



**ITC MIDWEST**

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Des Moines, IA 50309  
phone: 515-282-5300  
www.itctransco.com

March 8, 2010

Dr. Burl W. Haar  
Executive Secretary  
Minnesota Public Utilities Commission  
121 7<sup>th</sup> Place East, Suite 350  
St. Paul, MN 55101

Re: Hayward to Worth 161kV Transmission Line Rebuild and Glenworth Substation –  
Request for Minor Alteration Authorization

Dear Dr. Haar:

ITC Midwest, LLC (“ITC”) is electronically filing this request for a Minor Alteration authorization pursuant to Minnesota Statute 216E.16 and Minnesota Rule 7850.4800. We will also provide three paper copies of this request to the Minnesota Public Utilities Commission and the Minnesota Office of Energy Security via US mail.

ITC proposes to rebuild, with no increase in voltage, the Hayward to Worth 161kV high voltage transmission line, a portion of which is in Minnesota, from the Iowa border north to the Hayward substation in Freeborn County. The capacity of the line will be increased by replacing the existing conductors with larger ones. As part of the overall project, a new 161/69kV substation will be constructed on a 5 acre parcel along the line just southeast of Glenville, MN.

Also as part of the project, we will be straightening a section of the 161kV line as per a landowner request. This will entail moving 2 poles and a short section of new easement to straighten the alignment. An outbuilding was removed that the transmission line was originally constructed around and the landowners have agreed to the new alignment on their property. The balance of the 161kV line rebuild remains in the existing corridor under existing easements.

Please call me at (515) 282-5300 ext. 462 with any questions regarding this filing. Thank you for your attention to this matter.

*we're your energy superhighway*

Sincerely,



Dan Hagan  
Permit Coordinator

Enclosure

Cc: Wayne Sorenson, Freeborn County Environmental Services – w/encl. (1)  
Deborah Pile, Department of Commerce – w/encl. (3)

## PROJECT DESCRIPTION

Project components subject to Commission minor alteration determination consist of the following:

**Glenworth Substation:** The substation site is located 1 ½ miles southeast of Glenville, MN on the northeast side of Highway 65. The site is on a 5 acre parcel close to the intersection of an ITC 161 kV transmission line and a 69 kV transmission line owned by Dairyland Power Cooperative (“DPC”). A new 161/69kV 100 MVA transformer will be installed along with associated breakers, bus work, and switches. A 12’ x 48’ control building will be constructed to house the relays and other equipment for the 161 kV facilities. This portion of the project is estimated at \$5,000,000.

Drawings showing the site plan and maps showing the location are enclosed.  
(Figures 4-6)

**161kV Line Rebuild:** The existing Hayward to Worth 161kV line was originally permitted in 1957 and constructed in 1958. The approximately 11 mile route of the rebuild in Minnesota will follow the existing transmission line and will use the same easements. The only exception is for moving 2 new structures and a new easement obtained for the purpose of straightening out the line at the request of the landowners. The existing line will be removed and a new 440 MVA line will be constructed on the existing right of way using steel H frame poles. The estimate for this project is \$8,000,000.

Maps and plans showing the project area and the proposed improvements are enclosed.  
(Figures 1-3)

The Glenworth Substation work is scheduled to begin in April, 2010 with an in-service date of December, 2010.

The new 161kV line Rebuild in Minnesota is expected to begin in April, 2010 and be completed by December, 2010.

## PROJECT NEED

The line rebuild is needed to address inadequate capacity due to two wind generating facilities that were connected to ITC’s transmission system in 2008. The two projects, a 150 MW wind generating facility in Winnebago County, Iowa and a 160 MW wind generating facility in Worth County, Iowa have collectively been shown to overload the Worth-Hayward 161kV line. The overload has been identified as an injection related constraint by the Midwest ISO, and mitigation of such a constraint is required prior to the wind generation projects being granted interconnection service under the MISO tariff.

The addition of the substation is needed to relieve loading of the Hayward substation and also to provide for future load growth in the Freeborn and Mower County areas.

## **ANALYSIS**

Minnesota Rule 7850.4800 establishes the standard for determining whether a change in a high voltage transmission line is a minor alteration. The rule provides that, "A minor alteration is a change in...a high voltage transmission line that does not result in significant changes in human or environmental impact of the facility."

The proposed rebuild of the 161kV Hayward to Worth transmission line and the addition of the Glenworth substation will not result in significant changes in the human or environmental impacts of the facilities and therefore qualifies as a minor alteration.

- Aesthetic impacts will be minimal, since the transmission line will be built in the existing easements and the project will basically be a pole for pole rebuild.
- There will be no agricultural impacts sine the substation site is not currently farmed and the line rebuild is in the same configuration that has existed for over 50 years.
- There will be no new tree clearing for this project as the substation site is grassland and the line is existing.
- Freeborn County recently held a public meeting for the substation site and there were no objections voiced from any of the nearby residents that were notified. A conditional use permit was approved.
- All work will be on existing right of way, except for the 2 pole area that is being straightened. The land owners agreed to the slight change. The substation site was sold voluntarily by the owner. Therefore, no landowners will be significantly impacted.
- The Department of Natural Resources has no record of endangered species in the immediate area.
- The Department of Natural Resources has granted approvals for all land and water crossings under their jurisdiction.
- The high voltage transmission line has been in service for approximately 60 years. Rebuilding the line in place will have no significant human or environmental impacts.

## **NOTICE AND COMMENT REQUIREMENTS**

Minnesota Rule 7850.4800, Subpart 2, provides that the Commission shall mail notice of receipt of the application to those persons on the general list and to those persons on the project contact list if such a list exists. The commission shall provide at least a ten day period for interested persons to submit comments on the application or to request the matter be brought to the commission for consideration.

Pursuant to Minnesota Rule 7829.0700, ITC requests that the following persons be placed on the Commission's official list for this matter:

Dan Hagan  
Permit Coordinator  
ITC Midwest  
100 E. Grand Ave., Suite 230  
Des Moines, IA 50309

Dave Grover  
Manager, Regulatory Strategy  
ITC Midwest  
444 Cedar Street, Suite 1020  
St. Paul, MN 55101

**Utility Employee Responsible for Filing**

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Permit Coordinator  
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100 E. Grand Ave., Suite 230  
Des Moines, IA 50309  
515-282-5300 ext. 462 office  
515-897-8236 cell  
515-282-0500 fax

## CONCLUSION

ITC respectfully requests the Commission authorize the Hayward to Worth 161kV Transmission Line Rebuild and Glenworth Substation as a minor alteration, as provided in Minnesota Rule 7850.4800.

Dated:

ITC Holdings, Inc.  
d/b/a ITC Midwest, LLC

By:



Dan Hagan  
Permit Coordinator



LANDOWNER NAMES

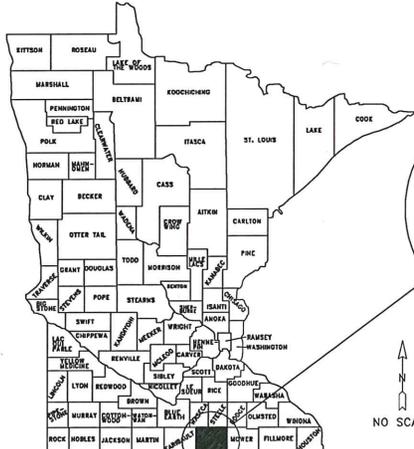
02	R. EMIL OLSON TRUST
01	SOLLAND REVOCABLE TRUST
02	DAVID A. CHRISTENSEN
03	CONSTANCE FRYDENLUND
04	TERRANCE L. & LAURIE J. NELSON
05	DIANE M. MINEAR
06	SCHOOL DISTRICT 2886
07	DAVID D. CHRISTENSEN
08	MICHAEL G. & JACQUELINE BJORKLUND
09	ALLEN R. KWACK
08	STATE OF MINNESOTA
01	BRENDA N. & DALE F. TEWS
02	FRED & LEONE FRIEDRICHSEN
03	MARVIN H. & MARY ANN THOMPSON
04	FRED L. FRIEDRICHSEN
05	DUANE GLEN VIRCHOW
06	KINSLER G. & JEAN GRUBE
07	THOMAS LANG
08	WALTER LANG REV TRUST
09	WALTER D. JOHNSON
08	MARVIN H. & MARY ANN THOMPSON
04	TERRY E. THORSON
02	TERRANCE A. & AUDREY HILLMAN
03	KENNETH & JANELLE THORSON
04	ROBERT E. & KRISTIN L. BASEMAN
05	THOMAS E. WALLIN
06	RONALD P. KLEVEN
07	SHARON KRAFKA
08	STATE OF MN DNR & WORTH CO. CONSERVATION BOARD
09	ROBERT A. & DARLENE OAKLAND
08	MICHAEL R. SANDERSON
09	DELMAR D. SANDERSON
05	BURNELL SANDERSON

LEGEND

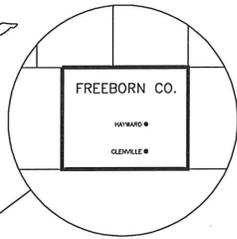
- TRANSMISSION CENTERLINE
- ◆ SPLICE BOX LOCATION

NOTES:

1. REFER TO TAB 25 PERMITS IN CONSTRUCTION SPEC FOR ALL RAILROAD CROSSINGS.
2. REFER TO TAB 25 PERMITS IN CONSTRUCTION SPEC FOR ALL COUNTY ROAD CROSSINGS.
3. REFER TO TAB 25 PERMITS IN CONSTRUCTION SPEC FOR ALL MN. D.O.T. ROAD CROSSINGS.
4. REFER TO TAB 25 PERMITS IN CONSTRUCTION SPEC FOR ALL DNR "PROTECTED WATERS" CROSSINGS.

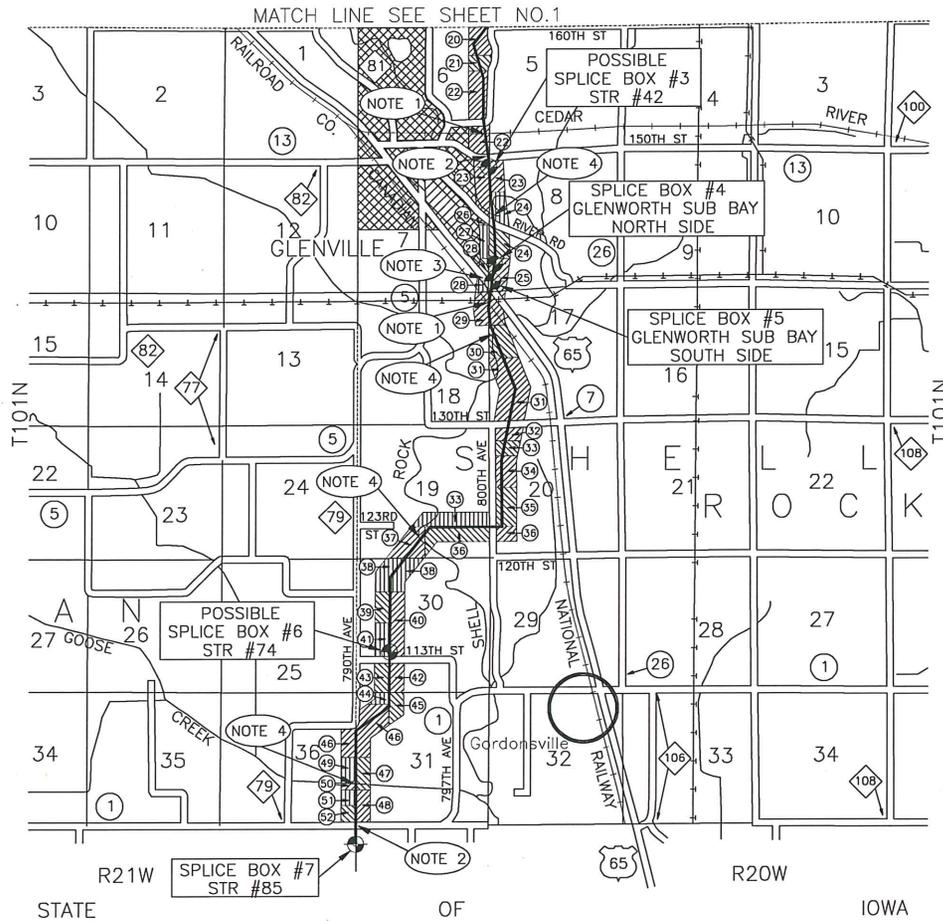


MINNESOTA PROJECT LOCATION



HIGHWAY SYSTEM LEGEND

- INTERSTATE HIGHWAY
- UNITED STATES HIGHWAY
- STATE HIGHWAY
- COUNTY STATE AID HIGHWAY
- COUNTY ROAD



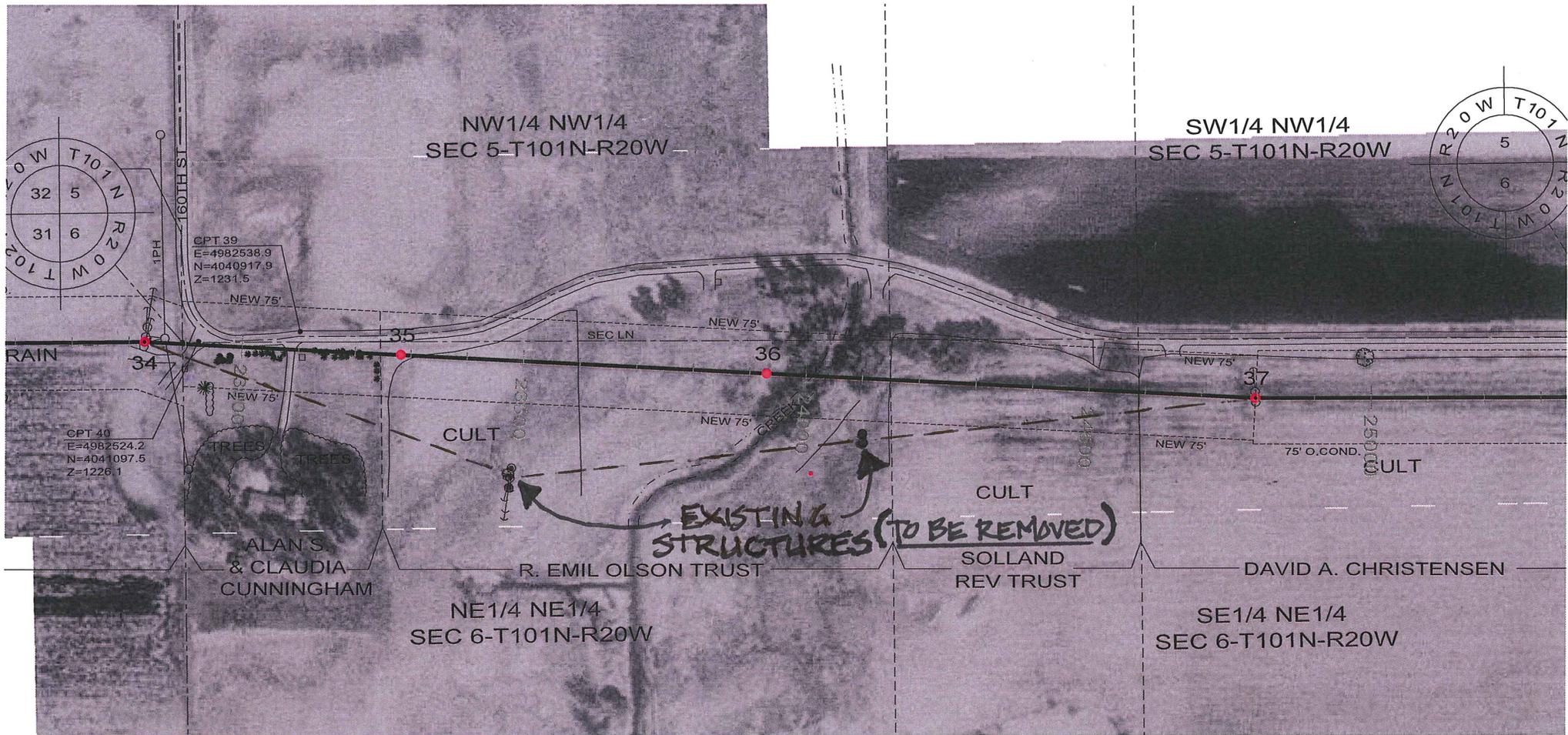
NO.	DATE	REVISION	BY
12/17/09	ORIGINAL ISSUE		MBN
			CHK'D/APP'D

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HAYWARD - WORTH 161kV  
(MINNESOTA PORTION)  
SHEET 2 OF 2

(FIGURE 2) VICINITY MAP - HAYWARD TO WORTH - SOUTH SECTION



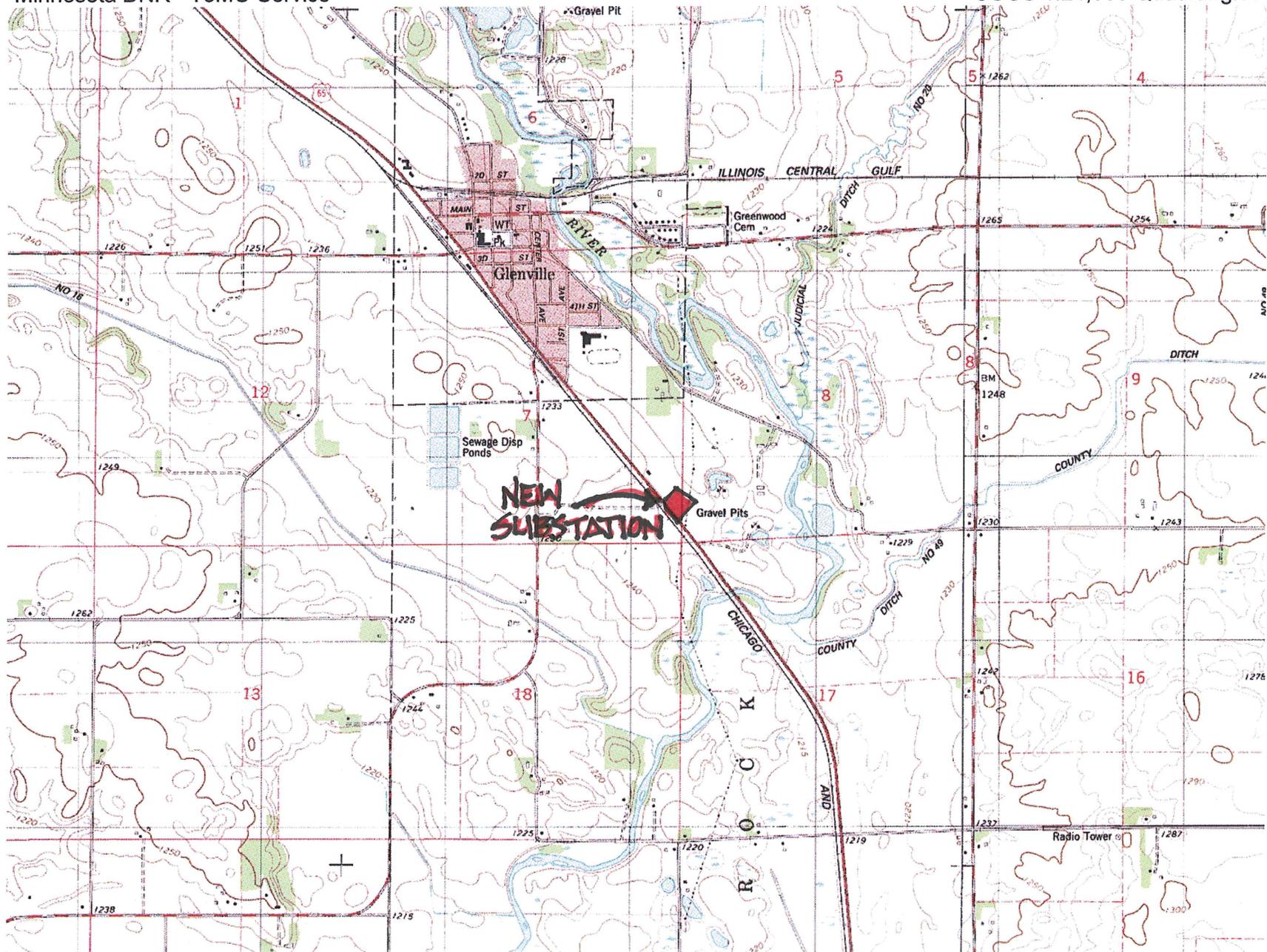
34  
 161-ASH3S-HV-VR266B-5  
 sta=22827.91  
 2,85-STEEL  
 LT POLE 16.0' DEEP  
 RT POLE 15.5' DEEP  
 2,APS-S

35  
 161-TNH3S-HV-VR266B  
 sta=23281.74  
 2,85-STEEL  
 LT POLE 15.5' DEEP  
 RT POLE 16.0' DEEP  
 2,APS-S

36  
 161-TNH3S-HV-VR266B  
 sta=23929.76  
 2,85-STEEL  
 LT POLE 17.0' DEEP  
 RT POLE 15.5' DEEP  
 APS-S  
 TM-OPT-GW-VD(N.SIDE)

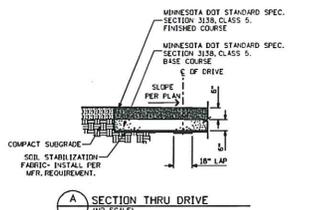
37  
 161-ASH3S-HV-VR266B-5  
 sta=24795.83  
 2,90-STEEL  
 LT POLE 16.5' DEEP  
 RT POLE 17.0' DEEP  
 APS-S  
 TM-OPT-GW-VD(N.SIDE)

(FIGURE 3) AERIAL MAP OF STRUCTURE REALIGNMENT

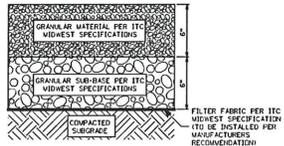


(FIGURE 4) VICINITY MAP – GLENWORTH SUBSTATION

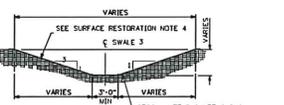




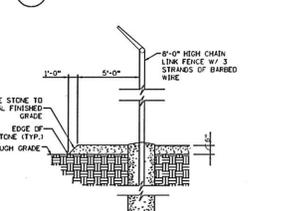
**A SECTION THRU DRIVE**  
(NO SCALE)



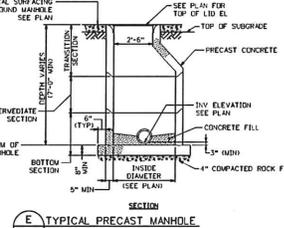
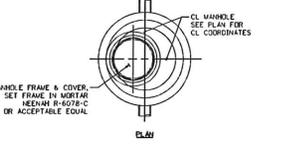
**B GRANULAR SURFACE SECTION**  
(NO SCALE)



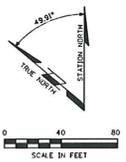
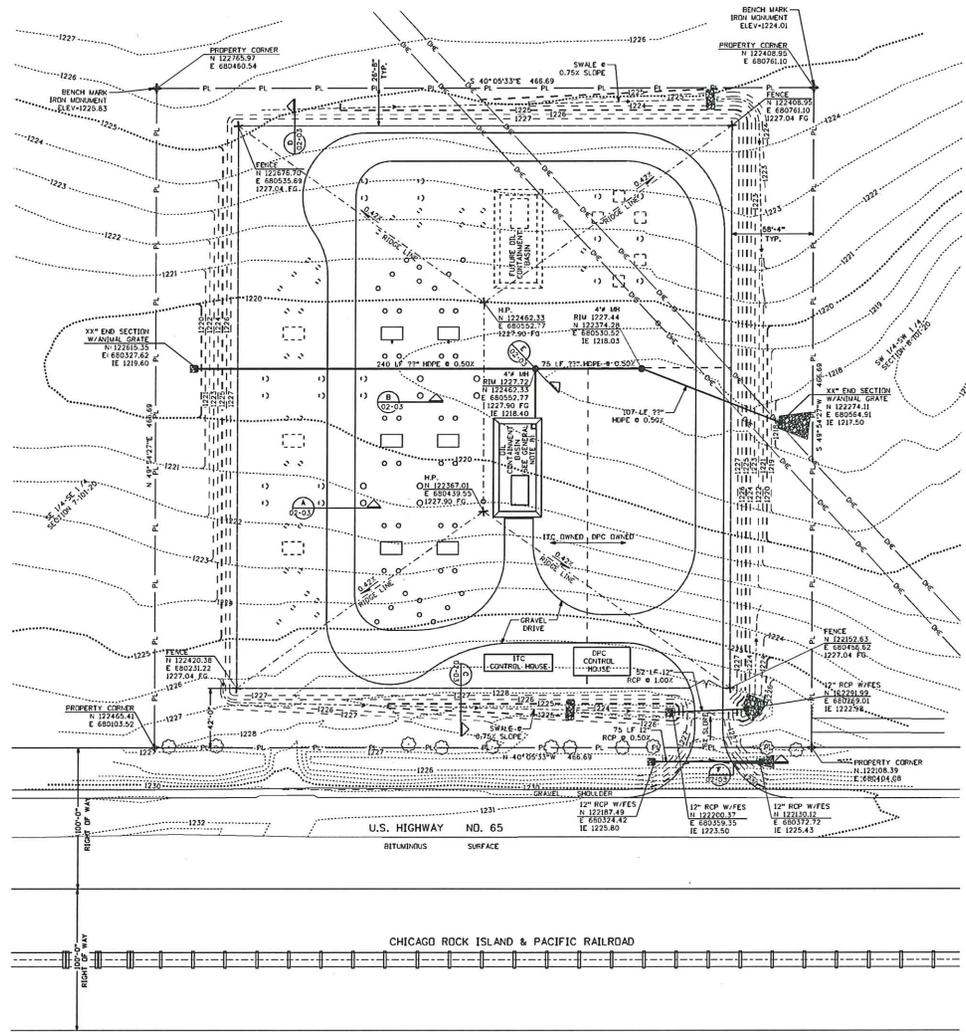
**C TYPICAL SWALE SECTION**  
(NO SCALE)



**D TYPICAL YARD EDGE DETAIL**  
(NO SCALE)



**E TYPICAL PRECAST MANHOLE**  
(NO SCALE)

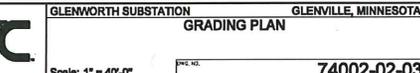


- SITE PREPARATION NOTES**
1. PROTECT ADJACENT PROPERTY DURING CONSTRUCTION.
  2. MAINTAIN POSITIVE DRAINAGE ON THE SITE THROUGHOUT PROJECT DURATION.
  3. KEEP ADJACENT PUBLIC STREETS FREE FROM SOIL AND DEBRIS GENERATED BY THE PROJECT. CLEAN SOIL AND DEBRIS FROM THE ADJACENT STREETS ON A DAILY BASIS.
  4. REMOVAL OR ABANDONMENT OF PUBLIC UTILITIES SHALL BE FULLY COORDINATED WITH APPROPRIATE UTILITY SUPPLIER AND REGULATORY AGENCIES.
  5. ANY EXISTING FACILITIES (CURBS, PAVEMENT, UTILITIES, ETC.) THAT THE CONTRACTOR'S OPERATIONS DAMAGE SHALL BE REPAIRED BY THAT CONTRACTOR AT HIS/HER COST.
  6. ALL FENCES WHICH ARE IMPACTED BY THIS PROJECT ARE TO BE REMOVED AND REPLACED TO AN EQUAL OR BETTER CONDITION. SALVAGED MATERIALS MAY BE USED UPON APPROVAL OF THE OWNERS REPRESENTATIVE. FENCES SHALL NOT BE REMOVED UNTIL PROPERTY OWNER HAS BEEN NOTIFIED.
    - A. CONNECT TO THE NEAREST STORM SEWER.
    - B. FLASHLIGHT TO FENCED GROUNDS.
    - C. REPAIR TILE AND MAINTAIN SERVICE.
  7. EXISTING FIELD TILE LINES ENCOUNTERED IN THE PROJECT SHALL BE REPAIRED BY THE CONTRACTOR IN ONE OF THE FOLLOWING WAYS:
    - A. CONNECT TO THE NEAREST STORM SEWER.
    - B. FLASHLIGHT TO FENCED GROUNDS.
    - C. REPAIR TILE AND MAINTAIN SERVICE.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF A TILE IS ENCOUNTERED AND SHALL INDICATE THE METHOD OF RESOLVING THE CONFLICT. THE ENGINEER SHALL APPROVE THE PROPOSED METHOD. THE LOCATION OF THE FIELD TILE SHALL BE RECORDED ON THE CONSTRUCTION RECORD DOCUMENTS.

- GENERAL NOTES**
1. THE LOCATIONS OF UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS PLOTTED ON THIS DRAWING ARE APPROXIMATE ONLY AND WERE OBTAINED FROM A TOPOGRAPHIC SURVEY DONE BY BOLTON & NEWMAN, INC. THERE MAY BE OTHER EXISTING UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS NOT SHOWN AND NOT SHOWN ON THIS DRAWING. THE VERIFICATION OF EXISTENCE OF AND ESTABLISHMENT OF THE EXACT LOCATION OF UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS SHALL BE THE RESPONSIBILITY OF THE CONSTRUCTION CONTRACTORS.
  2. STATE LAW REQUIRES NOTICE TO WORKER STATE ONE CALL 1-800-252-1166, NOT LESS THAN 48 HOURS AND NOT MORE THAN 14 DAYS BEFORE BEGINNING ANY EXCAVATION EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS.
  3. NOTIFY THE APPROPRIATE COVERING AUTHORITY 48-72 HOURS PRIOR TO BEGINNING CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY.
  4. NO WORK SHALL BE PERFORMED BEYOND PROJECT LIMITS WITHOUT PRIOR AUTHORIZATION FROM THE OWNERS REPRESENTATIVE.
  5. PROTECT EXISTING UTILITIES DURING CONSTRUCTION.
  6. MAINTAIN POSITIVE DRAINAGE ON THE SITE THROUGHOUT THE PROJECT DURATION.
  7. REPLACE ANY PROPERTY MONUMENTS REMOVED OR DESTROYED BY CONSTRUCTION MONUMENTS SHALL BE SET BY A LAND SURVEYOR REGISTERED TO PRACTICE IN THE STATE OF MINNESOTA.
  8. FOR OIL CONTAINMENT BASIN DETAILS, SEE DWG. 74002-03-04.

- GRADING NOTES**
1. STRIP EXISTING TOPSOIL WITH THE PROJECT LIMITS AND AREAS TO RECEIVE FILL. STOCKPILE TOPSOIL FOR REUSE. EXCESS TOPSOIL MAY BE STOCKPILED ON SITE AT A LOCATION APPROVED BY THE OWNERS REPRESENTATIVE.
  2. PROFFROLL ALL FILL AREAS TO IDENTIFY SOFT OR DISTURBED AREAS IN THE SUBGRADE. ALL UNDESIRABLE MATERIAL IDENTIFIED SHALL BE REMOVED AND RECOMPACTED PROFFROLL WITH 25 TON WINDRAM GROSS VEHICLE WEIGHT.
  3. REMOVE AND RECOMPACT AREAS OF SUBGRADE WHICH ARE SOFT AND UNSUITABLE TO MEET SPECIFIED LIMITS FOR DENSITY AND MOISTURE CONTENT.
  4. SCARIFY EXISTING SUBGRADE TO A DEPTH OF 8" AND RECOMPACT TO 95% STANDARD PROCTOR DRY DENSITY (ASTM D-698) PRIOR TO PLACEMENT OF FILL.
  5. DO NOT PLACE SPREAD OR COMPACT ANY FILL MATERIAL DURING UNFAVORABLE WEATHER CONDITIONS AND DO NOT RESUME CONSTRUCTION OPERATIONS UNTIL MOISTURE CONTENT AND DENSITY OF IN-PLACE FILL MATERIAL ARE WITHIN SPECIFIED LIMITS.
  6. PLACE FILL MATERIAL IN 6" MAXIMUM LIFTS AND COMPACT TO 95% STANDARD PROCTOR DRY DENSITY (ASTM D-698) 1/4"-2" TO 1/2" OPTIMUM WATER CONTENT. FILL MATERIAL SHALL BE FREE FROM ORGANIC MATERIAL, DEBRIS AND OTHER DELETERIOUS SUBSTANCES.
  7. FILLS PLACED BELOW LAWN AREAS SHALL BE COMPACTED TO 90% OF STANDARD PROCTOR DRY DENSITY (ASTM D-698).
  8. SCARIFY SUBGRADE TO DEPTH OF 3" WHERE TOPSOIL IS SCHEDULED. STAFFY AREAS WHERE EQUIPMENT USED FOR RAILING AND SPREADING TOPSOIL HAS CAUSED COMPACTED TOPSOIL.
  9. SCARIFY AND RECOMPACT THE TOP 6" OF SUBGRADE IN ALL CUT AREAS AFTER ROUGH GRADING IS COMPLETED. COMPACT THE ENTIRE FINISH AND BUILDING SUBGRADE TO 95% STANDARD PROCTOR DRY DENSITY TO WITHIN 1/2" OF FINAL SUBGRADE. THE FINAL 1/2" OF FILL TO BE COMPACTED TO 95% STANDARD PROCTOR DRY DENSITY (ASTM D-698).
  10. PROPOSED ELEVATIONS ARE TO TOP OF AGGREGATE AND FINISHED GRADE.
  11. TESTING FREQUENCY
    - COMPACTION TESTING
      - SUBGRADE ONE TEST PER 2,500 OR 5,000 SQ. FT.
      - AGGREGATE SUBGRADE ONE TEST PER 2,500 OR 5,000 SQ. FT.
    - STRUCTURAL MANHOLE FOUNDATION WALLS ONE TEST PER 100 LIN. FT. PER 6" LIFT. FLOOR SLABS ONE TEST PER 2,500 OR 5,000 SQ. FT.
    - TRENCH BACKFILL ONE TEST PER 100 LIN. FT. PER 6" LIFT.
  12. GRADE TO ENSURE SHEET FLOW FROM SITE TO NEIGHBOR.

- SURFACE RESTORATION**
1. ALL DISTURBED AREAS NOT PAVED OR HARD SURFACE ON THE SITE SHALL RECEIVE MINIMUM 6" TOPSOIL, SEED, MANURE AND FERTILIZER. SCARIFY AREAS TO RECEIVE TOPSOIL TO A DEPTH OF 3". REMOVE ALL STONES, WOOD AND OTHER DEBRIS LARGER THAN 2" FROM AREAS TO RECEIVE TOPSOIL. DO NOT COMPACT TOPSOIL. SEED, MANURE & FERTILIZER SHALL BE PLACED PER MINNESOTA DOT STANDARD SPECIFICATION SECTIONS 3876, 3881, & 3882.
  2. SURFACE RESTORATION SHALL BE IN ACCORDANCE WITH MINNESOTA DOT STANDARD SPECIFICATIONS SECTION 2575 USE MUDOT NATIVE SEED MIXTURE 330 APPLIED AT A RATE OF 0.45 LB/ACRE, PER 2575.5.
  3. IF PERMANENT SEED CANNOT BE PLACED BY SEPTEMBER 30, THE SITE SHALL BE SOEN WITH A TEMPORARY CROP OF WINTER WHEAT AT THE RATE OF 2 BUSH/ACRE.
  4. STABILIZE NEW EROSION WITH MINNESOTA DOT SEED MIXTURE & TYPE 3 EROSION CONTROL BLANKET PER MUDOT SPECIFICATION 3885.



DATE	DESCRIPTION OF CHANGE	BY
12-10-2009	ORIGINAL ISSUE (NO.002289) FOR REVIEW	BAV-GJ
	DESCRIPTION OF CHANGE	BY
	WORKING REVISIONS	

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**GLENWORTH SUBSTATION**  
**GRADING PLAN**  
SCALE: 1" = 40'-0"  
74002-02-03

(FIGURE 6) GRADING PLAN - GLENWORTH SUBSTATION