

# SAN MATEO MEDICAL CENTER

## 1 MW PARKING LOT SOLAR

METEOROLOGICAL MONITORING STATION (MET), &  
SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA) WITH HISTORIAN



2365 Iron Point Road, Suite 100  
Folsom, CA 95630  
916.357.5970  
9600 Topanga Canyon Boulevard, Suite 100  
Chatsworth, CA 91311  
818.963.4695  
2500 Alameda Ave, Suite 117  
Norfolk, VA 23513  
757.855.1040 www.TrimarkAssoc.com

CLIENT  
SAN MATEO  
MEDICAL CENTER

PROJECT  
SAN MATEO  
MEDICAL CENTER  
1 MW PARKING LOT SOLAR

ISSUED FOR  
APPROVAL

CAISO PROJECT NUMBER  
-

REVISION HISTORY			
NO.	DATE	DESCRIPTION	BY
A	01-30-17	PRELIMINARY	DL
B	02-01-17	ISSUED FOR APPROVAL	DL

SHEET TITLE  
COVER SHEET

TRIMARK PROJECT NUMBER  
168105

DES	DL
CAD	DL
DATE:	01-30-17

DEPARTMENT APPROVALS	
ENG	VB
SI/SCADA	TD
METER	
PROD	KW
PM	DB

DWG NUMBER	REVISION
G1-1	B
SCALE	NO SCALE
SHEET	1 OF 2

# INDEX OF DRAWINGS

DWG #	SHEET	DRAWING TITLE
G1-1	1	COVER SHEET
G1-1	2	INDEX OF DRAWINGS
ND-F	1	SCADA CABINET BILL OF MATERIAL
ND-F	2	SCADA CABINET EQUIPMENT LAYOUT
ND-F	3	SCADA CABINET POWER DISTRIBUTION
ND-F	4	SCADA CABINET COMMUNICATION DIAGRAM
JB-1	1	J-BOX CABINET EQUIPMENT LAYOUT AND BILL OF MATERIAL
TR-1	1	H-FRAME CABINET INSTALLATION



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**INDEX OF DRAWINGS**

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<b>G1-1</b>	<b>B</b>
SCALE	NO SCALE SHEET 2 OF 2



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SHEET TITLE  
**SCADA CABINET  
 BILL OF MATERIAL**

TRIMARK PROJECT NUMBER  
**168105**

DES	DL
CAD	DL
DATE:	01-30-17

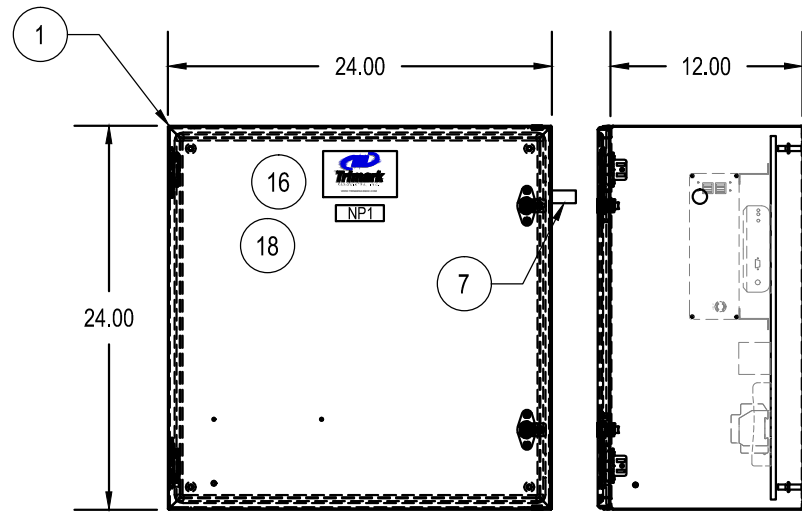
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ENG	VB
SI/SCADA	TD
METER	
PROD	KW
PM	DB

DWG NUMBER	REVISION
<b>ND-F</b>	<b>B</b>
SCALE	NO SCALE   SHEET 1 OF 4

<b>BILL OF MATERIALS</b>				
#	QTY	DESCRIPTION	PART NUMBER	MANUFACTURER
1	1	NEMA 4 STEEL ENCLOSURE (24" X 24" X 12")	CSD242412	HOFFMAN
2	1	BACKPANEL (22.2" X 22.2")	CP2424	HOFFMAN
3	1	RUGGED COMPUTER/HISTORIAN SERVER	NUVO-5000	NEOUSYS
4	1	TDG DUAL NIC, NO I/O	TDG393-GIGE-003	TRIMARK
5	1	TENODE	IBR1150LPE-VZ	CRADLEPOINT
6	1	ANTENNA CORD	LMR-195-3-NMSM	TOTAL WIRELESS DATA
7	1	CELLULAR ANTENNA	TRA6927M3PB-001	LAIRD
8	2	1-PORT REMOTE KVM-OVER-IP WITH USB AND 21" VGA CABLE	SLS200USB0-01	LANTRONIX
9	A/R	PANDUIT WIRING DUCT	G2X2LG6	PANDUIT
10	A/R	PANDUIT WIRING COVER	C2LG6	PANDUIT
11	1	GROUND BUS BAR	PK4GTA	SQUARE D
12	1	1M SLOTTED DIN RAIL ALUMINUM	111.033	DSB MARKETING
13	1	FUSE HOLDER	3048580	PHOENIX CONTACT
14	1	5A FUSE	ATDR5	MERSEN
15	10	DIN RAIL TERMINAL BLOCK (#10-#26 AWG)	3044102	PHOENIX CONTACT
16	8	DIN RAIL END BLOCK	0800886	PHOENIX CONTACT
17	1	UNO-PS/1AC/24DC/240W	2904372	PHOENIX CONTACT
18	1	8 PORT SWITCH	2891002	PHOENIX CONTACT
19	1	ETHERNET REMOTE I/O	E1210	MOXA
20	1	RS485 HUB	HUB-485-4	COMMFRONT

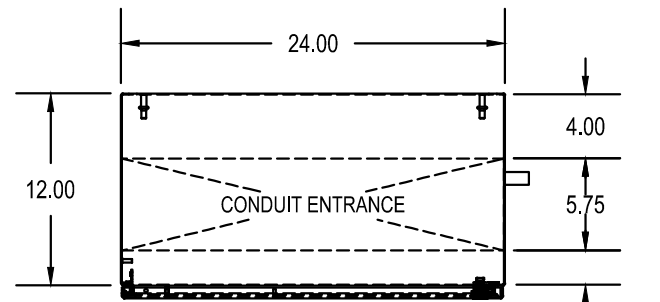
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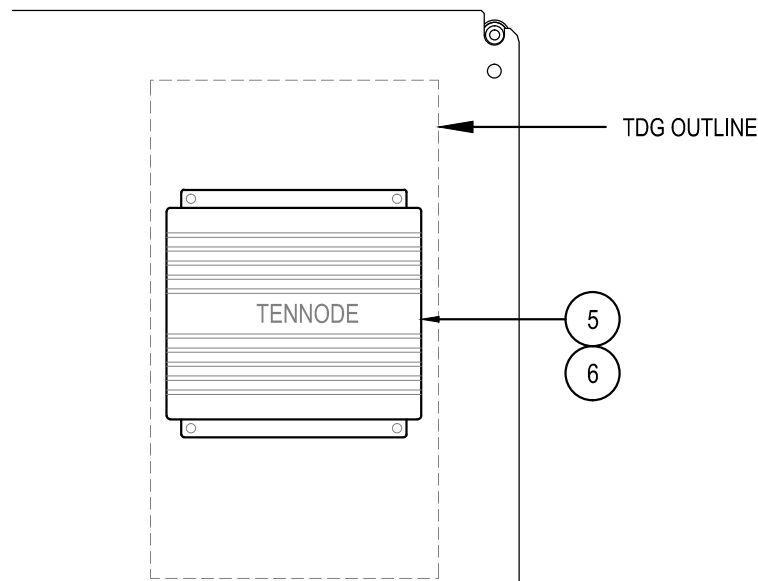


ENCLOSURE  
FRONT VIEW

ENCLOSURE  
SIDE VIEW



ENCLOSURE  
BASE PLAN

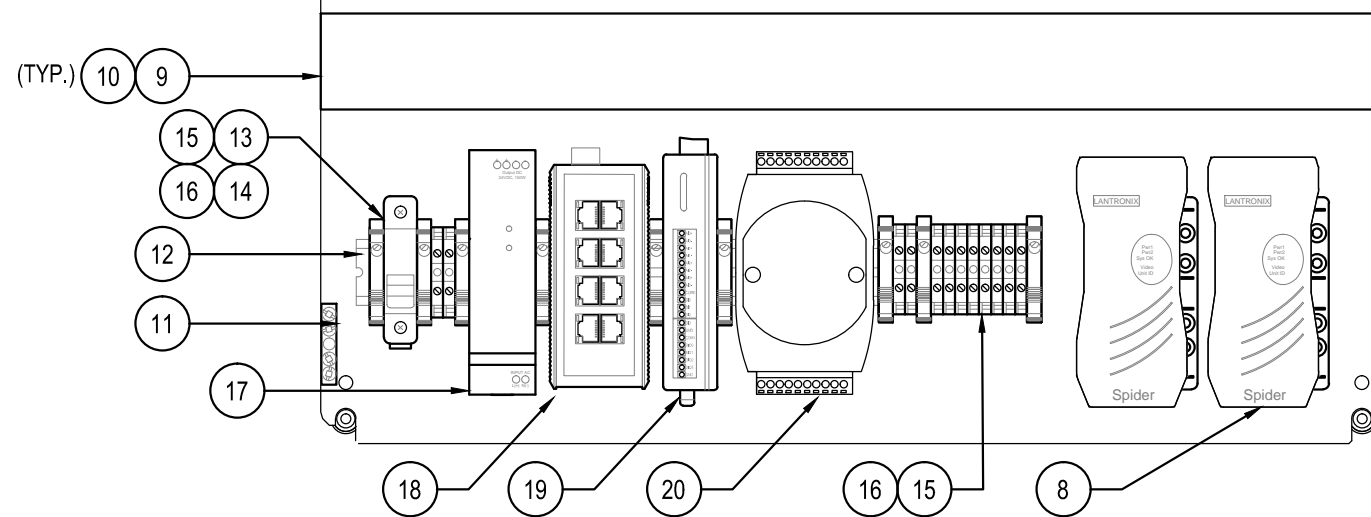
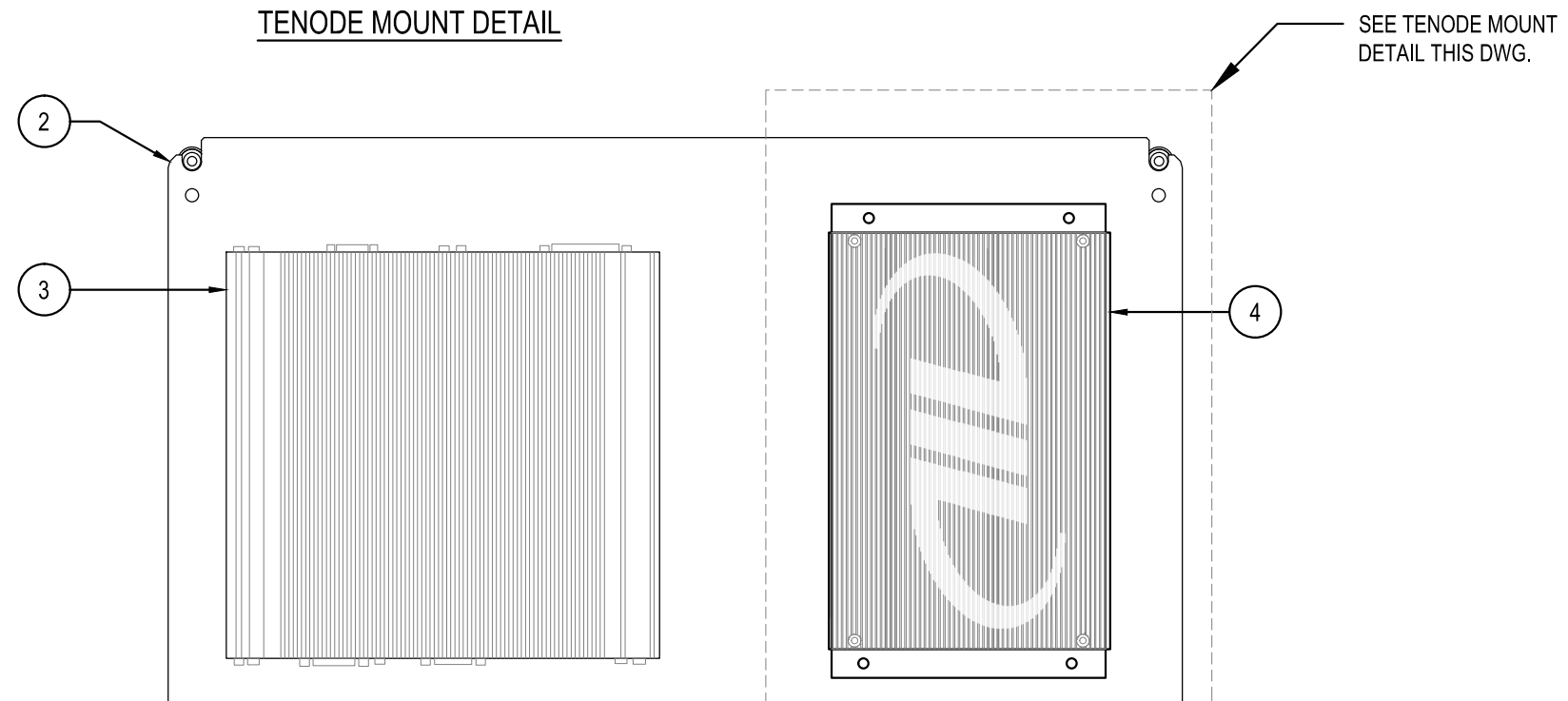


TENODE MOUNT DETAIL

ENCLOSURE NOTES

1. HOFFMAN CONCEPT, TYPE 4
2. MOUNTING HOLES IN BACK OF BODY FOR DIRECT MOUNTING OR OPTIONAL EXTERNAL MOUNTING BRACKETS.
3. PLASTIC NAMEPLATES WILL BE PROVIDED AS REQUIRED
4. WIRING WILL BE MARKED AT BOTH ENDS BY PERMANENT WIRE MARKER.
5. COLOR ANSI 61 GRAY.

NAME PLATE SCHEDULE			
TAG	QTY	SIZE	INSCRIPTION
NP1	1	1" X 3"	SCADA CABINET



ENCLOSURE LAYOUT

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 1 MW PARKING LOT SOLAR**

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A	01-30-17	PRELIMINARY	DL
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SHEET TITLE  
**SCADA CABINET  
 EQUIPMENT LAYOUT**

TRIMARK PROJECT NUMBER  
**168105**

DES: DL  
 CAD: DL  
 DATE: 01-30-17

DEPARTMENT APPROVALS	
ENG	VB
SI/SCADA	TD
METER	
PROD	KW
PM	DB

DWG NUMBER: **ND-F** REVISION: **B**  
 SCALE: NO SCALE SHEET 2 OF 4

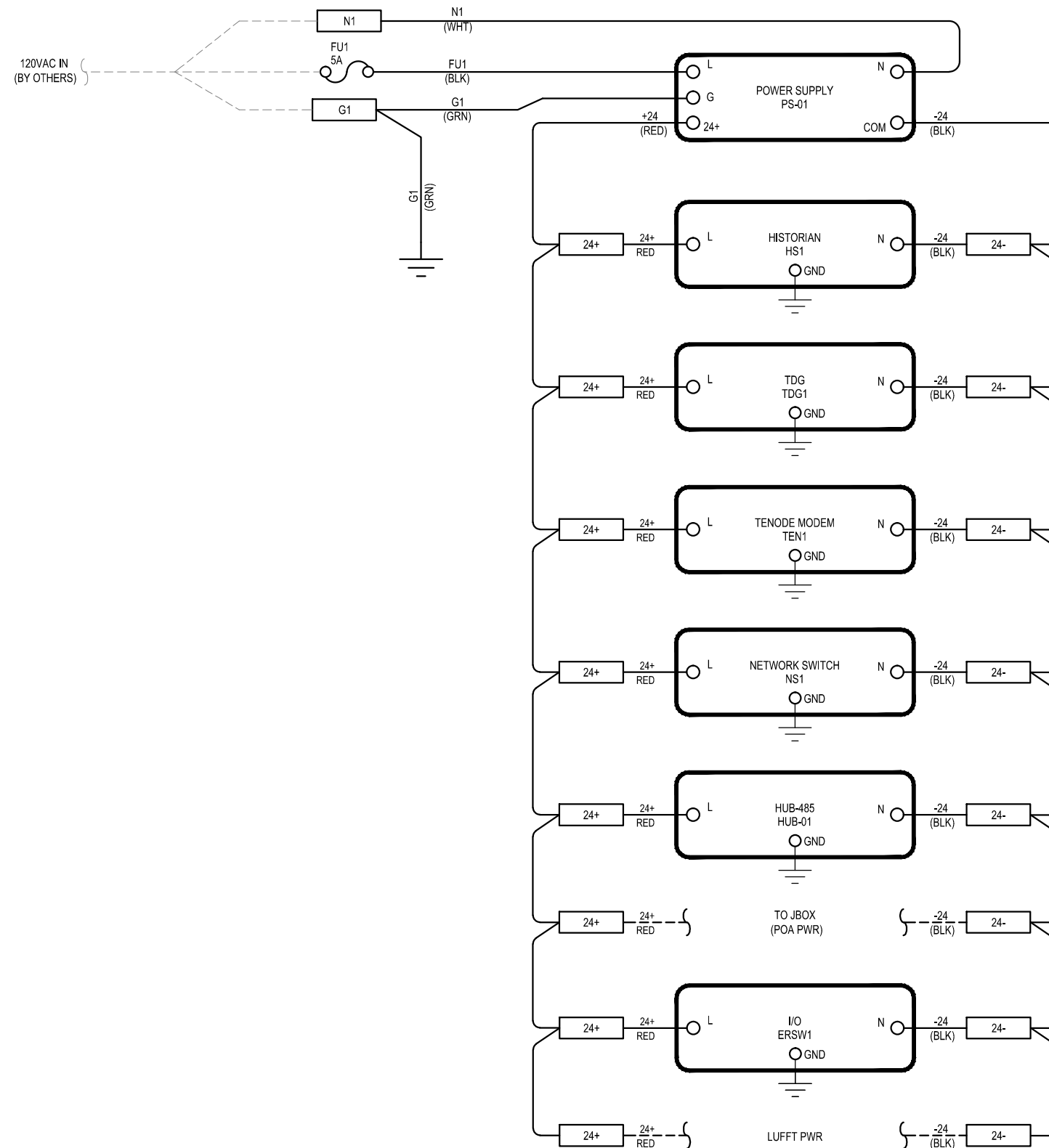
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- WIRING NOTES**
- ALL POWER WIRING SHALL BE #14AWG UNLESS OTHERWISE NOTED.
  - USE PUSH PORT CONNECTORS WHEN NEEDED.

**LEGEND:**

- INTERNAL PANEL WIRING  
 - - - - EXTERNAL WIRING



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A	01-30-17	PRELIMINARY	DL
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SHEET TITLE  
**SCADA  
 POWER DISTRIBUTION**

TRIMARK PROJECT NUMBER  
**168105**

DES	DL
CAD	DL
DATE:	01-30-17

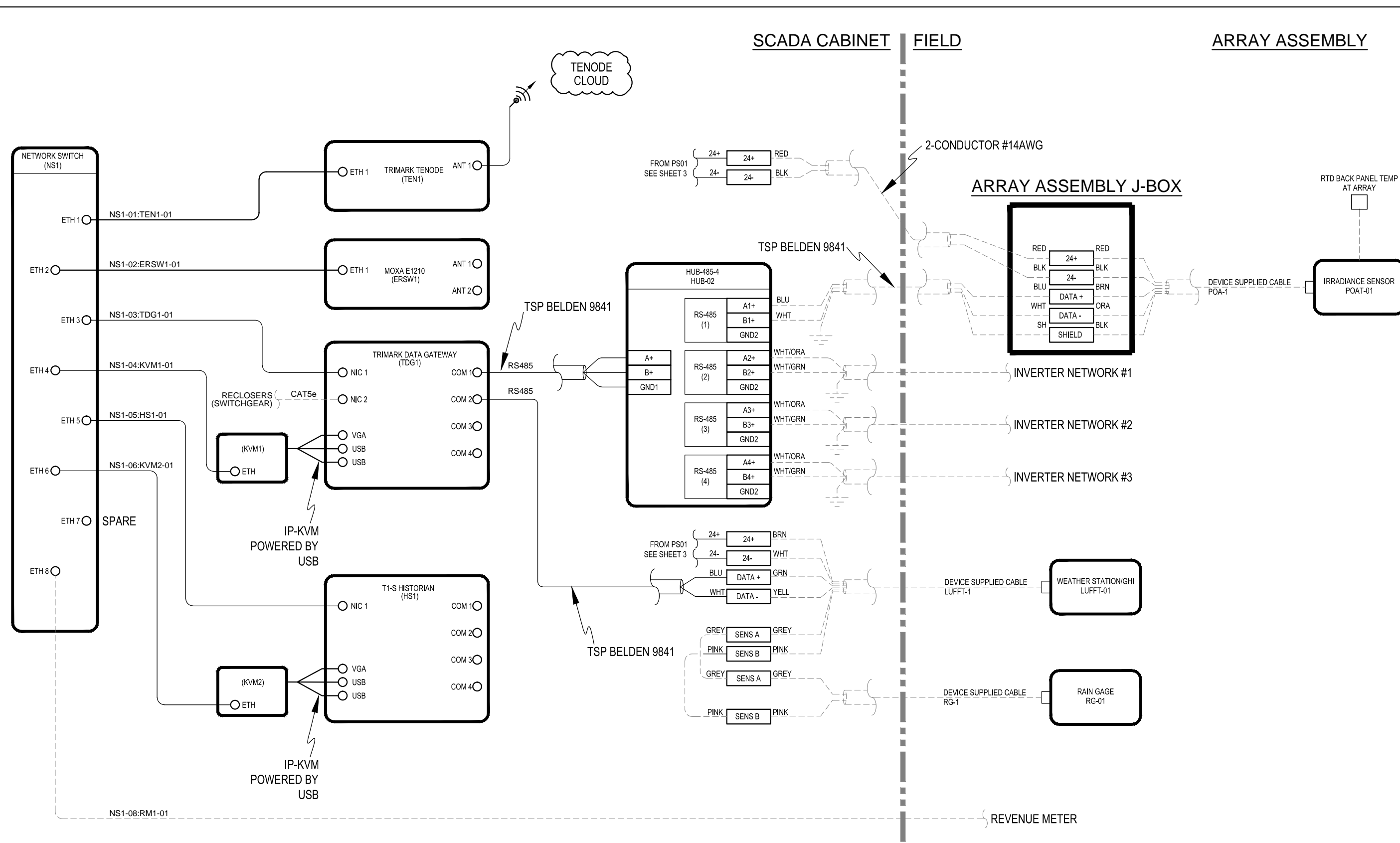
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SI/SCADA	TD
METER	
PROD	KW
PM	DB

DWG NUMBER	REVISION
<b>ND-F</b>	<b>B</b>
SCALE	NO SCALE   SHEET 3 OF 4

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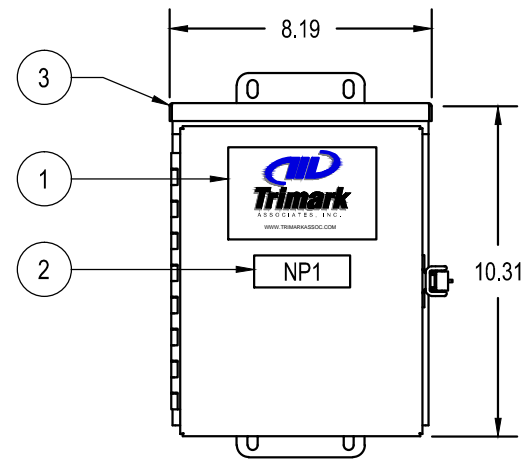
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SI/SCADA	TD
METER	
PROD	KW
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METEOROLOGICAL INSTRUMENT SCHEDULE						
ITEM	MEASUREMENT	DESCRIPTION	MANUFACTURER	MODEL	ID	LOCATION
1	GLOBAL HORIZONTAL IRRADIANCE & WEATHER STATION	WEATHER STATION/GHI	LUFFT	WS501	LUFFT-01	-
2	RAIN GAUGE	EXTERNAL RAIN GAUGE	LUFFT	WTB100	RG-01	-
3	PLANE OF ARRAY IRRADIANCE & TEMPERATURE, BACK OF MODULE	IRRADIANCE SENSRO	INGENIEURBURO	SI-RS485-TC-T	POAT-01	ARRAY
4	BACK OF MODULE	EXTERNAL TEMPERATURE	INGENIEURBURO	TMODUL-SI	POAT-01	ARRAY

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ENCLOSURE FRONT VIEW

- ENCLOSURE NOTES**
1. MOUNTING HOLES IN BACK OF BODY FOR DIRECT MOUNTING OR OPTIONAL EXTERNAL MOUNTING BRACKETS.
  2. PLASTIC NAMEPLATES WILL BE PROVIDED AS REQUIRED
  3. WIRING WILL BE MARKED AT BOTH ENDS BY PERMANENT WIRE MARKER.
  4. COLOR ANSI 61 GRAY.

J BOX BILL OF MATERIALS				
ITEM	QTY	DESCRIPTION	PART NUMBER	MANUFACTURER
1	1	TRIMARK PANEL LAMACOID	H12-322-512	PLASTIC
2	1	1" X 3" EQUIPMENT IDENTIFICATION LAMACOID	H03-322-402	PLASTIC
3	1	NEMA 3R STEEL CABINET (10" X 8" X 6")	RHC081006	WIEGMANN
4	1	BACKPANEL (8.25" X 6.25")	N1P0810	WIEGMANN
5	A/R	1M SLOTTED DIN RAIL ALUMINUM	111.033	DSB MARKETING
6	2	DIN RAIL END BLOCK	0800886	PHOENIX CONTACT
7	5	DIN RAIL TERMINAL BLOCK (#10-#26 AWG)	3044102	PHOENIX CONTACT
8	2	2 POSITION, PLUG IN BRIDGE (76A)	3005950	PHOENIX CONTACT

NAME PLATE SCHEDULE			
TAG	QTY	SIZE	INSCRIPTION
NP1	1	1" X 3"	J-BOX

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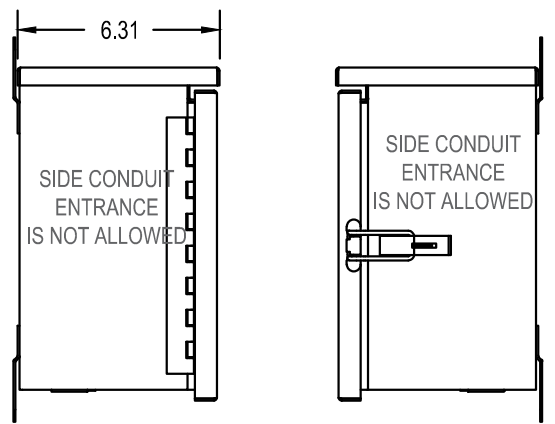
SHEET TITLE  
**J-BOX EQUIPMENT LAYOUT AND BILL OF MATERIAL**

TRIMARK PROJECT NUMBER  
**168105**

DES: DL  
 CAD: DL  
 DATE: 01-30-17

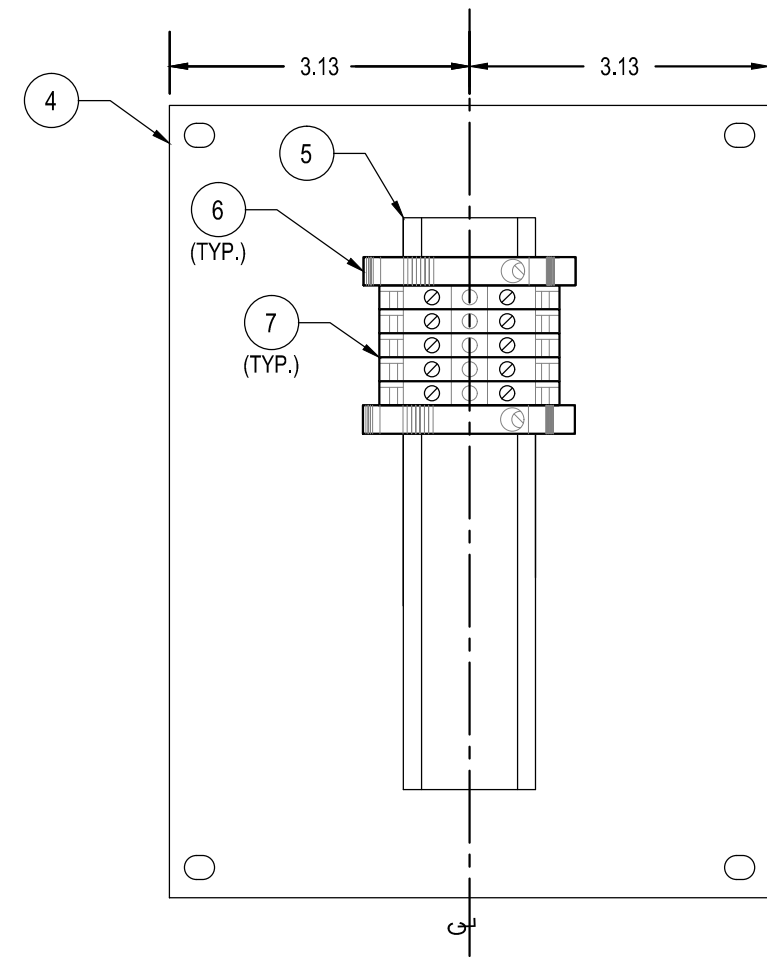
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ENG	VB
SI/SCADA	TD
METER	
PROD	KW
PM	DB

DWG NUMBER: **JB-1** REVISION: **B**  
 SCALE: NO SCALE SHEET 1 OF 1

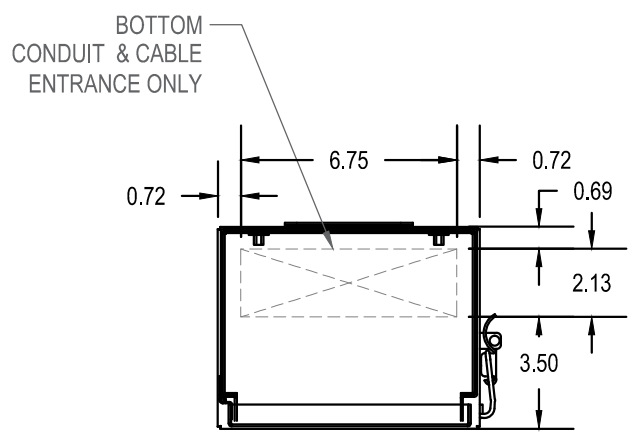


ENCLOSURE LEFTSIDE VIEW

ENCLOSURE RIGHTSIDE VIEW



JUNCTION BOX LAYOUT



ENCLOSURE BOTTOM BASE PLATE

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BILL OF MATERIALS				
ITEM	QTY	DESCRIPTION	PART NUMBER	MANUFACTURER
1	A/R	1-1/2" RIGID ALUM. CONDUIT (10'-0")	-	-

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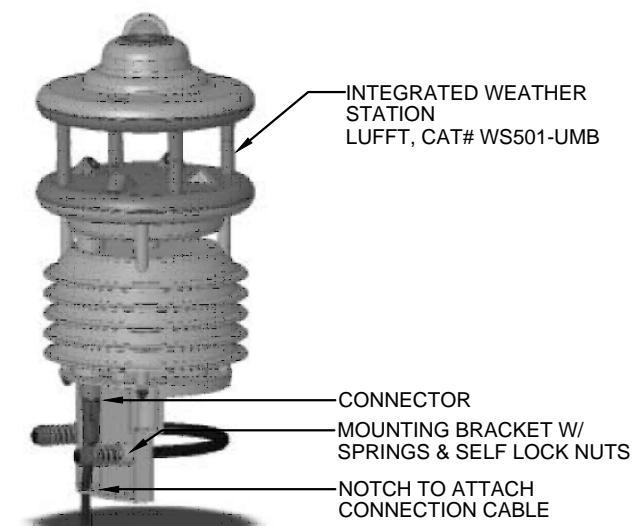
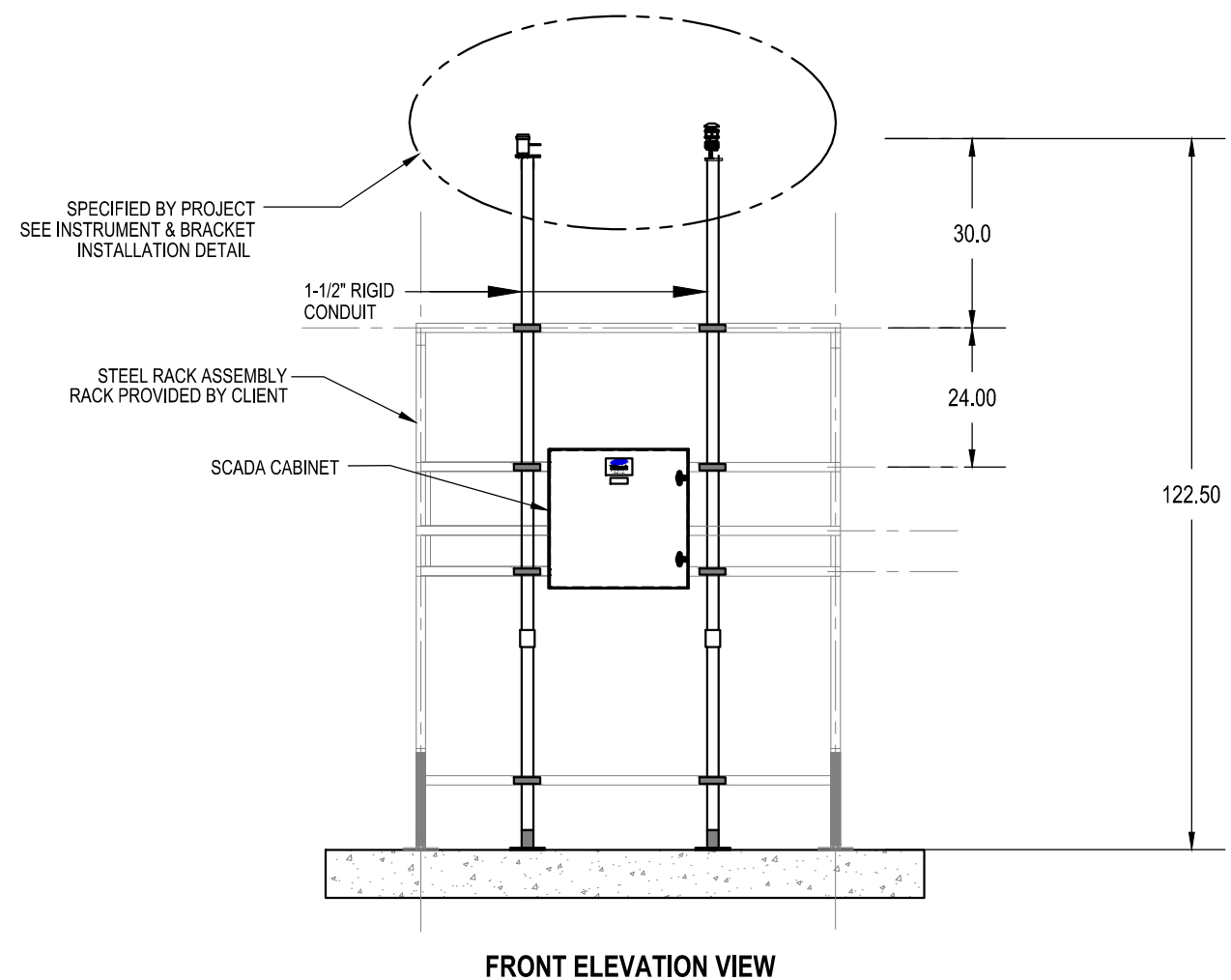
SHEET TITLE  
**H-FRAME CABINET INSTALLATION**

TRIMARK PROJECT NUMBER  
**168105**

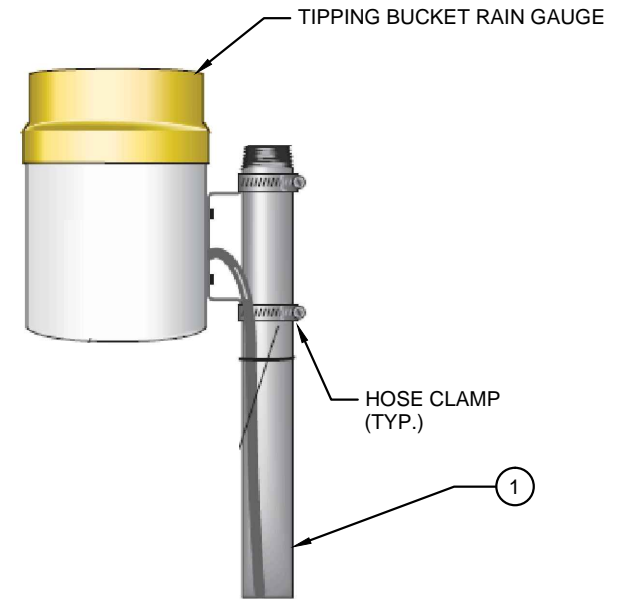
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ENG	VB
SI/SCADA	TD
METER	
PROD	KW
PM	DB

DWG NUMBER: **TR-1** REVISION: **B**  
 SCALE: NO SCALE SHEET 1 OF 1



**SMART WEATHER SENSOR INSTALLATION DETAIL**



**RAIN GAUGE INSTALLATION DETAIL**

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