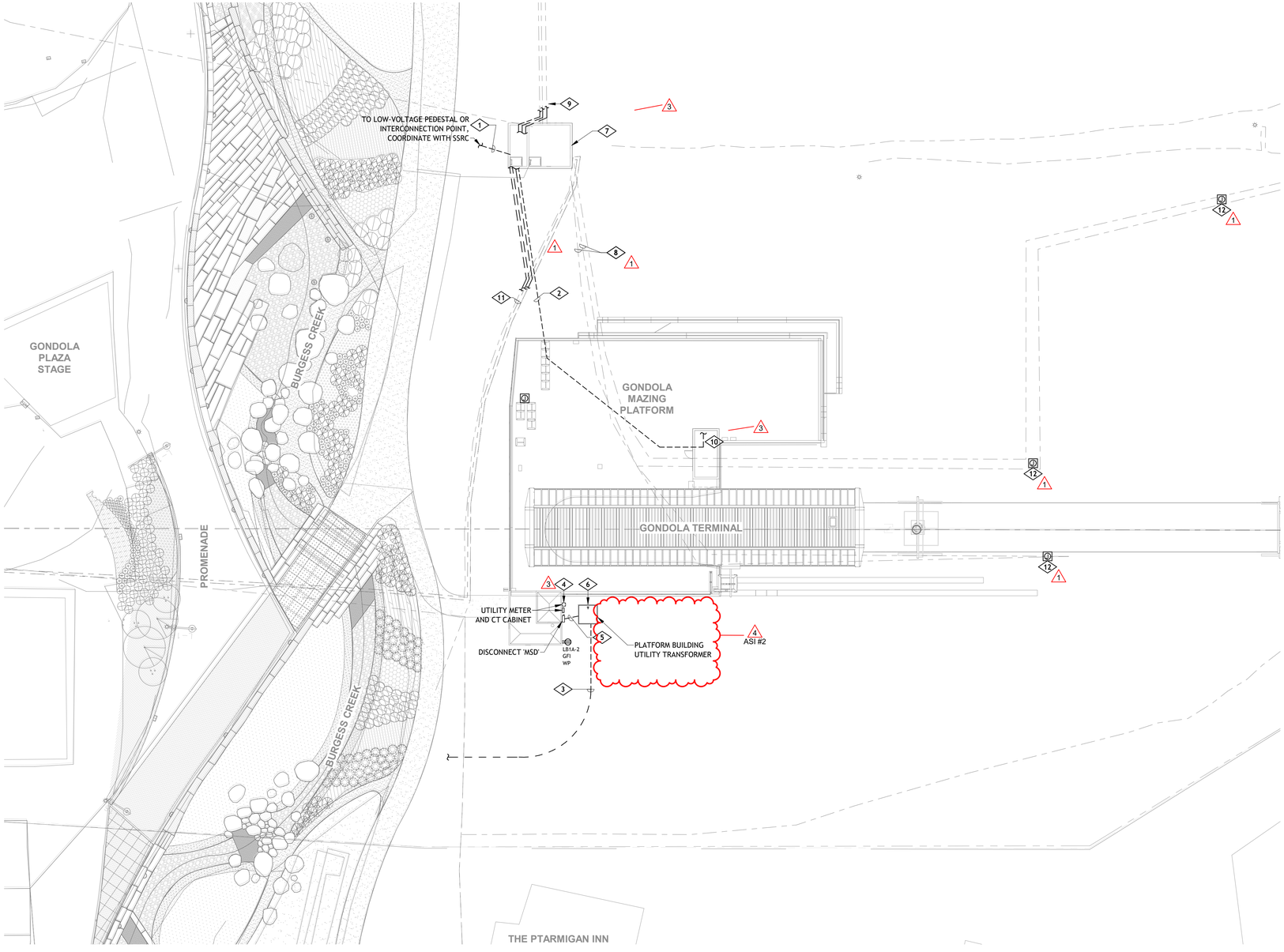


2 | FIRST LEVEL-ELECTRICAL SITE PLAN

E010 | 1" = 20'-0"

SITE GENERAL NOTES

A.	ALL EXTERIOR LIGHTING CIRCUITS SHALL UTILIZE A MINIMUM WIRE SIZE OF #8AWG COPPER, UON.

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1	PROVIDE (3) 3" AND (1) 2" CONDUITS FOR FIBER OPTIC AND COMMUNICATIONS SERVICE CABLING ROUTED FROM SERVICE INTERCONNECTION POINT INTO NEW UNDERGROUND ELECTRICAL VAULT FOR ROUTING TO OPERATOR CABIN, TOWER #4 AND CHRISTIE PEAK CHAIR LIFT. EC SHALL COORDINATE EXACT LOW-VOLTAGE CONDUIT ROUTING AND SIZING REQUIREMENTS WITH CIVIL SITE UTILITY DRAWINGS AND OWNER (SSRC) PRIOR TO COMMENCING WORK. REFER TO VAULT ELECTRICAL PLAN, SHEET E300, AND LOW-VOLTAGE RISER DIAGRAM, SHEET E600 , FOR ADDITIONAL INFORMATION.
2	PROVIDE (2) 3" CONDUITS FOR FIBER OPTIC AND COMMUNICATIONS SERVICE CABLING ROUTED THROUGH NEW UNDERGROUND ELECTRICAL VAULT TO OPERATORS CABIN. REFER TO CIVIL SITE UTILITY DRAWINGS FOR EXACT ROUTING AND SIZING REQUIREMENTS. REFER TO LOW-VOLTAGE RISER DIAGRAM, SHEET E600 , FOR ADDITIONAL INFORMATION.
3	APPROXIMATE ROUTING OF NEW UNDERGROUND UTILITY PRIMARY FROM NEW UTILITY TRANSFORMER TO UTILITY INTERCONNECTION POINT WITHIN EXISTING UTILITY EASEMENT. COORDINATE EXACT ROUTING AND REQUIREMENTS WITH ELECTRICAL UTILITY (YAMPA VALLEY ELECTRIC ASSOCIATION) AND GENERAL CONTRACTOR PRIOR TO COMMENCING WORK. COORDINATE FINAL ROUTING WITH ALL OTHER NEW/EXISTING UNDERGROUND UTILITIES INCLUDING FUTURE BASE BUILDING ELECTRICAL UTILITY PRIMARY/SECONDARY ROUTING PRIOR TO EXCAVATING.
4	THE EC SHALL FURNISH AND INSTALL THE REQUIRED METER HOUSING AS COORDINATED WITH YVEA. UTILITY SHALL FURNISH, INSTALL, AND CONNECT THE METER IN THAT HOUSING. ALL COSTS FOR WORK DESCRIBED ABOVE TO BE PERFORMED BY UTILITY SHALL BE CARRIED AS PART OF THE PROJECT BUDGET AND SHALL BE PAID BY THE CONTRACTOR. TRANSFORMER CONCRETE PAD BY GC, COORDINATE PAD AND CLEARANCE REQUIREMENTS WITH UTILITY ELECTRICAL SERVICE INSTALLATION MANUAL.
5	APPROXIMATE ROUTING OF NEW UNDERGROUND ELECTRICAL SECONDARY FEEDER FROM UTILITY TRANSFORMER TO NEW BUILDING ELECTRICAL SERVICE CT CABINET AND MAIN DISCONNECT LOCATED ON BUILDING EXTERIOR. REFER TO ELECTRICAL ONE-LINE DIAGRAM FOR MORE INFORMATION.
6	ANTICIPATED LOCATION OF NEW 480/277V, 3-PHASE PAD MOUNTED UTILITY TRANSFORMER. IT IS ANTICIPATED THAT UTILITY (YVEA - YAMPA VALLEY ELECTRIC ASSOCIATION) WILL PROVIDE BORING/TRENCHING FOR ALL PRIMARY CONDUIT BETWEEN UTILITY CONNECTION AND THE TRANSFORMER. UTILITY SHALL PROVIDE ALL PRIMARY CONDUIT AND WIRING TO THE TRANSFORMER, INCLUDING TRENCHING BETWEEN THE NEAREST UTILITY CONNECTION POINT AND THE PRIMARY CONNECTION AT THE TRANSFORMER. THE EC SHALL COORDINATE ROUTING AND TERMINATION IN THE FIELD AS TO ACHIEVE BUILDING POWER ACTIVATION. THE EC SHALL PERFORM ALL TRENCHING AND BACKFILLING ON THE SECONDARY SIDE OF THE TRANSFORMER. UTILITY SHALL MAKE ALL CONNECTIONS OF PRIMARY AND SECONDARY CABLING AT THE TRANSFORMER LANDINGS.
7	NEW UNDERGROUND VAULT STRUCTURE. EXISTING SKI SCHOOL BLOCKHOUSE 1 TO BE DEMOLISHED AS REQUIRED TO ACCOMMODATE NEW VAULT CONSTRUCTION. NEW VAULT TO HOUSE NEW/RELOCATED ELECTRICAL EQUIPMENT AND SNOW MAKING EQUIPMENT. REFER TO NEW VAULT ELECTRICAL ONE-LINE DIAGRAMS AND ENLARGED PLANS, SHEET E300, FOR ADDITIONAL INFORMATION.
8	EXISTING UNDERGROUND ELECTRICAL AND TELECOMMUNICATIONS CONDUITS AND CABLING FROM BLOCKHOUSE TO DEMOLISHED SKI CARPET LIFT EQUIPMENT SHALL BE REMOVED IN THEIR ENTIRETY BACK TO SOURCE AS REQUIRED TO ACCOMMODATE NEW PLATFORM BUILDING CONSTRUCTION.
9	EXISTING UNDERGROUND POWER AND TELECOMMUNICATIONS SERVICES (CONDUIT AND CABLING) SUPPLYING DEMOLISHED BLOCKHOUSE FROM CHRISTIE PEAK CHAIR LIFT. EXISTING POWER CONDUIT AND WIRING ANTICIPATED TO BE REMOVED AND REPLACED AS REQUIRED TO PROVIDE NEW UNDERGROUND POWER FEEDER FROM CHRISTIE PEAK CHAIR LIFT TO NEW VAULT ELECTRICAL PANEL HV1. CONTRACTOR SHALL PROVIDE NEW TRENCH FROM EXISTING CHRISTIE PEAK CHAIR LIFT TO NEW VAULT LOCATION AS NECESSARY TO ACCOMMODATE NEW CONDUIT INSTALLATION. REFER TO VAULT ELECTRICAL ONE-LINE DIAGRAM, SHEET E300, FOR ADDITIONAL INFORMATION. EXISTING POWER AND TELECOMMUNICATIONS CONDUIT ANTICIPATED TO BE RE-ROUTED/EXTENDED AS NECESSARY TO TERMINATE IN NEW VAULT ELECTRICAL ROOM FOR NEW PATHWAY AS REQUIRED. EC SHALL VERIFY EXISTING CONDUIT SIZING AND ROUTING IN FIELD. COORDINATE EXACT NEW COMMUNICATIONS CONDUIT SIZING/REQUIREMENTS AND ROUTING WITH OWNER PRIOR TO COMMENCING WORK.
10	ALL NEW UNDERGROUND CONDUIT ROUTED TO OPERATOR CABIN SHALL BE ROUTED THROUGH NEW STRUCTURAL BLOCK OUT IN OPERATOR CABIN FOUNDATION. EC SHALL COORDINATE EXACT BLOCK OUT LOCATION AND INSTALLATION REQUIREMENTS OF ALL ASSOCIATED CONDUIT/WIRING FOR OPERATOR CABIN POWER/TELECOMMUNICATIONS WITH DOPPELMAYR AND STRUCTURAL DRAWINGS PRIOR TO COMMENCING WORK. REFER TO ELECTRICAL FIRST LEVEL POWER PLAN, #1/E111, FOR ADDITIONAL INFORMATION.
11	APPROXIMATE ROUTING OF EXISTING TO REMAIN POWER AND COMMUNICATIONS CONDUITS TO EXISTING TO REMAIN BUCKAROO SKI CARPET LIFT. MAINTAIN ANY EXISTING CONDUIT/WIRING CONNECTIONS AND RE-CONNECT POWER TO NEW/RELOCATED PANEL IN NEW VAULT ELECTRICAL ROOM. EC SHALL RE-ROUTE EXISTING CONDUIT/WIRING AS NECESSARY TO RE-CONNECT POWER. REFER TO VAULT ELECTRICAL ONE-LINE DIAGRAMS, SHEET E300, FOR ADDITIONAL INFORMATION.
12	APPROX. LOCATION OF EXISTING CARPET LIFT POWER/COMMUNICATIONS TERMINATION POINT TO BE REMOVED. COORDINATE EXACT LOCATION IN FIELD AND VERIFY TIMING OF REMOVAL WITH OWNER PRIOR TO COMMENCING WORK.

CONSTRUCTION SET 03/29/21

AE DESIGN
Integrated Lighting and Electrical Solutions
1900 Wazee Street #205 | Denver, CO 80202 | 303.296.3034
aedesign-inc.com
Project #: 5155.00

6/9/2021 5:24:19 PM FILE: SBG PLATFORM v19.rvt

COLORADO REGISTERED PROFESSIONAL ENGINEER 35717 06/11/2021

NOTICE: DUTY OF COOPERATION

Release of these plans contemplates further cooperation among the owner, his contractor and the architect. Design and construction are complex. Although the architect and his consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for the consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect of responsibility for all consequences arriving out of such changes.

REVISIONS

No.	Description	Date
1	ADDENDUM #1	3/12/2021
3	ASI #1	4/19/2021
4	ASI #2	6/7/2021

STEAMBOAT GONDOLA RELOCATION
STEAMBOAT SPRINGS, CO

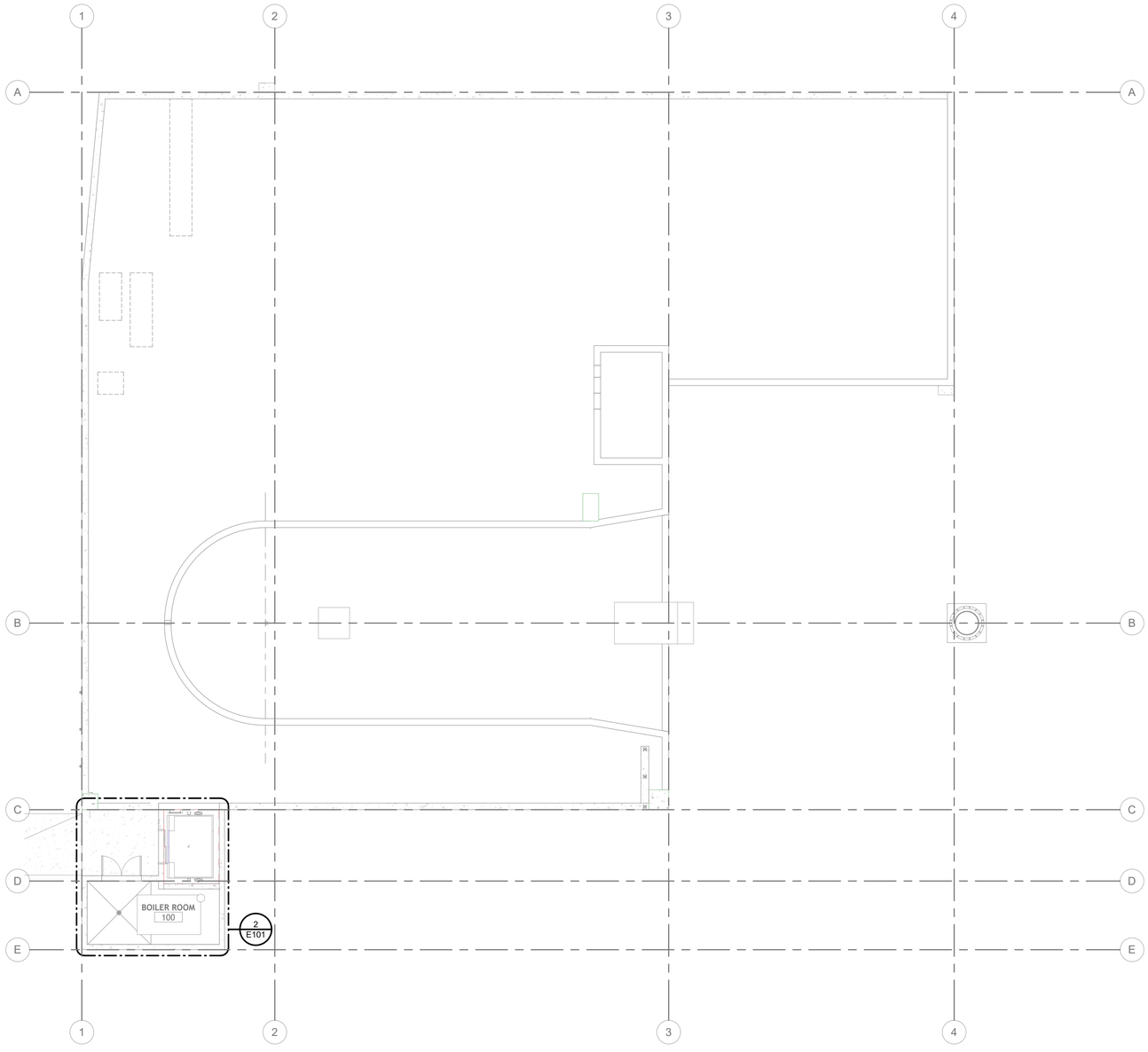
ERIC SMITH ASSOCIATES, P.C.
1919 SEVENTH STREET
BOULDER, COLORADO, 80302
(303) 442-5456, (303) 442-4745 FAX

Job Number:	20034
Date:	05/29/21
Drawn By:	BDJ, MAE
Checked By:	TPK

Project Phase
CONSTRUCTION DOCUMENTS

Sheet Title
ELECTRICAL SITE PLAN

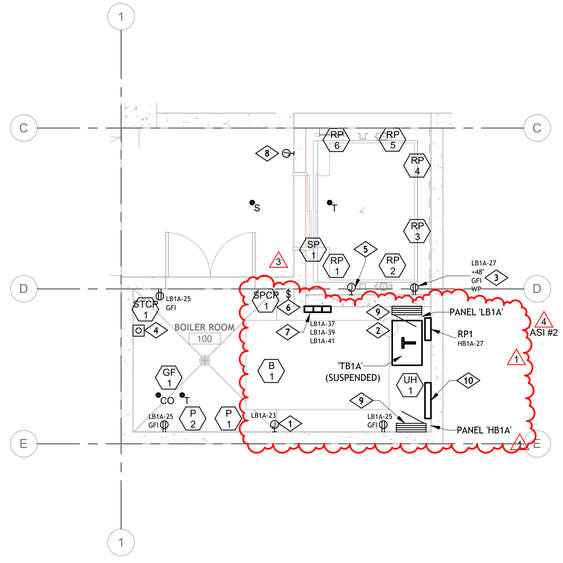
Sheet Number
E010



1 | LOWER LEVEL - ELECTRICAL POWER PLAN
E101 | 1/4" = 1'-0"

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1	PROVIDE 120V, 20-AMP CIRCUIT FOR MECHANICAL CONTROLS. COORDINATE EXACT CONTROL EQUIPMENT LOCATION AND MOUNTING HEIGHT PRIOR TO ROUGH-IN. RUN 2#12, 1#12G, 3/4"C.
2	EC SHALL COORDINATE EXACT ELECTRICAL PANEL LOCATIONS AND NEC REQUIRED WORKING CLEARANCES WITH MECHANICAL CONTRACTOR AND NEW MECHANICAL EQUIPMENT IN BOILER ROOM IN-FIELD PRIOR TO COMMENCING WORK. ALL FINAL INSTALLED ELECTRICAL PANEL CLEARANCES SHALL COMPLY WITH NEC REQUIREMENTS. EC SHALL SUSPEND ELECTRICAL TRANSFORMER FROM STRUCTURE AS REQUIRED. REFER TO DETAIL #1/E600 FOR MORE INFORMATION.
3	EC SHALL COORDINATE ELEVATOR SHAFT/PIT RECEPTACLE LOCATION WITH APPROVED MANUFACTURER'S ELEVATOR EQUIPMENT SHOP DRAWINGS PRIOR TO ROUGH-IN.
4	PROVIDE EPO SWITCH FOR SHUTDOWN OF MECHANICAL BOILER(S) AS REQUIRED. COORDINATE EXACT LOCATION IN-FIELD WITH MECHANICAL CONTRACTOR. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
5	24V THERMOSTAT WITH REMOTE SENSOR PROVIDED BY TCC. EC SHALL PROVIDE LINE-VOLTAGE CONTROLS TO RADIANT HEATER AS NECESSARY. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR AND REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
6	EC SHALL PROVIDE TOGGLE SWITCH WITH INDICATOR LIGHT FOR TRENCH DRAIN HEAT TRACE CONTROL. COORDINATE AND CONFIRM EXACT LOCATION WITH ARCHITECT/OWNER PRIOR TO ROUGH-IN. REFER TO FIRST LEVEL POWER PLAN FOR ADDITIONAL HEAT TRACE INFORMATION.
7	PROVIDE (3)120V, 20-AMP CIRCUITS FOR POWER CONNECTION TO NEW RFID TICKET GATE LOW-VOLTAGE TRANSFORMER/POWER SUPPLY (12 TOTAL QTY. ANTICIPATED). CIRCUITS TO CONNECTED THROUGH OWNER PROVIDED CONTROL CABINET ENCLOSURE AS NECESSARY. COORDINATE EXACT LOCATIONS, QUANTITY, AND REQUIREMENTS WITH OWNER (STEAMBOAT SKI AND RESORT) IN FIELD PRIOR TO COMMENCING WORK.
8	EC SHALL PROVIDE WALL RECESSED JUNCTION BOX AND 3/4"C TO OPERATOR CABIN TELECOMMUNICATIONS HEAD END EQUIPMENT/CABINET FOR ELEVATOR LANDING TWO-WAY COMMUNICATIONS CALL STATION AND LOW-VOLTAGE CABLING. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
9	EC SHALL VERIFY PANELBOARD LOCATION AND CLEARANCES PER NEC ARTICLE 110.26 REQUIREMENTS PRIOR TO INSTALLATION.
10	ANTICIPATED LOCATION OF OWNER (SSRC) RE-USED ELECTRICAL CONTROL AND BATTERY CABINET ENCLOSURES (24"X30" WALL MOUNTED ENCLOSURES TO BE STACKED VERTICALLY WITH TOP OF ENCLOSURES NOT TO EXCEED 6'-7"). EC SHALL COORDINATE INSTALLATION REQUIREMENTS AND AVAILABLE/RESERVED WALL SPACE WITH OWNER (SSRC) PRIOR TO COMMENCING WORK.



2 | ENLARGED ELECTRICAL POWER PLAN - BOILER ROOM
E101 | 1/4" = 1'-0"

CONSTRUCTION SET 03/29/21

AE DESIGN
Integrated Lighting and Electrical Solutions
1900 Wazee Street #205 | Denver, CO 80202 | 303.296.3034
aedesign-inc.com
Project #: 5155.00

COLORADO REGISTERED ERIC SMITH BROOKS SMITH 35717 06/11/2021 PROFESSIONAL ENGINEER

NOTICE: DUTY OF COOPERATION

Release of these plans contemplates further cooperation among the owner, his contractor and the architect. Design and construction are complex. Although the architect and his consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for the consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect of responsibility for all consequences arriving out of such changes.

REVISIONS

No.	Description	Date
1	ADDENDUM #1	3/12/2021
3	ASI #1	4/19/2021
4	ASI #2	6/7/2021

STEAMBOAT GONDOLA RELOCATION
STEAMBOAT SPRINGS, CO

ERIC SMITH ASSOCIATES, P.C.
1919 SEVENTH STREET
BOULDER, COLORADO, 80302
(303) 442-5456, (303) 442-4745 FAX

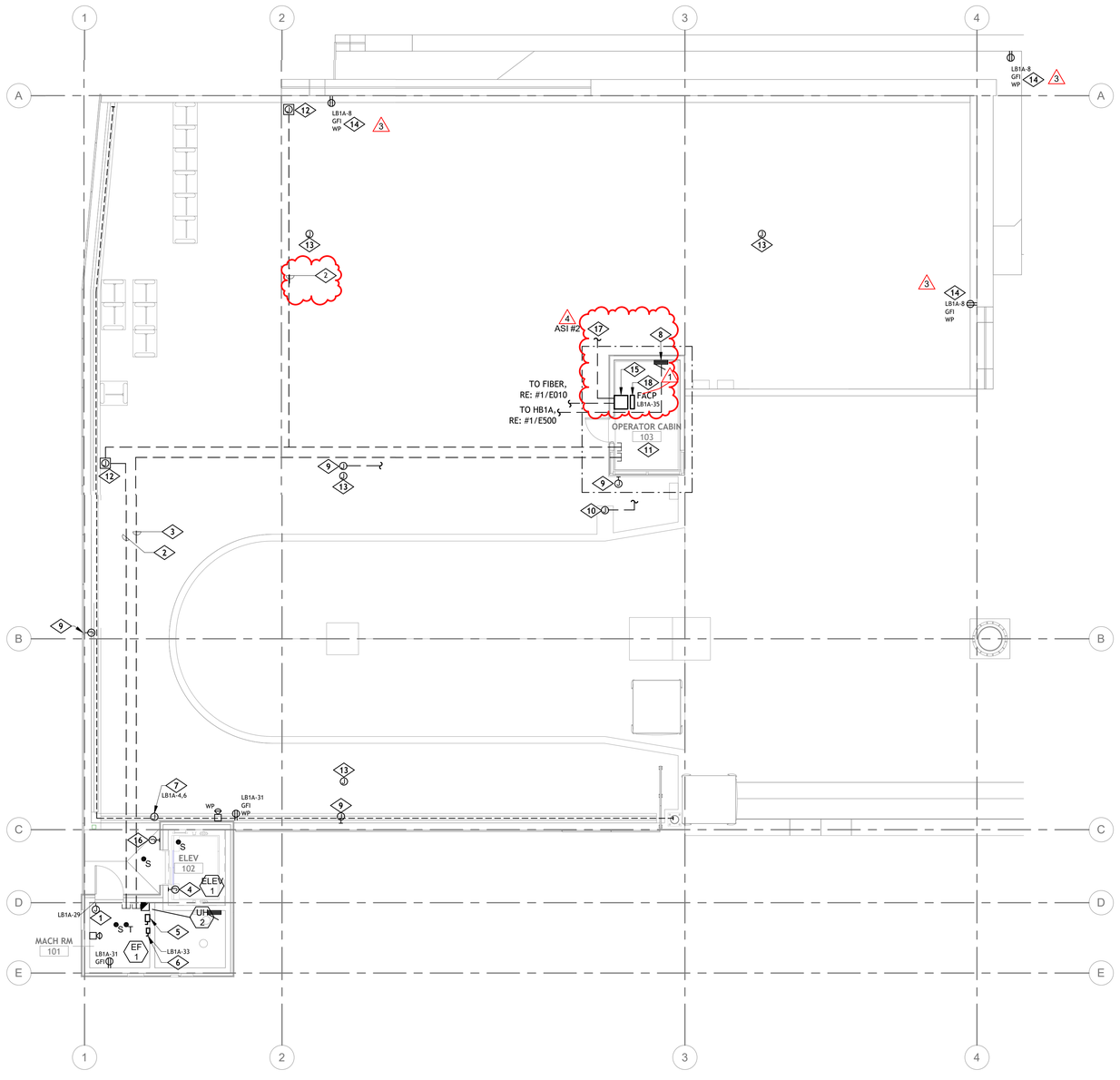
Job Number:	20034
Date:	05/29/21
Drawn By:	BDJ, MAE
Checked By:	TPK

Project Phase
CONSTRUCTION DOCUMENTS

Sheet Title
ELECTRICAL LOWER LEVEL POWER PLAN

Sheet Number
E101

6/9/2021 5:24:20 PM FILE: SBG PLATFORM v19.rvt



1 | FIRST LEVEL - ELECTRICAL POWER PLAN

E111 | 1/8" = 1'-0"

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1	PROVIDE 120V, 20-AMP CONNECTION FOR LINE VOLTAGE THERMOSTAT AND MOTORIZED DAMPER FOR EF-1. REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION, INCLUDING EXACT CONNECTION REQUIREMENTS AND LOCATION. RUN 2#12, 1#12G, 3/4"C.
2	PROVIDE (2) 2"C ROUTED UP THROUGH CRAWL SPACE AS NECESSARY AND THEN ROUTED BELOW GRADE/FINISHED PAVERS BETWEEN PANEL LB1A IN LOWER LEVEL BOILER ROOM AND IT EQUIPMENT IN UPPER LEVEL OPERATOR CABIN FOR ENTRY GATE AND TICKET SCANNER POWER/DATA CABLING PATHWAY. CONDUIT SHALL BE ROUTED TO JUNCTION BOXES AS SHOWN FOR FINAL TERMINATIONS TO ENTRY GATE AND TICKET SCANNER EQUIPMENT. COORDINATE EXACT LOCATIONS AND ROUTING WITH OWNER PRIOR TO COMMENCING WORK.
3	PROVIDE (1) 2"C WITH PULL-STRING FOR DATA CABLING AND (2) SPARE 2"C WITH PULL-STRING FOR FUTURE POWER/DATA, ROUTED BELOW GRADE/FINISHED PAVERS FROM BOILER ROOM ON LOWER LEVEL TO OPERATOR CABIN FOR POWER/DATA CABLING PATHWAY(S). REFER TO LOW VOLTAGE RISER DIAGRAM, #2/E600, FOR MORE INFORMATION.
4	PROVIDE 3/4"C CONDUIT ROUTED FROM TELECOMMUNICATIONS HEAD END EQUIPMENT LOCATION TO ELEVATOR CONTROLLER FOR LOW-VOLTAGE TELEPHONE CABLING RACEWAY. CONTRACTOR SHALL PROVIDE (1) CAT6 CABLE FOR CONNECTION TO ELEVATOR CONTROL PANEL. EC SHALL COORDINATE EXACT LOCATIONS AND REQUIREMENTS WITH APPROVED ELEVATOR MANUFACTURER SHOP DRAWINGS PRIOR TO INSTALLATION.
5	PROVIDE ELEVATOR FUSED DISCONNECT EQUIPMENT IN ELEVATOR MACHINE ROOM. PROVIDE EATON ELEVATOR CONTROL SWITCH #ES SERIES WITH FIRE SAFETY INTERFACE RELAY, VOLTAGE MONITORING RELAY, AND AUXILIARY CONTACTS AS REQUIRED FOR FIRE ALARM SHUNT TRIP OPERATION OF ELEVATOR POWER. EC SHALL COORDINATE EXACT DISCONNECT LOCATION, SIZING AND FIRE ALARM RELAY SPECIFICATION WITH THE APPROVED ELEVATOR SUBMITTALS AND FIRE ALARM SYSTEM SUBMITTALS PRIOR TO ORDERING.
6	PROVIDE LOCKABLE 120V, 20-AMP CIRCUIT FOR POWER CONNECTION TO ELEVATOR CAB. EC SHALL COORDINATE EXACT LOCATION AND REQUIREMENTS WITH APPROVED MANUFACTURER'S SHOP DRAWINGS PRIOR TO ROUGH-IN.
7	EC SHALL PROVIDE 208V, SINGLE-PHASE, 20A/2P ELECTRICAL CONNECTION WITH 30MA GFEP PROTECTION FOR HEAT TRACE SYSTEM CONTROL PANEL LOCATED IN BOILER ROOM AND HEAT TRACE CABLING LOCATED WITHIN TRENCH DRAIN AS INDICATED WITH DASHED LINE. EC SHALL COORDINATE EXACT LOCATIONS AND INSTALLATION REQUIREMENTS OF HEAT TRACE CABLE, CONTROL PANEL, THERMOSTATS, SENSORS, POWER CONNECTION KITS, INDICATOR LIGHTS, AND OTHER ACCESSORIES WITH MECHANICAL CONTRACTOR PRIOR TO COMMENCING WORK. REFER TO ENLARGED BOILER ROOM PLAN FOR CONTROLLER LOCATION. BASIS OF DESIGN SHALL BE RAYCHEM GM-2X CABLE, PROVIDED BY MECHANICAL CONTRACTOR. EC SHALL PROVIDE ANY ADDITIONAL ELECTRICAL BRANCH CIRCUIT POWER WIRING, CONDUIT, AND JUNCTION BOXES REQUIRED FOR A COMPLETE SYSTEM. EC SHALL COORDINATE EXACT ELECTRICAL CONNECTIONS AND REQUIREMENTS WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION AND CONTROL SYSTEM REQUIREMENTS.
8	APPROXIMATE LOCATION OF NEW TERMINAL ELECTRICAL CABINET EQUIPMENT 'DMEC', PROVIDED BY DOPPELMAYR USA. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
9	NEW POC (CONTROL STATION) SHOWN FOR REFERENCE ONLY. ALL DEVICE JUNCTION BOXES, CONDUIT, AND WIRING/TERMINATIONS PROVIDED BY OTHERS.
10	NEW GATE ACCESS CONTROL STATION SHOWN FOR REFERENCE ONLY. ALL DEVICE JUNCTION BOXES, CONDUIT, AND WIRING/TERMINATIONS PROVIDED BY OTHERS.
11	NEW OPERATOR CABIN PRE-MANUFACTURED BUILDING SHALL BE PRE-WIRED FOR ALL INTERIOR AND EXTERIOR BUILDING MOUNTED POWER, LIGHTING, AND COMMUNICATIONS DEVICES. EC SHALL PROVIDE CONDUIT AND WIRING FOR NEW POWER FEEDER TO LIFTER TERMINAL ELECTRICAL CABINET 'DMEC' (PANEL PROVIDED BY OTHERS), AND NEW COMMUNICATIONS SERVICE TO OPERATOR CABIN (SEE ELECTRICAL SITE PLAN FOR MORE INFORMATION). ALL NEW UNDERGROUND CONDUIT ROUTED TO OPERATOR CABIN SHALL BE ROUTED THROUGH NEW STRUCTURAL BLOCK OUT IN OPERATOR CABIN FOUNDATION. EC SHALL COORDINATE EXACT BLOCK OUT LOCATION AND INSTALLATION REQUIREMENTS OF ALL ASSOCIATED CONDUIT/WIRING FOR OPERATOR CABIN POWER/TELECOMMUNICATIONS WITH DOPPELMAYR AND STRUCTURAL DRAWINGS PRIOR TO COMMENCING WORK.
12	PROVIDE 13"X24"X18"D HUBBELL QUAZITE PG SERIES IN-GRADE PULL-BOX WITH (2) PVC OUTDOOR RATED, WATER-TIGHT JUNCTION BOXES MOUNTED INSIDE PULL-BOX ENCLOSURE, (1) FOR POWER AND (1) FOR DATA CONNECTIONS TO NEW ENTRY GATE AND TICKET SCANNER EQUIPMENT. COORDINATE EXACT LOCATIONS WITH OWNER PRIOR TO ROUGH-IN. COORDINATE INSTALLATION WITHIN FINISHED PAVERS WITH GENERAL CONTRACTOR.
13	PROVIDE 3/4"C FROM SNOW/ICE DETECTOR TO BOILER ROOM SNOWMELT CONTROL PANEL FOR SENSOR CONTROL WIRING AS NECESSARY. COORDINATE EXACT ZONES/QUANTITIES, LOCATIONS AND INSTALLATION REQUIREMENTS WITH MECHANICAL CONTRACTOR PRIOR TO COMMENCING WORK.
14	PROVIDE NEW 120V, 20-AMP DUPLEX RECEPTACLE MOUNTED WITHIN NEW RETAINING WALL. COORDINATE EXACT INSTALLATION REQUIREMENTS WITH ARCHITECT AND RETAINING WALL CONSTRUCTION AS REQUIRED FOR FLUSH RECESSED DEVICE AND BOX/COVER MOUNTING. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT IN-FIELD WITH OWNER PRIOR TO ROUGH-IN.
15	APPROXIMATE LOCATION OF TELECOMMUNICATIONS CABINET IN OPERATOR CABIN TO BE MOUNTED BELOW FACP. REFER TO SITE PLAN AND LOW-VOLTAGE SERVICE ENTRANCE CONDUIT ROUTING FOR MORE INFORMATION.
16	EC SHALL PROVIDE WALL RECESSED JUNCTION BOX AND 3/4"C TO OPERATOR CABIN TELECOMMUNICATIONS HEAD END EQUIPMENT/CABINET FOR ELEVATOR LANDING TWO-WAY COMMUNICATIONS CALL STATION AND LOW-VOLTAGE CABLING. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
17	PROVIDE (1) 3/4"C TO EACH EXTERIOR LIGHTING POLE LOCATION FOR FUTURE SECURITY CABLING AS NECESSARY. REFER TO LIGHTING PLAN FOR POLE LIGHT LOCATIONS. COORDINATE EXACT REQUIREMENTS WITH OWNER AND SECURITY INSTALLER PRIOR TO ROUGH-IN.
18	FIRE ALARM CONTROL PANEL TO BE MOUNTED ABOVE TELECOMMUNICATIONS CABINET. COORDINATE EXACT MOUNTING HEIGHT WITH OWNER AND LOW-VOLTAGE INSTALLER PRIOR TO ROUGH-IN.

CONSTRUCTION SET 03/29/21

AE DESIGN
Integrated Lighting and Electrical Solutions
1900 Wazee Street #205 | Denver, CO 80202 | 303.296.3034
aedesign-inc.com
Project #: 5155.00

6/9/2021 5:24:20 PM FILE: SBG PLATFORM v19.rvt

COLORADO REGISTERED
LON E. BROOKS
35717
06/11/2021
PROFESSIONAL ENGINEER

NOTICE: DUTY OF COOPERATION

Release of these plans contemplates further cooperation among the owner, his contractor and the architect. Design and construction are complex. Although the architect and his consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for the consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect of responsibility for all consequences arriving out of such changes.

REVISIONS

No.	Description	Date
1	ADDENDUM #1	3/12/2021
3	ASI #1	4/19/2021
4	ASI #2	6/7/2021

STEAMBOAT GONDOLA RELOCATION
STEAMBOAT SPRINGS, CO

ERIC SMITH ASSOCIATES, P.C.
1919 SEVENTH STREET
BOULDER, COLORADO, 80302
(303) 442-5458, (303) 442-4745 FAX

Job Number:	20054
Date:	03/29/21
Drawn By:	BDJ, MAE
Checked By:	TPK

Project Phase
CONSTRUCTION DOCUMENTS

Sheet Title
ELECTRICAL FIRST LEVEL POWER PLAN

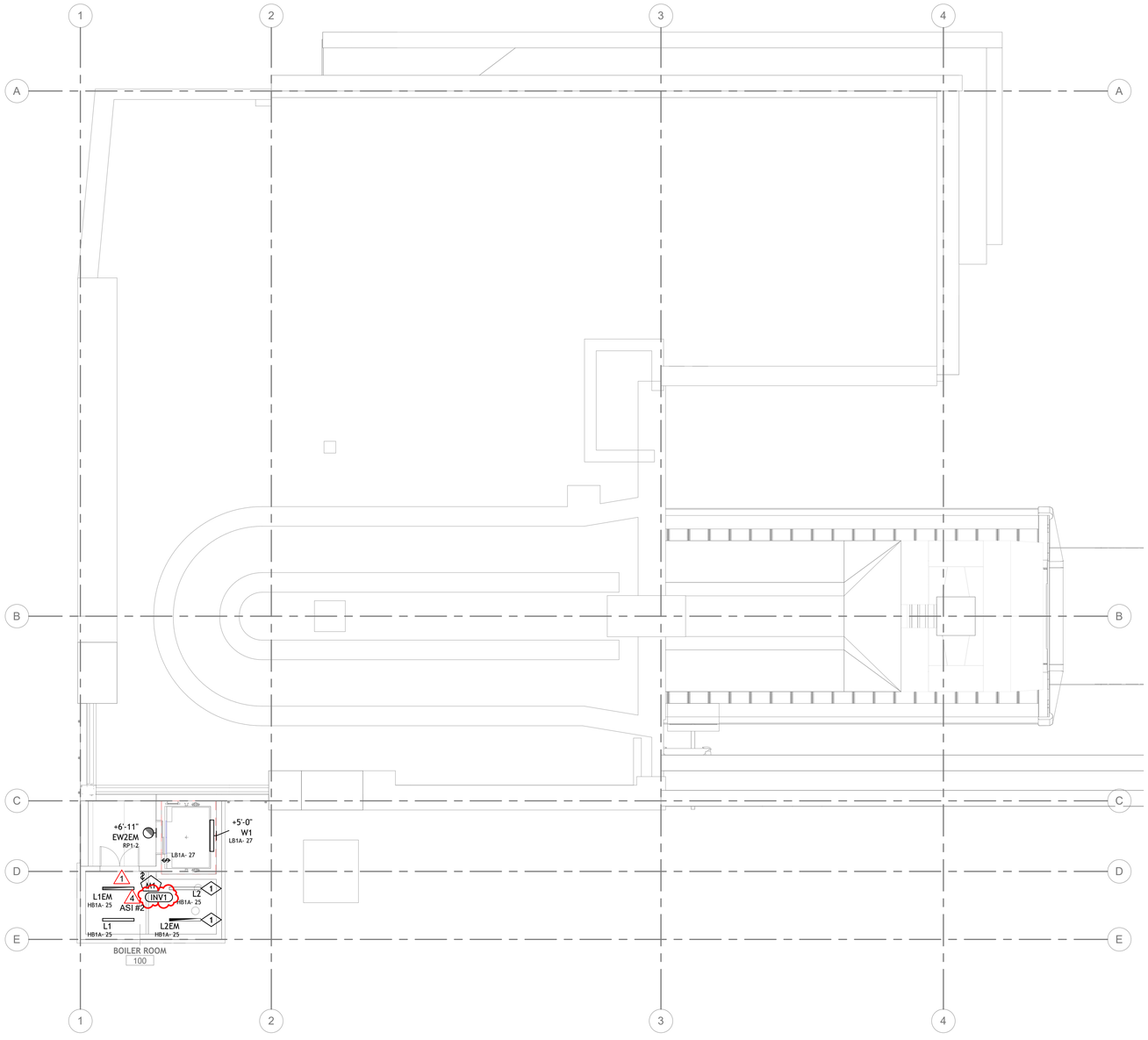
Sheet Number
E111

LIGHTING GENERAL NOTES

A.	ALL FIXTURES WITH HATCHING AND/OR DESIGNATED AS 'EM' SHALL BE PROVIDED WITH INTEGRAL BATTERY BACKUP. BATTERY SHALL ENGAGE ONLY AFTER COMPLETE LOSS OF POWER TO THE CIRCUIT.
B.	CIRCUIT ALL EMERGENCY LIGHTING UNITS AND EXIT SIGNS TO NEAREST LINE VOLTAGE CIRCUIT, AHEAD OF ALL SWITCH LEGS.

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1	EC TO PROVIDE MOUNTING EQUIPMENT AND ACCESSORIES TO COORDINATE MOUNTING HEIGHT TO BE 12'-0" AFF OF BOILER ROOM FLOOR.



1 | LOWER LEVEL - ELECTRICAL LIGHTING PLAN
E201 | 1/8" = 1'-0"

CONSTRUCTION SET 03/29/21

AE DESIGN
Integrated Lighting and Electrical Solutions
1900 Wazee Street #205 | Denver, CO 80202 | 303.296.3034
aedesign-inc.com
Project #: 5155.00

COLORADO REGISTERED
JOHN P. BROOKS
35717
06/11/2021
PROFESSIONAL ENGINEER

NOTICE: DUTY OF COOPERATION

Release of these plans contemplates further cooperation among the owner, his contractor and the architect. Design and construction are complex. Although the architect and his consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for the consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect of responsibility for all consequences arriving out of such changes.

REVISIONS

No.	Description	Date
1	ADDENDUM #1	3/12/2021
4	ASI #2	6/7/2021

STEAMBOAT GONDOLA RELOCATION
STEAMBOAT SPRINGS, CO

ERIC SMITH ASSOCIATES, P.C.
1919 SEVENTH STREET
BOULDER, COLORADO, 80302
(303) 442-5456, (303) 442-4745 FAX

Job Number:	20034
Date:	05/29/21
Drawn By:	BDJ, MAE
Checked By:	TPK

Project Phase
CONSTRUCTION DOCUMENTS

Sheet Title
ELECTRICAL LOWER LEVEL LIGHTING PLAN

Sheet Number
E201

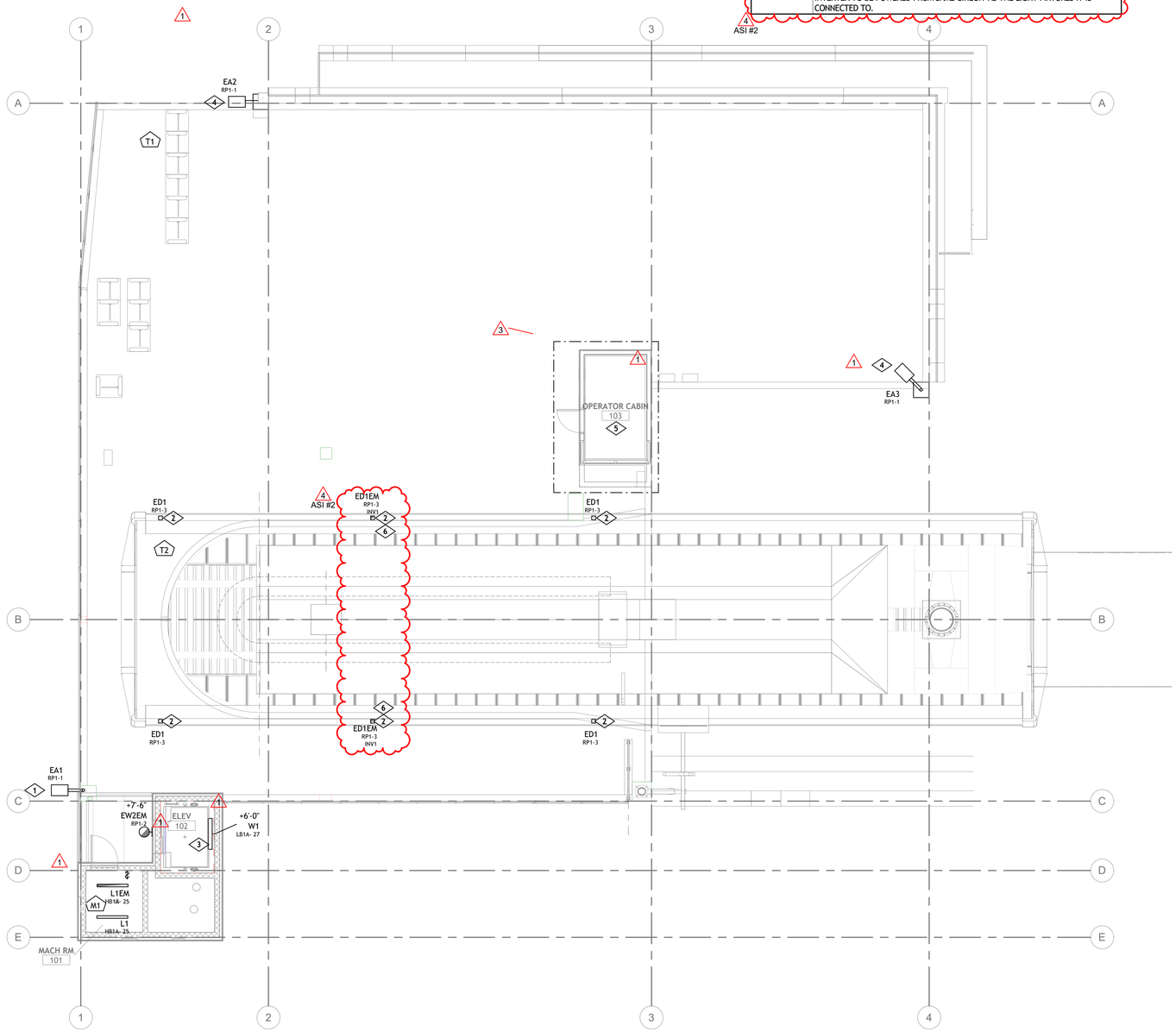
6/9/2021 5:24:21 PM FILE: SBG PLATFORM v19.rvt

LIGHTING GENERAL NOTES

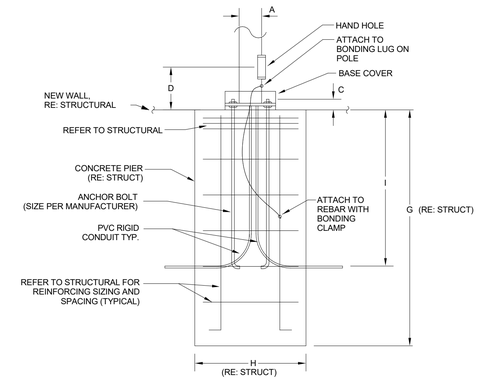
A.	ALL FIXTURES WITH HATCHING AND/OR DESIGNATED AS 'EM' SHALL BE PROVIDED WITH INTEGRAL BATTERY BACKUP. BATTERY SHALL ENGAGE ONLY AFTER COMPLETE LOSS OF POWER TO THE CIRCUIT.
B.	CIRCUIT ALL EMERGENCY LIGHTING UNITS AND EXIT SIGNS TO NEAREST LINE VOLTAGE CIRCUIT, AHEAD OF ALL SWITCH LEGS.

KEYNOTE LEGEND

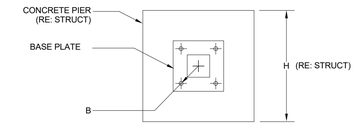
KEY VALUE	KEYNOTE TEXT
1	LIGHT POLE TO BE MOUNTED IN CONCRETE RETAINING WALL. COORDINATE MOUNTING WITH STRUCTURAL DRAWINGS.
2	TYPE 'ED1'/'ED1EM' SURFACE MOUNTED DOWNLIGHT FIXTURE SHALL BE MOUNTED TO UNDERSIDE OF TERMINAL CANOPY STRUCTURE AND DIRECTED DOWNWARD. FIXTURES SHALL BE PROVIDED/INSTALLED BY EC. EC SHALL PROVIDE CONDUIT/WIRING FROM LIGHTING FIXTURES TO OPERATOR CABIN TERMINAL ELECTRICAL CABINET 'DMEC' AS REQUIRED FOR POWER AND CONTROLS. COORDINATE EXACT POWER AND CONTROL CONDUIT/WIRING REQUIREMENTS FOR TERMINAL CANOPY LIGHTING WITH DOPPELMAYR PRIOR TO COMMENCING WORK.
3	HEIGHT LISTED FOR FIXTURE IS FROM FIRST LEVEL ELEVATION. FIXTURE TO BE CONTROLLED ON SWITCH ON LOWER LEVEL.
4	FIXTURE HEIGHTS ARE TO BE DETERMINED FROM FINISHED PLATFORM LEVEL SUCH THAT THE OVERALL POLE HEIGHTS ABOVE PLATFORM SHALL MATCH. REFER TO LIGHTING FIXTURE SCHEDULE FOR MORE INFO.
5	NEW OPERATOR CABIN PRE-MANUFACTURED BUILDING SHALL BE PRE-WIRED FOR ALL INTERIOR AND EXTERIOR BUILDING MOUNTED POWER, LIGHTING, AND COMMUNICATIONS DEVICES. REFER TO FIRST LEVEL POWER PLAN #1/E111, FOR ADDITIONAL INFORMATION.
6	EC TO PROVIDE REMOTE EMERGENCY BACKUP INVERTER, BODINE #ELI-S-100 OR APPROVED EQUAL. REFER TO EMERGENCY INVERTER SCHEDULE ON SHEET E800. PROVIDE UL-924 DEVICE FOR CONTROL WITH NORMAL FIXTURES AT CANOPY. INVERTER TO BE POWERED FROM SAME CIRCUIT AS THE LIGHT FIXTURES IT IS CONNECTED TO.



1 | FIRST LEVEL - ELECTRICAL LIGHTING PLAN
E211 | 1/8" = 1'-0"



ELEVATION



TOP VIEW

POLE KEY	OVERALL HEIGHT	A	ANCHOR BOLT DATA B	SIZE	C	D	E	F	G	H	I
EA1/2/3	15'0"	4"	PER MANUFACTURER			N/A	N/A	RE: STRUCT			36"

NOTE:
LIGHTING POLE SHALL BE INSTALLED INTO CAST-IN-PLACE STRUCTURAL CONCRETE PIER INTEGRATED WITH STRUCTURAL WALL/FOUNDATION SYSTEM. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION REGARDING CONCRETE PIER AND FOUNDATION INSTALLATION REQUIREMENTS INCLUDING CONCRETE PIER SIZING, LOCATIONS, AND REINFORCING SIZING. ELECTRICAL CONTRACTOR SHALL COORDINATE INSTALLATION OF POLE ELECTRICAL CONNECTIONS, BONDING, AND CONDUIT WITH STRUCTURAL DRAWINGS AND GENERAL CONTRACTOR PRIOR TO COMMENCING WORK.

2 | EA1, EA2, EA3 POLE BASE DETAIL
E211 | N.T.S.

CONSTRUCTION SET 03/29/21

AE DESIGN
Integrated Lighting and Electrical Solutions
1900 Wazee Street #205 | Denver, CO 80202 | 303.296.3034
aedesign-inc.com
Project #: 5155.00

6/9/2021 5:24:22 PM FILE: SBG PLATFORM v19.rvt

COLORADO REGISTERED LONNIE BROOKS 35717 06/11/2021 PROFESSIONAL ENGINEER

NOTICE: DUTY OF COOPERATION

Release of these plans contemplates further cooperation among the owner, his contractor and the architect. Design and construction are complex. Although the architect and his consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for the consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect of responsibility for all consequences arriving out of such changes.

REVISIONS

No.	Description	Date
1	ADDENDUM #1	3/12/2021
3	ASI #1	4/19/2021
4	ASI #2	6/7/2021

STEAMBOAT GONDOLA RELOCATION
STEAMBOAT SPRINGS, CO

ERIC SMITH ASSOCIATES, P.C.
1919 SEVENTH STREET
BOULDER, COLORADO, 80302
(303) 442-5456, (303) 442-4745 FAX

Job Number:	20054
Date:	05 / 29 / 21
Drawn By:	BDJ, MAE
Checked By:	TPK

Project Phase
CONSTRUCTION DOCUMENTS

Sheet Title
ELECTRICAL FIRST FLOOR LIGHTING PLAN

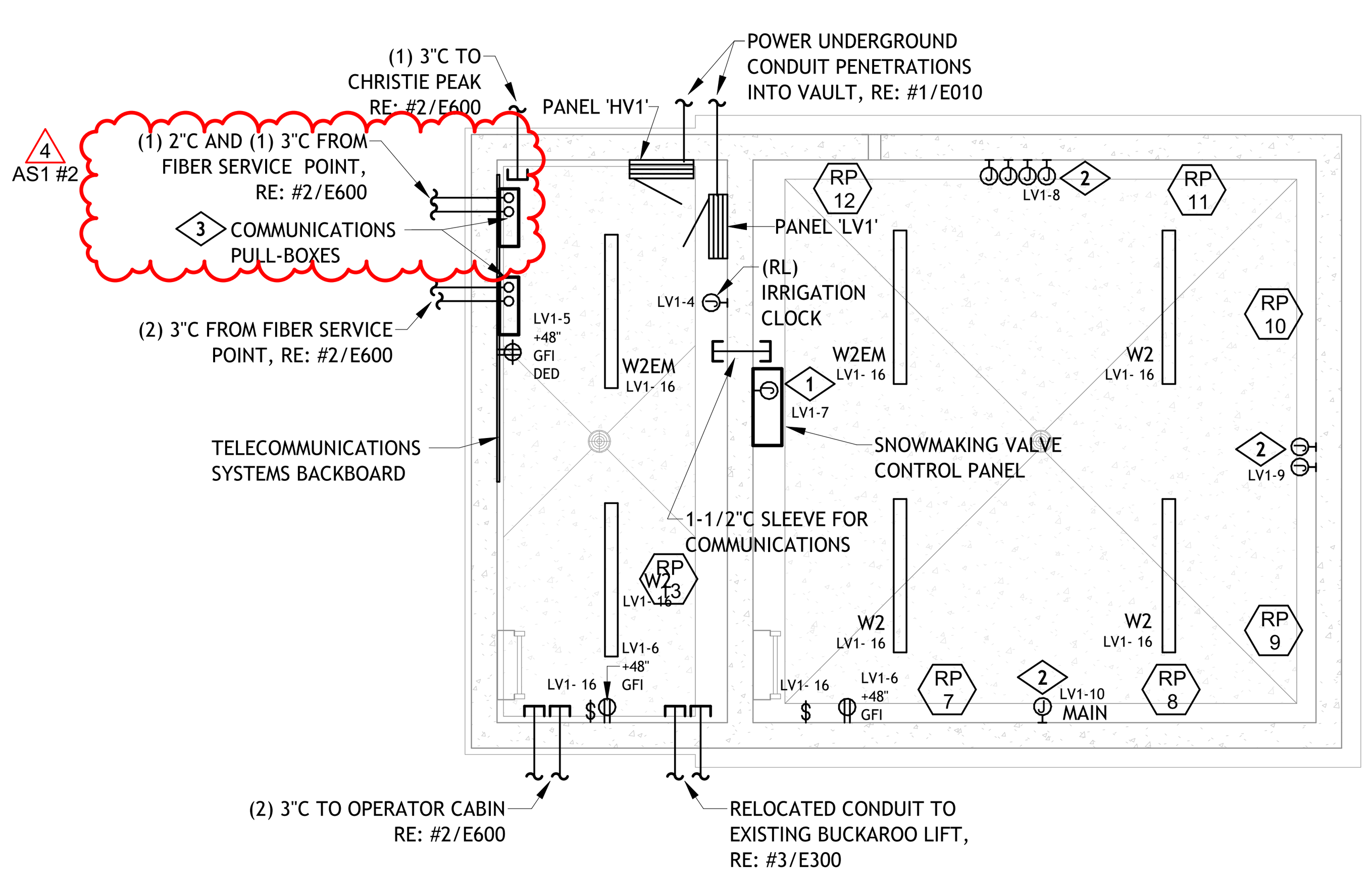
Sheet Number
E211

DEMOLITION REQUIREMENTS

A.	THE CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE DEMOLTION, REPAIR AND REPLACEMENT AS REQUIRED. THE CONTRACTOR, AND ITS SUBCONTRACTORS, ARE SOLELY RESPONSIBLE FOR DETERMINING THE EXTENT OF DEMOLITION AND REPLACEMENT OF EXISTING ELECTRICAL INFRASTRUCTURE OR EQUIPMENT IN AREAS WHERE HIDDEN WORK IS INDICATED IN THE DOCUMENTS (SUCH AS UNDERGROUND WORK) OR CAN BE INFERRED AS BEING REQUIRED DUE TO THE NATURE OF THE WORK. THE DOCUMENTS ARE INTENDED TO BE A GUIDE, AND ARE NOT INTENDED TO PROVIDE DEFINITIVE SCOPE REQUIREMENTS FOR EXACT EXISTING CONDITIONS. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL NECESSARY COVERINGS, PROTECTIVE ENCLOSURES, TEMPORARY PARTITIONS AND BARRIERS TO PROVIDE SECURITY AND PROTECTION TO ALL OCCUPANTS, EQUIPMENT, AND NEW/EXISTING WORK. REPAIR AND REPLACE ANY DAMAGE CAUSE BY IMPROPER PROTECTION AT NO ADDITIONAL COST TO OWNER. NEW OR EXISTING INSTALLATIONS DAMAGED DURING CONSTRUCTION/DEMOLITION OR NOT CONFORMING TO SPECIFIED STANDARDS, TOLERANCES OR MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION SHALL BE REPLACED AT NO ADDITIONAL COST TO OWNER.
B.	THE BASIS OF THESE DRAWINGS WERE SITE OBSERVATIONS, ORIGINAL BUILDING DRAWINGS AND VARIOUS OTHER SOURCES. EVERY ATTEMPT HAS BEEN MADE TO DOCUMENT THE ACTUAL CONDITIONS. HOWEVER, THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, VISIT THE SITE, AND THOROUGHLY BECOME FAMILIAR WITH THE BUILDING STANDARDS, AND THE EXISTING SITE CONDITIONS RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
C.	THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER/OWNER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, IN VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
D.	THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS COST THE REMOVAL OF ALL EXISTING ELECTRICAL DEVICES, CONDUITS, FIXTURES AND EQUIPMENT AS NOTED AND REQUIRED TO ACCOMMODATE SCOPE OF WORK. COORDINATE REMOVAL AND DISCARDING OF ALL EQUIPMENT WITH OWNER.
E.	EXISTING EQUIPMENT NOT NOTED AS EXISTING (E) OR INDICATED ON PLANS SHALL REMAIN, AS THEY PRESENTLY EXIST.
F.	THE DEMOLITION OF SOME DEVICES OR EQUIPMENT MAY INTERRUPT POWER TO DEVICES DOWN STREAM. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR RE-WORKING THESE CIRCUITS TO MAINTAIN POWER TO THE DOWN STREAM DEVICES AND EQUIPMENT WHICH WILL REMAIN.
G.	ALL UNENERGIZED/DEMOLISHED CIRCUITRY SHALL HAVE THE CONDUCTORS REMOVED FROM THE CONDUIT AND THE CONDUIT SHALL BE MARKED "EMPTY" WITH INDELIBLE MARKER.

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1	PROVIDE 120V, 20-AMP POWER CONNECTION TO NEW VALVE CONTROL PANEL FOR SNOW-MAKING EQUIPMENT VALVE/ACTUATOR CONTROLS. EC SHALL COORDINATE EXACT LOCATION AND REQUIREMENTS WITH NEW OWNER (STEAMBOAT SKI AND RESORT) IN FIELD PRIOR TO COMMENCING WORK.
2	EC SHALL PROVIDE 120V, 20-AMP POWER CONNECTIONS TO EACH SNOW-MAKING VALVE ACTUATOR/MOTOR AS REQUIRED. EC SHALL ANTICIPATE APPROXIMATELY (6) OUTLET VALVE ACTUATOR CONNECTIONS AND (1) MAIN-SUPPLY VALVE ACTUATOR CONNECTION IN THE SNOW-MAKING VAULT. EC SHALL COORDINATE EXACT LOCATION AND REQUIREMENTS WITH NEW OWNER (STEAMBOAT SKI AND RESORT) IN FIELD PRIOR TO COMMENCING WORK.
3	PROVIDE 18"X24"X6"D WALL-MOUNTED TELECOMMUNICATIONS ENCLOSURE/PULL-BOX WITH 3" CONDUIT KNOCKOUTS LOCATED IN NEW UNDERGROUND ELECTRICAL VAULT FOR FIBER OPTIC AND COMMUNICATIONS CABLING ROUTED THROUGH VAULT TO NEW GONDOLA PLATFORM BUILDING OPERATOR CABIN AS SHOWN. ASSEMBLY AND ALL COMPONENTS SHALL BE UL LISTED AND NEMA 3R RATED FOR OUTDOOR LOCATIONS. PROVIDE "COMMUNICATIONS" LABEL ON COVER. COORDINATE EXACT LOCATION OF PULL-BOX ENCLOSURE WITH OWNER PRIOR TO COMMENCING WORK. REFER TO ELECTRICAL SITE PLAN, SHEET E010, AND LOW-VOLTAGE RISE DIAGRAM, SHEET E600, FOR ADDITIONAL INFORMATION.



1 | LOWER LEVEL - ELECTRICAL POWER PLAN - VAULT
E300 | 1/4" = 1'-0"

LOAD SUMMARY

EXISTING MAIN DISTRIBUTION PANEL (MDP) (600A, 480/277V, 3PH, 4W)

NEW LOAD ON PANEL 'LV1'	15.2	KVA	42.2	AMPS
REMOVED LOAD ON PANEL 'HV1' (DEMOLISHED LOAD CENTER)	-5.0	KVA	-13.9	AMPS
REMOVED LOAD ON PANEL 'HV1' (REMOVED CARPET LIFTS)	-49.8	KVA	-138.3	AMPS
NET REMOVED LOAD			-40	KVA
AT 480/277V, 3PH			-47.6	AMPS(**)

(**)TOTAL REMOVED LOAD IS GREATER THAN ADDED/NEW LOAD ON EXISTING PANEL 'MDP', THEREFORE THE LOAD IS JUSTIFIED.

NOTES

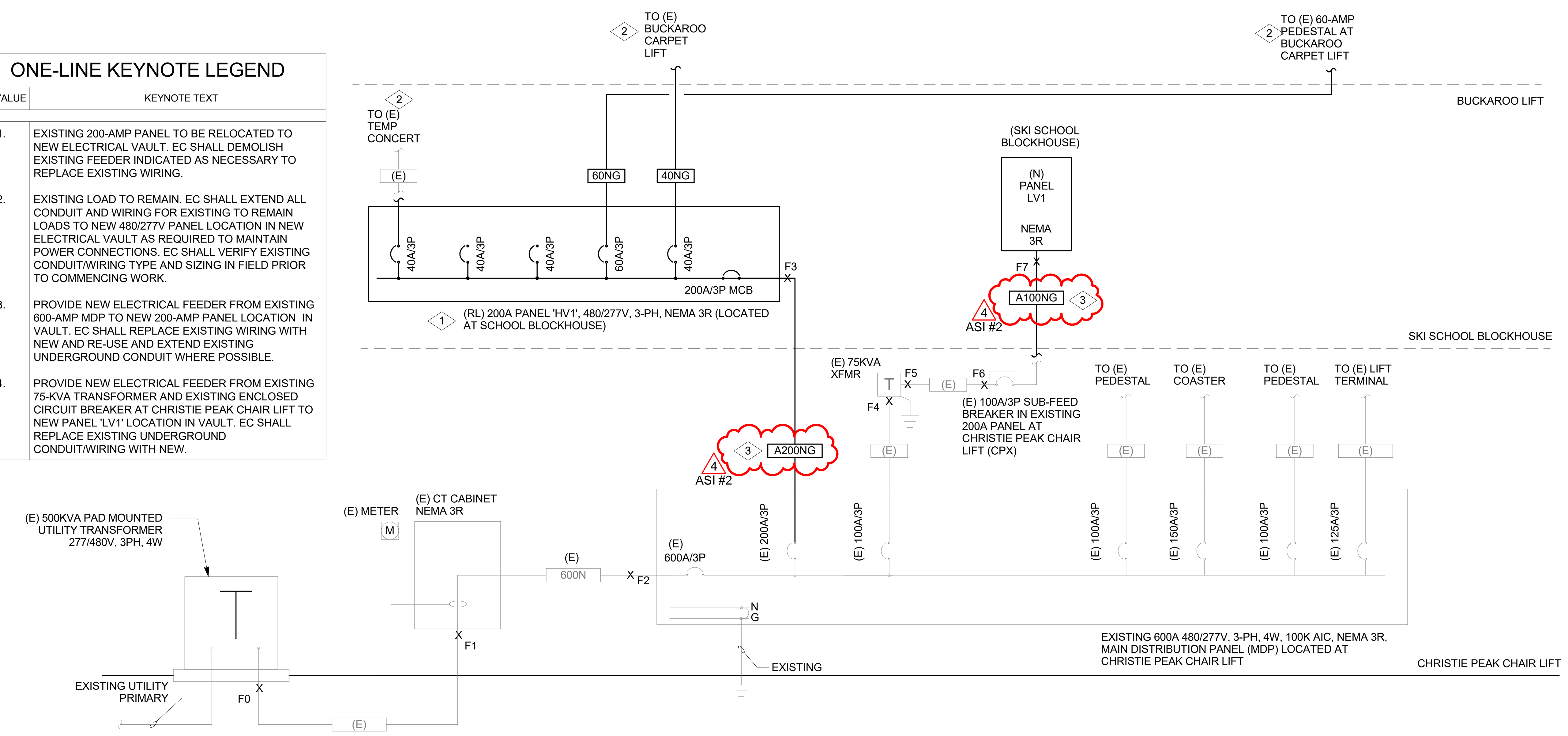
4 ASI #2

GENERAL NOTES

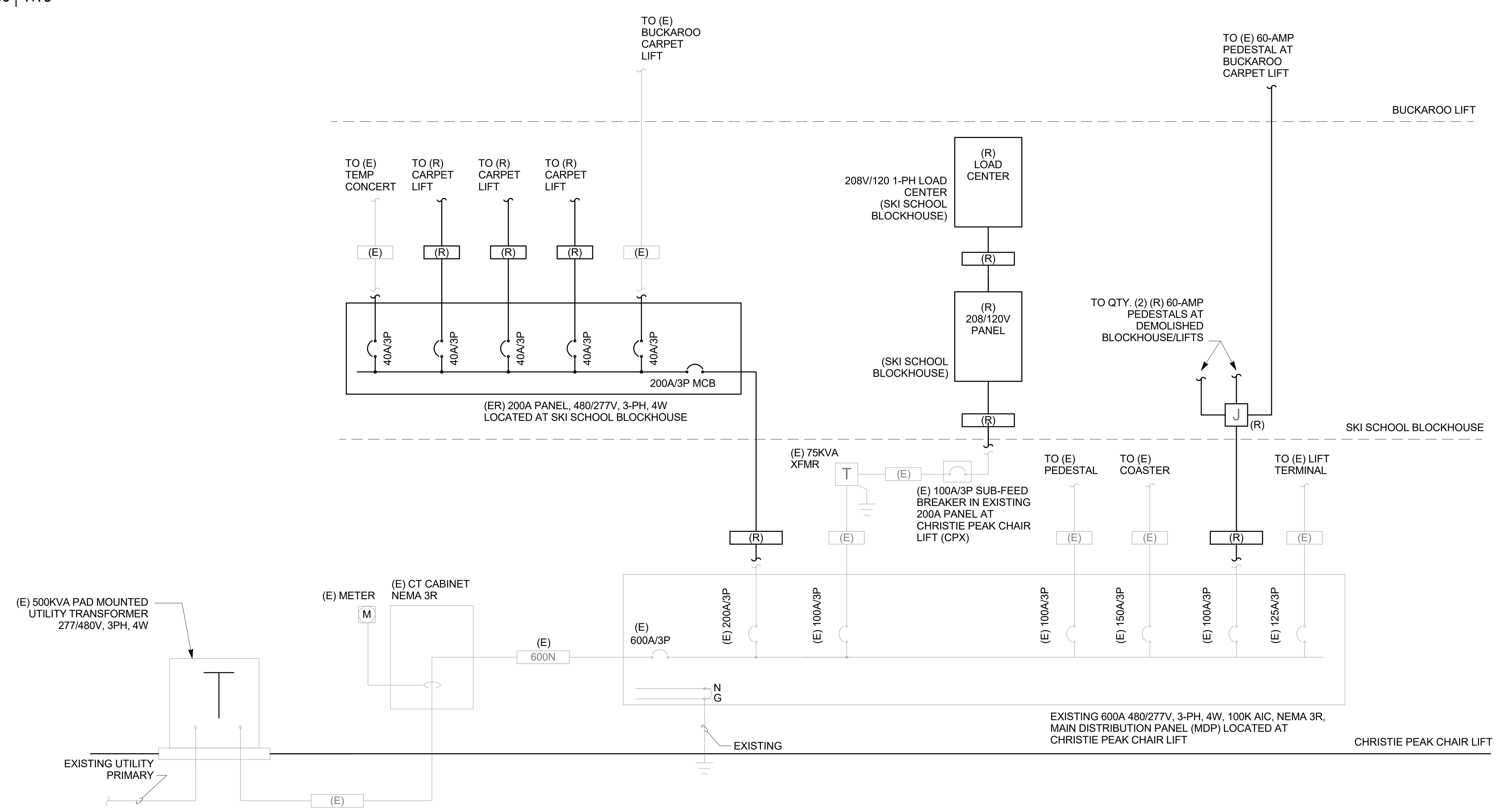
A.	PER APPROVED VE ALTERNATE ALUMINUM CONDUCTOR WIRING SHALL BE ACCEPTABLE FOR DISTRIBUTION WIRING RATED 100-AMPS AND LARGER. ALL ALUMINUM WIRING TERMINATIONS SHALL BE MADE WITH APPROPRIATE CONNECTORS, HARDWARE AND OTHER MATERIALS AND COMPONENTS LISTED AND RATED FOR ALUMINUM WIRING CONNECTIONS AS REQUIRED PER NEC. ALUMINUM WIRING AND TERMINATIONS SHALL BE INSTALLED ACCORDING TO LATEST NECA/AA-104 STANDARDS AND REQUIREMENTS. SEE ONE-LINE DIAGRAM AND ALUMINUM FEEDER SCHEDULE FOR SPECIFIED ALUMINUM FEEDERS.

ONE-LINE KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1.	EXISTING 200-AMP PANEL TO BE RELOCATED TO NEW ELECTRICAL VAULT. EC SHALL DEMOLISH EXISTING FEEDER INDICATED AS NECESSARY TO REPLACE EXISTING WIRING.
2.	EXISTING LOAD TO REMAIN. EC SHALL EXTEND ALL CONDUIT AND WIRING FOR EXISTING TO REMAIN LOADS TO NEW 480/277V PANEL LOCATION IN NEW ELECTRICAL VAULT AS REQUIRED TO MAINTAIN POWER CONNECTIONS. EC SHALL VERIFY EXISTING CONDUIT/WIRING TYPE AND SIZING IN FIELD PRIOR TO COMMENCING WORK.
3.	PROVIDE NEW ELECTRICAL FEEDER FROM EXISTING 600-AMP MDP TO NEW 200-AMP PANEL LOCATION IN VAULT. EC SHALL REPLACE EXISTING WIRING WITH NEW AND RE-USE AND EXTEND EXISTING UNDERGROUND CONDUIT WHERE POSSIBLE.
4.	PROVIDE NEW ELECTRICAL FEEDER FROM EXISTING 75-KVA TRANSFORMER AND EXISTING ENCLOSED CIRCUIT BREAKER AT CHRISTIE PEAK CHAIR LIFT TO NEW PANEL 'LV1' LOCATION IN VAULT. EC SHALL REPLACE EXISTING UNDERGROUND CONDUIT/WIRING WITH NEW.



3 | VAULT NEW ELECTRICAL ONE-LINE DIAGRAM
E300 | NTS



2 | VAULT DEMO ELECTRICAL ONE-LINE DIAGRAM
E300 | NTS

FAULT CURRENT CALCULATION SCHEDULE

POINT	LOCATION DESCRIPTION	LENGTH (L) (ft)	VOLTAGE (EL-L)	VOLTAGE (EL-N)	PHASE	WIRE SIZE	CONDUCTOR MATERIAL	CONDUCTOR TYPE	CONDUIT MATERIAL	VOLTAGE CLASS	C VALUE	# OF PARALLEL RUNS	Isc AVAILABLE UPSTREAM	Isc AT EQUIP (I3ph) OR (IL-L)	POINT
F0	500 KVA UTILITY XFMR												--	100,000	F0
F1	(E) CT CABINET	10	480	277	3	350	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	600V	22736	2	100,000	92,648	F1
F2	(E) 600A MDP	5	480	277	3	350	COPPER	THREE SINGLE CONDUCTORS	STEEL	600V	19703	2	92,648	88,878	F2
F3	PANEL 'HV1'	150	480	277	3	250	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	12122	1	88,878	17,889	F3
F4	(E) 75KVA XFMR PRI	10	480	277	3	1	COPPER	THREE SINGLE CONDUCTORS	STEEL	600V	7292	1	17,889	16,434	F4
F5	(E) 75KVA XFMR SEC	1	208	120	3	3X	COPPER	THREE SINGLE CONDUCTORS	STEEL	600V	12843	1	5,538	5,518	F5
F6	(E) PANEL AT CXP	5	208	120	3	3X	COPPER	THREE SINGLE CONDUCTORS	STEEL	600V	12843	1	5,518	5,421	F6
F7	(N) PANEL 'LV1'	150	208	120	3	1	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	4645	1	5,421	2,206	F7

4 ASI #2
4 ASI #2

NOTES:
1. ALL CALCULATIONS WERE DONE USING BUSSMAN "POINT-TO-POINT" METHOD.
2. REFER TO PLANS FOR ASSUMED UTILITY TRANSFORMER SIZE UTILIZED FOR CALCULATIONS. EXACT TRANSFORMER SIZE, IMPEDANCE, AND AVAILABLE SHORT CIRCUIT CURRENT SHALL BE VERIFIED WITH UTILITY PRIOR TO ORDERING ELECTRICAL EQUIPMENT. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.
3. DISTRIBUTION TRANSFORMER IMPEDANCES USED IN THE CALCULATIONS WERE TAKEN FROM EATON'S PUBLISHED IMPEDANCES FOR DOE 2016 DRY-TYPE TRANSFORMERS.
4. CONDUCTOR SIZES AND LENGTHS INDICATED IN THIS SCHEDULE ARE FOR THE PUROPOSES OF FAULT CURRENT CALCULATIONS ONLY. THESE LENGTHS ASSUME WORST CASE SHORTEST DISTANCE CONDITIONS AND SHOULD NOT BE UTILIZED BY THE ELECTRICAL CONTRACTOR FOR BIDDING PURPOSES. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND MEASURING ACTUAL FIELD CONDITIONS, SIZES, AND LENGTHS.

AE DESIGN
Integrated Lighting and Electrical Solutions
1900 Wazee Street #205 | Denver, CO 80202 | 303.296.3034
aedesign-inc.com
Project #: 5155.00

COLORADO REGISTERED PROFESSIONAL ENGINEER 35717 06/11/2021

NOTICE: DUTY OF COOPERATION

Release of these plans contemplates further cooperation among the owner, his contractor and the architect. Design and construction are complex. Although the architect and his consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for the consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect of responsibility for all consequences arriving out of such changes.

REVISIONS

No.	Description	Date
3	ASI #1	4/19/2021
4	ASI #2	6/7/2021

STEAMBOAT GONDOLA RELOCATION
STEAMBOAT SPRINGS, CO

ERIC SMITH ASSOCIATES, P.C.
1919 SEVENTH STREET
BOULDER, COLORADO, 80302
(303) 442-5458, (303) 442-4745 FAX

Job Number:	20034
Date:	03/29/21
Drawn By:	Author
Checked By:	Checker

Project Phase
CONSTRUCTION DOCUMENTS

Sheet Title
ELECTRICAL VAULT PLAN

Sheet Number
3 E300

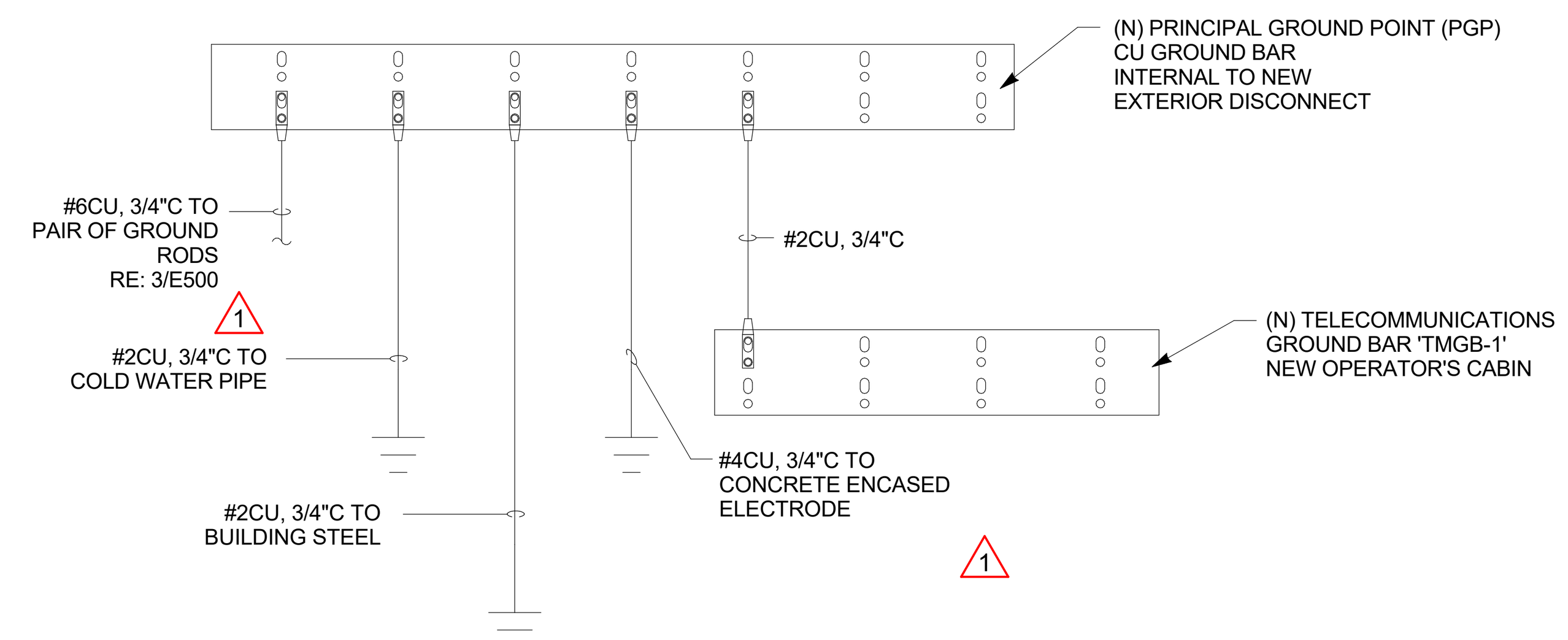
FILE: SBG PLATFORM v19.rvt
6/9/2021 5:24:22 PM

GENERAL GROUNDING NOTES

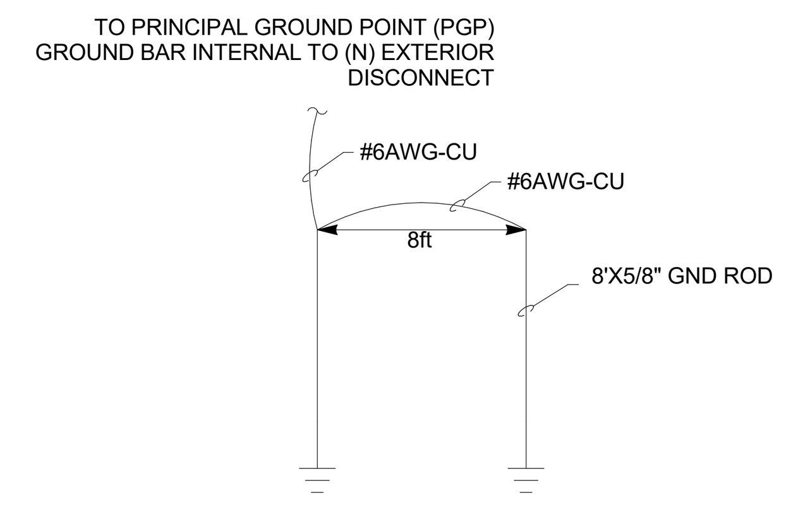
1.	ALL CABLES TO BE TERMINATED ONTO BUS BAR WITH TWO HOLE COMPRESSION LUGS AND ATTACHED TO BUS BAR WITH TAB COMPRESSION BELLEVILLE WASHERS AND TORK BOLT ASSEMBLY.
2.	ALL GROUND CONNECTORS SHALL BE STRANDED.
3.	ALL BUS BARS SHALL BE ATTACHED TO SURFACE WITH NON-CONDUCTIVE STAND-OFFS.
4.	GROUND BUS BAR AND GROUNDING SYSTEM SHALL BE UL LISTED AND COMPLY WITH MANUFACTURERS INSTALLATION INSTRUCTIONS.

GROUNDING ELECTRODE SYSTEMS NOTES

1.	METAL UNDERGROUND WATER PIPE - MAKE CONNECTION TO METAL UNDERGROUND WATER PIPE IN DIRECT CONTACT WITH THE EARTH FOR 10' OR AND ELECTRICALLY CONTINUOUS TO THE POINTS OF CONNECTION TO THE GROUNDING ELECTRODE CONDUCTOR AND BONDING CONDUCTORS. CONNECTION POINT TO BE AT A MAXIMUM OF 5' OF THE POINT OF ENTRANCE ON THE INTERIOR OF THE BUILDING.
2.	BUILDING STEEL - THE METAL FRAME OF THE BUILDING OR STRUCTURE, WHERE ANY OF THE FOLLOWING METHODS ARE USED TO MAKE AN EARTH CONNECTION: A. AT LEAST ONE STRUCTURAL METAL MEMBER THAT IS IN DIRECT CONTACT WITH THE EARTH FOR 10' OR MORE, WITH OR WITHOUT CONCRETE ENCASEMENT. B. HOLD-DOWN BOLTS SECURING THE STRUCTURAL STEEL COLUMN THAT ARE CONNECTED TO A CONCRETE ENCASED ELECTRODE THAT COMPLIES WITH 250.52(A)(3) AND IS LOCATED IN THE SUPPORT FOOTING OR FOUNDATION. THE HOLD-DOWN BOLTS SHALL BE CONNECTED TO THE CONCRETE-ENCASED ELECTRODE BY WELDING, EXOTHERMIC WELDING, THE USUAL STEEL TIE WIRES, OR OTHER APPROVED MEANS.
3.	UFER GROUND (CONCRETE-ENCASED ELECTRODE) - AN ELECTRODE ENCASED BY AT LEAST 2" OF CONCRETE, LOCATED WITHIN AND NEAR THE BOTTOM OF A CONCRETE FOUNDATION OR FOOTING THAT IS IN DIRECT CONTACT WITH EARTH, CONSISTING OF AT LEAST 20' OF ONE OR MORE BARE OR ZINC GALVANIZED OR OTHER ELECTRICALLY CONDUCTIVE COATED STEEL REINFORCING BARS OR RODS OF NOT LESS THAN 1/2" IN DIAMETER, OR CONSISTING OF AT LEAST 20' OF BARE COPPER CONDUCTOR NOT SMALLER THAN NO. 4 AWG. REINFORCING BARS SHALL BE PERMITTED TO BE BONDED TOGETHER BY THE USUAL STEEL TIE WIRES OR OTHER EFFECTIVE MEANS.
4.	GROUND ROD - ROD IS TO BE 8FT IN LENGTH AND SHALL BE MADE OF IRON OR STEEL AT LEAST 5/8" DIAMETER. INSTALLATION METHODS FOR GROUND ROD SHALL BE IN COMPLIANCE WITH THE NEC SUCH THAT AT LEAST 8' OF LENGTH IS IN CONTACT WITH THE EARTH.



2 ELECTRICAL GROUNDING DIAGRAM
E500 SCALE: NTS



3 GROUND ROD 'PAIR' DIAGRAM
E500 SCALE: NTS

FEEDER SCHEDULE (ALUMINUM)

KEY/ AMPS	FEEDER CONDUIT AND CONDUCTORS	KEY/ AMPS	FEEDER CONDUIT AND CONDUCTORS
SERVICE ENTRANCE FEEDERS		SDS XFMR FEEDERS (NOTE 1)	
A400N	2[4#250, 3"C]	A150S	4#3/0, 1#1/0G, 2-1/2"C
A600N	2[4#500, 3-1/2"C]	A250S	4#350, 1#1/0G, 3"C
A800N	3[4#400, 3"C]	A400S	2[4#250, 1#3/0G, 3"C]
A1000N	4[4#350, 3"C]	A500S	2[4#350, 1#3/0G, 3"C]
A1200N	4[4#500, 3"C]	A800S	3[4#400, 1#250G, 3"C]
A1600N	6[4#400, 3"C]	A1000S	4[4#350, 1#3/0G, 3"C]
A2000N	8[4#350, 3"C]	A1600S	6[4#400, 1#3/0G, 3"C]
A2500N	9[4#500, 3-1/2"C]	A2500S	9[4#500, 1#3/0G, 3-1/2"C]
A3000N	10[4#500, 3-1/2"C]		
A3500N	12[4#350, 3"C]		
A4000N	13[4#500, 3-1/2"C]		
EQUIPMENT FEEDERS			
A20NG	4#10, 1#10G, 3/4"C	A20G	3#10, 1#10G, 3/4"C
A30NG	4#8, 1#8G, 1"C	A30G	3#8, 1#8G, 1"C
A40NG	4#8, 1#8G, 1"C	A40G	3#8, 1#8G, 1"C
A50NG	4#6, 1#8G, 1"C	A50G	3#6, 1#8G, 1"C
A60NG	4#4, 1#8G, 1-1/4"C	A60G	3#4, 1#8G, 1-1/4"C
A70NG	4#3, 1#6G, 1-1/2"C	A70G	3#3, 1#6G, 1-1/2"C
A100NG	4#1, 1#6G, 1-1/2"C	A100G	3#1, 1#6G, 1-1/2"C
A150NG	4#3/0, 1#4G, 2"C	A150G	3#3/0, 1#4G, 2"C
A175NG	4#4/0, 1#4G, 2-1/2"C	A175G	3#4/0, 1#4G, 2-1/2"C
A200NG	4#250, 1#1G, 2-1/2"C	A200G	3#250, 1#1G, 2-1/2"C
A225NG	4#300, 1#2G, 2-1/2"C	A225G	3#300, 1#2G, 2-1/2"C
A250NG	4#350, 1#2G, 3"C	A250G	3#350, 1#2G, 3"C
A300NG	4#500, 1#2G, 3-1/2"C	A300G	3#500, 1#2G, 3-1/2"C
A350NG	2[4#4/0, 1#1G, 2-1/2"C]	A350G	2[3#4/0, 1#1G, 2-1/2"C]
A400NG	2[4#250, 1#1G, 2-1/2"C]	A400G	2[3#250, 1#1G, 2-1/2"C]
A450NG	2[4#300, 1#1/0G, 2-1/2"C]	A450G	2[3#300, 1#1/0G, 2-1/2"C]
A500NG	2[4#350, 1#1/0G, 3"C]	A500G	2[3#350, 1#1/0G, 3"C]
A600NG	2[4#500, 1#1/0G, 3-1/2"C]	A600G	2[3#500, 1#1/0G, 3-1/2"C]
A700NG	3[4#350, 1#3/0G, 3"C]	A700G	3[3#350, 1#3/0G, 3"C]
A800NG	3[4#400, 1#3/0G, 3"C]	A800G	3[3#400, 1#3/0G, 3"C]
A1000NG	4[4#350, 1#4/0G, 3"C]	A1000G	4[3#350, 1#4/0G, 3"C]
A1200NG	4[4#500, 1#250G, 3-1/2"C]	A1200G	4[3#500, 1#250G, 3-1/2"C]
A1600NG	6[4#400, 1#350G, 3"C]	A1600G	6[3#400, 1#350G, 3"C]
A2000NG	7[4#500, 1#400G, 3-1/2"C]	A2000G	7[3#500, 1#400G, 3-1/2"C]
GROUNDING CONDUCTORS		ABBREVIATIONS	
AG8	1#8, 3/4" C	MECH	SEE MECH SCHEDULE
AG6	1#6, 3/4" C	XFMR	SEE XFMR SCHEDULE
AG4	1#4, 3/4" C		
AG2	1#2, 3/4" C		
AG10	1-1/0, 3/4" C		
AG20	1-2/0, 3/4" C		
AG30	1-3/0, 3/4" C		

NOTES:
1. FEEDER FOR SECONDARY OF SEPARATELY DERIVED SYSTEM (SDS). GROUND SIZE PER NEC 250.66.
2. ALL CONDUCTORS ARE SINGLE CONDUCTOR ALUMINUM THWN UNLESS NOTED OTHERWISE. AMPACITY BASED ON NEC TABLE 310.16.
3. ALL CONDUITS ARE EMT UNLESS NOTED OTHERWISE, FILL RATIOS BASED ON NEC ANNEX C TABLE C1.

4 ASI #2

FEEDER SCHEDULE

KEY/ AMPS	FEEDER CONDUIT AND CONDUCTORS	KEY/ AMPS	FEEDER CONDUIT AND CONDUCTORS
SERVICE ENTRANCE FEEDERS		SDS XFMR FEEDERS (NOTE 1)	
400N	2[4#3/0, 2"C]	30S	4#10, 1#8G, 3/4"C
600N	2[4#350, 3"C]	50S	4#6, 1#8G, 1-1/4"C
800N	2[4#500, 3-1/2"C]	100S	4#1, 1#6G, 1-1/2"C
1000N	3[4#400, 3-1/2"C]	150S	4#1/0, 1#6G, 2"C
1200N	4[4#350, 3"C]	250S	4#250, 1#2G, 3"C
1600N	5[4#400, 3-1/2"C]	400S	2[4#3/0, 1#2G, 2"C]
2000N	6[4#400, 3-1/2"C]	500S	2[4#250, 1#1/0G, 3"C]
2500N	7[4#500, 3-1/2"C]	800S	2[4#500, 1#2/0G, 3-1/2"C]
3000N	8[4#500, 3-1/2"C]	1000S	3[4#400, 1#4/0G, 3-1/2"C]
3500N	10[4#500, 3-1/2"C]	1600S	5[4#400, 1#350G, 3-1/2"C]
4000N	11[4#500, 3-1/2"C]	2500S	7[4#500, 1#500G, 3-1/2"C]
EQUIPMENT FEEDERS			
20NG	4#12, #12G, 3/4"C	20G	3#12, #12G, 3/4"C
30NG	4#10, 1#10G, 3/4"C	30G	3#10, 1#10G, 3/4"C
40NG	4#8, 1#10G, 1"C	40G	3#8, 1#10G, 1"C
50NG	4#6, 1#10G, 1-1/4"C	50G	3#6, 1#10G, 1"C
60NG	4#4, 1#10G, 1-1/4"C	60G	3#4, 1#10G, 1"C
70NG	4#4, 1#8G, 1-1/4"C	70G	3#4, 1#8G, 1-1/4"C
80NG	4#3, 1#8G, 1-1/4"C	80G	3#3, 1#8G, 1-1/4"C
90NG	4#2, 1#8G, 1-1/2"C	90G	3#2, 1#8G, 1-1/4"C
100NG	4#1, 1#8G, 1-1/2"C	100G	3#1, 1#8G, 1-1/2"C
110NG	4#1, 1#6G, 2"C	110G	3#1, 1#6G, 1-1/2"C
125NG	4#1/0, 1#6G, 2"C	125G	3#1/0, 1#6G, 1-1/2"C
150NG	4#1/0, 1#6G, 2"C	150G	3#1/0, 1#6G, 1-1/2"C
175NG	4#2/0, 1#6G, 2"C	175G	3#2/0, 1#6G, 2"C
200NG	4#3/0, 1#6G, 2-1/2"C	200G	3#3/0, 1#6G, 2"C
225NG	4#4/0, 1#4G, 2-1/2"C	225G	3#4/0, 1#4G, 2"C
250NG	4#250, 1#4G, 3"C	250G	3#250, 1#4G, 2-1/2"C
300NG	4#350, 1#4G, 3"C	300G	3#350, 1#4G, 2-1/2"C
350NG	4#500, 1#3G, 3-1/2"C	350G	3#500, 1#3G, 3"C
400NG	2[4#3/0, 1#3G, 2-1/2"C]	400G	2[3#3/0, 1#3G, 2"C]
450NG	2[4#4/0, 1#2G, 2-1/2"C]	450G	2[3#4/0, 1#2G, 2"C]
500NG	2[4#250, 1#2G, 3"C]	500G	2[3#250, 1#2G, 2-1/2"C]
600NG	2[4#350, 1#1G, 3"C]	600G	2[3#350, 1#1G, 2-1/2"C]
700NG	2[4#500, 1#1/0G, 3-1/2"C]	700G	2[3#500, 1#1/0G, 3"C]
800NG	2[4#500, 1#1/0G, 3-1/2"C]	800G	2[3#500, 1#1/0G, 3"C]
1000NG	3[4#400, 1#2/0G, 3-1/2"C]	1000G	3[3#400, 1#2/0G, 3"C]
1200NG	4[4#350, 1#3/0G, 3"C]	1200G	4[3#350, 1#3/0G, 3"C]
1600NG	5[4#400, 1#4/0G, 3-1/2"C]	1600G	5[3#400, 1#4/0G, 3"C]
2000NG	6[4#400, 1#250G, 3-1/2"C]	2000G	6[3#400, 1#250G, 3"C]
GROUNDING CONDUCTORS		ABBREVIATIONS	
G8	1#8, 3/4" C	MECH	SEE MECH SCHEDULE
G6	1#6, 3/4" C	XFMR	SEE XFMR SCHEDULE
G4	1#4, 3/4" C		
G2	1#2, 3/4" C		
G10	1-1/0, 3/4" C		
G20	1-2/0, 3/4" C		
G30	1-3/0, 3/4" C		

NOTES:
1. FEEDER FOR SECONDARY OF SEPARATELY DERIVED SYSTEM (SDS). GROUND SIZE PER NEC 250.66.
2. ALL CONDUCTORS ARE SINGLE CONDUCTOR COPPER THWN UNLESS NOTED OTHERWISE. AMPACITY BASED ON NEC TABLE 310.16.
3. ALL CONDUITS ARE EMT UNLESS NOTED OTHERWISE, FILL RATIOS BASED ON NEC ANNEX C TABLE C1.

TRANSFORMER SCHEDULE - COPPER WINDINGS (2016 DOE EFFICIENCY STANDARDS)

KVA RATING	PRIMARY FLA	SECONDARY FLA	PRIMARY PROTECTION	PRIMARY FEEDER	SECONDARY PROTECTION	SECONDARY FEEDER	GROUNDING ELECTRODE CONDUCTOR (GEC)	TRANSFORMER IMPEDANCE	APPROX. DIMENSIONS HIGH	WIDE	DEEP	APPROX. WEIGHT	SPECIFIC NOTES
3	3.6	8.3	15A/3P	3#12, 1#12G, 3/4"C	15A/3P	4#12, 1#8G, 3/4"C	1#8, 3/4"C	4.57%	15	15	11	140LBS	1,2
6	7.2	16.7	15A/3P	3#12, 1#12G, 3/4"C	20A/3P	4#12, 1#8G, 3/4"C	1#8, 3/4"C	4.57%	15	15	11	145LBS	1,2
9	10.8	25.0	15A/3P	3#12, 1#12G, 3/4"C	30A/3P	4#10, 1#8G, 3/4"C	1#8, 3/4"C	4.57%	20	20	15	245LBS	1,2
15	18.1	41.7	25A/3P	3#10, 1#10G, 3/4"C	50A/3P	4#6, 1#8G, 1-1/4"C	1#8, 3/4"C	2.88%	26	21.88	17.75	250LBS	
30	36.1	83.3	45A/3P	3#6, 1#10G, 1"C	100A/3P	4#1, 1#6G, 1-1/2"C	1#6, 3/4"C	2.56%	36.88	24.88	21.13	415LBS	
45	54.2	125.0	70A/3P	3#4, 1#8G, 1-1/4"C	150A/3P	4#1/0, 1#6G, 2"C	1#6, 3/4"C	3.44%	36.88	24.88	21.13	478LBS	
75	90.3	208.3	125A/3P	3#1, 1#6G, 1-1/2"C	250A/3P	4#250MCM, 1#2G, 3"C	1#2G, 3/4"C	3.21%	43	30.54	24	676LBS	
112.5	135.4	312.5	175A/3P	3#2/0, 1#6G, 2"C	400A/3P	2[4#3/0, 1#2G, 2-1/2"C]	1#2G, 3/4"C	3.63%	51	34.5	31.5	1263LBS	
150	180.5	416.7	225A/3P	3#4/0, 1#4G, 2"C	500A/3P	2[4#250MCM, 1#1/0G, 3"C]	1#1/0G, 3/4"C	3.39%	51	34.5	31.5	1410LBS	
225	270.8	625.0	350A/3P	3#500MCM, 1#3G, 3"C	800A/3P	2[4#500MCM, 1#2/0G, 3-1/2"C]	1#2/0G, 3/4"C	4.34%	60	38	33.5	1745LBS	
300	361.0	833.3	450A/3P	2[3#4/0, 1#2G, 2"C]	1000A/3P	3[4#400MCM, 1#3/0G, 3-1/2"C]	1#3/0G, 3/4"	3.48%	66.18	42.18	33.5	2354LBS	
500	601.7	1388.9	750A/3P	2[3#500MCM, 1#1/0G, 3"C]	1600A/3P	5[4#400MCM, 1#3/0G, 3-1/2"C]	1#3/0G, 3/4"	4.57%	60	56	36	3450LBS	1,2
750	902.5	2083.3	1200A/3P	3[3#350MCM, 1#3/0G, 3"C]	2500A/3P	7[4#500MCM, 1#3/0G, 3-1/2"C]	1#3/0G, 3/4"	4.57%	74	56	41	3950LBS	1,2

GENERAL NOTES:
A. ALL TRANSFORMERS ARE 480V, 3PHASE, DELTA PRIMARY AND 208Y/120V, 3PHASE SECONDARY.
B. ALL CONDUCTORS ARE THWN, COPPER, SEE PLANS FOR INCREASED CONDUCTOR SIZE DUE TO VOLTAGE DROP.
C. BONDING AND GROUNDING CONDUCTORS ARE TO BE INSTALLED PER NEC 250.30 - GROUNDING SEPERATELY DERIVED ALTERNATING CURRENT SYSTEMS.
D. WEIGHT SHOWN FOR REFERENCE ONLY, AND MAY VARY BY MANUFACTURER.

SPECIFIC NOTES:
A. TRANSFORMER IMPEDANCE IS THE ASSUMED VALUE AND IS USED FOR FAULT-CURRENT CALCULATIONS. IF SUBMITTED TRANSFORMER IS OF A DIFFERENT VALUE, REVISED CALCULATIONS MAY BE REQUIRED.
B. EC TO FIELD VERIFY WEIGHTS OF NON DOE 2016 AS THEY MAY VARY BY MANUFACTURER.

TRANSFORMER SCHEDULE - ALUMINUM WINDINGS (2016 DOE EFFICIENCY STANDARDS)

4 ASI #2

KVA RATING	PRIMARY FLA	SECONDARY FLA	PRIMARY PROTECTION	PRIMARY FEEDER	SECONDARY PROTECTION	SECONDARY FEEDER	GROUNDING ELECTRODE CONDUCTOR (GEC)	TRANSFORMER IMPEDANCE	APPROX. DIMENSIONS HIGH	WIDE	DEEP	APPROX. WEIGHT	SPECIFIC NOTES
3	3.6	8.3	15A/3P	3#10, 1#10G, 1-1/4"C	15A/3P	4#10, 1#6G, 1-1/4"C	1#6, 3/4"C	4.57%	15	15	11	140LBS	1,2
6	7.2	16.7	15A/3P	3#10, 1#10G, 1-1/4"C	20A/3P	4#10, 1#6G, 1-1/4"C	1#6, 3/4"C	4.57%	15	15	11	145LBS	1,2
9	10.8	25.0	15A/3P	3#10, 1#10G, 1-1/4"C	30A/3P	4#8, 1#6G, 1-1/4"C	1#6, 3/4"C	4.57%	20	20	15	245LBS	1,2
15	18.1	41.7	25A/3P	3#8, 1#8G, 1-1/4"C	50A/3P	4#6, 1#6G, 1-1/4"C	1#6, 3/4"C	3.74%	26	21.88	17.75	225LBS	
30	36.1	83.3	45A/3P	3#6, 1#8G, 1-1/4"C	100A/3P	4#1, 1#4G, 1-1/4"C	1#4, 3/4"C	2.74%	36.88	24.88	21.13	409LBS	
45	54.2	125.0	70A/3P	3#3, 1#6G, 1-1/4"C	150A/3P	4#3/0, 1#4, 2"C	1#4, 3/4"C	3.51%	36.88	24.88	21.13	416LBS	
75	90.3	208.3	125A/3P	3#3/0, 1#4G, 2"C	250A/3P	4#350, 1#1/0, 3"C	1#1/0G, 3/4"C	3.61%	43	30.54	24	570LBS	
112.5	135.4	312.5	175A/3P	3#4/0, 1#4G, 2-1/2"C	400A/3P	2[4#250, 1#2G, 2-1/2"C]	1#1/0G, 3/4"C	4.37%	51	34.5	31.5	976LBS	
150	180.5	416.7	225A/3P	3#300, 1#2G, 2-1/2"C	500A/3P	2[4#350, 1#1/0G, 3"C]	1#3/0G, 3/4"C	3.46%	51	34.5	31.5	1239LBS	
225	270.8	625.0	350A/3P	2[3#4/0, 1#1G, 2-1/2"C]	800A/3P	3[4#400, 1#1/0G, 3"C]	1#4/0G, 3/4"C	4.29%	60	38	33.5	1571LBS	
300	361.0	833.3	450A/3P	2[3#300, 1#1/0G, 2-1/2"C]	1000A/3P	4[4#350, 1#1/0G, 3"C]	1#4/0G, 3/4"C	4.45%	66.18	42.18	33.5	2157LBS	
500	601.7	1388.9	750A/3P	3[3#400, 1#3/0G, 3"C]	1600A/3P	6[4#400, 1#1/0G, 3"C]	1#250G, 3/4"C	4.57%	60	56	36	3450LBS	1,2
750	902.5	2083.3	1200A/3P	4[3#500, 1#250G, 3-1/2"C]	2500A/3P	9[4#500, 1#1/0G, 3"C]	1#250G, 3/4"C	4.57%	74	56	41	3950LBS	1,2

GENERAL NOTES:
A. ALL TRANSFORMERS ARE 480V, 3PHASE, DELTA PRIMARY AND 208Y/120V, 3PHASE SECONDARY.
B. ALL CONDUCTORS ARE THWN, ALUMINUM, SEE PLANS FOR INCREASED CONDUCTOR SIZE DUE TO VOLTAGE DROP.
C. BONDING AND GROUNDING CONDUCTORS ARE TO BE INSTALLED PER NEC 250.30 - GROUNDING SEPERATELY DERIVED ALTERNATING CURRENT SYSTEMS.
D. WEIGHT SHOWN FOR REFERENCE ONLY, AND MAY VARY BY MANUFACTURER.

SPECIFIC NOTES:
1. TRANSFORMER IMPEDANCE IS THE ASSUMED VALUE AND IS USED FOR FAULT-CURRENT CALCULATIONS. IF SUBMITTED TRANSFORMER IS OF A DIFFERENT VALUE, REVISED CALCULATIONS MAY BE REQUIRED.
2. EC TO FIELD VERIFY WEIGHTS OF NON DOE 2016 AS THEY MAY VARY BY MANUFACTURER.

FAULT CURRENT CALCULATION SCHEDULE

4 ASI #2

POINT	LOCATION DESCRIPTION	LENGTH (L) (ft)	VOLTAGE (EL-L)	VOLTAGE (EL-N)	PHASE	WIRE SIZE	CONDUCTOR MATERIAL	CONDUCTOR TYPE	CONDUIT MATERIAL	VOLTAGE CLASS	C VALUE	# OF PARALLEL RUNS	Isc AVAILABLE UPSTREAM	Isc AT EQUIP (I3ph) OR (IL-L)	POINT
F0	UTILITY XFMR													15,500	F0
F1	400A CT CABINET	12	480	277	3	250	ALUMINUM	THREE SINGLE CONDUCTORS	NONMAGNETIC	600V	12862	2	15,500	15,106	F1
F2	400A DISC. 'MSD'	5	480	277	3	250	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	12122	2	15,106	14,938	F2
F3	PANEL 'HB1A'	10	480	277	3	250	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	12122	2	14,938	14,613	F3
F4	NEW EQUIPMENT	50	480	277	3	3X	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	8826	1	14,613	11,452	F4
F5	XFMR 'TB1A' PRI	20	480	277	3	4	COPPER	THREE SINGLE CONDUCTORS	STEEL	600V	3806	1	14,613	11,443	F5
F6	XFMR 'TB1A' SEC	0	208	120	3	3X	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	8826	1	3,192	3,192	F6
F7	PANEL 'LB1A'	10	208	120	3	3X	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	8826	1	3,192	3,098	F7
F8	ELEV-1 DISC.	20	480	277	3	4	COPPER	THREE SINGLE CONDUCTORS	STEEL	600V	3806	1	14,613	11,443	F8

NOTES:
1. ALL CALCULATIONS WERE DONE USING BUSSMAN "POINT-TO-POINT" METHOD.
2. REFER TO PLANS FOR ASSUMED UTILITY TRANSFORMER SIZE UTILIZED FOR CALCULATIONS. EXACT TRANSFORMER SIZE, IMPEDANCE, AND AVAILABLE SHORT CIRCUIT CURRENT SHALL BE VERIFIED WITH UTILITY PRIOR TO ORDERING ELECTRICAL EQUIPMENT. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.
3. DISTRIBUTION TRANSFORMER IMPEDANCES USED IN THE CALCULATIONS WERE TAKEN FROM EATON'S PUBLISHED IMPEDANCES FOR DOE 2016 DRY-TYPE TRANSFORMERS.
4. CONDUCTOR LENGTHS INDICATED IN THIS SCHEDULE ARE FOR THE PUROPOSES OF FAULT CURRENT CALCULATIONS ONLY. THESE LENGTHS ASSUME WORST CASE SHORTEST DISTANCE CONDITIONS AND SHOULD NOT BE UTILIZED BY THE ELECTRICAL CONTRACTOR FOR BIDDING PURPOSES. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ESTIMATING AND MEASURING ACTUAL FIELD CONDITION LENGTHS AS PART OF THE BID PROCESS.

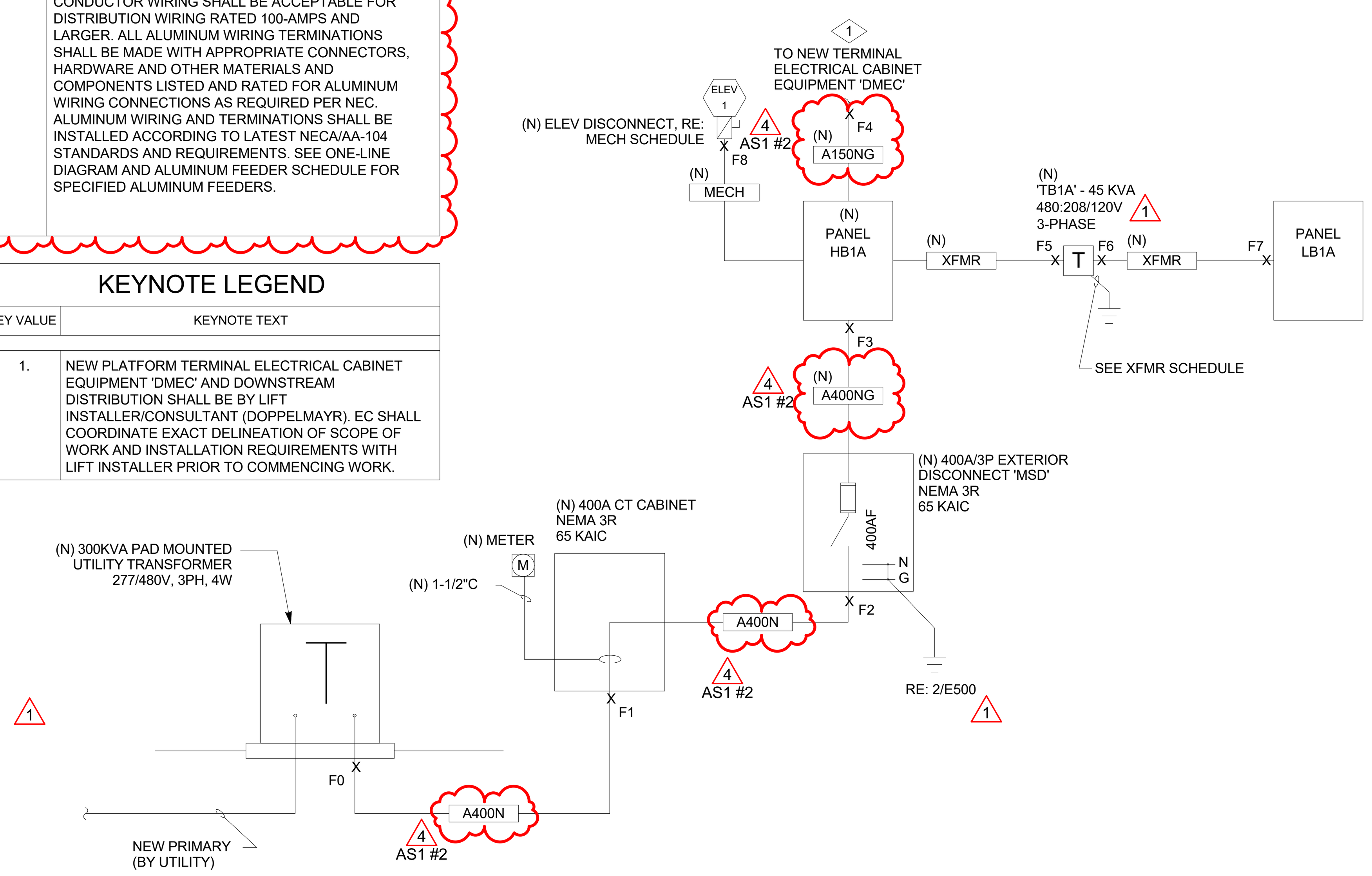
4 ASI #2

GENERAL NOTES

A.	PER APPROVED VE ALTERNATE ALUMINUM CONDUCTOR WIRING SHALL BE ACCEPTABLE FOR DISTRIBUTION WIRING RATED 100-AMPS AND LARGER. ALL ALUMINUM WIRING TERMINATIONS SHALL BE MADE WITH APPROPRIATE CONNECTORS, HARDWARE AND OTHER MATERIALS AND COMPONENTS LISTED AND RATED FOR ALUMINUM WIRING CONNECTIONS AS REQUIRED PER NEC. ALUMINUM WIRING AND TERMINATIONS SHALL BE INSTALLED ACCORDING TO LATEST NECA/AA-104 STANDARDS AND REQUIREMENTS. SEE ONE-LINE DIAGRAM AND ALUMINUM FEEDER SCHEDULE FOR SPECIFIED ALUMINUM FEEDERS.

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1.	NEW PLATFORM TERMINAL ELECTRICAL CABINET EQUIPMENT 'DMEC' AND DOWNSTREAM DISTRIBUTION SHALL BE BY LIFT INSTALLER/CONSULTANT (DOPPELMAYR). EC SHALL COORDINATE EXACT DELINEATION OF SCOPE OF WORK AND INSTALLATION REQUIREMENTS WITH LIFT INSTALLER PRIOR TO COMMENCING WORK.



4 ELECTRICAL ONE-LINE DIAGRAM
E500 NO SCALE

CONSTRUCTION SET 03/29/21

REVISIONS

No.	Description	Date
1	ADDENDUM #1	3/12/2021
4	ASI #2	6/7/2021

STEAMBOAT GONDOLA RELOCATION

STEAMBOAT SPRINGS, CO

ERIC SMITH ASSOCIATES, P.C.
1919 SEVENTH STREET
BOULDER, COLORADO, 80302
(303) 442-5458, (303) 442-4745 FAX

AE DESIGN
Integrated Lighting and Electrical Solutions
1900 Wazee Street #205 | Denver, CO 80202 | 303.296.3034
aedesign-inc.com
Project #: 5155.00

Job Number:	20034
Date:	03/29/21
Drawn By:	BDJ, MAE
Checked By:	TPK

Project Phase: CONSTRUCTION DOCUMENTS

Sheet Title: ELECTRICAL ONE LINE DIAGRAM

Sheet Number: E500

FILE: SBG PLATFORM v19.rvt
6/9/2021 5:24:23 PM

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1.	NEW (3) 3" PVC CONDUIT ROUTED 30" BELOW GRADE FOR CONNECTION TO SITE FIBER/TELEPHONE SERVICE INTERCONNECTION POINT (ROUTED THROUGH ELECTRICAL VAULT). ELECTRICAL CONTRACTOR SHALL VERIFY CONDUIT SIZING AND QUANTITY WITH SERVICE PROVIDER AND/OR OWNER (SSRC) PRIOR TO INSTALLATION. REFER TO ELECTRICAL PLANS FOR MORE INFORMATION.
2.	NEW (1)2" AND (1) 3" PVC CONDUIT ROUTED 30" BELOW GRADE FOR CONNECTION TO FIBER OPTIC SERVICE INTERCONNECTION POINT (ROUTED THROUGH ELECTRICAL VAULT) AND TO EXISTING CHRISTIE PEAK CHAIR LIFT. ELECTRICAL CONTRACTOR SHALL VERIFY CONDUIT SIZING AND QUANTITY WITH SERVICE PROVIDER AND/OR OWNER (SSRC) PRIOR TO INSTALLATION. REFER TO ELECTRICAL PLANS FOR MORE INFORMATION.
3.	MAIN TELECOMMUNICATIONS DEMARC POINT AND OWNER (SSRC) IT/MDF EQUIPMENT CABINET. EC SHALL PROVIDE MAIN TELEPHONE TERMINAL BOARD 'MTTB' AS NECESSARY AND REQUIRED BY OWNER (SSRC). IF REQUIRED, TELEPHONE BOARD SHALL CONSIST OF 3/4", FIRE-RETARDANT PAINTED AND TREATED PLYWOOD INSTALLED IN ROOM. EC SHALL COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH OWNER (SSRC) AND IT INSTALLER PRIOR TO COMMENCING WORK. ALL RECEPTACLE DEVICES SHOWN IN BACKBOARD ON PLANS SHALL BE FLUSH MOUNT, UON.
4.	PROVIDE GREEN COPPER GROUNDING CONDUCTOR (TYPICAL) BETWEEN GROUNDING BUSSES AS INDICATED. REFER TO #2/E500 FOR SIZING OF GROUNDING CONDUCTOR/CONDUIT.
5.	ROUTE (1) 1/2" CONDUIT FOR FIRE ALARM CONTROL PANEL COMMUNICATIONS CABLING RACEWAY.
6.	ROUTE (1) 1/2" CONDUIT FOR SECURITY ALARM CONTROL PANEL COMMUNICATIONS CABLING RACEWAY (AS REQUIRED/APPLICABLE TO PROJECT). COORDINATE REQUIREMENTS WITH SECURITY INSTALLER AND/OR OWNER (SSRC) AS NECESSARY.
7.	PROVIDE (3) 2" CONDUIT FROM OPERATOR CABIN TO BOILER ROOM FOR OPTICAL FIBER AND COPPER CABLING RACEWAY. REFER TO SHEET E111 FOR ADDITIONAL INFORMATION.
8.	PROVIDE (1) 3/4"C WITH PULL WIRE TO ELEVATOR CONTROL PANEL FOR ELEVATOR COMMUNICATIONS CABLING RACEWAY. CABLING SHALL BE FURNISHED BY OTHERS.
9.	PRINCIPAL GROUND POINT NEAR ELECTRICAL SERVICE EQUIPMENT.
10.	TELECOMMUNICATIONS MAIN GROUNDING BAR 'TCMGB' FUNCTIONING AS INTERSYSTEM BONDING TERMINATION DEVICE, COMPLYING WITH NEC 250.94.
11.	NEW TYPICAL WORK AREA COMMUNICATIONS OUTLET FOR STRUCTURED CABLE TERMINATIONS. PROVIDE 2" DEEP, 2-GANG BOX WITH 1-GANG PLASTER RING. PROVIDE 1" CONDUIT BACK TO 'MTTB'. RECEPTACLE FACEPLATE, JACK, CABLING, AND TERMINATIONS BY OTHERS.
12.	EXISTING UNDERGROUND CONDUIT TO BUCKAROO CARPET LIFT. EC SHALL RE-ROUTE AND EXTEND CONDUIT TO NEW ELECTRICAL VAULT FOR COMMUNICATIONS CABLING PATHWAY. ELECTRICAL CONTRACTOR SHALL VERIFY EXISTING CONDUIT SIZING AND QUANTITY IN FIELD WITH OWNER (SSRC) PRIOR TO INSTALLATION. REFER TO ELECTRICAL PLANS FOR MORE INFORMATION.

3 ASI #2 (1.) 4 ASI #2 (2.) 4 ASI #2 (4.) 4 ASI #2 (6.) 3 (12.)

GENERAL NOTES

A. PROVIDE EMT FOR ALL CABLING ROUTED THROUGH AREAS WITH EXPOSED STRUCTURAL CEILINGS AND THROUGH INACCESSIBLE CEILINGS, COORDINATE CONDUIT SIZE REQUIREMENTS WITH CABLE INSTALLER.

B. ALL EXPOSED CONDUIT SHALL BE CONCEALED TO THE GREATEST EXTENT POSSIBLE, AND SHALL BE INSTALLED PARALLEL AND CLOSE TO STRUCTURAL MEMBERS, PAINT CONDUIT TO MATCH ADJACENT FINISHES.

C. PROVIDE PULLCORD FOR ALL CONDUIT INSTALLED FOR CABLE.

D. PROVIDE PULLBOXES AS REQUIRED BY ABLE INSTALLER FOR RUNS EXCEEDING MAXIMUM PULL DISTANCE, AS IDENTIFIED BY CABLE INSTALLER.

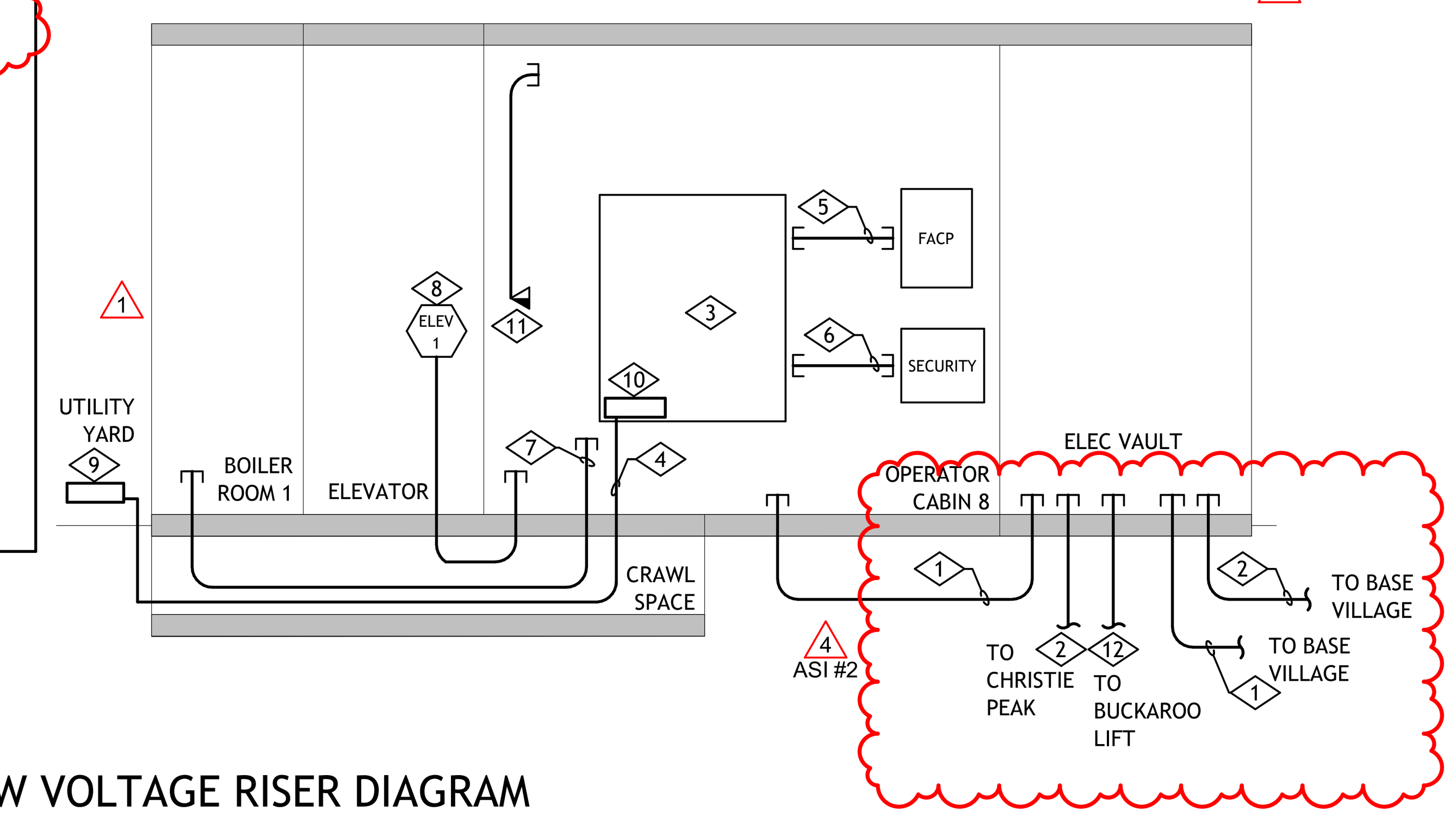
E. FOR ALL FREELY RUN ARMORED METALLIC FIBER OPTIC CABLING, CONTRACTOR SHALL GROUND CABLING ARMOR TO THE NEAREST PBB OR SBB.

F. PROVIDE SLEEVES AND CONDUIT BETWEEN FLOORS FOR ROUTING OF CABLE. COORDINATE CONDUIT SIZE WITH CABLE INSTALLER. COORDINATE LOCATION OF RACEWAY WITH ARCHITECT AND CABLE INSTALLER.

G. ALL CONDUIT AND CABLING IN CRAWL SPACE IS TO BE SUPPORTED BY AND TIGHT TO STRUCTURE ABOVE WHERE CONDUIT TRANSITIONS FROM BEING SUPPORTED BY STRUCTURE INTO SOIL. ADD LOOP AND/OR FLEXIBLE CONDUIT FOR ANTICIPATED SOIL MOVEMENT.

H. NOTE THAT ALL UNDERGROUND CONDUIT BENDS ARE TO BE GALVANIZED RIGID CONDUIT. UNDERGROUND CONDUIT EXTENDING ABOVE SLAB IS ALSO TO BE GALVANIZED RIGID CONDUIT. REFER TO SPECIFICATIONS FOR FULL CONDUIT REQUIREMENTS.

I. EC SHALL COORDINATE UNDERGROUND CONDUIT ROUTING TO OPERATOR CABIN WITH NEW STRUCTURAL BLOCK-OUTS IN FOUNDATION PRIOR TO COMMENCING WORK. REFER TO ELECTRICAL PLANS FOR ADDITIONAL INFORMATION.

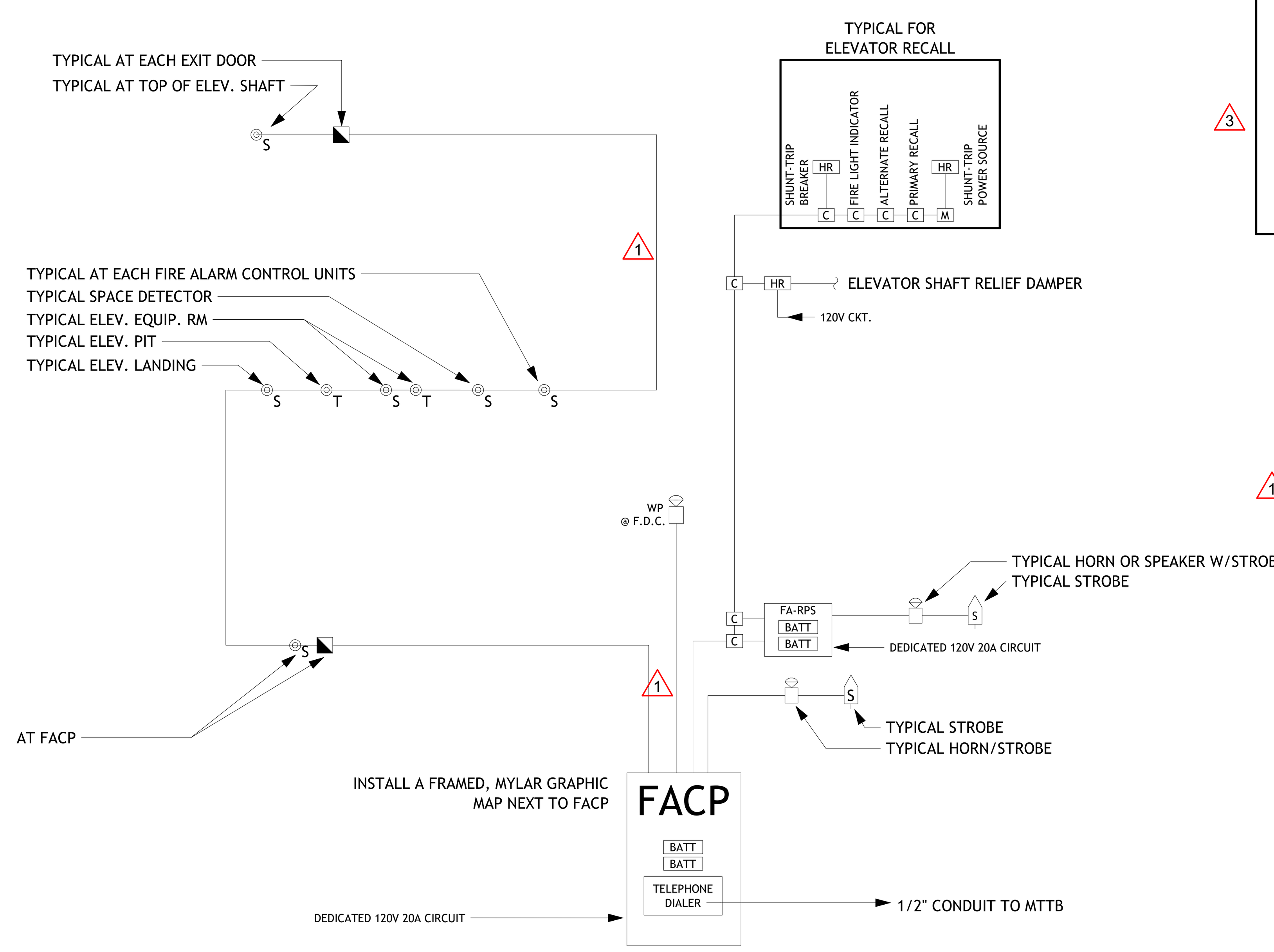


2 | LOW VOLTAGE RISER DIAGRAM
E600 | NTS

FIRE ALARM SHOP DRAWING REQUIREMENTS

THE FIRE ALARM DEVICES SHOWN ARE FOR GENERAL LAYOUT AND GUIDELINES ONLY. THE AWARDED FIRE ALARM CONTRACTOR IS TO PROVIDE A COMPLETE SET OF SHOP DRAWINGS FOR SUBMITTAL AND APPROVAL BY THE AUTHORITY HAVING JURISDICTION. THESE DOCUMENTS ARE TO INCLUDE THE FOLLOWING INFORMATION:

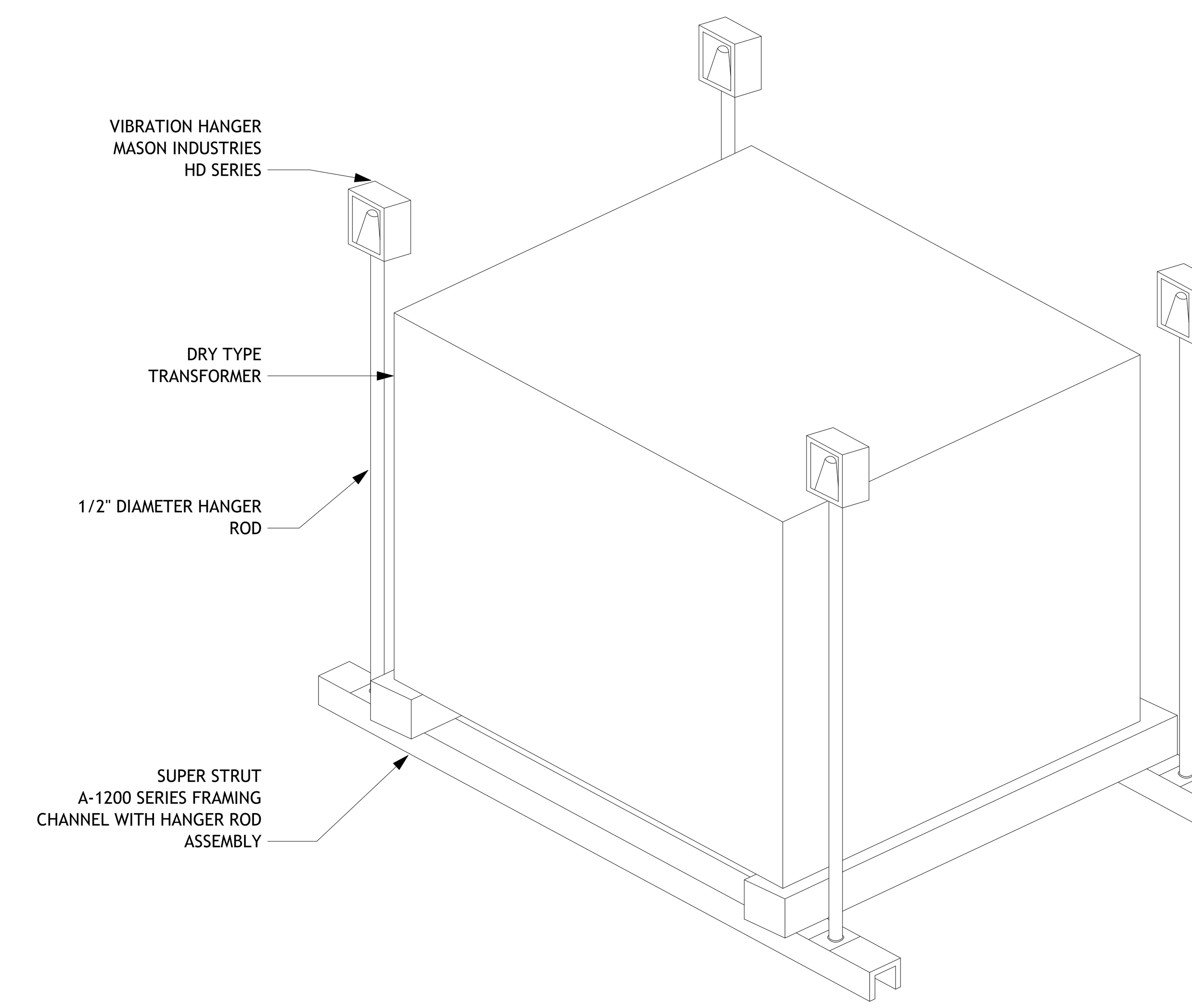
1. SHOP DRAWINGS MUST BE PREPARED AND SIGNED BY A MINIMUM OF A NICET FIRE ALARM LEVEL III CERTIFIED INDIVIDUAL.
2. COMPLETE RISER DIAGRAM SHOWING ALL DEVICES BY FLOOR/AREA AS CONNECTED TO THE CIRCUIT, DEVICE ADDRESSES, WIRE COLOR CODING SCHEDULE, WIRE COUNT, WIRE TYPE AND CONDUIT FILL WITH CALCULATIONS SHOWN.
3. PROVIDE A SEQUENCE OF OPERATION (INPUT/OUTPUT MATRIX) IN COMPLIANCE WITH THE NFPA 72 ANNEX MATERIAL. THE INFORMATION PROVIDED IN THE SEQUENCE OF OPERATION MUST BE SPECIFIC TO THE PROJECT. GENERIC SEQUENCE OF OPERATIONS WILL NOT BE ACCEPTED.
4. IDENTIFY THE TYPE OF SYSTEM, I.E. CENTRAL, REMOTE, PROPRIETARY, ETC.
5. IDENTIFY THE TYPE OF AUDIBLE NOTIFICATION: TEMPORAL, STEADY, CODED, VOICE, ETC.
6. IDENTIFY THE TYPE OF VISUAL NOTIFICATION: PUBLIC OR PRIVATE MODE.
7. PROVIDE A WIRING LEGEND SPECIFIC TO TYPES USED FOR THE PROJECT. IDENTIFY IF WIRING IS ENCLOSED IN CONDUIT, OPEN WIRING, PLENUM WIRING, POWER LIMITED OR NON-POWER LIMITED
8. PROVIDE AN EQUIPMENT LIST WITH MANUFACTURER, PART NUMBER, BACK BOX AND SYMBOL USED TO IDENTIFY THE COMPONENT. IF THERE IS INSUFFICIENT SPACE FOR WIRING LEGEND, EQUIPMENT LIST AND SYMBOL LEGEND ON THE TITLE SHEET, THAN INSERT AN ADDITIONAL SHEET.
9. COMPLETE RISER DIAGRAM SHOWING ALL DEVICES BY FLOOR/AREA AS CONNECTED TO THE CIRCUIT, DEVICE ADDRESSES, WIRE COLOR CODING SCHEDULE, WIRE COUNT, WIRE TYPE AND CONDUIT FILL WITH CALCULATIONS SHOWN.
10. DETAIL SHEET INCLUDING THE FOLLOWING; CIRCUIT WIRING DIAGRAM, DEVICE/APPLIANCE MOUNTING HEIGHT PROFILE, TYPICAL DEVICE AND ANCILLARY DEVICE WIRING, AND THE INTERFACE OF FIRE SAFETY CONTROL FUNCTIONS.
11. PROVIDE VOLTAGE DROP CALCULATIONS FOR EACH CIRCUIT SHOWING WIRE SIZE, CIRCUIT LOAD AND VOLTAGE DROP.
12. PROVIDE AUDIO CIRCUIT POWER LOSS CALCULATIONS
13. VOLTAGE DROP CALCULATIONS MUST BE PERFORMED USING THE OUTPUT CIRCUIT VOLTAGE WHEN THE INPUT VOLTAGE TO THE CONTROL PANEL IS 85% OF ITS NAME PLATE VOLTAGE. (NFPA 72, 2002 ED., SECTION 4.4.4.1(1))
14. PROVIDE RESISTANCE VALUES WITH SUPPORTING DATA SHEETS OR PROVIDE NEC VALUES AND REFERENCE.
15. INDICATE METHOD USED AND SHOW ALL FORMULAS/EQUATIONS.
16. PROVIDE STAND-BY BATTERY CALCULATIONS FOR EACH CONTROL PANEL, SUB PANEL, MONITORING STATION TRANSMITTER, POWER SUPPLY OR ANY COMPONENT REQUIRING SECONDARY POWER.
17. SHOW LOCATION OF ALL FIRE ALARM INITIATING DEVICES AND NOTIFICATION APPLIANCES WITH TEMPERATURE, DECIBLE AND CANDELA RATINGS, WHEN APPLICABLE.



FIRE ALARM GENERAL NOTES:

1. THIS IS A FULLY ADDRESSABLE SYSTEM WITH EACH DEVICE HAVING A DISTINCT 'ADDRESS'.
2. PROVIDE NON-POWER LIMITING, PLENUM RATED WIRING. INSTALL IN EMT WHERE WIRING IS ROUTED THROUGH HAZARDOUS LOCATIONS, EXPOSED STRUCTURAL CEILINGS, INACCESSIBLE CEILINGS, AND BETWEEN AREAS SEPARATED BY MULTI-STORY ATRIUMS. ALL RACEWAY COMPONENTS SHALL BE PAINTED RED.
3. NOT USED.
4. SPRINKLER SYSTEM IS A DESIGN-BUILD CONTRACT. COORDINATE WITH SPRINKLER CONTRACTOR FOR QUANTITIES AND LOCATIONS OF ALL FLOW AND TAMPER SWITCHES, AND FOR LOCATION OF FIRE HORN/LIGHT AT EXTERIOR OF BUILDINGS. INSTALL WITH A MINIMUM OF 20% SPARE CAPACITY ON ALL INITIATING AND INDICATING APPLIANCE CIRCUITS.
5. PROVIDE 120V CIRCUIT AND LOW-VOLTAGE FIRE ALARM CONTROL CIRCUIT TO ALL SMOKE DAMPERS. COORDINATE LOCATIONS WITH MECHANICAL CONTRACTOR PRIOR TO BID.
6. COORDINATE ALL SEQUENCING OF OPERATIONS WITH LOCAL FIRE DEPARTMENT.
7. ALL DEVICES INSTALLED IN DAMP, WET OR EXTERIOR LOCATIONS SHALL BE FURNISHED WITH WP HOUSINGS. ALL DEVICES INSTALLED IN GYMNASIUMS SHALL BE FURNISHED WITH WIRE GUARD.
8. SYSTEM SHALL TRANSMIT REQUIRED FIRE ALARM SIGNALS TO CENTRAL MONITORING AGENCY (SELECTED BY OWNER) VIA DIALER PROVIDED IN FIRE ALARM CONTROL PANEL.
10. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS BID AN ADDITIONAL 10% SPARE STROBES AND HORN/STROBES, INCLUDING INSTALLATION, AS MAY BE REQUIRED BY AHJ.
11. NOT USED.
12. SEQUENCE OF OPERATION FOR ELEVATOR RECALL:
    - 12.1. WHEN THE SMOKE DETECTORS IN THE LOBBIES, ELEVATOR SHAFT OR EQUIPMENT ROOM GO INTO ALARM, THE RESPECTIVE ELEVATOR WILL RETURN TO THEIR PRIMARY LEVEL OR SECONDARY LEVEL AND LOCK-OUT; THE LEVEL WILL DEPEND UPON IF THE ELEVATOR LOBBY DETECTOR SENSES ANY SMOKE AT THE RESPECTIVE LOBBY.
    - 12.2. SUBSEQUENTLY, IF THE THERMAL DETECTOR IN THE ELEVATOR ROOM GOES INTO ALARM, THE POWER TO THE ELEVATOR CONTROLLER WILL BE DISCONNECTED VIA A SHUNT TRIP CIRCUIT BREAKER.

3 | FIRE ALARM RISER DIAGRAM
E600 | 1/8" = 1'-0"



NOTES:
1. FASTEN VIBRATION HANGER RIGIDLY TO STRUCTURE ABOVE. SIZE TO ACCOMMODATE TRANSFORMER WEIGHT. BOT TRANSFORMER TO STRUT.
2. INSTALL FLEXIBLE CONDUIT BETWEEN PRIMARY AND SECONDARY CONDUIT AND TRANSFORMER HOUSING.

1 | SUSPENDED TRANSFORMER DETAIL
E600 | NTS

CONSTRUCTION SET 03/29/21

AE DESIGN
Integrated Lighting and Electrical Solutions
1900 Wazee Street #205 | Denver, CO 80202 | 303.296.3034
aedesign-inc.com Project #: 5155.00

COLORADO REGISTERED PROFESSIONAL ENGINEER 35717 06/11/2021

NOTICE: DUTY OF COOPERATION
Release of these plans contemplates further cooperation among the owner, his contractor and the architect. Design and construction are complex. Although the architect and his consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for the consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect of responsibility for all consequences arriving out of such changes.

REVISIONS

No.	Description	Date
1	ADDENDUM #1	3/12/2021
3	ASI #1	4/19/2021
4	ASI #2	6/7/2021

STEAMBOAT GONDOLA RELOCATION
STEAMBOAT SPRINGS, CO

ERIC SMITH ASSOCIATES, P.C.
1919 SEVENTH STREET
BOULDER, COLORADO, 80302
(303) 442-5458, (303) 442-4745 FAX

Job Number:	20034
Date:	03/29/21
Drawn By:	BDJ, MAE
Checked By:	TPK

Project Phase
CONSTRUCTION DOCUMENTS

Sheet Title
ELECTRICAL DIAGRAMS

Sheet Number
E600

FILE: SBG PLATFORM v19.rvt
6/9/2021 5:24:24 PM

PANEL: LV1

LOCATION:
SUPPLY FROM:
MOUNTING: Surface
ENCLOSURE: Type 3R

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. RATING: 10,000 AIC
MAINS TYPE: MCB
MAINS RATING: 150 A
MCB RATING: 100 A

Notes:

CKT	CCT TYPE	LOAD DESCRIPTION	TRIP	POLES	A		B		C		POLES	TRIP	LOAD DESCRIPTION	CCT TYPE	CKT
1	--	(E) BUCKAROO CARPET	40	2	2500	1000					1	20	'(E) IRRIGATION HEAT TAPE (*)	--	2
3	--	--	--	--			2500	200			1	20	(RL) IRRIGATION CLOCK (*)	E	4
5	R	DED GFCI QUAD RECEPT	20	1					360	360	1	20	GFCI CONV. RECEPTS	R	6
7	E	SNOWMAKING VALVE CONTROL PANEL	20	1	500	400					1	20	QTY (4) NORTH VALVE ACTUATORS	E	8
9	E	QTY (2) EAST VALVE ACTUATORS	20	1			200	200			1	20	MAIN VALVE ACTUATOR	E	10
11	E	RADIANT PANEL RP-7,8	20	1					1512	1512	1	20	RADIANT PANEL RP-9,10	E	12
13	--	SPARE	20	1	0	0					1	20	SPARE	--	14
15	E	RADIANT PANEL RP-11,12	20	1			1512	114			1	20	VAULT LIGHTING (**)	L	16
17	--	SPARE	20	1					0	756	1	20	RADIANT PANEL RP-13,14	E	18
19	--	SPARE	20	1	0	0					1	20	SPARE	--	20
21	--	SPARE	20	1			0	0			1	20	SPARE	--	22
23	--	SPARE	20	1					0	0	1	20	SPARE	--	24
25	--	SPARE	20	1	0	0					1	20	SPARE	--	26
27	--	SPARE	20	1			0	0			1	20	SPARE	--	28
29	--	SPARE	20	1					0	0	1	20	SPARE	--	30
31	--	SPARE	20	1	0	0					1	20	SPARE	--	32
33	--	SPARE	20	1			0	0			1	20	SPARE	--	34
35	--	SPARE	20	1					0	0	1	20	SPARE	--	36
37	--	BUSSED SPACE	--	--	0	0					--	--	BUSSED SPACE	--	38
39	--	BUSSED SPACE	--	--			0	0			--	--	BUSSED SPACE	--	40
41	--	BUSSED SPACE	--	--					0	0	--	--	BUSSED SPACE	--	42
				Total Load:	4400 VA		4726 VA		4500 VA						
				Total Amps:	37 A		40 A		38 A						

LEGEND

CCT TYPE:	LOAD	DEMAND LOAD	PANEL TOTALS	
LIGHTING:	114 VA	143 VA		
RECEPTACLE:	720 VA	720 VA	**TOTAL CONN. LOAD:**	13626 VA
MOTOR:			**TOTAL EST. LOAD:**	13655 VA
EQUIPMENT:	6792 VA	6792 VA	**TOTAL CONN.:**	38 A
KITCH EQUIP:			**TOTAL EST. DEMAND:**	38 A

NOTES:
(*) PROVIDE GFEP CIRCUIT BREAKER WITH 30mA GROUND FAULT PROTECTION FOR EQUIPMENT
(**) PROVIDE GFCI CIRCUIT BREAKER WITH 5mA GROUND FAULT CIRCUIT INTERRUPTER PROTECTION FOR PERSONNEL

PLATFORM MECHANICAL EQUIPMENT SCHEDULE

KEY	EQUIPMENT DESCRIPTION	LOAD	ELECTRICAL	MOCP/MFS	FEEDER	DISCONNECT	PANEL	CIRCUIT	NOTES
B 1	HEATING WATER BOILER	15.0A	208 V/3 3120 VA	25A	2#10, 1#10G, 1"C	30A/2P	LB1A	1,3	
EF 1	EXHAUST FAN	818 W	120 V/1-818 VA	20A	2#12, 1#12G, 3/4"C	30A/1P	LB1A	7	1
ELEV 1	ELEVATOR	25 HP 34 FLA	480 V/3-28266 VA	70A	3#4, 1#8G, 1-1/4"C	100A/3P	HB1A	1,3,5	
GF 1	GLYCOL FEEDER	50 W	120 V/1-50 VA	20A	2#12, 1#12G, 3/4"C	NEMA 5-20R	LB1A	11	2
P 1	PUMP	7.5 HP 11 FLA	480 V/3-9144 VA	20A	3#12, 1#12G, 3/4"C	30A/3P	HB1A	7,9,11	
P 2	PUMP	7.5 HP 11 FLA	480 V/3-9144 VA	20A	3#12, 1#12G, 3/4"C	30A/3P	HB1A	13,15,17	
RP 1	RADIANT CEILING PANEL	750 W	120 V/1-750 VA	20A	2#12, 1#12G, 3/4"C	20A/1P	LB1A	17	3
RP 2	RADIANT CEILING PANEL	750 W	120 V/1-750 VA	20A	2#12, 1#12G, 3/4"C	20A/1P	LB1A	17	3
RP 3	RADIANT CEILING PANEL	750 W	120 V/1-750 VA	20A	2#12, 1#12G, 3/4"C	20A/1P	LB1A	19	3
RP 4	RADIANT CEILING PANEL	750 W	120 V/1-750 VA	20A	2#12, 1#12G, 3/4"C	20A/1P	LB1A	19	3
RP 5	RADIANT CEILING PANEL	750 W	120 V/1-750 VA	20A	2#12, 1#12G, 3/4"C	20A/1P	LB1A	21	3
RP 6	RADIANT CEILING PANEL	750 W	120 V/1-750 VA	20A	2#12, 1#12G, 3/4"C	20A/1P	LB1A	21	3
SP 1	PLUMBING PUMP	4/10 HP	120 V/1-1176 VA	20A	2#12, 1#12G, 3/4"C	30A/1P	LB1A	9	
SPCP 1	SUMP PUMP CONTROL PANEL	3 FLA	120 V/1-360 VA	20A	2#12, 1#12G, 3/4"C	20A/1P TOGGLE	LB1A	11	
STCP 1	STORAGE TANK CONTROL PANEL	3 FLA	120 V/1-360 VA	20A	2#12, 1#12G, 3/4"C	20A/1P TOGGLE	LB1A	11	
UH 1	UNIT HEATER	7.5 KW 9.0 FLA	480 V/3-7482 VA	20A	3#12, 1#12G, 3/4"C	30A/3P	HB1A	19,21,23	
UH 2	UNIT HEATER	5.0 KW 6.0 FLA	480 V/3-4989 VA	20A	3#12, 1#12G, 3/4"C	30A/3P	HB1A	19,21,23	

VAULT MECHANICAL EQUIPMENT SCHEDULE

KEY	EQUIPMENT DESCRIPTION	LOAD	ELECTRICAL	MOCP/MFS	FEEDER	DISCONNECT	PANEL	CIRCUIT	NOTES
RP 7	RADIANT PANEL	6.3 FLA	120 V/1-756 VA	20A	2#12, 1#12G, 3/4"C	20A/1P STO	LV1	11	
RP 8	RADIANT PANEL	6.3 FLA	120 V/1-756 VA	20A	2#12, 1#12G, 3/4"C	20A/1P STO	LV1	11	
RP 9	RADIANT PANEL	6.3 FLA	120 V/1-756 VA	20A	2#12, 1#12G, 3/4"C	20A/1P STO	LV1	12	
RP 10	RADIANT PANEL	6.3 FLA	120 V/1-756 VA	20A	2#12, 1#12G, 3/4"C	20A/1P STO	LV1	12	
RP 11	RADIANT PANEL	6.3 FLA	120 V/1-756 VA	20A	2#12, 1#12G, 3/4"C	20A/1P STO	LV1	15	
RP 12	RADIANT PANEL	6.3 FLA	120 V/1-756 VA	20A	2#12, 1#12G, 3/4"C	20A/1P STO	LV1	15	
RP 13	RADIANT PANEL	6.3 FLA	120 V/1-756 VA	20A	2#12, 1#12G, 3/4"C	20A/1P STO	LV1	18	

MECHANICAL GENERAL NOTES

A. REFER TO MECHANICAL PLANS FOR SPECIFIC EQUIPMENT LOCATIONS AND REQUIREMENTS.

B. PRIOR TO ROUGH-IN, COORDINATE ALL MECHANICAL EQUIPMENT POWER AND CONNECTION REQUIREMENTS WITH MECHANICAL CONTRACTOR'S FINAL SHOP DRAWINGS.

C. PROVIDE ALL 120V CONTROL WIRING, REFER TO SPECIFICATIONS FOR FURTHER CONTROL WIRING CLARIFICATION.

D. FOR ANY VAV SYSTEM COORDINATE POWER REQUIREMENTS WITH MECHANICAL CONTRACTOR AND PROVIDE 120V CONNECTIONS AT EACH VAV BOX, OR AT CENTRAL CONTROL PANEL LOCATION(S) AS REQUIRED. IF EXACT QUANTITIES AND LOCATIONS FOR CONTROL PANELS ARE NOT KNOWN AT BID TIME, E.C. IS TO INCLUDE ONE 120V CONNECTION AT EACH VAV DEVICE IN THE BASE BID PRICE AND PROVIDE A CREDIT DURING CONSTRUCTION IF LESS CONNECTIONS ARE REQUIRED.

E. EXTERIOR DISCONNECT SWITCHES ARE TO BE PROVIDED AS NEMA 3R EQUIPMENT UNLESS OTHERWISE NOTED.

F. PROVIDE WEATHERPROOF 120 VOLT GFCI RECEPTACLES WITHIN 25' OF ALL ROOFTOP HEATING, VENTILATING, AND AIR CONDITIONING EQUIPMENT. CIRCUIT TO SPARE CIRCUIT ON NEAREST 120V PANELBOARD OR AS INDICATED ON PLANS.

G. PROVIDE DUCT DETECTION ON ALL RETURN AIR SYSTEMS OF 2,000 CFM OR GREATER, AND FOR ALL SUPPLY AIR SYSTEMS 15,000 CFM OR GREATER, INCLUDING THOSE SYSTEMS SERVING MULTIPLE FLOORS. PROVIDE ADDITIONAL DUCT DETECTORS AND INSTALL REMOTE INDICATOR LIGHTS AS REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION.

H. FOR ANY BOILER MECHANICAL SYSTEM, E.C. IS TO PROVIDE AN EMERGENCY PUSHBUTTON OFF AND ANY CONTROL WIRING REQUIRED. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR AND EQUIPMENT PRIOR TO INSTALLATION.

I. EC TO PROVIDE HAND/OFF/AUTO STARTERS FOR ALL MOTORS WHEN NOT INDICATED AS TO BE PROVIDED BY THE MECHANICAL CONTRACTOR ON THE MECHANICAL PLANS. SIZE OF STARTER TO BE BASED UPON SIZE OF MOTOR HORSEPOWER INDICATED.

MECHANICAL SPECIFIC NOTES

1. VERIFY THAT ELECTRICAL DISCONNECT IS PROVIDED BY MANUFACTURER AND INSTALL IN ACCESSIBLE LOCATION.

2. EC SHALL PROVIDE DEDICATED 120V DUPLEX GFCI RECEPTACLE WITHIN 3 FEET OF AND BEHIND UNIT. RECEPTACLE TO BE CIRCUITED PER MECHANICAL EQUIPMENT SCHEDULE.

3. MOUNT RADIANT PANEL IN ELEVATOR SHAFT WITH BOTTOM OF PANEL AT 18" ABOVE BOTTOM OF PIT. CONFIRM ALL MOUNTING LOCATIONS WITH ELEVATOR INSTALLER.

PANEL: HB1A

LOCATION: BOILER ROOM 100
SUPPLY FROM:
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTS: 480/277 Wye
PHASES: 3
WIRES: 4

A.I.C. RATING: 65K AIC FULLY RATED
MAINS TYPE: MLO
MAINS RATING: 400 A
MCB RATING: N/A

Notes:

CKT	CCT TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A		B		C		CB TYPE	POLES	TRIP	LOAD DESCRIPTION	CCT TYPE	CKT
1	M	ELEVATOR 'ELEV-1'	70	3		9422	0						--	--	BUSSED SPACE	--	2
3	--	--	--	--				9422	0				--	--	BUSSED SPACE	--	4
5	--	--	--	--						9422	0		--	--	BUSSED SPACE	--	6
7	M	PUMP (P-1)	20	3		3048	0						--	--	BUSSED SPACE	--	8
9	--	--	--	--				3048	0				--	--	BUSSED SPACE	--	10
11	--	--	--	--						3048	0		--	--	BUSSED SPACE	--	12
13	M	PUMP (P-2)	20	3		3048	0						--	--	BUSSED SPACE	--	14
15	--	--	--	--				3048	0				--	--	BUSSED SPACE	--	16
17	--	--	--	--						3048	0		--	--	BUSSED SPACE	--	18
19	E	UNIT HEATERS (UH-1, UH-2)	20	3		4157	0						--	--	BUSSED SPACE	--	20
21	--	--	--	--				4157	0				--	--	BUSSED SPACE	--	22
23	--	--	--	--						4157	0		--	--	BUSSED SPACE	--	24
25	L	PLATFORM AND BOH LTG	20	1		774	0						--	--	BUSSED SPACE	--	26
27	E	LTG CONTROL RELAY PANEL 'RP1'	20	1				500	0				--	--	BUSSED SPACE	--	28
29	--	SPARE	20	1						0	0		--	--	BUSSED SPACE	--	30
31	--	SPARE	20	1		0	32333						3	150	DOPPELMAYR PANEL	E; M	32
33	--	BUSSED SPACE	--	--				0	32333				--	--	--	--	34
35	--	BUSSED SPACE	--	--						0	32333		--	--	--	--	36
37	--	BUSSED SPACE	--	--		0	5998						3	70	PANEL 'LB1A' VIA XFMR 'TB1A'	L; E; R...	38
39	--	BUSSED SPACE	--	--				0	7154				--	--	1	--	40
41	--	BUSSED SPACE	--	--						0	5470		--	--	--	--	42
				Total Load:		58780 VA		59662 VA		57478 VA							
				Total Amps:		213 A		216 A		208 A							

CB TYPE LEGEND
GFCI: 5mA GROUND FAULT CIRCUIT INTERRUPTER
GFEP: 30mA GROUND FAULT PROTECTION FOR EQUIPMENT
AFCI: ARC FAULT CIRCUIT INTERRUPTER
CAFCI: COMBINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER
HC(-ON/OFF): HANDLE CLAMP FOR LOCKING IN ON/OFF POSITION
HT#: HANDLE TIE WITH GROUPING #
ST: SHUNT TRIP
LOCK: PERMANENTLY LOCKABLE BREAKER

CIRCUIT PHASE CODE LEGEND
N1. EXISTING LOAD ON EXISTING CIRCUIT BREAKER.
N2. NEW LOAD ON EXISTING CIRCUIT BREAKER.
N3. NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIC RATING TO MATCH EXISTING.

CCT TYPE:	LOAD	DEMAND LOAD	PANEL TOTALS	
LIGHTING:	812 VA	1015 VA		
RECEPTACLE:	1800 VA	1800 VA	**TOTAL CONN. LOAD:**	175921 VA
MOTOR:	54872 VA	61939 VA	**TOTAL EST. LOAD:**	183191 VA
EQUIPMENT:	118437 VA	118437 VA	**TOTAL CONN.:**	212 A
KITCH EQUIP:			**TOTAL EST. DEMAND:**	220 A

NOTES:

PANEL: LB1A

LOCATION:
SUPPLY FROM: TB1A
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. RATING: 10K AIC FULLY RATED
MAINS TYPE: MCB
MAINS RATING: 150 A
MCB RATING: 150 A 1

Notes:

CKT	CCT TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A		B		C		CB TYPE	POLES	TRIP	LOAD DESCRIPTION	CCT TYPE	CKT
1	E	BOILER (B-1)	25	2		1560	180						1	20	UTILITY YARD RECEPT	R	2
3	--	--	--	--				1560	1200			GFEP	2	20	HEAT TRACE SYSTEM	E	4
5	--	SPARE	20	1						0	1200	1	--	--	--	--	6
7	M	EXHAUST FAN (EF-1)	20	1		818	540						1	20	RETAINING WALL RECEPTS	R	8
9	E	PLUMBING PUMP (SP-1)	20	1				1176	0				1	20	SPARE	--	10
11	E	CTRL PANELS AND GLYCOL FEEDER	20	1						770	0		1	20	SPARE	--	12
13	--	SPARE	20	1		0	0						1	20	SPARE	--	14
15	--	SPARE	20	1				0	0				1	20	SPARE	--	16
17	E	RP-1, RP-2	20	1						1500	0		1	20	SPARE	--	18
19	E	RP-3, RP-4	20	1		1500	0						1	20	SPARE	--	20
21	E	RP-5, RP-6	20	1				1500	0				1	20	SPARE	--	22
23	E	MECHANICAL CONTROLS	20	1						500	0		1	20	SPARE	--	24
25	R	BOILER ROOM RECEPTS	20	1		540	0						1	20	SPARE	--	26
27	L; R	ELEVATOR SHAFT RECEPT	20	1				218	0				1	20	SPARE	--	28
29	M	THERMOSTAT AND MOTOR DAMPER	20	1						500	0		1	20	SPARE	--	30
31	R	MACHINE ROOM RECEPT	20	1		360	0						--	--	BUSSED SPACE	--	32
33	E	ELEVATOR CAB CONNECTION	20	1				1000	0				--	--	BUSSED SPACE	--	34
35	E	FIRE ALARM CONTROL PANEL	20	1						500	0		--	--	BUSSED SPACE	--	36
37	E	RFID GATE XFMR POWER SUPPLY	20	1		500	0						--	--	BUSSED SPACE	--	38
39	E	RFID GATE XFMR POWER SUPPLY	20	1				500	0				--	--	BUSSED SPACE	--	40
41	E	RFID GATE XFMR POWER SUPPLY	20	1						500	0		--	--	BUSSED SPACE	--	42
				Total Load:		5998 VA		7154 VA		5470 VA							
				Total Amps:		51 A		60 A		46 A							

CB TYPE LEGEND
GFCI: 5mA GROUND FAULT CIRCUIT INTERRUPTER
GFEP: 30mA GROUND FAULT PROTECTION FOR EQUIPMENT
AFCI: ARC FAULT CIRCUIT INTERRUPTER
CAFCI: COMBINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER
HC(-ON/OFF): HANDLE CLAMP FOR LOCKING IN ON/OFF POSITION
HT#: HANDLE TIE WITH GROUPING #
ST: SHUNT TRIP
LOCK: PERMANENTLY LOCKABLE BREAKER

CIRCUIT PHASE CODE LEGEND
N1. EXISTING LOAD ON EXISTING CIRCUIT BREAKER.
N2. NEW LOAD ON EXISTING CIRCUIT BREAKER.
N3. NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIC RATING TO MATCH EXISTING.

CCT TYPE:	LOAD	DEMAND LOAD	PANEL TOTALS	
LIGHTING:	38 VA	48 VA		
RECEPTACLE:	1800 VA	1800 VA	**TOTAL CONN. LOAD:**	18622 VA
MOTOR:	1318 VA	1523 VA	**TOTAL EST. LOAD:**	18836 VA
EQUIPMENT:	15466 VA	15466 VA	**TOTAL CONN.:**	52 A
KITCH EQUIP:			**TOTAL EST. DEMAND:**	52 A

NOTES:

AE DESIGN
Integrated Lighting and Electrical Solutions
1900 Wazee Street #205 | Denver, CO 80202 | 303.296.3034
aedesign-inc.com
Project #: 5155.00

CONSTRUCTION SET 03/29/21

6/9/2021 5:24:24 PM FILE: SBG PLATFORM v19.rvt

COLORADO REGISTERED 35717 06/11/2021 PROFESSIONAL ENGINEER

NOTICE: DUTY OF COOPERATION
Release of these plans contemplates further cooperation among the owner, his contractor and the architect. Design and construction are complex. Although the architect and his consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for the consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect of responsibility for all consequences arriving out of such changes.

REVISIONS

No.	Description	Date
1	ADDENDUM #1	3/12/2021
3	ASI #1	4/19/2021
4	ASI #2	6/7/2021

STEAMBOAT GONDOLA RELOCATION
STEAMBOAT SPRINGS, CO

ERIC SMITH ASSOCIATES, P.C.
1919 SEVENTH STREET
BOULDER, COLORADO, 80302
(303) 442-5456, (303) 442-4745 FAX

Job Number:	20054
Date:	03/29/21
Drawn By:	BDJ, MAE
Checked By:	TPK

Project Phase
CONSTRUCTION DOCUMENTS

Sheet Title
ELECTRICAL SCHEDULES

Sheet Number
E700

LIGHTING CONTROL NOTES

GENERAL CONTROL NOTES

G1	THE LIGHTING CONTROL SYSTEM CONSISTS OF THE FOLLOWING: a. STAND-ALONE CONTROLS b. ROOM CONTROLLER CONTROLS c. NETWORKED RELAY BASED LIGHTING CONTROL PANEL SYSTEM OR NETWORKED DISTRIBUTED LIGHTING CONTROLS OR NETWORKED WIRELESS DISTRIBUTED LIGHTING CONTROLS
G2	ALTERNATE MANUFACTURER'S WILL BE REVIEWED ACCORDING TO THE NOTES PROVIDED IN THE LIGHTING FIXTURE SCHEDULE.
G3	ALL WIRING DIAGRAMS WITHIN THESE DRAWINGS ARE PROVIDED TO COMMUNICATE THE DESIGN INTENT. SYSTEM SHALL BE WIRED ACCORDING TO THE APPROVED SHOP DRAWINGS.
G4	ALL STRUCTURED CABLE WIRING SHOWN ON RISER DIAGRAMS IS INTENDED TO BE BY CONTROL MANUFACTURER APPROVED STANDARD STRUCTURED CABLING, UNLESS OTHERWISE NOTED. EC SHALL PROVIDE ALL CABLING WITHIN THE LIGHTING CONTROL SYSTEM, CABLING BETWEEN THE NETWORKED HEAD-END AND THE BUILDINGS COMMUNICATION NETWORK SHALL BE PROVIDED BY THE LOW VOLTAGE CONTRACTOR/OWNER.
G5	ALL MANUALLY DIMMED LIGHT LOADS SHALL BE CAPABLE OF DIMMING LIGHTS TO OFF SETTING. DIMMING COMPATIBILITY BETWEEN THE CONTROLS AND LIGHT FIXTURES SHALL BE COORDINATED BY THE EC TO ENSURE THAT LIGHTING IS ABLE TO DIM TO LEVEL NOTED ON LIGHTING FIXTURE SCHEDULE.
G6	LIGHTING CONTROL SYSTEM SHALL INCLUDE A MINIMUM OF (4) HOURS OF MANUFACTURER'S REPRESENTATIVE TIME ON SITE FOR SYSTEM CHECK-OUT AND OWNER TRAINING. ELECTRICAL CONTRACTOR SHALL VIDEO RECORD TRAINING SESSION AND PROVIDE COPY OF VIDEO TO OWNER AS PART OF PROJECT COMPLETION SUBMITTALS.
G7	ALL DIGITAL SWITCHES FOR OVERRIDE CONTROL OF LIGHTING CONTROL SYSTEM(S) SHALL HAVE A MAXIMUM SETTING OF 2 HOURS PER IECC REQUIREMENTS.
G8	FINAL OCCUPANCY AND DAYLIGHT SENSOR LOCATION SHALL BE PROVIDED BY MANUFACTURER AND LOCATED PER APPROVED SHOP DRAWINGS AND DEVICE REQUIREMENTS. LOCATIONS INDICATED IN THESE DRAWINGS SHALL BE REVIEWED AND ALTERED AS NECESSARY FOR CORRECT OPERATION BY MANUFACTURER. IF OPERATIONS OF SENSORS DOES NOT MEET THE INTENT OUTLINED IN THESE DOCUMENTS THE MANUFACTURER REPRESENTATIVE SHALL PROVIDE FIELD RECTIFICATION SERVICES AS NECESSARY IN ORDER TO RECONFIGURE SYSTEM TO MEET OUTINED INTENT.

STANDALONE LIGHTING CONTROL GENERAL NOTES

S1	APPROVED STANDALONE LIGHTING CONTROLS TO BE PROVIDED BY ONE OF THE FOLLOWING PRE-APPROVED MANUFACTURERS: a. LEVITON b. nLIGHT/SENSORSWITCH c. LUTRON d. GREENGATE e. WATTSTOPPER f. DOUGLAS

ROOM CONTROLLER GENERAL NOTES

R1	APPROVED ROOM CONTROLLER LIGHTING CONTROLS TO BE PROVIDED BY ONE OF THE FOLLOWING PRE-APPROVED MANUFACTURERS: a. CRESTRON b. nLIGHT c. LUTRON d. GREENGATE e. WATTSTOPPER f. DOUGLAS
R2	REFER TO ELECTRICAL LIGHTING LAYOUTS FOR LAYOUT OF DEVICES CONNECTED TO ROOM CONTROLLERS. ROOM CONTROLLER COMPONENTS ARE INDICATED IN THE "LIGHTING CONTROL DEVICE" SCHEDULE, THESE COMPONENTS START WITH THE DESIGNATION 'R'.
R3	ROOM CONTROLLER HEAD END EQUIPMENT LOCATIONS ARE INDICATED IN SPACES, HOWEVER DRAWINGS ARE DIAGRAMMATIC AND EXACT QUANTITY OF ROOM CONTROLLER HEAD END EQUIPMENT PIECES VARIES FROM MANUFACTURER TO MANUFACTURER BASED ON DIMMING UTILIZATION, QUANTITY OF RELAYS, NUMBER OF INPUT DEVICES, QUANTITY OUTPUT ZONES AND RECEPTACLE CONTROL.

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLTAGE	LAMP QUAN.	LAMP WATTAGE	LAMP / CCT / CRI	MAX WATTAGE	LUMEN OUTPUT	DIMMING	FIXTURE FINISH	LOCATION	BOF/RFD/OFH	NOTES
EA1	AREA TYPE IV LED POLE	HUBBELL	ALT4-P70-96L-3K-277-BL	277 V	1	224 W	3000K 80 CRI LED	224 VA	19582	--	BLACK	POLE	15'-0" OFH	1,2
EA2	AREA TYPE V LED POLE	HUBBELL	ALT5-P35-96L-3K-277-BL	277 V	1	104 W	3000K 80 CRI LED	104 VA	11644	--	BLACK	POLE	15'-0" OFH	1,2
EA3	EXTERIOR LED AREA POLE LIGHT, SINGLE HEAD TYPE III	HUBBELL	ALT4-P35-96L-3K-277-BL	277 V	1	104 W	3000K 80 CRI LED	104 VA	9902	--	BLACK	POLE	15'-0" OFH	1,2
ED1	15" X 15" SQUARE LED CANOPY DOWNLIGHT	CREE	CPY250-DM-F-C-UL-BK-30K-DIM	277 V	1	31 W	3000K 80 CRI LED	31 VA	4210	--	BLACK	CANOPY SURFACE	2" RFD	1,3
ED1EM	15" X 15" SQUARE LED CANOPY DOWNLIGHT WITH REMOTE EMERGENCY INVERTER	CREE	CPY250-DM-F-C-UL-BK-30K-DIM	277 V	1	31 W	3000K 80 CRI LED	31 VA	4210	--	BLACK	CANOPY SURFACE	2" RFD	1,3
EW2EM	9"H x 11.5"W LED WALL MOUNT WITH -20 DEGREES C RATED EMERGENCY BATTERY BACKUP	LITHONIA	WDGE2 LED-P1-30K-80CRI-VW-MVOLT-E20WC-DBLXD	277 V	1	18 W	3000K 80 CRI LED	18 VA	1163	--	BLACK	SURFACE WALL	SEE PLANS	1
L1	4' LED STRIP LIGHT	LITHONIA	CLX-L48-3000LM-SEF-L/LENS-MVOLT-GZ10-30K-80CRI-WH	277 V	1	20 W	3000K 80 CRI LED	20 VA	2631	0-10V	WHITE	SURFACE CEILING	1" RFD	1
L1EM	4' LED STRIP LIGHT WITH EMERGENCY	LITHONIA	CLX-L48-3000LM-SEF-L/LENS-MVOLT-GZ10-30K-80CRI-E10WLCP-WH	277 V	1	20 W	3000K 80 CRI LED	20 VA	2631	0-10V	WHITE	SURFACE CEILING	1" RFD	1
L2	4' LED STRIP LIGHT SUSPENDED WITH AIRCRAFT CABLE	LITHONIA	CLX-L48-3000LM-SEF-L/LENS-MVOLT-GZ10-30K-80CRI-WH-ZACVH	277 V	1	20 W	3000K 80 CRI LED	20 VA	2631	0-10V	WHITE	SUSPENDED	12'-0" BOF	1
L2EM	4' LED STRIP LIGHT SUSPENDED WITH AIRCRAFT CABLE AND WITH EMERGENCY	LITHONIA	CLX-L48-3000LM-SEF-L/LENS-MVOLT-GZ10-30K-80CRI-WH-ZACVH-E10WLCP	277 V	1	20 W	3000K 80 CRI LED	20 VA	2631	0-10V	WHITE	SUSPENDED	12'-0" BOF	1
W1	4' LED STRIP LIGHT ELEVATOR SHAFT	CREE	C-STRIP-A-LIN4-22L-30K-WH	120 V	1	19 W	3000K 80 CRI LED	19 VA	2200	--	--	SURFACE WALL	SEE PLANS	1
W2	WET RATED LED STRIP LIGHT FIXTURE WITH SILICONE GASKETED LENS, IP 65 RATED OR EQUAL ON GFCI CIRCUIT BREAKER	LITHONIA	FEM-L48-LPPCL-MD-MVOLT-GZ10-35K-80CRI	120 V	1	19 W	3000K 80 CRI LED	19 VA	2000LM	--	--	SURFACE	SEE PLANS	1
W2EM	WET RATED LED STRIP LIGHT FIXTURE WITH EM BATTERY, SILICONE GASKETED LENS, IP 65 RATED OR EQUAL ON GFCI CIRCUIT BREAKER	LITHONIA	FEM-L48-LPPCL-MD-MVOLT-GZ10-35K-80CRI-E10WMCP	120 V	1	19 W	3000K 80 CRI LED	19 VA	2000LM	--	--	SURFACE	SEE PLANS	1

4 ASI #2

LIGHTING CONTROLS NAMING CONVENTION

SYSTEM TYPE
- **N** = NETWORKED
- **R** = ROOM CONTROLLER

(THE ABSENCE OF LETTERS ABOVE UNDER 'SYSTEM TYPE' INDICATE A STANDALONE SYSTEM)

AUTOMATIC MEANS OF SHUTOFF
- **L** = LIGHT LEVEL (VIA PHOTOCELL)
- **M** = MANUAL
- **O** = OCCUPANCY
- **T** = TIMECLOCK
- **V** = VACANCY

DEVICES
- **C** = CONTROLLED RECEPTACLE
- **D** = DIMMER
- **E** = EXTERIOR
- **P** = PHOTOCELL
- **S** = SENSOR
- **U** = UNIQUE DEVICE TYPE
- **W** = SWITCH MOUNTED DEVICE

NUMBERING

1,2,3... = QUANTITY AS REQUIRED FOR DIFFERENT PROGRAMMING SCENARIOS, DEVICE CHARACTERISTICS OR MOUNTING CONDITIONS

LIGHTING FIXTURE GENERAL NOTES

A.	ALL FRONT OF HOUSE LED LAMPS TO BE 3000K COLOR TEMPERATURE AND A MINIMUM OF 90CRI, UON.
B.	ALL REFLECTOR LAMPS TO BE PROVIDED AS WIDE FLOOD DISTRIBUTION, UON.
C.	LUMENS LISTED ARE DELIVERED LUMENS, NOT INITIAL.
D.	FOR ALL SPECIFIED LUMINAIRES, THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL MOUNTING HARDWARE, ACCESSORIES, COMPONENTS, LEADER/JUMPER CABLES, WIRE FEED, CONNECTORS, END CAPS, REMOTE POWER SUPPLIES, AND ANY OTHER NECESSARY COMPONENT AS REQUIRED FOR INSTALLING A SECURE AND FULLY FUNCTIONAL SYSTEM.
E.	THE CONTRACTOR SHALL VERIFY THE CEILING TYPE BEFORE ORDERING LIGHT FIXTURES TO ENSURE COMPATIBILITY WITH SPECIFIED FIXTURES. NOTIFY SPECIFIER OF ANY DISCREPANCIES.
F.	ALL FINISH SELECTIONS SHALL BE VERIFIED BE ARCHITECT/INTERIOR DESIGNER/OWNER AS PART OF THE SUBMITTAL PROCESS. UNLESS OTHERWISE NOTED, EC SHALL ASSUME STANDARD LUMINAIRE FINISH OPTION FOR PRICING.
G.	ALL MOUNTING HEIGHTS SHALL BE VERIFIED WITH ARCHITECTURAL ELEVATIONS PRIOR TO ANY ROUGH-IN.

LIGHTING FIXTURE SPECIFIC NOTES

1.	ARCHITECT TO VERIFY COLOR FINISH PRIOR TO ORDERING.
2.	OVERALL FIXTURE HEIGHT DTERMINED FROM PLATFORM LEVEL ELEVATION (LEVEL 1) TO BOTTOM OF FIXTURE LENS. EC SHALL PROVIDE POLE LENGTHS AS REQUIRED FOR OVERALL FIXTURE HEIGHT INDICATED. COORDINATE EXACT POLE HEIGHT REQUIRED WITH OVERALL HEIGHT AND ELEVATION OF POLE BASE. COORDINATE EXACT HEIGHT WITH ARCHITECT PRIOR TO ROUGH-IN.
3.	FIXTURE TO BE MOUNTED ON UNDERSIDE OF GONDOLA CANOPY. COORDINATE EXACT LOCATION AND MOUNTING REQUIRMENTS WITH GONDOLA VENDOR PRIOR TO ROUGH-IN.

LIGHTING SEQUENCE OF OPERATION

CONTROL SEQUENCE	ON	OFF	SENSOR TYPE	TIME OUT	DIMMING	DAYLIGHT HARVESTING	TARGET ILLUMINANCE (FC)	NOTES
M1	MANUAL ON	MANUAL OFF	NONE	N/A	0-10V	NO	--	
T1	TIMECLOCK AUTOMATIC ON 30 MINUTES PRIOR TO BUSINESS HOURS	TIMECLOCK AUTOMATIC OFF 30 MINUTES AFTER CLOSE OF BUSINESS	NONE	N/A	N/A	NO	--	
T2	TIMECLOCK AUTOMATIC ON 30 MINUTES PRIOR TO BUSINESS HOURS	TIMECLOCK AUTOMATIC OFF 30 MINUTES AFTER CLOSE OF BUSINESS	NONE	N/A	SWITCHING	NO	--	

LIGHTING RELAY SCHEDULE - RP1

RELAY ID	RELAY DESCRIPTION	DIMMING / SWITCHING	VOLTAGE	PANEL-CIRCUIT	CONTROL SEQUENCE
RP1-1	PLATFORM POLES	--	277 V	HB1A-25	TIMECLOCK
RP1-2	WALL/ELEVATOR SCONCES	--	277 V	HB1A-25	TIMECLOCK
RP1-3	GONDOLA DOWNLIGHTS	--	277 V	HB1A-25	TIMECLOCK
RP1-4	SPARE				
RP1-5	SPARE				
RP1-6	SPARE				
RP1-7	SPARE				
RP1-8	SPARE				

EMERGENCY INVERTER SCHEDULE

INVERTER ID	DESCRIPTION	CONTROL ZONE	PANEL-CIRCUIT	CONNECTED LOAD	MAX LOAD	DETAIL
INV1	BODINE #ELI-S-100 OR APPROVED EQUAL	RP1-3	HB1A-25	62 VA	100 VA	

4 ASI #2

COLORADO REGISTERED PROFESSIONAL ENGINEER
JON BROOKS
35717
06/11/2021

REVISIONS

No.	Description	Date
1	ADDENDUM #1	3/12/2021
3	ASI #1	4/19/2021
4	ASI #2	6/7/2021

STEAMBOAT GONDOLA RELOCATION

STEAMBOAT SPRINGS, CO

ERIC SMITH ASSOCIATES, P.C.
1919 SEVENTH STREET
BOULDER, COLORADO, 80302
(303) 442-5458, (303) 442-4745 FAX

Job Number:	20034
Date:	03/29/21
Drawn By:	BDJ, MAE
Checked By:	TPK

Project Phase
CONSTRUCTION DOCUMENTS

Sheet Title
ELECTRICAL LIGHTING SCHEDULES

Sheet Number
E800

AE DESIGN
Integrated Lighting and Electrical Solutions
1900 Wazee Street #205 | Denver, CO 80202 | 303.296.3034
aedesign-inc.com
Project #: 5155.00

CONSTRUCTION SET 03/29/21