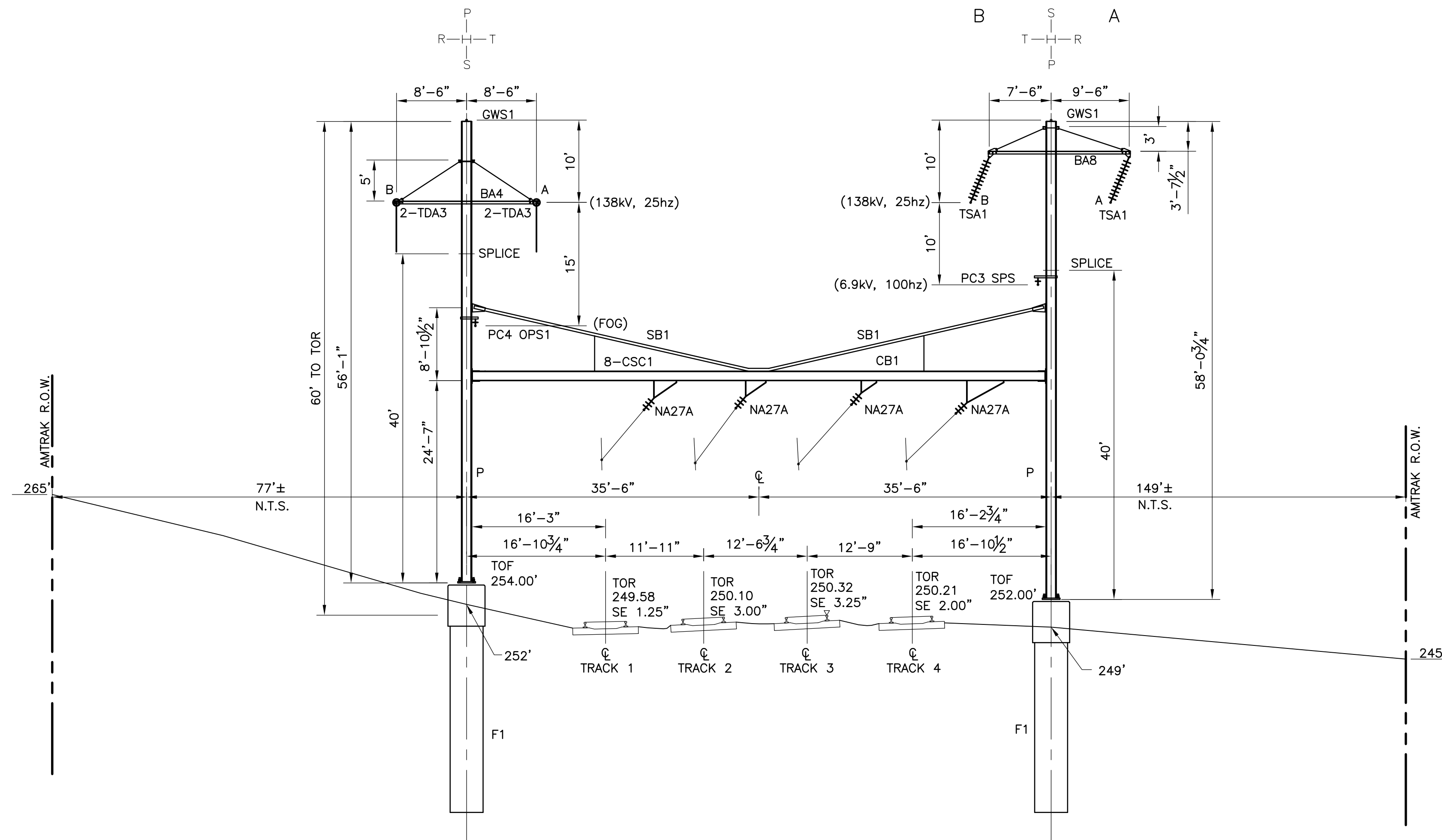


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CATENARY WIRE HEIGHTS				
	TRACK 1	TRACK 2	TRACK 3	TRACK 4
MW	25'-8 1/2"	25'-4 3/4"	25'-7 1/4"	24'-7 3/4"
CW	19'-7 1/2"	18'-8 3/4"	18'-4 1/2"	18'-9 3/4"

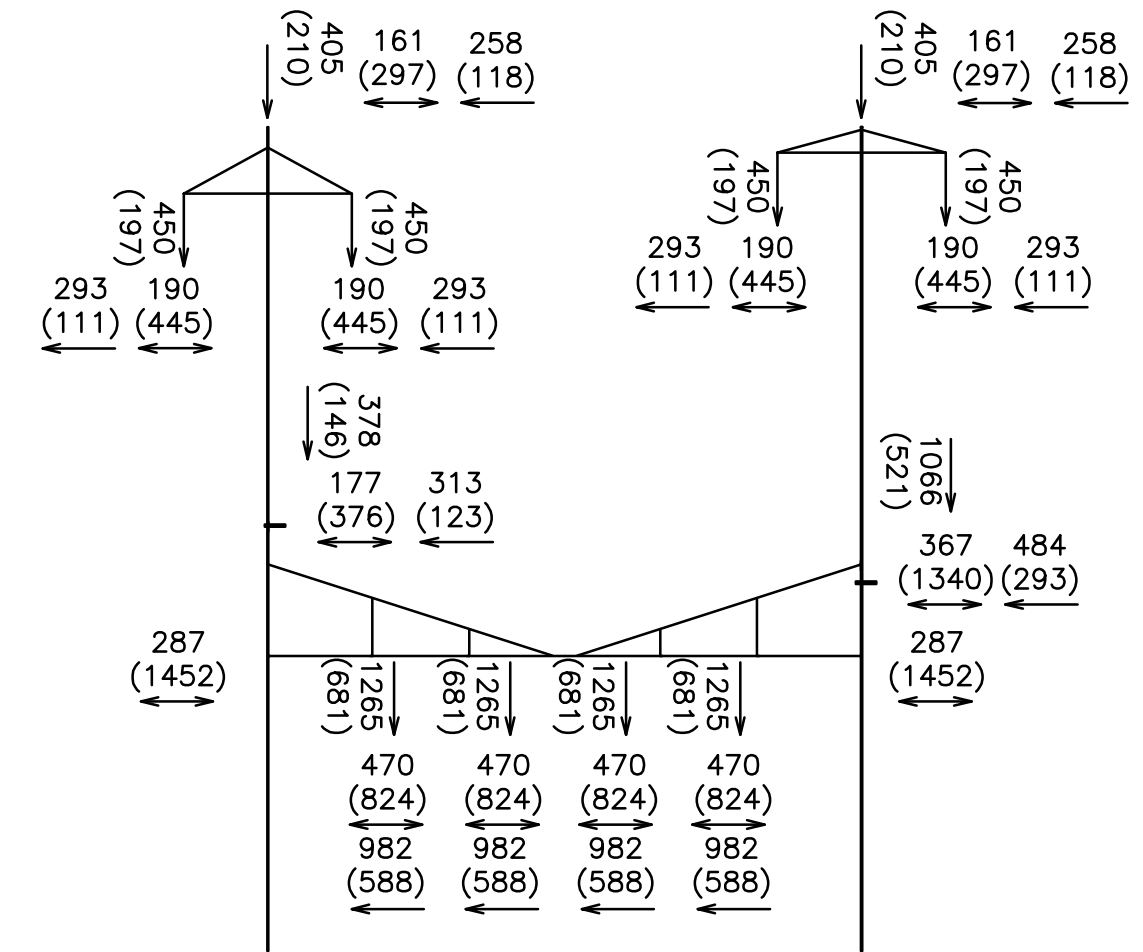
MESSENGER SUPPORT NA27A DIMENSIONS				
	TRACK 1	TRACK 2	TRACK 3	TRACK 4
T1	1'-3 1/2"	1'-1"	8"	1'-10"
T2	2'-8 1/2"	2'-4"	1'-7"	4'-5"

B **A**
TRANSPOSITION
T-147 TO T-142



STRUCTURE ERECTION DIAGRAM T-147

325+85
LOOKING TOWARDS HARRISBURG
0 10 20
SCALE: 1"=10'-0"



LOADING DIAGRAM
1/2" RADIAL ICE, 40 MPH WIND, (90 MPH WIND, 60°F)
300' LOAD SPAN
(NOT TO SCALE)

- WORK STATEMENT:**
1. INSTALL FOUNDATIONS.
 2. INSTALL POLES, CROSS BEAM AND SAG BRACES.
 3. INSTALL TRANSMISSION BRACKETS.
 4. INSTALL SIGNAL POWER SUPPORT BRACKET.
 5. INSTALL STATIC, TRANSMISSION AND INSULATED SIGNAL POWER WIRES.
 6. TRANSFER FOG AND EXISTING INSULATED SIGNAL POWER WIRES TO NEW STRUCTURE.
 7. INSTALL SLIDING BEAM CLAMPS AND MESSENGER SUPPORTS.
 8. TRANSFER CATENARY WIRES TO NEW STRUCTURE.
 9. ADJUST HANGERS IN CATENARY SPANS AND REPROFILE CATENARY.
 10. DEMO OLD CAT POLES AND FOUNDATIONS.

BILL OF MATERIALS				
MARK	DESCRIPTION	REF. DWG.	QUANTITY	
NA27A	MESSENGER SUPPORT	ET-1904	4	
GWS1	GROUND WIRE ASSEMBLY	ET-1909	2	
TSA1	TRANSMISSION WIRE SUPPORT	ET-1800	2	
TDA3	TRANSMISSION WIRE DEADEND	ET-1800	4	
OPS1	FOG WIRE SUPPORT	ET-1906	1	
SPS	SIGNAL POWER SUPPORT	ET-1913	1	
PC3	SLIDING CLAMP	S-5215	1	
PC4	SLIDING CLAMP	S-5215	1	
P	POLE	S-5103	2	
F1	FOUNDATION	S-5102	2	
SB1	SAG BRACE	S-5105	2	
CB1	CROSS BEAM	S-5104	1	
BA4	TRANSMISSION BRACKET	S-5203	1	
BAB	TRANSMISSION BRACKET	S-5206	1	
CSC1	SLIDING BRACKET	S-5214	8	

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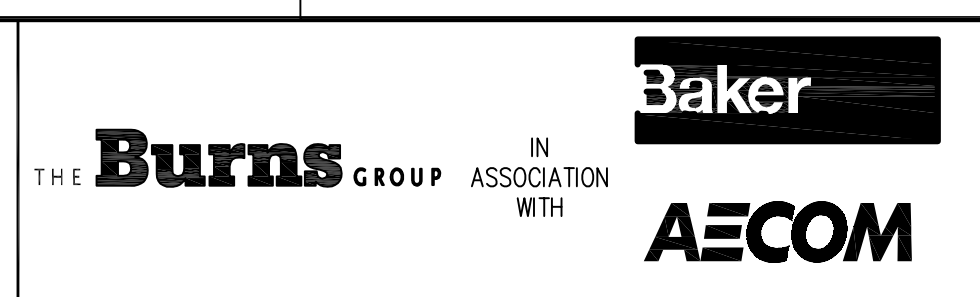
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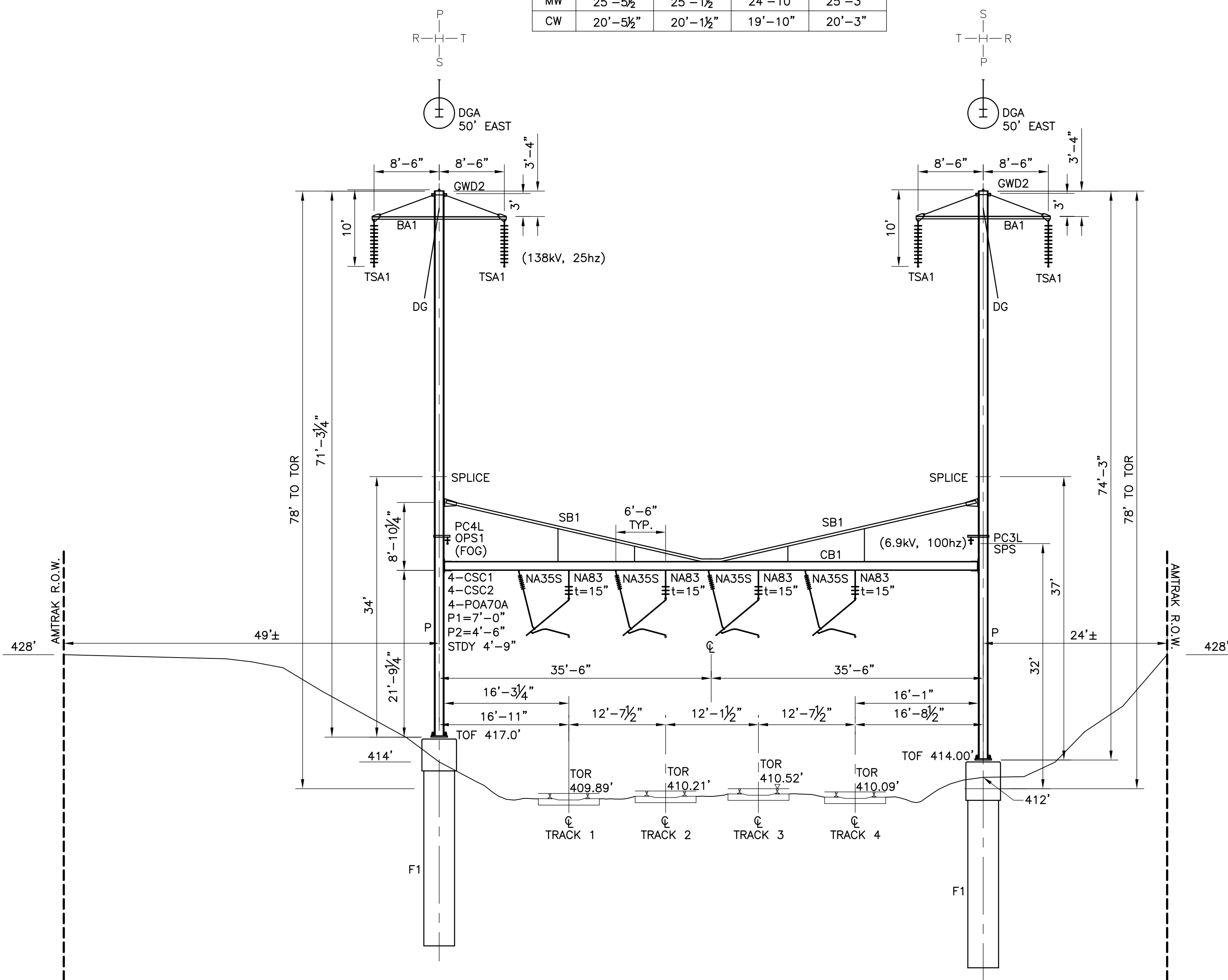
Approved	Date



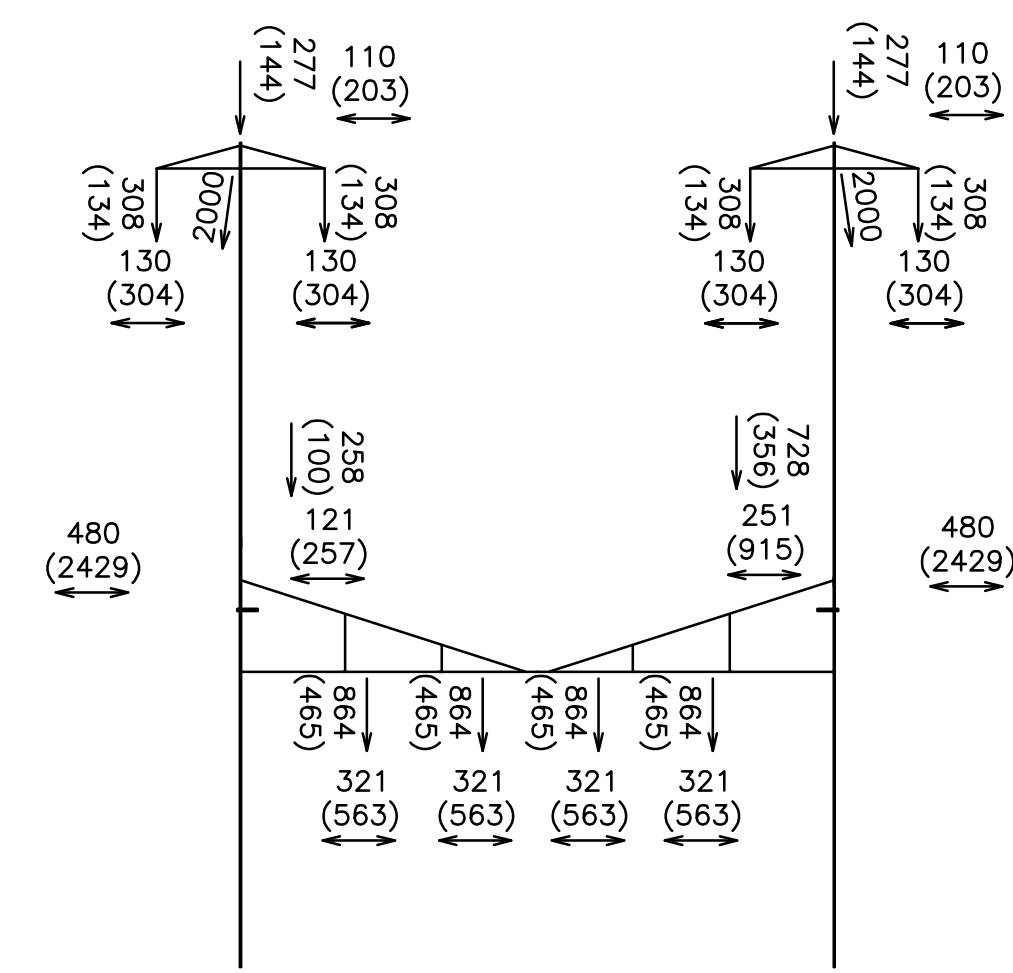
ZOO TO PAOLI TRANSMISSION ELECTRIFICATION STRUCTURAL ERECTION DIAGRAM T-147
Recommended: DP Drawn: CAG Checked: SW Date: 12/19/14

File No.:	2011-059-ET-1509.DWG
Ref. No.:	2011-059
Sheet No.:	485 OF 936
ET-1509	

CATENARY WIRE HEIGHTS				
	TRACK 1	TRACK 2	TRACK 3	TRACK 4
MW	25'-5 1/2"	25'-1 1/2"	24'-10"	25'-3"
CW	20'-5 1/2"	20'-1 1/2"	19'-10"	20'-3"



STRUCTURE ERECTION DIAGRAM T-226
 521+99
 LOOKING TOWARDS HARRISBURG
 SCALE: 1"=10'-0"



LOADING DIAGRAM
 1/2" RADIAL ICE, 40 MPH WIND, (90 MPH WIND, 60°F)
 205' LOAD SPAN
 (NOT TO SCALE)

BILL OF MATERIALS			
MARK	DESCRIPTION	REF. DWG.	QUANTITY
NA83	MESSENGER SUPPORT	ET-1904	4
NA35S	SYNTHETIC PIPE INSULATOR	ET-1904	4
GWD2	GROUND WIRE DEADEND	ET-1909	2
TSA1	TRANSMISSION WIRE SUPPORT	ET-1800	4
OPS1	FOG WIRE SUPPORT	ET-1906	1
SPS	SIGNAL POWER SUPPORT	ET-1913	1
POA70A	REGISTRATION ASSEMBLY	ET-1902	4
DG	DOWNGUY	ET-1908	2
PC3L	SLIDING CLAMP	S-5215	1
PC4L	SLIDING CLAMP	S-5215	1
P	POLE	S-5103	2
F1	FOUNDATION	S-5102	2
SB1	SAG BRACE	S-5105	2
CB1	CROSS BEAM	S-5104	1
BA1	TRANSMISSION BRACKET -DOUBLE	S-5200	2
CSC1	SLIDING CLAMP	S-5214	4
CSC2	SLIDING CLAMP - CLEVIS	S-5214	4
DGA	DOWN GUY FOUNDATION	S-5101	2

WORK STATEMENT:

1. INSTALL FOUNDATIONS.
2. INSTALL POLES, CROSS BEAM AND SAG BRACES.
3. INSTALL TRANSMISSION BRACKETS.
4. INSTALL SIGNAL POWER SUPPORT BRACKET.
5. INSTALL STATIC, TRANSMISSION AND INSULATED SIGNAL POWER WIRES.
6. TRANSFER FOG AND EXISTING INSULATED SIGNAL POWER WIRES TO NEW STRUCTURE.
7. INSTALL SLIDING BEAM CLAMPS AND MESSENGER SUPPORTS.
8. TRANSFER CATENARY WIRES TO NEW STRUCTURE.
9. ADJUST HANGERS IN CATENARY SPANS AND REPROFILE CATENARY.
10. DEMO OLD CAT POLES AND FOUNDATIONS.

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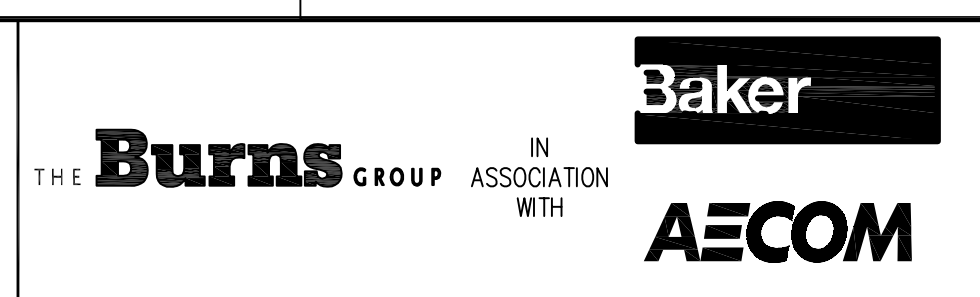
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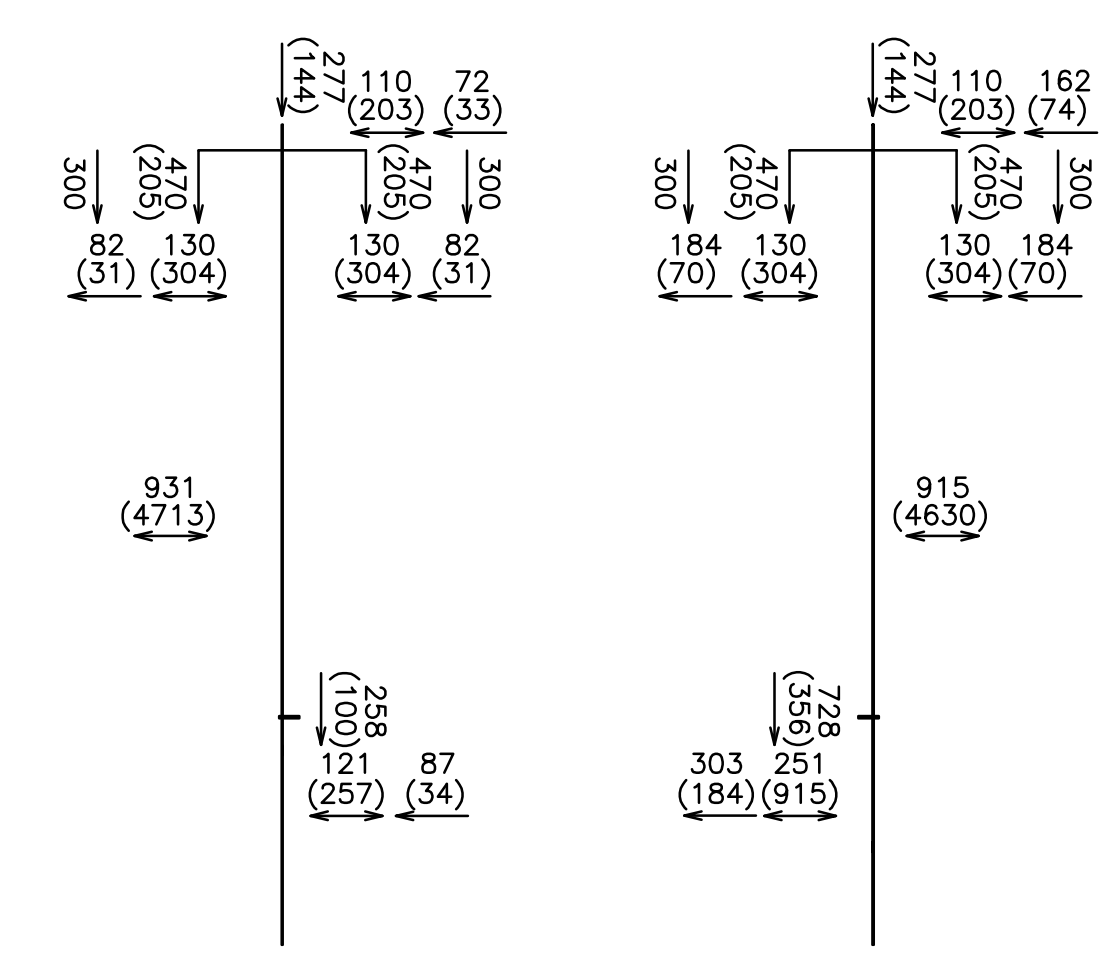
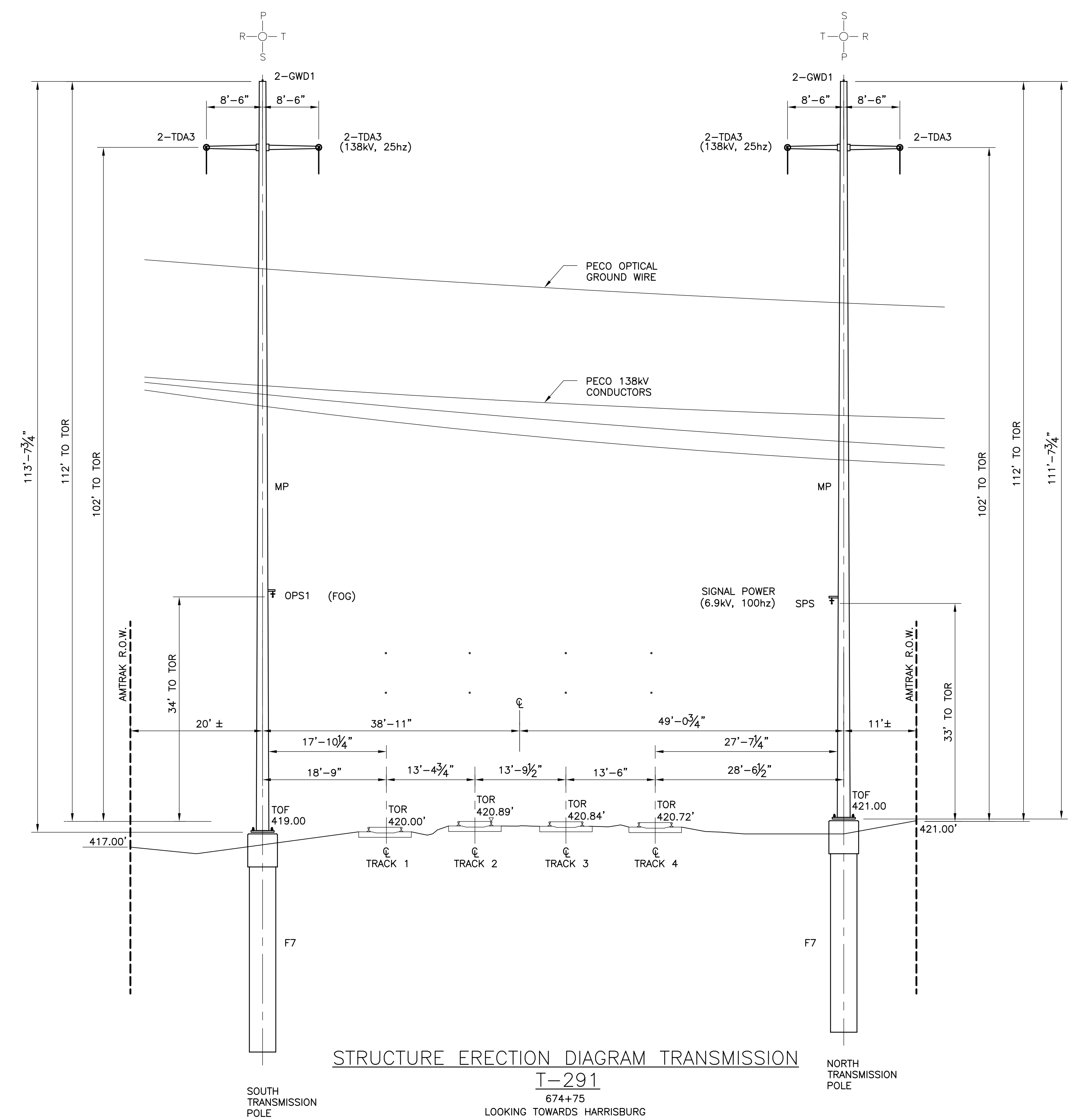
Approved	Date



ZOO TO PAOLI TRANSMISSION
 ELECTRIFICATION
 STRUCTURAL ERECTION DIAGRAM
 T-226
 Recommended: DP Drawn: CTS Checked: RW Date: 12/19/14

File No.:	2011-059-ET-1430
Ref. No.:	2011-059
Sheet No.:	406 OF 936
ET-1430	

BILL OF MATERIALS			
MARK	DESCRIPTION	REF. DWG.	QUANTITY
GWD1	GROUND WIRE ASSEMBLY	ET-1909	4
TDA3	TRANSMISSION DEADEND ASSEMBLY	ET-1800	8
OPS1	FOG WIRE SUPPORT	ET-1906	1
SPS	SIGNAL POWER SUPPORT	ET-1913	1
MP	POLE	S-5109	2
F7	FOUNDATION	S-5111	2



LOADING DIAGRAM
 1/2" RADIAL ICE, 40 MPH WIND, 314' VERTICAL SPAN, 205' WIND SPAN
 (60'F, 90 MPH WIND, 205' MAX SPAN)
 NOT TO SCALE

WORK STATEMENT:

1. INSTALL FOUNDATION.
2. INSTALL POLE.
3. INSTALL TRANSMISSION BRACKETS.
4. INSTALL SIGNAL POWER SUPPORT BRACKET.
5. INSTALL STATIC, TRANSMISSION AND INSULATED SIGNAL POWER WIRES.
6. TRANSFER EXISTING INSULATED SIGNAL POWER WIRES TO NEW STRUCTURE.

STRUCTURE ERECTION DIAGRAM TRANSMISSION
T-291
 674+75
 LOOKING TOWARDS HARRISBURG
 SCALE: 1"=10'-0"

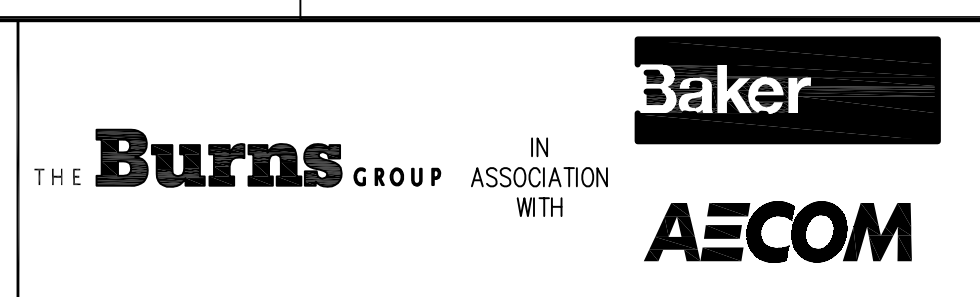
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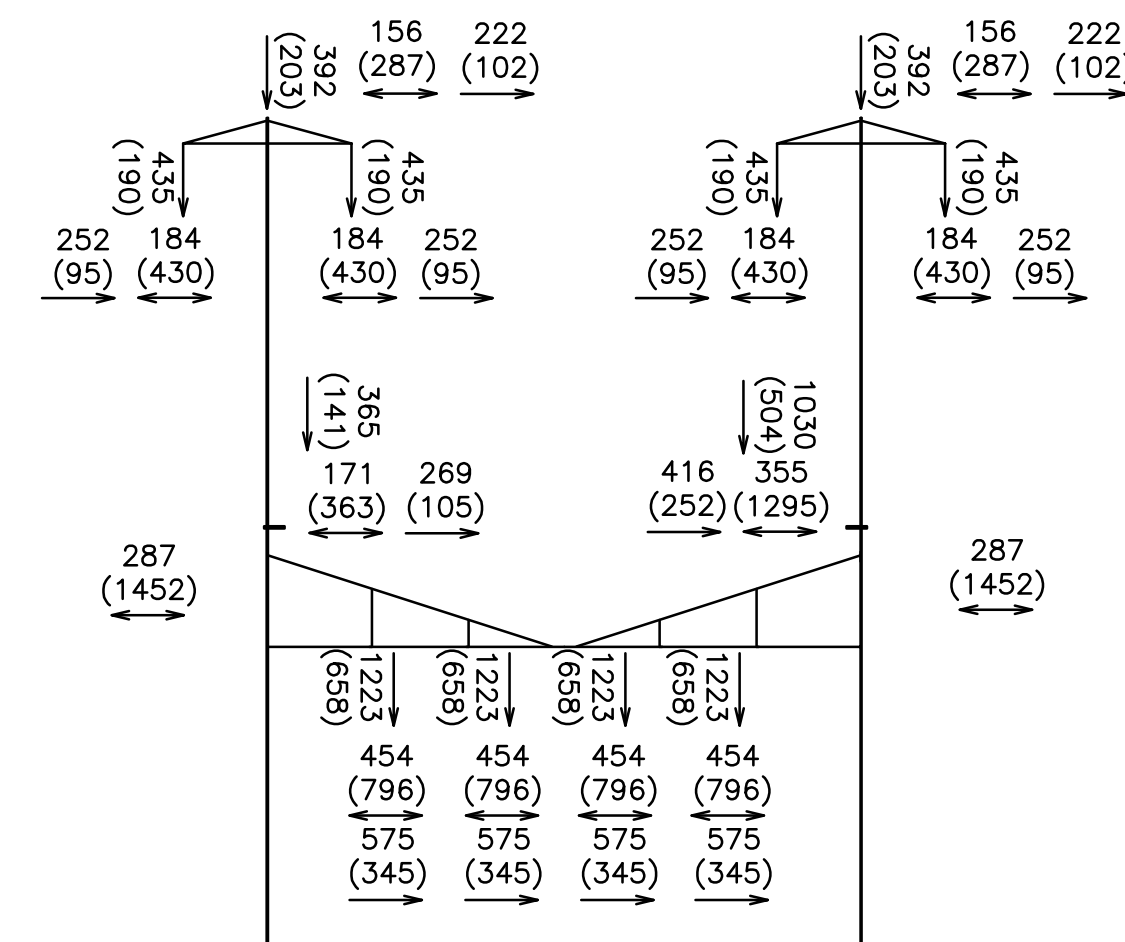
ZOO TO PAOLI TRANSMISSION
ELECTRIFICATION
STRUCTURAL ERECTION DIAGRAM
T-291
 Recommended: DP Drawn: CTS Checked: RW Date: 12/19/14

File No.:	2011-059-ET-1364.DWG
Ref. No.:	2011-059
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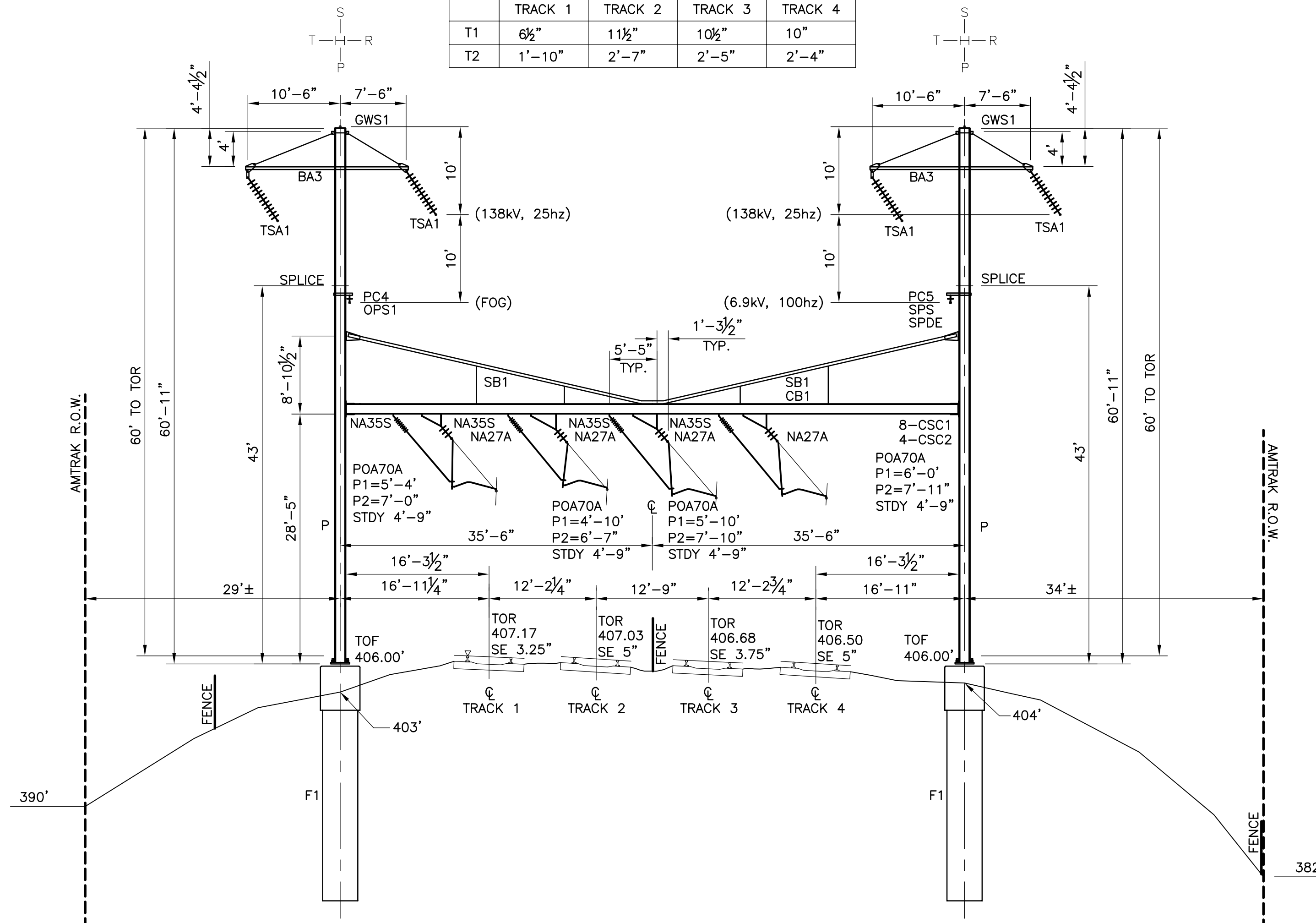
MARK	DESCRIPTION	REF. DWG.	QUANTITY
NA27A	MESSENGER SUPPORT	ET-1904	4
NA35S	SYNTHETIC PIPE INSULATOR	ET-1904	4
GWS1	GROUND WIRE ASSEMBLY	ET-1909	2
TSA1	TRANSMISSION WIRE SUPPORT	ET-1800	4
OPS1	FOG WIRE SUPPORT	ET-1906	1
SPS	SIGNAL POWER SUPPORT	ET-1913	1
SPDE	SIGNAL POWER DEADEND	ET-1913	1
POA70A	REGISTRATION ASSEMBLY	ET-1902	4
PC4	SLIDING CLAMP	S-5215	1
PC5	SLIDING CLAMP	S-5215	1
P	POLE	S-5103	2
F1	FOUNDATION	S-5102	2
SB1	SAG BRACE	S-5105	2
CB1	CROSS BEAM	S-5104	1
BA1	TRANSMISSION BRACKET -DOUBLE	S-5202	2
CSC1	SLIDING BRACKET	S-5210	8
CSC2	SLIDING BRACKET - CLEVIS	S-5210	4



LOADING DIAGRAM
1/2" RADIAL ICE, 40 MPH WIND, (90 MPH WIND, 60°F)
290' LOAD SPAN
(NOT TO SCALE)

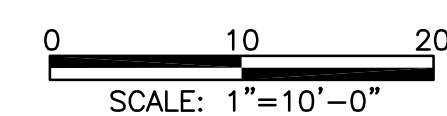
CATENARY WIRE HEIGHTS				
	TRACK 1	TRACK 2	TRACK 3	TRACK 4
MW	24'-8 1/2"	24'-5 3/4"	24'-10 1/2"	25'-1 3/4"
CW	18'-9"	19'-1 1/4"	18'-5 1/2"	18'-7 3/4"

MESSENGER SUPPORT NA27A DIMENSIONS				
	TRACK 1	TRACK 2	TRACK 3	TRACK 4
T1	6 1/2"	11 1/2"	10 1/2"	10"
T2	1'-10"	2'-7"	2'-5"	2'-4"



STRUCTURE ERECTION DIAGRAM T-330

775+59
LOOKING TOWARDS HARRISBURG



WORK STATEMENT:

1. INSTALL FOUNDATIONS.
2. INSTALL POLES, CROSS BEAM AND SAG BRACES.
3. INSTALL TRANSMISSION BRACKETS.
4. INSTALL SIGNAL POWER SUPPORT BRACKET.
5. INSTALL STATIC, TRANSMISSION, AND INSULATED SIGNAL POWER WIRES.
6. TRANSFER FOG AND EXISTING INSULATED SIGNAL POWER WIRES TO NEW STRUCTURE.
7. INSTALL SLIDING BEAM CLAMPS AND MESSENGER SUPPORTS.
8. TRANSFER CATENARY WIRES TO NEW STRUCTURE.
9. ADJUST HANGERS IN CATENARY SPANS AND REPROFILE CATENARY.
10. DEMO OLD CAT POLES AND FOUNDATIONS.

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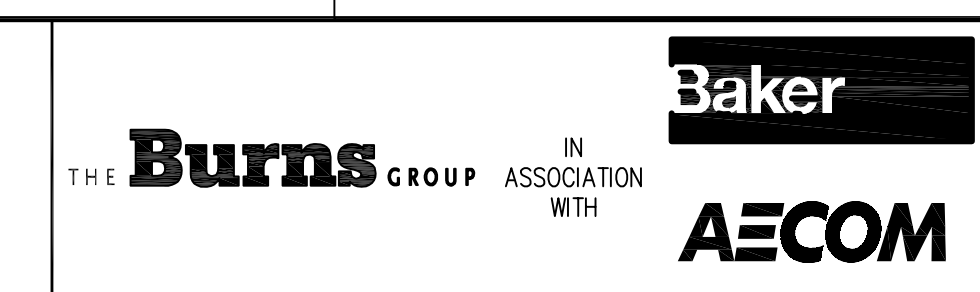
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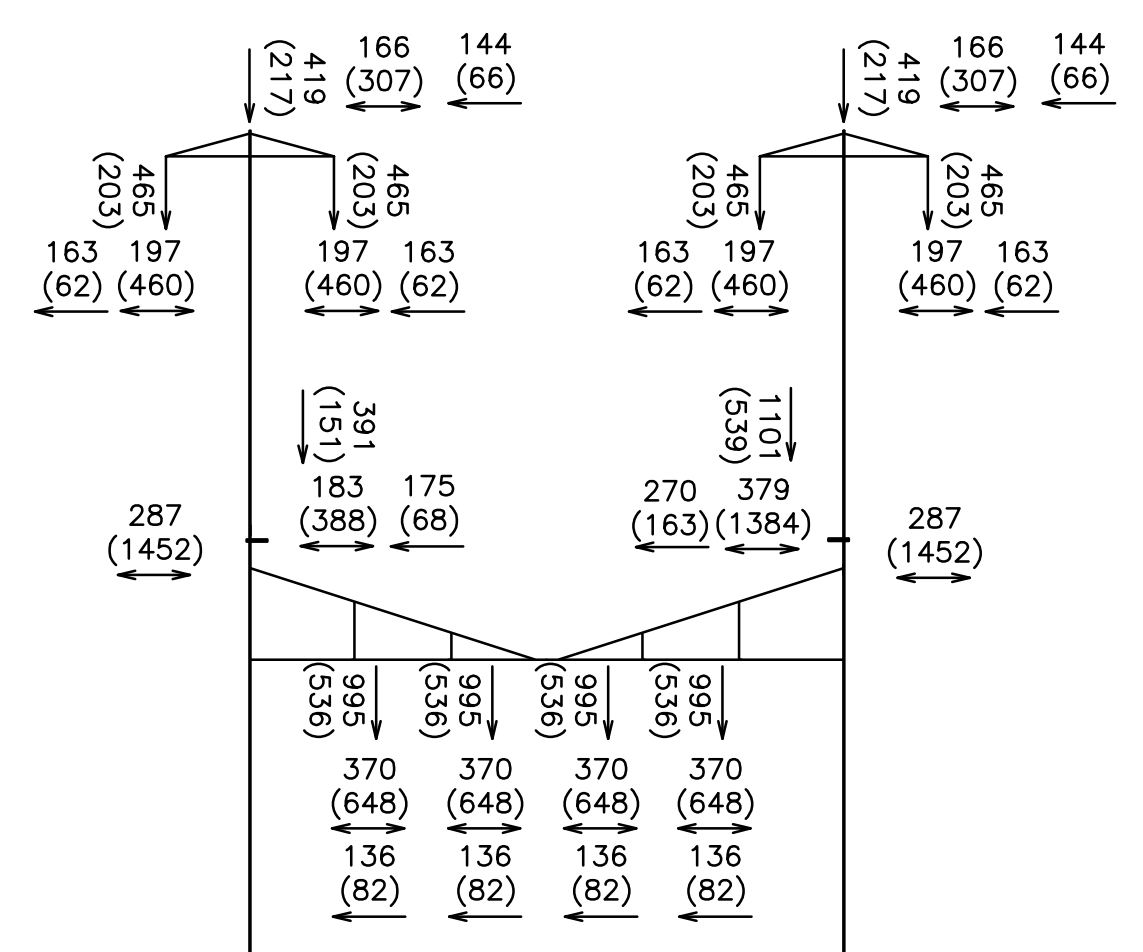
ZOO TO PAOLI TRANSMISSION
ELECTRIFICATION
STRUCTURAL ERECTION DIAGRAM
T-330
Recommended: DP Drawn: CTS Checked: RW Date: 12/19/14

File No.: 2011-059-ET-1325.DWG
Ref. No.: 2011-059
Sheet No.: 299 OF 936
ET-1325

BILL OF MATERIALS			
MARK	DESCRIPTION	REF. DWG.	QUANTITY
NA27A	MESSENGER SUPPORT	ET-1904	4
NA35S	SYNTHETIC PIPE INSULATOR	ET-1904	4
GWS1	GROUND WIRE ASSEMBLY	ET-1909	2
TSA1	TRANSMISSION WIRE SUPPORT	ET-1800	4
OPS1	FOG WIRE SUPPORT	ET-1906	1
SPS	SIGNAL POWER SUPPORT	ET-1913	1
POA70A	REGISTRATION ASSEMBLY	ET-1902	4
PC3	SLIDING CLAMP	S-5215	1
PC4	SLIDING CLAMP	S-5215	1
P	POLE	S-5103	2
F1	FOUNDATION	S-5102	2
SB1	SAG BRACE	S-5105	2
CB1	CROSS BEAM	S-5104	1
BA1	TRANSMISSION BRACKET -DOUBLE	S-5200	2
CSC1	SLIDING BRACKET	S-5214	8
CSC2	SLIDING BRACKET - CLEVIS	S-5214	4

CATENARY WIRE HEIGHTS				
	TRACK 1	TRACK 2	TRACK 3	TRACK 4
MW	23'-8"	22'-4½"	23'-5¾"	25'-0½"
CW	18'-3¾"	17'-7"	17'-10"	19'-7¾"

MESSENGER SUPPORT NA27A DIMENSIONS				
	TRACK 1	TRACK 2	TRACK 3	TRACK 4
T1	2'-0"	2'-9½"	1'-11"	8"
T2	3'-1"	4'-4"	3'-0"	1'-8"

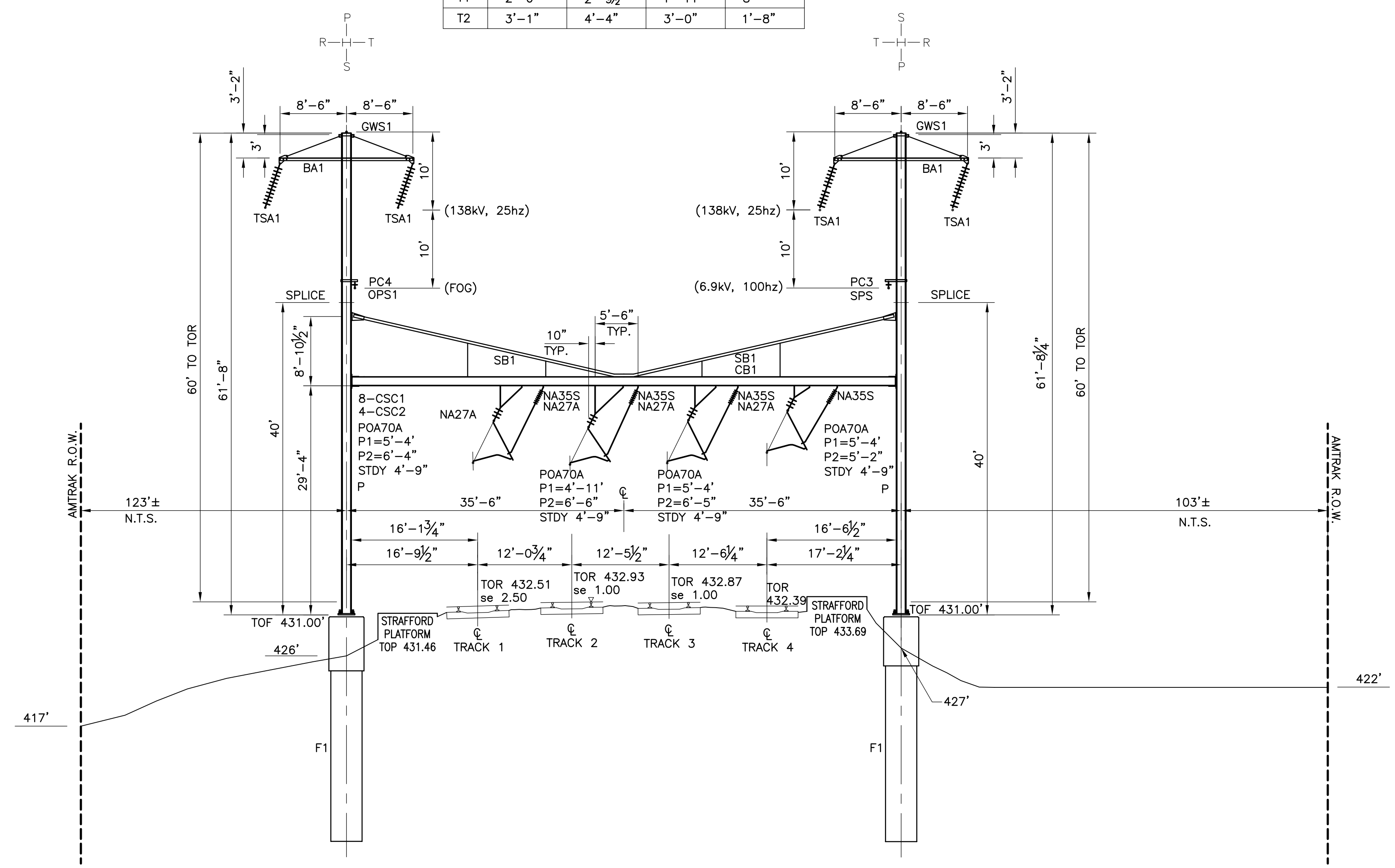


LOADING DIAGRAM

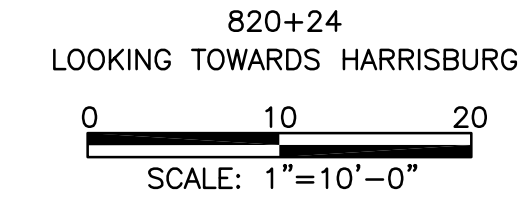
1/2" RADIAL ICE, 40 MPH WIND, (90 MPH WIND, 60°F)
 310' LOAD SPAN
 240' CATENARY LOAD SPAN
 (NOT TO SCALE)

WORK STATEMENT:

1. INSTALL FOUNDATIONS.
2. INSTALL POLES, CROSS BEAM AND SAG BRACES.
3. INSTALL TRANSMISSION BRACKETS.
4. INSTALL SIGNAL POWER SUPPORT BRACKET.
5. INSTALL STATIC, TRANSMISSION AND INSULATED SIGNAL POWER WIRES.
6. TRANSFER FOG AND EXISTING INSULATED SIGNAL POWER WIRES TO NEW STRUCTURE.
7. INSTALL SLIDING BEAM CLAMPS AND MESSENGER SUPPORTS.
8. TRANSFER CATENARY WIRES TO NEW STRUCTURE.
9. ADJUST HANGERS IN CATENARY SPANS AND REPROFILE CATENARY.
10. DEMO OLD CAT POLES AND FOUNDATIONS.



STRUCTURE ERECTION DIAGRAM T-348



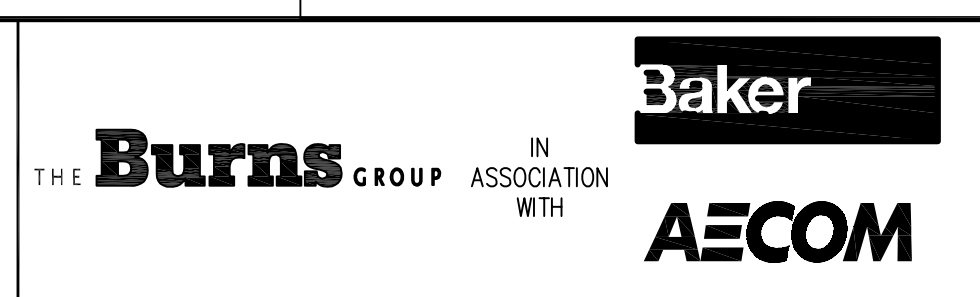
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ZOO TO PAOLI TRANSMISSION ELECTRIFICATION STRUCTURAL ERECTION DIAGRAM T-348
 Recommended: DP Drawn: CTS Checked: RW Date: 12/19/14

File No.:	2011-059-ET-1307.DWG
Ref. No.:	2011-059
Sheet No.:	280 OF 936
ET-1307	

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