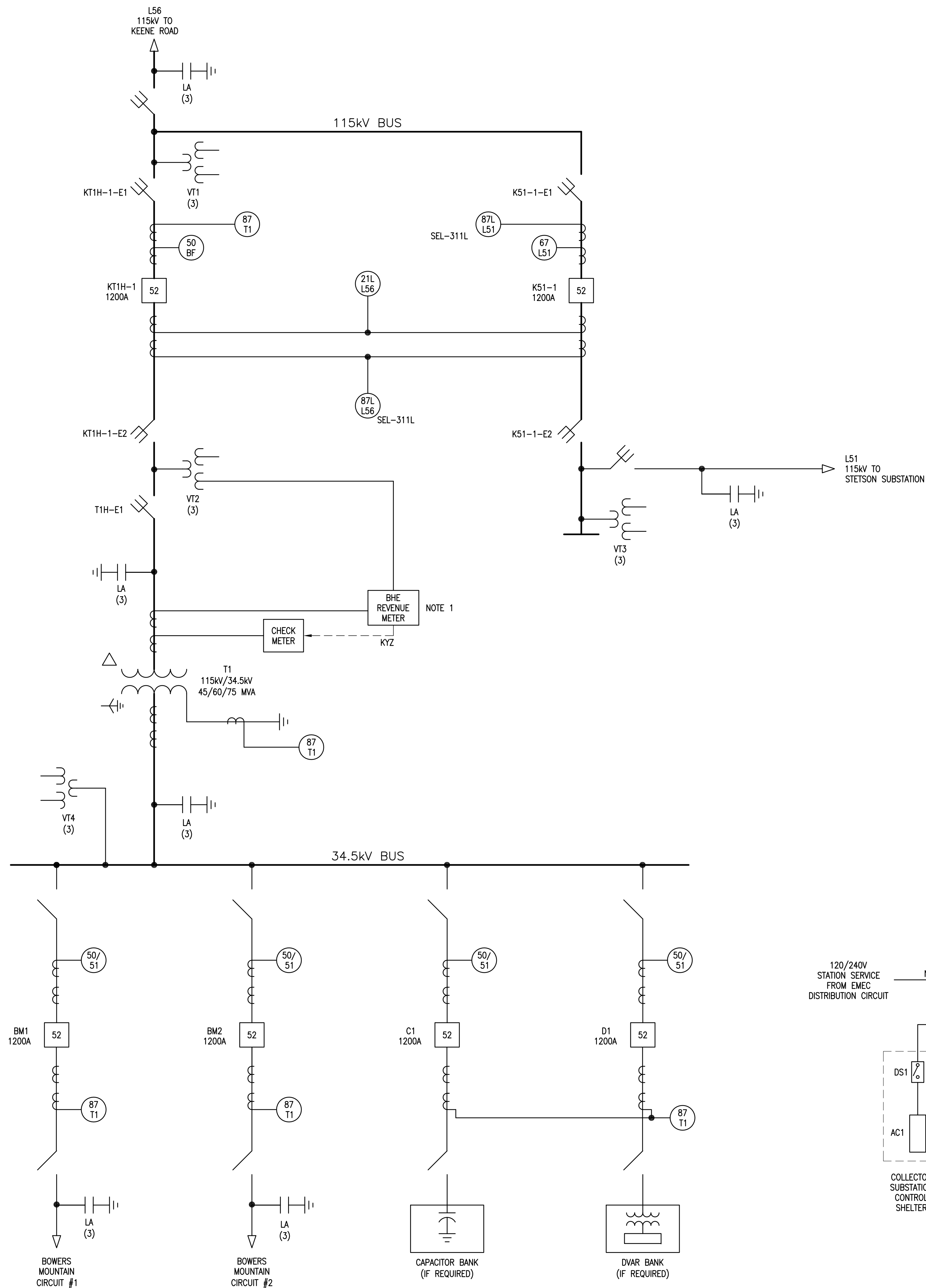


Exhibit 1C Substation Plans



- ### LEGEND:
- 21L LINE DISTANCE RELAY
 - 50 AC INSTANTANEOUS OVERCURRENT RELAY
 - 50BF BREAKER FAILURE RELAY
 - 51 AC INVERSE TIME OVERCURRENT RELAY
 - 52 AC CIRCUIT BREAKER
 - 67 AC DIRECTIONAL OVERCURRENT RELAY
 - 87 DIFFERENTIAL PROTECTIVE RELAY
 - 87L LINE DIFFERENTIAL PROTECTIVE RELAY
 - |—|— LIGHTNING ARRESTOR
 - |—|— DUAL SECONDARY WINDING VOLTAGE TRANSFORMER
 - |—|— 3-PHASE GROUP OPERATED DISCONNECT SWITCH
 - |—|— BUSHING MOUNTED CURRENT TRANSFORMER
 - |—|— MAIN STEP-UP TRANSFORMER
 - |—|— SINGLE POLE MANUAL DISCONNECT SWITCH
 - |—|— CAPACITOR (BANK)
 - |—|— DVAR (BANK)
 - |—|— ATS AUTOMATIC TRANSFER SWITCH
 - DS1/DS2 STATION SERVICE DISCONNECT
 - AC1/AC2 AC DISTRIBUTION PANEL

- ### NOTES
- BANGOR HYDRO REVENUE METERING REQUIREMENTS:
 - CT LEADS WILL BE #8 AWG MINIMUM.
 - VT CONNECTIONS TO BE WYE CONFIGURATION WITH 120V LINE TO GROUND.
 - CT CONNECTIONS TO BE WYE CONFIGURATION.
 - CTS TO HAVE A THERMAL RATING FACTOR OF NO LESS THAN 2.0.
 - CT AND VT LEADS TO BE IN DEDICATED CONDUIT.
 - CT AND VT WINDINGS WILL BE DEDICATED TO UTILITY METERING.
 - INSTRUMENT TRANSFORMERS TO BE METERING CLASS ACCURACY.
 - DEDICATED PHONE LINE FOR UTILITY DIAL-UP TO REVENUE METER.
 - KYZ OUTPUT TO UTILITY RTU VIA FIBER OPTIC.
 - REVENUE METER SHALL BE LOCATED SUCH THAT UTILITY CAN ACCESS METER YEAR ROUND.

NO.	REVISIONS:	APPD:	DATE:
A	ISSUED FOR REVIEW	MRL	10/26/10
B	ISSUED FOR PERMIT	MRL	12/8/10
C	ADDED UTILITY MTRG REQUIREMENTS	MRL	01/10/11

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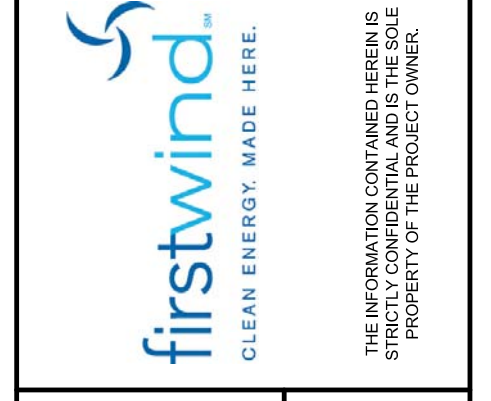
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 Drawn: S/JF
 Design: MRL
 Appd: JHF

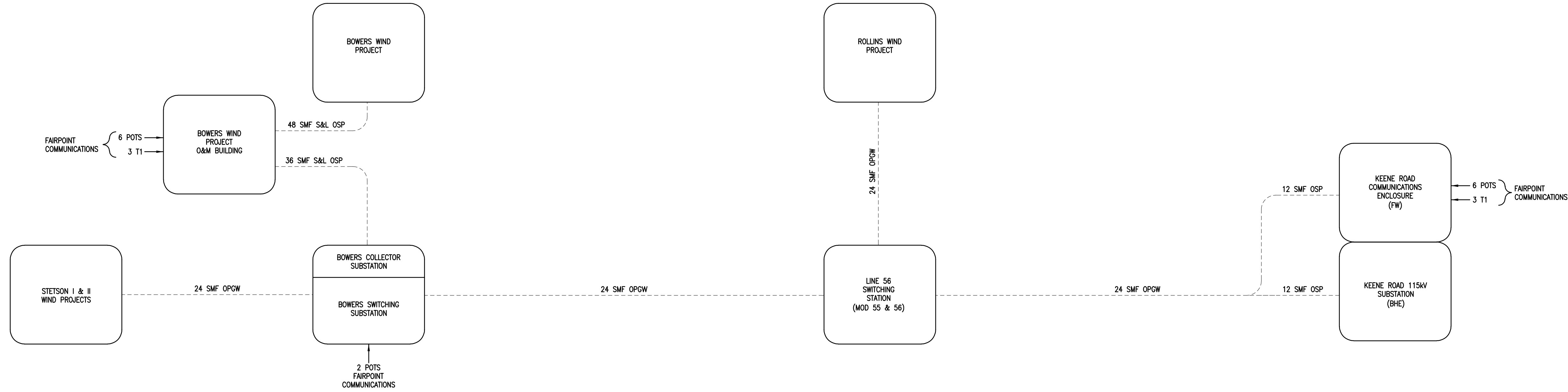
Date: SEPTEMBER 27, 2010
 SGC Project: 780001

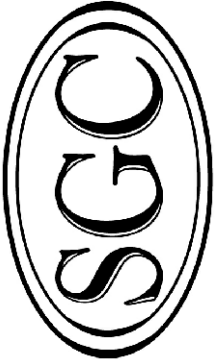

ONE LINE DIAGRAM

BOWERS WIND PROJECT
 PENOBSCOT COUNTY, MAINE

CHAMPLAIN WIND, LLC
 129 MIDDLE STREET, 3RD FLOOR, PORTLAND, ME 04101





 SGC ENGINEERING, LLC • Civil Design & Survey Engineering • Electrical Power Systems Engineering • Electrical Power Systems Engineering Offices - Westbrook & Orono, Maine South Burlington, Vermont Farmington, New Mexico		Scale: NONE Drawn: DJM Design: GSP Project: JHF
BOWERS COMMUNICATIONS OVERVIEW Project: BOWERS WIND PROJECT PENOBSCOT COUNTY, MAINE Client: CHAMPLAIN WIND, LLC 129 MIDDLE STREET, 3RD FLOOR, PORTLAND, ME 04101		Title: BOWERS COMMUNICATIONS OVERVIEW Project: BOWERS WIND PROJECT Client: CHAMPLAIN WIND, LLC
 CLEAN ENERGY. MADE HERE.	THE INFORMATION CONTAINED HEREIN IS STRICTLY CONFIDENTIAL AND IS THE SOLE PROPERTY OF THE PROJECT OWNER.	
DWG. 106-02-4001	SHEET 1 of 2	Date: OCTOBER 20, 2010 SGC Project: 780001
NO. A REVISIONS: ISSUED FOR REVIEW APPD: MRL DATE: XXXX	NO. B REVISIONS: ISSUED FOR PERMIT APPD: MRL DATE: 12/8/10	NO. REVISIONS: APPD: DATE:

NOTES:

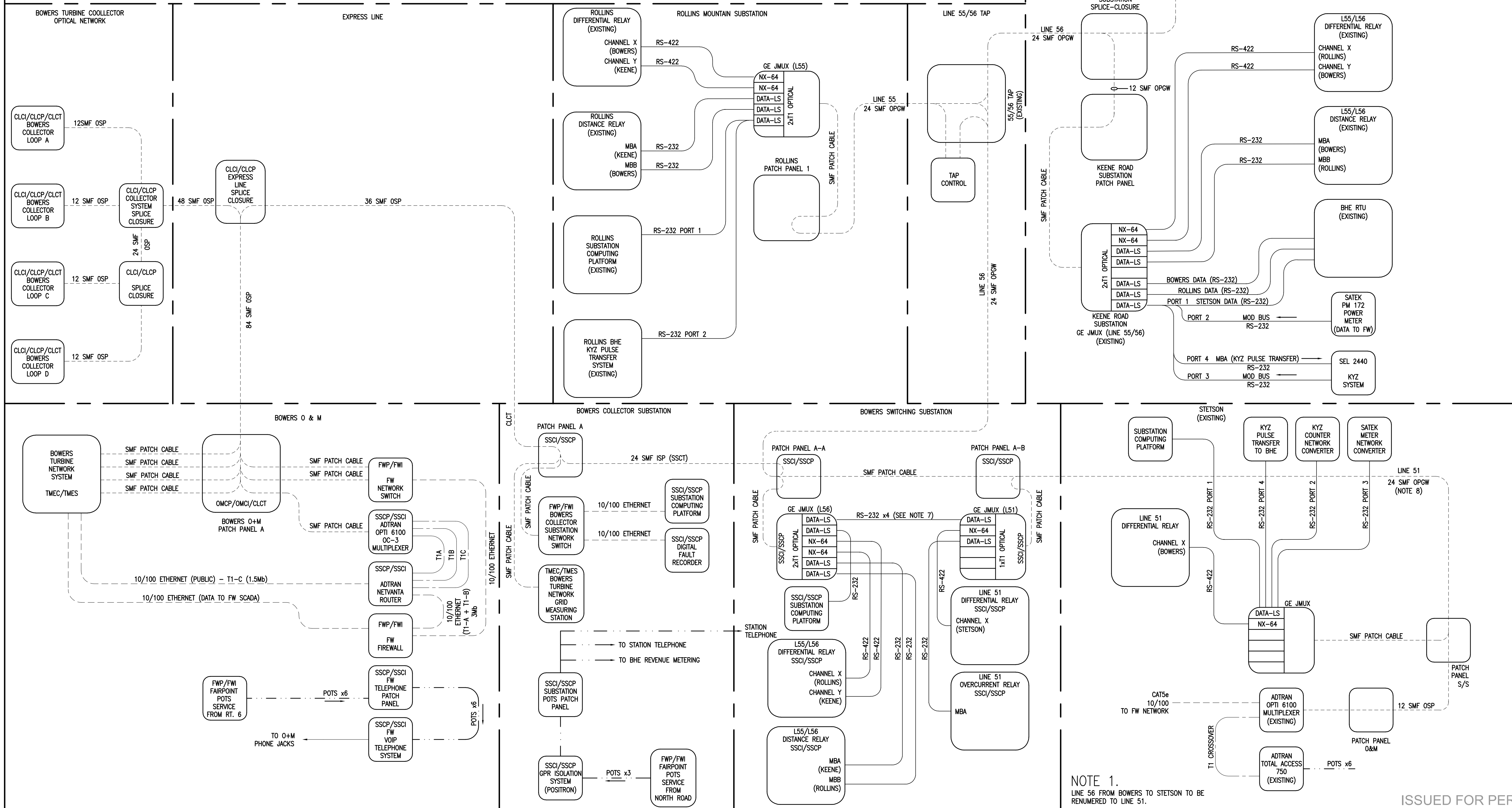
- 1) ALL LOW SPEED SERIAL CONNECTIONS WILL USE SEL FAST MESSAGE PROTOCOL OVER RS-232 AT 19,200 BPS UNLESS OTHERWISE NOTED.
- 2) ALL FIBER WILL BE SINGLE MODE SMF28e COMPATIBLE.
- 3) ALL FIBER CONNECTORS WILL BE PUSH/PULL SC TYPE CONNECTORS UNLESS OTHERWISE NOTED.
- 4) ALL COMMUNICATIONS CONNECTORS, WIRING AND TESTING SHALL CONFORM TO TIA-568B STANDARDS.
- 5) BHE SHALL PROVIDE AN SEL-2440 DISCRETE PROGRAMMABLE AUTOMATION CONTROLLER FOR MONITORING OF KYZ PULSES FROM THE REVENUE METER.
- 6) ALL TELECOM SERVICES SHALL BE FROM FAIRPOINT COMMUNICATIONS AND ITS ASSOCIATED SUBSIDIARIES.
- 7) SERIAL CONNECTIONS PATCHED THRU FOR TRANSFER OF STETSON DATA TO KEENE ROAD SUBSTATION.
- 8) LINE 56 FROM BOWERS TO STETSON TO BE RENUMBERED TO LINE 51.

CODES FOR SCOPE OF RESPONSIBILITY

OMCI	O&M CONTRACTOR INSTALL
OMCP	O&M CONTRACTOR PROCURE
CLCI	COLLECTOR LINE CONTRACTOR INSTALL
CLCP	COLLECTOR LINE CONTRACTOR PROCURE
CLCT	COLLECTOR LINE CONTRACTOR TERMINATE
TLCI	TRANSMISSION LINE CONTRACTOR INSTALL
TLCI	TRANSMISSION LINE CONTRACTOR PROCURE
SSCI	SUBSTATION CONTRACTOR INSTALL
SSCP	SUBSTATION CONTRACTOR PROCURES
SSCT	SUBSTATION CONTRACTOR TERMINATE
FWI	FIRST WIND INSTALL
FWP	FIRST WIND PROCURE
TMEC	TURBINE MANUFACTURER COMMISSIONED EQUIPMENT
TMES	TURBINE MANUFACTURER SUPPLIED EQUIPMENT
BHEI	BHE INSTALL
BHEP	BHE PROCURE
BHEC	BHE COMMISSION
24F 18SP	FIBER USAGE COUNT (24 FIBER 18 SPARE)

LEGEND:

PATCH	PATCH CABLE (TIGHT BUFFERED 200µM)
WTGNW	WIND TURBINE GENERATOR SCADA NETWORK
FWSNW	FIRSTWIND SCADA NETWORK
TPCTL	LINE 55 TAP CONTROLLER
---	SINGLE MODE FIBER
---	ETHERNET CABLE
---	LOW SPEED SERIAL CABLE
---	DATA TWISTED PAIR
---	POTS TWISTED PAIR



NOTE 1.
LINE 56 FROM BOWERS TO STETSON TO BE RENUMBERED TO LINE 51.

ISSUED FOR PERMIT

NO.	REVISIONS:	DATE:
A	ISSUED FOR REVIEW	12/8/10
B	ISSUED FOR PERMIT	

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Scale: NONE
Drawn: DJM
Checked: GSP
Project: 780001
Date: OCTOBER 20, 2010

STATION COMMUNICATIONS SYSTEM PROTECTION OVERVIEW

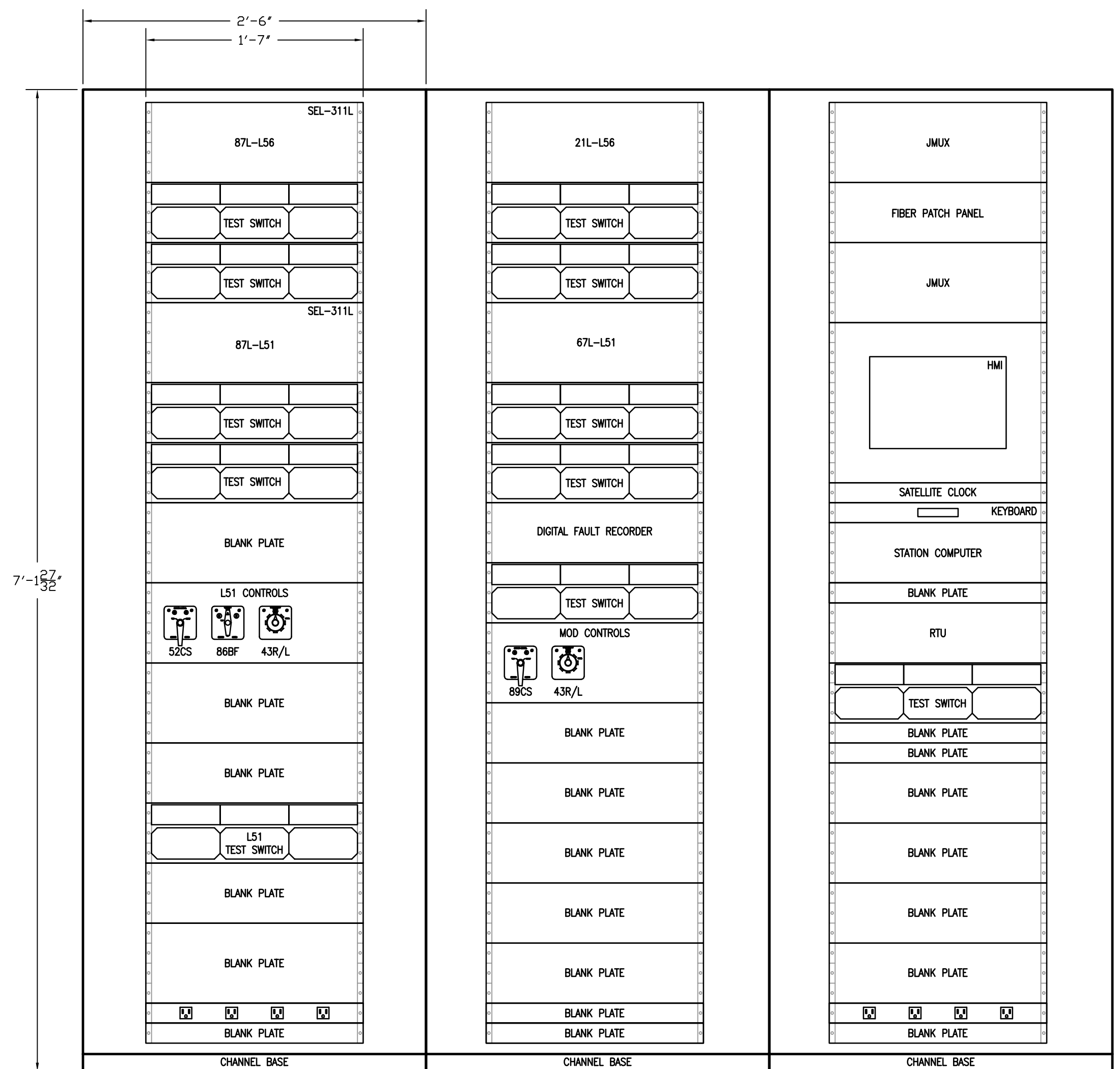
BOWERS WIND PROJECT
PENOBSCOT COUNTY, MAINE

CHAMPLAIN WIND, LLC
129 MIDDLE STREET, 3RD FLOOR, PORTLAND, ME 04101

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DWG. SHEET
106-02-4001 2 of 2



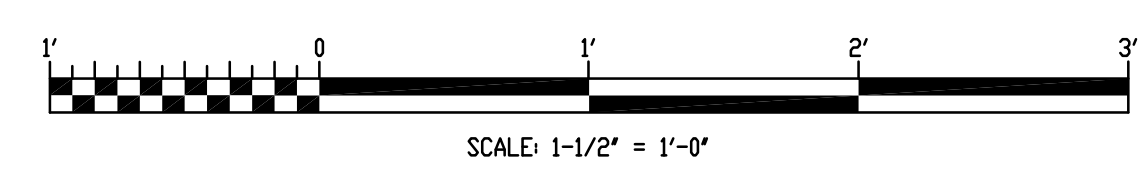
PANEL 1
LINES 51 & 56
PRIMARY PROTECTION
/CONTROL

PANEL 2
LINES 51 & 56
SECONDARY PROTECTION

PANEL 3
COMMUNICATIONS
CABINET

REFERENCE DRAWINGS:

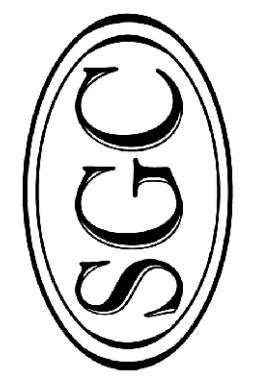
106-04-1001 SWITCHING SUBSTATION - CONTROL SHELTER PLAN VIEW



NO.	REVISIONS:	APPD:	DATE:
A	ISSUED FOR REVIEW	MRL	10/29/10
B	ISSUED FOR PERMIT	MRL	12/6/10

Scale	1-1/2" = 1'-0"
Drawn	SJF
Design	MRL
Appr'd	JHF

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SGC Project	780001
Date	SEPTEMBER 30, 2010
Scale	1-1/2" = 1'-0"
Drawn	SJF
Design	MRL
Appr'd	JHF

SWITCHING SUBSTATION PROTECTION &
CONTROL CABINET - FRONT VIEW
 Project: BOWERS WIND PROJECT
 PENOBSCOT COUNTY, MAINE
 Client: CHAMPLAIN WIND, LLC
 129 MIDDLE STREET, 3RD FLOOR, PORTLAND, ME 04101



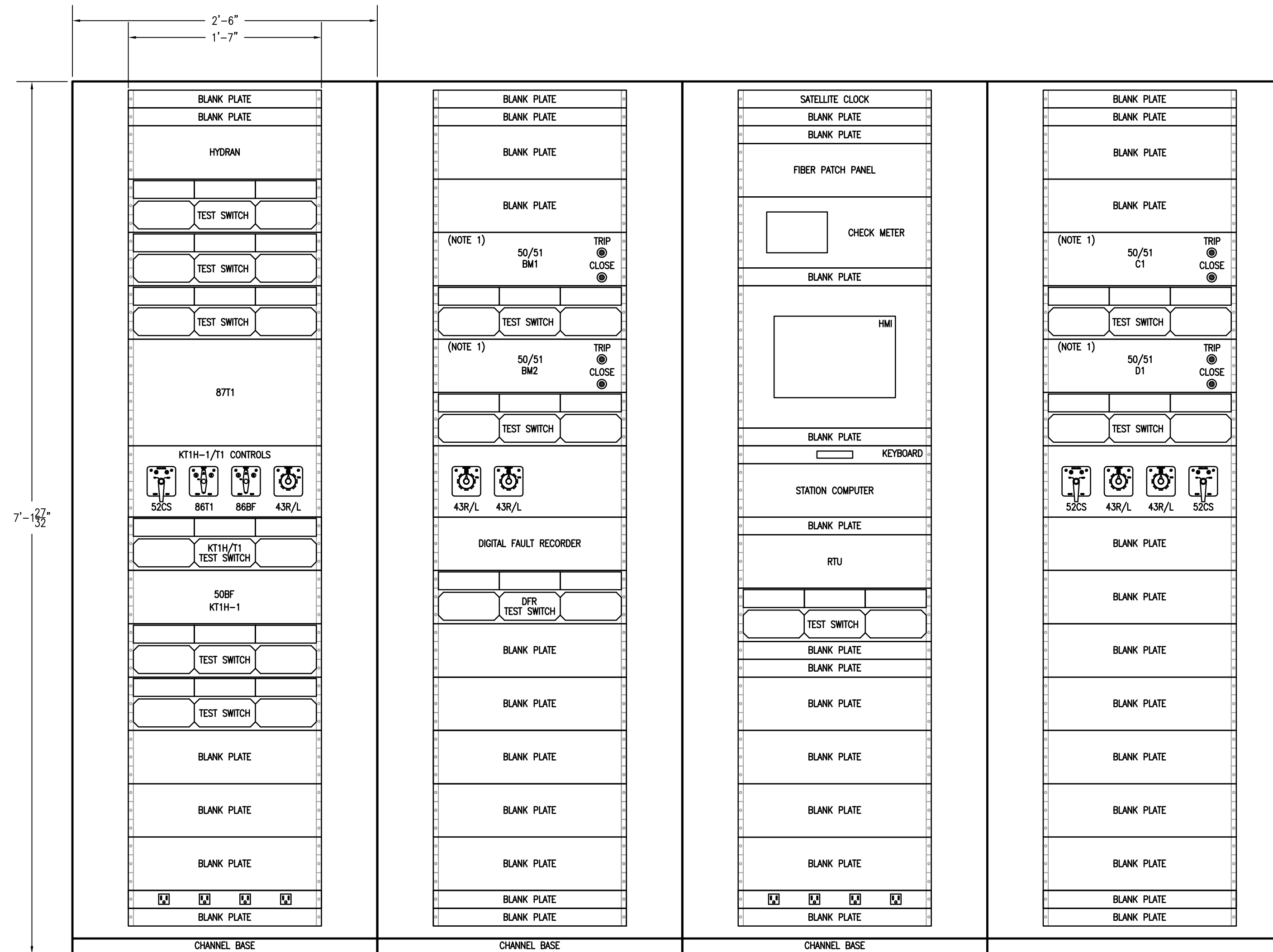
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DWG.	106-03-1001
SHEET	1 of 1

ISSUED FOR PERMIT

NOTES:

1. BREAKER CONTROLS (TRIP/CLOSE) ARE LOCATED ON THE CORRESPONDING RELAYS.



PANEL 1
TRANSFORMER & BREAKER
PROTECTION/CONTROL

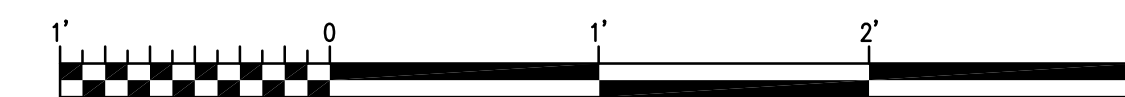
PANEL 2
34.5KV COLLECTOR
PROTECTION/CONTROL

PANEL 3
COMMUNICATIONS
CABINET

PANEL 4
CAPACITOR/DVAR BANK
PROTECTION/CONTROL
(IF REQUIRED)

REFERENCE DRAWINGS:

106-04-1001 SWITCHING SUBSTATION - CONTROL SHELTER PLAN VIEW

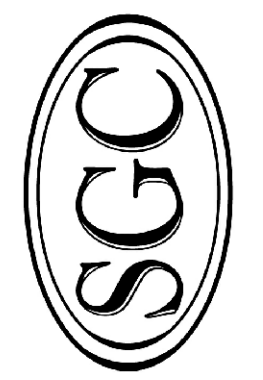


SCALE: 1-1/2" = 1'-0"

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A	ISSUED FOR REVIEW	MRL	10/29/10
B	ISSUED FOR PERMIT	MRL	12/6/10

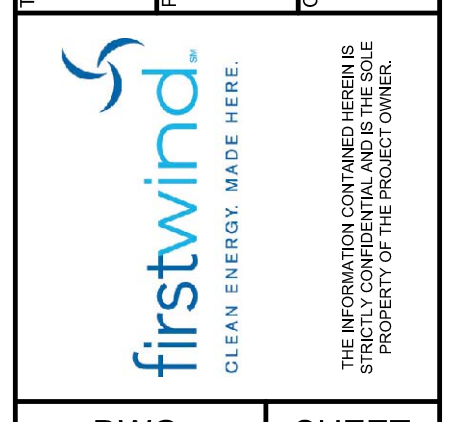
Drawn	Design	Check
SJF	MRL	JHF

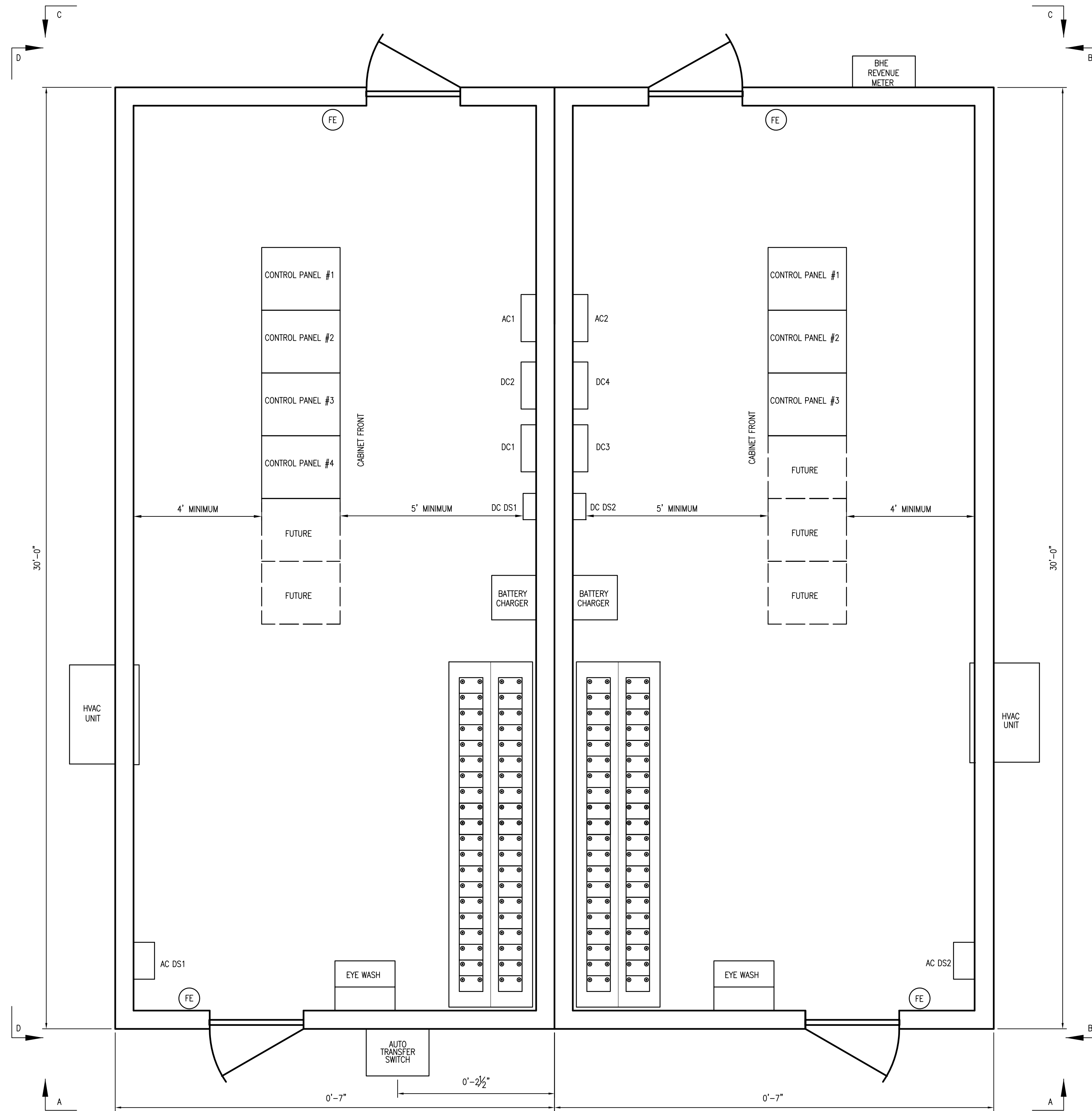
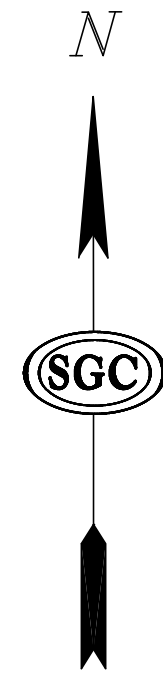
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 Farmington, New Mexico



Scale	1-1/2" = 1'-0"
Date	SEPTEMBER 30, 2010
SGC Project	780001

THIS COLLECTOR SUBSTATION PROTECTION & CONTROL CABINET - FRONT VIEW
 Project: BOWERS WIND PROJECT
 PENOBSCOT COUNTY, MAINE
 Client: CHAMPLAIN WIND, LLC
 129 MIDDLE STREET, 3RD FLOOR, PORTLAND, ME 04101





PLAN

REFERENCE DRAWINGS:
 106-05-1001 GENERAL ARRANGEMENT - PLAN VIEW

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

NO.	REVISIONS:	APPD:	DATE:
A	ISSUED FOR REVIEW	MRL	10/29/10
B	ISSUED FOR PERMIT	MRL	12/9/10

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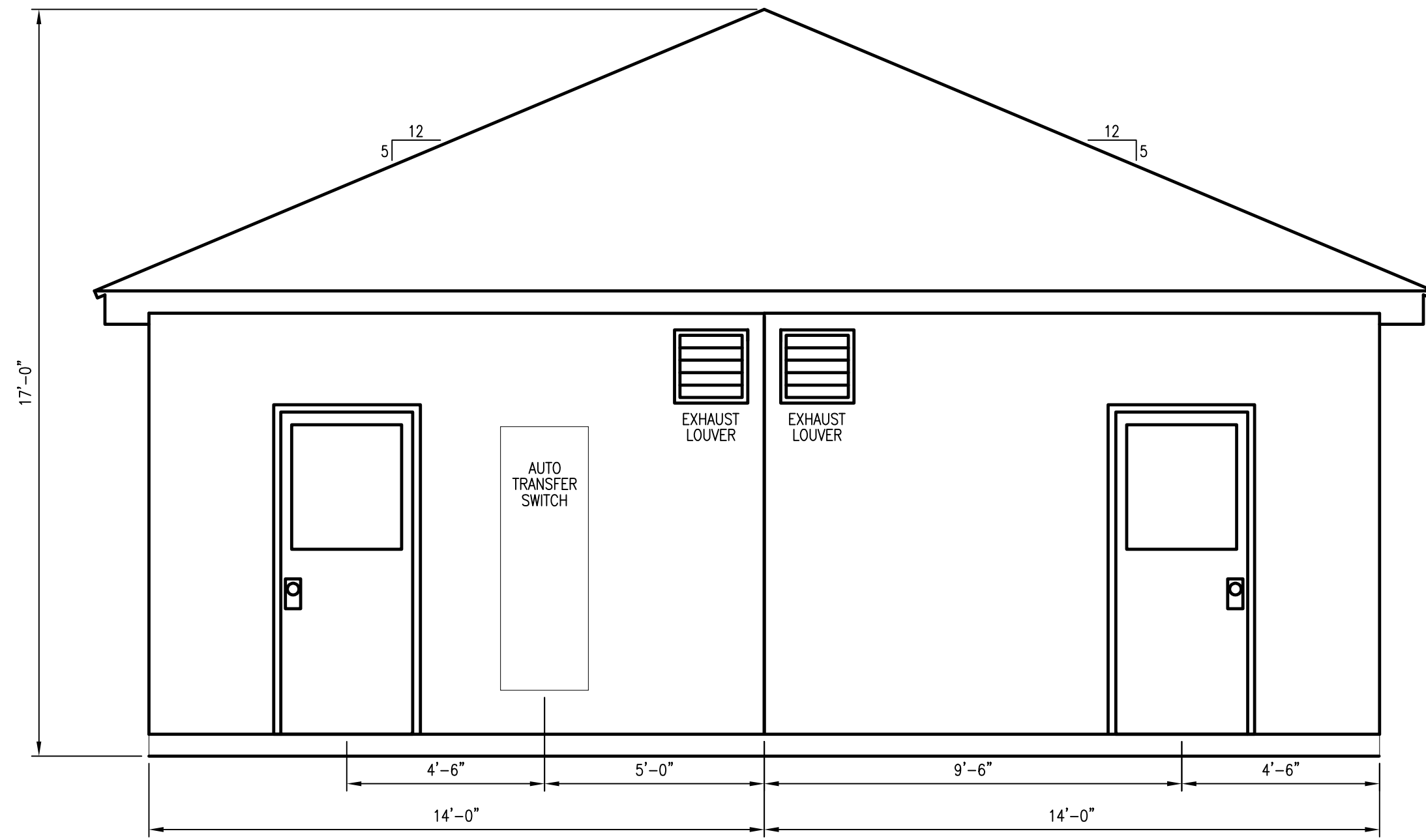
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 • Electrical Power Systems Engineering
 Offices - Washburn & Orono, Maine
 South Burlington, Vermont
 Farmington, New Mexico

Scale: 1/2" = 1'-0"
 Date: OCTOBER 15, 2010
 Drawn: REK
 Design: MRL
 Project: JHF

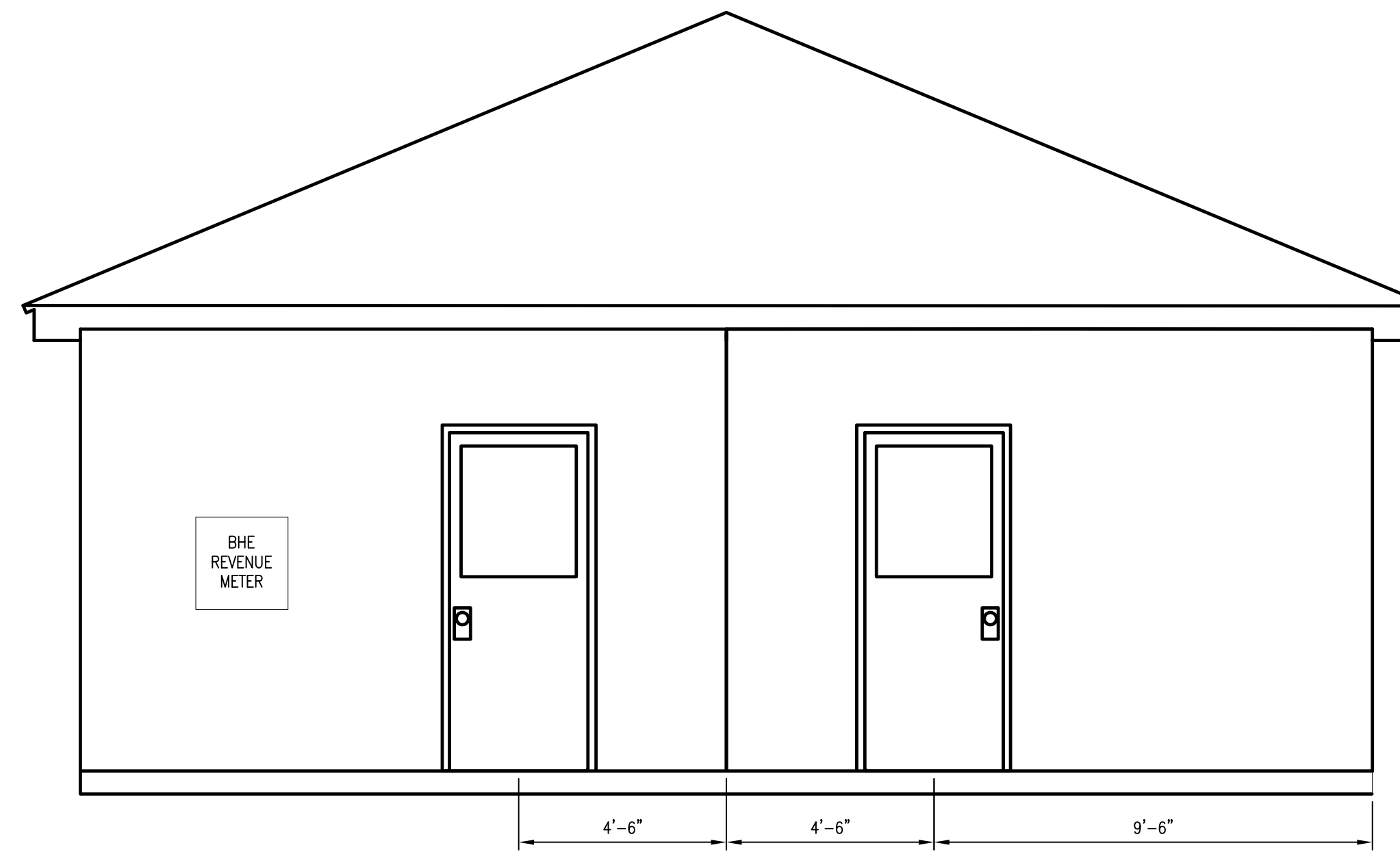
Client: SWITCHING & COLLECTOR SUBSTATION
 CONTROL SHELTER PLAN VIEW
 Project: BOWERS WIND PROJECT
 PENOBSCOT COUNTY, MAINE
 129 MIDDLE STREET, 3RD FLOOR, PORTLAND, ME 04101

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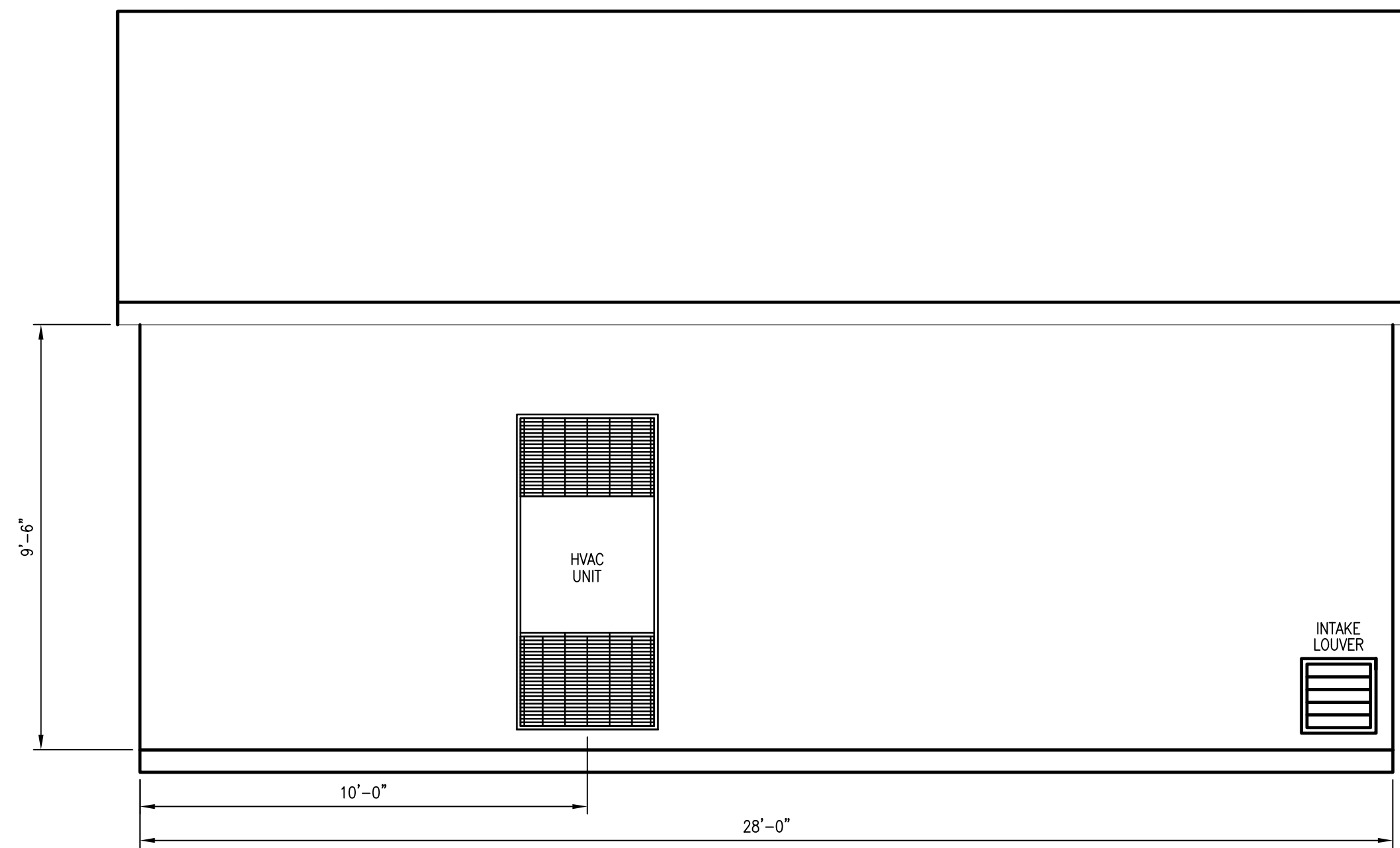
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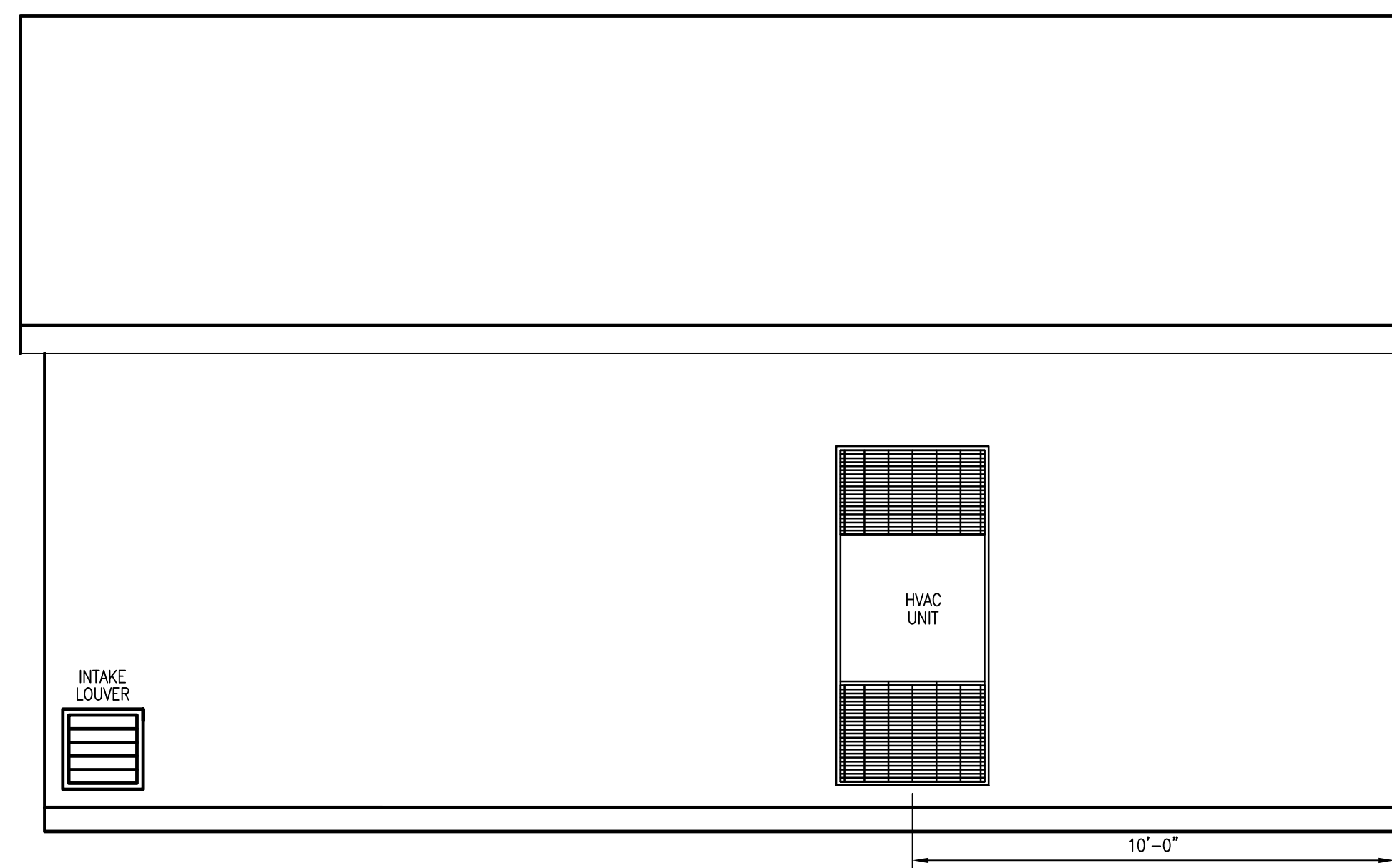
ELEVATION A-A



ELEVATION C-C

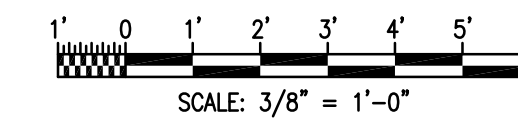


ELEVATION B-B

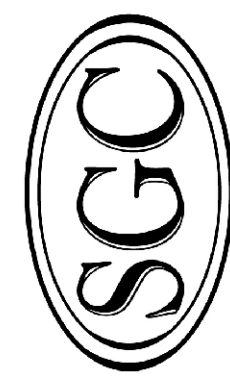


ELEVATION D-D

REFERENCE DRAWINGS:
106-04-1001 SWITCHING & COLLECTOR SUBSTATION CONTROL SHELTER PLAN VIEW



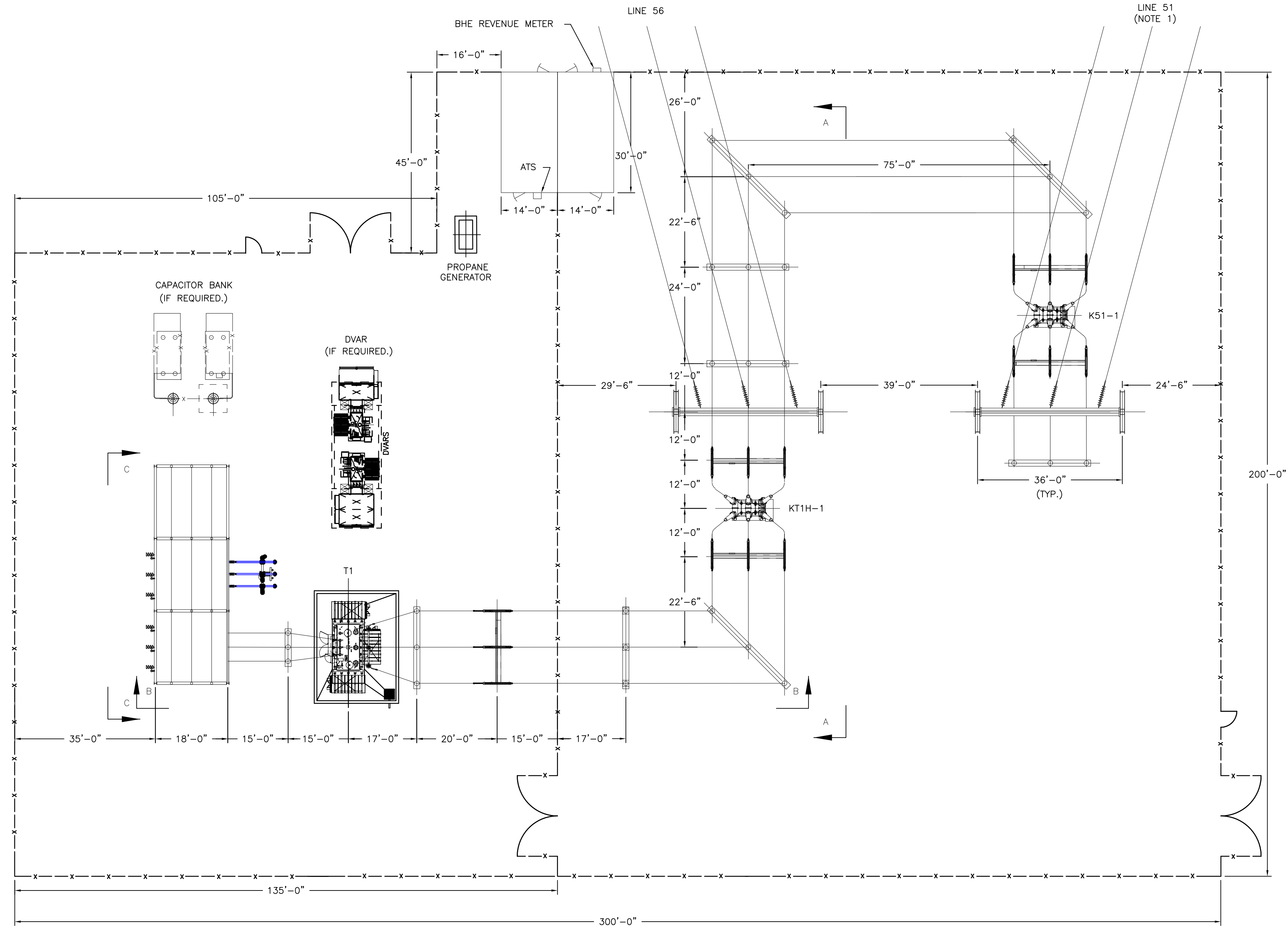
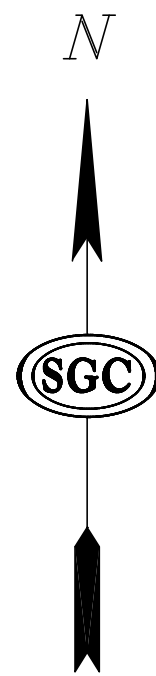
NO.	REVISIONS:	APPD:	DATE:
A	ISSUED FOR REVIEW	MRL	10/29/10
B	ISSUED FOR PERMIT	MRL	12/9/10


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Date: SEPTEMBER 30, 2010
 Scale: 3/8" = 1'-0"
 Drawn: REK
 Design: MRL
 Project: JHF

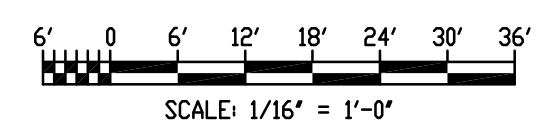
SWITCHING & COLLECTOR SUBSTATION
 CONTROL SHELTER ELEVATIONS
 Project: BOWERS WIND PROJECT
 PENOBSCOT COUNTY, MAINE
 Client: CHAMPLAIN WIND, LLC
 129 MIDDLE STREET, 3RD FLOOR, PORTLAND, ME 04101


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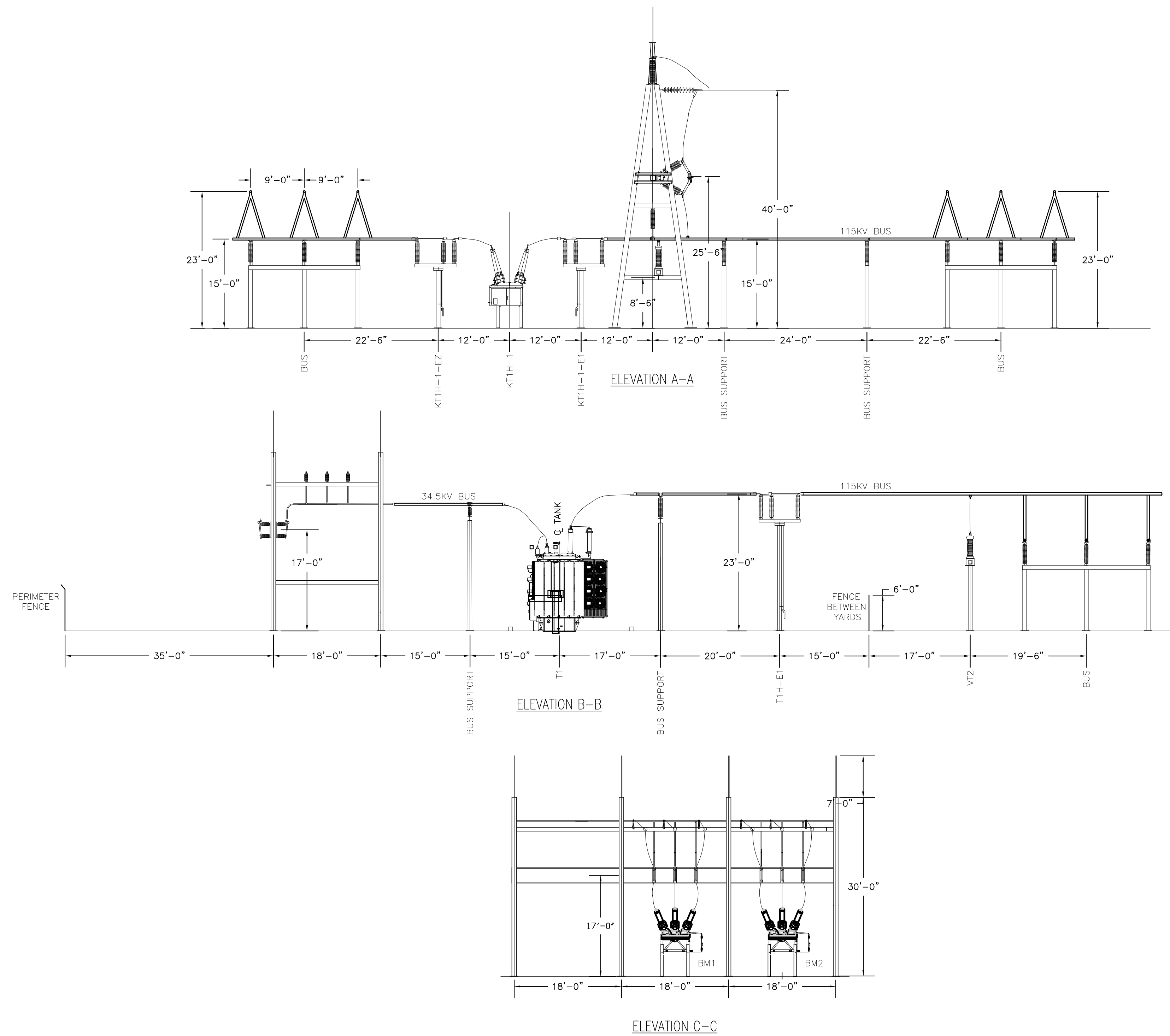


NOTES:
 1. LINE 51 PHASE CONDUCTORS WILL NEED TO BE ROLLED LEAVING THE SUBSTATION TO ACCOMMODATE THE PHASING ON THE 115KV TRANSMISSION LINE.

REFERENCE DRAWINGS:
 106-05-1002 GENERAL ARRANGEMENT - ELEVATIONS
 106-07-1001 SITE LAYOUT AND UTILITY PLAN
 106-07-1002 GRADING AND DRAINAGE - PLAN AND PROFILE



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	SGC	Title: GENERAL ARRANGEMENT PLAN VIEW Project: BOWERS WIND PROJECT PENOBSCOT COUNTY, MAINE Client: CHAMPLAIN WIND, LLC 129 MIDDLE STREET, 3RD FLOOR, PORTLAND, ME 04101
REVISIONS: A ISSUED FOR REVIEW B ISSUED FOR PERMIT	APPD: MRL 10/29/10 MRL 12/6/10	DATE: 10/29/10 12/6/10
NO. A NO. B	REVISIONS: A ISSUED FOR REVIEW B ISSUED FOR PERMIT	DATE: 10/29/10 12/6/10
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DWG. 106-05-1001	SHEET 1 of 1	ISSUED FOR PERMIT



REFERENCE DRAWINGS:
106-05-1001 GENERAL ARRANGEMENT - PLAN VIEW

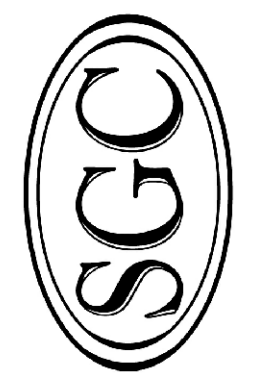


ISSUED FOR PERMIT

NO.	REVISIONS:	APPD:	DATE:
A	ISSUED FOR REVIEW	MRL	10/29/10
B	ISSUED FOR PERMIT	MRL	12/6/10

Scale	Drawn	Design	Revised
3/32" = 1'-0"	REK	MRL	JHF

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SGC Project
780001

GENERAL ARRANGEMENT
ELEVATIONS

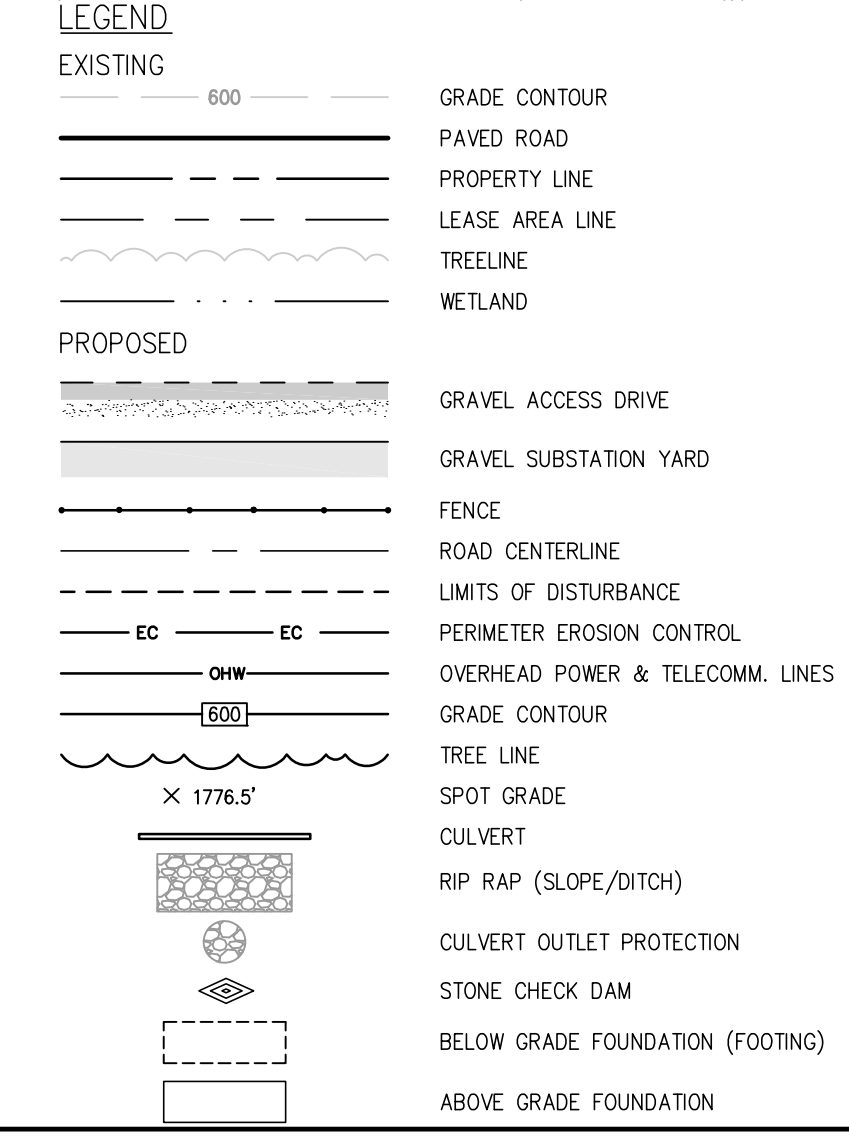
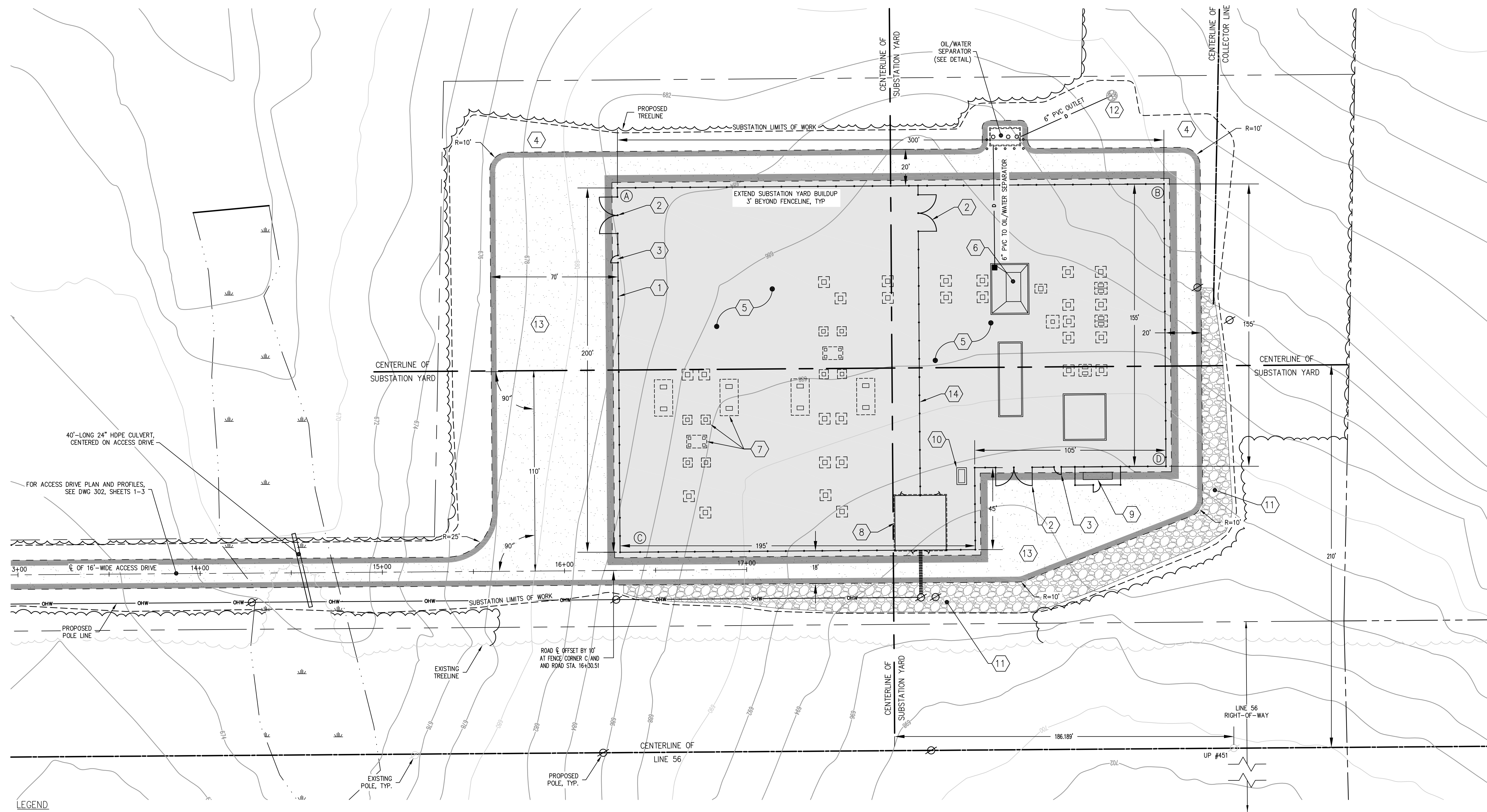
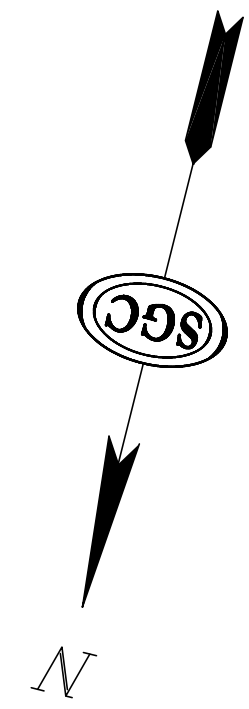
Project:
BOWERS WIND PROJECT
PENOBSCOT COUNTY, MAINE

Client:
CHAMPLAIN WIND, LLC
129 MIDDLE STREET, 3RD FLOOR, PORTLAND, ME 04101



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DWG.	SHEET
106-05-1002	1 of 1



- KEY NOTES**
- ① 8'-HIGH CHAIN LINK FENCE
 - ② 20'-WIDE VEHICLE GATE
 - ③ 4'-WIDE CHAIN LINK PERSONNEL GATE
 - ④ EROSION CONTROL MULCH OR LOAM, SEED AND BLANKET
 - ⑤ YARD CRUSHED STONE SURFACING AND GRAVEL SUBBASE MATERIAL
 - ⑥ TRANSFORMER FOUNDATION AND CONTAINMENT SLAB
 - ⑦ EQUIPMENT FOUNDATIONS, (TYP.)
 - ⑧ CONTROL SHELTER
 - ⑨ 1,000-GALLON PROPANE TANK
 - ⑩ BACKUP GENERATOR
 - ⑪ RIP RAP SLOPE
 - ⑫ RIPRAP DRAINAGE OUTLET
 - ⑬ GRAVEL ACCESS DRIVE MATERIAL
 - ⑭ 6'-HIGH CHAIN LINK FENCE

LOCATION CONTROL COORDINATES

FENCE CORNERS	NORTHING	EASTING
(A)	16516717.70	1887309.78
(B)	16516643.01	1887019.22
(C)	16516911.40	1887259.98
(D)	16516793.12	1886980.63
ACCESS DRIVE STA 0+00	16517327.06	1888836.69

- GENERAL NOTES:**
- EXISTING TREELINE IS APPROXIMATE.
 - TOPOGRAPHIC MAPPING IS BASED ON AN AERIAL PHOTOGRAMMETRIC SURVEY CONDUCTED BY JAMES W. SEWALL IN NOVEMBER 2009.
 - THE BOUNDS OF THE 300' X 500' SUBSTATION PARCEL WERE CREATED WITH THE INTENT TO BE PARALLEL WITH THE SOUTHERLY BOUND OF LAND NOW OR FORMERLY OWNED BY SUSAN B. THORNE AS AGREED TO IN A BOUNDARY LINE AGREEMENT WITH HERBERT C. HAYNES, JR. DATED OCTOBER 10, 2008 AND RECORDED OCTOBER 24, 2008 AT THE PENOBSCOT COUNTY DEEDS IN BOOK 11570, PAGE 242 AND PARALLEL WITH THE WESTERLY BOUND OF THE PARENT PROPERTY OWNED BY SAID HAYNES.
 - DRAWING COORDINATES ARE UTM NAD 83, ZONE 19, US FOOT AND VERTICAL NAVD88.
 - ALL DISTURBED AREAS SHALL RECEIVE PERMANENT STABILIZATION IN THE FORM OF: PAVEMENT, COMPACTED GRAVEL, RIPRAP, LOAM AND SEED, EROSION CONTROL MULCH OR BLANKET PLACED IN ACCORDANCE WITH THESE PLANS AND DETAILS AND TO THE APPROVAL OF THE ENGINEER.
 - WETLANDS SHOWN HEREON WERE DELINEATED BY STANTEC.

REVISIONS:

NO.	DATE	APPROVED	REVISIONS
A	10/28/10	JMR	ISSUED FOR REVIEW
B	11/03/10	JMR	ISSUED FOR REVIEW-ADDITION OF POLE LINE
C	12/08/10	JMR	ISSUED FOR PERMIT

NO.

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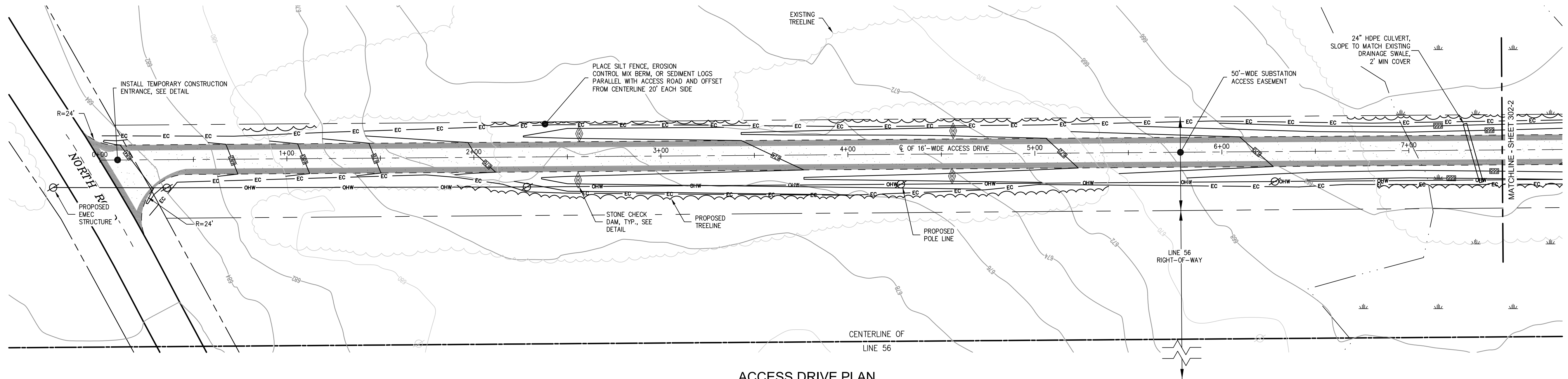
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 • Electrical Power Systems Engineering
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 Portland, New Mexico
 Farmington, New Mexico

Scale: 1"=30'
 Date: OCT. 21, 2010
 Drawn/Design: MRR/MRR/JMR
 SGC Project: 780001

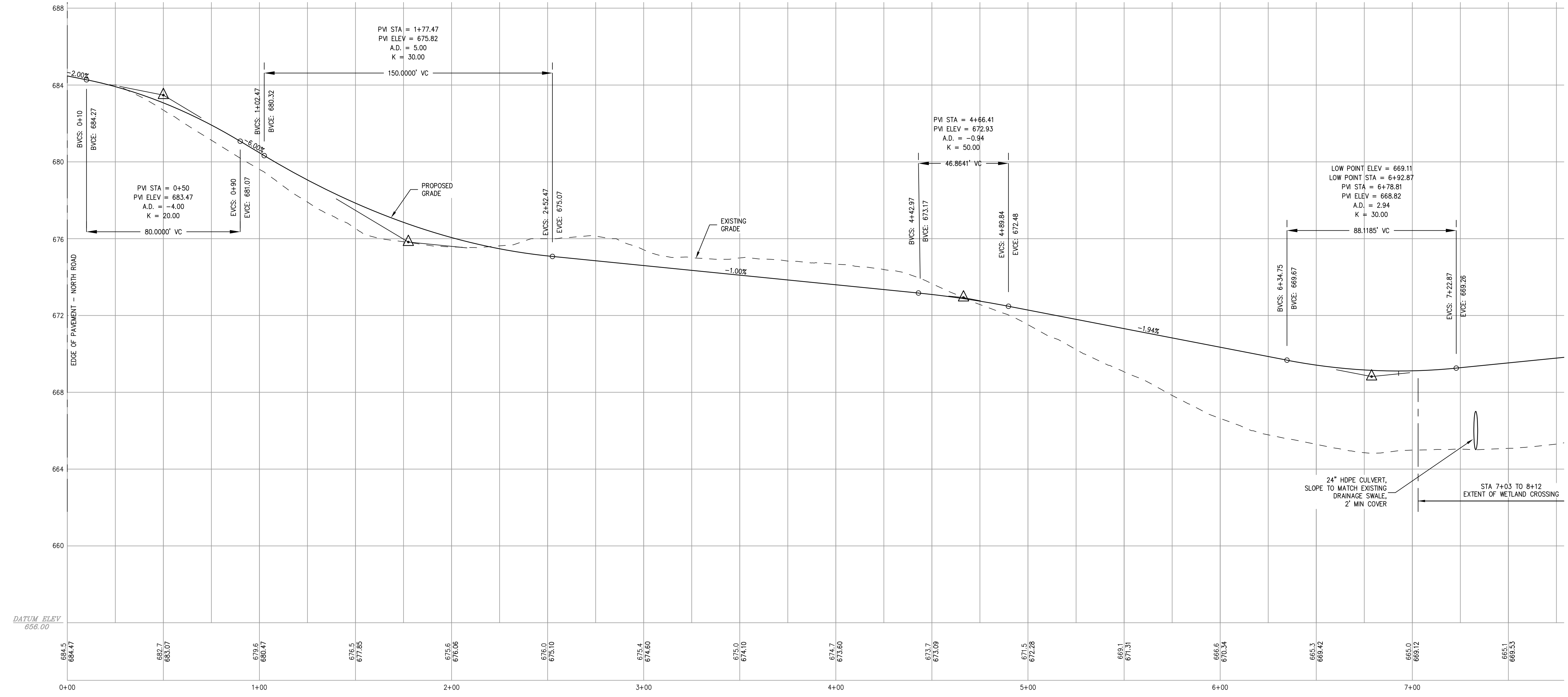
SITE LAYOUT AND UTILITY PLAN
BOWERS WIND PROJECT
 PENOBSCOT COUNTY, MAINE
 CHAMPLAIN WIND, LLC
 129 MIDDLE STREET, 3RD FLOOR, PORTLAND, ME 04101



ISSUED FOR PERMIT



ACCESS DRIVE PLAN
HOR. SCALE: 1"=30'



ACCESS DRIVE PROFILE
HOR. SCALE: 1"=30'
VER. SCALE: 1"=3'

NO.	REVISIONS:	APPD:	DATE:
A	ISSUED FOR REVIEW	JMR	10/28/10
B	ISSUED FOR REVIEW-ADDITION OF POLE LINE	JMR	11/03/10
C	ISSUED FOR PERMIT	JMR	12/08/10

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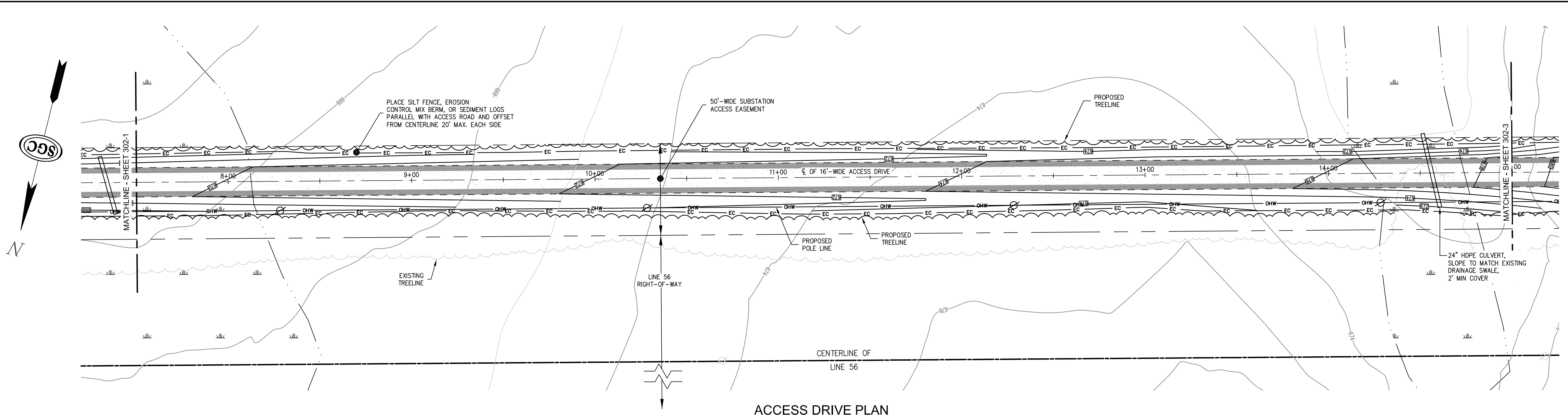
Scale: 1"=30'
 Date: OCT. 15, 2010
 Drawn/Design: MRR/MRR/JMR
 SGC Project: 780001

GRADING AND DRAINAGE PLAN AND PROFILE
BOWERS WIND PROJECT
 PENOBSCOT COUNTY, MAINE
CHAMPLAIN WIND, LLC
 129 MIDDLE STREET, 3RD FLOOR, PORTLAND, ME 04101

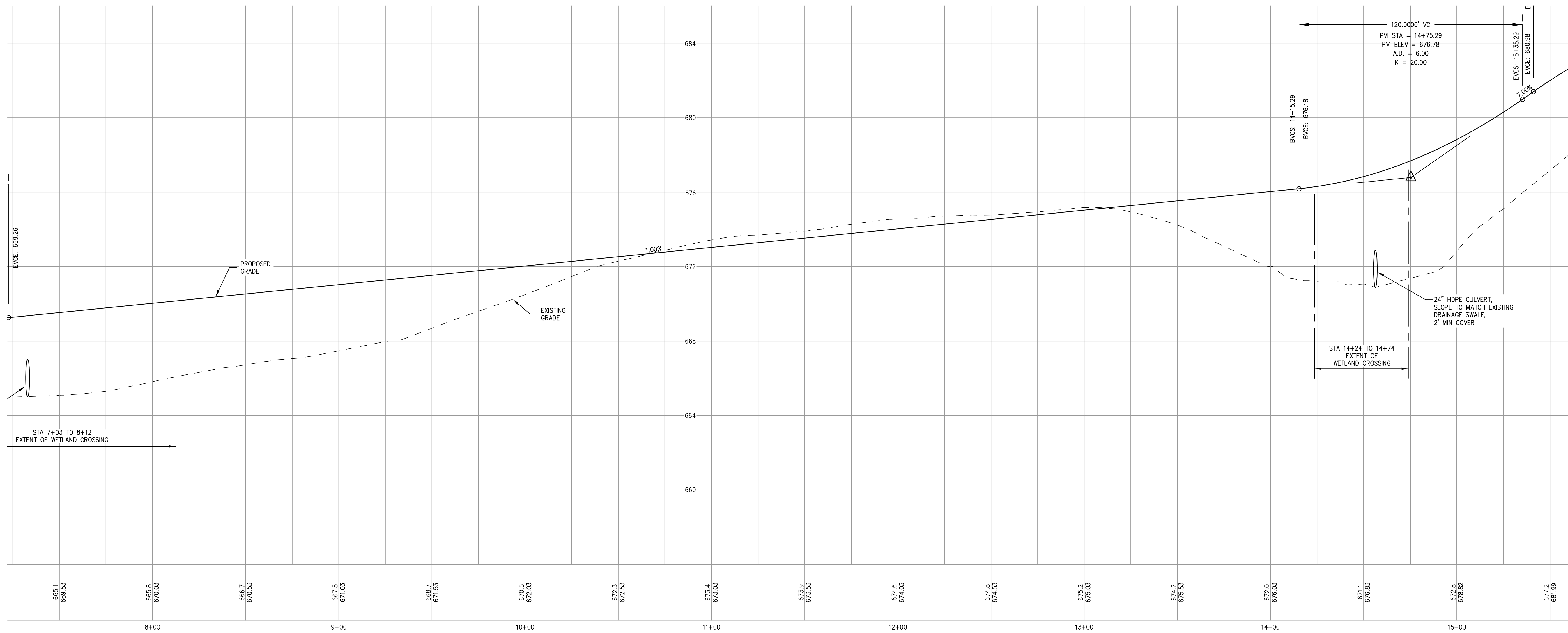
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ACCESS DRIVE PLAN
HOR. SCALE: 1"=30'



ACCESS DRIVE PROFILE
HOR. SCALE: 1"=30'
VER. SCALE: 1"=3'

NO.	REVISIONS:	APPD:	DATE:
A	ISSUED FOR REVIEW	JMR	10/28/10
B	ISSUED FOR REVIEW/ADDITION OF POLE LINE	JMR	11/03/10
C	ISSUED FOR PERMIT	JMR	12/08/10

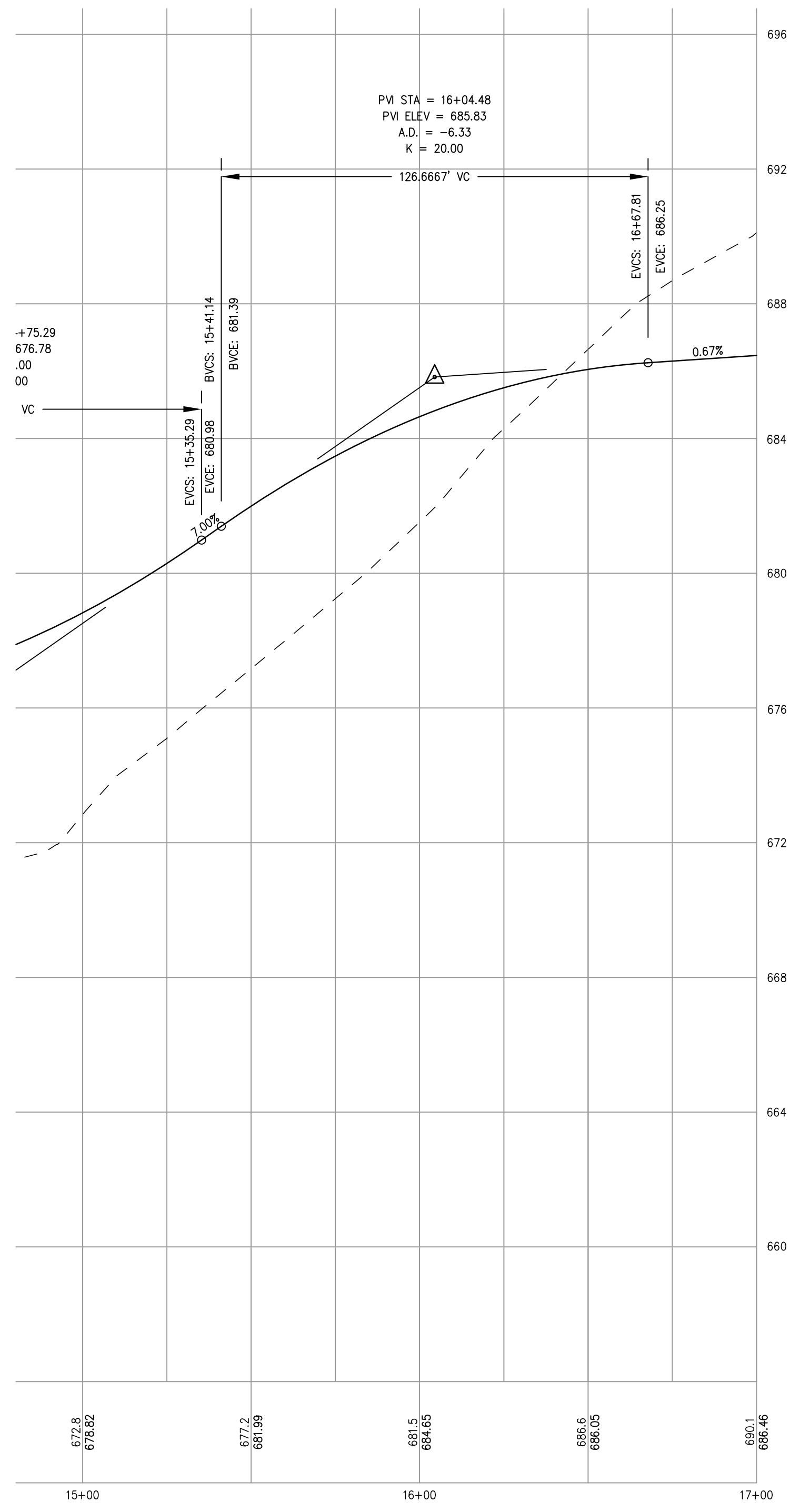
SGC ENGINEERING, LLC
 • Civil Design & Survey Engineering
 • Environmental & Regulatory Permitting
 • Electrical Power Systems Engineering
 Offices - Westbrook & Orono, Maine
 Portland, New Mexico

SGC ENGINEERING, LLC
 SGC Project: 780001
 Date: OCT. 21, 2010
 Scale: 1"=30'
 Drawn: MRR/MRR
 Design: JMR
 Appr: JMR

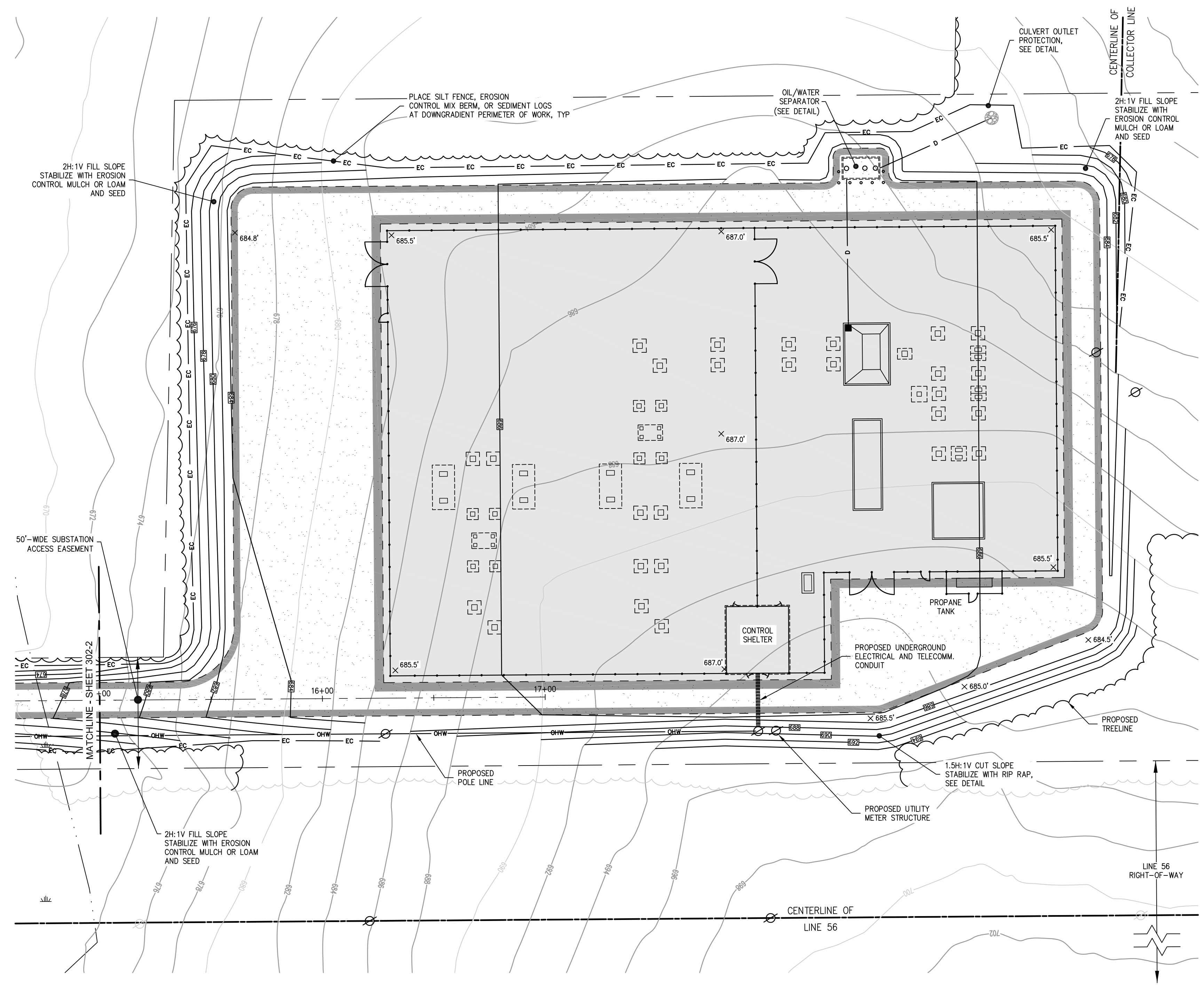
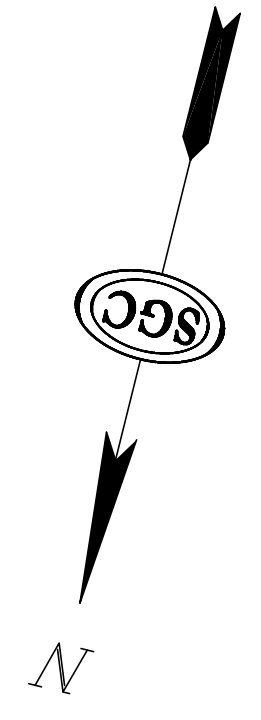
GRADING AND DRAINAGE PLAN AND PROFILE
BOWERS WIND PROJECT
 PENOBSCOT COUNTY, MAINE
CHAMPLAIN WIND, LLC
 129 MIDDLE STREET, 3RD FLOOR, PORTLAND, ME 04101



ISSUED FOR PERMIT



ACCESS DRIVE PROFILE
 HOR. SCALE: 1"=30'
 VER. SCALE: 1"=3'



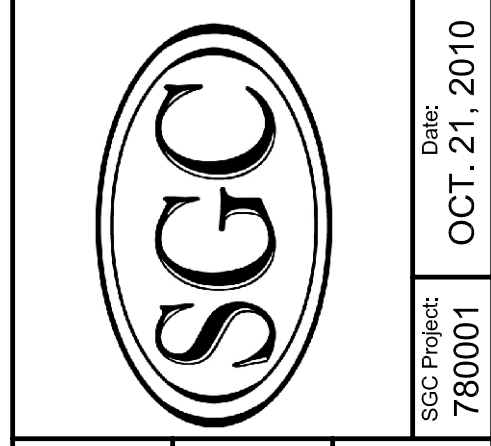
ACCESS DRIVE AND SUBSTATION PLAN
 HOR. SCALE: 1"=30'

- GENERAL NOTES**
1. PROPOSED GRADES SHOWN REPRESENT FINISHED GRADE AT TOP OF PROPOSED CRUSHED STONE SURFACE.
 2. EXISTING CONTOURS BASED ON AN AERIAL PHOTOGRAMMETRIC SURVEY CONDUCTED BY JAMES W. SEWALL CO. IN NOVEMBER 2009.

NO.	REVISIONS:	APPD:	DATE:
A	ISSUED FOR REVIEW	JMR	10/28/10
B	ISSUED FOR REVIEW-ADDITION OF POLE LINE	JMR	11/03/10
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 Portland, New Mexico
 Farmington, New Mexico

Scale: 1"=30'
 Date: OCT. 21, 2010
 Drawn: Design: MRR/MRR/JMR



GRADING AND DRAINAGE PLAN AND PROFILE
BOWERS WIND PROJECT
 PENOBSCOT COUNTY, MAINE
CHAMPLAIN WIND, LLC
 129 MIDDLE STREET, 3RD FLOOR, PORTLAND, ME 04101



GENERAL EROSION CONTROL NOTES:

- ALL EROSION & SEDIMENT CONTROL MEASURES SHALL BE INSTALLED & MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION DATED MARCH, 2003 (AS REVISED).
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUCTING STORM WATER MANAGEMENT PRACTICES IN ACCORDANCE WITH LOCAL REGULATIONS AND GOVERNING AUTHORITIES AND SHALL BE RESPONSIBLE FOR ANY FINES RESULTING FROM EROSION CONTROL VIOLATIONS.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION AND SHALL BE MAINTAINED UNTIL FINAL STABILIZATION IS ACHIEVED.
- THE CONTRACTOR SHALL PROVIDE PROPER EROSION CONTROL AND DRAINAGE MEASURES IN ALL AREAS OF WORK. PRIOR TO BEGINNING EXCAVATION WORK, SILT FENCE SHALL BE INSTALLED. EROSION CONTROL MEASURES SHOWN ON THE DRAWINGS ARE A MINIMUM. CONTRACTOR SHALL TAKE ALL OTHER NECESSARY MEASURES TO CONTROL EROSION. EROSION CONTROL MEASURES SHALL ALSO BE INSTALLED AT THE DOWNGRADIENT PERIMETER OF THE TOPSOIL STOCKPILES. ALL DISTURBED EARTH SURFACES SHALL BE STABILIZED IN THE SHORTEST PRACTICAL TIME AND TEMPORARY EROSION CONTROL DEVICES SHALL BE EMPLOYED UNTIL SUCH TIME AS ADEQUATE SOIL STABILIZATION HAS BEEN ACHIEVED. TEMPORARY STORAGE OF EXCAVATED MATERIAL SHALL BE STABILIZED IN A MANNER THAT WILL MINIMIZE EROSION.
- THE ON-SITE PLAN COORDINATOR SHALL INSPECT ESC MEASURES ONCE EVERY SEVEN DAYS AND WITHIN 24 HOURS OF SIGNIFICANT RUNOFF EVENTS, INCLUDING THOSE THAT RESULT IN DISCHARGE OF STORMWATER FROM THE SITE. DAILY INSPECTIONS OF ESC MEASURES SHALL BE CONDUCTED DURING THE WINTER CONSTRUCTION PERIOD (NOVEMBER 1 - APRIL 15). REPAIRS SHALL BE MADE AS NECESSARY. ACCUMULATED SEDIMENT TRAPPED BY ESC DEVICES SHALL BE REMOVED AS NECESSARY.
- TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES SHALL BE REMOVED AND THOSE ADJACENT AREAS RESTORED UPON COMPLETION OF THE WORK OR WHEN SO ORDERED BY THE ON-SITE PLAN COORDINATOR. EXPOSED SOIL RESULTING FROM REMOVAL OF TEMPORARY ESC MEASURES SHALL BE RAKED, SEED, AND MULCHED OR MATTED AS NEEDED.
- PERMANENT SEED MIX SHALL BE USED AS EARLY AS PRACTICABLE BETWEEN 05/15 AND 9/1.
- TEMPORARY SEED MIX SHALL BE USED BETWEEN 9/1 AND 5/14 AND SHALL MEET THE FOLLOWING CRITERIA:

SEED	% WEIGHT	% GERMINATION
WINTER RYE	80 MINIMUM	85 MIN
RED FESCUE (CREEPING)	4 MIN	80 MIN
PERENNIAL RYE GRASS	3 MIN	90 MIN
RED CLOVER	3 MIN	90 MIN
OTHER CROP GRASS	0.5 MAX	
NOXIOUS WEED SEED	0.5 MAX	
INERT MATTER	1.0 MAX	
- TEMPORARY MULCHING IS TO BE APPLIED TO ALL DISTURBED AREAS WITHIN 21 DAYS OF INITIAL DISTURBANCE AND TO AREAS LEFT INACTIVE AND UNSTABILIZED FOR A PERIOD GREATER THAN 7 DAYS AT A RATE OF 2 TONS/ACRE UNLESS:
 - STABILIZATION IS NOT REQUIRED IF WORK IS TO CONTINUE IN THE AREA WITHIN THE NEXT 24 HOURS AND THERE IS NO PRECIPITATION FORECAST FOR THE NEXT 24 HOURS.
 - STABILIZATION IS NOT REQUIRED IF THE WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION (i.e. NO OUTLET) WITH A DEPTH OF 2 FEET OR GREATER (e.g. UTILITY TRENCHES)
- PERMANENT SEED MIX SHALL BE USED AS EARLY AS PRACTICABLE BETWEEN 05/15 AND 9/1 AND MEET THE FOLLOWING CRITERIA:

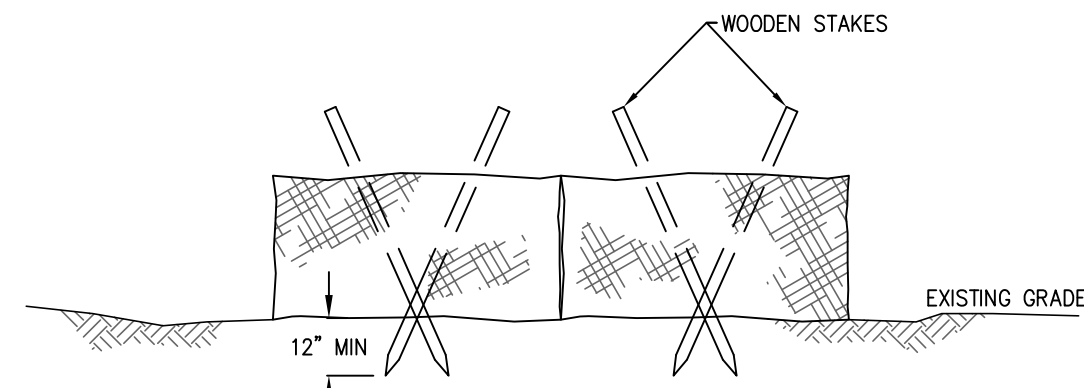
RED FESCUE	50%
SHEEP FESCUE	25%
RED TOP	5%
WHITE CLOVER	10%
ANNUAL RYE	10%
- WETLAND SEED MIX SHALL MEET THE FOLLOWING CRITERIA:

NOODING BUR MARIGOLD	3%
FOX SEDGE	13%
CREEPING BENTGRASS	14%
RIVERBANK WILD RYE	8%
VIRGINIA WILD RYE	14%
SOFT RUSH	2%
SENSITIVE FEM	1.5%
BLUE VERVAIN	1%
BLACKWELL SWITCH GRASS	25%
GREY DOGWOOD	0.5%
CREEPING RED FESCUE	18%
- THE METHOD OF STRIPPING VEGETATION SHALL BE SUCH AS TO MINIMIZE EROSION. FILLS SHALL BE PLACED AND COMPACTED IN SUCH A MANNER THAT SOIL SLIDING AND EROSION IS MINIMIZED. GRADING SHALL BE DONE IN SUCH A MANNER AS NOT TO DIVERT WATER ON TO ADJOINING PROPERTY.
- EROSION CONTROL BLANKET OR EQUIVALENT SHALL BE USED TO STABILIZE ALL DITCHES AND SIDESLOPES STEEPER THAN 3H:1V.
- SEDIMENT LOGS AND OR EROSION CONTROL MIX BERMS MAY BE SUBSTITUTED FOR SILT FENCE BY THE ON-SITE PLAN COORDINATOR AS CONDITIONS DICTATE.
- PLACE EXCAVATED MATERIAL ON THE UP GRADIENT SIDE OF THE EXCAVATION TO THE EXTENT POSSIBLE, EXCESS SOILS ARE TO BE TRANSPORTED TO AN OFF-SITE UPLAND LOCATION FOR STOCKPIILING. WETLAND SOILS SHALL BE STOCKPIILED SEPARATELY FROM UPLAND SOILS.

WINTER CONSTRUCTION NOTES:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING ALL WINTER EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH SECTION A-3 OF "MAINE EROSION AND SEDIMENTATION CONTROL BMP'S".
- WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT FOR ANY GIVEN SEGMENT OF THE PROJECT AREA, NO MORE AREA THAN CAN BE STABILIZED IN A ONE-WEEK PERIOD IS TO BE EXPOSED AT ANY GIVEN TIME. MULTIPLE SEGMENTS AT DIFFERENT LOCATIONS WITHIN THE PROJECT AREA CAN BE EXPOSED CONCURRENTLY.
- DISTURBED AREAS ARE TO BE LIMITED TO AREAS WHERE WORK IS TO BE COMPLETED WITHIN 15 DAYS AND CAN BE MULCHED IN ONE DAY PRIOR TO A SNOW EVENT.
- AREAS OF DISTURBED SOIL SHALL BE STABILIZED AT THE END OF EACH WORK DAY, WITH THE FOLLOWING EXCEPTIONS: (1) IF NO RUNOFF EVENT IS FORECAST FOR WITHIN 24 HOURS AND WORK WILL RESUME IN THE SAME DISTURBED AREA WITHIN 24 HOURS AND/OR (2) DISTURBED AREAS THAT COLLECT AND RETAIN RUNOFF, SUCH AS OPEN UTILITY TRENCHES OR FOUNDATIONS, WHICH REQUIRE STABILIZATION AT THE END OF EACH WORK WEEK.
- SNOW PILING SHALL OCCUR WITHIN THE DESIGNATED LIMITS OF DISTURBANCE.
- DRAINAGE STRUCTURES SHALL BE KEPT OPEN AND FREE OF SNOW AND ICE DAMS.
- SILT FENCE AND OTHER PRACTICES REQUIRING EARTH DISTURBANCE SHALL BE INSTALLED PRIOR TO FROZEN GROUND CONDITIONS. SILT FENCE MAY BE INSTALLED WITH STONE BACKING DURING FROZEN GROUND CONDITIONS.
- MULCH USED FOR TEMPORARY STABILIZATION SHALL BE APPLIED AT 4 TONS/ACRE WITH AN 80 TO 90 PERCENT UNIFORM COVER AND TRACKED IN TO PREVENT REMOVAL BY WIND.
- PRIOR TO STABILIZATION, SNOW AND/OR ICE SHALL BE REMOVED TO LESS THAN 1 INCH THICKNESS.
- STONE SHALL CONSTRUCTION ENTRANCES BE USED TO STABILIZE AREAS WHERE CONSTRUCTION VEHICLE TRAFFIC IS ANTICIPATED. STONE ENTRANCES SHALL BE AT LEAST 14 FEET WIDE TO ACCOMMODATE VEHICULAR TRAFFIC.
- ALL SLOPES LESS THAN 3H:1V SHALL BE MULCHED AT 4 TONS/ACRE AND TRACKED IN.
- THE SITE STABILIZATION SCHEDULE BEFORE WINTER SHALL BE AS FOLLOWS:

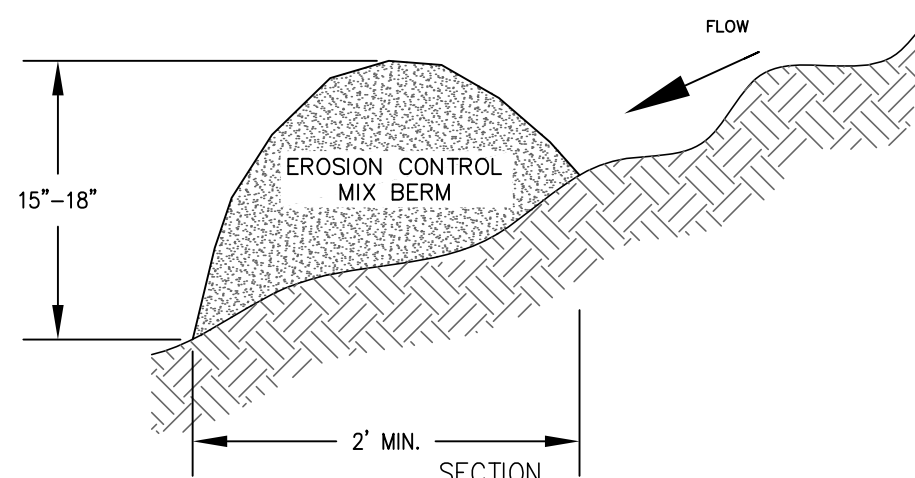
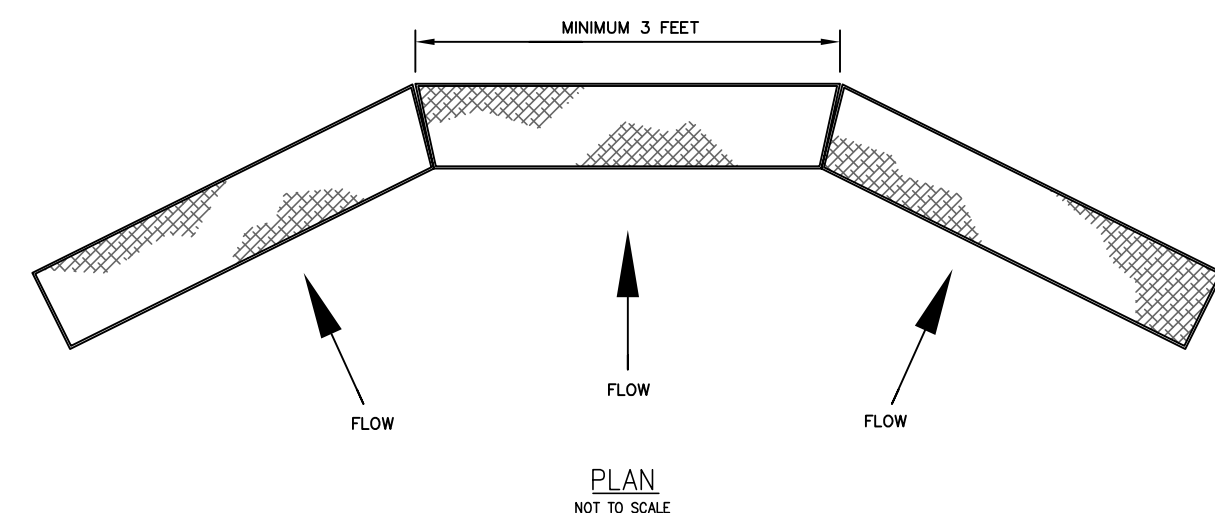
SEPTEMBER 15	ALL DISTURBED AREAS MUST BE SEEDED AND MULCHED. ALL SLOPES MUST BE STABILIZED, SEEDED AND MULCHED. ALL GRASS LINED DITCHES AND CHANNELS MUST BE STABILIZED WITH MULCH OR AN EROSION CONTROL BLANKET.
OCTOBER 1	ALL DISTURBED AREAS TO BE PROTECTED WITH AN ANNUAL GRASS MUST BE SEEDED AT A SEEDING RATE OF 3 POUNDS PER 1000 SQ-FT AND MULCHED.
NOVEMBER 15	ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED. SLOPES THAT ARE COVERED WITH RIPRAP MUST BE CONSTRUCTED BY THAT DATE.
DECEMBER 1	ALL DISTURBED AREAS WHERE THE GROWTH OF VEGETATION FAILS TO BE AT LEAST THREE INCHES TALL OR AT LEAST 75% OF THE DISTURBED SOIL IS COVERED BY VEGETATION, MUST BE PROTECTED FOR OVER-WINTER.



- NOTES:**
- LAY HAYBALES FLAT ON EXISTING GROUND AND MINIMIZE GAPS BETWEEN BALES.
 - PLACE HAYBALES PARALLEL TO EXISTING GRADE CONTOURS TO PREVENT CONCENTRATED FLOW. DO NOT USE HAYBALE FENCE IN AREAS OF CONCENTRATED FLOW.
 - DRIVE WOODEN STAKES INTO EXISTING GROUND A MINIMUM OF 12 INCHES.
 - WITHIN 21 DAYS HAYBALES SHALL BE REMOVED/REPLACED IF DAMAGED, ROTTED, OR OTHERWISE NON-FUNCTIONAL.
 - HAYBALES ARE TO BE SPREAD AS MULCH AT THE COMPLETION OF CONSTRUCTION ACTIVITIES, DO NOT RE-USE HAYBALES.

HAYBALE FENCE DETAIL

NOT TO SCALE

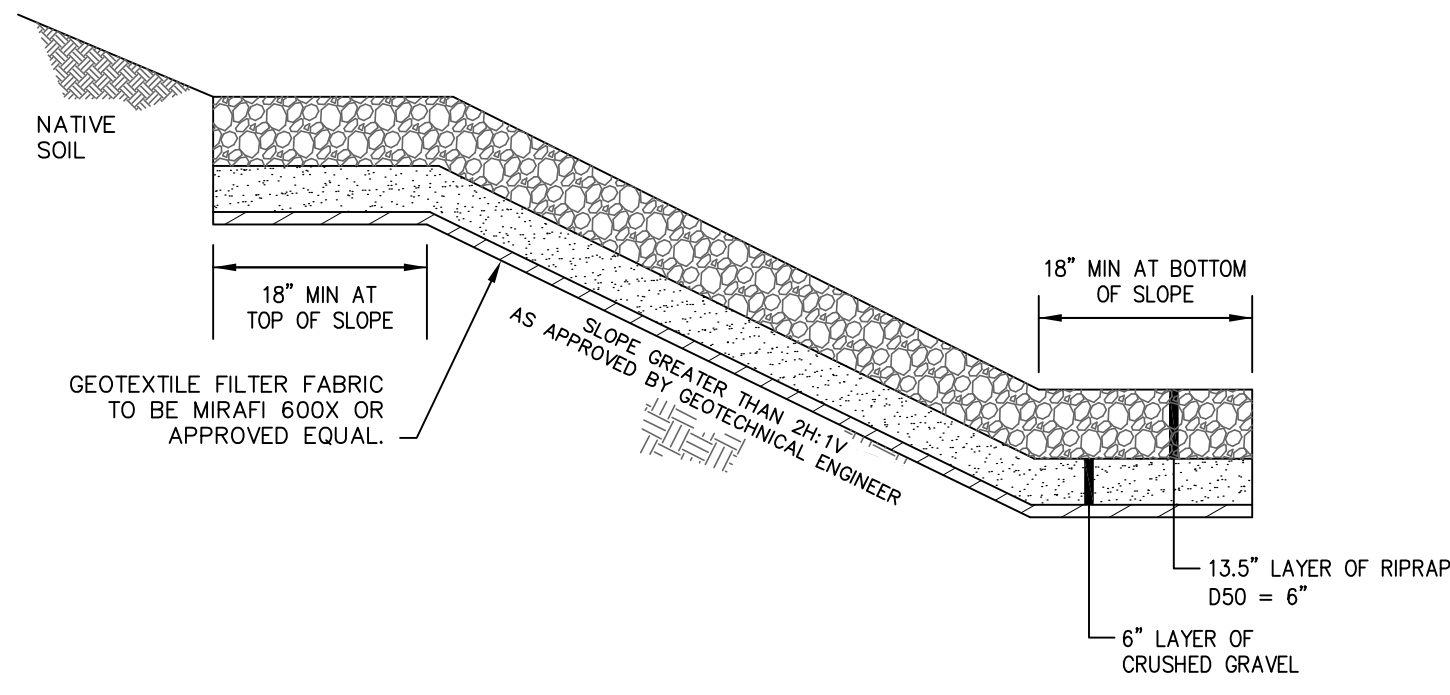


NOTES:

- EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZE AND MAY CONTAIN ROCKS LESS THAN 4-INCHES IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH. THE MIX COMPOSITION SHALL MEET THE FOLLOWING STANDARDS.
 - THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 80 AND 100 PERCENT, DRY WEIGHT BASIS.
 - PARTICLE SIZE BY WEIGHT SHALL BE 100 PERCENT PASSING A 6-INCH SCREEN AND A MINIMUM OF 70 PERCENT, MAXIMUM OF 85 PERCENT, PASSING A 3/4-INCH SCREEN.
 - THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.
 - LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.
 - SUITABLE SALTS CONTENT SHALL BE LESS THAN 4.0 MINIMUM.
- THE BARRIER MUST BE PLACED ALONG A RELATIVELY LEVEL CONTOUR. TALL GRASSES MAY NEED TO BE CUT TO AVOID VOID SPACES THAT WOULD ALLOW FINES TO WASH UNDER THE BARRIER.
- FROZEN GROUND, OUTCROPS OF BEDROCK AND VERY ROOTED FORESTED AREAS ARE LOCATIONS WHERE BERMS OF EROSION CONTROL MIX ARE MOST PRACTICAL AND EFFECTIVE.

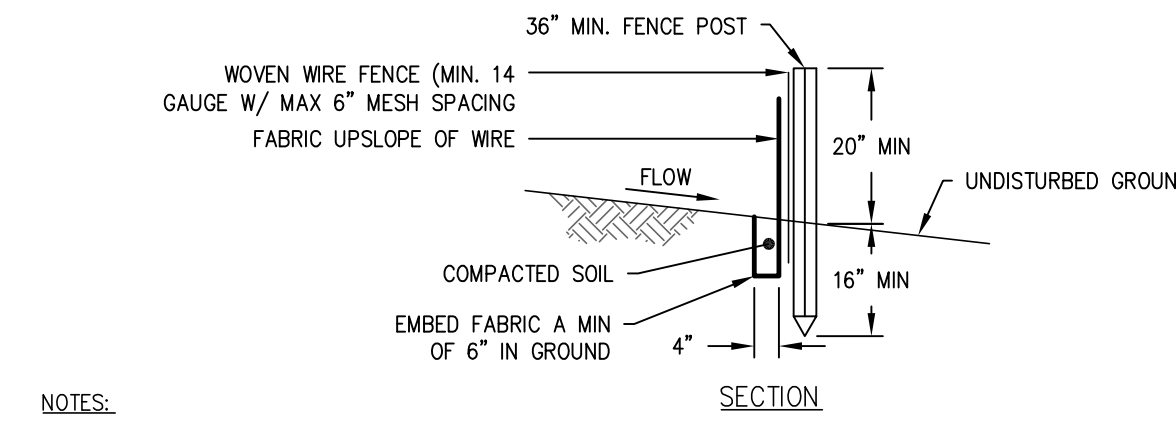
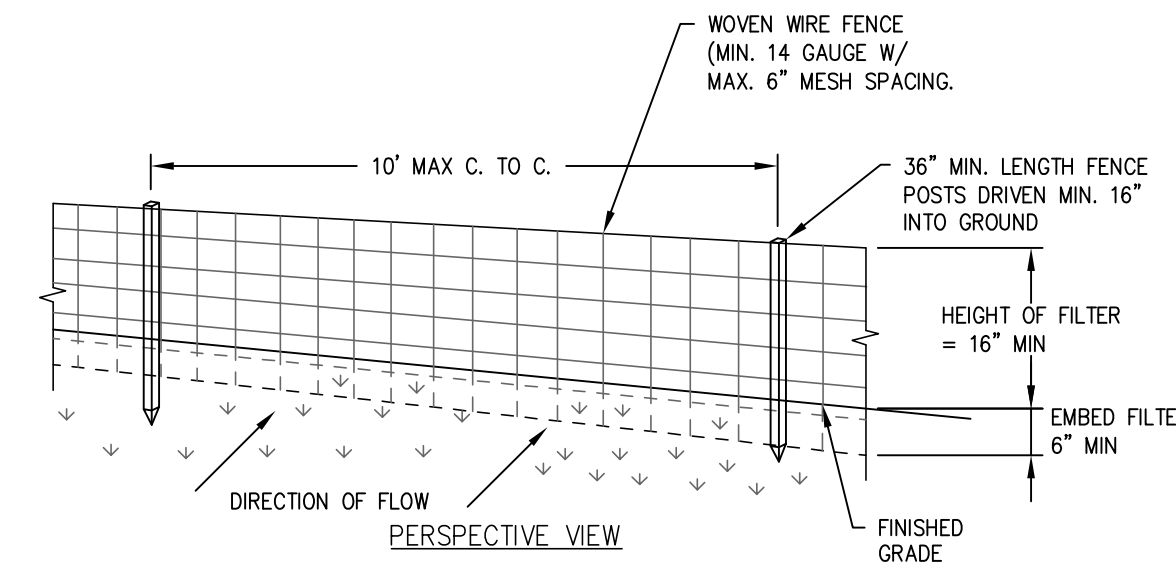
EROSION CONTROL MIX BERM DETAIL

NOT TO SCALE



RIPRAP SLOPE STABILIZATION DETAIL

NOT TO SCALE

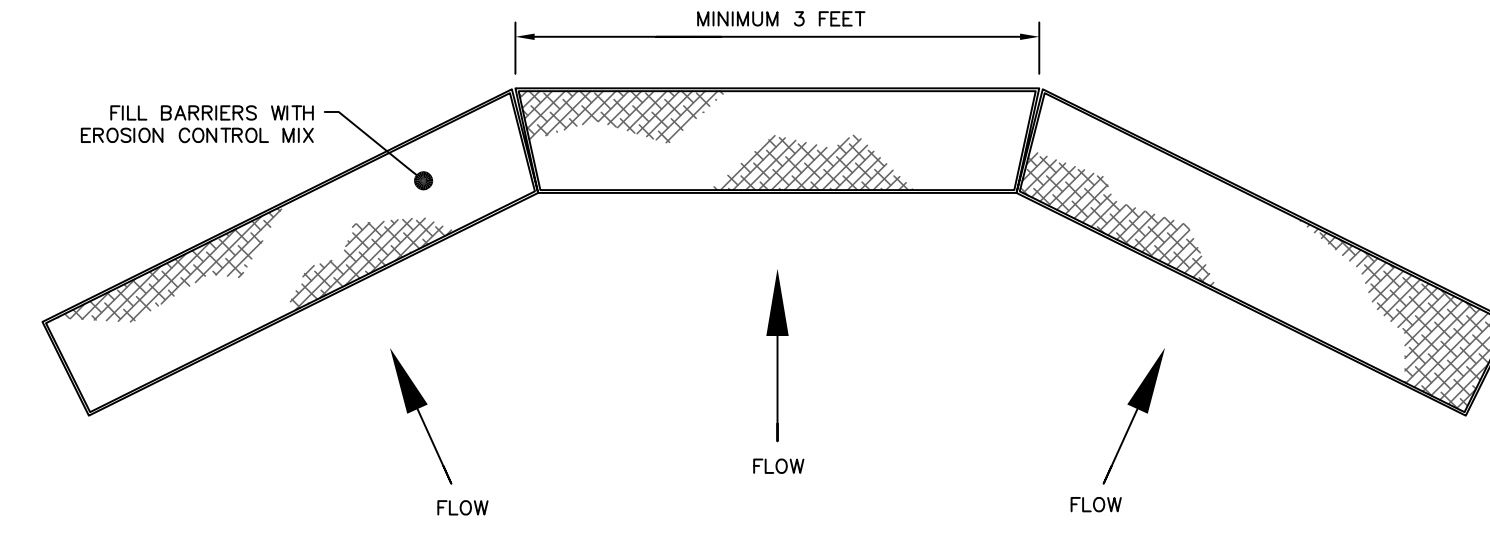


NOTES:

- REINFORCED FENCE CAN BE USED IN PLACE OF TWO LAYERS OF CONVENTIONAL SILT FENCE WHEN WORKING IN ENVIRONMENTALLY SENSITIVE AREAS SUCH AS WITHIN 250' OF A LAKE, POND, RIVER, STREAM, OR BROOK, WITHIN 100 FEET A WETLAND OR STREAM CROSSING OR OTHER SENSITIVE AREAS.
- WIRE REINFORCING NOT NECESSARY FOR NON-SENSITIVE INSTALLATIONS. FOR CONVENTIONAL SILT FENCE, INSTALL PER DETAIL MINUS WOVEN WIRE FENCE.
- SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
- INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
- DO NOT PLACE SILT FENCE IN STREAMS OR CONCENTRATED FLOW CONDITIONS.
- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES.
- FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
- PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.
- REMOVED SEDIMENT SHALL BE DEPOSITED TO AN UPLAND AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

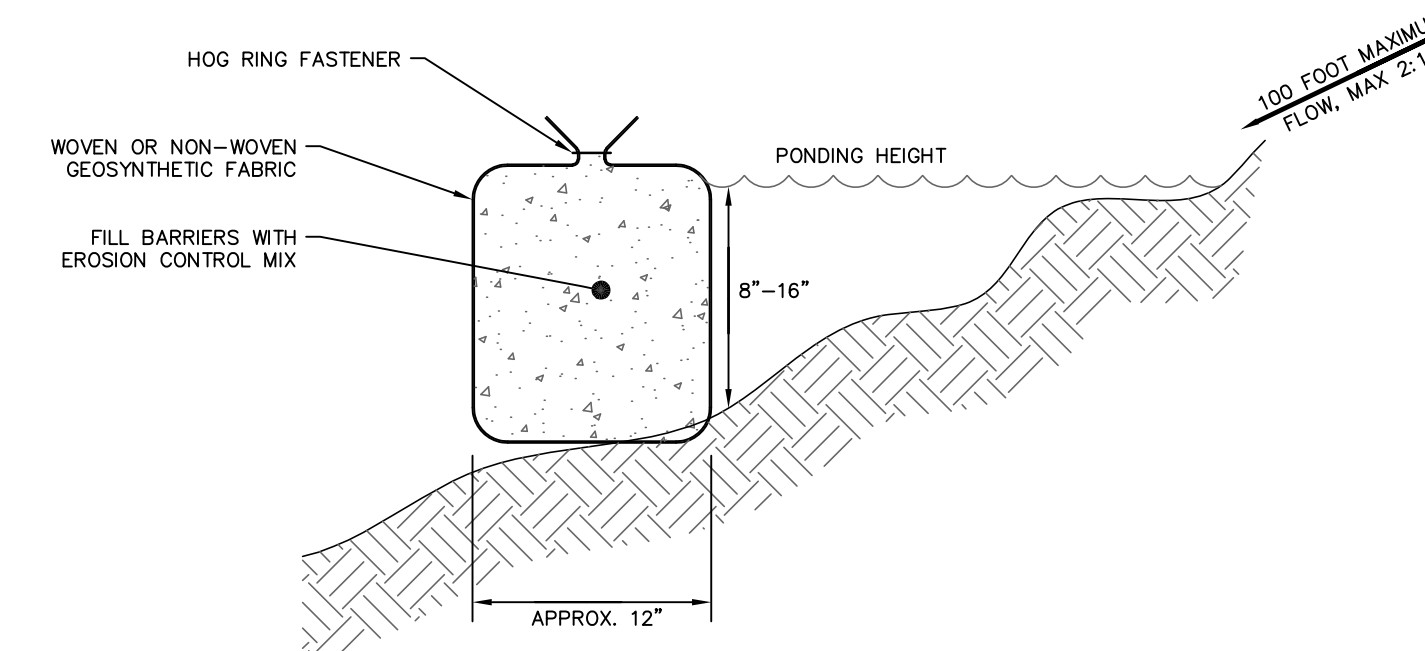
SILT FENCE DETAIL

NOT TO SCALE



SEDIMENT LOG PLAN

NOT TO SCALE

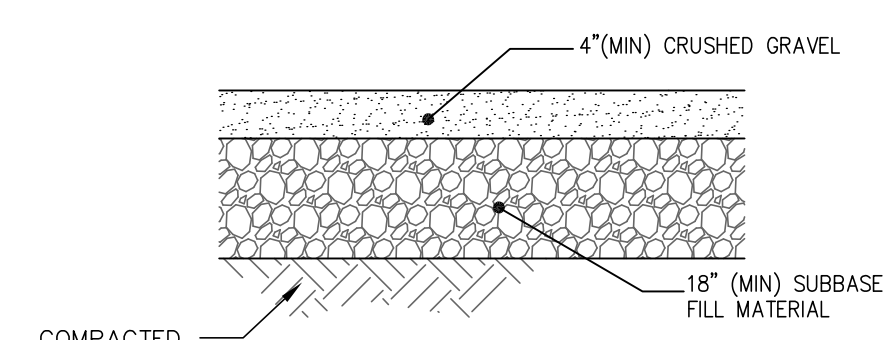


NOTES:

- EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZE AND MAY CONTAIN ROCKS LESS THAN 4-INCHES IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH. THE MIX COMPOSITION SHALL MEET THE FOLLOWING STANDARDS.
 - THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 80 AND 100 PERCENT, DRY WEIGHT BASIS.
 - PARTICLE SIZE BY WEIGHT SHALL BE 100 PERCENT PASSING A 6-INCH SCREEN AND A MINIMUM OF 70 PERCENT, MAXIMUM OF 85 PERCENT, PASSING A 3/4-INCH SCREEN.
 - THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.
 - LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.
 - SUITABLE SALTS CONTENT SHALL BE LESS THAN 4.0 MINIMUM.
- THE BARRIER MUST BE PLACED ALONG A RELATIVELY LEVEL CONTOUR. TALL GRASSES MAY NEED TO BE CUT TO AVOID SPACES THAT WOULD ALLOW FINES TO WASH UNDER THE BARRIER.
- FROZEN GROUND, OUTCROPS OF BEDROCK AND VERY ROOTED FORESTED AREAS ARE LOCATIONS WHERE BERMS OF EROSION CONTROL MIX ARE MOST PRACTICAL AND EFFECTIVE.

SEDIMENT LOG DETAIL

NOT TO SCALE

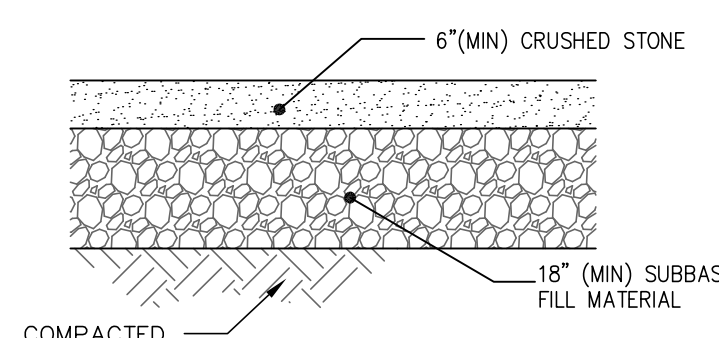


NOTE:

- CRUSHED GRAVEL SHALL BE MDOT 703.10
- SUBBASE FILL MATERIAL SHALL BE MDOT 703.06, TYPE C, PLACED AND COMPACTED IN 6-INCH LIFTS.
- SUBGRADE MATERIAL SHALL BE FREE OF ORGANICS, ROCKS, DEBRIS AND OTHER DELETERIOUS MATERIALS AND SHALL NOT BE WET OR FROZEN DURING PLACEMENT OF SUBBASE MATERIAL.

GRAVEL DRIVE DETAIL

NOT TO SCALE

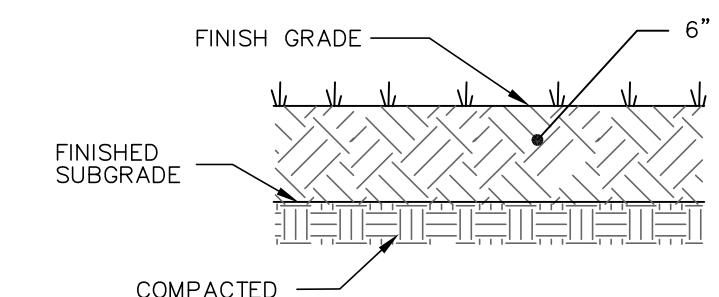


NOTE:

- CRUSHED STONE SHALL BE MDOT 703.12.
- SUBBASE FILL MATERIAL SHALL BE MDOT 703.06, TYPE C, PLACED AND COMPACTED IN 6-INCH LIFTS.
- SUBGRADE MATERIAL SHALL BE FREE OF ORGANICS, ROCKS, DEBRIS AND OTHER DELETERIOUS MATERIALS AND SHALL NOT BE WET OR FROZEN DURING PLACEMENT OF SUBBASE MATERIAL.

YARD CRUSHED STONE SURFACING AND GRAVEL SUBBASE DETAIL

NOT TO SCALE



LOAM AND SEED DETAIL

NOT TO SCALE

NOTES:

- ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE WATERWAY.
- THE WATERWAY SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN, AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
- FILLS SHALL BE COMPACTED AS NEEDED TO PREVENT UNEQUAL SETTLEMENT THAT WOULD CAUSE DAMAGE IN THE COMPLETE WATERWAY.
- ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE SPREAD OR DISPOSED OF SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE WATERWAY.
- GRASSSED WATERWAY SHALL BE FINISHED AND STABILIZED AS FOLLOWS:
 - A MINIMUM OF 4" SCREENED LOAM SHALL BE PROVIDED AS TOPSOIL.
 - DURING THE WINTER MONTHS, THE PERIMETER SWALE IS TO BE LINED WITH EITHER MULCH OR EROSION CONTROL BLANKET AS GROUND CONDITIONS DICTATE.
 - THE PERIMETER SWALE IS TO BE MULCHED AND SEEDED TO ENCOURAGE A GOOD CATCH OF GRASS AT THE COMPLETION OF CONSTRUCTION WHEN WINTER CONDITIONS HAVE SUBSIDED. SEED MIX SHALL MATCH ONE OF THE FOLLOWING:

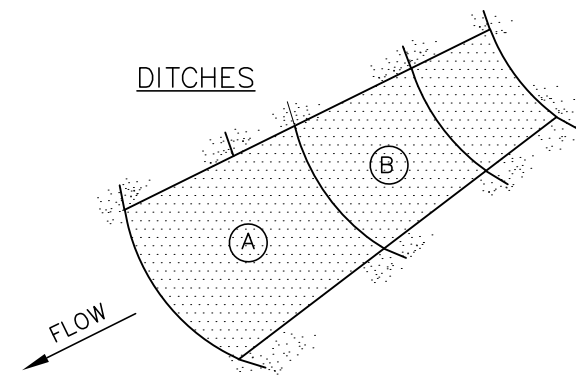
BIRDSFOOT TREFOL OR LADINO CLOVER	27%
TALL FESCUE OR SMOOTH BROMEGRASS	67%
RETOP OR	6%
KENTUCKY BLUEGRASS	45%
CREEPING RED FESCUE	36%
PERENNIAL RYEGRASS	19%

GRASSSED SWALE DETAIL

NOT TO SCALE

DATE:	10/28/10
APP'D:	JMR
REVISIONS:	ISSUED FOR REVIEW
	ISSUED FOR PERMIT
NO.	A
	B
Scale:	1"=30'
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SGC ENGINEERING, LLC • Civil Design & Survey Engineering • Environmental & Regulatory Permitting • Electrical Power Systems Engineering Offices - Westbrook & Orono, Maine Portland, New Mexico Farmington, New Mexico	
EROSION AND SEDIMENTATION CONTROL DETAILS AND NOTES	
BOWERS WIND PROJECT PENOBSCOT COUNTY, MAINE CHAMPLAIN WIND, LLC 129 MIDDLE STREET, 3RD FLOOR, PORTLAND, ME 04101	
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106-07-1003	1 of 1

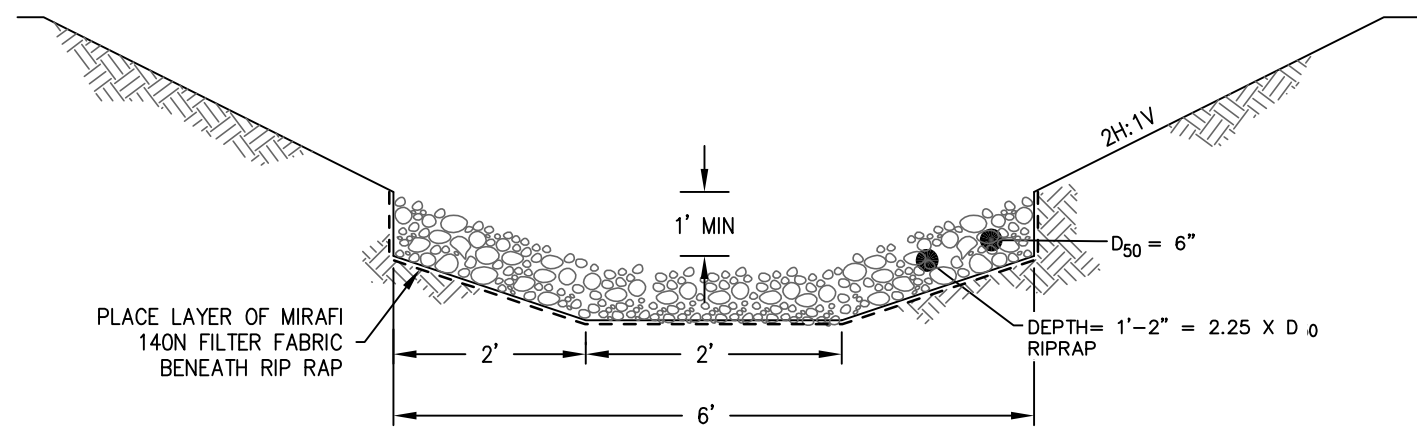
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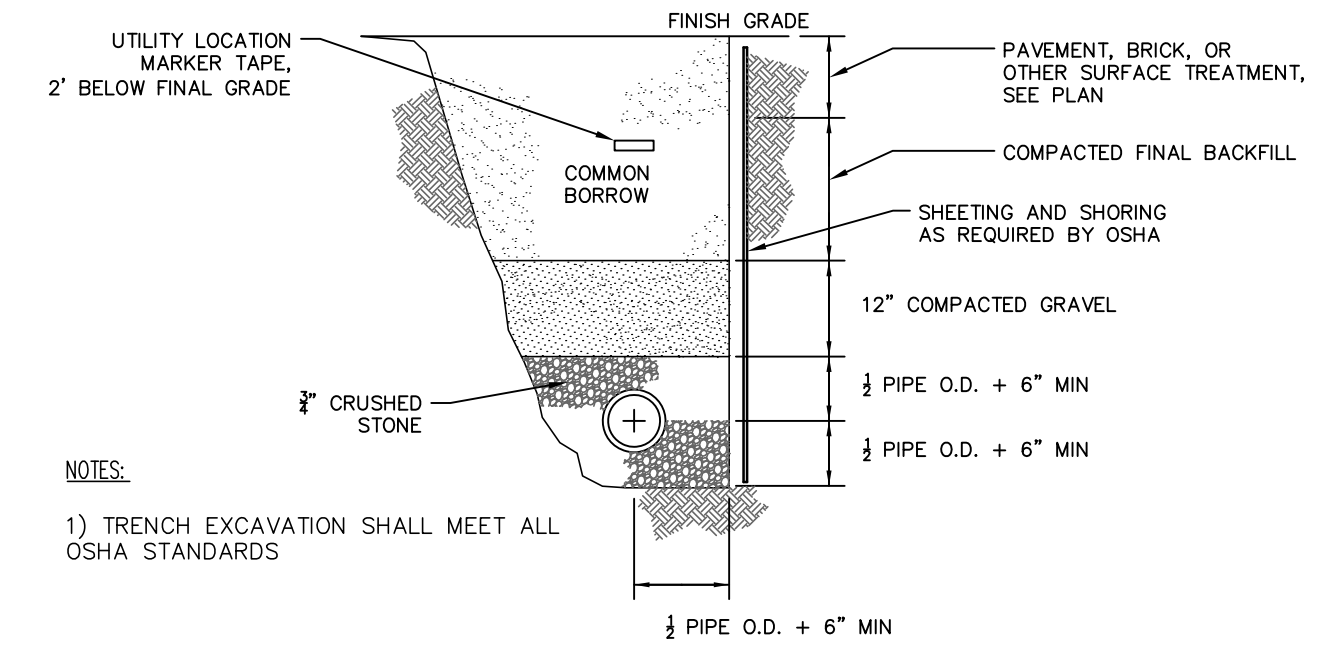
NOTES:

- BURY THE TOP END OF THE MESH MATERIAL IN A 12" TRENCH. BACKFILL AND TAMP TRENCH, SECURE END WITH STAPLES AT 6" SPACING, 4" DOWN FROM EXPOSED END.
- FLOW DIRECTION JOINTS TO HAVE UPPER END OF LOWER STRIP BURIED WITH UPPER LAYERS OVERLAPPED 4" AND STAPLED. OVERLAP B OVER A.
- LATERAL JOINTS TO HAVE 4" OVERLAP OF STRIPS. STAPLE 18" ON CENTER.
- STAPLE OUTSIDE LATERAL EDGE 2' ON CENTER.
- WIRE STAPLES TO BE MIN. OF # 11 WIRE 6" LONG AND 1-1/2" WIDE.
- USE NORTH AMERICAN GREEN DS 150 OR APPROVED EQUAL.

EROSION CONTROL BLANKET DETAIL (DITCH)
NOT TO SCALE



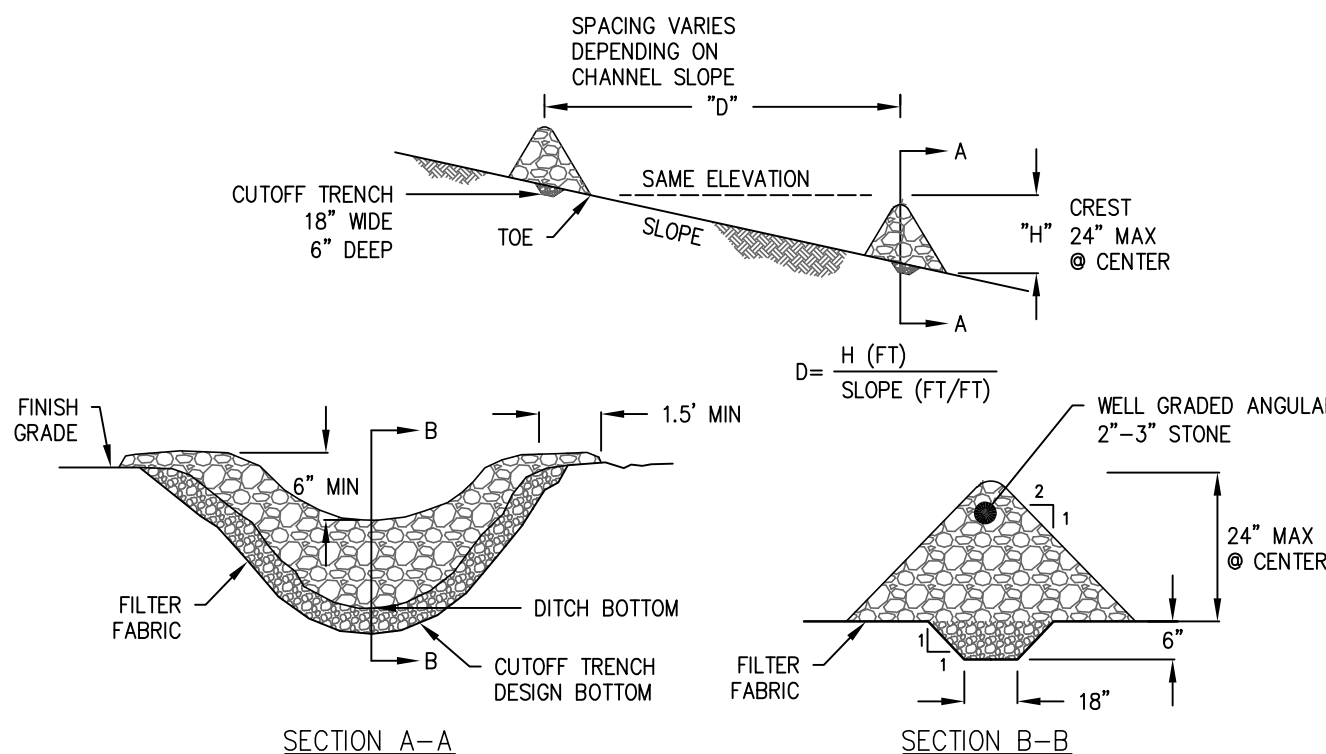
STONE LINED SWALE DETAIL
NOT TO SCALE



NOTES:

- TRENCH EXCAVATION SHALL MEET ALL OSHA STANDARDS

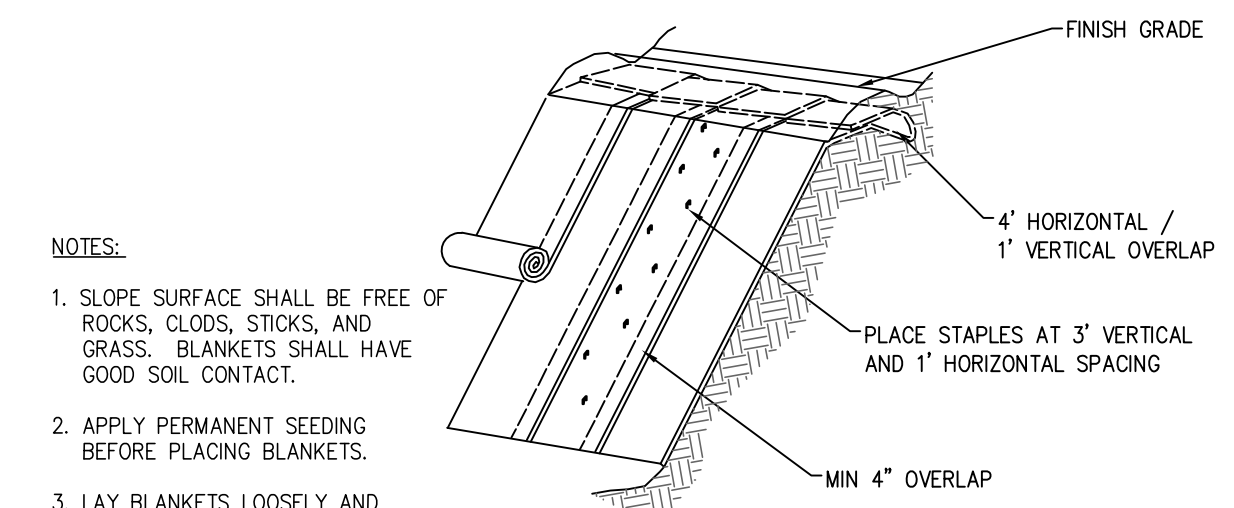
TYPICAL PIPE TRENCH DETAIL
NOT TO SCALE



NOTES:

- STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
- SET SPACING OF CHECK DAMS TO ASSURE THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE DOWNSTREAM DAM.
- EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
- PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
- ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.

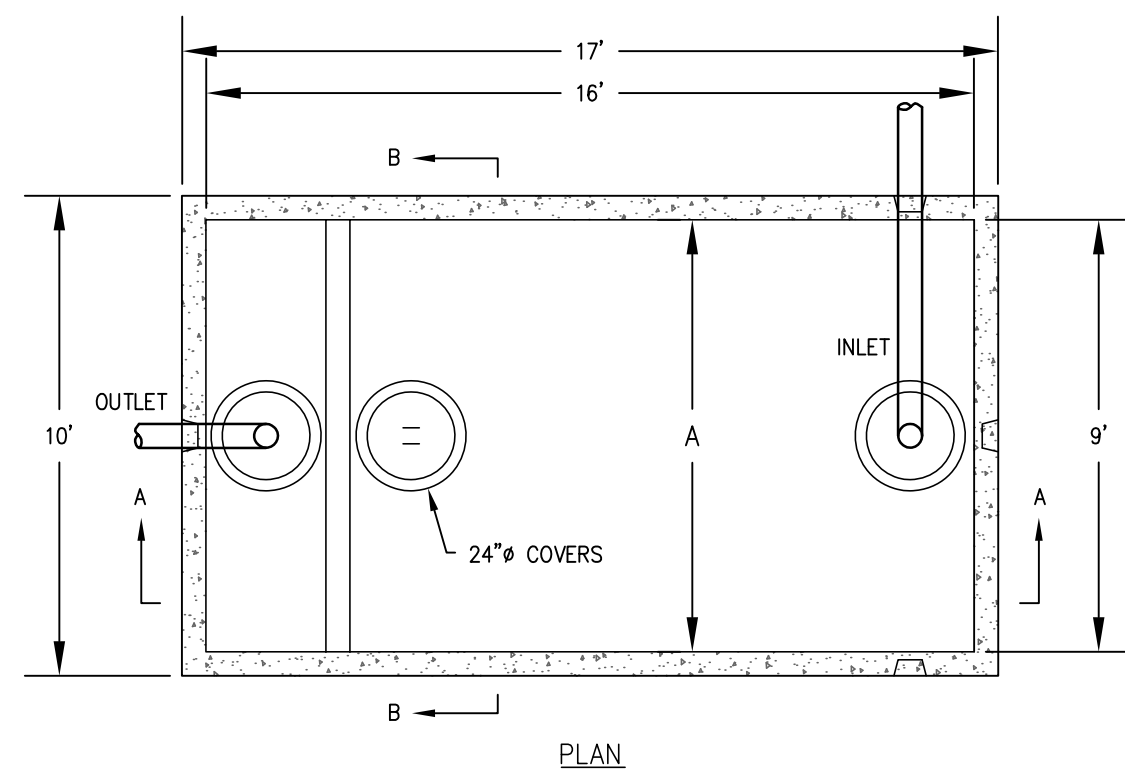
STONE CHECK DAM DETAIL
NOT TO SCALE



NOTES:

- SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS. BLANKETS SHALL HAVE GOOD SOIL CONTACT.
- APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
- LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
- INSTALL BLANKETS VERTICALLY DOWNSLOPE.

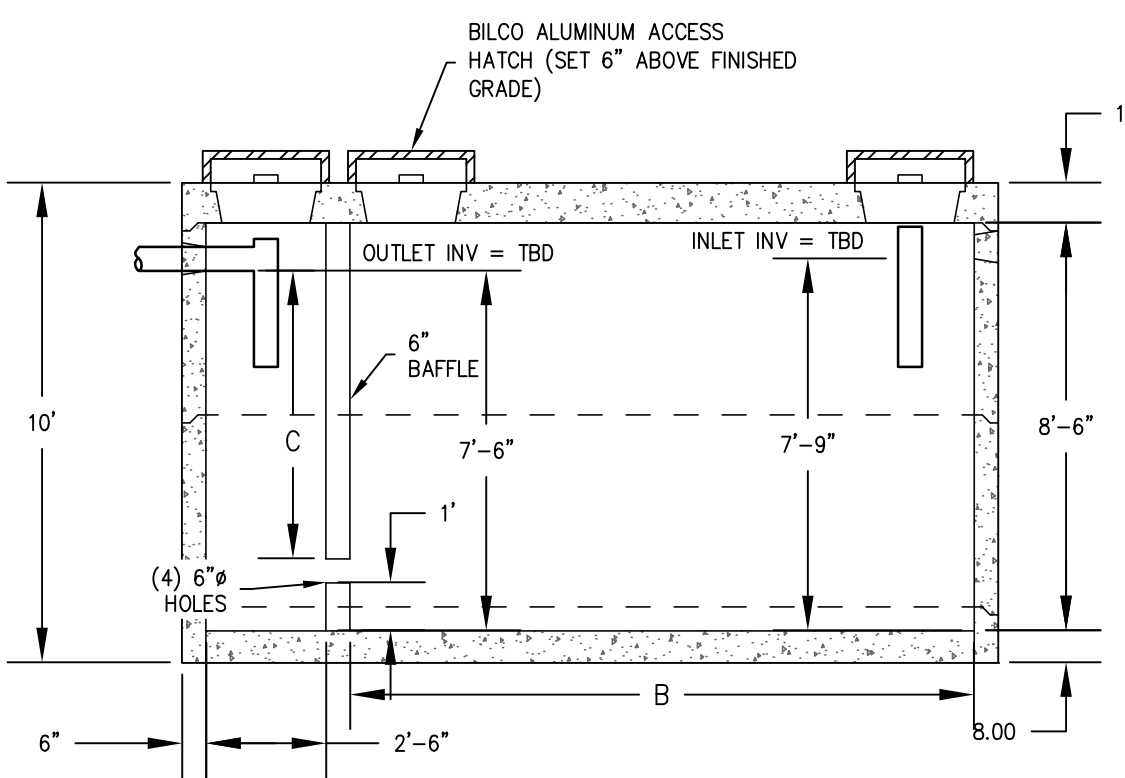
EROSION CONTROL BLANKET DETAIL (SLOPE)
NOT TO SCALE



PLAN

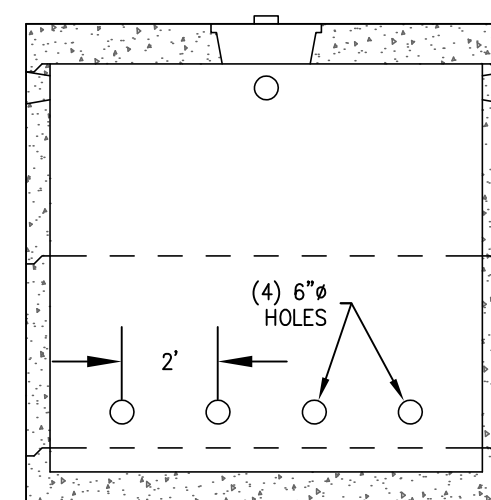
NOTES:

- CONCRETE: 5,000 PSI MINIMUM STRENGTH AT 28 DAYS.
- STEEL REINFORCING - ASTM A-615, GRADE 60.
- COVER TO STEEL - 1" MIN.
- DESIGNED TO MEET ASTM C858 AND ACI 318 WITH AASHTO HS-20 LOADING.
- EARTH COVER - 0 TO 5 FEET MAX.
- PIPE SLEEVES SHALL BE FLEXIBLE LOCK-JOINT OR EQUAL.
- TANK JOINTS SHALL BE KENT SEAL 2" BUTYL RUBBER SEALS.
- TANK SHALL BE OLDCASTLE PRECAST CST-8,000, 8,000 GALLON COMMERCIAL SEPTIC TANK OR EQUAL.
- DIMENSIONS OF TANK MAY VARY DEPENDING ON THE OIL STORAGE VOLUME OF THE TRANSFORMER.

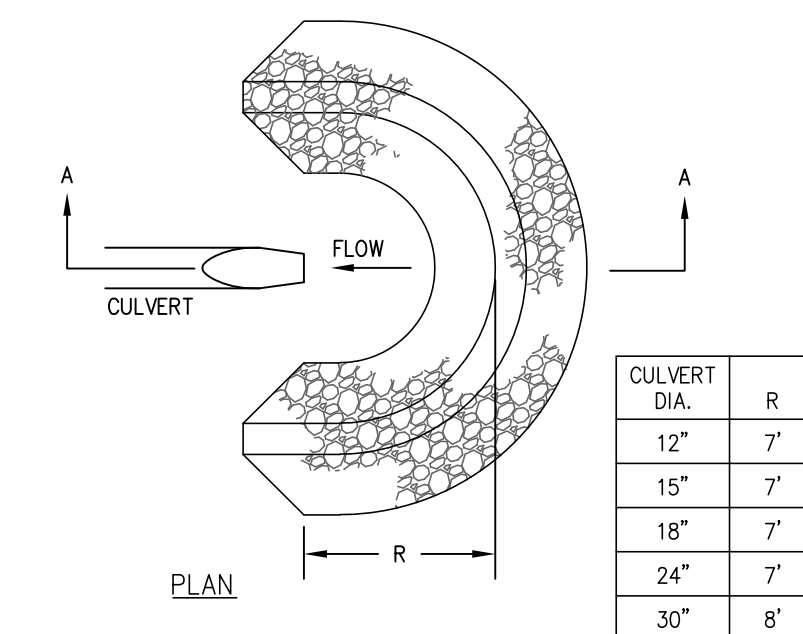


SECTION A-A

OIL/WATER SEPARATOR DETAIL
NOT TO SCALE



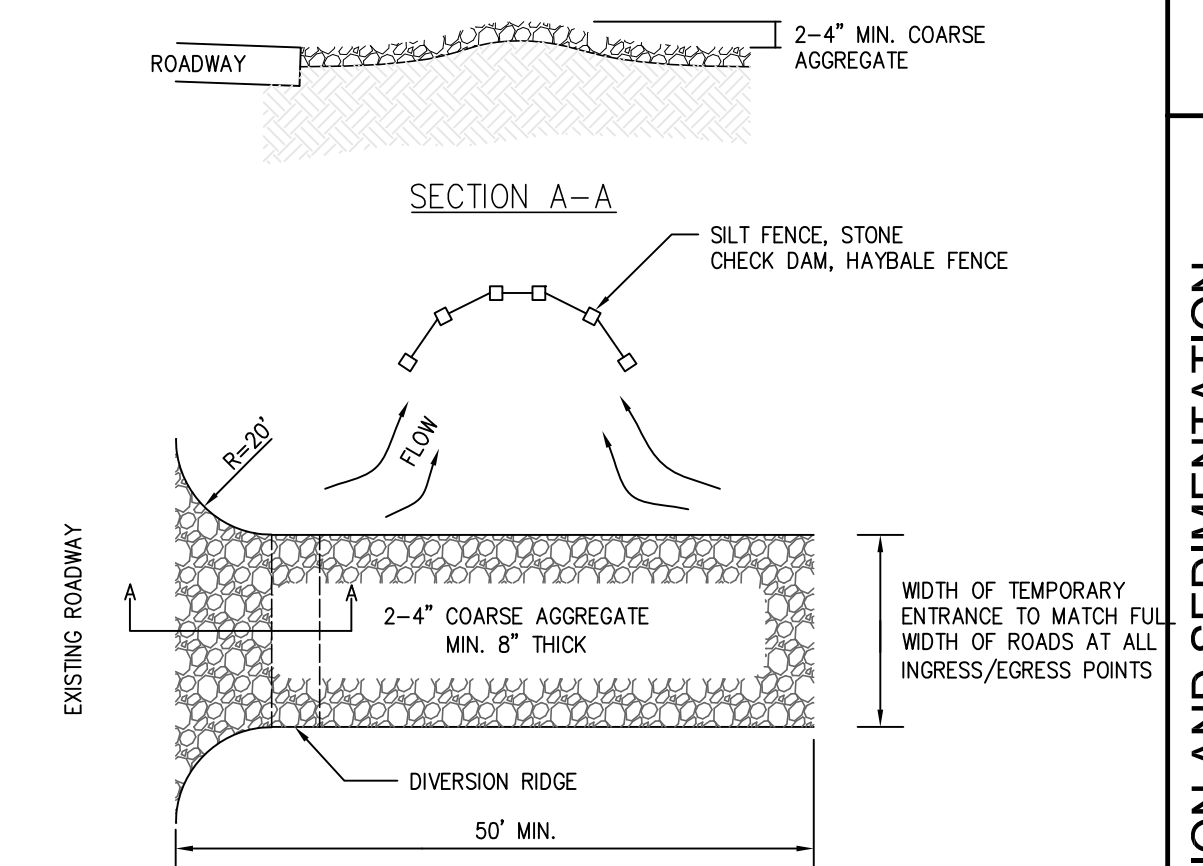
SECTION B-B



NOTES:

- USE 2" TO 3" STONE.
- PLACE STONE OVER GEOTEXTILE.
- ONCE THE AREAS UPGRADIENT FROM THE CHECK DAM ARE STABILIZED BY VEGETATION, THE SEDIMENT TRAPPED BEHIND/WITHIN THE DAM SHALL BE RELOCATED TO AN AREA UNDERGOING FINAL GRADING OR DISPOSED OF OFFSITE.
- ONCE UPGRADIENT AREAS ARE STABILIZED, DAMS SHALL BE FLATTENED AND GRADED IN A MANNER WHICH PROTECTS THE AREA FROM EROSION AND CHANNEL BLOCKAGE.
- GEOTEXTILE MUST BE REMOVED AND DISPOSED OF OFFSITE.
- THE AREA CONTRIBUTING TO THE CHECK DAM SHALL NOT EXCEED 10 ACRES.

TEMPORARY CULVERT INLET PROTECTION DETAIL
NOT TO SCALE



NOTES:

- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING. REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
- WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
- ALL SEDIMENT SPILLED, DROPPED, OR WASHED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.
- PLACE STONE ON GEOTEXTILE FABRIC.

TEMPORARY CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE

NO.	REVISIONS:	DATE:
A	ISSUED FOR REVIEW	10/28/10
B	ISSUED FOR PERMIT	12/28/10

SGC ENGINEERING, LLC
 • Civil Design & Survey Engineering
 • Environmental & Regulatory Permitting
 • Electrical Power Systems Engineering
 Offices - Westbrook & Orono, Maine
 Portland, New Mexico
 Farmington, New Mexico

Scale: 1"=30'
 Date: OCT. 21, 2010
 SGC Project: 780001
 Drawn: MRRMRR/JMR
 Design: MRRMRR/JMR

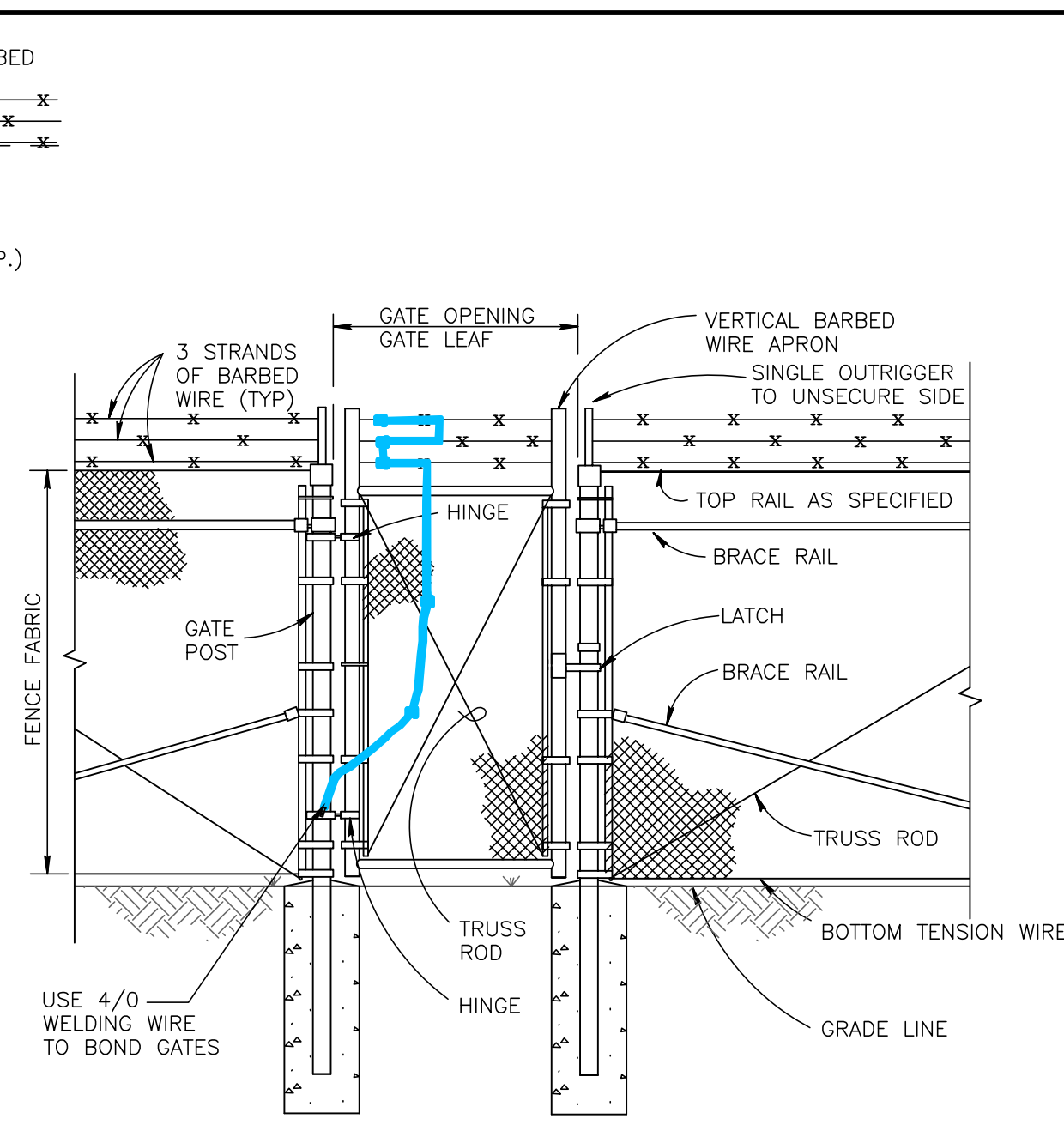
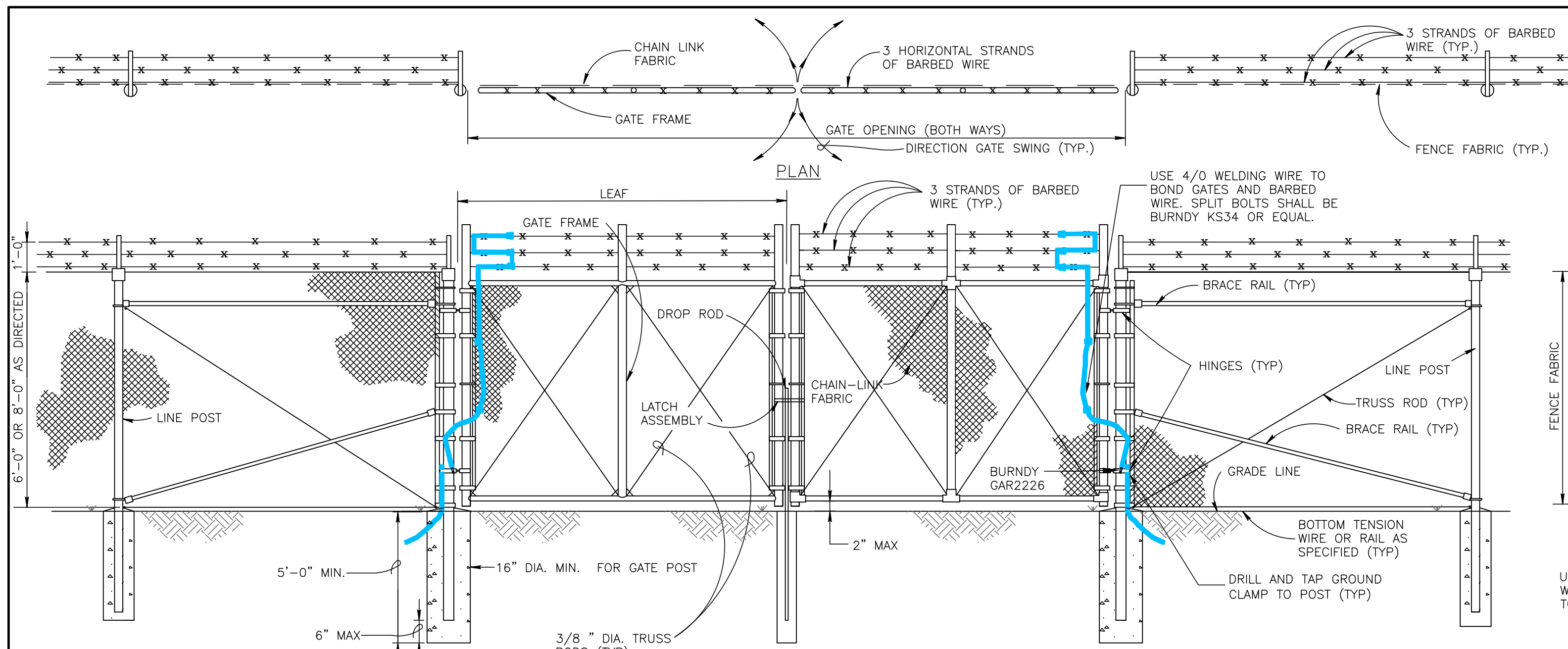
EROSION AND SEDIMENTATION CONTROL DETAILS AND NOTES

BOWERS WIND PROJECT
 PENOBSCOT COUNTY, MAINE

CHAMPLAIN WIND, LLC
 129 MIDDLE STREET, 3RD FLOOR, PORTLAND, ME 04101

CLEAN ENERGY MADE HERE.

THE INFORMATION CONTAINED HEREIN IS STRICTLY THE PROPERTY OF THE PROJECT OWNER.



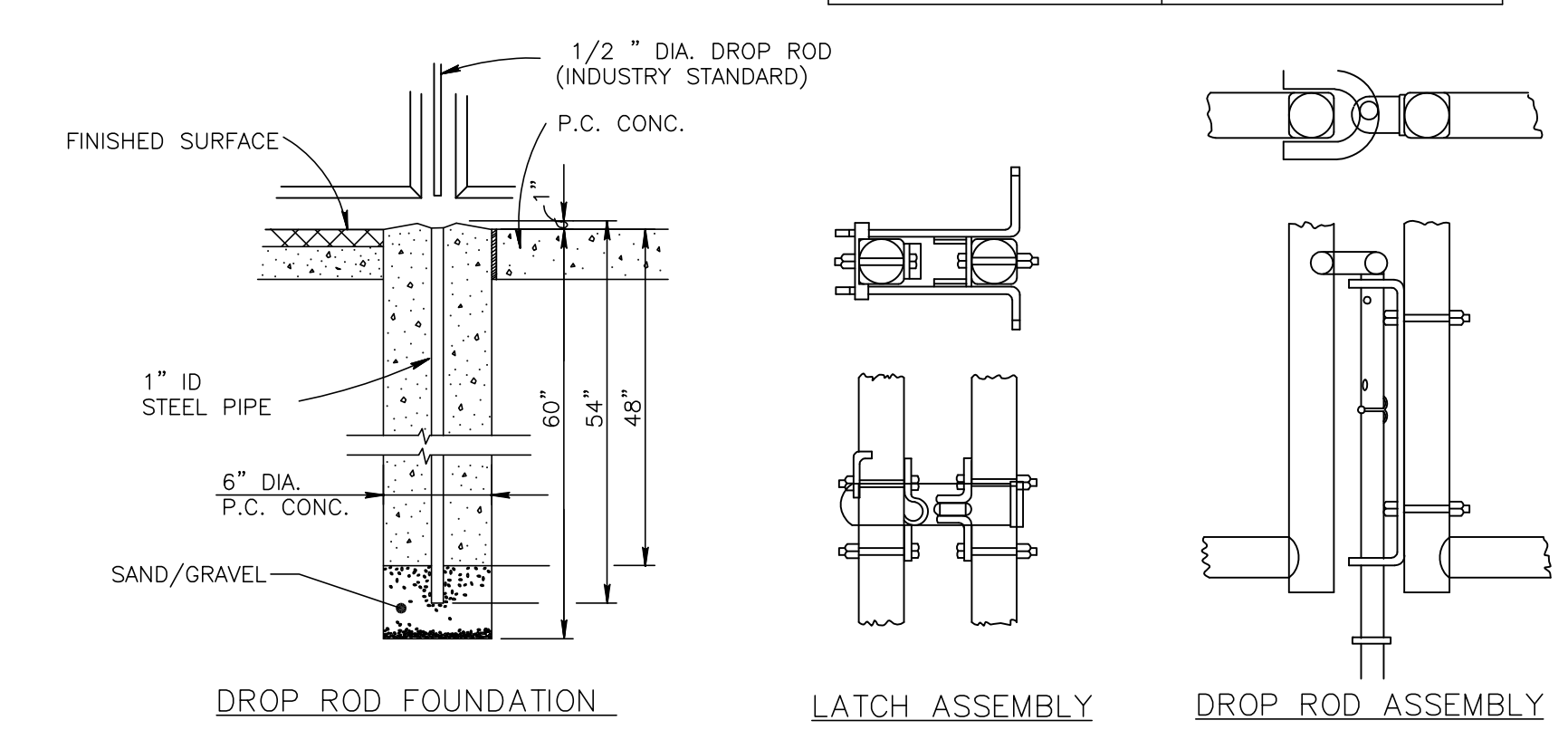
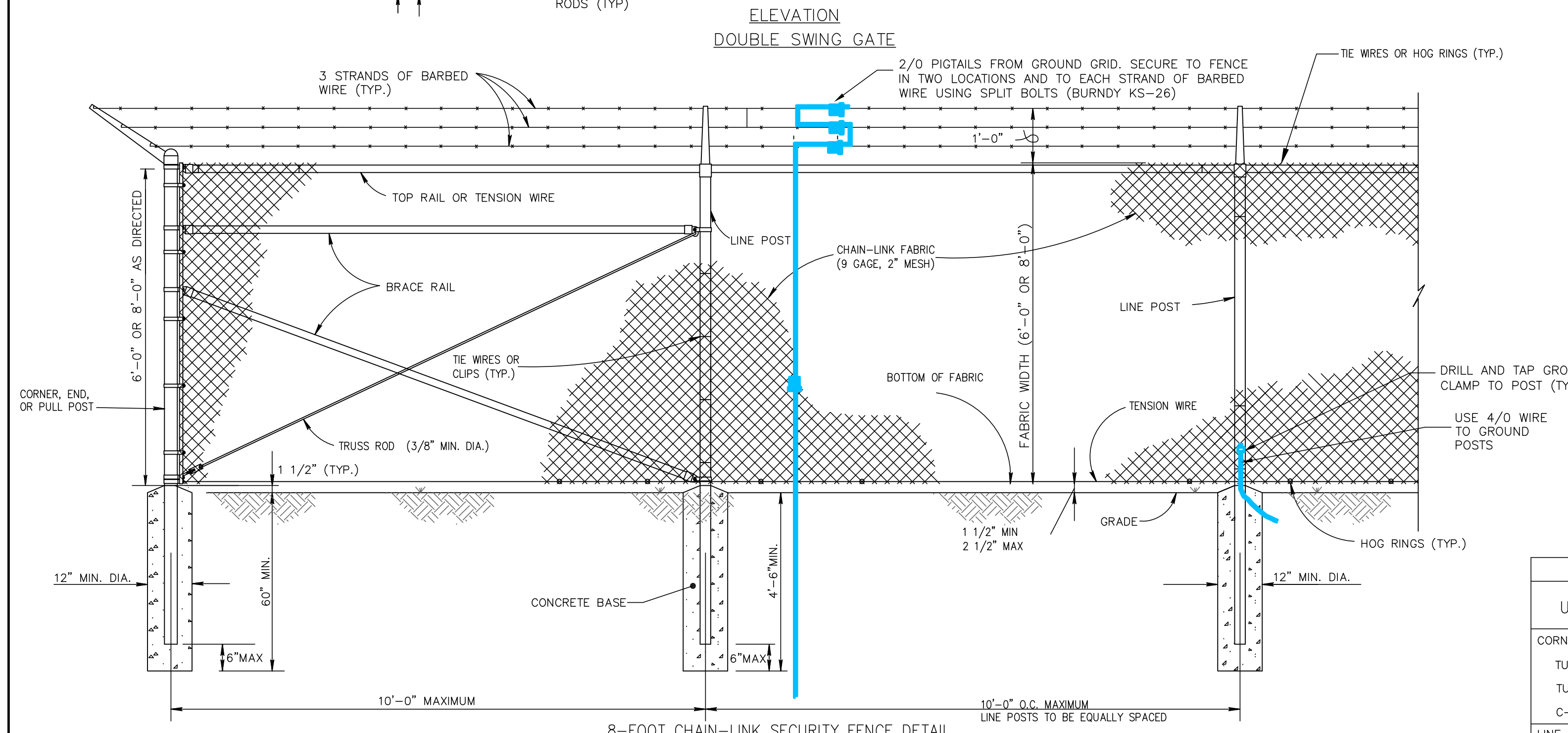
GENERAL NOTES

1. DETAILS SHOWN ARE TO CLARIFY REQUIREMENTS AND ARE NOT INTENDED TO LIMIT OTHER TYPE OF FENCE SECTIONS AND METHODS OF INSTALLATION WHICH COMPLY WITH THE SPECIFICATIONS.
2. DOUBLE SWING GATES SHALL BE CONSTRUCTED WITH DROP RODS, PADLOCKS AND LATCH ASSEMBLY, EXCEPT AS NOTED.
3. ALL GATE FRAMES SHALL MEET THE MINIMUM REQUIREMENTS OF ASTM F900 1.90" NOMINAL (ROUND) OR 2.00" NOMINAL (SQUARE). GATE FRAMES SHALL BE OF WELDED CONSTRUCTION OR SHALL BE ASSEMBLED USING HEAVY FITTINGS. AT CONTRACTOR'S OPTION A WELDED HORIZONTAL BRACE MAY BE USED IN LIEU OF TRUSS RODS TO BRACE ALL-WELDED GATE FRAMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER RIGID CONSTRUCTION OF ALL GATES SUPPLIED.

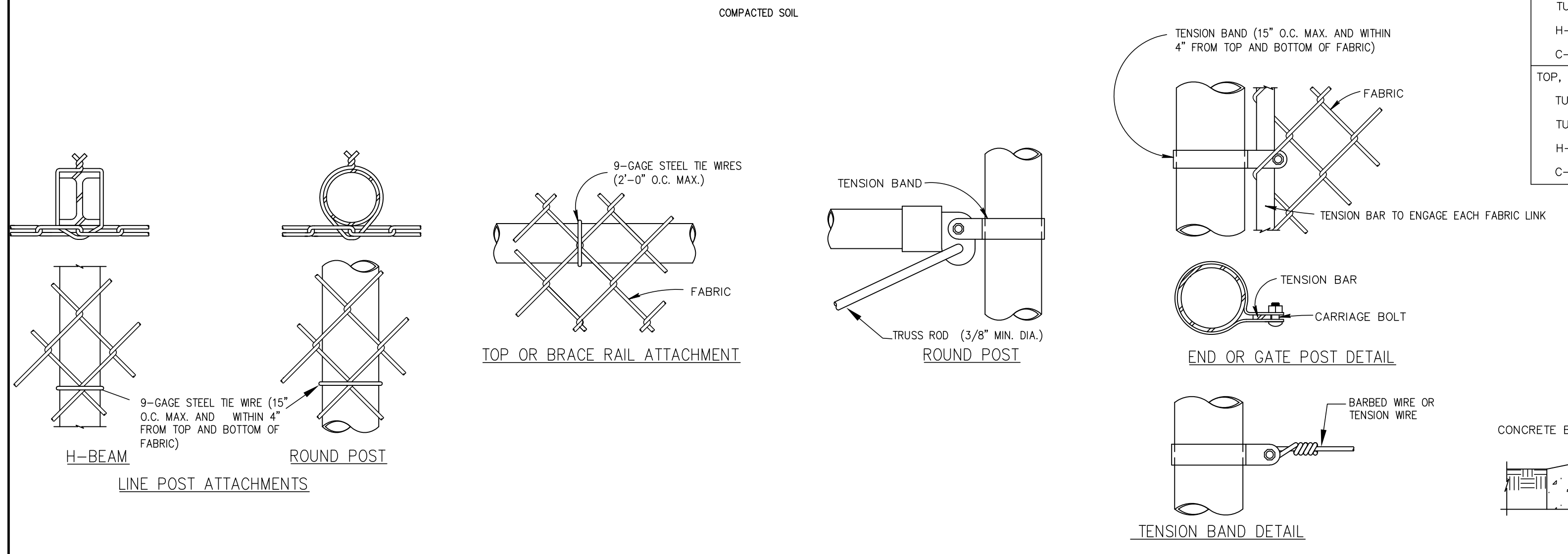
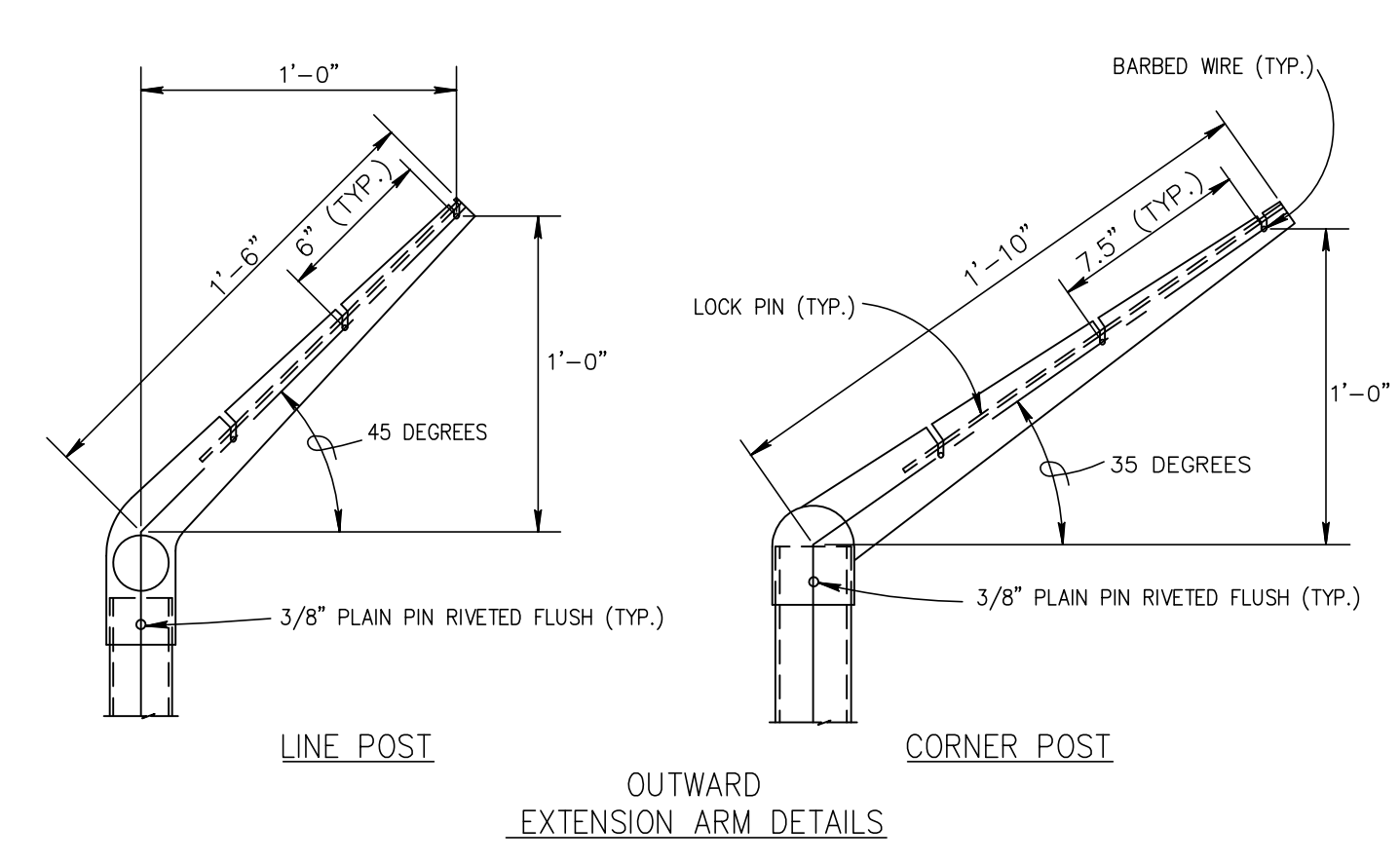
GROUNDING NOTES

1. AT A MINIMUM, FENCE POSTS SHALL BE CONNECTED TO THE MAIN GROUND GRID EVERY 20 FEET WITH 4/0 COPPER. THE POST CONNECTIONS SHALL BE DRILLED AND TAPPED.
2. FENCE FABRIC, AT A MINIMUM, SHALL BE CONNECTED TO THE MAIN GROUND GRID EVERY 40 FEET WITH 2/0 COPPER WIRE. WIRE SHALL BE WEAVED THROUGH THE FABRIC AND CONNECTED TO EACH STRAND OF THE BARB WIRE WITH A SPLIT BOLT CONNECTOR. SPLIT BOLT CONNECTOR SHALL BE BURNDY KS-26 OR EQUAL.

GATE POST SCHEDULE	
GATE LEAF WIDTH (NOMINAL)	OUTSIDE DIMENSION (NOMINAL)
6' OR LESS	2.875" OD 2.5" SQ
6' TO 12'	4.0" OD



STEEL POST SCHEDULE	
USE AND SECTION	MIN. OUTSIDE DIM. (NOMINAL)
FABRIC WIDTH 84" TO 96"	
CORNER, END & PULL POSTS	
TUBULAR - ROUND	2.875" O.D.
TUBULAR - SQUARE	2.50" SQ.
C-SECTION (ROLL-FORMED)	3.50" X 3.50"
LINE POSTS	
TUBULAR - ROUND	2.375" O.D.
H-SECTION	2.25" X 1.70"
C-SECTION (ROLL-FORMED)	2.25" X 1.70"
TOP, BOTTOM & BRACE RAILS	
TUBULAR - ROUND	1.66" O.D.
TUBULAR - SQUARE	1.50" SQ.
H-SECTION	1.625" X 1.50"
C-SECTION (ROLL-FORMED)	1.625" X 1.25"



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A	ISSUED FOR REVIEW	10/28/10
B	ISSUED FOR PERMIT	12/08/10

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 • Electrical Power Systems Engineering
 Offices - Westbrook & Orono, Maine
 Portland, New Mexico

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FENCE AND GATE DETAILS
 BOWERS WIND PROJECT
 PENOBSCOT COUNTY, MAINE
 CHAMPLAIN WIND, LLC
 129 MIDDLE STREET, 3RD FLOOR, PORTLAND, ME 04101

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DWG. 106-07-1005 SHEET 1 of 1

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