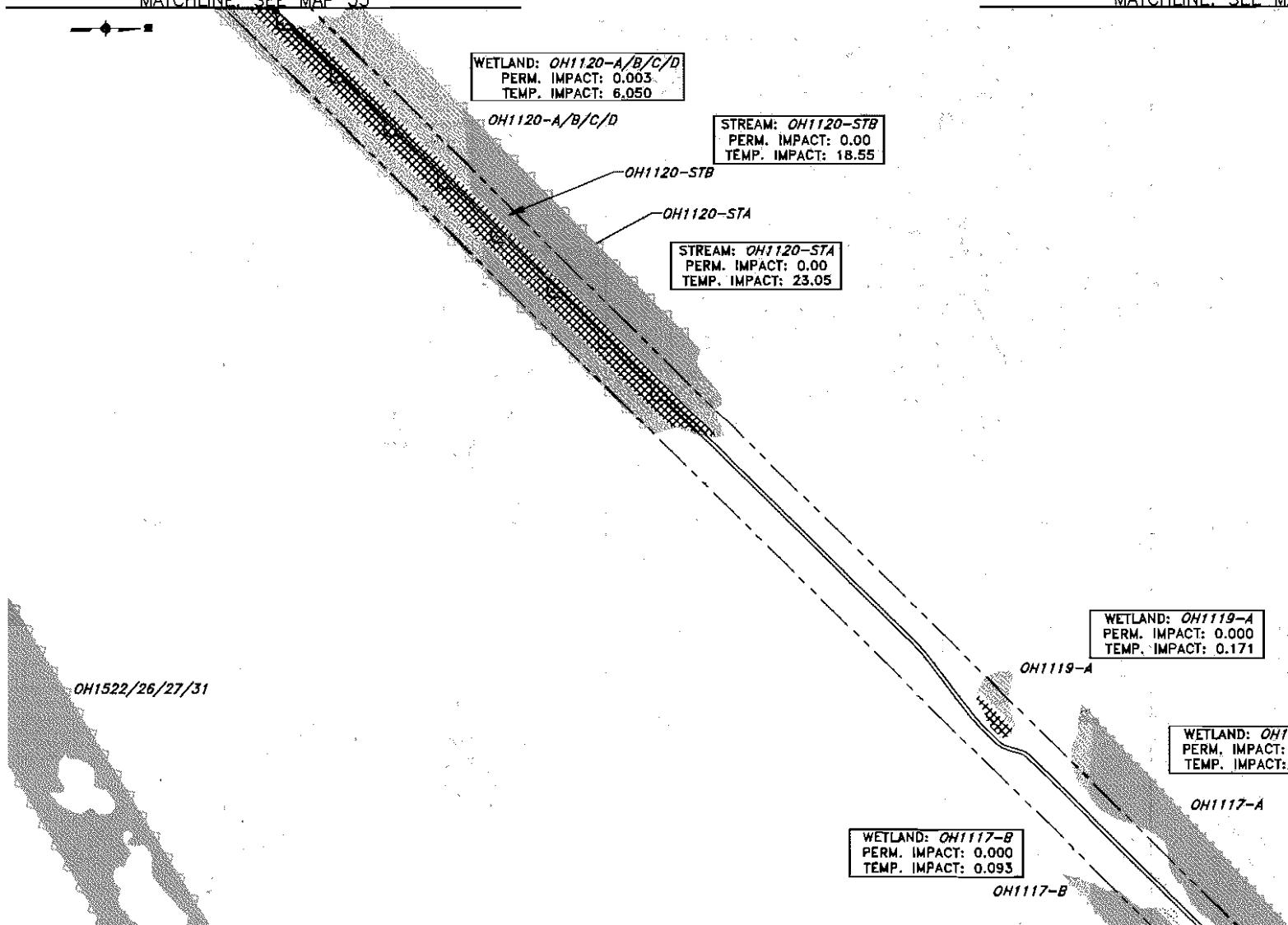
REV. 1 03/04/08 REVISED IMPACTS

**MARBLE RIVER WIND FARM**  
**DELINERATED WETLANDS**

DATE: DEC. 2007 MAP# 30 OF 52

MATCHLINE SEE MAP 33

MATCHLINE SEE MAP 32



MATCHLINE, SEE MAP 33

OVERHEAD ELECTRICAL

COLLECTION SYSTEM

UNDERGROUND ELECTRICAL

COLLECTION SYSTEM

TEMPORARY WETLAND IMPACT

PERMANENT WETLAND IMPACT

WTG  
139

WIND TURBINE/CRANE PAD

LEGEND

ACCESS ROAD

FIELD DELINEATED STREAM

PERMANENT STREAM IMPACT

TEMPORARY STREAM IMPACT

FIELD DELINEATED WETLAND

LIMIT OF JURISDICTIONAL DETERMINATION

FORESTED WETLAND COVERTYPE ALTERATION

EXISTING CONTOUR

NWI MAPPED WETLAND

FIELD DELINEATED ISOLATED WETLAND

WETLAND CONTINUATION LINE

NOTE: MATCHLINE, SEE MAP 30

1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

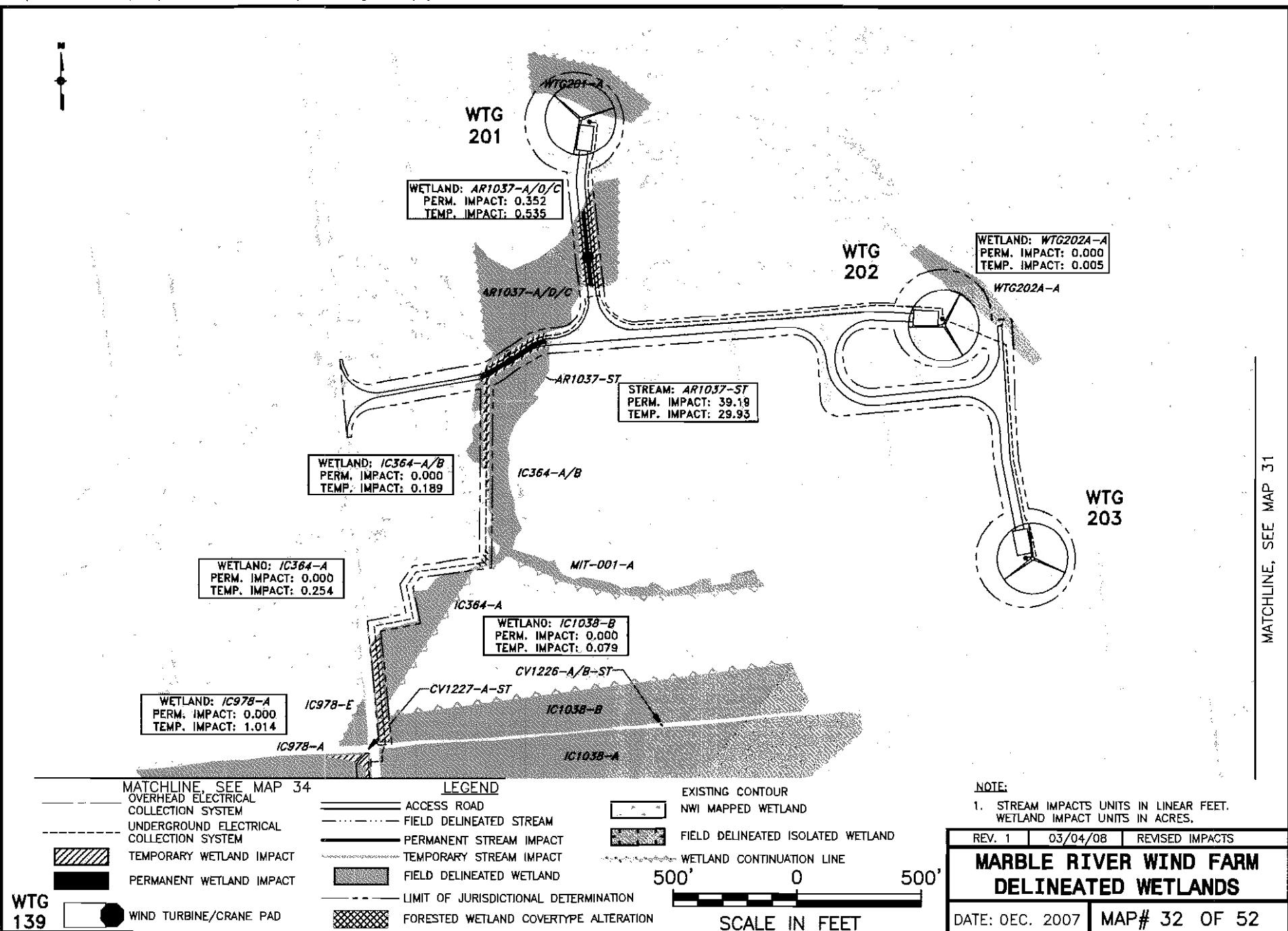
REV. 1 03/04/08 REVISED IMPACTS

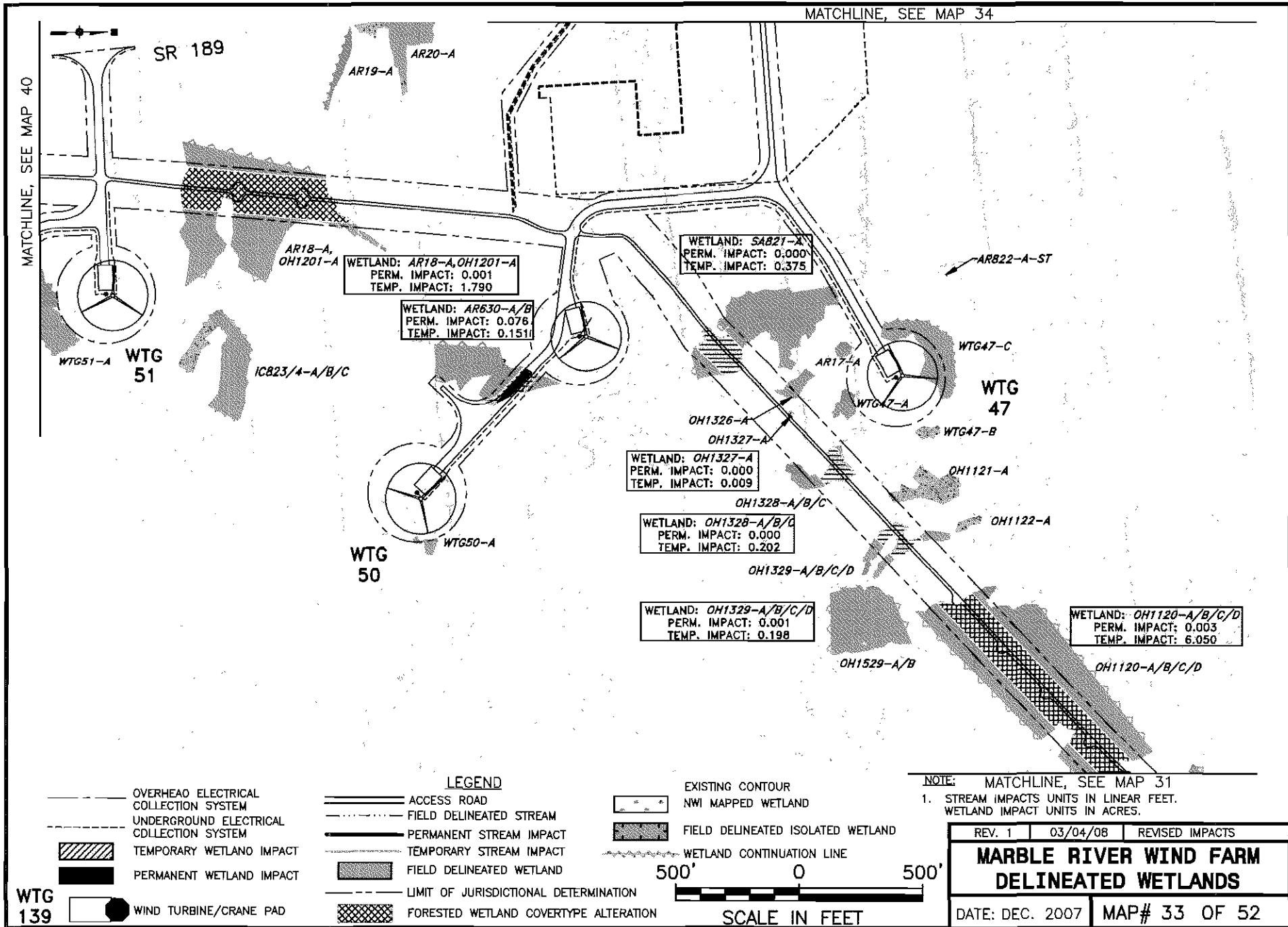
**MARBLE RIVER WIND FARM  
DELINEATED WETLANDS**

DATE: DEC. 2007 MAP# 31 OF 52

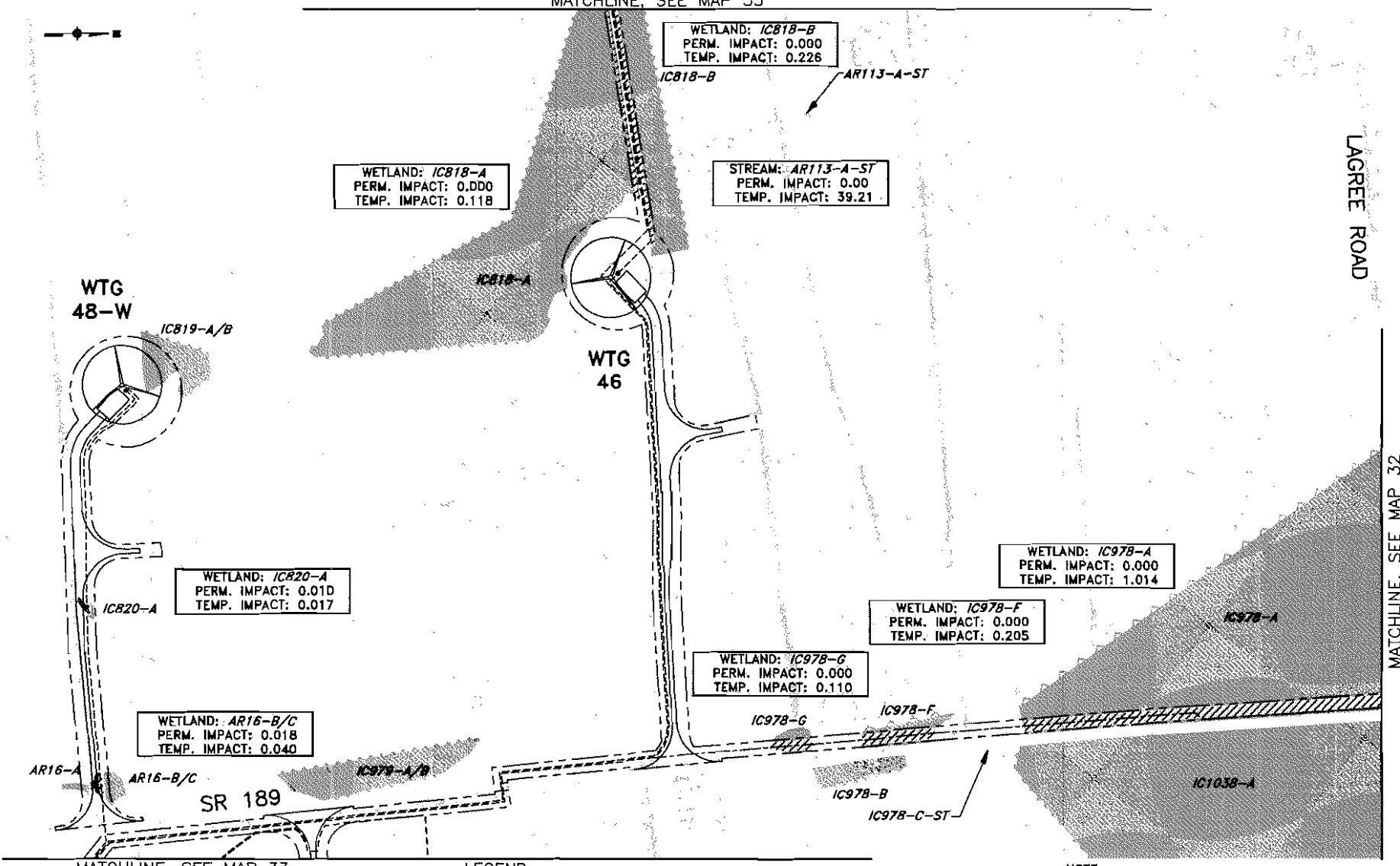
500' 0 500'

SCALE IN FEET





MATCHLINE, SEE MAP 35



MATCHLINE, SEE MAP 33

## LEGEND

- OVERHEAD ELECTRICAL COLLECTION SYSTEM
- - - UNDERGROUND ELECTRICAL COLLECTION SYSTEM
- TEMPORARY WETLAND IMPACT
- PERMANENT WETLAND IMPACT
- WTG ■ WIND TURBINE/CRANE PAD

EXISTING CONTOUR

NWI MAPPED WETLAND

FIELD DELINEATED ISOLATED WETLAND

WETLAND CONTINUATION LINE

500' 0 500'

SCALE IN FEET

## NOTE:

1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

REV. 1 03/04/08 REVISED IMPACTS

**MARBLE RIVER WIND FARM  
DELINERATED WETLANDS**

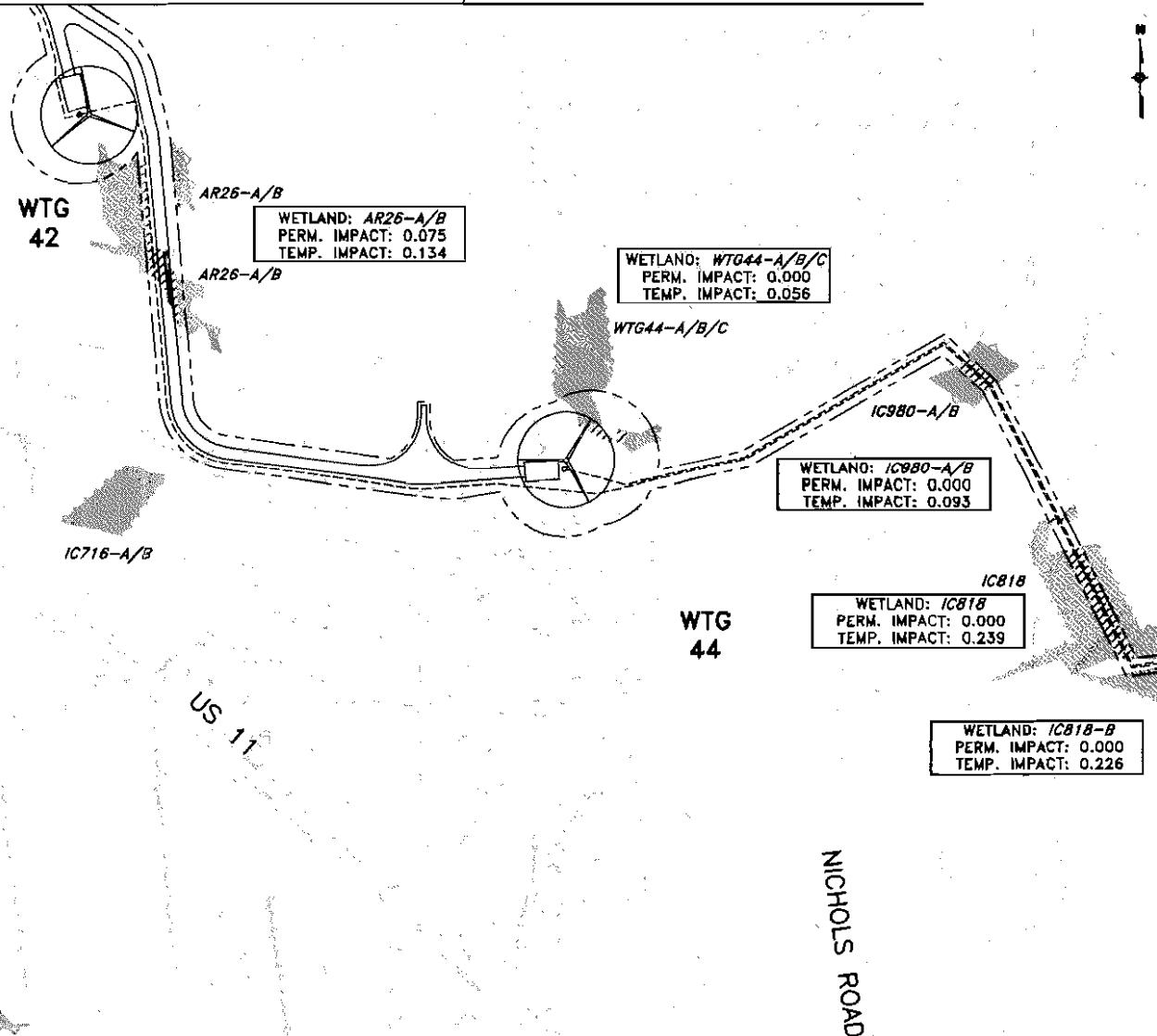
DATE: DEC. 2007 MAP# 34 OF 52

Applicant No. NAN-2002-00417-WDC

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## MATCHLINE, SEE MAP 6

## MATCHLINE, SEE MAP 36

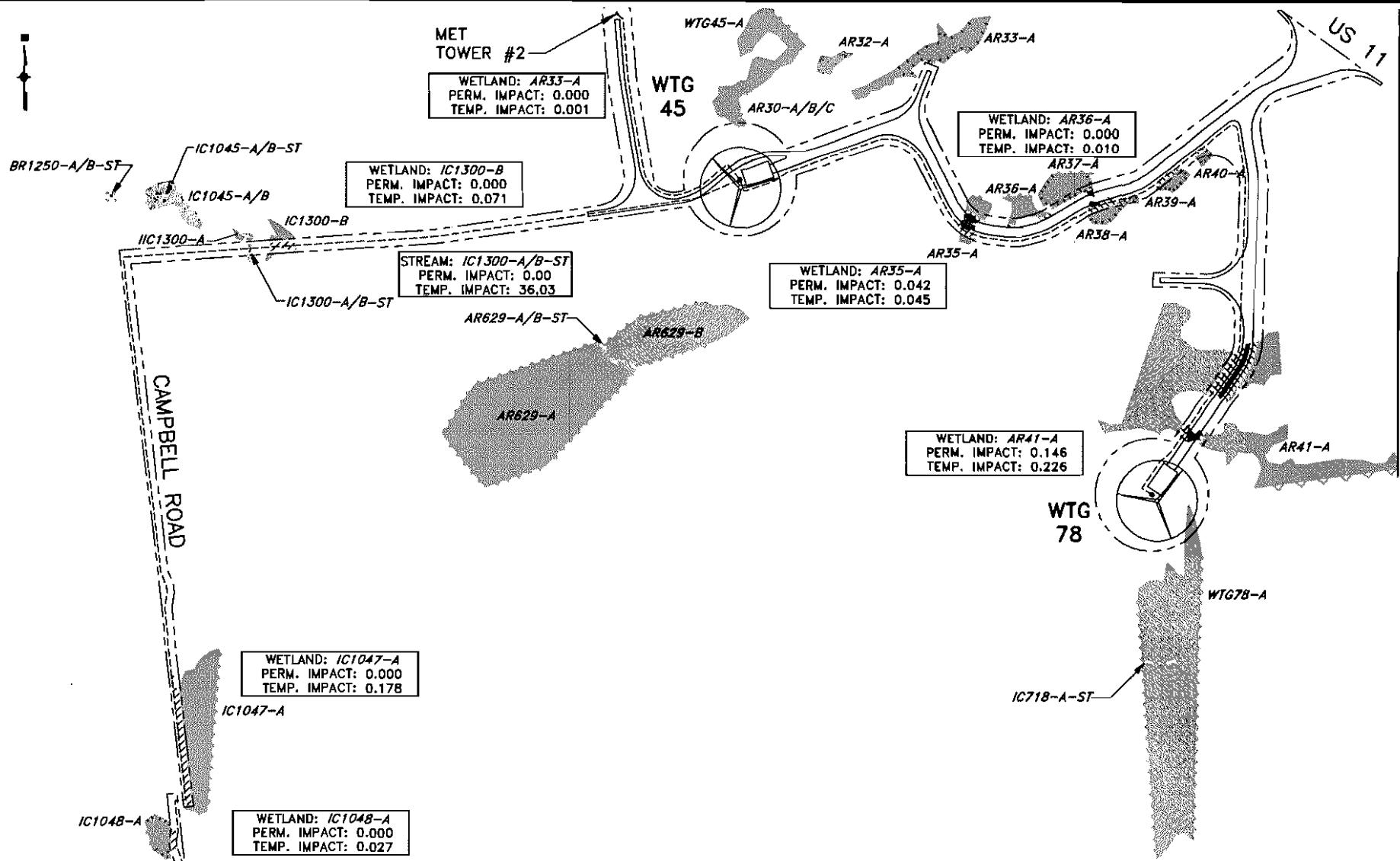


SCALE IN FEET

REV. 1	03/04/08	REVISED IMPACTS
<b>MARBLE RIVER WIND FARM DELINEATED WETLANDS</b>		
DATE: DEC. 2007		MAP# 35 OF 52

## NOTE:

1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

LEGEND

- OVERHEAD ELECTRICAL COLLECTION SYSTEM
- UNDERGROUND ELECTRICAL COLLECTION SYSTEM
- TEMPORARY WETLAND IMPACT
- PERMANENT WETLAND IMPACT
- WTG 139
- WIND TURBINE/CRANE PAD

MATCHLINE, SEE MAP 37

EXISTING CONTOUR

NWI MAPPED WETLAND

FIELD DELINEATED ISOLATED WETLAND

WETLAND CONTINUATION LINE

500' 0 500'



SCALE IN FEET

NOTE:

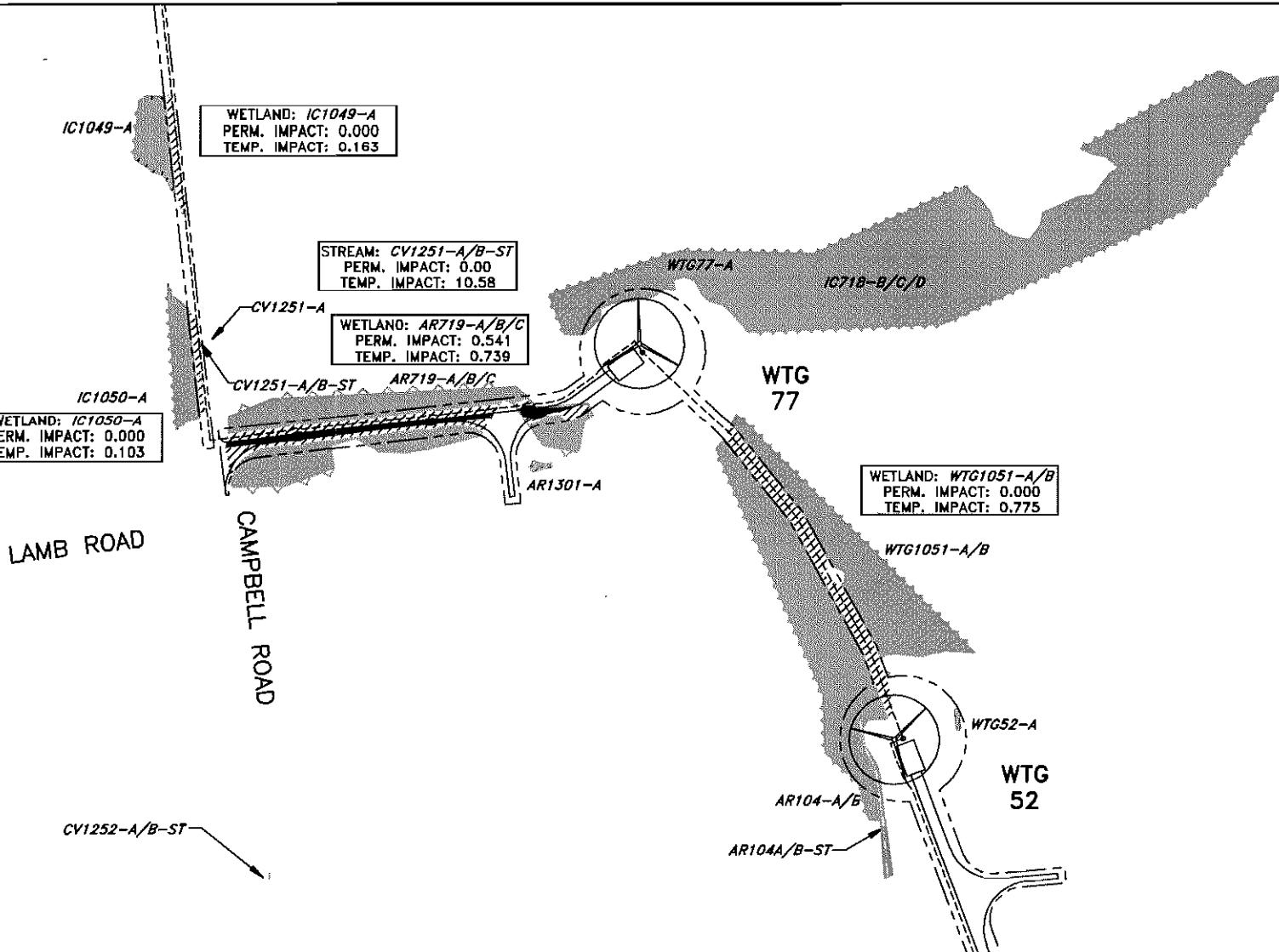
1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

**MARBLE RIVER WIND FARM  
DELINERATED WETLANDS**

DATE: DEC. 2007 MAP# 36 OF 52

## MATCHLINE, SEE MAP 36

Application No. NAN-2007-60147-LDDE

WTG  
139

- OVERHEAD ELECTRICAL COLLECTION SYSTEM
- - - UNDERGROUND ELECTRICAL COLLECTION SYSTEM
- TEMPORARY WETLAND IMPACT
- PERMANENT WETLAND IMPACT
- WTG WIND TURBINE/CRANE PAD

- LEGEND
- ACCESS ROAD
  - - - FIELD DELINEATED STREAM
  - PERMANENT STREAM IMPACT
  - TEMPORARY STREAM IMPACT
  - FIELD DELINEATED WETLAND
  - LIMIT OF JURISDICTIONAL DETERMINATION
  - FORESTED WETLAND COVERTYPE ALTERATION

EXISTING CONTOUR MATCHLINE, SEE MAP 38  
NWI MAPPED WETLAND

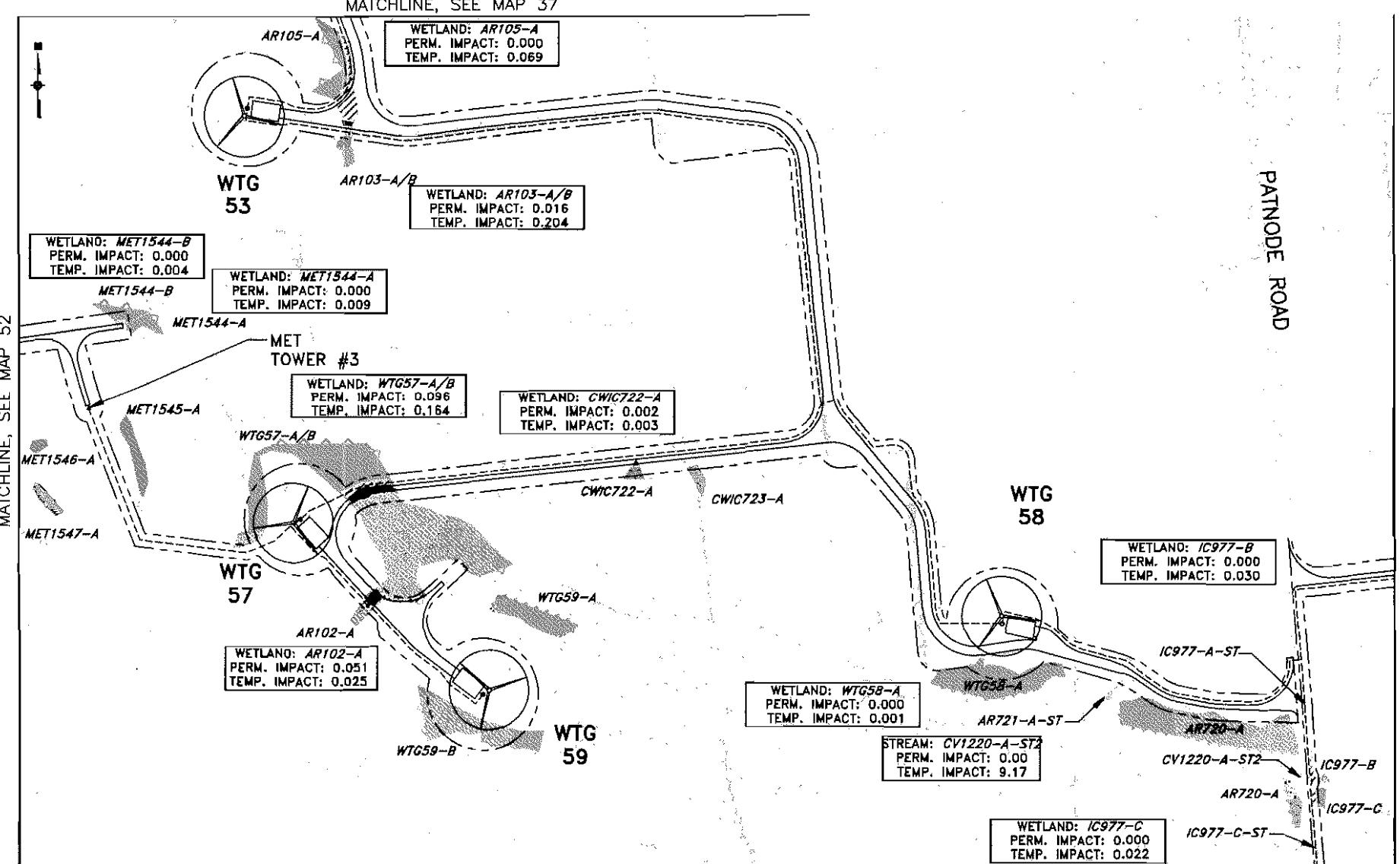
500' 0 500'  
SCALE IN FEET

- NOTE:
1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

**MARBLE RIVER WIND FARM  
DELINERATED WETLANDS**

DATE: DEC. 2007 | MAP# 37 OF 52

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**MATCHLINE, SEE MAP 50**

- OVERHEAD ELECTRICAL COLLECTION SYSTEM
- UNDERGROUND ELECTRICAL COLLECTION SYSTEM
- TEMPORARY WETLAND IMPACT
- PERMANENT WETLAND IMPACT

**WTG 139**

**LEGEND**

- ACCESS ROAD
- FIELD DELINEATED STREAM
- PERMANENT STREAM IMPACT
- TEMPORARY STREAM IMPACT
- FIELD DELINEATED WETLAND
- LIMIT OF JURISDICTIONAL DETERMINATION
- FORESTED WETLAND COVERTYPE ALTERATION

**EXISTING CONTOUR**

NWI MAPPED WETLAND

FIELD DELINEATED ISOLATED WETLAND

WETLAND CONTINUATION LINE

500' 0 500'

SCALE IN FEET

**MATCHLINE, SEE MAP 41**

**NOTE:**

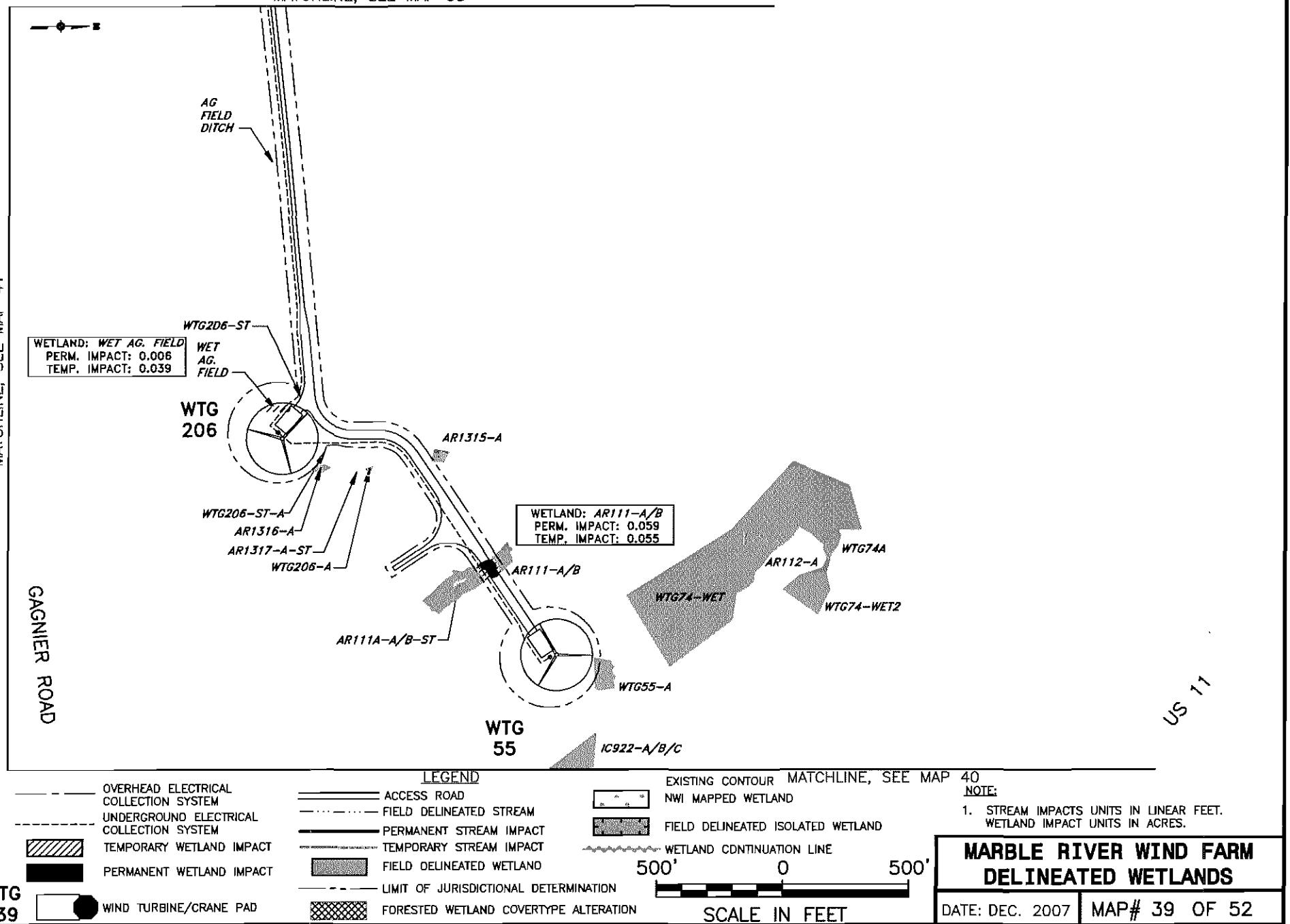
1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

REV. 1	03/04/08	REVISED IMPACTS
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### MARBLE RIVER WIND FARM DELINERATED WETLANDS

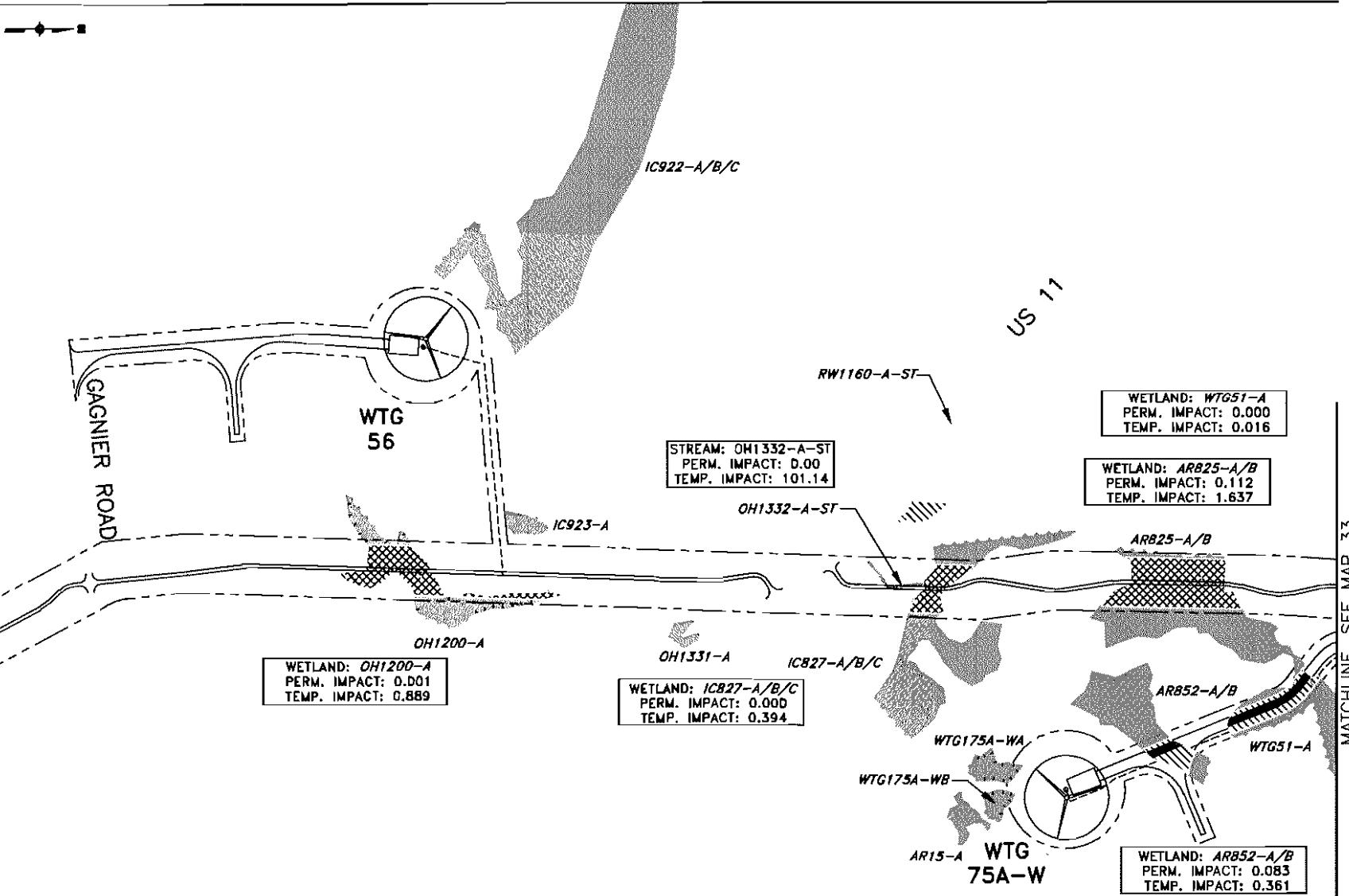
DATE: DEC. 2007	MAP# 38 OF 52
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MATCHLINE, SEE MAP 38



MATCHLINE, SEE MAP 39

MATCHLINE, SEE MAP 42

WTG  
139

- OVERHEAD ELECTRICAL COLLECTION SYSTEM
- - - UNDERGROUND ELECTRICAL COLLECTION SYSTEM
- [diagonal hatching] TEMPORARY WETLAND IMPACT
- [solid black] PERMANENT WETLAND IMPACT
- [white box] WIND TURBINE/CRANE PAD

**LEGEND**

- ACCESS ROAD
- - - FIELD DELINEATED STREAM
- PERMANENT STREAM IMPACT
- - - TEMPORARY STREAM IMPACT
- [solid black] FIELD DELINEATED WETLAND
- [diagonal hatching] FIELD DELINEATED ISOLATED WETLAND
- - - WETLAND CONTINUATION LINE
- LIMIT OF JURISDICTIONAL DETERMINATION
- [diagonal hatching] FORESTED WETLAND COVERTYPE ALTERATION

EXISTING CONTOUR  
NWI MAPPED WETLAND

WETLAND CONTINUATION LINE

500' 0 500'

SCALE IN FEET

**NOTE:**

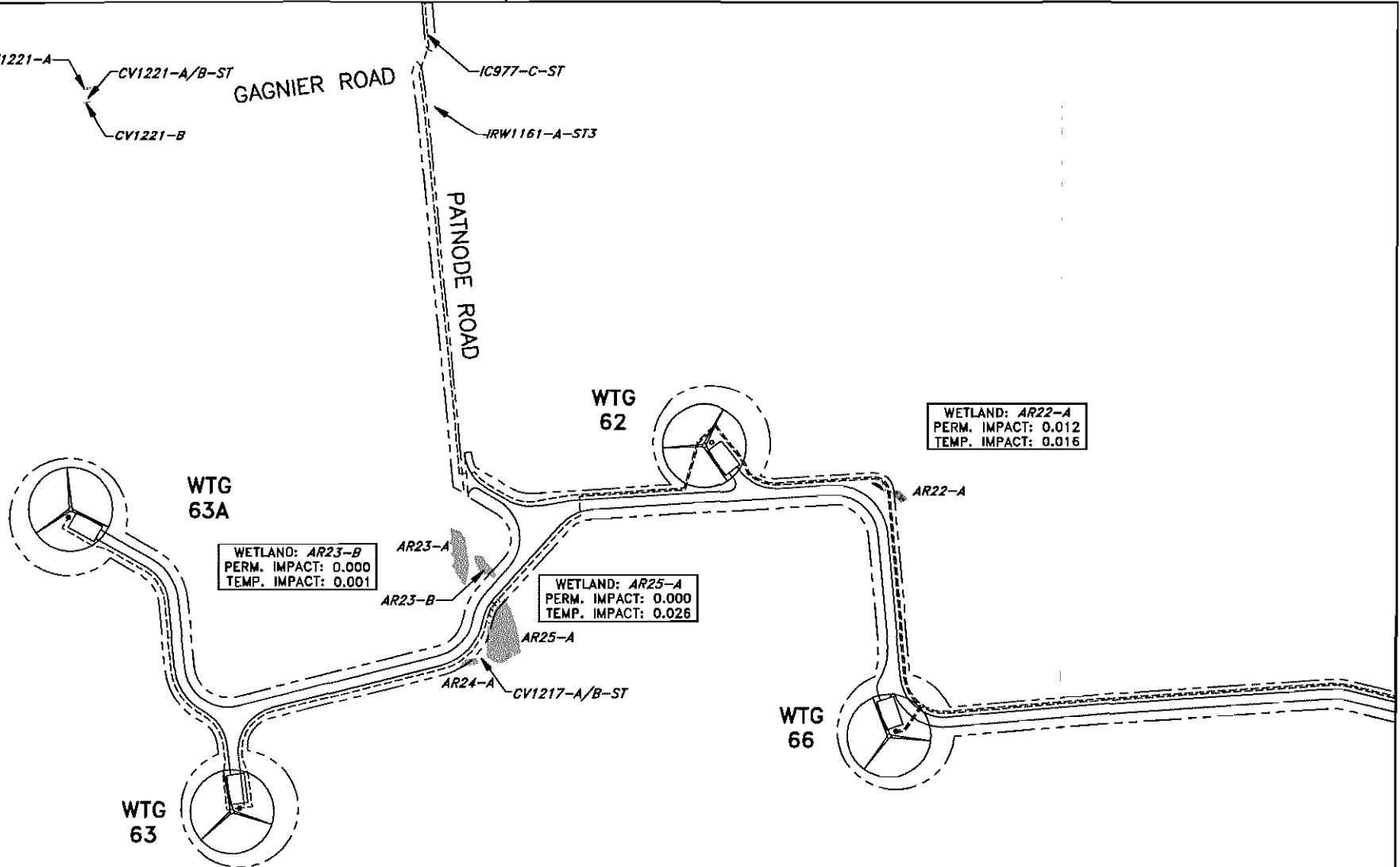
1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

**MARBLE RIVER WIND FARM  
DELINEATED WETLANDS**

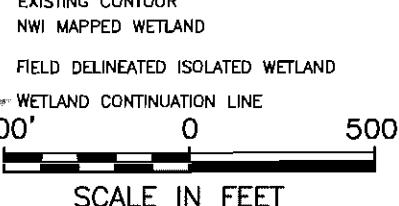
DATE: DEC. 2007 MAP# 40 OF 52

MATCHLINE, SEE MAP 38

MATCHLINE, SEE MAP 39

**LEGEND**

OVERHEAD ELECTRICAL COLLECTION SYSTEM	ACCESS ROAD
UNDERGROUND ELECTRICAL COLLECTION SYSTEM	FIELD DELINEATED STREAM
TEMPORARY WETLAND IMPACT	PERMANENT STREAM IMPACT
PERMANENT WETLAND IMPACT	TEMPORARY STREAM IMPACT
WTG 139	FIELD DELINEATED WETLAND
WIND TURBINE/CRAINE PAD	FIELD DELINEATED ISOLATED WETLAND
	WETLAND CONTINUATION LINE
	LIMIT OF JURISDICTIONAL DETERMINATION
	FORESTED WETLAND COVERTYPE ALTERATION



<b>MARBLE RIVER WIND FARM DELINEATED WETLANDS</b>	
DATE: DEC. 2007	MAP# 41 OF 52

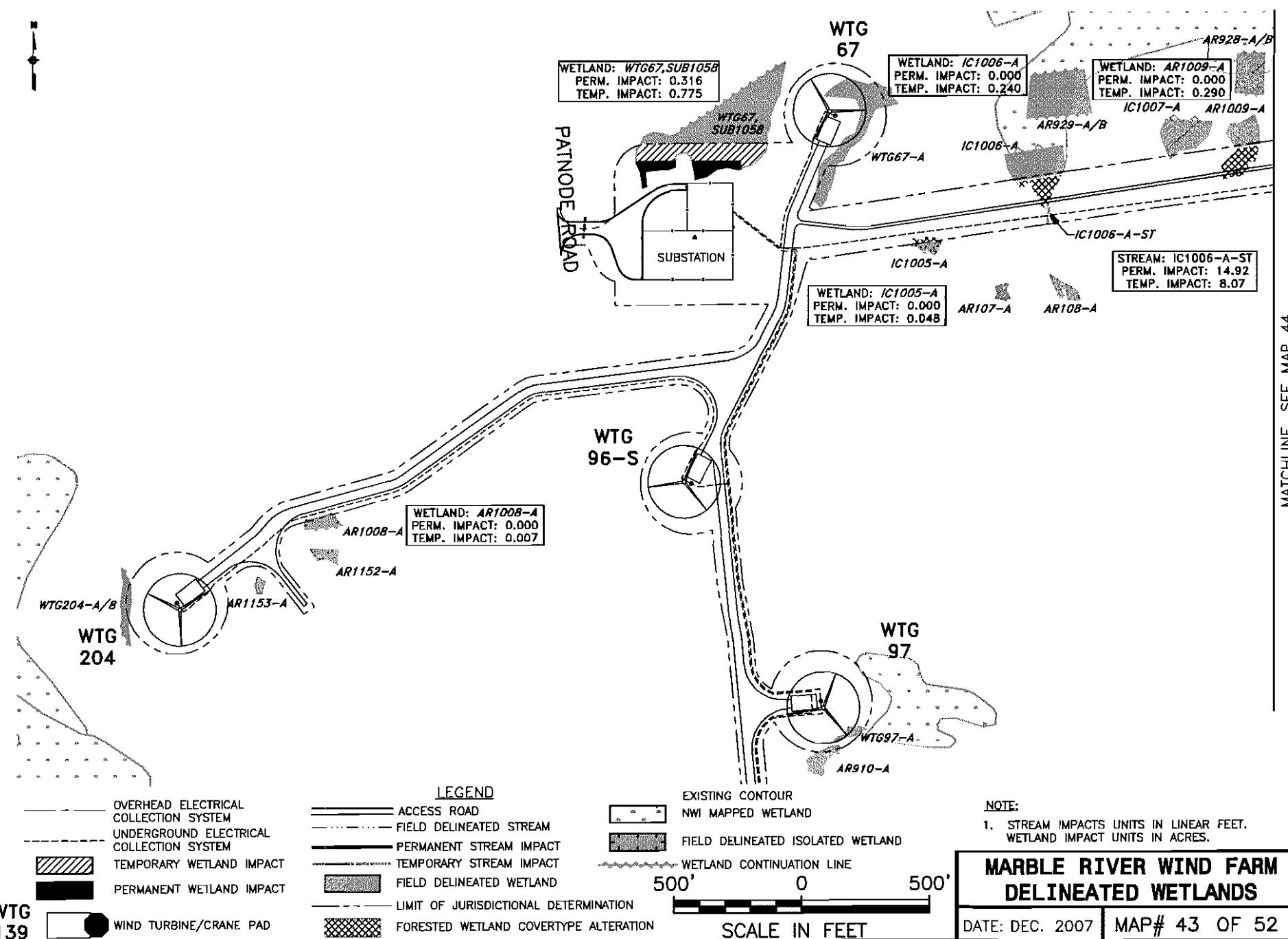
**NOTE:**

1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

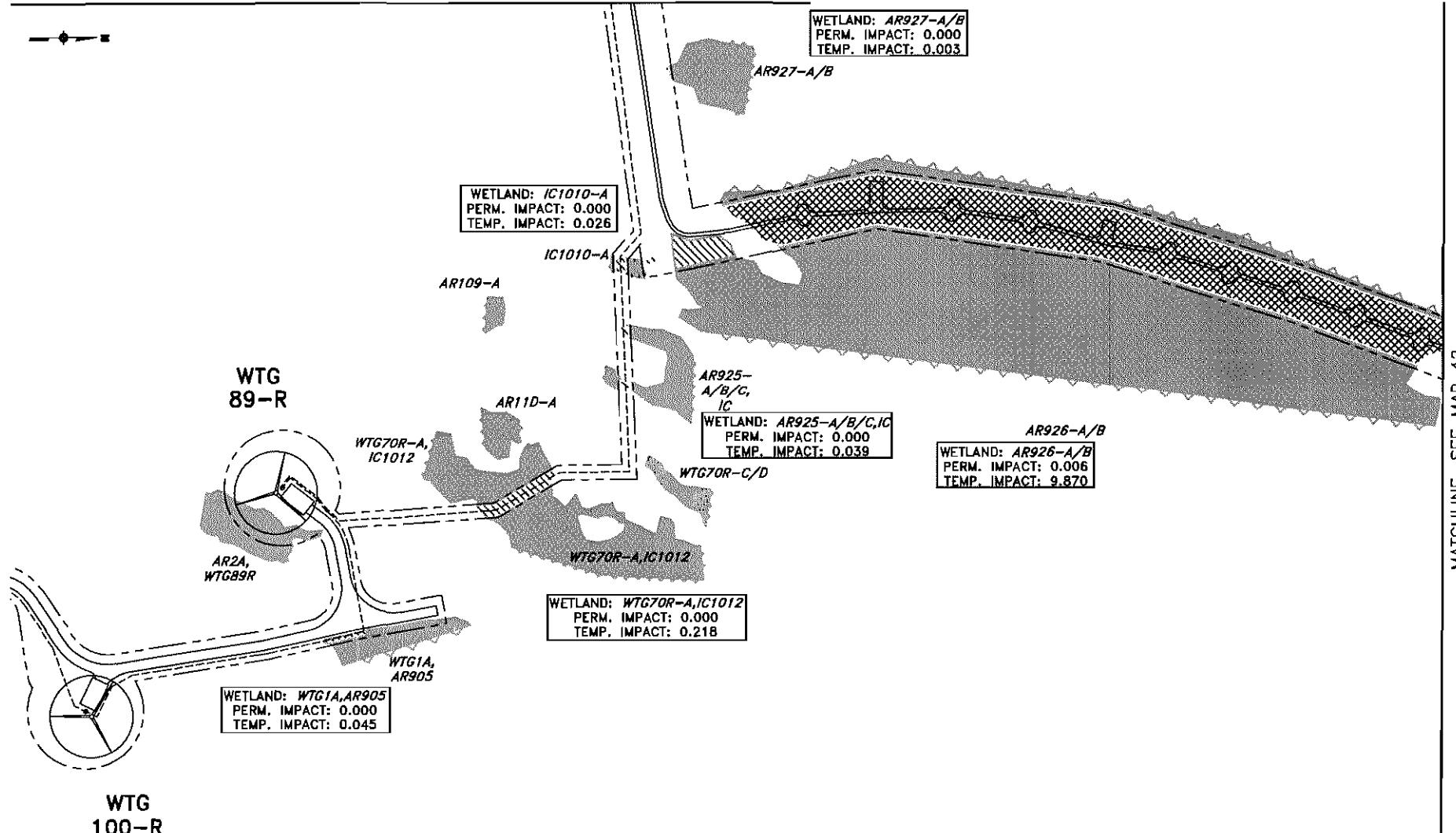
MATCHLINE, SEE MAP 42



MATCHLINE, SEE MAP 44



MATCHLINE, SEE MAP 43



MATCHLINE, SEE MAP 42

Application No. NAD-2007-00147-JWDE

Sheet 46 of 69

MIT-3004

WTG  
139

- OVERHEAD ELECTRICAL COLLECTION SYSTEM
- UNDERGROUND ELECTRICAL COLLECTION SYSTEM
- TEMPORARY WETLAND IMPACT
- PERMANENT WETLAND IMPACT
- WTG 139 ■ WIND TURBINE/CRANE PAD

#### LEGEND

- ACCESS ROAD
- - - FIELD DELINEATED STREAM
- PERMANENT STREAM IMPACT
- TEMPORARY STREAM IMPACT
- FIELD DELINEATED WETLAND
- LIMIT OF JURISDICTIONAL DETERMINATION
- FORESTED WETLAND COVERTYPE ALTERATION

EXISTING CONTOUR

NWI MAPPED WETLAND

FIELD DELINEATED ISOLATED WETLAND

WETLAND CONTINUATION LINE

500' 0 500'

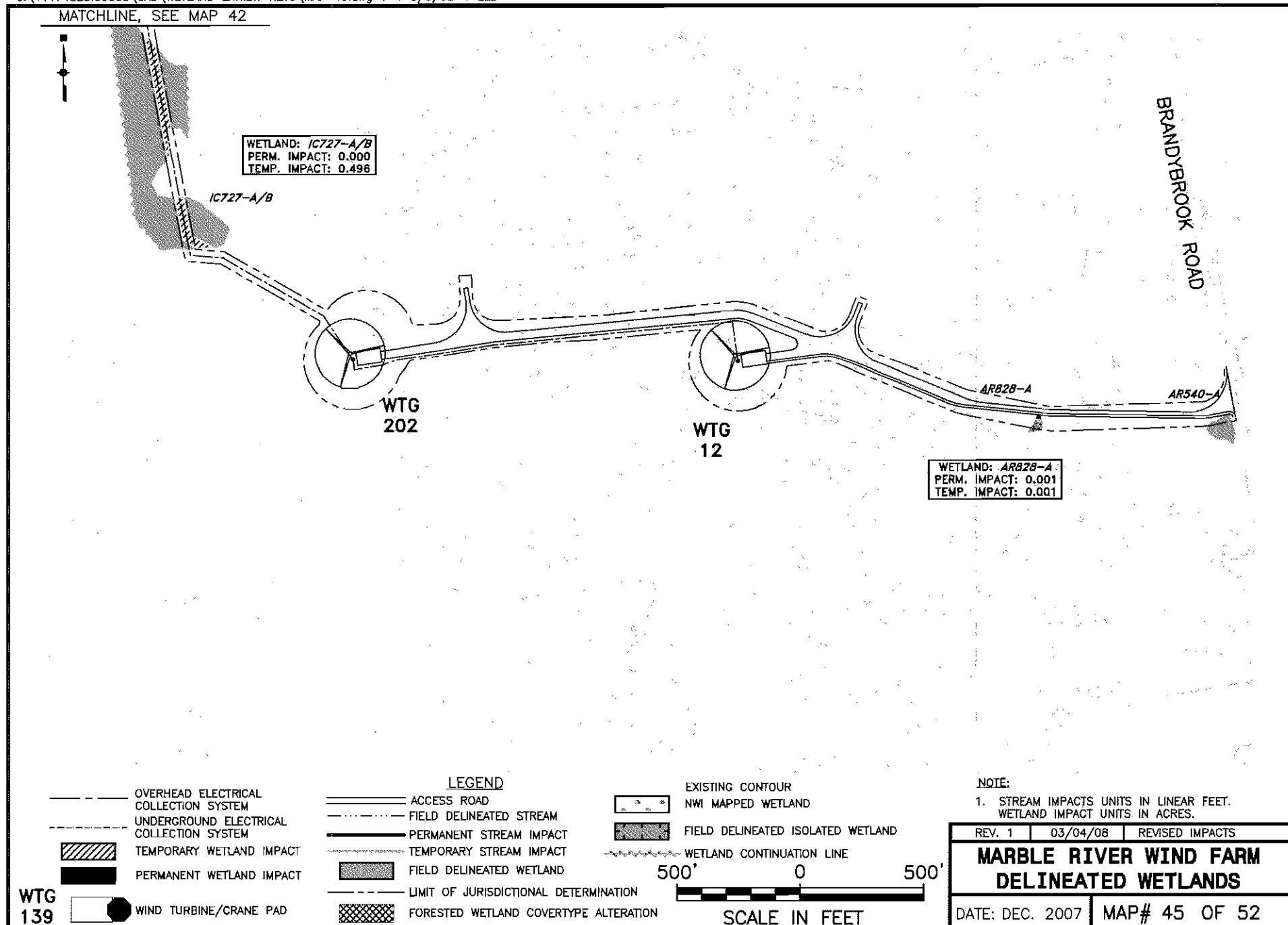
SCALE IN FEET

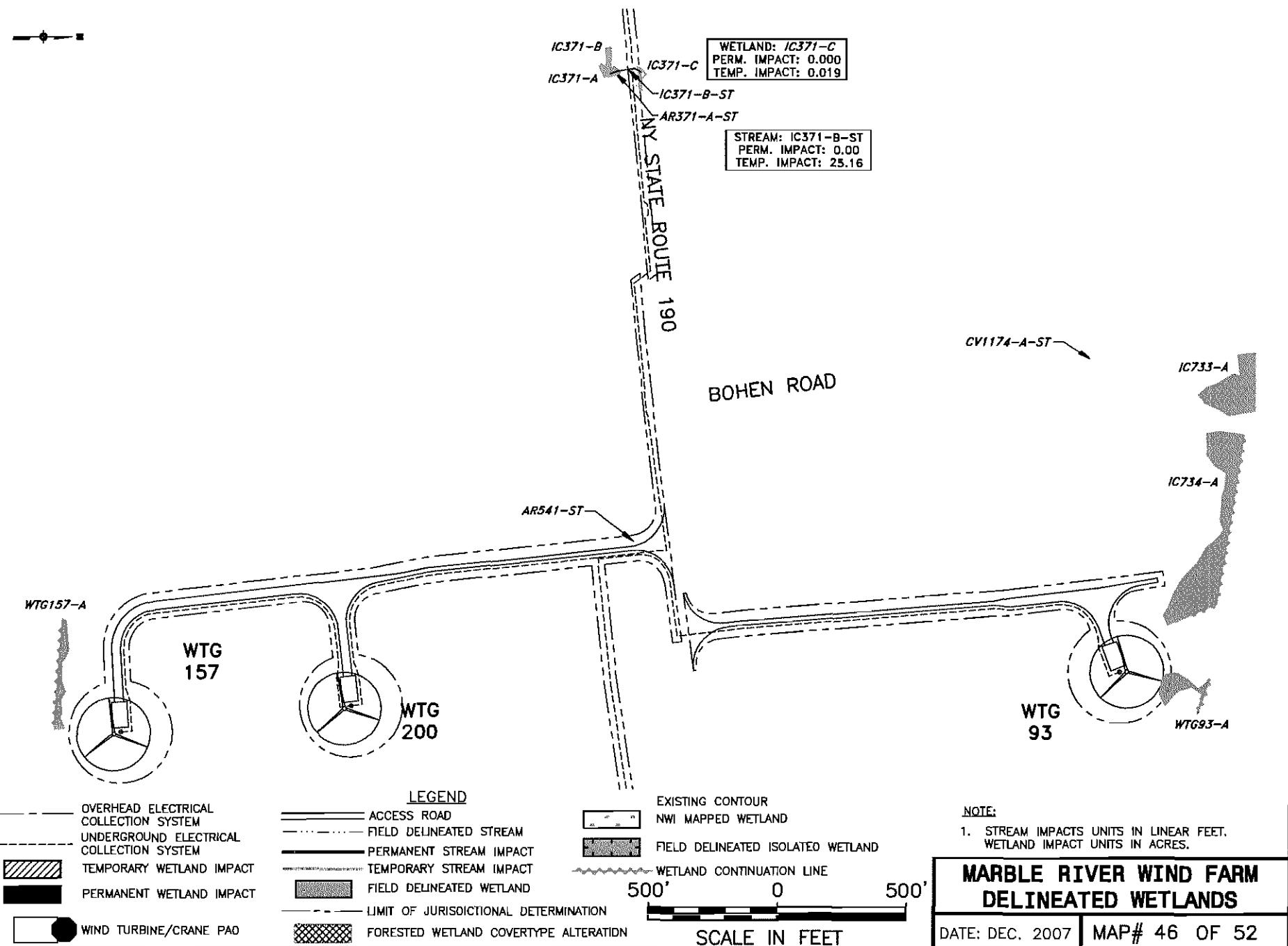
NOTE:

1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

**MARBLE RIVER WIND FARM  
DELINERATED WETLANDS**

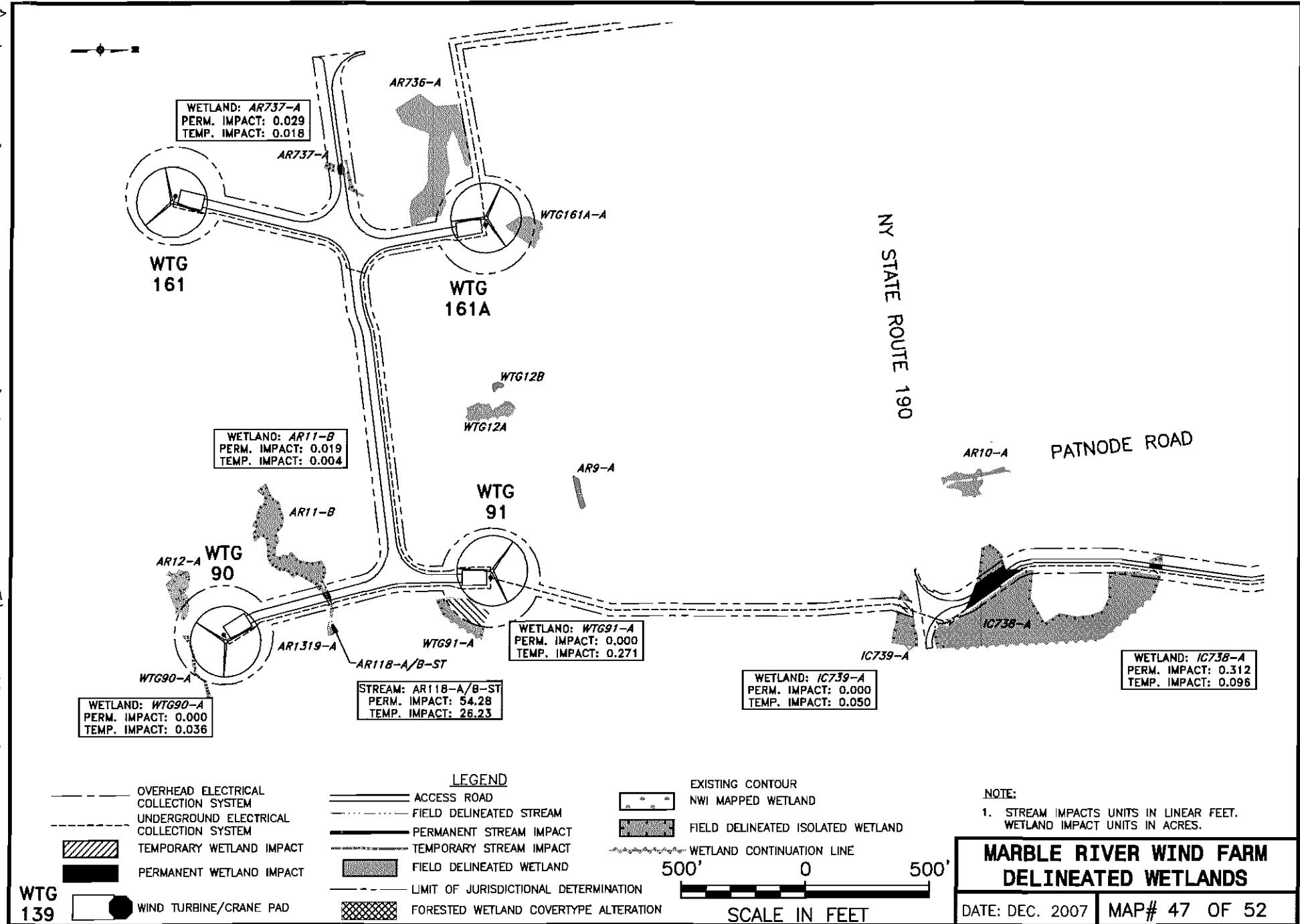
DATE: DEC. 2007 | MAP# 44 OF 52

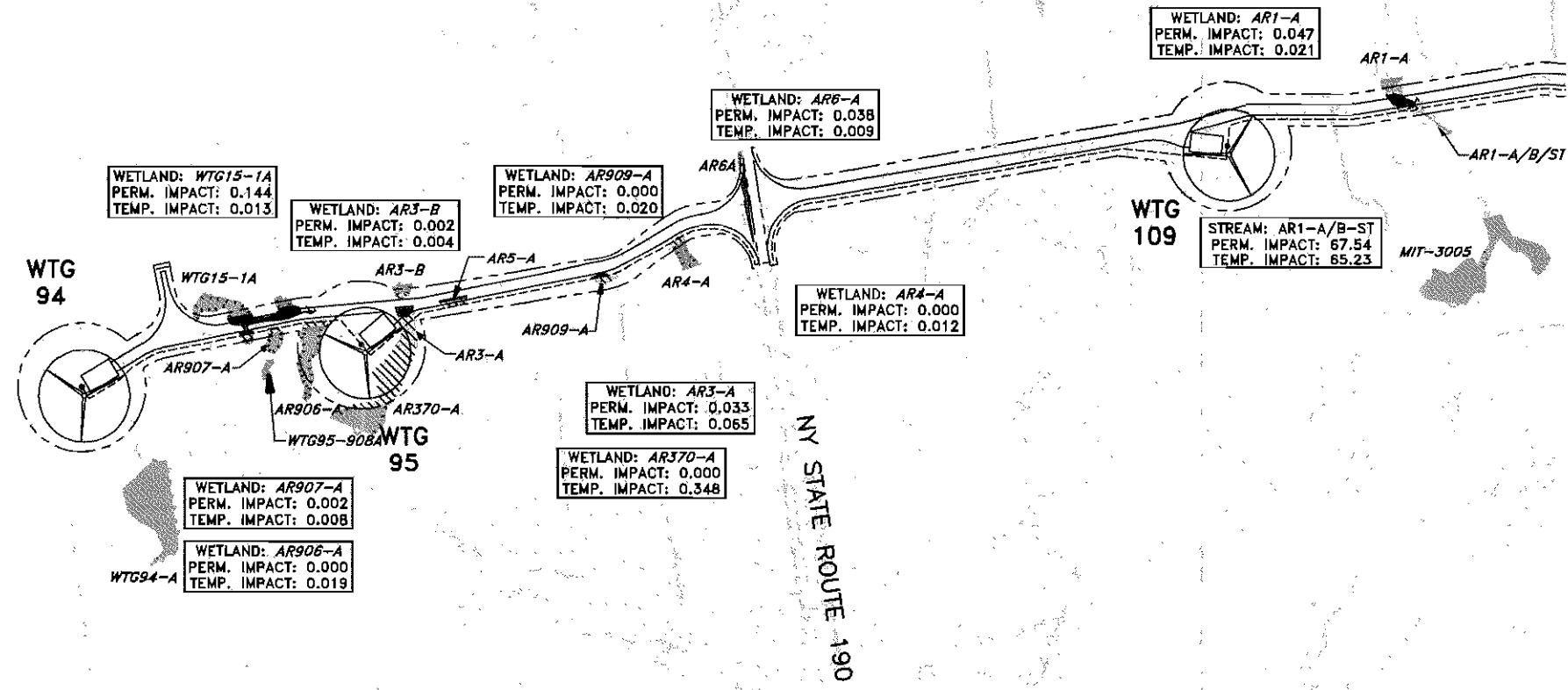


WTG  
139

**MARBLE RIVER WIND FARM  
DELINEATED WETLANDS**

DATE: DEC. 2007 MAP# 46 OF 52





OVERHEAD ELECTRICAL  
COLLECTION SYSTEM  
UNDERGROUND ELECTRICAL  
COLLECTION SYSTEM  
TEMPORARY WETLAND IMPACT  
PERMANENT WETLAND IMPACT

WTG  
139

WIND TURBINE/CRANE PAD

LEGEND

- OVERHEAD ELECTRICAL COLLECTION SYSTEM
- UNDERGROUND ELECTRICAL COLLECTION SYSTEM
- TEMPORARY WETLAND IMPACT
- PERMANENT WETLAND IMPACT
- ACCESS ROAD
- FIELD DELINEATED STREAM
- PERMANENT STREAM IMPACT
- TEMPORARY STREAM IMPACT
- FIELD DELINEATED WETLAND
- FIELD DELINEATED ISOLATED WETLAND
- FIELD DELINEATED WETLAND
- LIMIT OF JURISDICTIONAL DETERMINATION
- FORESTED WETLAND COVERTYPE ALTERATION

500' 0 500'

SCALE IN FEET

NOTE:

1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

REV. 1 03/04/08 REVISED IMPACTS

**MARBLE RIVER WIND FARM  
DELINEATED WETLANDS**

DATE: DEC. 2007 MAP# 48 OF 52

MATCHLINE, SEE MAP 38

MATCHLINE, SEE MAP 41

RW1162-A5

CAMPBELL ROAD

CV1256-B-ST

STREAM: CV1400-A/B, CV1223-A-ST  
 PERM. IMPACT: 0.00  
 TEMP. IMPACT: 89.45

WETLAND: CV1400-A  
 PERM. IMPACT: 0.000  
 TEMP. IMPACT: 0.011

CV1400-A/B, CV1223-A-ST GAGNIER ROAD

CV1400-A  
 CV1400-C

WETLAND: CV1400-C  
 PERM. IMPACT: 0.000  
 TEMP. IMPACT: 0.028

CV1222-A/B-ST



- OVERHEAD ELECTRICAL COLLECTION SYSTEM
- - - UNDERGROUND ELECTRICAL COLLECTION SYSTEM
- [diagonal hatching] TEMPORARY WETLAND IMPACT
- [solid black] PERMANENT WETLAND IMPACT
- [white square] WTG 139
- [white circle with black dot] WIND TURBINE/CRANE PAD

- LEGEND
- ACCESS ROAD
  - - - FIELD DELINEATED STREAM
  - PERMANENT STREAM IMPACT
  - - - TEMPORARY STREAM IMPACT
  - [diagonal hatching] FIELD DELINEATED WETLAND
  - [solid black] LIMIT OF JURISDICTIONAL DETERMINATION
  - [white square with diagonal hatching] FORESTED WETLAND COVERTYPE ALTERATION

- EXISTING CONTOUR
- NWI MAPPED WETLAND
- [diagonal hatching] FIELD DELINEATED ISOLATED WETLAND
- - - WETLAND CONTINUATION LINE

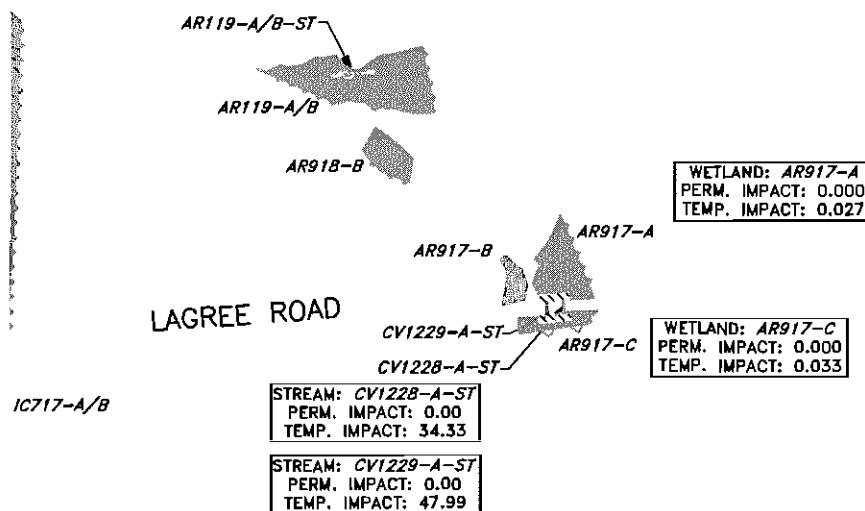
500' 0 500'

SCALE IN FEET

NOTE:  
 1. STREAM IMPACTS UNITS IN LINEAR FEET.  
 WETLAND IMPACT UNITS IN ACRES.

### MARBLE RIVER WIND FARM DELINATE WETLANDS

DATE: DEC. 2007 MAP# 50 OF 52



OVERHEAD ELECTRICAL COLLECTION SYSTEM  
UNDERGROUND ELECTRICAL COLLECTION SYSTEM  
TEMPORARY WETLAND IMPACT  
PERMANENT WETLAND IMPACT  
WTG 139  
WIND TURBINE/CRANE PAD

LEGEND

- OVERHEAD ELECTRICAL COLLECTION SYSTEM
- UNDERGROUND ELECTRICAL COLLECTION SYSTEM
- TEMPORARY WETLAND IMPACT
- PERMANENT WETLAND IMPACT
- ACCESS ROAD
- FIELD DELINEATED STREAM
- PERMANENT STREAM IMPACT
- TEMPORARY STREAM IMPACT
- FIELD DELINEATED WETLAND
- LIMIT OF JURISDICTIONAL DETERMINATION
- FORESTED WETLAND COVERTYPE ALTERATION

EXISTING CONTOUR  
NWI MAPPED WETLAND  
FIELD DELINEATED ISOLATED WETLAND  
WETLAND CONTINUATION LINE

500' 0 500'

SCALE IN FEET

**NOTE:**  
1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

**MARBLE RIVER WIND FARM  
DELINNEATED WETLANDS**  
DATE: DEC. 2007 MAP# 51 OF 52

MATCHLINE, SEE MAP 37

CV1253-A/B-ST  
CV1253-A

BR1254-B-ST:

WETLAND: MET1548-B  
PERM. IMPACT: 0.000  
TEMP. IMPACT: 0.002

MET1551A/B-STA

WETLAND: MET1551-A  
PERM. IMPACT: 0.000  
TEMP. IMPACT: 0.069

MET1551-B  
MET1548-B  
MET1548-A

WETLAND: MET1548-A  
PERM. IMPACT: 0.000  
TEMP. IMPACT: 0.025

MATCHLINE, SEE MAP 3B

CAMPBELL ROAD

OVERHEAD ELECTRICAL  
COLLECTION SYSTEM  
UNDERGROUND ELECTRICAL  
COLLECTION SYSTEM  
TEMPORARY WETLAND IMPACT  
PERMANENT WETLAND IMPACT  
WTG 139  
WIND TURBINE/CRANE PAD

LEGEND  
 ——— ACCESS ROAD  
 - - - FIELD DELINEATED STREAM  
 — PERMANENT STREAM IMPACT  
 — TEMPORARY STREAM IMPACT  
 ■ FIELD DELINEATED WETLAND  
 - - - LIMIT OF JURISDICTIONAL DETERMINATION  
 ■ FORESTED WETLAND COVERTYPE ALTERATION

EXISTING CONTOUR  
NWI MAPPED WETLAND

FIELD DELINEATED ISOLATED WETLAND

WETLAND CONTINUATION LINE

500' 0 500'

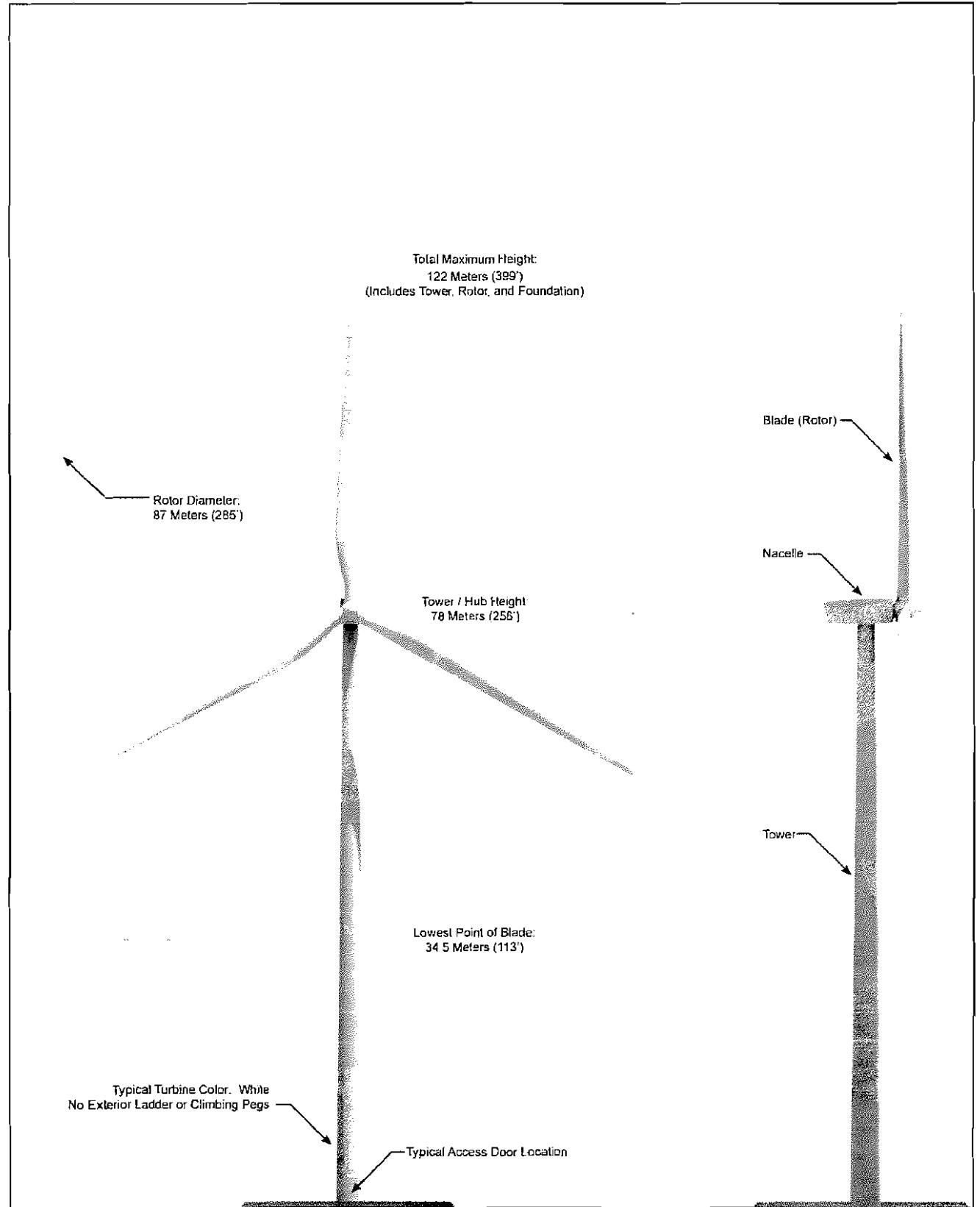
SCALE IN FEET

MATCHLINE, SEE MAP 50  
NOTE:

1. STREAM IMPACTS UNITS IN LINEAR FEET.  
WETLAND IMPACT UNITS IN ACRES.

**MARBLE RIVER WIND FARM  
DELINEATED WETLANDS**

DATE: DEC. 2007 MAP# 52 OF 52



### Typical Turbine Dimensions

**Gamesa G87**  
**Marble River Wind Farm**

Towns of Clinton and Ellenburg  
Clinton County, New York

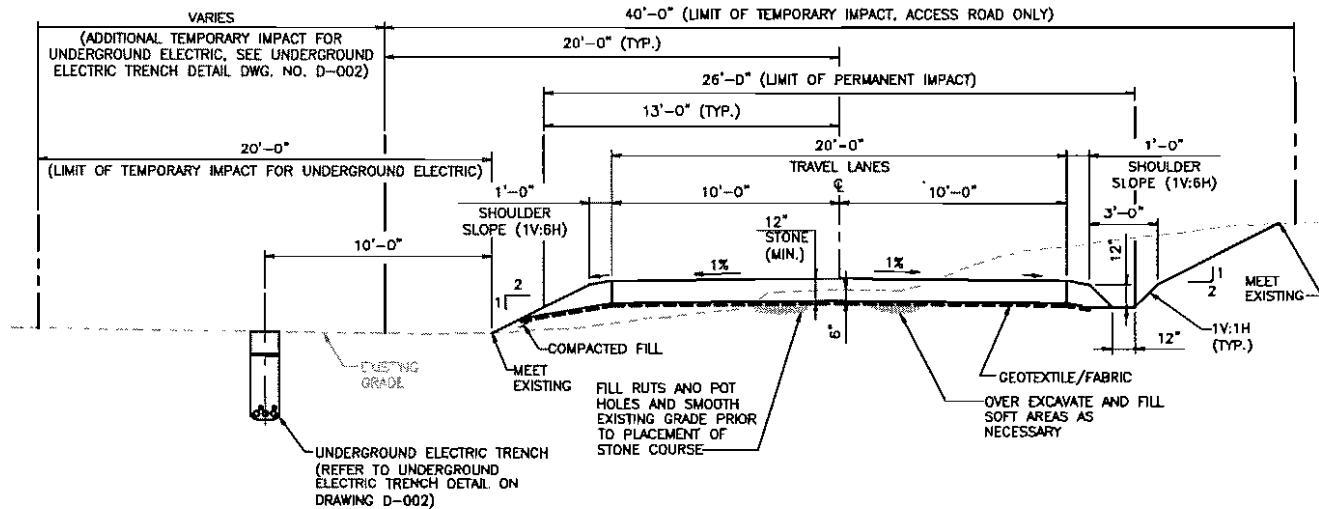
Prepared By:



**Marble River**

December 2007

Application No 2007-00147-WDE

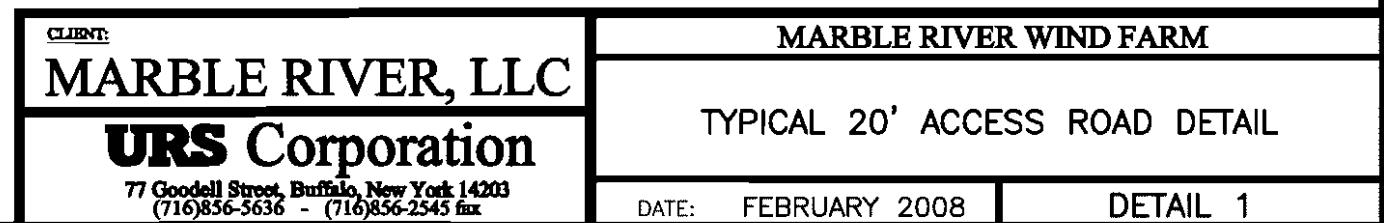


## TYPICAL 20' ACCESS ROAD DETAIL

NOT TO SCALE

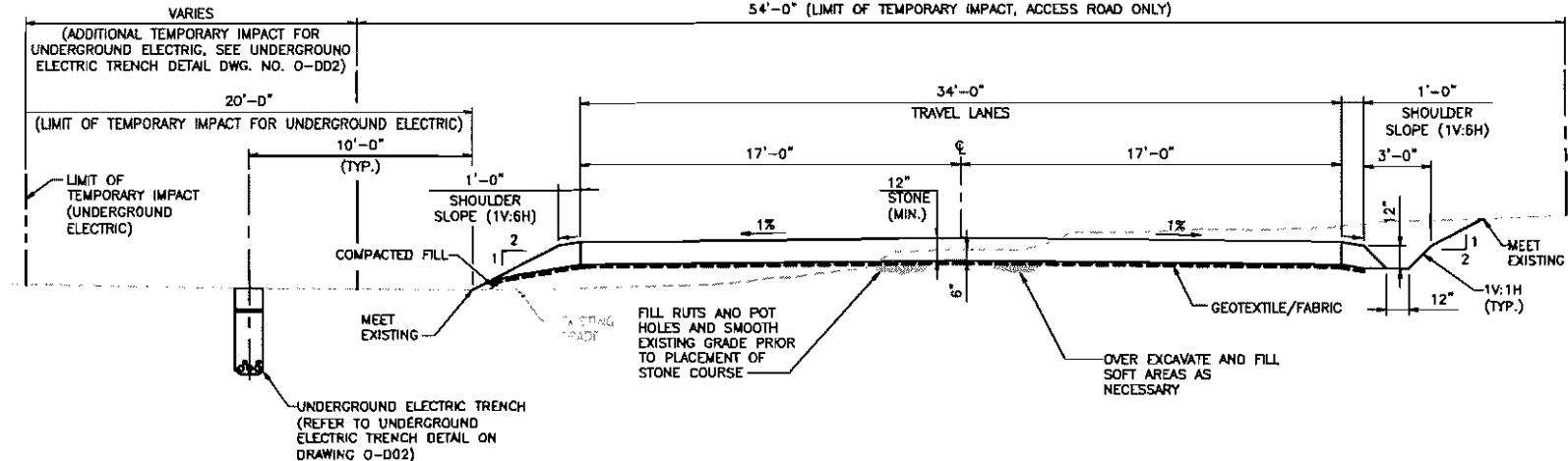
#### 20' ACCESS ROAD REQUIREMENTS:

1. THE ROAD SURFACE SHALL BE ADEQUATELY COMPACTED FOR A FOURTEEN (14) TON PER AXLE LOAD IN WET OR DRY CONDITIONS, WITH A MAXIMUM 24 INCHES DEVIATION IN A 110-FOOT SPAN.
  2. ACCESS ROADS MUST BE GRADED SO AS TO SELF DRAIN AND MUST NOT ALLOW WATER TO PUDDLE.
  3. ROADS MUST BE DEFORESTED TO GIVE A HORIZONTAL CLEARANCE OF NO LESS THAN THE LIMIT OF PERMANENT IMPACT, AND A VERTICAL CLEARANCE OF 22 FEET.
  4. OVERHEAD OBSTRUCTIONS AS IDENTIFIED BY CONTRACTOR SHALL BE REMOVED BY OWNER PRIOR TO START OF TURBINE EQUIPMENT DELIVERIES, AND TURBINE CONSTRUCTION ACTIVITIES.
  5. THE OWNERS BOP CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SURFACE IS FREQUENTLY AND ROUTINELY MAINTAINED AS NECESSARY TO ENSURE THAT THE SURFACE REMAINS IN GOOD CONDITION SUITABLE FOR CONSTRUCTION TRAFFIC.
  6. UNDERGROUND ELECTRIC LOCATION VARIES, REFER TO PLAN FOR LOCATIONS.
  7. DITCHES SHALL BE CONSTRUCTED AS REQUIRED BY THE APPROVED STORMWATER POLLUTION PREVENTION PLAN AND AS REQUIRED BY CONSTRUCTION.
  8. GRADE ALONG DIRECTION OF TRAVEL SHALL NOT EXCEED 12%.
  9. COMPACT TD PROVIDE A GROUND BEARING CAPACITY OF NOMINAL 3,600 POUNDS PER SQUARE FOOT IN WET OR DRY CONDITIONS.
  10. REFER TO WETLAND PERMIT NOTES ON DRAWING FS-003 FOR SOIL STOCKPILING REQUIREMENTS.



Application No. NAW-200-t000-0001-0001

Sheet 5 of 69



## TYPICAL 34' TEMPORARY ACCESS ROAD DETAIL

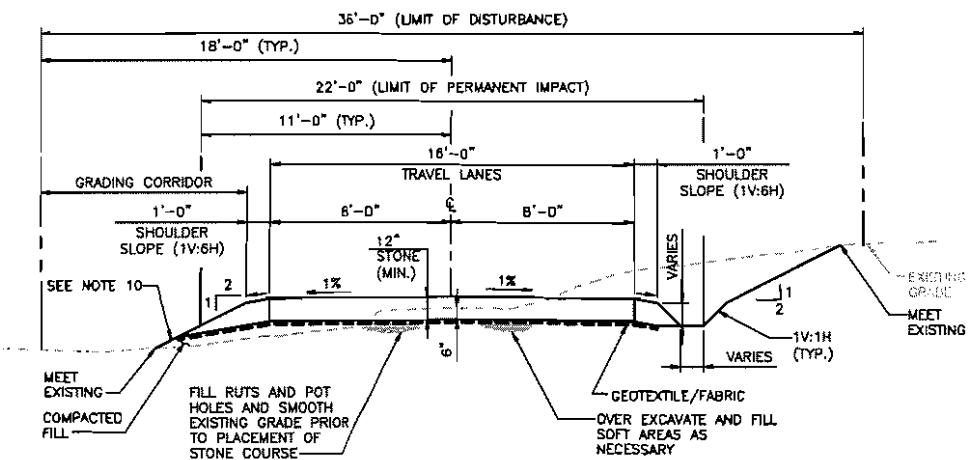
NOT TO SCALE

### 34' ACCESS ROAD REQUIREMENTS:

1. THE TEMPORARY 34' ACCESS ROAD WILL BE REDUCED TO 18' AFTER TURBINE CONSTRUCTION IN ACCORDANCE WITH TYPICAL 34' ROAD TO 18' ROAD REDUCTION DETAIL PRESENTED ON THIS DRAWING.
2. THE ROAD SURFACE SHALL BE ADEQUATELY COMPACTED FOR A FOURTEEN (14) TON PER AXLE LOAD IN WET OR DRY CONDITIONS, WITH A MAXIMUM 24 INCHES DEVIATION IN A 110-FOOT SPAN.
3. ACCESS ROADS MUST BE GRADED SO AS TO SELF DRAIN AND MUST NOT ALLOW WATER TO PUDDLE.
4. ROADS MUST BE DEFORESTED TO GIVE CLEAR CORRIDOR OF NO LESS THAN THE LIMIT OF PERMANENT IMPACT WITH NO OVERHEAD OBSTRUCTIONS.
5. OVERHEAD OBSTRUCTIONS AS IDENTIFIED BY CONTRACTOR SHALL BE REMOVED BY OWNER PRIOR TO START OF TURBINE EQUIPMENT DELIVERIES, AND TURBINE CONSTRUCTION ACTIVITIES.
6. THE OWNERS BOP CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SURFACE IS FREQUENTLY AND ROUTINELY MAINTAINED AS NECESSARY TO ENSURE THAT THE SURFACE REMAINS IN GOOD CONDITION SUITABLE FOR CONSTRUCTION TRAFFIC.
7. ROADS MUST BE CONSTRUCTED WITH A MAXIMUM CROSS GRADIENT OF 1%.
8. GRADE ALONG DIRECTION OF TRAVEL SHALL NOT EXCEED 12%.
9. COMPACT TO PROVIDE A GROUND BEARING CAPACITY OF NOMINAL 3,600 POUNDS PER SQUARE FOOT IN WET OR DRY CONDITIONS.
10. FOR GRADES >6%, INCREASE THE GROUND BEARING CAPACITY BY 25%.
11. SHOULDER SLOPES OF ROADS MUST BE NO GREATER THAN 45°.
12. ALL CREEKS AND DITCHES WITHIN THE CRANE PATH MUST BE FILLED AND MADE DRIVABLE. PROVIDE CULVERTS IF REQUIRED.
13. UNDERGROUND ELECTRIC LOCATION VARIES, REFER TO PLAN FOR LOCATIONS.
14. REFER TO WETLAND PERMIT NOTES ON DRAWING ES-003 FDR SOIL STOCKPILING REQUIREMENTS.

<b>CLIENT:</b> <b>MARBLE RIVER, LLC</b> <b>URS Corporation</b> 77 Goodell Street, Buffalo, New York 14203 (716)856-5636 - (716)856-2545 fax	<b>MARBLE RIVER WIND FARM</b> <b>TYPICAL 34' TEMPORARY ACCESS ROAD DETAIL</b>
DATE:	FEBRUARY 2008

DETAIL 2

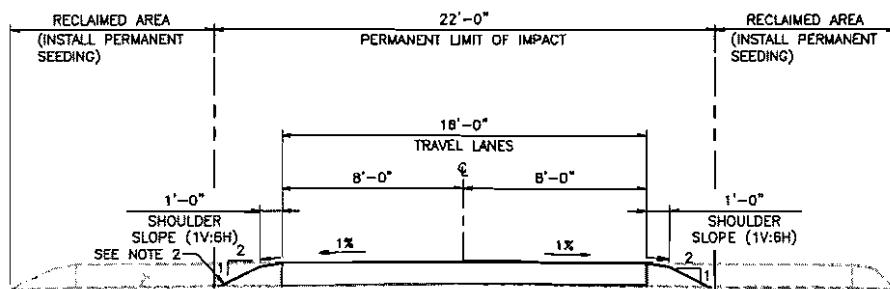


### TYPICAL 16' ACCESS ROAD DETAIL

NOT TO SCALE

#### 16' ACCESS ROAD REQUIREMENTS:

1. THE ROAD SURFACE SHALL BE ADEQUATELY COMPACTED FOR A FOURTEEN (14) TON PER AXLE LOAD IN WET OR DRY CONDITIONS, WITH A MAXIMUM 24 INCHES DEVIATION IN A 110-FOOT SPAN.
2. ACCESS ROADS SHALL BE GRADED SO AS TO SELF DRAIN AND MUST NOT ALLOW WATER TO PUDDLE.
3. ROADS SHALL BE CLEARED TO GIVE A HORIZONTAL CLEARANCE OF NO LESS THAN THE LIMIT OF PERMANENT IMPACT, AND A VERTICAL CLEARANCE OF 22 FEET.
4. OVERHEAD OBSTRUCTIONS AS IDENTIFIED BY CONTRACTOR WILL BE REMOVED BY OWNER PRIOR TO START OF TURBINE EQUIPMENT DELIVERIES AND TURBINE CONSTRUCTION ACTIVITIES.
5. THE CONTRACTOR SHALL MAINTAIN THE SURFACE IN CONDITION SUITABLE FOR CONSTRUCTION TRAFFIC.
6. DITCHES SHALL BE CONSTRUCTED AS REQUIRED BY THE APPROVED STORMWATER POLLUTION PREVENTION PLAN AND AS REQUIRED BY CONSTRUCTION.
7. GRADE ALONG DIRECTION OF TRAVEL SHALL NOT EXCEED 12%.
8. COMPACT TO PROVIDE A GROUND BEARING CAPACITY OF NOMINAL 3,600 POUNDS PER SQUARE FOOT IN WET OR DRY CONDITIONS.
9. REFER TO WETLAND PERMIT NOTES ON DRAWING ES-003 FOR SOIL STOCKPILING REQUIREMENTS.
10. MINIMIZE CONCENTRATED FLOW OFF OF ROAD. RUN-OFF TO DISSIPATE EVENLY THROUGH SILT FENCE AND INTO PASTURE OR WOODS.



### TYPICAL 34' TEMPORARY ACCESS ROAD RESTORATION DETAIL

NOT TO SCALE

#### NOTES:

1. IN AREAS WHERE DITCHES HAVE BEEN CONSTRUCTED, THE PERMANENT ROAD SHALL BE ALONG THE DITCH SIDE AND NOT CENTERED WITHIN THE 34 FOOT ROAD.
2. MINIMIZE CONCENTRATED FLOW OFF OF ROAD-RUN-OFF TO DISSIPATE EVENLY THROUGH SILT FENCE AND INTO PASTURE OR WOODS.

CLIENT:

**MARBLE RIVER, LLC**

**URS Corporation**

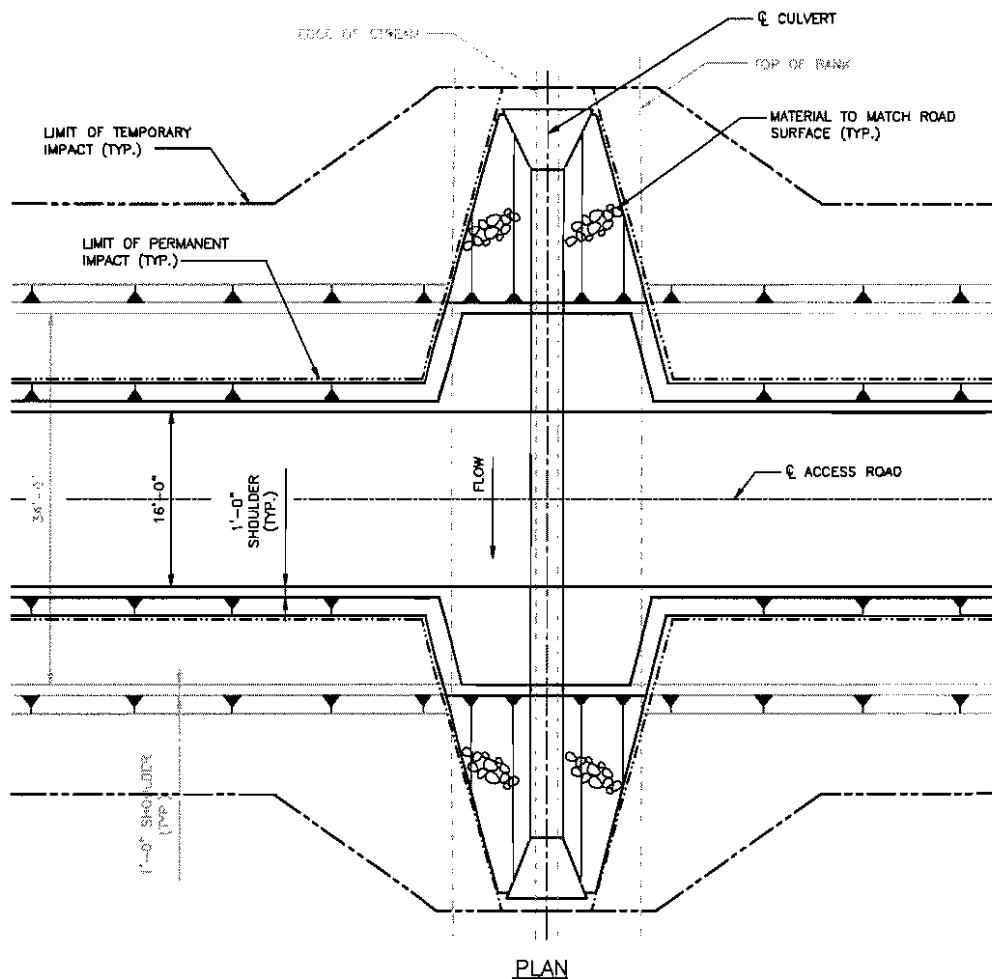
77 Goodell Street, Buffalo, New York 14203  
(716)856-5636 - (716)856-2545 fax

**MARBLE RIVER WIND FARM**

**TYPICAL 16' ACCESS ROAD DETAIL  
AND TYPICAL 34' TEMPORARY ACCESS  
ROAD RESTORATION DETAIL**

DATE: FEBRUARY 2008

DETAIL 3



NOTES:

1. IN AREA OF RECLAMATION, STOCK PILED SOIL/WETLAND SOIL SHALL BE PLACED TO BRING GRADE TO ACCESS ROAD ELEVATION.
2. RECLAIMED AREA ABOVE CULVERT WILL BE RESTORED AND PLANTED WITH THE SPECIFIED PLANTING MATERIAL.

**TYPICAL 34 FOOT TEMPORARY ACCESS ROAD  
RESTORATION AT A CULVERT DETAIL**

NOT TO SCALE

CLIENT:

**MARBLE RIVER, LLC**

**URS Corporation**

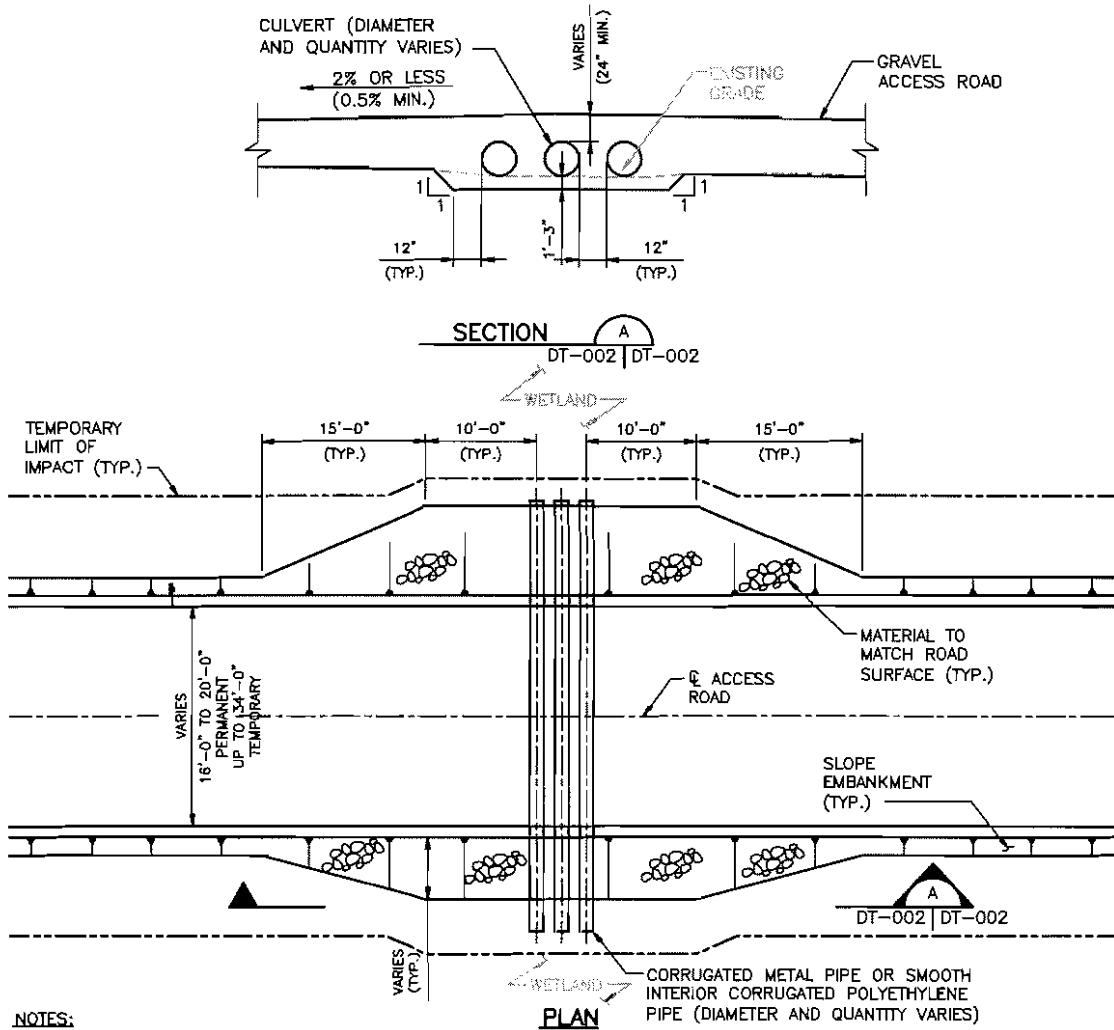
77 Goodell Street, Buffalo, New York 14203  
(716)856-5636 - (716)856-2545 fax

**MARBLE RIVER WIND FARM**

**TYPICAL 34' TEMPORARY ACCESS ROAD  
RESTORATION AT A CULVERT DETAIL**

DATE: FEBRUARY 2008

DETAIL 4

**NOTES:**

1. THIS DETAIL SHALL BE USED IN AREAS WHERE STREAMS DO NOT EXIST BUT PONDING OCCURS IN WET SEASONS.
2. THE CULVERT PLACEMENT SHALL BE PLACED TO PROVIDE FREE FLOW OF PONDED WATER WITHIN A WETLAND FROM ONE SIDE OF THE ROAD TO ANOTHER.
3. THE NUMBER AND SIZE OF CULVERTS SHALL BE DETERMINED BY THE CONTRACTOR AND REGULATORY AGENCY IN THE FIELD, UNLESS ALREADY NOTED ON THE PLANS.
4. CULVERT ALIGNMENT SHALL MATCH EXISTING DRAINAGE PATH ALIGNMENT AS CLOSELY AS POSSIBLE.
5. WHERE EXISTING CULVERTS ARE TO BE REPLACED, THE NEW CULVERT(S) SIZE SHALL MEET OR EXCEED THAT OF THE EXISTING CULVERT. SHOULD THE CULVERT SIZE CALLED OUT ON THE PLANS BE SMALLER THAN THE EXISTING CULVERT, THE ENGINEER SHOULD BE CONTACTED.

**CULVERT AT WETLAND DETAIL**

NOT TO SCALE

CLIENT:

**MARBLE RIVER, LLC**  
**URS Corporation**

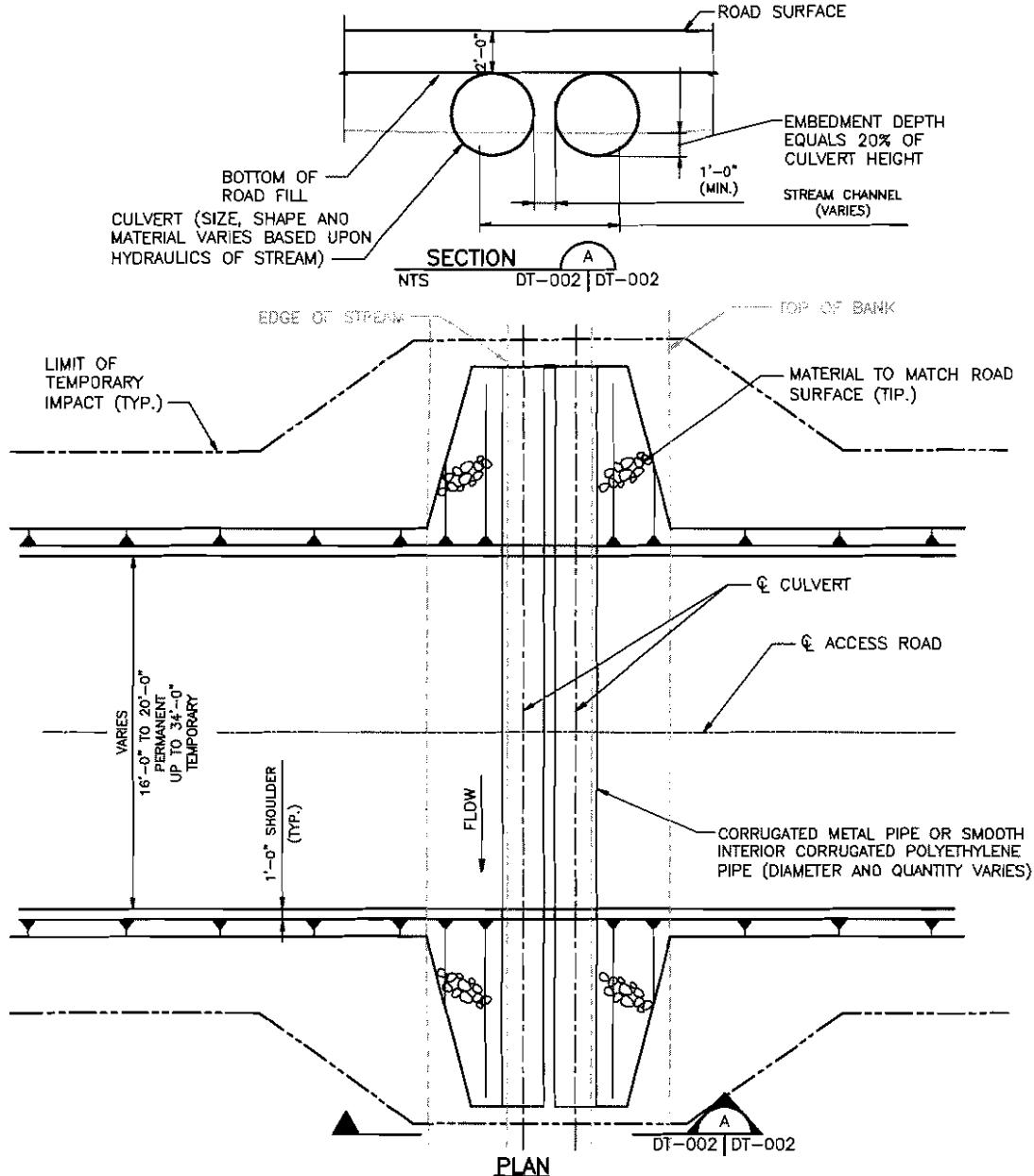
77 Goodell Street, Buffalo, New York 14203  
 (716)856-5636 - (716)856-2545 fax

MARBLE RIVER WIND FARM

CULVERT AT WETLAND DETAIL

DATE: MARCH 2008

DETAIL 5



NOTES:

- CULVERTS SHALL BE INSTALLED IN A MANNER THAT WILL ALLOW THE INVERT OF THE PIPE TO SILT IN.
- CULVERT SIZE SHALL BE AS SHOWN ON THE PLANS. MULTIPLE CULVERTS WILL BE INSTALLED WHERE APPROPRIATE TO MINIMIZE EMBANKMENT FILLS ACROSS CLASSIFIED STREAMS.
- REFER TO WETLAND PERMIT NOTES ON DRAWING ES-003 FOR SOIL STOCKPILING REQUIREMENTS.
- REFER TO DETAIL 44 ON DRAWING ES-007 FOR THE CULVERT CROSSING DETAIL AT NON-CLASSIFIED STREAM CROSSINGS.
- TOTAL CULVERT WIDTH (I.E. THE SUM OF ALL CULVERT DIAMETERS USED IN THE CROSSING) FOR C(T) DESIGNATED STREAMS SHALL BE 1.25 TIMES THE CHANNEL BED WIDTH.
- CULVERT ALIGNMENT SHALL MATCH EXISTING DRAINAGE PATH ALIGNMENT AS CLOSELY AS POSSIBLE.
- WHERE EXISTING CULVERTS ARE TO BE REPLACED, THE NEW CULVERT(S) SIZE SHALL MEET OR EXCEED THAT OF THE EXISTING CULVERT. SHOULD THE CULVERT SIZE CALLED OUT ON THE PLANS BE SMALLER THAN THE EXISTING CULVERT, THE ENGINEER SHOULD BE CONTACTED.

## OVER SIZED CULVERT AT STREAM CROSSING DETAIL

NOT TO SCALE

CLIENT:

**MARBLE RIVER, LLC**

**URS Corporation**

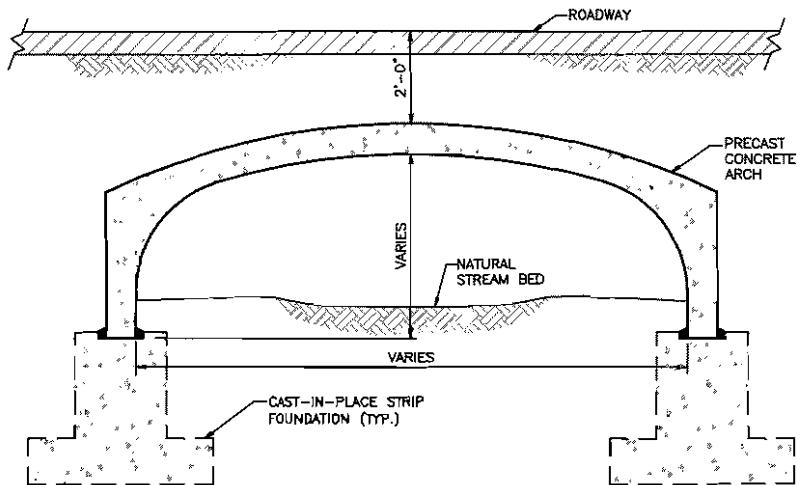
77 Goodell Street, Buffalo, New York 14203  
(716)856-5636 - (716)856-2545 fax

**MARBLE RIVER WIND FARM**

**OVER SIZED CULVERT AT  
STREAM CROSSING DETAIL**

DATE: MARCH 2008

DETAIL 6

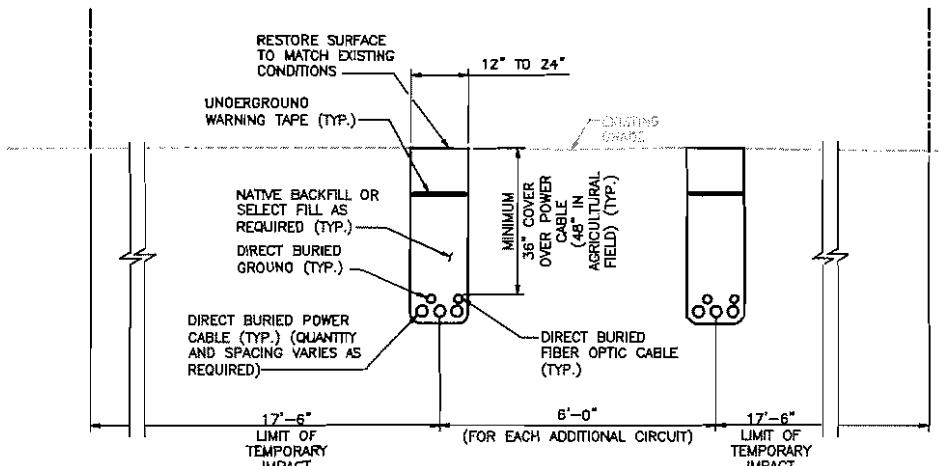


**NOTES:**

1. ARCH SIZE SHALL BE AS SHOWN ON PLANS.
2. INSTALLATION OF ARCH SHALL BE AS REQUIRED BY THE MANUFACTURER.

## BOTTOMLESS CULVERT AT STREAM CROSSING DETAIL

NOT TO SCALE



**NOTES:**

1. CONTRACTOR SHALL EXCAVATE AND STOCK PILE TOPSOIL OR WETLAND SOIL DURING EXCAVATION ACTIVITIES. THIS STOCK PILED MATERIAL SHALL BE USED AS BACKFILL FOR THE TOP 12" OF THE TRENCH.
2. IMPACT UNITS SHOWN APPLY TO TRENCH INSTALLATIONS NOT IN PROXIMITY TO ACCESS ROADS. REFER TO DRAWING D-001 FOR UNDERGROUND ELECTRIC TRENCH DETAIL ALONG ACCESS ROADS.
3. REFER TO WETLAND PERMIT NOTES ON DRAWING ES-DD3 FOR SOIL STOCKPILING REQUIREMENTS.

## UNDERGROUND ELECTRIC TRENCH DETAIL

NOT TO SCALE

**CLIENT:**

**MARBLE RIVER, LLC**

**URS Corporation**

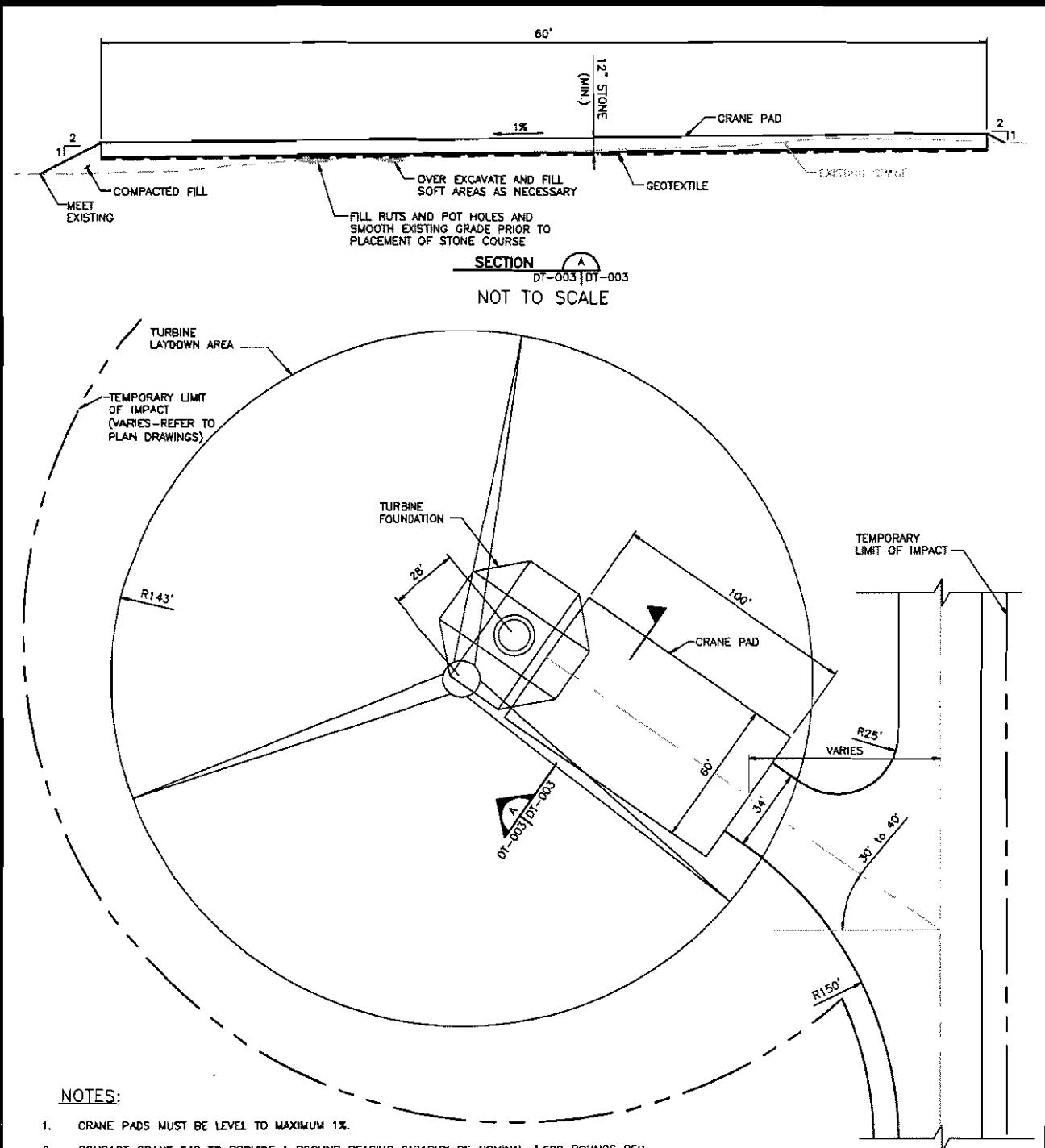
77 Goodell Street, Buffalo, New York 14203  
(716)856-5636 - (716)856-2545 fax

**MARBLE RIVER WIND FARM**

**BOTTOMLESS CULVERT AT  
STREAM CROSSING DETAIL AND  
UNDERGROUND ELECTRIC TRENCH DETAIL**

DATE: MARCH 2008

DETAIL 7



NOTES:

1. CRANE PADS MUST BE LEVEL TO MAXIMUM 1%.
2. COMPACT CRANE PAD TO PROVIDE A GROUND BEARING CAPACITY OF NOMINAL 3,600 POUNDS PER SQUARE FOOT IN WET OR DRY CONDITIONS.
3. THE TRANSITION AREAS SHALL BE BACKFILLED WITH THE SUBGRADE MATERIAL UNLESS OTHERWISE INDICATED ON THE CONSTRUCTION DRAWINGS.

TYPICAL TURBINE LAYOUT DETAIL

NOT TO SCALE

CLIENT:

**MARBLE RIVER, LLC**

**URS Corporation**

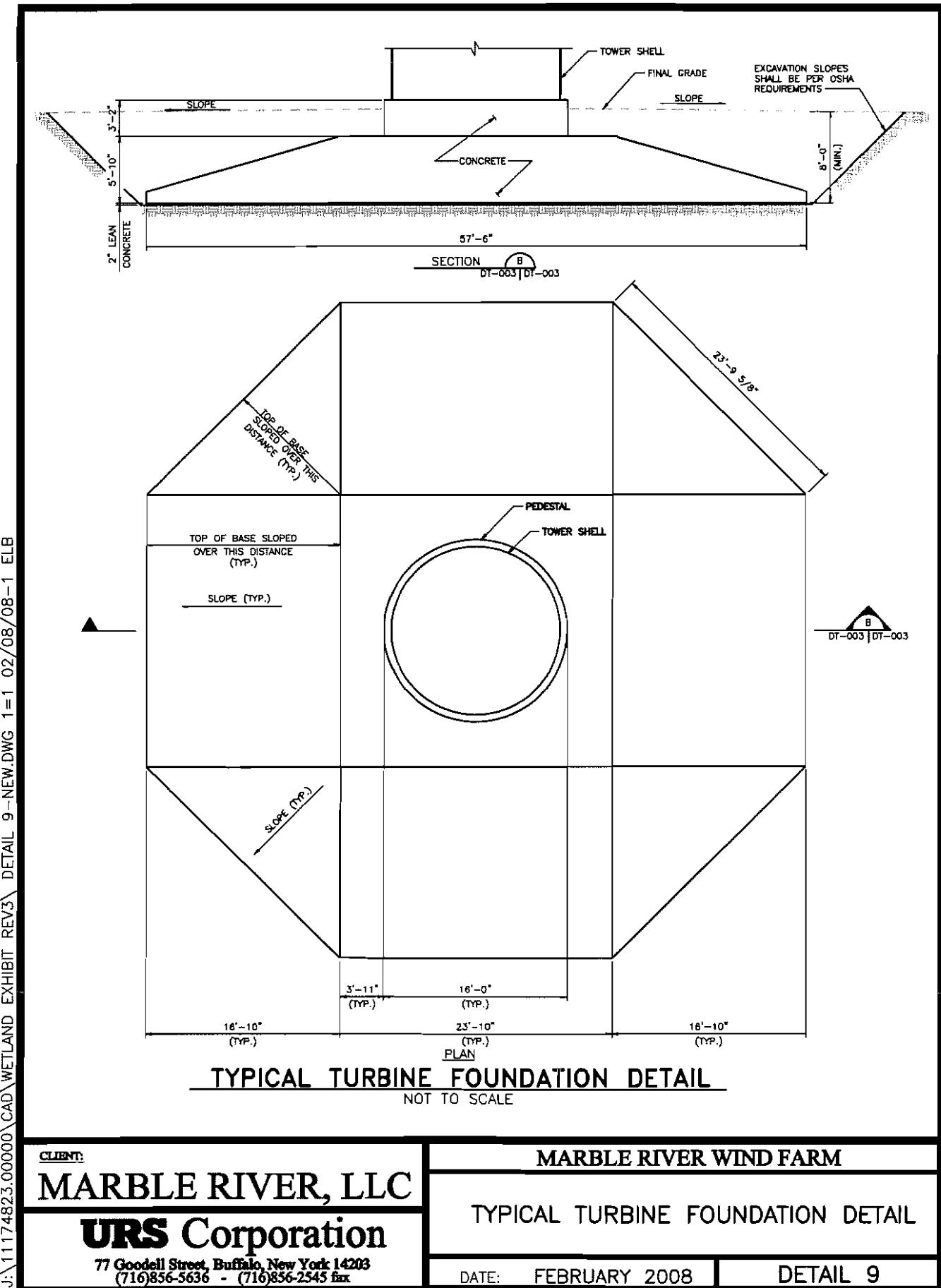
77 Goodell Street, Buffalo, New York 14203  
(716)856-5636 - (716)856-2545 fax

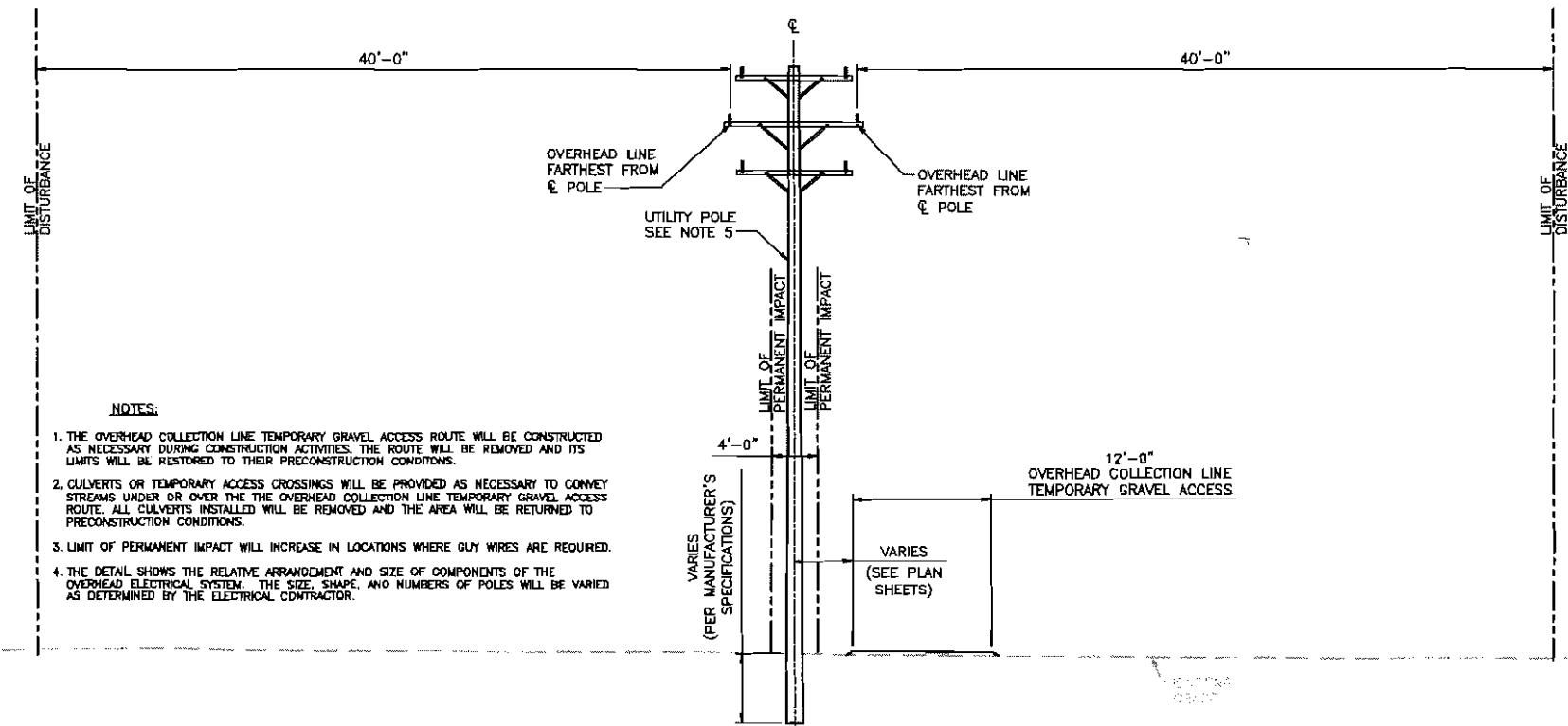
**MARBLE RIVER WIND FARM**

BOTTOMLESS CULVERT AT  
STREAM CROSSING DETAIL AND  
UNDERGROUND ELECTRIC TRENCH DETAIL

DATE: FEBRUARY 2008

DETAIL 8

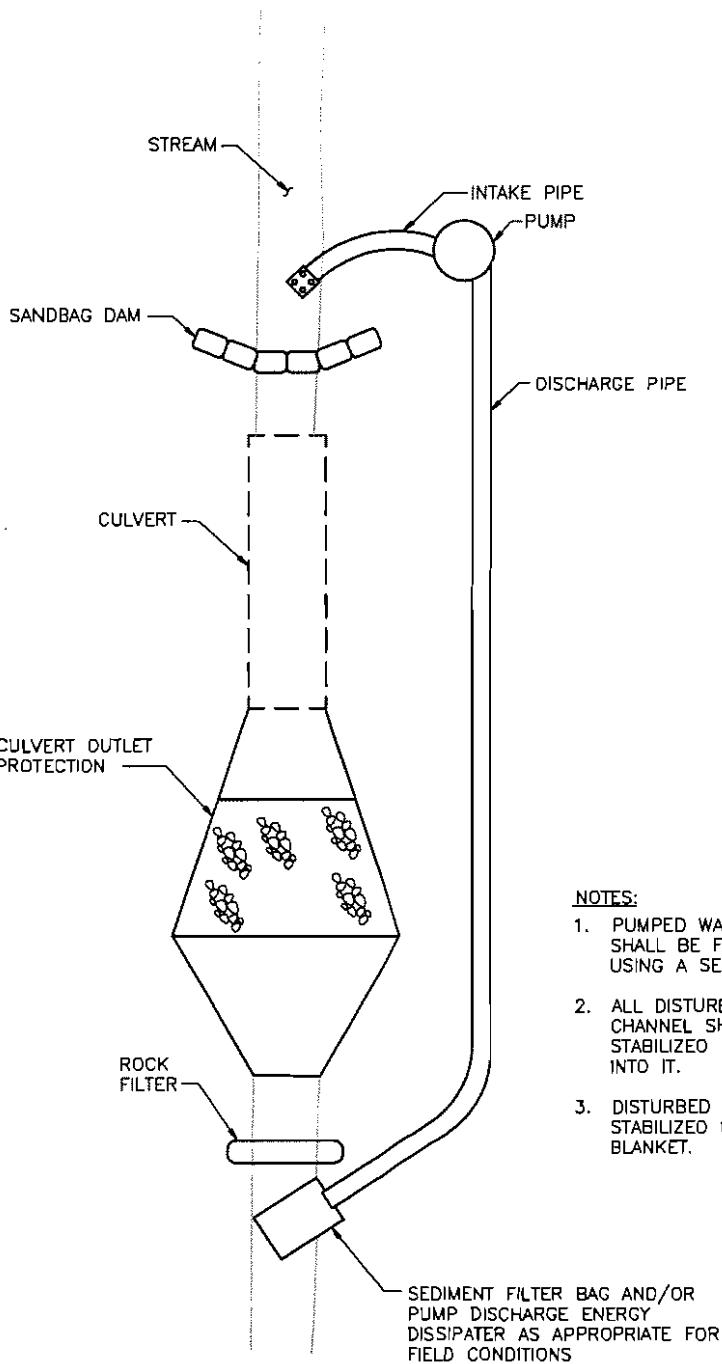




## GENERAL UTILITY POLE DETAIL

NOT TO SCALE

<b>CLIENT:</b> <b>MARBLE RIVER, LLC</b> <b>URS Corporation</b> 77 Goodell Street, Buffalo, New York 14203 (716)856-5636 - (716)856-2545 fax	<b>MARBLE RIVER WIND FARM</b> <b>TYPICAL UTILITY POLE DETAIL</b> DATE: MARCH 2008
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NOTES:

1. PUMPED WATER FROM EXCAVATED AREAS SHALL BE FILTERED PRIOR TO DISCHARGE USING A SEDIMENT FILTER BAG.
2. ALL DISTURBED AREAS WITHIN THE EXISTING CHANNEL SHALL BE COMPLETED AND STABILIZED BEFORE FLOW IS REDIRECTED INTO IT.
3. DISTURBED STREAM BANKS SHALL BE STABILIZED USING AN EROSION CONTROL BLANKET.

## TEMPORARY COFFERDAM AND PUMP BYPASS AROUND IN-CHANNEL WORK AREAS DETAIL

NOT TO SCALE

CLIENT:

**MARBLE RIVER, LLC**

**URS Corporation**

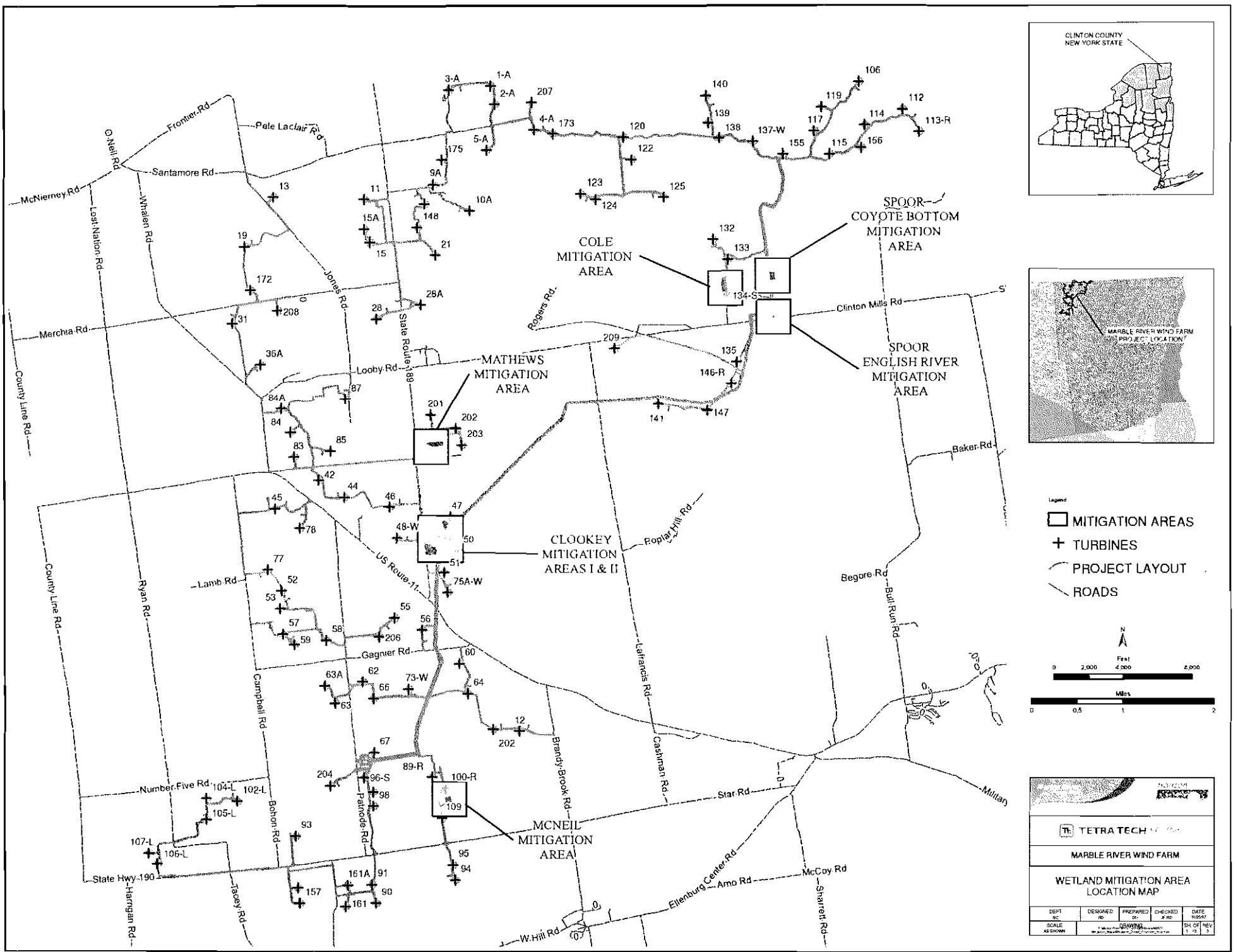
77 Goodell Street, Buffalo, New York 14203  
(716)856-5636 - (716)856-2545 fax

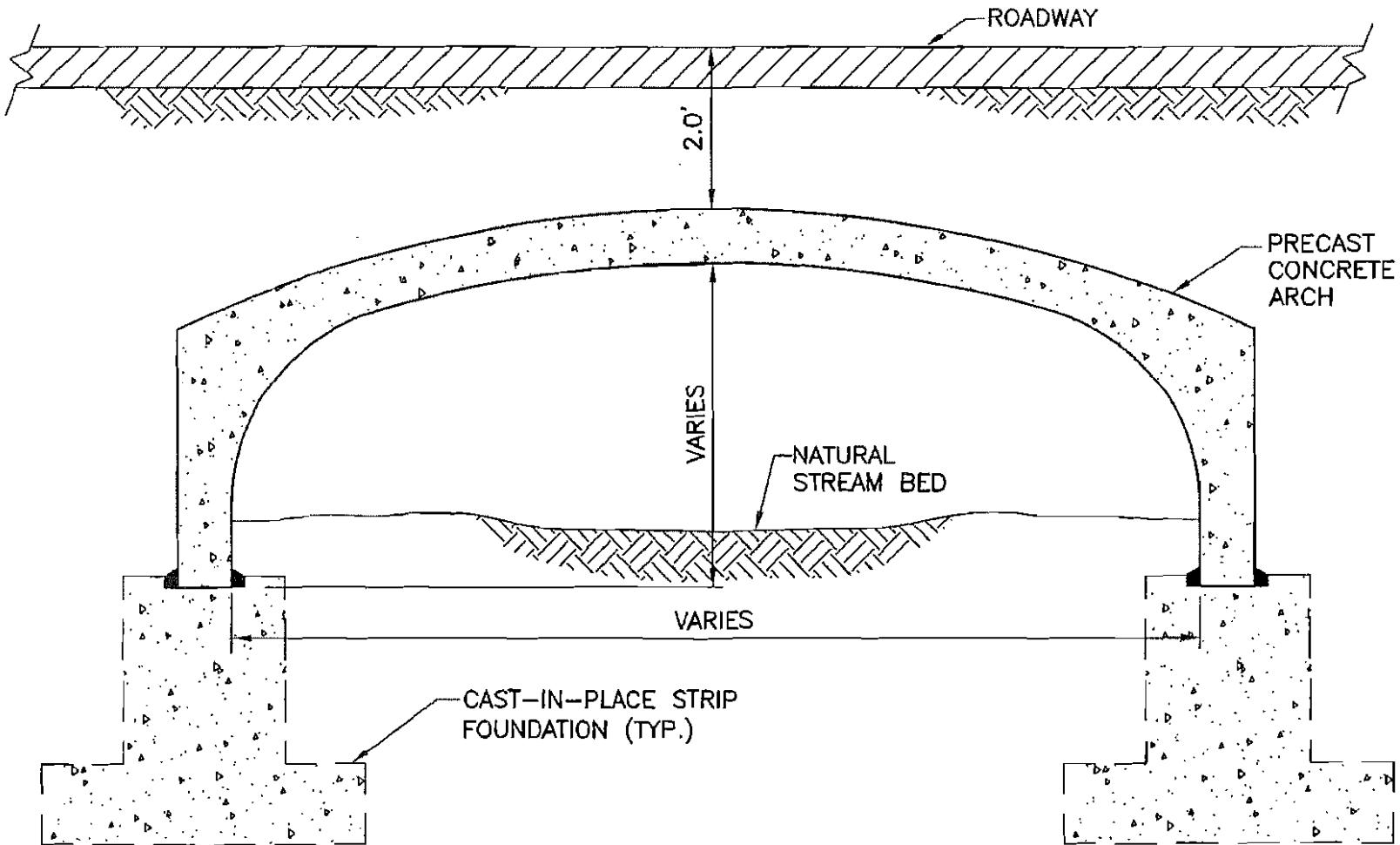
**MARBLE RIVER WIND FARM**

**EROSION AND SEDIMENT  
CONTROL DETAILS**

DATE: FEBRUARY 2008

ES-14





2' 0' 2'  
SCALE IN FEET

CLIENT:

MARBLE RIVER, LLC

**URS** Corporation

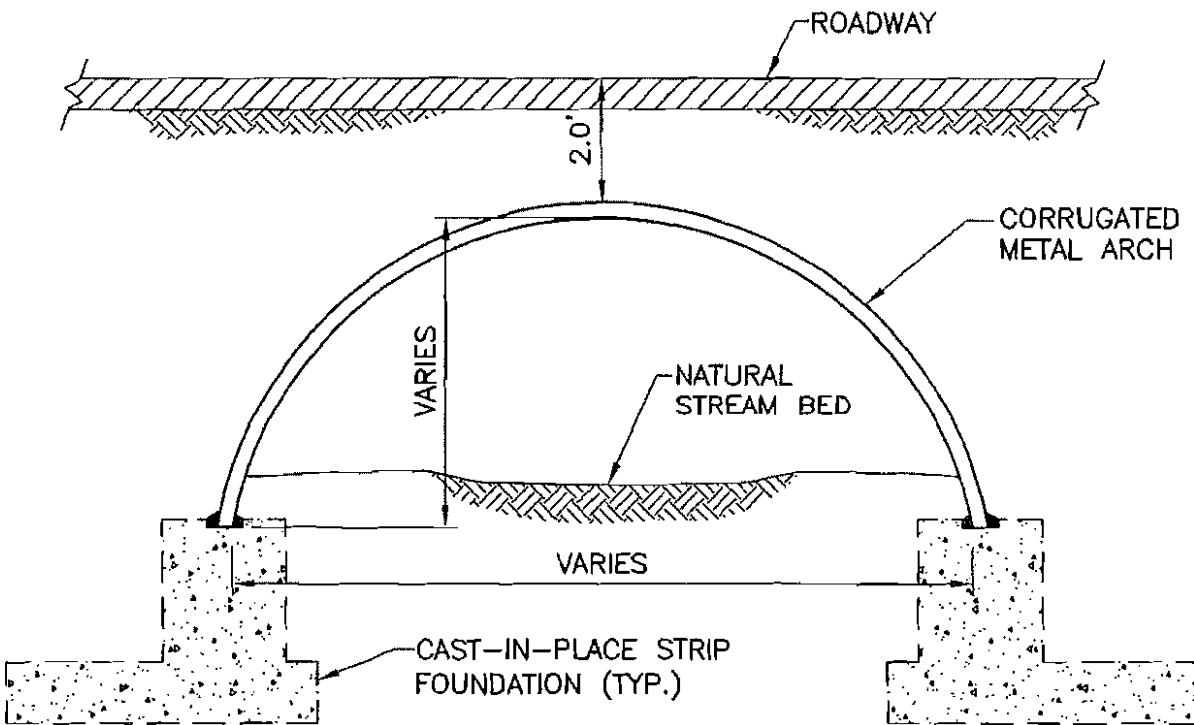
77 Goodell Street, Buffalo, New York 14203  
(716)856-5636 - (716)856-2545 fax

MARBLE RIVER WIND FARM

PROPOSED STREAM FRIENDLY CULVERT  
PRECAST CONCRETE

DATE: OCTOBER 2007

FIGURE 1



3' 0 3'  
SCALE IN FEET

CLIENT:

MARBLE RIVER, LLC

**URS** Corporation

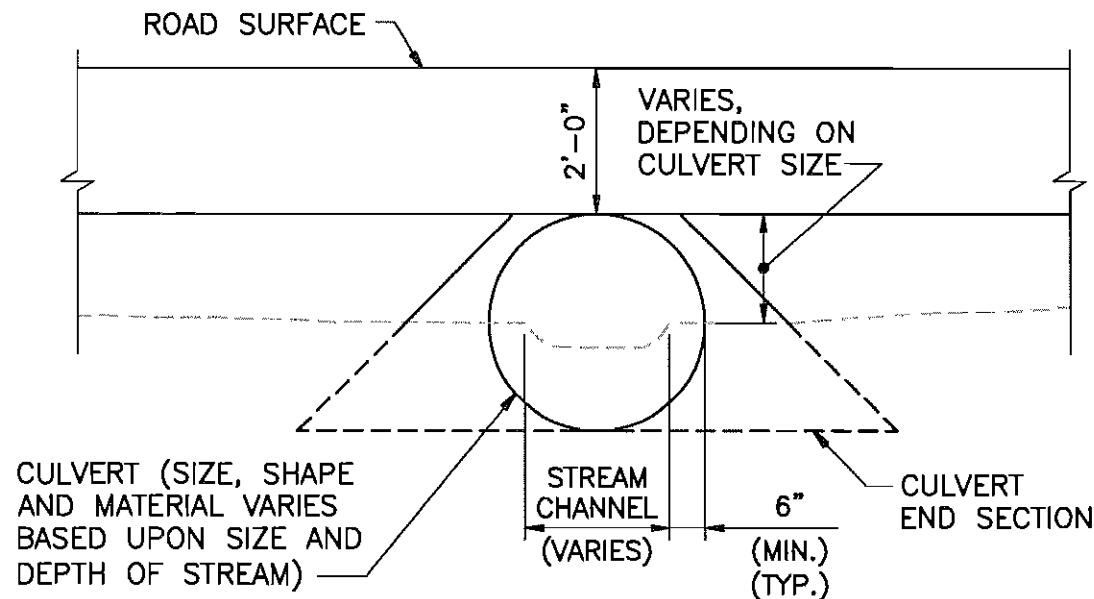
77 Goodell Street, Buffalo, New York 14203  
(716)856-5636 - (716)856-2545 fax

MARBLE RIVER WIND FARM

PROPOSED STREAM FRIENDLY CULVERT  
CORRUGATED METAL

DATE: OCTOBER 2007

FIGURE 2



## **DEPRESSED CULVERT DETAIL**

NOT TO SCALE

CLIENT:  
**MARBLE RIVER, LLC**  
**URS Corporation**  
77 Goodell Street, Buffalo, New York 14203  
(716)856-5636 - (716)856-2545 fax

**MARBLE RIVER WIND FARM**  
**DEPRESSED CULVERT DETAIL**  
DATE: NOV. 2007 **FIGURE 1**