



**THE CONNECTICUT PORTION
OF THE INTERSTATE RELIABILITY PROJECT**

BY

THE CONNECTICUT LIGHT AND POWER COMPANY

**VOLUME 7: SUBSTATION AND SWITCHING STATION
DRAWINGS**

DECEMBER 2011



Connecticut Siting Council Application
The Interstate Reliability Project

VOLUME 7: SUBSTATIONS AND SWITCHING STATION

DRAWINGS

EX. 1: Proposed Card Street Substation Modifications

345kV Expansion (Drawing # 17101-Aerial View)
345kV Yard Arrangement – Plan (Drawing # SK-17101-3.11-18)
345kV Yard Arrangement – Section 1-1 (Drawing # SK-17101-3.11-20)
345kV Yard Arrangement – Section 2-2 (Drawing # SK-17101-3.11-22)
345kV Yard Arrangement – Sections 4-4 & 5-5 (Drawing # SK-17101-3.11-23)
345kV Yard Arrangement – Section 3-3 (Drawing # SK-17101-3.11-24)

EX. 2: Proposed Lake Road Switching Station Modifications

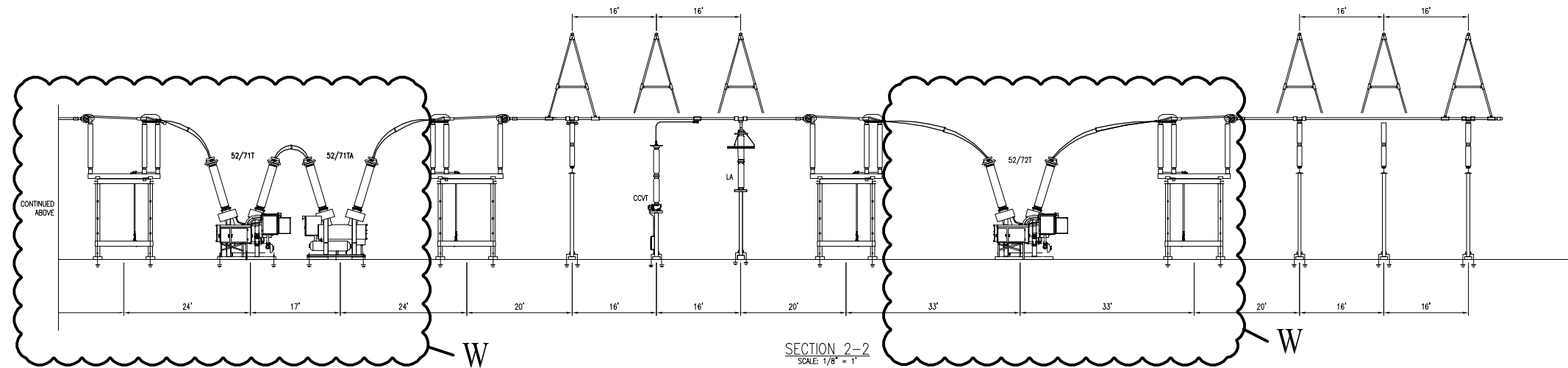
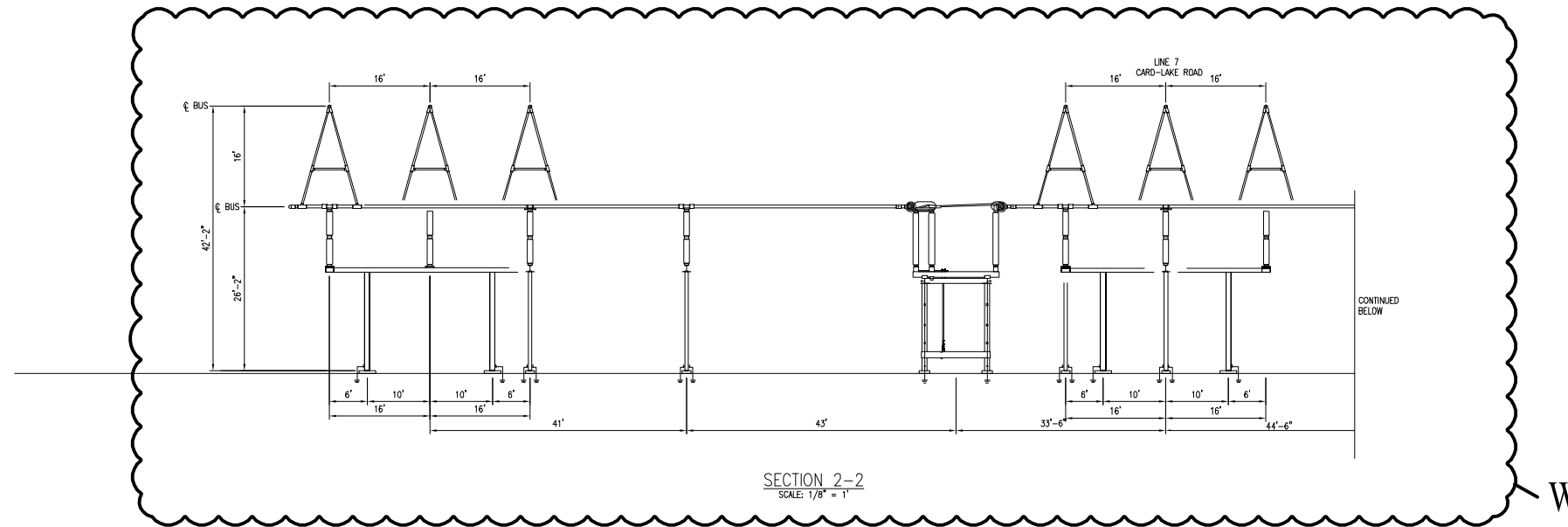
345kV Expansion (Drawing # 16909- Aerial View)
345kV Yard Arrangement – Plan (Drawing # 16909-33001)
345kV Sections (Drawing # 16909-33002 PG 1)
345kV Sections (Drawing # 16909-33002 PG 3)
345kV Sections (Drawing # 16909-33002 PG 4)
345kV Sections (Drawing # 16909-33002 PG 6)
345kV Sections (Drawing # 16909-33002 PG 7)
345kV Sections (Drawing # 16909-33002 PG 8)
345kV Sections (Drawing # 16909-33002 PG 9)
345kV Sections (Drawing # 16909-33002 PG 11)
345kV Sections (Drawing # 16909-33002 PG 12)

EX. 3: Proposed Killingly Substation Modifications


345kV Expansion (Drawing # 16910- Aerial View)
345kV Yard Arrangement – Plan (Drawing # 16910-33102 PG 1)
345kV Elevations (Drawing # 16910-33102 PG 6)
345kV Elevations (Drawing # 16910-33102 PG 7)

EX. 1: Proposed Card Street Substation Modifications

12/05/2011 11:01am - J_Gately - N:\USCDD\46650 - IRP SS\3.11 - Card St\Cadd\CSC\2011 RING BUS OPTION\SK-17101-3.11-22.dwg



REVISIONS DURING CONSTRUCTION				
W	12/5/11	ISSUED FOR CSC APPLICATION	CLE	TAT

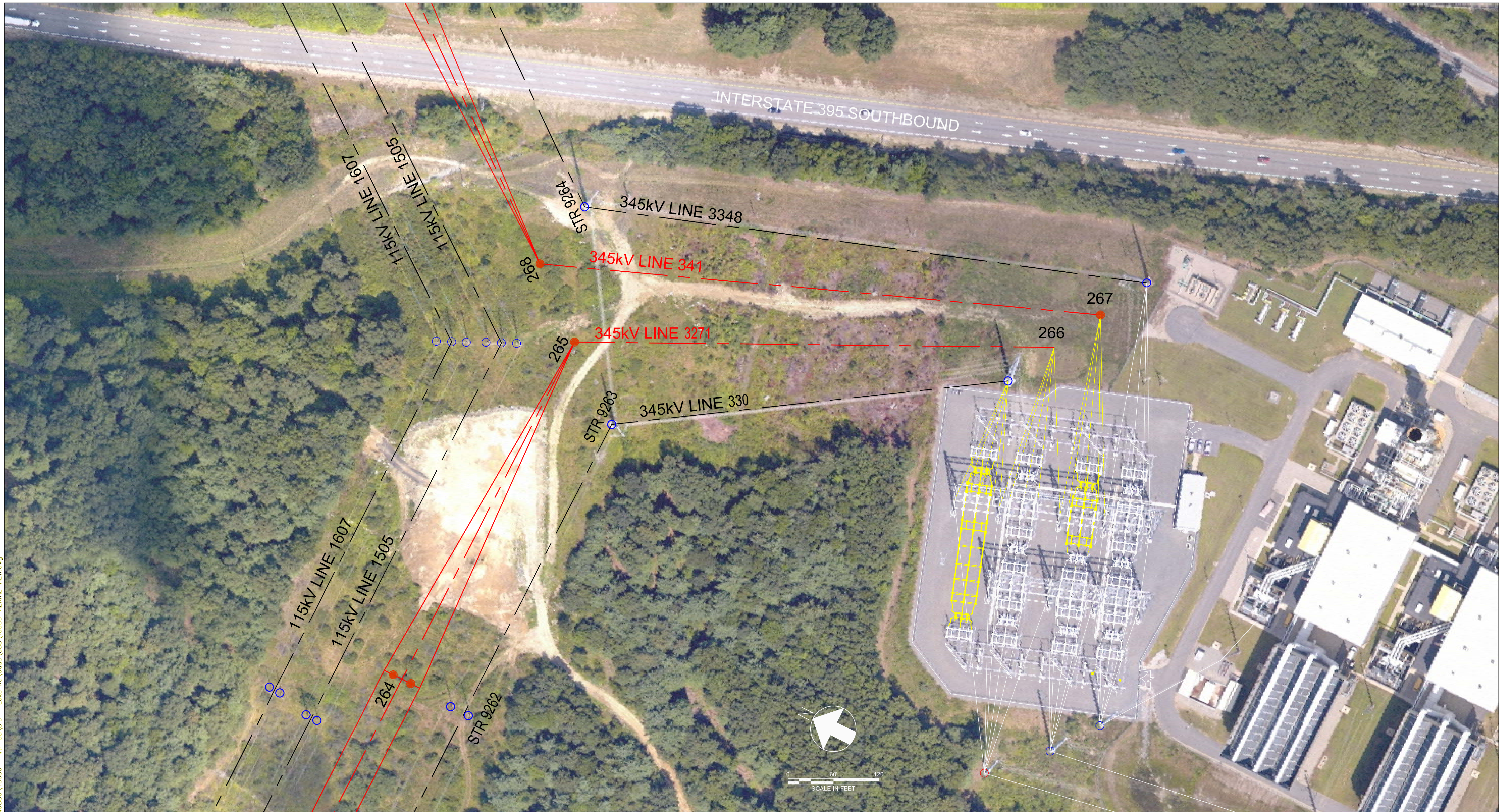
 **Northeast Utilities Service Co.**
FOR CONNECTICUT LIGHT & POWER COMPANY
TITLE: CARD STREET
345kV YARD ARRANGEMENT - SECTION 2-2
LEBANON, CONNECTICUT

BY	CHKD.	APP.	APP.
DATE	DATE	DATE	DATE
SCALE NONE	SIZE B	DWG. NO. SK-17101-3.11-22	
NO.	DATE	AS BUILT REVISIONS	BY CHK APP APP PROJ. V.S.

PRELIMINARY DESIGN
SUBJECT TO CHANGE

 INDICATE SUBSTATION CHANGES

EX. 2: Proposed Lake Road Switching Station Modifications



AERIAL PHOTO IMAGE TAKEN FROM ORIGINAL FIELD SURVEY CONDUCTED IN APRIL 2007 BY OPTIMAL LYDAR SURVEY

LEGEND
 SWITCHING STATION ———
 CHANGES ———
 NEW TRANSMISSION LINE ———

PRELIMINARY DESIGN
 SUBJECT TO CHANGE

no.	date	design revisions	by	chk	app	app
A	12/5/11	ISSUED FOR CSC APPLICATION	RAD	AFG	.	.

Burns & McDonnell
 SINCE 1898

46650

date MARCH 13, 2009
 designed A. GROLL

detailed R. DAVY
 checked

NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP

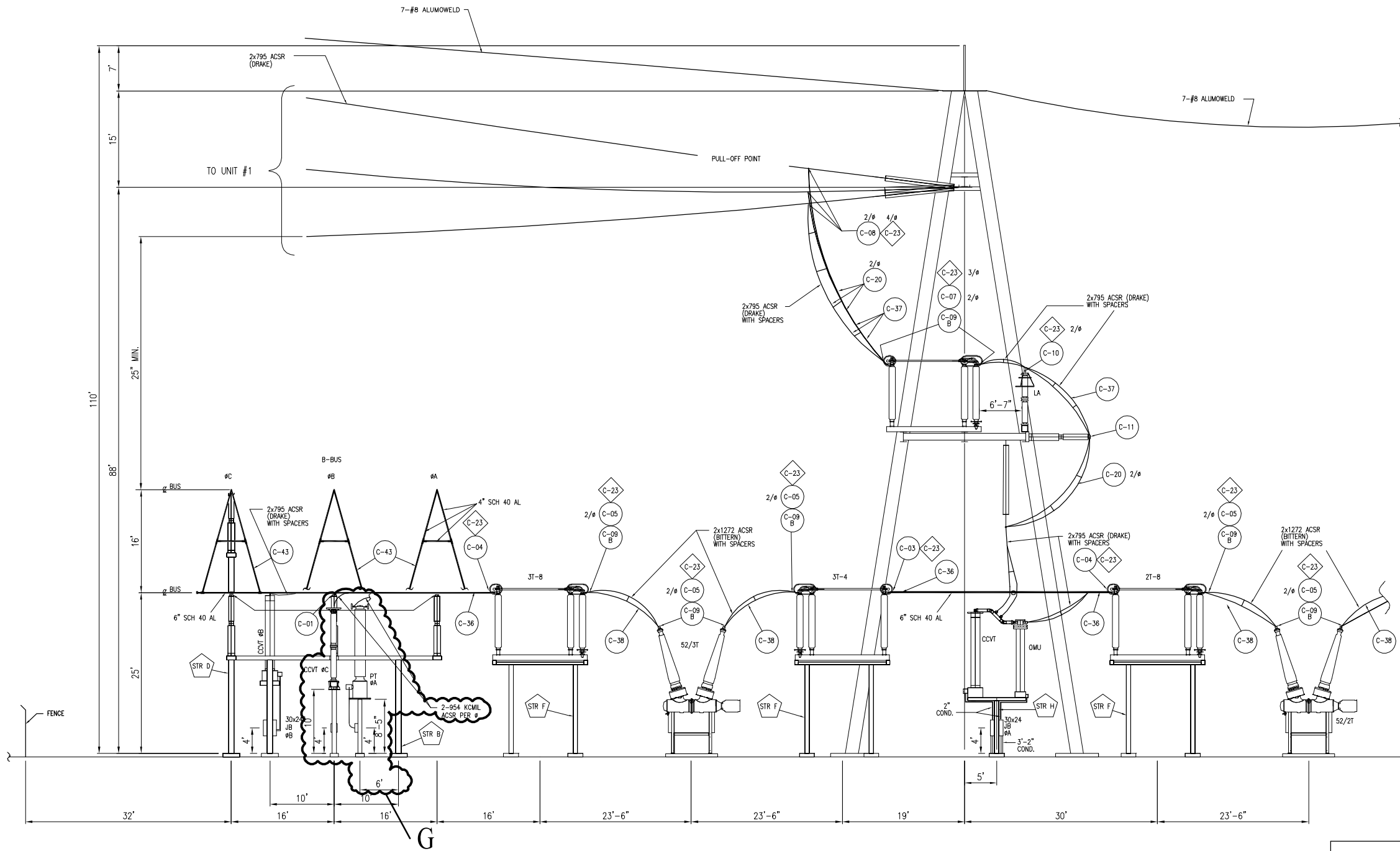
Northeast Utilities Service Co.
 FOR CONNECTICUT LIGHT & POWER COMPANY

TITLE
 LAKE ROAD
 345kV EXPANSION
 KILLINGLY, CONNECTICUT

BY	RAD	CHKD	AFG	APP	APP
DATE	3/13/09	DATE	3/06/09	DATE	DATE
SCALE	NONE	SIZE	D	DWG. NO.	
PROJ		V.S.			16909-AERIAL VIEW

12/05/2011 10:13am - J. Gately - N:\NUSCO\46650 - IRP_SS\3.9 - Lake Rd\Cadd\CSC\16909-AERIAL_VIEW.dwg

12/05/2011 10:20am - J_Gately - N:\NUSCD\46650 - IRP SS\3.9 - Lake Rd\Cadd\CSC\16909-33002p001.dwg




SECTION A-A

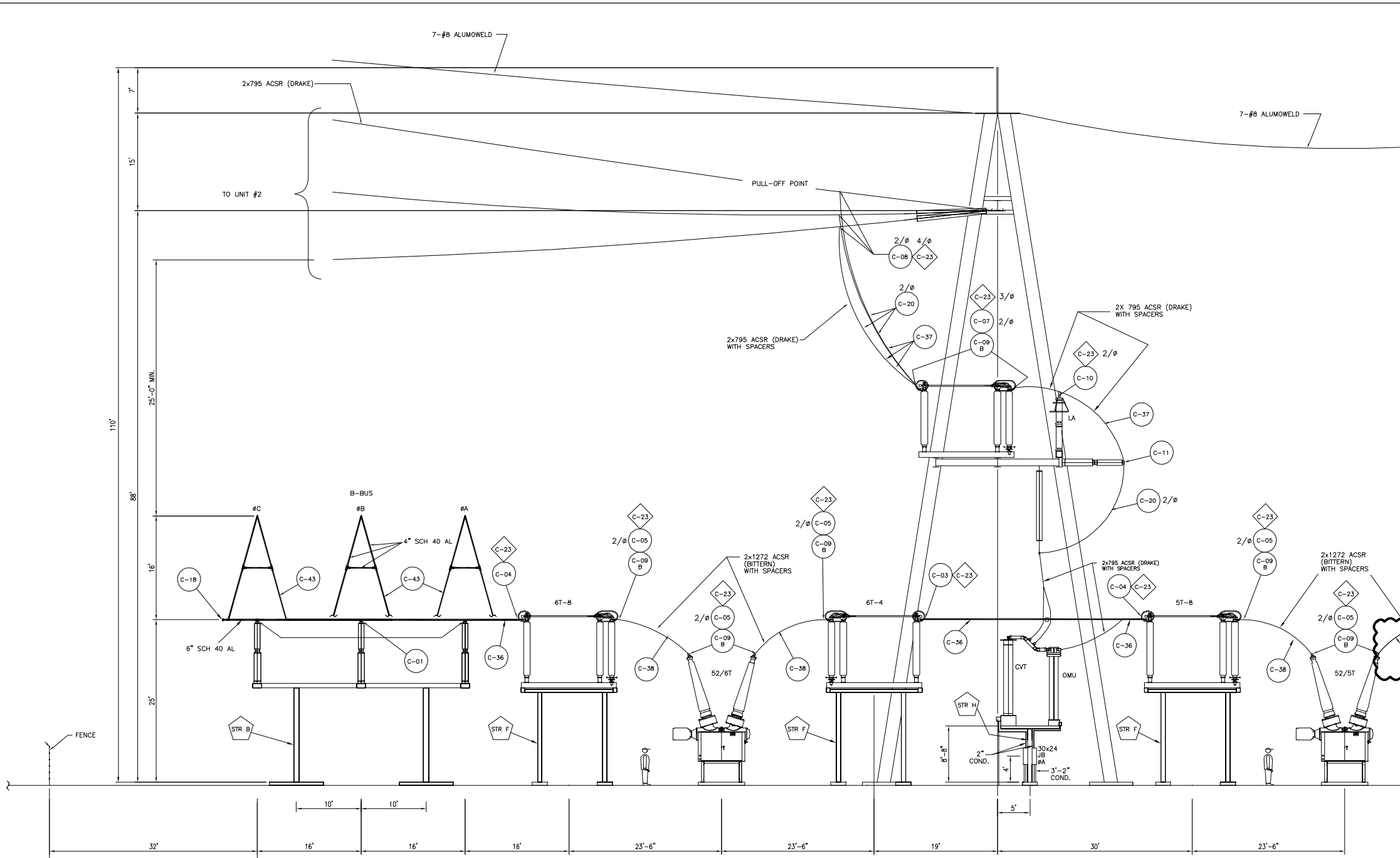
REVISIONS DURING CONSTRUCTION				
G	12/5/11	ISSUED FOR CSC APPLICATION	CLE	TAT

PRELIMINARY DESIGN
SUBJECT TO CHANGE

 INDICATE SWITCHING STATION CHANGES

	Northeast Utilities Service Co.			
	FOR CONNECTICUT LIGHT & POWER COMPANY			
TITLE LAKE ROAD 345kV SECTIONS KILLINGLY, CONNECTICUT				
BY RAD	CHKD. AFG	APP.	APP.	
DATE 3/06/09	DATE 3/06/09	DATE	DATE	
SCALE NONE	SIZE B	DWG. NO. 16909-33002 PG 1		
NO.	DATE	AS BUILT REVISIONS	BY	CHK APP APP

12/05/2011 10:20am - J_Gately - N:\NUSCD\46650 - IRP SS\3.9 - Lake Rd\Cadd\CSC\16909-33002p003.dwg



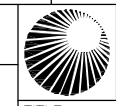
SECTION B-B

CONSTRUCTION DESIGN NOTE:
 1. REPLACE EXISTING JUMPERS FOR CONNECTION TO NEW SWITCH.

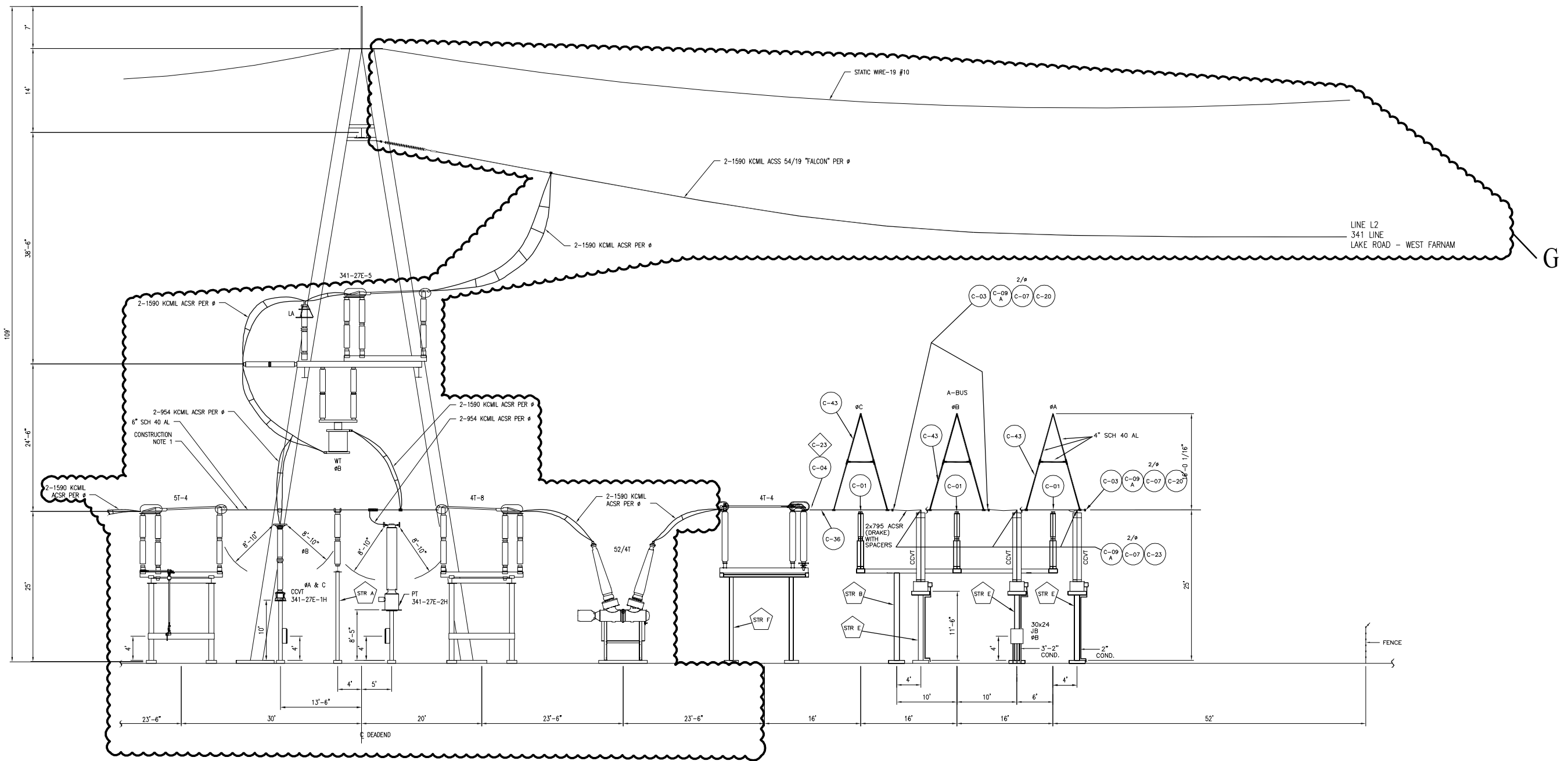
REVISIONS DURING CONSTRUCTION				
G	12/5/11	ISSUED FOR CSC APPLICATION	CLE	TAT

PRELIMINARY DESIGN
SUBJECT TO CHANGE

 INDICATE SWITCHING STATION CHANGES

	Northeast Utilities Service Co.			
	FOR CONNECTICUT LIGHT & POWER COMPANY			
TITLE LAKE ROAD 345kV SECTIONS KILLINGLY, CONNECTICUT				
BY RAD	CHKD. AFG	APP.	APP.	
DATE 3/06/09	DATE 3/06/09	DATE	DATE	
SCALE NONE	SIZE B	DWG. NO.		
NO.	DATE	AS BUILT REVISIONS		
BY	CHK	APP	APP	
PROJ.	V.S.	16909-33002 PG 3		

12/05/2011 10:19am - J_Gately - N:\USCD\46650 - IRP_SS\3.9 - Lake Rd\Cadd\CSC\16909-33002p004.dwg




SECTION B1-B1
1/8" = 1'-0"

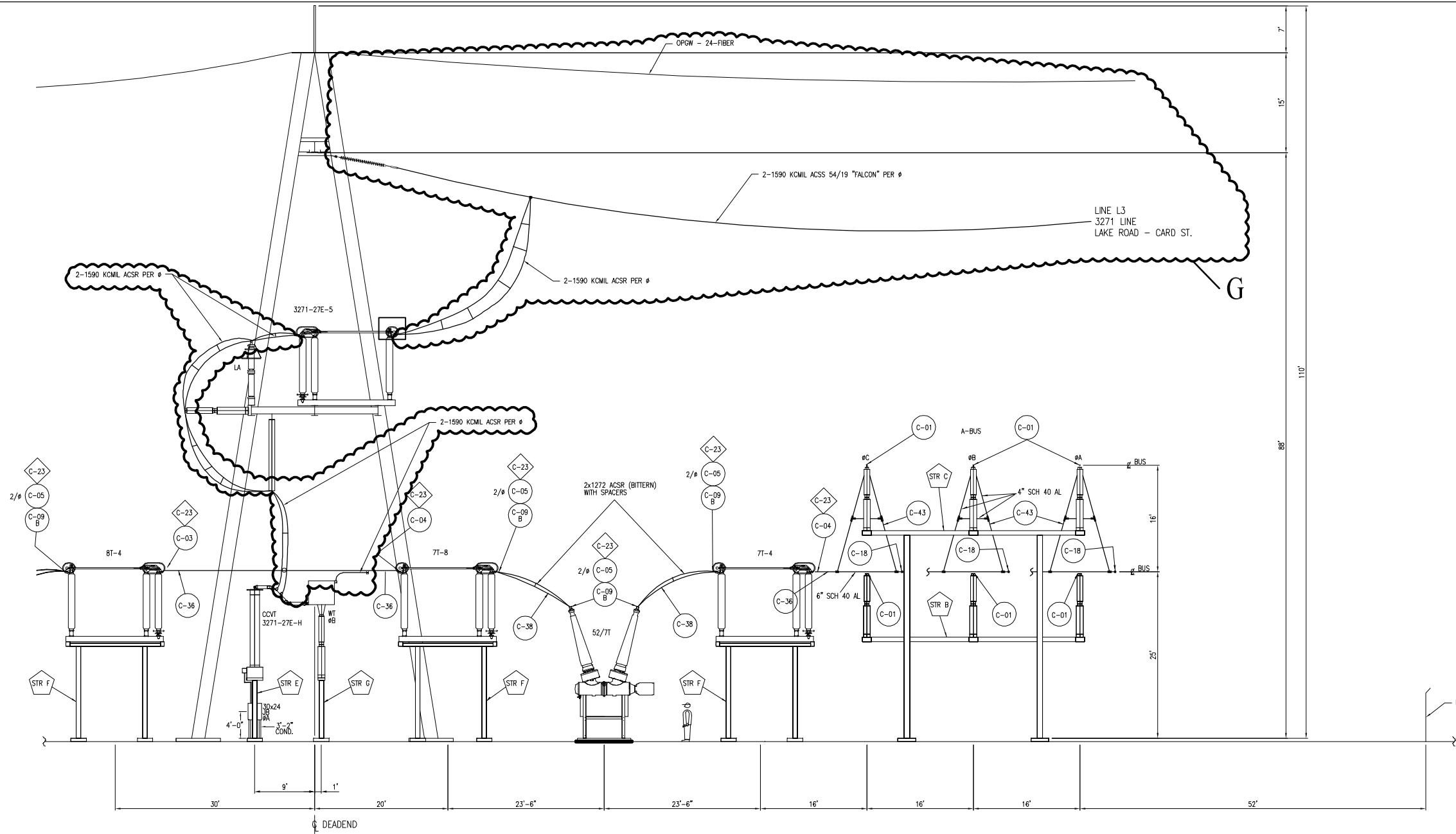
PRELIMINARY DESIGN
SUBJECT TO CHANGE

 INDICATE SWITCHING STATION CHANGES

REVISIONS DURING CONSTRUCTION				
G	12/5/11	ISSUED FOR CSC APPLICATION	CLE	TAT

 Northeast Utilities Service Co. FOR CONNECTICUT LIGHT & POWER COMPANY		TITLE LAKE ROAD 345kV SECTIONS KILLINGLY, CONNECTICUT			
		BY RAD	CHKD. AFG	APP.	APP.
DATE 3/06/09		DATE 3/06/09		DATE	
SCALE NONE		SIZE B		DWG. NO.	
NO.		DATE		AS BUILT REVISIONS	
BY		CHK		APP	
PROJ.		V.S.		16909-33002 PG 4	

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SECTION C1-C1
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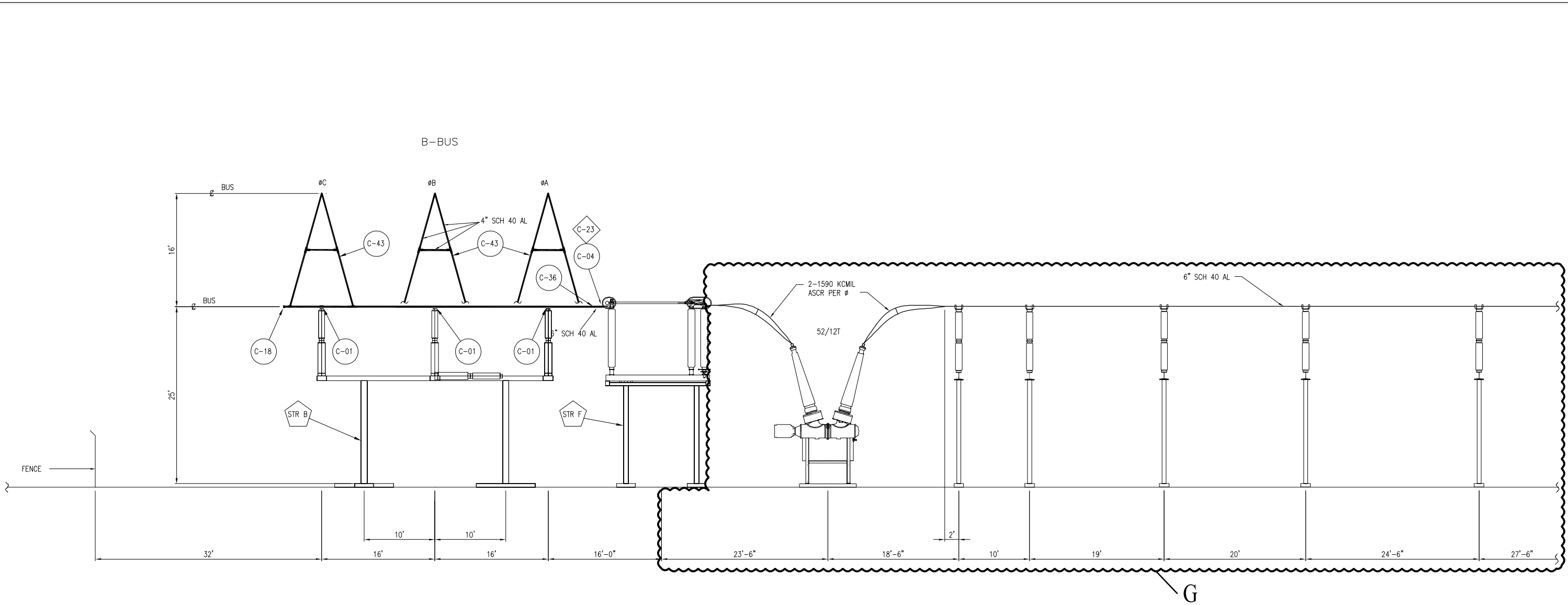
PRELIMINARY DESIGN
SUBJECT TO CHANGE

 INDICATE SWITCHING STATION CHANGES

REVISIONS DURING CONSTRUCTION				
G	12/5/11	ISSUED FOR CSC APPLICATION	CLE	TAT

 Northeast Utilities Service Co. FOR CONNECTICUT LIGHT & POWER COMPANY		TITLE LAKE ROAD 345kV SECTIONS KILLINGLY, CONNECTICUT							
		BY RAD	CHKD. AFG	APP.	APP.				
DATE 3/06/09		DATE 3/06/09	DATE	DATE					
SCALE NONE		SIZE B	DWG. NO.						
NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP	PROJ.	V.S.	16909-33002 PG 6

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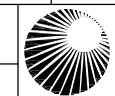
SECTION D-D
1/8" = 1'-0"

REVISIONS DURING CONSTRUCTION				
G	12/5/11	ISSUED FOR CSC APPLICATION	CLE	TAT

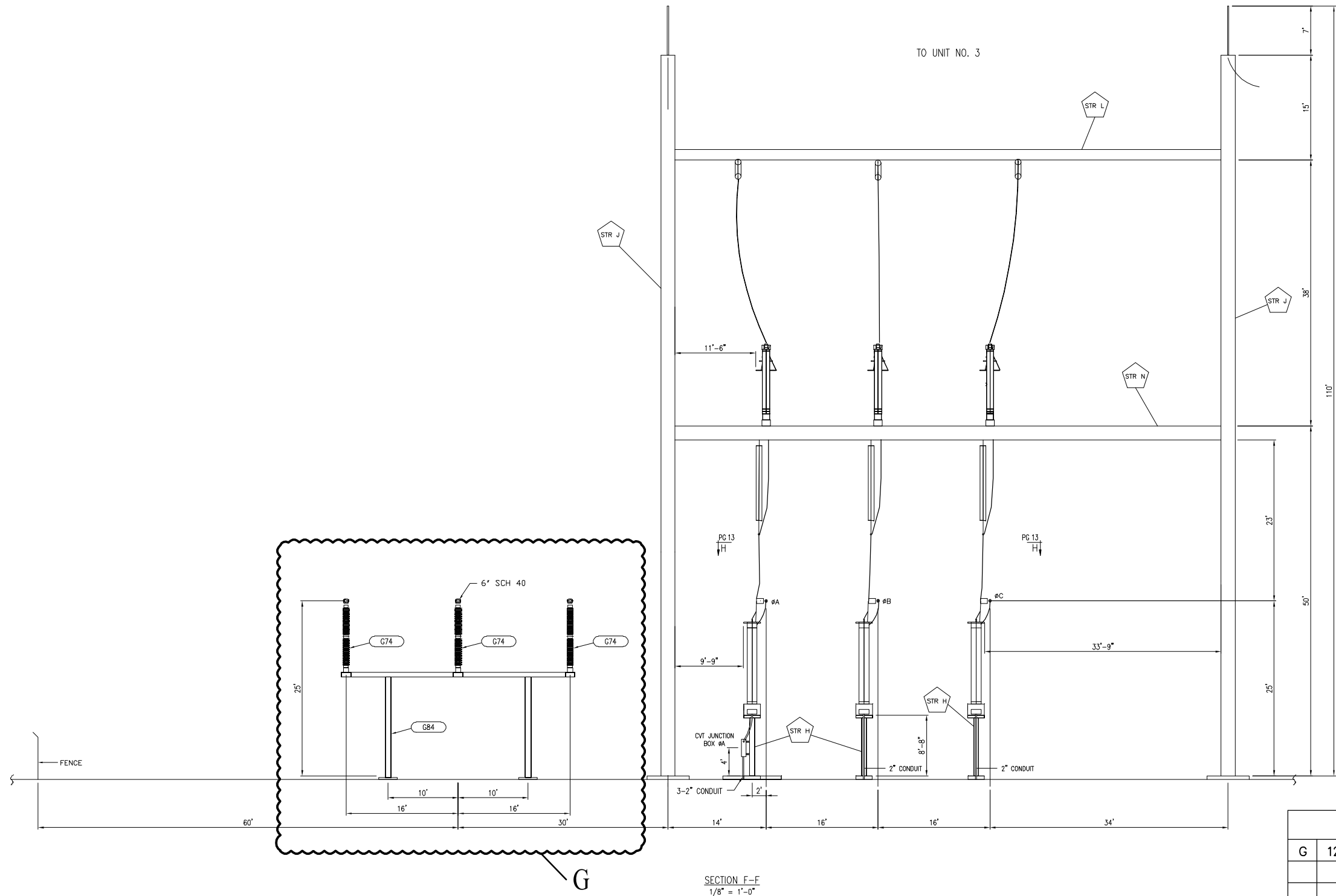
PRELIMINARY DESIGN
SUBJECT TO CHANGE

 INDICATE SWITCHING STATION CHANGES

BY		RAD	CHKD.	AFG	APP.	APP.
DATE		3/06/09	DATE	3/06/09	DATE	DATE
SCALE		NONE	SIZE	B	DWG. NO.	
NO.		DATE	AS BUILT REVISIONS	BY	CHK	APP
PROJ.		V.S.	16909-33002 PG 7			

 **Northeast Utilities Service Co.**
FOR CONNECTICUT LIGHT & POWER COMPANY
TITLE LAKE ROAD
345kV SECTIONS
KILLINGLY, CONNECTICUT

12/05/2011 10:17am - J_Gately - N:\NUSCD\46650 - IRP SS\3.9 - Lake Rd\Cadd\CSC\16909-33002p009.dwg

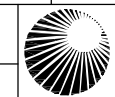


REVISIONS DURING CONSTRUCTION				
G	12/5/11	ISSUED FOR CSC APPLICATION	CLE	TAT

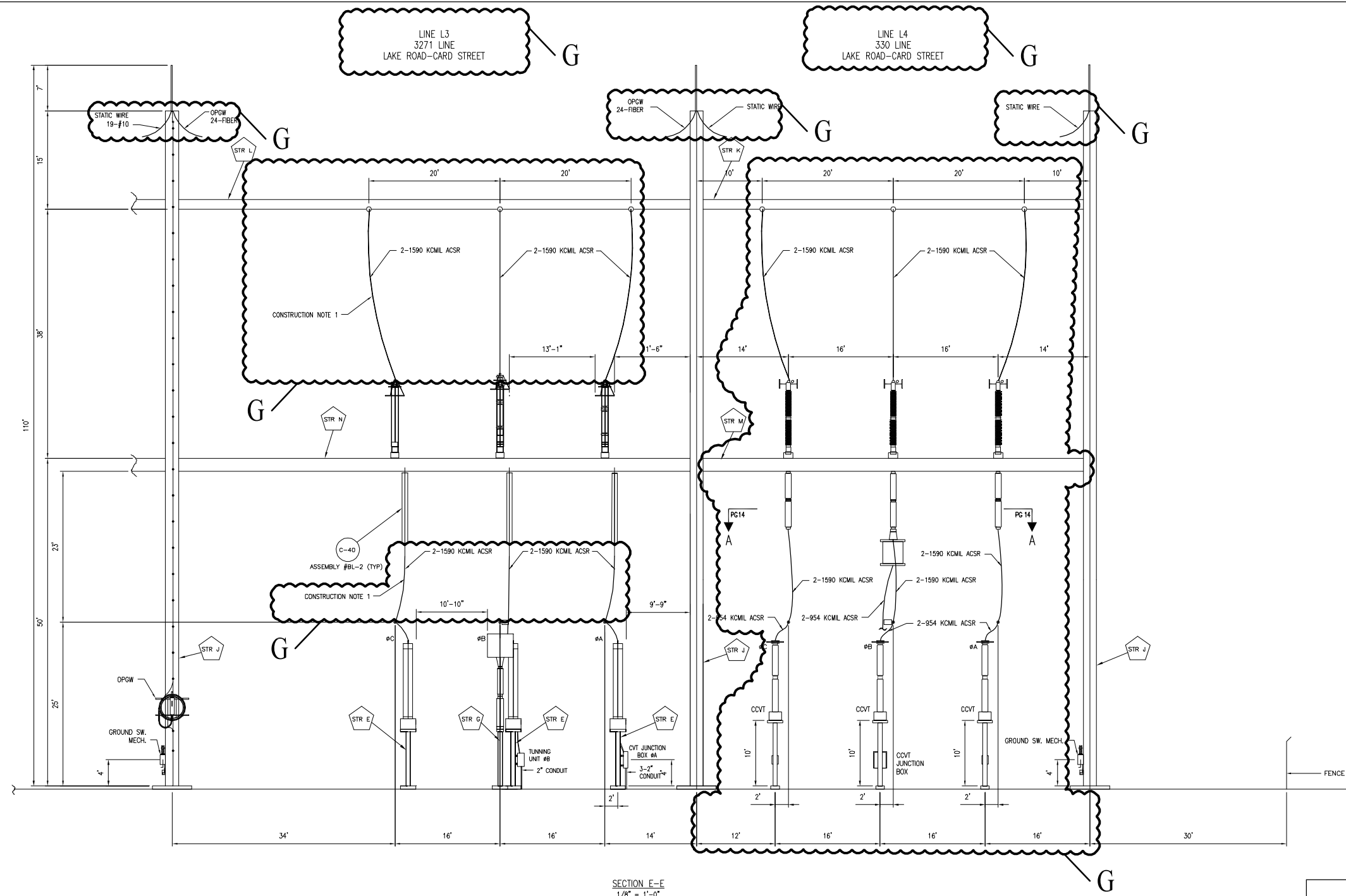
PRELIMINARY DESIGN
SUBJECT TO CHANGE

 INDICATE SWITCHING STATION CHANGES

NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP

	Northeast Utilities Service Co.			
	FOR CONNECTICUT LIGHT & POWER COMPANY			
TITLE LAKE ROAD				
345kV SECTIONS				
KILLINGLY, CONNECTICUT				
BY RAD	CHKD. AFG	APP.	APP.	
DATE 3/06/09	DATE 3/06/09	DATE	DATE	
SCALE NONE	SIZE B	DWG. NO.		
PROJ.	V.S.	16909-33002 PG 9		

12/05/2011 10:16am - J_Gately - N:\NUSCD\46650 - IRP_SS\3.9 - Lake Rd\Cadd\CSC\16909-33002p011.dwg



SECTION E-E
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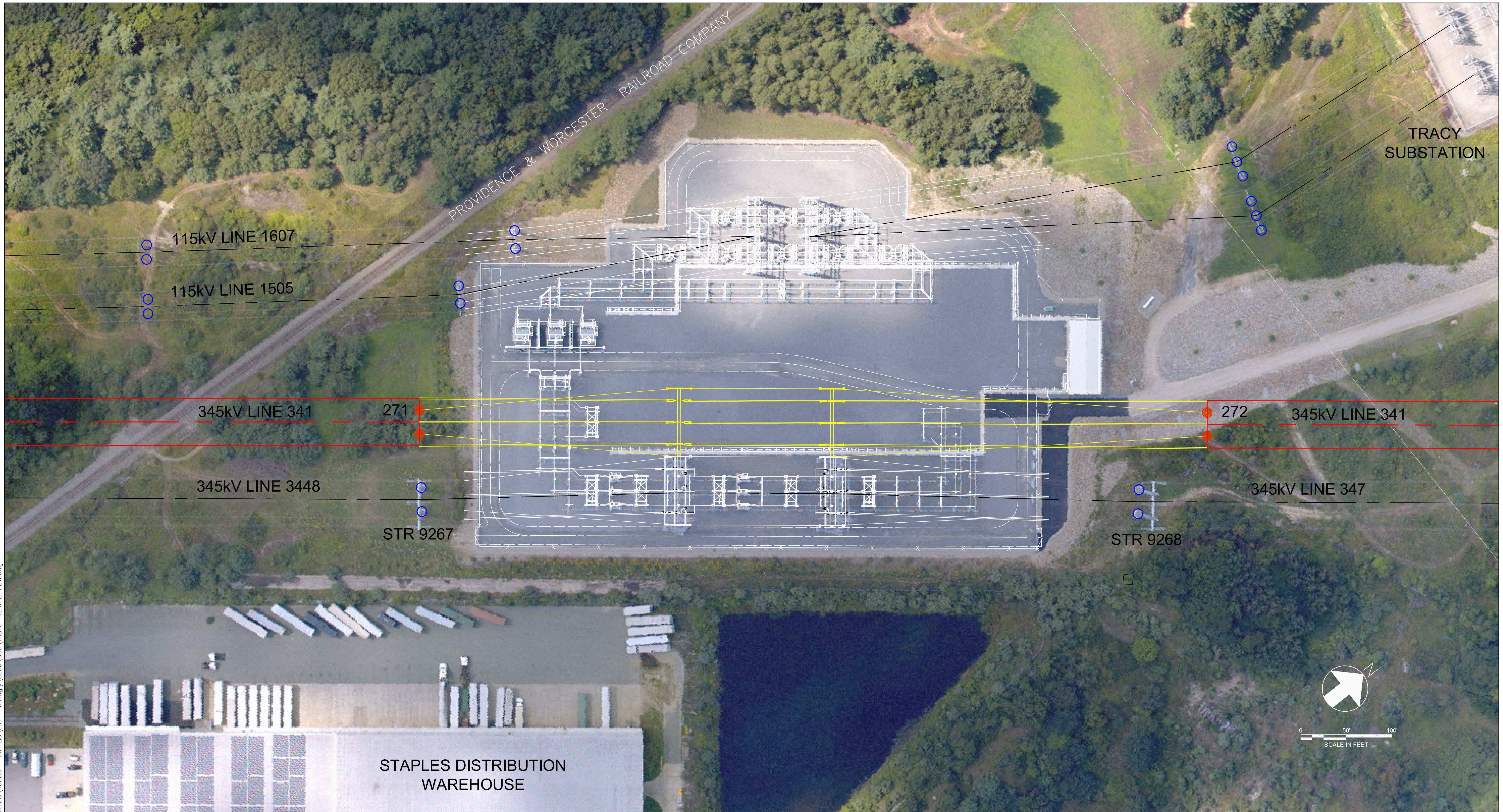
PRELIMINARY DESIGN
SUBJECT TO CHANGE

INDICATE SWITCHING STATION CHANGES

REVISIONS DURING CONSTRUCTION				
G	12/5/11	ISSUED FOR CSC APPLICATION	CLE	TAT

		Northeast Utilities Service Co. FOR CONNECTICUT LIGHT & POWER COMPANY			
		TITLE LAKE ROAD 345kV SECTIONS KILLINGLY, CONNECTICUT			
BY	RAD	CHKD.	AFG	APP.	APP.
DATE	3/06/09	DATE	3/06/09	DATE	DATE
SCALE	NONE	SIZE	B	DWG. NO.	16909-33002 PG 11
NO.	DATE	AS BUILT REVISIONS	BY	CHK APP APP	

EX. 3: Proposed Killingly Substation Modifications



AERIAL PHOTO IMAGE TAKEN FROM ORIGINAL FIELD SURVEY CONDUCTED IN APRIL 2007 BY OPTIMAL LYDAR SURVEY

LEGEND
 SUBSTATION CHANGES ———
 NEW TRANSMISSION LINE ———

PRELIMINARY DESIGN
 SUBJECT TO CHANGE

no.	date	design revisions	by	chk	app	app
A	12/5/11	ISSUED FOR CSC APPLICATION		RAD	AFG	TAT

Burns & McDonnell
 SINCE 1898

46650

date MARCH 13, 2009 detailed R. DAVY
 designed A. GROLL checked

NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP

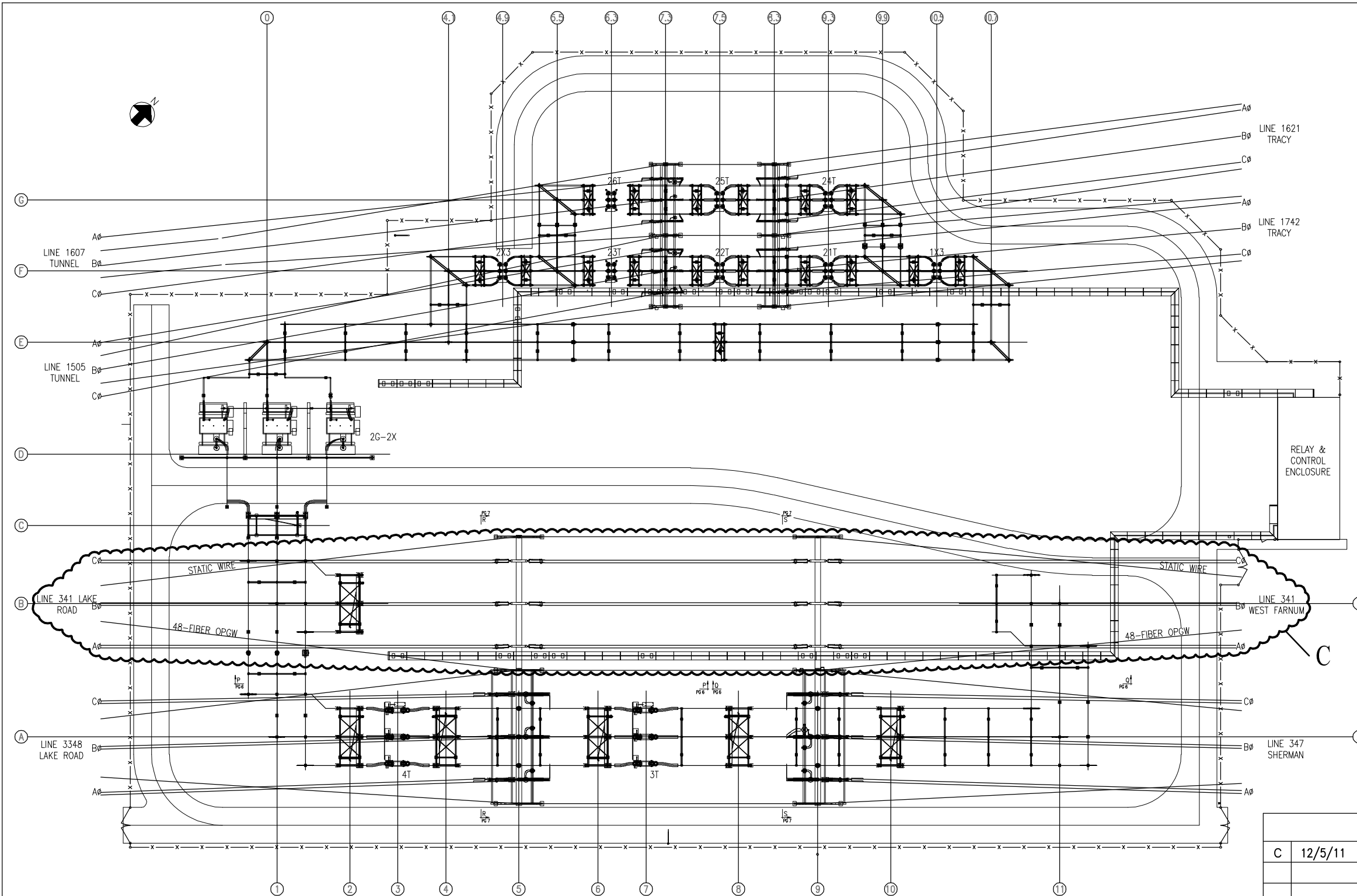
Northeast Utilities Service Co.
 FOR CONNECTICUT LIGHT & POWER COMPANY

TITLE
 KILLINGLY
 345kV EXPANSION
 KILLINGLY, CONNECTICUT

BY	RAD	CHKD	AFG	APP	APP
DATE	3/13/09	DATE	3/13/09	DATE	DATE
SCALE	NONE	SIZE	D	DWG. NO.	16910-AERIAL VIEW
PROJ	V.S.				


12/05/2011 9:40am - J_Gately - N:\NUSCO\46650 - IRP_SS\3.8 - Killingly\Cadd\CSC\16910-AERIAL_VIEW.dwg

12/05/2011 9:33am - J_Gately - N:\USCO\46650 - IRP SS\3.8 - Killingly\Cadd\CSC\16910-33102p001.dwg



 INDICATE SUBSTATION CHANGES

REVISIONS DURING CONSTRUCTION				
C	12/5/11	ISSUED FOR CSC APPLICATION	CLE	TAT

 Northeast Utilities Service Co. FOR CONNECTICUT LIGHT & POWER COMPANY		TITLE KILLINGLY 345kV YARD ARRANGEMENT - PLAN KILLINGLY, CONNECTICUT			
		BY RAD	CHKD. AFG	APP. APP.	APP. APP.
DATE 3/05/09		DATE 3/05/09		DATE DATE	
SCALE NONE		SIZE B		DWG. NO. 16910-33102 PG 1	
NO.	DATE	AS BUILT REVISIONS	BY	CHK APP APP	

