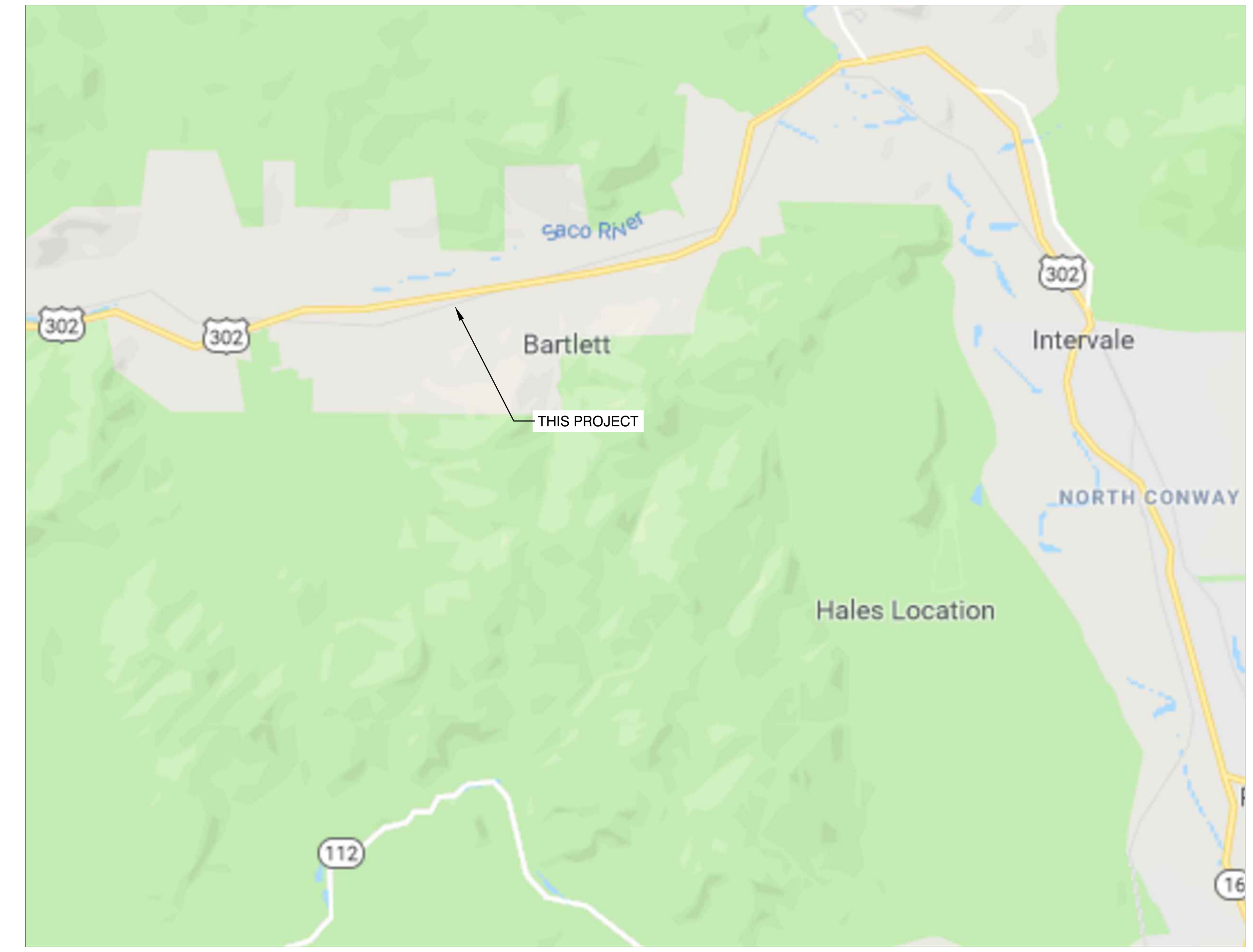

VICINITY MAP:
1" = 1 MILE

GRAND SUMMIT HOTEL AT ATTITASH
BARTLETT, NEW HAMPSHIRE
BACKUP GENERATOR FINAL DESIGN PLANS

SITE ADDRESS:
104 GRAND SUMMIT DRIVE
BARTLETT, NH 03812

DESIGNED BY:
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REV	APPROVED	DESCRIPTION	JCN	REDLINE DATE	APVD

CLIENT:
GRAND SUMMIT HOTEL CONDOMINIUM UNIT OWNERS' ASSOCIATION, INC.

GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
COVER SHEET

CUSA CONSULTING LLC

BARTLETT NH

REVIEWED BY:

SUBMITTED BY:
CUSA PROJECT ENGINEER

APPROVED BY:
AUTHORIZED CORPORATE OFFICER

DESIGNED:
DRAWN: A.J.G.
CHECKED: C.W.C.

ISSUED BY:

DATE:
JCN:
DRAWING NUMBER: GSH-FINAL-G000
REV

HAMPTON, NH OFFICE

STATE OF NEW HAMPSHIRE – CHARLES W. ... 816 – LICENSED PROFESSIONAL ENGINEER – DRAFT

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10/31/2019 7:56 AM KEVIN MARCHESE

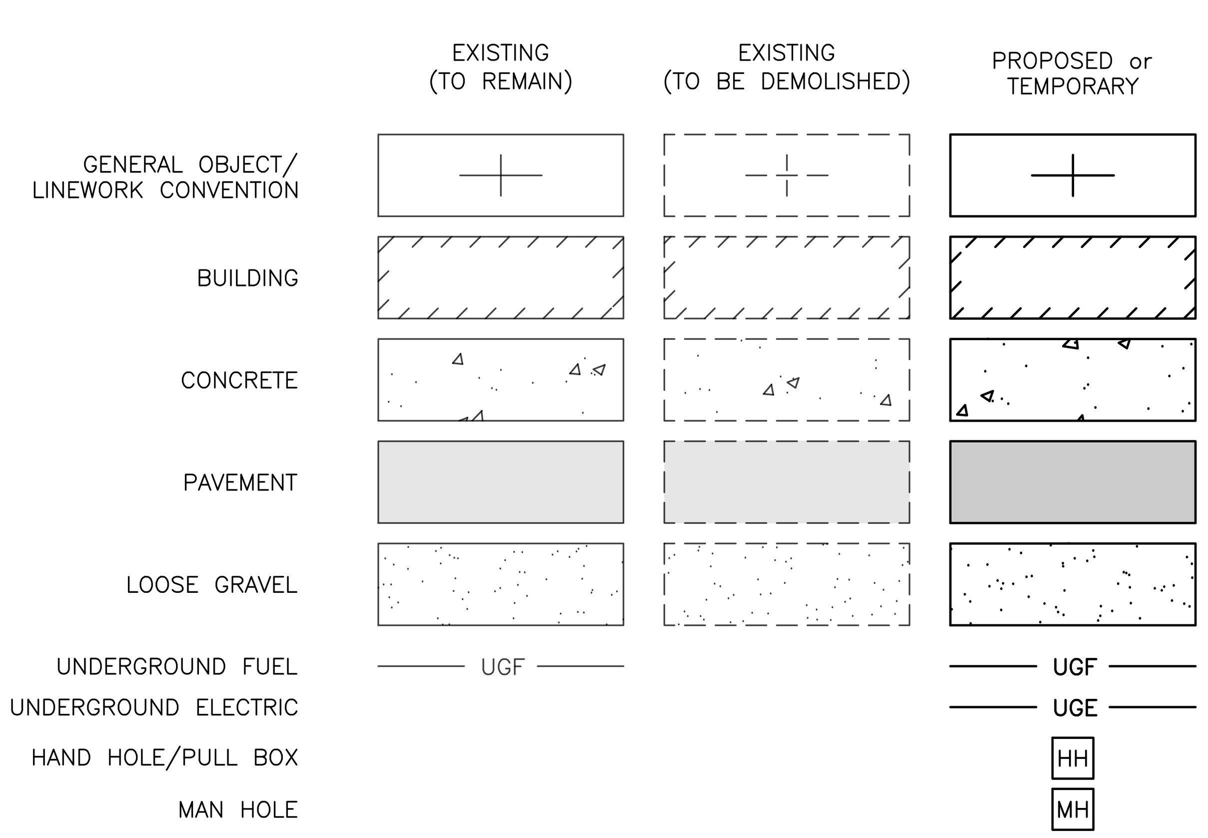
DRAWING PREFIXES:

G – GENERAL
D – DEMOLITION
E – ELECTRICAL
C – CIVIL
M – MECHANICAL

DRAWING LIST:

DRAWING #	DRAWING TITLE
GSH-FINAL-G000	COVER SHEET
GSH-FINAL-G001	INDEX OF SHEETS, LEGEND AND ABBREVIATIONS
GSH-FINAL-G002	REFERENCED CODES, DESIGN STANDARDS AND REQUIRED PERMITS
GSH-FINAL-G003	EXISTING SITE BLUEPRINT
GSH-FINAL-D001	SITE DEMOLITION AND RELOCATION PLAN
GSH-FINAL-C000	CIVIL NOTES AND MATERIAL SCHEDULES
GSH-FINAL-C001	CIVIL SITE LAYOUT
GSH-FINAL-C002	GENERATOR FOUNDATION LAYOUT
GSH-FINAL-C003	GENERATOR FOUNDATION DETAILS
GSH-FINAL-C004	ELECTRICAL EQUIPMENT ENCLOSURE CIVIL LAYOUT & FOUNDATION DETAILS
GSH-FINAL-C005	TYPICAL SECTIONS AND DETAILS
GSH-FINAL-C006	CAST-IN-PLACE MANHOLE DETAILS
GSH-FINAL-C007	HANDHOLE DETAILS
GSH-FINAL-C008	LIGHT PEDESTAL DETAILS
GSH-FINAL-C009	SOILS REPORT
GSH-FINAL-E000	ELECTRICAL NOTES
GSH-FINAL-E001	ELECTRICAL SITE LAYOUT
GSH-FINAL-E002	ELECTRICAL EQUIPMENT ENCLOSURE ELECTRICAL LAYOUT
GSH-FINAL-E003	ELECTRICAL ONE-LINE DIAGRAM
GSH-FINAL-E004	PANEL/BREAKER/FEEDER/EQUIPMENT SCHEDULES
GSH-FINAL-E005	BRANCH CIRCUIT AND CONTROLS SCHEDULE
GSH-FINAL-E006	EG AND ATS WIRING DIAGRAM
GSH-FINAL-E007	GROUNDING DETAILS
GSH-FINAL-E008	ELECTRICAL WORK SPACE LAYOUT
GSH-FINAL-E009	CONDUIT STUB-UP LOCATIONS
GSH-FINAL-M001	ENCLOSED GENERATOR DIMENSION PRINT
GSH-FINAL-M002	FUEL TANK DIMENSION PRINT
GSH-FINAL-M003	GENERATOR SPECIFICATIONS
GSH-FINAL-M004	STAIRS/PLATFORM ASSEMBLY DETAILS
GSH-FINAL-M005	ATS DIMENSIONAL DRAWING

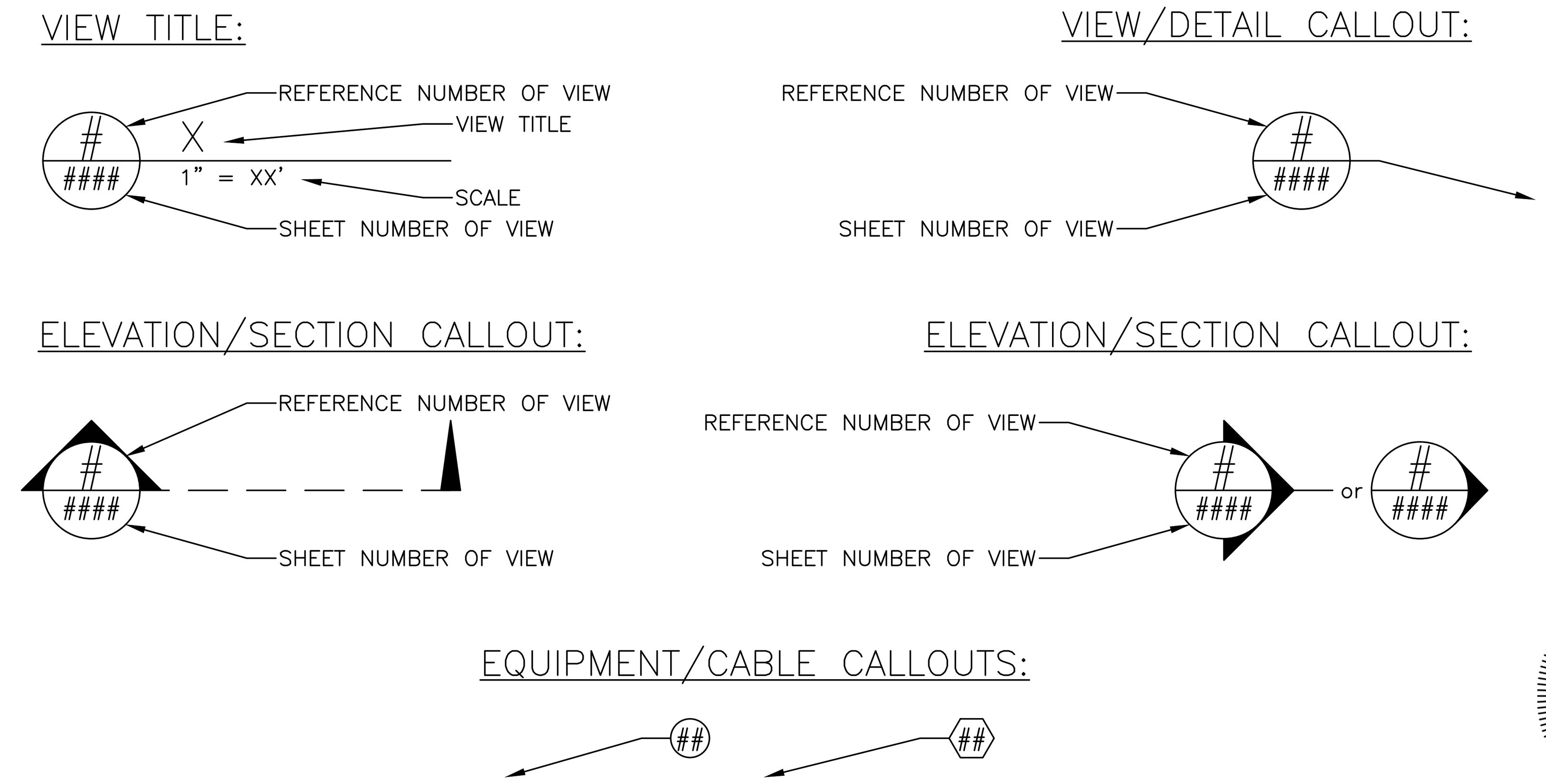
LEGEND (SITE):



GENERAL CONTRACTOR PROVIDED EQUIPMENT

ITEM	DESCRIPTION
ENGINE GENERATOR	500KW KOHLER ENGINE GENERATOR 480/277V 3P, 4W, WITH 2466 GALLON SUB BASE FUEL TANK W/REMOTE SERIAL ANNUNCIATOR III PANEL (120VAC POWER OPTION).
AUTOMATIC TRANSFER SWITCH (ATS)	ATS, 1200A, 480V, 65KA, 4P INCLUDES SWITCHED NEUTRAL, INCLUDES ISOLATION BYPASS SWITCH, FLOOR MOUNTED, 38"W x 91"H x 48"D – KOHLER ADV-8602.
MAIN DISTRIBUTION PANEL	MAIN DISTRIBUTION PANEL, 1200A, 480/277V, 3P, 65KA, NEMA 1 FREE STANDING – SQUARE D QED-2 SWITCHBOARD. WITH (3) 1200AF/600AS PJ BREAKERS WITH MICROLOGIC 6.0, (1) 250AF/100AS LJ BREAKER WITH MICROLOGIC 3.3, (1) PROTECTED 120KA SPD
MAIN SERVICE SWICHBOARD	MAIN SERVICE DISCONNECT, SWITCHBOARD, 1200A, 480V, 65KA, 3PH, 4W BREAKER WITH GROUND FAULT DETECTION, FLOOR MOUNTED 36"W x 91.5"H x 24"D – SQUARE D QED-2 SWITCHBOARD WITH RJF MICROLOGIC 6.0 TYPE BREAKER.
EG PANEL TRANSFORMER	45KVA STEP DOWN TRANSFORMER, 3-PHASE, 60HZ, DOE 2016, VENTILATED, FLOOR MOUNTED, NEMA 3R ENCLOSURE, INDOOR, HV-480V, LV-208Y/120V, COPPER WINDINGS, 150°C TEMPERATURE RISE, 220°C CLASS, DRY TYPE, HAMMOND POWER SOLUTIONS SG3A0045KB0C. ORDER WITH ILSCO D167-4 GROUNDING BAR.
MANHOLE COLLAR, COVER, & STEPS	MANHOLE FRAME WITH SOLID RECTANGULAR LID – NEENAH FOUNDRY R1800-E, OR EQUIV. MANHOLE STEPS – NEENAH FOUNDRY R-1980-C, OR EQUIV.
PULLBOX W/COVER/LID	PULLBOX, 5'x5'x5' WITH MANHOLE FRAME AND CIRCULAR COVER – SHEA CONCRETE PRODUCTS PB-555, OR EQUIV.
BOLLARDS	GALVANIZED STEEL BOLLARDS AND COVERS

LEGEND (LABELS):



ABBREVIATIONS:

	A
A	AMPERE
AC	ALTERNATING CURRENT
AF	AMPERE FRAME
AFF	ABOVE FINISHED FLOOR
AIC	AMPERE INTERRUPTING CURRENT
AST	ABOVE GROUND STORAGE TANK
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
	B
BC	BARE COPPER
BAT CHGR	BATTERY CHARGER
	C
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
COMM	COMMUNICATIONS
CONC	CONCRETE
CONN	CONNECTION
CT	CURRENT TRANSFORMER
	D
DB	DIRECT BURIAL
DC	DIRECT CURRENT
DIA	DIAMETER
DISC	DISCONNECT
D PNL	DISTRIBUTION PANEL
DS	DISCONNECT SWITCH
DWG	DRAWING
	E
EES	EARTH ELECTRODE SYSTEM
EG	ENGINE/GENERATOR
EF	EXHAUST FAN
EMERG	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EQUIP	EQUIPMENT
ERMS	ENVIRONMENTAL REMOTE MONITORING SYSTEM
	F
FLR	FLOOR
FLEX	FLEXIBLE
FST	FUEL STORAGE TANK
	G
G, GND	GROUND
GFM	GOVERNMENT FURNISHED EQUIPMENT
	H
HH	HAND HOLE
	I
IAW	IN ACCORDANCE WITH
IN	INCH
	J
J, JB	JUNCTION BOX
	K
KCMIL	THOUSAND CIRCULAR MILLS
KVA	KILOVOLT AMPERES
KW	KILOWATT
	L
LP	LIQUID PROPANE
LTG	LIGHTING
	M
MAX	MAXIMUM
MCM	1000 CIRCULAR MILS (AREA)
MDP	MAIN DISTRIBUTION PANEL
MDS	MAIN DISCONNECT SWITCH
MECH	MECHANICAL
MH	MANHOLE
MISC	MISCELLANEOUS
MLO	MAIN LUG ONLY
	N
N	NEUTRAL
NA N/A	NOT APPLICABLE
NTS	NOT TO SCALE
	O
OVHD	OVERHEAD
	P
P	POLE
PNL	PANEL
PRESS	PRESSURE
PSIG	POUNDS PER SQUARE GAUGE
	R
RE	RESIDENT ENGINEER
REC	RECEPTACLE
REQD	REQUIRED
RGS	RIGID GALVANIZED STEEL
RM	ROOM
	S
SH	SHEET
SPD	SURGE PROTECTION DEVICE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
	T
TK	TANK
TYP	TYPICAL
	U
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
	V
V	VOLT, VOLTAGE
VA	VOLT AMPERE
	W
W	WATT
W/	WITH
W/O	WITHOUT
	X
XFMR	TRANSFORMER
	Y
Y	WYE
Y-D	WYE-DELTA
	Z
Z	IMPEDANCE

REV	APPROVED	DESCRIPTION	JCN	REDLINE DATE	APVD

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CLIENT:
GRAND SUMMIT HOTEL CONDOMINIUM UNIT OWNERS' ASSOCIATION, INC.

GRAND SUMMIT HOTEL AT ATTITASH BACKUP GENERATOR FINAL DESIGN DRAWINGS, 10/31/2019 INDEX OF SHEETS, LEGEND AND ABBREVIATIONS

CUSA CONSULTING LLC

BARTLETT NH

REVIEWED BY: | SUBMITTED BY: CUSA PROJECT ENGINEER | APPROVED BY: AUTHORIZED CORPORATE OFFICER

STATE OF NEW HAMPSHIRE — LICENSED PROFESSIONAL ENGINEER — DRAFT

HAMPTON, NH OFFICE

DESIGNED: | ISSUED BY: | DATE: | JCN:
DRAWN: A.J.G.
CHECKED: C.W.C.

DRAWING NUMBER: GSH-FINAL-G001 | REV

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STATE OF NEW HAMPSHIRE ADOPTED BUILDING CODES:

DISCIPLINE:	APPLICABLE CODE:	VERSION:
CIVIL	ICC INTERNATIONAL BUILDING CODE	2009, AS AMENDED BY NEW HAMPSHIRE BCR 300
MECHANICAL	ICC INTERNATIONAL PLUMBING CODE	2009, AS AMENDED BY NEW HAMPSHIRE BCR 300
MECHANICAL	ICC INTERNATIONAL MECHANICAL CODE	2009, AS AMENDED BY NEW HAMPSHIRE BCR 300
DEMOLITION	ICC INTERNATIONAL EXISTING BUILDING CODE	2009, AS AMENDED BY NEW HAMPSHIRE BCR 300
ELECTRICAL	ICC INTERNATIONAL ELECTRICAL CODE	2014, AS AMENDED BY NEW HAMPSHIRE BCR 300
ALL	NH STATE FIRE CODE	NH SAF-C 600, AS ADOPTED 6/8/2012

REQUIRED PERMITS:

AGENCY:	PERMITS REQUIRED:	COMMENTS/REFERENCE:
STATE OF NEW HAMPSHIRE	MECHANICAL PERMIT	
	ELECTRICAL PERMIT	
	NHDES EMISSION PERMIT	
	NHDES TANK REGISTRATION	
CARROLL COUNTY	N/A	
TOWN OF BARTLETT	BUILDING AND USE PERMIT	

DESIGN REFERENCE MANUALS:

REFERENCE:	VERSION:
ACI 318-14: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY	2014
ACI 302.1R-15: GUIDE TO CONCRETE FLOOR AND SLAB CONSTRUCTION	2014
ASCE 7-10: MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES	2010
US ARMY CORPS OF ENGINEER COLD REGIONS RESEARCH AND ENGINEERING LABORATORY – "GROUND SNOW LOADS FOR NEW HAMPSHIRE"	FEB 2002
NFPA 70: NATIONAL ELECTRICAL CODE	2017

SPECIAL INSPECTIONS REQUIRED:

INSPECTION ITEM:	TIMING:
BOTTOM OF EXCAVATION	PRIOR TO IMPORTING ANY BACKFILL
AGGREGATE SUB-BASE AND BASE COURSE	DURING IMPORT AND COMPACTION
CONCRETE FORMWORK AND REINFORCING STEEL	PRIOR TO CONCRETE POUR
STRUCTURAL CONCRETE	DURING CONCRETE POUR
ANCHOR BOLTS	DURING INSTALLATION
UTILITY TRENCH	PRIOR TO BACKFILL OF CONDUITS

DRAFT

REV	APPROVED	DESCRIPTION	JCN	REDLINE DATE	APVD

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CLIENT:
GRAND SUMMIT HOTEL CONDOMINIUM UNIT OWNERS' ASSOCIATION, INC.

GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
REFERENCED CODES, DESIGN STANDARDS AND REQUIRED PERMITS

CUSA CONSULTING LLC

BARTLETT NH

REVIEWED BY:

SUBMITTED BY:
CUSA PROJECT ENGINEER

APPROVED BY:
AUTHORIZED CORPORATE OFFICER

HAMPTON, NH OFFICE

DESIGNED:
DRAWN: A.J.G.
CHECKED: C.W.C.

ISSUED BY:

DATE:
JCN:

DRAWING NUMBER: GSH-FINAL-G002
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NOTE: THIS DRAWING IS A CAPTURED VIEW BASED OFF OF THE 'GRADING PLAN, PHASE I' DRAWING, REVISION (J) ON 6/19/1996 FROM JSA INC., ARCHITECTS AND PLANNERS OF PORTSMOUTH NH.

THIS DRAWING AND INFORMATION GAINED DURING CUSA CONSULTING SITE VISITS IN 2019 IS USED AS THE BASIS OF DESIGN. MINOR SITE DISCREPANCIES MAY EXIST BETWEEN THIS BLUEPRINT DRAWING AND ACTUAL SITE CONDITIONS. CUSA CONSULTING DESIGN DRAWINGS HAVE ATTEMPTED TO DEPICT THE CURRENT CONDITIONS AS BEST AS POSSIBLE. THE CONTRACTOR MUST PHYSICALLY INSPECT THE SITE BEFORE SUBMITTING A BINDING BID TO THE OWNER.

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REV	APPROVED	DESCRIPTION	JCN	REDLINE DATE	APVD

CLIENT:
GRAND SUMMIT HOTEL CONDOMINIUM UNIT OWNERS' ASSOCIATION, INC.

GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
EXISTING SITE BLUEPRINT

CUSA CONSULTING LLC

BARTLETT NH

REVIEWED BY:

SUBMITTED BY: CUSA PROJECT ENGINEER

APPROVED BY: AUTHORIZED CORPORATE OFFICER

DESIGNED:
DRAWN: A.J.G.
CHECKED: C.W.C.

ISSUED BY:

DATE:
JCN:
DRAWING NUMBER: GSH-FINAL-G003
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HAMPTON, NH OFFICE

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UTILITY DEMOLITION NOTES:

1. EXISTING ELECTRIC SERVICE AND TELEPHONE SERVICE ARE THE ONLY KNOWN OUTSIDE UTILITIES WHICH ENTER THE PROPERTY. WATER, SEWER AND HEATING FUEL ARE PROVIDED BY ON-SITE UTILITIES. IF LOCATING OR RE-LOCATING OF ANY UTILITY IS NECESSARY, A PRIVATE UTILITY LOCATOR WILL NEED TO BE CONTACTED.
2. THE EXISTING DUCT BANK CONTAINS THE FOLLOWING UTILITIES:
   - 2.1. PROPANE SERVICE LINE
   - 2.2. FUEL OIL SERVICE LINE
   - 2.3. 2x 8"ø PVC WATER LINES FOR COOLING SYSTEM
   - 2.4. 2"ø COPPER WATER LINE FOR MAKE-UP WATER
   - 2.5. 480V ELECTRIC FEED FOR OIL FORWARDING PUMP AND OTHER ELECTRICAL COMPONENTS IN THE COOLING TOWER BUILDING
3. THE UTILITY DUCT IS SHOWN BASED UPON GROUND PENETRATING RADAR LOCATING PERFORMED ON 04/23/2019 AND DESCRIPTIONS BY THE HOTEL MANAGER AND MAINTENANCE STAFF. PHOTOS OF UTILITY LOCATE MARKS MAY BE REQUESTED FROM CUSA CONSULTING FOR REFERENCE.
4. ALL OF THE AFOREMENTIONED UTILITY LINES MUST BE LOCATED BY HAND DIGGING AND CAREFULLY PROTECTED FROM DAMAGE DURING CONSTRUCTION.

ADD-ALTERNATE #1:

THE EXISTING 2"ø COPPER WATER LINE IS SUSPECTED TO BE DAMAGED AND LEAKING. UPON MUTUAL AGREEMENT BY THE CLIENT AND CONTRACTOR, THE CONTRACTOR MAY PROCEED WITH ADD-ALTERNATE #1 TO REPAIR THE COOLING TOWER MAKE-UP WATER LINE, SUBJECT TO THE FOLLOWING:

1. ALL WORK TO EXPOSE, LOCATE AND REPAIR DAMAGE SHALL BE ON A TIME AND MATERIALS BASIS.
2. THE CONTRACTOR SHALL FIRST EXPOSE THE WATER LINE IN THE AREA ANTICIPATED FOR EXCAVATION OF NEW UTILITIES. IF NO AVAILABLE FITTINGS EXIST TO PRESSURE TEST THE LINE, THE CONTRACTOR SHALL CUT IN AND INSTALL A FITTING TO ALLOW PRESSURE TESTING OF THE LINE.
3. IF THE LEAK ISN'T FOUND IN THE INITIAL EXPOSED AREA, THE CONTRACTOR SHALL EXCAVATE IN 50' INCREMENTS WITH AUTHORIZATION BY THE CLIENT TO LOCATE DAMAGE.
4. IF OVER 50% OF THE LINE IS EXPOSED WITHOUT LOCATING THE DAMAGE, THE CONTRACTOR SHALL CEASE WORK AND SUBMIT THE FOLLOWING TO THE CLIENT;
   - 4.1. AN ACCOUNT OF TIME AND MATERIALS EXPENDED SO FAR.
   - 4.2. A COMPREHENSIVE BID TO REPLACE THE ENTIRE WATER LINE.
   - 4.3. ONCE APPROVED, THE CONTRACTOR SHALL PROCEED WITH REPLACEMENT OF THE ENTIRE WATER LINE
5. IF THE DAMAGE IS LOCATED, THE CONTRACTOR SHALL REPAIR THE COPPER LINE WITH MATERIALS AND METHODS TO MATCH THE EXISTING WATER LINE.
6. AFTER CONSTRUCTION OR REPAIR, THE WATER LINE SHALL BE PRESSURE TESTED AT 60 PSI FOR 24-HOURS, WITH A MAXIMUM TOLERABLE DROP OF 1 PSI.

DRAFT

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HAMPTON, NH OFFICE

REV	APPROVED	DESCRIPTION	JCN	REDLINE DATE	APVD

CLIENT:
GRAND SUMMIT HOTEL CONDOMINIUM UNIT OWNERS' ASSOCIATION, INC.

GRAND SUMMIT HOTEL AT ATTITASH BACKUP GENERATOR FINAL DESIGN DRAWINGS, 10/31/2019 SITE DEMOLITION SHEET

BARTLETT NH

REVIEWED BY:
SUBMITTED BY: CUSA PROJECT ENGINEER
APPROVED BY: AUTHORIZED CORPORATE OFFICER
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DRAWING NUMBER: GSH-FINAL-D001
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GENERAL NOTES:

1. PERSONNEL:
   - 1.1. 'OWNER' – THE OWNER OF THE SITE AND PROJECT OR AN AUTHORIZED REPRESENTATIVE OF THE OWNER.
   - 1.2. 'CONTRACTOR' – THE INDIVIDUAL OR CORPORATION ENGAGED TO CONSTRUCT THE PROJECT.
   - 1.3. 'SITE SUPERINTENDENT' – THE CONTRACTOR'S AUTHORIZED AGENT WITH RESPONSIBLE CONTROL OF THE SITE, AUTHORIZED TO DIRECT WORK AND PERSONNEL EMPLOYED BY THE CONTRACTOR.
   - 1.4. 'ENGINEER' – THE PROFESSIONAL ENGINEER RESPONSIBLE FOR THE PROJECT OR PORTIONS OF THE PROJECT SEALED BY HIM.
   - 1.5. 'ON-SITE INSPECTOR' – ON-SITE INSPECTOR SHALL EITHER BE THE ENGINEER OR A QUALIFIED INSPECTOR, WORKING UNDER THE DIRECT DIRECTION AND SUPERVISION OF THE ENGINEER.
2. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL MEET WITH THE OWNER AND CONDUCT A PRE-CONSTRUCTION MEETING. DURING THIS MEETING, THE CONTRACTOR SHALL PRESENT HIS PLAN FOR CONSTRUCTION INCLUDING ANTICIPATED HAZARDS, ACCESS LIMITATIONS AND VEHICLE TRAFFIC TO THE OWNER. THE OWNER SHALL PROVIDE THE CONTRACTOR ANY INFORMATION NEEDED BY THE CONTRACTOR TO SAFELY EXECUTE THE PROJECT OR ANY OTHER INFORMATION THAT THE CONTRACTOR SHOULD BE AWARE OF. PHOTOGRAPHS OF THE SITE PRIOR TO CONSTRUCTION MUST BE TAKEN TO DETERMINE THE EXTENT OF SITE RESTORATION.

DEMOLITION NOTES:

1. EXCAVATION AND EXPORT OF UNSUITABLE SOILS SHALL BE IN ACCORDANCE WITH THE DIMENSIONS LISTED IN THESE PLANS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL REQUIRED MEASURES TO PROTECT THE SAFETY OF ADJACENT SITE USERS INCLUDING BARRICADES, WARNING SIGNS, CAUTION TAPE OR OTHER MEASURES AS DETERMINED BY THE SITE SUPERINTENDENT.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL REQUIRED MEASURES TO PREVENT SEDIMENT MIGRATION FROM DISTURBED AREAS DURING CONSTRUCTION.
4. CONTRACTOR SHALL REMOVE AND HAUL OFF-SITE ALL UNSUITABLE SOILS AND ANY ITEMS SLATED FOR DEMOLITION.
5. NO TREES SHALL BE LIMBED OR CUT UNLESS DIRECTED TO DO SO BY THE OWNER.

EXCAVATION AND GRADING NOTES:

1. IMPORTING OF AGGREGATE BASE MATERIALS AND TRENCHES SHALL BE IN ACCORDANCE WITH THE LISTED DIMENSIONS IN THESE PLANS.
   - 1.1. ALL IMPORTED AGGREGATES SHALL CONSIST OF STONES, ROCK FRAGMENTS, AND FINE HARD DURABLE PARTICLES RESULTING FROM THE NATURAL DISINTEGRATION OF ROCK. THE MATERIAL SHALL BE FREE OF ORGANIC MATTER. THE WEAR SHALL NOT EXCEED 60 PERCENT. NO MORE THAN 6 PERCENT OF THE MATERIAL PASSING THE NO. 4 SIEVE SHALL PASS THE NO. 200 SIEVE.
   - 1.2. ITEM C4 SHALL CONSIST OF A MIXTURE OF STONES OR ROCK FRAGMENTS AND PARTICLES WITH 95 TO 100 PERCENT PASSING THE 3" SIEVE AND 25 TO 70 PERCENT PASSING THE NO. 4 SIEVE.
   - 1.3. ITEM C5 SHALL BE NH-DOT GRADATION 304.4 CRUSHED STONE (FINE) IN ACCORDANCE WITH THE GRADATION LISTED HEREIN.
2. ELEVATIONS LISTED ON EXCAVATION PLANS ARE REFERENCED FROM THE BOTTOM ELEVATION OF THE PROPOSED CONCRETE FOUNDATION.
3. ANY EXCAVATION EXCEEDING 5' IN DEPTH MUST USE PROTECTIVE MEASURES AS DESCRIBED IN 29 CFR PART 1926, SUBPART B.
4. AT NO POINT SHALL THE CONTRACTOR CREATE A GRADED SLOPE EXCEEDING 2:1 WHETHER TEMPORARY OR PERMANENT. PERMANENT SLOPES EXCEEDING 3:1 MUST BE STABILIZED WITH SLOPE STABILIZATION MATTING AND SEEDED IMMEDIATELY.
5. IF GROUNDWATER IS FOUND DURING EXCAVATION, THE REVISED MAXIMUM DEPTH OF SUB-BASE MATERIALS SHALL BE 6" ABOVE THE FOUND GROUNDWATER ELEVATION.
6. COMPACTION:
   - 6.1. ALL BUILT UP AGGREGATES UNDER THE CONCRETE FOUNDATION SHALL BE COMPACTED TO 95% MAXIMUM MODIFIED PROCTOR DENSITY. NO DENSITY TESTING SHALL BE REQUIRED.
   - 6.2. IF VIBRATORY ROLLER COMPACTION EQUIPMENT IS USED, AGGREGATES SHALL BE BUILT UP IN LIFTS NOT EXCEEDING 12 INCHES IN DEPTH AND SUBJECT TO A MINIMUM OF ONE PASS BY THE COMPACTION EQUIPMENT.
   - 6.3. IF HAND OPERATED COMPACTION EQUIPMENT IS USED, AGGREGATES SHALL BE BUILT UP IN LIFTS NOT TO EXCEED 6 INCHES IN DEPTH AND SUBJECT TO A MINIMUM OF TWO PASSES BY THE COMPACTION EQUIPMENT.

REINFORCED CONCRETE NOTES:

1. CONCRETE SHALL BE NH-DOT CLASS 'AA' CONCRETE WITH THE FOLLOWING MINIMUM REQUIREMENTS:
   - 1.1. 28-DAY COMPRESSIVE STRENGTH: 4000 PSI
   - 1.2. MAX. WATER/CEMENT RATIO: 0.444
   - 1.3. ENTRAINED AIR CONTENT; 4-9%
   - 1.4. CONCRETE SLUMP: 2-4"
2. EXPOSED CONCRETE SURFACE SHALL BE BROOM-FINISHED.
3. CONCRETE SHALL BE PROTECTED FROM FOOT TRAFFIC, ANIMAL TRAFFIC AND RAIN DURING THE INITIAL 24-HOUR CURING PERIOD.
4. NO LOADING GREATER THAN PERSONNEL SHALL BE PERMITTED ON THE CONCRETE UNTIL AFTER 72-HOUR CURING PERIOD.
5. ALL REINFORCING STEEL SHALL BE ASTM A615 GRADE 60 NON-COATED REINFORCING BARS, LAID OUT AS SHOWN IN THESE PLANS.
6. ALL REINFORCING STEEL RUNS SHALL EITHER BE A CONTINUOUS BAR OR SHALL BE SPLICED WITH A MINIMUM BAR OVERLAP OF 24 INCHES AND TIED PRIOR TO CONCRETE POUR.
7. ALL EXPOSED CONCRETE EDGES SHALL BE ROUNDED TO A RADIUS OF 1/2".
8. CONTRACTOR BIDS FOR CONCRETE SHALL INCLUDE THE COST OF ALL REQUIRED REINFORCING STEEL.

SITE RESTORATION NOTES:

1. THE CONTRACTOR SHALL RESTORE THE SITE TO PRE-EXISTING CONDITIONS.
2. EXCAVATED AREAS, TRENCHES AND OTHER DISTURBED AREAS SHALL BE TREATED WITH A MINIMUM 3 INCHES OF ITEM C5, RAKED SMOOTH AND COMPACTED ONCE WITH HAND HELD COMPACTION EQUIPMENT.
3. UPON COMPLETION, THE OWNER SHALL CONDUCT AN ACCEPTANCE INSPECTION WITH THE CONTRACTOR PRESENT TO DETERMINE THAT SITE RESTORATION HAS BEEN SATISFACTORILY COMPLETE.

CAST-IN-PLACE MANHOLE NOTES:

1. TO ACCOMMODATE ONLY ONE SINGLE SERVICE OUTAGE, THE CONTRACTOR SHALL CAST A NEW CONCRETE MANHOLE AROUND THE EXISTING ELECTRICAL SERVICE CONDUITS AND THE NEW ELECTRICAL SERVICE CONDUITS.
2. THE DEPTH OF THE MANHOLE SHALL BE 12" BELOW THE EXISTING ELECTRICAL SERVICES
3. THE DEPTH OF THE SERVICES WILL LIKELY CREATE A HAZARDOUS EXCAVATION TO EXPOSE AND CONSTRUCT THE MANHOLE
   - 3.1. THE CONTRACTOR SHALL PROVIDE ALL MEANS, METHODS, PERSONNEL AND MATERIALS TO EXCAVATE TO DEPTH AND COMPLY WITH <u>OSHA 1926, SUBPART B</u> FOR EXCAVATIONS EXCEEDING 5' IN DEPTH.
   - 3.2. PROTECTIVE SHORING IS LIKELY TO BE REQUIRED TO PROTECT PERSONNEL AND THE INTEGRITY OF THE EXISTING BUILDING.
   - 3.3. THE CONTRACTOR SHALL HAVE A 'COMPETENT PERSON' ON SITE DURING EXCAVATION AND STABILIZATION OF THE EXCAVATION FOR THIS MANHOLE.

HANDHOLE NOTES:

1. TYPICAL DRAWINGS OF INTENDED PRODUCTS IS SHOWN ON SHEET C007. SUPPLIER IS TO BE EF SHEA CONCRETE PRODUCTS OR AUTHORIZED FRANCHISE DISTRIBUTOR.
2. 30" DIAMETER ENTRANCE SHALL BE SPECIFIED FOR TOP OPENING.
3. ALL CONDUIT ENTRANCES SHALL BE GROUTED WITH A NON-SHRINK TYPE GROUT.
4. HANDHOLE FRAME AND COVER SHALL BE NEENAH FOUNDRY OR APPROVED EQUIVALENT.

ELECTRICAL SHELTER NOTES:

1. ELECTRICAL SHELTER SHALL BE A '10'x20' SHED FROM POST WOODWORKING.
2. THE CONCRETE CONTRACTOR <u>MUST</u> OBTAIN A SET OF SHOP DRAWINGS, SPECIFIC TO THIS PROJECT FROM POST WOODWORKING PRIOR TO CONSTRUCTING FOUNDATION. IF MINOR ADJUSTMENTS ARE REQUIRED TO ACCOMMODATE FRAMED SHED, CONTRACTOR MAY PROCEED WITH ADJUSTMENTS.
3. THE CONTRACTOR MUST SUBMIT A SHOP DRAWING, TO BE APPROVED BY THE ENGINEER, FOR THE CONCRETE PAD SHOWING THE LOCATION OF THE CONDUIT STUB-UPS PRIOR TO POURING THE PAD.
4. ANY CONTRACTOR OR SUBCONTRACTOR BID FOR INSTALLATION OF THE SHED SHALL INCLUDE REQUIRED WEDGE ANCHORS TO ANCHOR THE SHED PER MANUFACTURER'S RECOMMENDATIONS.
5. ANY CONTRACTOR OR SUBCONTRACTOR BID FOR INSTALLATION OF THE SHED SHALL INCLUDE THE DOORS AND ALL REQUIRED MOUNTING EQUIPMENT OR INCIDENTAL PARTS TO INSTALL THE DOORS.
6. SHED SHALL BE MOUNTED TO CONCRETE FOUNDATION USING TITEN ANCHOR SCREWS WITH A MINIMUM EMBEDMENT DEPTH OF 4". ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

ESTIMATE OF QUANTITIES:

ITEM NO.	ITEM:	UNIT:	QUANTITY
C1	MOBILIZATION & DEMOBILIZATION	LUMP SUM	ALL REQUIRED
C2	EROSION & SEDIMENT CONTROL, TEMPORARY ACCESS AND SAFETY MEASURES	LUMP SUM	ALL REQUIRED
C3	UNCLASSIFIED EXCAVATION (INCLUDING HAUL-OFF)	CUBIC YARD	~250
C4	GRANULAR BACKFILL (SUBBASE)	CUBIC YARD	~150
C5	2"-MINUS CRUSHED STONE (BASE)	CUBIC YARD	~75
C6	CLASS AA CONCRETE	CUBIC YARD	~18
C7	LIGHT PEDESTAL	EACH	1
C8	ATLAS LIGHTING PRODUCTS 20' SQUARE STEEL POLE [SSS20411B]	EACH	1
C9	BOLLARDS	EACH	9
C10	CAST-IN-PLACE CONCRETE MANHOLE	EACH	1
C11	NEENAH FOUNDRY R-1800-E FRAME AND COVER	EACH	1
C12	NEENAH FOUNDRY R-1980-C MANHOLE STEPS	EACH	5
C13	EF SHEA CONCRETE HANDHOLE (5'x5'x5')	EACH	1
C14	NEENAH FOUNDRY R-1563 FRAME AND COVER	EACH	1
C15	2"ø SCH 40 PVC ELECTRICAL CONDUIT	LF	680
C16	4"ø SCH 40 PVC ELECTRICAL CONDUIT	LF	1360
C17	2" INSULATION	SF	480
C18	D3034 4"ø PVC DRAIN PIPE	LINEAR FOOT	140
C19	¾" DIA. ANCHORS	EACH	18
C20	POST WOODWORKING 10'x20' SHED BUILDING	EACH	1
C21	OTHER REQUIRED	LUMP SUM	ALL REQUIRED

BASE COURSE (C5) GRADATION:

SIEVE SIZE:	PERCENT PASSING BY WEIGHT:
2"	100%
1 1/2"	85-100%
3/4"	40-70%
#4	15-40%
#200	0-5%

STATE OF NEW HAMPSHIRE
ANDREW J. GRAY
No. 13856
LICENSED PROFESSIONAL ENGINEER
DRAFT

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<u>CUSA CONSULTING LLC</u>

HAMPTON, NH OFFICE

REV	APPROVED	DESCRIPTION	JCN	REDLINE DATE	APVD

CLIENT:
GRAND SUMMIT HOTEL CONDOMINIUM UNIT OWNERS' ASSOCIATION, INC.

GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
CIVIL NOTES AND MATERIAL SCHEDULES

BARTLETT NH

REVIEWED BY:

SUBMITTED BY:
CUSA PROJECT ENGINEER

APPROVED BY:
AUTHORIZED CORPORATE OFFICER

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DRAWN: A.J.G.
CHECKED: A.J.G.

ISSUED BY:

DATE:
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DRAWING NUMBER: GSH-FINAL-C000
REV

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SITE LAYOUT PLAN
1/16" = 1'

NOTES

1. THE ELECTRICAL ENCLOSURE SHALL BE PLACED TO MAINTAIN A MINIMUM OF 24' BETWEEN THE ENCLOSURE AND THE HOTEL. THIS MINIMUM REQUIREMENT IS NEEDED TO MAINTAIN A FIRE LANE BETWEEN THE ELECTRICAL ENCLOSURE AND THE HOTEL. IF FIELD CONDITIONS DICTATE THAT THIS MINIMUM DISTANCE CANNOT BE MET THEN THE CONTRACTOR MUST CONSULT WITH THE BARTLETT FIRE CHIEF PAT ROBERTS (PHONE NUMBER: 603-383-9555).

2. THE BOLLARDS SURROUNDING THE NEW EG PAD MUST BE 16FT FROM THE BOLLARDS SURROUNDING THE FUEL AND PROPANE TANKS IN ORDER TO PROVIDE A PASSAGEWAY FOR A PLOW. THE BOLLARDS SHALL BE PLACED NO CLOSER THAN 5' FROM THE SUB-BASED FUEL TANK. THE BOLLARDS SHOULD BE AT LEAST 4' FROM THE EG STAIRWAY; HOWEVER THEY MAY BE PLACED CLOSER IF SPACE DOESN'T ALLOW.

DRAFT

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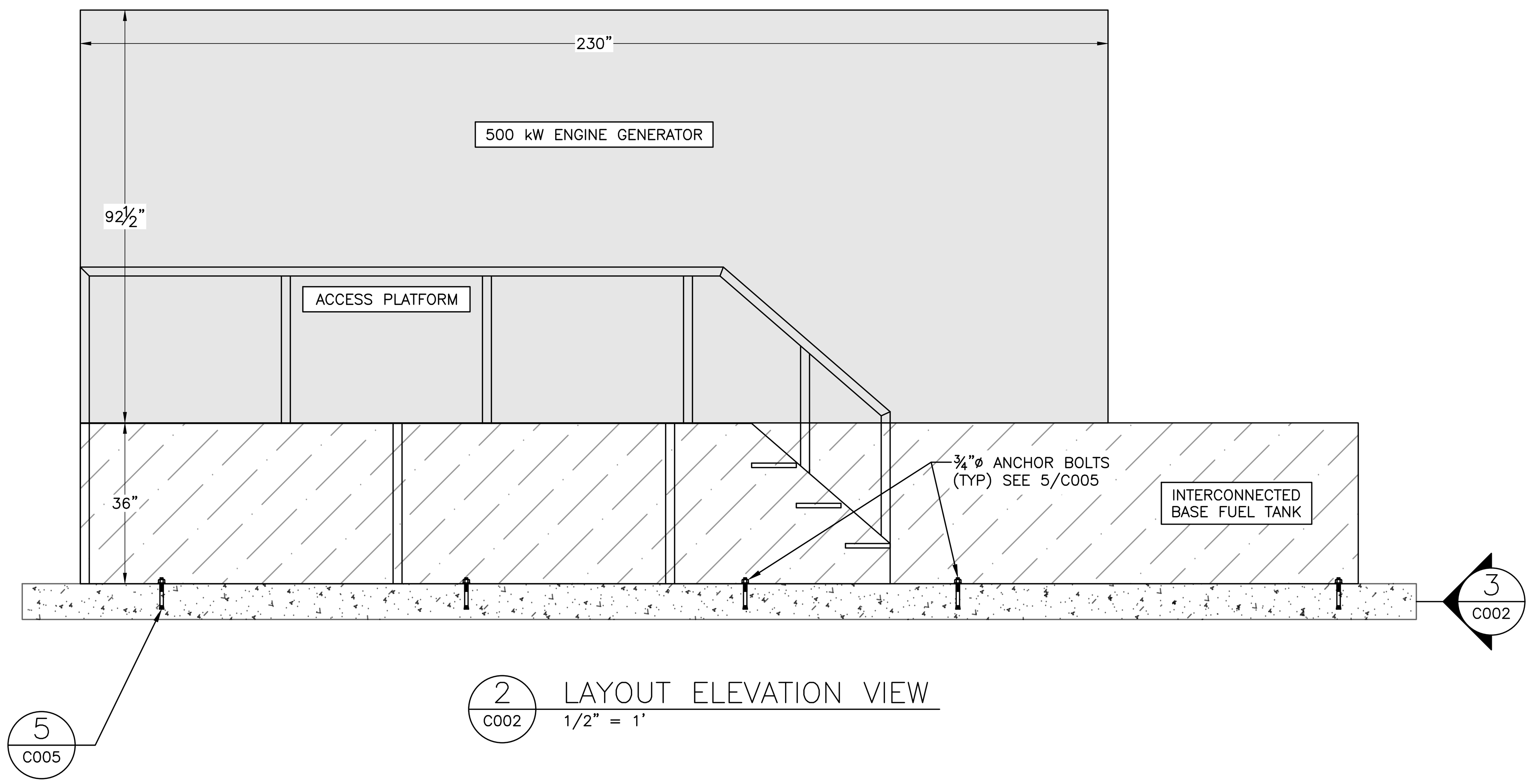
GRAND SUMMIT HOTEL AT ATTITASH BACKUP GENERATOR FINAL DESIGN DRAWINGS, 10/31/2019 SITE LAYOUT PLAN

CUSA CONSULTING LLC

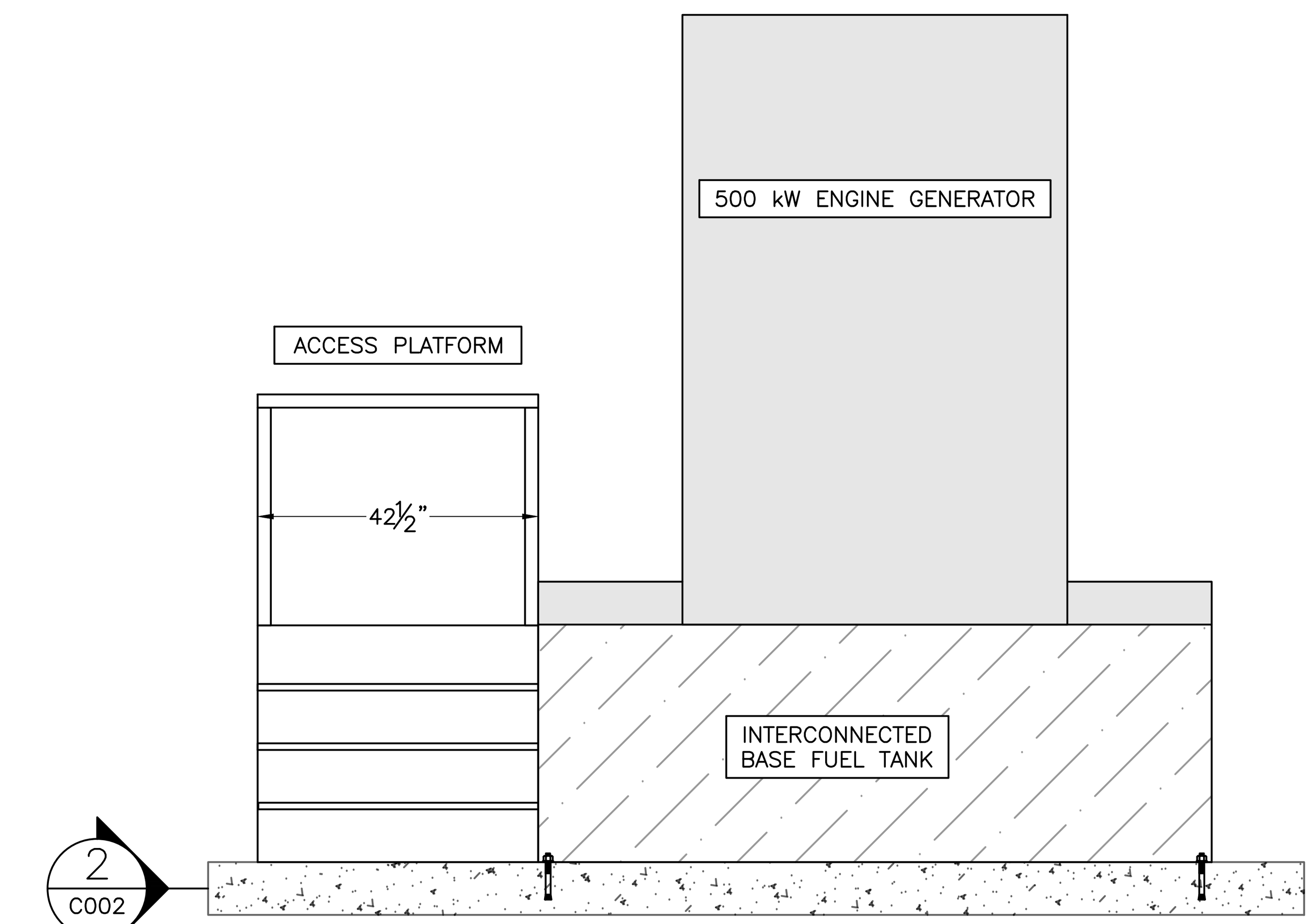
BARTLETT NH

HAMPTON, NH OFFICE

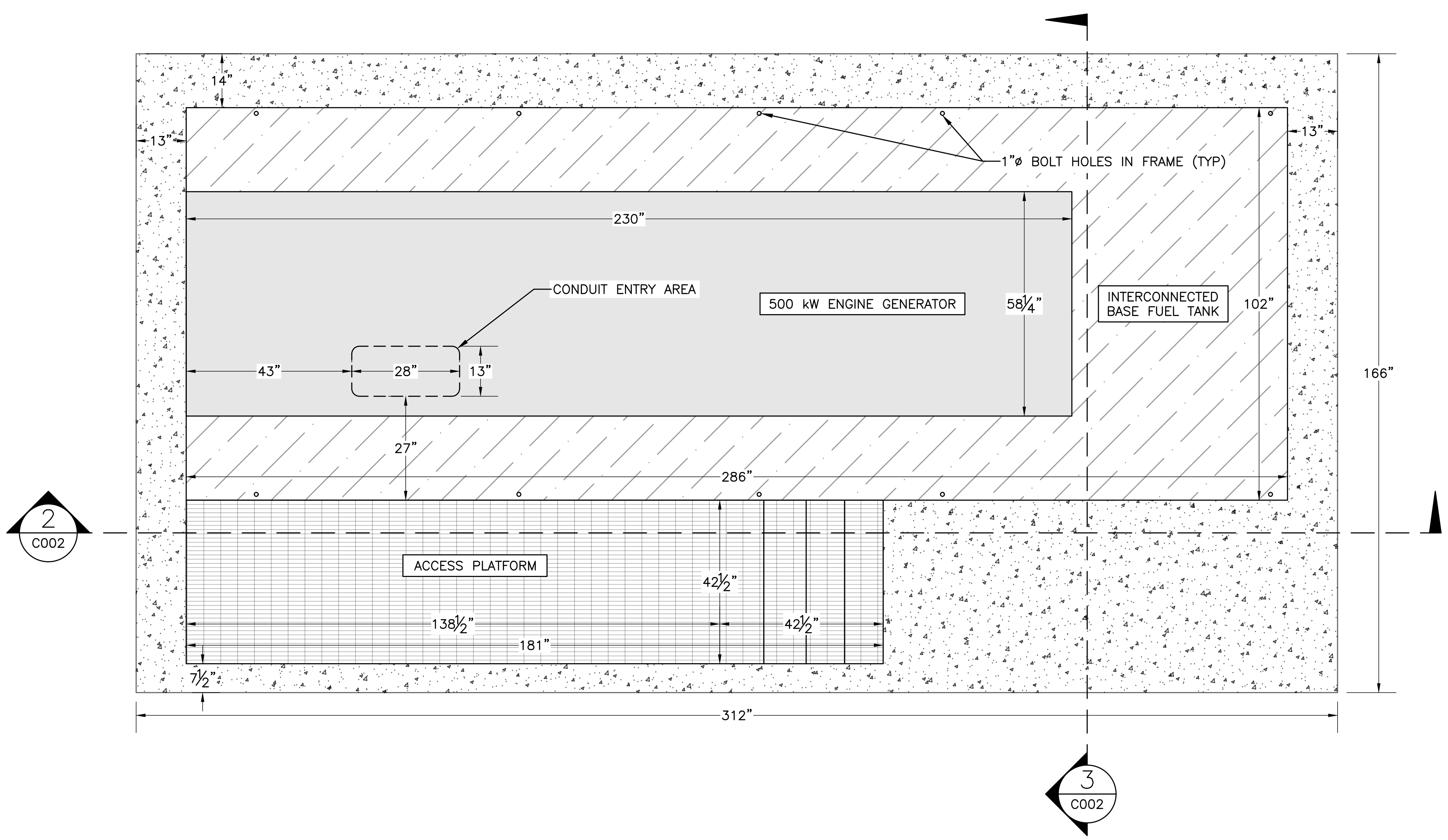
REVIEWED BY:	SUBMITTED BY:		APPROVED BY:	
	CUSA PROJECT ENGINEER		AUTHORIZED CORPORATE OFFICER	
	DESIGNED: A.J.G.	ISSUED BY:	DATE:	JCN:
	DRAWN: A.J.G.		DRAWING NUMBER: GSH-FINAL-C001	REV
	CHECKED: A.J.G.			



2 C002 LAYOUT ELEVATION VIEW
1/2" = 1'



3 C002 LAYOUT SECTION VIEW
1/2" = 1'



1 C002 LAYOUT PLAN VIEW
1/2" = 1'

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GRAND SUMMIT HOTEL CONDOMINIUM UNIT OWNERS' ASSOCIATION, INC.

GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
GENERATOR FOUNDATION LAYOUT

BARTLETT NH

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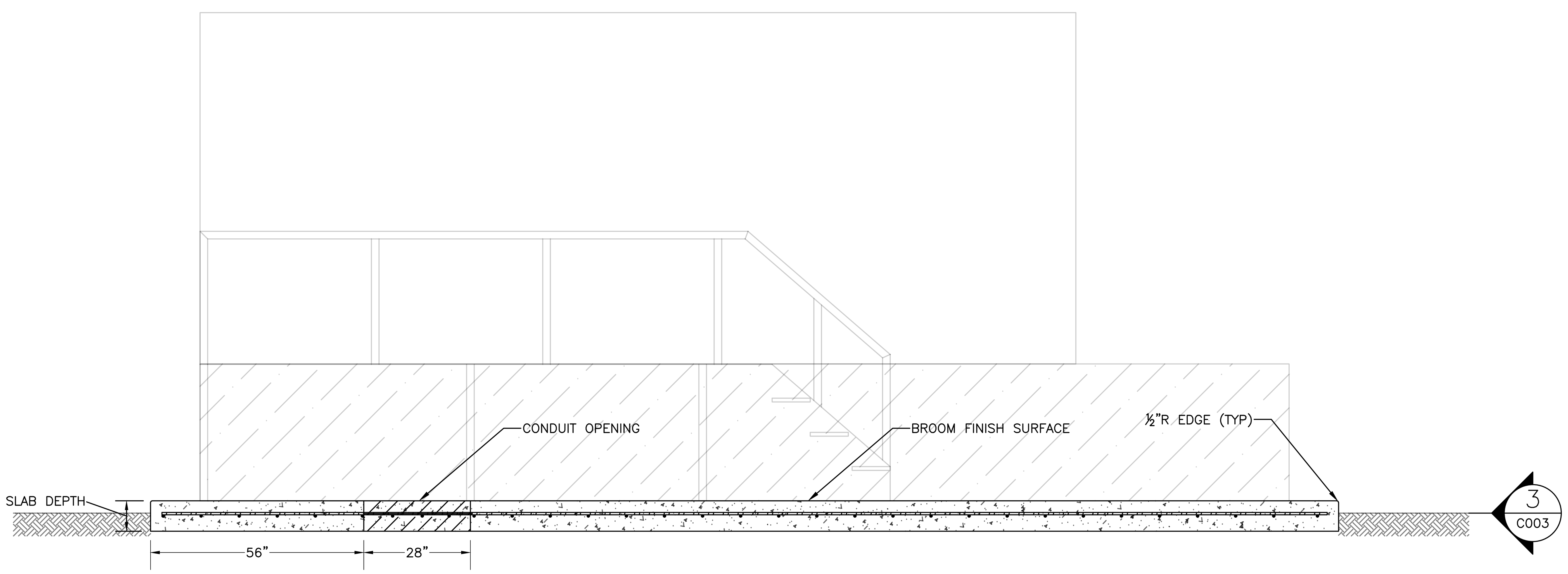
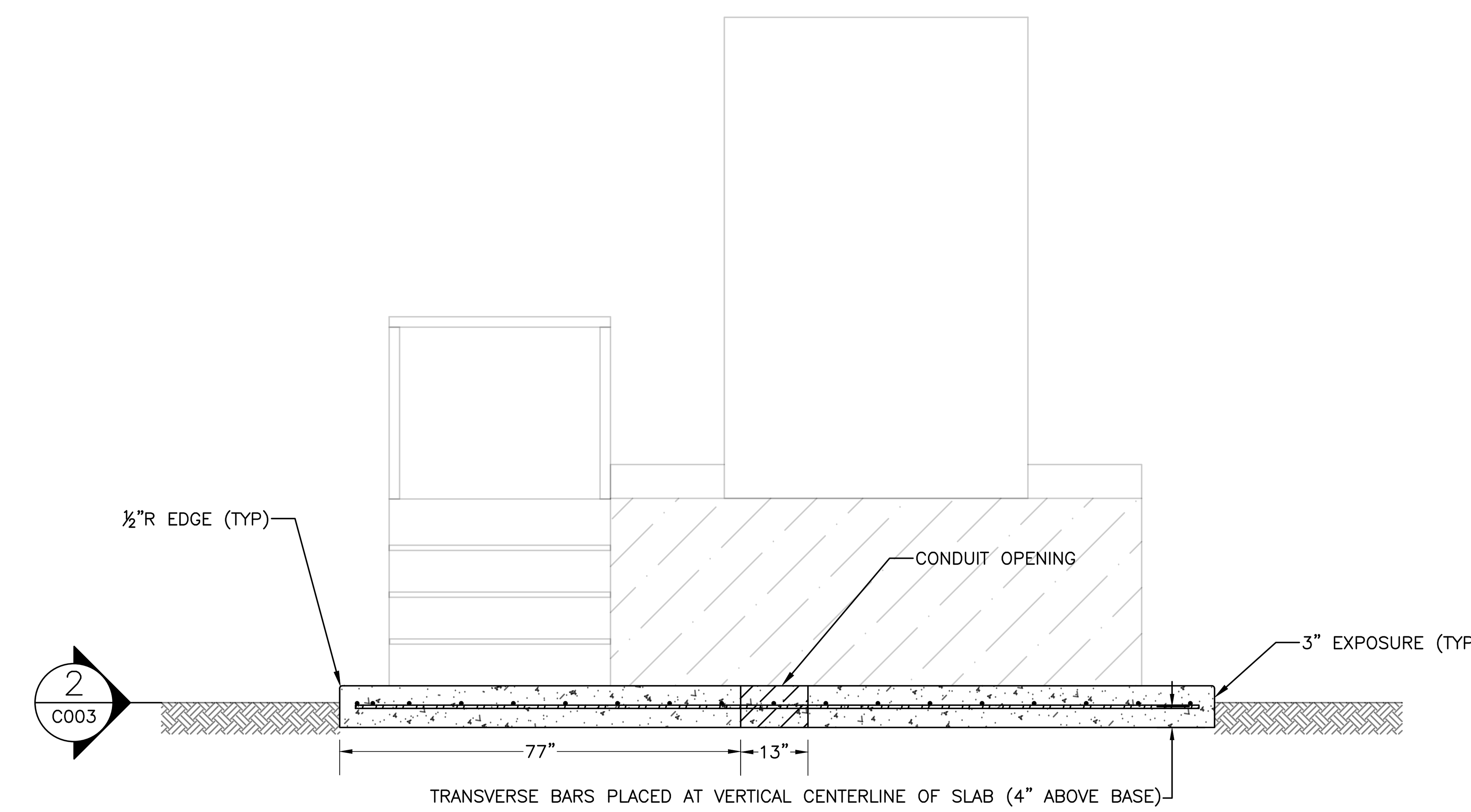
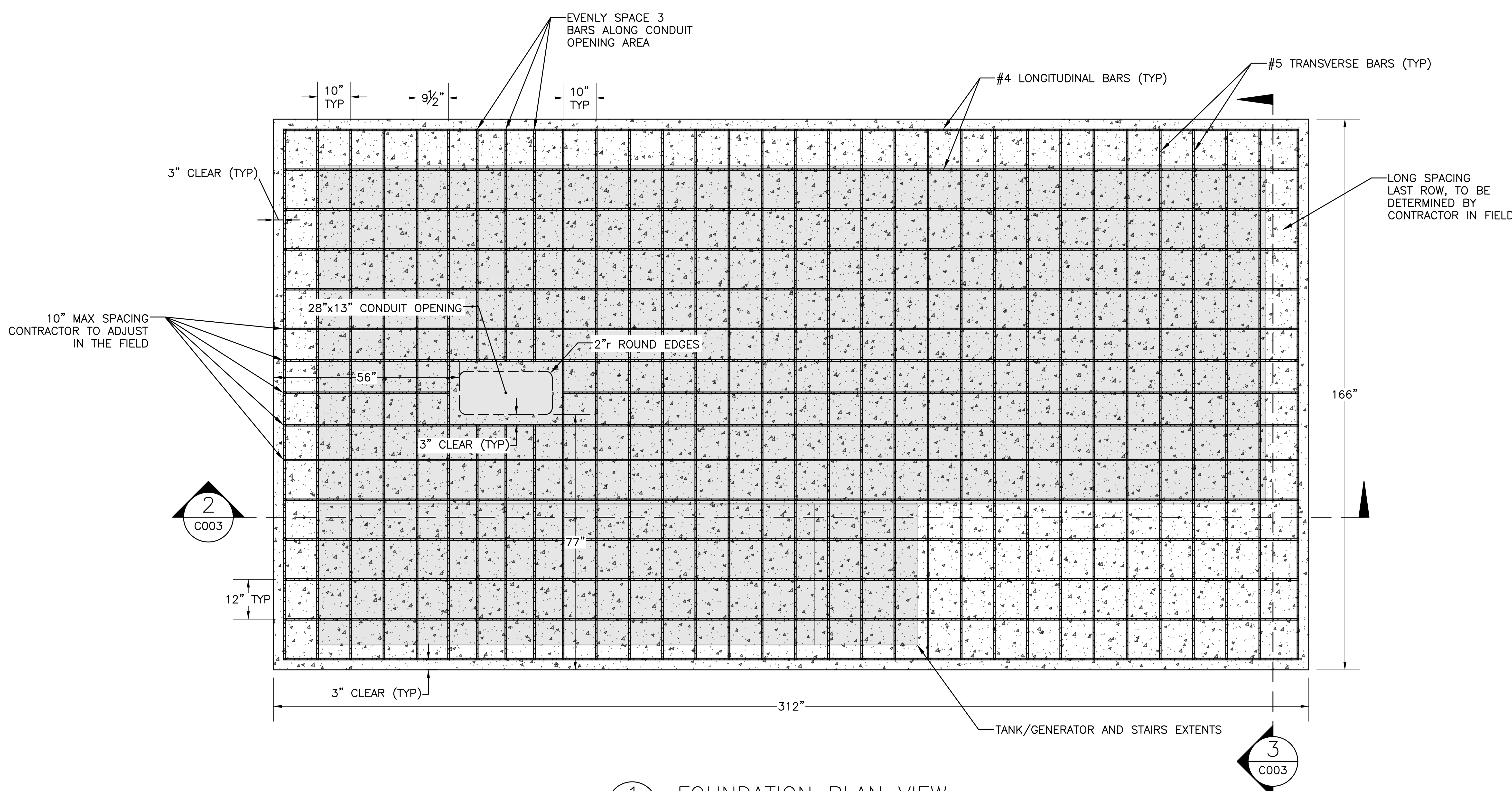


2 C003 FOUNDATION ELEVATION VIEW
1/2" = 1'



3 C003 FOUNDATION SECTION VIEW
1/2" = 1'



1 C003 FOUNDATION PLAN VIEW
1/2" = 1'

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GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
GENERATOR FOUNDATION DETAILS

CUSA CONSULTING LLC

BARTLETT NH

REVIEWED BY: | SUBMITTED BY: CUSA PROJECT ENGINEER | APPROVED BY: AUTHORIZED CORPORATE OFFICER

STATE OF NEW HAMPSHIRE ... PROFESSIONAL ENGINEER LICENSED DRAFT

HAMPTON, NH OFFICE

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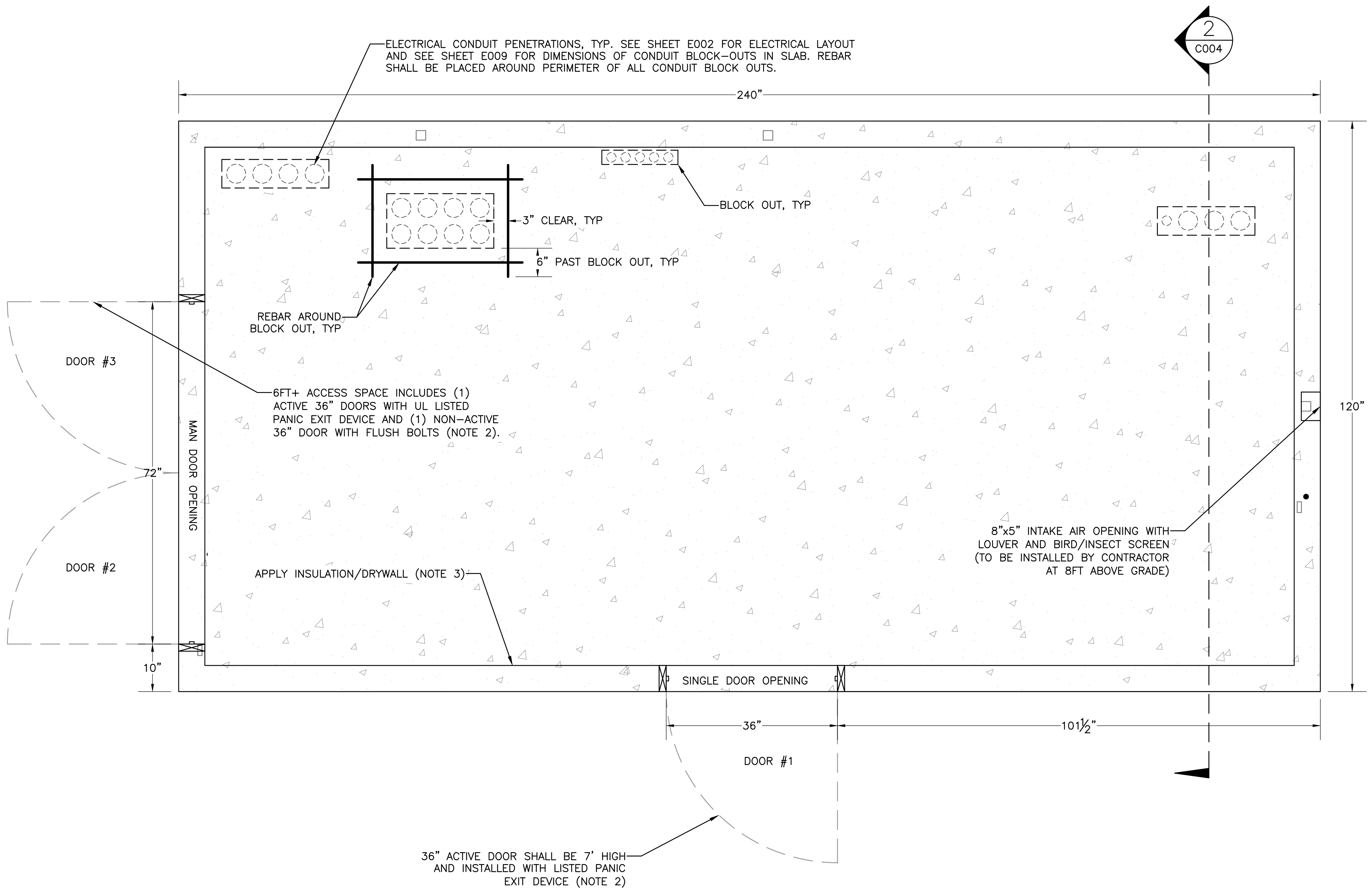
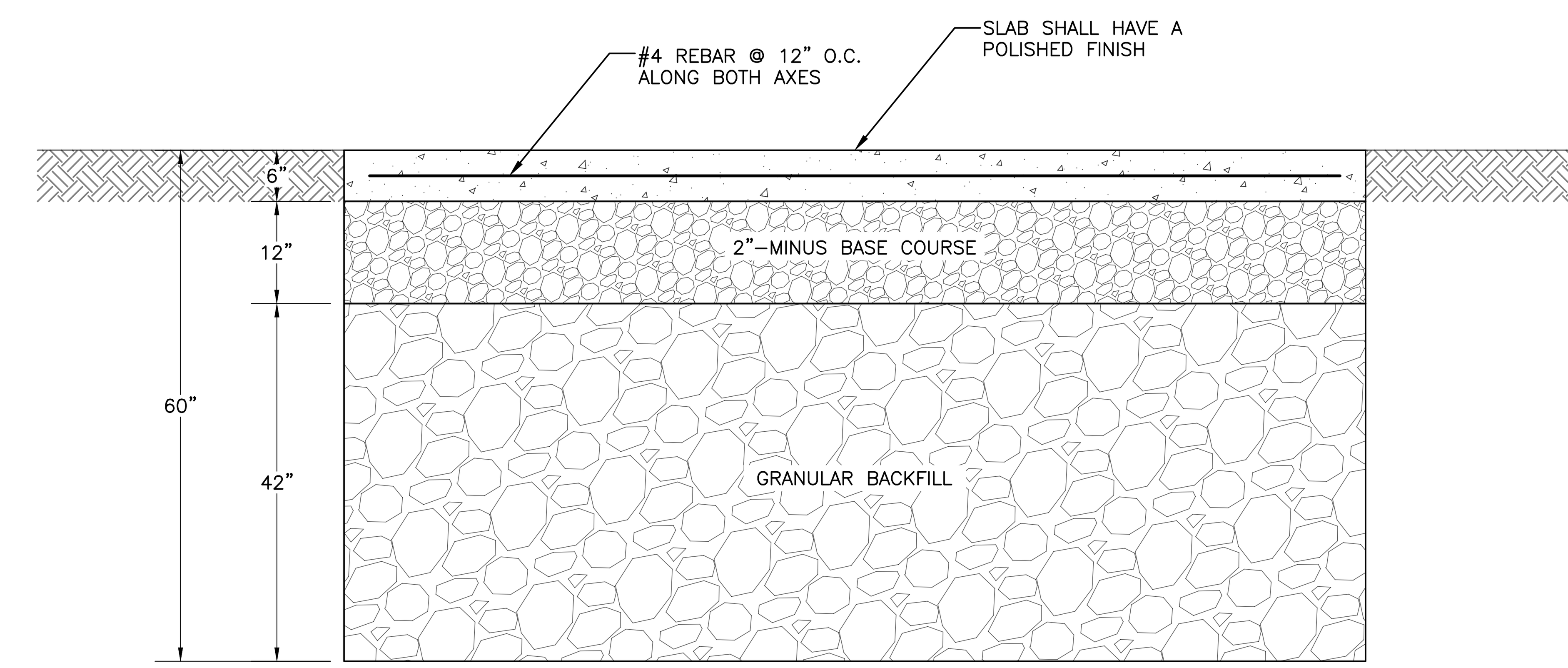


1 C004 PLAN VIEW
3/4" = 1'0"



2 C004 SECTION VIEW
3/4" = 1'0"

NOTES

1. ELECTRICAL ENCLOSURE TO BE PROVIDED AND INSTALLED BY POST WOODWORKING OF DANVILLE, NH. ENCLOSURE WILL HAVE 10FT HIGH WALLS. TO BE PROVIDED WITH 2"X4" CEILING, ROUGH CUT DOOR OPENINGS, AND NO FLOOR. ENCLOSURE WILL HAVE VINYL SIDING, ASPHALT SHINGLES, AND A TRANSOM WINDOW ON THE SHORT SIDE.
2. DOORS SHALL BE GALVANNEALED AND COME WITH A PAINT PRIMER. CONTRACTOR TO PAINT DOORS WITH DIRECT TO METAL (DTM) PAINT. COLOR TBD.
3. POST WOODWORKING WILL INSTALL THE STRUCTURE WITH 2"X6" UNFINISHED WALLS AND CEILING. CONTRACTOR SHALL INSTALL R-19 INSULATION IN ALL WALLS AND CEILING. CONTRACTOR WILL INSTALL 5/8" FIRE-RATED DRYWALL ON ALL FOUR WALLS AND CEILING. CONTRACTOR WILL APPLY TAPE AND JOINT-COMPOUND TO ALL JOINTS AND WILL SAND, PRIME, AND PAINT ALL WALLS FLAT WHITE.
4. CONCRETE SHALL BE TROWEL-FINISHED.
5. CONCRETE FLOOR SHALL BE PAINTED AFTER INSTALLATION OF EQUIPMENT IN THE ENCLOSURE. (MINIMUM 28-DAYS OF CURING TIME PRIOR TO PAINTING).

EQUIP	PROPOSED /EXISTING	QTY	EQUIPMENT SCHEDULE
DOOR #1	PROPOSED	1	COMMERCIAL GALVANNEALED DOOR, 36" W x 7' HIGH, ACTIVE, WITH POLYSTYRENE INSULATION, CYLINDRICAL DOOR LOCKS WITH CLASSROOM STYLE KEY ENTRY, AUTO-CLOSE, EXTRA INSULATION AT THRESHOLD, SWEEP AT BOTTOM, AND WITH LISTED PANIC EXIT DEVICE. DOOR TO BE SUPPLIED WITH PRE-DRILLED AND DIMPLED KNOCK DOWN FRAME AND HINGES.
DOOR #2	PROPOSED	1	COMMERCIAL GALVANNEALED DOOR, 36" W x 7' HIGH, ACTIVE, WITH POLYSTYRENE INSULATION, CYLINDRICAL DOOR LOCKS WITH KEY ENTRY, HOLD OPEN DEVICE, EXTRA INSULATION AT THRESHOLD, SWEEP AT BOTTOM, AND WITH LISTED PANIC EXIT DEVICE. DOOR TO BE SUPPLIED WITH PRE-DRILLED AND DIMPLED KNOCK DOWN FRAME AND HINGES.
DOOR #3	PROPOSED	1	COMMERCIAL GALVANNEALED DOOR, 36" W x 7' HIGH, NON-ACTIVE FLUSH BOLTED, WITH POLYSTYRENE INSULATION, HOLD OPEN DEVICE, EXTRA INSULATION AT THRESHOLD, AND SWEEP AT BOTTOM. DOOR TO BE SUPPLIED WITH PRE-DRILLED AND DIMPLED KNOCK DOWN FRAME AND HINGES.

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CLIENT:
GRAND SUMMIT HOTEL CONDOMINIUM UNIT OWNERS' ASSOCIATION, INC.

GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
ELECTRICAL EQUIPMENT ENCLOSURE CIVIL LAYOUT & FOUNDATION DETAILS

BARTLETT NH

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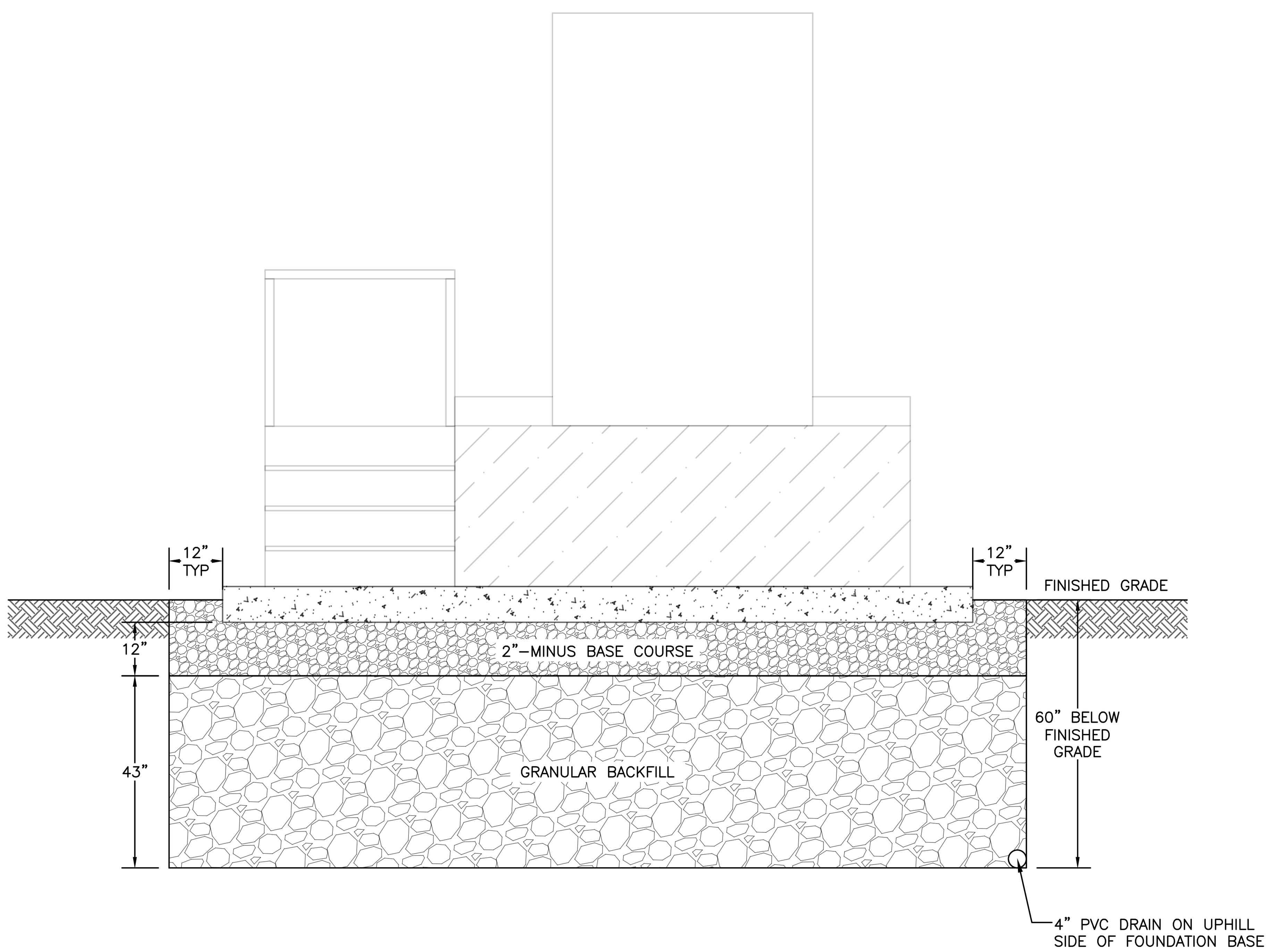
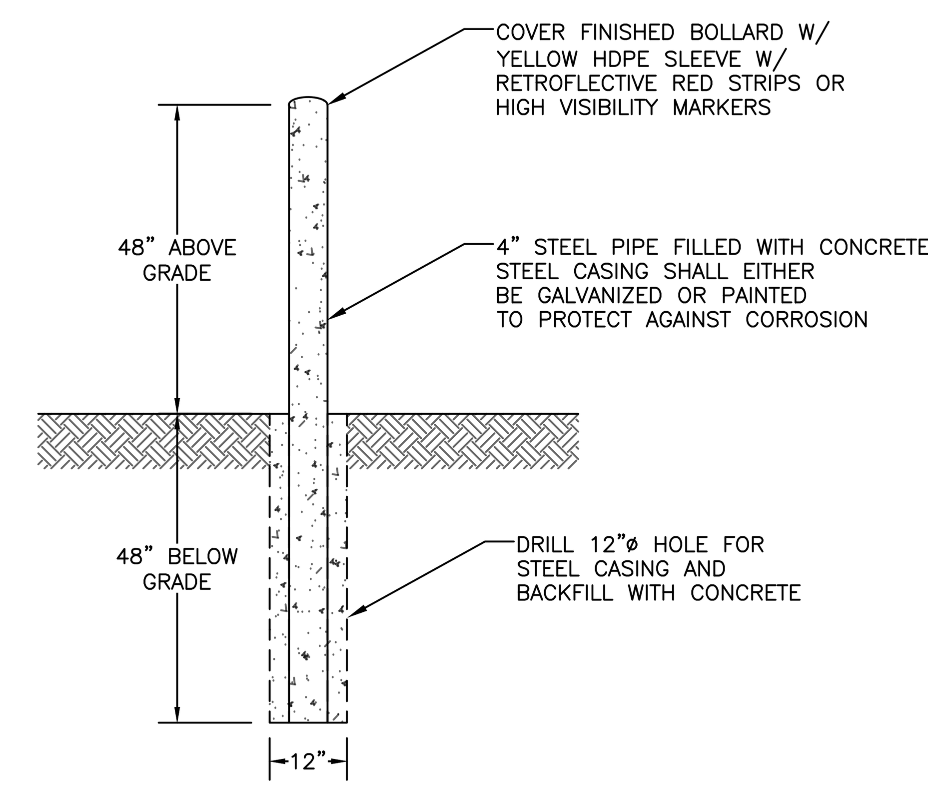
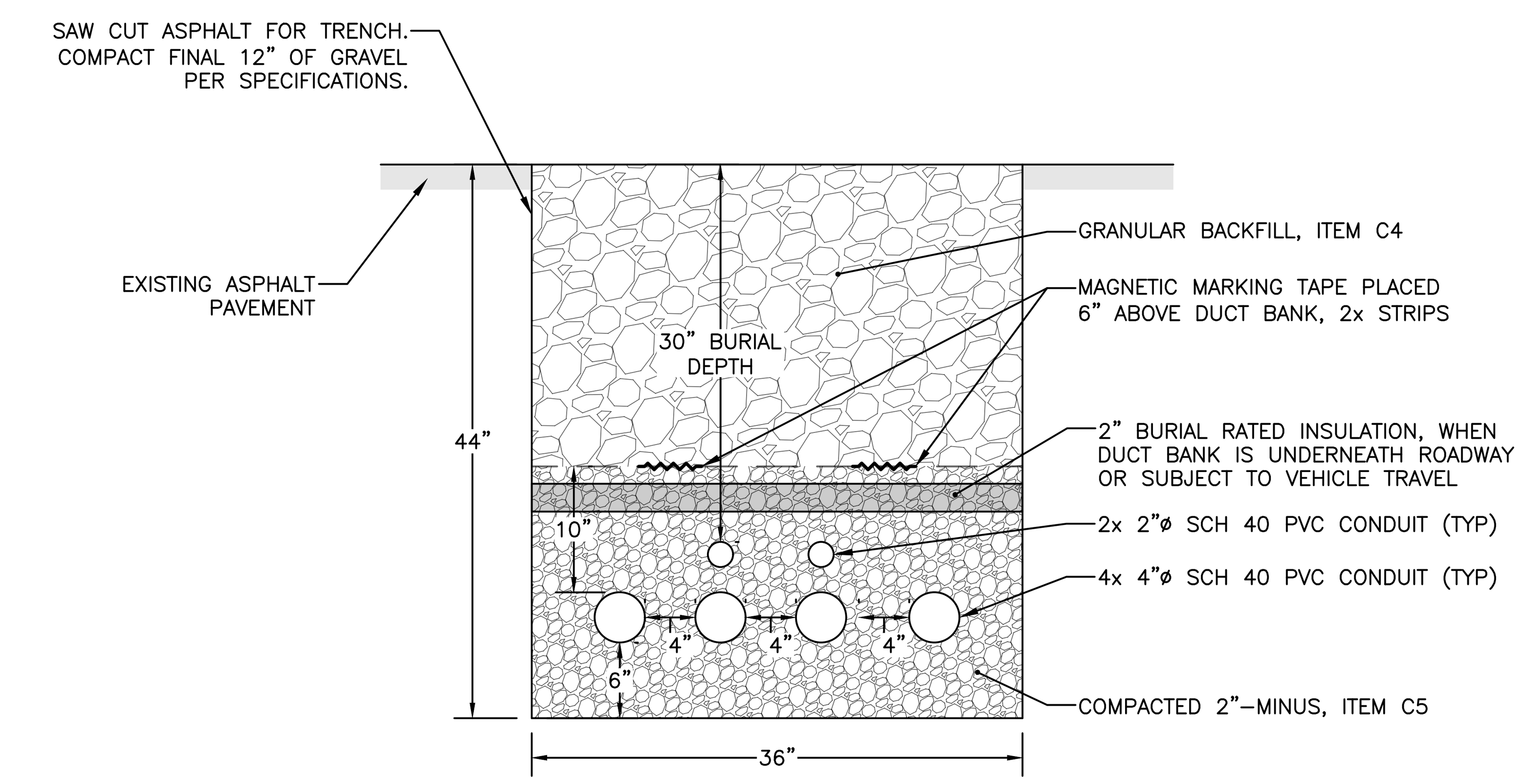


1 C005 FOUNDATION BASE SECTION
NOT TO SCALE



2 C005 BOLLARD DETAIL
NOT TO SCALE



3 C005 TRENCHING DETAIL
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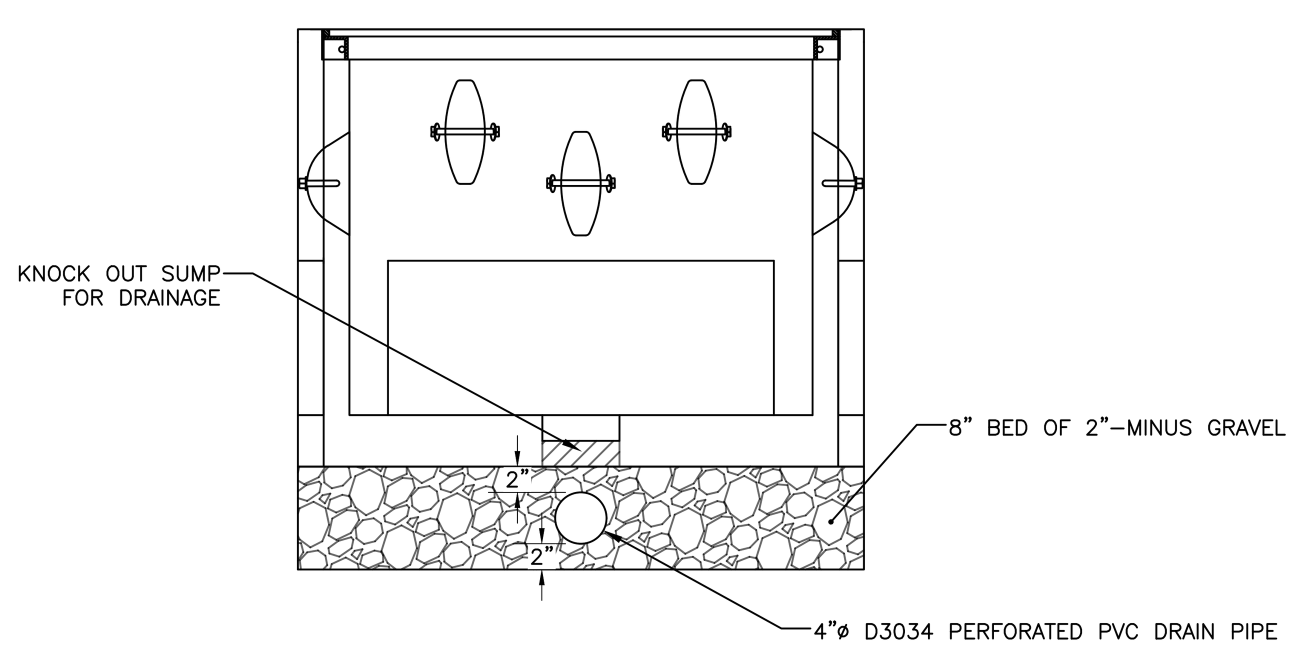
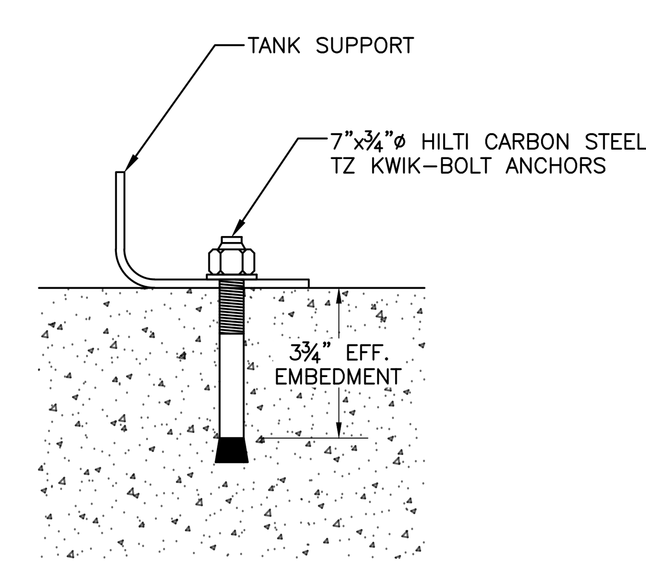


4 C005 HANDHOLE DRAIN DETAIL
NOT TO SCALE



5 C005 ANCHOR BOLT DETAIL
NOT TO SCALE

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CLIENT:
GRAND SUMMIT HOTEL CONDOMINIUM UNIT
OWNERS' ASSOCIATION, INC.

GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
TYPICAL SECTIONS & DETAILS

CUSA CONSULTING LLC

BARTLETT NH

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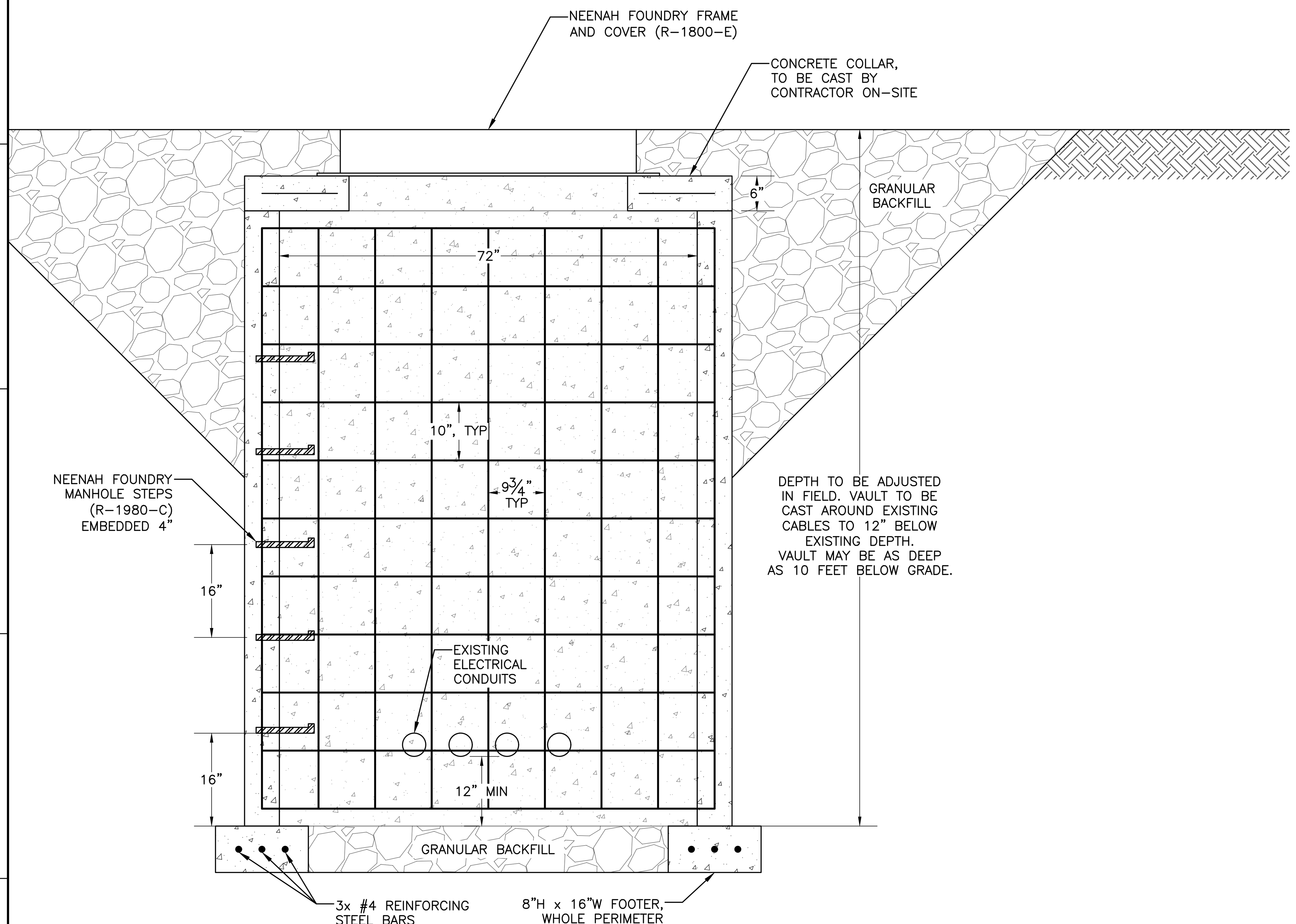
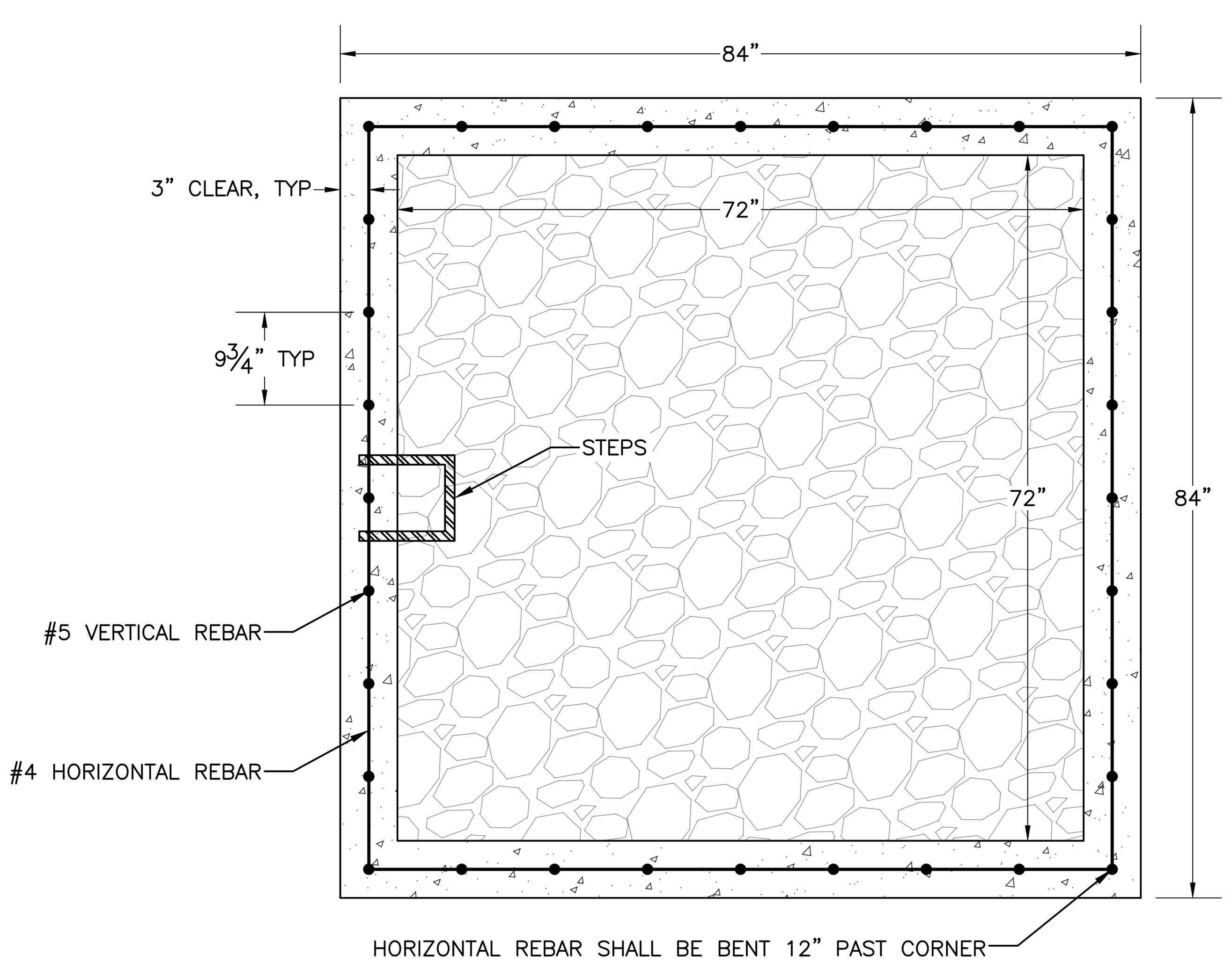
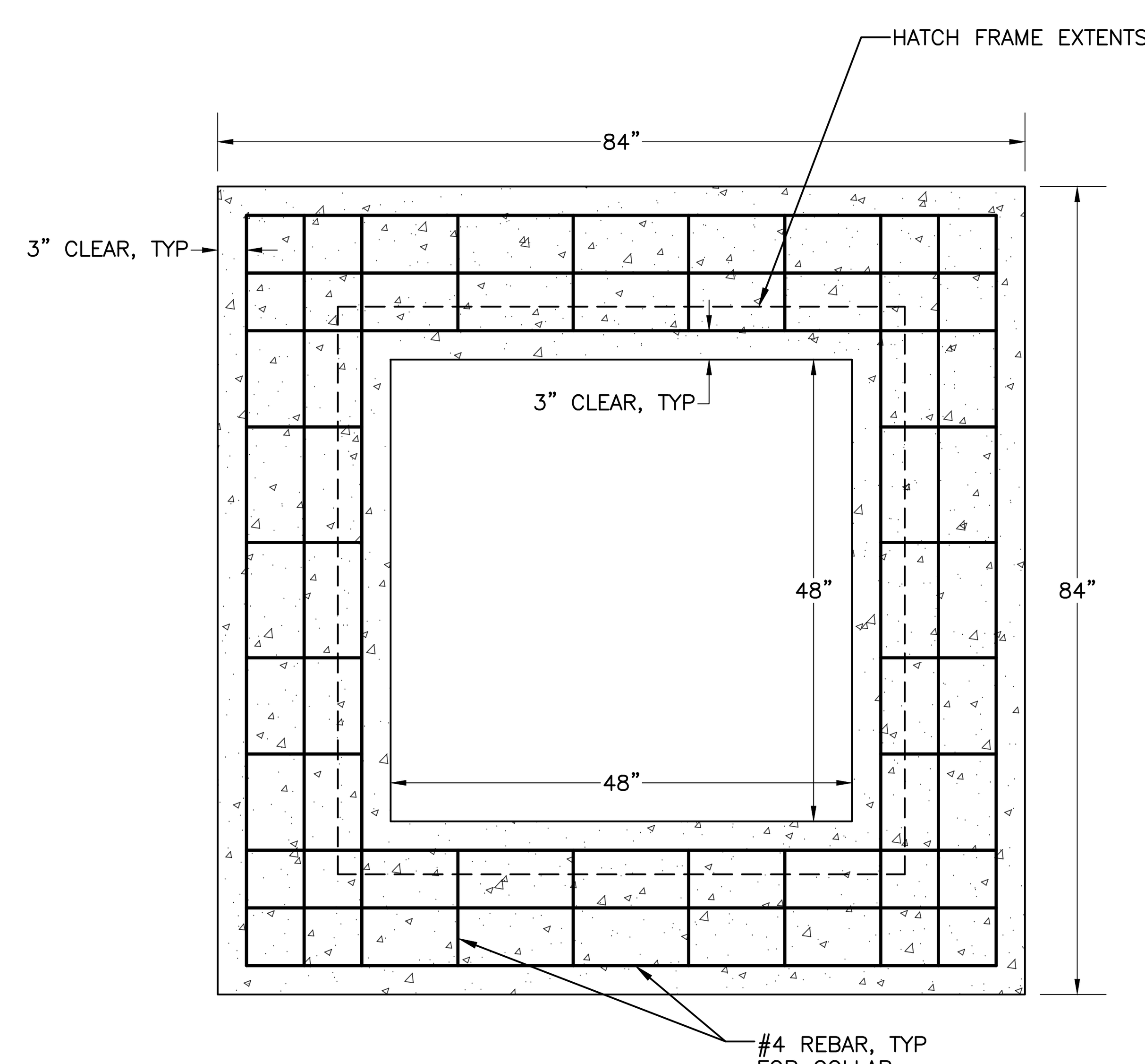


1 C006 MANHOLE ELEVATION VIEW
3/4" = 1'0"



2 C006 MANHOLE PLAN VIEW
3/4" = 1'0"

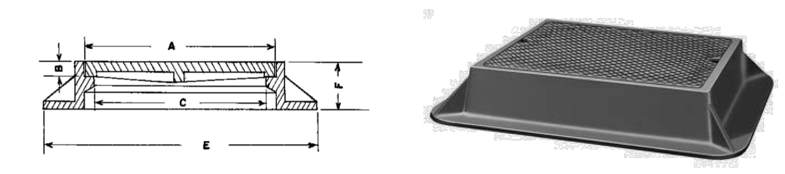


3 C006 MANHOLE COLLAR DETAIL
3/4" = 1'0"

MANHOLE FRAMES & LIDS 1

R-1800 to 1801 Series
Frame, Solid Lid

Heavy Duty



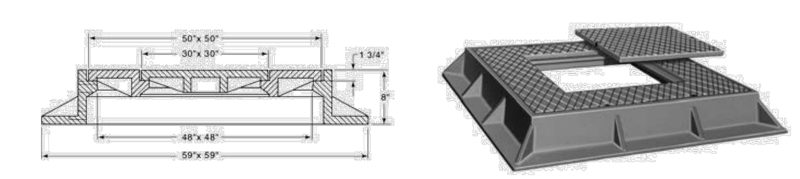
Illustrating R-1800-C with Square Base flange

Catalog No.	A	B	C	E	F	Grate Alt.
			Dimensions in inches			
	Square					
R-1800-A *	20 x 20	1 3/4	18 x 18	31 x 31	5	R-3430
R-1800-B	23 1/2 x 23 1/2	1 1/2	22 x 22	28 x 28	4	R-1878-A5G
R-1800-C *	24 x 24	2	22 x 22	35 x 35	6	R-3210-A
R-1800-D +	32 x 32	1 1/2	30 x 30	36 x 36	6	-
R-1800-E **	50 x 50	1 3/4	48 x 48	59 x 59	8	~~R-3430-A~~
	Rectangular					
R-1801-A	11 1/2 x 14 3/4	1 1/4	10 x 13	19 x 22	4	
R-1801-B	14 1/2 x 21 1/2	2	13 x 20	23 x 30	5 1/2	R-3460-A
R-1801-C	18 x 30	2	16 x 28	26 x 38	8 1/2	-
R-1801-D	18 x 36	2	16 x 34	28 x 46	7	-
R-1801-E	23 1/2 x 35 1/2	2	22 x 33	34 x 46	6 1/4	R-3416
R-1801-F	23 7/8 x 35 3/4	1 3/4	22 x 34	36 x 48	9	R-3455-C
R-1801-G ***	36 x 48	1 3/4	33 x 45	42 x 54	5 1/2	R-3457-C2

* Furnished with round base flange if specified.
** Lid furnished in two pieces.
*** Lid in two pieces (also frame).
\+ Built-up / slab frame

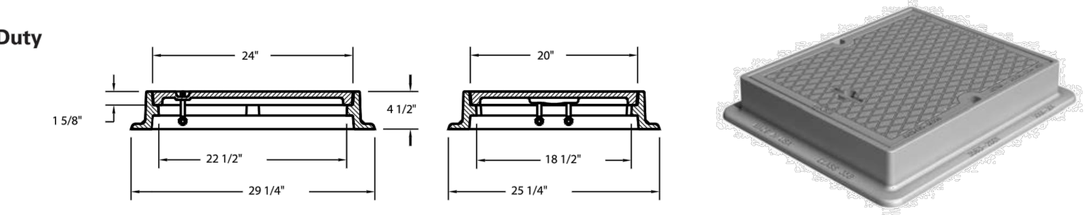
R-1860-A
Large Frame, Solid Lid with Removable Center Lid

Heavy Duty



R-1863
Frame

Heavy Duty



Frame is reversible for slab installation.

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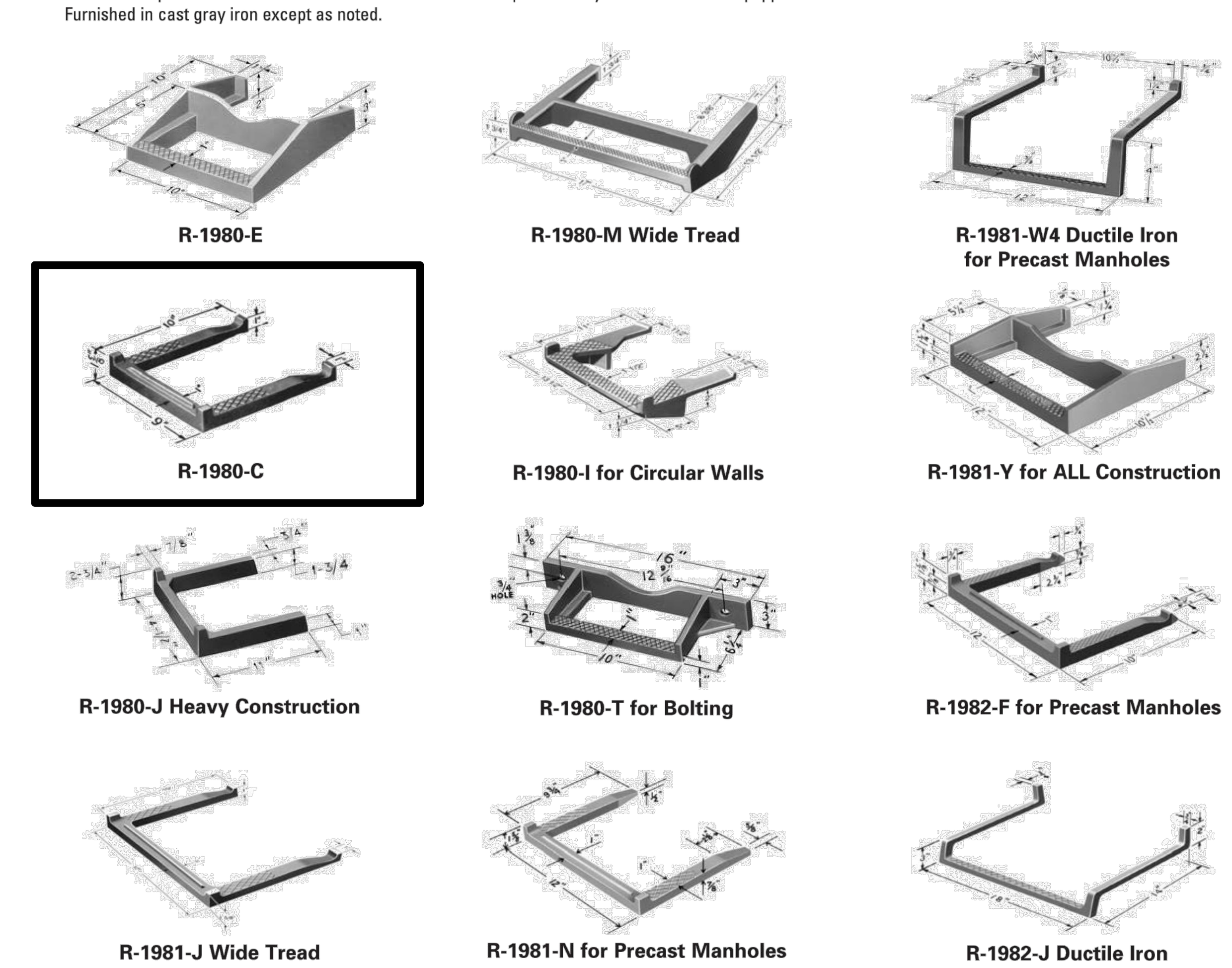
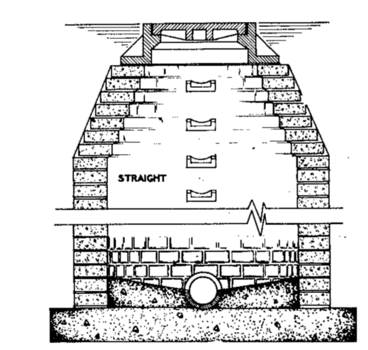
MANUFACTURER'S CUT SHEET FOR MANHOLE FRAME & COVER

MANHOLE FRAMES & LIDS 1

R-1980-1-2 Series
Manhole Steps

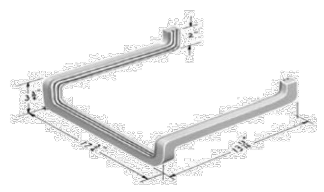
Manhole Steps shown in this series are for use in conical shaped sanitary sewer manholes equipped with standard cast iron frames and covers. Furnished in cast gray iron except as noted.





Steps should be installed in a vertical row on 16" centers.

Cast iron manhole steps are manufactured from high tensile iron, which has a minimum **tensile strength of 35,000 lb. per square inch**. Actual load tests on castings have shown a generous safety factor. Cast iron steps with their inherent corrosion resistant qualities, are easily installed in concrete, brick or block manholes. The tread is scored to meet safety requirements.



R-1982-W Extruded Aluminum

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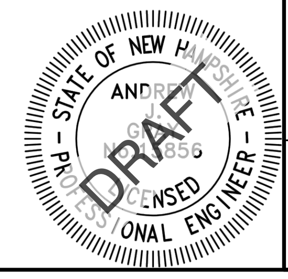
MANUFACTURER'S CUT SHEET FOR EMBEDDED STEPS



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CLIENT:
GRAND SUMMIT HOTEL CONDOMINIUM UNIT OWNERS' ASSOCIATION, INC.

GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
CAST-IN-PLACE MANHOLE DETAILS

CUSA CONSULTING LLC

BARTLETT NH

REVIEWED BY: | SUBMITTED BY: | APPROVED BY:
CUSA PROJECT ENGINEER | AUTHORIZED CORPORATE OFFICER

HAMPTON, NH OFFICE

DESIGNED: A.J.G.
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ISSUED BY:
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DRAWING NUMBER: GSH-FINAL-C006
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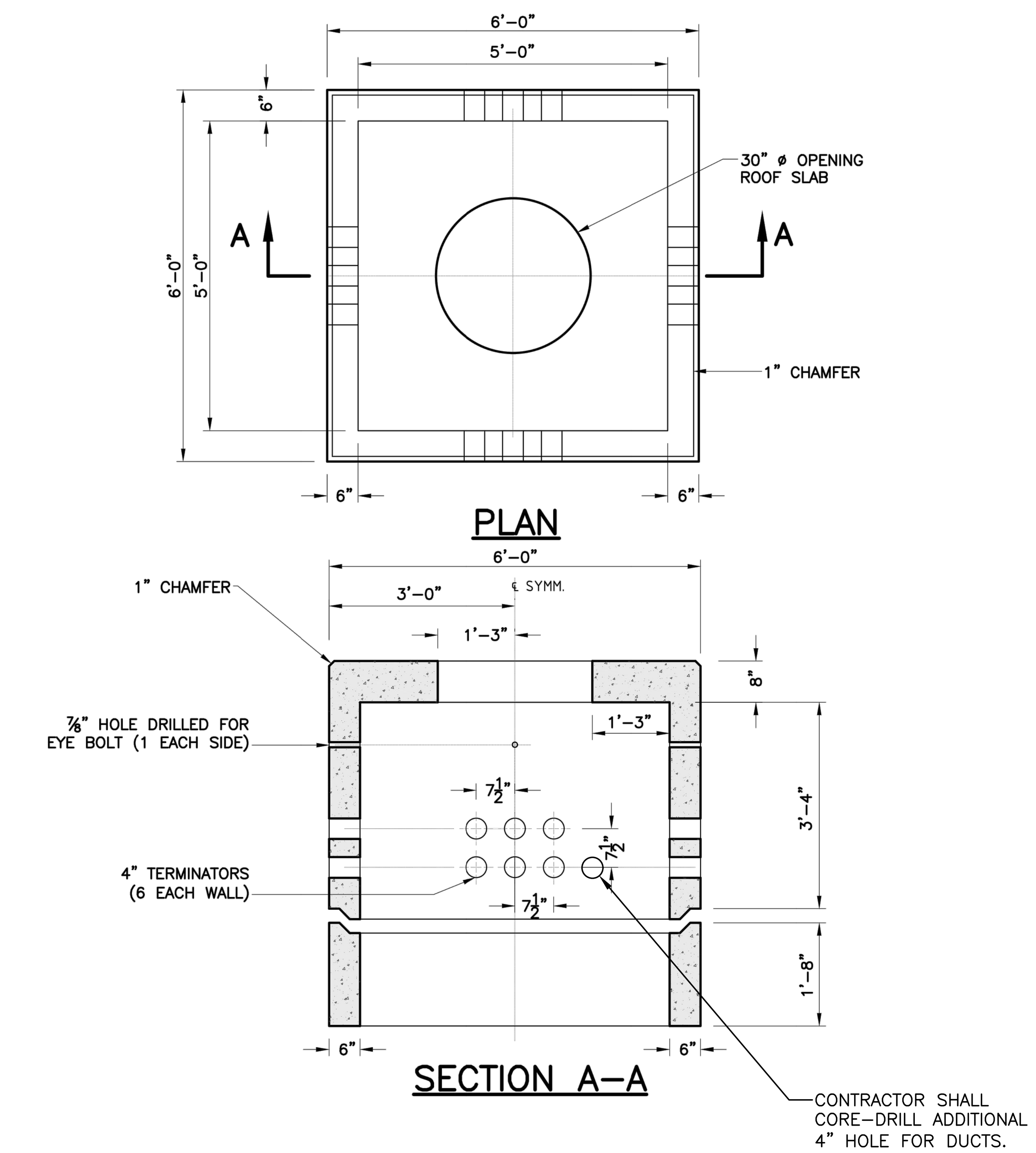
SHEA CONCRETE PRODUCTS
New England's Premier Precaster
800-696-7432 (SHEA)
www.sheaconcrete.com
MAILING ADDRESS: 87 HAVERHILL RD AMESBURY, MA 01913

PULLBOX 5' X 5' X 5'



NOTES:

1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
2. DESIGN LOADING: AASHTO HS20-44, 0 TO 5 FEET COVER.
3. STEEL REINFORCEMENT CONFORMS TO ASTM A615, GRADE 60.
4. MINIMUM STEEL COVER 1".

SHEA PRODUCT ID: PB-555	FILE NAME: PULLBOX 5X5X5		NPCA CERTIFIED PLANT
WEIGHT (LBS): 10980	DRAWN BY: L.P.	DATE: 2/5/2018	PAGE: I.B.7

773 Salem Street-Wilmington, MA | 153 Cranberry Hwy-Rochester, MA | 87 Haverhill Road-Amesbury, MA | 160 Old Turnpike Rd-Nottingham, NH

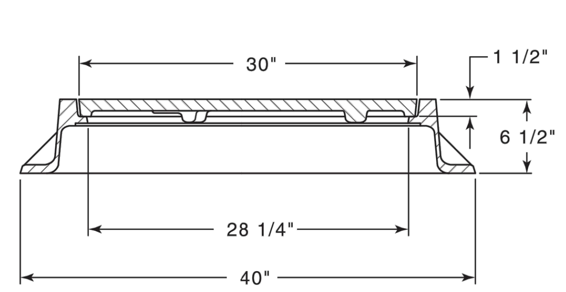
Specifications subject to change without notice

1 / C007 HANDHOLE MANUFACTURER'S CUT SHEET
N.T.S.

R-1563
Manhole Frame, Solid Lid

Heavy Duty

Furnished with four 1" x 2" anchor holes on 37" diameter bolt circle.



2 / C007 MANHOLE/HANDHOLE COVER DETAIL
N.T.S.

DRAFT

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GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
HANDHOLE DETAILS

BARTLETT NH

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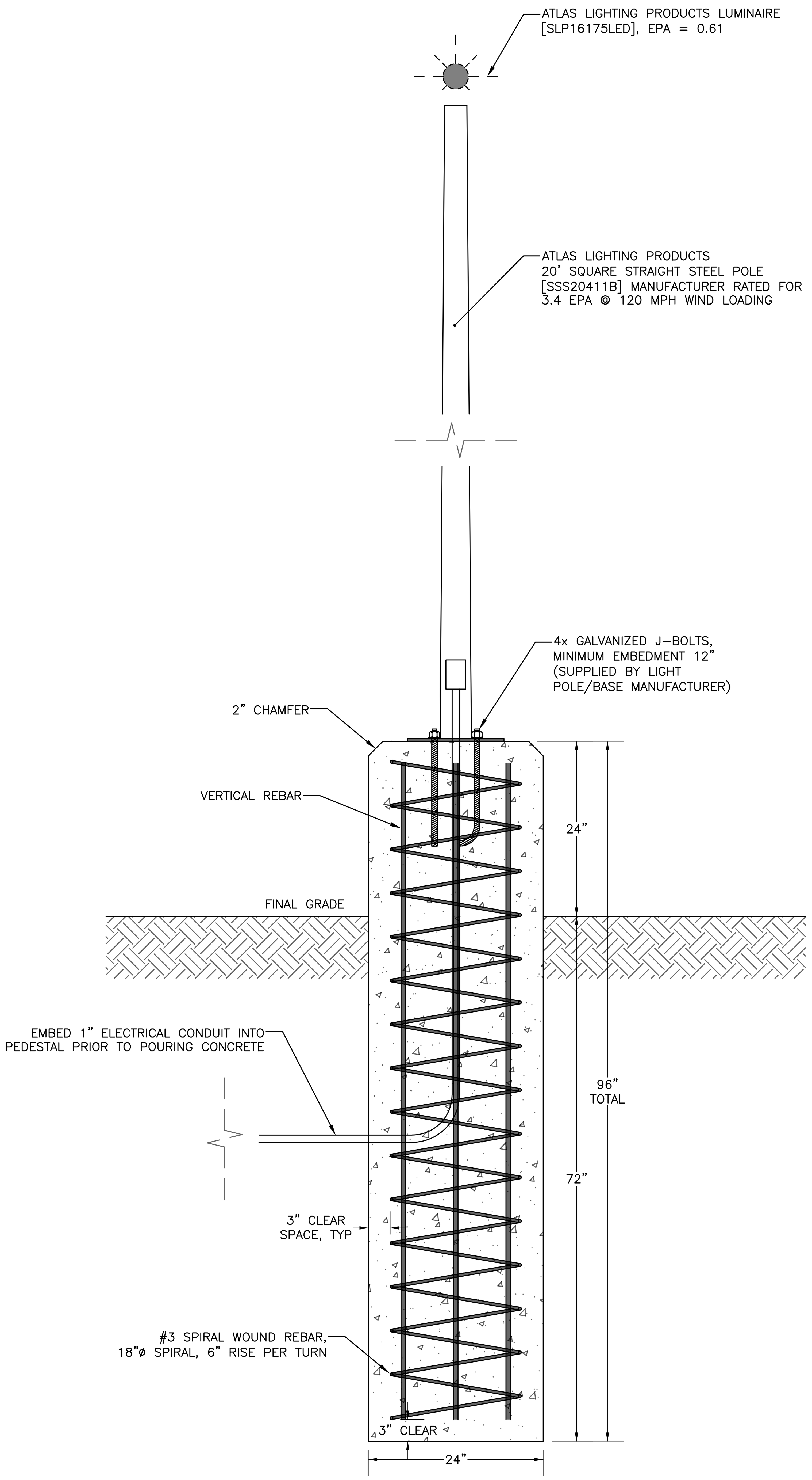
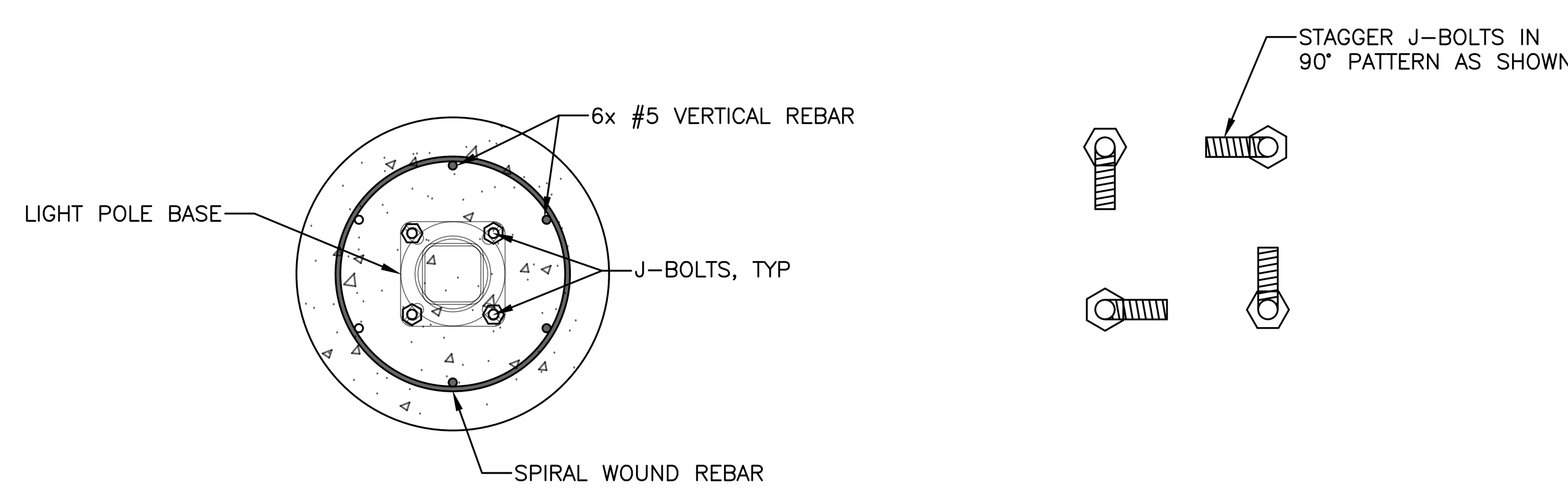
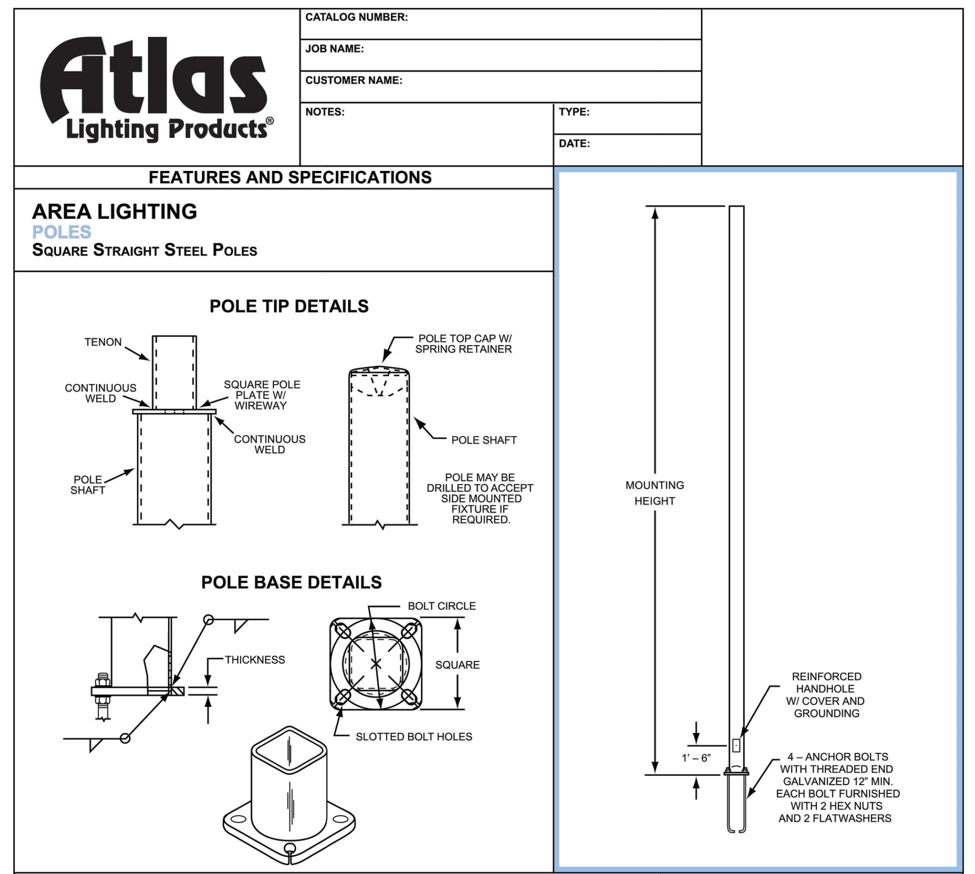


1 C008 LIGHT PEDESTAL SECTION
NOT TO SCALE



2 C008 LIGHT PEDESTAL PLAN VIEW AND BOLT DETAIL
NOT TO SCALE



ORDERING INFORMATION

Nominal Mounting Height (ft)	Catalog Number	Shaft			Pole Base			Maximum Loading			
								90MPH	100MPH	110MPH	120MPH
		Base O.D. (in)	Wall Thk. (ga)	Gross Weight (lbs)	Bolt Circle Range*	Plate Width (in)	Plate Thk. (in)	EPA (ft^2)	EPA (ft^2)	EPA (ft^2)	EPA (ft^2)
12	SSS12411BZ	4.00	11	90	8 to 11	8.0	0.75	23.0	18.2	14.6	11.7
14	SSS14411BZ	4.00	11	105	8 to 11	8.0	0.75	18.7	14.5	11.5	9.1
16	SSS16411BZ	4.00	11	120	8 to 11	8.0	0.75	15.1	11.5	8.9	6.9
18	SSS18411BZ	4.00	11	135	8 to 11	8.0	0.75	12.2	9.1	6.8	5.1
20	SSS20411BZ	4.00	11	150	8 to 11	8.0	0.75	9.5	6.9	4.9	3.4
20	SSS20507BZ	5.00	7	250	9 to 11	11.0	1.00	30.5	23.7	18.6	14.7
20	SSS20511BZ	5.00	11	180	9 to 11	11.0	0.75	20.0	14.9	11.5	8.8

*-Consult Factory for Specific Bolt Circle Measurements.

Continued →

Actual performance can vary depending on operating conditions. Specifications are subject to change without notice.

ATLAS LIGHTING PRODUCTS, INC.
PO BOX 2348 | BURLINGTON, NC 27216
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3 C008 LIGHT POLE MANUFACTURER'S CUT SHEET
NOT TO SCALE

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GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
LIGHT PEDESTAL DETAILS

CUSA CONSULTING LLC

BARTLETT NH

REVIEWED BY:

SUBMITTED BY: CUSA PROJECT ENGINEER

APPROVED BY: AUTHORIZED CORPORATE OFFICER

DESIGNED: A.J.G.
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DATE:
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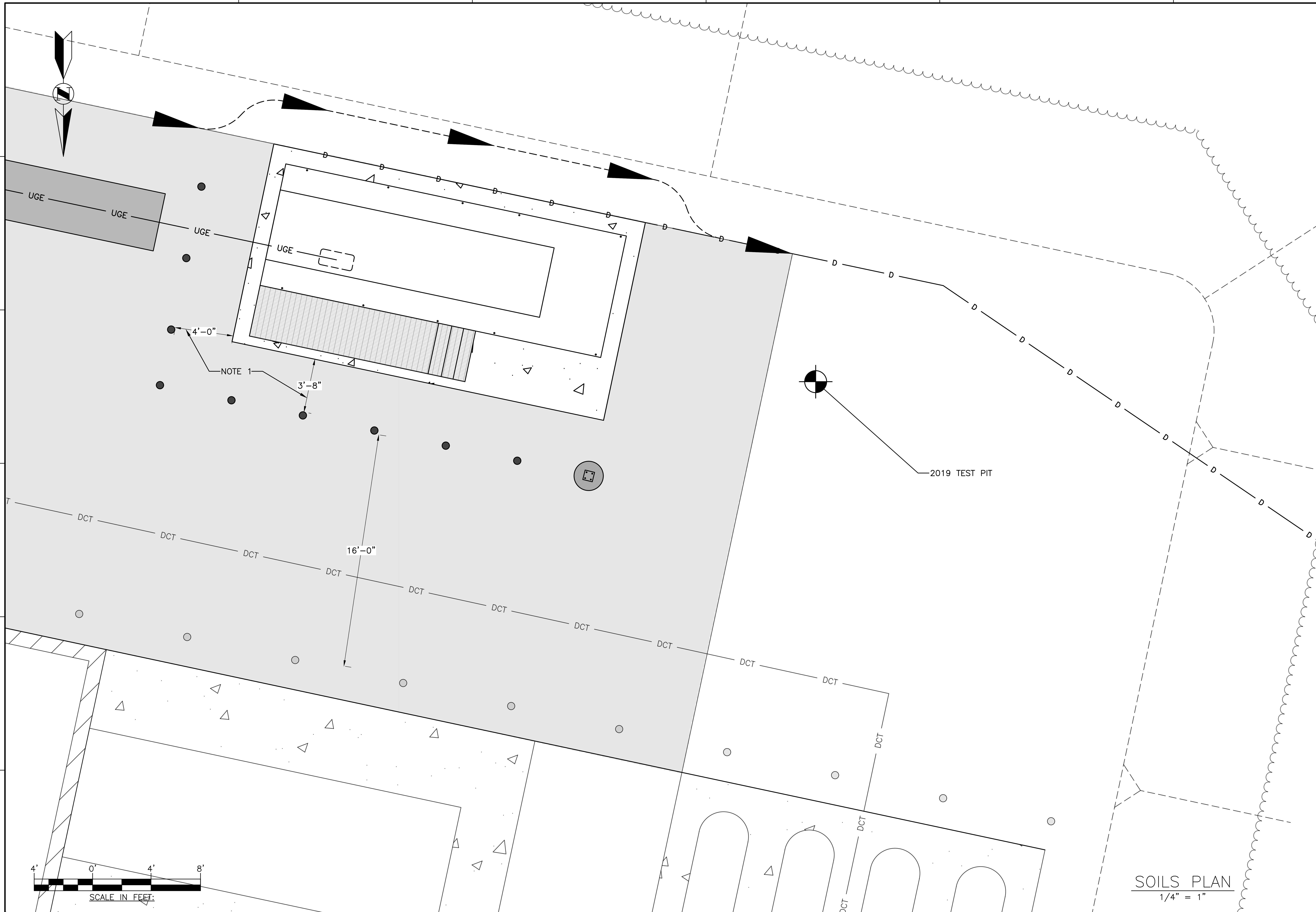
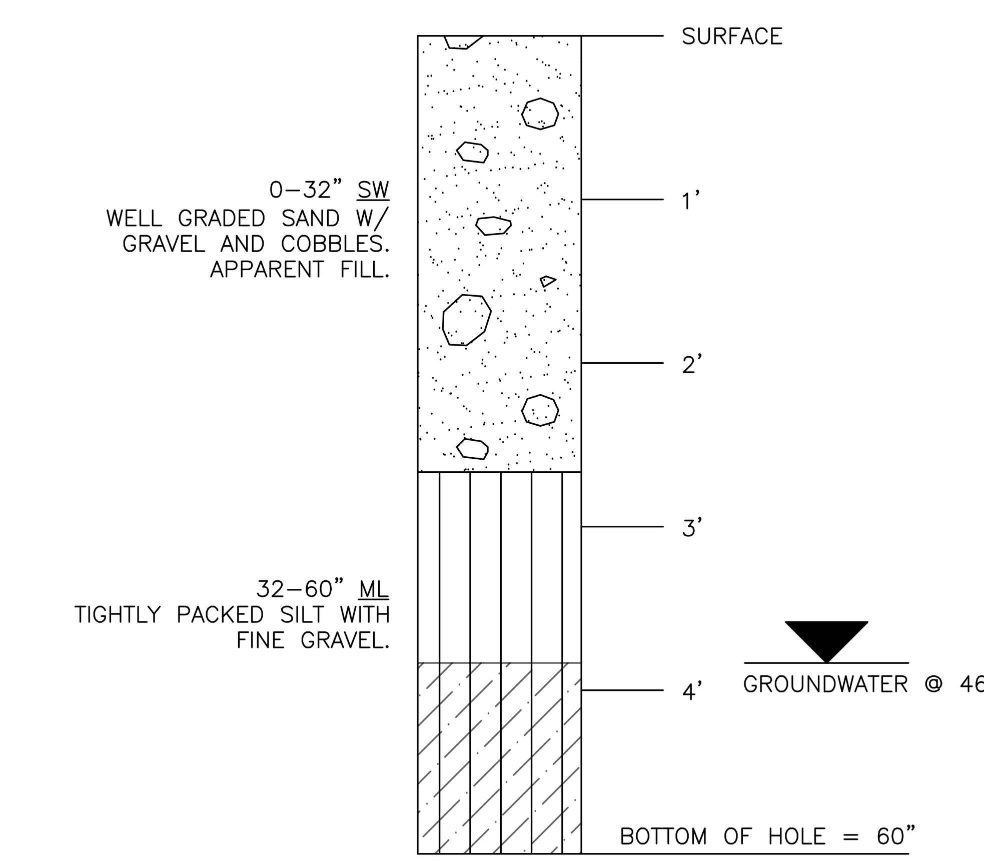


SOIL LOG – 04/23/2019 TEST PIT



SOIL TEST PIT EXCAVATION WAS WITNESSED BY ANDREW J. GRAY, P.E.

NOTES

1. THE BOLLARDS SHOULD BE 4 FEET FROM THE PAD, BUT CAN BE PLACED CLOSER AS LONG AT THE DISTANCE BETWEEN THE BOLLARD AND THE FUEL TANK IS NOT LESS THAN 4 FEET.

DRAFT

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GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
SOILS REPORT

CUSA CONSULTING LLC

BARTLETT NH

REVIEWED BY:

SUBMITTED BY: CUSA PROJECT ENGINEER

APPROVED BY: AUTHORIZED CORPORATE OFFICER

DESIGNED: A.J.G.
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GENERAL ELECTRICAL NOTES:

1. THE CONTRACTOR SHALL COORDINATE ANY WORK THAT WILL CAUSE A LOSS OF POWER WITH THE OWNER. UNSCHEDULED ELECTRICAL POWER INTERRUPTION SHALL NOT BE PERMITTED.
2. INSTALL OVERHEAD CONDUIT SYSTEMS TO THE HIGHEST POSSIBLE ELEVATION.
3. TORQUE ALL ELECTRICAL HARDWARE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS FOR ELECTRICAL POWER DISTRIBUTION EQUIPMENT AND PROVIDE DOCUMENTATION.
4. MINIMUM SIZE CONDUIT INSTALLED SHALL NOT BE LESS THAN 1/2".
5. ALL ANALOG CABLE SIGNALS SHALL BE ROUTED IN DEDICATED CONDUIT AND PHYSICALLY SEPERATED FROM 120VAC OR GREATER WIRING.
6. THERE SHALL BE NO MULTI-WIRE TERMINATIONS UNLESS THE TERMINATION POINT IS RATED FOR MORE THAN ONE WIRE.
7. ALL CONDUCTORS SHALL BE LABELED AT EACH TERMINATION AND AT EVERY PULL BOX WITH SELF LAMINATION TYPE WIRE LABELS.
8. MEGGER CHECKS SHALL BE TESTED AT 500V, 30MEG OHM READING OR GREATER PER ANSI/NETA ATS-2013 ON ALL 600V RATED WIRE. RECORD ALL READINGS ON MEGGER SHEETS.
9. ELECTRICAL CONTRACTOR TO SET BREAKER SETTINGS AS APPLICABLE.
10. PULL STRING SHALL BE INSTALLED IN NEW SPARE CONDUITS.

GROUNDING NOTES:

1. ALL GROUNDING SHALL BE SIZED IN ACCORDANCE WITH NFPA70(NEC).
2. GROUND CONNECTIONS TO ELECTRICAL EQUIPMENT ENCLOSURES, TRANSFORMERS, AND GENERATORS SHALL BE MADE WITH DESIGNED APPROVED GROUNDING CONNECTIONS.
3. WHEN BONDING TO EQUIPMENT USING FIELD INSTALLED GROUND LUGS, SCRAPE THE PAINT OFF THE MOUNTING SURFACE TO ENSURE A GOOD BOND. (FOR EXAMPLE: WHEN BONDING TO THE E/G FRAME) APPLY A PROTECTIVE COATING TO MATCH EXISTING FINISH OVER ANY EXPOSED METAL ONCE THE GROUNDING CONNECTION HAS BEEN MADE.
4. ALL GROUND RODS AND OTHER UNDERGROUND GROUNDING CONNECTIONS SHALL BE CADWELD OR APPROVED EQUIVALENT. CADWELD CONNECTIONS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES.

PHASING:

PHASE 1 – CIVIL WORK

1. THE CIVIL CONTRACTOR WILL HAVE THE ELECTRIC UTILITIES MARKED OUT. THE ELECTRIC COMPANY DISTRIBUTING POWER TO THE HOTEL IS NEW HAMPSHIRE ELECTRIC CO-OP.
2. EXCAVATE AROUND THE EXISTING SECONDARY CONDUCTORS BETWEEN THE TRANSFORMER AND THE HOTEL RETAINING WALL SO THAT NEW 6'x6' MANHOLE CAN BE POURED IN PLACE AROUND THE EXISTING CONDUITS. NEW CONDUITS FROM THE ELECTRICAL SHELTER TO THIS MANHOLE WILL NEED TO BE IN PLACE BEFORE POUR.
3. CIVIL CONTRACTOR WILL COORDINATE WITH ELECTRICAL CONTRACTOR TO MAKE SURE THAT ALL CONDUITS ARE IN PLACE BEFORE ELECTRICAL SHELTER AND ENGINE GENERATOR SLABS ARE POURED.
4. CIVIL CONTRACTOR TO PERFORM THE REMAINDER OF THE CIVIL AND SITE WORK, INCLUDING INSTALLING DUCT BANK, HAND HOLE, SLABS FOR EQUIPMENT SHELTER & EG, AND LIGHT POST FOOTING. CIVIL CONTRACTOR WILL ALSO EXCAVATE TRENCH FOR FEEDER P1.
5. CIVIL CONTRACTOR WILL BACKFILL ALL EXCAVATIONS AND LEAVE SITE AS FOUND BEFORE SITE WORK BEGAN (EXCEPT FOR THE EXCAVATION FOR FEEDER P1).

PHASE 2 – EQUIPMENT DELIVERY & INSTALL

6. THE GENERAL CONTRACTOR WILL ACCEPT DELIVERY OF THE ELECTRICAL & MECHANICAL EQUIPMENT.
7. THE GENERAL CONTRACTOR WILL HIRE A CRANE, OFFLOAD, AND SECURE THE EG AND THE LIGHT POST.
8. ELECTRICAL SHELTER WILL BE INSTALLED BY POST WOODWORKING. COMMERCIAL DOORS WILL BE INSTALLED BY THE BUILDING CONTRACTOR WITH SUPPORT FROM POST WOODWORKING.
9. ELECTRICAL CONTRACTOR WILL ROUGH-IN CIRCUITS INSIDE ELECTRICAL SHELTER AND BUILDING CONTRACTOR WILL INSTALL INSULATION AND DRYWALL INSIDE ELECTRICAL SHELTER. THE FIRE PROTECTION CIRCUITRY WILL ALSO NEED TO BE ROUGHED-IN DURING THIS TIME (EITHER BY ELECTRICAL OR FIRE PROTECTION CONTRACTOR).
10. THE ELECTRICAL CONTRACTOR WILL INSTALL THE (2) SWITCHBOARDS, TRANSFORMER, AND ATS USING A TELEHANDLER OPERATED BY THE CIVIL CONTRACTOR. ACCESS WILL BE VIA THE DOUBLE DOORS ON THE WEST SIDE OF THE ENCLOSURE.
11. THE ELECTRICAL/BUILDING CONTRACTORS WILL COMPLETE FINISH WORK INSIDE ELECTRICAL SHELTER.
12. ELECTRICAL CONTRACTOR WILL PULL ALL FEEDERS AND BRANCH CIRCUITS THAT CAN BE PULLED BEFORE MAIN POWER OUTAGE IS NEEDED.

PHASE 3 – OUTAGE & ADDITIONAL CABLE PULLING

13. THE GENERAL CONTRACTOR AND THE PROJECT MANAGER. WILL SCHEDULE OUTAGE WITH UTILITY AND HOTEL FOR FINAL CUTOVER. THIS OUTAGE WILL AFFECT FULL FACILITY POWER FOR AT LEAST ONE DAY AND LIKELY WILL RUN INTO A SECOND DAY.
14. DURING OUTAGE THE EXISTING (9) SETS OF 500MCM BETWEEN THE (3) 1200A DISTRIBUTION PANELS INSIDE THE HOTEL AND THE UTILITY TRANSFORMER WILL BE PULLED OUT AND THE MANHOLE WILL BE PATCHED. NEW CONDUCTORS WILL BE PULLED IN BETWEEN MAIN DISTRIBUTION PANEL AND THE (3) 1200A PANELS IN THE HOTEL. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR DISCUSSING WITH THE UTILITY WHETHER OR NOT THEIR CURRENT TRANSFORMER (CT) CONFIGURATION NEEDS TO CHANGE AS A RESULT OF REDUCING THE FEEDERS FROM (9) SETS OF 500MCM TO (3) SETS OF 500MCM.
15. DURING THE OUTAGE THE ELECTRICAL CONTRACTOR WILL NEED TO DO SOME ADDITIONAL WORK INSIDE THE (3) DISTRIBUTION PANELS IN THE HOTEL ELECTRICAL ROOM. THE NEUTRAL-GROUND BOND INSIDE EACH PANEL SHALL BE REMOVED. THE ELECTRICAL CONTRACTOR WILL NEED TO SUPPLY A GROUND BAR IN EACH PANEL TO TERMINATE EXISTING GROUND CONNECTIONS THAT ARE CURRENTLY CONNECTED TO THE NEUTRAL BAR. THE ELECTRICAL CONTRACTOR WILL ALSO CUT ONE UNDERGROUND CONDUIT FLUSH WITH THE SLAB, SO THAT THE FIRE CABLES AND EG ANNUNCIATOR CABLE CAN BE ROUTED OUTSIDE THE POWER PANELS. THE ELECTRICAL CONTRACTOR WILL ALSO NEED TO PROVIDE A #12 AWG GROUND WIRE FROM ONE OF THE PANELS FOR THE SURGE ARRESTOR PROVIDED BY THE FIRE PROTECTION CONTRACTOR.
16. THE ELECTRICAL CONTRACTOR WILL INSTALL NEW CONDUIT AND CONDUCTORS BETWEEN THE MAIN SERVICE SWITCHBOARD AND THE UTILITY TRANSFORMER. THIS WORK WILL INVOLVE CORE DRILLING (3) 4" HOLES THROUGH THE WEST SIDE OF THE TRANSFORMER VAULT.

PHASE 4 – POWER RESTORATION & TESTING

17. ONCE ALL CONNECTIONS HAVE BEEN MADE THE GENERAL CONTRACTOR WILL CALL BACK THE UTILITY TO RE-ENERGIZE THE 500KVA TRANSFORMER AND RETURN THE HOTEL TO FULL SERVICE.
18. A KOHLER TECHNICIAN WILL BE ON SITE FOR A DAY TO FIRE UP AND TEST THE ENGINE GENERATOR. THE ENGINE GENERATOR WILL BE TESTED USING THE FACILITY LOAD. A KOHLER TECHNICIAN WILL ALSO COMMISSION THE ATS AT THIS TIME.
19. THE FIRE PROTECTION CONTRACTOR WILL MAKE FINAL CONNECTIONS TO TIE NEW EQUIPMENT TO MAIN BUILDING FIRE ALARM SYSTEM. FIRE PROTECTION CONTRACTOR WILL TEST & COMMISSION SYSTEM AND WILL TIE DEVICES TO THE RAPID RESPONSE DCAT REPORTING SYSTEM.
20. THE FIRE PROTECTION CONTRACTOR WILL PERFORM ACCEPTANCE TESTING OF NEW EQUIPMENT PER LOCAL FIRE DEPARTMENT.
21. THE CIVIL CONTRACTOR WILL BACKFILL ALL REMAINING EXCAVATIONS AND RETURN SITE BACK TO ITS ORIGINAL CONDITION.

REV	APPROVED	DESCRIPTION	JCN	REDLINE DATE	APVD

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GRAND SUMMIT HOTEL CONDOMINIUM UNIT OWNERS' ASSOCIATION, INC.

GRAND SUMMIT HOTEL AT ATTITASH BACKUP GENERATOR FINAL DESIGN DRAWINGS, 10/31/2019 ELECTRICAL NOTES

CUSA CONSULTING LLC

BARTLETT NH

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ELECTRICAL SITE LAYOUT
1/16" = 1'

NOTES

1. INTERCEPT THE EXISTING CONDUITS THAT FEED PANELS MDPA, MDPB1, AND MDPB2 AND CONSTRUCT THE PROPOSED MANHOLE TO BE POURED IN PLACE AROUND THE EXISTING CONDUITS. NEW CONDUCTORS SHALL BE INSTALLED TO THE EXISTING PANELS UTILIZING THE EXISTING CONDUIT. ALL CONDUITS GOING TOWARDS BUILDING SHALL BE DUCT SEALED.
2. STUB-UP THE CONDUITS UNDER THE E/G ALTERNATOR ENCLOSURE.
3. THE ENCLOSED E/G SUB-BASE TANK WILL BE DELIVERED AS ONE UNIT. THE CONTRACTOR IS RESPONSIBLE FOR PLACING THE UNIT ON THE NEW CONCRETE PAD.
4. RE-USE CONDUCTORS BETWEEN NEW MANHOLE AND EXISTING TRANSFORMER IN ORDER TO PREVENT OUTAGE DURING FIRST PHASE OF PROJECT. CONDUCTORS DENOTED BY DOTED LINE WILL BE REMOVED DURING THE FINAL CUTOVER (SEE CUTOVER PLAN).
5. THE SERVICE CONDUCTORS MUST HAVE A WARNING LABEL BURIED AT LEAST 12" ABOVE THE CONDUIT.
6. FACE LUMINARY IN PARALLEL WITH THE EG PAD AS SHOWN.
7. ALL CONDUCTORS GOING TO/FROM THE ELECTRICAL ENCLOSURE WILL BE STUBBED UP THROUGH THE SLAB THAT THE ENCLOSURE SITS ON.

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GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
ELECTRICAL SITE LAYOUT

CUSA

CUSA CONSULTING LLC

BARTLETT NH

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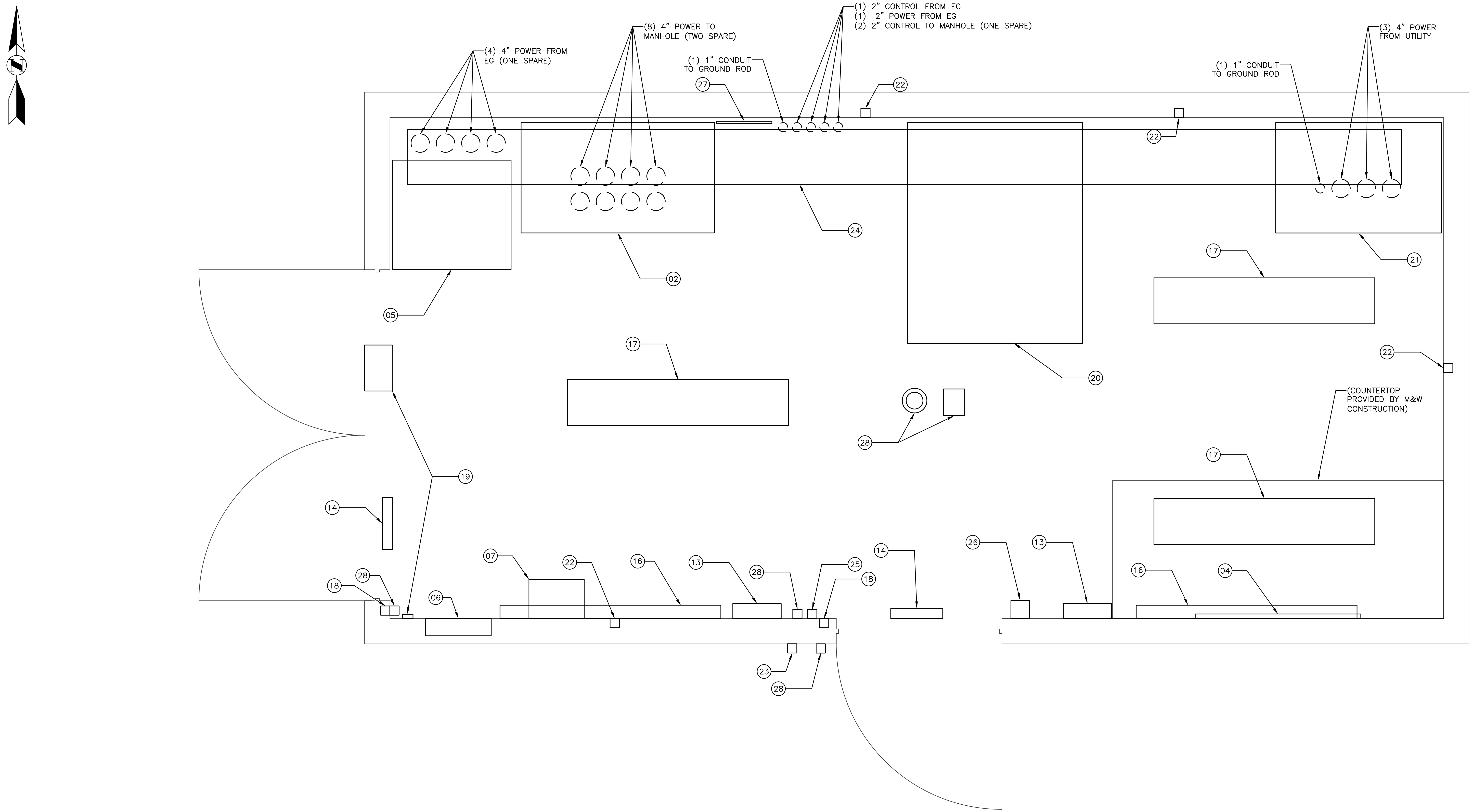

1 E002 SHED ELECTRICAL LAYOUT
SCALE: 1-1/2" = 1'-0"

NOTES

1. ALL DUPLEX RECEPTACLES TO BE INSTALLED 18" ABOVE THE FLOOR. THE 4-GANG RECEPTACLE TO BE MOUNTED 35" ABOVE THE FLOOR.
2. ALL LIGHT SWITCHES TO BE INSTALLED 48" ABOVE THE FLOOR.
3. ALL ROMEX TO BE INSTALLED NO CLOSER THAN 1-1/4" FROM EDGE OF STUDS.
4. A FIRE PROTECTION SYSTEM CONTAINING (1) SMOKE/HEAT DETECTOR, (2) DUAL ACTION ADDRESSABLE PULL STATIONS, (1) EXTERIOR WEATHERPROOF NOTIFICATION STROBE, AND (1) CEILING MOUNTED HORN STROBE WILL BE INSTALLED BY A FIRE PROTECTION CONTRACTOR. THE ELECTRICAL CONTRACTOR WILL INSTALL THE CONDUIT AND CONDUCTORS FOR THE UNDERGROUND RUN. THE FIRE PROTECTION WIRING WILL USE 2" CONDUIT C4, THEN WILL USE ONE OF THE SPARE 4" CONDUITS THAT ENTER THE BUILDING AND TERMINATE AT PANEL MPDA. THE CONDUIT WILL BE CUT FLUSH WITH THE CONCRETE SLAB AND THE CONDUIT WILL DIVERT UNDER THE PANEL AND TERMINATE AT A 8"x8" PULLBOX (SUPPLIED BY FIRE PROTECTION SUB) UNDER THE DESK TO THE LEFT OF THE PANEL. THE FIRE PROTECTION CONTRACTOR WILL PULL THE WIRE FROM THERE TO A LOCAL PULL STATION AND HORN STROBE IN ORDER TO TIE INTO THE ADDRESSABLE FIRE PROTECTION SYSTEM.
5. THE FIRE PROTECTION CONTRACTOR WILL SUPPLY AND INSTALL ALL EQUIPMENT AND WIRING INSIDE THE ELECTRICAL SHELTER AND INSIDE THE HOTEL.

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GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
ELECTRICAL EQUIPMENT ENCLOSURE
ELECTRICAL LAYOUT

CUSA CONSULTING LLC

BARTLETT NH

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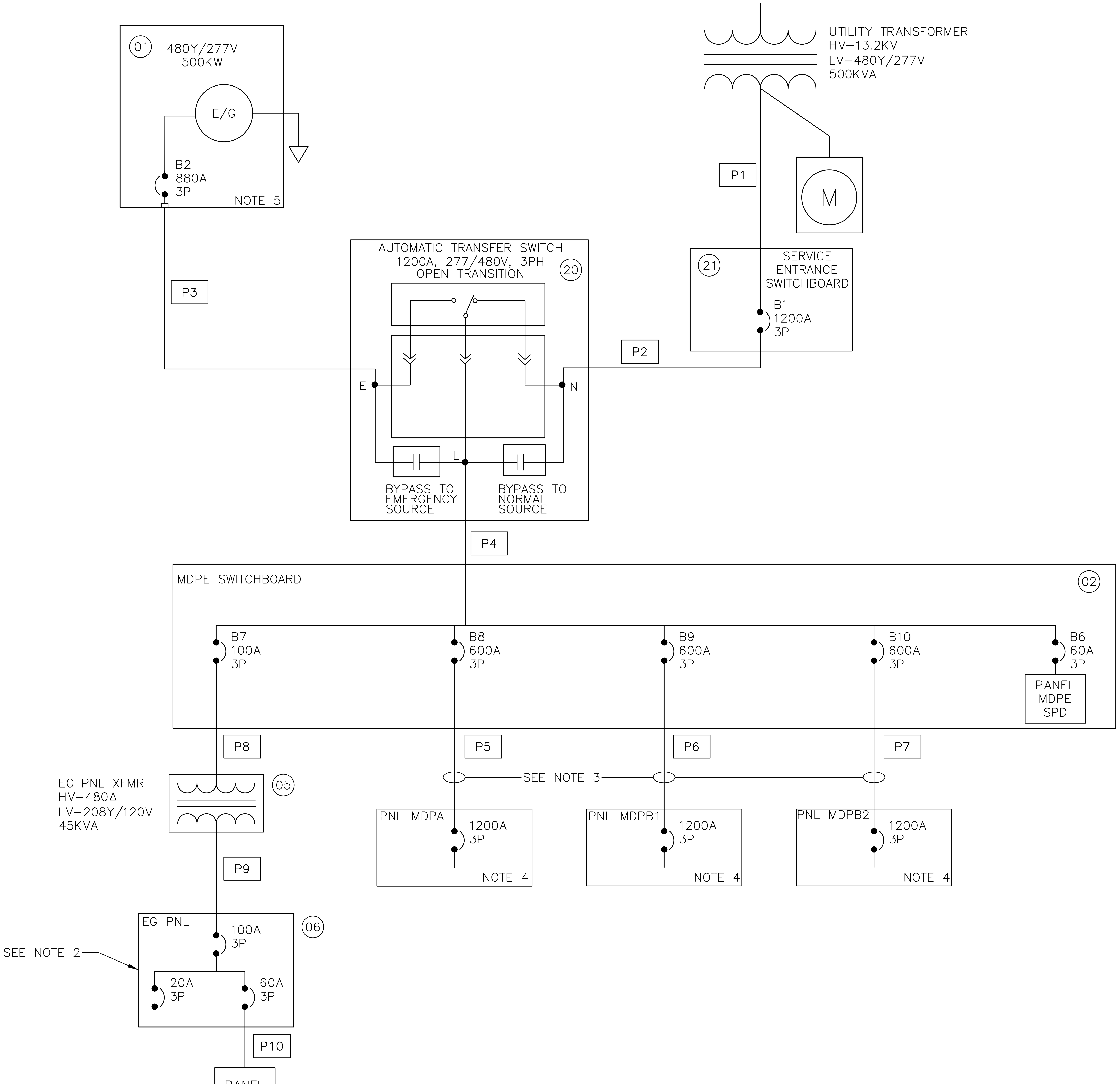

ELECTRICAL ONE–LINE

NO SCALE

NOTES

1. SEE DRAWING E004 FOR THE FEEDER/BREAKER/EQUIPMENT/PANEL SCHEDULES.
2. SEE DRAWING E005 FOR THE CONDUIT AND WIRING SIZES FOR THE NEW BRANCH CIRCUIT IN EG PANEL.
3. INTERCEPT AND REUSE THE CONDUITS THAT FEED PANELS MDPA, MDPB1, AND MDPB2. INSTALL NEW CONDUIT BETWEEN THE MANHOLE AND THE SHED CONTAINING THE MAIN DISTRIBUTION PANEL. REMOVE EXISTING CONDUCTORS AND PULL NEW CONDUCTORS FOR ENTIRE RUN.
4. REMOVE THE GEC FROM THE NEUTRAL BUS AND RELOCATE THE GEC TO A SEPARATE GROUND BUS (GROUND BUS MUST BE PROVIDED BY THE CONTRACTOR FOR A CUTLER–HAMMER POW–R–LINE PRL4 PANELBOARD). REMOVE ANY AND ALL BONDING JUMPERS BETWEEN THE NEUTRAL BUS AND RELOCATE TO THE GROUND BUS. ALL NEUTRAL AND GROUND BUS CONNECTIONS MUST BE SEPARATED. THE GEC IS (1) #6 AWG CU. THERE ARE ALSO (2) #300 MCM AL CONDUCTORS THAT PRESUMABLY GO TO BUILDING STEEL.
5. ENGINE GENERATOR BREAKER WILL BE A MICROLOGIC TRIP 3.3 1200AF/1000AT BREAKER. THE LONG TIME PICK–UP WILL BE SET TO 0.88, WHICH MAKES THE BREAKER AN EFFECTIVE 880A BREAKER. BREAKER ADJUSTMENT POINT SHALL BE LOCATED BEHIND STEEL ENCLOSURE, SUCH THAT NON–QUALIFIED PERSONNEL AREN'T ABLE TO CHANGE THE BREAKER SET POINT.

REV	APPROVED	DESCRIPTION	JCN	REDLINE DATE	APVD

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CLIENT:
GRAND SUMMIT HOTEL CONDOMINIUM UNIT OWNERS' ASSOCIATION, INC.

GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
ELECTRICAL ONE-LINE DIAGRAM

CUSA CONSULTING LLC

BARTLETT NH

HAMPTON, NH OFFICE

REVIEWED BY:	SUBMITTED BY:		APPROVED BY:	
	CUSA PROJECT ENGINEER		AUTHORIZED CORPORATE OFFICER	
	DESIGNED: K.R.M.	ISSUED BY:	DATE:	JCN:
	DRAWN: K.R.M.		DRAWING NUMBER: GSH–FINAL–E003	REV
	CHECKED: C.W.C.			

NOTES

1. ALL UNDERGROUND CONDUIT IS TO BE PVC SCHEDULE 40.
2. ALL OUTDOOR WIRING/CABLING THAT IS NOT SPECIFIED SHALL BE XHHW-2.
3. ALL CONDUCTORS LARGER THAN 12AWG AND LOCATED INSIDE SHED ARE THHN-2. ALL 14-12 AWG CIRCUITS INSIDE SHED SHALL BE ROMEX CABLE. USE 12AWG FOR LOADS FED FROM 20A BREAKERS AND 14AWG FOR LOADS FED FROM 15A BREAKERS.
4. ADD DUCT SEAL TO ALL (9) CONDUITS ENTERING THE HOTEL.
5. ADD DUCT SEAL TO CONDUITS FEEDING SPDs.
6. TWO 4" SPARE PVC SCHEDULE 40 CONDUITS WILL BE INSTALLED IN PARALLEL TO P5-P7.

PANEL EG

VOLTAGE (L-N):	120 V	SOURCE:	PANEL EG 45 KVA TRANSFORMER
VOLTAGE (L-L):	208 V	MOUNTING/SIZE:	FLUSH MOUNTED/ 29.84"H x 14.25"W x 3.5"D
PHASES, WIRES:	3ϕ, 4W	TYPE:	SQUARE-D QO - NEMA 1
MINIMUM BUS CAPACITY (A) / AIC RATING (kA):	100A/10kA	NOTES:	FEEDER SIZE - 4-#2 AWG & 1#8 AWG GND
MAIN OVER CURRENT DEVICE TYPE & RATING (A):	QO 100A		

CKT NO	DESCRIPTION	TRIP AMPS	POLE	PHASE LOADS (VA) A		B		C		POLE	TRIP AMPS	DESCRIPTION	CKT NO
1,3,5	PANEL EG SPD	60	3	X	2500					3	20	EG BLOCK HEATER	2,4,6
						X	2500						
								X	2500				
7	EG SHELTER LIGHT	20	1	175	41					1	20	EQUIPMENT SHELTER INTERIOR LIGHTS	8
9	BATTERY CHARGER RECEPTACLE	20	1			800	132			1	20	EQUIPMENT SHELTER VENTILATION FAN	10
11	ATS HEATER	20	1					X	1920	1	20	EQUIPMENT SHELTER CONVENIENCE RECEPTACLES	12
13	EQUIPMENT SHELTER EMERGENCY LIGHTS	20	1	5	2000					2	20	EQUIPMENT SHELTER: (2) BASEBOARD HEATERS	14,16
15	SPARE	20	1			X	2000						
17	SPARE	20	1					X				SPACE	18
19	SPARE	20	1									SPACE	20
21	SPACE											SPACE	22
23	SPACE											SPACE	24
25	SPACE											SPACE	26
27	SPACE											BLANK	

LOW VOLTAGE BREAKER SETTING SCHEDULE

BREAKER LOCATION	CIRCUIT DESIGNATION	TRIP TYPE	FRAME (A)	SENSOR (A) OR In	PLUG (A) OR Ir	LTPU SETTING	LTD BAND	STPU SETTING	STD BAND	STPU I^2T	INST SETTING	GND PICKUP	GND DELAY	GND I^2T
SERVICE ENTRANCE SWITCHGEAR	MAIN SVC DS - B1	MICROLOGIC 6.0	1200	1200	1200	1	16	5	0.2	OUT	15	J	0.4	IN
EG	EG MAIN BKR - B2	MICROLOGIC 3.3	1200	1000	1000	0.88	16	–	–	–	12	–	–	–
PANEL MDPE	MDPE SPD - B6	THERMAL MAGNETIC	150	60	N/A	FIXED	FIXED	–	–	–	–	–	–	–
PANEL MDPE	MDPE EG XFMR - B7	THERMAL MAGNETIC	250	250	100	100A	2.0	–	–	–	6 x In	–	–	–
PANEL MDPE	MDPE TO MDPA - B8	MICROLOGIC 6.0	1200	600	600	1	8	6	0	N/A	15	G	0.2	IN
PANEL MDPE	MDPE TO MDPB1 - B9	MICROLOGIC 6.0	1200	600	600	1	24	6	0	N/A	15	J	0.2	IN
PANEL MDPE	MDPE TO MDPB2 - B10	MICROLOGIC 6.0	1200	600	600	1	24	6	0	N/A	15	J	0.2	IN
PANEL MDPA	MDPA MAIN*	THERMAL MAGNETIC	1250	1200	1200	FIXED	FIXED	8X	200	–	–	–	–	–
PANEL MDPB1	MDPB1 MAIN*	THERMAL MAGNETIC	1250	1200	1200	FIXED	FIXED	8X	200	–	–	–	–	–
PANEL MDPB2	MDPB2 MAIN*	THERMAL MAGNETIC	1250	1200	1200	FIXED	FIXED	8X	200	–	–	–	–	–
PANEL MDPA	MDPA-HGA	THERMAL MAGNETIC	250	225	N/A	FIXED	–	10	–	–	–	–	–	–
PANEL MDPB1	MDPB1-NO LABEL	THERMAL MAGNETIC	400	400	N/A	FIXED	–	5	–	–	–	–	–	–
PANEL MDPB2	MDPB2-H2A	THERMAL MAGNETIC	400	400	N/A	FIXED	–	5	–	–	–	–	–	–

*THE BREAKER WAS HIDDEN BEHIND A DEAD FRONT PANEL AND THEREFORE SETTIINGS AND BREAKER TYPE ARE AN ESTIMATE.

EG FEEDER SCHEDULE

CABLE TAG	FROM	TO	CONDUCTORS WITH GROUND	CONDUIT SIZE (IN) (NOTE 1)	LENGTH (FT)
P1	UTILITY TRANSFORMER	SERVICE ENTRANCE SWITCHBOARD	(3) 4-600MCM	3-4"	30
P2	SERVICE ENTRANCE SWITCHBOARD	ATS	(3) 4-600MCM & 1-#3/0 AWG GND	WIREWAY	25
P3	ENGINE GENERATOR	ATS	(3) 4-500MCM & 1-#2/0 AWG GND	4-4" (1 SPARE)	325
P4	ATS	SWITCHBOARD MDPE	(3) 4-600MCM & 1-#3/0 AWG GND	WIREWAY	20
P5	SWITCHBOARD MDPE	PANEL MDPA	(2) 4-500MCM & 1-#1 AWG GND	2-4" (NEW/EXISTING)	150
P6	SWITCHBOARD MDPE	PANEL MDPB1	(2) 4-500MCM & 1-#1 AWG GND	2-4" (NEW/EXISTING)	150
P7	SWITCHBOARD MDPE	PANEL MDPB2	(2) 4-500MCM & 1-#1 AWG GND	2-4" (NEW/EXISTING)	150
P8	SWITCHBOARD MDPE	PANEL EG TRANSFORMER	3-#1 AWG & 1-#8 AWG GND	1-½"	30
P9	PANEL EG TRANSFORMER	PANEL EG	4-#2 AWG & 1-#8 AWG GND	1-½"	30
P10	PANEL EG	PANEL EG SPD	4-#6 AWG & 1-#8 AWG GND	1"	5

EQUIP	PROPOSED /EXISTING	QTY	EQUIPMENT SCHEDULE
01	PROPOSED	1	500KW KOHLER ENGINE GENERATOR 408/277V 3P, 4W, WITH 2466 GALLON SUB BASE FUEL TANK W/REMOTE SERIAL ANNUNCIATOR III PANEL (120VAC POWER OPTION).
02	PROPOSED	1	MAIN DISTRIBUTION PANEL, 1200A, 480/277V, 3P, 65KA, NEMA 1 FREE STANDING - SQUARE D QED-2 SWITCHBOARD. WITH (3) 1200AF/600AS PJ BREAKERS WITH MICROLOGIC 6.0, (1) 250AF/100AS LJ BREAKER WITH MICROLOGIC 3.3, (1) PROTECTED 120KA SPD
03	PROPOSED	6	GROUND ROD, 3/4" COPPER-CLAD CARBON-STEEL, 8' LONG.
04	PROPOSED	1	POWERSTRIP, 6-RECEPTACLE, 120V, 20A, NEMA 5-20R, HARDWIRED.
05	PROPOSED	1	45KVA STEP DOWN TRANSFORMER, 3-PHASE, 60HZ, DOE 2016, VENTILATED, FLOOR MOUNTED, NEMA 3R ENCLOSURE, INDOOR, HV-480V, LV-208Y/120V, COPPER WINDINGS, 150°C TEMPERATURE RISE, 220°C CLASS, DRY TYPE, HAMMOND POWER SOLUTIONS SG3A0045KB0C. ORDER WITH ILSCO D167-4 GROUNDING BAR.
06	PROPOSED	1	EG PANEL, 100A, 208/120V, 3P, 10KA, NEMA 1, 27 POSITIONS - SQUARE D QO327M100-LOAD CENTER. WITH (1) 100A 3P MAIN, (1) 60A 3P, (2) 20A 3P, (10) 20A 1P. WITH PK27GTACU GROUND BAR KIT, AND QOC30UF FLUSH MOUNT COVER.
07	PROPOSED	1	PANEL EG SPD, RAYVOSS MODEL: 120-3Y-M3-4-06-A-H.
08	EXISTING	1	PANEL MDPA, 1200A, 480/277V, 4-WIRE
09	EXISTING	1	PANEL MDPB1, 1200A, 480/277V, 4-WIRE
10	EXISTING	1	PANEL MDPB2, 1200A, 480/277V, 4-WIRE
11	PROPOSED	1	LUMINARY, 16,400 LUMENS, 120V, 175W, 3000K COLOR TEMPERATURE, 0-10V DIMMING, 0.61 FT^2 EPA, TYPE IV LIGHT DISTRIBUTION; ATLAS LIGHTING PRODUCTS SLP16175LEDT43KMUB, OR EQUIV.
12	PROPOSED	1	DUPLEX GFCI RECEPTACLE, 120V, 20A, NEMA 5-20R, WITH 2"x4" GALVANIZED ELECTRICAL BOX AND METAL FACE PLATE.
13	PROPOSED	2	EMERGENCY LIGHT, 2-HEAD LED, 90 MINUTE RUN-TIME, NI-CAD BATTERY, 120V, EXITRONIX LED-90, OR EQUIV.
14	PROPOSED	2	EMERGENCY EXIT SIGN, 120V, 90 MINUTE RUN-TIME, NI-CAD BATTERY, EXITRONIX ILX-R-EM-WH, OR EQUIV.

EQUIP	PROPOSED /EXISTING	QTY	EQUIPMENT SCHEDULE
15			NOT USED
16	PROPOSED	2	ELECTRIC SPACE HEATER, 4' BASEBOARD, 1P, 208V, 1KW - QMARK 2504. ORDER WITH UNIT MOUNTED THERMOSTATIC CONTROL - QMARK TA2AW.
17	PROPOSED	3	LIGHT FIXTURE, CEILING MOUNT, LED, 120V, 4695 LUMEN, 3000K COLOR TEMPERATURE, NON DIMMING - LITHONIA LBL4 4800LM 80CRI 30K NODIM, OR EQUIV.
18	PROPOSED	2	LIGHTING SWITCH, 3-WAY, 120V, 15A, SINGLE POLE SWITCH. LOCATED 48" ABOVE GROUND.
19	PROPOSED	1	VENTILATION FAN, 500CFM, 120VAC, WITH GRAVITY DAMPER AND BIRD/INSECT SCREEN. CFM SELECT SEF-12 WITH TST120V COOLING THERMOSTAT, OR EQUIV.
20	PROPOSED	1	ATS, 1200A, 480V, 65KA, 4P INCLUDES SWITCHED NEUTRAL, INCLUDES ISOLATION BYPASS SWITCH, FLOOR MOUNTED, 38"W x 91"H x 48"D - KOHLER ADV-8602.
21	PROPOSED	1	MAIN SERVICE DISCONNECT, SWITCHBOARD, 1200A, 480V, 65KA, 3PH, 4W BREAKER WITH GROUND FAULT DETECTION, FLOOR MOUNTED 36"W x 91.5"H x 24"D - SQUARE D QED-2 SWITCHBOARD WITH RJF MICROLOGIC 6.0 TYPE BREAKER.
22	PROPOSED	4	DUPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R, WITH 2"x4" PLASTIC ELECTRICAL BOX AND METAL FACE PLATE.
23	PROPOSED	1	DUPLEX GFCI RECEPTACLE, 120V, 20A, NEMA 5-20R, WITH 2"x4" OUTDOOR ALUMINUM ELECTRICAL BOX, METAL FACE PLATE, AND IN-USE WEATHERPROOF PLASTIC COVER.
24	PROPOSED	1	WIREWAY, 12"x12", 18' LONG, NEMA 1, WITH FRONT ACCESS AND SCREW COVER.
25	PROPOSED	1	EMERGENCY SHUT-OFF SWITCH, LOCKABLE, PILLA WPSKRCLMSO, OR EQUIV.
26	PROPOSED	1	FIRE EXTINGUISHER, DRY CHEMICAL, CLASS ABC, 5LB CAPACITY, BADGER 5MB-6H, OR EQUIV. INCLUDE WALL STICKER TO IDENTIFY FIRE EXTINGUISHER LOCATION.
27	PROPOSED	1	GROUND BAR, COPPER, 12'x4"x1/4" WITH WALL MOUNTING HARDWARE.
28	PROPOSED	1	FIRE PROTECTION EQUIPMENT INCLUDES: (1) SMOKE/HEAT DETECTOR, (1) CEILING MOUNTED HORN STROBE, (2) DUAL ACTION ADDRESSABLE PULL STATIONS, & (1) EXTERIOR WEATHERPROOF NOTIFICATION STROBE. SURGE ARRESTORS WILL BE INSTALLED IN 8"x8" BOXES ON BOTH SIDES OF UNDERGROUND FEED.

SCHEDULES
NO SCALE

REV	APPROVED	DESCRIPTION	JCN	REDLINE DATE	APVD

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CLIENT:
GRAND SUMMIT HOTEL CONDOMINIUM UNIT OWNERS' ASSOCIATION, INC.

GRAND SUMMIT HOTEL AT ATTITASH BACKUP GENERATOR FINAL DESIGN DRAWINGS, 10/31/2019 PANEL/BREAKER/FEEDER/EQUIPMENT SCHEDULES

CUSA CONSULTING LLC

BARTLETT NH

HAMPTON, NH OFFICE

REVIEWED BY:	SUBMITTED BY:	APPROVED BY:
	CUSA PROJECT ENGINEER	AUTHORIZED CORPORATE OFFICER
	DESIGNED: K.R.M.	DATE: / JCN:
	DRAWN: K.R.M.	DRAWING NUMBER: GSH-FINAL-E004 / REV
	CHECKED: C.W.C.	

ISSUED BY:

NOTES

1. SEE DRAWING E004 FOR THE PANEL AND EQUIPMENT SCHEDULES.
2. INSTALL A 120V/15A GFCI DUPLEX RECEPTACLE NEAR BATTERY CHARGER. INSTALL RECEPTACLE SUCH THAT A TECHNICIAN COULD EASILY ACCESS THE RECEPTACLE TO PLUG-IN TROUBLE SHOOTING EQUIPMENT.
3. SPLICE BRANCH CIRCUIT P21 DIRECTLY TO 208V, 3P, 2500W BLOCK HEATER.
4. THE RS-485 COMMUNICATION CABLE RUNS BETWEEN THE EG AND EG REMOTE ANNUNCIATOR PANEL. THE EG REMOTE ANNUNCIATOR PANEL SHALL BE LOCATED BEHIND THE FRONT DESK AND NEXT TO THE FIRE PANEL. THE COMMUNICATION SPEED IS 19.2KBPS AND THE DISTANCE IS APPROXIMATELY 800FT. THE CABLE WILL RUN WITH THE OTHER LOW VOLTAGE CONTROL WIRES BETWEEN THE EG AND THE ELECTRICAL SHELTER AND THEN TO THE MANHOLE. THE CABLE SHALL BE SEPARATED FROM THE POWER CABLES WHILE IN THE MANHOLE. THEN THE CABLE WILL UTILIZE ONE OF THE SPARE DUCTS BETWEEN THE NEW MANHOLE AND THE HOTEL ELECTRICAL ROOM. FROM THERE THE CABLE WILL CONTINUE THROUGH THE HOTEL TO THE FRONT DESK. THIS CABLE SHALL NOT BE RUN IN CONDUIT WITH AC POWER CIRCUITS. THE SHIELD WILL BE BONDED AT THE EG SIDE OF THE CABLE ONLY.
5. ALL WIRING/CABLING NOT SPECIFIED SHALL BE XHHW-2.
6. ALL FIRE PROTECTION CONTROL WIRE USED INSIDE THE ELECTRICAL ENCLOSURE AND HOTEL SHALL BE #16AWG/2 SHIELDED FPLR CABLE. WIRING METHODS SHALL BE IN COMPLIANCE WITH NEC 760. ALL POWER-LIMITED FIRE ALARM CIRCUITS SHALL NOT BE RUN WITH ELECTRIC LIGHT, POWER, CLASS 1, OR NPLFA CIRCUITS.
7. ALL WIRE FOR HORN/STROBE SHALL BE #14AWG THHN.

EG BRANCH CIRCUIT SCHEDULE

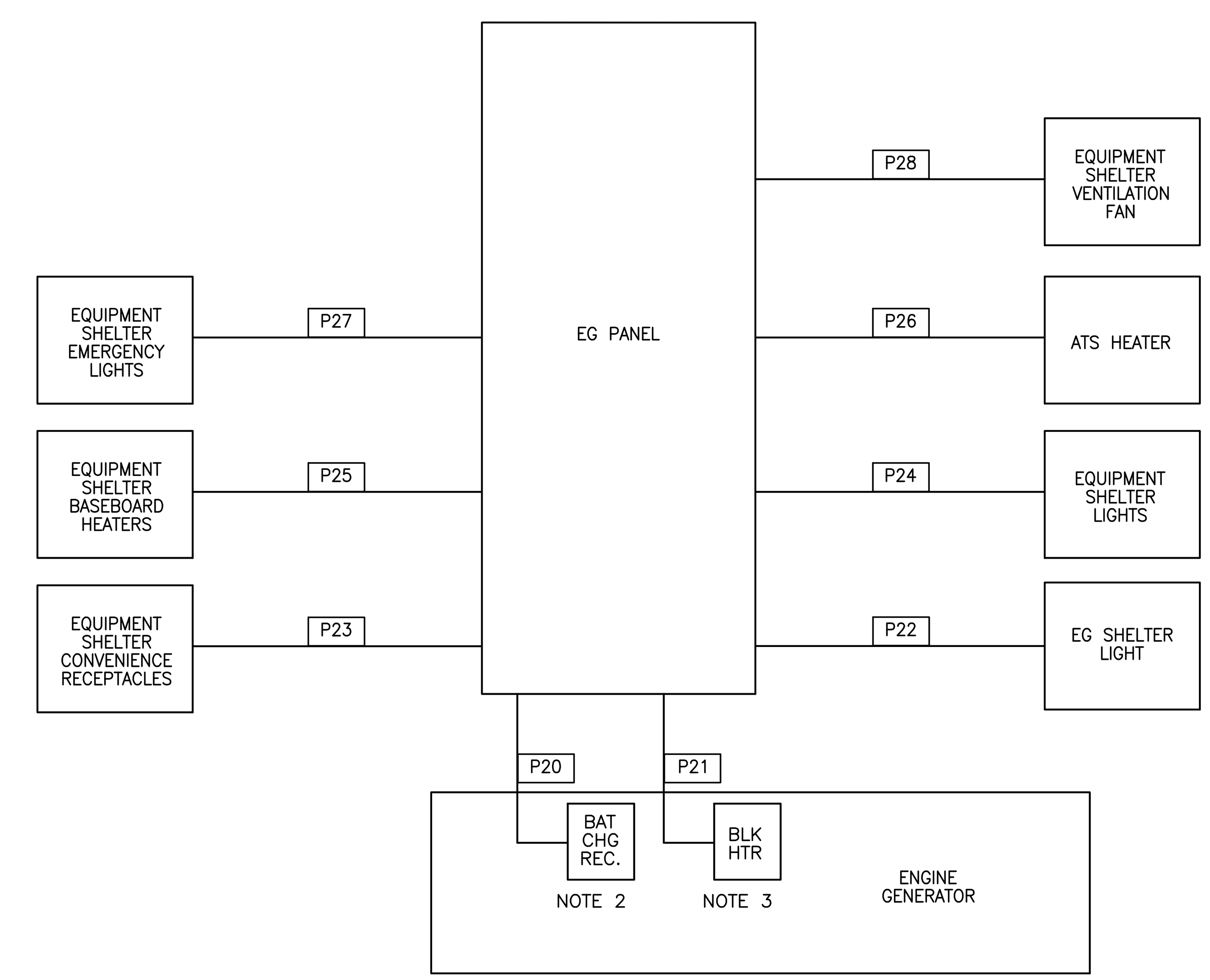
DESIGNATION	FROM	TO	RACEWAY	CONDUCTOR	NOMINAL VOLTAGE	LENGTH (FT)	NOTES
P20	PANEL EG	BATTERY CHARGER RECEPTACLE	(1) 2"C	2-#8 & 1#8 GND XHHW-2 STRANDED	120 VAC	325	POWER CIRCUIT FOR THE BATTERY CHARGER RECEPTACLE.
P21	PANEL EG	BLOCK HEATER RECEPTACLE	RUN WITH P20	3-#8 & 1#8 GND XHHW-2 STRANDED	208 VAC	325	POWER CIRCUIT FOR THE BLOCK HEATER RECEPTACLE. RUN CIRCUIT WITH [P20]
P22	PANEL EG	EG SHELTER LIGHT	RUN WITH P20	2-#10 & 1#10 GND XHHW-2 STRANDED	120 VAC	325	POWER CIRCUIT FOR THE EXTERIOR LIGHT NEAR THE ENGINE GENERATOR. RUN CIRCUIT WITH [P20]
P23	PANEL EG	EQUIPMENT SHELTER CONVENIENCE RECEPTACLES	IN-WALL	#12/2 ROMEX	120 VAC	80	POWER CIRCUIT FOR THE CONVENIENCE RECEPTACLES IN THE EQUIPMENT SHELTER.
P24	PANEL EG	EQUIPMENT SHELTER LIGHTS	IN-WALL	#12/2 ROMEX	120 VAC	25	POWER CIRCUIT FOR THE INTERIOR LIGHTS IN THE EQUIPMENT SHELTER.
P25	PANEL EG	EQUIPMENT SHELTER BASEBOARD HEATERS	IN-WALL	#12/3 ROMEX	208 VAC	40	POWER CIRCUIT FOR (2) BASEBOARD HEATERS IN ELECTRICAL SHELTER.
P26	PANEL EG	ATS HEATER	IN-WALL/WIREWAY	#12/2 ROMEX	120 VAC	35	POWER CIRCUIT FOR ELECTRIC HEATER INSIDE ATS.
P27	PANEL EG	EQUIPMENT SHELTER EMERGENCY LIGHTS	IN-WALL	#12/2 ROMEX	120 VAC	30	POWER CIRCUIT FOR EMERGENCY LIGHTS AND EMERGENCY EXIT SIGN.
P28	PANEL EG	EQUIPMENT SHELTER VENTILATION FAN	IN-WALL	#12/2 ROMEX	120 VAC	20	POWER CIRCUIT FOR VENTILATION FAN.

1 E005 BRANCH CIRCUIT WIRING AND CONDUIT SCHEDULE

EG CONTROL CIRCUIT SCHEDULE

DESIGNATION	FROM	TO	RACEWAY	CONDUCTOR	NOMINAL VOLTAGE	LENGTH (FT)	NOTES
C1	EG CONTROLLER	ATS	(1) 2"C	2-#14 ALL STRANDED	24 VDC	325	ENGINE START CIRCUIT.
C2	EG CONTROLLER	REMOTE EMERGENCY SHUT-OFF SWITCH	RUN WITH C1	2-#14 ALL STRANDED	24 VDC	325	REMOTE EMERGENCY SHUT-OFF SWITCH TO BE MOUNTED INSIDE EQUIPMENT SHELTER.
C3	EG CONTROLLER	REMOTE ANNUNCIATOR PANEL	RUN WITH C1 TO SHELTER THEN WITH C4 TO HOTEL	2-#16 SHIELDED, TWISTED PAIR 2-#16 UNSHIELDED	24 VDC	800	CIRCUIT #1: RS-485 COMM BETWEEN EG & REMOTE ANNUCIATOR PNL. USE LAPP UNITRONIC 301601STP, OR EQUIV (NOTE 4) CIRCUIT #2: DC POWER BETWEEN EG & REMOTE ANNUNCIATOR PNL. USE LAPP UNITRONIC 300 301602, OR EQUIV.
C4	EQUIPMENT SHELTER	FIRE PANEL INSIDE HOTEL	(1) 2"C	2-#12 THWN STRANDED (BK/RD) & 1-2c 16AWG SHIELDED/TWISTED CABLE	24 VDC	135	CIRCUIT #1: 24VDC POWER CIRCUIT FOR INDOOR HORN/STROBE AND OUTDOOR STROBE. CIRCUIT #2: CONTROL CIRCUIT FOR (2) PULL STATION AND (1) SMOKE ALARM. USE LAPP UNITRONIC 301601STP.
C5	EQUIPMENT SHELTER COOLING THERMOSTAT	EQUIPMENT SHELTER VENTILATION FAN	IN-WALL	#12/2 ROMEX	120VAC	15	ACROSS THE LINE THERMOSTATIC CONTROL OF VENTILATION FAN.

2 E005 CONTROL WIRING AND CONDUIT SCHEDULE



3 E005 PANEL E/G CIRCUIT CONNECTION DIAGRAM

REV	APPROVED	DESCRIPTION	JCN	REDLINE DATE	APVD

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GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
BRANCH CIRCUIT AND CONTROLS SCHEDULES

CUSA CONSULTING LLC

BARTLETT NH

REVIEWED BY: | SUBMITTED BY: | APPROVED BY:
CUSA PROJECT ENGINEER | AUTHORIZED CORPORATE OFFICER
DESIGNED: K.R.M. | ISSUED BY: | DATE: | JCN:
DRAWN: K.R.M. | DRAWING NUMBER: GSH-FINAL-E005 | REV
CHECKED: C.W.C.

HAMPTON, NH OFFICE

DRAFT

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10/31/2019 7:59 AM KEVIN MARCHESE

DESIGN NOTES:

1. THIN LINE WEIGHTS INDICATE FACTORY WIRING. THICK LINE WEIGHTS INDICATE SITE WIRING INSTALLED BY CONTRACTOR
2. ALL CONTROL WIRES (IN CONDUITS "CXX") TO BE #14 AWG STRANDED. TERMINATIONS TO BE WIRE COMPRESSION CONNECTORS. NO TERMINATIONS MAY BE MADE UNDER A SCREW WITH A WIRE COMPRESSION CONNECTOR.
3. USE KOHLER WIRING DIAGRAMS TO VERIFY CONNECTIONS. VERIFY ATS CONNECTIONS WITH THE MANUFACTURER'S INSTALLATION MANUAL.
4. SEE DWGS E004-E005 FOR CONDUIT/WIRING AND EQUIPMENT SCHEDULES.
5. CONTRACTOR TO PROVIDE AND INSTALL GFCI DUPLEX RECEPTACLE (NEMA 5-20R) FOR TERMINATION OF THE BATTERY CHARGER POWER CABLE. BATTERY CHARGER COMES WITH 72" PIGTAIL. APPLY STICKER STATING THAT RECEPTACLE IS GOOD FOR 800W.
6. CONTRACTOR TO SPLICE WIRES ORIGINATING FROM EG PANEL DIRECTLY TO THREE PHASE 208V, 2500W BLOCK HEATER. CONTRACTOR TO USE BUTT SPLICES AND ADHESIVE LINED HEAT SHRINK, SUCH AS QUALTEK Q5-3X.
7. RELAYS SHOWN IN DE-ENERGIZED CONDITION.
8. RELAYS CAN BE PROGRAMMED FOR VARIOUS FUNCTIONS.
9. INSTALL 121W RESISTOR X-6058-27 THAT IS PROVIDED WITH THE RSA III PANEL.
10. TERMINALS ARE NOT POLARITY SENSITIVE.

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GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
EG AND ATS WIRING DIAGRAM

CUSA CONSULTING LLC

BARTLETT NH

REVIEWED BY: SUBMITTED BY: CUSA PROJECT ENGINEER
APPROVED BY: AUTHORIZED CORPORATE OFFICER

HAMPTON, NH OFFICE

DESIGNED: K.R.M.
DRAWN: K.R.M.
CHECKED: C.W.C.
ISSUED BY:
DATE: JCN:
DRAWING NUMBER: GSH-FINAL-E006
REV

DRAFT

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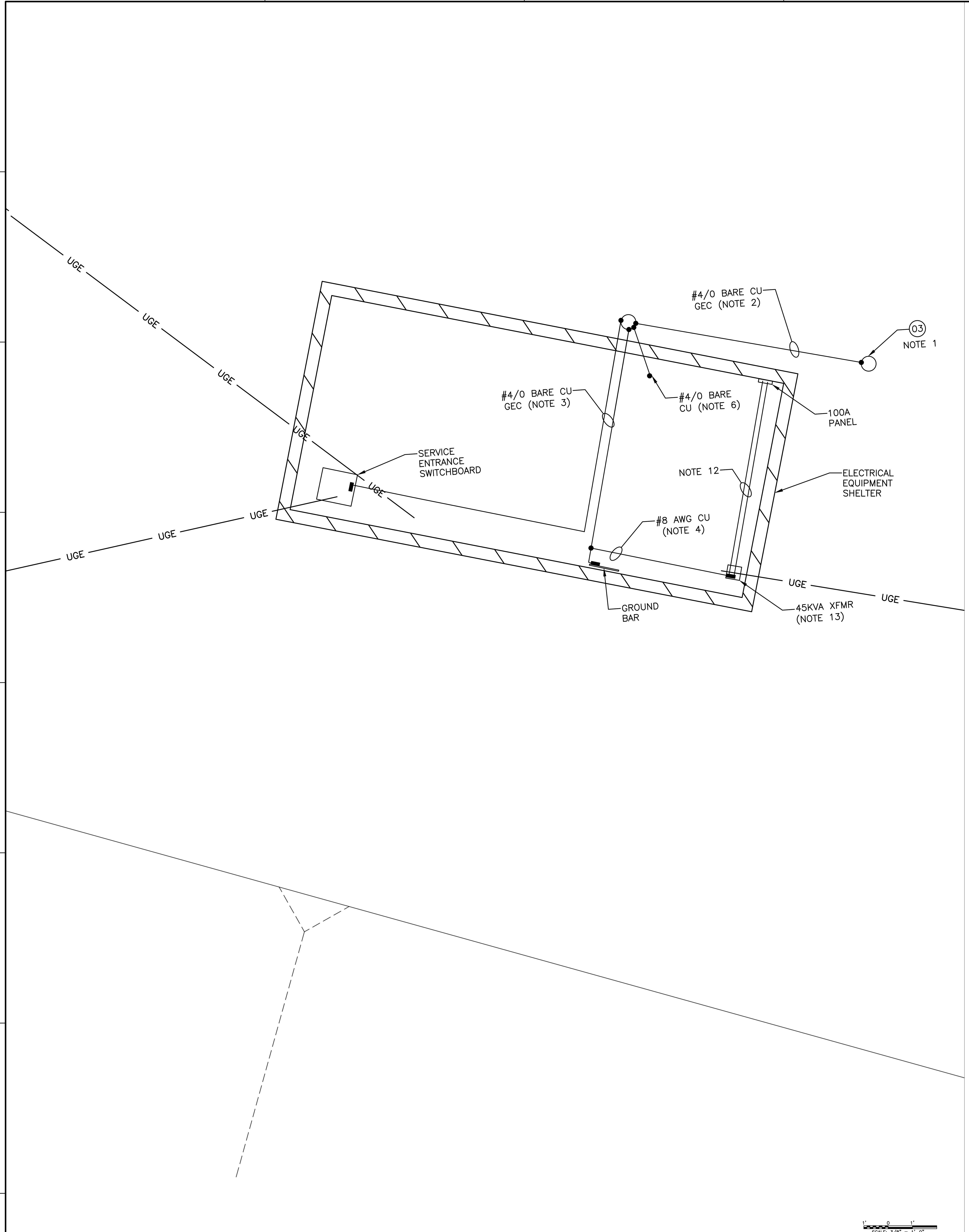
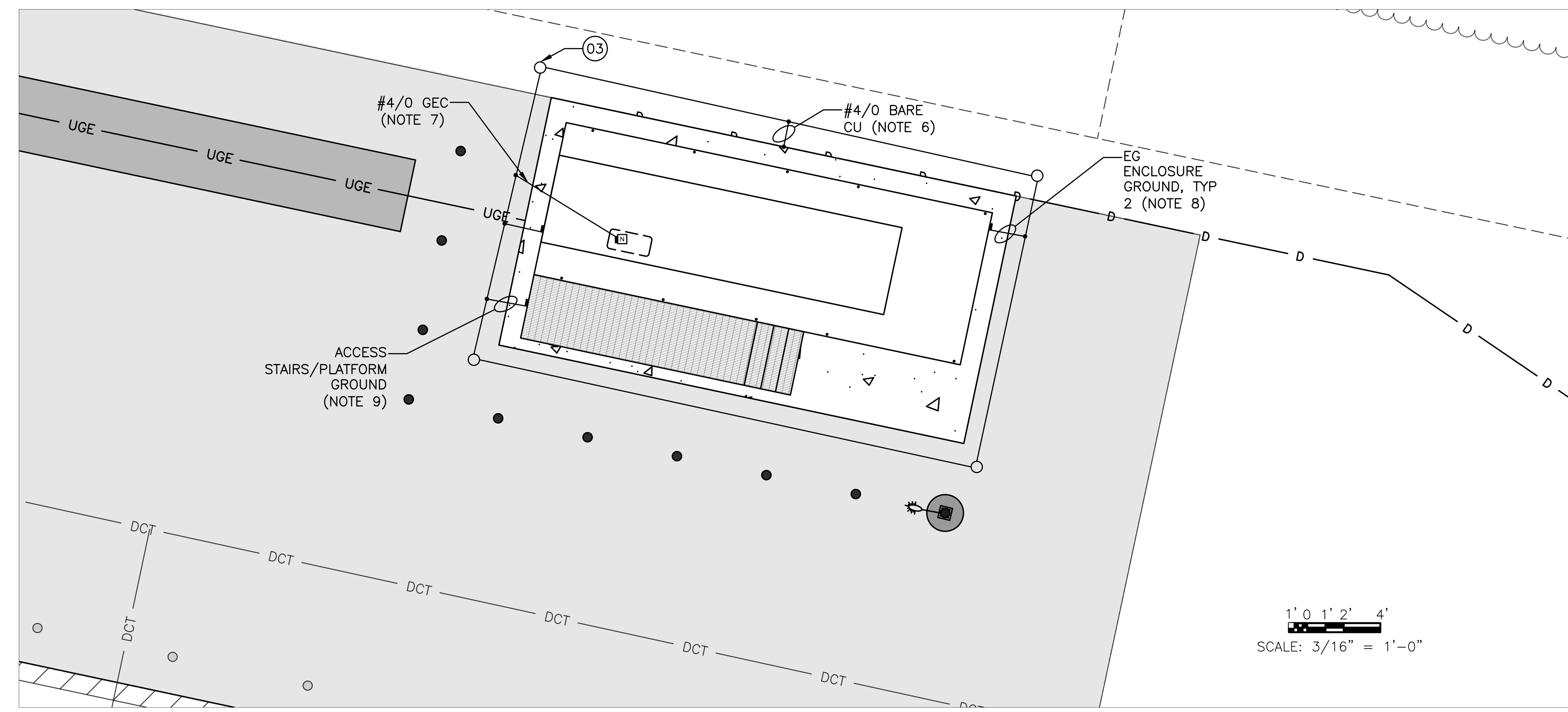
10/31/2019 7:59 AM KEVIN MARCHESE



1
E007
GROUNDING LAYOUT FOR ATS
SCALE: 3/8" = 1'-0"

NOTES

1. INSTALL TWO GROUND RODS TO CREATE THE EARTHING ELECTRODE SYSTEM (EES). THE TWO GROUND RODS MUST BE AT LEAST 6FT APART. THE GROUND RODS MUST BE DRIVEN IN VIRGIN SOIL AND POUNDED TO BELOW GRADE. CONDUCTORS CONNECTED TO GROUND RODS SHALL BE DONE USING AN EXOTHERMIC WELD.
2. INSTALL #4/0 AWG BARE COPPER CONDUCTOR BETWEEN GROUND RODS. CABLE MUST BE AT LEAST 6FT LONG. USE AN EXOTHERMIC WELD WHEN CONNECTING TO GROUND RODS.
3. USE #4/0 AWG COPPER WITH GREEN INSULATION FOR THE GROUNDING ELECTRODE CONDUCTOR (GEC). USE EXOTHERMIC WELDS WHEN CONNECTING TO THE EES GROUND ROD. GEC WILL STUB-UP IN 1" PVC CONDUIT THROUGH CONCRETE PAD IN 2 PLACES; (1) INSIDE THE MAIN SERVICE SWITCHBOARD AND (1) NEAR THE GROUNDING BAR.
4. USE A #8 AWG COPPER WIRE WITH GREEN INSULATION AS THE GROUNDING ELECTRODE CONDUCTOR FOR THE 45KVA TRANSFORMER.
5. THE NEUTRAL ORIGINATING FROM THE UTILITY TRANSFORMER MUST BE BONDED TO GROUND AT THE HIGH SIDE OF THE FIRST BREAKER. THE ATS BREAKERS WILL HAVE A SWITCHED NEUTRAL.
6. BOND THE EES TO THE CONCRETE PAD REBAR USING A #4/0 AWG BARE COPPER CONDUCTOR AND UL LISTED CONNECTOR. USE NON-METALLIC PROTECTIVE SLEEVE, SUCH AS PVC CONDUIT, WHERE CONDUCTOR EXITS CONCRETE.
7. INSTALL A #4/0 AWG BARE COPPER CONDUCTOR TO BOND THE EES TO THE NEUTRAL OF THE GENERATOR. THIS IS THE GEC FOR THE GENERATOR. ROUTE THE #4/0 AWG GROUND UNDER THE SLAB AND UP THROUGH THE BLOCKED OUT SECTION FOR CONDUIT ENTRY.
8. BOND THE EG TO THE EES ON OPPOSITE CORNERS USING A #4/0 AWG BARE COPPER CONDUCTOR.
9. BOND THE EG STAIRS/ACCESS PLATFORM TO THE EES USING A #4/0 AWG BARE COPPER CONDUCTOR.
10. ALL GROUND RODS SHALL BE CONNECTED TO THE EES USING AN EXOTHERMIC WELD.
11. ALL COMPRESSION LUGS MUST BE UL LISTED FOR BONDING AND GROUNDING.
12. THE NEUTRAL AND GROUND WILL BE SEPARATED DURING THIS CABLE RUN. THE NEUTRAL WILL BE A #2 AWG CU AND THE GROUND IS A SUPPLY SIDE BONDING JUMPER AND SHALL BE A #8 AWG CU. THE NEUTRAL AND GROUND SHALL BE CONNECTED TO DIFFERENT BUS BARS INSIDE THE EG PANEL AND THESE BUS BARS SHALL NOT BE CONNECTED.
13. BOND THE NEUTRAL AND THE GROUND ON THE SECONDARY SIDE OF THE 45KVA TRANSFORMER. ADD GROUNDING BAR TO TRANSFORMER TO ACCOMMODATE ALL GROUNDING CONNECTIONS. USE ILSCO D167-4, OR EQUIV.



2
E007
GROUNDING LAYOUT FOR EG
SCALE: 3/16" = 1'-0"

DESIGNED BY:

CUSA CONSULTING LLC
6 MERRILL INDUSTRIAL DR, UNIT 6
HAMPTON, NH 03842
T. (603) 926-5895
WWW.CUSACONSULTING.COM

REV	APPROVED	DESCRIPTION	JCN	REDLINE DATE	APVD

CLIENT:
GRAND SUMMIT HOTEL CONDOMINIUM UNIT OWNERS' ASSOCIATION, INC.

GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
GROUNDING DETAILS

CUSA CONSULTING LLC

BARTLETT NH

REVIEWED BY:
SUBMITTED BY:
CUSA PROJECT ENGINEER
APPROVED BY:
AUTHORIZED CORPORATE OFFICER

DESIGNED: K.R.M.
DRAWN: K.R.M.
CHECKED: C.W.C.
ISSUED BY:
DATE:
JCN:
DRAWING NUMBER: GSH-FINAL-E007
REV

HAMPTON, NH OFFICE

STATE OF NEW HAMPSHIRE
DRAFT
PROFESSIONAL ENGINEER

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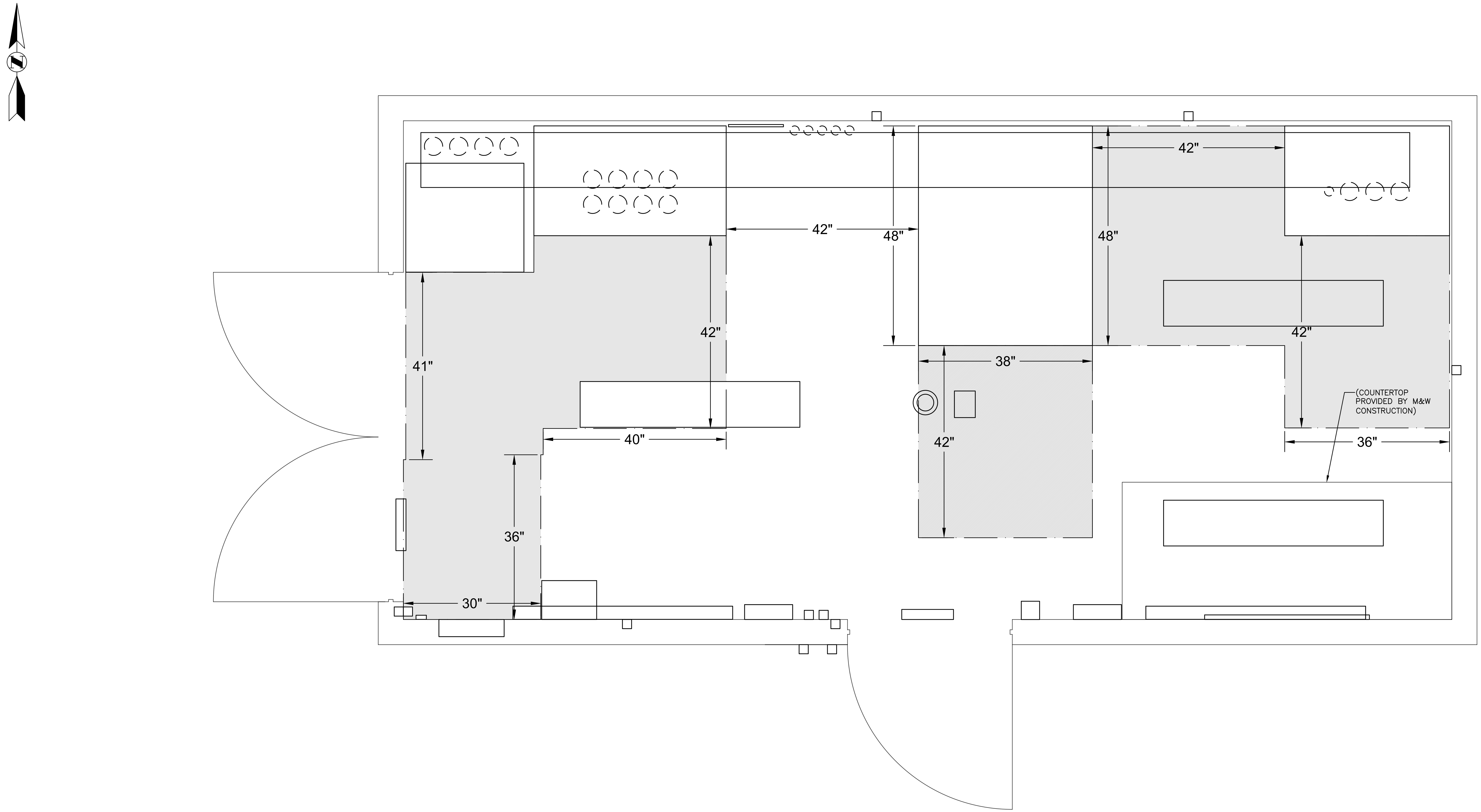

NOTES

1. THE WORKING SPACE IDENTIFIED ON THIS DRAWING MUST BE CLEAR AT ALL TIMES. THIS SPACE ISN'T PERMITTED FOR STORAGE.
2. EQUIPMENT LAYOUT SHOWN IS DIAGRAMMATICAL ONLY. THE EXACT LOCATION OF THE EQUIPMENT SHALL BE FIELD ADJUSTED AS REQUIRED TO ASSURE ADEQUATE WORKING SPACE FOR ALL EQUIPMENT.

1 E008 ELECTRICAL WORK SPACE
SCALE: 1-1/2" = 1'-0"

DESIGNED BY:

CUSA CONSULTING LLC
6 MERRILL INDUSTRIAL DR, UNIT 6
HAMPTON, NH 03842
T. (603) 926-5895
WWW.CUSACONSULTING.COM

CUSA

CUSA CONSULTING LLC

HAMPTON, NH OFFICE

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CLIENT:
GRAND SUMMIT HOTEL CONDOMINIUM UNIT OWNERS' ASSOCIATION, INC.

GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
ELECTRICAL WORK SPACE LAYOUT

BARTLETT NH

REVIEWED BY: | SUBMITTED BY: | APPROVED BY:

CUSA PROJECT ENGINEER | AUTHORIZED CORPORATE OFFICER

DESIGNED: K.R.M.
DRAWN: K.R.M.
CHECKED: C.W.C.
ISSUED BY:
DATE:
JCN:
DRAWING NUMBER: GSH-FINAL-E008
REV

STATE OF NEW HAMPSHIRE LICENSED PROFESSIONAL ENGINEER DRAFT

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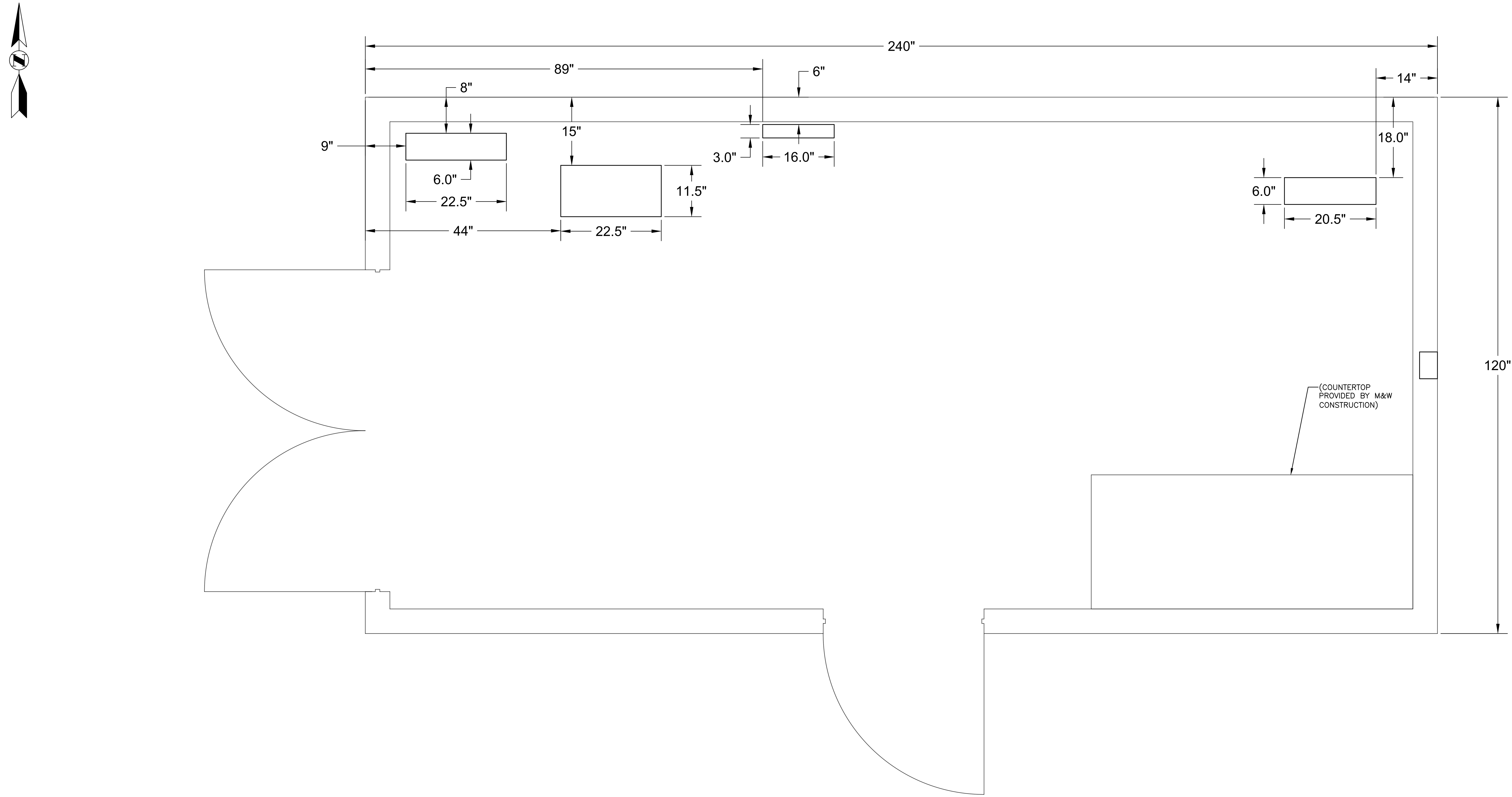

NOTES

1. ALL CONDUITS PENETRATING THE SLAB SHALL HAVE A COUPLING AT THE FLOOR LEVEL.
2. CONTRACTOR SHALL BACKFILL CONDUIT BLOCK-OUT AREAS WITH CONCRETE AFTER CONDUITS HAVE BEEN INSTALLED AND SLAB HAS BEEN POURED.

1 / E009 CONDUIT STUB-UP LOCATIONS
SCALE: 1-1/2" = 1'-0"

DESIGNED BY:

CUSA CONSULTING LLC
6 MERRILL INDUSTRIAL DR, UNIT 6
HAMPTON, NH 03842
T. (603) 926-5895
WWW.CUSACONSULTING.COM

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CLIENT:
GRAND SUMMIT HOTEL CONDOMINIUM UNIT OWNERS' ASSOCIATION, INC.

GRAND SUMMIT HOTEL AT ATTITASH BACKUP GENERATOR FINAL DESIGN DRAWINGS, 10/31/2019 CONDUIT STUB-UP LOCATIONS

CUSA CONSULTING LLC

BARTLETT NH

HAMPTON, NH OFFICE

REVIEWED BY:

SUBMITTED BY:
CUSA PROJECT ENGINEER

APPROVED BY:
AUTHORIZED CORPORATE OFFICER

DESIGNED: K.R.M.
DRAWN: K.R.M.
CHECKED: C.W.C.

ISSUED BY:

DATE: JCN:

DRAWING NUMBER: GSH-FINAL-E009 REV

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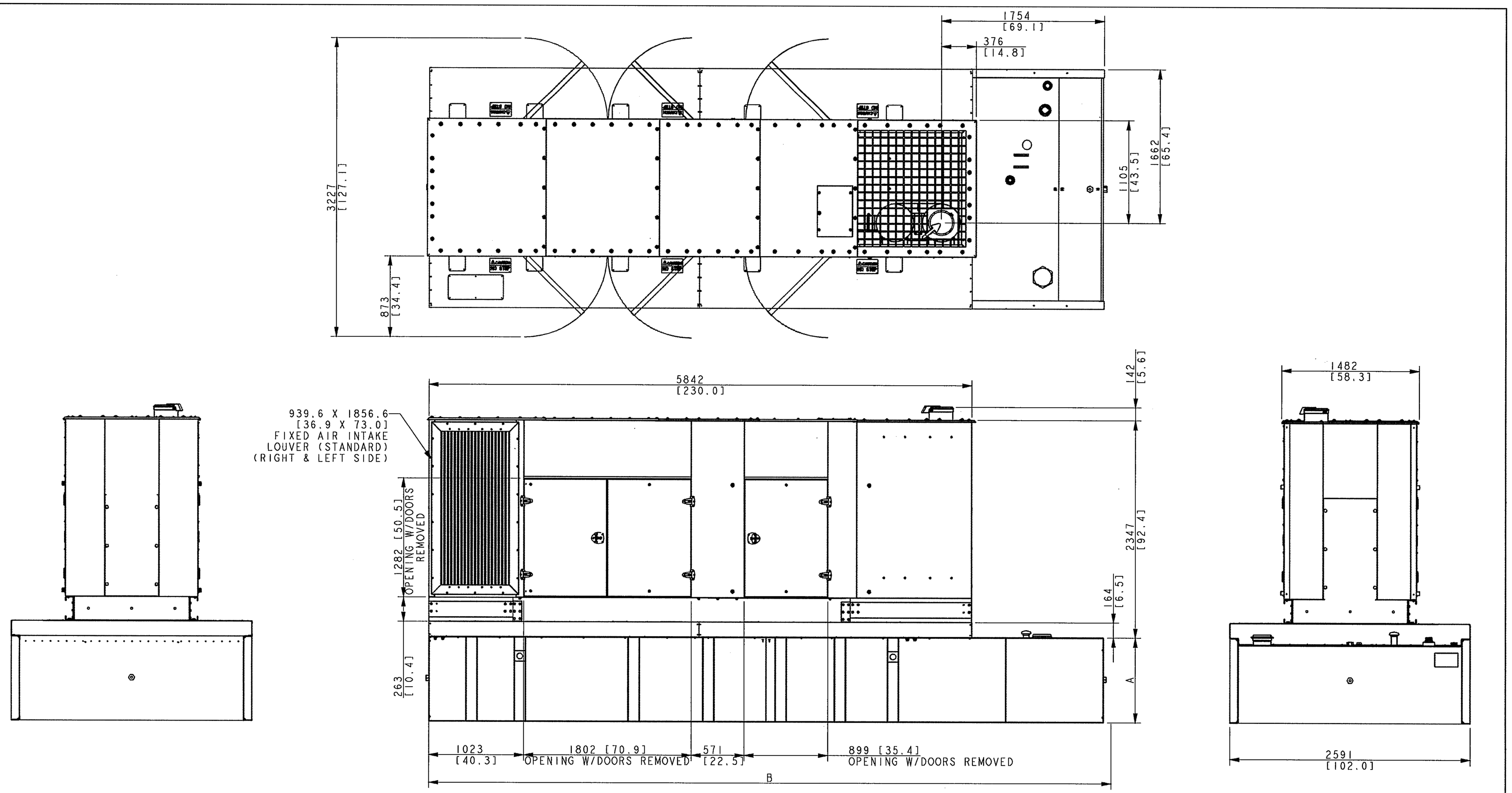

350-500 REOZJB	KG [LBS]
STEEL SOUND L2 ENCLOSURE WEIGHT	1134 [2500] APPROX
ALUM. SOUND L2 ENCLOSURE WEIGHT	680 [1500] APPROX

REV	DATE	ON COMPOSITE DWGS, SEE PART NO. FOR REVISION LEVEL	BY
-	10-25-12	NEW DRAWING [CT28128]	KNN
A	10-10-13	SEE SHEET 7 [CT59787]	SVP
B	2-7-14	SEE SHEETS 1, 5 AND 6 [CT71787]	SAM
C	2-3-17	SEE SHEET 7 [CT170345]	PAS
D	6-11-18	SEE SHEET 7 [CT188044]	DS

UNLESS OTHERWISE SPECIFIED -
1) DIMENSIONS ARE IN MILLIMETERS
2) TOLERANCES ARE:
X.XX ± 0.25
X.X ± 1.0
X ± 1.5
ANGLES ± 0° 30'
SURFACE FINISH MAX.
THIRD ANGLE PROJECTION

APPROVALS		DATE
DRAWN	KNN	10-25-12
CHECKED	PKD	10-25-12
APPROVED	AJD	10-25-12

KOHLER CO. METRIC | PRO-E
POWER SYSTEMS, KOHLER, WI 53044 U.S.A.
THIS DRAWING IN DESIGN AND DETAIL IS KOHLER CO. PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH KOHLER CO. WORK. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.

TITLE: DIMENSION PRINT, 350-500REOZJB SND LVL 2 & TANK
SCALE 0.05 | CAD NO. | SHEET 2 of 7
DWG NO. ADV-8515 | D

TANK INFORMATION				
LITERS [GALLONS] MIN HOURS	GENSETS	DIM A MM [INCH]	DIM B MM [INCH]	TANK WEIGHT KG [LBS] (NO FUEL)
10009 [2644] 72 HOURS STATE	350-500KW	914.4 [36.0]	7264.4 [286.0]	3582 [7898]

350-500KW REOZJB
STEEL & ALUMINUM ENCL.
72HR SOUND L2

MANUFACTURER'S CUT SHEET, INCORPORATED BY REFERENCE

NOT TO SCALE

STATE OF NEW HAMPSHIRE
DRAFT

DESIGNED BY:

CUSA CONSULTING LLC
6 MERRILL INDUSTRIAL DR, UNIT 6
HAMPTON, NH 03842
T. (603) 926-5895
WWW.CUSACONSULTING.COM

REV	APPROVED	DESCRIPTION	JCN	REDLINE DATE	APVD

CLIENT:
GRAND SUMMIT HOTEL CONDOMINIUM UNIT OWNERS' ASSOCIATION, INC.

GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
ENCLOSED GENERATOR DIMENSION PRINT

CUSA CONSULTING LLC

BARTLETT NH

REVIEWED BY:
SUBMITTED BY: CUSA PROJECT ENGINEER
APPROVED BY: AUTHORIZED CORPORATE OFFICER
DESIGNED: C.A.F.
DRAWN: A.J.G.
CHECKED: C.W.C.
ISSUED BY:
DATE:
JCN:
DRAWING NUMBER: GSH-FINAL-M001
REV

HAMPTON, NH OFFICE

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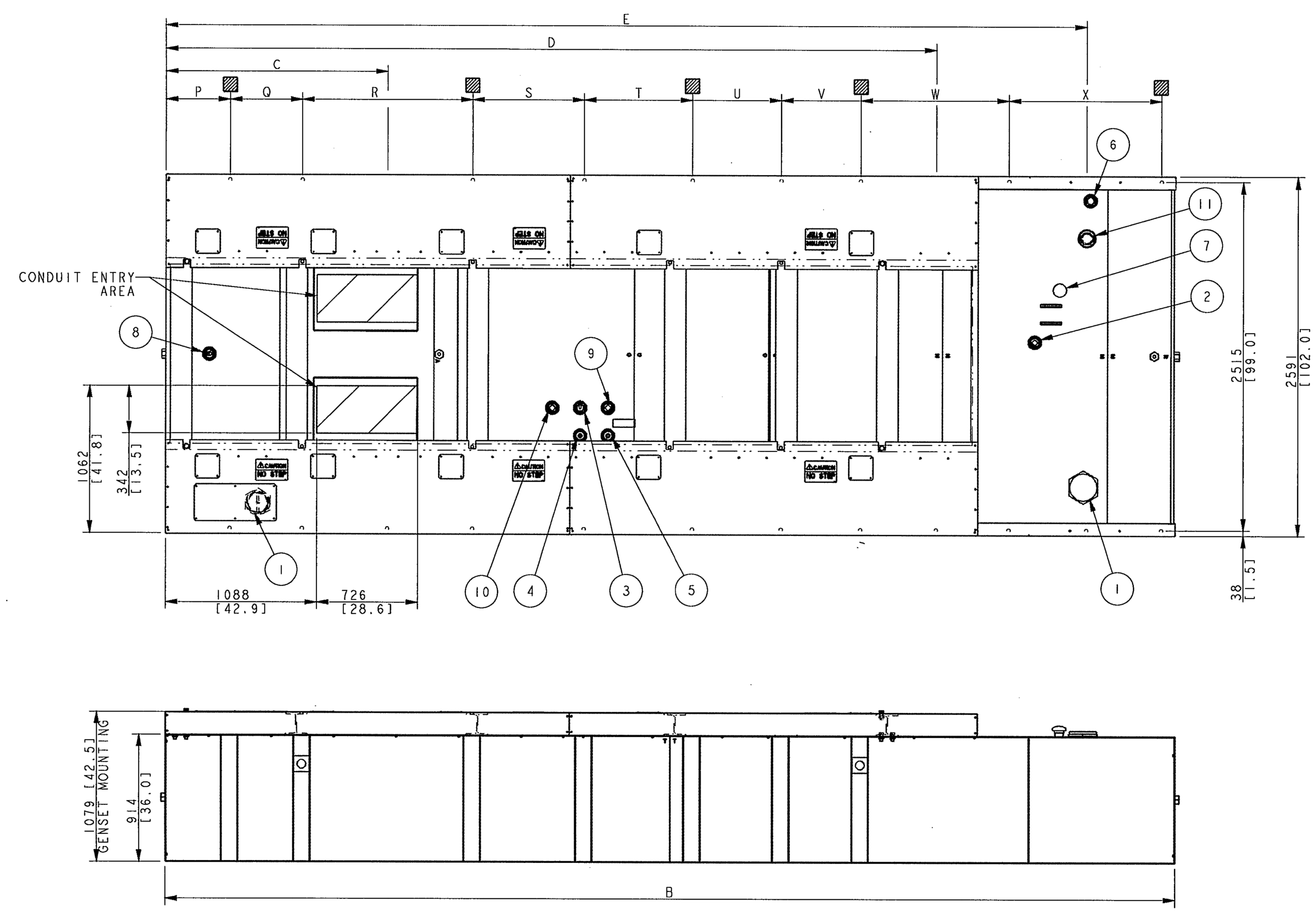
STATE TANK



ITEM	DESCRIPTION
11	FILL CAP, 2" LOCKABLE W/PIPE RISER
10	PLUG, PIPE (1/2"NPTF)
9	PLUG, PIPE (2" NPT)
8	SWITCH, FUEL IN BASIN TOP MTD, 2"
7	VENT, NORMAL
6	GAUGE, FUEL LEVEL, DIRECT READ
5	RETURN, FUEL (1/2" NPT)
4	SUPPLY, FUEL (1/2" NPT)
3	GAUGE, FUEL LEVEL, W/ SENDER
2	PLUG, PIPE (2"NPT)
1	CAP, EMERGENCY VENT

GROUND CLEARANCE I-BEAM MOUNTING HOLE

72 HOUR 350-500kW STATE TANK W/ SOUND L2 HOUSE

TANK INFORMATION

LITERS [GALLONS] MIN HOURS	GENSETS	B	C	D	E	P	Q	R	S	T	U	V	W	X
10009 [2644] 72 HOURS STATE	350-400KW 500KW	7264.4 [286.0]	1595.1 [62.8]	5542.3 [218.2]	6624.3 [260.8]	461.6 [18.2]	520.9 [20.5]	1224.5 [48.2]	804.0 [31.7]	778.5 [30.7]	638.1 [25.1]	570.2 [22.5]	1067.2 [42.0]	1097.9 [43.2]

REV	DATE	ON COMPOSITE DWGS. SEE PART NO. FOR REVISION LEVEL	BY
-	10-25-12	NEW DRAWING [CT28128]	KNN
A	10-10-13	(D-7,D-6,D-5) DIM. C, D & E ADDED; (A-8) TANK INFORMATION TABLE UPDATED [CT59787]	SVP
B	2-7-14	SEE SHEETS 1, 5 AND 6 [CT71787]	SAM
C	2-3-17	VIEWS UPDATED FOR LIFTING PLATES [CT170345]	PAS
D	6-11-18	(A-4) GROUND CLEARANCE I-BEAM MOUNTING HOLE NOTE ADDED [CT188044]	DS

UNLESS OTHERWISE SPECIFIED - 1) DIMENSIONS ARE IN MILLIMETERS 2) TOLERANCES ARE:
X.XX ± 0.25
X.X ± 1.0
X ± 1.5
ANGLES ± 0° 30'
SURFACE FINISH MAX.
THIRD ANGLE PROJECTION

APPROVALS		DATE
DRAWN	KNN	10-25-12
CHECKED	PKD	10-25-12
APPROVED	AJD	10-25-12

KOHLER CO. METRIC PRO-E
POWER SYSTEMS, KOHLER, WI 53044 U.S.A.
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TITLE: DIMENSION PRINT, 350-500REOZJB SND LVL 2 & TANK
SCALE 0.40 CAD NO. SHEET 7 of 7
DWG NO. ADV-8515 D

MANUFACTURER'S CUT SHEET, INCORPORATED BY REFERENCE
NOT TO SCALE

STATE OF NEW HAMPSHIRE – CHARLES W. ... No. ...816 LICENSED PROFESSIONAL ENGINEER – DRAFT

DESIGNED BY:
CUSA CONSULTING LLC
6 MERRILL INDUSTRIAL DR, UNIT 6
HAMPTON, NH 03842
T. (603) 926-5895
WWW.CUSACONSULTING.COM

REV	APPROVED	DESCRIPTION	JCN	REDLINE DATE	APVD

CLIENT:
GRAND SUMMIT HOTEL CONDOMINIUM UNIT OWNERS' ASSOCIATION, INC.

GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
FUEL TANK DIMENSION PRINT

CUSA CONSULTING LLC
HAMPTON, NH OFFICE

BARTLETT NH

REVIEWED BY:
SUBMITTED BY: CUSA PROJECT ENGINEER
APPROVED BY: AUTHORIZED CORPORATE OFFICER
DESIGNED: C.A.F.
DRAWN: A.J.G.
CHECKED: C.W.C.
ISSUED BY:
DATE:
JCN:
DRAWING NUMBER: GSH-FINAL-M002
REV

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10/31/2019 8:00 AM KEVIN MARCHESE

KOHLER. Model: **500REOZJB**

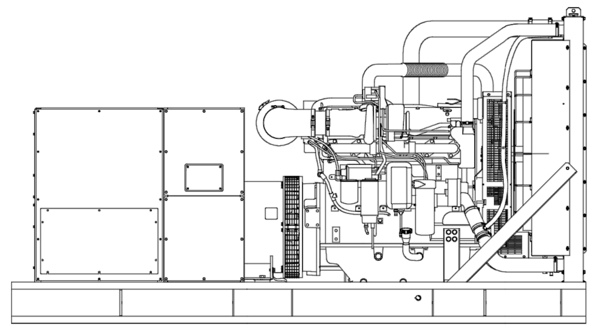
208-600 V **Diesel**

ISO 9001 KOHLER. NATIONALLY REGISTERED

Tier 2 EPA-Certified for Stationary Emergency Applications

Ratings Range

		60 Hz
Standby:	kW	400-510
	kVA	500-638



Standard Features

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The 60 Hz generator set offers a UL 2200 listing.
- The generator set accepts rated load in one step.
- The 60 Hz emergency generator set meets NFPA 110, Level 1, when equipped with the necessary accessories and installed per NFPA standards.
- A one-year limited warranty covers all generator set systems and components. Two- and five-year extended limited warranties are also available.
- Alternator features:
  - The pilot-excited, permanent magnet (PM) alternator provides superior short-circuit capability.
  - The brushless, rotating-field alternator has broadrange reconnectability.
- Other features:
  - Kohler designed controllers for one-source system integration and remote communication. See Controllers on page 3.
  - The low coolant level shutdown prevents overheating (standard on radiator models only).
  - Integral vibration isolation eliminates the need for under-unit vibration spring isolators.
  - An electronic, isochronous governor delivers precise frequency regulation.
  - Multiple circuit breaker configurations.

Generator Set Ratings

				150°C Rise Standby Rating		130°C Rise Standby Rating	
Alternator	Voltage	Ph	Hz	kW/kVA	Amps	kW/kVA	Amps
5M4024	120/208	3	60	450/563	1561	440/550	1527
	127/220	3	60	465/581	1525	465/581	1525
	139/240	3	60	505/631	1519	475/594	1428
	220/380	3	60	400/500	760	400/500	760
	240/416	3	60	450/563	781	440/550	763
	277/480	3	60	505/631	759	475/594	714
5M4027	120/208	3	60	505/631	1752	475/594	1648
	127/220	3	60	505/631	1657	500/625	1640
	139/240	3	60	505/631	1519	505/631	1519
	220/380	3	60	405/506	769	405/506	769
	240/416	3	60	505/631	876	475/594	824
	277/480	3	60	505/631	759	505/631	759
5M4028	120/208	3	60	510/638	1770	510/638	1770
	127/220	3	60	510/638	1673	510/638	1673
	139/240	3	60	510/638	1534	510/638	1534
	220/380	3	60	470/588	893	470/588	893
	240/416	3	60	510/638	885	510/638	885
	277/480	3	60	510/638	767	510/638	767
5M4270	347/600	3	60	505/631	607	505/631	607
5M4272	347/600	3	60	510/638	613	510/638	613

RATINGS: All three-phase units are rated at 0.8 power factor. *Standby Ratings:* The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-8528-1 and ISO-3046-1. Obtain technical information bulletin (TIB-101) for ratings guidelines, complete ratings definitions, and site condition derates. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

Alternator Specifications

Specifications		Alternator
Type		4-Pole, Rotating-Field
Exciter type		Brushless, Permanent-Magnet, Pilot Exciter
Leads: quantity, type		10/12, Reconnectable
		4, 600 V
Voltage regulator		Solid State, Volts/Hz
Insulation:		NEMA MG1
Material		Class H, Synthetic, Nonhygroscopic
Temperature rise		130°C, 150°C Standby
Bearing: quantity, type		1, Sealed
Coupling		Flexible Disc
Amortisseur windings		Full
Rotor balancing		125%
Voltage regulation, no-load to full-load		Controller Dependent
One-step load acceptance		100% of Rating
Unbalanced load capability		100% of Rated Standby Current
Peak motor starting kVA:		(35% dip for voltages below)
480 V	5M4024 (10 lead)	1350
480 V	5M4027 (12 lead)	1550
480 V	5M4028 (10 lead)	1800
600 V	5M4270 (4 lead)	1250
600 V	5M4272 (4 lead)	1750

- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator field.
- Self-ventilated and dripproof construction.
- Superior voltage waveform from a two-thirds pitch stator and skewed rotor.
- Brushless alternator with brushless pilot exciter for excellent load response.

Application Data

Engine

Engine Specifications	
Engine manufacturer	John Deere
Engine model	6135HFG75
Engine type	4-Cycle, Turbocharged, Charge Air-Cooled
Cylinder arrangement	6, Inline
Displacement, L (cu. in.)	13.5 (824)
Bore and stroke, mm (in.)	132 x 165 (5.2 x 6.5)
Compression ratio	16.0:1
Piston speed, m/min. (ft./min.)	594 (1949)
Main bearings: quantity, type	7, Replaceable Insert
Rated rpm	1800
Max. power at rated rpm, kWm (BHP)	563 (755)
Crankshaft material	Forged Steel
Valve material	
Intake/Exhaust	Nickel-Chromium Head
	Chromium-Silicone Stem
Governor: type, make/model	JDEC Electronic L15
Frequency regulation, no-load to full-load	Isochronous
Frequency regulation, steady state	±0.25%
Frequency	Fixed
Air cleaner type, all models	Dry

Exhaust

Exhaust System	
Exhaust manifold type	Dry
Exhaust flow at rated kW, m^3/min. (cfm)	97.2 (3433)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	524 (975)
Maximum allowable back pressure, kPa (in. Hg)	Min. 4 (1.2) Max. 10 (3.0)
Engine exhaust outlet size, mm (in.)	See ADV drawing

Engine Electrical

Engine Electrical System	
Battery charging alternator:	
Ground (negative/positive)	Negative
Volts (DC)	24
Ampere rating	60
Starter motor rated voltage (DC)	24
Battery, recommended cold cranking amps (CCA):	
Qty., CCA rating each	Two, 950
Battery voltage (DC)	12

Fuel

Fuel System	
Fuel supply line, min. ID, mm (in.)	13 (0.50)
Fuel return line, min. ID, mm (in.)	10 (0.38)
Max. lift, fuel pump: type, m (ft.)	Electronic 2.1 (6.8)
Max. fuel flow, Lph (gph)	214.8 (56.7)
Max. return line restriction, kPa (in. Hg)	35 (10.3)
Fuel prime pump	Electronic
Fuel filter	
Secondary	2 Microns @ 98% Efficiency
Primary	10 Microns
Water Separator	Yes
Recommended fuel	#2 Diesel

Lubrication

Lubricating System	
Type	Full Pressure
Oil pan capacity, L (qt.) §	40.0 (42.3)
Oil pan capacity with filter, L (qt.) §	42.0 (44.4)
Oil filter: quantity, type §	1, Cartridge
Oil cooler	Water-Cooled

§ Kohler recommends the use of Kohler Genuine oil and filters.

Application Data

Cooling

Radiator System	
Ambient temperature, °C (°F)*	50 (122)
Engine jacket water capacity, L (gal.)	18 (4.8)
Radiator system capacity, including engine, L (gal.)	67.2 (17.8)
Engine jacket water flow, Lpm (gpm)	400 (106)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	209 (11896)
Heat rejected to air charge cooler at rated kW, dry exhaust, kW (Btu/min.)	116 (6603)
Water pump type	Centrifugal
Fan diameter, including blades, mm (in.)	965 (38)
Fan, kWm (HP)	18 (24)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H_2O)	0.125 (0.5)

* Enclosure with internal silencer reduces ambient temperature capability by 5°C (9°F).

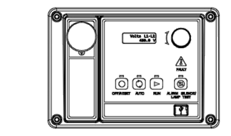
Operation Requirements

Air Requirements	
Radiator-cooled cooling air, m^3/min. (scfm)†	651 (23000)
Cooling air required for generator set when equipped with city water cooling or remote radiator, based on 14°C (25°F) rise, m^3/min. (cfm)†	279 (9867)
Combustion air, m^3/min. (cfm)	38 (1342)
Heat rejected to ambient air:	
Engine, kW (Btu/min.)	38 (2163)
Alternator, kW (Btu/min.)	40 (2277)

† Air density = 1.20 kg/m^3 (0.075 lbm/ft^3)

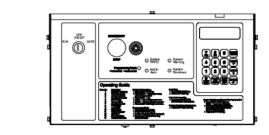
Fuel Consumption	
Diesel, Lph (gph) at % load	Standby Rating
100%	134.5 (35.5)
75%	104.6 (27.6)
50%	75.3 (19.9)
25%	38.8 (10.2)

Controllers



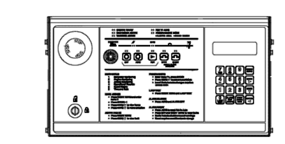
APM402 Controller
Provides advanced control, system monitoring, and system diagnostics for optimum performance and compatibility.
- Digital display and menu control provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a PC via network or serial configuration
- Controller supports Modbus® protocol
- Integrated hybrid voltage regulator with ±0.5% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-161 for additional controller features and accessories.



Decision-Maker® 550 Controller
Provides advanced control, system monitoring, and system diagnostics with remote monitoring capabilities.
- Digital display and keypad provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a PC via network or modem configuration
- Controller supports Modbus® protocol
- Integrated voltage regulator with ±0.25% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-46 for additional controller features and accessories.



Decision-Maker® 6000 Paralleling Controller
Provides advanced control, system monitoring, and system diagnostics with remote monitoring capabilities for paralleling multiple generator sets.
- Paralleling capability with first-on logic, synchronizer, kW and kVAR load sharing, and protective relays
- Digital display and keypad provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a PC via network or modem configuration
- Controller supports Modbus® protocol
- Integrated voltage regulator with ±0.25% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-107 for additional controller features and accessories.

MANUFACTURER'S SPECIFICATION SHEETS, INCORPORATED BY REFERENCE

STATE OF NEW HAMPSHIRE – CHARLES W. COX No. 10816 – LICENSED PROFESSIONAL ENGINEER – DRAFT

REV	APPROVED	DESCRIPTION	JCN	REDLINE DATE	APVD

DESIGNED BY:

CUSA CONSULTING LLC
6 MERRILL INDUSTRIAL DR, UNIT 6
HAMPTON, NH 03842
T. (603) 926-5895
WWW.CUSACONSULTING.COM

CLIENT:
GRAND SUMMIT HOTEL CONDOMINIUM UNIT OWNERS' ASSOCIATION, INC.

GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
GENERATOR SPECIFICATIONS

CUSA CONSULTING LLC

BARTLETT NH

REVIEWED BY:

SUBMITTED BY: CUSA PROJECT ENGINEER

APPROVED BY: AUTHORIZED CORPORATE OFFICER

DESIGNED: C.A.F.
DRAWN: A.J.G.
CHECKED: C.W.C.

ISSUED BY:

DATE: JCN:

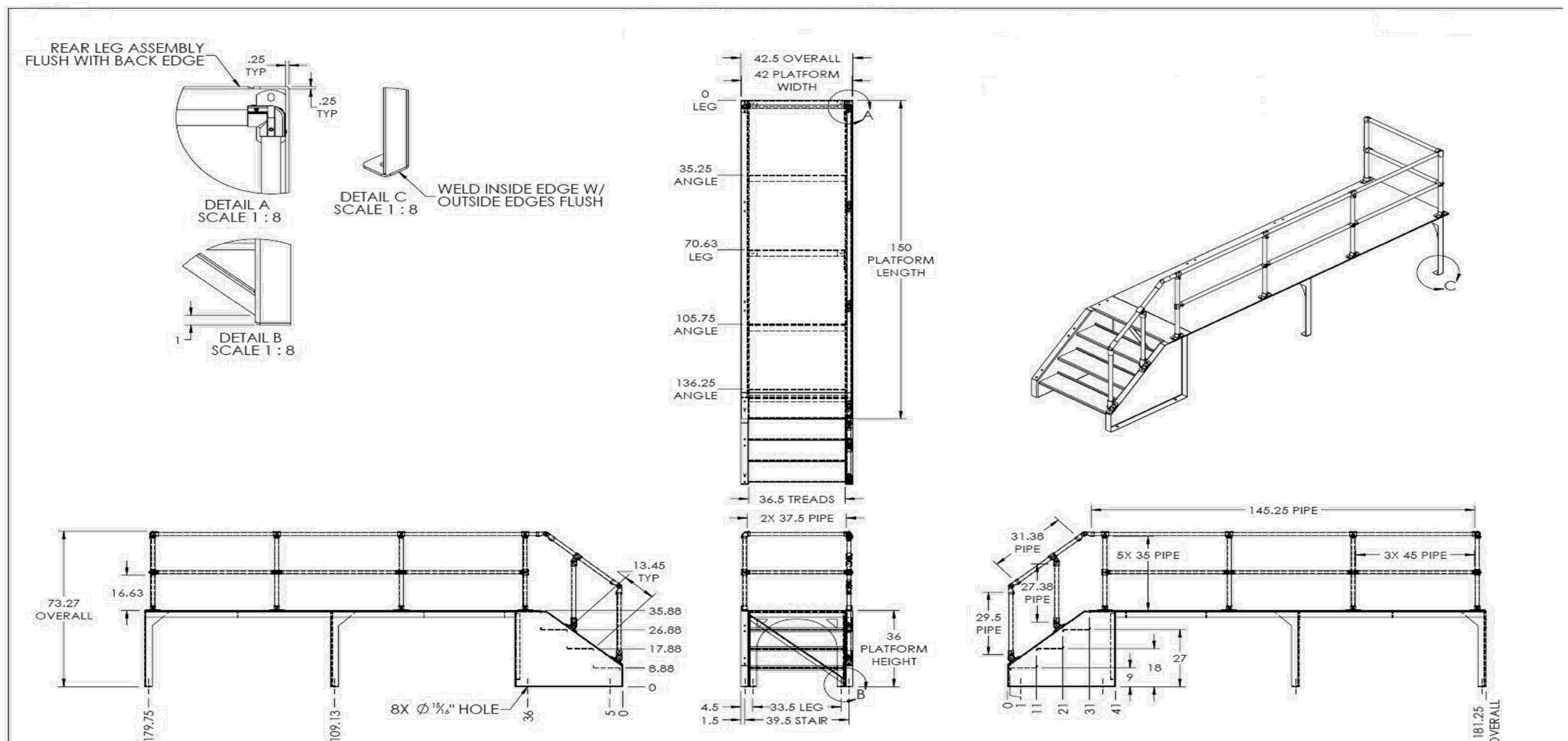
DRAWING NUMBER: GSH-FINAL-M003 REV

HAMPTON, NH OFFICE

j:\grand summit hotel attitash\cusa drawings\final for construction\GSH M-SHEETS Final.dwg
10/31/2019 8:00 AM KEVIN MARCHESE

QUOTE #	STAIR HEIGHT	CATWALK WIDTH	CATWALK LENGTH	WEIGHT
804720	36"	42"	150"	975 LBS

LEFT-HAND ACCESS IS SHOWN. STAIRS/PLATFORM MUST BE FABRICATED MIRRORED FOR RIGHT-HAND ACCESS.



GLOBAL POWER COMPONENTS
2300 S. 51st ST.
MILWAUKEE, WI 53219
PH (414) 475-3000 FAX (414) 475-3441
www.globalpowercomponents.com

THIRD ANGLE PROJECTION

CUSTOMER NAME: KOHLER COMPANY
JOB REFERENCE: GM74974-TPL
DRAWING REFERENCE: X

DATE: 7/27/2018
DRAWN BY: RJK
DESCRIPTION: PLATFORM ASSEMBLY
SIZE: B
DWG. NO. 804720-00
SCALE: 1:36
REV.
SHEET 2 OF 4

NOTE: ALL DIMENSION ARE IN INCH UNITS

REV	DATE	ON COMPOSITE DWGS. SEE PART NO. FOR REVISION LEVEL	BY
B	8-14-18	(A-4)GM74974-TPL8 ADDED; SEE SHEET 1, 2 & 3 [CT188677]	SRB

DO NOT SCALE. REFERENCE THE MODEL FOR ALL UNSPECIFIED DIMENSIONS

UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS IN MILLIMETERS
GENERAL TOLERANCES: X.XX ± 0.25, X.X ± 1.0, X ± 1.5, ANGLES ± 1° ST
SURFACE FINISH MAX.
THIRD ANGLE PROJECTION

KOHLER.
KOHLER, WISCONSIN 53044
THIS DRAWING IN DESIGN AND DETAIL IS KOHLER CO. PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH KOHLER CO. WORK. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.

TITLE: DWG, STAIR, PLATFORM AND CATWALK

APPROVALS		DATE
DRAWN	SRB	8-14-18
CHECKED	DPM	8-14-18
APPROVED	DPM	8-14-18

SHEET 4 of 4
DWG NO. GM74974 D

GM74974-TPL8
STAIRS AND CATWALK, FREESTANDING, 2 DOOR

MANUFACTURER'S CUT SHEET, INCORPORATED BY REFERENCE

NOT TO SCALE

STATE OF NEW HAMPSHIRE — LICENSED PROFESSIONAL ENGINEER — DRAFT

DESIGNED BY:
CUSA CONSULTING LLC
6 MERRILL INDUSTRIAL DR, UNIT 6
HAMPTON, NH 03842
T. (603) 926-5895
WWW.CUSACONSULTING.COM

REV	APPROVED	DESCRIPTION	JCN	REDLINE DATE	APVD

CLIENT:
GRAND SUMMIT HOTEL CONDOMINIUM UNIT OWNERS' ASSOCIATION, INC.

GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
STAIRS/PLATFORM ASSEMBLY DETAILS

CUSA CONSULTING LLC

BARTLETT NH

REVIEWED BY:
SUBMITTED BY: CUSA PROJECT ENGINEER
APPROVED BY: AUTHORIZED CORPORATE OFFICER

DESIGNED: C.A.F.
DRAWN: A.J.G.
CHECKED: C.W.C.
ISSUED BY:
DATE:
JCN:
DRAWING NUMBER: GSH-FINAL-M004
REV

HAMPTON, NH OFFICE

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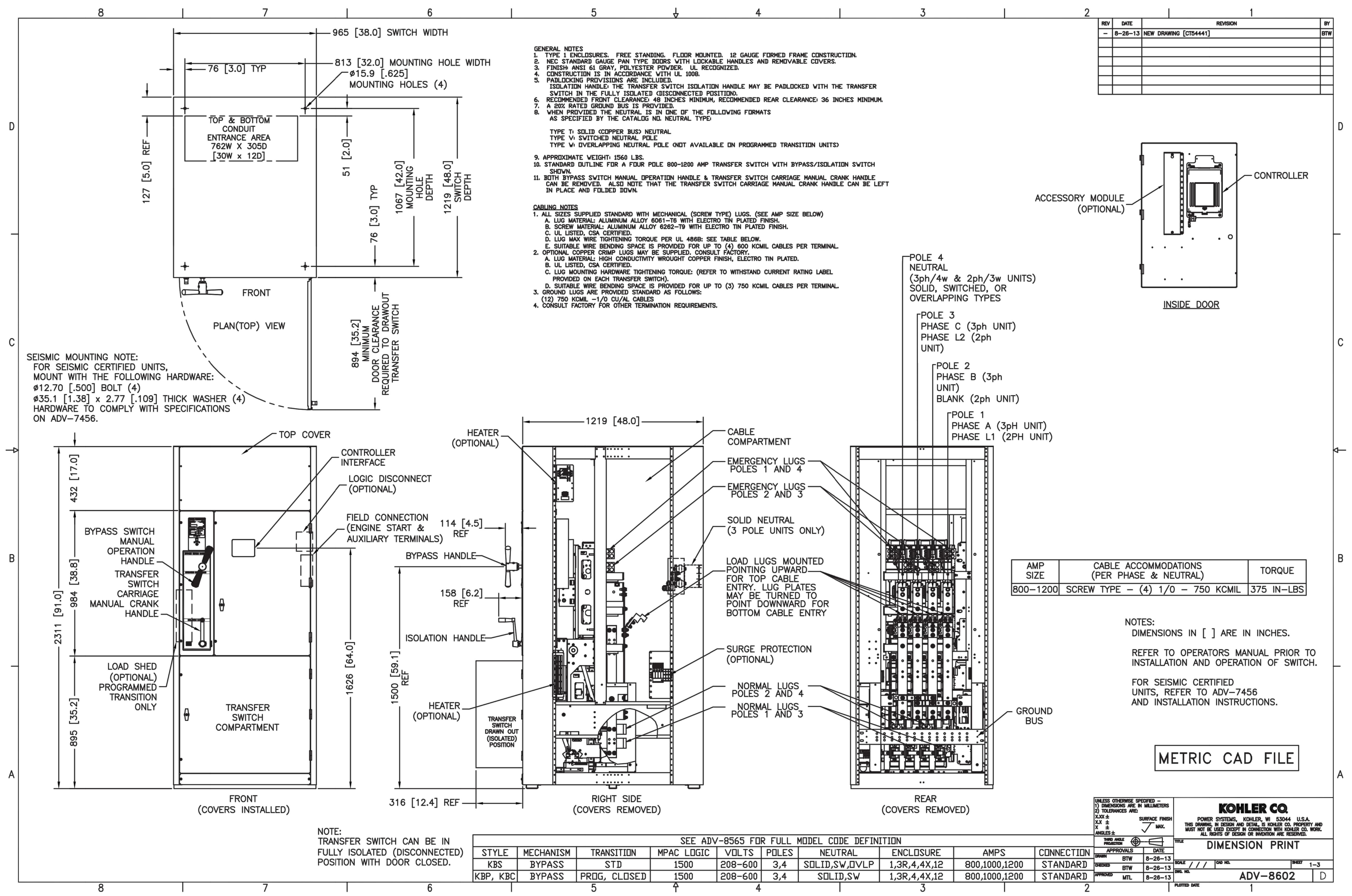
10/31/2019 8:01 AM KEVIN MARCHESE



MANUFACTURER'S CUT SHEET, INCORPORATED BY REFERENCE

NOT TO SCALE

STATE OF NEW HAMPSHIRE ... LICENSED PROFESSIONAL ENGINEER — DRAFT

DESIGNED BY:	REV	APPROVED	DESCRIPTION	JCN	REDLINE DATE	APVD

DESIGNED BY:

CUSA CONSULTING LLC
6 MERRILL INDUSTRIAL DR, UNIT 6
HAMPTON, NH 03842
T. (603) 926-5895
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CLIENT:
GRAND SUMMIT HOTEL CONDOMINIUM UNIT OWNERS' ASSOCIATION, INC.

GRAND SUMMIT HOTEL AT ATTITASH
BACKUP GENERATOR
FINAL DESIGN DRAWINGS, 10/31/2019
ATS DIMENSIONAL DRAWING

CUSA CONSULTING LLC

BARTLETT NH

REVIEWED BY: | SUBMITTED BY: | APPROVED BY:

CUSA PROJECT ENGINEER | AUTHORIZED CORPORATE OFFICER

DESIGNED: K.R.M. | ISSUED BY: | DATE: | JCN:

DRAWN: A.J.G. | DRAWING NUMBER: GSH-FINAL-M005 | REV

CHECKED: C.W.C.

HAMPTON, NH OFFICE

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10/31/2019 8:01 AM KEVIN MARCHESE