

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Print Name **KENNETH J. BENOIT** REV.1
 Signature **[Signature]** ON FILE
 Date 1-12-05 License No. 18866

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Print Name **KENNETH J. BENOIT** REV.0
 Signature **[Signature]** ON FILE
 Date 11-23-04 License No. 18866

DR. BAF	CHK. KJB	SH.11 OF 16 REV. 1
APPROVED	KJB	GARY 115/14KV SUBSTATION
DATE 11-11-04		131 LINE PANEL
		21P LOGIC DIAGRAM
CADD DRAWING - FOR REPRODUCTION ONLY		CODE
		MB+26263-8
		MICROFILMED
		3200
		3508

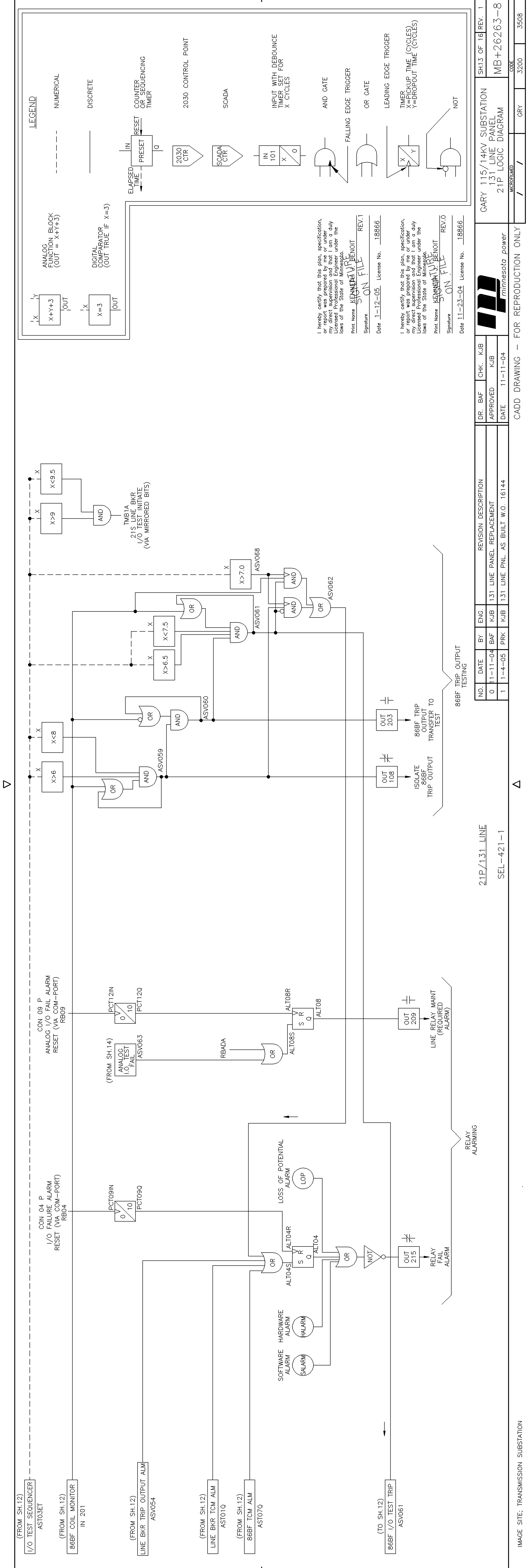
NO.	DATE	BY	ENG.	REVISION DESCRIPTION
0	11-11-04	BAF	KJB	131 LINE PANEL REPLACEMENT
1	11-10-05	PRK	KJB	131 LINE PNL. AS BUILT W.O. 16144

21P/131 LINE
SEL-421-1

RECLOSER MODE SELECTION

SUPERVISE CLOSE 131 LINE BKR.
 LINE BREAKER CLOSE SUPERVISION

IMAGE SITE; TRANSMISSION SUBSTATION



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Print Name: KENNETH J. BENOIT REV.0
 Signature: [Signature]
 Date: 11-23-04 License No. 18866

NO.	DATE	BY	ENG.	REVISION DESCRIPTION
0	11-11-04	BAF	KJB	131 LINE PANEL REPLACEMENT
1	1-4-05	PRK	KJB	131 LINE PNL. AS BUILT W.O. 16144

DR. BAF CHK. KJB
 APPROVED KJB
 DATE 11-11-04

GARY 115/14KV SUBSTATION
 131 LINE PANEL
 21P LOGIC DIAGRAM

minnesota power
 MICROFILMED / / GRY 3200 3508

21P/131 LINE
 SEL-421-1

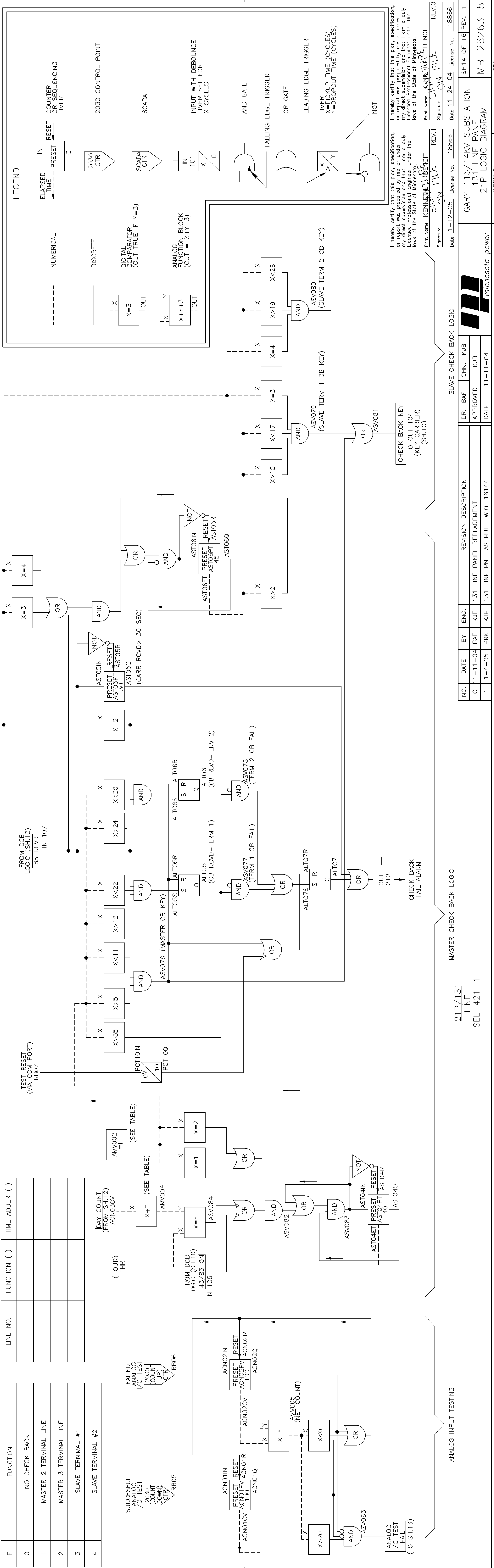
IMAGE SITE: TRANSMISSION SUBSTATION

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SH.13 OF 16 REV. 1
 MB+26263-8

F	FUNCTION	FUNCTION (F)	TIME ADDER (T)
0	NO CHECK BACK		
1	MASTER 2 TERMINAL LINE		
2	MASTER 3 TERMINAL LINE		
3	SLAVE TERMINAL #1		
4	SLAVE TERMINAL #2		

LINE NO.	FUNCTION (F)	TIME ADDER (T)



ANALOG INPUT TESTING

21P/131
LINE
SEL-421-1

MASTER CHECK BACK LOGIC

SLAVE CHECK BACK LOGIC

DATE 11-24-04 License No. 18866

Signature ON FILE REV.1

Print Name KENNETH J. BENOIT

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NO.	DATE	BY	ENG.	REVISION DESCRIPTION
0	11-11-04	BAF	KJB	131 LINE PANEL REPLACEMENT
1	1-4-05	PRK	KJB	131 LINE PNL. AS BUILT W.O. 16144

DR.	BAF	CHK.	KJB	GARY 115/14KV SUBSTATION
APPROVED				131 LINE PANEL
DATE	11-11-04			21P LOGIC DIAGRAM

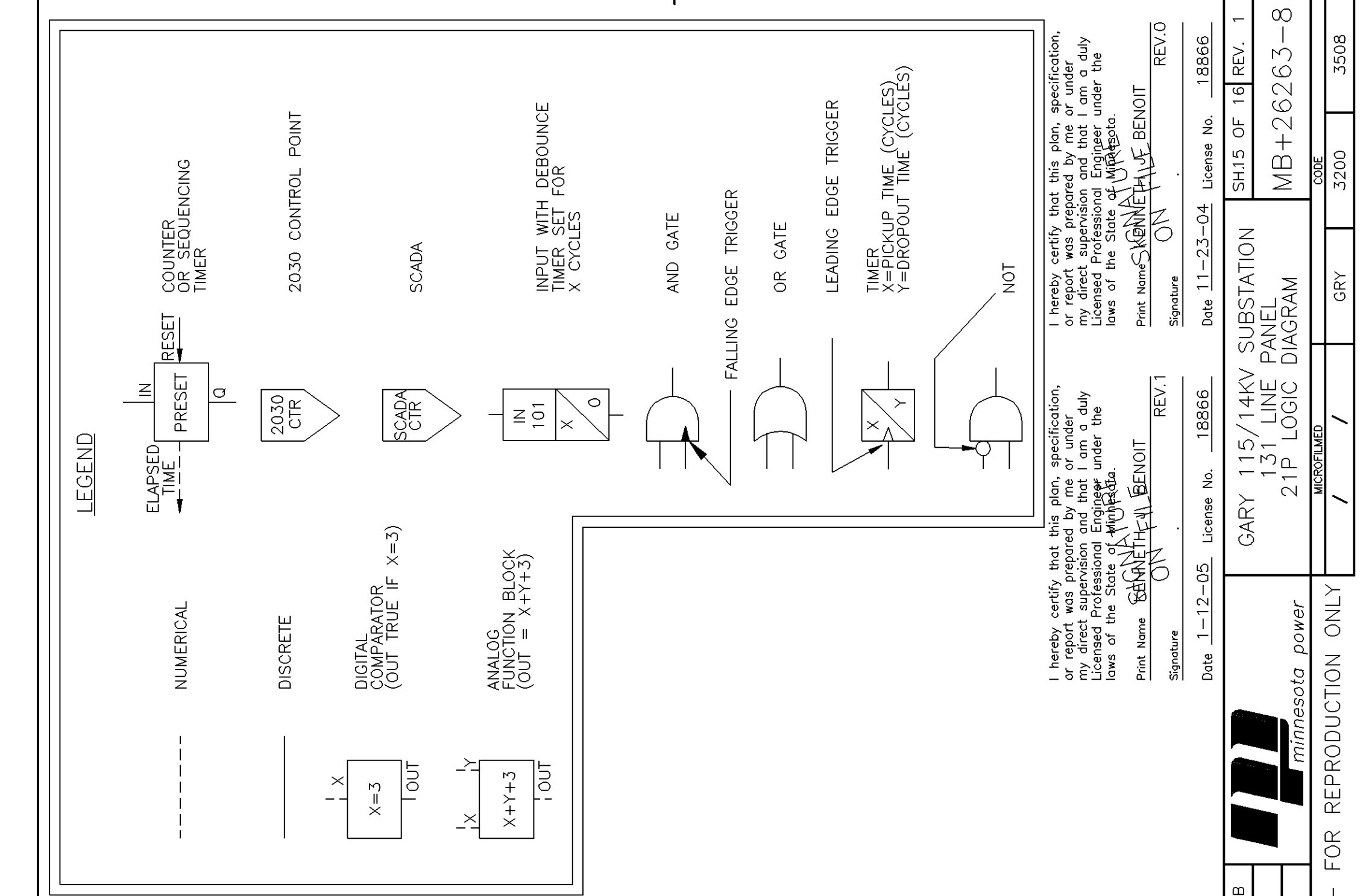
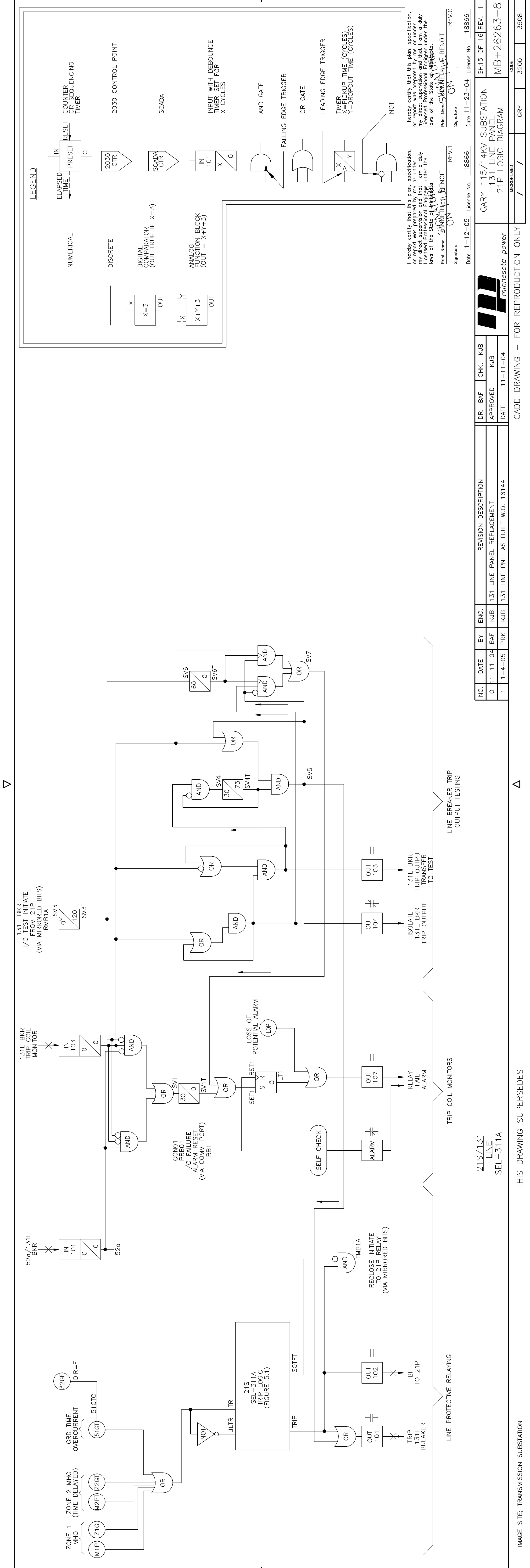
THIS DRAWING SUPERSEDES

IMAGE SITE: TRANSMISSION SUBSTATION

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MINNESOTA power

SH.14 OF 16 REV. 1
MB+26263-8
3200 GRY 3508



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Print Name: BENJAMIN H. BENOIT REV.1
 Signature: [Signature]

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Print Name: BENJAMIN H. BENOIT REV.0
 Signature: [Signature]

NO.	DATE	BY	ENG.	REVISION DESCRIPTION
0	11-11-04	BAF	KJB	131 LINE PANEL REPLACEMENT
1	1-4-05	PRK	KJB	131 LINE PNL. AS BUILT W.O. 16144

DR. BAF	CHK. KJB	SH.15 OF 16 REV. 1
APPROVED	KJB	GARY 115/14KV SUBSTATION
DATE 11-11-04		131 LINE PANEL
		21P LOGIC DIAGRAM

CADD DRAWING - FOR REPRODUCTION ONLY