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September 12, 2017

Robert Stein, Chairman
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: Petition No. 1286
West Brookfield Reliability Project
Monthly Construction Progress Report – August 2017

Dear Chairman Stein:

On behalf of The Connecticut Light and Power Company dba Eversource Energy (“Eversource”) and pursuant to the Development and Management Plan specific to the West Brookfield substation expansion, Eversource hereby provides a copy of the Monthly Construction Progress Report for the month of August 2017.

The Project Construction Progress Table is also included in Attachment 1.

Please contact me at (86)728-4527 with any questions that you and other Council member may have on this report.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kathleen M. Shanley". The signature is fluid and cursive, with a large loop at the end.

Enclosures

Petition 1286
West Brookfield Reliability Project
Monthly Construction Progress Report
August 2017

WEST BROOKFIELD SUBSTATION

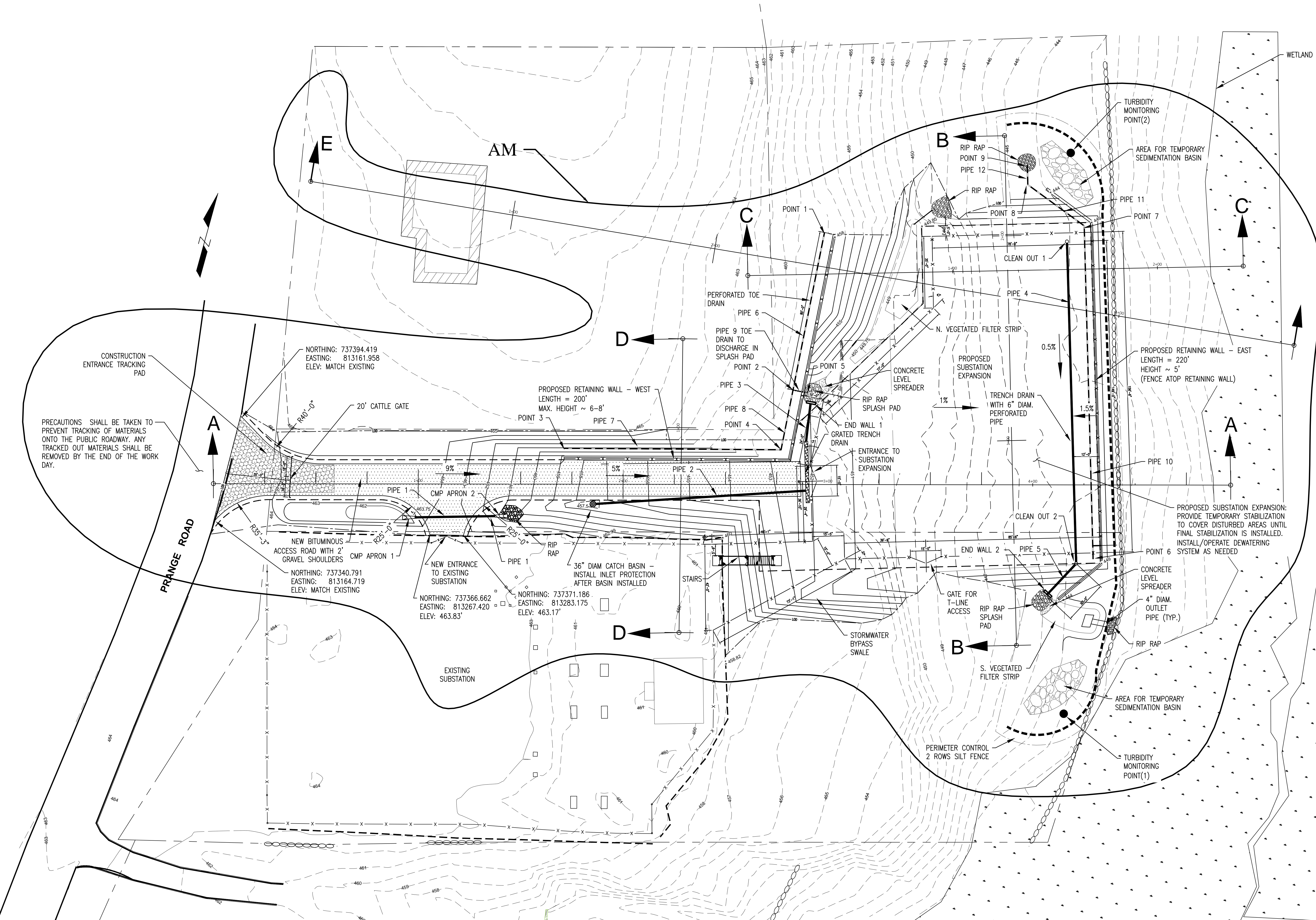
Demolition crews removed the house, its foundations, above-ground pool, shed, etc., that were previously located in the substation yard expansion area. The yard expansion area was cleared and grubbed and the site was rough graded and made ready for construction. Excavation for both the retaining walls and expansion yard equipment footings was completed. The eastern retaining wall was erected and 80% of expansion yard foundations were formed and poured. The manhole, conduits and ground grid in the new yard are approximately 50% complete. The new duct banks connecting the existing and expansion yard are approximately 50% complete. Within the existing substation, excavation to relocate conduits to the control house has been completed. Footings for the new switch structure in the existing yard were completed. New conduits have been installed within the existing yard to replace conduits being removed for the new foundation installation.

MINOR D&M PLAN CHANGES

Prior to the beginning of construction, a deficiency with the eastern retaining wall drainage for the expansion yard was identified. To resolve the issue and to ensure no hydrostatic pressure on that retaining wall would compromise its integrity, an additional drainage pipe was installed within the limit of disturbance draining to a new rip rap pad at the north of that retaining wall. See attached "11801-11010-REV AM ADDITIONS" showing the eastern retaining wall area modification.

Petition 1286 West Brookfield Reliability Project Monthly Construction Progress Report - Attachment 1	
Substation Construction	
Site Development	70%
Foundation Installation	60%
Steel Erection	0%
Capacitor Installation	0%
Cable Installation	0%
Test Energization	0%
Total % Complete	20%

6/7/2017 4:32 PM - peter.falmon - C:\BC-Workspace\EVERSOURCE\Projects\CONTROLLED\NOI\1801-11010.dwg - REV AM Additions
 ES: VER: 05/2010



- EARTHWORK & MATERIAL QUANTITY ESTIMATES:**
- TOPSOIL/EXISTING MATERIAL STRIP = 3,140 CY
 - CUT = 4,220 CY
 - FILL = 3,890 CY
 - NET MATERIAL CUT = 330 (HAUL OFF OR WASTE ON SITE)
 - AGGREGATE FOR ACCESS ROAD = 112 CY
 - BITUMINOUS ASPHALT CONCRETE FOR ACCESS ROAD = 3,770 SF OR 50 TONS
 - TRAP ROCK FOR SUBSTATION PAD = 290 CY
 - TOPSOIL TO BE REUSED ON SITE = 2,080 CY
 - TOTAL PROPERTY AREA = 2.71 ACRES
 - LIMIT OF DISTURBANCE = 1.13 ACRES
 - RE-EXPANSION AREA OF IMPERVIOUS FILL = 0.08 ACRES
 - POST-EXPANSION AREA OF IMPERVIOUS FILL = 0.19 ACRES

- THE ABOVE ESTIMATES WERE MADE USING THE FOLLOWING ASSUMPTIONS:
1. 2-FOOT DEPTH OF TOPSOIL AND EXISTING MATERIALS TO BE STRIPPED ON SITE.
 2. BITUMINOUS ASPHALT CONCRETE FOR ACCESS ROAD TO TYPICAL ACCESS ROAD DETAIL ON DWG 11801-11011, CONSISTING OF 2 COURSES OF 2" LIFT CLASS HMA S-0.75.
 3. BITUMINOUS ASPHALT CONCRETE ASSUMED TO HAVE A DENSITY OF 115 LBS. PER SQUARE YARD PER INCH.
 4. SUBSTATION GRAVEL PAD TO BE CONSTRUCTED WITH 4" TRAP ROCK PER EVERSOURCE SUBSTATION STANDARD 5.E.1.
 5. NO ADJUSTMENT TO THE QUANTITIES WERE MADE FOR EXPANSION OR SHRINKAGE.
 6. ALL OTHER GRADED AREAS ASSUMED BE INSTALLED WITH 4" TOPSOIL.

- NOTES:**
1. SURVEYED DRAWING PROVIDED TO MARS BY REALTIME UTILITY ENGINEERS ON 9/28/2016.
 2. MONTGOMERY ASSOCIATES-RESOURCE SOLUTIONS, LLC (MARS) IS NOT THE PROJECT CIVIL ENGINEER, REGISTRANT, OWNER, CONTRACTOR, OR PERMITEE.
 3. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS BEFORE BIDDING OR CONSTRUCTION.
 4. EROSION AND SEDIMENT CONTROLS DEPICTED IN PLAN NO'S 11801-11010, 11011 & 11015 HAVE BEEN DESIGNED BY MARS. THESE REPRESENT THE MINIMUM REQUIREMENTS. SHOULD ADDITIONAL OR MODIFIED EROSION CONTROL AND STABILIZATION MEASURES BE NECESSARY TO CONTROL THE TRANSPORT OF POLLUTANTS FROM THE SITE VIA STORMWATER THE CONTRACTOR SHALL PROVIDE, INSTALL, MAINTAIN, AND INSPECT ADDITIONAL CONTROLS AS NEEDED.
 5. ALL UNDERGROUND PIPE SHALL BE HS-20 RATED.

- REFERENCE DRAWINGS:**
- 11801-10001 FOUNDATION & PLOT PLAN
 - 11801-10005 YARD EXPANSION FOUNDATION PLAN
 - 11801-11006 FENCE PLAN
 - 11801-11009 RETAINING WALL FOUNDATION DETAILS
 - 11801-54015 EXTERIOR STAIRS STEEL
 - 11801-33014PG10 POWER CABLE PLAN AND PROFILE
 - 11801-33005 CONDUIT PLAN
 - 11801-11011 GRADING CROSS SECTIONS
 - 11801-33012 YARD EXPANSION CONDUIT PLAN

LEGEND

- EXISTING MINOR CONTOURS
- - - EXISTING MAJOR CONTOURS
- x - PROPOSED MINOR CONTOURS
- x - PROPOSED MAJOR CONTOURS
- - - EXISTING GRAVEL EXTE1"=20'
- LIMIT OF DISTURBANCE
- EXISTING FENCELINE
- PROPOSED FENCELINE
- PARCEL BOUNDARIES
- EXISTING RETAINING WALL
- PROPOSED RETAINING WALL
- PROPOSED SPOT ELEVATION

STORM WATER PIPE SCHEDULE

PIPE	STR. UP	INVERT UP	STR. DOWN	INVERT DOWN	DIAMETER	MATERIAL	LENGTH
1	CMP APRON 1	462.00'	CMP APRON 2	461.00'	6"	CMP	40'-0"
2	CATCH BASIN	454.50'	GRADED TRENCH	451.50'	6"	PVC	102'-8"
3	GRADED TRENCH	451.25'	END WALL 1	451.00'	12"	PVC	19'-6"
4	CLEAN OUT 1	446.05'	CLEAN OUT 2	445.16'	6"	PVC	148'-9"
5	CLEAN OUT 2	445.16'	END WALL 2	445.00'	6"	PVC	32'-7"
6	POINT 1	456.00'	POINT 2	451.75'	6"	PVC	80'-0"
7	POINT 3	456.00'	POINT 4	452.63'	6"	PVC	105'-11"
8	POINT 4	452.63'	POINT 2	451.75'	6"	PVC	29'-9"
9	POINT 2	451.75'	POINT 5	451.25'	6"	PVC	8'-0"
10	POINT 6	444.20'	POINT 7	444.03'	6"	PVC	161'-10"
11	POINT 7	444.03'	POINT 8	444.01'	6"	PVC	27'-5"
12	POINT 8	444.01'	POINT 9	444.00'	6"	PVC	7'-6"

STORM WATER STRUCTURE SCHEDULE

STRUCTURE	NORTHING	EASTING	RIM ELEVATION
CMP APRON 1	737372.231	813257.055	462.50
CMP APRON 2	737384.753	813295.045	461.00
CATCH BASIN	737404.601	813338.930	458.00
GRADED TRENCH (UP)	737436.562	813438.965	452.14
GRADED TRENCH (DOWN)	737464.908	813429.143	451.84
END WALL 1	737484.061	813425.552	453.50
CLEAN OUT 1	737598.629	813529.397	449.05
CLEAN OUT 2	737457.957	813577.842	449.05
END WALL 2	737428.597	813563.759	447.00
POINT 1	737564.853	813407.309	456.00
POINT 2	737485.317	813415.729	451.75
POINT 3	737426.426	813317.409	456.00
POINT 4	737457.318	813418.693	452.63
POINT 5	737486.159	813423.685	451.25
POINT 6	737451.511	813578.538	444.20
POINT 7	737604.508	813525.871	444.03
POINT 8	737613.368	813499.957	444.01
POINT 9	737620.459	813497.516	444.00

SITE DEVELOPMENT NOTES:

1. HORIZONTAL SURVEY DATUM REFERS TO THE CONNECTICUT STATE PLANE COORDINATE SYSTEM NAD83.
2. VERTICAL SURVEY DATUM REFERS TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
3. UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATION DEPICTED HEREIN HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING AND OTHER DATA SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES, GOVERNMENTAL AGENCIES, AND/OR OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN THE NATURE, ADDITIONALLY, OTHER SUCH UNDERGROUND FEATURES MAY EXIST ON THE SITE., THE EXISTENCE OF WHICH ARE UNKNOWN. THE EXISTENCE, SIZE AND LOCATION OF ALL SUCH FEATURES MUST BE DETERMINED AND VERIFIED IN THE FIELD BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.
4. THE CONTRACTOR SHALL CONDUCT ALL EARTH DISTURBING ACTIVITIES IN A MANNER TO MITIGATE SOIL EROSION AND SEDIMENT LOSS. THE LOSS, THE WORK, AND EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL AND THE NORTHEAST UTILITIES BEST MANAGEMENT PRACTICES MANUAL; CONNECTICUT DATED DECEMBER 2001. ALL TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED PRIOR TO ANY SITE DISTURBANCE AND SHALL BE LEFT IN PLACE UNTIL THE COMPLETION OF THE PROJECT OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
5. CONTRACTOR SHALL ADJUST EROSION AND SEDIMENTATION MEASURES TO MAINTAIN SEDIMENTATION AND EROSION CONTROL CONSISTENT WITH THE STORMWATER POLLUTION CONTROL PLAN PREPARED FOR THIS PROJECT.
6. THE SITE DEVELOPMENT CONTRACTOR SHALL COORDINATE AND SCHEDULE HIS SITE GRADING ACTIVITIES WITH THE OWNER. THE CONSTRUCTION LIMIT OF THE PROJECT EXTENDS TO THE LIMIT OF DISTURBANCE LINE, GRADING AND EARTHWORK LIMIT OF DISTURBANCE (LOD) AREA TOTAL = 1.13 ACRES.
7. AREAS WITHIN THE EXISTING SUBSTATION THAT ARE DISTURBED DURING CONSTRUCTION AND EXPANDED SUBSTATION AREA, INCLUDING AREAS 4-FT OUTSIDE THE NEW FENCE LINE, SHALL BE SURFACED WITH 4-INCH THICK LAYER OF TRAP ROCK (GRAVEL) ON PROPERLY PREPARED SUBGRADE PER EVERSOURCE STANDARDS.
8. CONTRACTOR SHALL INSTALL 4-INCHES OF TOPSOIL AND SEED IN AREAS WITHIN THE LIMITS OF DISTURBANCE THAT ARE NOT OTHERWISE SURFACED WITH GRAVEL.
9. PROPOSED CONTOURS AND SPOT ELEVATIONS INDICATED REFER TO TOP OF FINISHED GRADE, UNLESS OTHERWISE NOTED.
10. ACCORDING TO FEMA FLOOD INSURANCE RATE MAP (FIRM) NUMBERS 0909C0503H DATED DECEMBER 17, 2010, THE PROJECT IS LOCATED WITHIN ZONE X: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.
11. GEOTECHNICAL INFORMATION BASED UPON GEOTECHNICAL REPORT ENTITLED "GEOTECHNICAL STUDY FOR PROPOSED EXPANSION OF WEST BROOKFIELD SUBSTATION, 85 PRANGE ROAD, BROOKFIELD, CT" DATED JANUARY 18, 2007.
12. CONTRACTOR SHALL NOT HAVE ANY PERMANENT IMPACTS TO WETLANDS OR ADJACENT PROPERTIES DURING CONSTRUCTION.
13. CONTRACTOR SHALL INSTALL TURF REINFORCEMENT MATS ON NEW 3' H: 1' V EARTH SLOPES (NORTH AMERICAN GREEN SC250 OR APPROVED EQUAL).
14. SUBSTATION EXPANSION SURFACE AREA SHALL BE GRADED TO DRAIN STORMWATER RUNOFF AWAY FROM THE PROPOSED RETAINING WALL SYSTEM.
15. SITE DEVELOPMENT AS-BUILT SURVEY REQUIRED UPON COMPLETION OF SITE WORK CONSTRUCTION SCOPE. AS-BUILT DRAWINGS SHALL INCLUDE A NOTE TO REFERENCE THE FINAL RETAINING WALL DESIGN DRAWINGS AND CALCULATIONS.
16. REFER TO DRAWINGS SERIES 17605-11009 FOR RETAINING WALL DESIGN AND FENCE DETAILS.
17. SITE DEVELOPMENT WORK SHOULD ADHERE TO ES DESIGN STANDARD SUB010 - SUBSTATION SITE DEVELOPMENT AND CONSTRUCTION STANDARD SUB210.
18. COORDINATES SHOULD BE USED AS LAST RESORT, DIMENSIONS SHOULD BE REFERENCED FROM PROPOSED BASE LINES.
19. EXISTING SITE SURVEY NEEDS TO BE VERIFIED WITH EVERSOURCE SITE SURVEY BEFORE COMMENCING CONSTRUCTION.

REV AM ADDITIONS (NEW DRAWING)

REVISIONS DURING CONSTRUCTION

REV	DATE	DESCRIPTION	BY	CHK	APP
AM	6/17	ADD CAP BANK WD #404355WB (BY RUE)			

EVERSOURCE ENERGY

WEST BROOKFIELD 14H
YARD EXPANSION - GRADING & EROSION CONTROL
CIVIL PLAN
BROOKFIELD, CT

REV	RUE	CHK	SL	CHK	APP
DATE	4/17	DATE	4/17	DATE	4/17
H-SCALE	N.T.S.	SCALE	E	FIELD BOOK & SHEET	
V-SCALE	N.T.S.	SCALE	4:1	DATE	

NO. DATE AS BUILT REVISIONS BY CHK APP APP REF PROJ NUMBER 11801-11010 11801-11010