

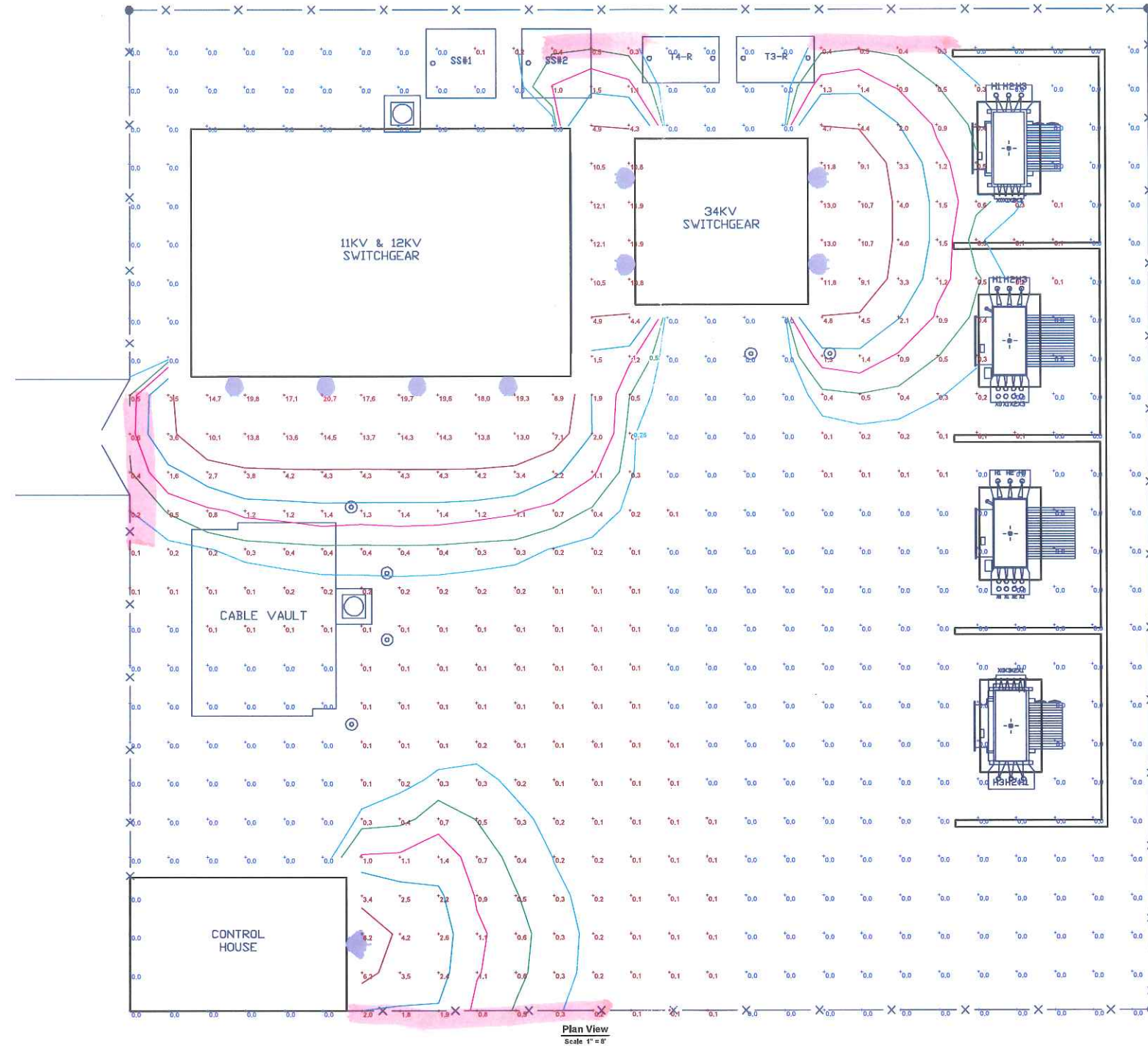
32-I-39

40 Union St.
Substation

~~Q117~~

LUMINAIRE SCHEDULE							
Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens LLF Watts
■	B	1	TWR1 70S	GENERAL PURPOSE BUILDING MOUNTED LUMINAIRE, 70W HPS, W/ CLEAR LAMP.	ONE 70-WATT CLEAR ED-17 HIGH PRESSURE SODIUM, HORIZONTAL POSITION.	TWR1_70S.ies	6300 0.86 94
■	D	4	TWR1C 70S FCV	BUILDING MOUNTED LUMINAIRE, FULL CUTOFF 70W HPS, W/ CLEAR LAMP AND FULL CUTOFF VISOR.	ONE 70-WATT CLEAR ED-17 HIGH PRESSURE SODIUM, HORIZONTAL POSITION.	TWR1C_70S_FCV.ies	6300 0.86 94
■	E	4	LS10C	BUILDING MOUNTED LUMINAIRE, FULL CUTOFF 70W HPS, W/ CLEAR LAMP AND FULL CUTOFF VISOR.	70 WATT HPS COATED HOR ED-17	LS10C.ies	6300 0.86 100

STATISTICS						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	1.2 fc	20.7 fc	0.0 fc	N/A	N/A



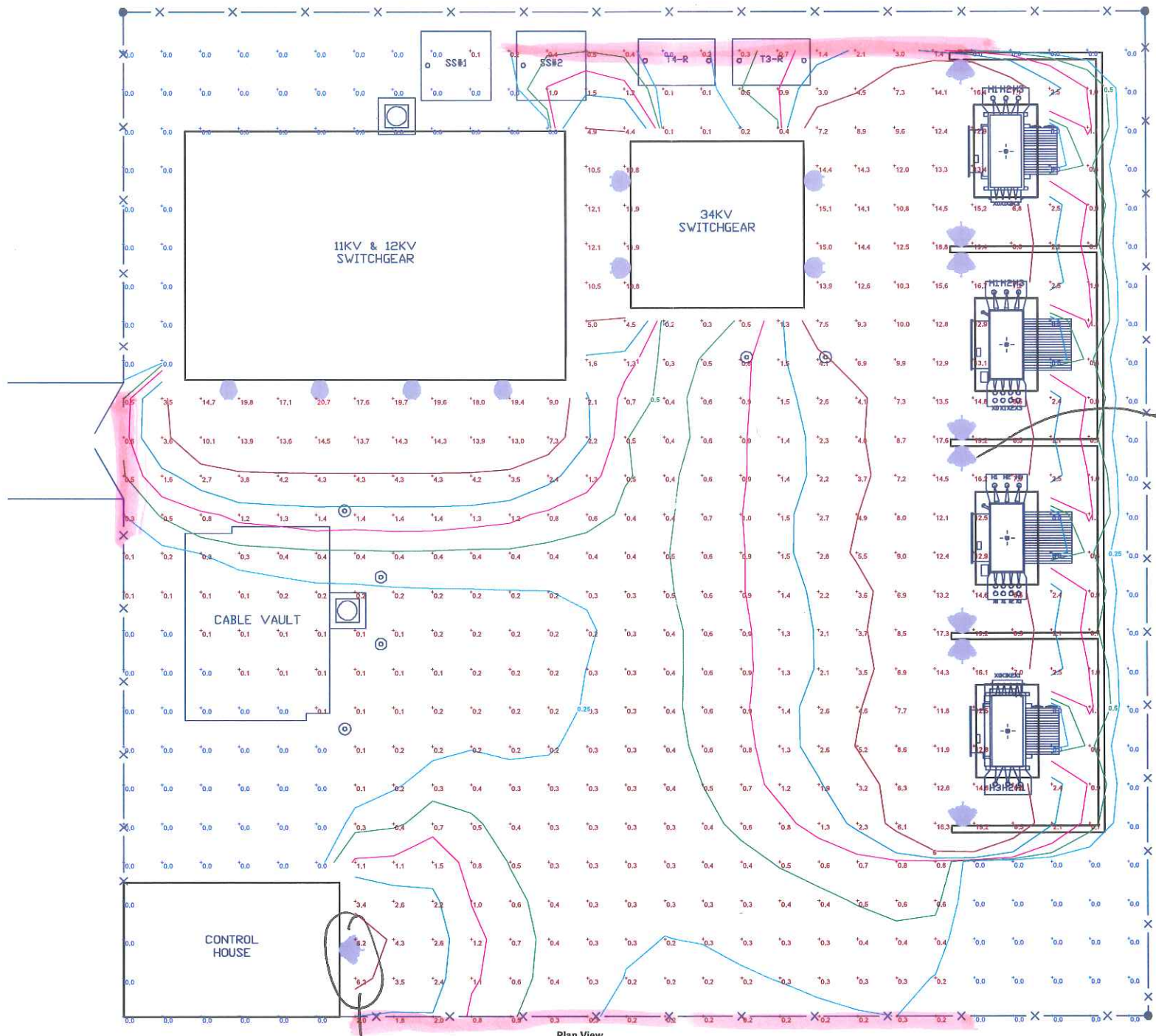
UNION STREET
YARD LIGHTING CALCULATIONS
BUILDING LIGHTING ONLY

Designer
MAD
Date
May 20 2013
Scale
NONE
Drawing No.

LUMINAIRE SCHEDULE							
Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens LLF Watts
■	A	8	TWR1 150S	GENERAL PURPOSE BUILDING MOUNTED LUMINAIRE, 150W HPS, W/ CLEAR LAMP.	ONE 150-WATT CLEAR ED-17 HIGH PRESSURE SODIUM, HORIZONTAL POSITION.	TWR1_150S.ies	15800 0.86 169
■	B	1	TWR1 70S	GENERAL PURPOSE BUILDING MOUNTED LUMINAIRE, 70W HPS, W/ CLEAR LAMP.	ONE 70-WATT CLEAR ED-17 HIGH PRESSURE SODIUM, HORIZONTAL POSITION.	TWR1_70S.ies	6300 0.86 94
■	D	4	TWR1C 70S FCV	BUILDING MOUNTED LUMINAIRE, FULL CUTOFF 70W HPS, W/ CLEAR LAMP AND FULL CUTOFF VISOR.	ONE 70-WATT CLEAR ED-17 HIGH PRESSURE SODIUM, HORIZONTAL POSITION.	TWR1C_70S_FCV.ies	6300 0.86 94
■	E	4	LS10C	BUILDING MOUNTED LUMINAIRE, FULL CUTOFF 70W HPS, W/ CLEAR LAMP AND FULL CUTOFF VISOR.	70 WATT HPS COATED HOR ED-17	LS10C.ies	6300 0.86 100

STATISTICS						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	2.9 fc	20.7 fc	0.0 fc	N/A	N/A

TM - 12.2
 MIN .2 fc
 MAX 5fc
 AVG 1.25
 UNIFORMITY 20:1
 TRESPASS < .1 fc



↓ existing 1/2 cutoff



UNION STREET
 YARD LIGHTING CALCULATIONS
 ALL SUBSTATION LIGHTING

Designer
 MAD
 Date
 May 20 2013
 Scale
 NONE
 Drawing No.

PERMITTING PLAN SET

SWITCHGEAR / TRANSFORMER REPLACEMENT PROJECT

UNION STREET SUBSTATION

UNION STREET
CUMBERLAND COUNTY
PORTLAND, MAINE



LOCATION MAP
SCALE: 1"=150'

APPLICANT / RECORD OWNER:



CENTRAL MAINE POWER COMPANY

83 EDISON DRIVE
AUGUSTA, ME 04336

PREPARED BY:



249 WESTERN AVENUE
AUGUSTA, ME 04330

DRAWING INDEX

CVR	COVER SHEET / LOCATION MAP / DWG INDEX
C-1	EXISTING CONDITIONS PLAN
C-2	SITE GRADING PLAN
C-3	SECTIONS & DETAILS
C-4	EROSION CONTROL NOTES & DETAILS
SS-1	SWITCHGEAR ELEVATIONS
S-1	BOUNDARY SURVEY

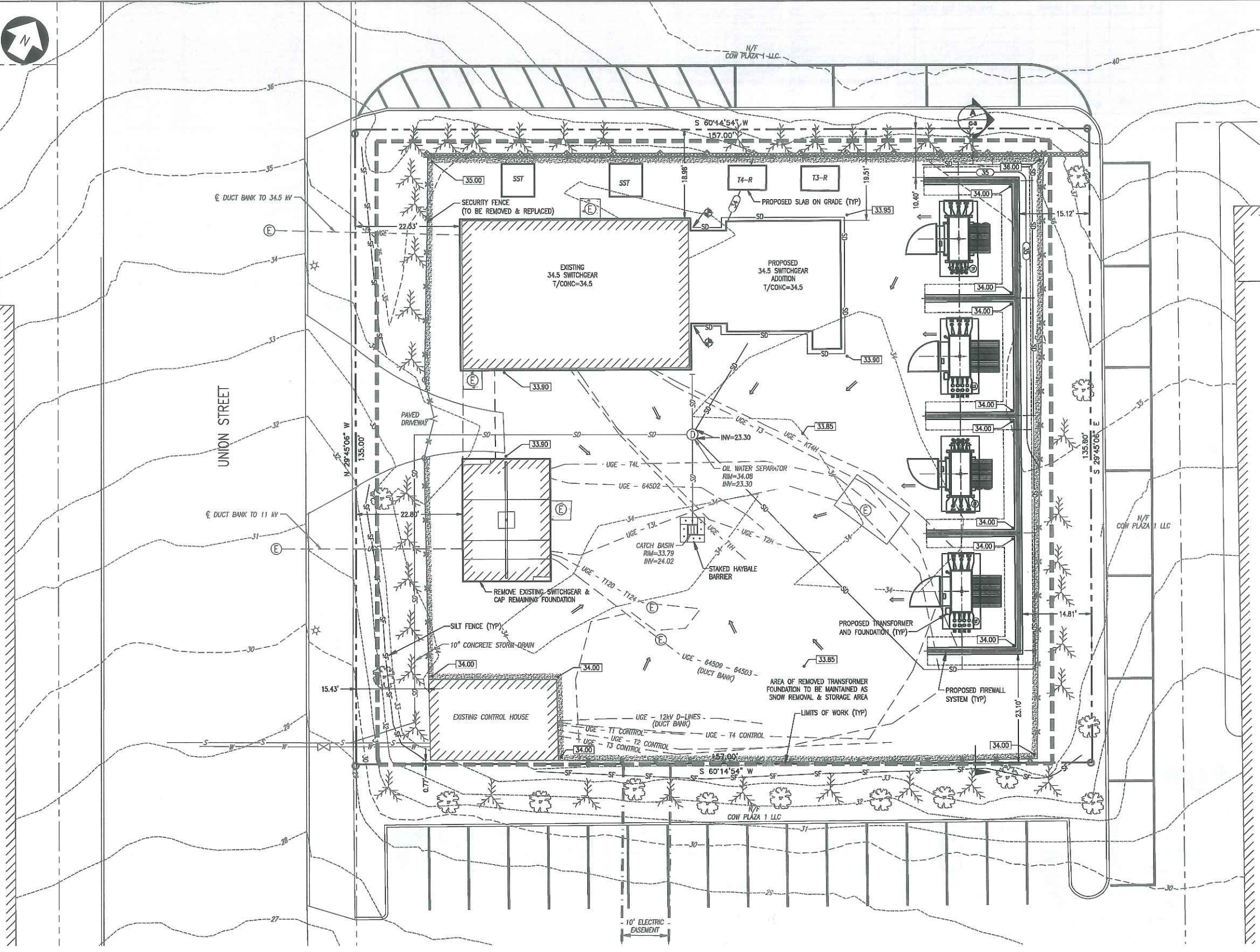
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ISSUED FOR PERMITTING
03/08/13

NO.	REVISION	DATE	BY	CK	P. E.
A	ISSUED FOR PERMITTING	03/08/13	CMH	MWC	DTB

ENGINEERING CONSULTANT - LAND - ADDRESS
CTRC
 249 WESTERN AVENUE
 AUGUSTA, ME 04330
 PROJECT NO: 178899

THIS DRAWING SHALL BE REVISED ON THE CAD SYSTEM ONLY



EXISTING	LEGEND	PROPOSED
---	PROPERTY/ROW LINE	---
---	EASEMENT LINE	---
---	CENTERLINE	---
---	EDGE OF PAVEMENT	---
---	CURBING	---
---	EDGE OF GRAVEL	---
---	EDGE OF CONCRETE	---
---	SUBSTATION YARD	---
---	SUBSTATION BASELINE	---
---	MAJOR CONTOUR	---
---	MINOR CONTOUR	---
---	BUILDING	---
---	CHAIN LINK FENCE	---
---	RETAINING WALL	---
S	SEWER	S
W	WATER	W
SD	STORM DRAIN	SD
6" CPP	UNDERDRAIN	6" CPP
12" CMP	CULVERT	12" CMP
---	UNDERGROUND ELECTRIC	---
---	OVERHEAD TRANSMISSION	---
○	IRON PIPE/REBAR	○
□	MONUMENT	□
△	SURVEY CONTROL POINT	△
184.50	SPOT ELEVATION	184.50
○	UTILITY POLE	○
○	SEWER MANHOLE	○
○	DRAINAGE MANHOLE	○
○	CATCH BASIN	○
○	ELECTRIC MANHOLE	○
○	SHUTOFF VALVE	○
○	HYDRANT	○
○	UTILITY POLE	○
○	LIGHT POLE	○
○	SILT FENCE	○
○	RIPRAP	○
---	SURFACE DRAINAGE FLOW	---
---	SIGN	---
---	TEMPORARY BENCH MARK	---
---	TEST BORING	---
---	TEST PIT	---
---	LIMITS OF WORK	---
---	CONIFEROUS TREE	---
---	DECIDUOUS TREE	---
---	SHRUB	---
---	CONNECT TO EXISTING	---

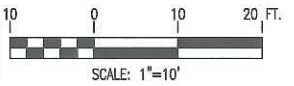
EARTHWORK NOTES

- ALL EXCAVATIONS, SHORING AND BRACING SHALL CONFORM TO OSHA REQUIREMENTS (29 CFR 1926).
- CONTAMINATED SOIL IS NOT EXPECTED TO BE ENCOUNTERED. IF CONTAMINATED SOIL IS ENCOUNTERED, IMMEDIATELY NOTIFY THE CMP ENGINEER.
- UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS. PRIOR TO WORK, THE CONTRACTOR SHALL, AT A MINIMUM, CONTACT "DIG SAFE" AT 1-888-344-7233 TO IDENTIFY OR VERIFY SIZE, DEPTH AND LOCATIONS OF ALL UNDERGROUND UTILITIES WITHIN THE VICINITY OF THE WORK AREA. CONTRACTOR SHALL PROTECT UTILITIES FROM DAMAGE AND SHALL NOT DISTURB UNDERGROUND UTILITIES TO REMAIN. IN THE EVENT THAT A UTILITY IS DAMAGED AS A RESULT OF THE CONTRACTOR'S WORK, THE DAMAGED UTILITY SHALL BE REPAIRED OR REPLACED AT THE EXPENSE OF THE CONTRACTOR. SHOULD UNCHARTED OR INCORRECTLY CHARTED PIPING OR OTHER UTILITIES BE ENCOUNTERED DURING EXCAVATION, CONTACT CMP IMMEDIATELY FOR DIRECTION.
- SOIL MATERIAL SHALL BE FREE OF COMBUSTIBLE, ORGANIC DEBRIS AND FROZEN MATERIALS AS WELL AS ROOTS, TOPSOIL, LOAM, TRASH, SNOW, ICE, WOOD AND OTHER OBJECTIONABLE MATERIALS.

SAFETY NOTES

- WORK WILL BE CARRIED OUT NEAR AND UNDER ENERGIZED EQUIPMENT. EXTREME CAUTION IS REQUIRED AT ALL TIMES. THE CONTRACTOR SHALL STRICTLY FOLLOW ALL CMP CO. SAFETY REQUIREMENTS. FAILURE TO DO SO WILL RESULT IN TERMINATION.

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 NOT FOR CONSTRUCTION



This document and any attachments are considered:
BUSINESS CONFIDENTIAL
PROTECTED CRITICAL INFRASTRUCTURE INFORMATION

NO.	REVISION	DATE	BY	CK	P. E.	P. E. No.	Professional Engineer Seal
A	ISSUED FOR PERMITTING	03/15/13	CMH	MWC	DTB	6796	

DESIGNED	TRC/SBL
DRAWN	TRC/KAV
CHECKED	JRS/
APPROVED	
REVIEWED	

SITE GRADING PLAN	
UNION STREET S/S	
PORTLAND	MAINE
CENTRAL MAINE POWER	SYSTEM ENGINEERING
DATE: 2/14/13	SCALE: AS NOTED
C-2	REV A

NO.	REVISION	DATE	BY	CK	P. E.
A	ISSUED FOR PERMITTING	03/08/13	CMH	MWC	DTB

ENGINEERING CONSULTANT - LOD - ADDRESS
CTRC
 240 WESTERN AVENUE
 AUGUSTA, ME 04330
 PROJECT NO. 133112

THIS DRAWING SHALL
 BE REVISION ON THE
 CADD SYSTEM ONLY

CONSTRUCTION SEQUENCE

- ESTABLISH CONSTRUCTION WORKSPACE LIMITS; IDENTIFY AND MARK SENSITIVE RESOURCES.
- PERFORM ALL WORK IN ACCORDANCE WITH MAINE EROSION CONTROL AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION BEST MANAGEMENT PRACTICES (2003) AND WIDE WINTER CONSTRUCTION GUIDELINES (1999).
- PRIOR TO USAGE, CONSTRUCT AND STABILIZE THE CONSTRUCTION ENTRANCE ON THE EXISTING PERMANENT ACCESS ROAD WITH A STONE PAD, MUD RACK, OR OTHER MATERIALS USED TO REDUCE THE TRACKING OR FLOWING OF SEDIMENT OFF THE SITE AND MAINTAIN UNTIL PAVING IS COMPLETED.
- CLEAR TIMBER AND BRUSH; DO NOT GRUB UNTIL JUST PRIOR TO PRELIMINARY GRADING AND ESTABLISHMENT AND STABILIZATION OF TEMPORARY OR PERMANENT DRAINAGE COURSES.
- INSTALL AND MAINTAIN SEDIMENT BARRIERS SUCH AS SILT FENCING AND/OR OTHER EROSION CONTROL BARRIERS ALONG THE DOWNHILL LIMIT OF WORK, AS SHOWN ON THE DRAWINGS. SEDIMENT BARRIER LOCATIONS MAY BE ADJUSTED IN THE FIELD BASED ON SITE CONDITIONS AS DETERMINED BY THE ENGINEERING INSPECTOR, WHERE SILT FENCING CANNOT BE TIED-IN PROPERLY DUE TO TREE ROOTS, ROCKS OR FROZEN GROUND, HAY BALES OR AN EROSION CONTROL MIX BERM MAY BE SUBSTITUTED. SILT FENCING WILL BE INSTALLED AFTER CLEARING BUT PRIOR TO GRUBBING AND GRADING ACTIVITIES. ANY EROSION ISSUES DEVELOPED DURING CLEARING WILL BE TEMPORARILY STABILIZED AS NECESSARY.
- STABILIZE PERMANENT ACCESS ROAD SURFACE, PARKING AREAS AND EQUIPMENT STORAGE AND LAYDOWN AREAS WITH MATTING, CRUSHED STONE OR GRAVEL SUBBASE AS NECESSARY TO MINIMIZE RUTTING AND AVOID PONDING.
- CONCURRENT WITH INITIATION OF SITE GRADING, CONSTRUCT AND STABILIZE TEMPORARY DRAINAGE SWALES, DIVERSION BERMS, CHECK DAMS, AND CULVERTS WITH TEMPORARY INLET AND OUTLET STRUCTURES TO MINIMIZE SEDIMENT IN SITE RUNOFF DURING THE CONSTRUCTION OF THE ROADWAY, DENIED IN ACCORDANCE WITH DETAILED NOTES BELOW.
- INSTALL PROPERLY SPACED STONE CHECK DAMS IN ANY SECTION OF DITCH WITHIN 24 HOURS OF FORMING, SHARPEN OR ROUGH GRADING THAT SECTION OF DITCH.
- MINIMIZE THE AMOUNT OF DISTURBANCE AT ANY ONE TIME BY STAGING CONSTRUCTION AS MUCH AS PRACTICAL FOR EFFICIENT CONSTRUCTION OF THE FACILITY. NATURAL VEGETATIVE BUFFERS OR STRIPS SHOULD BE LEFT IN PLACE WHERE FEASIBLE TO AID IN SEDIMENT RETENTION AND REDUCE EROSION POTENTIAL.
- STABILIZE ANY NEWLY GRADED SLOPE GREATER THAN EIGHT PERCENT AND ANY SECTION OF NEWLY CONSTRUCTED DITCH USING ANCHORED EROSION CONTROL BLANKETS OR OTHER APPROVED MULCHING TECHNIQUES WITHIN 24 HOURS. STABILIZE ANY SLOPE EXCEEDING EIGHT PERCENT AND BROUGHT TO FINAL GRADE WITHIN 24 HOURS USING THE APPROVED PERMANENT STABILIZATION MEASURES FOR SLOPES. STABILIZE ANY SECTION OF DITCH BROUGHT TO FINAL GRADE WITHIN 24 HOURS USING THE APPROVED PERMANENT STABILIZATION MEASURES FOR DITCHES.
- DUST CONTROL METHODS WILL BE EMPLOYED AFTER GRADING AND PRIOR TO FINAL STABILIZATION TO PREVENT THE BLOWING AND MOVEMENT OF DUST THROUGH THE APPLICATION OF WATER AND/OR CALCIUM CHLORIDE TO REDUCE WIND EROSION. REPETITIVE TREATMENT WILL BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL.
- APPLY TEMPORARY SEED AND MULCH TO ANY EXPOSED AREAS WHERE ACTIVITY IS NOT ANTICIPATED FOR 30 DAYS OR MORE, OR WHERE ACTIVITY HAS NOT OCCURRED WITHIN 30 DAYS. TEMPORARILY MULCH ANY EXPOSED AREAS WITHIN 100 FEET OF A WETLAND WHERE ACTIVITY IS NOT ANTICIPATED OR HAS NOT OCCURRED IN 7 DAYS.
- REMOVE EXCESS SPOILS FROM SITE THAT WILL NOT BE USED FOR THE FINAL DESIGN AND STABILIZATION. STOCKPILED SOILS THAT REMAIN IN PLACE FOR 48 HOURS OR MORE WILL BE CONTAINED WITH SEDIMENT BARRIERS SUCH AS SILT FENCE, HAY BALES OR EQUIVALENT. THE SEDIMENT BARRIERS SHALL BE ADEQUATELY LOCATED AND REINFORCED TO HANDLE A SIGNIFICANT RAIN EVENT AND THE POTENTIAL SLUMPING OF THE PILE. BETWEEN APRIL 15 AND OCTOBER 1, APPLY TEMPORARY SEED AND MULCH TO A STOCKPILE THAT IS NOT EXPECTED TO BE DISTURBED WITHIN 30 DAYS. APPLY ANCHORED MULCH DAILY, AS NEEDED, DURING WINTER CONSTRUCTION.
- INSPECT AND REPAIR EROSION CONTROL MEASURES DAILY IN AREAS OF ACTIVE CONSTRUCTION; OTHERWISE WEEKLY AND AFTER RAINFALL OF 1/8 INCH OR GREATER WITHIN A 24-HOUR PERIOD. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE BARRIER.
- MONITOR PUBLIC ROADS FOR SIGNS OF TRACKING OR SPILLING OF SPOIL MATERIAL AND CLEANUP AS NEEDED.
- COMPLETE FINAL GRADING AND STABILIZATION OF EARTHEN STRUCTURES SUCH AS DIVERSION BERMS, LEVEL SPREADERS AND SWALES THAT WILL CONTROL RUNOFF.
- FINISH GRADE AND REPLACE TOPSOIL OR LOAM IN DISTURBED AREAS. SEED AND MULCH DISTURBED AREAS WITHIN 6 DAYS OF FINAL GRADING.
- MAINTAIN ALL TEMPORARY EROSION CONTROLS AND SEDIMENT BARRIERS UNTIL VEGETATION HAS BEEN ESTABLISHED OVER 85-90% OF THE AREA TO BE REVEGETATED. RESEED SPARSILY VEGETATED AREAS.
- REMOVE ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ONCE THE SITE IS PERMANENTLY STABILIZED.

MULCH AND SEEDING SPECIFICATIONS

SUMMARY OF TEMPORARY AND PERMANENT MULCH APPLICATION REQUIREMENTS			
CONDITION	TIMING	MULCH TYPE ^{1,2}	APPLICATION RATES
TEMPORARY			
	IF NO ACTIVITY IN EXPOSED AREAS FOR 7 DAYS, OR PRIOR TO A STORM EVENT	STRAW MULCH OR WOOD FIBER MULCH	2 TONS/ACRES 2000 LB./ACRES
	ALL DISTRIBUTED AREAS OF THE CONSTRUCTION WORKSPACE	STRAW MULCH OR WOOD FIBER MULCH	2 TONS/ACRES 2000 LB./ACRES ³
	ALL WORK AREAS EXPOSED ARE TO BE MULCHED DAILY EACH TIME SOIL IS DISTURBED	STRAW MULCH OR WOOD FIBER MULCH	3 TONS/ACRES 2000 LB./ACRES
PERMANENT			
	ON ALL EXPOSED AREAS AFTER SEEDING TO STABILIZE THE SOIL SURFACE	CRIMPED STRAW MULCH OR PAPER MULCH OR WOOD FIBER MULCH	2 TONS/ACRES 1500 LB./ACRES ⁴ 2000 LB./ACRES
	WOOD CHIP APPLICATION AREAS	CRIMPED STRAW MULCH OR PAPER MULCH OR WOOD FIBER MULCH	2 TONS/ACRES 1500 LB./ACRES ⁴ 2000 LB./ACRES

NOTES:
 1. STRAW AND HAY MULCH MAY BE USED INTERCHANGEABLY, EXCEPT IN WETLAND AREAS WHERE STRAW MULCH WILL BE REQUIRED.
 2. DOUBLE RATE OF WOOD FIBER MULCH WHEN USED IN CRITICAL AREAS.
 3. STRAW, HAY, OR HYDROMULCH (WOOD FIBER OR PAPER MULCH AS APPROPRIATE) WILL PROVIDE 90 PERCENT GROUND COVERAGE.
 4. PAPER MULCH IS ACCEPTABLE FOR USE DURING THE GROWING SEASON. ON SLOPES >30 PERCENT AND IN AREAS WHERE VEGETATION HAS NOT ESTABLISHED WELL, ADDITIONAL HAY MULCH WILL BE ADDED AS A WINTERIZING MEASURE.

MULCH ANCHORING REQUIREMENTS

- ON SLOPES GREATER THAN 3 PERCENT, HAY OR STRAW MULCH WILL BE FIRMLY ANCHORED INTO THE SOIL UTILIZING ONE OF THE FOLLOWING METHODS:
 -CRIMPING WITH A STRAIGHT OR NOTCHED MULCH CRIMPING TOOL (FARM DISCS WILL NOT BE ALLOWED);
 -TRACK WALKING WITH DEEP-CLEATED EQUIPMENT OPERATING UP AND DOWN THE SLOPE (MULCH CRIMPED PERPENDICULAR TO THE SLOPE) ON SLOPES <25 PERCENT;
 -APPLICATION OF MULCH NETTING;
 -APPLICATION OF 500 LB./ACRE OF WOOD FIBER MULCH OVER STRAW/HAY MULCH; AND
 -COMMERCIALY AVAILABLE TACKIFIERS (EXCEPT WITHIN 100 FEET OF WATERBODIES OR WETLANDS).

SEED MIX SPECIFICATIONS		
SEED MIX NAME	SEED MIX COMPONENTS	LB./ACRE ¹
TEMPORARY SEED MIX	ANNUAL RYEGRASS	40
PERMANENT UPLAND SEED MIX	REDTOP	4
	CREeping RED FESCUE	40
	TALL FESCUE	40
	BROADFOOT TREFOIL	16
WOODCHIP APPLICATION SEED MIX	CREeping RED FESCUE	20
	REDTOP	4
	TALL FESCUE	30
	CROWNVEITCH	30
WETLAND SEED MIX	ANNUAL RYEGRASS	40
	WINTER RYEGRASS	120

NOTES:
 1. INCREASE SEEDING RATES 10X WHEN HYDROSEEDING
 2. WINTER RYE WILL BE ADDED TO PERMANENT UPLAND MIX AT A RATE OF 120 LB./ACRE BETWEEN OCTOBER 1 AND APRIL 15

SUMMARY OF SEEDING REQUIREMENTS		
CONDITION	TIMING ^{1,2}	SEED MIX
TEMPORARY SEEDING ³	TEMPORARY SEED BETWEEN APRIL 15 AND OCTOBER 1 ONLY. DISTURBED AREAS OR SPOIL STOCKPILES WILL BE SEEDD IMMEDIATELY IF FURTHER DISTURBANCE IS NOT EXPECTED FOR 30 DAYS OR MORE.	ANNUAL RYEGRASS
PERMANENT SEEDING ^{3,4}		
UPLAND PORTIONS OF THE CONSTRUCTION AREA	DISTURBED AREA WILL BE SEEDD WITHIN 6 DAYS OF FINAL GRADING.	PERMANENT UPLAND MIX
SLOPES > 3:1	DISTURBED AREA WILL BE SEEDD IMMEDIATELY AFTER SEEDBED PREPARATION	PERMANENT UPLAND MIX
WETLANDS	DISTURBED WETLANDS WILL BE SEEDD WITHIN 6 DAYS OF FINAL GRADING.	ANNUAL RYEGRASS
WOODCHIP APPLICATION AREAS	DISTURBED AREA WILL BE SEEDD WITHIN 6 DAYS OF FINAL GRADING.	WOODCHIP APPLICATION SEED MIX
WINTER DORMANT SEEDING	DORMANT SEED BETWEEN OCTOBER 1 AND APRIL 15 ONLY. NO SEEDING WILL OCCUR IF SNOW DEPTHS EXCEED 1 INCH.	PERMANENT UPLAND MIX PLUS WINTER RYEGRASS

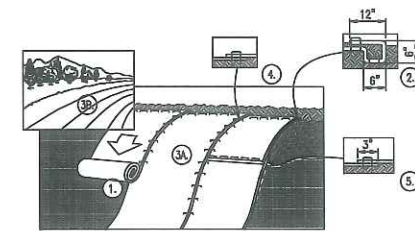
NOTES:
 1. WEATHER CONDITIONS PERMITTING.
 2. AREAS THAT DO NOT SUCCESSFULLY REVEGETATE WITHIN APPROPRIATE PERIOD OF TIME WILL BE RESEEDD AS NECESSARY.
 3. LOOSEN COMPACTED SOIL TO A MINIMUM DEPTH OF 4 INCHES.
 4. TOP DRESS WITH 6 INCHES LOAM, AS NEEDED.

FERTILIZER AND LIMESTONE REQUIREMENTS.

IN GENERAL, FERTILIZER AND LIME APPLICATION RATES WILL FOLLOW THE GUIDELINES IDENTIFIED BELOW UNLESS SITE SPECIFIC SOIL TESTS IDENTIFY THE NEED FOR ALTERNATIVE FERTILIZER/LIME APPLICATION RATES. FERTILIZER WILL BE APPLIED TO UPLAND AREAS PRIOR TO SEEDING AT A RATE OF 800 POUNDS PER ACRE USING 10-20-20 (N-P2O5-K2O) OR EQUIVALENT. GROUND LIMESTONE (EQUVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) WILL BE APPLIED AT A RATE OF 3 TONS PER ACRE. AN EQUIVALENT MIXTURE OF FERTILIZER AND LIME MAY BE APPLIED USING THE HYDROSEEDING METHOD. NO LIME OR FERTILIZER WILL BE APPLIED TO WETLANDS.

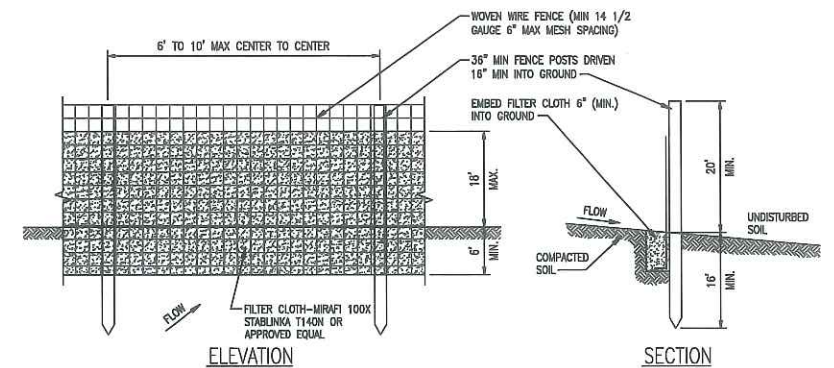
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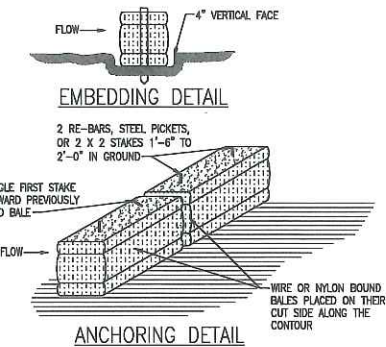
- PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
 - BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
 - ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
 - THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
 - CONSECUTIVE BLANKETS SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.
- NOTE:
 *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

EROSION CONTROL BLANKET INSTALLATION
 NOT TO SCALE

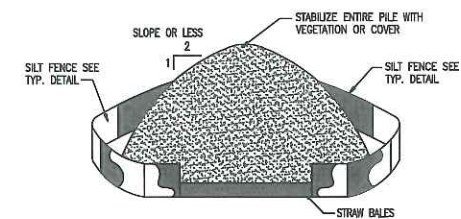


- WOVEN WIRE FENCE TO BE FASTENED TO FENCE POSTS WITH WIRE TIES OR STAPLES.
- FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MIDSECTION.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN BUILD-UP REACHES 1/3 THE HEIGHT OF THE FENCE.

SILT FENCE DETAILS
 NOT TO SCALE



STAKED STRAW BALE BARRIER DETAIL
 NOT TO SCALE



- INSTALLATION NOTES:
- AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
 - MAXIMUM SLOPE OF STOCKPILE SHALL BE 2H:1V.
 - UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAW BALES, THEN STABILIZED WITH VEGETATION OR COVERED.

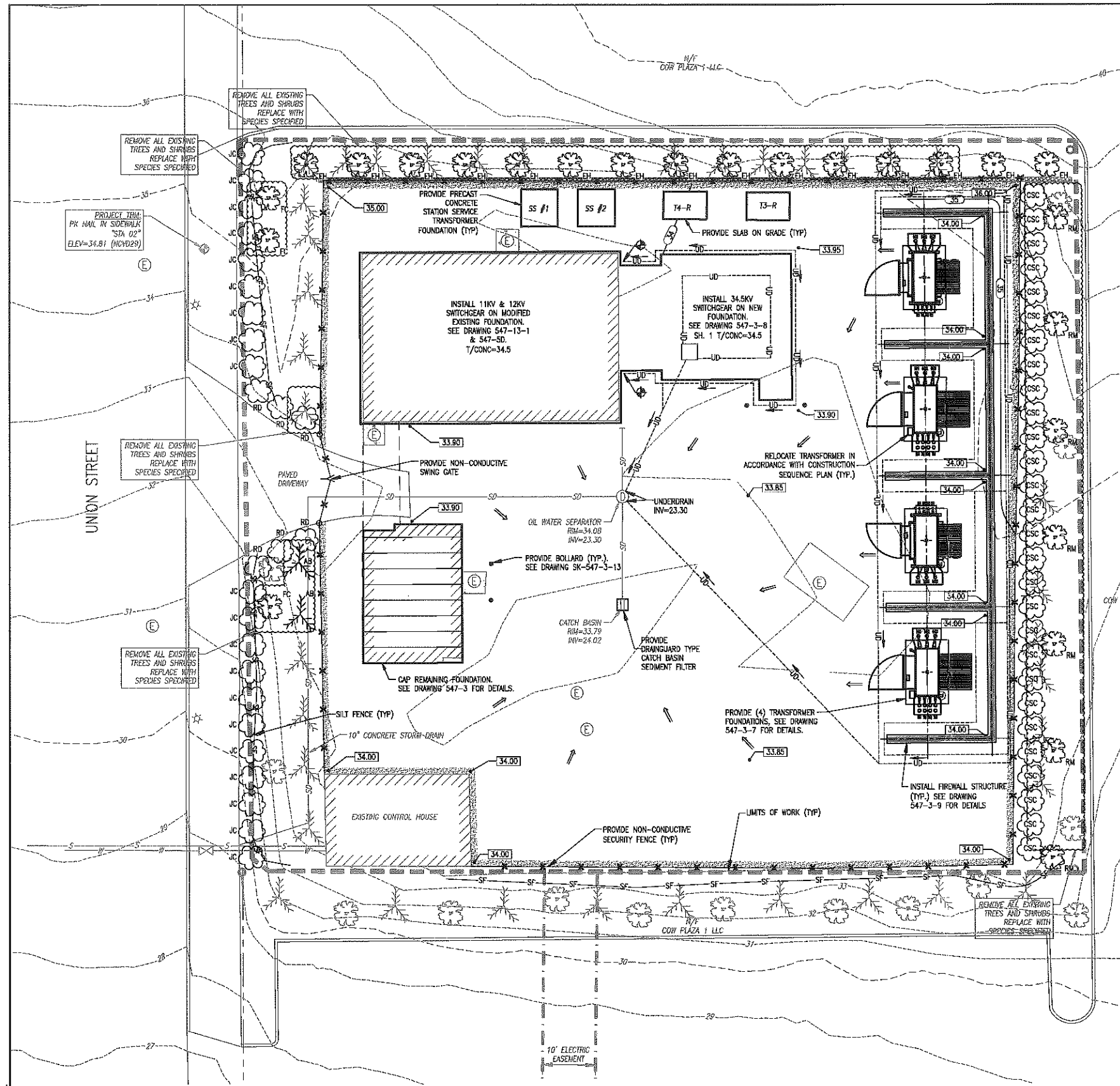
TYPICAL SOIL STOCKPILE
 NOT TO SCALE

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NO.	REVISION	DATE	BY	CK	P. E.	P. E.	Professional Engineer Seal	DESIGNED TRC/SGL	EROSION CONTROL NOTES & DETAILS UNION STREET S/S
								DRAWN TRC/KAV	
								CHECKED TRC/	PORTLAND MAINE
								APPROVED	
								REVIEWED	CENTRAL MAINE POWER COMPANY SYSTEM ENGINEERING
A	ISSUED FOR PERMITTING	03/15/13	CMH	MWC	DTB	8786			CENTRAL MAINE POWER

DATE: 2/14/13
 SCALE: AS NOTED

C-4
 REV A



NOTES:

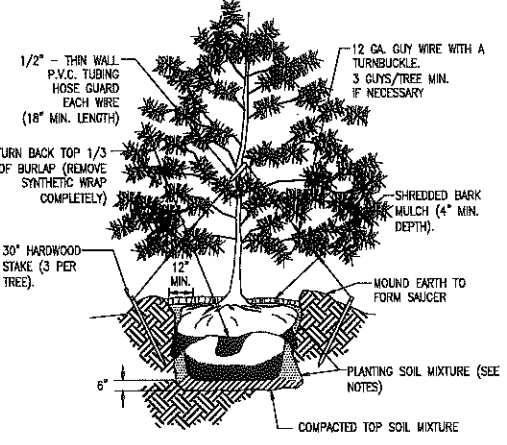
1. ALL TREES THAT ARE TO REMAIN ON SITE SHALL BE PRUNED.
2. ANY TREES DAMAGED OR KILLED DURING CONSTRUCTION SHALL BE REPLACED WITH THE SAME SIZE AND SPECIES THAT WAS ORIGINALLY ON SITE.
3. PRIOR TO PLANTING, WEEDS SHALL BE SPRAYED WITH ROUND-UP OR OTHER GENERIC HERBICIDE. HERBICIDE SHALL BE APPLIED BY A LICENSED PROFESSIONAL.
4. ALL PLANT MATERIALS SHALL CONFORM TO THE AMERICAN ASSOCIATION OF NURSERYMEN'S AMERICAN STANDARD FOR NURSERY STOCK (LATEST EDITION).
5. ALL PLANTS AND PLANTING BEDS SHALL RECEIVE A 3" DEEP LAYER OF SHREDDED HARDWOOD BARK MULCH. MULCH IN PLANTING BEDS SHALL BE CONTINUOUS.
6. ALL PLANTS SHALL BE GUARANTEED FOR ONE YEAR AFTER INSTALLATION BY THE INSTALLER. ANY PLANT THAT DIES OR IS IN POOR CONDITION DURING THAT TIME SHALL BE REPLACED WITH THE SAME SIZE AND SPECIES AS THE ORIGINAL PLANTING.
7. PLANTING SHALL OCCUR BETWEEN APRIL 15 - MAY 30 OR SEPTEMBER 1 - OCTOBER 15.
8. PLANT MATERIAL SHALL BE WATERED AT THE TIME OF INSTALLATION. REGULAR WATERING SHALL BE PROVIDED TO ENSURE THE ESTABLISHMENT, GROWTH AND SURVIVAL OF ALL PLANTS.

LEGEND

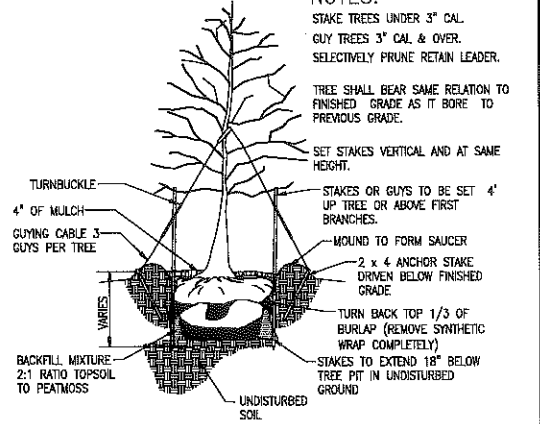
EXISTING	PROPOSED
S	S
W	W
SD	SD
SF	SF
(Symbol)	(Symbol)
(Symbol)	(Symbol)
(Symbol)	(Symbol)
(Symbol)	(Symbol)

NOTES:

- STAKE TREES UNDER 3" CAL. GUY TREES 3" CAL. & OVER. SELECTIVELY PRUNE RETAIN LEADER.
- TREE SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS GRADE.
- SET STAKES VERTICAL AND AT SAME HEIGHT.
- STAKES OR GUY TO BE SET 4' UP TREE OR ABOVE FIRST BRANCHES.
- MOUND TO FORM SAUCER 2 x 4 ANCHOR STAKE DRIVEN BELOW FINISHED GRADE.
- TURN BACK TOP 1/3 OF BURLAP (REMOVE SYNTHETIC WRAP COMPLETELY).
- STAKES TO EXTEND 18" BELOW TREE PIT IN UNDISTURBED GROUND.



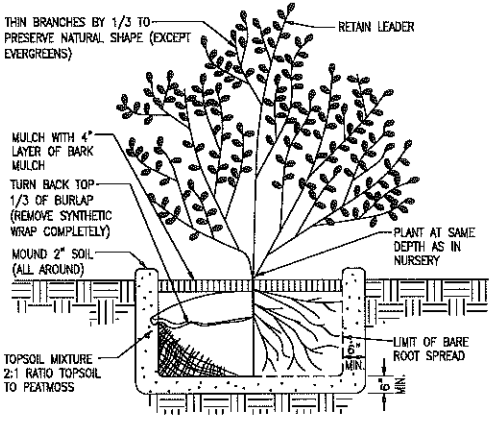
EVERGREEN TREE PLANTING DETAIL
N.T.S.



DECIDUOUS TREE PLANTING DETAIL
N.T.S.

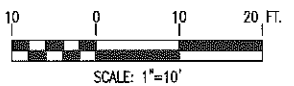
PLANTING SCHEDULE

KEY	QUAN.	SCIENTIFIC NAME	COMMON NAME	SIZE	CALIPER	ROOT
Buffer/Screen Tree Species						
EH	15	Carpinus betulus	European Hornbeam	4-5 ft. min.	N/A	1/1B
RM	7	Acer rubrum	Armstrong Red Maple	4-5 ft. min.	N/A	#2B
AB	2	Thuja occidentalis smaragd	Emerald Green Arborvitae	4-5 ft. min.	N/A	BB
FC	3	Malus centurion	Flowering Crabapple	7-8 ft. min.	1.5-1.75 in. min.	BB
RD	6	Rhododendron english roseum	Rhododendron	2-2.5 ft. min.	N/A	#3
JC	20	Juniperus horizontalis Bar Harbor	Creeping Juniper	2-2.5 ft. min.	N/A	#5
CSC	28	Clethra alnifolia (Sixteen Candles)	Sweet Pepperbush	15-18 in. min.	N/A	BB



SHRUB PLANTING DETAIL
N.T.S.

PRELIMINARY
IFB ISSUED FOR BID
NOT FOR CONSTRUCTION



REV	DESCRIPTION	DATE	DES	CHK	APP
A	IFB ISSUED FOR PERMITTING	05/13/13	AMW	TRC	

REFERENCE DRAWING NUMBER	DESCRIPTION

Professional Engineer Seal

CENTRAL MABE POWER CO.
IBERDROLA USA

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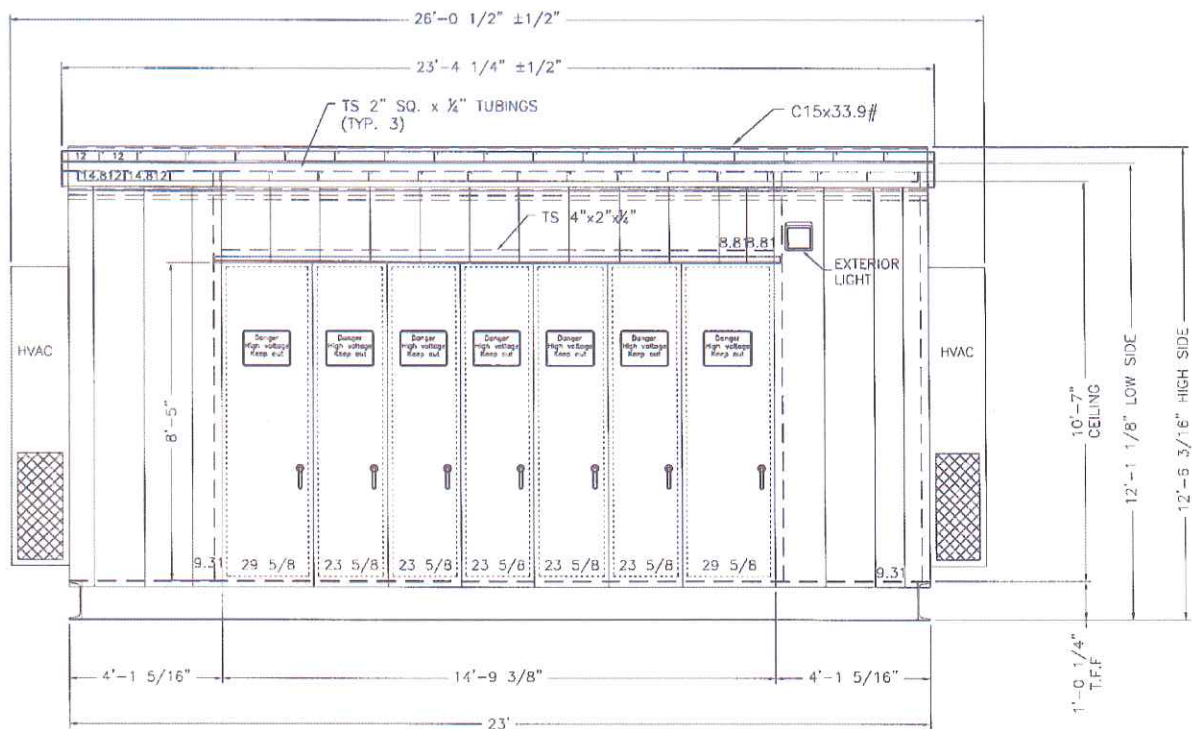
LANDSCAPE PLAN UNION STREET SUBSTATION	
UNION ST. S/S	PORTLAND, ME
DR. TRC/AMW/	FILE: SK-547-S-13.DWG
CK. TRC/MC	NO.
APP. CMP/DOX	SK-547-3-13
APP. DATE: 6/08/13	SCALE: AS NOTED

CADD Drawings DO NOT REVISE MANUALLY.

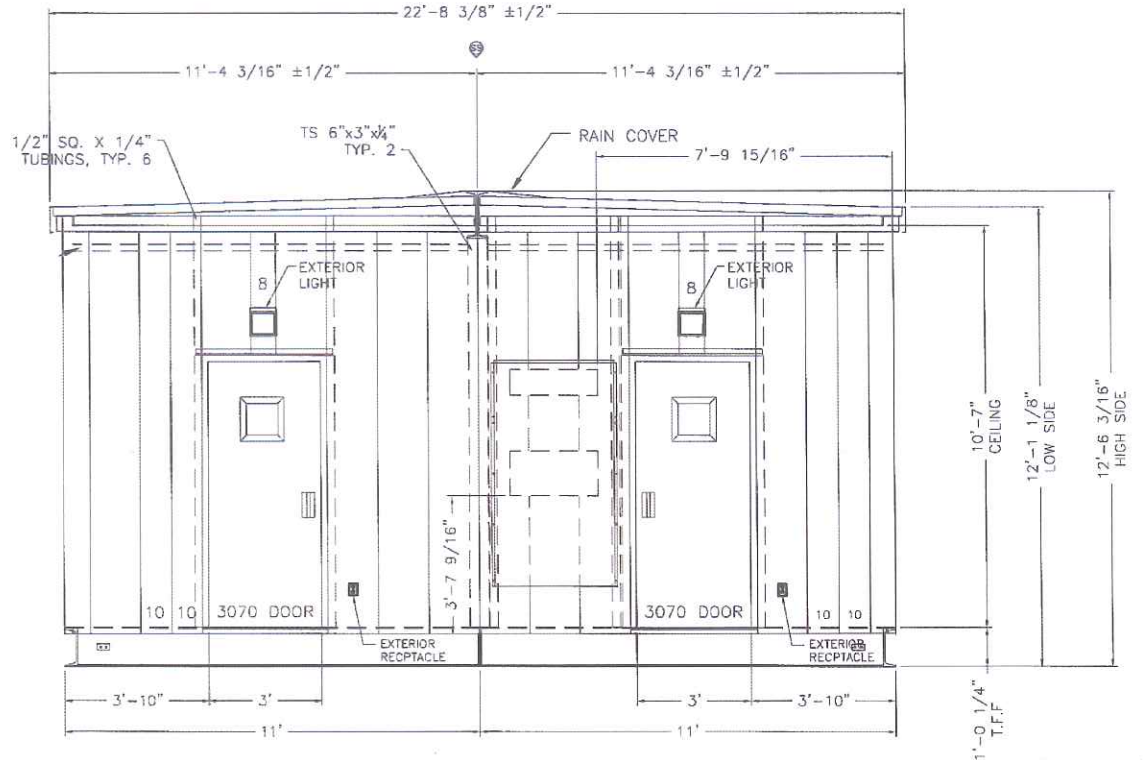
NO.	REVISION	DATE	BY	CK	P. E.
A	ISSUED FOR PERMITTING	03/08/13	CMH	MWC	DTB

ENGINEERING CONSULTANT - LOCAL - BUSINESS
CTRC
 249 WESTERN AVENUE
 PORTLAND, MAINE 04103
 PROJECT NO. 183172

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 CAD SYSTEM ONLY

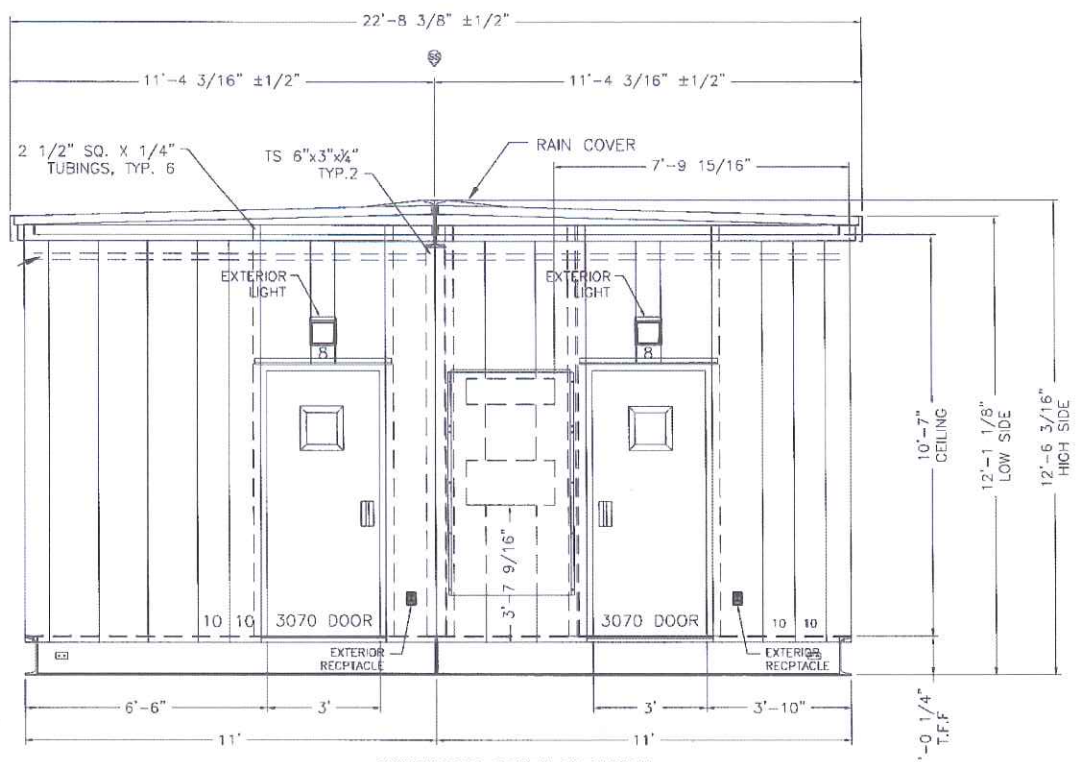


SWITCHGEAR WEST ELEVATION
 NOT TO SCALE

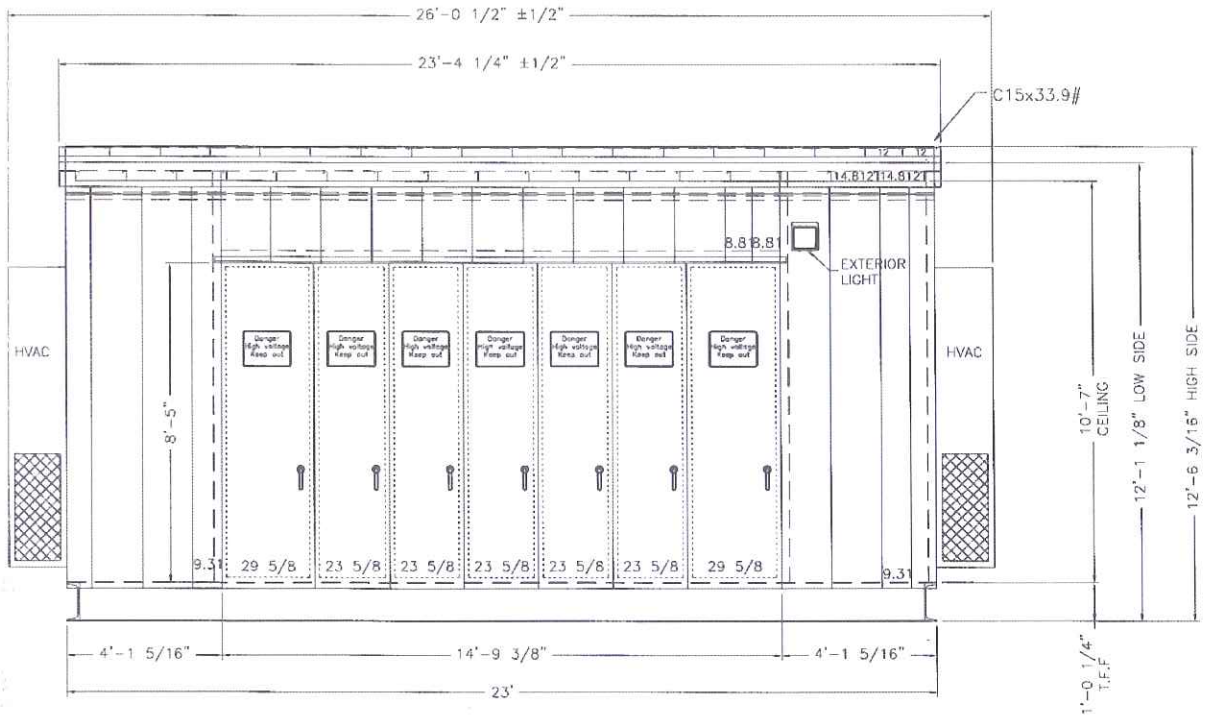


SWITCHGEAR NORTH ELEVATION
 NOT TO SCALE

Coron



SWITCHGEAR SOUTH ELEVATION
 NOT TO SCALE



SWITCHGEAR EAST ELEVATION
 NOT TO SCALE

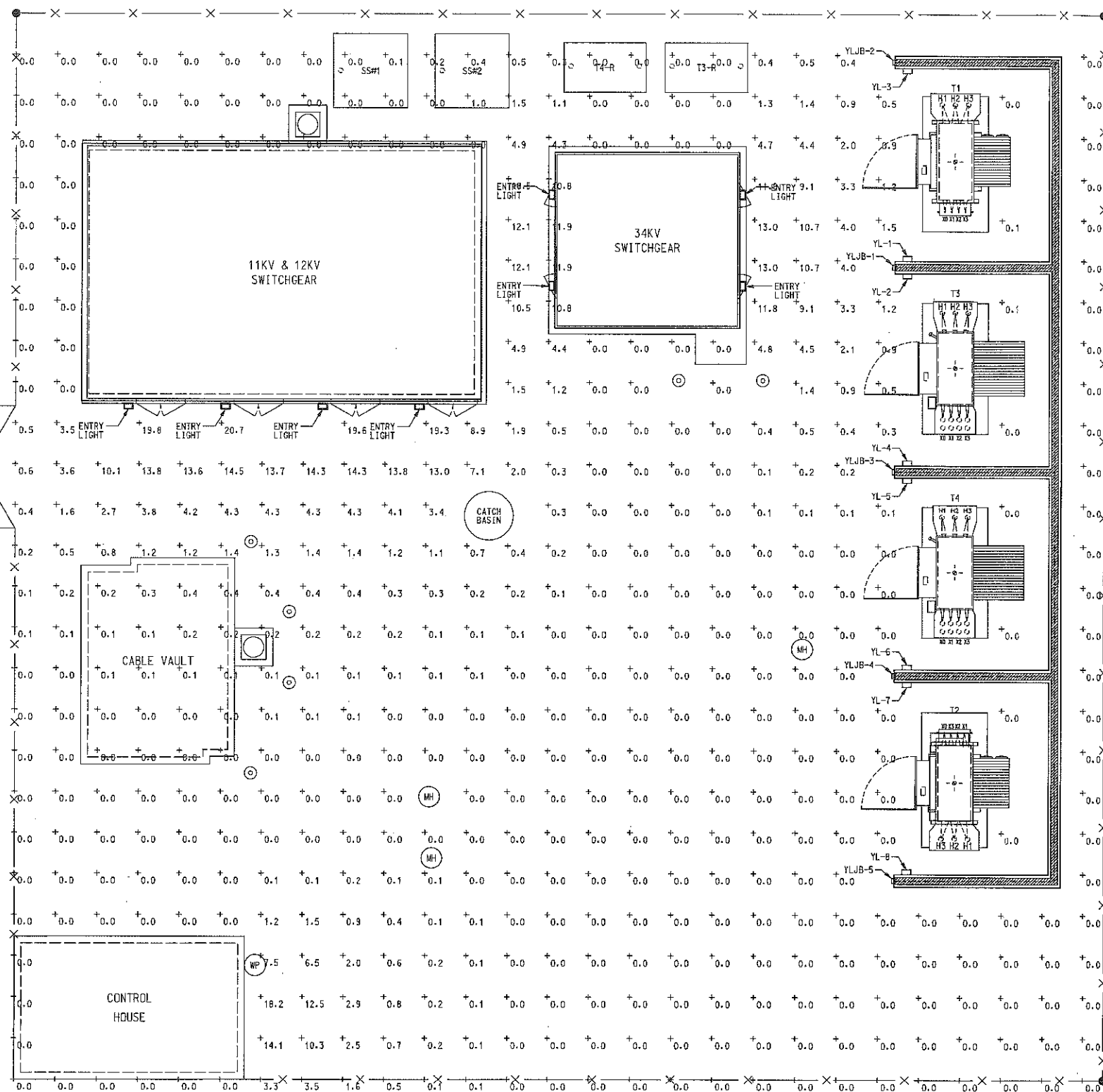
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NO.	REVISION	DATE	BY	CK	P. E.	P. E. No.
A	ISSUED FOR PERMITTING	03/08/13	CMH	MWC	DTB	6798

Professional Engineer Seal	DESIGNED TRC/SGL
	DRAWN TRC/KAV
	CHECKED TRC/
	APPROVED
REVIEWED	DATE: 2/14/13 SCALE: AS NOTED

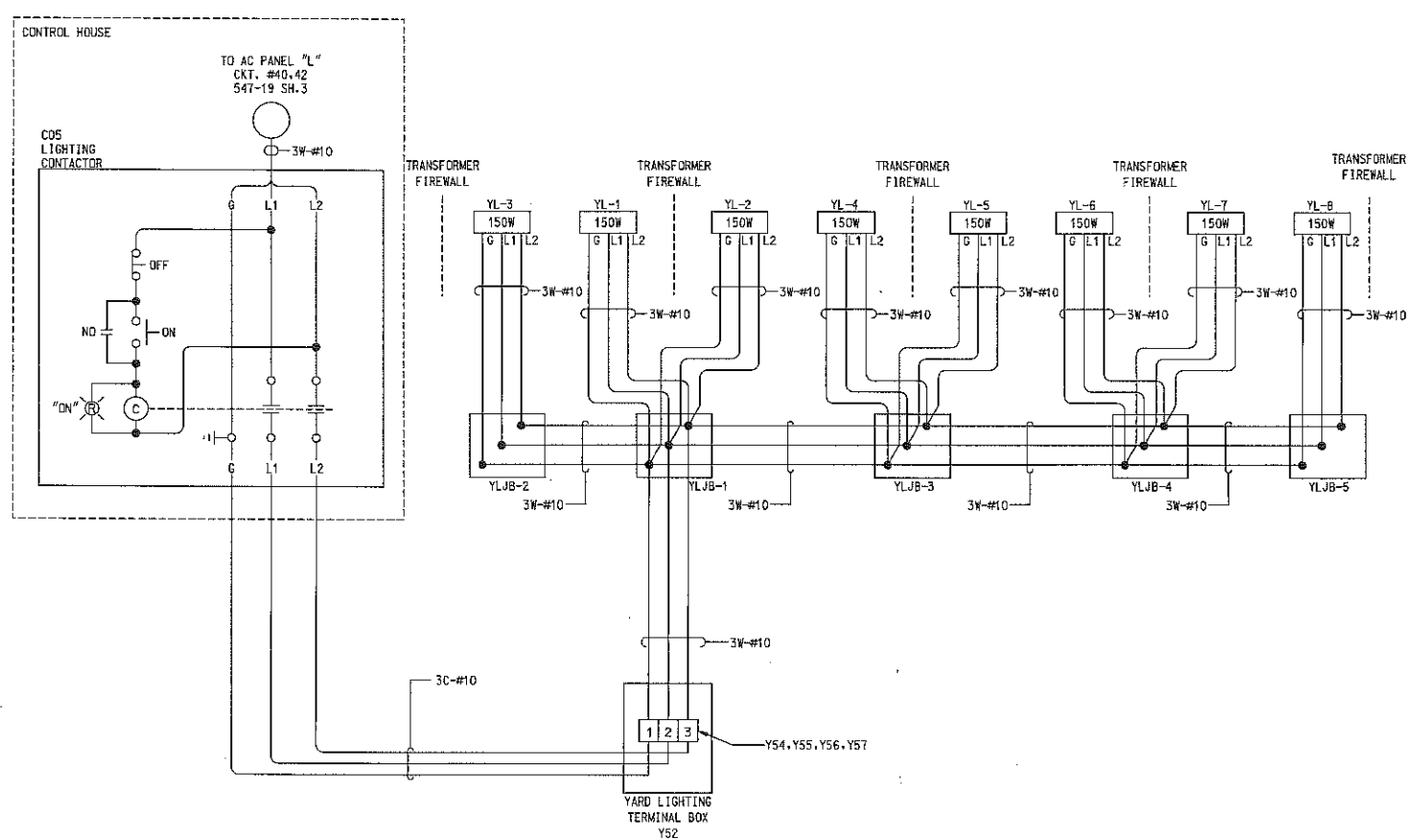
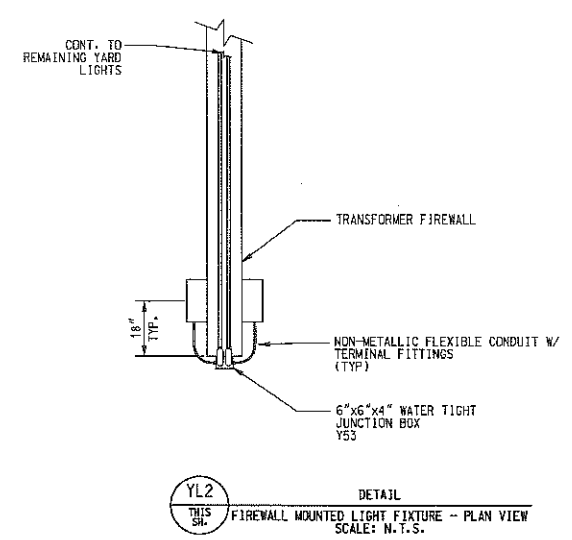
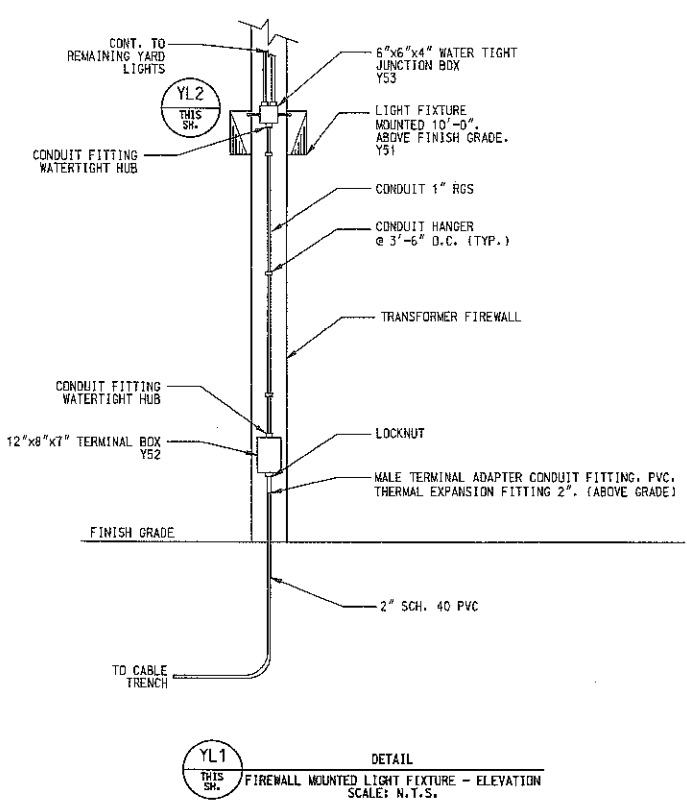
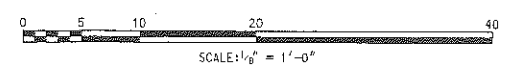
SWITCHGEAR ELEVATIONS	
UNION STREET S/S	
PORTLAND	MAINE
CENTRAL MAINE POWER COMPANY SYSTEM ENGINEERING	SS-1
DATE: 2/14/13 SCALE: AS NOTED	REV A



YARD LIGHTING PLAN
SCALE: 1/8" = 1'-0"

- NOTES:**
- SEE 547-12-1 FOR YARD MATERIAL AND SEE 547-12-3 FOR CONTROL HOUSE MATERIAL.
 - CALCULATIONS SHOWN DO NOT INCLUDE TRANSFORMER WORK LIGHTS MOUNTED ON THE BLAST WALLS.
 - TRANSFORMER WORK LIGHTS YL-1 THROUGH YL-8 MOUNTED ON THE BLAST WALLS WILL BE SWITCHED ON ONLY TEMPORARILY AS REQUIRED FOR MAINTENANCE AND EMERGENCY PURPOSES.

- LEGEND**
- Y51 150W 8 EA. TRANSFORMER LIGHTING FIXTURE 150W HPS, MULTI-TAP BALLAST
 - Y70 70W 8 EA. SWITCHGEAR ENTRY LIGHT, FURN. W/ SWGR, 70W HPS, 120VAC, WITH INTERNAL PHOTOCELL
 - C15 WP 1 EA. CONTROL HOUSE ENTRY LIGHT 70W HPS, W/ FULL CUTOFF VISOR.
 - YXX YARD MATERIAL MARK
 - CXX CONTROL HOUSE MATERIAL MARK
 - YL-X YARD LIGHT FIXTURE IDENTIFICATION



CENTRAL MAINE POWER CO.

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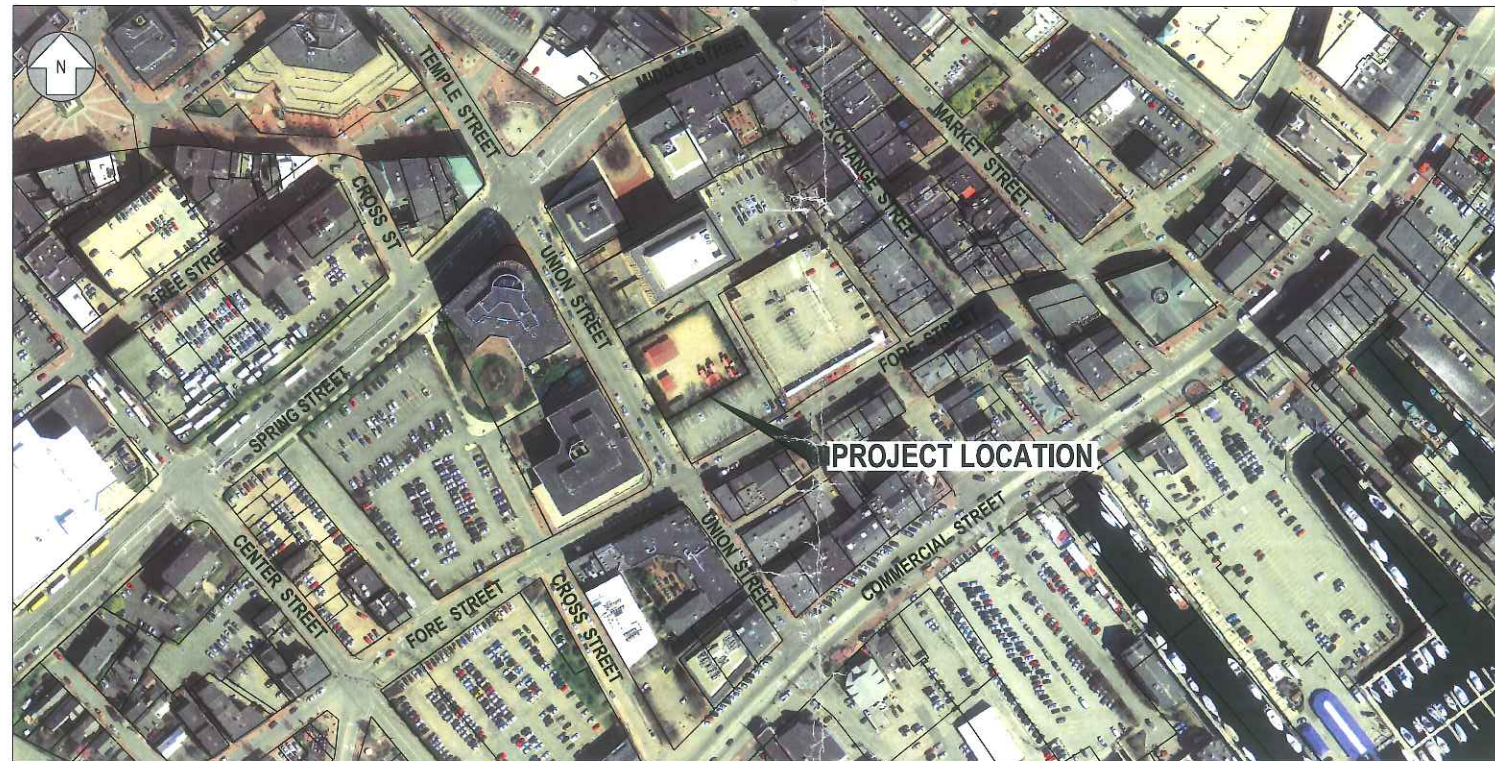
YARD LIGHTING PLAN

PERMITTING PLAN SET

SWITCHGEAR / TRANSFORMER REPLACEMENT PROJECT

UNION STREET SUBSTATION

UNION STREET
CUMBERLAND COUNTY
PORTLAND, MAINE



LOCATION MAP
SCALE: 1"=150'

APPLICANT / RECORD OWNER:



CENTRAL MAINE POWER COMPANY

83 EDISON DRIVE
AUGUSTA, ME 04336

PREPARED BY:



249 WESTERN AVENUE
AUGUSTA, ME 04330

DRAWING INDEX

CVR	COVER SHEET / LOCATION MAP / DWG INDEX
C-1	EXISTING CONDITIONS PLAN
C-2	SITE GRADING PLAN
C-3	SECTIONS & DETAILS
C-4	EROSION CONTROL NOTES & DETAILS
C-5	LANDSCAPING PLAN

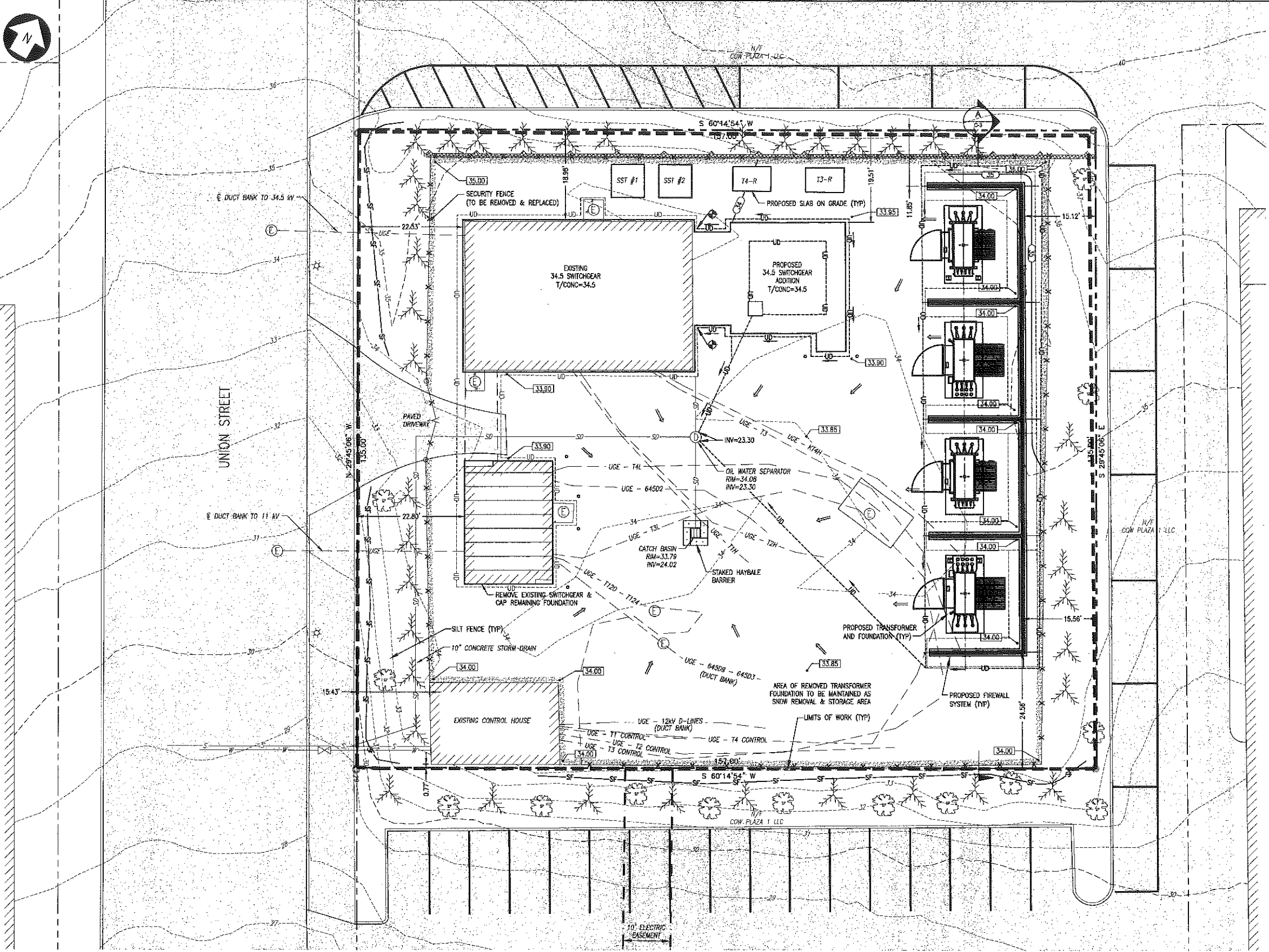
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ISSUED FOR PERMITTING
06/10/13

NO.	REVISION	DATE	BY	CK	P. E.
A	ISSUED FOR PERMITTING	03/08/13	CMH	MWC	DTB
B	RE-ISSUED FOR PERMITTING	06/10/13	CMH	MWC	DTB

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CTRC
 249 WESTERN AVENUE
 AUGUSTA, ME 04330
 PROJECT NO: 176899

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EXISTING	PROPOSED
PROPERTY/ROW LINE	PROPERTY/ROW LINE
EASEMENT LINE	EASEMENT LINE
CENTERLINE	CENTERLINE
EDGE OF PAVEMENT	EDGE OF PAVEMENT
CURBING	CURBING
EDGE OF GRAVEL	EDGE OF GRAVEL
EDGE OF CONCRETE	EDGE OF CONCRETE
SUBSTATION YARD	SUBSTATION YARD
SUBSTATION BASELINE	SUBSTATION BASELINE
MAJOR CONTOUR	MAJOR CONTOUR
MINOR CONTOUR	MINOR CONTOUR
BUILDING	BUILDING
CHAIN LINK FENCE	CHAIN LINK FENCE
RETAINING WALL	RETAINING WALL
SEWER	SEWER
WATER	WATER
STORM DRAIN	STORM DRAIN
UNDERDRAIN	UNDERDRAIN
CULVERT	CULVERT
UNDERGROUND ELECTRIC	UNDERGROUND ELECTRIC
OVERHEAD TRANSMISSION	OVERHEAD TRANSMISSION
IRON PIPE/REBAR	IRON PIPE/REBAR
MONUMENT	MONUMENT
SURVEY CONTROL POINT	SURVEY CONTROL POINT
SPOT ELEVATION	SPOT ELEVATION
UTILITY POLE	UTILITY POLE
SEWER MANHOLE	SEWER MANHOLE
DRAINAGE MANHOLE	DRAINAGE MANHOLE
CATCH BASIN	CATCH BASIN
ELECTRIC MANHOLE	ELECTRIC MANHOLE
SHUTOFF VALVE	SHUTOFF VALVE
HYDRANT	HYDRANT
UTILITY POLE	UTILITY POLE
LIGHT POLE	LIGHT POLE
SILT FENCE	SILT FENCE
R/R/RAP	R/R/RAP
SURFACE DRAINAGE FLOW	SURFACE DRAINAGE FLOW
SIGN	SIGN
TEMPORARY BENCH MARK	TEMPORARY BENCH MARK
TEST BORING	TEST BORING
TEST PIT	TEST PIT
LIMITS OF WORK	LIMITS OF WORK
CONFEROUS TREE	CONFEROUS TREE
DECIDUOUS TREE	DECIDUOUS TREE
SHRUB	SHRUB
CONNECT TO EXISTING	CONNECT TO EXISTING

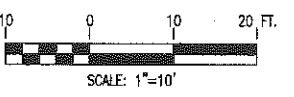
EARTHWORK NOTES

- ALL EXCAVATIONS, SHORINGS AND BRACING SHALL CONFORM TO OSHA REQUIREMENTS (29 CFR 1926).
- CONTAMINATED SOIL IS NOT EXPECTED TO BE ENCOUNTERED. IF CONTAMINATED SOIL IS ENCOUNTERED, IMMEDIATELY NOTIFY THE CMP ENGINEER.
- UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS. PRIOR TO WORK, THE CONTRACTOR SHALL, AT A MINIMUM, CONTACT "DIG SAFE" AT 1-888-344-7233 TO IDENTIFY OR VERIFY SIZE, DEPTH AND LOCATIONS OF ALL UNDERGROUND UTILITIES WITHIN THE VICINITY OF THE WORK AREA. CONTRACTOR SHALL PROTECT UTILITIES FROM DAMAGE AND SHALL NOT DISTURB UNDERGROUND UTILITIES TO REMAIN. IN THE EVENT THAT A UTILITY IS DAMAGED AS A RESULT OF THE CONTRACTOR'S WORK, THE DAMAGED UTILITY SHALL BE REPAIRED OR REPLACED AT THE EXPENSE OF THE CONTRACTOR. SHOULD UNEXPECTED OR INCORRECTLY CHARTERED PIPING OR OTHER UTILITIES BE ENCOUNTERED DURING EXCAVATION, CONTACT CMP IMMEDIATELY FOR DIRECTION.
- SOIL MATERIAL SHALL BE FREE OF COMBUSTIBLE, ORGANIC DEBRIS AND FROZEN MATERIALS AS WELL AS ROOTS, TOPSOIL, LOAM, TRASH, SNOW, ICE, WOOD AND OTHER OBJECTIONABLE MATERIALS.

SAFETY NOTES

- WORK WILL BE CARRIED OUT NEAR AND UNDER ENERGIZED EQUIPMENT. EXTREME CAUTION IS REQUIRED AT ALL TIMES. THE CONTRACTOR SHALL STRICTLY FOLLOW ALL CMP CO. SAFETY REQUIREMENTS. FAILURE TO DO SO WILL RESULT IN TERMINATION.

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B	RE-ISSUED FOR PERMITTING	06/10/13	CMH	MWC	DTB	8796
A	ISSUED FOR PERMITTING	03/15/13	CMH	MWC	DTB	8796

Professional Engineer Seal
 STATE OF MAINE
 DANIEL T. BUTLER
 No. 6796
 LICENSED PROFESSIONAL ENGINEER

DESIGNED	TRC/SGL
DRAWN	TRC/KAV
CHECKED	TRC/
APPROVED	
REVIEWED	

SITE GRADING PLAN
UNION STREET S/S

PORTLAND	CENTRAL MAINE POWER COMPANY SYSTEM ENGINEERING	MAINE
REVIEWED	CENTRAL MAINE DATE: 2/14/13 SCALE AS NOTED	
		C-2 REV B

NO.	REVISION	DATE	BY	CHK	P.E.	DTS	DTB
A	ISSUED FOR PERMITTING	03/08/13	CMH	MWC			
B	RE-ISSUED FOR PERMITTING	06/10/13	CMH	MWC			

NO.	REVISION	DATE	BY	CHK	P.E.	DTS	DTB
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ENGINEERING CONSULTANTS - LTD. - ADDRESS
 249 WESTERN AVENUE
 AUGUSTA, ME 04330
 PROJECT NO: 133112
CTRC

THIS DRAWING SHALL
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 CAD SYSTEM ONLY

CONSTRUCTION SEQUENCE

- ESTABLISH CONSTRUCTION WORKSPACE LIMITS; IDENTIFY AND MARK SENSITIVE RESOURCES.
- PERFORM ALL WORK IN ACCORDANCE WITH MAINE EROSION CONTROL AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION BEST MANAGEMENT PRACTICES (2003) AND MAINE WATER CONSTRUCTION GUIDELINES (1999).
- PRIOR TO USAGE, CONSTRUCT AND STABILIZE THE CONSTRUCTION ENTRANCE ON THE EXISTING PERMANENT ACCESS ROAD WITH A STONE PAD, MUD RACK, OR OTHER MATERIALS USED TO REDUCE THE TRACKING OR FLOWING OF SEDIMENT OFF THE SITE AND MAINTAIN UNTIL PAVING IS COMPLETED.
- CLEAR TIMBER AND BRUSH; DO NOT GRUB UNTIL JUST PRIOR TO PRELIMINARY GRADING AND ESTABLISHMENT AND STABILIZATION OF TEMPORARY OR PERMANENT DRAINAGE COURSES.
- INSTALL AND MAINTAIN SEDIMENT BARRIERS SUCH AS SILT FENCING AND/OR OTHER EROSION CONTROL BARRIERS ALONG THE DOWNHILL LIMIT OF WORK, AS SHOWN ON THE DRAWINGS. SEDIMENT BARRIER LOCATIONS MAY BE ADJUSTED IN THE FIELD BASED ON SITE CONDITIONS AS DETERMINED BY THE ENGINEERING INSPECTOR. WHERE SILT FENCES CANNOT BE TIED-IN PROPERLY DUE TO TREE ROOTS, ROCKS OR FROZEN GROUND, HAY BALES OR AN EROSION CONTROL MIX BERM MAY BE SUBSTITUTED. SILT FENCING WILL BE INSTALLED AFTER CLEARING BUT PRIOR TO GRUBBING AND GRADING ACTIVITIES. ANY EROSION ISSUES DEVELOPED DURING CLEARING WILL BE TEMPORARILY STABILIZED AS NECESSARY.
- STABILIZE PERMANENT ACCESS ROAD SURFACE, PARKING AREAS AND EQUIPMENT STORAGE AND LAYDOWN AREAS WITH MATTING, CRUSHED STONE OR GRAVEL SUBBASE AS NECESSARY TO MINIMIZE RUTTING AND AVOID PONDING.
- CONCURRENT WITH INITIATION OF SITE GRADING, CONSTRUCT AND STABILIZE TEMPORARY DRAINAGE SWALES, DIVERSION BERMS, CHECK DAMS, AND CULVERTS WITH TEMPORARY INLET AND OUTLET STRUCTURES TO MINIMIZE SEDIMENT IN SITE RUNOFF DURING THE CONSTRUCTION OF THE ROADWAY, DRAINER IN ACCORDANCE WITH DRAINAGE NOTES BELOW.
- INSTALL PROPERLY SPACED STONE CHECK DAMS IN ANY SECTION OF DITCH WITHIN 24 HOURS OF FORMING, SHAPING OR ROUGH GRADING THAT SECTION OF DITCH.
- MINIMIZE THE AMOUNT OF DISTURBANCE AT ANY ONE TIME BY STAGING CONSTRUCTION AS MUCH AS PRACTICAL. FOR EFFICIENT CONSTRUCTION OF THE FACILITY, NATURAL VEGETATIVE BUFFERS OR STRIPS SHOULD BE LEFT IN PLACE WHERE FEASIBLE TO AID IN SEDIMENT RETENTION AND REDUCE EROSION POTENTIAL.
- STABILIZE ANY NEWLY GRADED SLOPE GREATER THAN EIGHT PERCENT AND ANY SECTION OF NEWLY CONSTRUCTED DITCH USING ANCHORED EROSION CONTROL BLANKETS OR OTHER APPROVED MULCHING TECHNIQUES WITHIN 24 HOURS. STABILIZE ANY SLOPE EXCEEDING EIGHT PERCENT AND BROUGHT TO FINAL GRADE WITHIN 24 HOURS USING THE APPROVED PERMANENT STABILIZATION MEASURES FOR SLOPES. STABILIZE ANY SECTION OF DITCH BROUGHT TO FINAL GRADE WITHIN 24 HOURS USING THE APPROVED PERMANENT STABILIZATION MEASURES FOR DITCHES.
- DUST CONTROL METHODS WILL BE EMPLOYED AFTER GRADING AND PRIOR TO FINAL STABILIZATION TO PREVENT THE BLOWING AND MOVEMENT OF DUST THROUGH THE APPLICATION OF WATER AND/OR CALCIUM CHLORIDE TO REDUCE WIND EROSION. REPETITIVE TREATMENT WILL BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL.
- APPLY TEMPORARY SEED AND MULCH TO ANY EXPOSED AREAS WHERE ACTIVITY IS NOT ANTICIPATED FOR 30 DAYS OR MORE, OR WHERE ACTIVITY HAS NOT OCCURRED WITHIN 30 DAYS. TEMPORARILY MULCH ANY EXPOSED AREAS WITHIN 100 FEET OF A WETLAND WHERE ACTIVITY IS NOT ANTICIPATED OR HAS NOT OCCURRED IN 7 DAYS.
- REMOVE EXCESS SPOILS FROM SITE THAT WILL NOT BE USED FOR THE FINAL DESIGN AND STABILIZATION. STOCKPILED SOILS THAT REMAIN IN PLACE FOR 48 HOURS OR MORE WILL BE CONTAINED WITH SEDIMENT BARRIERS SUCH AS SILT FENCE, HAY BALES OR EQUIVALENT. THE SEDIMENT BARRIERS SHALL BE ADEQUATELY LOCATED AND REINFORCED TO HANDLE A SIGNIFICANT RAIN EVENT AND THE POTENTIAL SLUMPING OF THE PILE BETWEEN APRIL 15 AND OCTOBER 1. APPLY TEMPORARY SEED AND MULCH TO A STOCKPILE THAT IS NOT EXPECTED TO BE DISTURBED WITHIN 30 DAYS. APPLY ANCHORED MULCH DAILY, AS NEEDED, DURING WINTER CONSTRUCTION.
- INSPECT AND REPAIR EROSION CONTROL MEASURES DAILY IN AREAS OF ACTIVE CONSTRUCTION. OTHERWISE WEEKLY AND AFTER RAINFALL OF 1/8 INCH OR GREATER WITHIN A 24-HOUR PERIOD. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE BARRIER.
- MONITOR PUBLIC ROADS FOR SIGNS OF TRACKING OR SPILLING OF SOIL MATERIAL AND CLEANUP AS NEEDED.
- COMPLETE FINAL GRADING AND STABILIZATION OF EARTHEN STRUCTURES SUCH AS DIVERSION BERMS, LEVEL SPREADERS AND SWALES THAT WILL CONTROL RUNOFF.
- FINISH GRADE AND REPLACE TOPSOIL OR LOAM IN DISTURBED AREAS. SEED AND MULCH DISTURBED AREAS WITHIN 6 DAYS OF FINAL GRADING.
- MAINTAIN ALL TEMPORARY EROSION CONTROLS AND SEDIMENT BARRIERS UNTIL VEGETATION HAS BEEN ESTABLISHED OVER 85-90% OF THE AREA TO BE REVEGETATED. RESEED SPARSLEY VEGETATED AREAS.
- REMOVE ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ONCE THE SITE IS PERMANENTLY STABILIZED.

MULCH AND SEEDING SPECIFICATIONS

SUMMARY OF TEMPORARY AND PERMANENT MULCH APPLICATION REQUIREMENTS			
CONDITION	TIMING	MULCH TYPE ^{1,2}	APPLICATION RATES
TEMPORARY			
	IF NO ACTIVITY IN EXPOSED AREAS FOR 7 DAYS, OR PRIOR TO A STORM EVENT.	STRAW MULCH OR WOOD FIBER MULCH	2 TONS/ACRES
	ALL DISTRIBUTED AREAS OF THE CONSTRUCTION WORKSPACE	STRAW MULCH OR WOOD FIBER MULCH	2 TONS/ACRES ³
	ALL WORK AREAS EXPOSED ARE TO BE MULCHED DAILY EACH TIME SOIL IS DISTURBED	STRAW MULCH OR WOOD FIBER MULCH	3 TONS/ACRES
PERMANENT			
	ON ALL EXPOSED AREAS AFTER SEEDING TO STABILIZE THE SOIL SURFACE	CRIMPED STRAW MULCH OR PAPER MULCH OR WOOD FIBER MULCH	2 TONS/ACRES ⁴ 1500 LB./ACRES ⁴ 2000 LB./ACRES
	WOOD CHIP APPLICATION AREAS	CRIMPED STRAW MULCH OR PAPER MULCH OR WOOD FIBER MULCH	2 TONS/ACRES ⁴ 1500 LB./ACRES ⁴ 2000 LB./ACRES

NOTES:
 1. STRAW AND HAY MULCH MAY BE USED INTERCHANGEABLY, EXCEPT IN WETLAND AREAS WHERE STRAW MULCH WILL BE REQUIRED.
 2. DOUBLE RATE OF WOOD FIBER MULCH WHEN USED IN CRITICAL AREAS.
 3. STRAW, HAY, OR HYDROMULCH (WOOD FIBER OR PAPER MULCH AS APPROPRIATE) WILL PROVIDE 90 PERCENT GROUND COVERAGE.
 4. PAPER MULCH IS ACCEPTABLE FOR USE DURING THE GROWING SEASON. ON SLOPES >30 PERCENT AND IN AREAS WHERE VEGETATION HAS NOT ESTABLISHED WELL, ADDITIONAL HAY MULCH WILL BE ADDED AS A WINTERIZING MEASURE.

MULCH ANCHORING REQUIREMENTS

ON SLOPES GREATER THAN 3 PERCENT, HAY OR STRAW MULCH WILL BE FIRMLY ANCHORED INTO THE SOIL UTILIZING ONE OF THE FOLLOWING METHODS:
 -CRIMPING WITH A STRAIGHT OR NOTCHED MULCH CRIMPING TOOL (FARM DISCS WILL NOT BE ALLOWED);
 -TRACK WALKING WITH DEEP-CLEATED EQUIPMENT OPERATING UP AND DOWN THE SLOPE (MULCH CRIMPED PERPENDICULAR TO THE SLOPE) ON SLOPES <25 PERCENT;
 -APPLICATION OF MULCH NETTING;
 -APPLICATION OF 500 LB./ACRE OF WOOD FIBER MULCH OVER STRAW/HAY MULCH; AND
 -COMMERCIALLY AVAILABLE TACKIFIERS (EXCEPT WITHIN 100 FEET OF WATERBODIES OR WETLANDS).

SEED MIX SPECIFICATIONS		
SEED MIX NAME	SEED MIX COMPONENTS	LB./ACRE ¹
TEMPORARY SEED MIX	ANNUAL RYEGRASS	40
PERMANENT UPLAND SEED MIX	REDTOP	4
	CREeping RED FESCUE	40
	TALL FESCUE	40
	BIRDFOOT TREFOL	16
WOODCHIP APPLICATION SEED MIX	CREeping RED FESCUE	20
	REDTOP	4
	TALL FESCUE	30
	CROWNCRACK	30
WETLAND SEED MIX	ANNUAL RYEGRASS	40
SUPPLEMENTAL WINTER SEED MIX ²	WINTER RYEGRASS	120

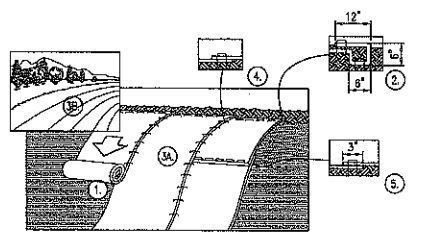
NOTES:
 1. INCREASE SEEDING RATES 10% WHEN HYDROSEEDING
 2. WINTER RYE WILL BE ADDED TO PERMANENT UPLAND MIX AT A RATE OF 120 LB./ACRE BETWEEN OCTOBER 1 AND APRIL 15

SUMMARY OF SEEDING REQUIREMENTS		
CONDITION	TIMING ³	SEED MIX
TEMPORARY SEEDING ³	TEMPORARY SEED BETWEEN APRIL 15 AND OCTOBER 1 ONLY. DISTURBED AREAS OR SOIL STOCKPILES WILL BE SEEDED IMMEDIATELY IF FURTHER DISTURBANCE IS NOT EXPECTED FOR 30 DAYS OR MORE.	ANNUAL RYEGRASS
PERMANENT SEEDING ^{3,4}		
UPLAND PORTIONS OF THE CONSTRUCTION AREA	DISTURBED AREA WILL BE SEEDED WITHIN 6 DAYS OF FINAL GRADING.	PERMANENT UPLAND MIX
SLOPES > 3:1	DISTURBED AREA WILL BE SEEDED IMMEDIATELY AFTER SEEDED PREPARATION.	PERMANENT UPLAND MIX
WETLANDS	DISTURBED WETLANDS WILL BE SEEDED WITHIN 6 DAYS OF FINAL GRADING.	ANNUAL RYEGRASS
WOODCHIP APPLICATION AREAS	DISTURBED AREA WILL BE SEEDED WITHIN 6 DAYS OF FINAL GRADING.	WOODCHIP APPLICATION SEED MIX
WINTER DORMANT SEEDING	DORMANT SEED BETWEEN OCTOBER 1 AND APRIL 15 ONLY. NO SEEDING WILL OCCUR IF SNOW DEPTHS EXCEED 1 INCH.	PERMANENT UPLAND MIX PLUS WINTER RYEGRASS

NOTES:
 1. WEATHER CONDITIONS PERMITTING.
 2. AREAS THAT DO NOT SUCCESSFULLY REVEGETATE WITHIN APPROPRIATE PERIOD OF TIME WILL BE RESEEDED AS NECESSARY.
 3. LOOSEN COMPACTED SOIL TO A MINIMUM DEPTH OF 4 INCHES.
 4. TOP DRESS WITH 6 INCHES LOAM, AS NEEDED.

FERTILIZER AND LIMESTONE REQUIREMENTS

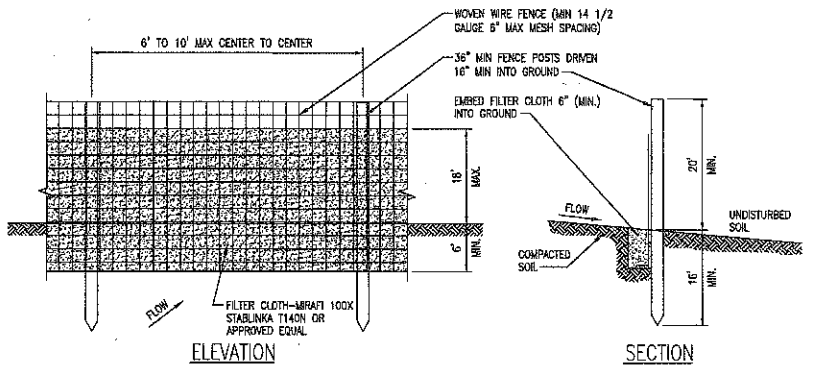
IN GENERAL, FERTILIZER AND LIME APPLICATION RATES WILL FOLLOW THE GUIDELINES IDENTIFIED BELOW UNLESS SITE SPECIFIC SOIL TESTS IDENTIFY THE NEED FOR ALTERNATIVE FERTILIZER/LIME APPLICATION RATES. FERTILIZER WILL BE APPLIED TO UPLAND AREAS PRIOR TO SEEDING AT A RATE OF 800 POUNDS PER ACRE USING 10-20-20 (N-P205-K2O) OR EQUIVALENT. GROUND LIMESTONE (EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) WILL BE APPLIED AT A RATE OF 3 TONS PER ACRE. AN EQUIVALENT MIXTURE OF FERTILIZER AND LIME MAY BE APPLIED USING THE HYDROSEEDING METHOD. NO LIME OR FERTILIZER WILL BE APPLIED TO WETLANDS.



- PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
- BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDING BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REARING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
- ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
- THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
- CONSECUTIVE BLANKETS SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHIMBLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.

EROSION CONTROL BLANKET INSTALLATION

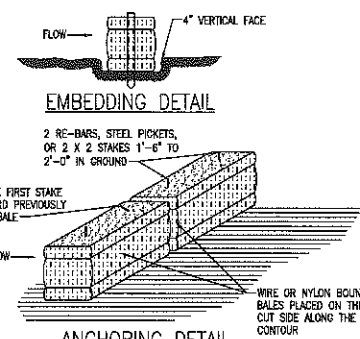
NOT TO SCALE



- WOVEN WIRE FENCE TO BE FASTENED TO FENCE POSTS WITH WIRE TIES OR STAPLES.
- FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MIDSECTION.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN BUILD-UP REACHES 1/3 THE HEIGHT OF THE FENCE.

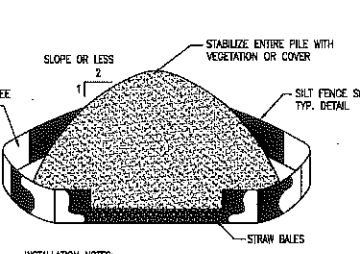
SILT FENCE DETAILS

NOT TO SCALE



ANCHORING DETAIL

NOT TO SCALE



- INSTALLATION NOTES:**
- AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
 - MAXIMUM SLOPE OF STOCKPILE SHALL BE 2H:1V.
 - UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAW BALES, THEN STABILIZED WITH VEGETATION OR COVERED.

TYPICAL SOIL STOCKPILE

NOT TO SCALE

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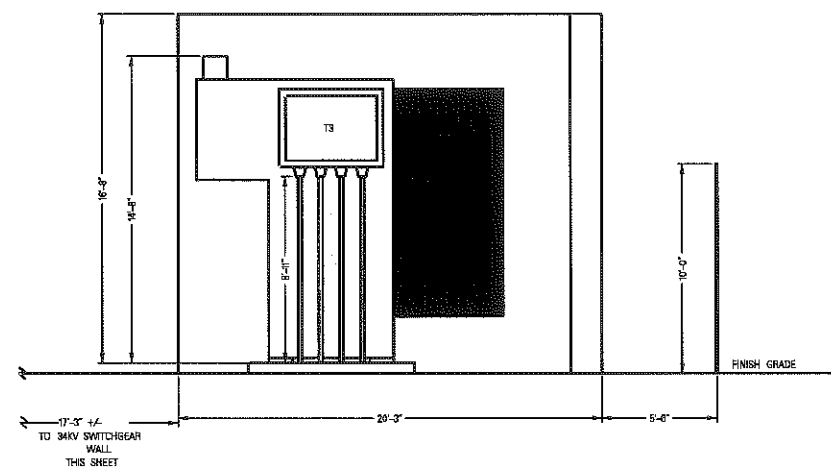
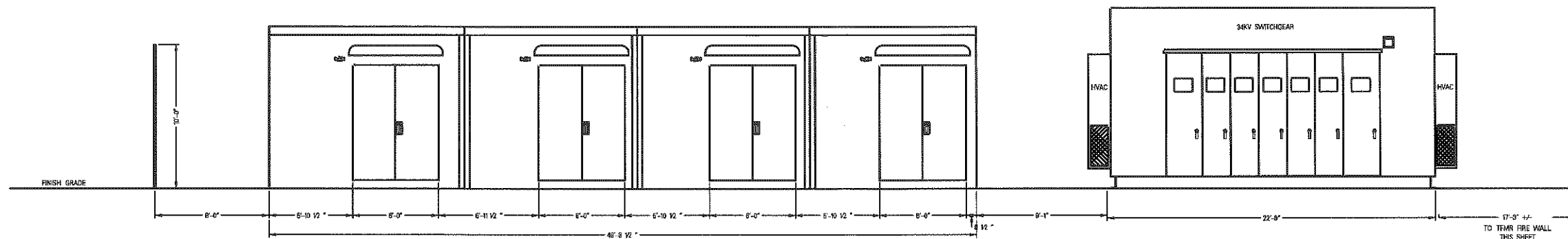
REFERENCE DRAWINGS	

NO.	REVISION	DATE	BY	CK	P. E. No.	P. E. No.
B	RE-ISSUED FOR PERMITTING	06/10/13	CMH	MWC	DTB	6796
A	ISSUED FOR PERMITTING	03/15/13	CMH	MWC	DTB	6798

Professional Engineer Seal
 STATE OF MAINE
 DANIEL T. BUTLER
 No. 6798
 LICENSED PROFESSIONAL ENGINEER
 6/10/13

DESIGNED	TRC/SGL
DRAWN	TRC/KAV
CHECKED	TRC/
APPROVED	
REVIEWED	

EROSION CONTROL NOTES & DETAILS
 UNION STREET S/S
 PORTLAND MAINE
 CENTRAL MAINE POWER COMPANY
 SYSTEM ENGINEERING
 CENTRAL MAINE DATE: 2/14/13
 POWER SCALE: AS NOTED
 C-4 REV B



B
547-3-1
ELEVATION
SCALE: 1/4" = 1'-0"

REFERENCE DRAWINGS CONTINUED:
CC-38892-A MCGRAW-EDISON OUTLINE - POWER TRANSFORMER



PRELIMINARY
IF ISSUED FOR BID
NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DES	CHK	APP
0	FOR BIDDING FOR BID	03/13/13	SP	MS	

CTRC
 310 WESTERN AVENUE
 AUBURN, ME 04220
 PROJECT #14-102E

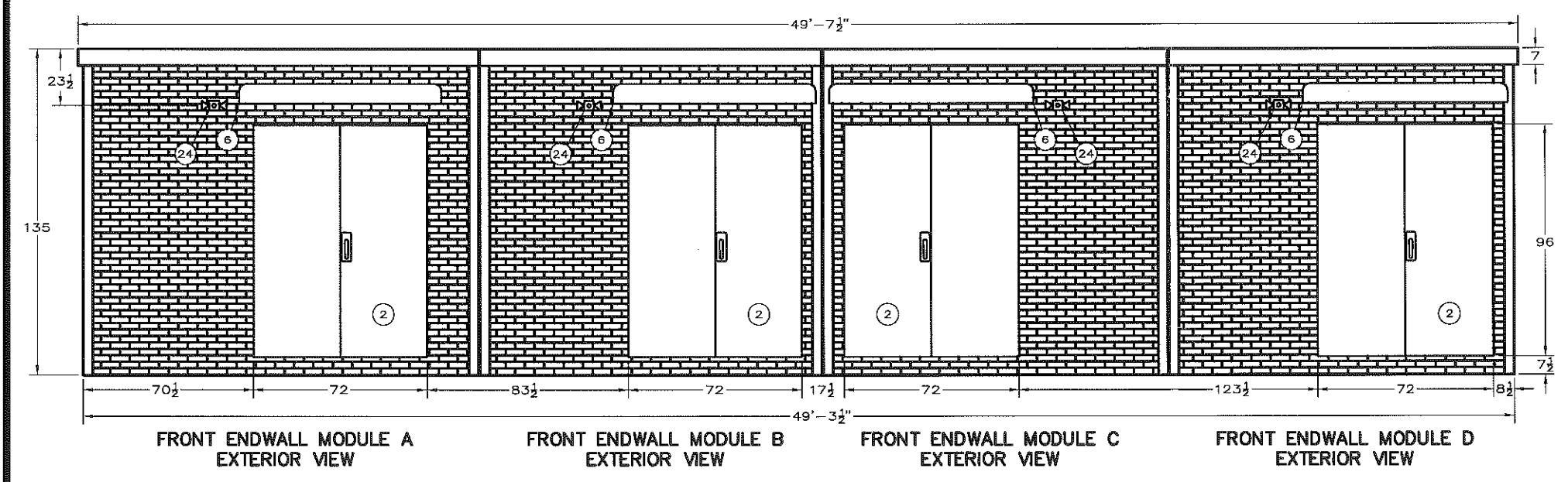
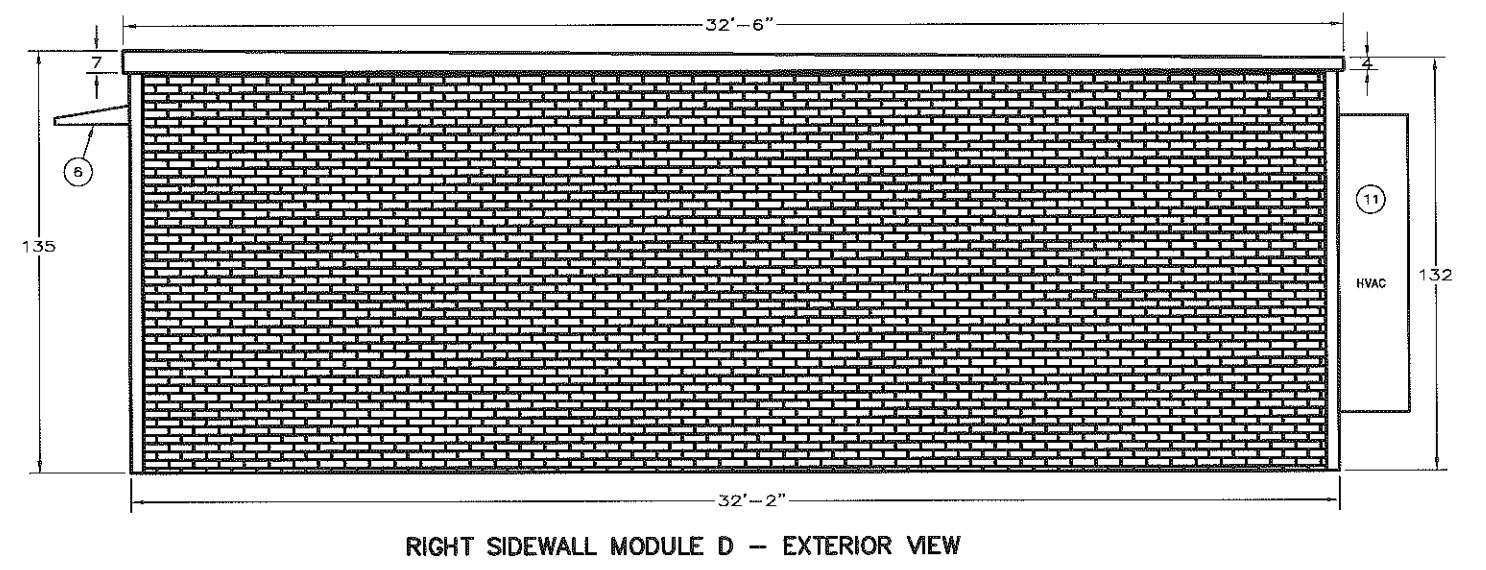
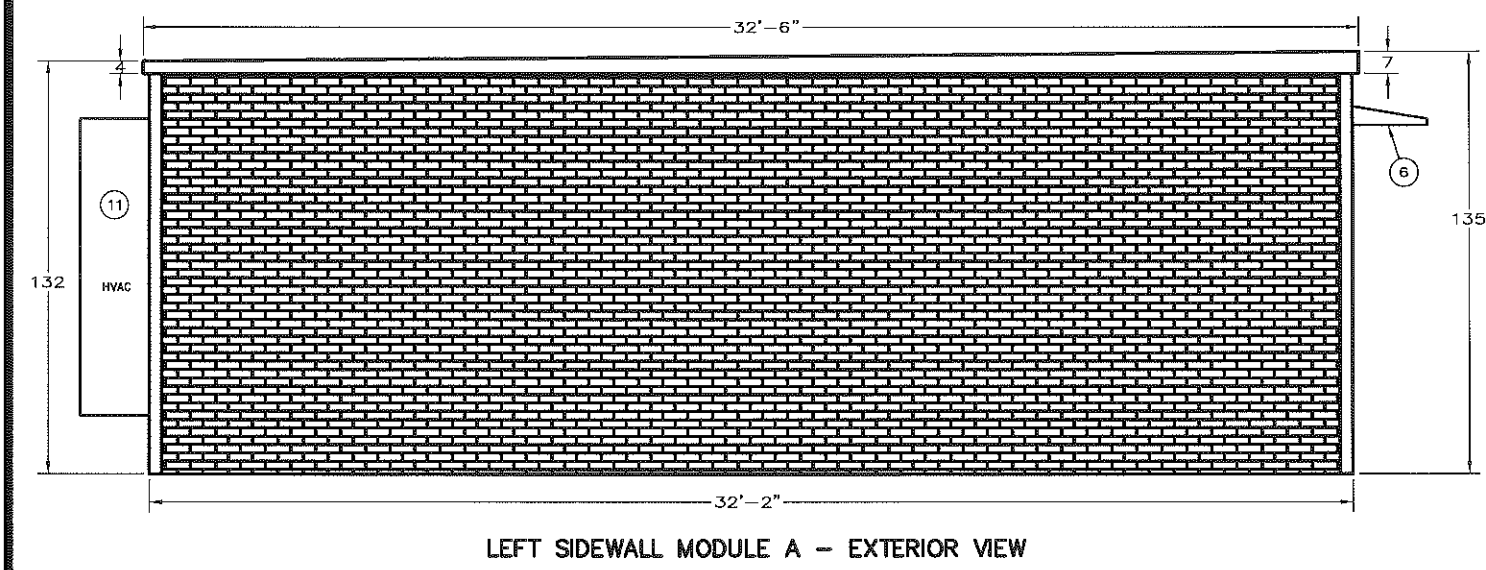
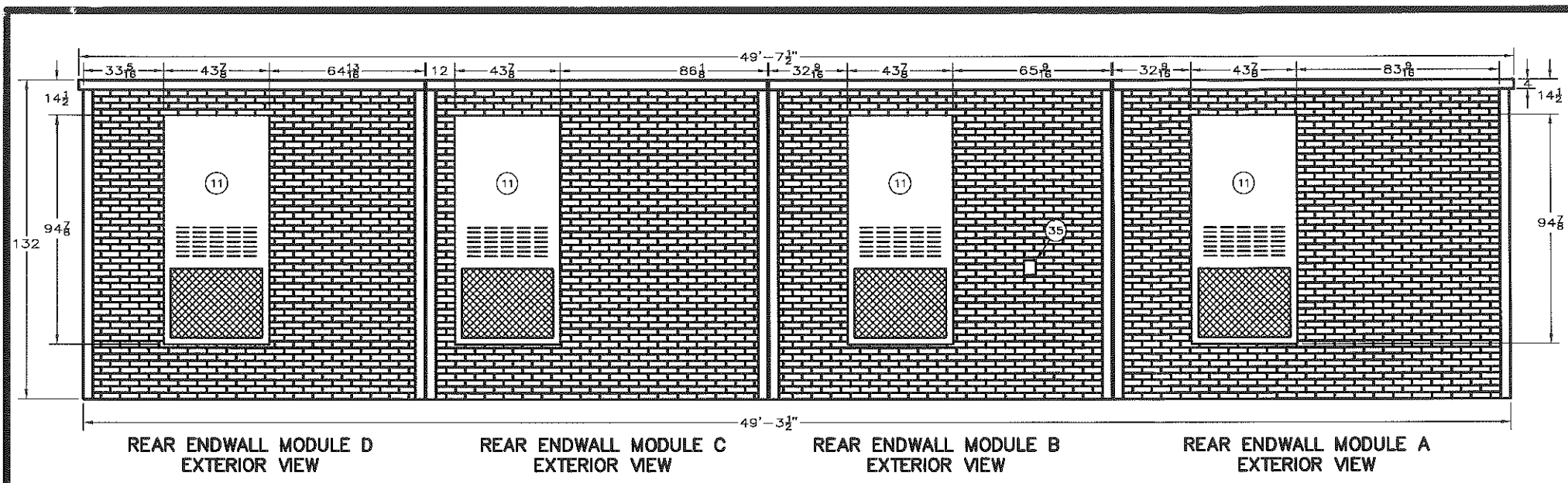
REFERENCE DRAWING NUMBER	DESCRIPTION
547-3-1	GENERAL LOCATION PLAN
547-2-2 SH.1	GENERAL ARRANGEMENT ELEVATIONS

Professional Engineer Seal

CENTRAL MAINE POWER CO.		IUSA ENGINEERING CONFIDENTIAL, PROPRIETARY and TRADE SECRET INFORMATION Property of Iberdrola, USA	
UNION ST. S/S	PORTLAND, ME	DR.	TRC/SP
FILE:	547-02-02 S02	CK.	TRC/MJS
NO.	547-2-2 SH.2	APP.	
DATE:	03/13/13	SCALE:	1/4" = 1'

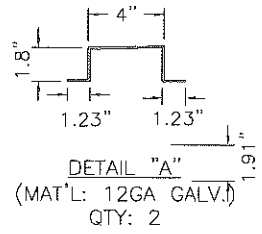
REV.	DESCRIPTION
C	

CADD Drawings DO NOT REVISE MANUALLY.

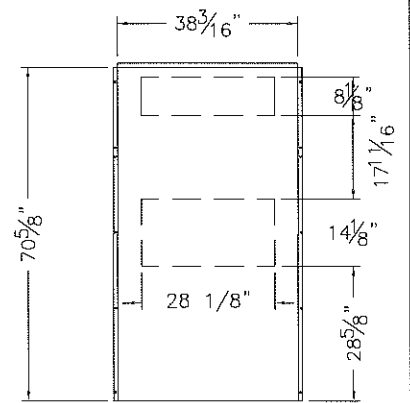


EXTERIOR SURFACE: SIMULATED BRICK (COLOR TBD)
 "MAY BE BUILT MIRROR IMAGED"

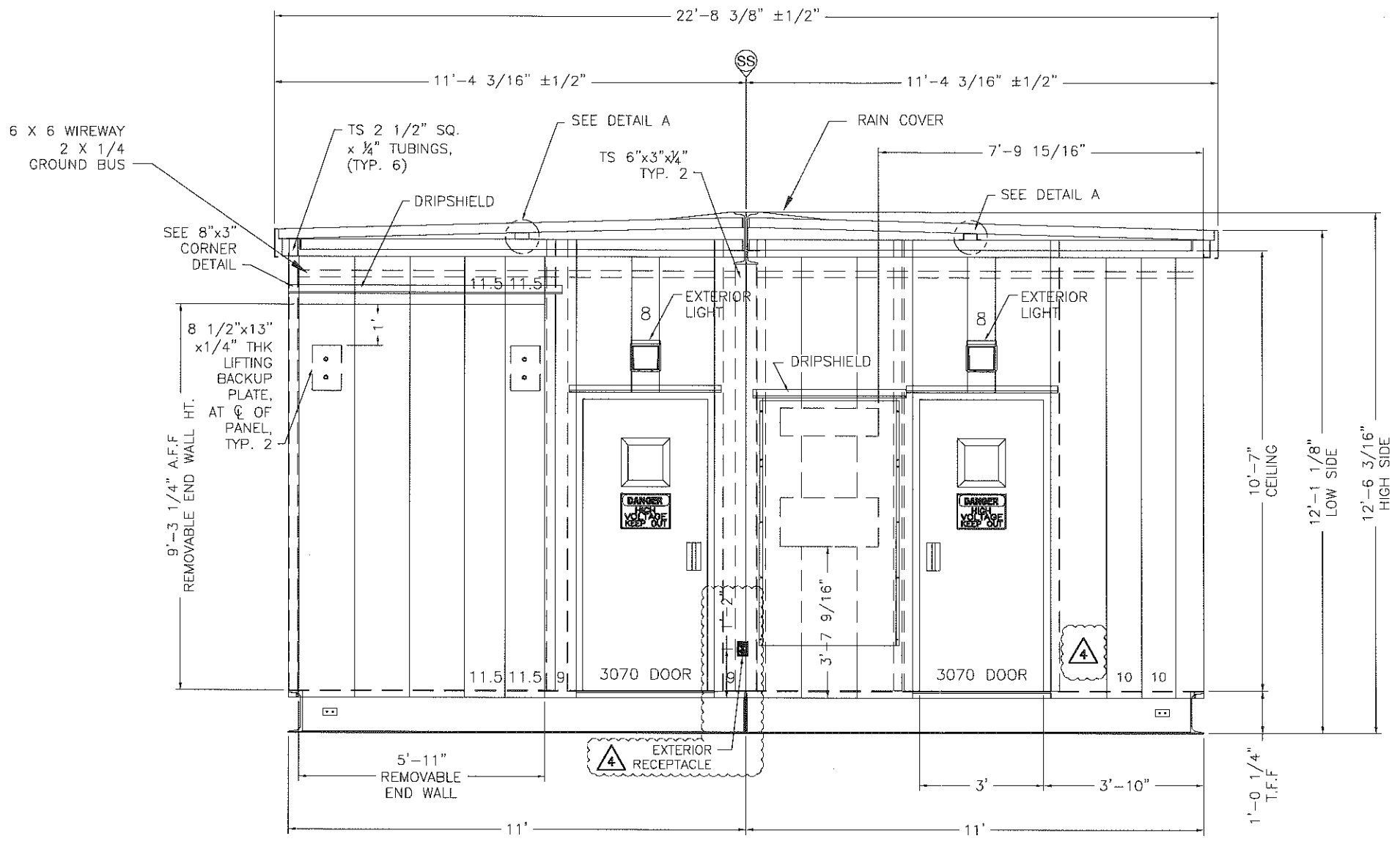
REV NO.	DESCRIPTION	DATE	DRAWN BY
R1	MOVED HVAC AND DOOR ON MODULE C.	4-26-13	RAP
MODULAR CONNECTIONS, LLC 1090 Industrial Blvd Bessemer, AL 35022 Phone: 205-980-4965 Fax: 877-903-6335 Email: info@ModularConnections.com		DRAWN BY JR	DATE 3-22-13
TITLE SCHNEIDER ELECTRIC USA, INC EXTERIOR ELEVATION VIEWS		MODEL NO. MCP547	PROJ MGR CLP
NOTICE: These drawings and specifications are the property of Modular Connections, LLC. All information contained herein which is not known generally in the field of Modular Connections, LLC shall be confidential except to any extent to which it is established to have been known previously from sources other than Modular Connections, LLC. These drawings and specifications may not be reproduced, copied or used as the basis for the manufacture or sale of apparatus without written permission.			DRAWING NO. D12021 R1
			SHEET 10



8"x3" CORNER DETAIL



HVAC CUTOUT DETAIL



Notes:

Rev: 4	Date: 05/07/2013	By: AMD	Appr.: CB
DELETED EXTERIOR RECEPTACLE			
Rev: 3	Date: 05/02/2013	By: KS	Appr.: CB
Added ac dripshield, added reser detail, added danger sign			
Added removable end wall details			
Rev: 2	Date: 03/16/2013	By: KS	Appr.: CB
Rev. HVAC detail			
Rev: 1	Date: 06/25/2012	By: KS	Appr.: CB
Rev. line item#			
Rev: 0	Date: 06/20/2012	By: KS	Appr.: CB
For Construction			
Rev: A	Date: 04/03/2012	By: KS	Appr.: CB
For Approval			

Revision Information:

CONTROLLED	
<input type="checkbox"/> Revised	<input type="checkbox"/> FI - For Information Only
<input type="checkbox"/> PR - Preliminary	<input type="checkbox"/> AP - For Approval
<input type="checkbox"/> IN - For Inspection	<input type="checkbox"/> CC - For Construction
<input type="checkbox"/> AS - Certified "AS BUILT"	

SIEMENS

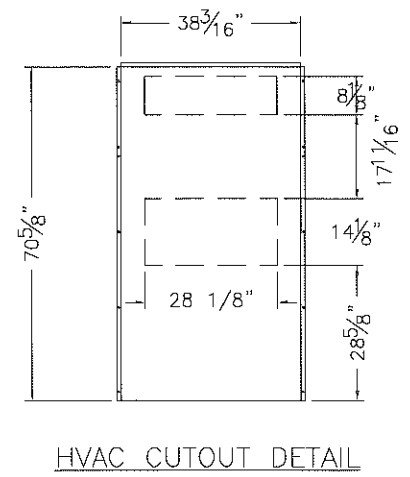
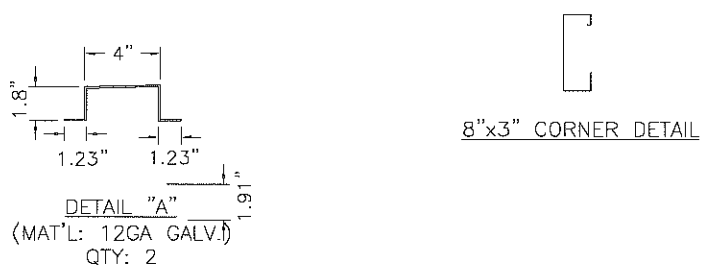
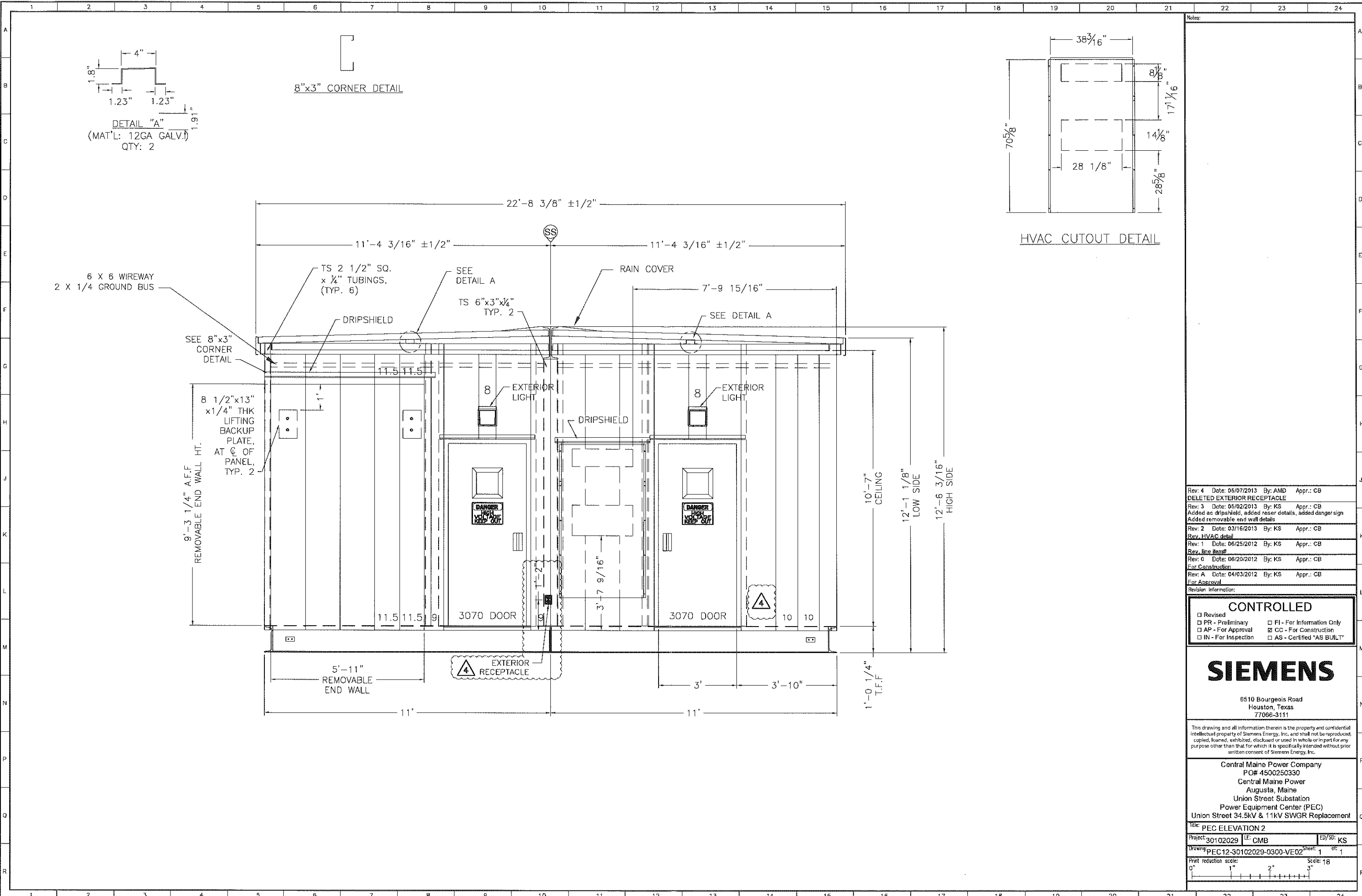
6510 Bourgeois Road
Houston, Texas
77066-3111

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Central Maine Power Company
PO# 4500250330
Central Maine Power
Augusta, Maine
Union Street Substation
Power Equipment Center (PEC)
Union Street 34.5kV & 11kV SWGR Replacement

Title: PEC ELEVATION 4	
Project: 30102029	LE: CMB
Sheet: 1	of: 1
Drawing: PEC12-30102029-0300-VE04	
Print reduction scale:	Scale: 1/8"





Notes:

Rev: 4	Date: 05/07/2013	By: AMD	Appr.: CB
DELETED EXTERIOR RECEPTACLE			
Rev: 3	Date: 05/02/2013	By: KS	Appr.: CB
Added ac dripshield, added reser details, added danger sign Added removable end wall details			
Rev: 2	Date: 03/16/2013	By: KS	Appr.: CB
Rev. HVAC detail			
Rev: 1	Date: 06/25/2012	By: KS	Appr.: CB
Rev. line item#			
Rev: 0	Date: 06/20/2012	By: KS	Appr.: CB
For Construction			
Rev: A	Date: 04/03/2012	By: KS	Appr.: CB
For Approval			

Revision Information:

CONTROLLED	
<input type="checkbox"/> Revised	<input type="checkbox"/> FI - For Information Only
<input type="checkbox"/> PR - Preliminary	<input type="checkbox"/> AP - For Approval
<input type="checkbox"/> AP - For Approval	<input checked="" type="checkbox"/> CC - For Construction
<input type="checkbox"/> IN - For Inspection	<input type="checkbox"/> AS - Certified "AS BUILT"

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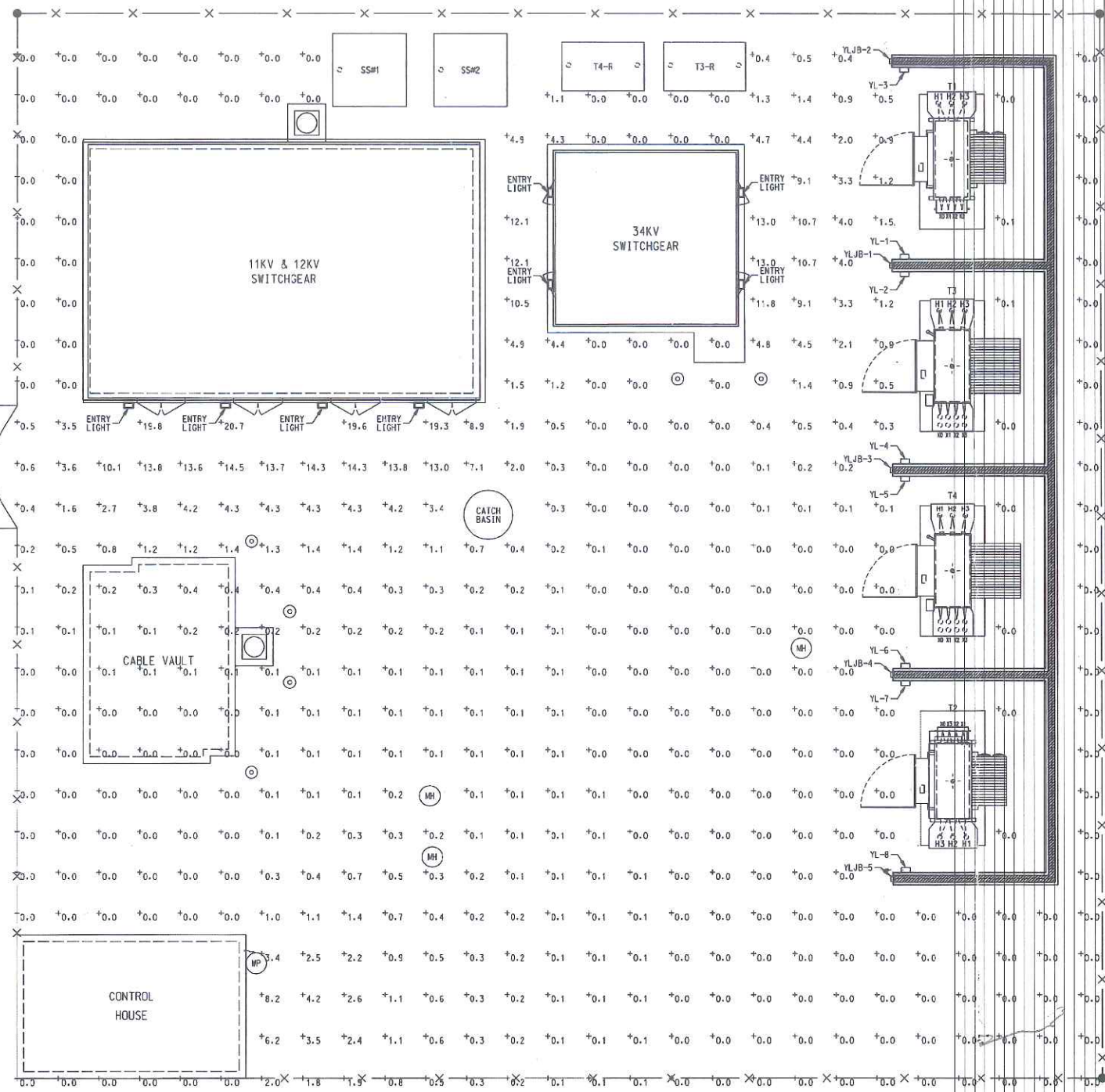
Central Maine Power Company
PO# 4500250330
Central Maine Power
Augusta, Maine
Union Street Substation
Power Equipment Center (PEC)
Union Street 34.5kV & 11kV SWGR Replacement

Title: PEC ELEVATION 2

Project: 30102029 LE: CMB ED/SO: KS

Drawing: PEC12-30102029-0300-VE02 Sheet: 1 of 1

Print reduction scale: Scale: 1/8"



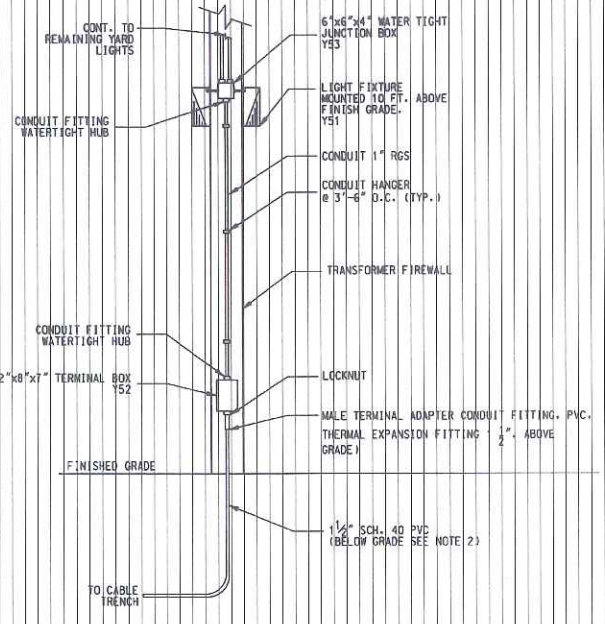
YARD LIGHTING PLAN
SCALE: 1/4" = 1'-0"

NOTES:

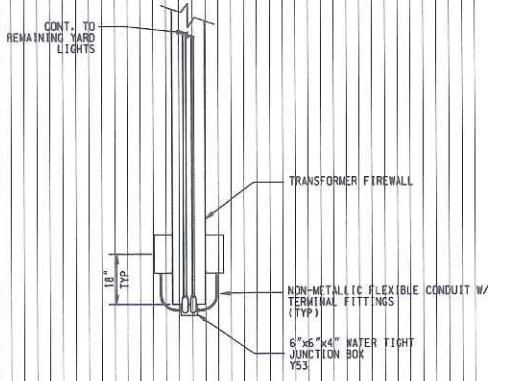
- SEE 547-12-1 FOR YARD MATERIAL AND SEE 547-12-3 FOR CONTROL HOUSE MATERIAL.
- CALCULATIONS SHOWN DO NOT INCLUDE TRANSFORMER WORK LIGHTS MOUNTED ON BLAST WALLS.

LEGEND

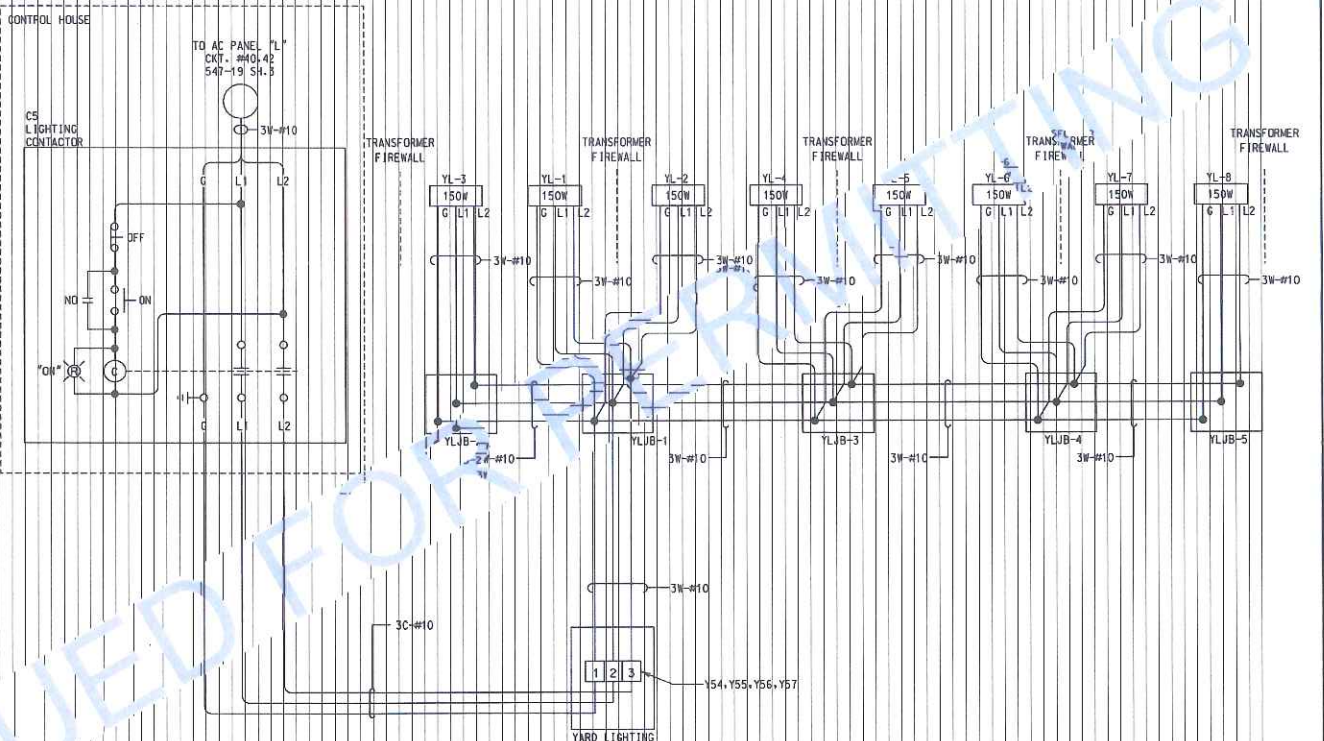
- YL-51 150W 8 EA. TRANSFORMER LIGHTING FIXTURE 150W HPS, MULTI-TAP BALLAST
- 70W 8 EA. SWITCHGEAR ENTRY LIGHT - PURN. W/ SMGR. 70W HPS, 120VAC. WITH INTERNAL PHOTOCELL
- WP 1 EA. EXISTING CONTROL HOUSE ENTRY LIGHT 200W.
- YXX YARD MATERIAL MARK
- CXX CONTROL HOUSE MATERIAL MARK



YL1
DETAIL
FIREWALL MOUNTED LIGHT FIXTURE - ELEVATION
SCALE: N.T.S.

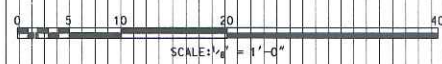


YL2
DETAIL
FIREWALL MOUNTED LIGHT FIXTURE - PLAN VIEW
SCALE: N.T.S.



YARD LIGHTING WIRING DIAGRAM
SCALE: N.T.S.

PRELIMINARY
ISSUED FOR CLIENT REVIEW
NOT FOR CONSTRUCTION



REV	DESCRIPTION	DATE	DES	CHK	APP
C2	IFR ISSUE FOR REVIEW 95%	06/06/13	MAD	MJS	
C	IFB ISSUED FOR BID	05/10/13	MAD	MJS	

TRC 249 WESTERN AVENUE
AUGUSTA, ME 04330
PROJECT NO: 183112

REFERENCE DRAWING NUMBER	DESCRIPTION
547-3-1	GENERAL LOCATION PLAN
547-12-1	YARD SITE MATERIAL LIST
547-12-3	CONTROL HOUSE MATERIAL LIST



CENTRAL MAINE POWER CO.
BERDROLA USA

USA ENGINEERING
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YARD LIGHTING PLAN

REV.	DATE	BY	DESCRIPTION

UNION ST. S/S	PORTLAND, MAINE
DR. TRC/MAD	FILE: 547-06-05.DGN
CK. TRC/MMS	NO. 547-6-5
APP.	REV. C2
APP. DATE: 05/07/13	SCALE: 1/8" = 1'-0"

Central Maine Power Company
 Union Street Substation
 Portland, Maine

Suggested Landscape Planting Using "Street Hardy" Trees (assume 250-foot length to be replanted which includes 50-foot length of new plantings in sparse areas. (BB = balled and burlapped).

Species	Size	Quantity	Unit Cost	Subtotal
Hedge maple (<i>Acer campestre</i>)	2-2.5" dia, BB	10	\$250	\$2,500
Rocky Mountain Glow (<i>Acer gradidentatum</i>)	2-2.5" dia, BB	10	\$300	\$3,000
Leprechaun ash (<i>Fraxinus pensylvanicum</i>)	2-2.5" dia, BB	10	\$300	\$3,000
<i>Ginkgo biloba</i>	2-2.5" dia, BB	10	\$325	\$3,250
Tea Crabapple (<i>Malus hyphensis</i>)	3-3.5" dia, BB	10	\$250	\$2,500
Bayberry (<i>Myrica pensylvanica</i>)	3-4' tall, BB	10	\$75	\$750
Emerald green arborvitae (<i>Thuja occidentalis smaragd</i>)	8-10' tall, BB	10	\$200	\$2,000
Subtotal Cost (Assumed 250 linear feet, with 5-foot spacing)				\$17,000
Installation				\$10,000
Total Cost				\$27,000

Ex end 433 page to Angelo
 take out point

TRIGGS "X"

Shrubs
 3 to each side

EXISTING 34.5 SWITCHGEAR
 PROPOSED 34.5 SWITCHGEAR
 2" caliper replace all

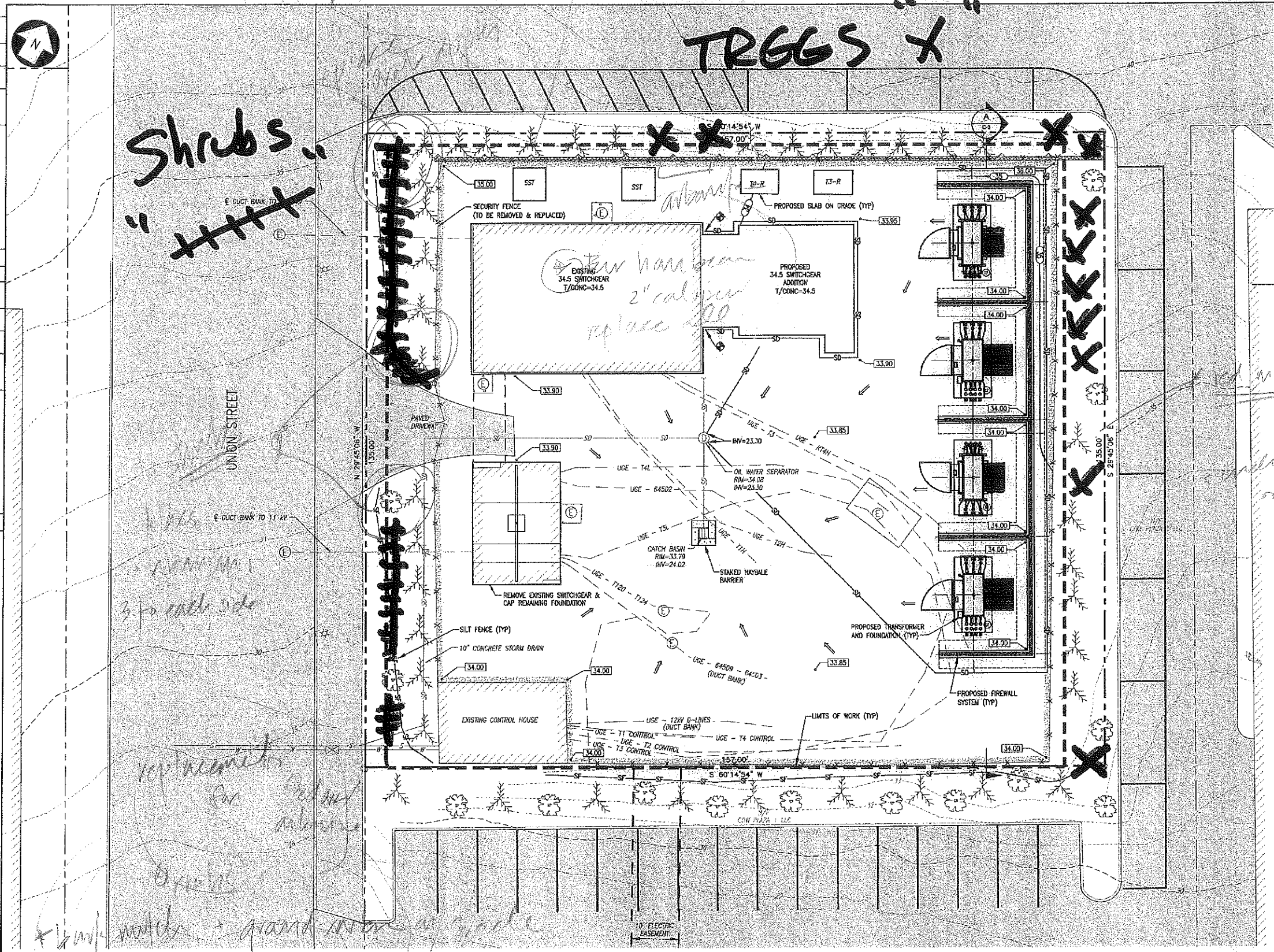
replace for
 Pedestrian
 access

*bank match + grand

NO.	REVISION	DATE	BY	CHK	P. E.
	ISSUED FOR PERMITTING	03/08/13	CMH	MWC	DTB

ENGINEERING CONSULTANTS - 1080 - ADDRESS
CTRC
 249 WESTERN AVENUE
 AUGUSTA, ME 04330
 PROJECT NO. 17889

THIS DRAWING SHALL BE REVISED ON THE CAD SYSTEM ONLY



EXISTING	LEGEND	PROPOSED
---	PROPERTY/ROW LINE	---
---	EASEMENT LINE	---
---	CENTERLINE	---
---	EDGE OF PAVEMENT	---
---	CURBING	---
---	EDGE OF GRAVEL	---
---	EDGE OF CONCRETE	---
---	SUBSTATION YARD	---
---	SUBSTATION BASELINE	---
---	MAJOR CONTOUR	(120)
---	MINOR CONTOUR	(121)
---	BUILDING	---
---	CHAIN LINK FENCE	---
---	RETAINING WALL	---
---	SEWER	S
---	WATER	W
---	STORM DRAIN	SD
---	UNDERDRAIN	8" C/P
---	CAULVERT	12" C/P
---	UNDERGROUND ELECTRIC	UGE
---	OVERHEAD TRANSMISSION	---
○	IRON PIPE/REBAR	○
○	MONUMENT	○
△	SURVEY CONTROL POINT	△
△	SPOT ELEVATION	184.50
---	UTILITY POLE	---
○	SEWER MANHOLE	○
○	DRAINAGE MANHOLE	○
○	CATCH BASIN	○
○	ELECTRIC MANHOLE	○
○	SHUTOFF VALVE	○
○	HYDRANT	○
○	UTILITY POLE	○
○	LIGHT POLE	○
○	SILT FENCE	○
---	RIPRAP	---
---	SURFACE DRAINAGE FLOW	---
---	SIGN	---
---	TEMPORARY BENCH MARK	---
---	TEST BORING	---
---	TEST PIT	---
---	LIMITS OF WORK	---
---	CONIFEROUS TREE	---
---	DECIDUOUS TREE	---
---	SHRUB	---
---	CONNECT TO EXISTING	---

EARTHWORK NOTES

1. ALL EXCAVATIONS, SHORING AND BRACING SHALL CONFORM TO OSHA REQUIREMENTS (29 CFR 1926).
2. CONTAMINATED SOIL IS NOT EXPECTED TO BE ENCOUNTERED. IF CONTAMINATED SOIL IS ENCOUNTERED, IMMEDIATELY NOTIFY THE CMP ENGINEER.
3. UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS. PRIOR TO WORK THE CONTRACTOR SHALL, AT A MINIMUM, CONTACT "BIG SAFE" AT 1-888-344-7233 TO IDENTIFY OR VERIFY SIZE, DEPTH AND LOCATIONS OF ALL UNDERGROUND UTILITIES WITHIN THE VICINITY OF THE WORK AREA. CONTRACTOR SHALL PROTECT UTILITIES FROM DAMAGE AND SHALL NOT DISTURB UNDERGROUND UTILITIES TO REMAIN. IN THE EVENT THAT A UTILITY IS DAMAGED AS A RESULT OF THE CONTRACTOR'S WORK, THE DAMAGED UTILITY SHALL BE REPAIRED OR REPLACED AT THE EXPENSE OF THE CONTRACTOR. SHOULD UNCHARTERED OR INCORRECTLY CHARTERED PIPING OR OTHER UTILITIES BE ENCOUNTERED DURING EXCAVATION, CONTACT CMP IMMEDIATELY FOR DIRECTION.
4. SOIL MATERIAL SHALL BE FREE OF COMBUSTIBLE, ORGANIC DEBRIS AND FROZEN MATERIALS AS WELL AS ROCKS, TOPSOIL, LOAM, TRASH, SNOW, ICE, WOOD AND OTHER OBJECTIONABLE MATERIALS.

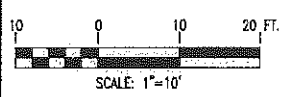
SAFETY NOTES

1. WORK WILL BE CARRIED OUT NEAR AND UNDER ENERGIZED EQUIPMENT. EXTREME CAUTION IS REQUIRED AT ALL TIMES. THE CONTRACTOR SHALL STRICTLY FOLLOW ALL CMP CO. SAFETY REQUIREMENTS. FAILURE TO DO SO WILL RESULT IN TERMINATION.

FOR PERMITTING
 NOT FOR CONSTRUCTION

SITE GRADING PLAN
UNION STREET S/S

PORTLAND MAINE
 CENTRAL MAINE POWER COMPANY
 SYSTEM ENGINEERING
 CENTRAL MAINE DATE: 2/14/13
 SCALE: AS NOTED
 C-2
 REV A



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NO.	REVISION	DATE	BY	OK	P. E.	P. E. No.
A	ISSUED FOR PERMITTING	03/15/13	CMH	MWC	DTB	6786

NO.	REVISION	DATE	BY	OK	P. E.	P. E. No.

Professional Engineer Seal
 STATE OF MAINE
 DANIEL T. BUTLER
 No. 6796

DESIGNED: TRC/SCL
 DRAWN: TRC/KAV
 CHECKED: TRC/
 APPROVED:

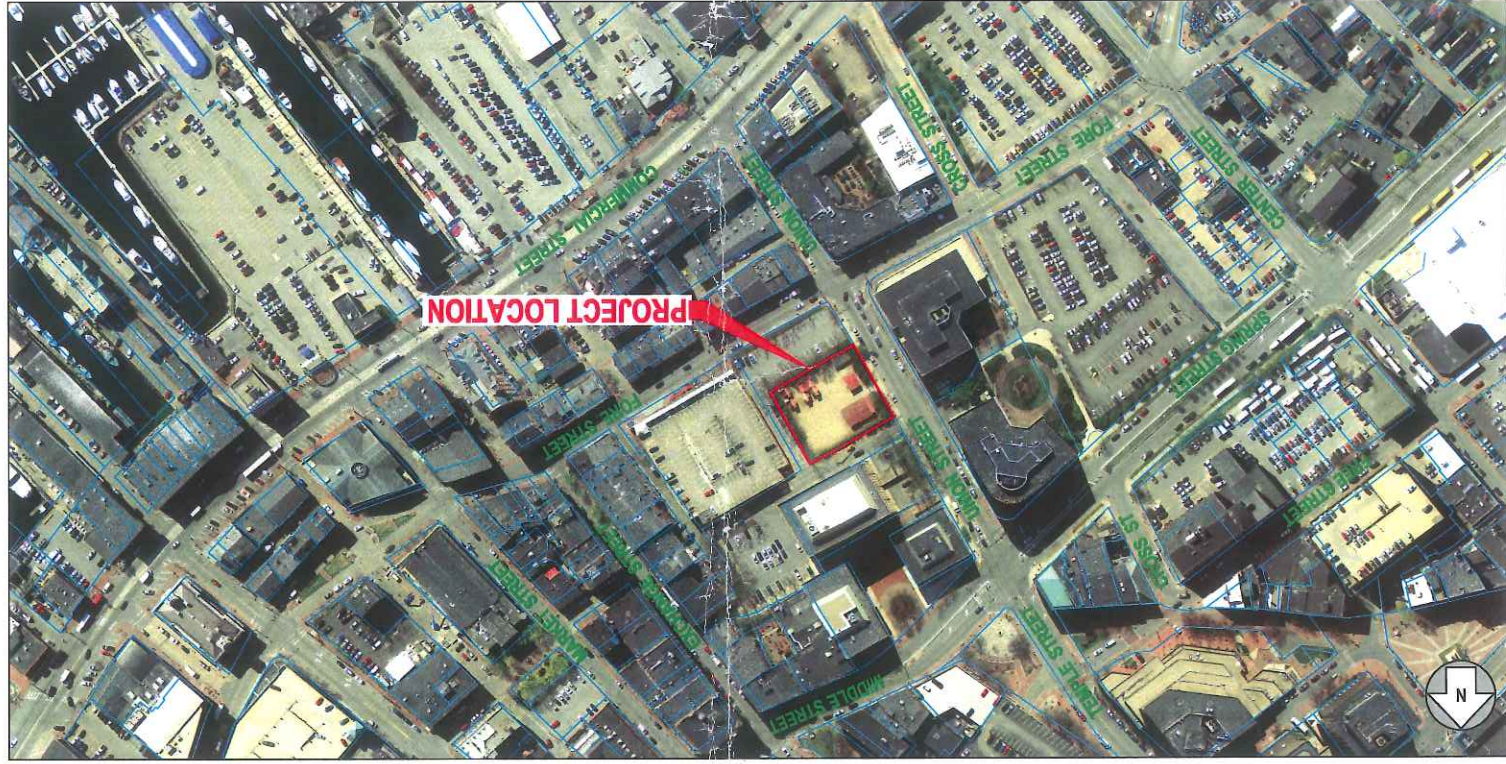
REVIEWED:

PERMITTING PLAN SET

SWITCHGEAR / TRANSFORMER REPLACEMENT PROJECT

UNION STREET SUBSTATION

UNION STREET
 CUMBERLAND COUNTY
 PORTLAND, MAINE



LOCATION MAP
 SCALE: 1"=150'

APPLICANT / RECORD OWNER:



CENTRAL MAINE POWER COMPANY

83 EDISON DRIVE
 AUGUSTA, ME 04336

PREPARED BY:



249 WESTERN AVENUE
 AUGUSTA, ME 04330

CVR	COVER SHEET / LOCATION MAP / DWG INDEX
C-1	EXISTING CONDITIONS PLAN
C-2	SITE GRADING PLAN
C-3	SECTIONS & DETAILS
C-4	EROSION CONTROL NOTES & DETAILS

DRAWING INDEX

FOR PERMITTING
 NOT FOR CONSTRUCTION

ISSUED FOR PERMITTING
 03/15/13

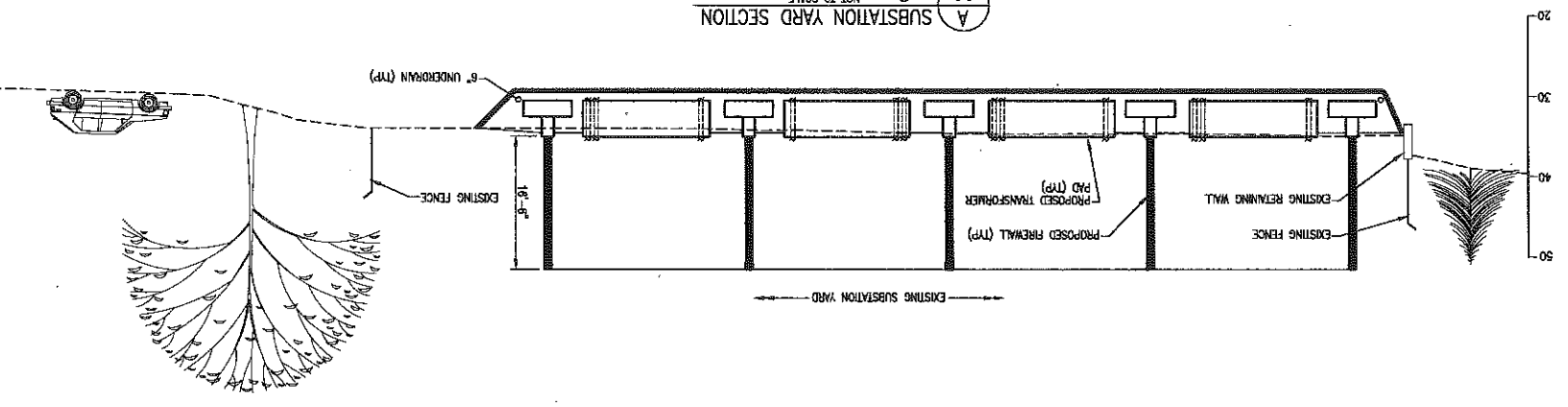
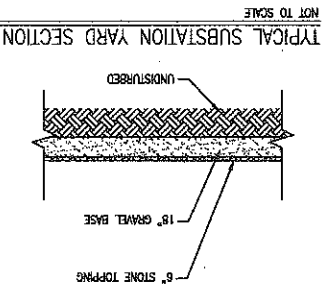
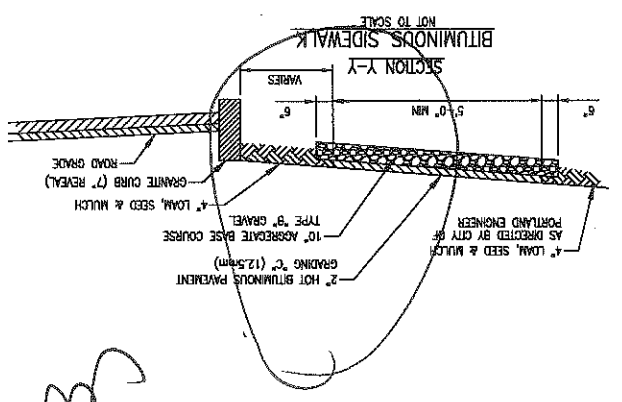
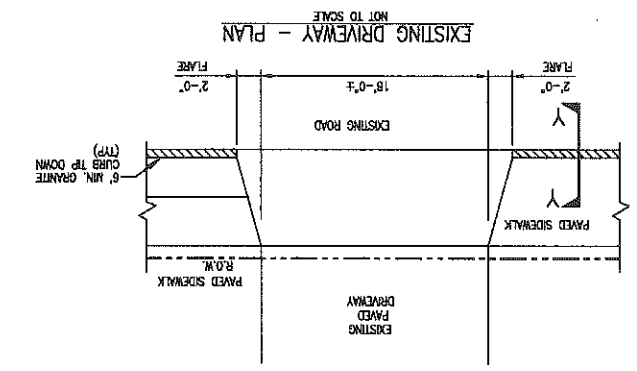
THIS DRAWING SHALL BE REVISED ON THE OLD SYSTEM ONLY

ENGINEERING CONSULTANTS - L000 - OFFICE
CTRC
 249 WESTERN AVENUE
 PORTLAND, ME 04112
 PHONE NO. 831112

NO.	REVISION	DATE	BY	CK	P.E.
A	ISSUED FOR PERMITTING	03/08/13	CMH	LMC	DTB

NO.	REVISION	DATE	BY	CK	P.E.

This document and any attachments are considered:
BUSINESS CONFIDENTIAL
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 REFERENCE DRAWINGS



US STANDARD SIEVE SIZE	% BY WEIGHT PASSING SIEVE
2	100
1-1/2	100
1	100
3/4	100
0	100

B. THE STONE TOPPING SHALL MEET THE FOLLOWING BLEND REQUIREMENTS:
 A. CRUSHED STONE TOPPING SHALL BE OBTAINED FROM ROCK OF UNIFORM QUALITY AND SHALL CONSIST OF CLEAN, ANGULAR FRAGMENTS OF QUARRIED ROCK FREE FROM SOFT DISINTEGRATED PIECES OR OTHER OBJECTIONABLE MATTER.

C. IF IT IS NOT ANTICIPATED THAT MATERIALS EXCAVATED FOR THE PROJECT WILL BE SUITABLE FOR USE AS GRAVEL FILL, THEREFORE, GRAVEL FILL WILL BE REQUIRED FROM OFF-SITE BORROW SOURCES.

SIEVE DESIGNATION	PERCENTAGE BY WEIGHT PASSING SQUARE MESH SIEVE
No. 20	100
No. 40	100
No. 60	100
No. 100	100
No. 200	100

D. TYPE A ASPHALT FOR GRAVEL FILL SHALL ONLY CONTAIN PARTICLES OF ROCK WHICH WILL PASS THE 2\"/>

E. ASPHALT FOR GRAVEL FILL SHALL BE OBTAINED FROM A SOURCE THAT WILL GUARANTEE THAT THE GRAVEL FILL IS FREE FROM VEGETABLE MATTER, LIMBS OR BALLS OF CLAY AND OTHER DESTRUCTIVE SUBSTANCES. THE GRAVIMETER OF THE PART THAT PASSES A 3\"/>

F. STONE TOPPING SHALL BE OBTAINED FROM ROCK OF UNIFORM QUALITY AND SHALL CONSIST OF CLEAN, ANGULAR FRAGMENTS OF QUARRIED ROCK FREE FROM SOFT DISINTEGRATED PIECES OR OTHER OBJECTIONABLE MATTER.

G. THE STONE TOPPING SHALL MEET THE FOLLOWING BLEND REQUIREMENTS:
 US STANDARD SIEVE SIZE % BY WEIGHT PASSING SIEVE

US STANDARD SIEVE SIZE	% BY WEIGHT PASSING SIEVE
2	100
1-1/2	100
1	100
3/4	100
0	100

H. THE STONE TOPPING SHALL MEET THE FOLLOWING BLEND REQUIREMENTS:
 US STANDARD SIEVE SIZE % BY WEIGHT PASSING SIEVE

US STANDARD SIEVE SIZE	% BY WEIGHT PASSING SIEVE
2	100
1-1/2	100
1	100
3/4	100
0	100

FOR PERMITTING
 NOT FOR CONSTRUCTION

SECTIONS & DETAILS
 UNION STREET S/S
 PORTLAND MAINE
 CENTRAL MAINE POWER COMPANY
 SYSTEM ENGINEERING
 DATE: 2/14/13
 POWER SCALE(S) NOTED
 REV A
 C-3

DESIGNED: JRS/SCL
 DRAWN: JRS/SCL
 CHECKED: JRS/SCL
 TRC: JRS/SCL
 APPROVED: JRS/SCL
 REVIEWED: JRS/SCL



NO.	REVISION	DATE	BY	CK	P.E.

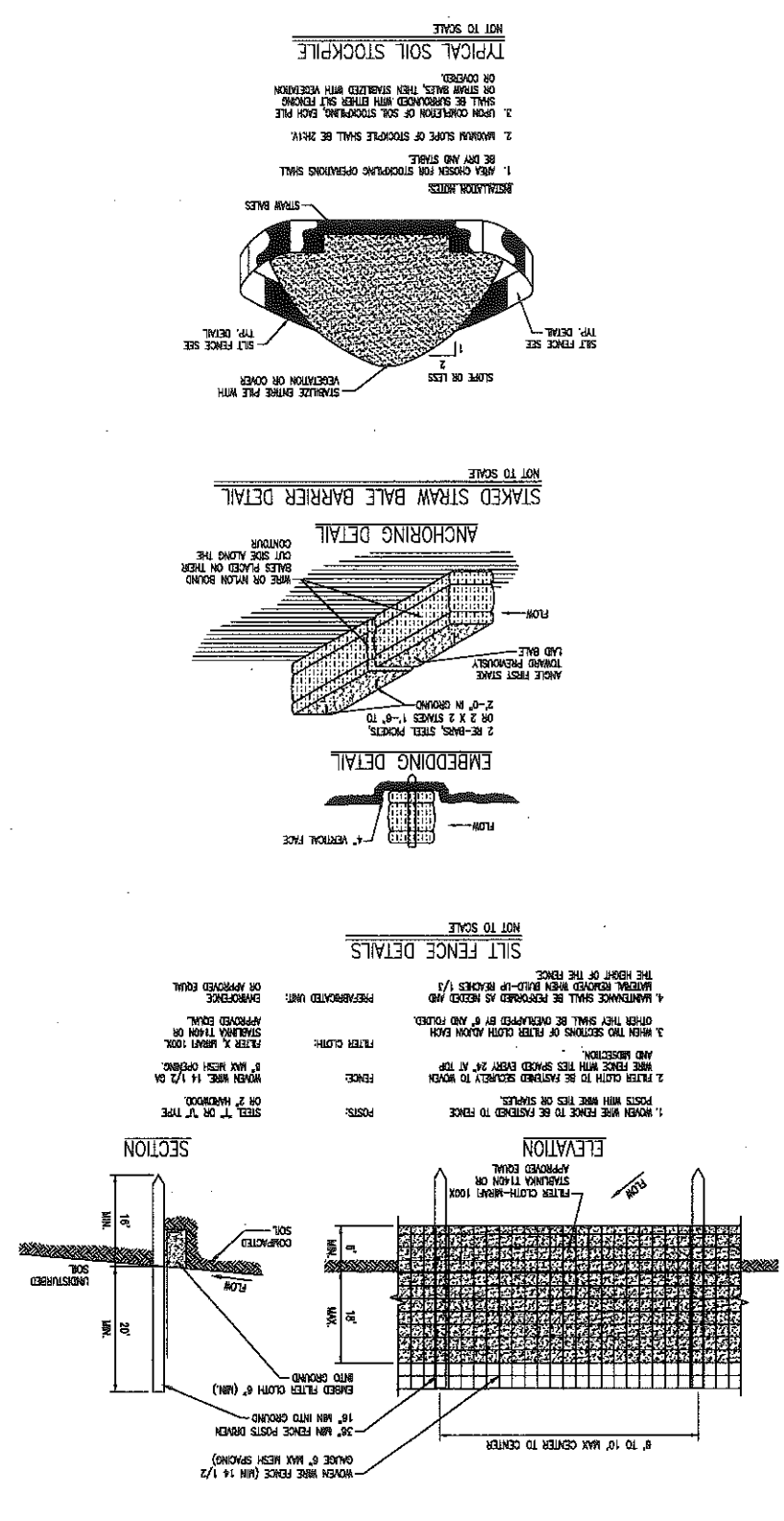
THIS DRAWING SHALL BE REVIEWED BY THE OWNER AND LOCAL AGENCIES. NO PARTIAL REVIEW SHALL BE ACCEPTED.

ENGINEERING CONSULTING - CORP. ADDRESS
CTRC
 248 WESTERN AVENUE
 AUGUSTA, ME 04330
 PROJECT NO: 123112

NO.	REVISION	DATE	BY	CK	P.E.
1	ISSUED FOR PERMITTING	03/09/13	CHM	WMC	DDB

NO.		REVISION		DATE		BY		CK		P.E.	
A		ISSUED FOR PERMITTING		03/15/13		CHM		WMC		DDB	

FOR PERMITTING
 NOT FOR CONSTRUCTION



EROSION CONTROL MEASURES:
 1. AREA COVERED FOR STOCKPILE OPERATIONS SHALL BE DRY AND STABLE.
 2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2:1H.
 3. UPON COMPLETION OF SOIL STOCKPILE, EACH PILE SHALL BE ENCASED WITH EITHER Silt Fence or Straw Bales.

STAKED STRAW BALE BARRIER:
 2-2" OR 2-2.5" SQUARE STEEL PIPES, 1'-0" TO 2'-0" IN GROUND.
 ANGLE IRON STRAP, 1 1/2" X 2" X 8'
 4" X 4" BALE PLACEMENT ON 6" X 6" BALE CENTER TO CENTER.
 BALE PLACEMENT ON 6" X 6" BALE CENTER TO CENTER.

MULCH ANCHORING REQUIREMENTS:
 1. STRAW AND HAY MULCH MAY BE USED INTERCHANGEABLY, EXCEPT IN WETLAND AREAS WHERE STRAW MULCH WILL BE REQUIRED.
 2. MULCH RATE OF WOOD FIBER MULCH IN OPEN AREAS SHALL BE 2 TONS/ACRES.
 3. STRAW, HAY, OR PERFORATED WOOD BARK OR PAPER MULCH (AS APPROVED) WILL PROVIDE 90 PERCENT GROUND COVER.
 4. PAPER MULCH IS ACCEPTABLE FOR USE DURING THE GROWING SEASON, ON SLOPES > 20 PERCENT AND IN AREAS WHERE VEGETATION HAS NOT ESTABLISHED WELL. ADDITIONAL HAY MULCH WILL BE ADDED AS A WEINIZING MEASURE.
 5. MULCH SHALL BE APPLIED TO A MINIMUM DEPTH OF 4 INCHES.

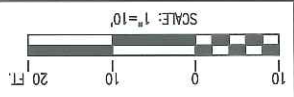
FERTILIZER AND LIMESTONE REQUIREMENTS:
 IN GENERAL, FERTILIZER AND LIME APPLICATION RATES WILL FOLLOW THE GUIDELINES IDENTIFIED BELOW UNLESS SITE SPECIFIC SOIL TESTS IDENTIFY THE NEED FOR ALTERNATIVE FERTILIZER/LIME APPLICATION RATES. FERTILIZER WILL BE APPLIED TO UPLAND AREAS PRIOR TO SEEDING AT A RATE OF 800 POUNDS PER ACRE USING 10-20-20 (N-P2O5-K) OR EQUIVALENT OR EQUIVALENT LIME OR EQUIVALENT LIME OF FERTILIZER AND LIME MAY BE APPLIED USING THE PROPOSED METHOD. NO LIME OR FERTILIZER WILL BE APPLIED TO WETLANDS.
 2. AREAS THAT DO NOT SUCCESSFULLY REVEGETATE WITHIN APPROPRIATE PERIOD OF TIME WILL BE RESEED AS NECESSARY.

CONDITION	SEED MIX	SEED MIX SPECIFICATIONS	SEED MIX RATE
CONSTRUCTION	ANNUAL REVEGETATION	SEED MIX COMPONENTS	40 LB./ACRE
TEMPORARY SEEDING	SEED MIX	ANNUAL REVEGETATION	40 LB./ACRE
PERMANENT SEEDING	WOODCHIP APPLICATION SEED MIX	WOODCHIP APPLICATION SEED MIX	20 LB./ACRE
WETLANDS	ANNUAL REVEGETATION	ANNUAL REVEGETATION	40 LB./ACRE
WOODCHIP APPLICATION AREAS	WOODCHIP APPLICATION SEED MIX	WOODCHIP APPLICATION SEED MIX	40 LB./ACRE

SEED MIX SPECIFICATIONS	SEED MIX RATE	SEED MIX COMPONENTS
WOODCHIP APPLICATION SEED MIX	20 LB./ACRE	WOODCHIP APPLICATION SEED MIX
WOODCHIP APPLICATION SEED MIX	40 LB./ACRE	WOODCHIP APPLICATION SEED MIX
WOODCHIP APPLICATION SEED MIX	40 LB./ACRE	WOODCHIP APPLICATION SEED MIX
WOODCHIP APPLICATION SEED MIX	40 LB./ACRE	WOODCHIP APPLICATION SEED MIX
WOODCHIP APPLICATION SEED MIX	40 LB./ACRE	WOODCHIP APPLICATION SEED MIX

CONDITION	MULCH TYPE	APPLICATION RATES
TEMPORARY	STRAW MULCH OR WOOD FIBER MULCH	2 TONS/ACRES
PERMANENT	STRAW MULCH OR WOOD FIBER MULCH	3 TONS/ACRES
PERMANENT	STRAW MULCH OR WOOD FIBER MULCH	2 TONS/ACRES
PERMANENT	STRAW MULCH OR WOOD FIBER MULCH	2 TONS/ACRES
PERMANENT	STRAW MULCH OR WOOD FIBER MULCH	2 TONS/ACRES
PERMANENT	STRAW MULCH OR WOOD FIBER MULCH	2 TONS/ACRES
PERMANENT	STRAW MULCH OR WOOD FIBER MULCH	2 TONS/ACRES
PERMANENT	STRAW MULCH OR WOOD FIBER MULCH	2 TONS/ACRES
PERMANENT	STRAW MULCH OR WOOD FIBER MULCH	2 TONS/ACRES
PERMANENT	STRAW MULCH OR WOOD FIBER MULCH	2 TONS/ACRES

CONSTRUCTION SEQUENCE:
 1. ESTABLISH CONSTRUCTION WORKSPACE LIMITS: DETERMINE AND MARK SENSITIVE RESOURCES.
 2. PREPARE ALL WORK IN ACCORDANCE WITH EROSION CONTROL AND SEDIMENT CONTROL MANUALBOOK FOR CONSTRUCTION BEST MANAGEMENT PRACTICES (2000) AND BEST WETLAND PRACTICES (1999).
 3. PRIOR TO SEEDING, CONSTRUCTION AND STABILIZATION OF THE EXISTING FACILITY SHALL BE COMPLETED.
 4. EROSION CONTROL AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION.
 5. TEMPORARY AND PERMANENT EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION.
 6. STABILIZATION OF EXISTING FACILITY SHALL BE COMPLETED PRIOR TO CONSTRUCTION.
 7. CONSTRUCTION OF NEW FACILITY SHALL BE COMPLETED PRIOR TO CONSTRUCTION.
 8. STABILIZATION OF NEW FACILITY SHALL BE COMPLETED PRIOR TO CONSTRUCTION.
 9. REVEGETATION OF EXISTING FACILITY SHALL BE COMPLETED PRIOR TO CONSTRUCTION.
 10. REVEGETATION OF NEW FACILITY SHALL BE COMPLETED PRIOR TO CONSTRUCTION.



THIS DRAWING SHALL BE REVISED ON THE CAD SYSTEM ONLY

ENGINEERING CONSULTANT - 0201 - ADDRESS
CTRC
 249 WESTERN AVENUE
 AUGUSTA, ME 04330
 PROJECT NO: 183112

NO.	REVISION	DATE	BY	CK	P.E.
A	ISSUED FOR PERMITTING	03/15/13	GMH	MWC	DJB



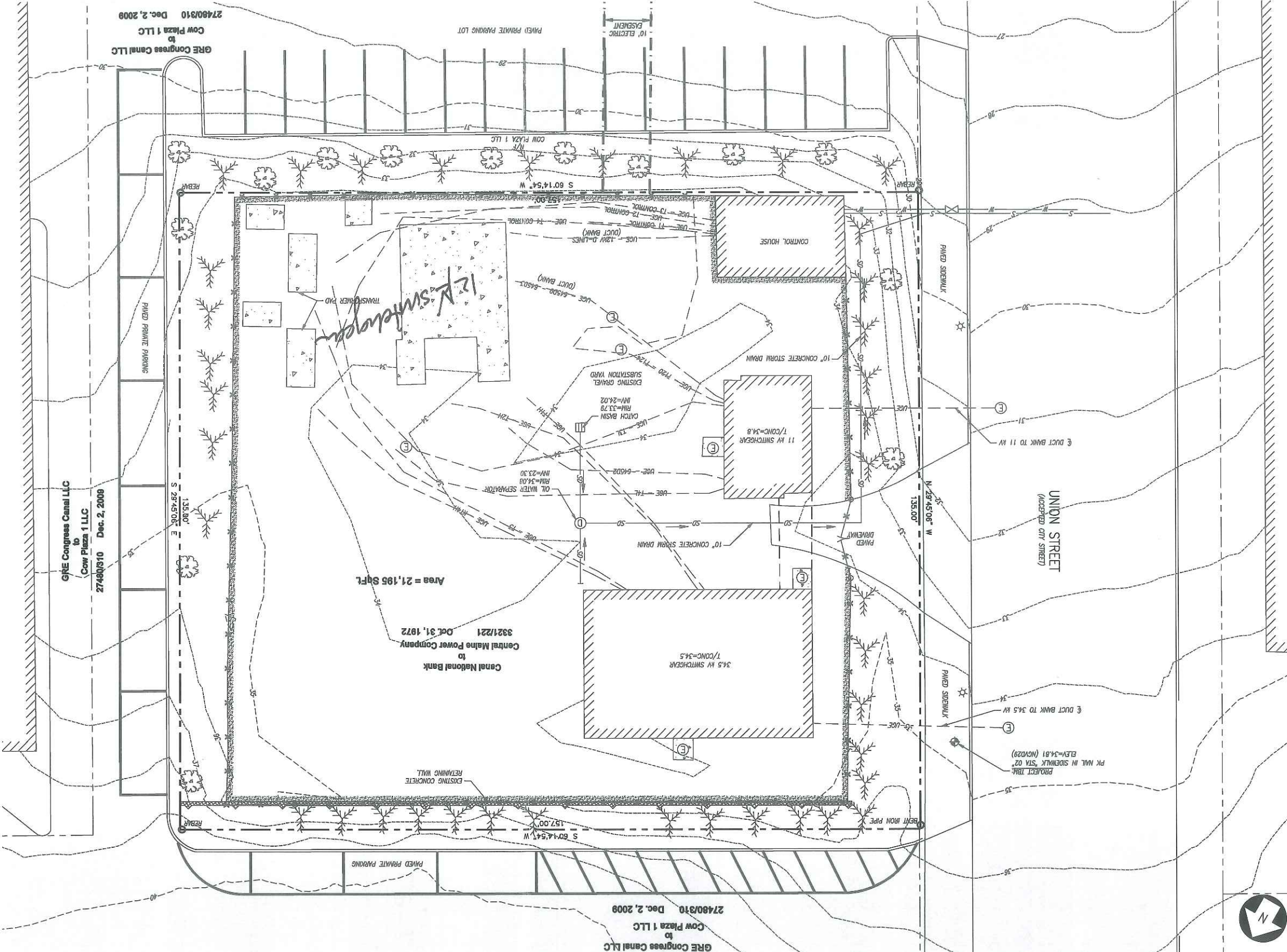
NO.	REVISION	DATE	BY	CK	P.L.S.	P.L.S. No.
A	ISSUED FOR PERMITTING	03/15/13	GMH	MWC	SWE	2181

This document and any attachments are considered:
PROTECTED CONFIDENTIAL INFRASTRUCTURE INFORMATION
 REFERENCE DRAWINGS



DESIGNED: TRC/
 DRAWN: TRC/
 CHECKED: TRC/
 APPROVED: [Signature]
 PORTLAND
 CENTRAL MAINE POWER COMPANY
 SYSTEMS ENGINEERING
 CENTRAL MAINE DATE: 2/4/13
 SCALE: AS NOTED

EXISTING CONDITIONS PLAN
 UNION STREET S/S
 C-1
 REV A



FOR PERMITTING
 NOT FOR CONSTRUCTION

- NOTES:
1. THE FOLLOWING DATUMS ARE REPRESENTED HEREON:
 HORIZONTAL: MAINE STATE COORDINATE SYSTEM, MAZ 83, WEST ZONE
 VERTICAL: NATIONAL GEODESIC VERTICAL DATUM 1929
 CITY OF PORTLAND OFFICIAL BENCHMARK REFERENCES
 US ROOM HOUSE, COMMONWEALTH STREET ENTRANCE, BOTTOM OF
 1/2" BENCH, 1/8" DEEP AT RIGHT SIDE OF ENTRANCE.
 MON29 ELEV=14.072
 2. TOPOGRAPHICAL SURVEY PERFORMED BY TRC, OCTOBER, 2011.
 3. BOUNDARY SURVEY PERFORMED BY TRC, JAN 2013.
 4. PROPERTY LOCATED IN THE B3, DOMINION BUSINESS ZONE.
 5. UNDERGROUND UTILITIES ARE SHOWN BASED ON VISIBLE SURFACE EVIDENCE ONLY, AND ARE NOT CERTIFIED.
- APPLICANT / RECORD OWNER:
 CENTRAL MAINE POWER COMPANY
 AUGUSTA, ME 04330
 PREPARED BY:
 THE ENGINEERS, LLC
 249 WESTERN AVENUE
 AUGUSTA, ME 04330

LEGEND

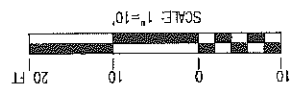
EXISTING	PROPOSED
PROPERTY/ROW LINE	PROPERTY/ROW LINE
CENTRALLINE	CENTRALLINE
EASEMENT LINE	EASEMENT LINE
EDGE OF PAVEMENT	EDGE OF PAVEMENT
CURBING	CURBING
EDGE OF CONCRETE	EDGE OF CONCRETE
SUBSTATION BASELINE	SUBSTATION BASELINE
MINOR CONTOUR	MINOR CONTOUR
MAJOR CONTOUR	MAJOR CONTOUR
BUILDING	BUILDING
CHAIN LINK FENCE	CHAIN LINK FENCE
RETAINING WALL	RETAINING WALL
SEWER	SEWER
WATER	WATER
STORM DRAIN	STORM DRAIN
UNDERDRAIN	UNDERDRAIN
12" CMP	12" CMP
UNDERGROUND ELECTRIC	UNDERGROUND ELECTRIC
OVERHEAD TRANSMISSION	OVERHEAD TRANSMISSION
MONUMENT	MONUMENT
IRON PIPE/REBAR	IRON PIPE/REBAR
SURVEY CONTROL POINT	SURVEY CONTROL POINT
SPOT ELEVATION	SPOT ELEVATION
UTILITY POLE	UTILITY POLE
SEWER MANHOLE	SEWER MANHOLE
DRAINAGE MANHOLE	DRAINAGE MANHOLE
CATCH BASIN	CATCH BASIN
ELECTRIC MANHOLE	ELECTRIC MANHOLE
SHUTOFF VALVE	SHUTOFF VALVE
HYDRANT	HYDRANT
UTILITY POLE	UTILITY POLE
LIGHT POLE	LIGHT POLE
SILT FENCE	SILT FENCE
RRRAIP	RRRAIP
SURFACE DRAINAGE FLOW	SURFACE DRAINAGE FLOW
SION	SION
TEMPORARY BENCH MARK	TEMPORARY BENCH MARK
TEST PIT	TEST PIT
LIMITS OF WORK	LIMITS OF WORK
CONIFEROUS TREE	CONIFEROUS TREE
DECIDUOUS TREE	DECIDUOUS TREE
SHRUB	SHRUB

GRE Congress Canal LLC
 to
 Cow Plaza 1 LLC
 Dec. 2, 2009
 27490/310

Canal National Bank
 to
 Central Maine Power Company
 Oct. 31, 1972
 3921/221

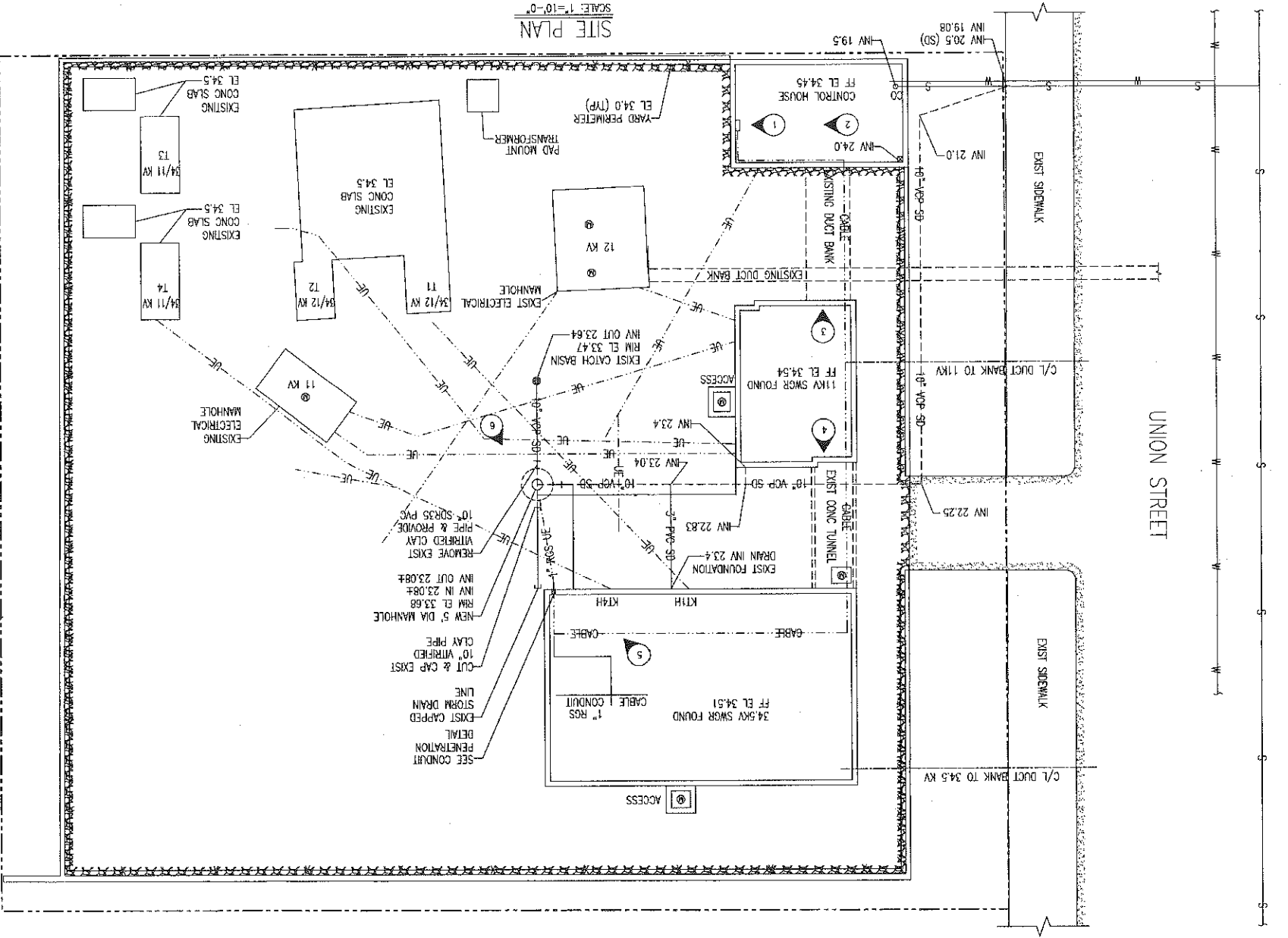
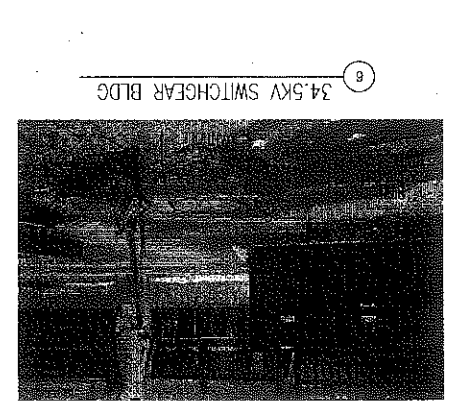
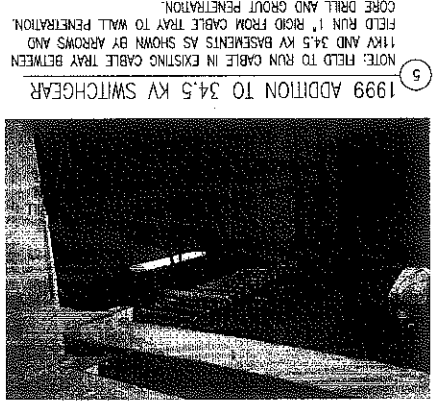
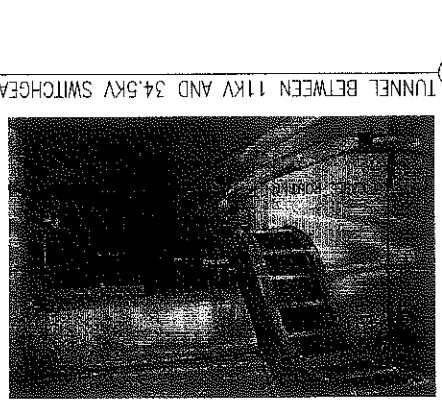
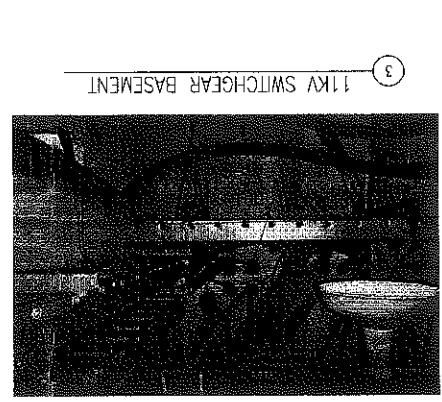
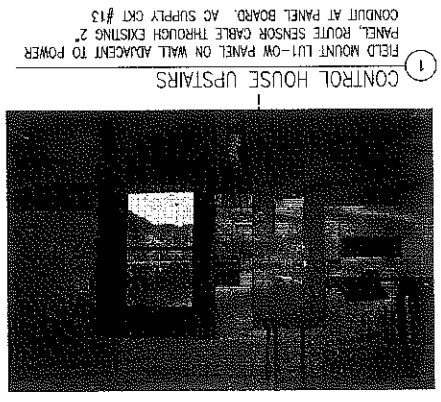
Area = 21,195 Sq.Ft.

GRE Congress Canal LLC
 to
 Cow Plaza 1 LLC
 Dec. 2, 2009
 27490/310



DESIGNED	DATE	BY	CK	NO	REVISION
CHECKED	DATE	BY	CK	NO	REVISION
APPROVED	DATE	BY	CK	NO	REVISION
1 AS BUILT	3/24/04	EVD	DTB		

PORTLAND
 OIL VALVE STOP INSTALLATION
 UNION STREET S/S
 SITE PLAN
 MAINE
 547-67
 CENTRAL MAINE POWER COMPANY
 ENGINEERING DEPARTMENT
 SCALE AS NOTED DATE 03-10-04
 SCANNED 4-8-05



ABBREVIATION LIST

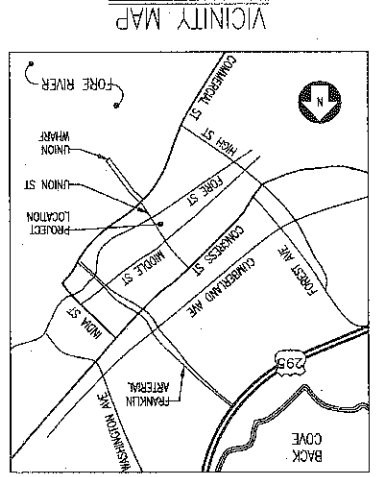
FF	FINISH FLOOR
EXIST	EXISTING
EL	ELEVATION
DIA	DIAMETER
CONC	CONCRETE
CO	CLEANOUT
FOUND	FOUNDATION
VC	VERTICAL
W	WATER
S	SANITARY
SD	STORM DRAIN

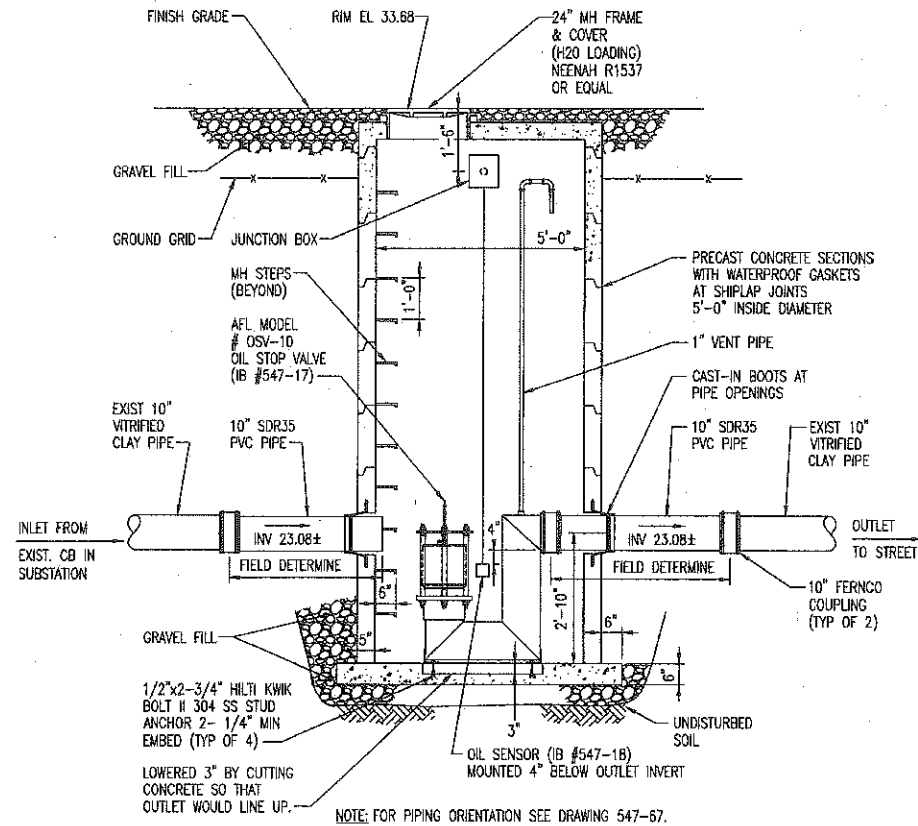
LEGEND

---	EXISTING UNDERGROUND ELECTRIC
---	EXISTING WATER LINE
---	EXISTING SANITARY SEWER
---	EXISTING STORM DRAIN
---	EXISTING EDGE OF GRAVEL
---	EXISTING EDGE OF PAVEMENT
---	PHOTOGRAPH LOCATION

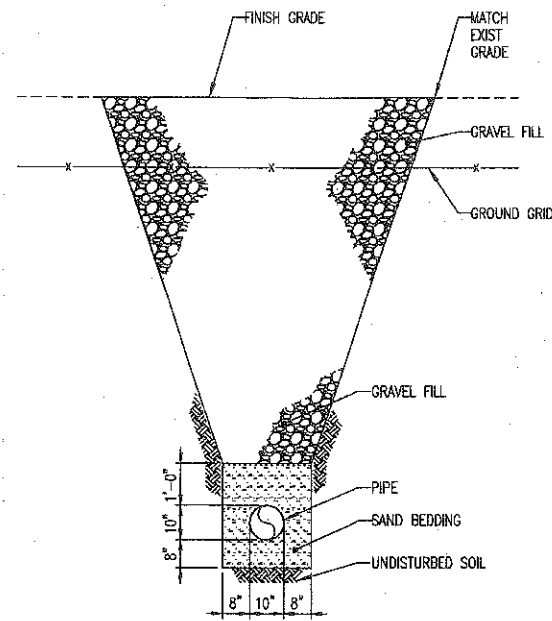
NOTES

- REFER TO DRAWING 547-68 FOR DETAILS.
- REFER TO DRAWING 547-68 FOR SAFETY, GENERAL, AND EARTHWORK NOTES.
- BENCHMARK: CONTROL HOUSE FINISH FLOOR ELEVATION 34.45.

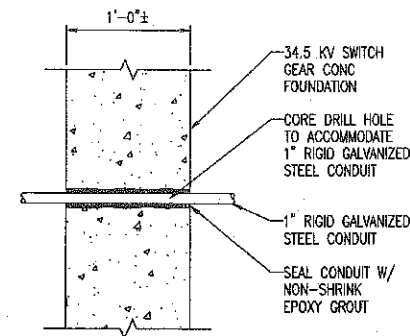




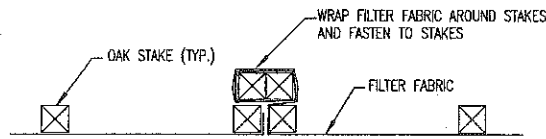
MANHOLE DETAIL
SCALE: 1/2" = 1'-0"



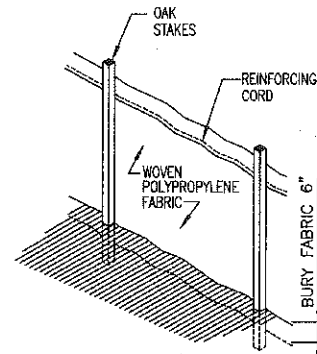
PIPE TRENCH DETAIL
SCALE: NONE



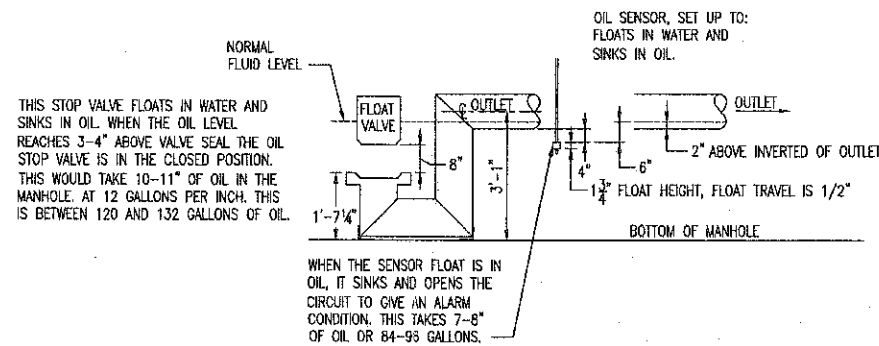
CONDUIT PENETRATION DETAIL
SCALE: 1-1/2" = 1'-0"



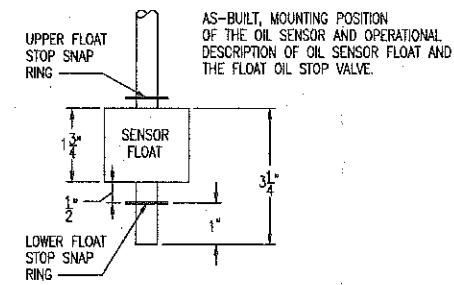
SILT FENCE LAP DETAIL
SCALE: NONE



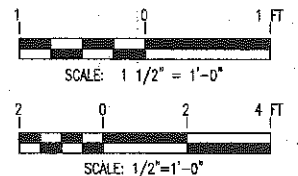
SILT FENCE DETAIL
SCALE: NONE



AS BUILT MANHOLE DETAIL
SCALE: 1/2" = 1'-0"



OIL SENSOR FLOAT
SCALE: NONE



SAFETY NOTES

1. WORK WILL BE CARRIED OUT IN AND NEAR ENERGIZED ELECTRICAL EQUIPMENT. EXTREME CAUTION IS REQUIRED AT ALL TIMES. THE CONTRACTOR SHALL STRICTLY FOLLOW ALL CMP SAFETY REQUIREMENTS. FAILURE TO DO SO WILL RESULT IN TERMINATION.

GENERAL NOTES

1. BOLD LINES AND NOTES INDICATE WORK TO BE PROVIDED.
2. THE CONTRACTOR SHALL CONDUCT ACTIVITIES TO MINIMIZE DAMAGE OR INTERFERENCE TO ADJACENT STRUCTURES AND OPERATIONS. ANY DAMAGE TO PROPERTY CAUSED BY CONTRACTOR NEGLIGENCE WILL BE REPAIRED OR REPLACED AT THE EXPENSE OF THE CONTRACTOR.
3. THE CONTRACTOR SHALL LEAVE THE PREMISES IN EQUAL OR BETTER CONDITION THAN THE CONDITION FOUND AT THE BEGINNING OF THE PROJECT. THE CONTRACTOR SHALL PRACTICE GOOD HOUSEKEEPING AND SHALL REMOVE ALL REFUSE AND CONSTRUCTION DEBRIS FROM THE SITE. FAILURE TO DO SO WILL RESULT IN CMP HIRING A THIRD PARTY TO CLEAN UP OR PERFORM REPAIRS AT THE EXPENSE OF THE CONTRACTOR.

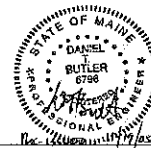
EARTHWORK

1. ALL EXCAVATIONS, SHORING, AND BRACING SHALL CONFORM TO OSHA REQUIREMENTS (29 CFR 1926).
2. UNDERGROUND UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS. PRIOR TO WORK, THE CONTRACTOR SHALL, AT A MINIMUM, CONTACT "DIG SAFE" AT 1-888-344-7233 TO IDENTIFY OR VERIFY SIZE, DEPTH, AND LOCATIONS OF ALL UNDERGROUND UTILITIES WITHIN THE VICINITY OF THE WORK AREA. CONTRACTOR SHALL PROTECT UTILITIES FROM DAMAGE AND SHALL NOT DISTURB UNDERGROUND UTILITIES TO REMAIN. IN THE EVENT A UTILITY IS DAMAGED AS A RESULT OF THE CONTRACTOR'S WORK, THE DAMAGED UTILITY SHALL BE REPAIRED BY THE CONTRACTOR TO ITS PRE-CONSTRUCTION CONDITION AT NO ADDITIONAL COST TO THE OWNER.
3. SHOULD UNCHARTED, OR INCORRECTLY CHARTED, PIPING OR OTHER UTILITIES BE ENCOUNTERED DURING EXCAVATION, CONTACT CMP IMMEDIATELY FOR DIRECTION.
4. THE SUBSTATION YARD IS TOPPED WITH A 3 FOOT LAYER OF A GRAVELLY FILL MATERIAL. THIS MATERIAL IS UNDERLAIN BY A 20 FOOT PLUS LAYER OF WELL COMPACTED SAND. LEDGE, STONES, OR BOULDERS GREATER THAN 1/3 CUBIC YARD WILL NOT BE ENCOUNTERED.
5. PLACE RGS CONDUIT 18 INCHES BELOW FINISH GRADE. BED CONDUIT IN SAND A MINIMUM OF 4 INCHES ALL AROUND AND TAMP.

OIL SENSOR

OMTEC LU1-OW
MODEL ELP21-LU1-OW
SERIAL # EL045679
OMTEC MFG, INC.
PHONE: 631-467-5787

E-PRO Engineering & Environmental Consulting, LLC
 246 Western Ave, Augusta, Maine 04330
 PROJECT NO: 10240 CONTRACT DWS NO: 10240-C2 DRAWING NO: 547-68/01N
 THIS DRAWING SHALL BE REVISIONED ON THE CAD SYSTEM ONLY



NO	REVISION	DATE	BY	CK	NO	REVISION	DATE	BY	CK
0	ISSUED FOR CONSTRUCTION	3/24/04	END	DTB					
1	AS BUILT	6/14/04	JLB	DTB					

UNION STREET S/S
OIL VALVE STOP INSTALLATION
SITE DETAILS

PORTLAND MAINE

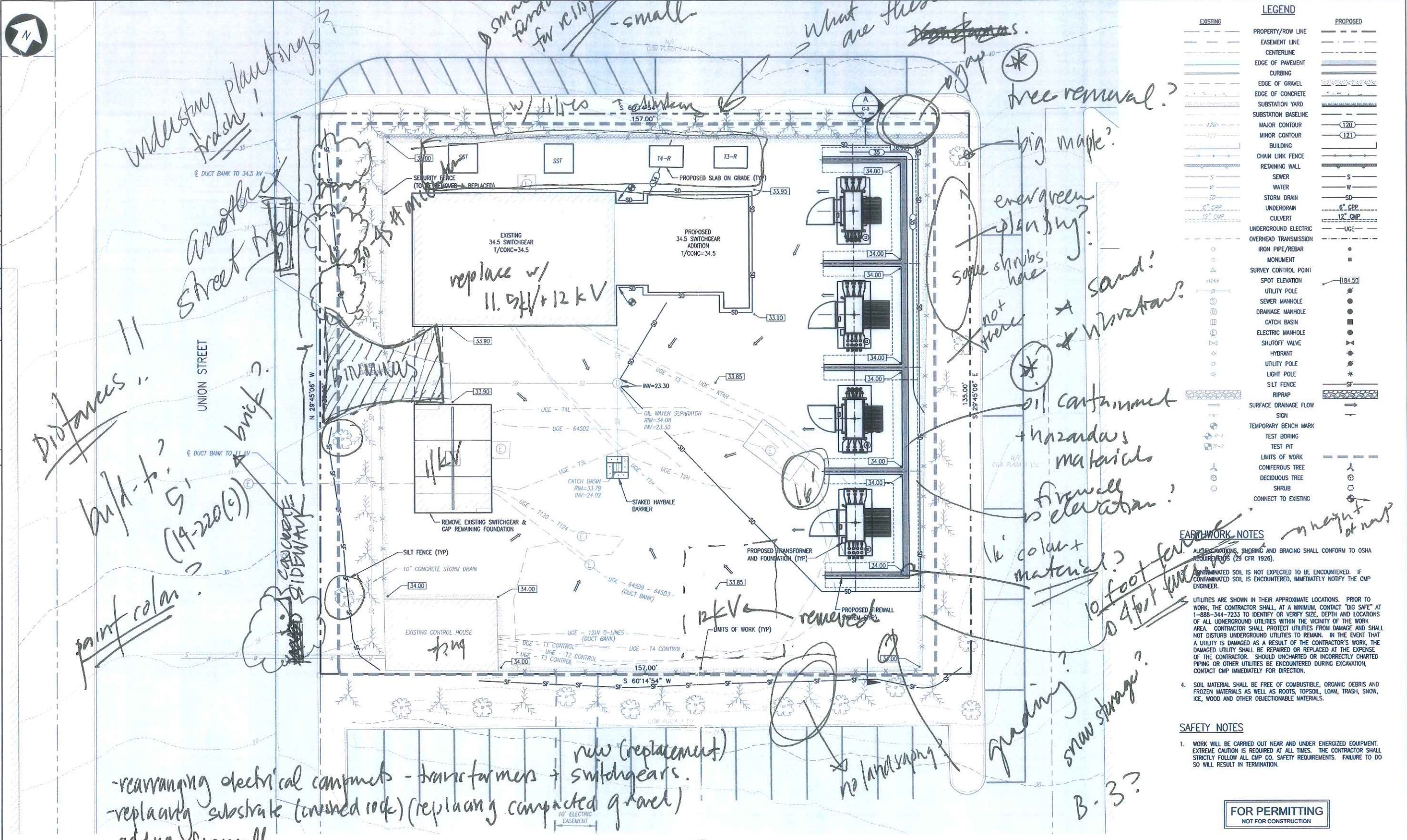
CENTRAL MAINE POWER COMPANY
ENGINEERING DEPARTMENT
SCALE AS NOTED DATE 03-10-04

547-68

NO.	REVISION	DATE	BY	CK	P. E.
A	ISSUED FOR PERMITTING	03/08/13	CMH	MWC	DTB

ENGINEERING CONSULTANT - LOGO - ADDRESS
TRC
 240 WESTERN AVENUE
 AUGUSTA, MAINE 04330
 PROJECT NO. 176899

THIS DRAWING SHALL BE REVISED ON THE GRID SYSTEM ONLY



LEGEND

EXISTING	PROPOSED
PROPERTY/ROW LINE	PROPERTY/ROW LINE
EASEMENT LINE	EASEMENT LINE
CENTERLINE	CENTERLINE
EDGE OF PAVEMENT	EDGE OF PAVEMENT
CURBING	CURBING
EDGE OF GRAVEL	EDGE OF GRAVEL
EDGE OF CONCRETE	EDGE OF CONCRETE
SUBSTATION YARD	SUBSTATION YARD
SUBSTATION BASELINE	SUBSTATION BASELINE
MAJOR CONTOUR	MAJOR CONTOUR (120)
MINOR CONTOUR	MINOR CONTOUR (121)
BUILDING	BUILDING
CHAIN LINK FENCE	CHAIN LINK FENCE
RETAINING WALL	RETAINING WALL
SEWER	SEWER
WATER	WATER
STORM DRAIN	STORM DRAIN
UNDERDRAIN	6" CPP
CULVERT	12" CMP
UNDERGROUND ELECTRIC	UNDERGROUND ELECTRIC
OVERHEAD TRANSMISSION	OVERHEAD TRANSMISSION
IRON PIPE/REBAR	IRON PIPE/REBAR
MONUMENT	MONUMENT
SURVEY CONTROL POINT	SURVEY CONTROL POINT
SPOT ELEVATION	SPOT ELEVATION (184.50)
UTILITY POLE	UTILITY POLE
SEWER MANHOLE	SEWER MANHOLE
DRAINAGE MANHOLE	DRAINAGE MANHOLE
CATCH BASIN	CATCH BASIN
ELECTRIC MANHOLE	ELECTRIC MANHOLE
SHUTOFF VALVE	SHUTOFF VALVE
HYDRANT	HYDRANT
UTILITY POLE	UTILITY POLE
LIGHT POLE	LIGHT POLE
SILT FENCE	SILT FENCE
RIPPRAP	RIPPRAP
SURFACE DRAINAGE FLOW	SURFACE DRAINAGE FLOW
SIGN	SIGN
TEMPORARY BENCH MARK	TEMPORARY BENCH MARK
TEST BORING	TEST BORING
TEST PIT	TEST PIT
LIMITS OF WORK	LIMITS OF WORK
CONIFEROUS TREE	CONIFEROUS TREE
DECIDUOUS TREE	DECIDUOUS TREE
SHRUB	SHRUB
CONNECT TO EXISTING	CONNECT TO EXISTING

EARTHWORK NOTES

1. ALL EXCAVATIONS, SHORING AND BRACING SHALL CONFORM TO OSHA REQUIREMENTS (29 CFR 1926).

2. CONTAMINATED SOIL IS NOT EXPECTED TO BE ENCOUNTERED. IF CONTAMINATED SOIL IS ENCOUNTERED, IMMEDIATELY NOTIFY THE CMP ENGINEER.

3. UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS. PRIOR TO WORK, THE CONTRACTOR SHALL, AT A MINIMUM, CONTACT "DIG SAFE" AT 1-888-344-7233 TO IDENTIFY OR VERIFY SIZE, DEPTH AND LOCATIONS OF ALL UNDERGROUND UTILITIES WITHIN THE VICINITY OF THE WORK AREA. CONTRACTOR SHALL PROTECT UTILITIES FROM DAMAGE AND SHALL NOT DISTURB UNDERGROUND UTILITIES TO REMAIN. IN THE EVENT THAT A UTILITY IS DAMAGED AS A RESULT OF THE CONTRACTOR'S WORK, THE DAMAGED UTILITY SHALL BE REPAIRED OR REPLACED AT THE EXPENSE OF THE CONTRACTOR. SHOULD UNCHARTED OR INCORRECTLY CHARTED PIPING OR OTHER UTILITIES BE ENCOUNTERED DURING EXCAVATION, CONTACT CMP IMMEDIATELY FOR DIRECTION.

4. SOIL MATERIAL SHALL BE FREE OF COMBUSTIBLE, ORGANIC DEBRIS AND FROZEN MATERIALS AS WELL AS ROOTS, TOPSOIL, LOAM, TRASH, SNOW, ICE, WOOD AND OTHER OBJECTIONABLE MATERIALS.

SAFETY NOTES

1. WORK WILL BE CARRIED OUT NEAR AND UNDER ENERGIZED EQUIPMENT. EXTREME CAUTION IS REQUIRED AT ALL TIMES. THE CONTRACTOR SHALL STRICTLY FOLLOW ALL CMP CO. SAFETY REQUIREMENTS. FAILURE TO DO SO WILL RESULT IN TERMINATION.

FOR PERMITTING
NOT FOR CONSTRUCTION

- rearranging electrical components - transformers + switchgears.
- replacing substrate (crushed rock) (replacing compacted gravel)
- adding fire wall
- new fencing.
- new landscaping

This document and any attachments are considered:
BUSINESS CONFIDENTIAL
PROTECTED CRITICAL INFRASTRUCTURE INFORMATION

REFERENCE DRAWINGS

NO.	REVISION	DATE	BY	CK	P. E.	P. E.
A	ISSUED FOR PERMITTING	03/15/13	CMH	MWC	DTB	6796

Professional Engineer Seal
 STATE OF MAINE
 DANIEL T. BUTLER
 No. 6796

DESIGNED: TRC/SGL
 DRAWN: TRC/KAV
 CHECKED: TRC/
 APPROVED: TRC/

SITE GRADING PLAN

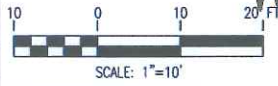
UNION STREET S/S

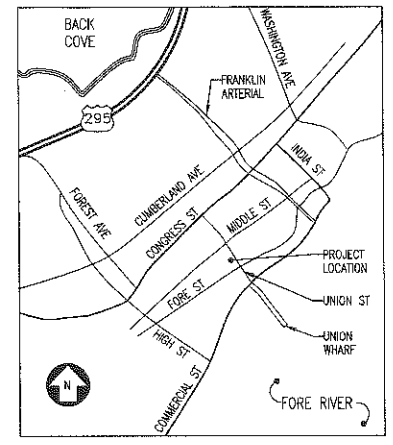
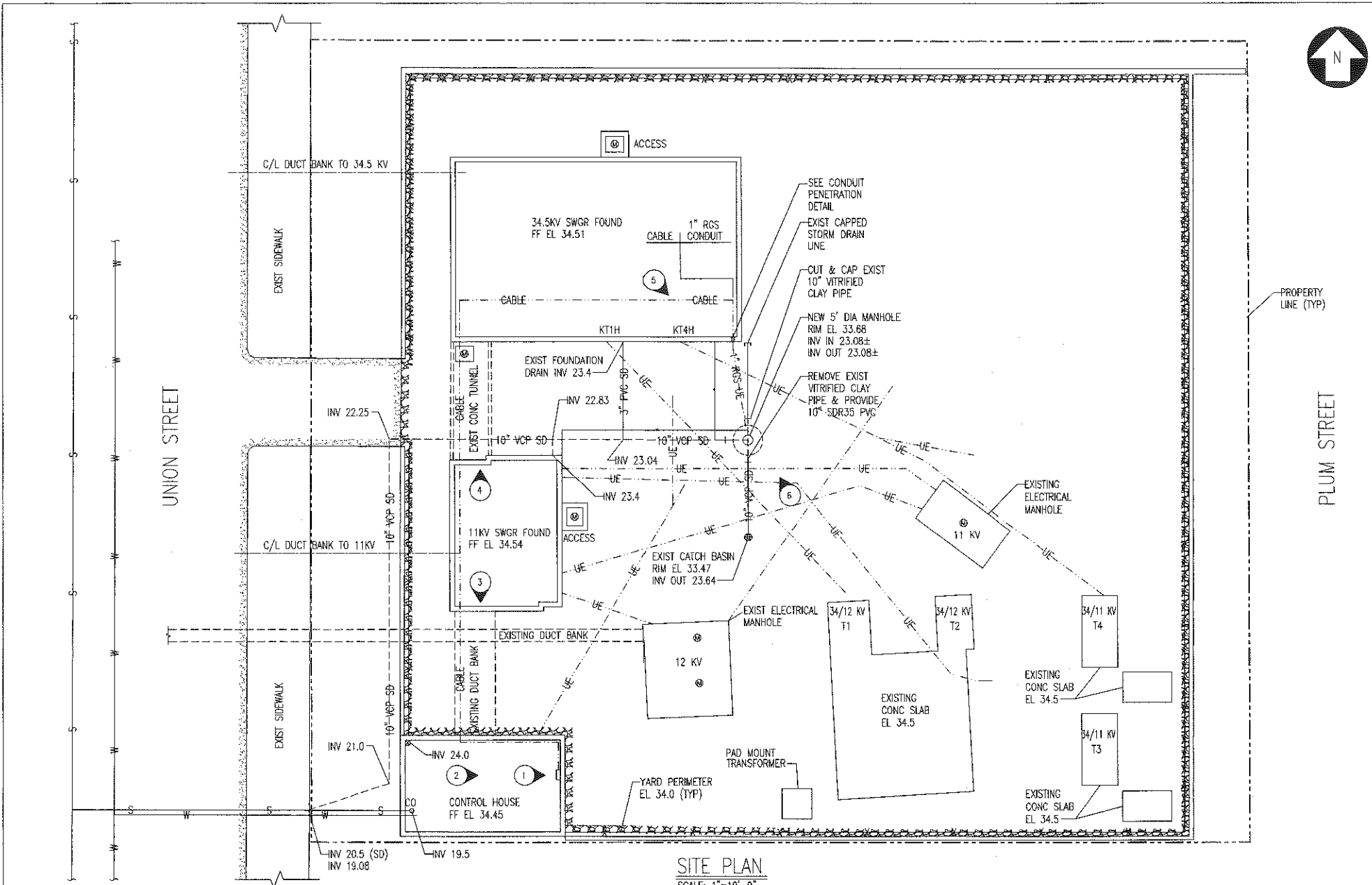
PORTLAND MAINE

CENTRAL MAINE POWER COMPANY
 SYSTEM ENGINEERING

CENTRAL MAINE DATE: 2/14/13
 SCALE: AS NOTED

C-2
 REV A





VICINITY MAP

- NOTES**
- REFER TO DRAWING 547-68 FOR DETAILS.
 - REFER TO DRAWING 547-68 FOR SAFETY, GENERAL, AND EARTHWORK NOTES.
 - BENCHMARK: CONTROL HOUSE FINISH FLOOR ELEVATION 34.45.

- LEGEND**
- SD---
 - S---
 - W---
 - UE---
 -
 -
 -
- EXISTING STORM DRAIN
 EXISTING SANITARY SEWER
 EXISTING WATER LINE
 EXISTING UNDERGROUND ELECTRIC
 EXISTING EDGE OF PAVEMENT
 EXISTING EDGE OF GRAVEL
 PHOTOGRAPH LOCATION

- ABBREVIATION LIST**
- | | | | |
|-------|--------------|-------|------------------------|
| BLDG | BUILDING | FOUND | FOUNDATION |
| CO | CLEANOUT | INV | INVERT |
| CONC | CONCRETE | RGS | RIGID GALVANIZED STEEL |
| DIA | DIAMETER | SWGR | SWITCH GEAR |
| EL | ELEVATION | TYP | TYPICAL |
| EXIST | EXISTING | VC | VITRIFIED CLAY |
| FF | FINISH FLOOR | | |

SITE PLAN
SCALE: 1"=10'-0"



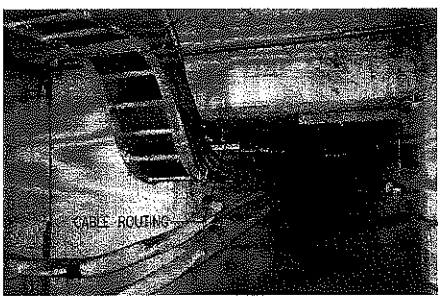
1 CONTROL HOUSE UPSTAIRS
FIELD MOUNT LU1-OW PANEL ON WALL ADJACENT TO POWER PANEL. ROUTE SENSOR CABLE THROUGH EXISTING 2" CONDUIT AT PANEL BOARD. AC SUPPLY CKT #13



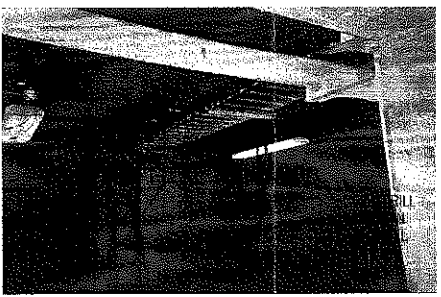
2 CONTROL HOUSE DOWNSTAIRS
NOTE: USE EXISTING 4" CONDUIT BETWEEN CONTROL HOUSE AND 11KV SWITCHGEAR FOR SENSOR CABLE ROUTING



3 11KV SWITCHGEAR BASEMENT



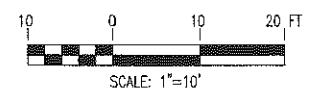
4 TUNNEL BETWEEN 11KV AND 34.5KV SWITCHGEAR



5 1999 ADDITION TO 34.5 KV SWITCHGEAR
NOTE: FIELD TO RUN CABLE IN EXISTING CABLE TRAY BETWEEN 11KV AND 34.5 KV BASEMENTS AS SHOWN BY ARROWS AND FIELD RUN 1" RIGID FROM CABLE TRAY TO WALL PENETRATION. CORE DRILL AND GROUT PENETRATION.



6 34.5KV SWITCHGEAR BLDG



NO	REVISION	DATE	BY	CK	NO	REVISION	DATE	BY	CK
1	AS BUILT	3/24/04	EVD	DTR					

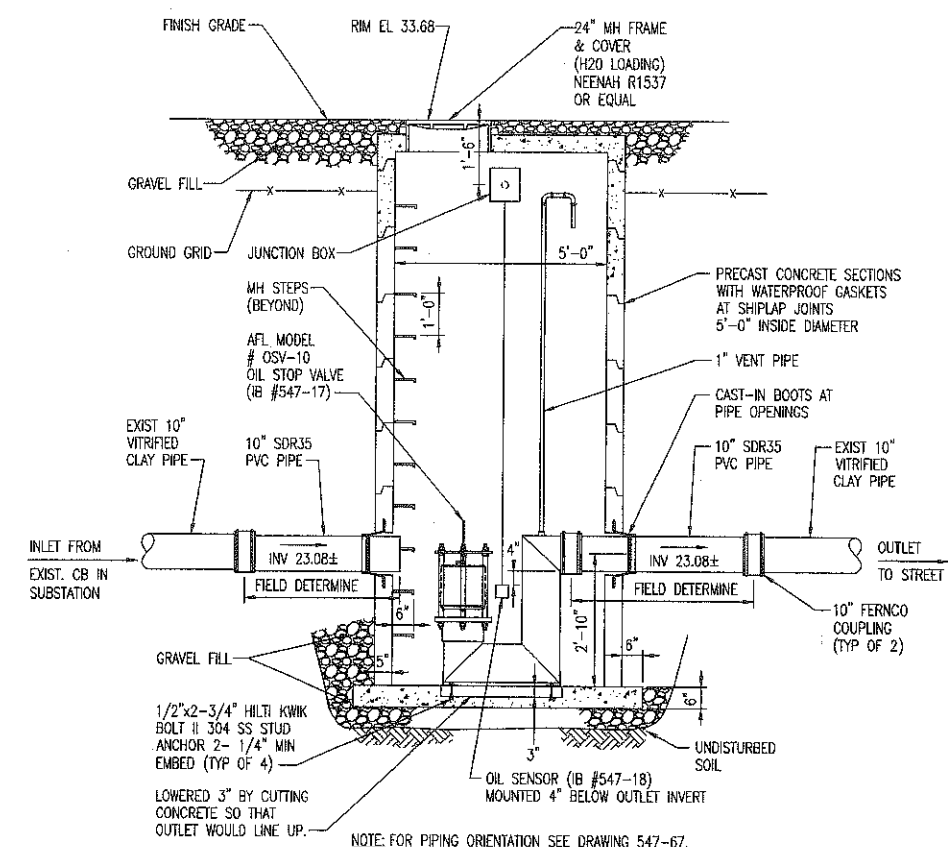
UNION STREET S/S
OIL VALVE STOP INSTALLATION
SITE PLAN

PORTLAND MAINE

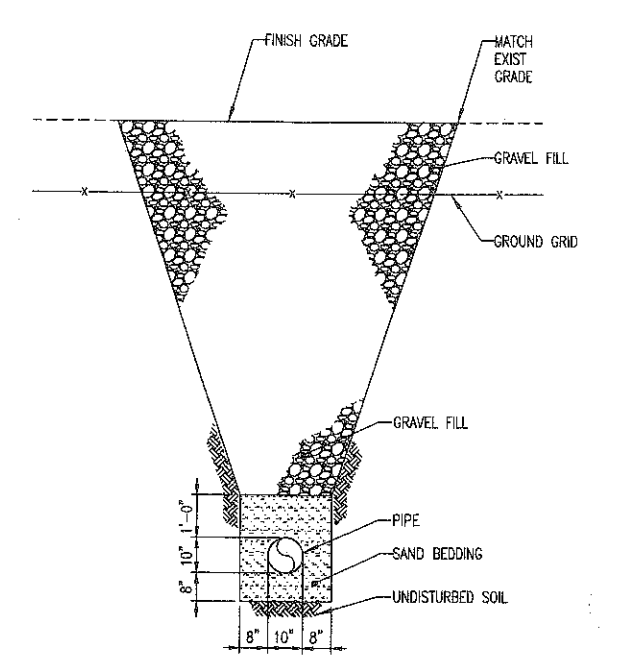
CENTRAL MAINE POWER COMPANY
ENGINEERING DEPARTMENT
SCALE AS NOTED DATE 03-10-04

547-67

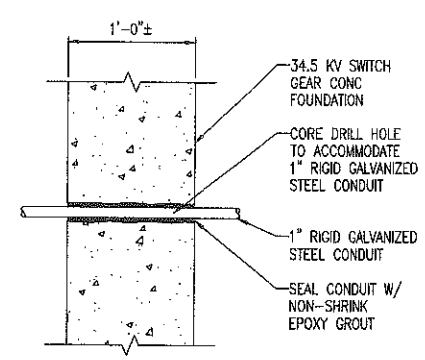
ENGINEERING & ENVIRONMENTAL CONSULTING, LLC
 249 WESTERN AVE, AUGUSTA, MAINE 04330
 PROJECT NO: 10240 CONTRACT DWG NO: 10240-C1
 FILENAME: 547-67.DWG
 THIS DRAWING SHALL BE REVISED ON THE CAD SYSTEM ONLY



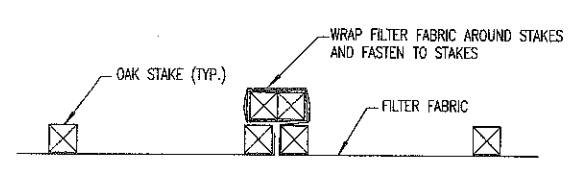
MANHOLE DETAIL
SCALE: 1/2"=1'-0"



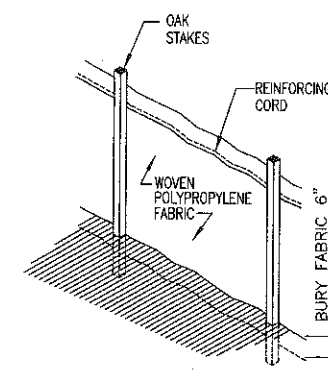
PIPE TRENCH DETAIL
SCALE: NONE



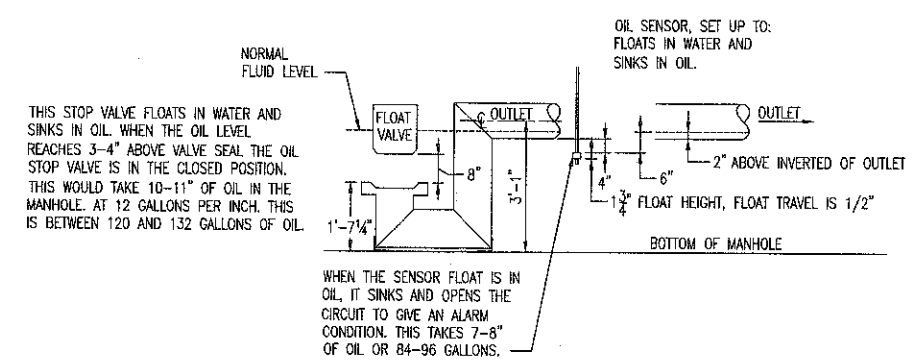
CONDUIT PENETRATION DETAIL
SCALE: 1-1/2"=1'-0"



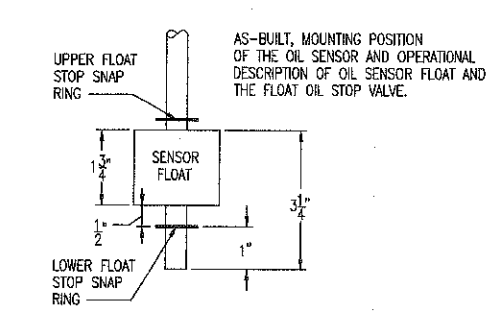
SILT FENCE LAP DETAIL
SCALE: NONE



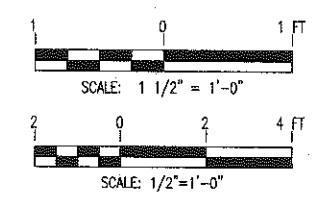
SILT FENCE DETAIL
SCALE: NONE



AS BUILT MANHOLE DETAIL
SCALE: 1/2"=1'-0"



OIL SENSOR FLOAT
SCALE: NONE



SAFETY NOTES

1. WORK WILL BE CARRIED OUT IN AND NEAR ENERGIZED ELECTRICAL EQUIPMENT. EXTREME CAUTION IS REQUIRED AT ALL TIMES. THE CONTRACTOR SHALL STRICTLY FOLLOW ALL CMP SAFETY REQUIREMENTS. FAILURE TO DO SO WILL RESULT IN TERMINATION.

GENERAL NOTES

1. BOLD LINES AND NOTES INDICATE WORK TO BE PROVIDED.
2. THE CONTRACTOR SHALL CONDUCT ACTIVITIES TO MINIMIZE DAMAGE OR INTERFERENCE TO ADJACENT STRUCTURES AND OPERATIONS. ANY DAMAGE TO PROPERTY CAUSED BY CONTRACTOR NEGLIGENCE WILL BE REPAIRED OR REPLACED AT THE EXPENSE OF THE CONTRACTOR.
3. THE CONTRACTOR SHALL LEAVE THE PREMISES IN EQUAL OR BETTER CONDITION THAN THE CONDITION FOUND AT THE BEGINNING OF THE PROJECT. THE CONTRACTOR SHALL PRACTICE GOOD HOUSEKEEPING AND SHALL REMOVE ALL REFUSE AND CONSTRUCTION DEBRIS FROM THE SITE. FAILURE TO DO SO WILL RESULT IN CMP HIRING A THIRD PARTY TO CLEAN UP OR PERFORM REPAIRS AT THE EXPENSE OF THE CONTRACTOR.

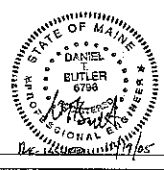
EARTHWORK

1. ALL EXCAVATIONS, SHORING, AND BRACING SHALL CONFORM TO OSHA REQUIREMENTS (29 CFR 1926).
2. UNDERGROUND UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS. PRIOR TO WORK, THE CONTRACTOR SHALL, AT A MINIMUM, CONTACT "DIG SAFE" AT 1-888-344-7233 TO IDENTIFY OR VERIFY SIZE, DEPTH, AND LOCATIONS OF ALL UNDERGROUND UTILITIES WITHIN THE VICINITY OF THE WORK AREA. CONTRACTOR SHALL PROTECT UTILITIES FROM DAMAGE AND SHALL NOT DISTURB UNDERGROUND UTILITIES TO REMAIN. IN THE EVENT A UTILITY IS DAMAGED AS A RESULT OF THE CONTRACTOR'S WORK, THE DAMAGED UTILITY SHALL BE REPAIRED BY THE CONTRACTOR TO ITS PRE-CONSTRUCTION CONDITION AT NO ADDITIONAL COST TO THE OWNER.
3. SHOULD UNCHARTED, OR INCORRECTLY CHARTED, PIPING OR OTHER UTILITIES BE ENCOUNTERED DURING EXCAVATION, CONTACT CMP IMMEDIATELY FOR DIRECTION.
4. THE SUBSTATION YARD IS TOPPED WITH A 3 FOOT LAYER OF A GRAVELLY FILL MATERIAL. THIS MATERIAL IS UNDERLAIN BY A 20 FOOT PLUS LAYER OF WELL COMPACTED SAND. LEDGE, STONES, OR BOULDERS GREATER THAN 1/3 CUBIC YARD WILL NOT BE ENCOUNTERED.
5. PLACE RGS CONDUIT 18 INCHES BELOW FINISH GRADE. BED CONDUIT IN SAND A MINIMUM OF 4 INCHES ALL AROUND AND TAMP.

OIL SENSOR

OMNTEC LU1-OW
MODEL ELP21-LU1-OW
SERIAL # EL045679
OMNTEC MFG, INC.
PHONE: 631-467-5787

E-PRO Engineering & Environmental Consulting, LLC
 249 Western Ave, Augusta, Maine 04330
 PROJECT NO: 10240 CONTRACT NO: 10240-C2 FILENAME: 547-68.DGN
 THIS DRAWING SHALL BE REVISED ON THE SUB SYSTEM ONLY



NO	REVISION	DATE	BY	CK	NO	REVISION	DATE	BY	CK
0	ISSUED FOR CONSTRUCTION	3/24/04	EVO	DTB					
1	AS BUILT	8/14/04	JLB	DTB					

DESIGNED	REVIEWED
DRAWN	
CHECKED	
APPROVED	

**UNION STREET S/S
OIL VALVE STOP INSTALLATION
SITE DETAILS**

PORTLAND MAINE

CENTRAL MAINE POWER COMPANY
ENGINEERING DEPARTMENT
SCALE AS NOTED DATE 03-10-04

547-68