

**Addendum to the  
Final Environmental Assessment**



**PROPOSED AMENDMENT TO  
PRESIDENTIAL PERMIT PP-63 AND  
ASSOCIATED MODIFICATIONS TO  
500 KV INTERNATIONAL  
TRANSMISSION LINE**

**Forbes, Minnesota to Manitoba, Canada**

**Northern States Power Company**

**U.S. DEPARTMENT OF ENERGY**

Washington, DC 20545

**October 1992**

## **DISCLAIMER**

**This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, make any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.**

## **DISCLAIMER**

**Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.**

# TABLE OF CONTENTS

	<u>Page</u>
<b>1.0 INTRODUCTION</b> .....	1
<b>2.0 DESCRIPTION OF THE PROPOSED ACTION</b> .....	1
2.1 Forbes Substation .....	1
2.1.1 Construction Activities .....	1
2.1.2 Operations .....	4
<b>3.0 THE AFFECTED ENVIRONMENT</b> .....	4
3.1 Topography and Soils .....	4
3.2 Terrestrial and Aquatic Ecology .....	5
3.3 Wetlands/Floodplains .....	9
3.4 Threatened or Endangered Species .....	9
3.5 Land Use .....	9
3.6 Socioeconomics .....	9
3.6.1 Population and Housing .....	9
3.6.2 Employment and Income .....	11
3.7 Transportation and Traffic .....	11
3.8 Noise .....	11
3.9 Cultural Resources .....	11
<b>4.0 POTENTIAL IMPACTS</b> .....	14
4.1 Topography and Soils .....	14
4.2 Terrestrial and Aquatic Ecology .....	14
4.3 Wetlands/Floodplains .....	14
4.4 Threatened or Endangered Species .....	14
4.5 Land Use .....	14
4.6 Socioeconomic Impacts .....	14
4.6.1 Population and Housing .....	14
4.6.2 Employment and Income .....	15
4.7 Transportation and Traffic .....	15
4.8 Noise Impacts .....	15
4.9 Cultural Resources .....	15
4.10 Air Quality .....	15
4.11 Electrical and Magnetic Fields (EMF) .....	15
<b>5.0 MITIGATION MEASURES</b> .....	16
<b>6.0 COMMITMENTS OF RESOURCES, SHORT-AND LONG-TERM PRODUCTIVITY, AND CUMULATIVE IMPACTS</b> .....	16
6.1 Irreversible and Irretrievable Commitments of Resources .....	16

**MASTER**

## TABLE OF CONTENTS

	<u>Page</u>
6.2 Relationship Between Short-term Use and Long-Term Productivity .....	16
6.3 Cumulative Impacts .....	16
7.0 REFERENCES .....	18

## LIST OF TABLES

	<u>Page</u>
Table 1: Population - St. Louis County .....	10
Table 2: Employment .....	12
Table 3: Labor Force .....	13

## LIST OF FIGURES

	<u>Page</u>
Figure 1: Proposed Site Layout for Expansion of the Existing Forbes Substation .....	2
Figure 2: Forbes Substation - View Looking North .....	3
Figure 3: Proposed Site Layout, Forbes Substation Expansion, Showing Existing Drainage .....	6
Figure 4: Plant Communities, Forbes Substation .....	7



## **1.0 INTRODUCTION**

This Addendum to the **Final Environmental Assessment for the Proposed Amendment to Presidential Permit PP-63 and Associated Modifications to 500 kV International Transmission Line: Forbes, Minnesota to Manitoba, Canada (DOE/EA-587)** addresses Northern States Power Company's (NSP) proposed expansion of the Forbes Substation. The applicant has requested that the expansion take place on the west side of the substation, within the existing property line, instead of on the north side as originally proposed. All of the proposed construction would take place on property already owned by NSP. DOE has reviewed the environmental impacts associated with this minor modification and has determined that the conclusions reached in the environmental assessment and Finding of No Significant Impact prepared in connection with NSP's original amendment request remain valid.

## **2.0 DESCRIPTION OF THE PROPOSED ACTION**

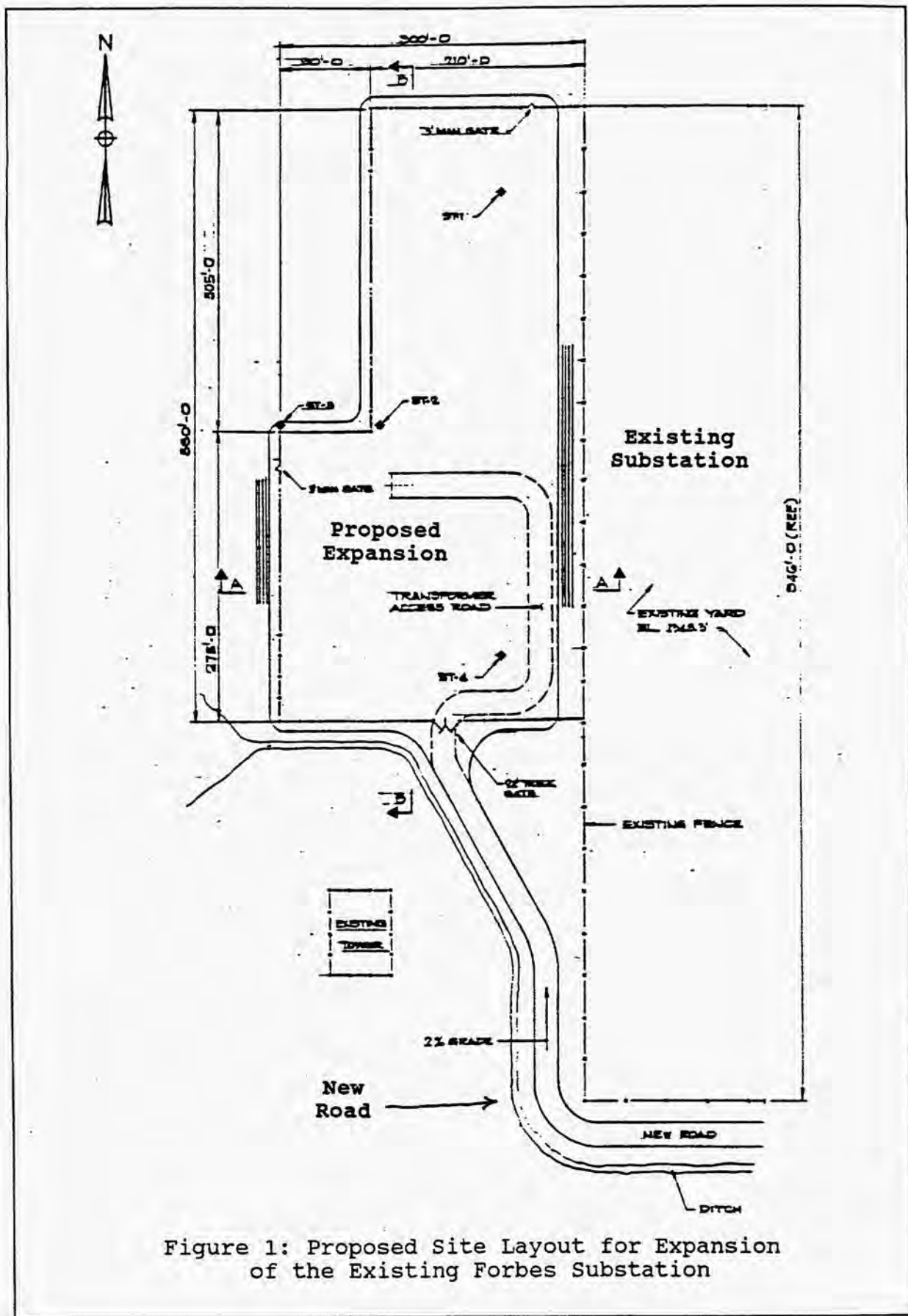
### **2.1 Forbes Substation**

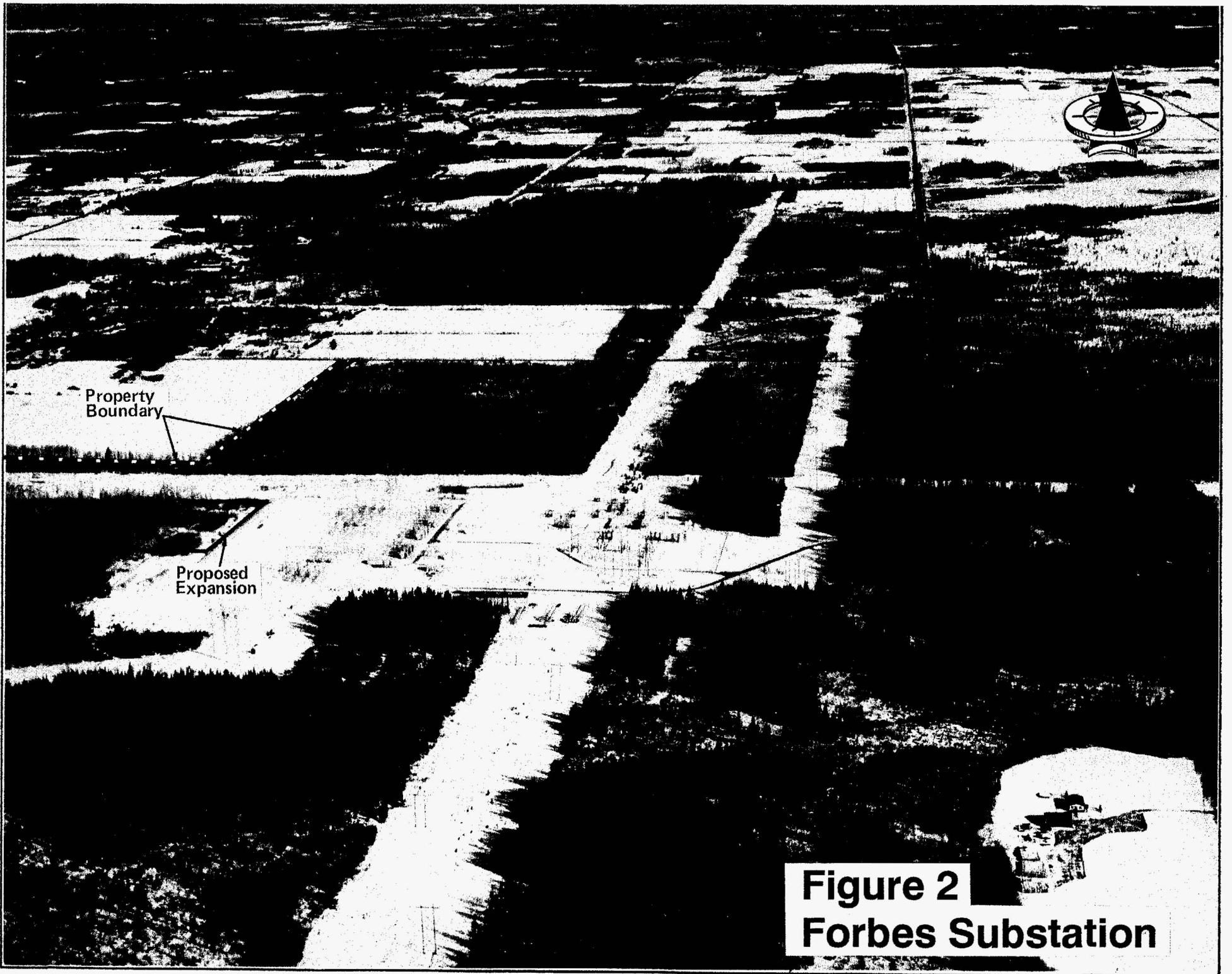
The proposed expansion of Forbes substation would be constructed under a "turnkey" contract. The contract includes both civil and electrical engineering work (grading, filling, construction of steel support structures, installation and testing of equipment). NSP has identified civil and electrical engineering performance requirements for the substation that must be met by the construction contractor. The construction contractor selected to do the work would provide NSP with a completed expansion of the substation which has been tested and is ready to be brought into service.

#### **2.1.1 Construction Activities**

According to the geotechnical report for the site (Braun Intertec, 1992) and the construction specifications (Asea Brown Boveri, 1992) the following construction activities would be carried out. The Forbes Substation currently consists of an area approximately 950 by 1,350 feet, and is situated in a rural area characterized by mixed hardwood and pine woods. To accommodate the new electrical equipment, 240,000 sq. ft. (400' by 600') would be added to the west side of the Forbes substation (See Figure 1). To prepare the site for construction, trees and shrubs now occupying approximately half of the proposed expansion area would be removed (see Figure 2). The expansion area would be graded and filled to a level about four feet below the grade of the existing substation. In addition, the existing access road, which now runs to the southeast corner of the existing substation, would be extended along the south and west sides of the substation to the area of the proposed expansion, a total length of about 900 feet (see Figure 1). A perimeter security fence would be installed. Surrounding areas disturbed by construction would be rehabilitated by spreading of four inches of topsoil and reseeded.







**Figure 2**  
**Forbes Substation**