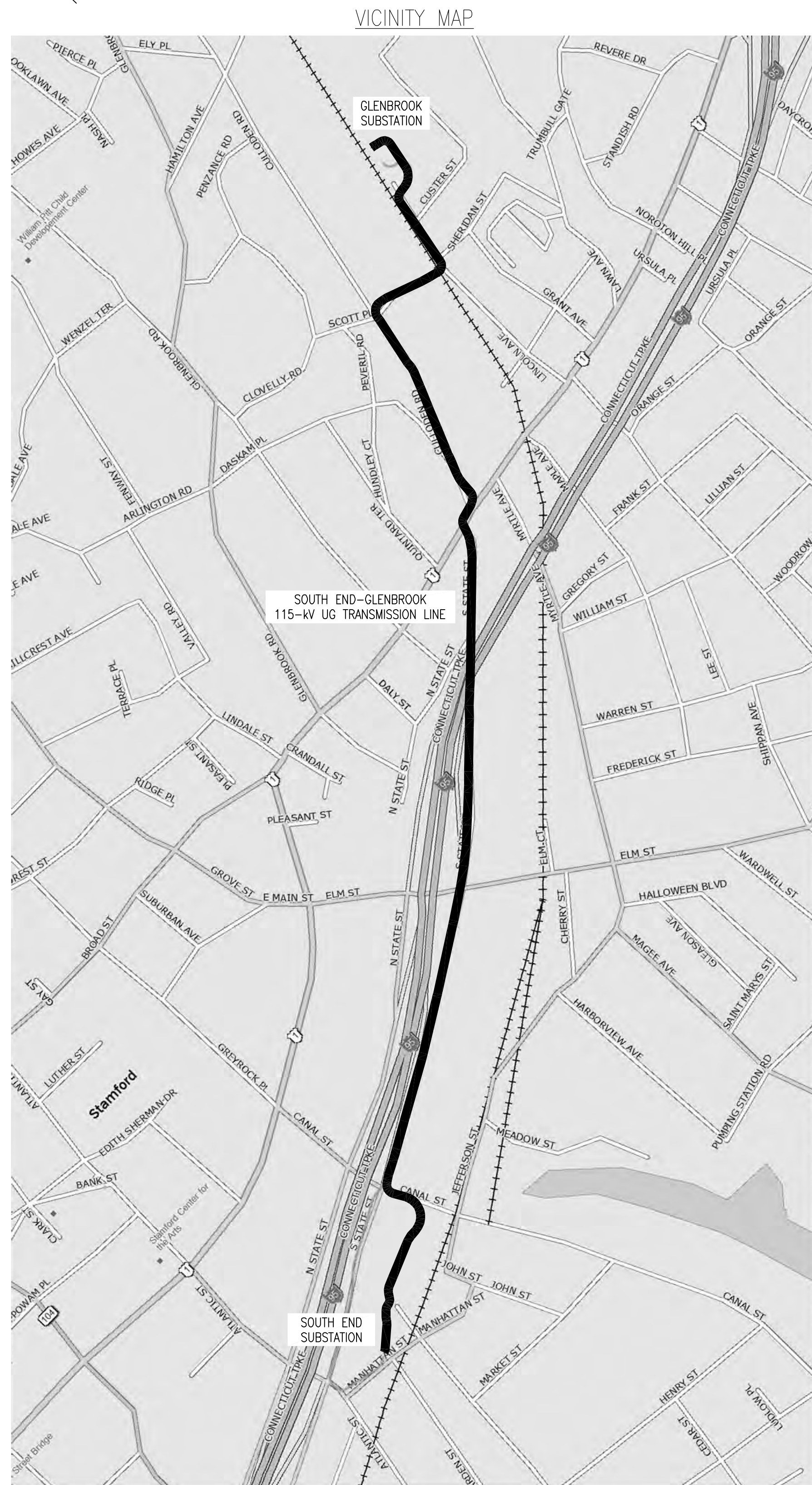
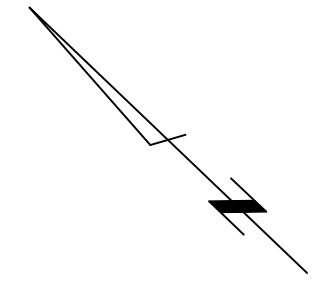


## **Exhibit 3: Plan and Profile and Detail Drawings**

# LINE 1151 SOUTH END - GLENBROOK 115-kV UNDERGROUND TRANSMISSION LINE FOR STAMFORD RELIABILITY CABLE PROJECT NORTHEAST UTILITIES SERVICE COMPANY



### GENERAL NOTES

1. UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES OR GOVERNMENTAL AGENCIES, FROM PAROL TESTIMONY AND FROM OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO NORTHEAST UTILITIES SERVICES COMPANY. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG: 1.800.922.4455
2. HORIZONTAL DATUM REFERENCES NAD83 CONNECTICUT STATE PLANE ZONE.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING THE COMPLETE 115-kV CABLE SYSTEM FROM TERMINATOR TO TERMINATOR.
4. ALL WORK SHALL BE PERFORMED WITHIN THE DESIGNATED UTILITY PROPERTY.
5. ALL VERTICAL RADII ARE 400' UNLESS OTHERWISE NOTED.
6. DUCT BANK SHALL MAINTAIN COVER DEPTH OF 3'-0", A 2'-0" VERTICAL CLEARANCE OVER OR UNDER EXISTING UTILITIES, UNLESS OTHERWISE SHOWN ON DRAWINGS.
7. FOR ANY AREAS DISTURBED BY CONSTRUCTION, AT COMPLETION OF CONSTRUCTION ACTIVITIES, THESE AREAS WILL BE SUBSTANTIALLY RESTORED TO THEIR PRECONSTRUCTION CONDITIONS.
8. CONTRACTOR SHALL HAUL AWAY ALL UNUSED EXCAVATED MATERIAL TO PERMITTED SOIL DISPOSAL SITE.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING AND REPAIRING ALL PAVEMENT, DRIVEWAYS, CURBS, AND SIDEWALKS, DISTURBED DUE TO CONSTRUCTION, IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS. ALL REPLACEMENTS AND REPAIRS SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF STAMFORD AND CONNDOT STANDARDS AND SPECIFICATIONS.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY & ALL UTILITIES AND FACILITIES DAMAGED DURING CONSTRUCTION IN ACCORDANCE WITH THE APPLICABLE UTILITY SPECIFICATION, LOCAL AND/OR STATE REQUIREMENTS.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ABANDONED CONDUIT AS REQUIRED IN ACCORDANCE WITH THE APPLICABLE LOCAL AND/OR STATE REQUIREMENTS. CUT AND CAP ABANDONED UTILITIES (DO NOT CUT GAS LINES).
12. DEPTH OF CROSSING UTILITY LATERALS HAVE NOT BEEN VERIFIED ON ALL UTILITIES 12" AND SMALLER.
13. DEPTHS OF UTILITIES IDENTIFIED AS ABANDONED WERE NOT VERIFIED AND ARE ASSUMED IN DRAWINGS.
14. CONTRACTOR TO COORDINATE WITH THE CITY OF STAMFORD TRAFFIC ENGINEER PRIOR TO DISTURBING TRAFFIC SENSING INDUCTIVE LOOP DETECTORS.

	CATCH BASIN
	ROUND CATCH BASIN
	CATCH BASIN AS DEPICTED BY AERIAL
	MAIL BOX
	FLAG POLE AS DEPICTED BY AERIAL
	ELECTRIC HANDHOLE
	DRAIN MANHOLE
	MANHOLE
	MANHOLE AS DEPICTED BY AERIAL
	SEWER MANHOLE
	ELECTRIC MANHOLE
	TELEPHONE MANHOLE
	WATER MANHOLE
	WATER GATE
	FIRE HYDRANT
	GAS GATE
	STREET SIGN
	EDGE OF PAVEMENT
	CURB
	STEEL GUARD RAIL
	FENCE
	TREE LINE
	RETAINING WALL
	UNDERGROUND ELECTRIC LINE (SUE-B)
	UNDERGROUND ELECTRIC LINE (SUE-C)
	UNDERGROUND ELECTRIC LINE (SUE-D)
	UNDERGROUND GAS LINE (SUE-B)
	UNDERGROUND GAS LINE (SUE-C)
	UNDERGROUND GAS LINE (SUE-D)
	UNDERGROUND WATER LINE (SUE-B)
	UNDERGROUND WATER LINE (SUE-C)
	UNDERGROUND WATER LINE (SUE-D)
	UNDERGROUND TELEPHONE LINE (SUE-B)
	UNDERGROUND TELEPHONE LINE (SUE-C)
	UNDERGROUND TELEPHONE LINE (SUE-D)
	UNDERGROUND FIBER OPTIC (SUE-B)
	UNDERGROUND FIBER OPTIC (SUE-C)
	UNDERGROUND FIBER OPTIC (SUE-D)
	UNDERGROUND CABLE TELEVISION (SUE-C)
	UNDERGROUND SEWER LINE (SUE-C)
	UNDERGROUND SEWER LINE (SUE-D)
	UNDERGROUND DRAIN LINE (SUE-C)
	UNDERGROUND DRAIN LINE (SUE-D)
	BOLLARD

### LEGEND

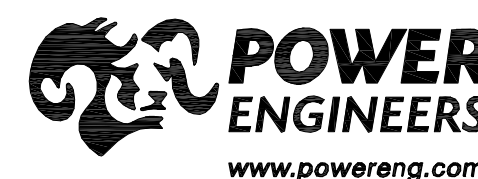
	A.C.C.M.P. ASPHALT COATED CORRUGATED METAL PIPE
	C.I. CENTER INVERT
	RCP REINFORCED CONCRETE PIPE
	PVC POLYVINYL CHLORIDE PIPE
	DIP DUCTILE IRON PIPE
	CMP CORRUGATED METAL PIPE
	CPP CORRUGATED PLASTIC PIPE
	VC VITRIFIED CLAY PIPE
	CB CATCH BASIN
	MH MANHOLE
	DMH DRAIN MANHOLE
	SMH SEWER MANHOLE
	RIM= RIM ELEVATION
	INV= INVERT ELEVATION
	TYP. TYPICAL
	GM GAS METER
	□ HAND HOLE
	WM WATER METER
	T TRANSFORMER
	SP STEEL SPAN POLE
	TCB TRAFFIC CONTROL BOX
	BB BILLBOARD
	TREE
	SHRUB
	UNKNOWN FEATURE AS DEPICTED BY AERIAL
	UTILITY POLE AS DEPICTED BY AERIAL
	UTILITY POLE W/LIGHT AS DEPICTED BY AERIAL
	LIGHT POLE AS DEPICTED BY AERIAL
	GUY POLE AS DEPICTED BY AERIAL
	GUY WIRE AS DEPICTED BY AERIAL
	TRAFFIC SIGNAL AS DEPICTED BY AERIAL
	BORING
	MONITORING WELL
	SPOT ELEVATION
	PROPERTY LINE
	EASEMENT LINE
	STATE HIGHWAY LINE
	CITY/TOWN LAYOUT LINE
	CONTOUR INDEX
	DEPRESSED AREA
	RAILROAD TRACKS
	UG TRANSMISSION LINE (DUCT BANK)
	PROPOSED VAULT

NORTHEAST UTILITIES SERVICE COMPANY  
PROJECT NUMBER:  
403500

POWER ENGINEERS  
PROJECT NUMBER:  
127724

NORTHEAST UTILITIES SERVICE COMPANY  
PROJECT ENGINEER:  
PETER NOVAK  
(860) 665-6500

POWER ENGINEERS  
PROJECT ENGINEER:  
LES HINZMAN  
(208) 309-3577



"FOR CURRENT NUSCO PROPERTY RIGHTS REFER TO PROPERTY RECORD MAPPING - LOCATED IN TRANSMISSION SURVEY ENGINEERING/ROW DEPARTMENT"

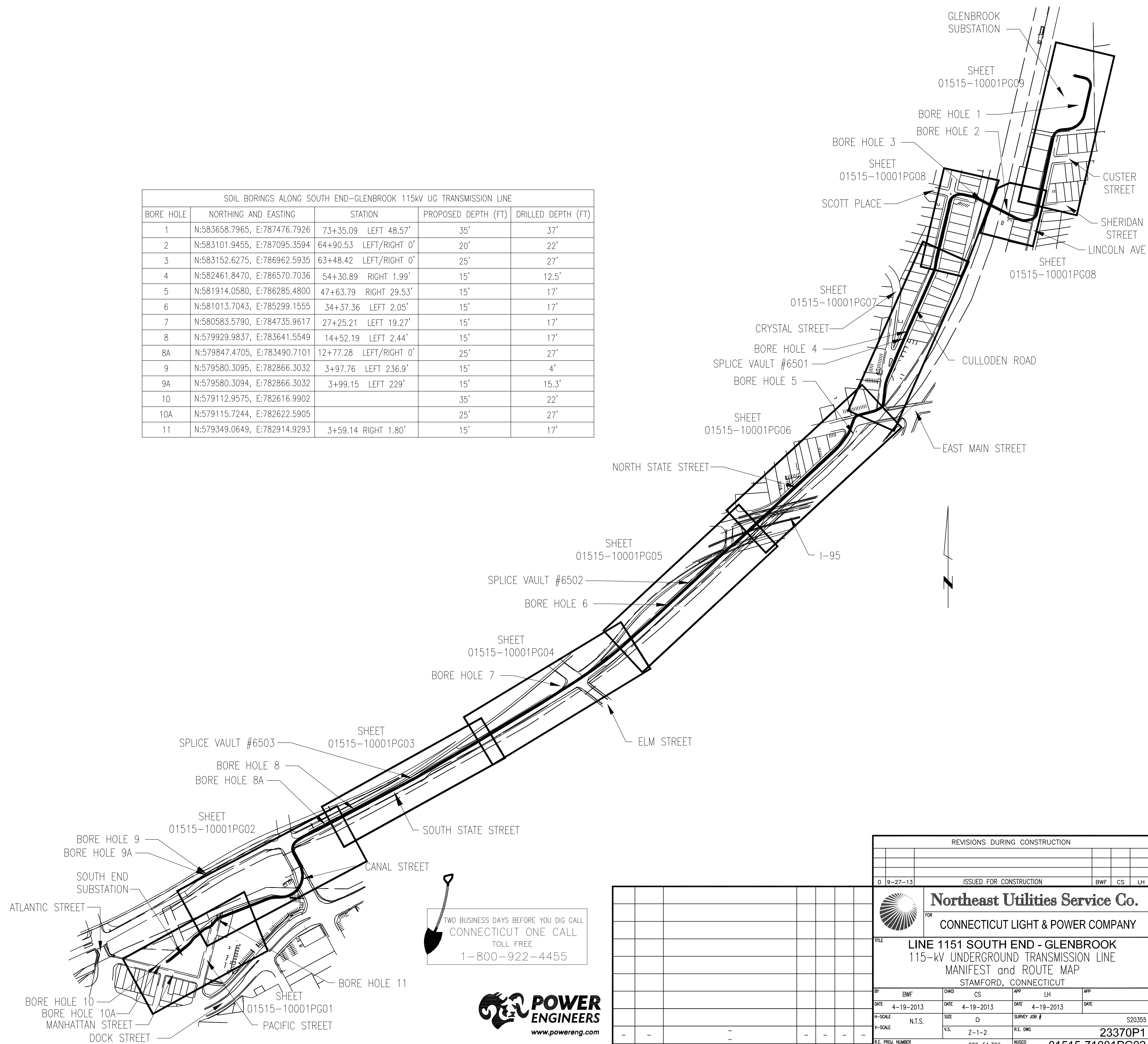
REVISIONS DURING CONSTRUCTION					
NO.	DATE	AS BUILT	REVISIONS	BY	CHK

ISSUED FOR CONSTRUCTION					
0	9-27-13			BWF	CS LH
<b>Northeast Utilities Service Co.</b>					
FOR <b>CONNECTICUT LIGHT &amp; POWER COMPANY</b>					
<b>LINE 1151 SOUTH END - GLENBROOK</b> 115-kV UNDERGROUND TRANSMISSION LINE COVER SHEET STAMFORD, CONNECTICUT					
BY	BWF	CHKD	CS	APP	LH
DATE	4-19-2013	DATE	4-19-2013	DATE	4-19-2013
H-SCALE	N.T.S.	SIZE	D	SURVEY JOB #	S20355
V-SCALE		VS.	Z-1-2	R.E. DWG	23370P1
R.E. PROJ. NUMBER	000-51.326	NUSCO	01515-71001PG01		

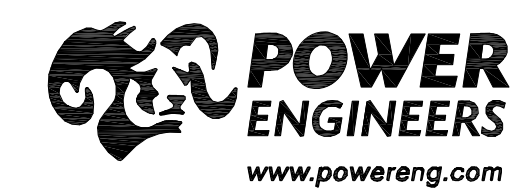
NO.	DATE	AS BUILT	REVISIONS	BY	CHK	APP	APP

DRAWING MANIFEST			
DRAWING NO.	TITLE/DESCRIPTION	REVISION	DATE
01515-71001PG01	COVER SHEET	0	09-27-2013
01515-71001PG02	MANIFEST and ROUTE MAP	0	09-27-2013
01515-10001PG01	PLAN and PROFILE STA. 0+00 TO 5+00	0	09-27-2013
01515-10001PG02	PLAN and PROFILE STA. 5+00 TO 14+00	0	09-27-2013
01515-10001PG03	PLAN and PROFILE STA. 14+00 TO 23+00	0	09-27-2013
01515-10001PG04	PLAN and PROFILE STA. 23+00 TO 32+00	0	09-27-2013
01515-10001PG05	PLAN and PROFILE STA. 32+00 TO 41+00	0	09-27-2013
01515-10001PG06	PLAN and PROFILE STA. 41+00 TO 50+00	0	09-27-2013
01515-10001PG07	PLAN and PROFILE STA. 50+00 TO 59+00	0	09-27-2013
01515-10001PG08	PLAN and PROFILE STA. 59+00 TO 68+00	0	09-27-2013
01515-10001PG09	PLAN and PROFILE STA. 68+00 TO 75+99	0	09-27-2013
01515-10001PG05A	PLAN AND PROFILE AT I-95 PIERS	0	09-27-2013
01515-10001PG08A	RAILROAD PIPE-JACKING DETAIL	0	09-27-2013
01515-46001PG01	SPLICE VAULT DETAIL	0	09-27-2013
01515-46001PG02	SPLICE VAULT DETAIL	0	09-27-2013
01515-47001PG01	S.E. TRANSITION STRUCTURE DETAIL	0	09-27-2013
01515-47001PG02	S.E. TRANSITION STRUCTURE DETAIL	0	09-27-2013
01515-47001PG03	S.E. TRANSITION STRUCTURE DETAIL	0	09-27-2013
01515-47001PG04	S.E. TRANSITION STRUCTURE HARDWARE DETAIL	0	09-27-2013
01515-47001PG05	S.E. TRANSITION STRUCTURE HARDWARE DETAIL	0	09-27-2013
01515-47001PG06	GLENBROOK TERMINATION STRUCTURE	0	09-27-2013
01515-60001	S.E. TRANSITION STRUCTURE FOUNDATION	0	09-27-2013
01515-71001PG03	DUCT BANK DETAIL	0	09-27-2013
01515-71001PG04	MISCELLANEOUS DETAIL	0	09-27-2013
01515-71001PG05	COMMUNICATION VAULT DETAIL	0	09-27-2013
01515-71001PG06	SHEATH BONDING SCHEMATIC	0	09-27-2013
01515-71001PG07	SPLICE VAULT MAINTENANCE AND PROTECTION PLAN	0	09-27-2013

SOIL BORINGS ALONG SOUTH END-GLENBROOK 115KV UG TRANSMISSION LINE				
BORE HOLE	NORTHING AND EASTING	STATION	PROPOSED DEPTH (FT)	DRILLED DEPTH (FT)
1	N:583658.7965, E:787476.7926	73+35.09 LEFT 48.57'	35'	37'
2	N:583101.9455, E:787095.3594	64+90.53 LEFT/RIGHT 0'	20'	22'
3	N:583152.6275, E:786962.5935	63+48.42 LEFT/RIGHT 0'	25'	27'
4	N:582461.8470, E:786570.7036	54+30.89 RIGHT 1.99'	15'	12.5'
5	N:581914.0580, E:786285.4800	47+63.79 RIGHT 29.53'	15'	17'
6	N:581013.7043, E:785299.1555	34+37.36 LEFT 2.05'	15'	17'
7	N:580583.5790, E:784735.9617	27+25.21 LEFT 19.27'	15'	17'
8	N:579929.9837, E:783641.5549	14+52.19 LEFT 2.44'	15'	17'
8A	N:579847.4705, E:783490.7101	12+77.28 LEFT/RIGHT 0'	25'	27'
9	N:579580.3095, E:782866.3032	3+97.76 LEFT 236.9'	15'	4'
9A	N:579580.3094, E:782866.3032	3+99.15 LEFT 229'	15'	15.3'
10	N:579112.9575, E:782616.9902		35'	22'
10A	N:579115.7244, E:782622.5905		25'	27'
11	N:579349.0649, E:782914.9293	3+59.14 RIGHT 1.80'	15'	17'



"FOR CURRENT NUSCO PROPERTY RIGHTS REFER TO PROPERTY RECORD MAPPING - LOCATED IN TRANSMISSION SURVEY ENGINEERING/ROW DEPARTMENT"



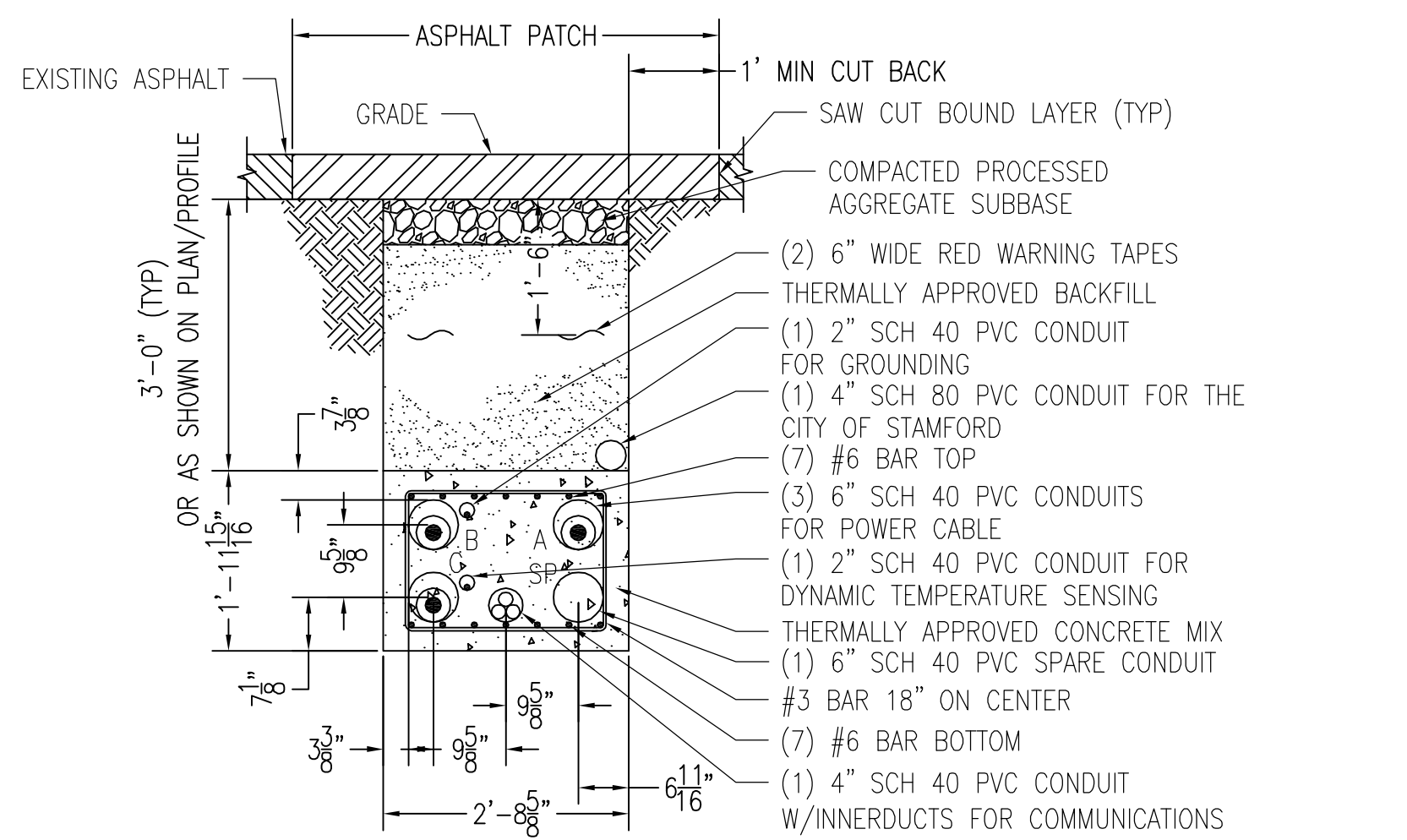
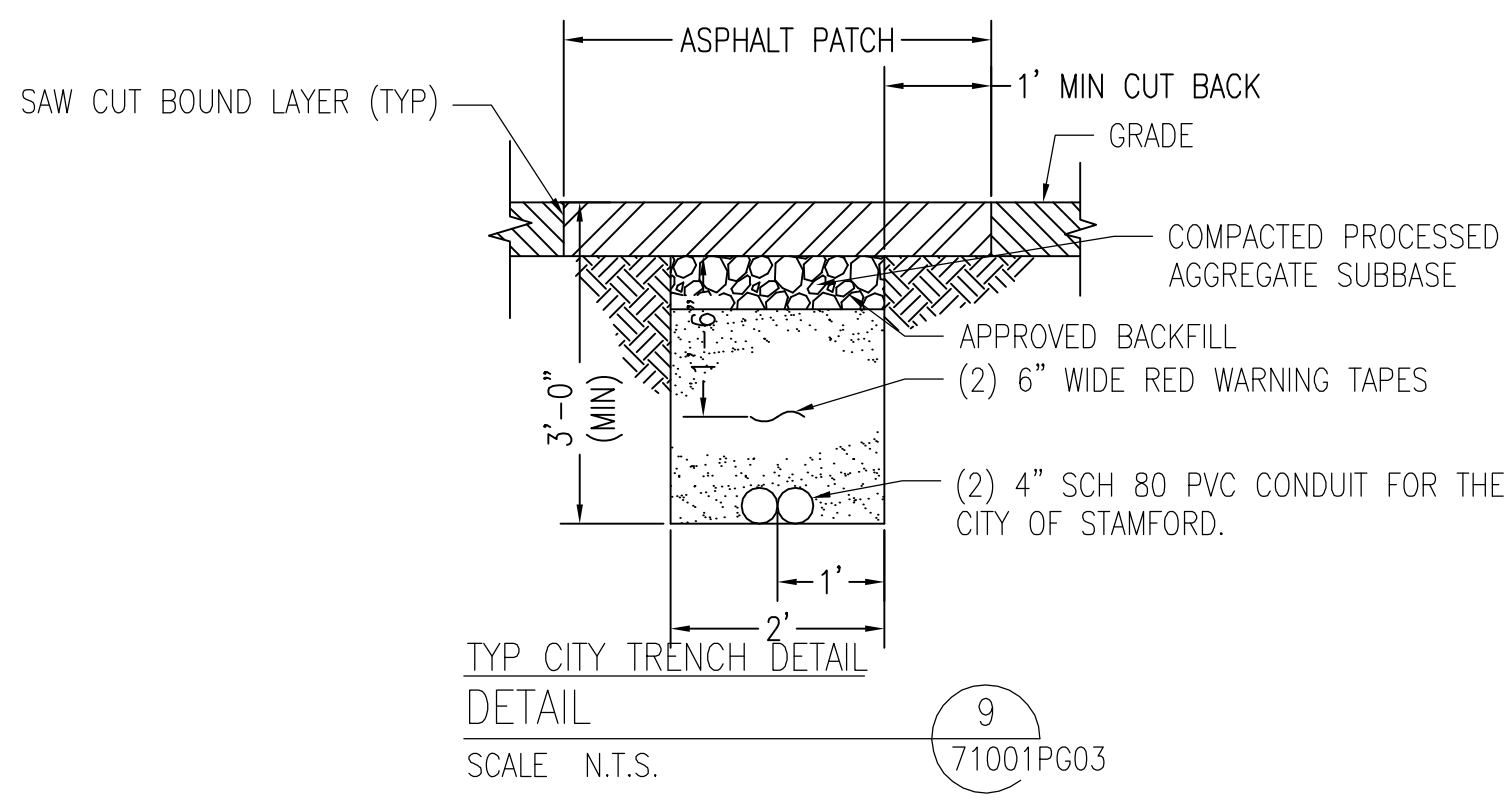
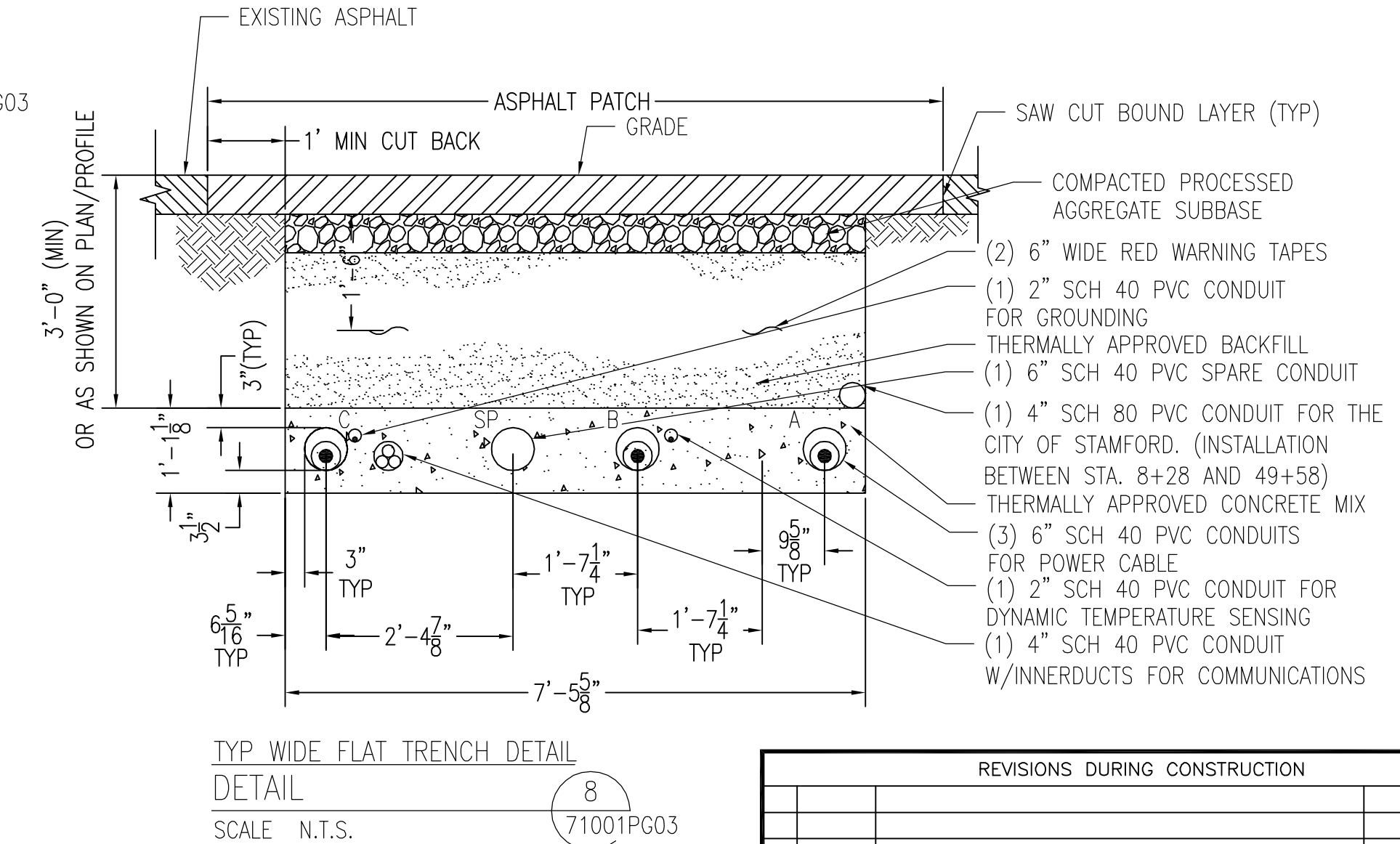
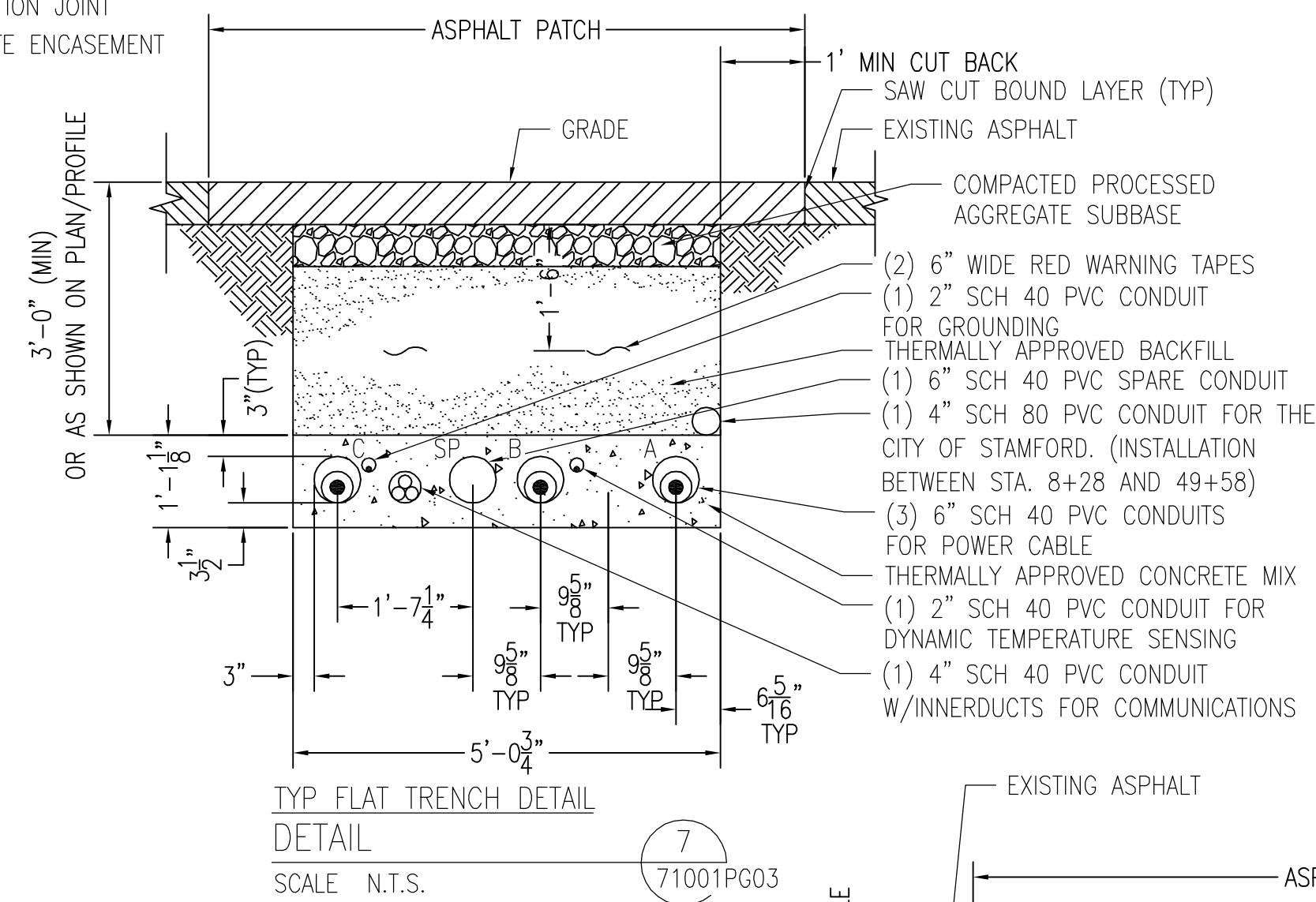
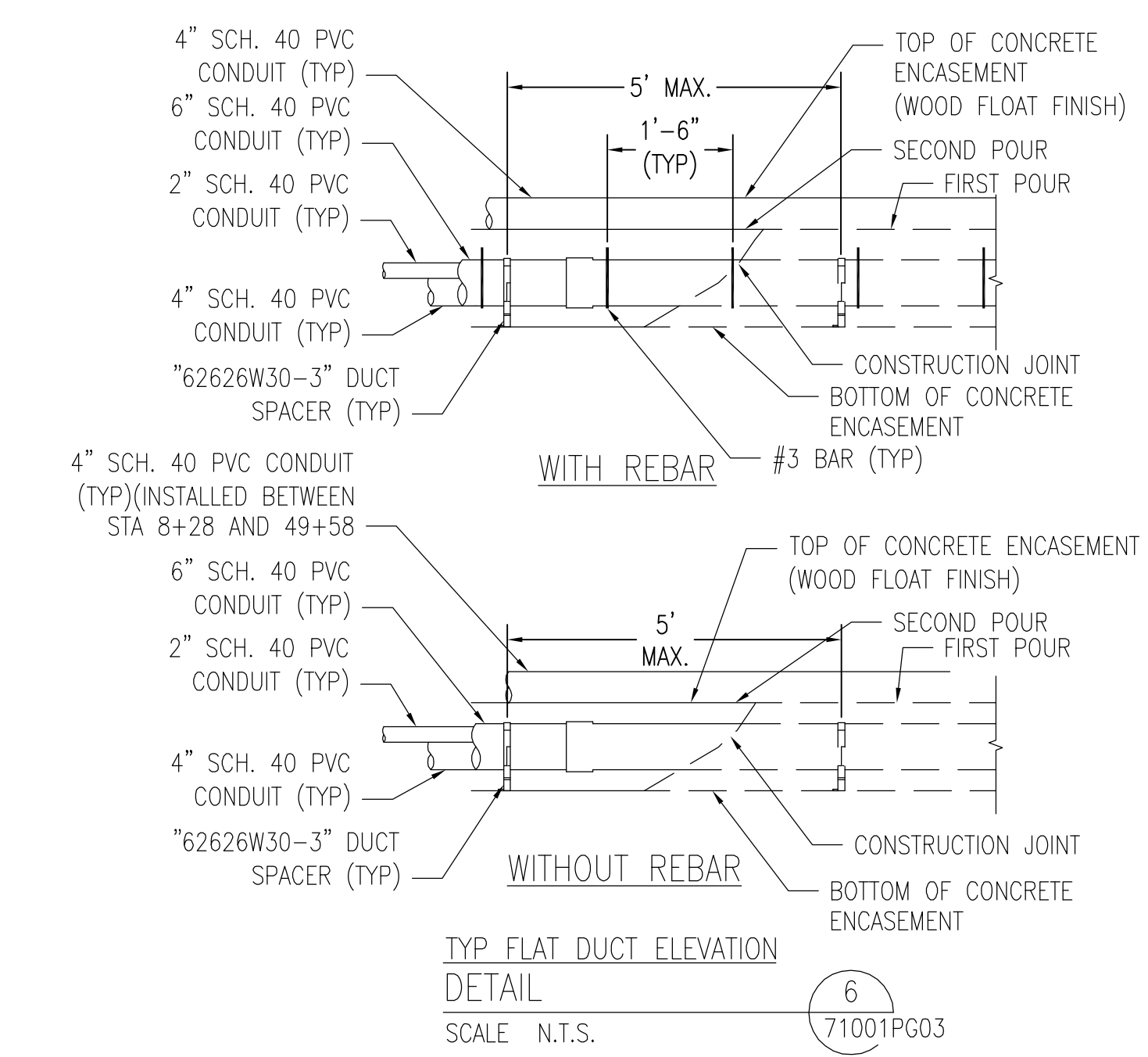
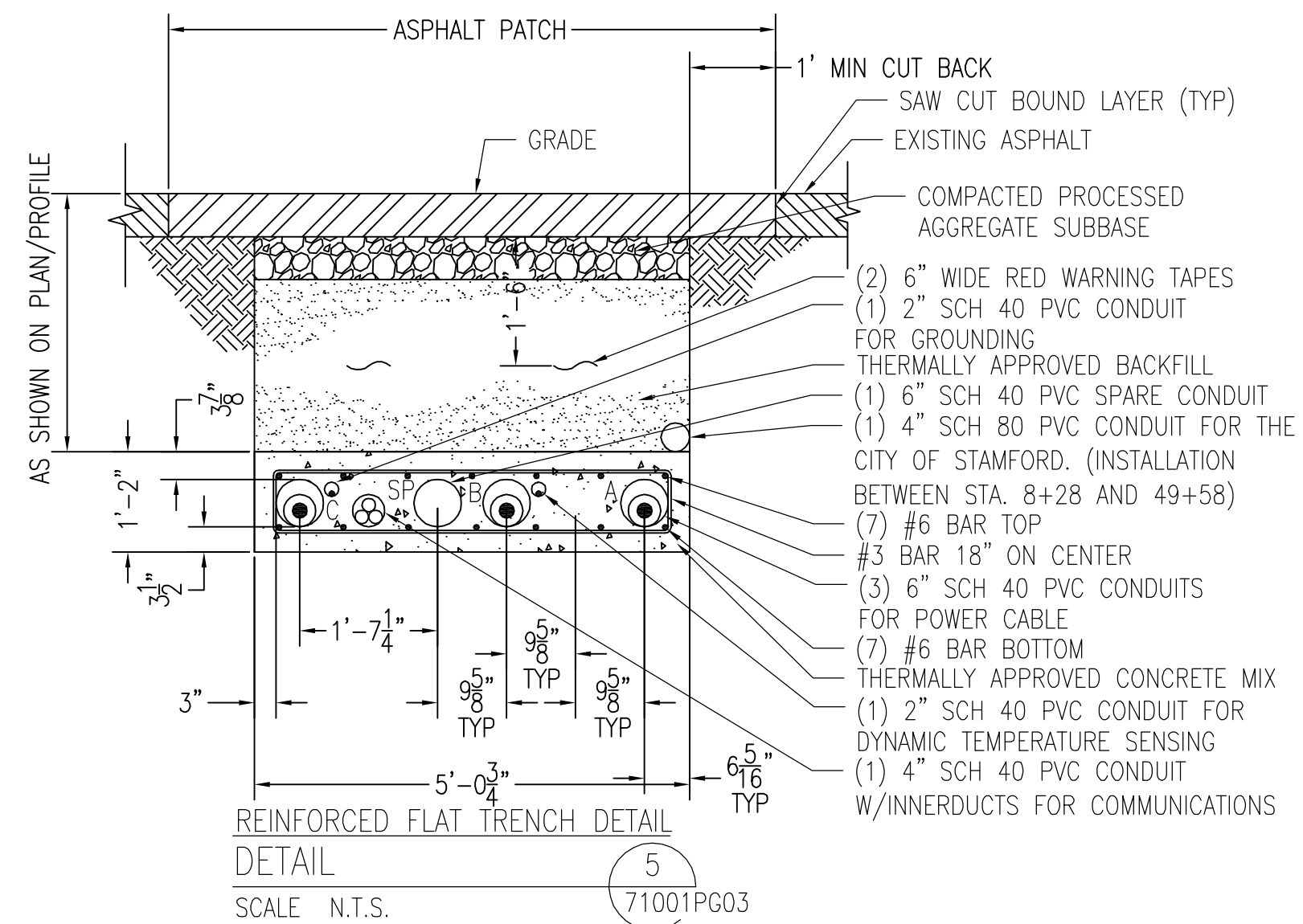
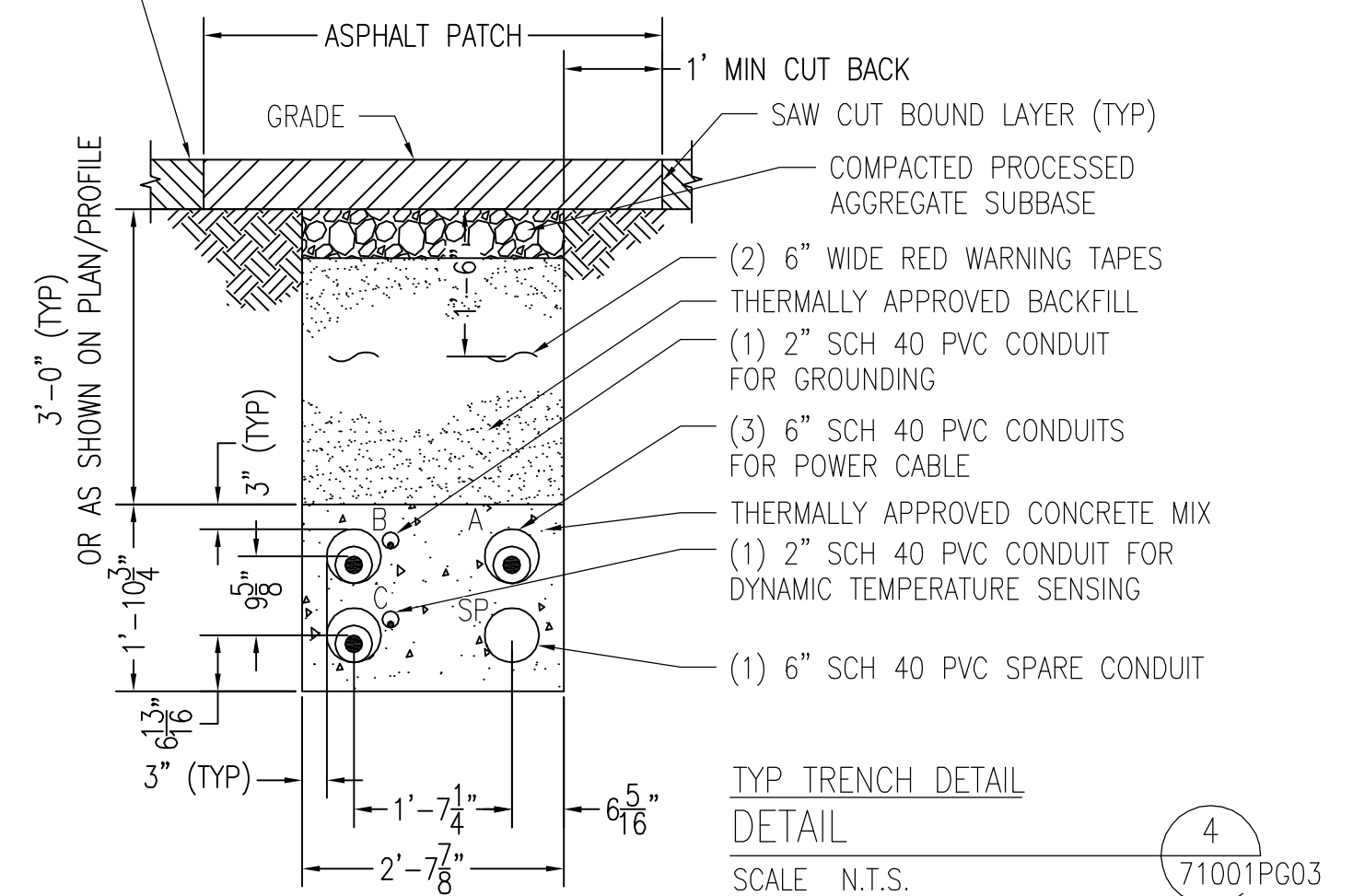
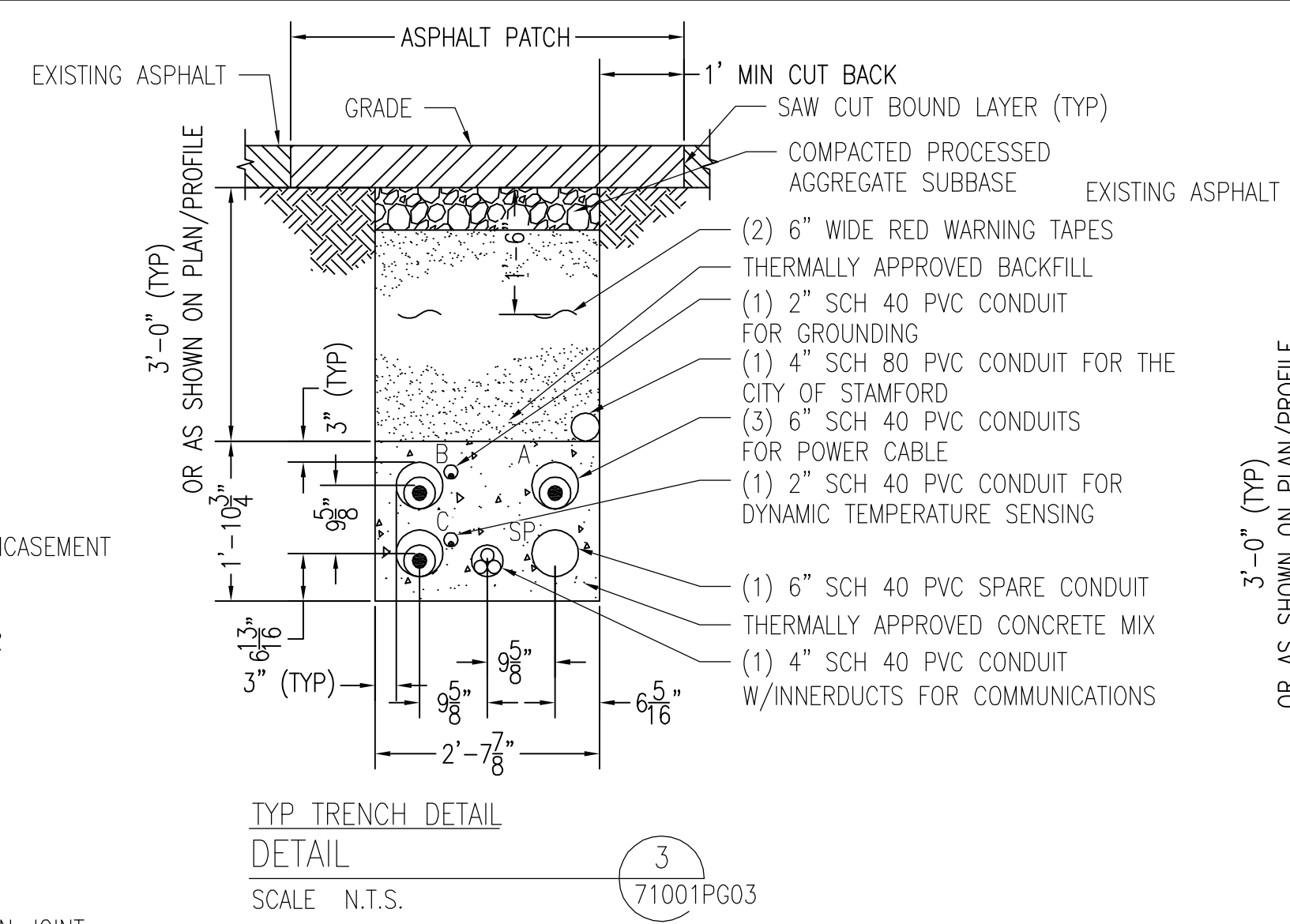
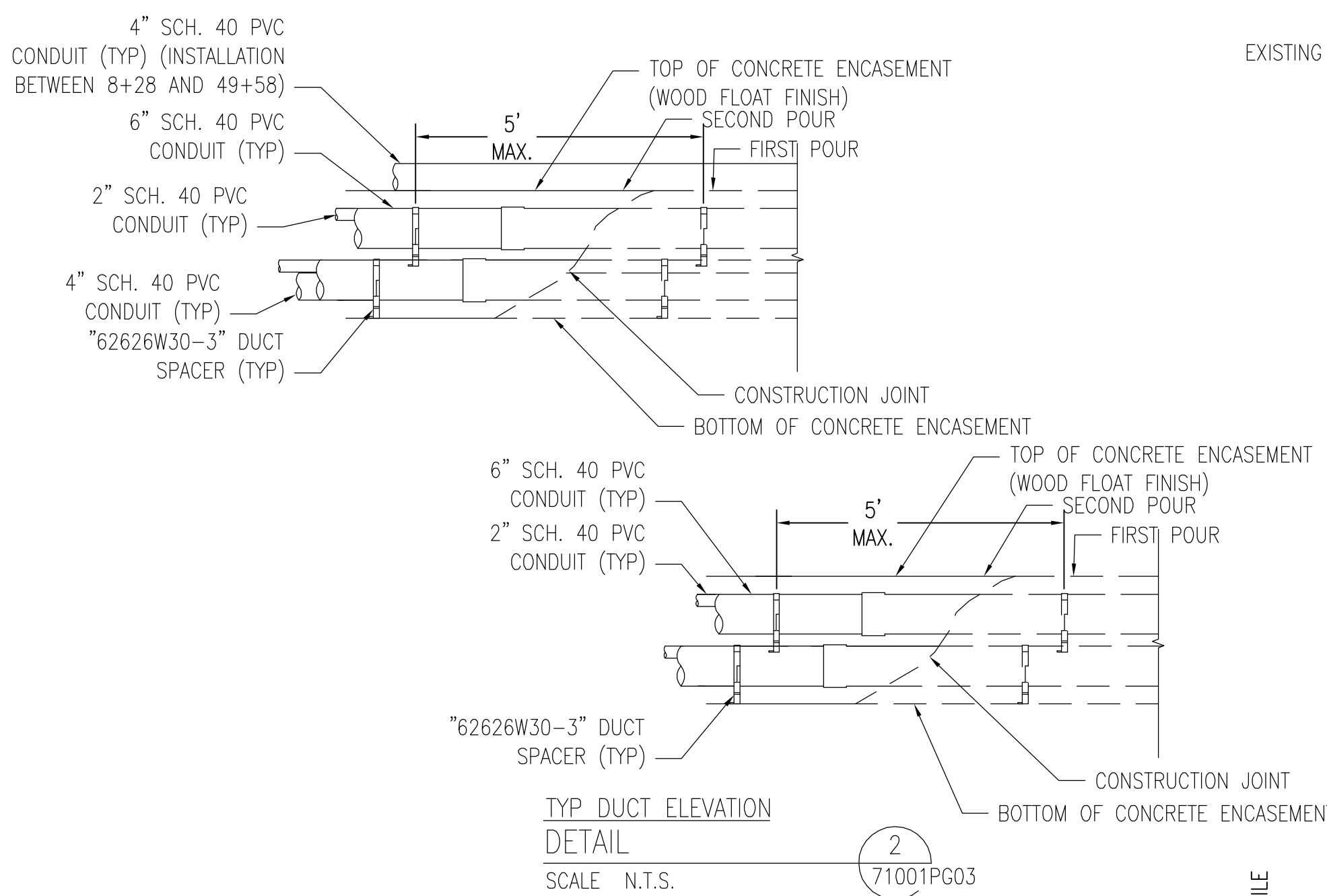
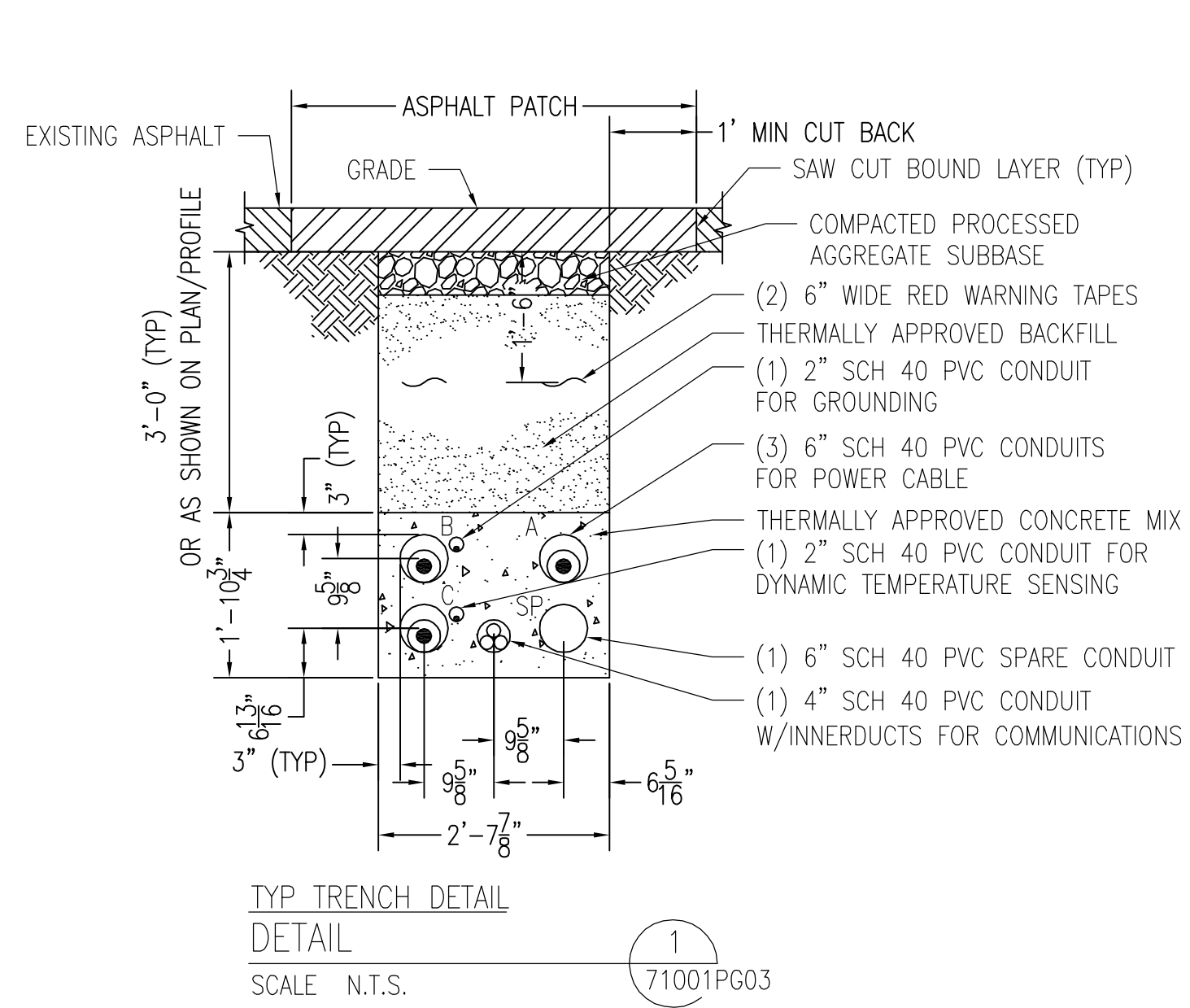
NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP

REVISIONS DURING CONSTRUCTION					
NO.	DATE	DESCRIPTION	BY	CHK	APP
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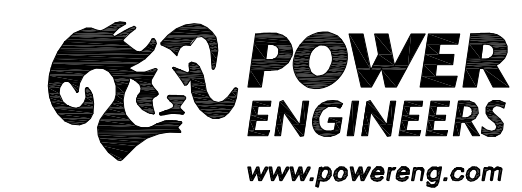
**Northeast Utilities Service Co.**  
FOR **CONNECTICUT LIGHT & POWER COMPANY**

TITLE: **LINE 1151 SOUTH END - GLENBROOK 115-kV UNDERGROUND TRANSMISSION LINE MANIFEST and ROUTE MAP STAMFORD, CONNECTICUT**

BY	BWF	CHKD	CS	APP	LH	APP
DATE	4-19-2013	DATE	4-19-2013	DATE	4-19-2013	DATE
H-SCALE	N.T.S.	SIZE	D	SURVEY JOB #	S20355	
V-SCALE		V.S.	Z-1-2	R.E. DWG	23370P1	
R.E. PROJ. NUMBER	000-51.326	NUSCO	01515-71001PG02			

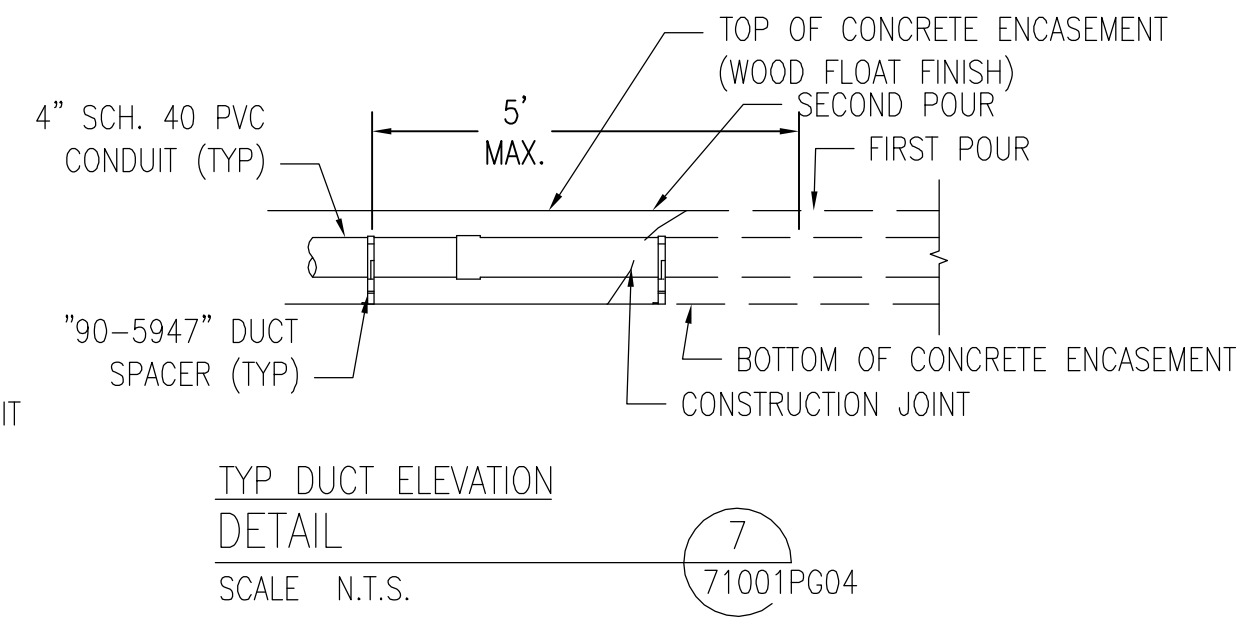
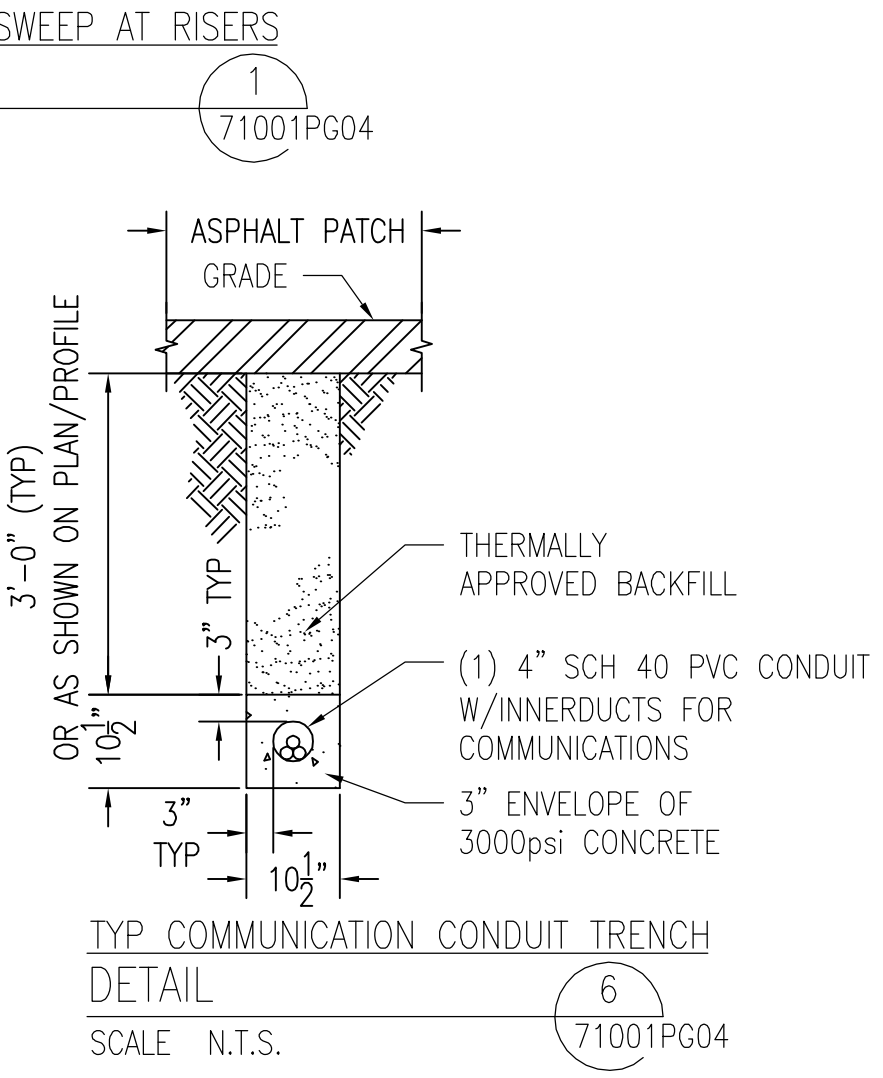
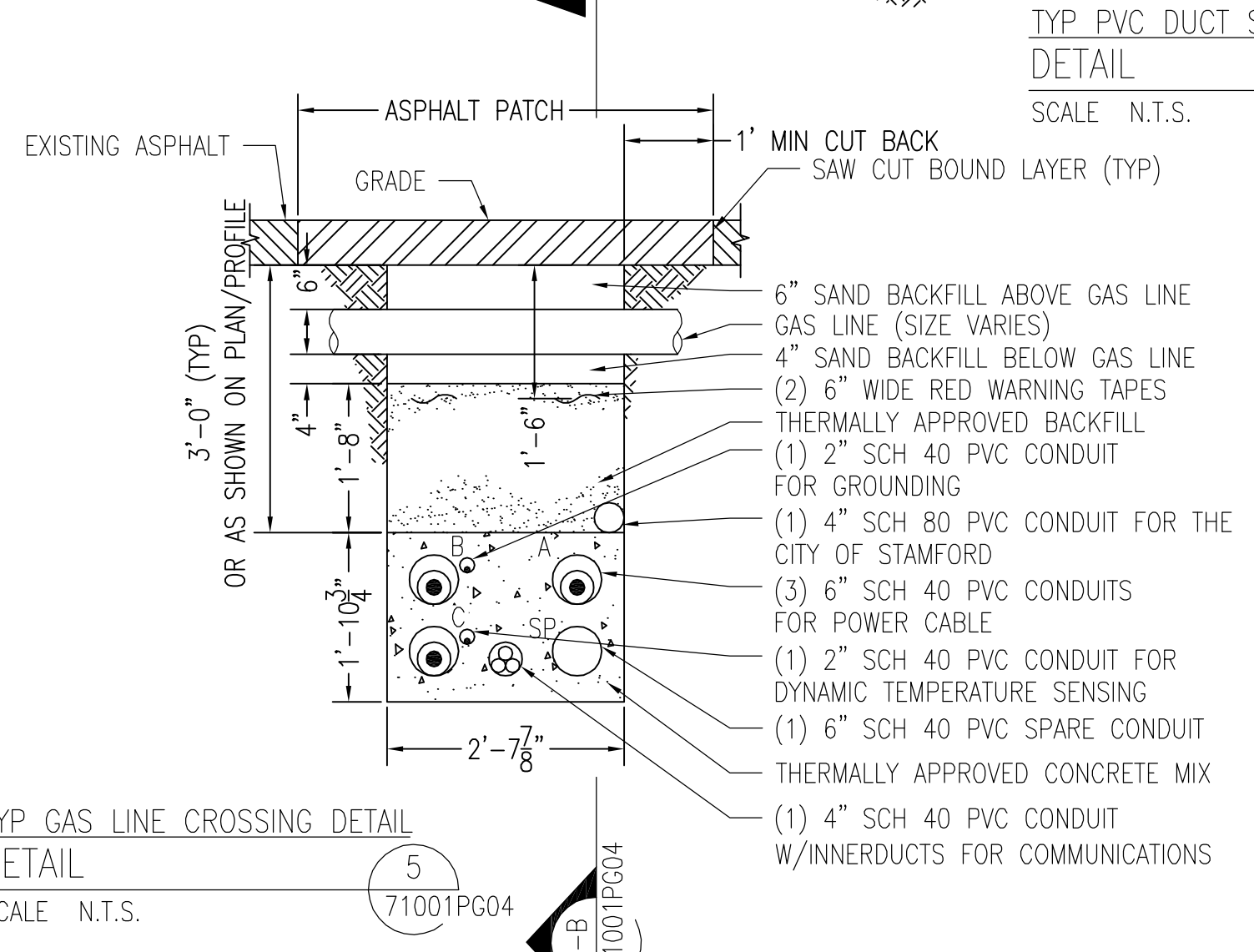
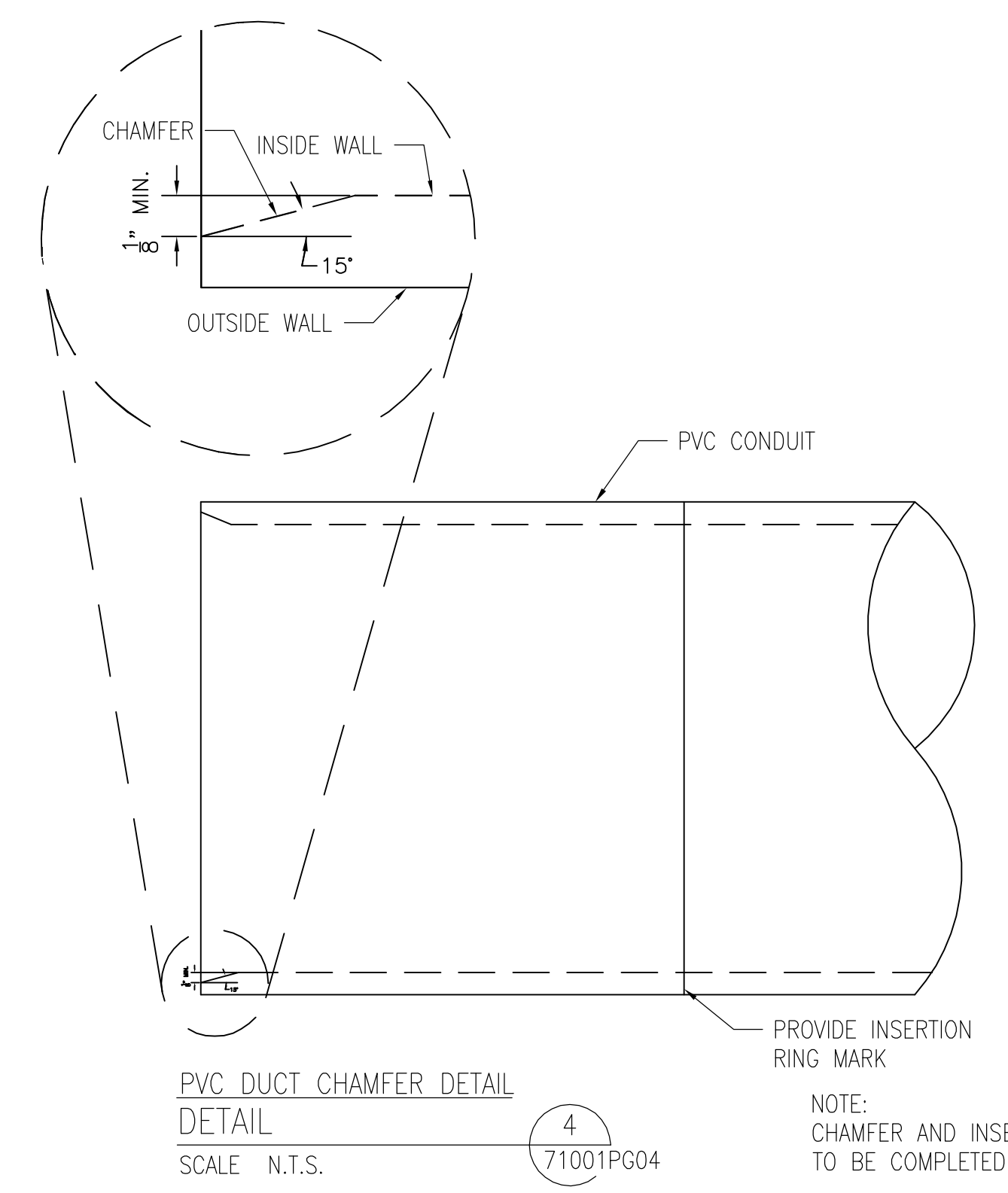
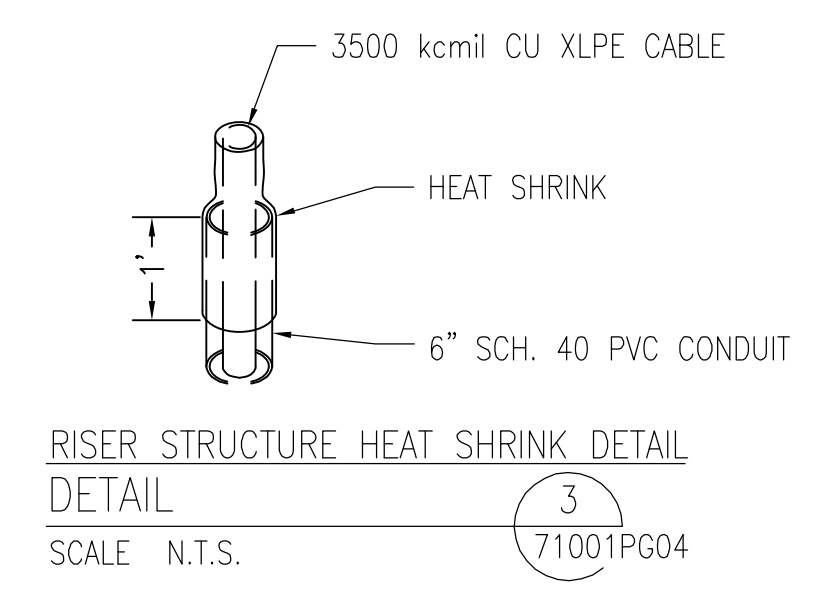
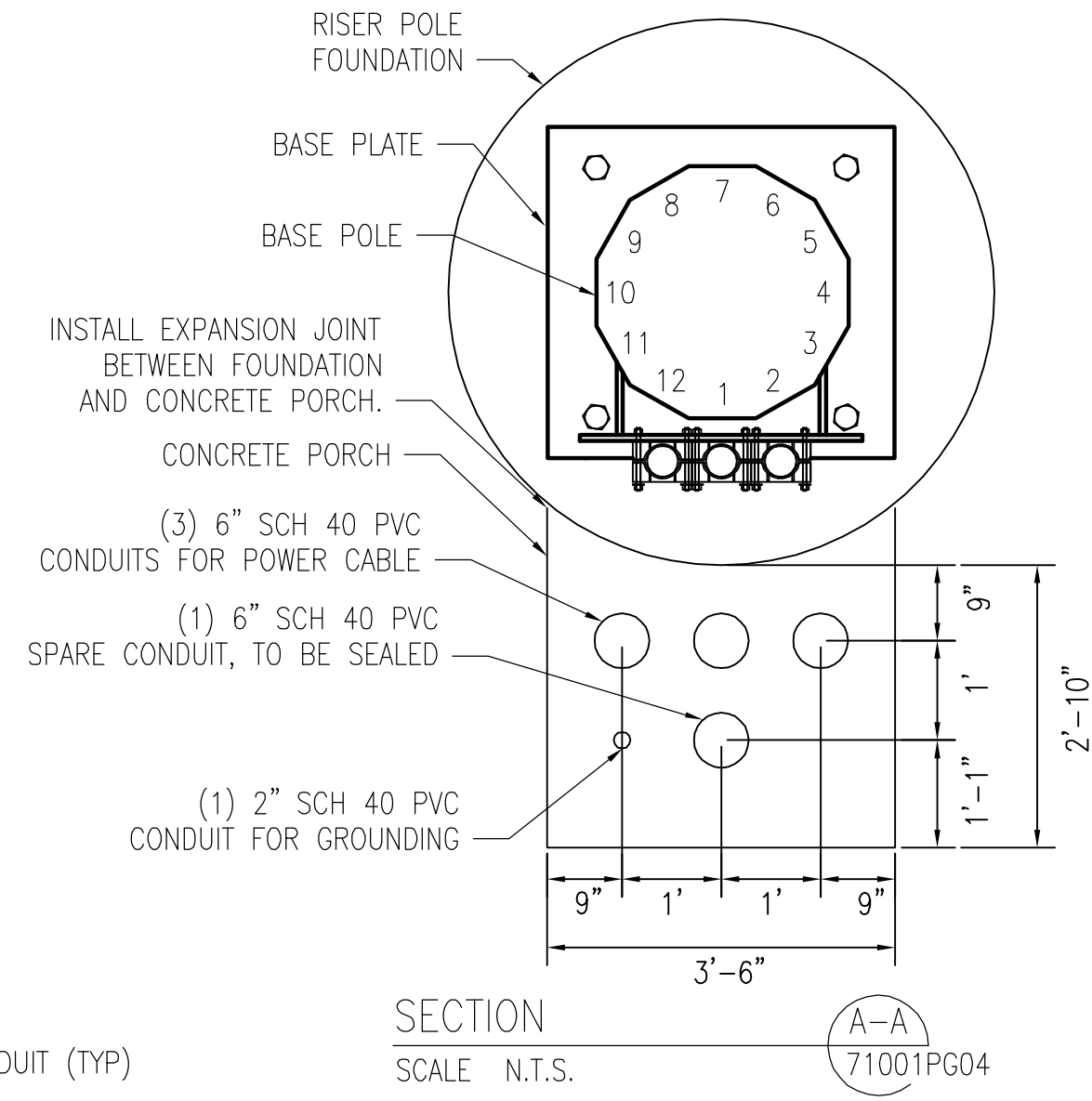
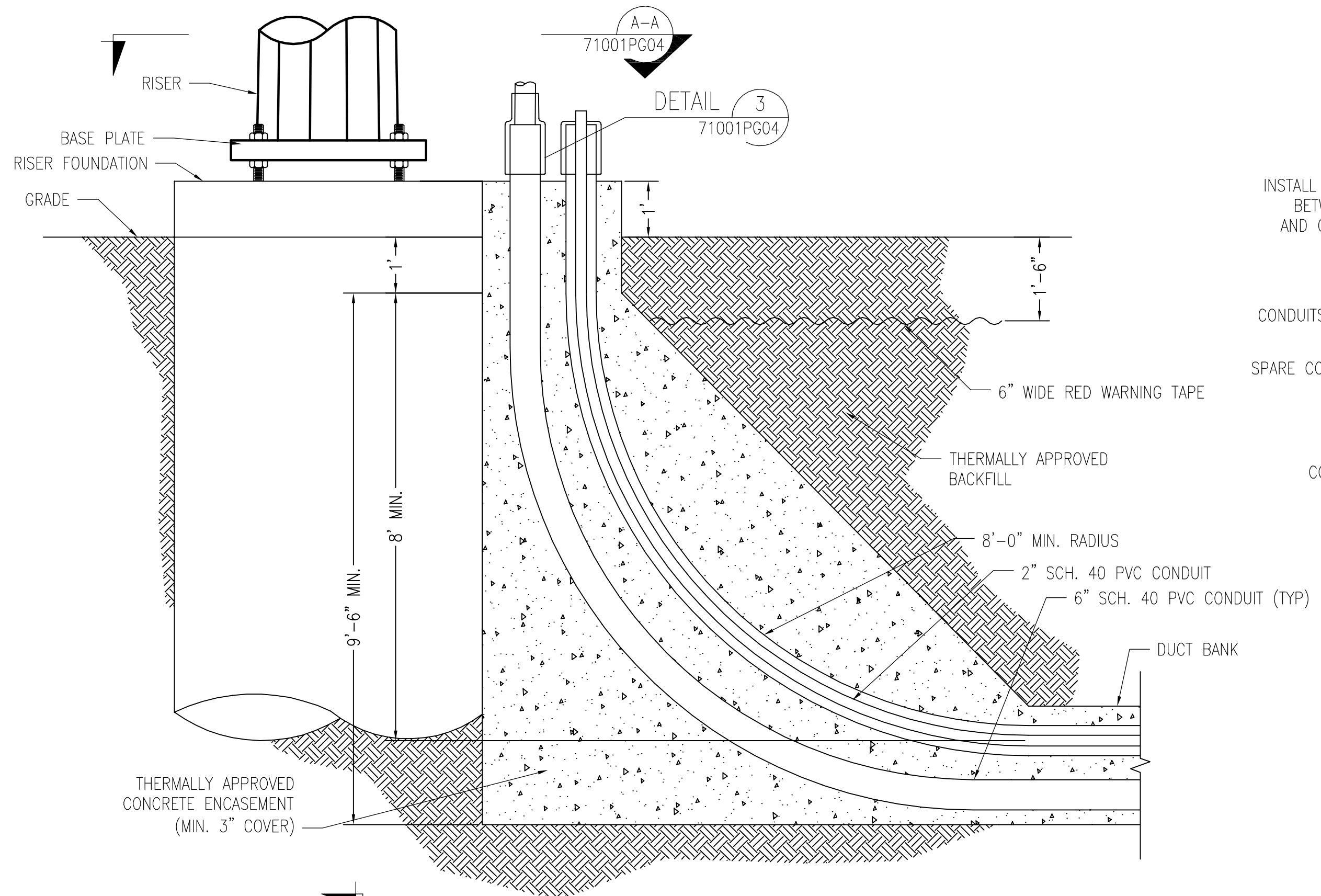


- NOTES:**
1. THESE DETAILS ARE FOR DEMONSTRATION PURPOSES ONLY. THE CONTRACTOR SHALL COMPLETE STREET RESTORATION IN COMPLIANCE WITH THE APPROPRIATE SPECIFICATION AS REFERENCED IN THE STREET OPENING PERMIT OR CTDOT STANDARD DRAWINGS AND SPECIFICATIONS.
  2. THE 1' CUT BACK OF PAVEMENT SHALL BE MADE AT TIME OF REPAIRING AND NOT WHEN TRENCH IS EXCAVATED.



REVISIONS DURING CONSTRUCTION			
NO.	DATE	AS BUILT REVISIONS	BY

0	9-27-13	ISSUED FOR CONSTRUCTION	BWF	CS	LH
<p><b>Northeast Utilities Service Co.</b> FOR CONNECTICUT LIGHT &amp; POWER COMPANY</p>					
<p><b>LINE 1151 SOUTH END - GLENBROOK</b> 115-kV UNDERGROUND TRANSMISSION LINE DUCT BANK DETAIL STAMFORD, CONNECTICUT</p>					
BY	EWF	CHK	CS	APP	LH
DATE	05-10-2013	DATE	05-10-2013	DATE	05-10-2013
H-SCALE	N.T.S.	SIZE	D	SURVEY JOB #	S20355
V-SCALE	N.T.S.	V.S.	Z-1-2	R.E. DWG	23370P1
R.E. PROJ. NUMBER	000-51.326	NUSCO	01515-71001PG03		



**CONDUIT AND HOLE SIZES**

CONDUIT NOMINAL SIZE	CONDUIT ACTUAL OD	FULL HOLE DIAMETER BANNED	FULL HOLE DIAMETER NON-BANNED	PARTIAL HOLE DIAMETER
2"	2.375	----	2.495	----
4"	4.500	----	4.653	----
6"	6.625	6.715	----	----

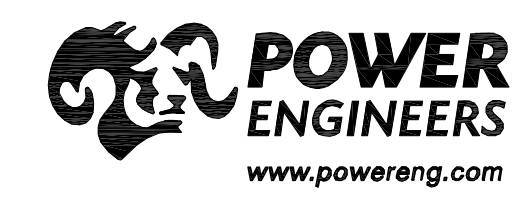
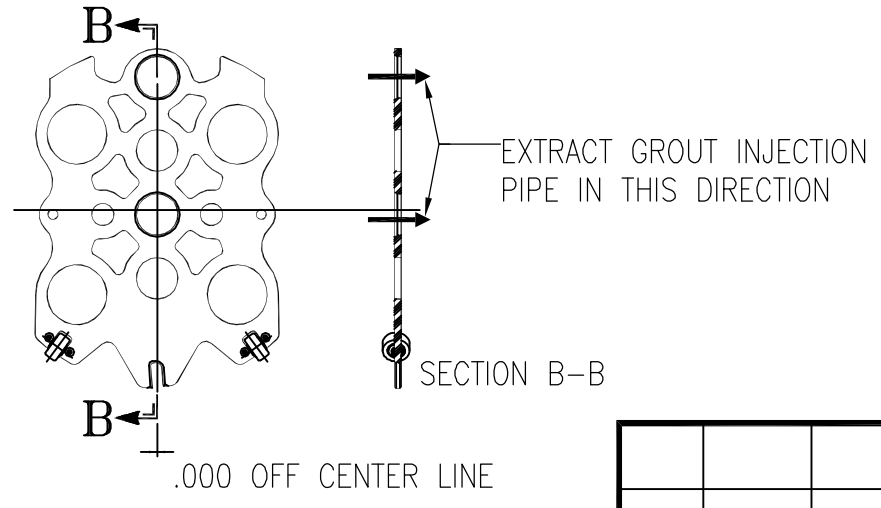
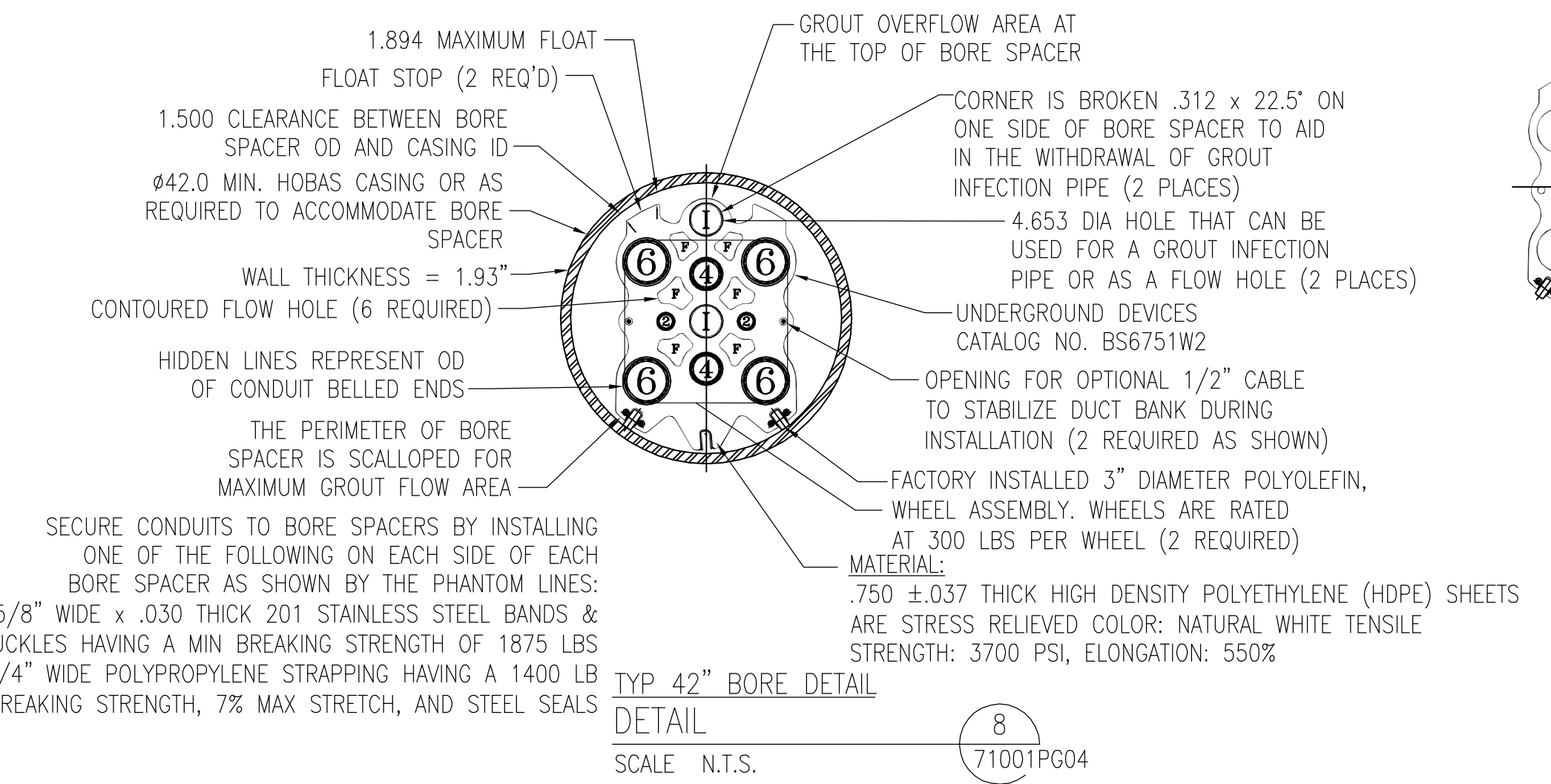
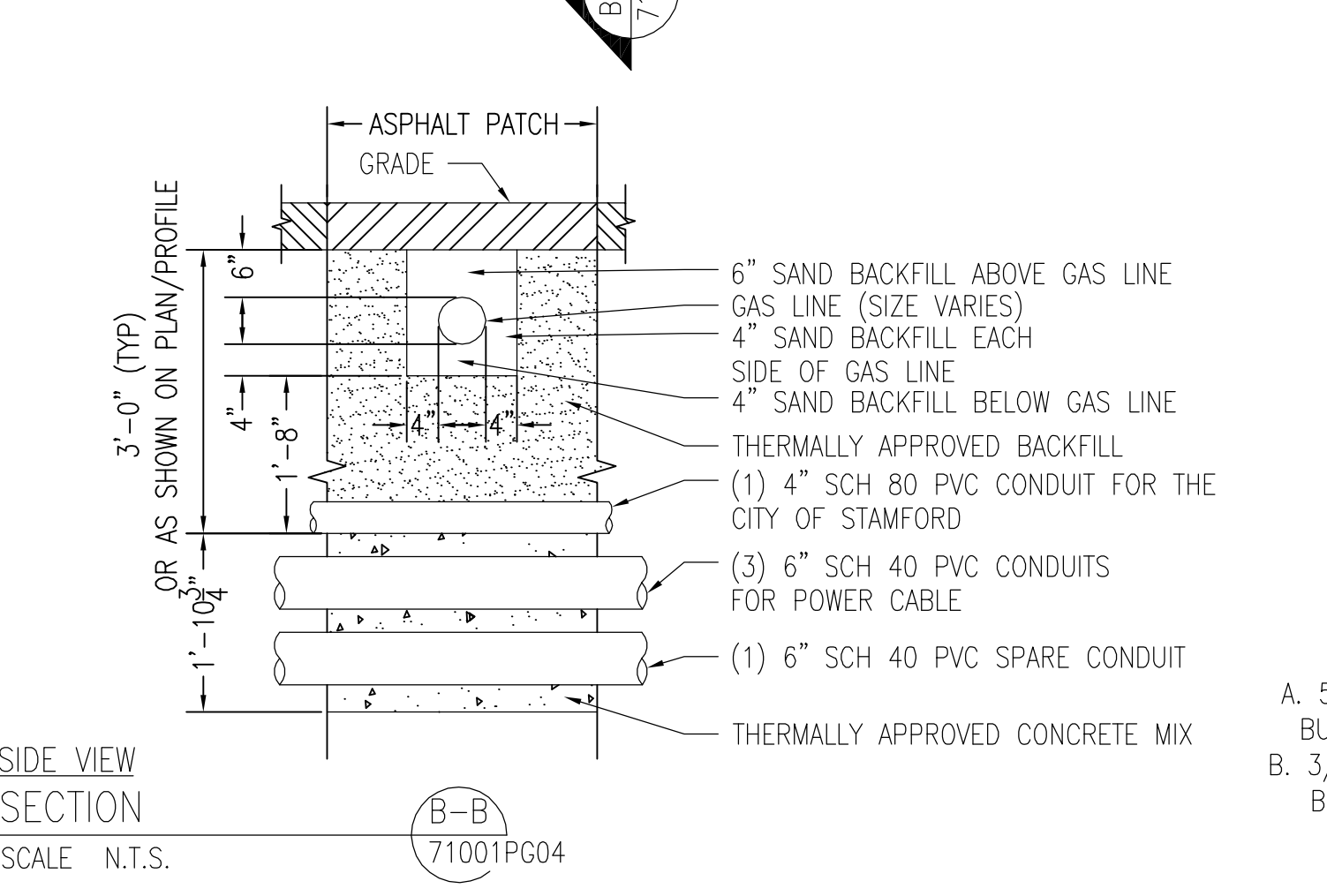
**MINIMUM DISTANCE BETWEEN CONDUITS**

CONDUIT SIZE	MIN. DISTANCE
2 & 4	4.853
2 & 6	5.837
4 & 6	3.500
6 & 6	11.250

**CENTER TO CENTER DISTANCE BETWEEN CONDUITS**

CONDUIT SIZE	MIN. DISTANCE
6 & 6	18.000

- USE ONE BORE SPACER FOR EVERY 5 FEET OF DUCT BANK.
- THE CASING ID MUST BE SMOOTH AND FREE FROM RIDGES, PROJECTIONS, AND SEAMS THAT MIGHT IMPEDE THE ROLLING OF WHEELS.
- INSTALL BORE SPACERS PERPENDICULAR TO CONDUITS TO REDUCE THE TENDENCY OF DUCT BANK TO CORKSCREW.
- A TROUGH OR FEEDER BRIDGE SHOULD BE CONSTRUCTED AT THE LEADING END OF THE CASING TO SUPPORT SECTIONS OF DUCT BANK AS THEY ARE ASSEMBLED AND PULLED INTO THE CASING.
- THIS BORE SPACER IS DESIGNED FOR A CASING THAT IS STRAIGHT AND TRUE.
- IT IS POSSIBLE THAT THE DUCT BANK WILL ROTATE (CORKSCREW) AS IT IS PULLED THROUGH THE CASING UNLESS AN "OFF CENTER WEIGHT TECHNIQUE", "STABILIZATION CABLES" IS USED.
- THIS BORE SPACER WILL ACCOMMODATE THE "SINGLE-END", "FLUSH COUPLED EXTRACTABLE INJECTION PIPE", OR "STATIONARY SACRIFICIAL INJECTION PIPE" METHODS OF GROUT FILLING.
- IT IS ESSENTIAL THAT THE BORE SPACERS ARE HELD IN PLACE RELATIVE TO THE CONDUIT. REASON: AS THE GROUT IS PUMPED INTO THE CASING, THE COMPARTMENTS FORMED BETWEEN THE BORE SPACERS ARE MORE OR LESS FILLED SEQUENTIALLY, PLACING A TEMPORARY THRUST LOAD ON EACH BORE SPACER.
- THE DUCT BANK MUST BE HELD IN POSITION AT BOTH ENDS TO ACCOMMODATE POSSIBLE UNEVEN THRUST LOADS THAT MAY BE GENERATED DURING THE GROUTING OPERATION.
- WHEN FILLING THE AREA BETWEEN THE CONDUITS AND CASING WITH GROUT, TAKE CARE NOT TO EXCEED THE HYDRAULIC COLLAPSE PRESSURE OF THE CONDUITS. DEPENDING ON THE GROUT SPECIFIC GRAVITY AND GROUT FLOW, IT IS POSSIBLE THAT THE DUCT BANK WILL FLOAT TO THE TOP OF THE CASING.
- ACTUAL QUANTITY OF GROUT USED SHOULD BE MEASURED AND RECORDED.
- CONTRACTOR SHALL TAKE MEASURES TO ENSURE THAT CONDUIT BUNDLE DOES NOT ROLL WITHIN CASING.
- THESE DETAILS ARE FOR DEMONSTRATION PURPOSES ONLY. THE CONTRACTOR SHALL COMPLETE STREET RESTORATION IN COMPLIANCE WITH THE APPROPRIATE SPECIFICATION AS REFERENCED IN THE STREET OPENING PERMIT OR CTDOT STANDARD DRAWINGS AND SPECIFICATIONS.
- THE 1' CUT BACK OF PAVEMENT SHALL BE MADE AT TIME OF REPAIRING AND NOT WHEN TRENCH IS EXCAVATED.



REVISIONS DURING CONSTRUCTION

NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP

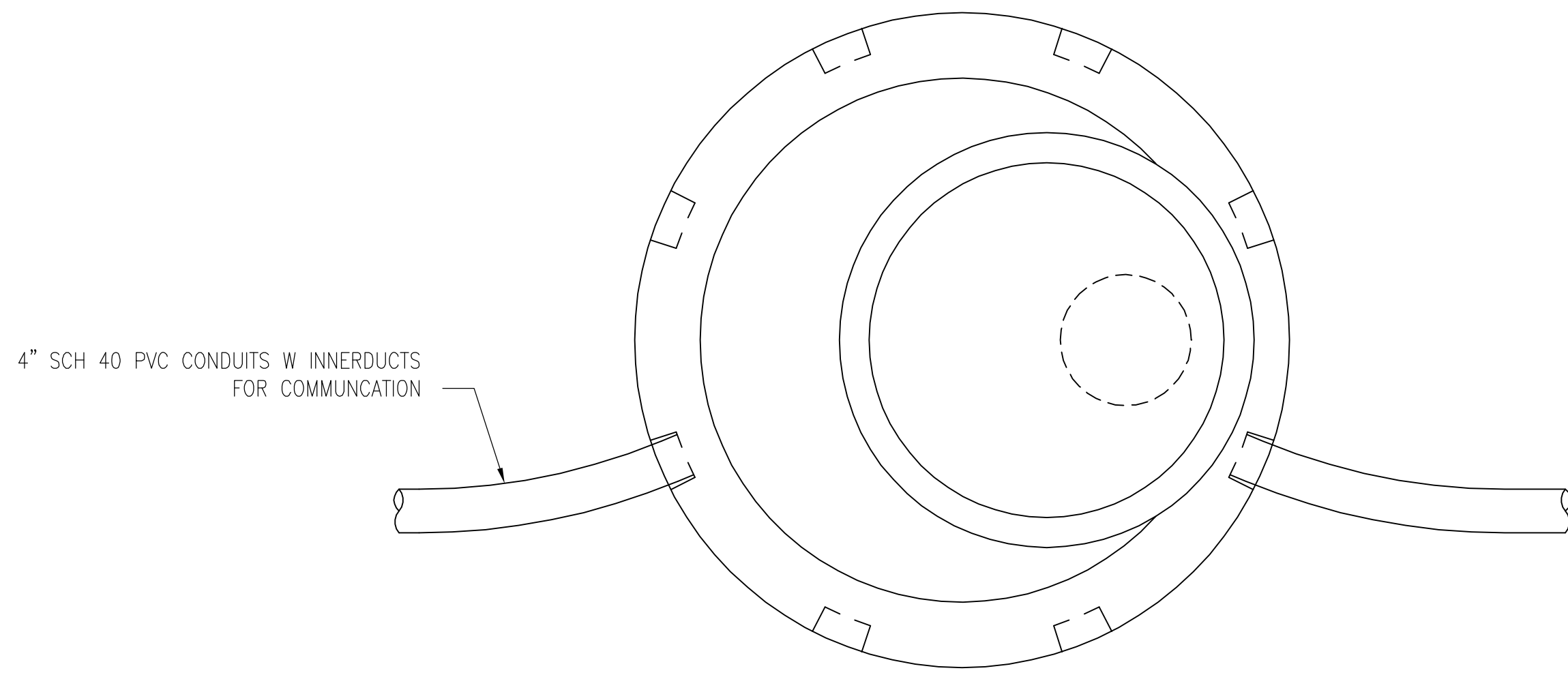
ISSUED FOR CONSTRUCTION

**Northeast Utilities Service Co.**  
FOR **CONNECTICUT LIGHT & POWER COMPANY**

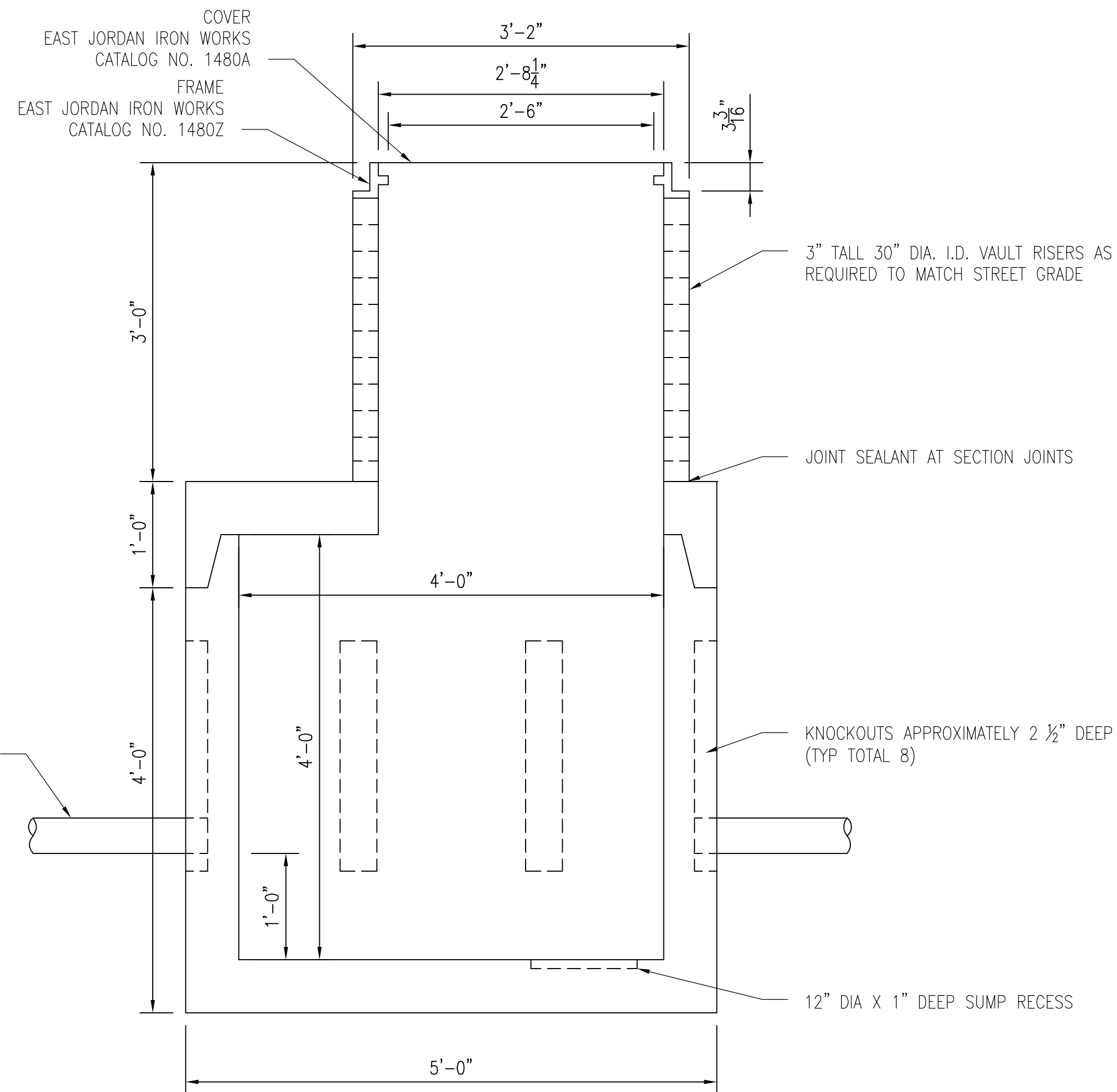
**LINE 115V SOUTH END - GLENBROOK**  
115-kV UNDERGROUND TRANSMISSION LINE  
MISCELLANEOUS DETAIL  
STAMFORD, CONNECTICUT

DATE	BY	CHKD	CS	APP	DATE	DATE	DATE	DATE
05-10-2013	EWF		CS	APP	05-10-2013	05-10-2013	05-10-2013	

V-Scale: N.T.S.    H-Scale: N.T.S.    SIZE: D    SURVEY JOB #: S20355  
VS. Z-1-2    R.E. DWG: 23370P1  
R.E. PROJ. NUMBER: 000-51.326    NUSCO: 01515-71001PG04



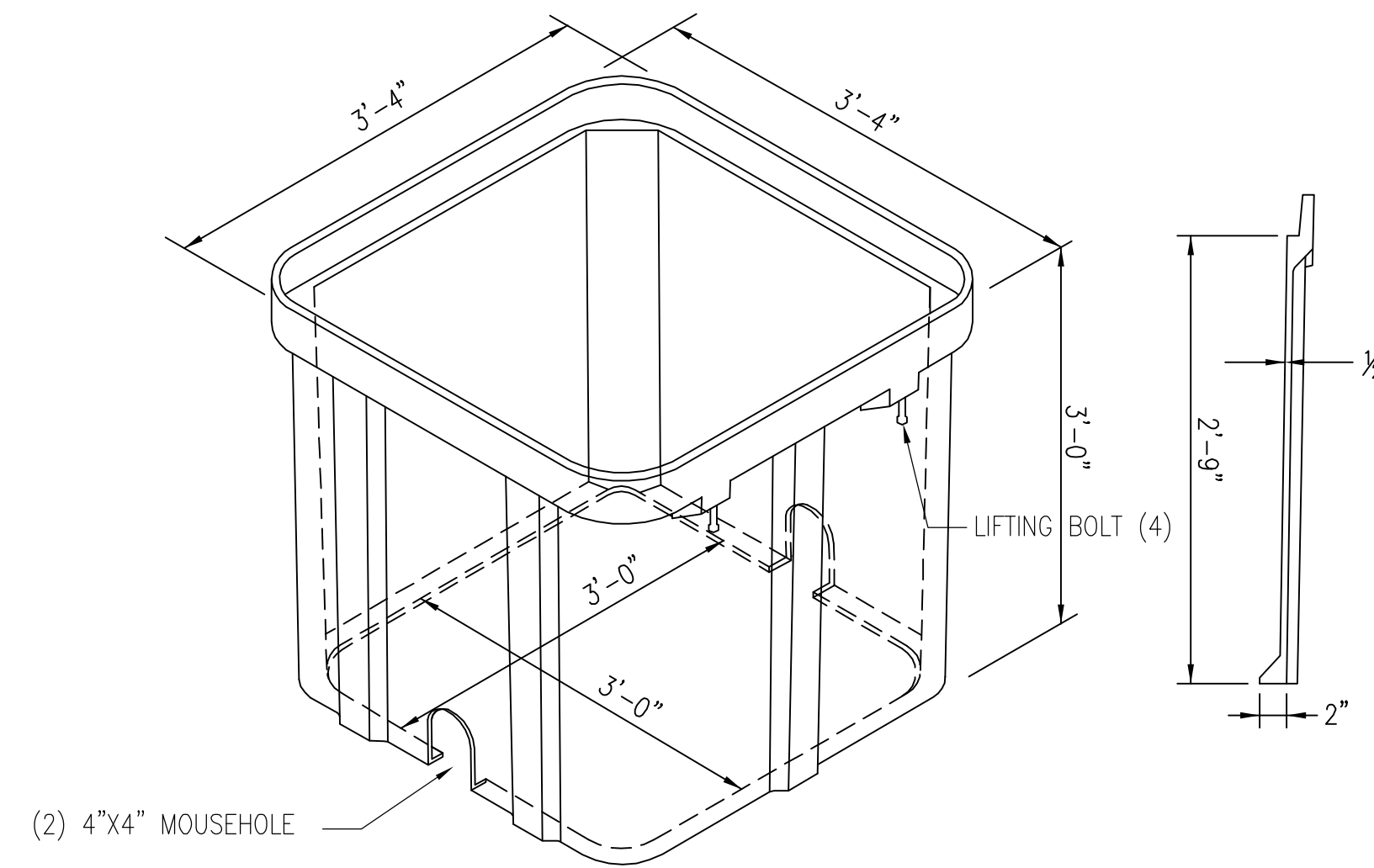
PLAN VIEW  
SCALE 1" = 1'-0"



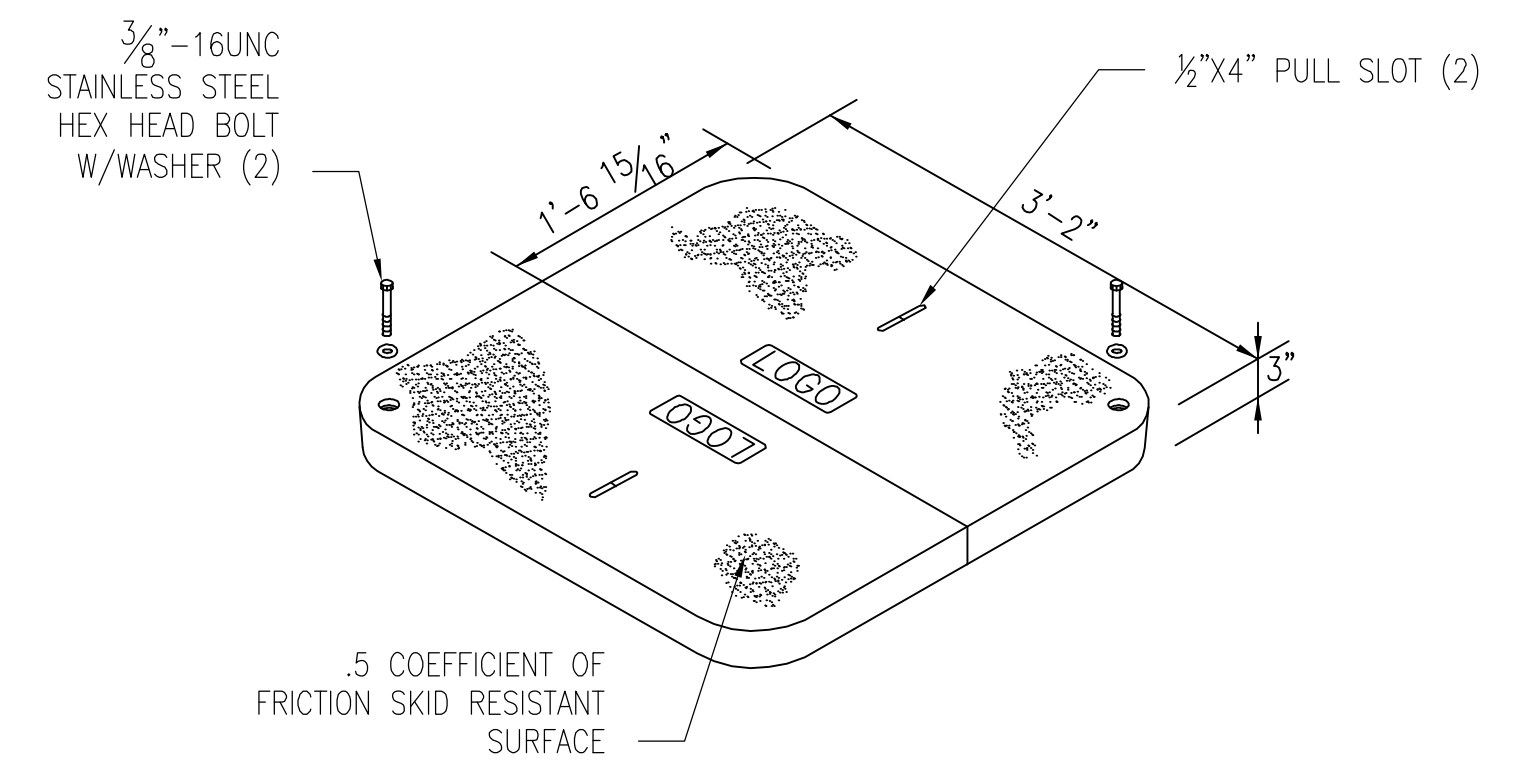
COMMUNICATION VAULT DETAIL  
SCALE 1" = 1'-0"

1  
71001PG05

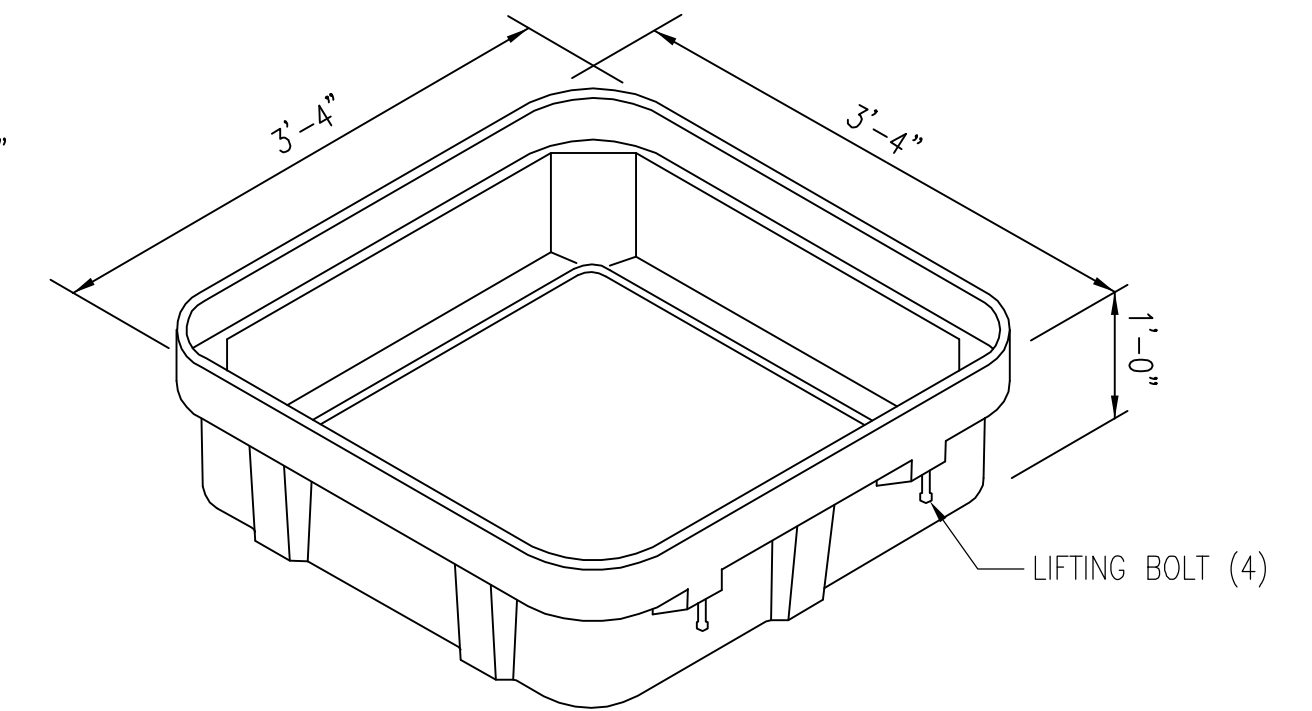
NOTE:  
COMMUNICATION VAULT SHALL BE RATED FOR AASHTO STANDARD HS20-44 DIRECT WHEEL LOADING PLUS IMPACT LOADING



BOX VIEW  
HUBBELL PART # PG3636BB36



HEAVY DUTY 2-PIECE W/2 BOLTS  
HUBBELL PART # PG3636HS00



EXTENSION VIEW  
HUBBELL PART # PG3636EA12

QUAZITE HANDHOLE DETAIL  
SCALE 1" = 1'-0"




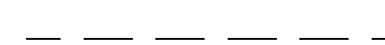
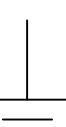
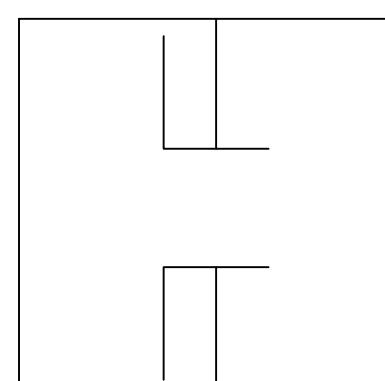
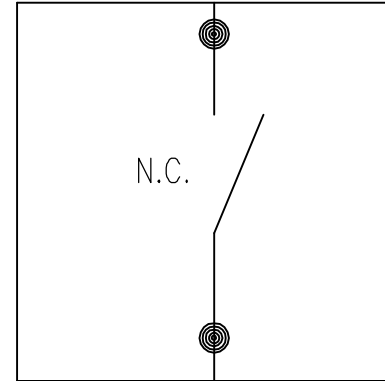
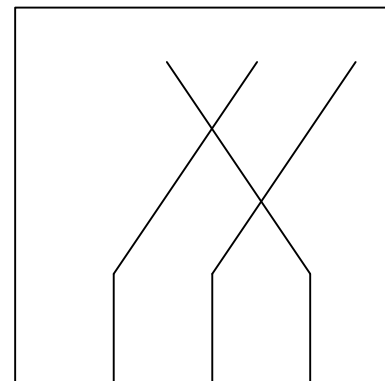
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71001PG05

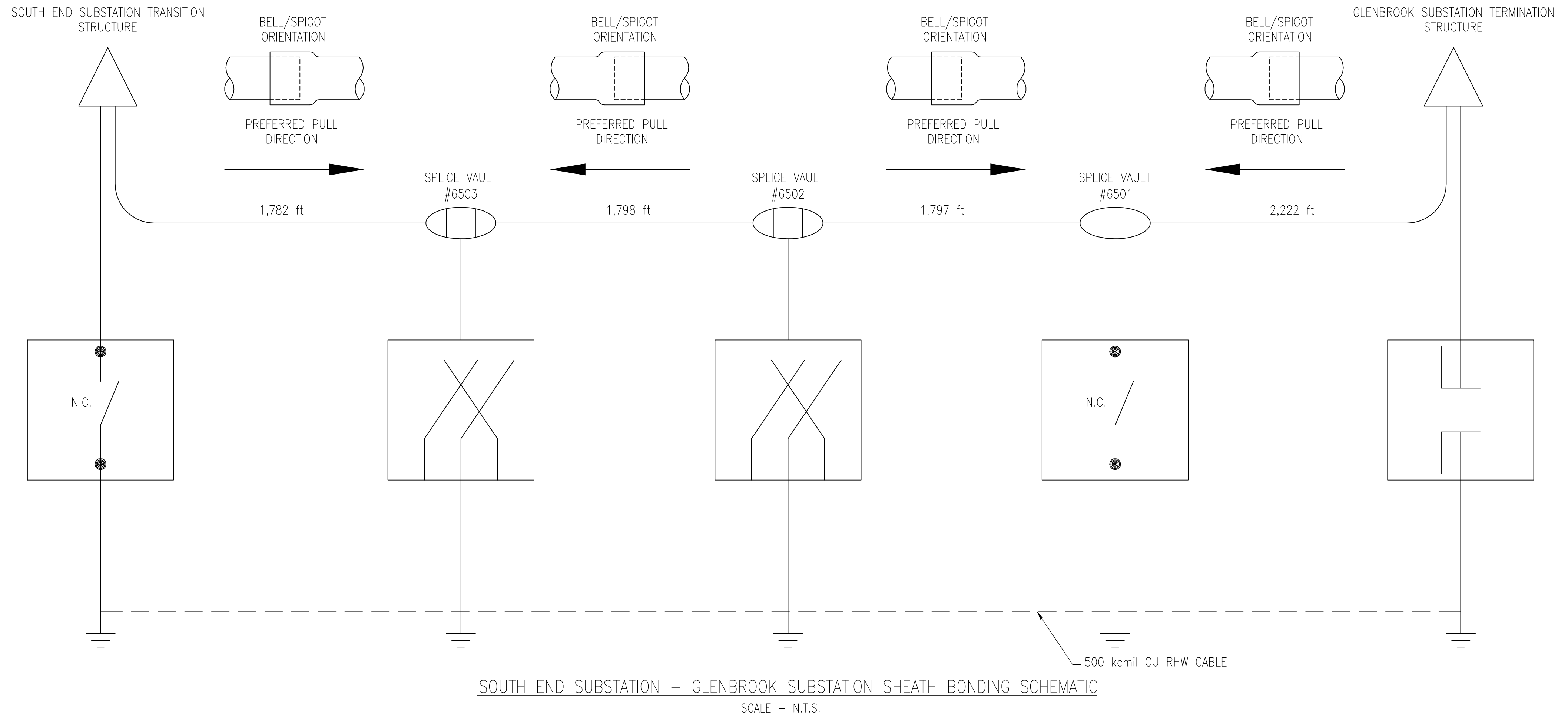
REVISIONS DURING CONSTRUCTION					
NO.	DATE	AS BUILT	REVISIONS	BY	CHK

ISSUED FOR CONSTRUCTION					
0	9-27-13			BWF	CS LH
<b>Northeast Utilities Service Co.</b> FOR CONNECTICUT LIGHT & POWER COMPANY					
<b>LINE 1151 SOUTH END - GLENBROOK</b> 115-kV UNDERGROUND TRANSMISSION LINE COMMUNICATION VAULT DETAIL STAMFORD, CONNECTICUT					
BY	EWF	CHKD	CS	APP	LH
DATE	05-10-2013	DATE	05-10-2013	DATE	05-10-2013
H-SCALE	N.T.S.	SIZE	ID	SURVEY JOB #	S20355
V-SCALE		VS.	Z-1-2	R.E. DWG	23370P1
R.E. PROJ. NUMBER	000-51.326	NUSCO	01515-71001PG05		



LEGEND

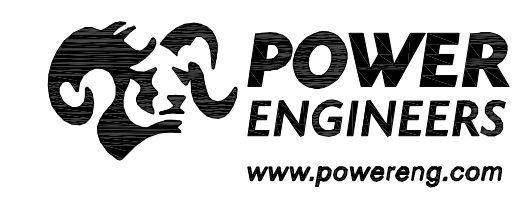
-  TERMINATOR
-  SHEATH BREAK SPLICE
-  NON-SHEATH BREAK SPLICE
-  PARALLEL GROUND CONDUCTOR
-  GROUND ROD
-  SHEATH VOLTAGE LIMITER (SVL) LINK BOX
-  3 PHASE GROUNDING LINK BOX
-  CROSS BONDING LINK BOX, WITH SVL'S



NOTE:  
1. GROUNDING TO TIE INTO EXISTING GROUND GRID AT BOTH SUBSTATIONS.

REVISIONS DURING CONSTRUCTION			
NO.	DATE	BY	APP.

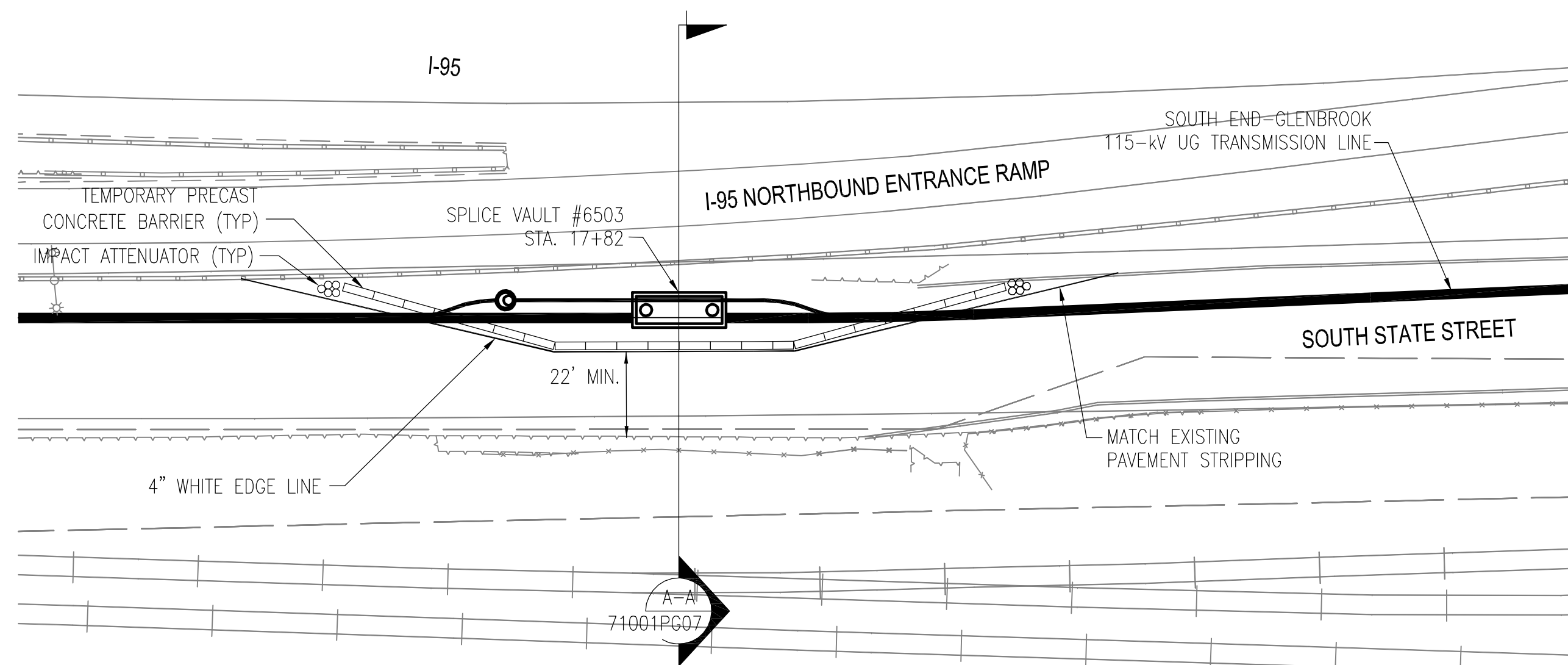
ISSUED FOR CONSTRUCTION			
0	9-27-13	BWF	CS LH
<b>Northeast Utilities Service Co.</b>			
FOR CONNECTICUT LIGHT & POWER COMPANY			
TITLE <b>LINE 1151 SOUTH END - GLENBROOK</b> 115-kV UNDERGROUND TRANSMISSION LINE SHEATH BONDING SCHEMATIC STAMFORD, CONNECTICUT			
BY	BWF	CHKD	APP
DATE	11-30-2012	DATE	11-30-2012
H-SCALE	N.T.S.	SIZE	D
V-SCALE		V.S.	Z-1-2
R.E. PROJ. NUMBER	000-51.326	R.E. DWG	23370P1
		NUSSO	01515-71001PG06



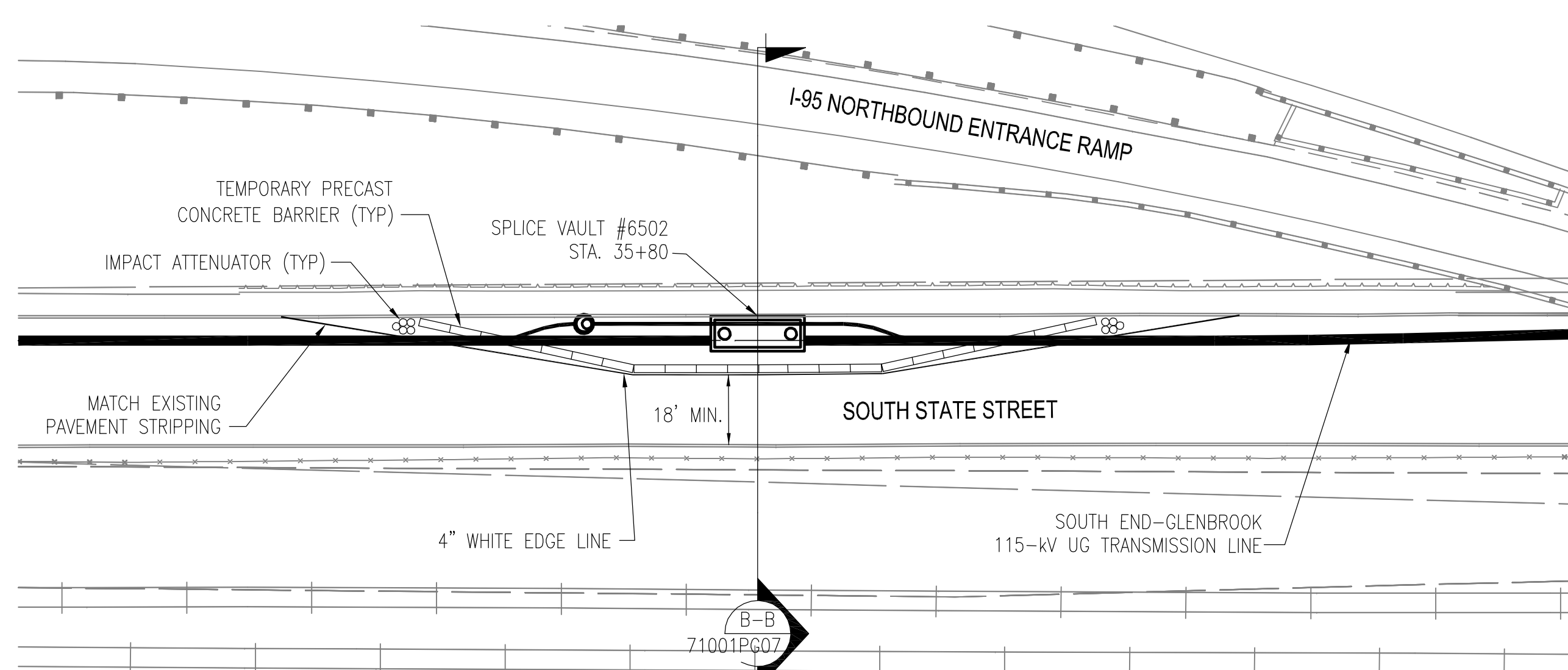
NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP

9/16/2013 1:23 PM - bflaming - R:\SIP\Projects\127724\001\DWG\08 Const Dwg\01515-71001PG07 Splice Vault Maintenance and Protection Plan.dwg - 01515-71001PG07

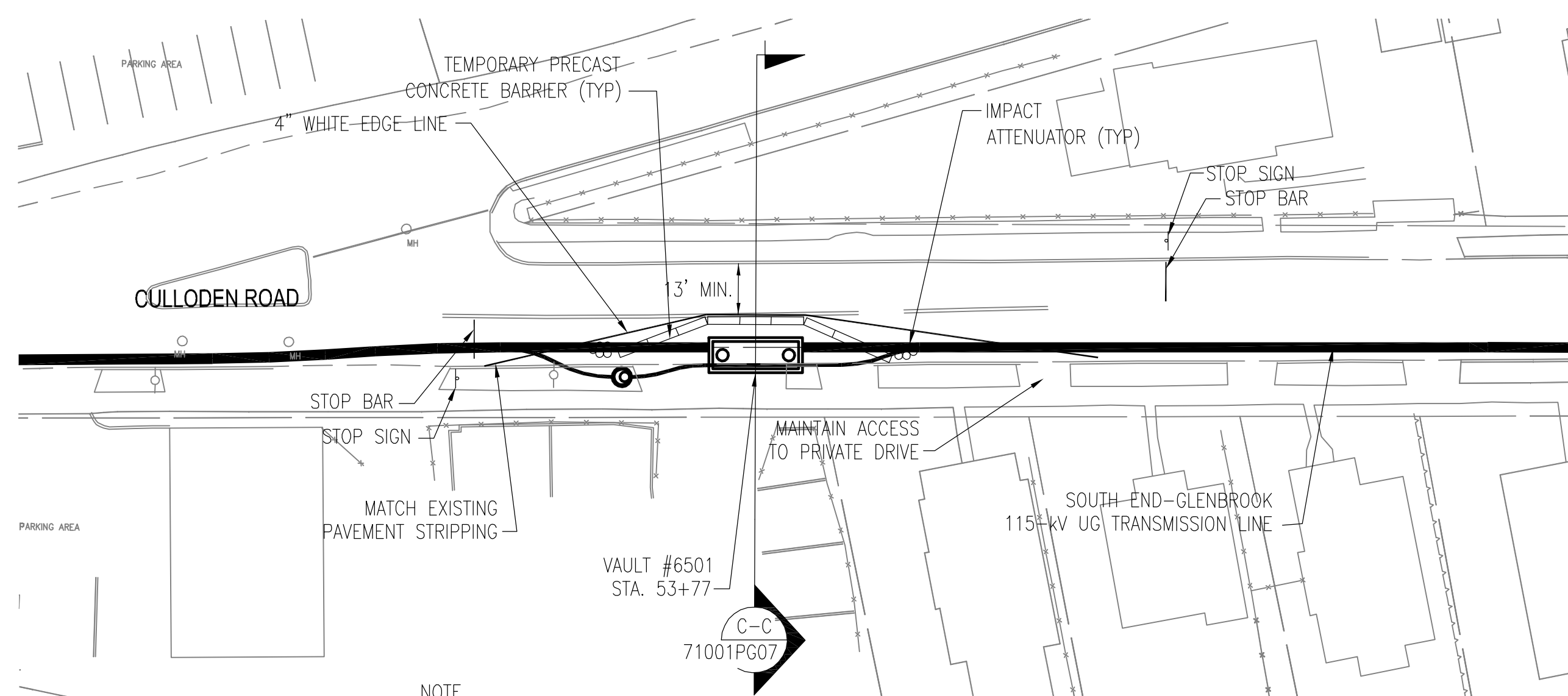
SECTION A-A  
VAULT #6503  
STA. 17+82



SECTION B-B  
VAULT #6502  
STA. 35+80



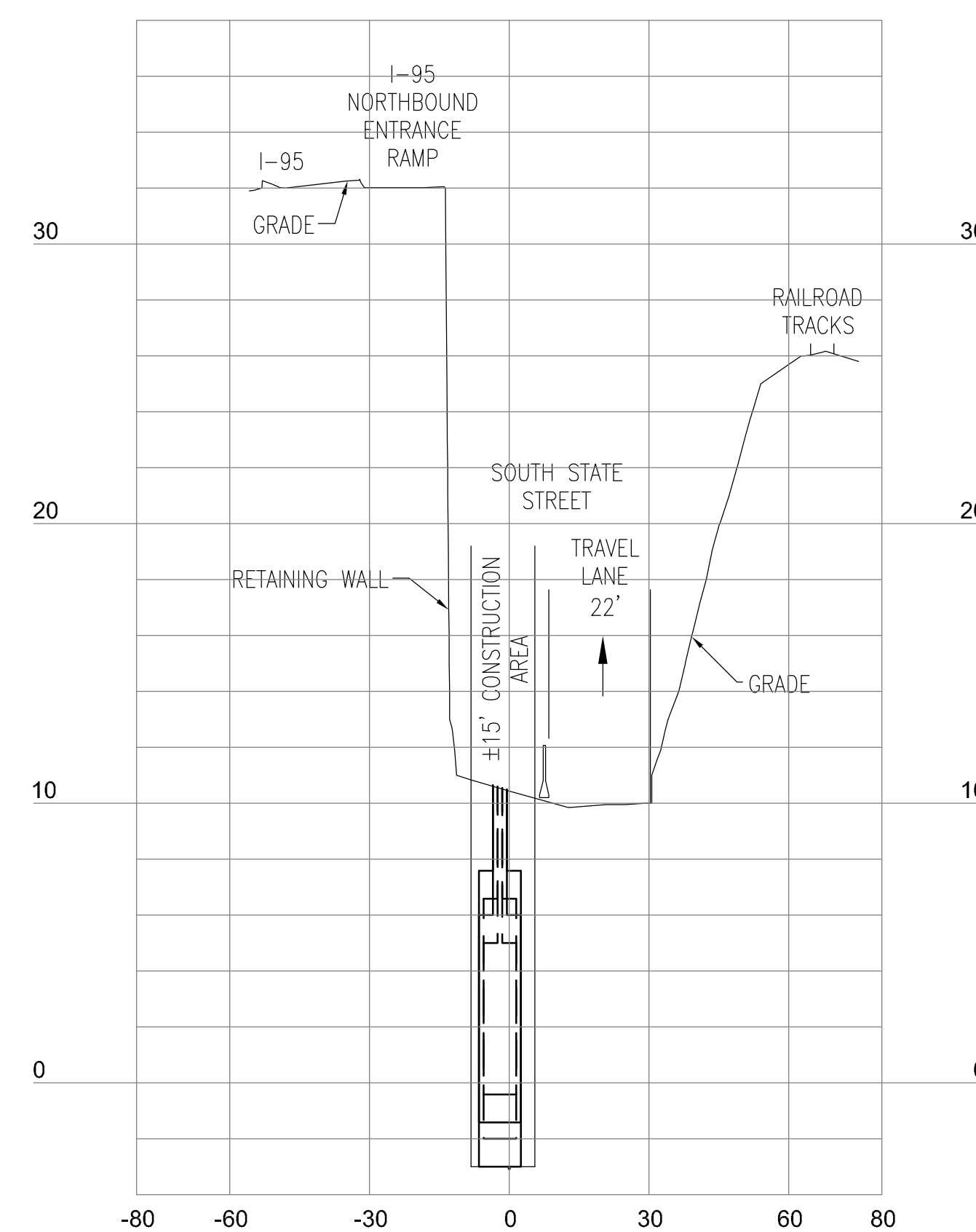
SECTION C-C  
VAULT #6501  
STA. 53+77



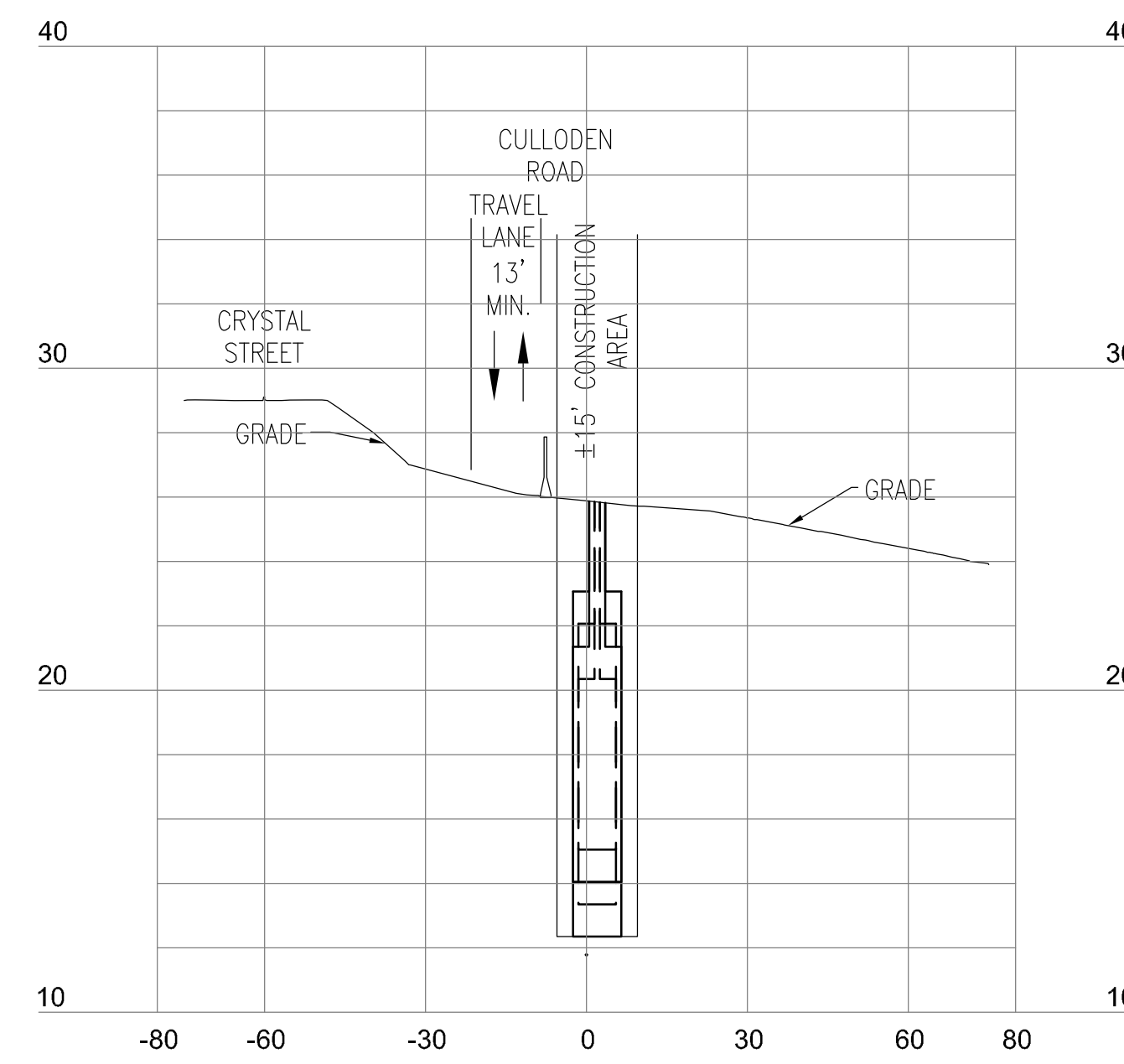
**NOTE**

- UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES OR GOVERNMENTAL AGENCIES, FROM PAROL TESTIMONY AND FROM OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO NORTHEAST UTILITIES SERVICES COMPANY, THE SIZE LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG: 1.800.922.4455

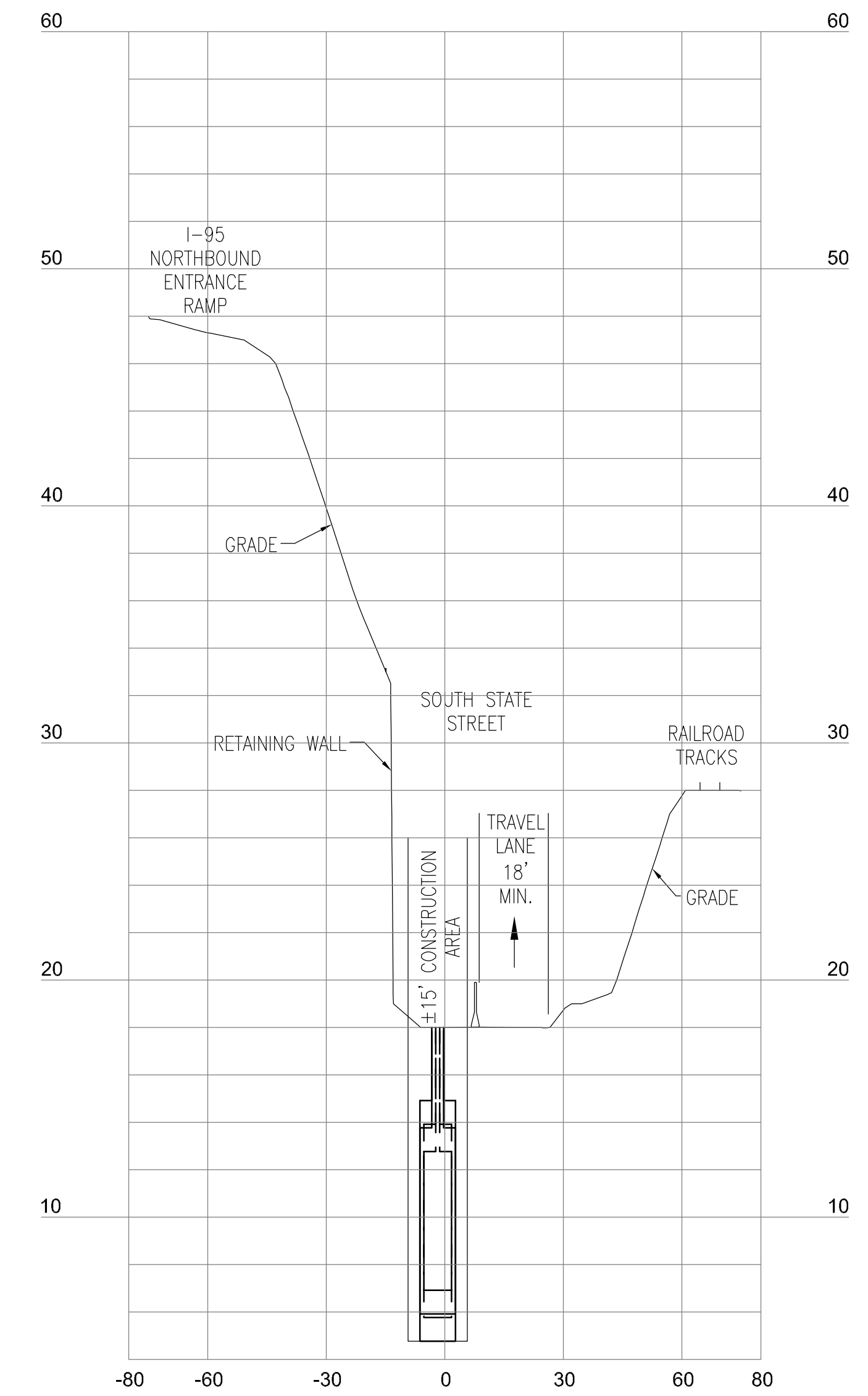
"FOR CURRENT NUSCO PROPERTY RIGHTS REFER TO PROPERTY RECORD MAPPING - LOCATED IN TRANSMISSION SURVEY ENGINEERING/ROW DEPARTMENT"



SECTION A-A  
SCALE H: 1" = 30'  
V: 1" = 5'



SECTION C-C  
SCALE H: 1" = 30'  
V: 1" = 5'



SECTION B-B  
SCALE H: 1" = 30'  
V: 1" = 5'

REVISIONS DURING CONSTRUCTION			
NO.	DATE	AS BUILT REVISIONS	BY

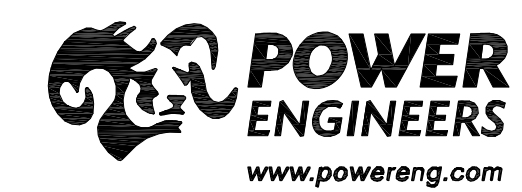
  

0 9-27-13 ISSUED FOR CONSTRUCTION			
BWF	CS	LH	LH

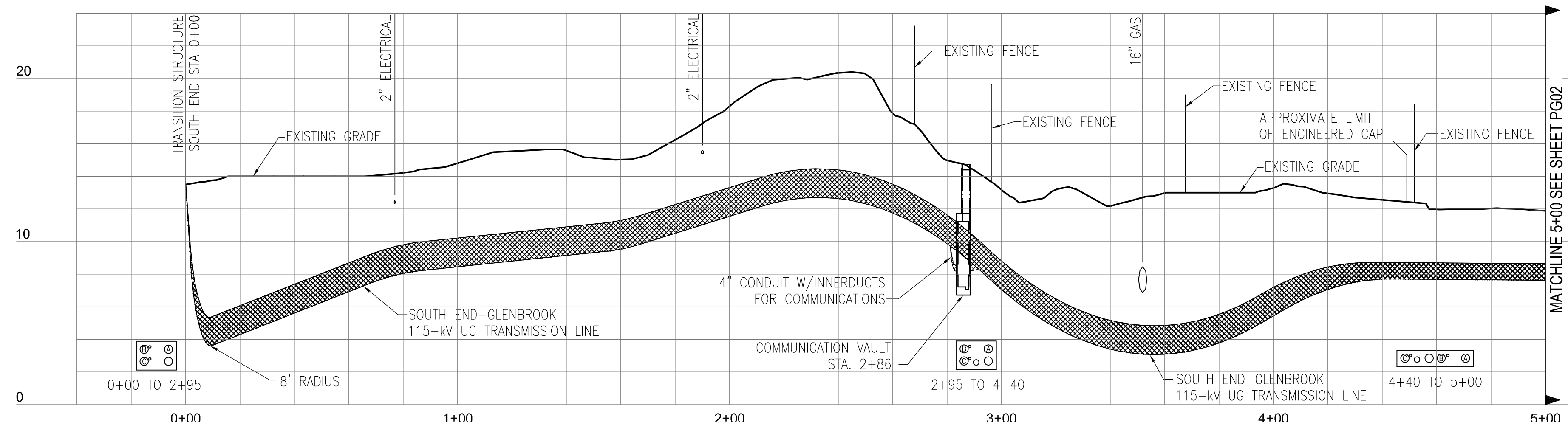
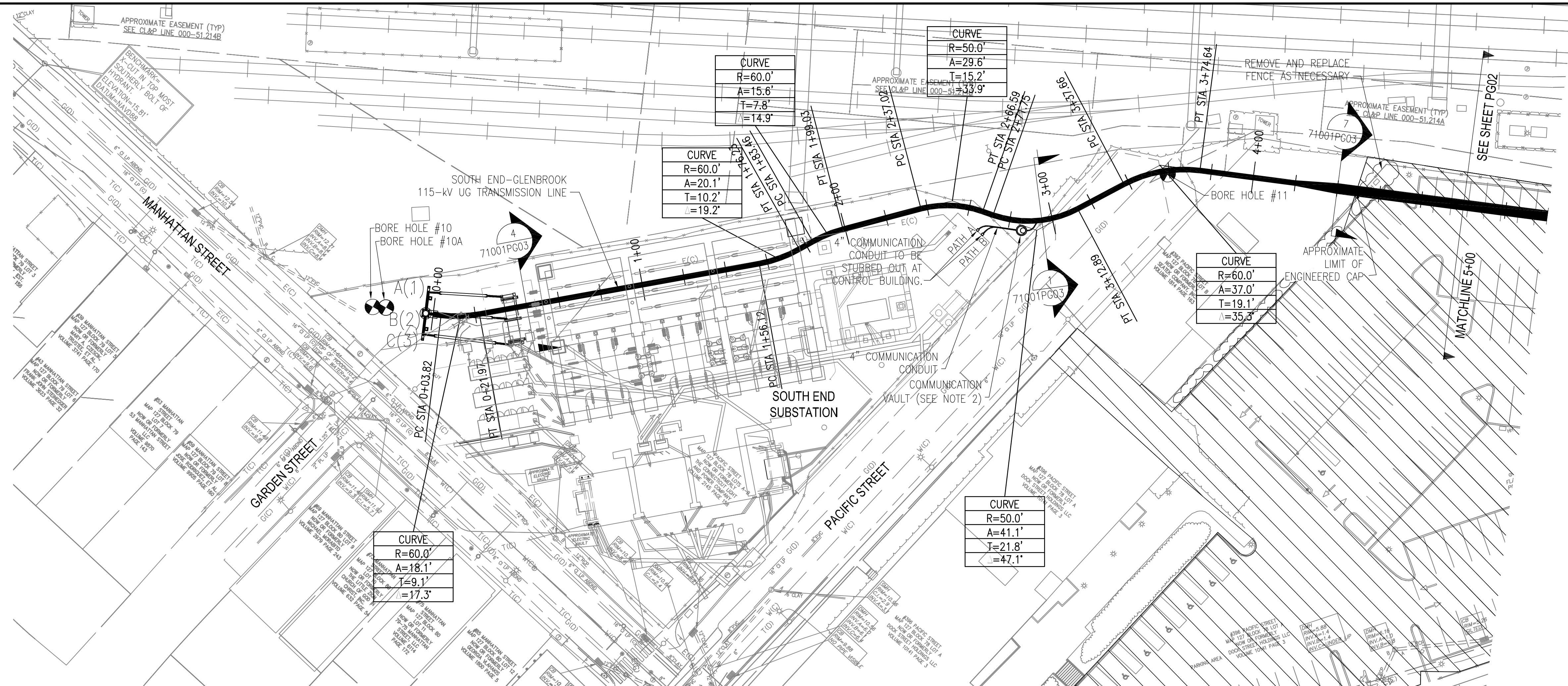
  

<b>Northeast Utilities Service Co.</b>			
FOR CONNECTICUT LIGHT & POWER COMPANY			
<b>LINE 1151 SOUTH END - GLENBROOK</b>			
115-kV UNDERGROUND TRANSMISSION LINE			
SPLICE VAULT MAINTENANCE AND PROTECTION PLAN			
STAMFORD, CONNECTICUT			
DATE	BY	DATE	APP
05-10-2013	BWF	05-10-2013	CS
05-10-2013	BWF	05-10-2013	LH
05-10-2013	BWF	05-10-2013	LH
H-SCALE	1" = 30'	SIZE	D
V-SCALE	1" = 5'	V.S.	Z-1-2
R.E. PROJ. NUMBER	000-51.326	NUSCO	01515-71001PG07
DATE		DATE	
AS BUILT REVISIONS		DATE	
BY	CHK	APP	APP

TWO BUSINESS DAYS BEFORE YOU DIG CALL  
**CONNECTICUT ONE CALL**  
 TOLL FREE  
 1-800-922-4455



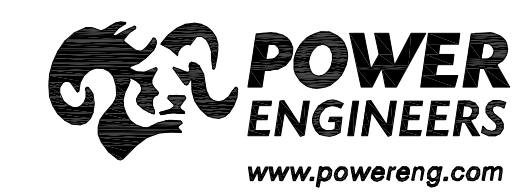




- NOTE**
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  - LEAVE 200' OF FIBER OPTIC CABLE COILED IN COMMUNICATION VAULT, TO BE INSTALLED BY OTHERS.
  - PHASING RELATIONSHIP  
 PHASE 1 = A  
 PHASE 2 = B  
 PHASE 3 = C
  - ALL PHASING IS SHOWN LOOKING AHEAD ON LINE (TYPICAL).

"FOR CURRENT NUSCO PROPERTY RIGHTS REFER TO PROPERTY RECORD MAPPING - LOCATED IN TRANSMISSION SURVEY ENGINEERING/ROW DEPARTMENT"

TWO BUSINESS DAYS BEFORE YOU DIG CALL  
 CONNECTICUT ONE CALL  
 TOLL FREE  
 1-800-922-4455



REVISIONS DURING CONSTRUCTION					
NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP

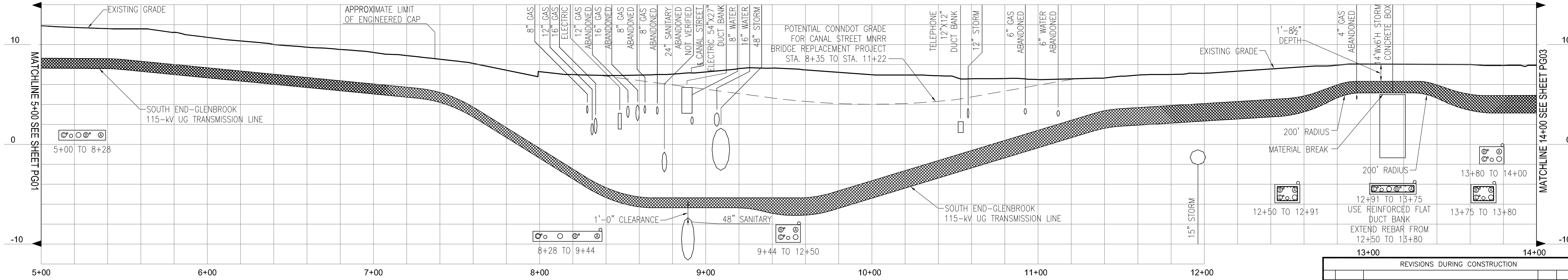
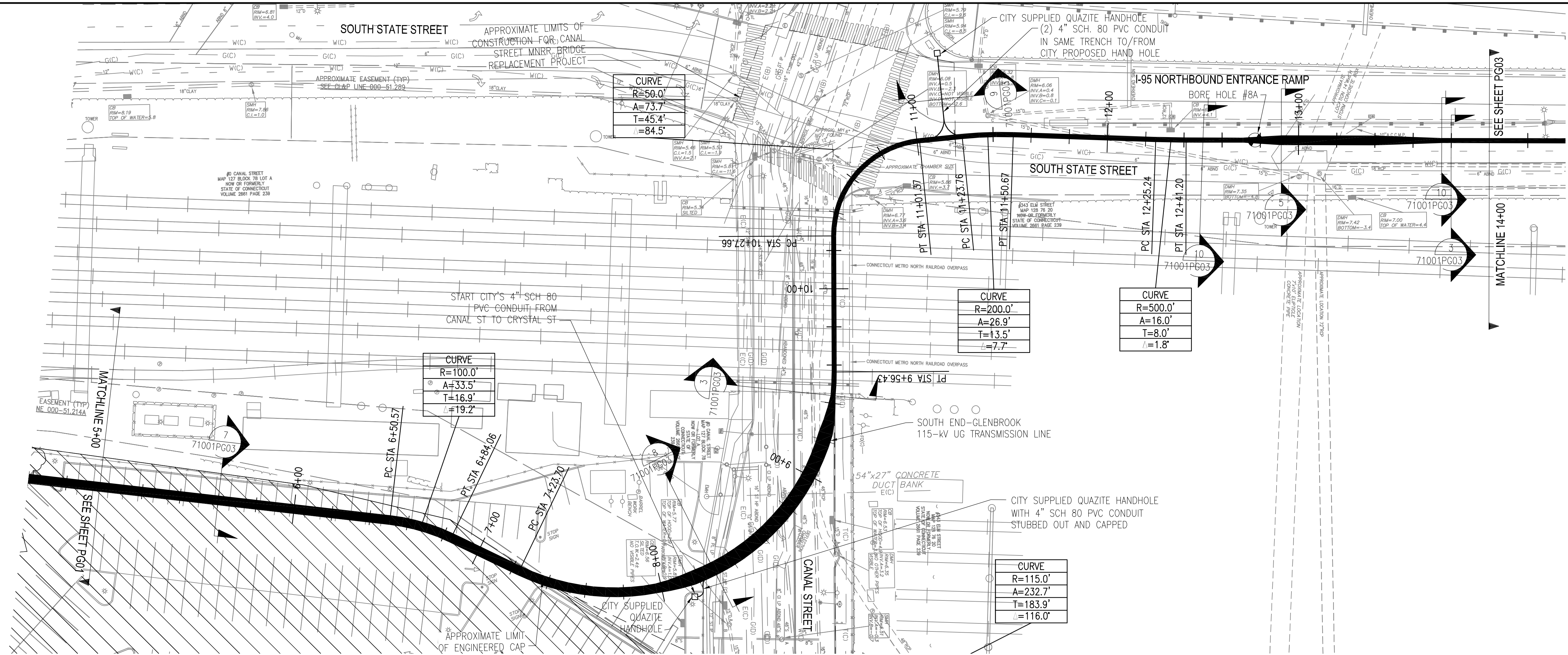
  

0	9-27-13	ISSUED FOR CONSTRUCTION	BWF	CS	LH
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<b>Northeast Utilities Service Co.</b> FOR CONNECTICUT LIGHT & POWER COMPANY					
<b>LINE 1151 SOUTH END - GLENBROOK</b> 115-kV UNDERGROUND TRANSMISSION LINE PLAN AND PROFILE STA 0+00 TO 5+00 STAMFORD, CONNECTICUT					
BY	BWF	CHKD	CS	APP	LH
DATE	11-30-2012	DATE	11-30-2012	DATE	11-30-2012
H-SCALE	1" = 30'	SIZE	D	SURVEY JOB #	S20355
V-SCALE	1" = 5'	VS.	Z-1-2	R.E. DWG	23370P1
R.E. PROJ. NUMBER	000-51.326	NUSCO	01515-10001PG01		

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 NU VER: 02/2012

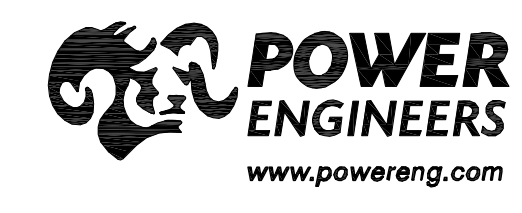


**NOTE**

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"FOR CURRENT NUSCO PROPERTY RIGHTS REFER TO PROPERTY RECORD MAPPING - LOCATED IN TRANSMISSION SURVEY ENGINEERING/ROW DEPARTMENT"

TWO BUSINESS DAYS BEFORE YOU DIG CALL  
 CONNECTICUT ONE CALL  
 TOLL FREE  
 1-800-922-4455

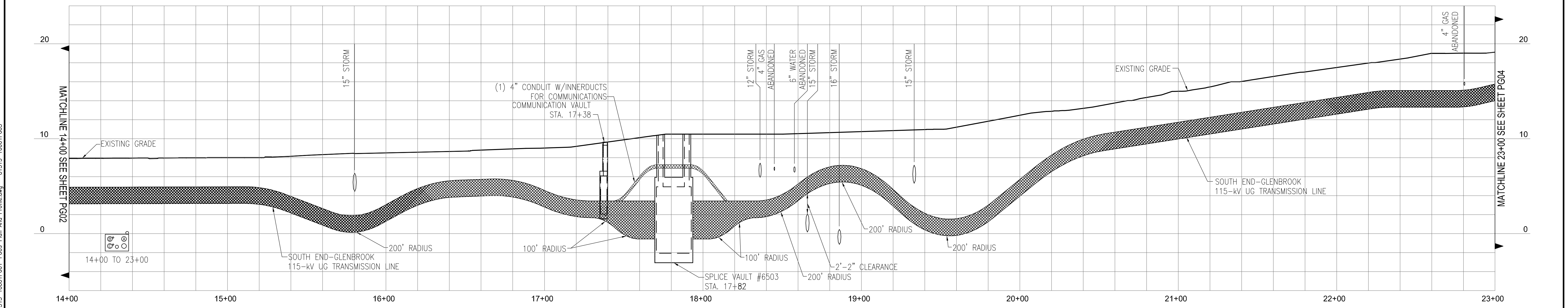
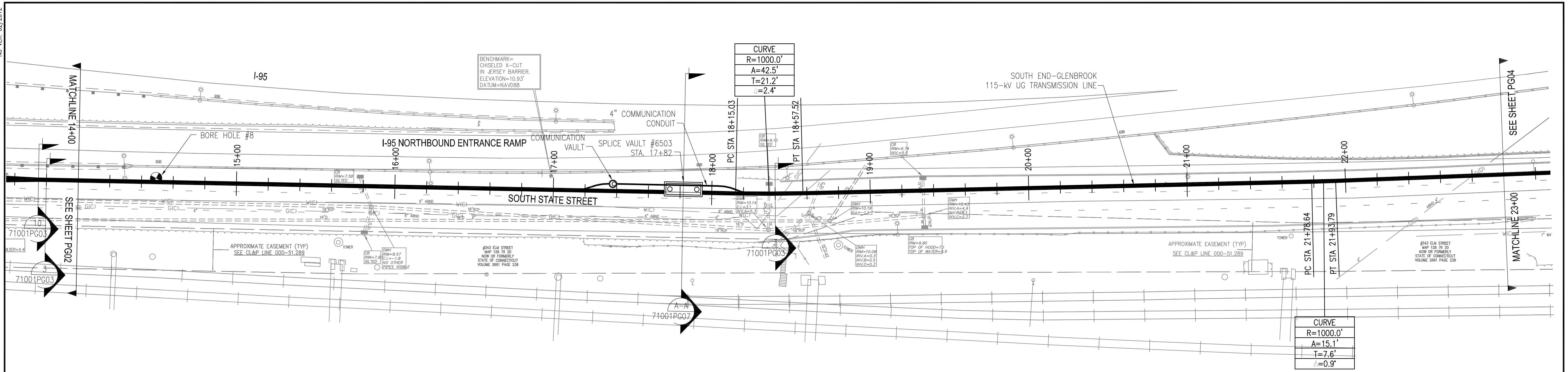


NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP

REVISIONS DURING CONSTRUCTION					
ISSUED FOR CONSTRUCTION					
<b>Northeast Utilities Service Co.</b> FOR CONNECTICUT LIGHT & POWER COMPANY					
<b>LINE 1151 SOUTH END - GLENBROOK</b> 115-kV UNDERGROUND TRANSMISSION LINE PLAN AND PROFILE STA 5+00 TO 14+00 STAMFORD, CONNECTICUT					
BY	BWF	CHKD	CS	APP	LH
DATE	11-30-2012	DATE	11-30-2012	DATE	11-30-2012
H-SCALE	1" = 30'	SIZE	D	SURVEY JOB #	S20355
V-SCALE	1" = 5'	VS.	Z-1-2	R.E. DWG	23370P1
R.E. PROJ. NUMBER	000-51.326	NUSCO	01515-10001PG02		

NU VER: 02/2012

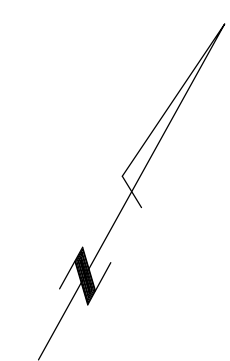
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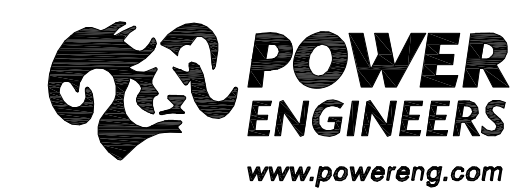
**NOTE**

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"FOR CURRENT NUSCO PROPERTY RIGHTS REFER TO PROPERTY RECORD MAPPING - LOCATED IN TRANSMISSION SURVEY ENGINEERING/ROW DEPARTMENT"



TWO BUSINESS DAYS BEFORE YOU DIG CALL  
 CONNECTICUT ONE CALL  
 TOLL FREE  
 1-800-922-4455



NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP

REVISIONS DURING CONSTRUCTION					
NO.	DATE	DESCRIPTION	BY	CHK	APP
0	9-27-13	ISSUED FOR CONSTRUCTION	BWF	CS	LH

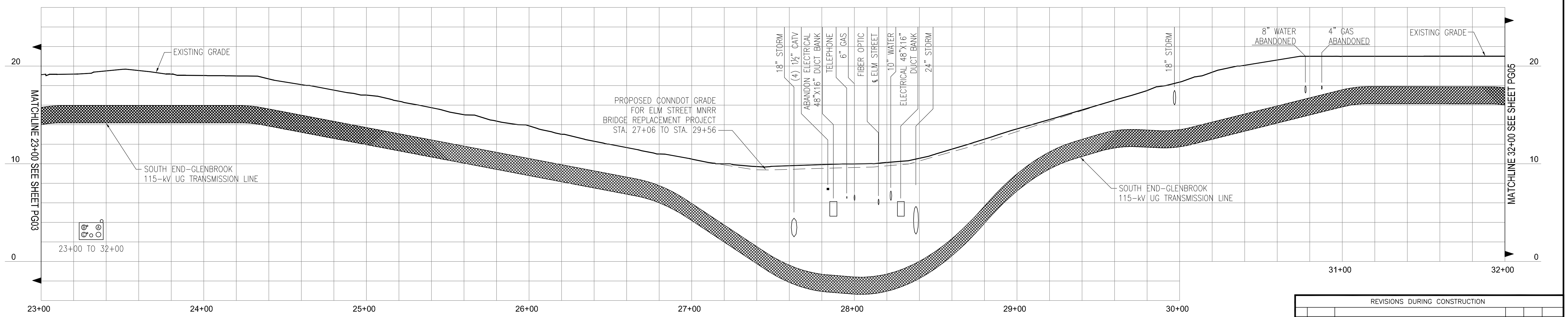
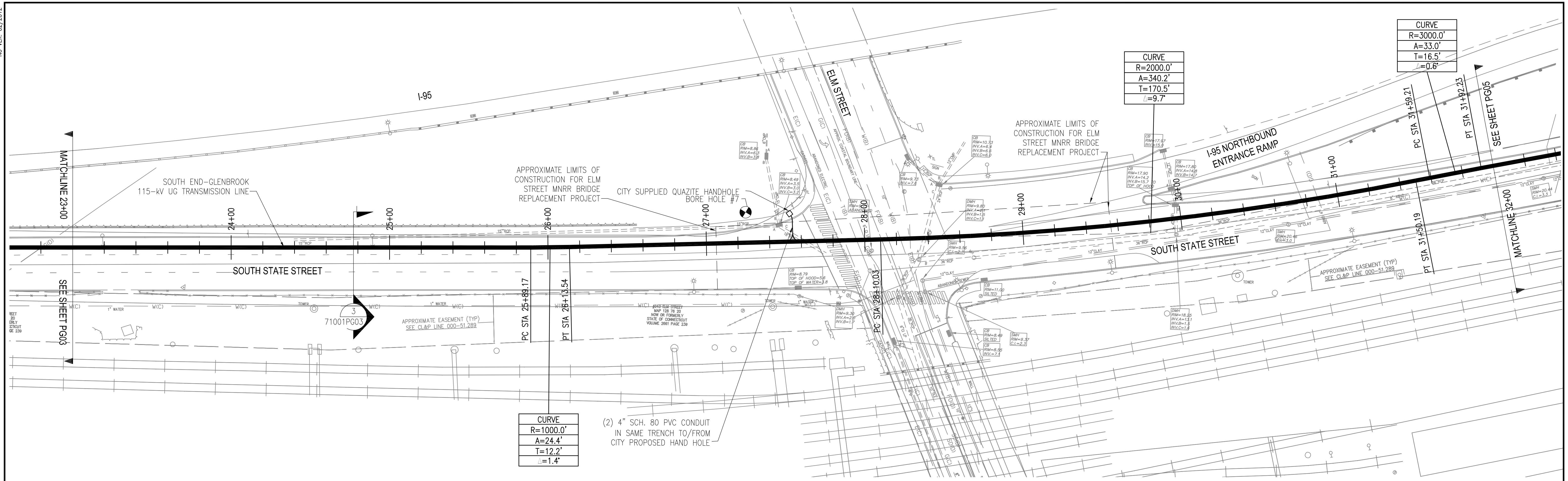
**Northeast Utilities Service Co.**  
 FOR CONNECTICUT LIGHT & POWER COMPANY

**LINE 1151 SOUTH END - GLENBROOK**  
 115-kV UNDERGROUND TRANSMISSION LINE  
 PLAN and PROFILE STA 14+00 TO 23+00  
 STAMFORD, CONNECTICUT

DATE	BY	CHKD	APP	DATE	BY	CHKD	APP
11-30-2012	BWF	CS	LH	11-30-2012	BWF	CS	LH

H-SCALE 1" = 30'  
 V-SCALE 1" = 5'

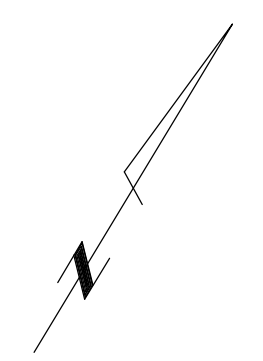
R.E. PROJ. NUMBER 000-51.326  
 NUSCO 23370P1  
 01515-10001PG03



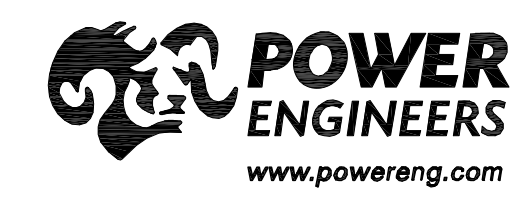
**NOTE**

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"FOR CURRENT NUSCO PROPERTY RIGHTS REFER TO PROPERTY RECORD MAPPING - LOCATED IN TRANSMISSION SURVEY ENGINEERING/ROW DEPARTMENT"



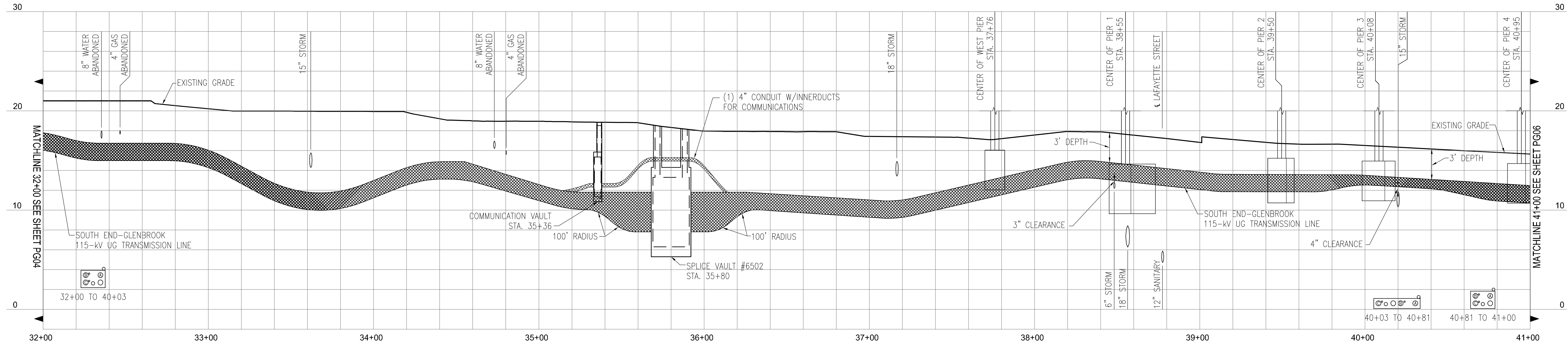
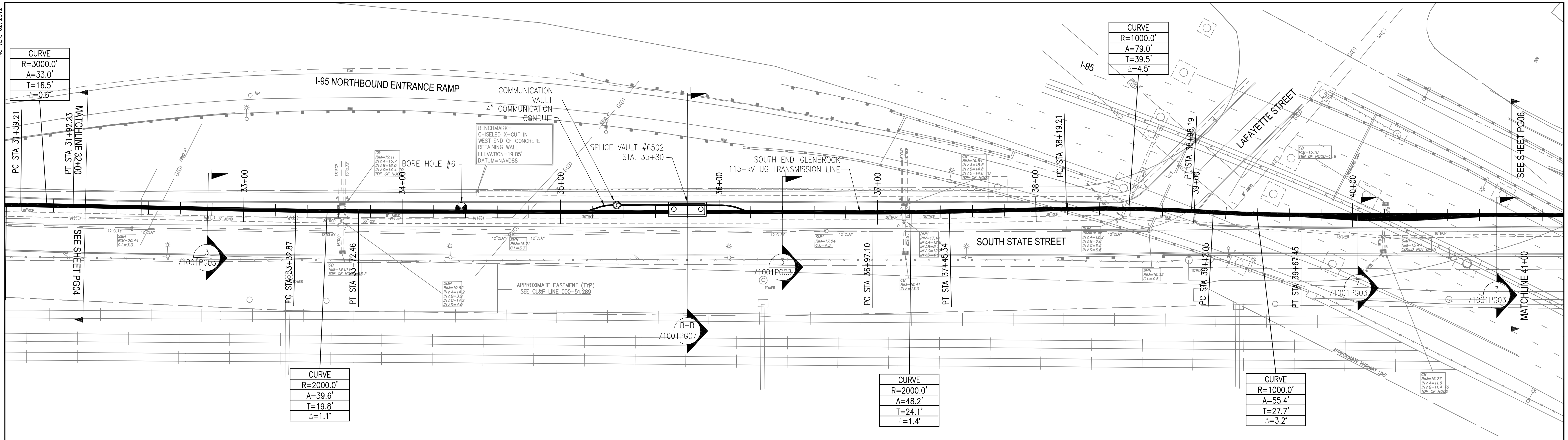
TWO BUSINESS DAYS BEFORE YOU DIG CALL CONNECTICUT ONE CALL TOLL FREE 1-800-922-4455



NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP

REVISIONS DURING CONSTRUCTION					
ISSUED FOR CONSTRUCTION					
0	9-27-13			BWF	CS LH
<b>Northeast Utilities Service Co.</b> FOR CONNECTICUT LIGHT & POWER COMPANY					
<b>LINE 1151 SOUTH END - GLENBROOK</b> <b>115-kV UNDERGROUND TRANSMISSION LINE</b> <b>PLAN and PROFILE STA 23+00 TO 32+00</b> STAMFORD, CONNECTICUT					
BY	BWF	CHKD	CS	APP	LH
DATE	11-30-2012	DATE	11-30-2012	DATE	11-30-2012
H-SCALE	1" = 30'	SIZE	D	SURVEY JOB #	S20355
V-SCALE	1" = 5'	VS.	Z-1-2	R.E. DWG	23370P1
R.E. PROJ. NUMBER	000-51.326	NUSCO	01515-10001PG04		

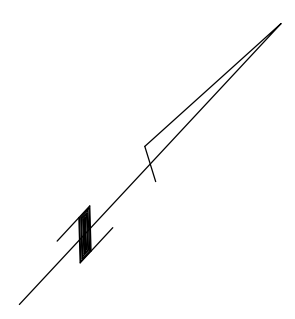
NU VER: 02/2012



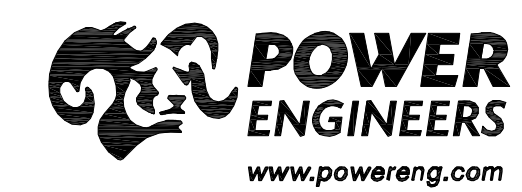
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"FOR CURRENT NUSCO PROPERTY RIGHTS REFER TO PROPERTY RECORD MAPPING - LOCATED IN TRANSMISSION SURVEY ENGINEERING/ROW DEPARTMENT"



TWO BUSINESS DAYS BEFORE YOU DIG CALL  
CONNECTICUT ONE CALL  
TOLL FREE  
1-800-922-4455



NO.	DATE	AS BUILT	REVISIONS	BY	CHK	APP	APP

REVISIONS DURING CONSTRUCTION			
NO.	DATE	DESCRIPTION	BY

ISSUED FOR CONSTRUCTION BWF CS LH

**Northeast Utilities Service Co.**  
FOR  
**CONNECTICUT LIGHT & POWER COMPANY**

**LINE 1151 SOUTH END - GLENBROOK 115-kV UNDERGROUND TRANSMISSION LINE PLAN and PROFILE STA 32+00 TO 41+00 STAMFORD, CONNECTICUT**

BY	DATE	CHKD	DATE	APP	DATE
BWF	11-30-2012	CS	11-30-2012	LH	11-30-2012

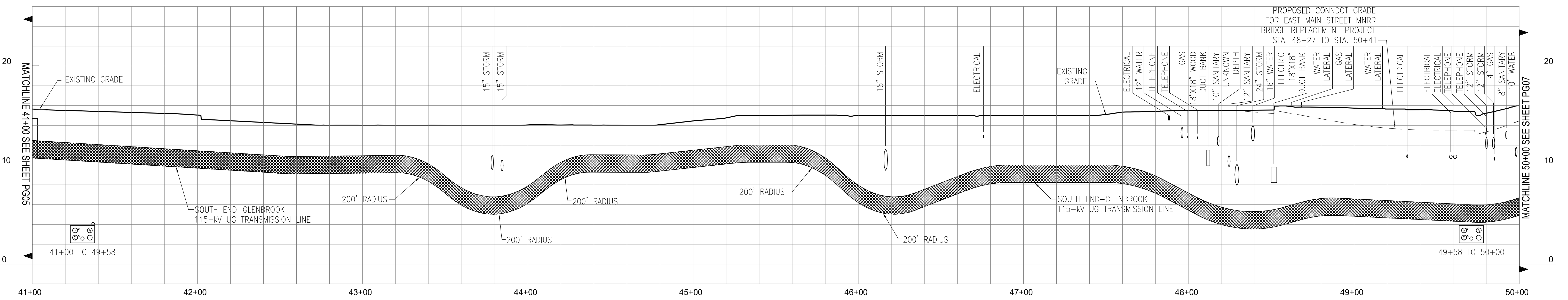
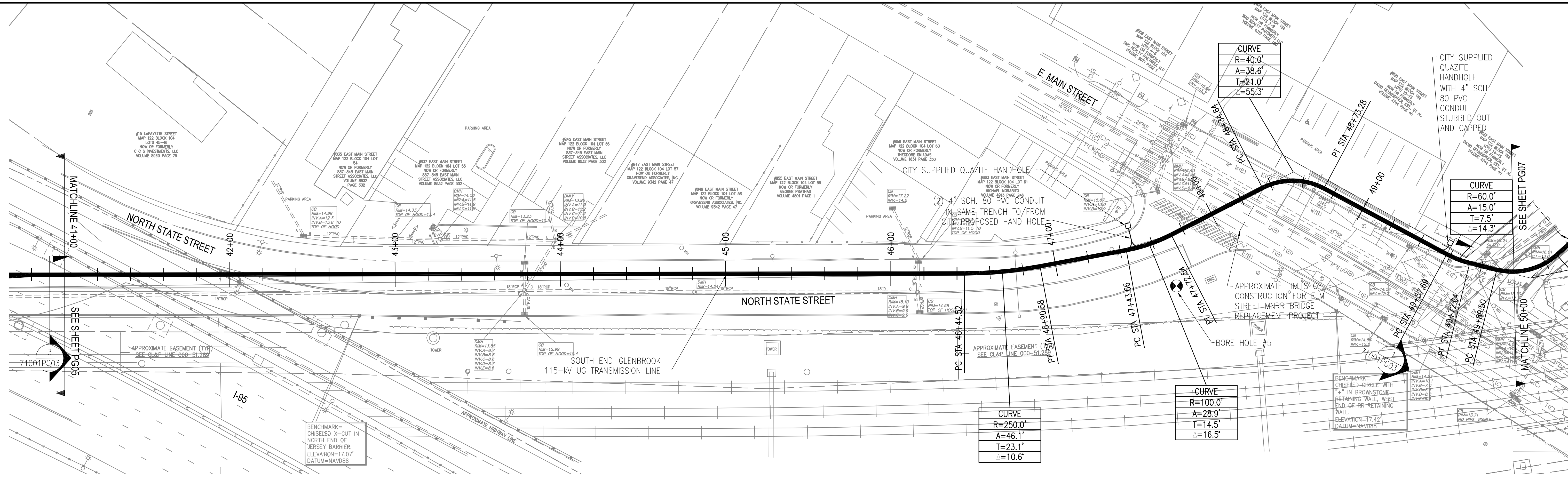
H-SCALE 1" = 30'  
V-SCALE 1" = 5'

VS. Z-1-2

R.E. DWG. NUMBER 000-51.326

REVISIONS 23370P1

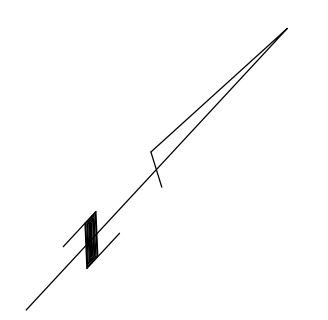
PROJECT NUMBER 01515-10001PG05



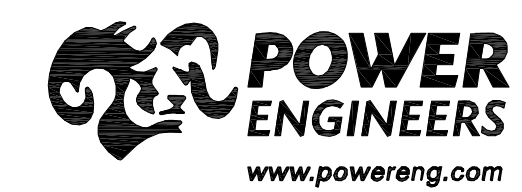
**NOTE**

1. UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES OR GOVERNMENTAL AGENCIES, FROM PAROL TESTIMONY AND FROM OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO NORTHEAST UTILITIES SERVICES COMPANY. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG: 1.800.922.4455

"FOR CURRENT NUSCO PROPERTY RIGHTS REFER TO PROPERTY RECORD MAPPING - LOCATED IN TRANSMISSION SURVEY ENGINEERING/ROW DEPARTMENT"

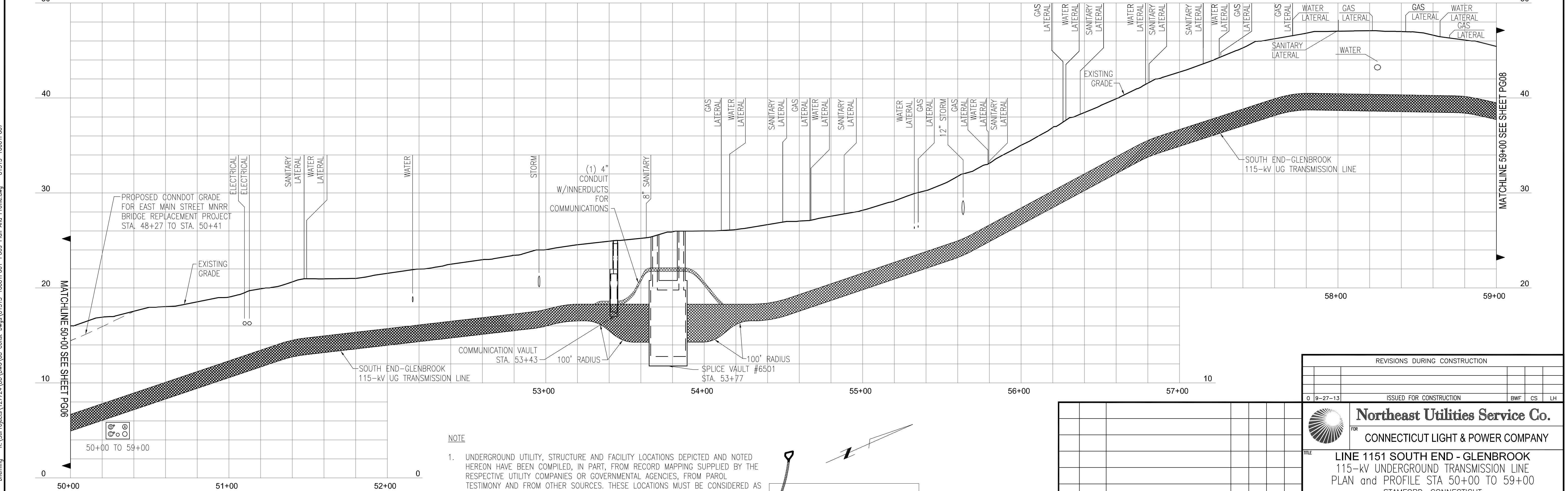
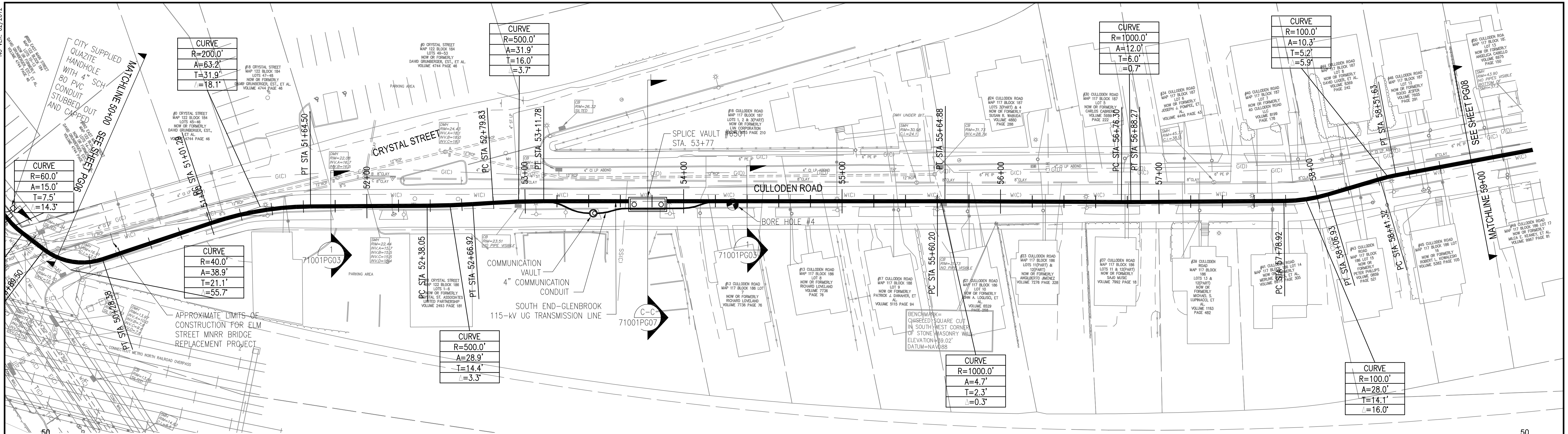


TWO BUSINESS DAYS BEFORE YOU DIG CALL  
**CONNECTICUT ONE CALL**  
 TOLL FREE  
 1-800-922-4455



NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP

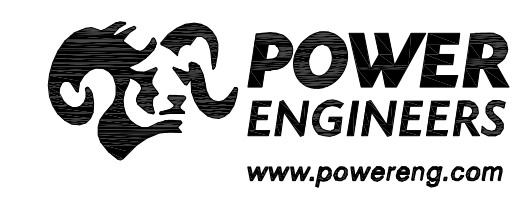
REVISIONS DURING CONSTRUCTION			
0	9-27-13	ISSUED FOR CONSTRUCTION	BWF CS LH
<b>Northeast Utilities Service Co.</b>			
FOR <b>CONNECTICUT LIGHT &amp; POWER COMPANY</b>			
TITLE: <b>LINE 1151 SOUTH END - GLENBROOK 115-kV UNDERGROUND TRANSMISSION LINE PLAN AND PROFILE STA 41+00 TO 50+00 STAMFORD, CONNECTICUT</b>			
BY: BWF	CHKD: CS	APP: LH	APP: BWF
DATE: 11-30-2012	DATE: 11-30-2012	DATE: 11-30-2012	DATE: 11-30-2012
H-SCALE: 1" = 30'	SIZE: D	SURVEY JOB #:	S20355
V-SCALE: 1" = 5'	VS: Z-1-2	R.E. DWG:	23370P1
R.E. PROJ. NUMBER:	000-51.326	NUSCO:	01515-10001PG06



**NOTE**

- UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES OR GOVERNMENTAL AGENCIES, FROM PAROL TESTIMONY AND FROM OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO NORTHEAST UTILITIES SERVICES COMPANY. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG: 1.800.922.4455

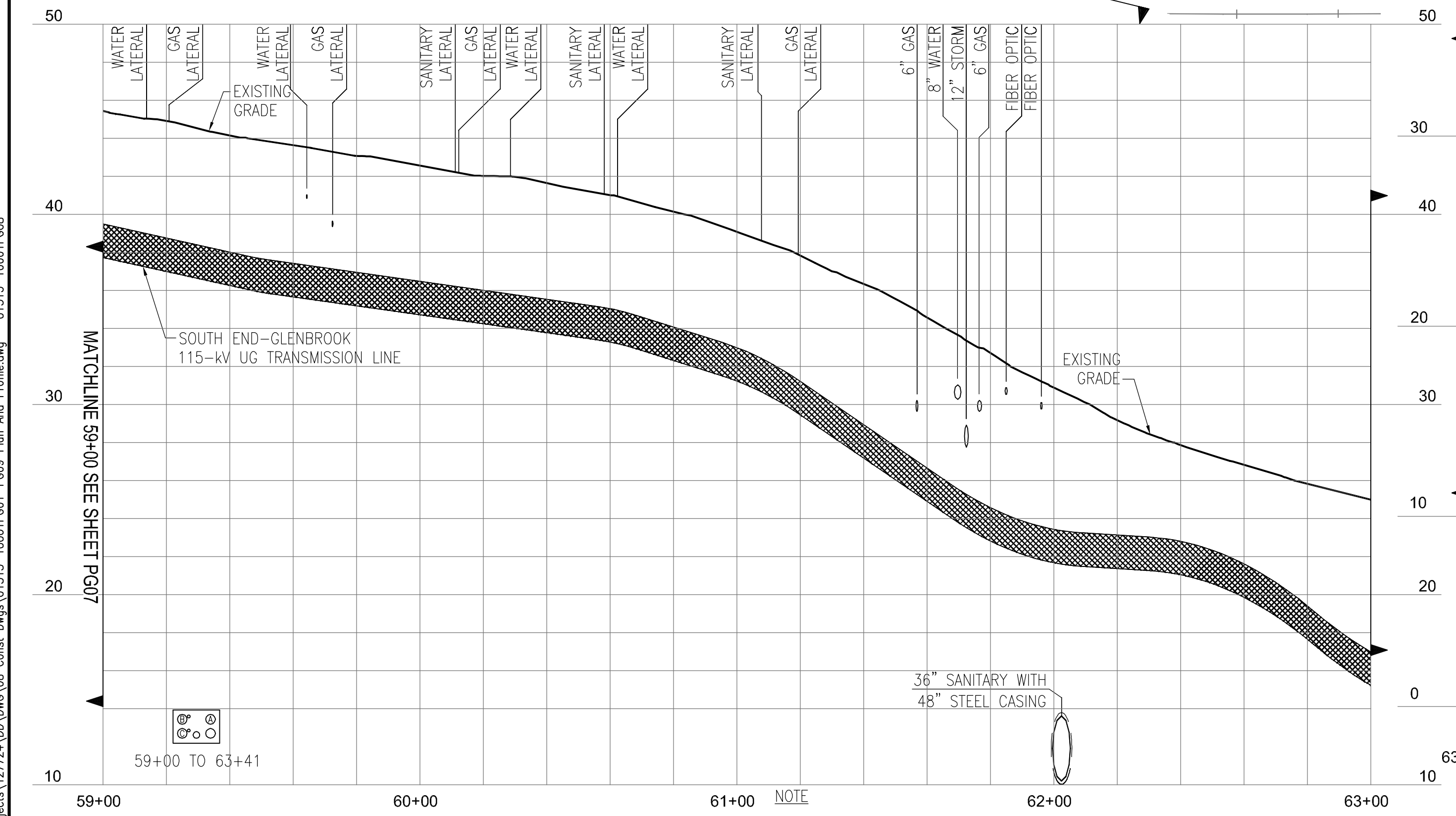
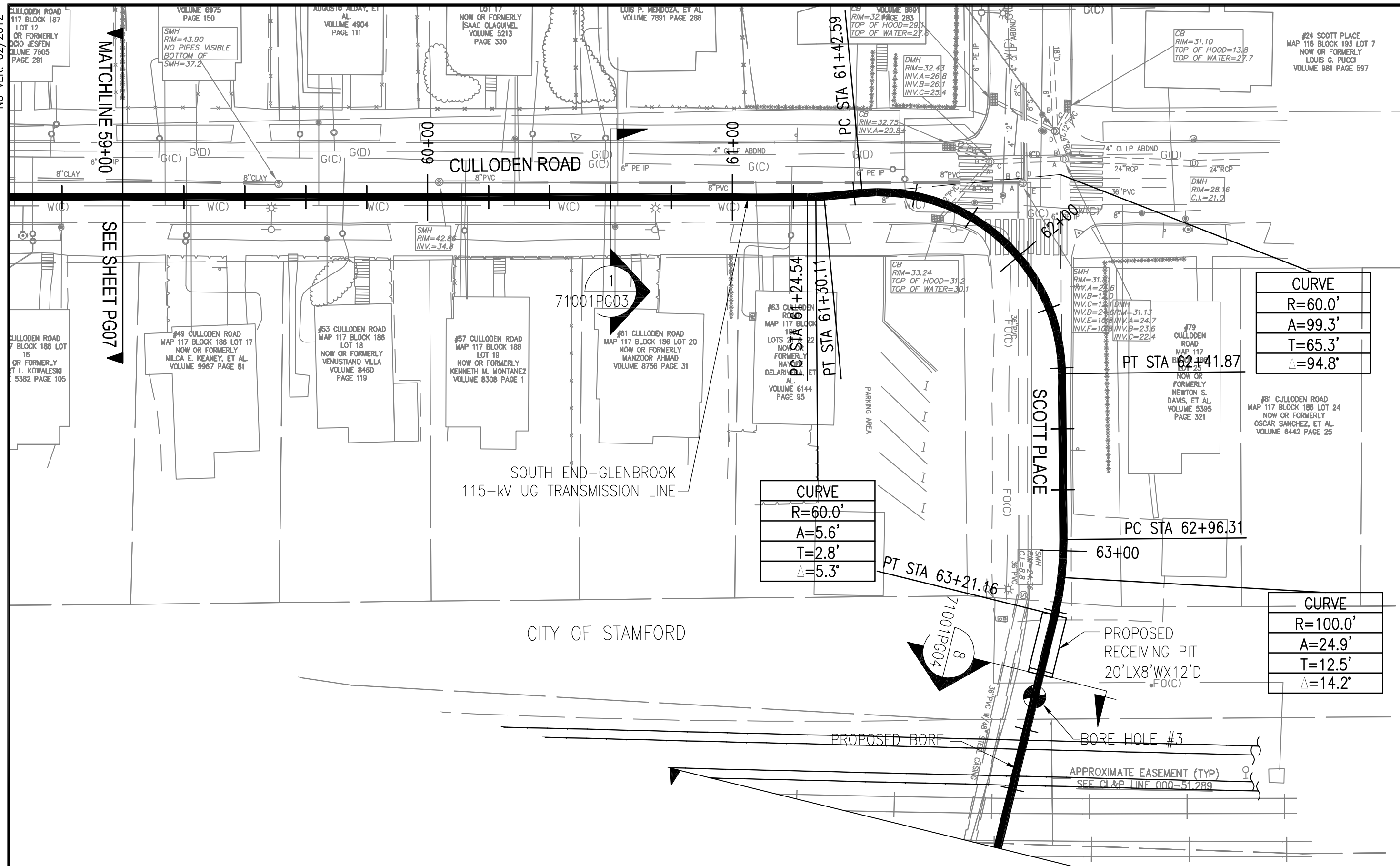
TWO BUSINESS DAYS BEFORE YOU DIG CALL  
CONNECTICUT ONE CALL  
TOLL FREE:  
1-800-922-4455



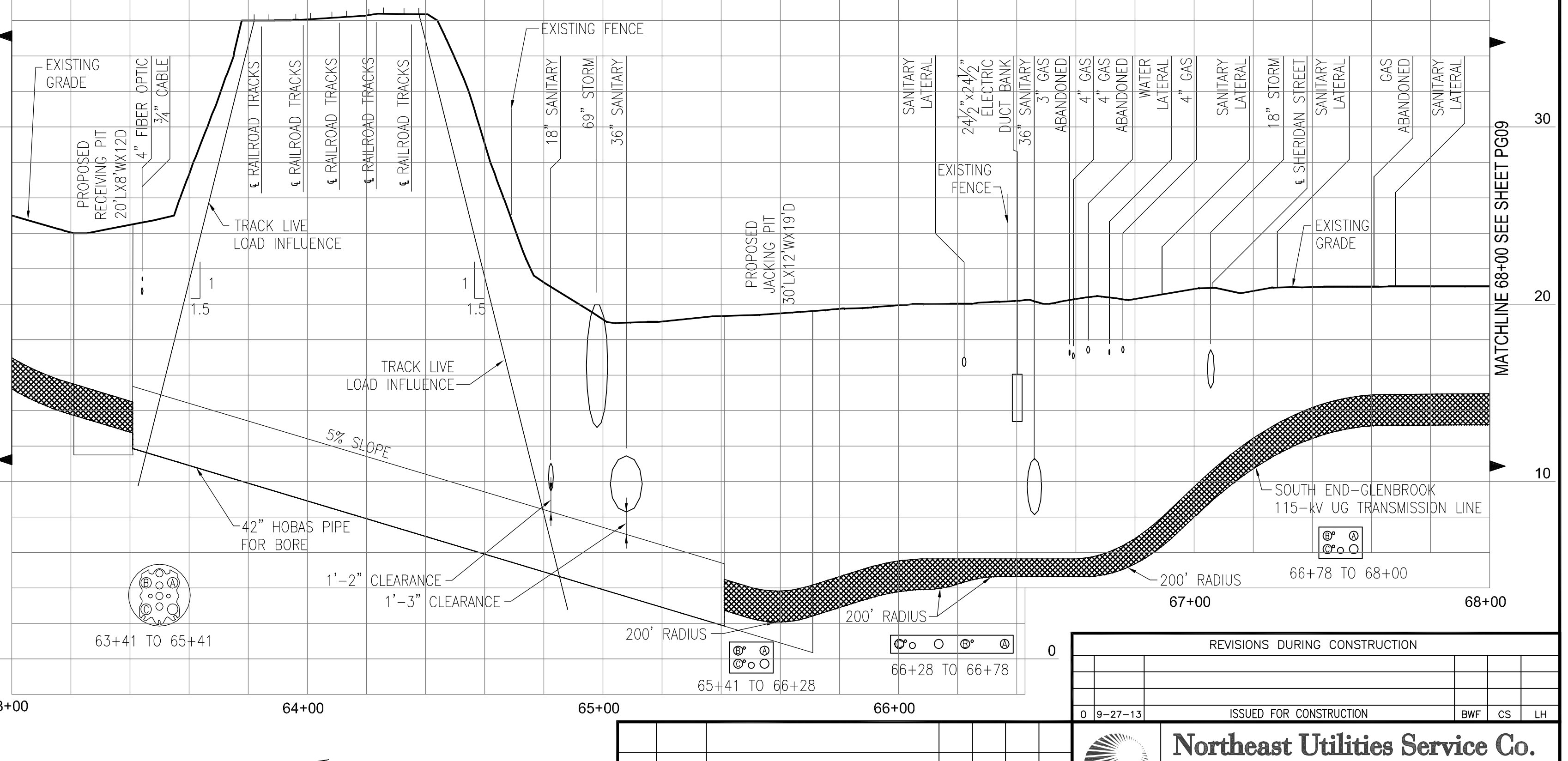
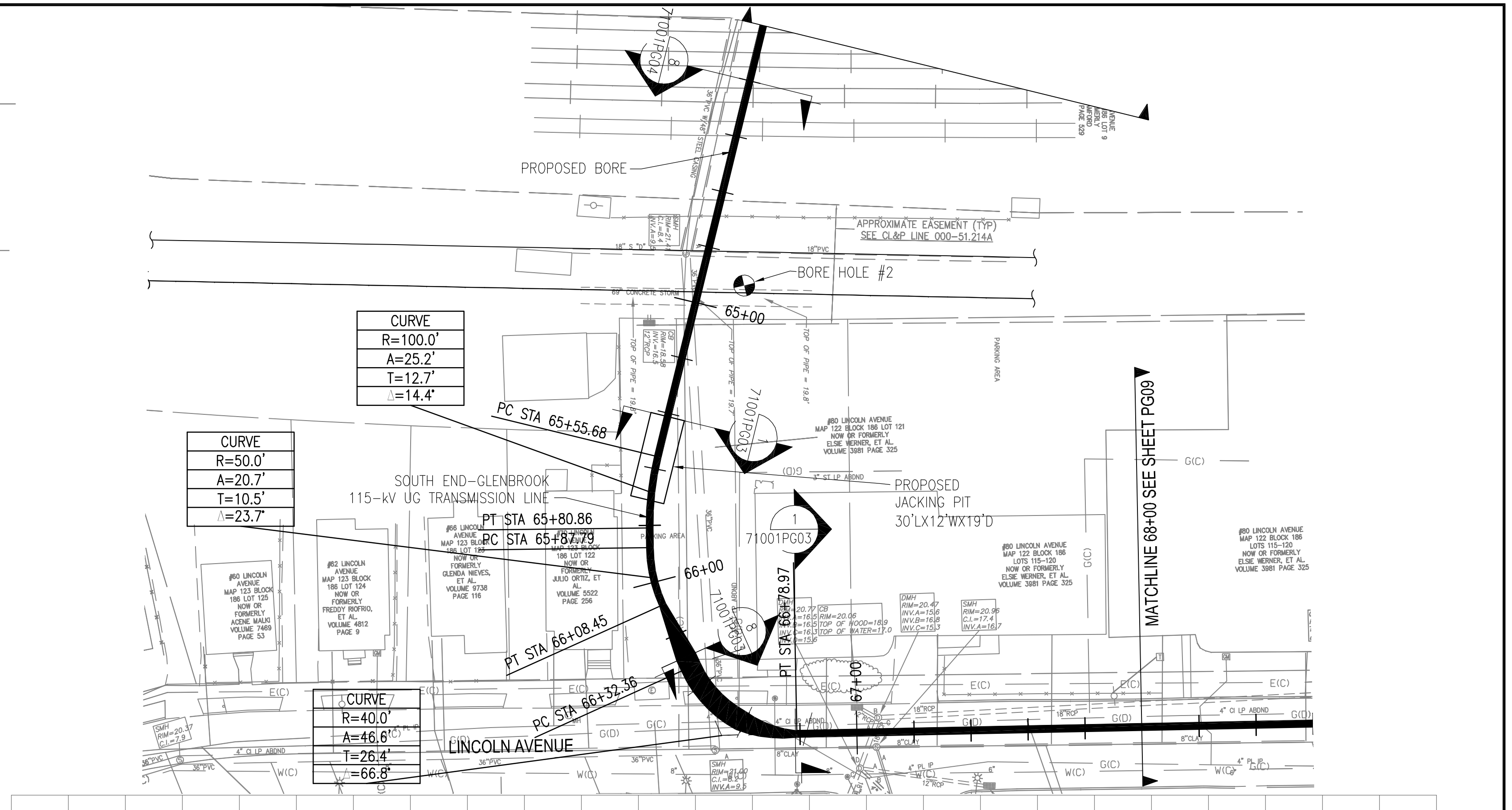
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NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP

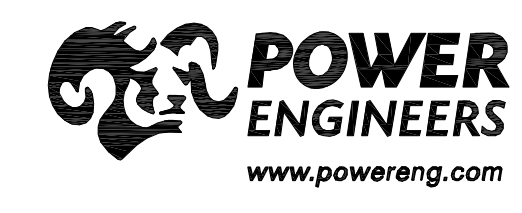
REVISIONS DURING CONSTRUCTION					
ISSUED FOR CONSTRUCTION					
<b>Northeast Utilities Service Co.</b> FOR <b>CONNECTICUT LIGHT &amp; POWER COMPANY</b>					
<b>LINE 1151 SOUTH END - GLENBROOK</b> <b>115-kV UNDERGROUND TRANSMISSION LINE</b> <b>PLAN AND PROFILE STA 50+00 TO 59+00</b> STAMFORD, CONNECTICUT					
BY	EWF	CHK	CS	APP	APP
DATE	11-30-2012	DATE	11-30-2012	DATE	11-30-2012
H-SCALE	1" = 30'	SIZE	D	SURVEY JOB #	S20355
V-SCALE	1" = 5'	VS.	Z-1-2	RE. DWG.	23370P1
R.E. PROJ. NUMBER	000-51.326	NUSCO	01515-10001PG07		



- NOTE
1. UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES OR GOVERNMENTAL AGENCIES, FROM PAROL TESTIMONY AND FROM OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO NORTHEAST UTILITIES SERVICES COMPANY. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG: 1.800.922.4455
  2. THE CONTRACTOR SHALL AT THE END OF EACH WORK DAY INSTALL A BULKHEAD INSIDE THE FORWARD END OF THE CASING.
  3. THE CONTRACTOR SHALL COORDINATE WITH THE RAILROAD FOR FLAGMAN SUPPORT.



TWO BUSINESS DAYS BEFORE YOU DIG CALL  
CONNECTICUT ONE CALL  
TOLL FREE  
1-800-922-4455



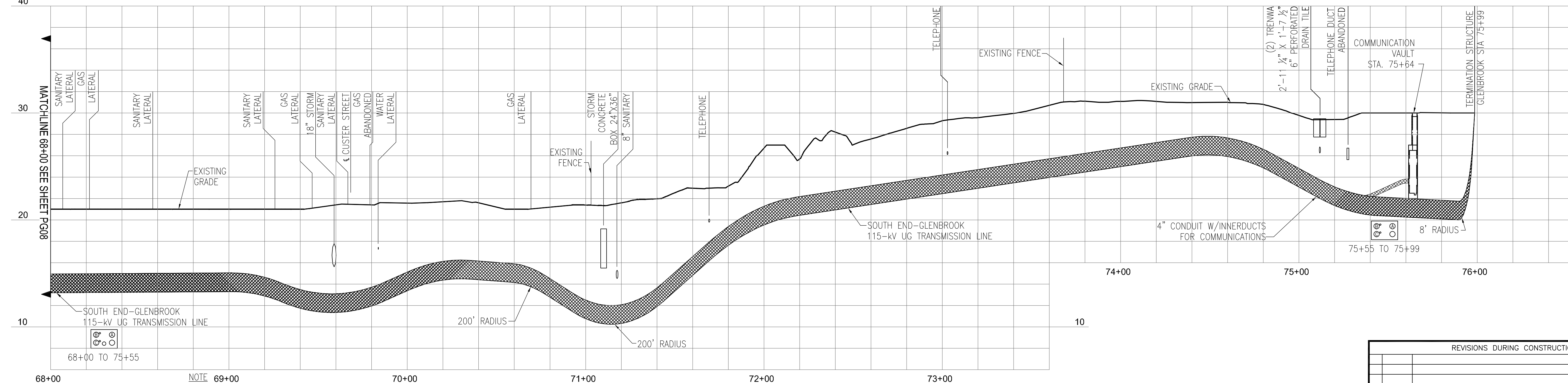
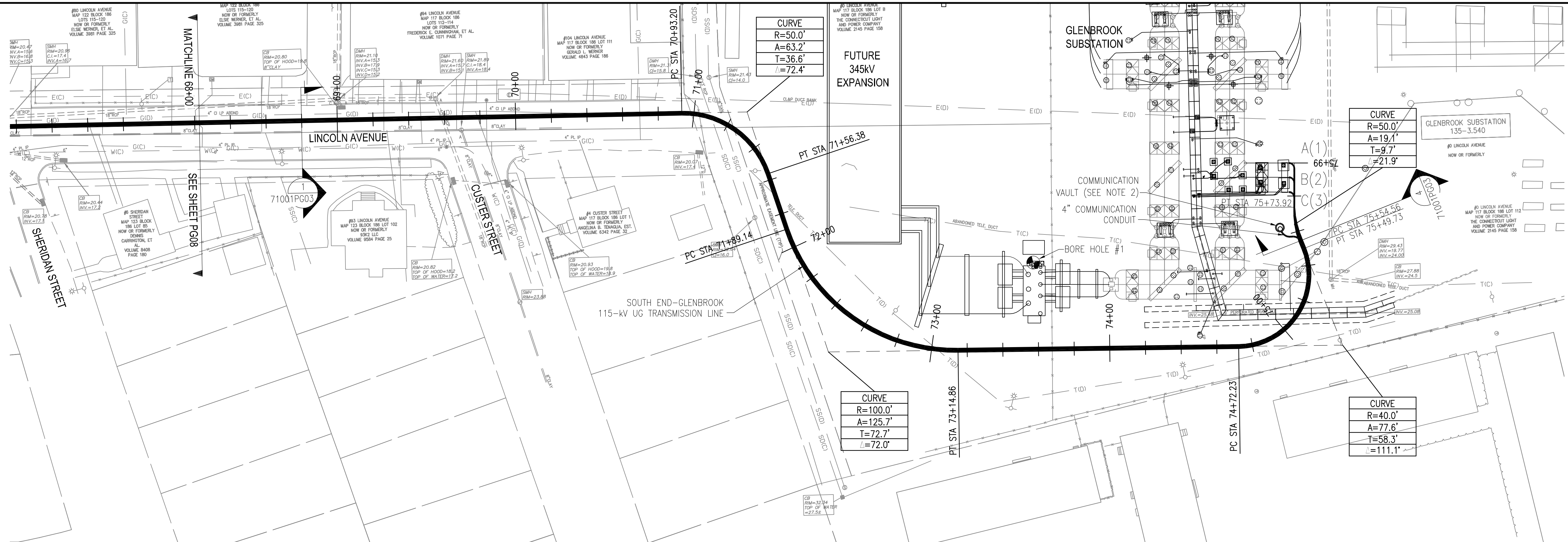
"FOR CURRENT NUSCO PROPERTY RIGHTS REFER TO PROPERTY RECORD MAPPING - LOCATED IN TRANSMISSION SURVEY ENGINEERING/ROW DEPARTMENT"

REVISIONS DURING CONSTRUCTION											
NO.	DATE	AS BUILT	REVISIONS	BY	CHK	APP	APP				

0 9-27-13			ISSUED FOR CONSTRUCTION			BWF	CS	LH
<b>Northeast Utilities Service Co.</b> FOR <b>CONNECTICUT LIGHT &amp; POWER COMPANY</b>								
<b>LINE 1151 SOUTH END - GLENBROOK</b> <b>115-kV UNDERGROUND TRANSMISSION LINE</b> <b>PLAN AND PROFILE STA 59+00 TO 68+00</b> STAMFORD, CONNECTICUT								
BY	BWF	CHKD	CS	APP	LH	APP		
DATE	11-30-2012	DATE	11-30-2012	DATE	11-30-2012	DATE		
H-SCALE	1" = 30'	SIZE	D	SURVEY JOB #	S20355			
V-SCALE	1" = 5'	VS.	Z-1-2	R.E. DWG	23370P1			
R.E. PROJ. NUMBER	000-51.326		NUSCO	01515-10001PG08				

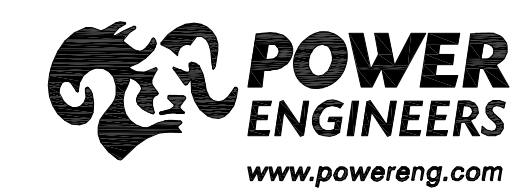




- NOTE 69+00
- UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES OR GOVERNMENTAL AGENCIES, FROM PAROL TESTIMONY AND FROM OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO NORTHEAST UTILITIES SERVICES COMPANY. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG: 1.800.922.4455.
  - LEAVE 1400' OF FIBER OPTIC CABLE COILED IN COMMUNICATION VAULT, TO BE INSTALLED BY OTHERS.
  - PHASING RELATIONSHIP  
 PHASE 1 = A  
 PHASE 2 = B  
 PHASE 3 = C

"FOR CURRENT NUSCO PROPERTY RIGHTS REFER TO PROPERTY RECORD MAPPING - LOCATED IN TRANSMISSION SURVEY ENGINEERING/ROW DEPARTMENT"

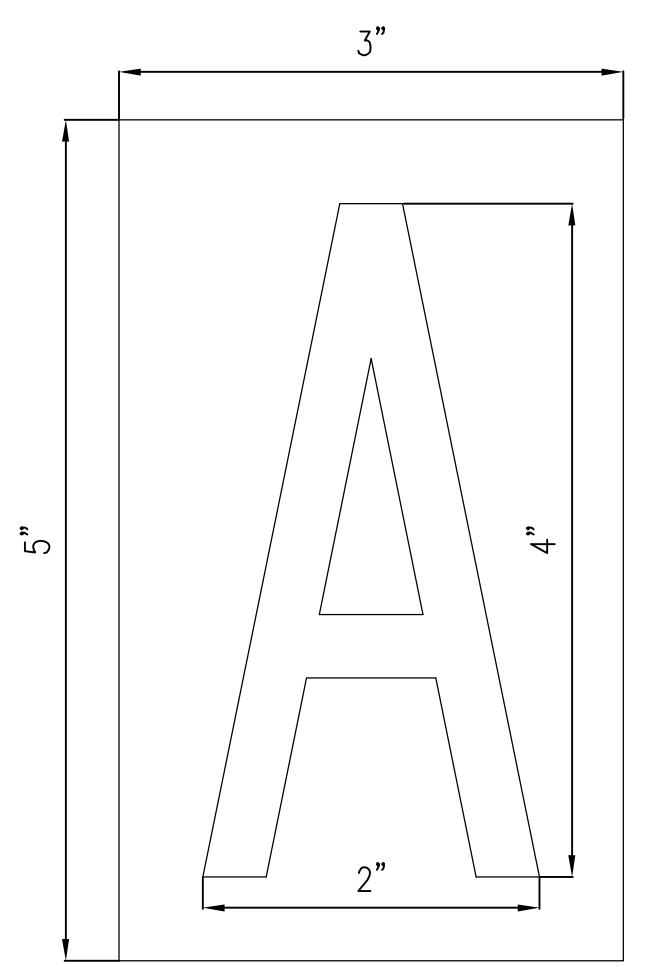
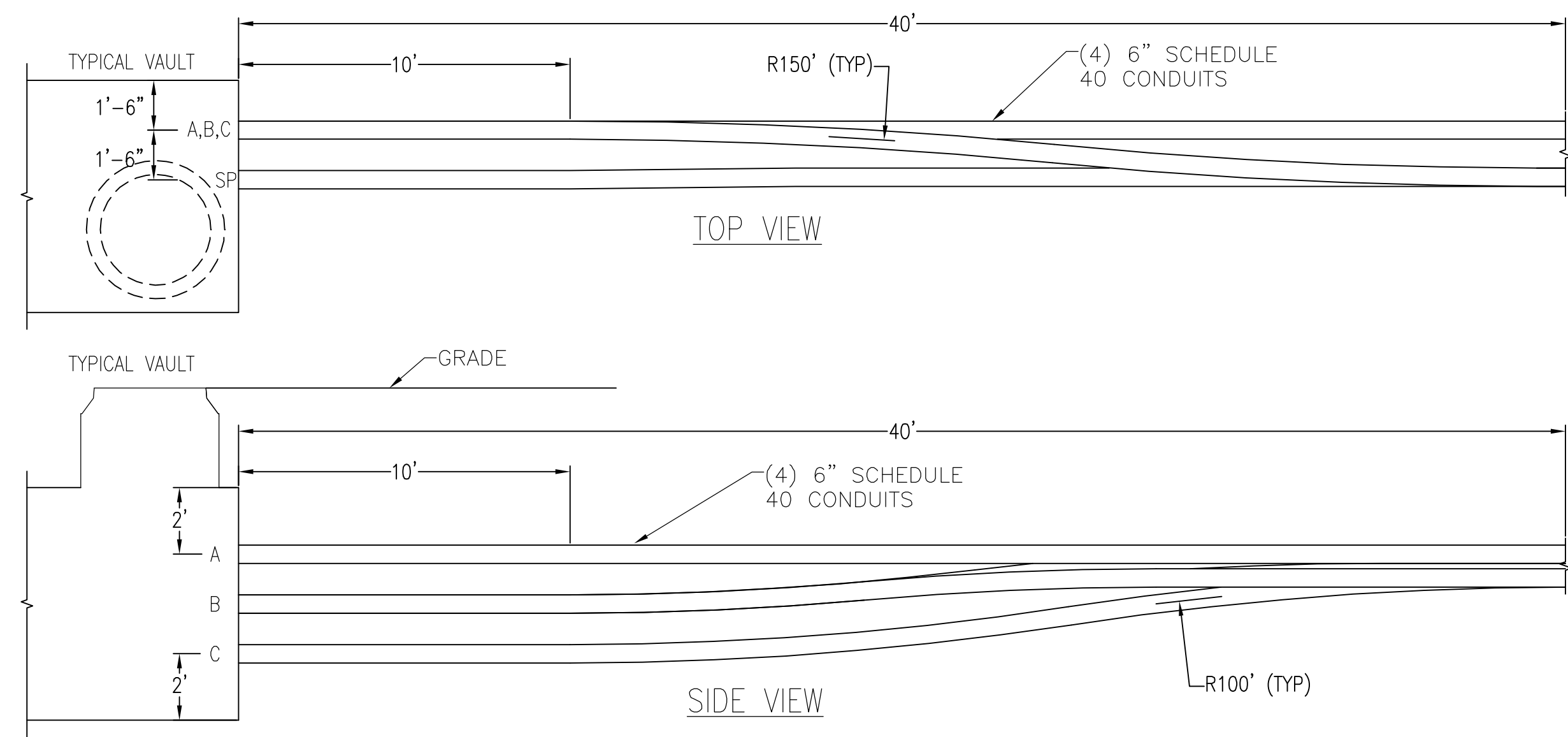
TWO BUSINESS DAYS BEFORE YOU DIG CALL CONNECTICUT ONE CALL TOLL FREE 1-800-922-4455



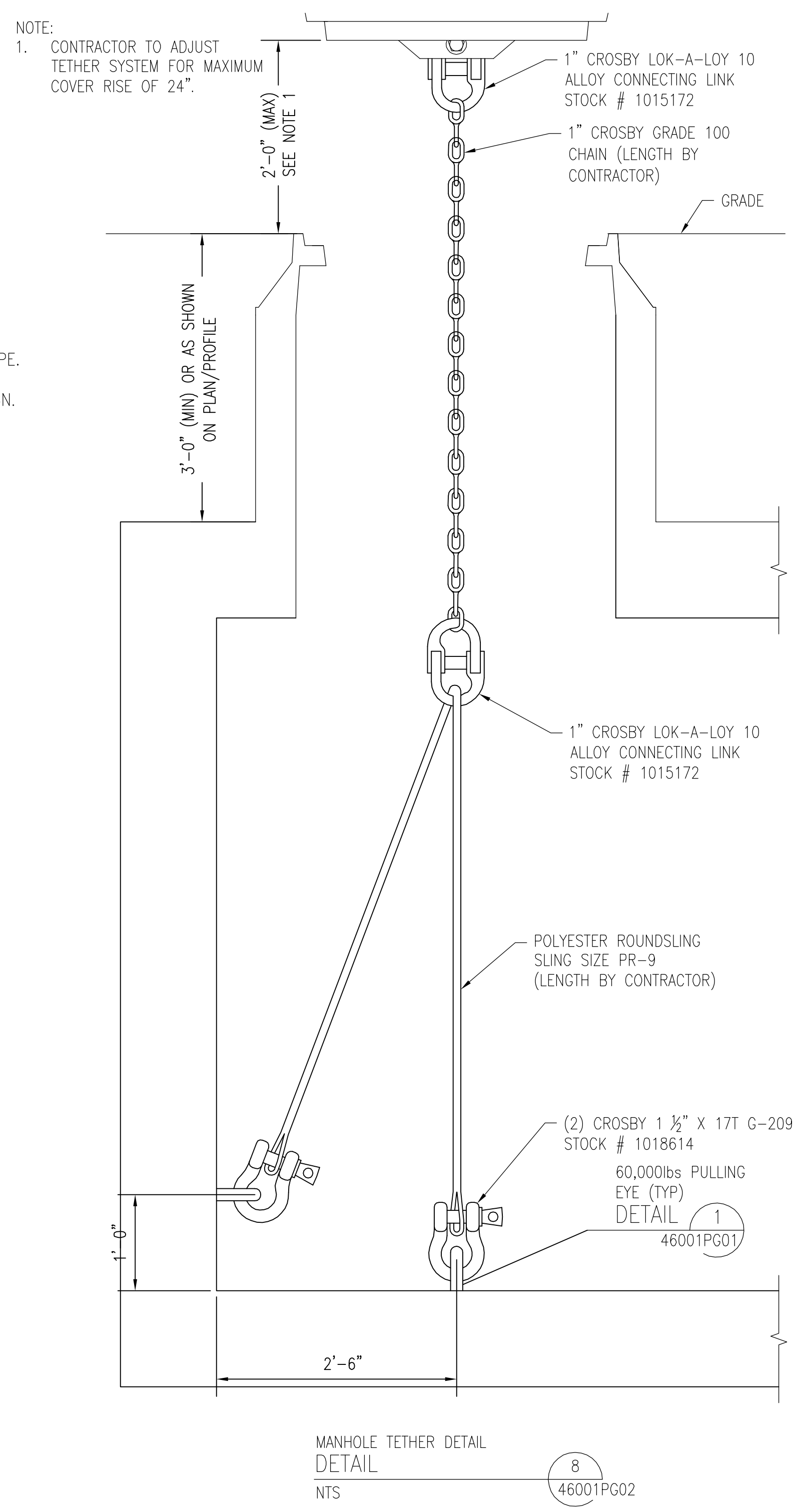
NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP

REVISIONS DURING CONSTRUCTION					
0	9-27-13	ISSUED FOR CONSTRUCTION	BWF	CS	LH
 <b>Northeast Utilities Service Co.</b> FOR CONNECTICUT LIGHT & POWER COMPANY					
<b>LINE 1151 SOUTH END - GLENBROOK</b> <b>115-kV UNDERGROUND TRANSMISSION LINE</b> <b>PLAN and PROFILE STA 68+00 TO 75+99</b> STAMFORD, CONNECTICUT					
BY	BWF	CHKD	CS	APP	APP
DATE	11-30-2012	DATE	11-30-2012	DATE	11-30-2012
H-SCALE	1" = 30'	SIZE	D	SURVEY JOB #	S20355
V-SCALE	1" = 5'	VS.	Z-1-2	R.E. DWG	23370P1
R.E. PROJ. NUMBER	000-51.326	NUSCO	01515-10001PG09		

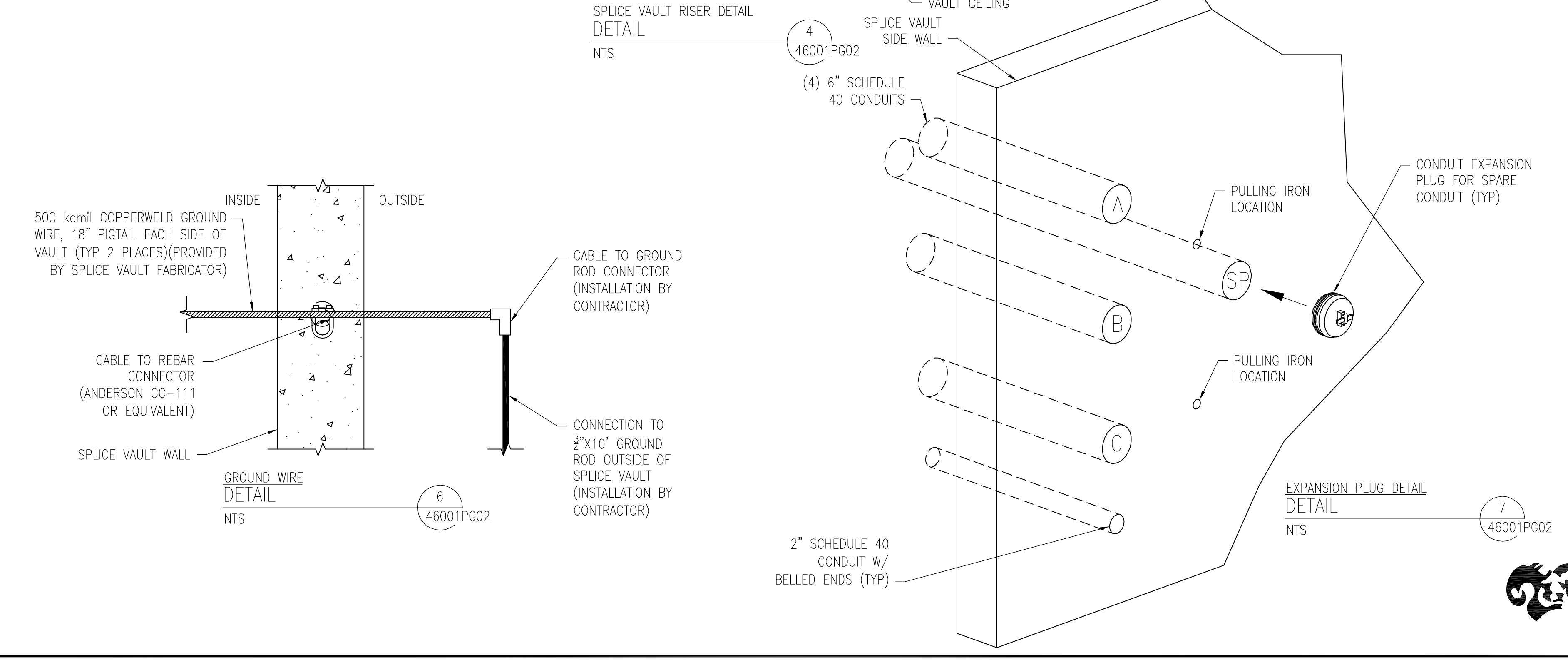
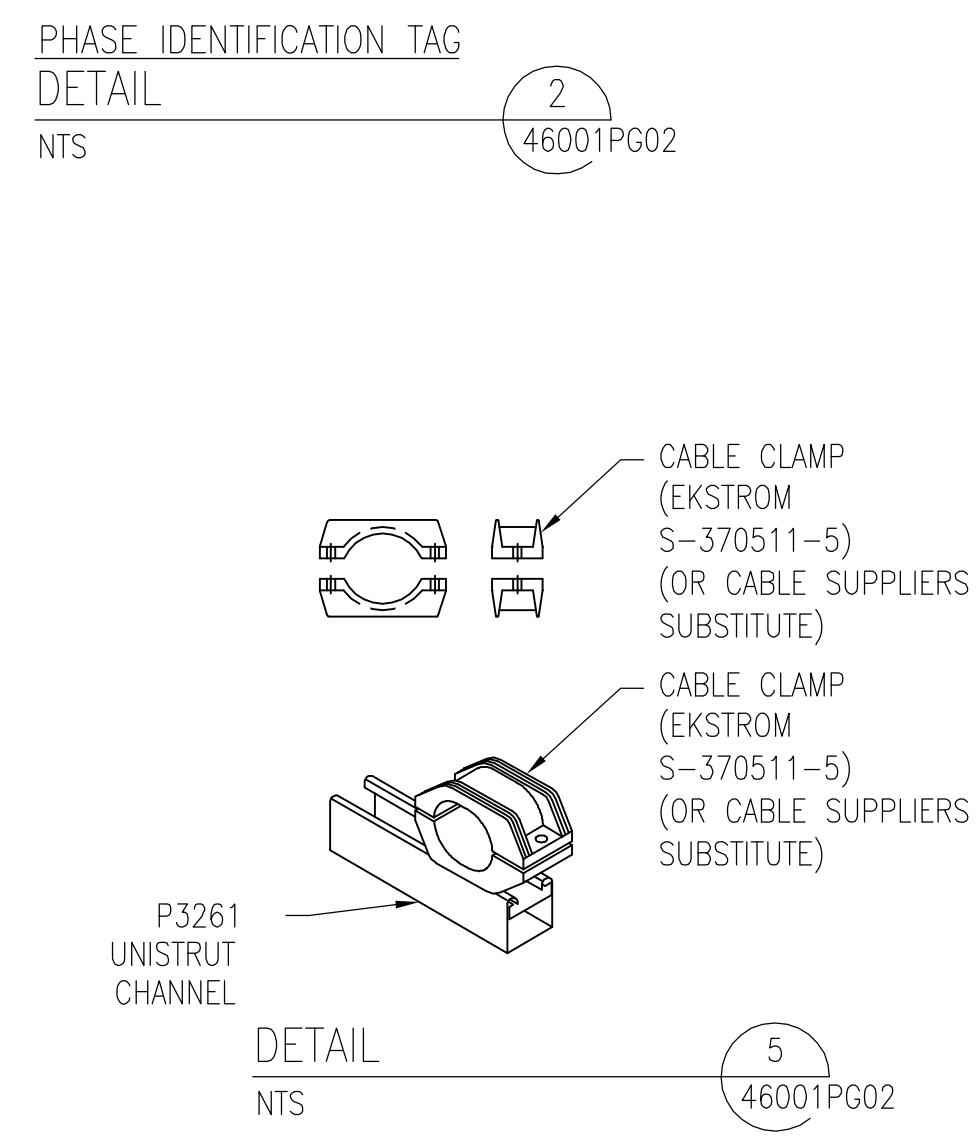
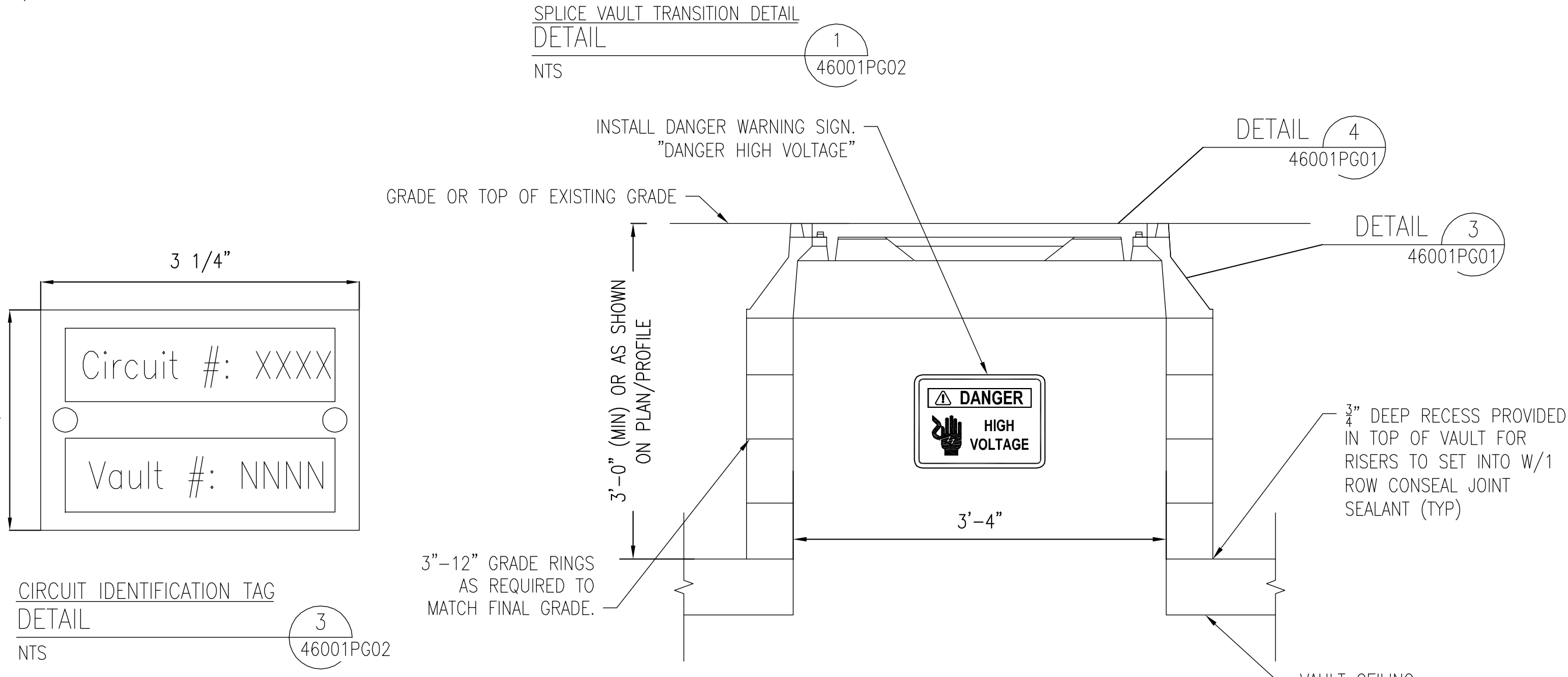




- NOTES**
- CHARACTER SHALL BE 4" HIGH BOLD TYPE.
  - CHARACTER SHALL BE CENTERED ON SIGN.
  - BACKGROUND: WHITE  
 LETTERING: BLACK  
 CHARACTERS: A, B & C AS SHOWN



- NOTE:**
- CONTRACTOR TO ADJUST TETHER SYSTEM FOR MAXIMUM COVER RISE OF 24".



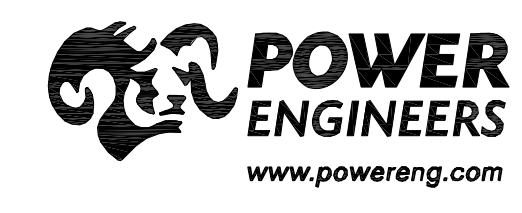
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NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP

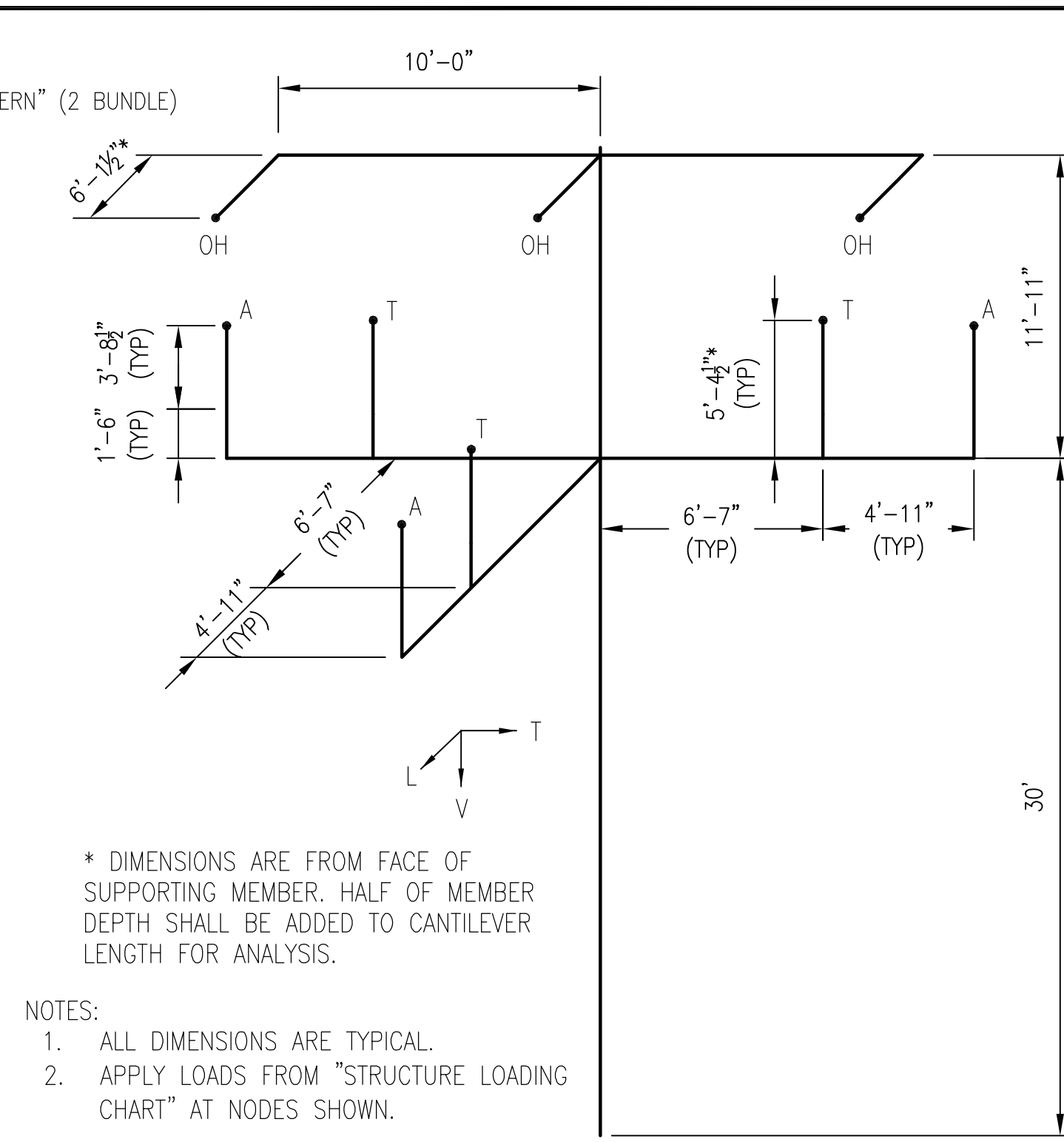
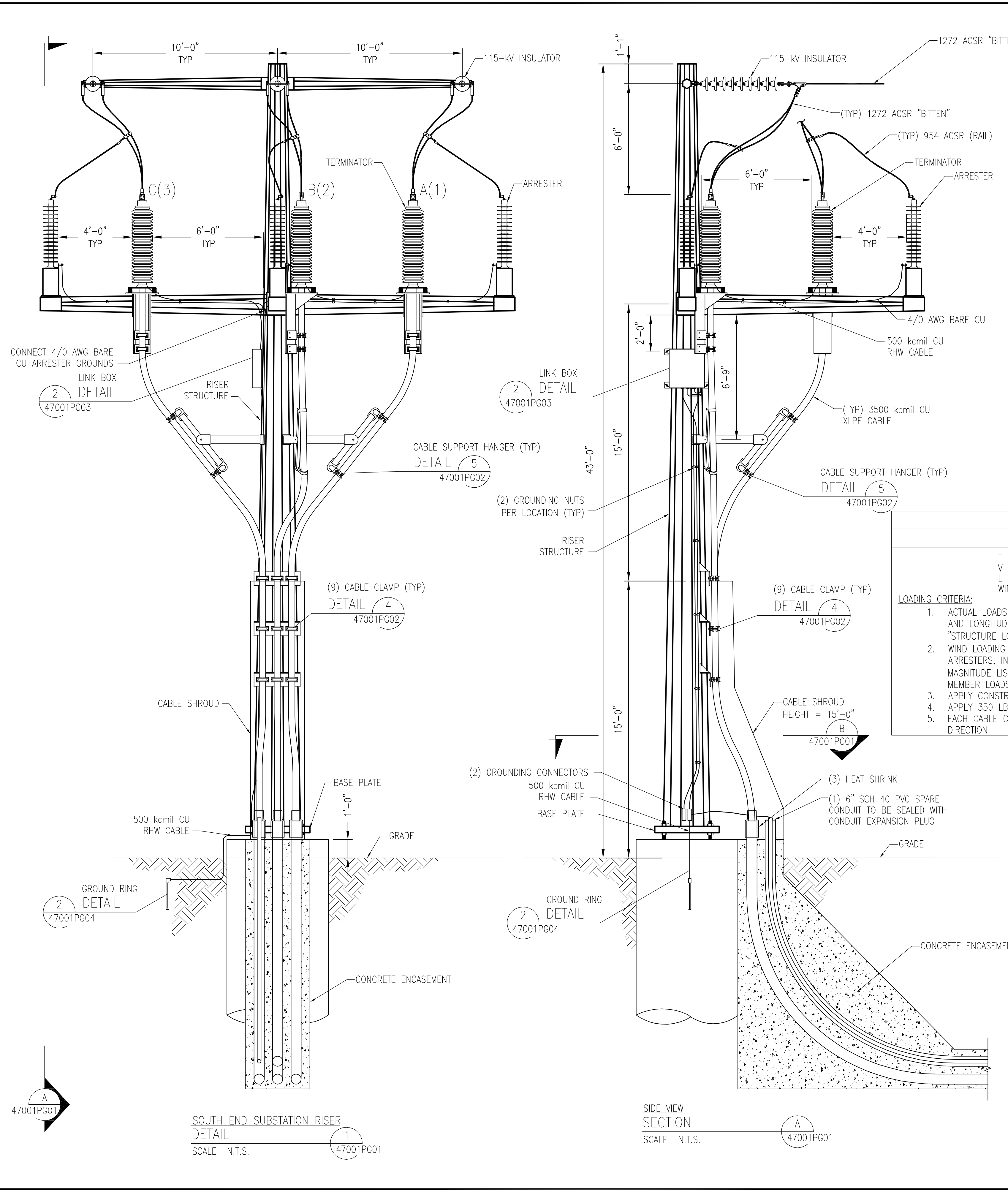
09-27-13	ISSUED FOR CONSTRUCTION	BWF	CS	LH
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<b>Northeast Utilities Service Co.</b> FOR CONNECTICUT LIGHT & POWER COMPANY					
<b>LINE 1151 SOUTH END - GLENBROOK</b> 115-kV UNDERGROUND TRANSMISSION LINE SPLICE VAULT DETAIL STAMFORD, CONNECTICUT					
BY	BWF	CHK	CS	APP	LH
DATE	05-10-2013	DATE	05-10-2013	DATE	05-10-2013
H-SCALE	N.T.S.	SIZE	D	SURVEY JOB #	S20355
V-SCALE	-	V.S.	Z-1-2	R.E. DWG	23370P1
R.E. PROJ. NUMBER	000-51.326	NUSSO	01515-46001PG02		



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**STRUCTURE LOADING CRITERIA**

**LOADING TREE**

T - TRANSVERSE (LBS)  
 V - VERTICAL (LBS)  
 L - LONGITUDINAL (LBS)  
 WIND LOAD ON POLE (LBS/FT<sup>2</sup>)

ARROW INDICATES + DIRECTION

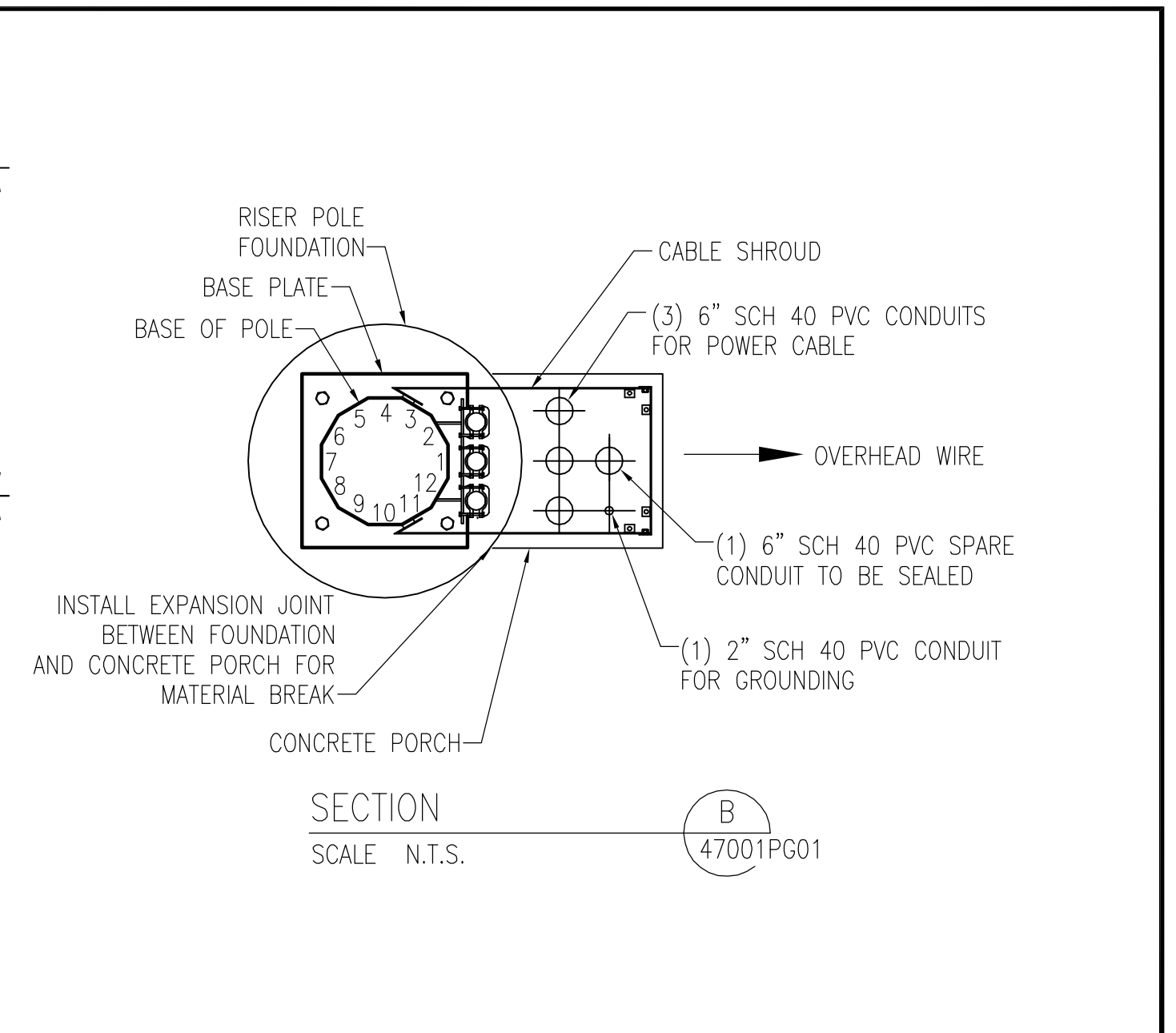
**LOADING CRITERIA:**

- ACTUAL LOADS AT THEIR RESPECTIVE PULLOFF LOCATIONS HAVE BEEN TRANSFORMED INTO TRANSVERSE, VERTICAL AND LONGITUDINAL COMPONENTS AT THE LOCATIONS SHOWN ON THE LOADING TREE. THIS DATA IS LISTED IN THE "STRUCTURE LOADING CHART".
- WIND LOADING INCLUDED ON THE "STRUCTURE LOADING CHART" TABLE SHALL BE APPLIED TO TERMINATORS, ARRESTERS, INSULATORS AND CONDUCTORS. MANUFACTURER SHALL ALSO INCLUDE WIND ON STRUCTURE OF THE MAGNITUDE LISTED (PSF) FOR THE APPLICABLE LOADING CONDITION WITH THE DIRECTION TO RESULT IN MAXIMUM MEMBER LOADS.
- APPLY CONSTRUCTION LOADING PER NORTHEAST UTILITIES OTRM 160.
- APPLY 350 LBS TO EACH CABLE CLAMP LOCATION.
- EACH CABLE CLAMP LOCATION SHALL BE ABLE TO WITHSTAND A SHORT CIRCUIT LOAD OF 2100 LBS IN ANY DIRECTION.

**STRUCTURE LOADING CHART WITH OVERLOAD FACTORS (LBS)**

STRUCTURE COMPONENTS	LOADING COMPONENTS	WIND PRESSURE ON STRUCTURE (PSF)			CONSTRUCTION LOAD
		10	35	4	
ARRESTER, A	T	100	200	100	0
	V	400	300	300	1700
	L	100	200	100	0
TERMINATOR, T	T	200	500	100	0
	V	2500	1600	1800	2000
	L	200	500	100	0
OVERHEAD WIRE, OH	T	200	200	100	0
	V	1400	900	1100	1900
	L	1300	1000	1100	400
WIND PRESSURE ON STRUCTURE (PSF)	-	10	35	4	0

\* CONSTRUCTION LOADING NOT INCLUDED ON NESC LOADINGS.



- NOTES:**
- POLE, ARMS, BOLTS, ETC. SHALL BE DESIGNED AND FABRICATED PER NORTHEAST UTILITIES OTRM 160, OTRM 066 AND ASSOCIATED REFERENCES, AND ASCE 48-11: DESIGN OF STEEL TRANSMISSION POLE STRUCTURES.
  - POLE AND ACCESSORIES SHALL BE GALVANIZED STEEL IN ACCORDANCE WITH NORTHEAST UTILITIES OTRM 160.
  - DEFLECTION OF MEMBERS SHALL BE PER SECTION 8 OF NORTHEAST UTILITIES OTRM 066 AND OTRM 160.
  - ALL DESIGN LOADING SHALL CONSIDER THE ECCENTRIC LOADING DUE TO THE DEFLECTED STRUCTURE PLUS A FOUNDATION ROTATION OF 1.5'.
  - CABLE SHROUD SHALL BE FASTENED TO POLE WITH MCGREGOR TYPE LADDER CLIPS SPACED 3'-0" O.C.
  - FABRICATOR SHALL VERIFY MOUNTING PLATES, DIMENSIONS, AND ATTACHMENTS PRIOR TO MANUFACTURING. FABRICATOR MAY PROPOSE STRUCTURAL DETAILS DIFFERENT THAN THOSE SHOWN TO SIMPLIFY FABRICATION.
  - FABRICATOR SHALL PROVIDE TWO GROUNDING NUTS AT THE FOLLOWING LOCATIONS:
    - CENTERLINE OF FLATS 3 & 11 BETWEEN LINK BOX AND BASE OF POLE AT 6'-0" O.C. AND 1' ABOVE TOP OF BASE PLATE.
    - ON TWO OPPOSITE SIDES OF TERMINATOR/ARRESTER SUPPORT ARMS AT 2'-0" O.C.
    - ON EACH SIDE OF SLIP OR FLANGE JOINT.
    - 2' BELOW CENTER PHASE CONDUCTOR STRAIN ATTACHMENT PLATE, AND 2' FROM CONDUCTOR STRAIN ATTACHMENT PLATES ON CONDUCTOR DEADEND ARMS.
  - ALL VANGS SHALL BE DESIGNED TO WITHSTAND A 15° PULL-OFF ANGLE AND AN ADDITIONAL 500LB LOAD.
  - GROUNDING NUTS SHALL BE PER DETAIL B ON SKETCH F OF NORTHEAST UTILITIES OTRM 160.
  - GROUND LINE REACTIONS TO BE PROVIDED BY STEEL FABRICATOR ALONG WITH BID.
  - BOTTOM OF BASE PLATE SHALL BE NO MORE THAN 1" PLUS LEVELING NUT HEIGHT ABOVE CONCRETE FOUNDATION.
  - CABLE SHROUD TO EXTEND TO BOTTOM OF BASE PLATE.
  - ALL NUTS WELDED TO THE STEEL POLE SHALL HAVE A HOLE DRILLED THROUGH THE STEEL POLE WITH A DIAMETER 1/8" LARGER THAN THE NUT. DRILLED HOLES SHALL BE CONCENTRIC TO THE WELDED NUT.
  - PHASING RELATIONSHIP  
 PHASE 1 = A  
 PHASE 2 = B  
 PHASE 3 = C

**REVISIONS DURING CONSTRUCTION**

NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP

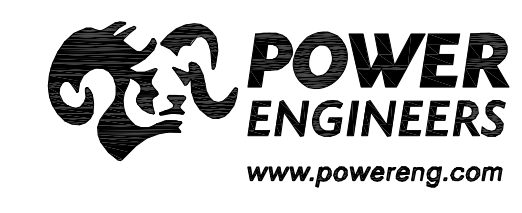
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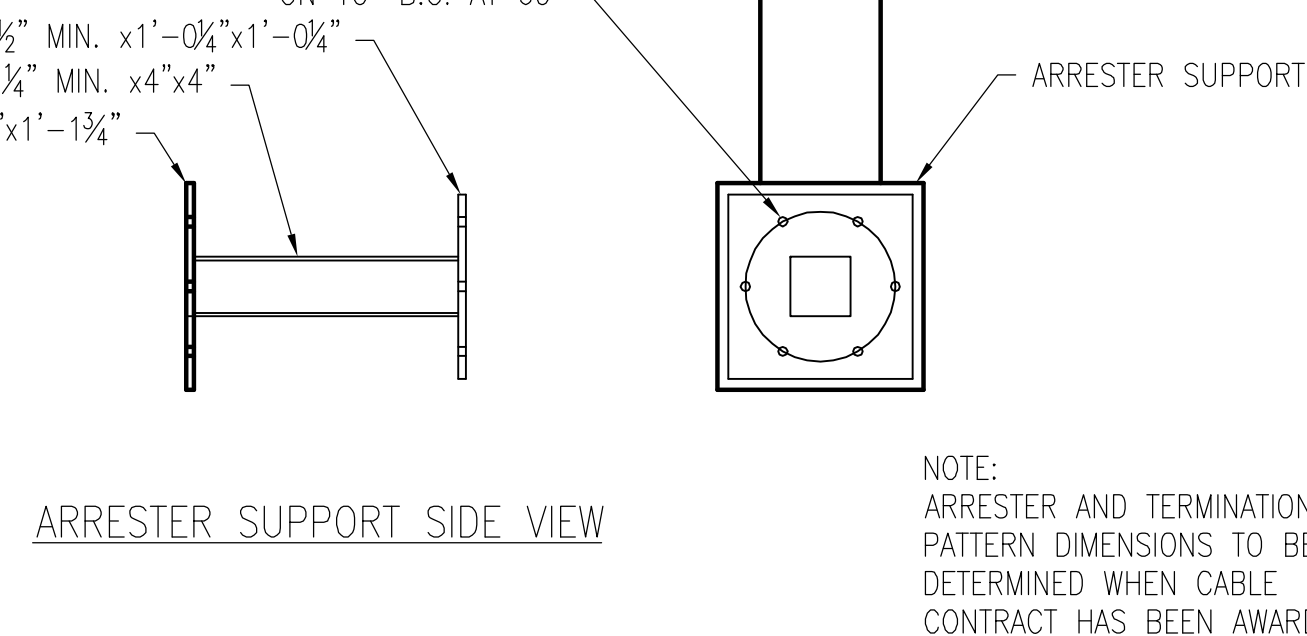
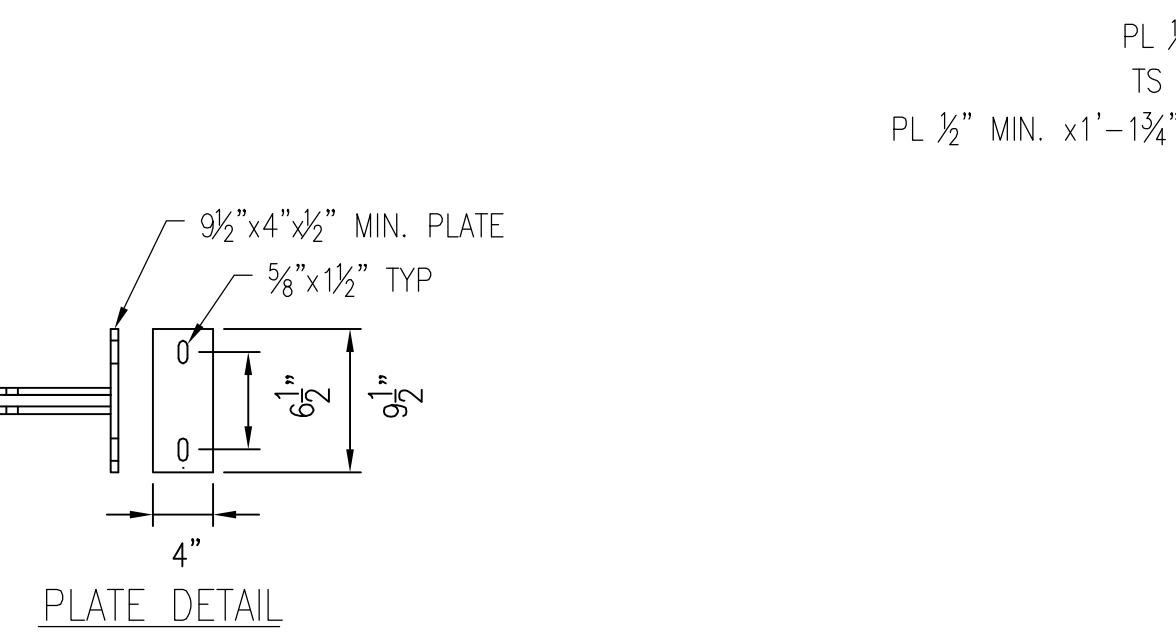
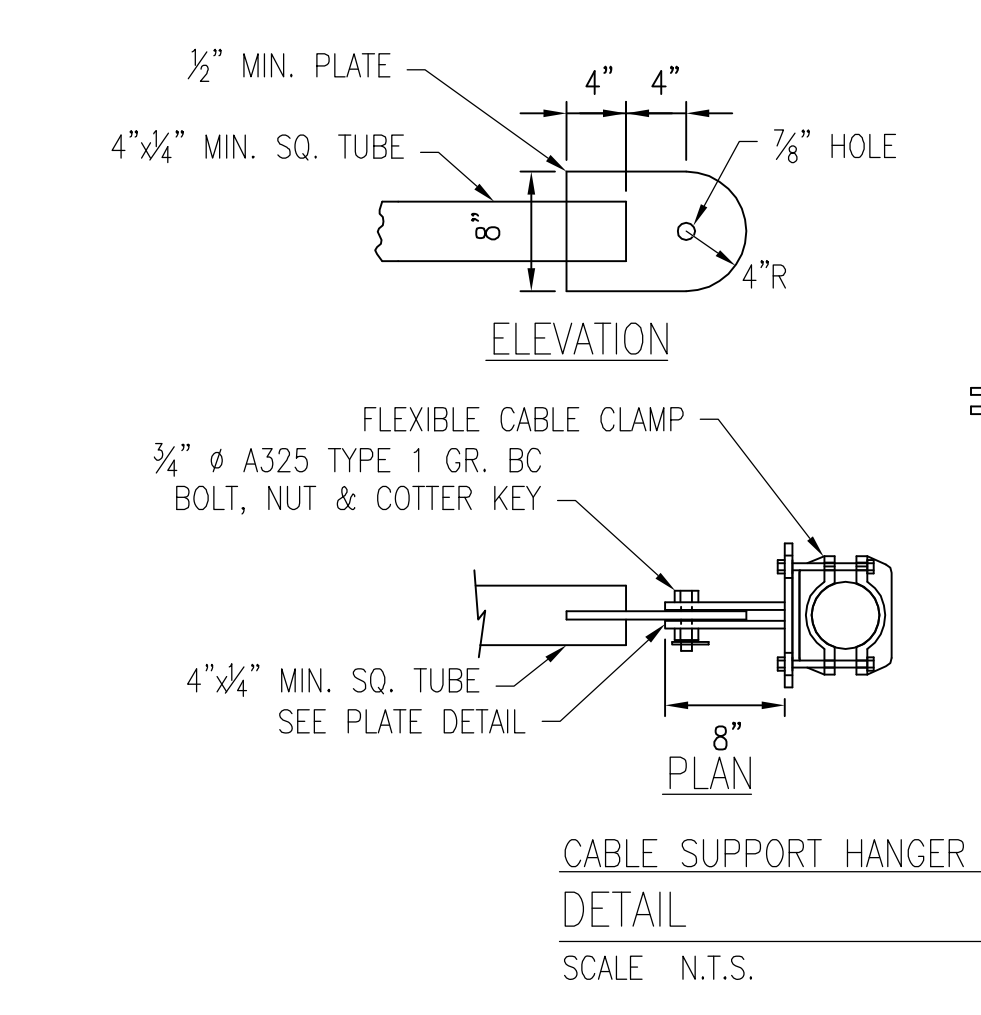
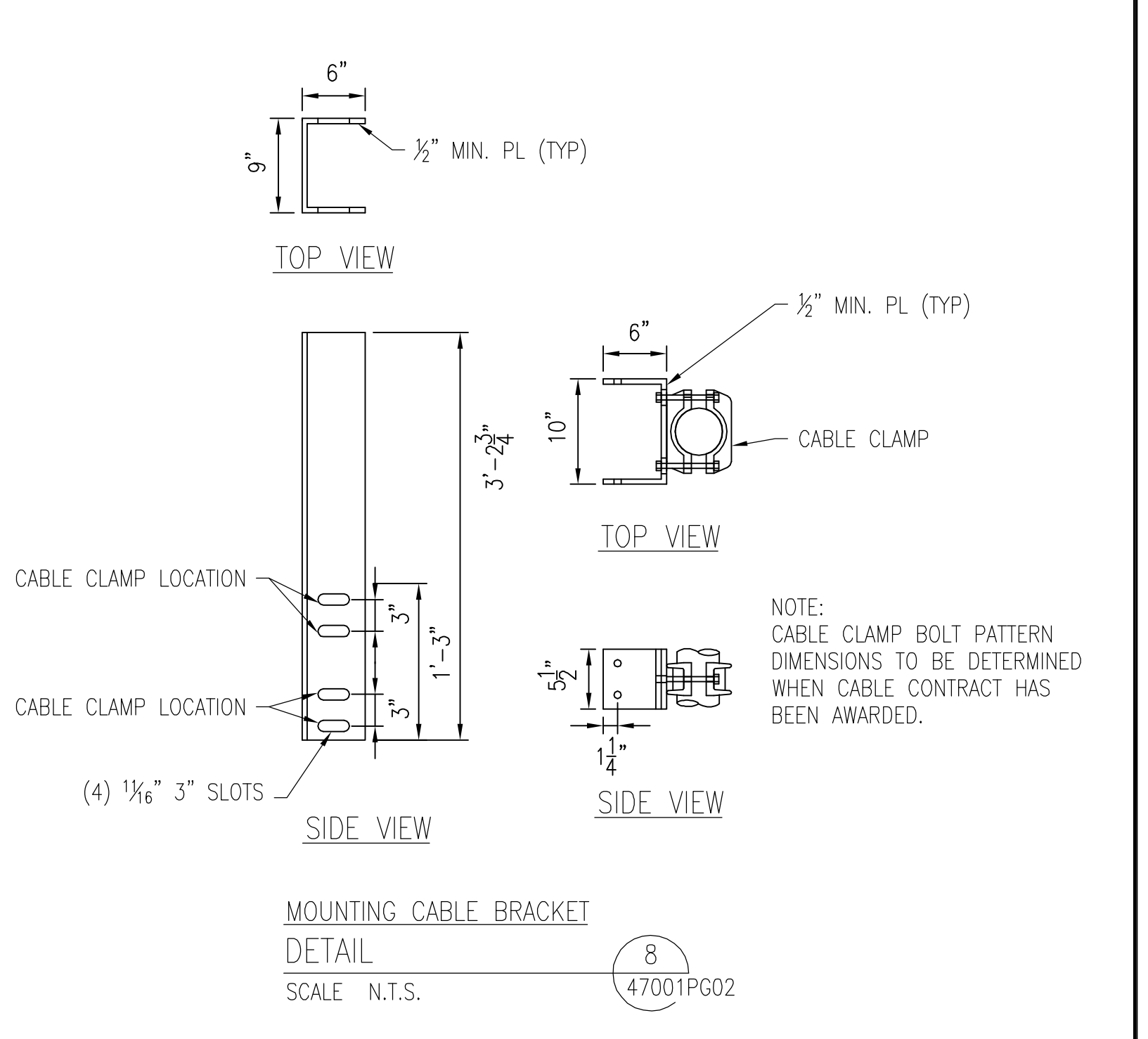
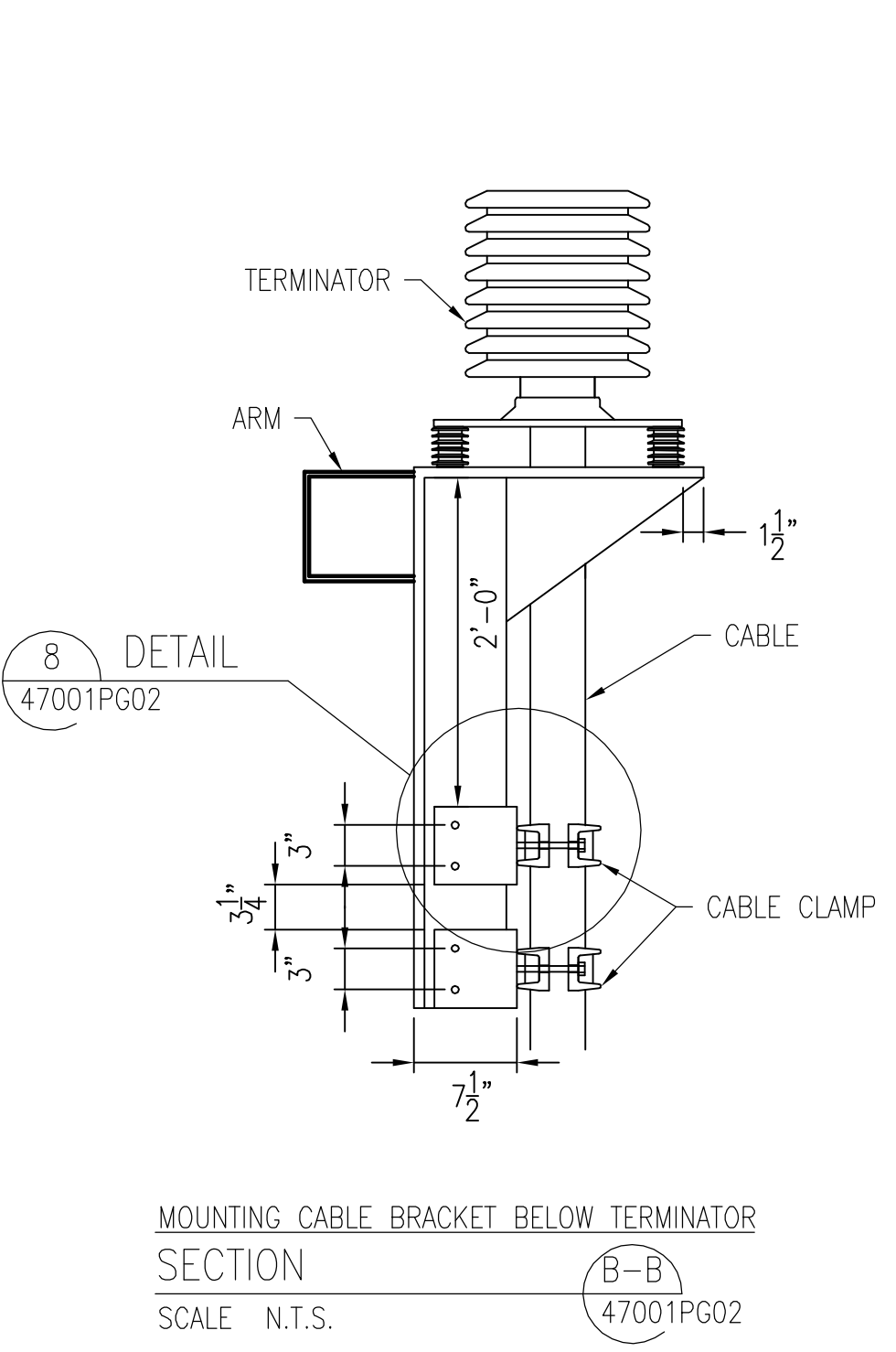
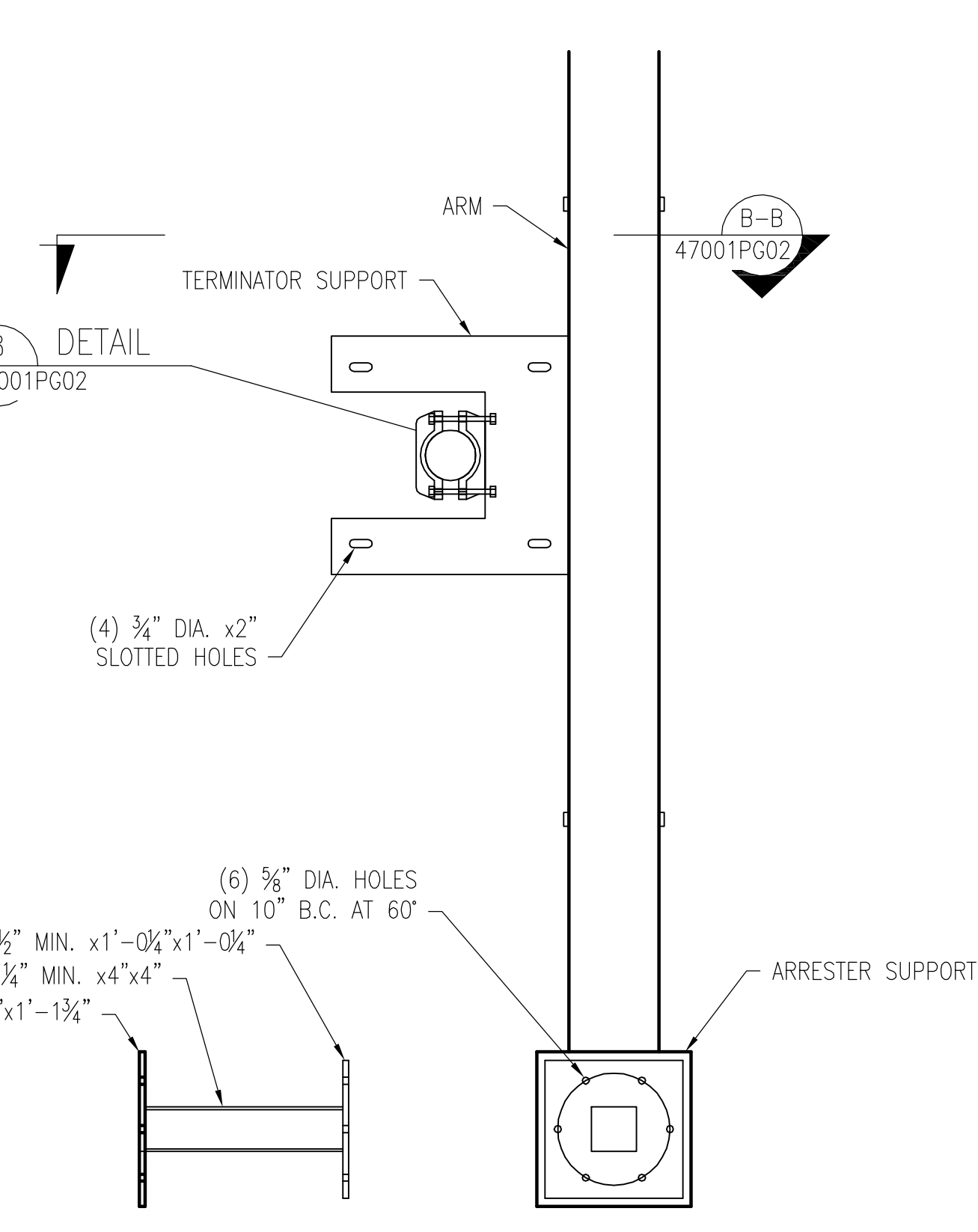
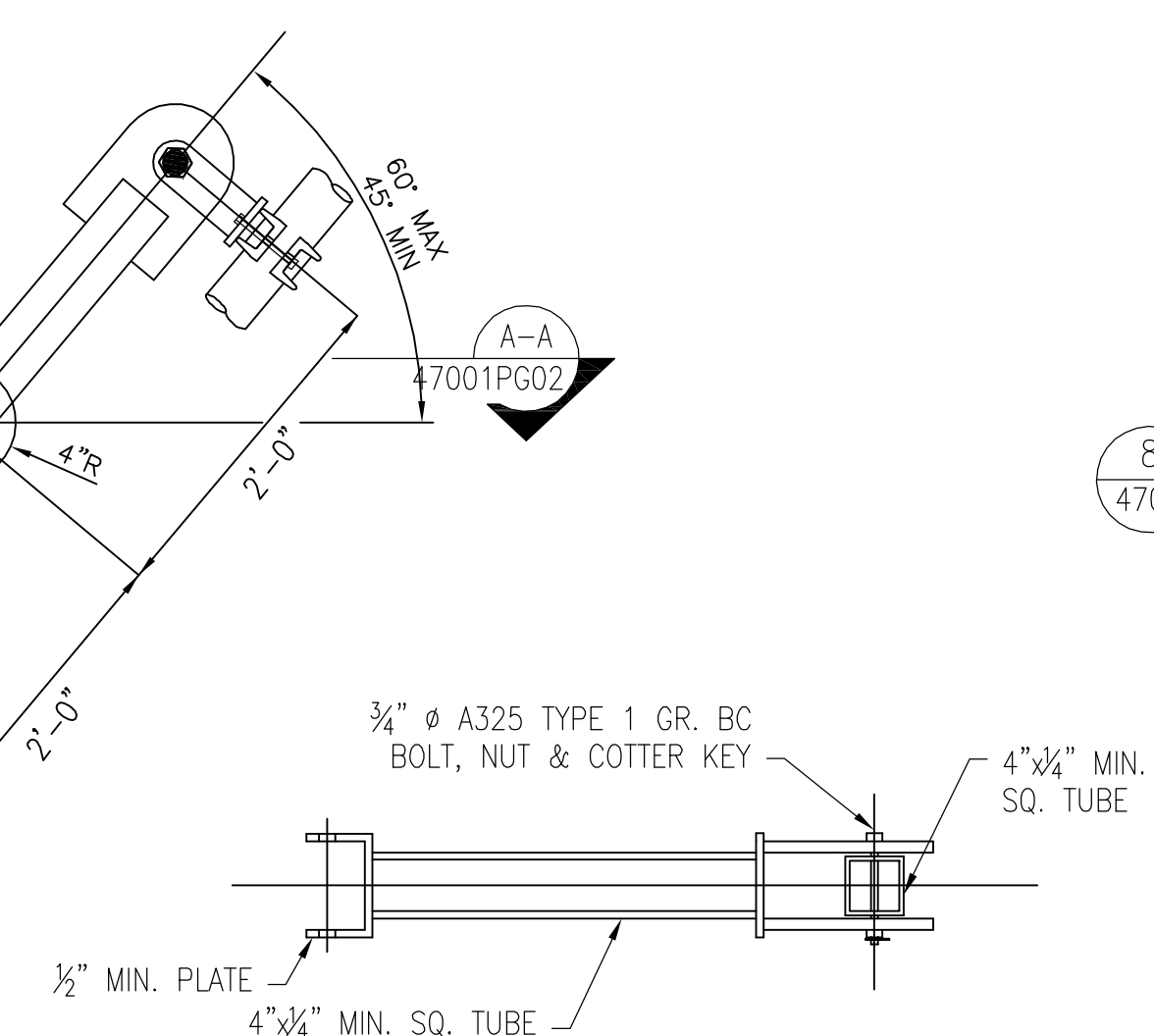
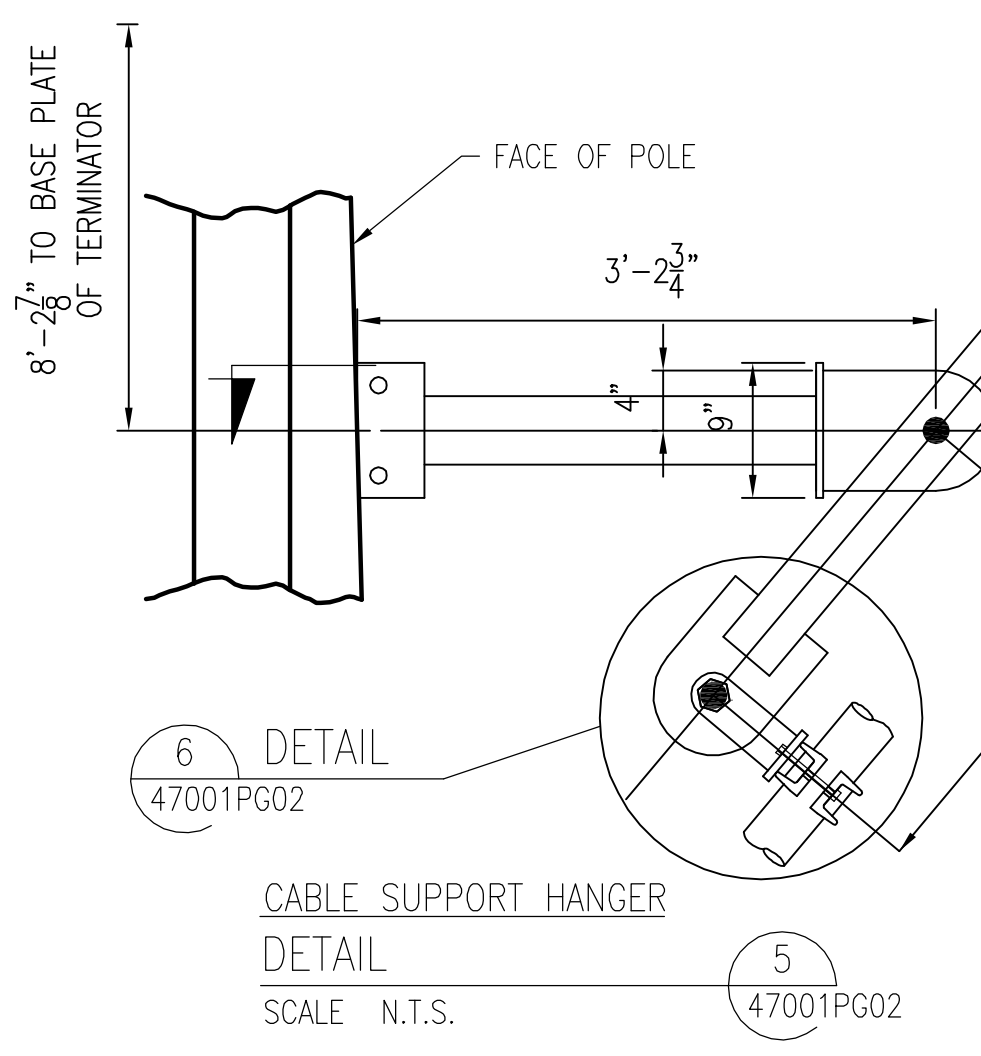
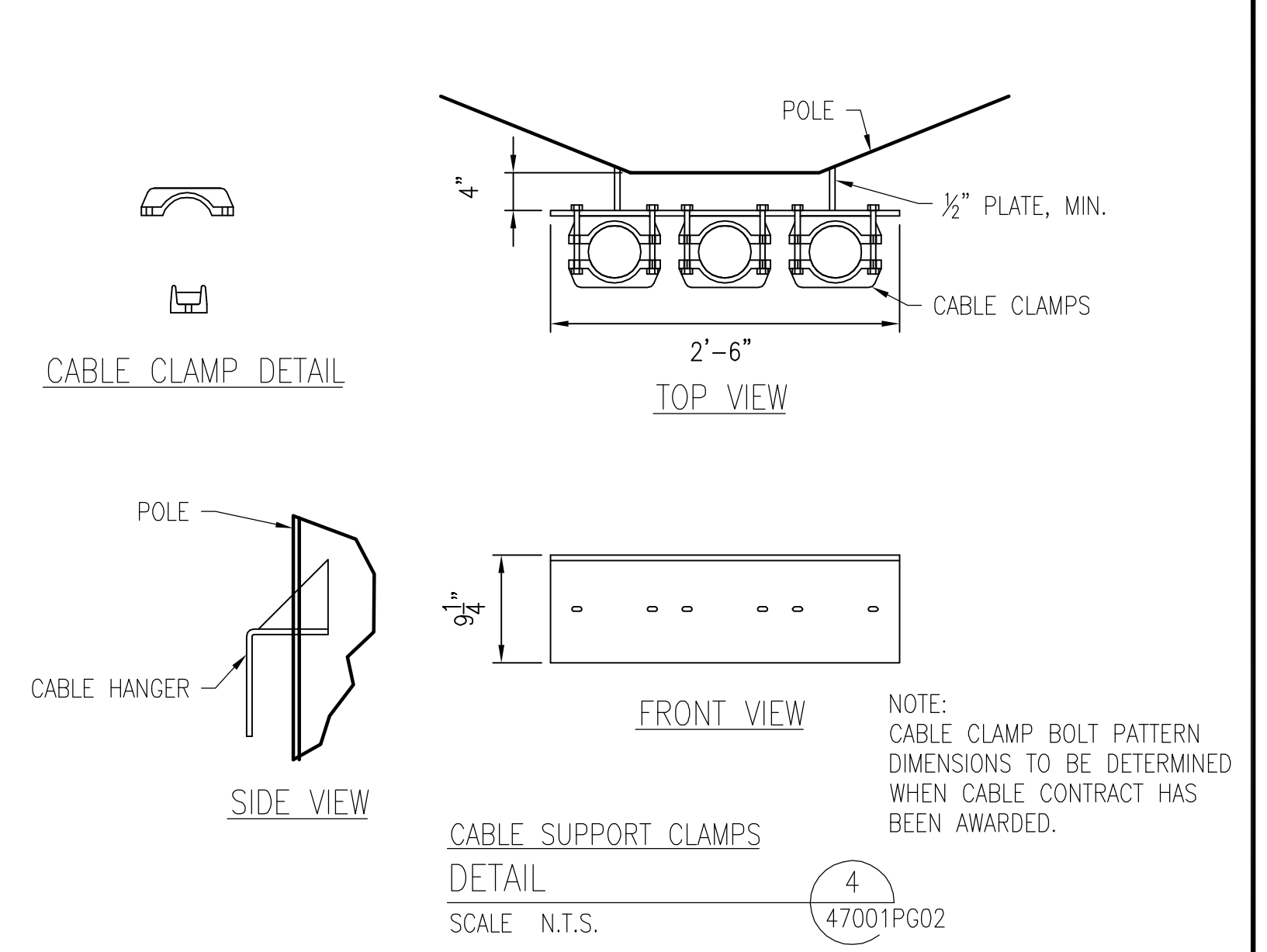
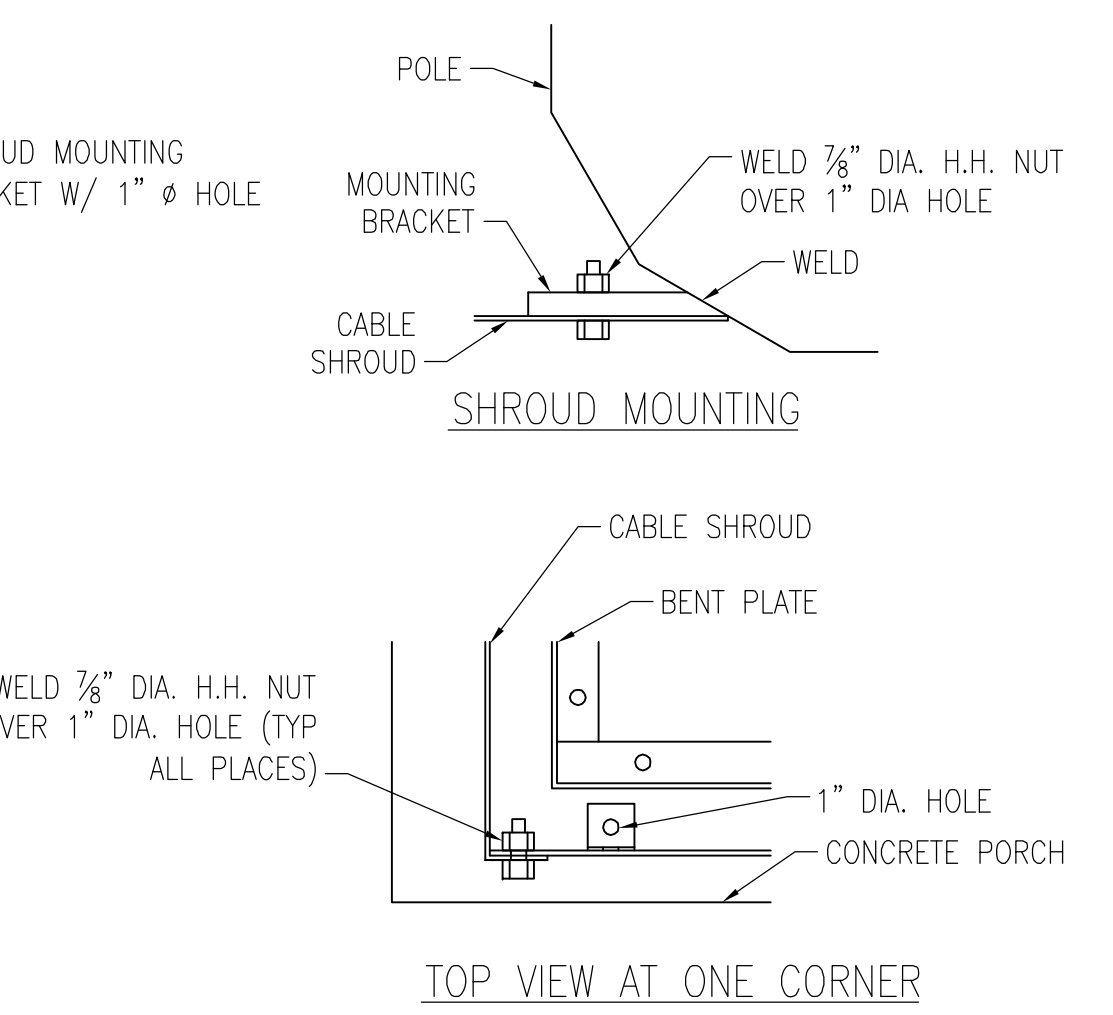
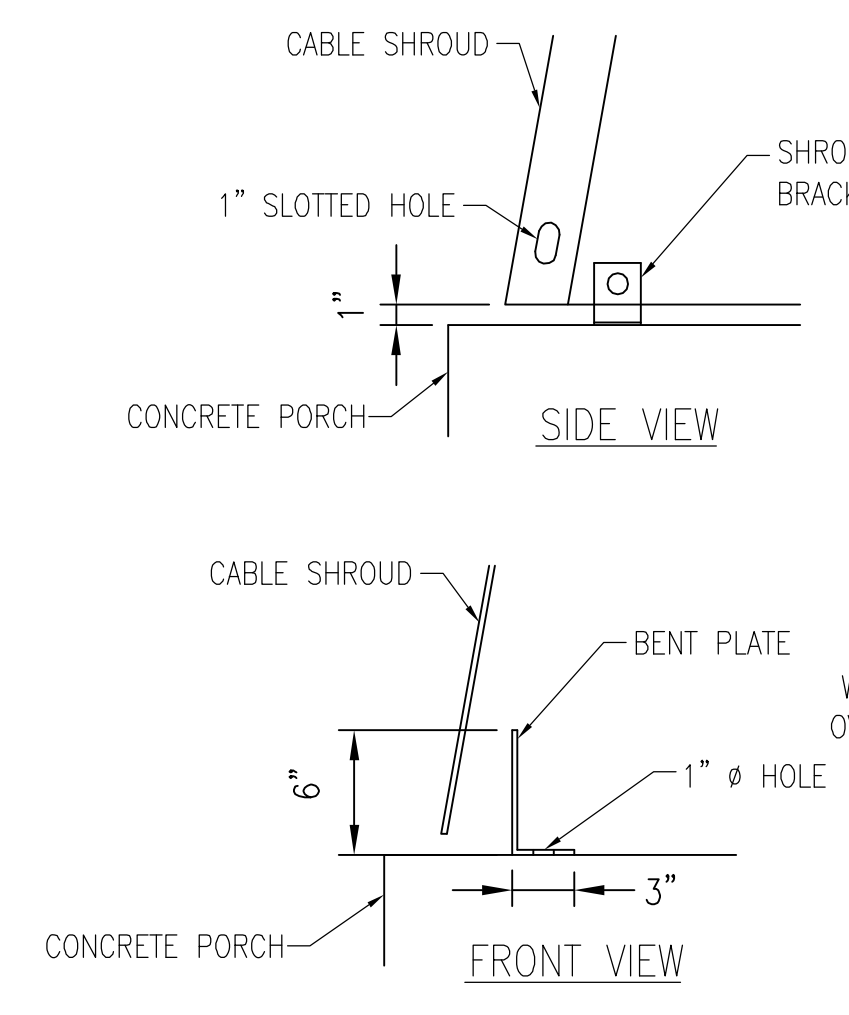
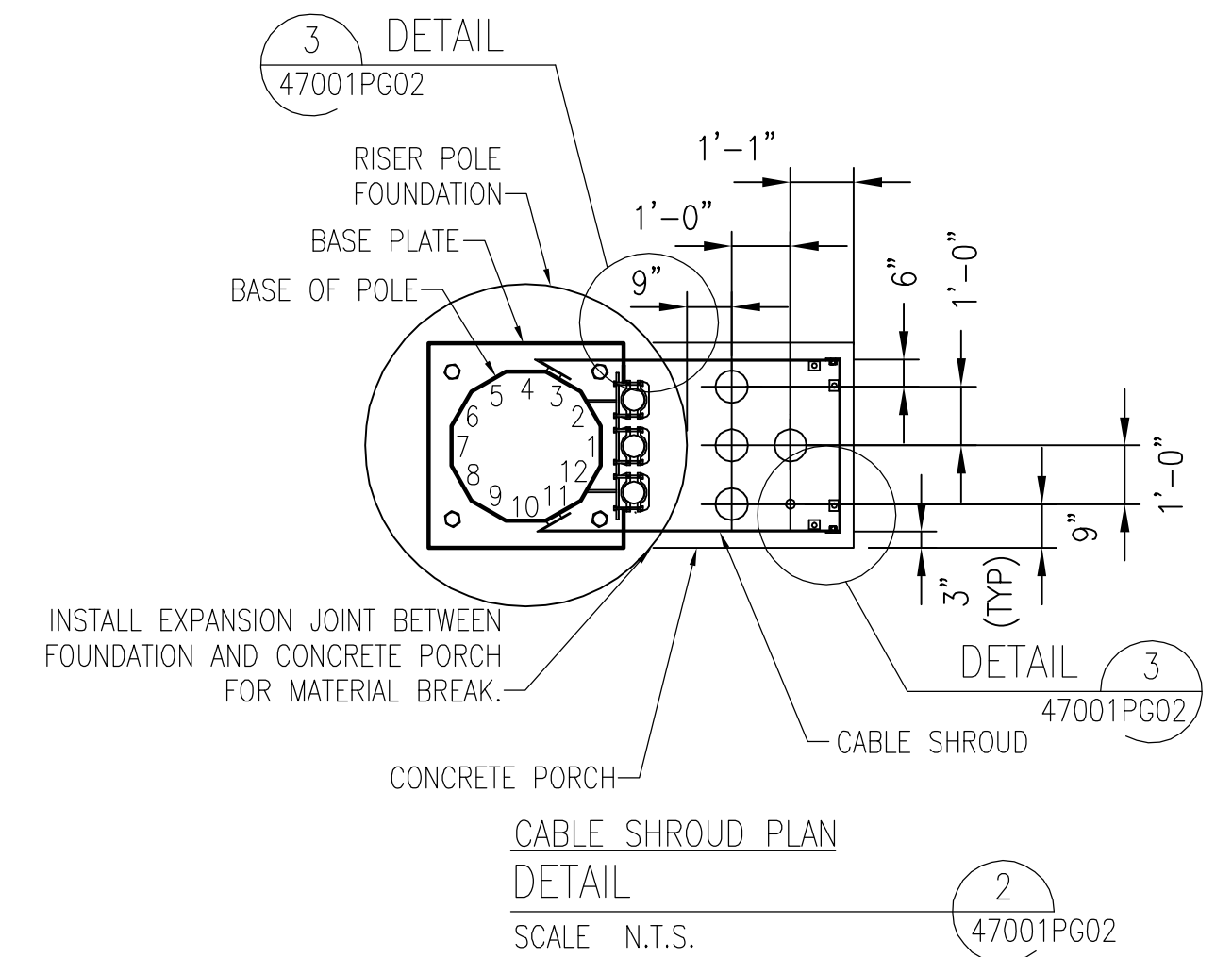
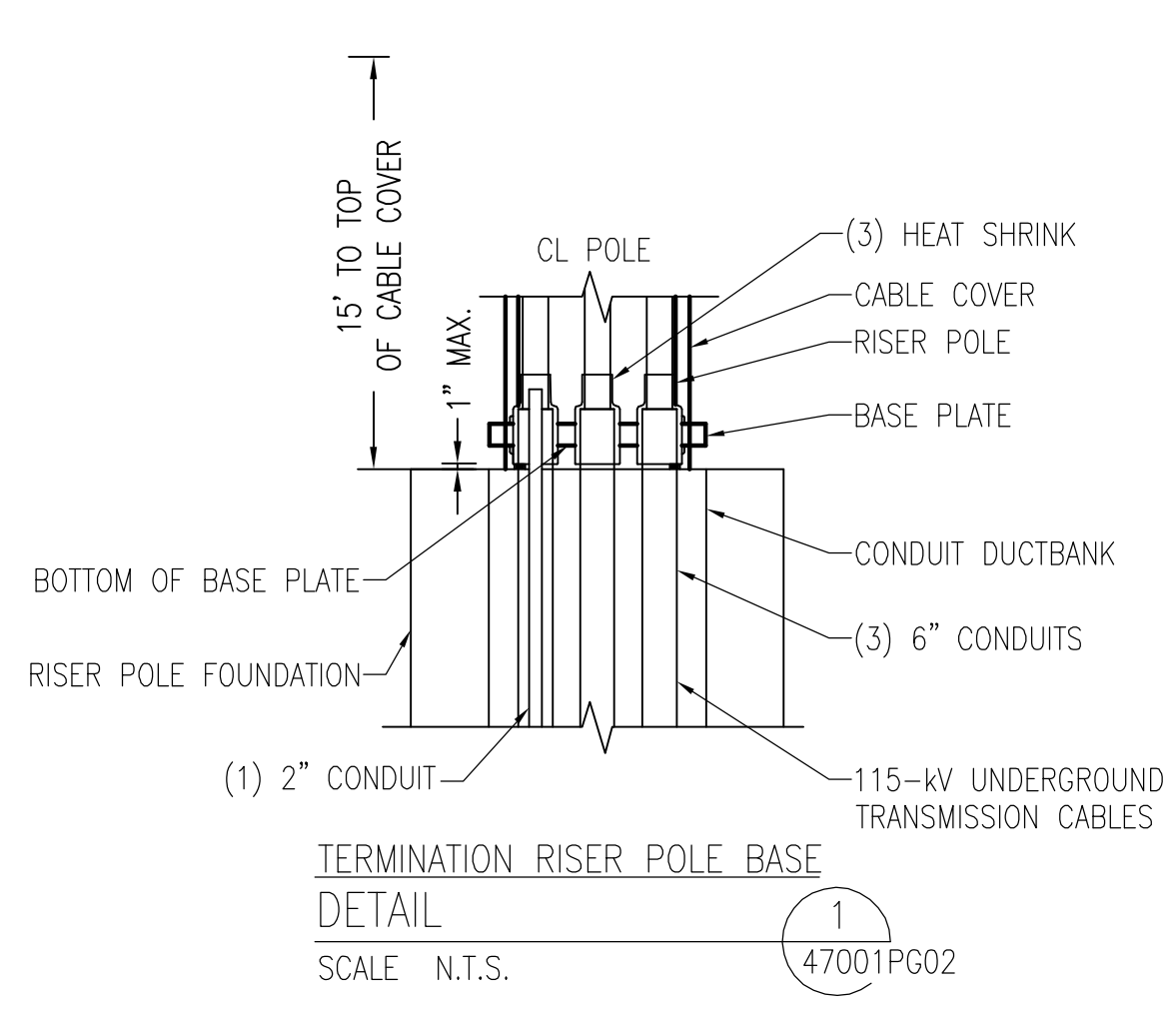
**Northeast Utilities Service Co.**  
FOR CONNECTICUT LIGHT & POWER COMPANY

**LINE 1151 SOUTH END - GLENBROOK**  
115-kV UNDERGROUND TRANSMISSION LINE  
S.E. TRANSITION STRUCTURE DETAIL  
STAMFORD, CONNECTICUT

DATE	BY	DATE	BY	DATE	BY
05-10-2013	BWF	05-10-2013	CS	05-10-2013	LH

H-SCALE N.T.S. V-SCALE N.T.S. SIZE D SURVEY JOB # S20355 R.E. DWG 23370P1 R.E. PROJ. NUMBER 000-51.326 NUSCO 01515-47001PG01





NOTE:  
ARRESTER AND TERMINATION BOLT  
PATTERN DIMENSIONS TO BE  
DETERMINED WHEN CABLE  
CONTRACT HAS BEEN AWARDED.

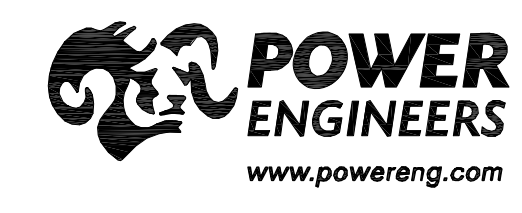
REVISIONS DURING CONSTRUCTION					
NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP

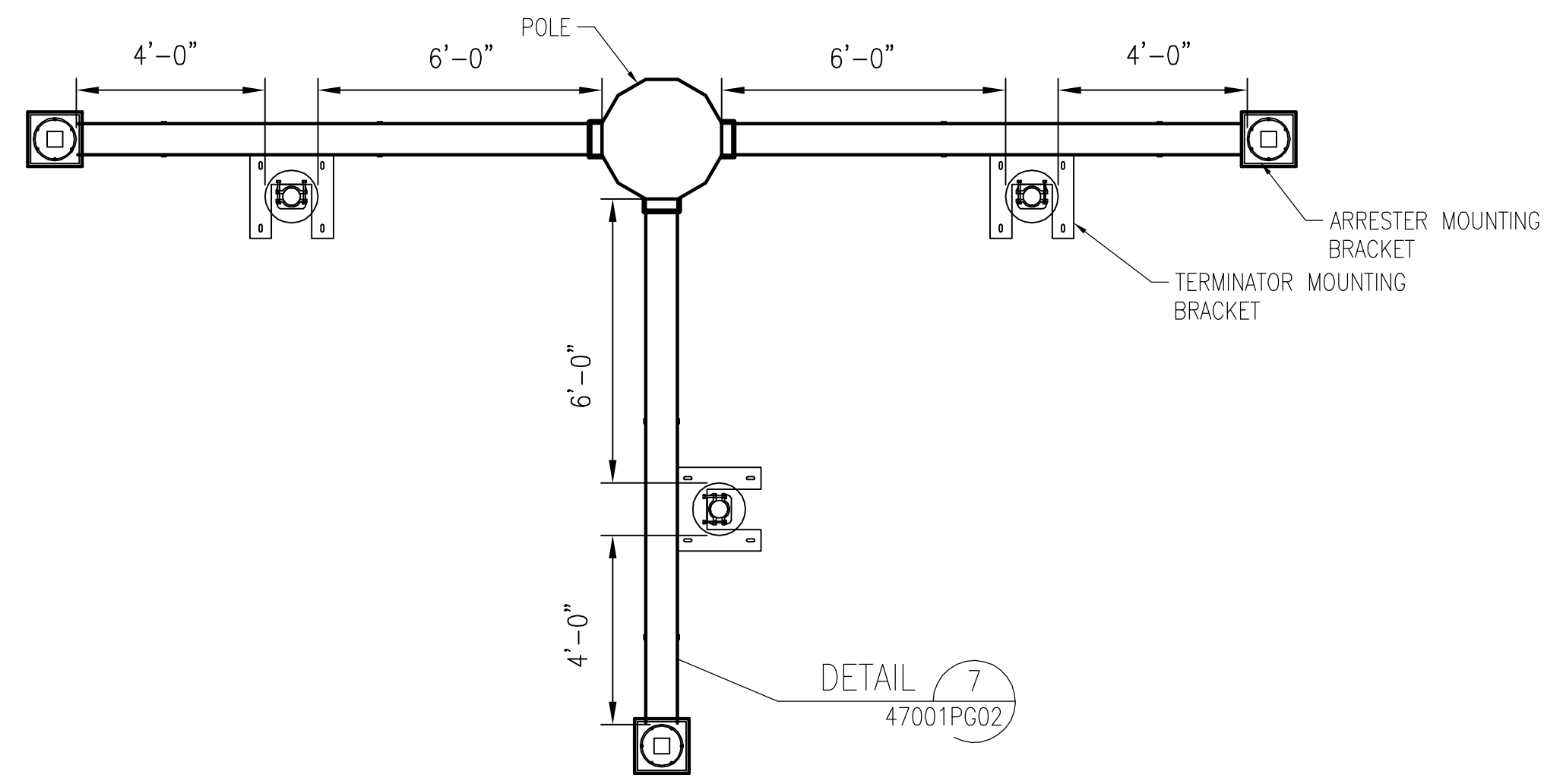
ISSUED FOR CONSTRUCTION BWF CS LH

**Northeast Utilities Service Co.**  
FOR  
**CONNECTICUT LIGHT & POWER COMPANY**

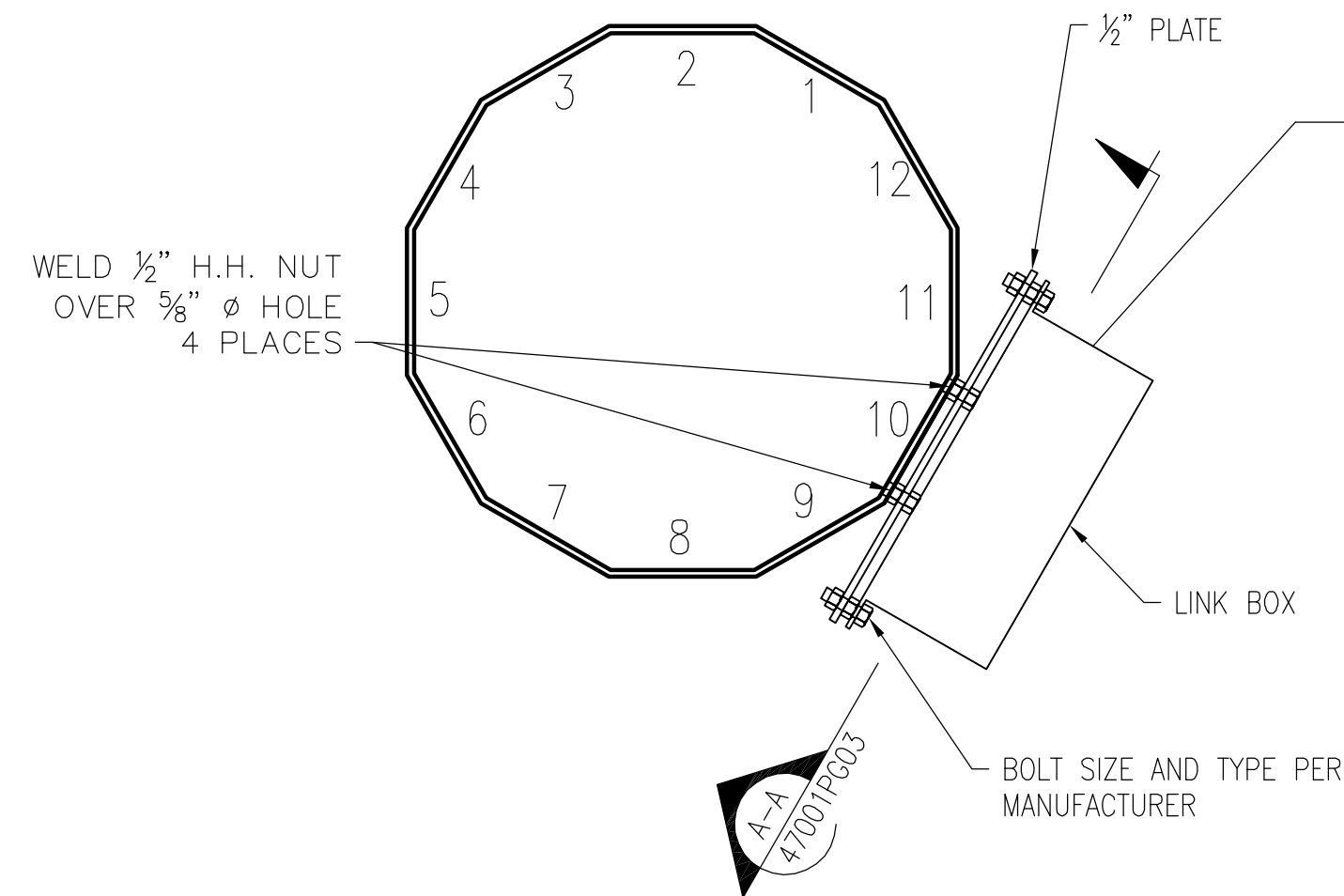
TITLE  
**LINE 1151 SOUTH END - GLENBROOK  
115-kV UNDERGROUND TRANSMISSION LINE  
S.E. TRANSITION STRUCTURE DETAIL  
STAMFORD, CONNECTICUT**

BY	BWF	CHK	CS	APP	LH	APP
DATE	05-10-2013	DATE	05-10-2013	DATE	05-10-2013	DATE
H-SCALE	N.T.S.	SIZE	ID	SURVEY JOB #	S20355	
V-SCALE	N.T.S.	V.S.	Z-1-2	R.E. DWG	23370P1	
R.E. PROJ. NUMBER	000-51.326			NUSCO	01515-47001PG02	

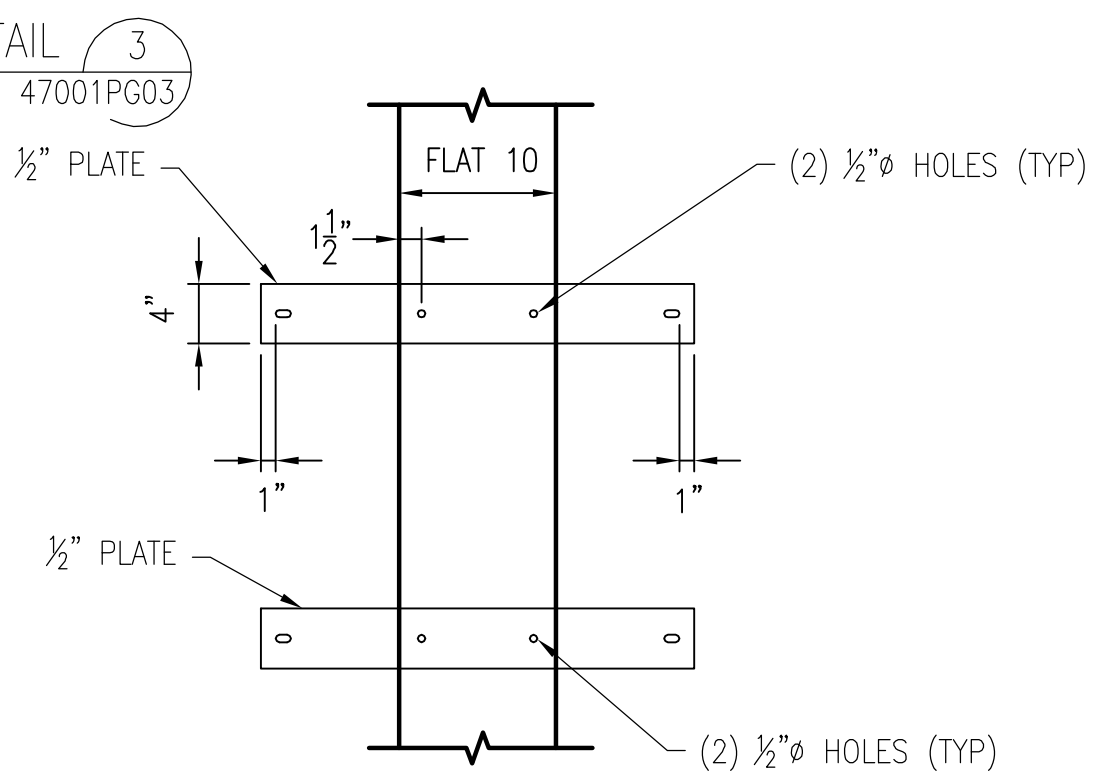




RISER ARM LAYOUT  
DETAIL  
SCALE N.T.S. 1 47001PG03

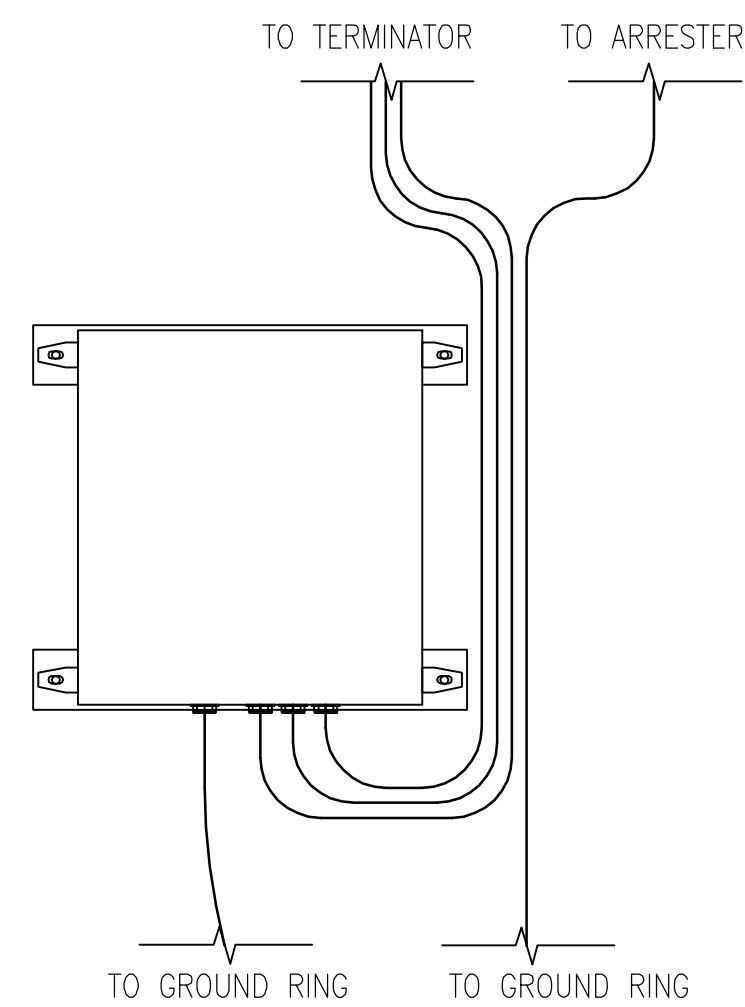


LINK BOX MOUNTING DETAIL  
DETAIL  
SCALE N.T.S. 2 47001PG03

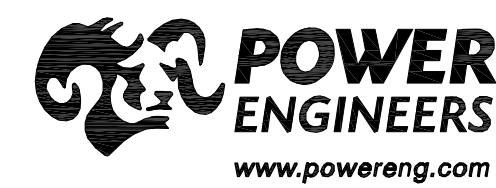


SECTION  
SCALE N.T.S. A-A 47001PG03

NOTE:  
LINK BOX BOLT PATTERN  
DIMENSIONS TO BE DETERMINED  
WHEN CABLE CONTRACT HAS BEEN  
AWARDED.



LINK BOX GROUNDING DETAIL  
SECTION  
SCALE N.T.S. 3 47001PG03



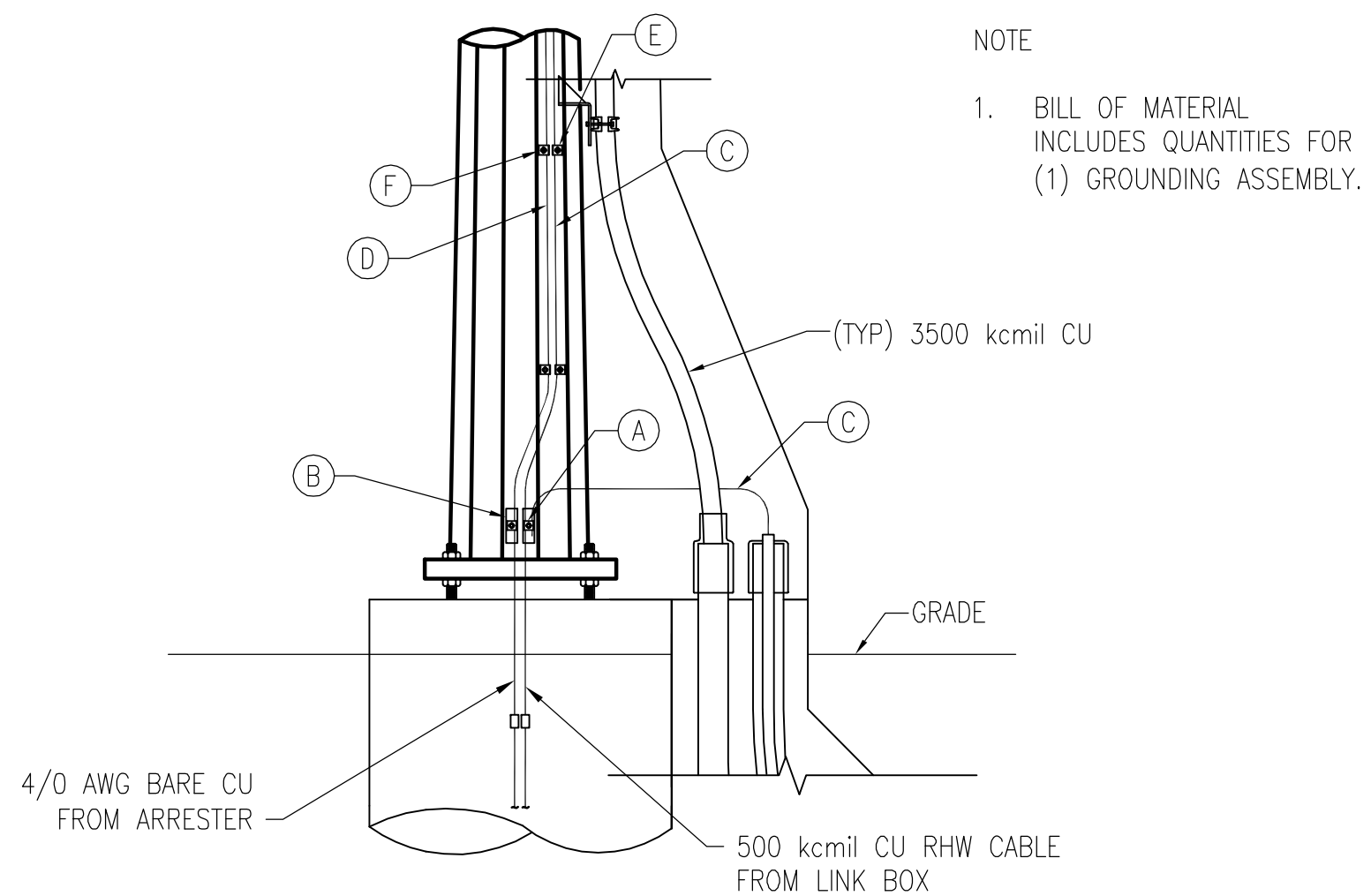
NO.	DATE	AS BUILT	REVISIONS	BY	CHK	APP	APP
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REVISIONS DURING CONSTRUCTION			
NO.	DATE	DESCRIPTION	BY
0	9-27-13	ISSUED FOR CONSTRUCTION	BWF CS LH

		<b>Northeast Utilities Service Co.</b> FOR CONNECTICUT LIGHT & POWER COMPANY	
TITLE <b>LINE 1151 SOUTH END - GLENBROOK</b> 115-kV UNDERGROUND TRANSMISSION LINE S.E. TRANSITION STRUCTURE DETAIL STAMFORD, CONNECTICUT			
BY	EWF	CHKD	CS
DATE	05-10-2013	DATE	05-10-2013
H-SCALE	N.T.S.	SIZE	D
V-SCALE	Z-1-2	SURVEY JOB #	S20355
R.E. PROJ. NUMBER	000-51.326	R.E. DWG	23370P1
		NUSCO	01515-47001PG03

DETAIL 1 - GROUNDING DETAIL					
ITEM	VENDOR	CATALOG NUMBER	DESCRIPTION	UNIT	QTY
A	BURNDY	GB2929	GROUND CONNECTOR FOR 2 PARALLEL 500 kcmil CABLES	EA	1
B	BURNDY	GC2929	GROUND CONNECTOR FOR 2 PARALLEL 4/0 CABLES	EA	1
C	PRYSMIAN		500 kcmil CU RHW CABLE	FT	*
D	PRYSMIAN		4/0 AWG BARE CU	FT	*
E	BURNDY	GC34	500 kcmil GROUND CABLE CLAMP	EA	*
F	BURNDY	GC29	4/0 AWG GROUND CABLE CLAMP	EA	*

\* DENOTES QUANTITY AS NEEDED

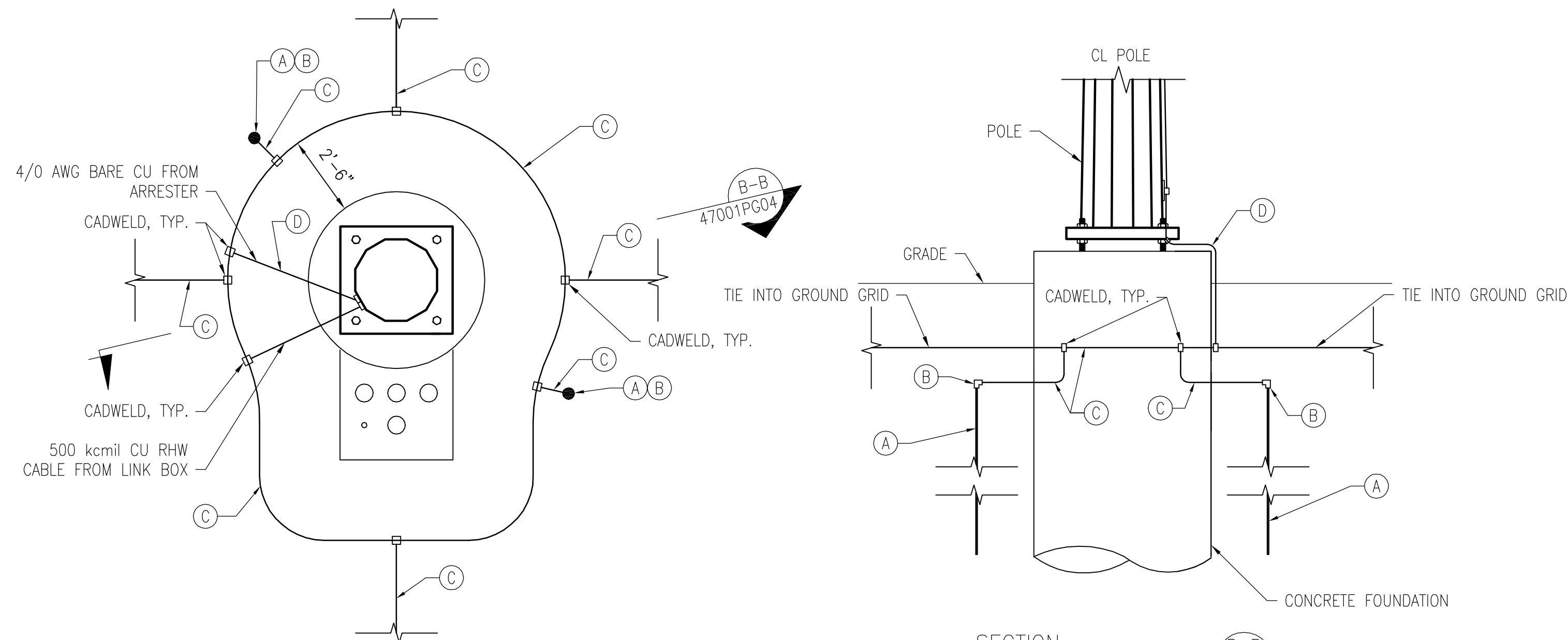


GROUNDING DETAIL  
DETAIL  
SCALE N.T.S. 1 47001PG04

NOTE  
1. BILL OF MATERIAL  
INCLUDES QUANTITIES FOR  
(1) GROUNDING ASSEMBLY.

DETAIL 2 - GROUND RING DETAIL					
ITEM	VENDOR	CATALOG NUMBER	DESCRIPTION	UNIT	QTY
A	HUBBELL	C613400	3/4" COPPER BONDED GROUND ROD	EA	2
B	HUBBELL	GC1113D	CONNECTOR, GROUND, CABLE TO 3/4" ROD	EA	*
C	PRYSMIAN		500 kcmil CU RHW CABLE	EA	*
D	PRYSMIAN		4/0 AWG BARE CU	EA	*

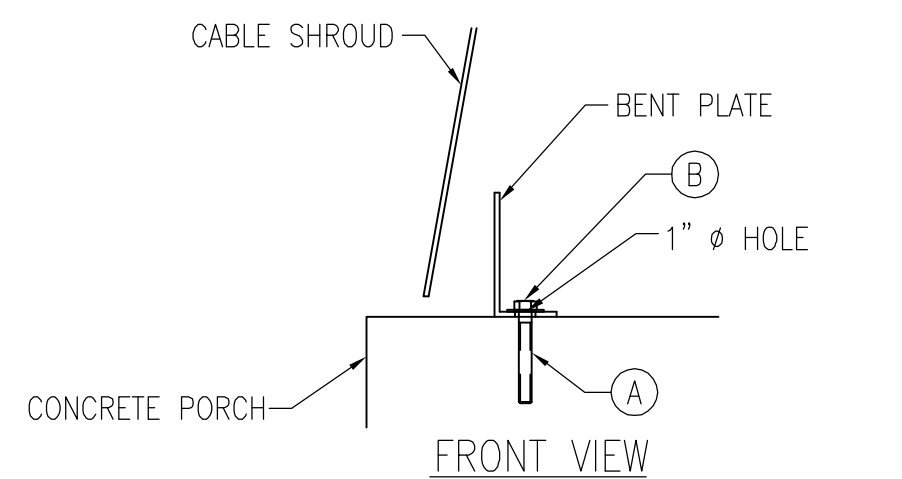
\* DENOTES QUANTITY AS NEEDED



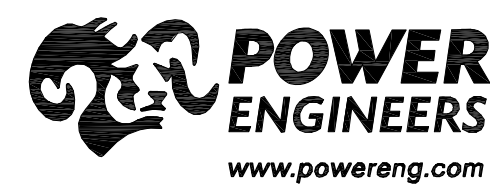
LINK GROUND RING DETAIL  
DETAIL  
SCALE N.T.S. 2 47001PG04

DETAIL 3 - BENT PLATE ANCHOR					
ITEM	VENDOR	CATALOG NUMBER	DESCRIPTION	UNIT	QTY
A	HILTI	HLC-HX 3/4 X 4 1/4	MECHANICAL CONCRETE ANCHOR 5/8" HEX	EA	*
B	FASTENAL	33185	FLAT WASHER 5/8" ID 1.75" OD GALV.	EA	*

\* DENOTES QUANTITY AS NEEDED



BENT PLATE ANCHOR  
DETAIL  
SCALE N.T.S. 3 47001PG04



REVISIONS DURING CONSTRUCTION							
NO.	DATE	AS BUILT	REVISIONS	BY	CHK	APP	APP

0	9-27-13	ISSUED FOR CONSTRUCTION	BWF	TBB	LH
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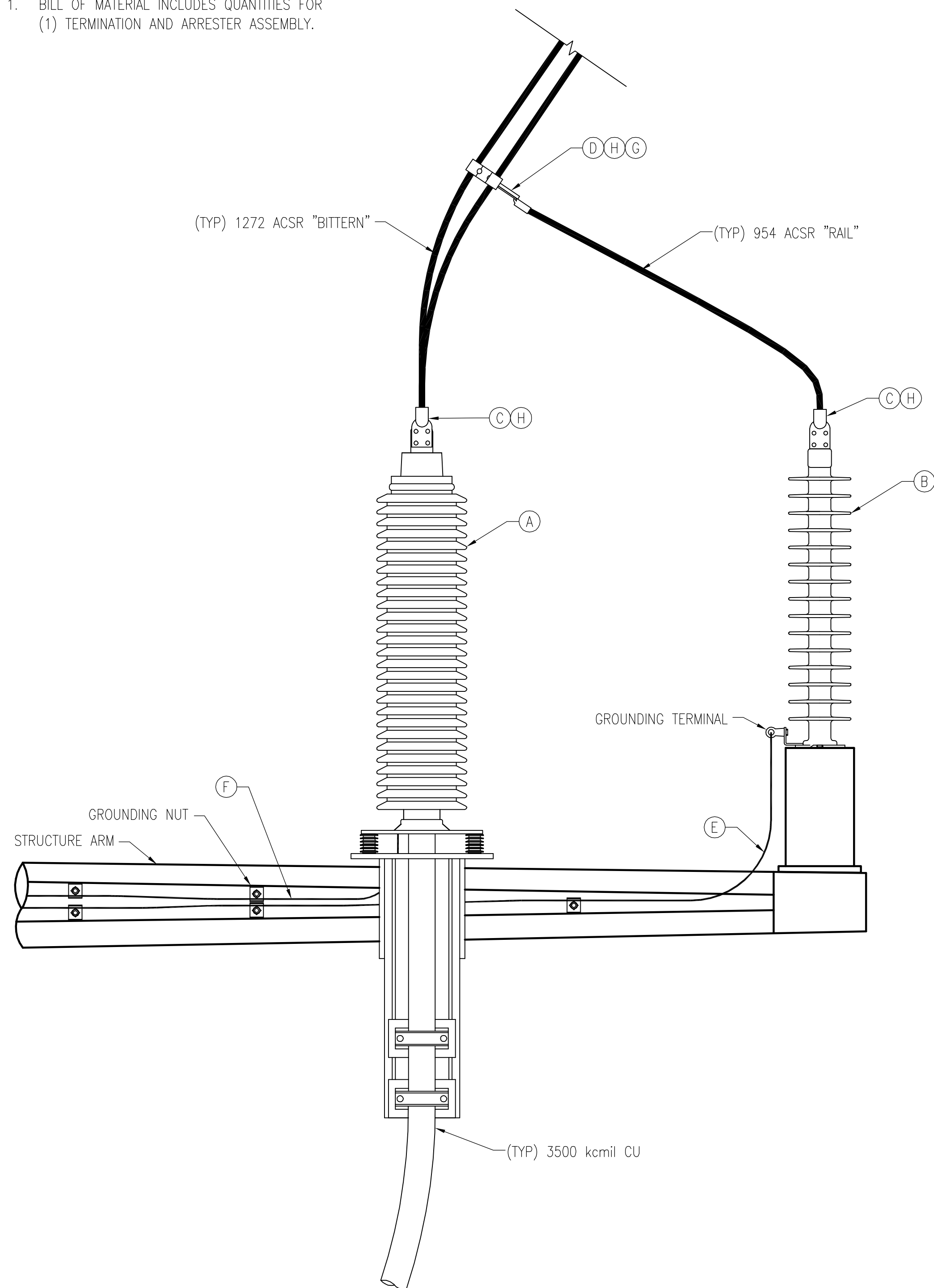
		<b>Northeast Utilities Service Co.</b> FOR <b>CONNECTICUT LIGHT &amp; POWER COMPANY</b>					
TITLE <b>LINE 1151 SOUTH END - GLENBROOK</b> <b>115-kV UNDERGROUND TRANSMISSION LINE</b> <b>S.E. TRANSITION STRUCTURE HARDWARE DETAIL</b> STAMFORD, CONNECTICUT							
BY	EWB	CHKD	CS	APP	LH	APP	APP
DATE	06-28-2013	DATE	06-28-2013	DATE	06-28-2013	DATE	
H-SCALE	N.T.S.	SIZE	D	SURVEY JOB #	S20355		
V-SCALE		V.S.	Z-1-2	R.E. DWG	23370P1		
R.E. PROJ. NUMBER	000-51.326	NUSCO	01515-47001PG04				

DETAIL 1 - 115-kV TERMINATION AND ARRESTER ASSEMBLY					
ITEM	VENDOR	CATALOG NUMBER	DESCRIPTION	UNIT	QTY
A	G&W	PAT 140	TERMINATION, COMPOSITE	EA	1
B	ABB	P0905AD70A	ARRESTER	EA	1
C	HUBBELL	JTF15	COMPRESSION TERMINAL	EA	2
D	HUBBELL	ADCSF13012	CABLE SPACER TERMINAL (DOG BONE)	EA	1
E	PRYSMIAN		4/0 AWG BARE CU	EA	*
F	PRYSMIAN		500 kcmil CU RHW CABLE	FT	*
G	HUBBELL	JTF14	COMPRESSION TERMINAL	EA	2
H	ALCOA	ALNOXIQT	COMPOUND, CORROSION INHIBITOR, PAD TO PAD CONNECTIONS	FT	*

\* DENOTES QUANTITY AS NEEDED

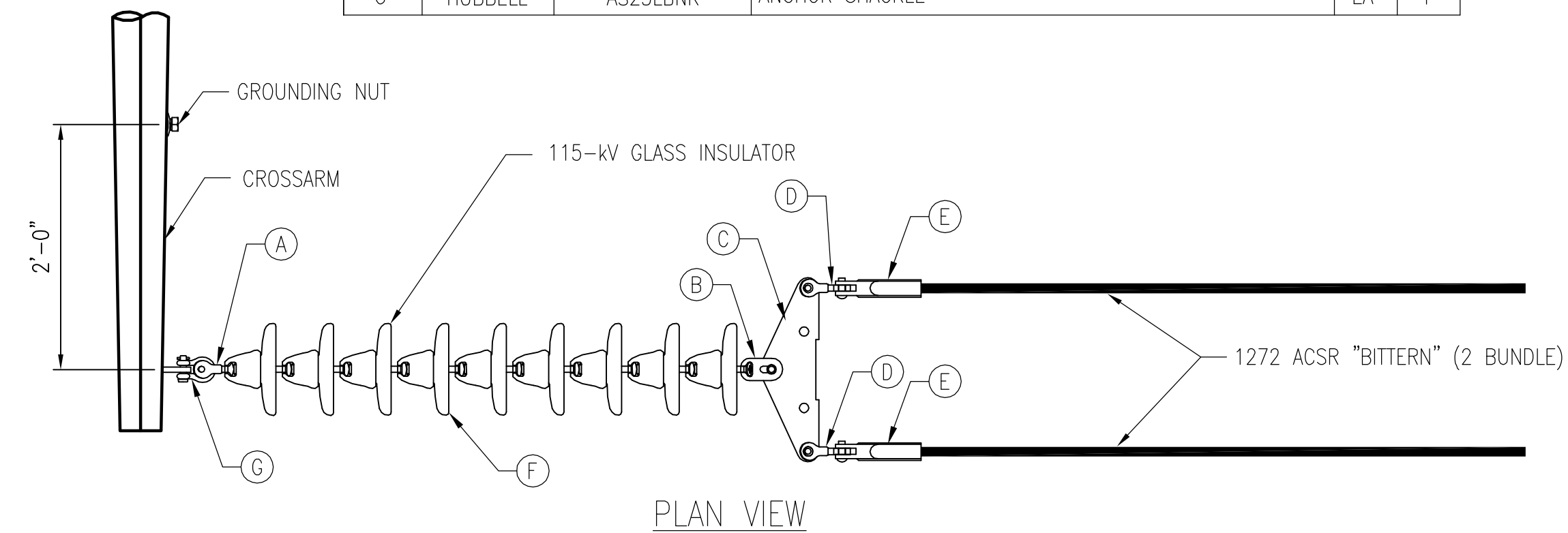
NOTE

- BILL OF MATERIAL INCLUDES QUANTITIES FOR (1) TERMINATION AND ARRESTER ASSEMBLY.

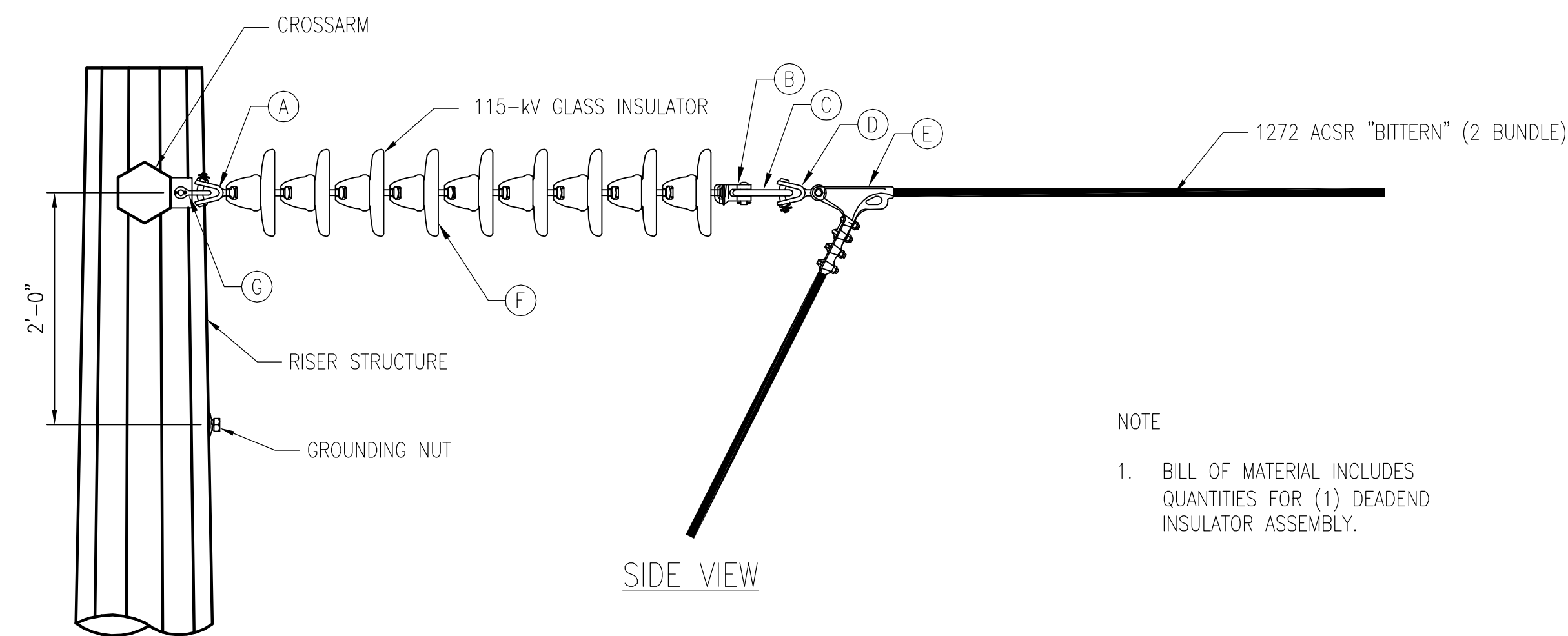


115-kV TERMINATION AND ARRESTER ASSEMBLY  
 DETAIL  
 SCALE N.T.S. 1 47001PG05

DETAIL 2 - INSULATOR ASSEMBLY					
ITEM	VENDOR	CATALOG NUMBER	DESCRIPTION	UNIT	QTY
A	HUBBELL	YBC 30	BALL-Y CLEVIS	EA	1
B	HUBBELL	SC301	SOCKET CLEVIS	EA	1
C	HUBBELL	YPD3018437-3	YOKE PLATE STRAIN TRI 18" 30 KIP	EA	1
D	HUBBELL	YCS1059013	Y-CLEVIS, EYE 90 DEG.	EA	2
E	HUBBELL	SD130N	DEAD END BOLTED QUADRANT STRAIN CLAMP	EA	2
F	SEDIVER	N14/146	INSULATOR, GLASS, 10", 30,000LB	EA	9
G	HUBBELL	AS25LBNK	ANCHOR SHACKLE	EA	1



PLAN VIEW



SIDE VIEW

INSULATOR ASSEMBLY  
 DETAIL  
 SCALE N.T.S.

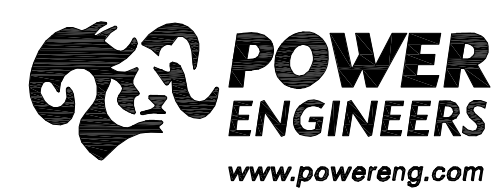
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NOTE

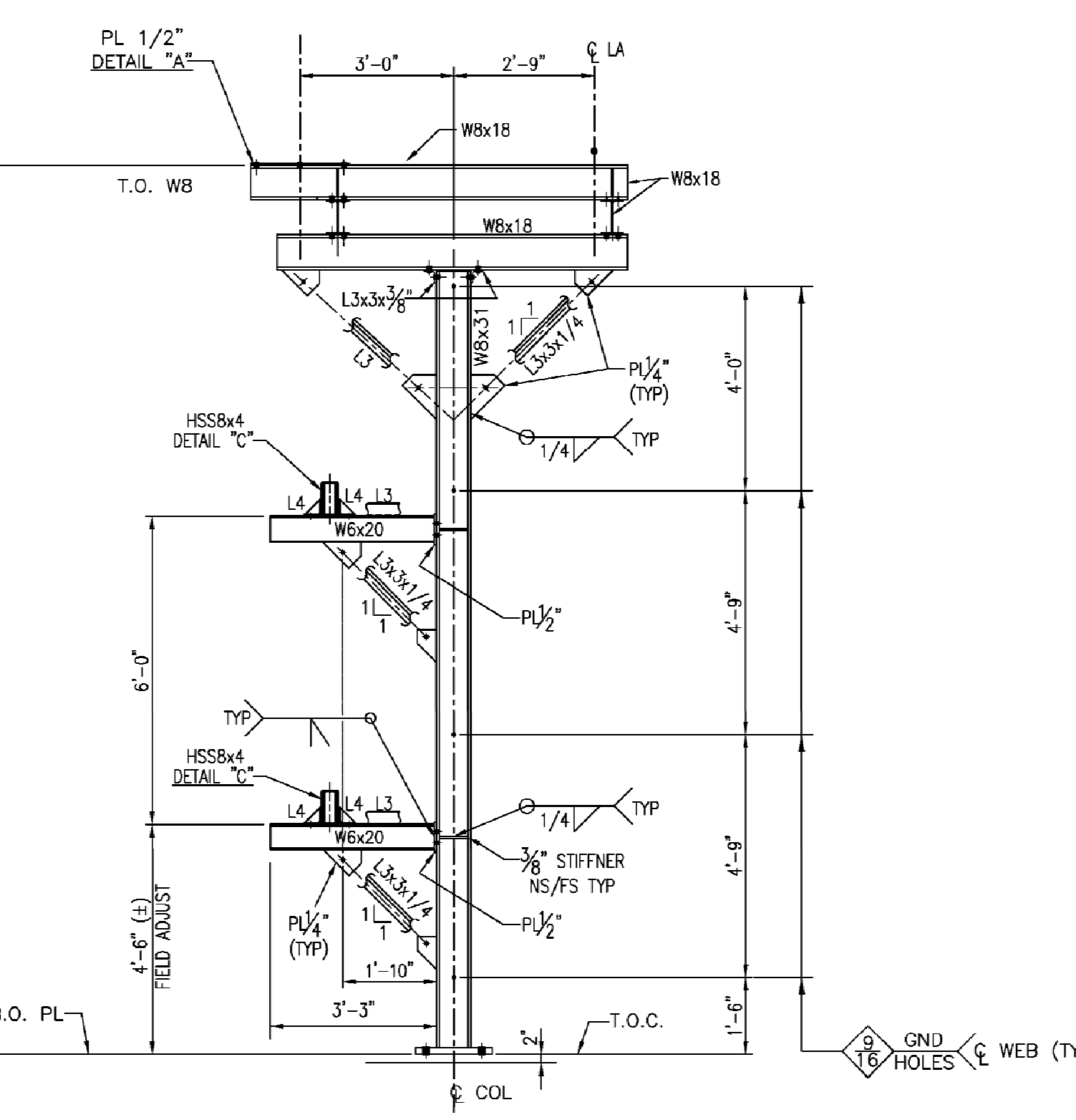
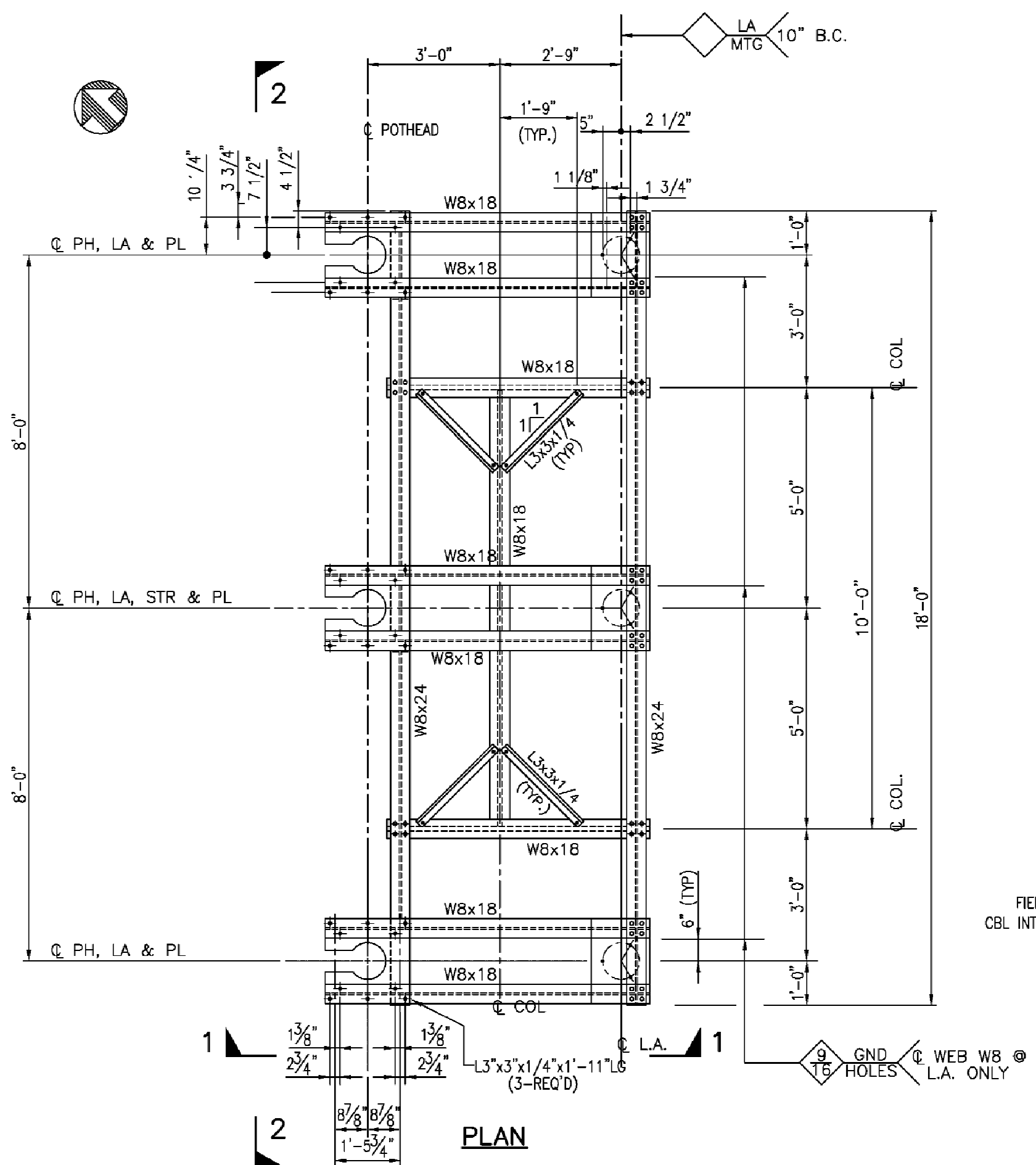
- BILL OF MATERIAL INCLUDES QUANTITIES FOR (1) DEADEND INSULATOR ASSEMBLY.

REVISIONS DURING CONSTRUCTION					
NO.	DATE	BY	CHK	APP	APP

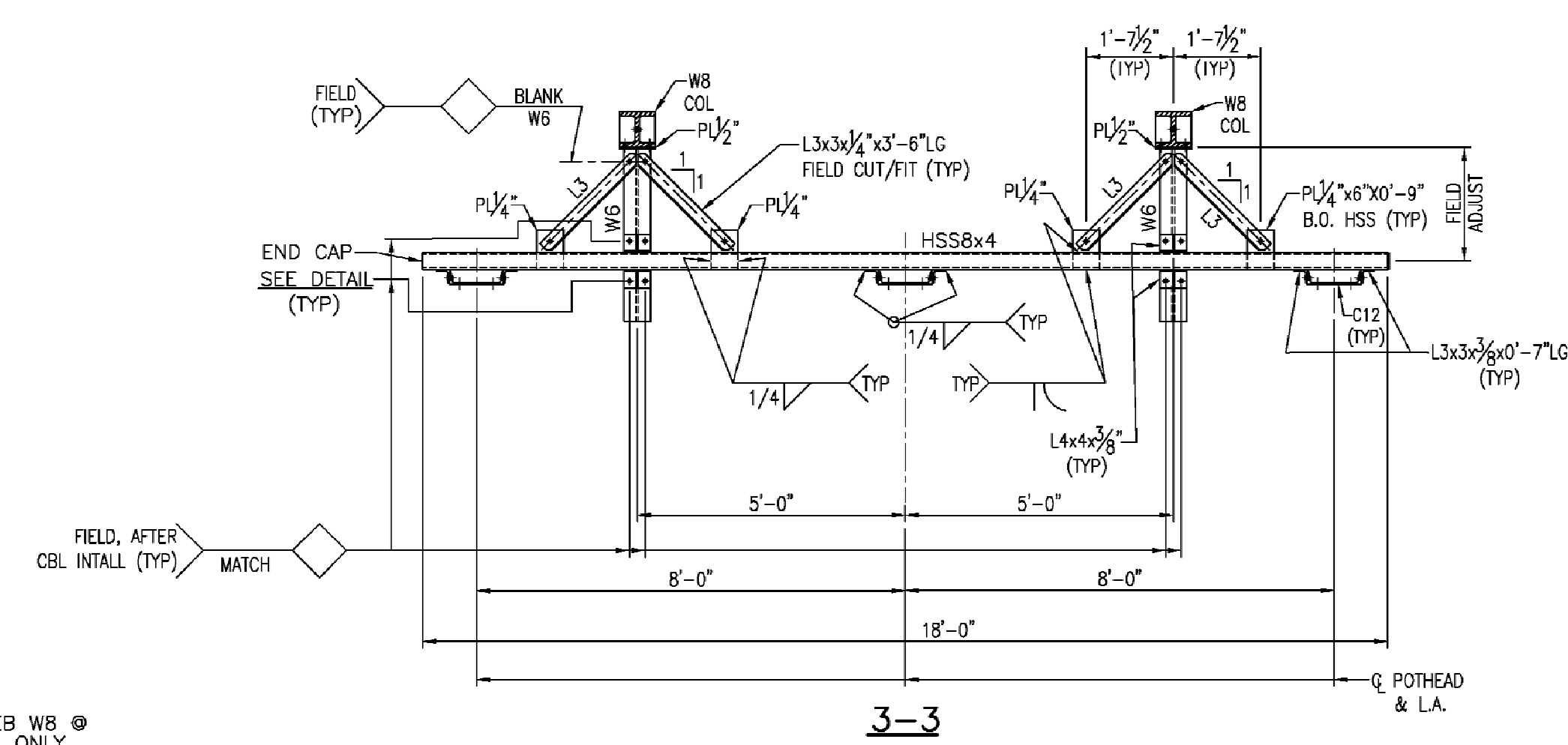
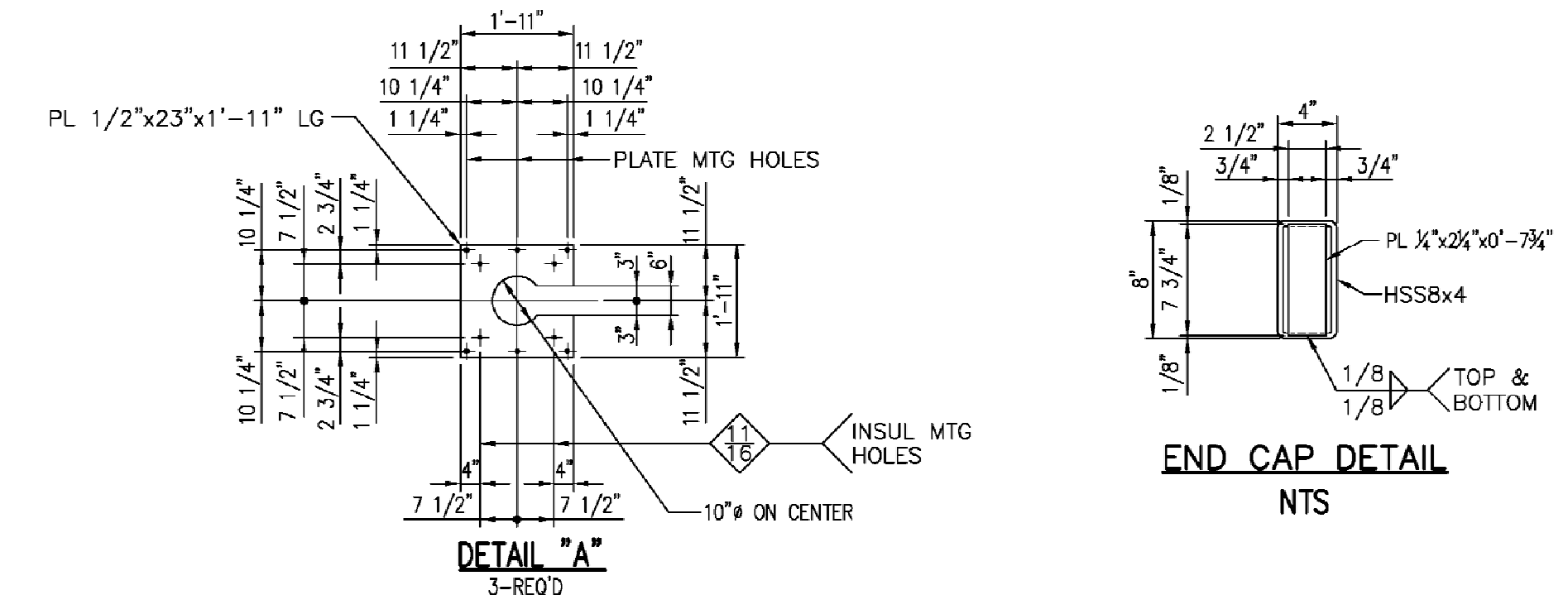
<p><b>Northeast Utilities Service Co.</b>          FOR CONNECTICUT LIGHT &amp; POWER COMPANY</p>			
<p>TITLE  <b>LINE 1151 SOUTH END - GLENBROOK</b>  <b>115-kV UNDERGROUND TRANSMISSION LINE</b>  <b>S.E. TRANSITION STRUCTURE HARDWARE DETAIL</b>          STAMFORD, CONNECTICUT</p>			
BY EWF DATE 06-28-2013	CHK CS DATE 06-28-2013	APP LH DATE 06-28-2013	APP DATE
H-SCALE N.T.S.	SIZE D	SURVEY JOB #	S20355
V-SCALE	VS. Z-1-2	R.E. DWG	23370P1
R.E. PROJ. NUMBER	000-51.326	NUSCO	01515-47001PG05



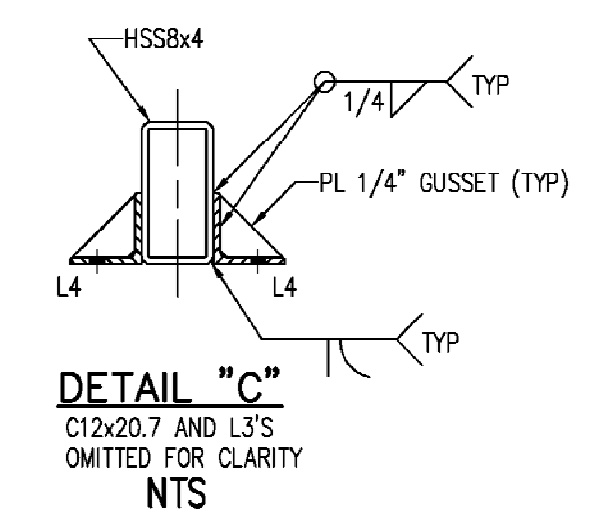
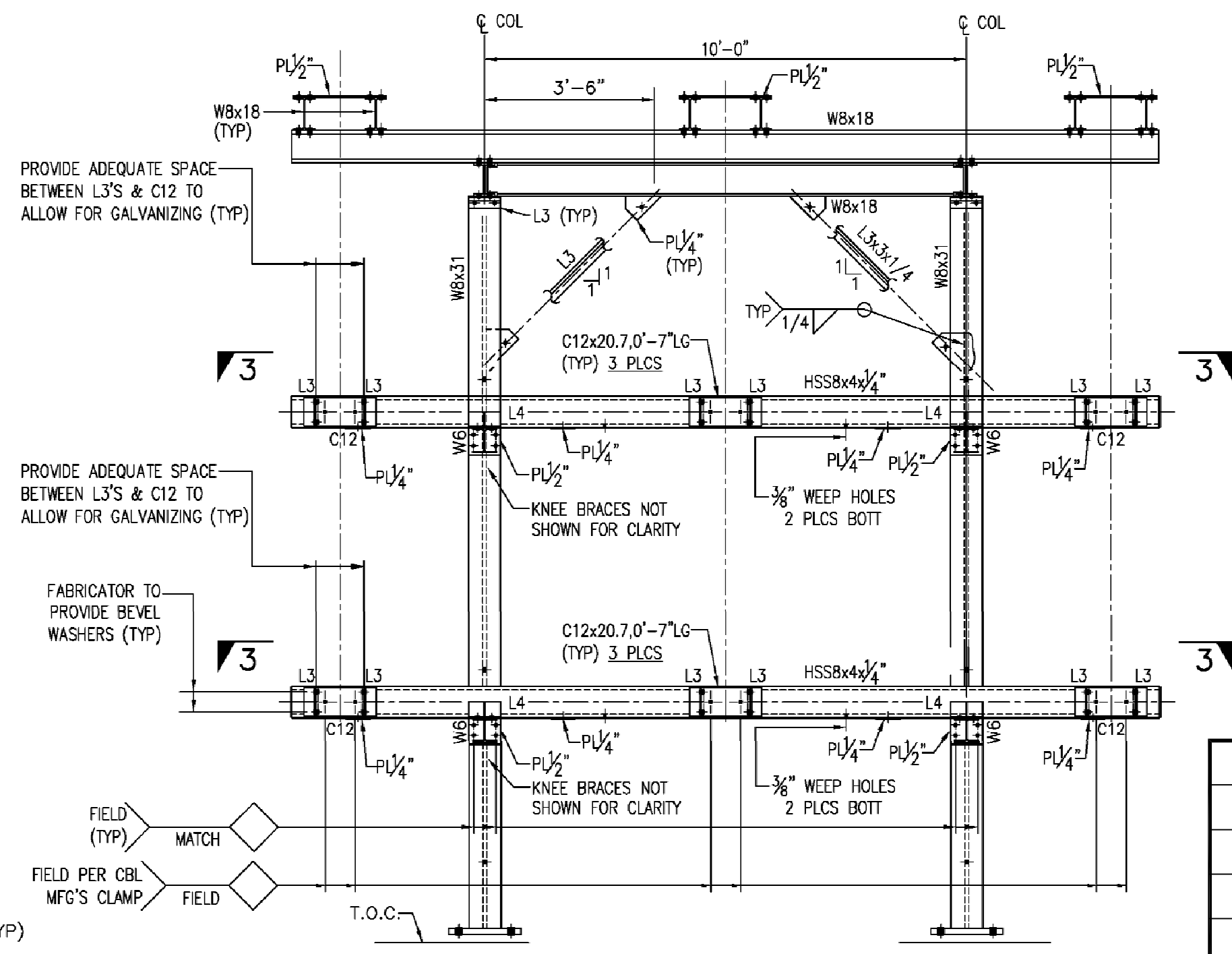




POTHEAD LIGHTNING ARRESTER (PHLA-13) (1-REQ'D-13)



2-2



DETAIL 'C' C12x20.7 AND L3'S OMITTED FOR CLARITY NTS

- STEEL FABRICATOR NOTES:**
- ALL STRUCTURAL STEEL AND FABRICATION SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) LATEST EDITION AND NU CIVIL ENGINEERING SPEC S-3036.
  - STRUCTURAL STEEL PLATES SHALL BE ASTM A-36 OR EQUAL UNLESS NOTED OTHERWISE (U.N.O.), WIDE FLANGES SHALL BE ASTM A-992. HSS SHAPES SHALL BE ASTM A-500 GR. B.
  - STRUCTURAL STEEL: GALVANIZED IN ACCORDANCE WITH ASTM A-123.
  - ALL HARDWARE: TO BE GALVANIZED IN ACCORDANCE WITH ASTM A-153.
  - NON-STANDARD BOLTS AND HOLES ARE DESIGNATED AS SHOWN BELOW:

- NOTES
- BOLT DIA/BOLT MAT'L
  - BOLT DIMENSIONS & DESCRIPTION
  - HOLE INFORMATION
  - HOLE SIZE
  - A- PROPERTIES NOT FURNISHED MEAN STANDARD.
  - B- IF NO BOLT INFORMATION IS GIVEN, STEEL SUPPLIER DOES NOT FURNISH THE BOLT.

F6. BOLT ASSEMBLY MATERIAL SHALL BE AS FOLLOWS:

ITEM	DIAMETER	MATERIAL	HOLE DIAMETER
BOLT NON-STANDARD	5/8"	ASTM A325	11/16" NON-STANDARD
BOLT STANDARD	3/4"	ASTM A325	13/16" STANDARD

- NUT - ASTM A563 D11
  - WASHER - ASTM F436
- ALL WELDING IS TO BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF AWS D1.1.
  - ALL WELDS ARE TO BE VISUALLY INSPECTED BY A QUALIFIED WELD INSPECTOR USING THE ACCEPTANCE CRITERIA OF AWS D1.1.
  - THE FABRICATOR SHALL POSSESS AN AISC CATEGORY STD QUALITY CERTIFICATION.

- STEEL ERECTOR NOTES:**
- STRUCTURE ASSEMBLY EFFORT SHALL CONFORM TO THE REQUIREMENTS OF AISC CHAPTER M AS APPLICABLE.
  - ERECTOR IS TO TAKE SPECIAL CARE TO ENSURE THAT STRUCTURES ARE ERECTED WITH ALL MEMBERS ORIENTED AS SHOWN ON THE CONSTRUCTION DRAWINGS.
  - STEEL FIT-UP ISSUES ARE TO BE BROUGHT TO THE ATTENTION OF CIVIL ENGINEERING FOR RESOLUTION.
  - STRUCTURAL MEMBERS SHALL NOT BE MODIFIED WITHOUT PRIOR REVIEW AND APPROVAL BY CIVIL ENGINEERING.
  - BASE PLATE OR BASE ANGLE HOLES SHALL NOT BE ENLARGED OR ELONGATED TO FACILITATE FIT-UP WITHOUT PRIOR REVIEW AND APPROVAL BY CIVIL ENGINEERING.
  - ALL BASE PLATES ARE TO BE INSTALLED UTILIZING WASHERS UNDER ANCHOR BOLT NUTS.
  - REMOVAL OF BRACING (OR OTHER STRUCTURAL MEMBERS) ON EXISTING STRUCTURES TO FACILITATE ERECTION IS NOT PERMITTED UNLESS AUTHORIZED BY CIVIL ENGINEERING. ALL BRACING MUST BE RE-INSTALLED.
  - FIELD DRILLING OR CUTTING OF GALVANIZED STEEL SHALL HAVE AFFECTED AREAS CLEANED BY A WIRE BRUSH AND COVERED WITH 2 COATS OF ZINC RICH PAINT TO RESTORE THE GALVANIZED SURFACING.
  - ERECTOR SHALL PROVIDE A "MARK-UP" AS-BUILT TO CIVIL ENGINEERING IDENTIFYING ALL FIELD CHANGES UPON COMPLETION PER NU ADM-4.
  - ALL BOLTS SHALL BE BROUGHT TO A SNUG TIGHT CONDITION WITH A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF A MAN USING AN ORDINARY SPUD WRENCH.

- REFERENCE DRAWINGS :**
- 23505-11004 PG 6 FOUNDATION PLAN
  - 23505-11829 FOUNDATION DETAILS
  - 23505-33033 PG 1 115KV YARD TRENCH & CONDUIT PLAN
  - 23505-54906 PG 4 STEEL KEY PLAN
- REFERENCE CALCULATIONS :**
- 30801-12-TCE-403418PK-STL-01

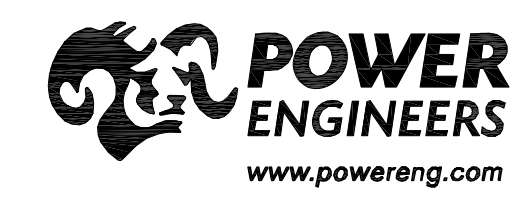
REVISIONS DURING CONSTRUCTION			
NO.	DATE	BY	DESCRIPTION
0	9-27-13	BWF	ISSUED FOR CONSTRUCTION

**Northeast Utilities Service Co.**  
FOR CONNECTICUT LIGHT & POWER COMPANY

**LINE 1151 SOUTH END - GLENBROOK**  
115-KV UNDERGROUND TRANSMISSION LINE  
GLENBROOK TERMINATION STRUCTURE  
STAMFORD, CONNECTICUT

DATE	BY	CHK	APP	DATE	BY	CHK	APP
06-28-2013	BWF	CS	APP	06-28-2013	LH	APP	

V-SHALE N.T.S. SIZE D SURVEY JOB # S20355  
R.E. NUMBER 000-51.326 NUSCO 23370P1  
AS BUILT REVISIONS BY CHK APP APP 01515-47001PG06

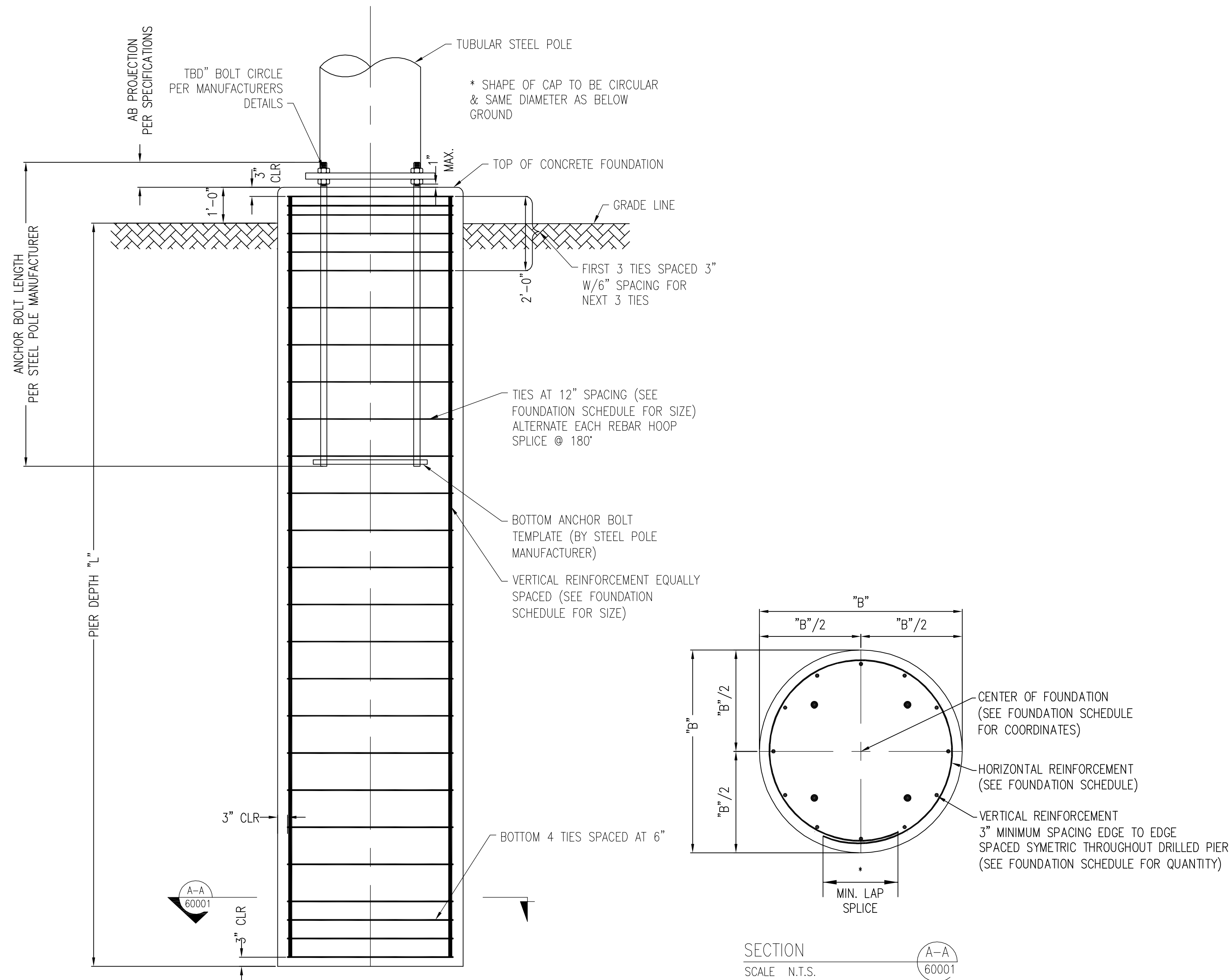


### STEEL POLE CAISSON FOUNDATION SCHEDULE

STRUCTURE TYPE	PIER DIA. "B" (FT)	PIER DEPTH "L" (FT)	VERTICAL REINFORCEMENT		HORIZONTAL REINFORCEMENT		CONSTRUCTION STAKING	
			BAR#	NO./PIER	TIE #	NO./PIER	CENTER OF FOUNDATION	
							EASTING (FT)	NORTHING (FT)
115-kV RISER TRANSITION STRUCTURE	5'	20'	10	12	4	26	782640.298	579122.413

**NOTE:**

FOUNDATION DIMENSIONS AND REINFORCING SCHEDULE IS AN ESTIMATE. FOUNDATION DESIGN ON HOLD PENDING GROUND LINE REACTIONS WHICH ARE TO BE PROVIDED BY STEEL POLE MANUFACTURER.



RISER STRUCTURE FOUNDATION  
DETAIL  
SCALE N.T.S. 1/60001

**NOTES**

- ALL ABOVE GRADE FOUNDATION EDGES SHALL HAVE A 3/4" CHAMFER.
- ALL ABOVE GRADE FOUNDATION SURFACES SHALL BE STEEL TROWEL FINISHED AND SLOPED 1/2" CENTER TO EDGE TO SHED WATER.
- CONCRETE SHALL HAVE A MINIMUM OF 28 DAY COMPRESSIVE STRENGTH OF 5000PSI.
- ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A6 15 GRADE 60. FABRICATION AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 318 AND THIS DRAWING.
- ANCHOR BOLT CAGES TO BE SUPPLIED BY POLE SUPPLIER. ALL OTHER MATERIALS SHALL BE CONTRACTOR FURNISHED AS REQUIRED BY THE SPECS.
- CONCRETE SHALL BE VIBRATED IN LAYERS OF 12 -18 INCHES TO PROVIDE A DENSE MASS FREE OF VOIDS.
- FOUNDATION SHALL BE POURED MONOLITHICALLY WITH NO MORE THAN 45 MINUTES BETWEEN END OF ONE POUR AND START OF NEXT. A POUR SHALL NOT BE STOPPED ONCE IT IS STARTED.
- REINFORCEMENT SHOWN IS THE MIN. STEEL REQUIRED FOR STRENGTH. THE CONTRACTOR SHALL SUPPLY & INSTALL ANY ADDITIONAL STEEL REQUIRED FOR SAFE & PROPER INSTALLATION & HANDLING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING & INSTALLING ALL FORM WORK, CONCRETE REINFORCING STEEL AND CASING AS REQUIRED FOR PIERS.
- FOR ALL DRILLED PIERS, THE CONTRACTOR SHALL REMOVE & DISPOSE, FROM THE RIGHT OF WAY, ALL EXCAVATED MATERIAL INCLUDING THE DRILLER'S MUD. IN NO CASE SHALL THIS MATERIAL BE PERMANENTLY DEPOSITED ON THE RIGHT OF WAY.
- CONTRACTOR IS REQUIRED TO REVIEW THE GEOTECHNICAL REPORT FOR INFORMATION ABOUT SITE CONDITIONS AND CONSTRUCTION CONSIDERATIONS.
- ALL LOOSE OR DISTURBED SOIL AND MATERIAL MUST BE REMOVED FROM THE DRILL PIER EXCAVATION PRIOR TO PLACING REINFORCING STEEL OR CONCRETE.
- PROVIDE POSITIVE DRAINAGE AWAY FROM EXCAVATIONS AND COMPLETED FOUNDATION TO AVOID SURFACE WATER FROM PONDING. CONCRETE SHALL BE POURED WITHIN 24 HOURS AFTER COMPLETING AN EXCAVATION FOR AN INDIVIDUAL FOUNDATION.
- THE BOTTOM OF ALL EXCAVATIONS SHALL BE FREE OF STANDING WATER, DEBRIS AND OTHER UNSUITABLE MATERIAL PRIOR TO PLACING CONCRETE. IF WATER CANNOT BE REMOVED, CONTRACTOR SHALL OBTAIN ENGINEERING APPROVAL TO PLACE CONCRETE BY TREMIE METHODS.
- DRILLED PIERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACI 336.3R-93 AND THIS DRAWING.
- FOUNDATION LOCATIONS AS PER STAKING COORDINATES IN FOUNDATION SCHEDULE.
- CONCRETE MATERIALS, MIXING, DELIVERY AND PLACEMENT SHALL BE IN ACCORDANCE WITH ACI 318 AND THIS DRAWING.
- CONCRETE: READY MIX CONCRETE SHALL CONFORM TO ASTM C-94. AIR ENTRAINING ADMIXTURE SHALL BE ADDED PER ASTM C-260. NO CALCIUM CHLORIDE SOLUTION SHALL BE ADDED TO CONCRETE MIX.
- CEMENT: PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, LATEST VERSION.
- ADMIXTURES: ADMIXTURES SHALL CONTAIN NO CHLORIDES, FLUORIDES OR NITRATES AND SHALL BE FORMULATED BY THE MANUFACTURER FOR THE JOB AREA AND WEATHER CONDITIONS TO CONTROL SETTING TIME. WATER REDUCING AND RETARDING ADMIXTURES, IF APPROVED BY THE ENGINEER OR CONSTRUCTION COORDINATOR, SHALL CONFORM TO ASTM C-494.
- THE ADDITION OF WATER AT THE SITES SHALL BE IN ACCORDANCE WITH ASTM C-94.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAR ALL POSSIBLE UNDERGROUND CONFLICTS PRIOR TO COMMENCING EXCAVATION ACTIVITIES.
- A MINIMUM OF THE TOP EIGHT FEET OF THE FOUNDATION SHALL BE CASED TO PREVENT OVER POUR. THE CASING SHALL BE REMOVED AS CONCRETE IS PLACED IN THE EXCAVATION. CONCRETE SHALL BE PLACED SUCH THAT AT LEAST ONE FOOT OF CONCRETE IS ABOVE THE BOTTOM OF THE CASING AS THE CASING IS EXTRACTED FROM THE GROUND.
- FOUNDATION DESIGN BASED ON THE GROUND LINE REACTIONS PROVIDED BY STEEL MANUFACTURER.

- ANCHOR BOLT DESIGN AND TEMPLATE SHALL BE PROVIDED BY STEEL POLE MANUFACTURER.
- SPECIAL INSPECTIONS SHALL COMPLY WITH CBC 2010 CHAPTER 17 SECTION 1704 AND OTHER INSPECTIONS REQUIRED BY THE BUILDING OFFICIAL. OWNER SHALL RETAIN PROFESSIONAL TESTING AND INSPECTION FIRMS FOR THE FOLLOWING SPECIAL INSPECTIONS:

**VERIFICATION AND INSPECTIONS**

VERIFICATION AND INSPECTIONS	INSPECTION TYPE
INSPECTION OF REINFORCING STEEL AND PLACEMENT.	P
WELDING OF SHEAR REINFORCING STEEL.	C
WELDING OF OTHER REINFORCING STEEL.	P
INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE.	P
VERIFYING USE OF REQUIRED DESIGN MIX.	P
AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	C
INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	C
INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	P
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	P
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	P
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	P
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	P
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	C
PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	P
OBSERVE DRILLING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT.	C
VERIFY DRILLED PILES WILL BE CONFINED BY MEANS OF COMPETENT ROCK, HARD COHESIVE SOILS, OR VERY DENSE GRANULAR SOILS PER CBC 1810.3.13 AND AS APPROVED BY THE GEOTECHNICAL ENGINEER OF RECORD.	C
VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM ELEMENT DIAMETERS, LENGTHS, AND ADEQUATE END-BEARING STRATA CAPACITY. RECORD CONCRETE OR GROUT VOLUMES.	C

(C) = CONTINUOUS SPECIAL INSPECTION  
(P) = PERIODIC SPECIAL INSPECTION

ADDITIONALLY, CONTRACTOR SHALL SUBMIT TO OWNER CERTIFIED MILL TEST REPORTS FOR DEFORMED CONCRETE REINFORCING STEEL TO ASSURE COMPLIANCE WITH ACI 318 SECTION 21.1.5.2.

REVISIONS DURING CONSTRUCTION			
NO.	DATE	BY	CHK
0	9-27-13	BWF	CS LH

ISSUED FOR CONSTRUCTION

**Northeast Utilities Service Co.**  
FOR  
**CONNECTICUT LIGHT & POWER COMPANY**

TITLE  
**LINE 1151 SOUTH END - GLENBROOK  
115-kV UNDERGROUND TRANSMISSION LINE  
S.E. TRANSITION STRUCTURE FOUNDATION  
STAMFORD, CONNECTICUT**

DATE	BY	CHK	APP
05-10-2013	BWF	CS	LH
05-10-2013			

H-SCALE N.T.S. V-SCALE Z-1-2

R.E. PROJ. NUMBER 000-51.326 NUSCO 01515-60001



NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP
-	-	-	-	-	-	-