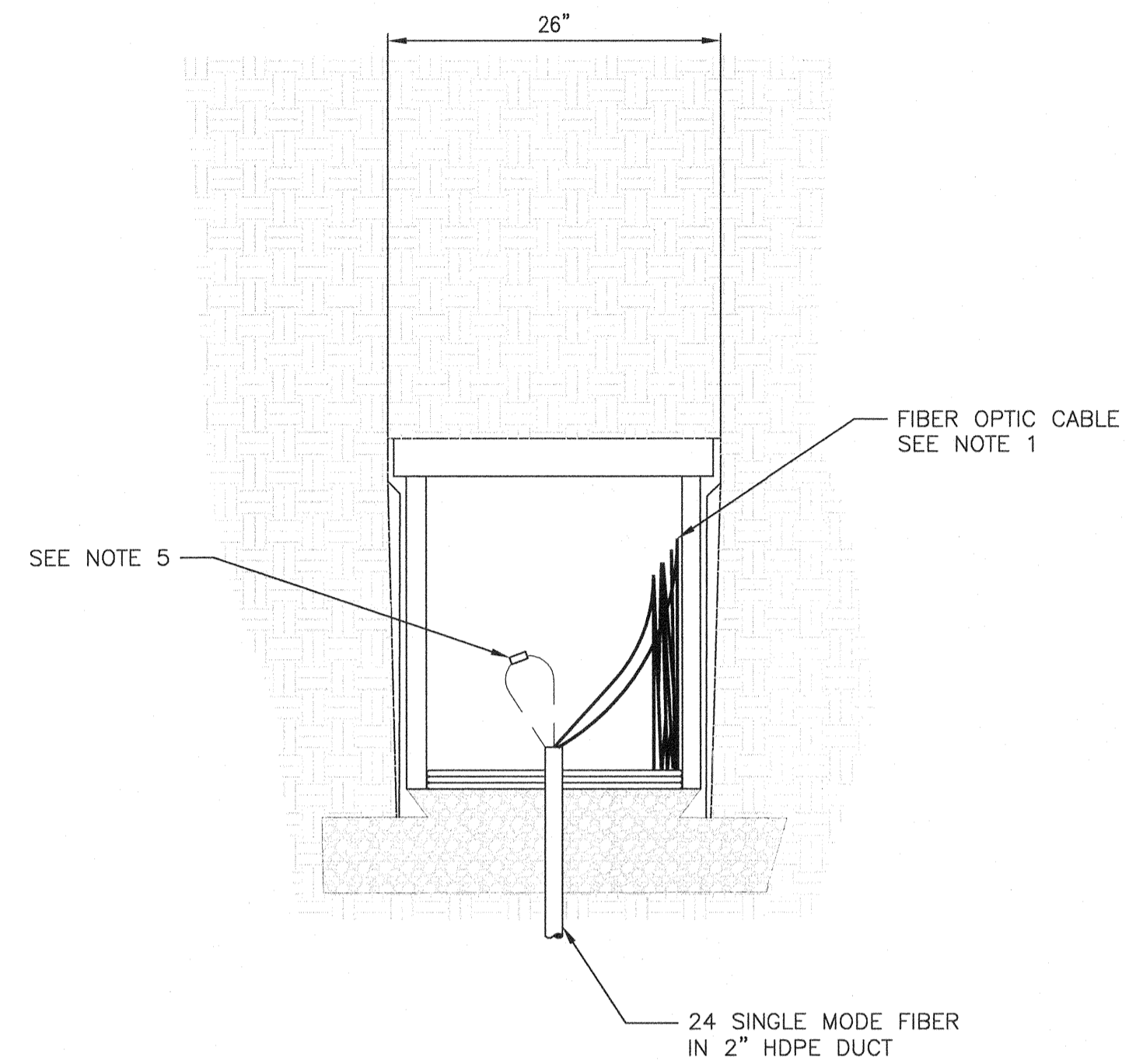


**HAND HOLE DETAIL  
BELOW GRADE**  
N.T.S.



**[XXXX]**  
**CABLE TAG DETAIL**

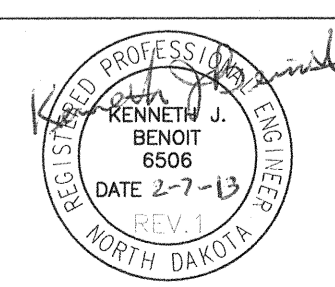
**NOTES:**

1. COIL MINIMUM 100' FIBER OPTIC CABLE SERVICE LOOP IN VAULT.
2. CONTRACTOR TO LOCATE SPLICE BOXES AS CLOSE TO PROPERTY LINES AND/OR FENCE LINES AS PRACTICAL.
3. GPS COORDINATES TO BE TAKEN FOR ALL LOCATIONS PER FIELD INSTALLATION.
4. SEE FIBER SINGLE LINE FOR SPLICE LOCATION, DRAWING E-FL-10.
5. TRACER WIRES TO BE BONDED TOGETHER AND ELECTRICALLY INSULATED.
6. ALL FIBER MUST BE LABELED WITHIN 12" OF TERMINATIONS WITH CABLE/WIRE DESTINATION.
7. IF HAND HOLE IS BURIED USE LOCATOR BALL.

BILL OF MATERIALS - FIBER OPTIC SPLICE, BELOW GRADE					
ITEM	QUANTITY	UNIT	DESCRIPTION	MANUFACTURER	CATALOG
63	2	FT	2" HDPE CONDUIT 90 DEGREE ELBOW, 24" RADIUS		
110	1	EA	ENCLOSURE, PRECAST POLYMER CONCRETE ENCLOSURE 24"x36" GASKETED, HEAVY DUTY w/ 2 BOLTS	QUAZITE	PG246HG00
111	1	EA	COVER, PRECAST POLYMER CONCRETE ENCLOSURE 24"x36" GASKETED, HEAVY DUTY w/ 2 BOLTS	QUAZITE	PG246HG00



NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
A	RJG	CSF	CSF	7/8/11	90% DELIVERABLE
B	BNK	RJG	CSF	7/19/11	REVISED FOR QA CHECKS
C	BNK	CEG	CSF	7/21/11	REVISED PER CLIENTS COMMENTS
O	BNK	RJG	CSF	8/4/11	ISSUED FOR CONSTRUCTION
1	NJG			11/1/12	CONSTRUCTION REVISIONS, NO CHANGES



CLIENT	7/8/11/19/11/21/18/4/11
BID	
CONSTRUCTION	
PERMITTING	
RELEASED TO/FOR	A B C O 1 2 3
DATE RELEASED	

**BARR**  
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Fax: (952) 832-2601  
www.barr.com

Scale	N.T.S.
Date	07/08/11
Drawn	RJG
Checked	CSF
Designed	RJG
Approved	JLM



A WIND ENERGY INITIATIVE OF MINNESOTA POWER IN NORTH DAKOTA

BISON 2 WIND PROJECT  
MORTON & OLIVER COUNTIES, NORTH DAKOTA

COLLECTOR SYSTEM  
BELOW GRADE FIBER OPTIC HAND HOLE

BARR PROJECT No.	34/33-1007
CLIENT PROJECT No.	
DWG. No.	E-FS-03
REV. No.	1