

## **Appendix C: Orono Substation Views**

HUNTINGTON FARM ASSOCIATION

PROPOSED 115/115 kV DOUBLE CIRCUIT STRUCTURE 076-4

PROPOSED STORMWATER POND

PROPOSED 115/115 kV DOUBLE CIRCUIT STRUCTURE 076-5

PROPERTY LINE

PROPOSED STEEL DEADENDS

PROPOSED TUBULAR BUS

PROPOSED SUBSTATION

PROPOSED CIRCUIT SWITCHER NO. 1

PROPOSED ELECTRICAL EQUIPMENT ENCLOSURE

SCALE  
1"=80'

NOV. 21, 2011

EXISTING GRE 69kV TRANSMISSION STRUCTURE

EXISTING GRE 69kV TRANSMISSION STRUCTURE

EXISTING GRE 69kV TRANSMISSION STRUCTURE

PROPOSED FUTURE TRANSFORMER

PROPOSED TRANSFORMER NO. 1

EXISTING GRE 69kV TRANSMISSION STRUCTURE

EXISTING SWITCHGEAR

VIEW LOOKING EAST

PROPOSED ACCESS RD

ACCESS ROAD

EXISTING DISTRIBUTION LINES

PROPOSED STEEL BOX STRUCTURE W/SHIELD SPIKE

EXISTING SUBSTATION

EXISTING DISTRIBUTION LINES

6TH AVE NORTH C.R. 6

6TH AVE NORTH C.R. 6

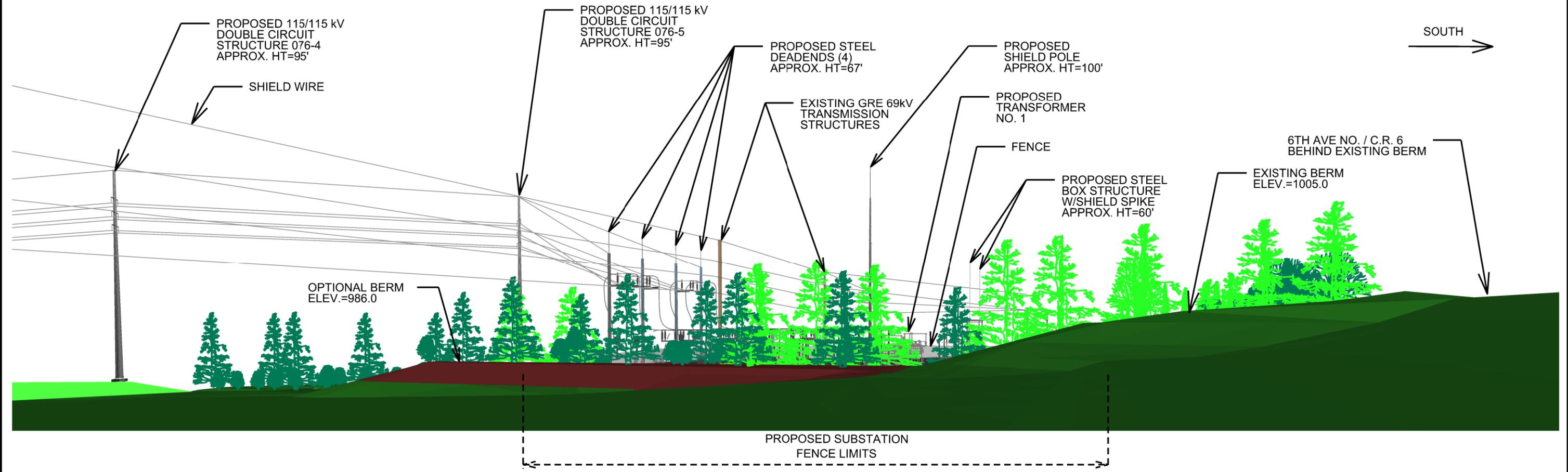
ORCHARD PARK ROAD

VIEW LOOKING NORTH

|   |   |                 |                    |
|---|---|-----------------|--------------------|
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| NSP OPERATING AREA<br>ENGINEERING<br>Minneapolis, MN  | <b>ORONO SUBSTATION - PROPOSED<br/>VIEW LOCATIONS</b> | ORO             | DATE               |
| Xcel Energy   | SCALE AS NOTED  | NH-11399043-PLN |                    |

NORTH  
←

SOUTH  
→



LEGEND

-  SHRUB TREE (APPROX. MID-HEIGHT=8')
-  DECIDUOUS TREE APPROX. MID-HEIGHT=30')
-  CONIFER TREE APPROX. MID-HEIGHT=30')
-  EXISTING TREE
-  PROPOSED TREE

VIEW LOOKING EAST  
W/BERM

SCALE:  
V - 1"=40'  
H - 1"=40'

NOV. 21, 2011

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|   |  |       |
|---|--|-------|
| NSP OPERATING AREA<br>ENGINEERING<br>Minneapolis, MN                                  | <b>ORONO SUBSTATION- PROPOSED<br/>VIEW LOOKING EAST - BERM</b> | ORONO |
|  | SCALE<br>AS NOTED  | REV   |
| NH 11399043-L04   |  |       |

WEST

EAST

PROPOSED 115/115 kV  
DOUBLE CIRCUIT  
STRUCTURE 076-4  
APPROX. HT=95'

PROPOSED 115/115 kV  
DOUBLE CIRCUIT  
STRUCTURE 076-3  
APPROX. HT=95'

EXISTING BERM  
ELEV. 1005.0

EXISTING 6TH  
AVE NORTH / C.R. 6

PROPOSED 115/115 kV  
DOUBLE CIRCUIT  
STRUCTURE 076-5  
APPROX. HT=95'

EXISTING GRE 69 kV  
TRANSMISSION  
STRUCTURE  
APPROX. HT=60'

PROPOSED  
SHIELD POLE  
APPROX. HT=100'

PROPOSED STEEL BOX  
STRUCTURE (2)  
W/SHIELD SPIKE  
APPROX. HT=60'

PROPOSED STEEL  
DEADENDS (4)  
APPROX. HT=67'

PROPOSED  
TRANSFORMER  
NO. 1

EXISTING STEEL  
69kV DEADEND  
STRUCTURE

EXISTING GRE 69 kV  
TRANSMISSION  
STRUCTURE  
APPROX. HT=60'

EXISTING 6TH  
AVE NORTH / C.R. 6

PROPOSED SUBSTATION  
FENCE LIMITS

PROPOSED  
FENCE

LEGEND

-  SHRUB TREE (APPROX. MID-HEIGHT=8')
-  DECIDUOUS TREE (APPROX. MID-HEIGHT=30')
-  CONIFER TREE (APPROX. MID-HEIGHT=30')
-  EXISTING TREE
-  PROPOSED TREE

VIEW LOOKING NORTH

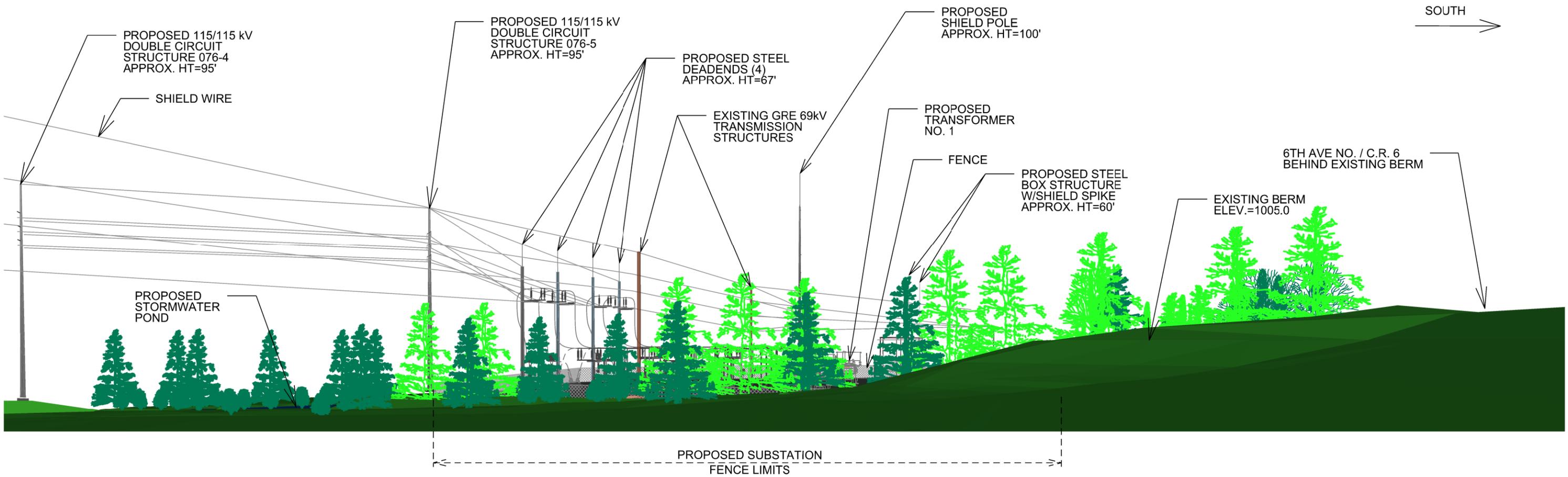
SCALE:  
V - 1"=40'  
H - 1"=40'  
NOV. 21, 2011

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|  |                            |                 |
|--|----------------------------|-----------------|
| NSP OPERATING AREA<br>ENGINEERING<br>Minneapolis, MN | ORONO SUBSTATION- PROPOSED | ORO             |
|  | VIEW LOOKING NORTH         |                 |
| Xcel Energy  | SCALE<br>AS NOTED          | NH-11399043-L02 |

NORTH  
←

SOUTH  
→



### VIEW LOOKING EAST

SCALE:  
V - 1"=40'  
H - 1"=40'

NOV. 21, 2011

#### LEGEND

-  SHRUB TREE (APPROX. MID-HEIGHT=8')
-  DECIDUOUS TREE (APPROX. MID-HEIGHT=30')
-  CONIFER TREE (APPROX. MID-HEIGHT=30')
-  EXISTING TREE
-  PROPOSED TREE

|  |   |                        |  |
|--|---|------------------------|--|
| <small>THIS IMPROVEMENT IS A TOOL TO ASSIST EMPLOYEES IN THE PERFORMANCE OF THEIR JOBS. YOUR PERSONAL SAFETY IS PROVIDED FOR BY USING SAFETY PRACTICES, PROCEDURES AND EQUIPMENT AS DESCRIBED IN THE SAFETY TRAINING PROGRAM, MANUALS AND SPANS.<br/>CONFIDENTIAL: DO NOT COPY OR DISTRIBUTE TO OTHERS WITHOUT EXPRESS WRITTEN CONSENT FROM XCEL ENERGY.</small> |   |                        | <small>SIGNIFICANT NUMBER</small><br>1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10 |
| NSP OPERATING AREA<br>ENGINEERING<br>Minneapolis, MN   | <b>ORONO SUBSTATION- PROPOSED</b><br><b>VIEW LOOKING EAST</b> | <b>ORO</b>             |  |
|   | SCALE<br>AS NOTED   | <b>NH-11399043-L03</b> | REV  |