Staff Report for Administrative Approval – Hillside Review – Notice of Conditional Approval

Weber County Planning Division

Synopsis

Application Information

Application Request: Consideration and action on a request to approve a Hillside Review for the Passageland LLC Residence on Lot 14-R of Summit Eden Phase 1A.
Applicant: Amy Dee
File Number: HSR 2018-03

Property Information

Approximate Address: 7719 E Horizon Run, Eden
Project Area: 4.28 acres
Zoning: DRR-1
Existing Land Use: Vacant
Proposed Land Use: Single Family Residence
Parcel ID: 23-128-0009
Township, Range, Section: 7N 2E Sec 6

Adjacent Land Use

North: Vacant Residential
South: Vacant Residential
East: Vacant Residential
West: Vacant Residential

Staff Information

Report Presenter: Steve Burton
sburton@co.weber.ut.us
801-399-8766
Report Reviewer: RG

Applicable Ordinances

- Weber County Land Use Code Title 108 (Standards) Chapter 14 (Hillside Development Review)
- Weber County Land Use Code Title 108 (Standards) Chapter 22 (Natural Hazards Areas)

Background

The subject lot (14-R) is located in Summit Eden Phase 1A which was recorded with the Weber County Recorder's office on January 27, 2014. The average slope of the lot exceeds 25 percent, as such, plans for development are required to be reviewed by the Hillside Development Review Board, as outlined in the Uniform Land Use Code of Weber County (LUC) Title108 Chapter 14.

IGES has performed the geotechnical report and the geologic hazards investigation. Information related to the construction of the dwelling as outlined in the geologic and geotechnical reports, have been distributed to the Hillside Review Board for comment. The reports have been reviewed by all applicable review agencies.

Planning Division Review

The Planning Division Staff has determined that, in compliance with review agency conditions, the requirements and standards provided by the Hillside Review Chapter have been met for the excavation and construction of the dwelling. The following submittals were required:

1. Engineered Plans.
2. Geotechnical Investigation and Geologic Hazards Report (see Exhibit B).
3. Utah Pollution Discharge Elimination system (UPDES) Permit with Storm water Pollution Prevention Plan. A condition of approval from the Planning Division is that the applicant provides the UPDES Permit and SWPPP with the building permit application.
4. Landscaping plan.

Weber County Hillside Review Board comments

The Weber County Hillside Review Board, on this particular application, made the following comments and conditions:

Weber County Engineering Division: The Engineering Division granted approval on June 28, 2018. The approval is subject to the following comments as conditions of approval:

All the recommendations of the geotechnical report must be followed including the following:

- *An engineering geologist shall inspect the excavation for the house to ensure the suitability of the soils.*
- *The house shall stay in the location presently shown in the submitted house plan.*
- *Storm water shall be diverted around the house and away from the site.*
- *If there are cracks or creeping in the soil, consult the engineering geologist.*

Weber Fire District: The Fire District granted an approval on June 19, 2018 subject to the following conditions:

1. *A fire suppression system is required.*
2. *Adherence to both specific and general comments from the full Fire District review.*

Weber County Building Inspection Department: The Building Inspection Department granted approval on June 26, 2018. The approval is subject to the following comments as conditions of approval:

1. *Provide a copy of a letter from the engineer stating that he has reviewed the Geological report and has addressed any concerns.*
2. *A geotech engineer must see the excavation and any recommendations must be followed.*
3. *A letter from the geotech engineer approving the soils will need to provide at the footing inspection.*

Weber-Morgan Health Department: The Health Department will not impose any requirements or conditions for this application due to the proposed residence connecting to the Powder Mountain Water and Sewer District for culinary and wastewater services.

Weber County Planning Division: The Planning Division has granted approval subject to the applicant complying with all Board requirements and conditions. This approval is also subject to the applicant developing Lot 14-R according to approved plans and in compliance with the geologic and geotechnical investigation reports performed by IGES, dated March 8, 2018 as project number 02693-001 which outline specific recommendations for the site development.

Planning Division Findings

Based on site inspections and review agency comments, the Planning Division Staff is recommending approval subject to the following conditions:

1. Development of the lot must comply with the excavating, grading, and filling standards outlined in LUC §108-14-8 as well as the recommendations outlined in the geologic and geotechnical reports that were provided with the application.
2. The applicant shall provide the UPDES Permit and SWPPP with the building permit application.
3. The irrigation of proposed natural landscaping shall not include a drip irrigation system or any system other than manually watering plants until established.
4. As a condition it is understood, by the applicant and his geo-technical engineer and geologist, that if any geologic hazards are revealed during the excavation and construction phase of the dwelling, work on Lot 14-R will cease pending the development of appropriate mitigation measures and subsequent approval by the County and the County's contracted geo-technical and/or geological consultant.

The recommendation for approval is based on the following findings:

1. The application was submitted and has been deemed complete.
2. The requirements and standards found in the Hillside Development Review Procedures and Standards Chapter have been met or will be met during the excavation and construction phase of the dwelling.
3. The Hillside Review Board members reviewed the application individually and have provided their comments.
4. The applicant has met or will meet, as part of the building permit process and/or during the excavation and construction phase of the dwelling, the requirements and conditions set forth by the Hillside Review Board.

Administrative Approval

Administrative approval of Lot 14-R, Passageland LLC Hillside Review (HSR2018-03), is hereby granted based upon its compliance with the Weber County Land Use Code. This approval is subject to the requirements of applicable review agencies and is based on the findings listed in this staff report.

Date of Administrative Approval: _____

_____
Rick Grover
Weber County Planning Director

Exhibits

A. Approved Plans
B. Geotechnical Investigation and Geologic Hazards Report

Map 1


N Powder Ridge Rd
SUMMIT PASS RD
HORIZON RUN RD
7632
7668
7663
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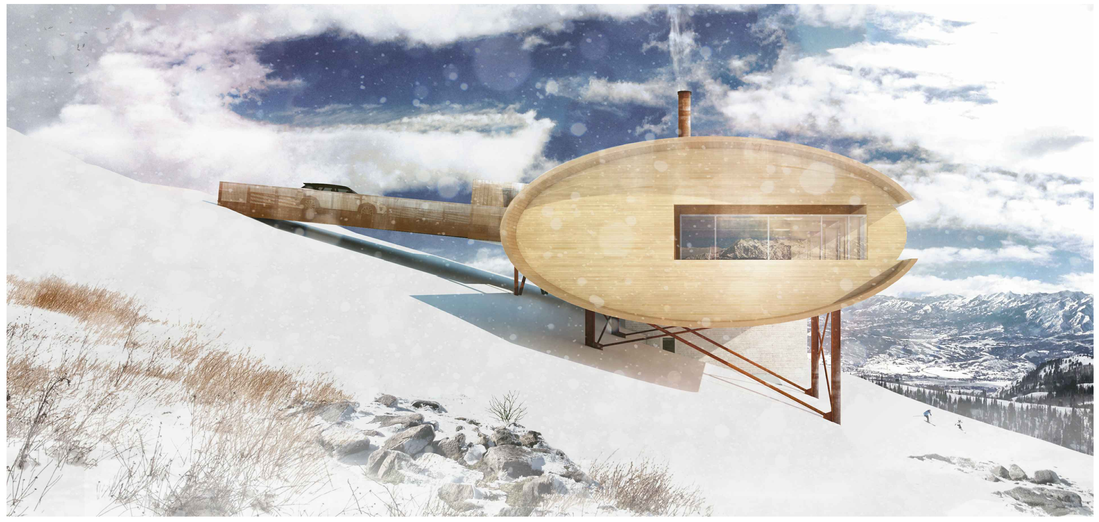
7844

Exhibit A



May 30, 2018

DD Issued for Pricing

MacKay-Lyons Sweetapple
Architects Limited
2188 Gottingen Street
Halifax, Nova Scotia, Canada B3K 3B4
ph: (902) 429-1867 fax: (902) 429-6276

Blackwell
Structural Engineers
19 Duncan Street, Suite 405
Toronto, Ontario, Canada M5H 3H1
ph: (416) 593-5300 fax: (416) 593-4840

Talisman Civil Engineers
Civil Engineers
5217 South State Street #200
Murray, Utah, United States 84107
ph: (801) 743-1300

IGES
Geotechnical Engineers
12429 South Street 300 East, Suite 100
Draper, Utah, United States 84020-8770
ph: (801) 748-4045

BMA Consulting
Electrical Engineers
635 South State Street
Salt Lake City, Utah, United States 84111
ph: (801) 532-2196

Harris-Dudley Co.
Mechical Engineers
3039 Specialty Circle
Salt Lake City, Utah, United States 84115
ph: (801) 363-3883

Edge Builders LLC.
Construction Management
P.O. Box 17404,
Salt Lake City, Utah, United States 84117
ph: (801) 381-9003

CIVIL

C101	General Notes & Legend
C201	Site & Utility Plan
C202	Horizontal Control Plan
C301	Grading & Drainage Plan
C601	Erosion Control Plan
C701	Details

STRUCTURAL

S001	General Notes
S002	Typical Details
S100	Foundation Plan
S101	Lower Fl. Framing Plan
S102	Main Fl. Framing Plan
S103	Garage Fl. Framing Plan
S104	Roof Framing Plan

ELECTRICAL

E000	Schedule & Notes
E100	Electrical Site Plan
E200	Lighting Plan - Ground Floor
E201	Lighting Plan - Lower Floor
E202	Lighting Plan - Main Floor
E203	Lighting Plan - Upper Floor
E300	Power Plan - Ground Floor
E301	Power Plan - Lower Floor
E302	Power Plan - Main Floor
E303	Power Plan - Upper Floor
E400	One-line Diagram & Panelboard Schedule

MECHANICAL

M200	Duct Design

ARCHITECTURAL

A001	Abbreviations, Key Plan & Partition Types
A100	Site Plan
A200	Ground Floor Plan
A201	Lower Floor Plan
A202	Main Floor Plan
A203	Upper Floor Plan
A204	Rfl'd Clg. Plan - Ground Fl.
A205	Rfl'd Clg. Plan - Lower Fl.
A206	Rfl'd Clg. Plan - Main Fl.
A207	Rfl'd Clg. Plan - Upper Fl.
A300	Exterior Elevations
A301	Exterior Elevations
A400	Building Sections
A401	Building Sections
A402	Building Sections
A403	Building Sections
A404	Building Sections
A500	Wall Sections
A501	Wall Sections
A502	Wall Sections
A510	Section Details
A511	Plan Details
A600	Millwork - Kitchen & Pantry
A601	Millwork - Details
A602	Millwork - Master Suite
A603	Millwork - Foyer & Media
A604	Millwork - Lower Floor
A605	Millwork - Ground Floor
A606	Millwork - Garage & Mud
A610	Stairs
A700	Bridge
A900	Window & Door Schedule

Lot 14R Mountain House

Summit Powder Mountain, Eden, Utah

Exhibit A

GENERAL NOTES

1. ALL CONSTRUCTION MUST STRICTLY FOLLOW THE STANDARDS AND SPECIFICATIONS SET FORTH BY: GOVERNING UTILITY MUNICIPALITY, GOVERNING CITY OR COUNTY (IF UN-INCORPORATED), INDIVIDUAL PRODUCT MANUFACTURERS, THE DESIGN ENGINEER, AND AMERICAN PUBLIC WORKS ASSOCIATION (APWA). THE ORDER LISTED ABOVE IS ARRANGED BY SENIORITY. IF A CONSTRUCTION PRACTICE IS NOT SPECIFIED BY ANY OF THE LISTED SOURCES, CONTRACTOR MUST CONTACT DESIGN ENGINEER FOR DIRECTION.
2. CONTRACTOR TO STRICTLY FOLLOW GEOTECHNICAL RECOMMENDATIONS FOR THIS PROJECT. ALL GRADING INCLUDING BUT NOT LIMITED TO CUT, FILL, COMPACTION, ASPHALT SECTION, SUBBASE, TRENCH EXCAVATION/BACKFILL, SITE GRUBBING, RETAINING WALLS AND FOOTINGS MUST BE COORDINATED DIRECTLY WITH THE PROJECT GEOTECHNICAL ENGINEER.
3. TRAFFIC CONTROL, STRIPING & SIGNAGE TO CONFORM TO CURRENT UDOT TRANSPORTATION ENGINEER'S MANUAL AND MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
4. ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO OWNER.
5. CONSULT ALL OF THE DRAWINGS AND SPECIFICATIONS FOR COORDINATION REQUIREMENTS BEFORE COMMENCING CONSTRUCTION.
6. AT ALL LOCATIONS WHERE EXISTING PAVEMENT ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAWCUT TO A CLEAN, SMOOTH EDGE.
7. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE MOST RECENT, ADOPTED EDITION OF ADA ACCESSIBILITY GUIDELINES.
8. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED THOROUGHLY REVIEWED PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.
9. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING AND NOTIFYING ENGINEER OR INSPECTING AUTHORITY 48 HOURS IN ADVANCE OF COVERING UP ANY PHASE OF CONSTRUCTION REQUIRING OBSERVATION.
10. ANY WORK IN THE PUBLIC RIGHT-OF-WAY WILL REQUIRE PERMITS FROM THE APPROPRIATE, CITY, COUNTY OR STATE AGENCY CONTROLLING THE ROAD, INCLUDING OBTAINING REQUIRED INSPECTIONS.
11. ALL DIMENSIONS, GRADES & UTILITY DESIGNS SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES.
12. CONTRACTOR MUST VERIFY ALL EXISTING CONDITIONS BEFORE BIDDING AND BRING UP ANY QUESTIONS BEFOREHAND.
13. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH BY THE GEOTECHNICAL ENGINEER.
14. CATCH SLOPES SHALL BE GRADED AS SPECIFIED ON GRADING PLANS.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FLAGGING, CAUTION SIGNS, LIGHTS, BARRICADES, FLAGMEN, AND ALL OTHER DEVICES NECESSARY FOR PUBLIC SAFETY.
16. CONTRACTOR SHALL, AT THE TIME OF BIDDING AND THROUGHOUT THE PERIOD OF THE CONTRACT, BE LICENSED IN THE STATE OF UTAH AND SHALL BE BONDABLE FOR AN AMOUNT EQUAL TO OR GREATER THAN THE AMOUNT BID AND TO DO THE TYPE OF WORK CONTEMPLATED IN THE PLANS AND SPECIFICATIONS. CONTRACTOR SHALL BE SKILLED AND REGULARLY ENGAGED IN THE GENERAL CLASS AND TYPE OF WORK CALLED FOR IN THE PLANS AND SPECIFICATIONS.
17. CONTRACTOR SHALL INSPECT THE SITE OF THE WORK PRIOR TO BIDDING TO SATISFY HIMSELF BY PERSONAL EXAMINATION OR BY SUCH OTHER MEANS AS HE MAY PREFER OF THE LOCATION OF THE PROPOSED WORK AND OF THE ACTUAL CONDITIONS OF AND AT THE SITE OF WORK. IF, DURING THE COURSE OF HIS EXAMINATION, A BIDDER FINDS FACTS OR CONDITIONS WHICH APPEAR TO HIM TO BE IN CONFLICT WITH THE LETTER OR SPIRIT OF THE PROJECT PLANS AND SPECIFICATIONS, HE SHALL CONTACT THE ENGINEER FOR ADDITIONAL INFORMATION AND EXPLANATION BEFORE SUBMITTING HIS BID. SUBMISSION OF A BID BY THE CONTRACTOR SHALL CONSTITUTE ACKNOWLEDGMENT THAT, IF AWARDED THE CONTRACT, HE HAS RELIED AND IS RELYING ON HIS OWN EXAMINATION OF (1) THE SITE OF THE WORK, (2) ACCESS TO THE SITE, AND (3) ALL OTHER DATA AND MATTERS REQUISITE TO THE FULFILLMENT OF THE WORK AND ON HIS OWN KNOWLEDGE OF EXISTING FACILITIES ON AND IN THE VICINITY OF THE SITE OF THE WORK. TO BE CONSTRUCTED UNDER THIS CONTRACT. THE INFORMATION PROVIDED BY THE ENGINEER IS NOT INTENDED TO BE A SUBSTITUTE FOR, OR A SUPPLEMENT TO, THE INDEPENDENT VERIFICATION BY THE CONTRACTOR TO THE EXTENT SUCH INDEPENDENT INVESTIGATION OF SITE CONDITIONS IS DEEMED NECESSARY BY THE CONTRACTOR. CONTRACTOR SHALL ACKNOWLEDGE THAT HE HAS NOT RELIED SOLELY UPON OWNER- OR ENGINEER-FURNISHED INFORMATION REGARDING SITE CONDITIONS IN PREPARING AND SUBMITTING HIS BID.
18. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL WATER, POWER, SANITARY FACILITIES AND TELEPHONE SERVICES AS REQUIRED FOR THE CONTRACTOR'S USE DURING CONSTRUCTION.
19. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE OWNER, ENGINEER, AND/OR GOVERNING AGENCIES.
20. CONTRACTOR SHALL EXERCISE DUE CAUTION AND SHALL CAREFULLY PRESERVE BENCH MARKS, CONTROL POINTS, REFERENCE POINTS AND ALL SURVEY STAKES, AND SHALL BEAR ALL EXPENSES FOR REPLACEMENT AND/OR ERRORS CAUSED BY THEIR UNNECESSARY LOSS OR DISTURBANCE.
21. CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
22. CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY SCHEDULING INSPECTION AND TESTING OF ALL FACILITIES CONSTRUCTED UNDER THIS CONTRACT. ALL TESTING SHALL CONFORM TO THE REGULATORY AGENCY'S STANDARD SPECIFICATIONS. ALL TESTING AND INSPECTION SHALL BE PAID FOR BY THE OWNER; ALL RE-TESTING AND/OR RE-INSPECTION SHALL BE PAID FOR BY THE CONTRACTOR.
23. IF EXISTING IMPROVEMENTS NEED TO BE DISTURBED AND/OR REMOVED FOR THE PROPER PLACEMENT OF IMPROVEMENTS TO BE CONSTRUCTED BY THESE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING IMPROVEMENTS FROM DAMAGE. COST OF REPLACING OR REPAIRING EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS REQUIRING REMOVAL AND/OR REPLACEMENT. THERE WILL BE NO EXTRA COST DUE TO THE CONTRACTOR FOR REPLACING OR REPAIRING EXISTING IMPROVEMENTS.
24. WHENEVER EXISTING FACILITIES ARE REMOVED, DAMAGED, BROKEN, OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE PLANS OR SPECIFICATIONS, SAID FACILITIES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE WITH MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL EXISTING FACILITIES. THE FINISHED PRODUCT SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER, THE ENGINEER, AND THE RESPECTIVE REGULATORY AGENCY.
25. CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZE AS-BUILT RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL STRUCTURES AND OTHER FACILITIES. AS-BUILT RECORD DRAWINGS SHALL REFLECT CHANGE ORDERS, ACCOMMODATIONS, AND ADJUSTMENTS TO ALL IMPROVEMENTS CONSTRUCTED. WHERE NECESSARY, SUPPLEMENTAL DRAWINGS SHALL BE PREPARED AND SUBMITTED BY THE CONTRACTOR. PRIOR TO ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL DELIVER TO THE ENGINEER ONE SET OF NEATLY MARKED AS-BUILT RECORD DRAWINGS SHOWING THE INFORMATION REQUIRED ABOVE. AS-BUILT RECORD DRAWINGS SHALL BE REVIEWED AND THE COMPLETE AS-BUILT RECORD DRAWING SET SHALL BE CURRENT WITH ALL CHANGES AND DEVIATIONS REDLINED AS A PRECONDITION TO THE FINAL PROGRESS PAYMENT APPROVAL AND/OR FINAL ACCEPTANCE.
26. WHERE THE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE IS TO PREVAIL AND THAT ONLY MATERIALS AND WORKMANSHIP OF THE FIRST QUALITY ARE TO BE USED.

GENERAL NOTES CONT.

27. CONTRACTOR SHALL BE SKILLED AND REGULARLY ENGAGED IN THE GENERAL CLASS AND TYPE OF WORK CALLED FOR IN THE PROJECT PLANS AND SPECIFICATIONS. THEREFORE, THE OWNER IS RELYING UPON THE EXPERIENCE AND EXPERTISE OF THE CONTRACTOR. PRICES PROVIDED WITHIN THE CONTRACT DOCUMENTS SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THE TRUE INTENT AND PURPOSE OF THESE PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE COMPETENT, KNOWLEDGEABLE AND HAVE SPECIAL SKILLS IN THE NATURE, EXTENT AND INHERENT CONDITIONS OF THE WORK TO BE PERFORMED. CONTRACTOR SHALL ALSO ACKNOWLEDGE THAT THERE ARE CERTAIN PECULIAR AND INHERENT CONDITIONS EXISTENT IN THE CONSTRUCTION OF THE PARTICULAR FACILITIES WHICH MAY CREATE, DURING THE CONSTRUCTION PROGRAM, UNUSUAL OR UNSAFE CONDITIONS HAZARDOUS TO PERSONS, PROPERTY AND THE ENVIRONMENT. CONTRACTOR SHALL BE AWARE OF SUCH PECULIAR RISKS AND HAVE THE SKILL AND EXPERIENCE TO FORESEE AND TO ADOPT PROTECTIVE MEASURES TO ADEQUATELY AND SAFELY PERFORM THE CONSTRUCTION WORK WITH RESPECT TO SUCH HAZARDS.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL STRIPING AND/OR PAVEMENT MARKINGS NECESSARY TO TIE EXISTING STRIPING INTO FUTURE STRIPING. METHOD OF REMOVAL SHALL BE BY GRINDING OR SANDBLASTING.
29. CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, SLOPING OR OTHER PROVISIONS NECESSARY TO PROTECT WORKMEN FOR ALL AREAS TO BE EXCAVATED TO A DEPTH OF 4' OR MORE. FOR EXCAVATIONS 4 FEET OR MORE IN DEPTH, THE CONTRACTOR SHALL COMPLY WITH INDUSTRIAL COMMISSION OF UTAH SAFETY ORDERS SECTION 68 - EXCAVATIONS, AND SECTION 69 - TRENCHES, ALONG WITH ANY LOCAL CODES OR ORDINANCES.
30. ALL EXISTING GATES AND FENCES TO REMAIN UNLESS OTHERWISE NOTED ON PLANS. PROTECT ALL GATES AND FENCES FROM DAMAGE.

UTILITY NOTES

1. CONTRACTOR SHALL COORDINATE LOCATION OF NEW "DRY UTILITIES" WITH THE APPROPRIATE UTILITY COMPANY, INCLUDING BUT NOT LIMITED TO: TELEPHONE SERVICE, GAS SERVICE, CABLE, POWER, INTERNET.
2. EXISTING UTILITIES HAVE BEEN SHOWN ON THE PLANS USING A COMBINATION OF ON-SITE SURVEYS (BY OTHERS). PRIOR TO COMMENCING ANY WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATE, IN THE FIELD, THEIR MAIN AND SERVICE LINES. THE CONTRACTOR SHALL NOTIFY BLUE STAKES AT 1-800-662-4111 48 HOURS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK. THE CONTRACTOR SHALL RECORD THE BLUE STAKES ORDER NUMBER AND FURNISH ORDER NUMBER TO OWNER AND ENGINEER PRIOR TO ANY EXCAVATION. IT WILL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DIRECTLY CONTACT ANY OTHER UTILITY COMPANIES THAT ARE NOT MEMBERS OF BLUE STAKES. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES SO THAT NO DAMAGE RESULTS TO THEM DURING THE PERFORMANCE OF THIS CONTRACT. ANY REPAIRS NECESSARY TO DAMAGED UTILITIES SHALL BE PAID FOR BY THE CONTRACTOR. THE CONTRACTOR SHALL BE REQUIRED TO COOPERATE WITH OTHER CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICE TO THE PROJECT.
3. CONTRACTOR SHALL POT HOLE ALL UTILITIES TO DETERMINE IF CONFLICTS EXIST PRIOR TO BEGINNING ANY EXCAVATION. NOTIFY ENGINEER OF ANY CONFLICTS. CONTRACTOR SHALL VERIFY LOCATION AND INVERTS OF EXISTING UTILITIES TO WHICH NEW UTILITIES WILL BE CONNECTED. PRIOR TO COMMENCING ANY EXCAVATION WORK THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN ACCORDANCE WITH THE REQUIRED PROCEDURES.
4. CARE SHOULD BE TAKEN IN ALL EXCAVATIONS DUE TO POSSIBLE EXISTENCE OF UNRECORDED UTILITY LINES. EXCAVATION REQUIRED WITHIN PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT HIS EXPENSE.
5. ALL VALVES AND MANHOLE COVERS SHALL BE RAISED OR LOWERED TO MEET FINISHED GRADE.
6. CONTRACTOR SHALL CUT PIPES OFF FLUSH WITH THE INSIDE WALL OF THE BOX OR MANHOLE.
7. CONTRACTOR SHALL GROUT AT CONNECTION OF PIPE TO BOX WITH NON-SHRINKING GROUT, INCLUDING PIPE VOIDS LEFT BY CUTTING PROCESS, TO A SMOOTH FINISH.
8. CONTRACTOR SHALL GROUT WITH NON-SHRINK GROUT BETWEEN GRADE RINGS AND BETWEEN BOTTOM OF INLET LID FRAME AND TOP OF CONCRETE BOX.
9. SILT AND DEBRIS IS TO BE CLEANED OUT OF ALL STORM DRAIN BOXES. CATCH BASINS ARE TO BE MAINTAINED IN A CLEANED CONDITION AS NEEDED UNTIL AFTER THE FINAL BOND RELEASE INSPECTION.
10. CONTRACTOR SHALL CLEAN ASPHALT, TAR OR OTHER ADHESIVES OFF OF ALL MANHOLE LIDS AND INLET GRATES TO ALLOW ACCESS.
11. EACH TRENCH SHALL BE EXCAVATED SO THAT THE PIPE CAN BE LAID TO THE ALIGNMENT AND GRADE AS REQUIRED. THE TRENCH WALL SHALL BE SO BRACED THAT THE WORKMEN MAY WORK SAFELY AND EFFICIENTLY. ALL TRENCHES SHALL BE DRAINED SO THE PIPE LAYING MAY TAKE PLACE IN DEWATERED CONDITIONS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE COST OF DEWATERING AND NO COST CHANGE WILL BE PROVIDED.
12. CONTRACTOR SHALL PROVIDE AND MAINTAIN AT ALL TIMES AMPLE MEANS AND DEVICES WITH WHICH TO REMOVE PROMPTLY AND TO PROPERLY DISPOSE OF ALL WATER ENTERING THE TRENCH EXCAVATION.
13. MAINTAIN A MINIMUM 18" VERTICAL SEPARATION DISTANCE BETWEEN ALL UTILITY CROSSINGS.
14. CONTRACTOR SHALL START INSTALLATION AT LOW POINT OF ALL NEW GRAVITY UTILITY LINES.
15. ALL BOLTED FITTINGS MUST BE GREASED AND WRAPPED.
16. UNLESS SPECIFICALLY NOTED OTHERWISE, MAINTAIN AT LEAST 2 FEET OF COVER OVER ALL STORM DRAIN LINES AT ALL TIMES (INCLUDING DURING CONSTRUCTION).
17. ALL WATER LINES SHALL BE INSTALLED A MINIMUM OF 60" OF COVER TO TOP OF PIPE BELOW FINISHED GRADE.
18. ALL SEWER LINES AND SEWER SERVICES SHALL HAVE A MINIMUM SEPARATION OF 10 FEET, PIPE EDGE TO PIPE EDGE, FROM THE WATER LINES.
19. CONTRACTOR SHALL INSTALL THRUST BLOCKING AT ALL WATERLINE ANGLE POINTS AND TEES.
20. ALL UNDERGROUND UTILITIES SHALL BE IN PLACE PRIOR TO INSTALLATION OF CURB, GUTTER, SIDEWALK AND STREET PAVING.
21. CONTRACTOR SHALL INSTALL MAGNETIC LOCATING TAPE CONTINUOUSLY OVER ALL NONMETALLIC PIPE.
22. THE CONTRACTOR SHALL NOTIFY TALISMAN CIVIL CONSULTANTS, LLC. IN WRITING AT LEAST 48 HOURS PRIOR TO BACKFILLING OF ANY PIPE WHICH STUBS TO A FUTURE PHASE OF CONSTRUCTION FOR INVERT VERIFICATION. TOLERANCE SHALL BE IN ACCORDANCE WITH THE REGULATORY AGENCY STANDARD SPECIFICATIONS.
23. UNDER NO CIRCUMSTANCE SHALL THE PIPE OR ACCESSORIES BE DROPPED INTO THE TRENCH

EROSION CONTROL GENERAL NOTES:

THE CONTRACTOR TO USE BEST MANAGEMENT PRACTICES FOR PROVIDING EROSION CONTROL FOR CONSTRUCTION OF THIS PROJECT. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO WEBER COUNTY ORDINANCES AND ALL WORK SHALL BE SUBJECT TO INSPECTION BY THE COUNTIES. ALSO, INSPECTORS WILL HAVE THE RIGHT TO CHANGE THE FACILITIES AS NEEDED.

CONTRACTOR SHALL KEEP THE SITE WATERED TO CONTROL DUST. CONTRACTOR TO LOCATE A NEARBY HYDRANT FOR USE AND TO INSTALL TEMPORARY METER. CONSTRUCTION WATER COST TO BE INCLUDED IN BID.

WHEN GRADING OPERATIONS ARE COMPLETED AND THE DISTURBED GROUND IS LEFT "OPEN" FOR 14 DAYS OR MORE, THE AREA SHALL BE FURROWED PARALLEL TO THE CONTOURS.

THE CONTRACTOR SHALL MODIFY EROSION CONTROL MEASURES TO ACCOMMODATE PROJECT PLANNING.

LEGEND:

SYMBOL / LINETYPE	DESCRIPTION
4"W	EXISTING 4" WATER PIPE
W	EXISTING WATER SERVICE LATERAL
W	EXISTING WATER METER
	EXISTING WATER VALVE
8"SS	EXISTING 8" SANITARY SEWER PIPE
SS	EXISTING SANITARY SEWER LATERAL AND CLEANOUT
(1)SS-P	EXISTING PRESSURIZED SANITARY SEWER PIPE
	EXISTING SANITARY SEWER GRINDER/PUMP
S	EXISTING SANITARY SEWER MANHOLE
15"SD	EXISTING 15" STORM DRAIN PIPE
D	EXISTING STORM DRAIN MANHOLE
	EXISTING STORM DRAIN FLARED END SECTION
T	EXISTING TELECOMMUNICATION CONDUIT
TL	EXISTING TELECOMMUNICATION PULL BOX
E	EXISTING ELECTRICAL CONDUIT
E TR	EXISTING ELECTRICAL PULL BOX EXISTING ELECTRICAL TRANSFORMER
G	EXISTING GAS PIPE
	PROPOSED CONCRETE
	PROPOSED GABION BASKET WALL
W	PROPOSED WATER METER
G	PROPOSED GAS PIPE
P	PROPOSED ELECTRICAL CONDUIT
T	PROPOSED TELECOMMUNICATIONS CONDUIT

NOTE: LEGEND MAY CONTAIN SYMBOLS THAT ARE NOT USED IN PLAN SET.

EROSION CONTROL GENERAL NOTES:

THE CONTRACTOR TO USE BEST MANAGEMENT PRACTICES FOR PROVIDING EROSION CONTROL FOR CONSTRUCTION OF THIS PROJECT. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO WEBER COUNTY ORDINANCES AND ALL WORK SHALL BE SUBJECT TO INSPECTION BY THE COUNTIES. ALSO, INSPECTORS WILL HAVE THE RIGHT TO CHANGE THE FACILITIES AS NEEDED.

CONTRACTOR SHALL KEEP THE SITE WATERED TO CONTROL DUST. CONTRACTOR TO LOCATE A NEARBY HYDRANT FOR USE AND TO INSTALL TEMPORARY METER. CONSTRUCTION WATER COST TO BE INCLUDED IN BID.

WHEN GRADING OPERATIONS ARE COMPLETED AND THE DISTURBED GROUND IS LEFT "OPEN" FOR 14 DAYS OR MORE, THE AREA SHALL BE FURROWED PARALLEL TO THE CONTOURS.

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A) SPRAYING DISTURBED AREAS WITH A TACKIFIER VIA HYDROSEED
B) TRACKING STRAW PERPENDICULAR TO SLOPES
C) INSTALLING A LIGHT-WEIGHT, TEMPORARY EROSION CONTROL BLANKET

* SEED MIXTURE FOR REVEGITATION

a. MEADOW BROME (RIGOR)	14lb/ac
b. ORCHARD GRASS	10lb/ac
c. ALFALFA (ADAK)	4lb/ac

ABBREVIATIONS:

BG - BUILDING
BW - BOTTOM OF WALL
FL - FLOWLINE
FG - FINISHED GROUND
EX - EXISTING
MA - MATCH
TW - TOP OF WALL

WEBER COUNTY

2380 WASHINGTON BLVD. #240
OGDEN, UT 84401
(801) 399-8374

ROCKY MOUNTIAN POWER

1438 WEST 2550 SOUTH
OGDEN, UT 84401
(801) 629-4429

POWDER MOUNTAIN WATER & SEWER DISTRICT

PO BOX 270
EDEN, UT 84310
(801) 745-0912

LOT 14 | esidence

Summit Powder Mountain
Eden, Utah

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No.	Description	Date
Revision:		

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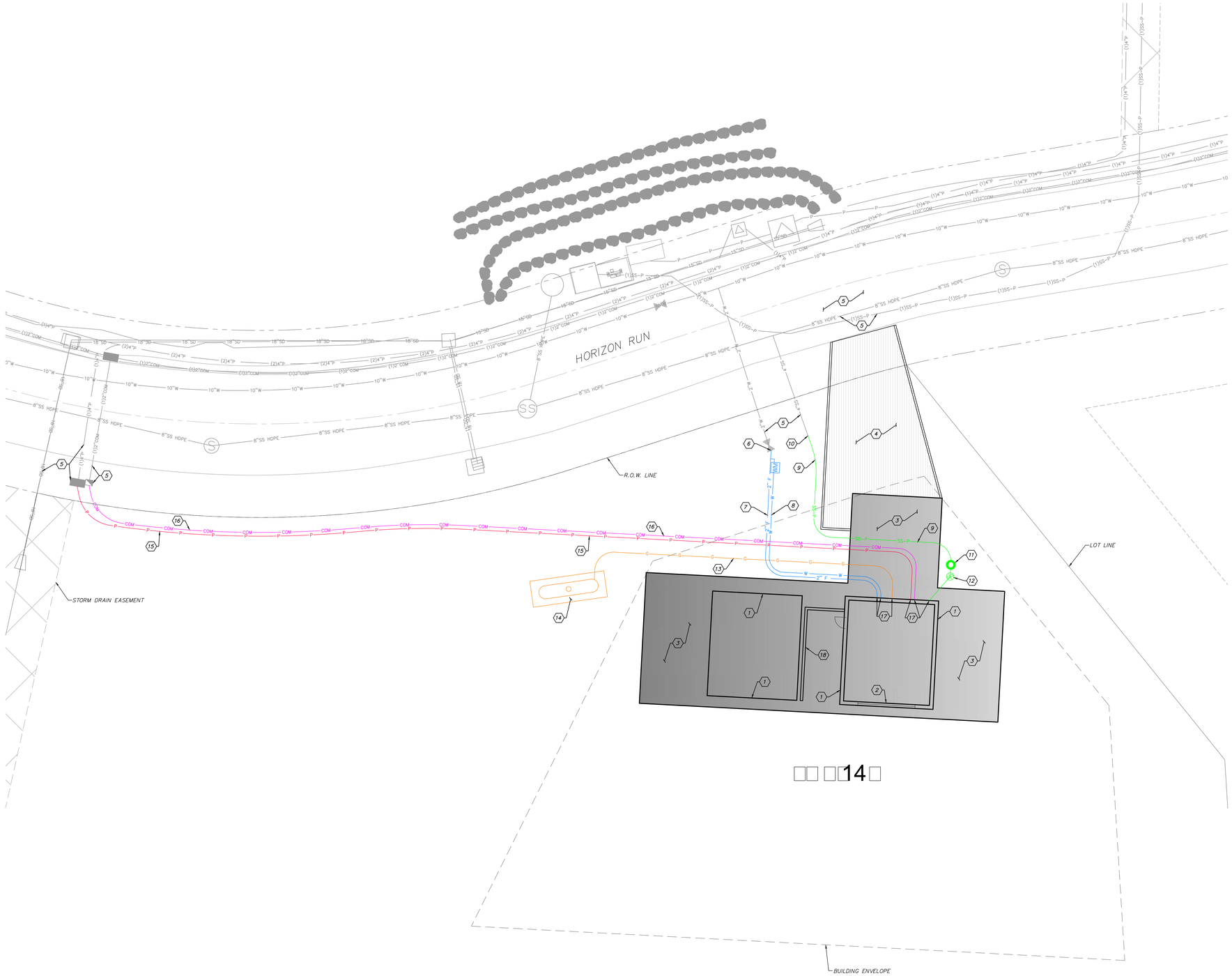
General Notes & Legend

scale: N.A
date: 05.15.201
drawn: LB
chk'd: RWC

C101

Exhibit A



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ENSURE ALL GRADING SLOPES AWAY FROM STRUCTURE AT 5% FOR A MINIMUM OF 10' PER IRC R401.3

UTILITIES:

ENSURE MINIMUM BURIED DEPTH PER BUILDING CODE FOR ALL BURIED UTILITIES.

IMPROVEMENTS, INCLUDING LANDSCAPING, SHALL NOT INTERFERE WITH ANY DRAINAGE CULVERT, RIP RAP, AND DRAINAGE PATTERN ASSOCIATED WITH ANY DRAINAGE EASEMENT.

KEY NOTES:

1. *BUILDING FOOTPRINT. SEE ARCHITECTURAL PLANS.*
2. *EGRESS WINDOW. SEE ARCHITECTURAL PLANS.*
3. *BUILDING PORTION ABOVE. SEE ARCHITECTURAL PLANS.*
4. *INSTALL PREFABRICATED STEEL BRIDGE. SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR DETAILS.*
5. *PROTECT IN PLACE EXISTING IMPROVEMENTS/UTILITIES IN PLACE. IF DAMAGED, REPLACE AT CONTRACTOR'S EXPENSE.*
6. *CONNECT TO EXISTING 2"ø WATER LATERAL PER DETAIL B/SHEET C601.*
7. *INSTALL 2"ø PVC FIRE LINE, MINIMUM COVER OF 60" DEEP.*
8. *INSTALL 3/4"ø PVC WATER LATERAL, MINIMUM COVER OF 60" DEEP.*
9. *INSTALL 1 1/2"ø DR-11 IPS PRESSURE SEWER PIPE, MINIMUM COVER OF 60". SEWER PRESSURE LINE TO CROSS UNDER WATER LATERAL WITH A MINIMUM OF 18" CLEAR BETWEEN PIPES AT CROSSING.*
10. *CONNECT 1 1/2"ø PRESSURE SEWER PIPE TO EXISTING 4"ø SEWER LATERAL.*
11. *INSTALL E/ONE GRINDER PUMP STATION MODEL DH071. WITH E/ONE SENTRY ALARM PANEL INCLUDING GENERATOR RECEPTACLE WITH AUTO TRANSFER AND GFCI RECEPTACLE. ALARM PANELS SHALL BE INSTALLED WITHIN LINE OF SIGHT OF ENTRY TO UNIT. SEE DETAIL SHEET C602.*
12. *INSTALL 4"ø SEWER LATERAL AND CLEANOUT PER APWA STANDARD PLAN NO. 431.*
13. *GAS PIPES, AND STORAGE TANKS (1,000 GAL) TO BE EXCAVATED AND TRENCHED BY CONTRACTOR. INSTALLATION BY OTHERS. GAS PIPE MINIMUM COVER OF 24".*
14. *PROPANE TANK PIT PER DETAIL C/SHEET 601.*
15. *INSTALL 2" ELECTRICAL CONDUIT WITH MULE TAPE, MINIMUM COVER OF 24". CONTRACTOR TO COORDINATE ELECTRICAL INSTALLATION WITH ROCKY MOUNTAIN POWER.*
16. *INSTALL 2" COMMUNICATIONS CONDUIT WITH MULE TAPE, MINIMUM COVER OF 24". CONTRACTOR TO COORDINATE WITH SUMMIT FOR COMMUNICATIONS SERVICE AND INSTALLATION.*
17. *SEE MECHANICAL PLANS FOR CONTINUATION OF UTILITY WITHIN BUILDING.*
18. *CONCRETE RETAINING WALL. SEE ARCHITECTURAL AND STRUCTURAL PLANS.*

SCALE

LOT 14□ □esidence

Summit Powder Mountain
Eden, Utah

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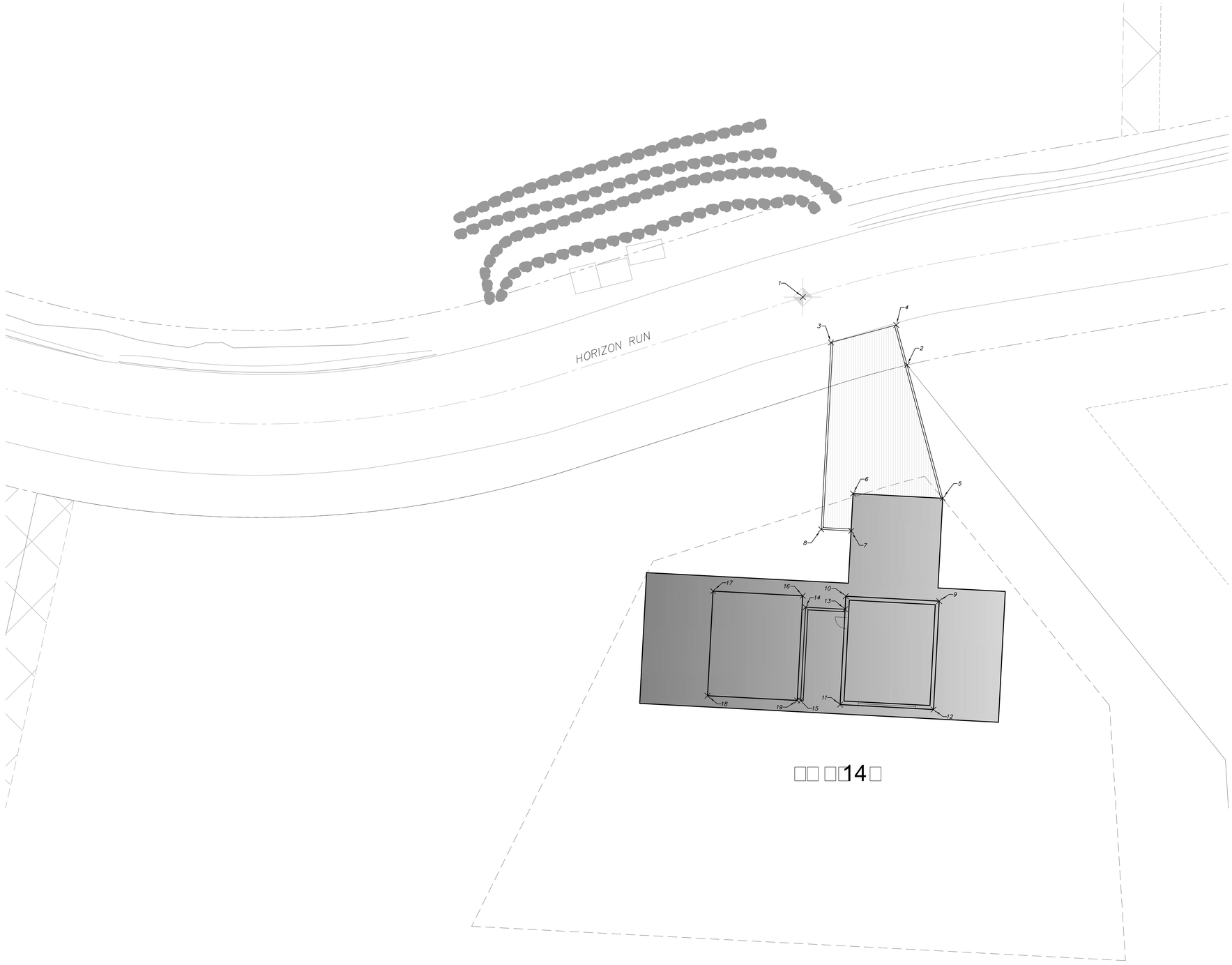
Site □ Utility Plan

scale: 1": 10'
date: 05.15.201□
drawn: □LB
chk'd: RWC

C201

Exhibit A



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3	3657476.65	1568135.24
4	3657481.33	1568152.69
5	3657435.03	1568165.10
6	3657436.29	1568141.13
7	3657426.30	1568140.61
8	3657426.72	1568132.62
9	3657407.54	1568164.16
10	3657408.85	1568139.19
11	3657379.89	1568137.67
12	3657378.58	1568162.64
13	3657405.36	1568139.01
14	3657405.91	1568128.44
15	3657380.94	1568127.13
16	3657408.95	1568127.68
17	3657410.21	1568103.71
18	3657382.25	1568102.25
19	3657380.99	1568126.21

□□ □□14□

LOT 14□ □esidence

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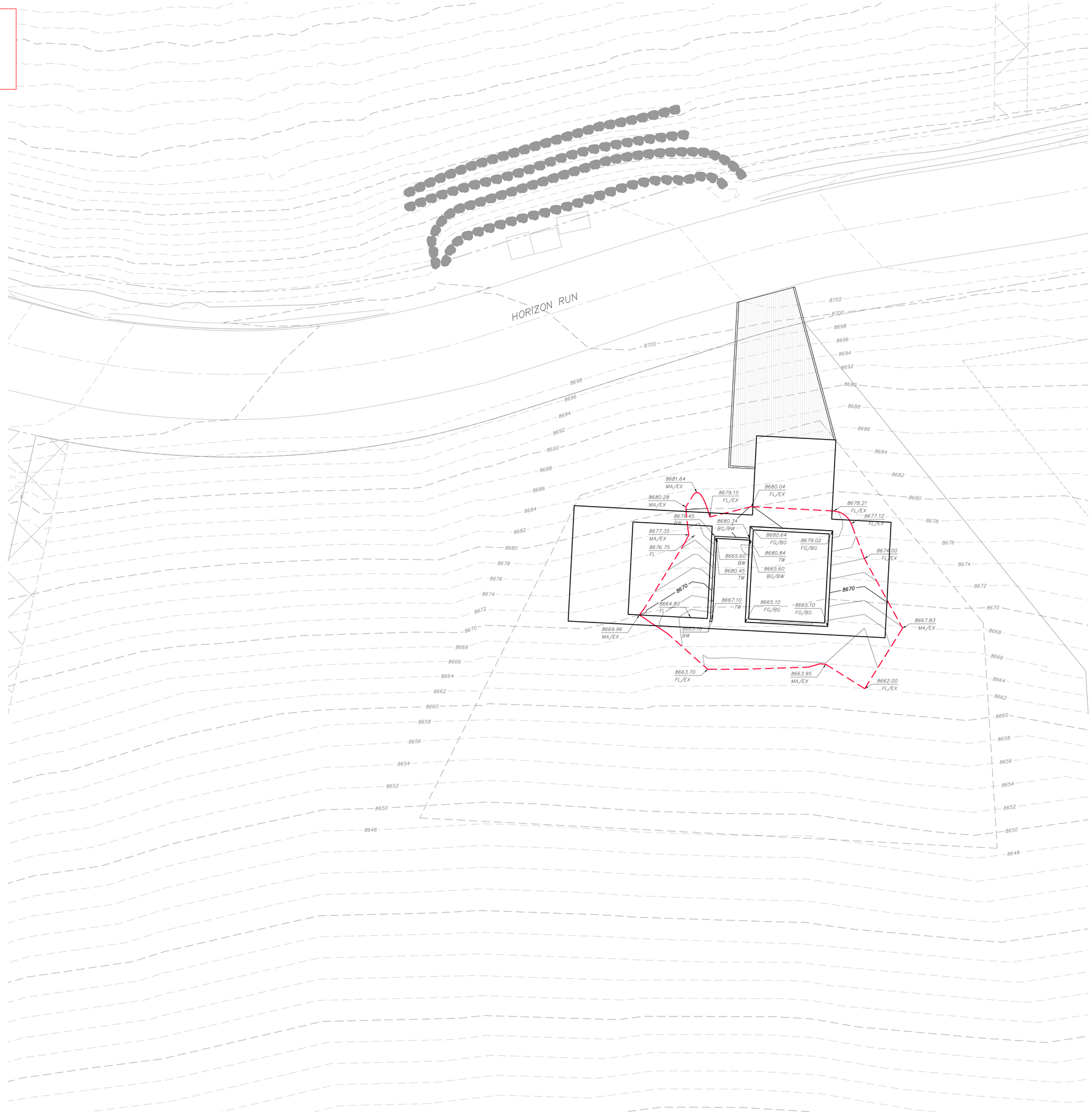
SCALE

Hori□ontal Control Plan

scale: 1": 10'
date: 05.15.201□
drawn: □LB
ch□'d: RWC

C202

Exhibit A



LOT 14 [illegible] esidence

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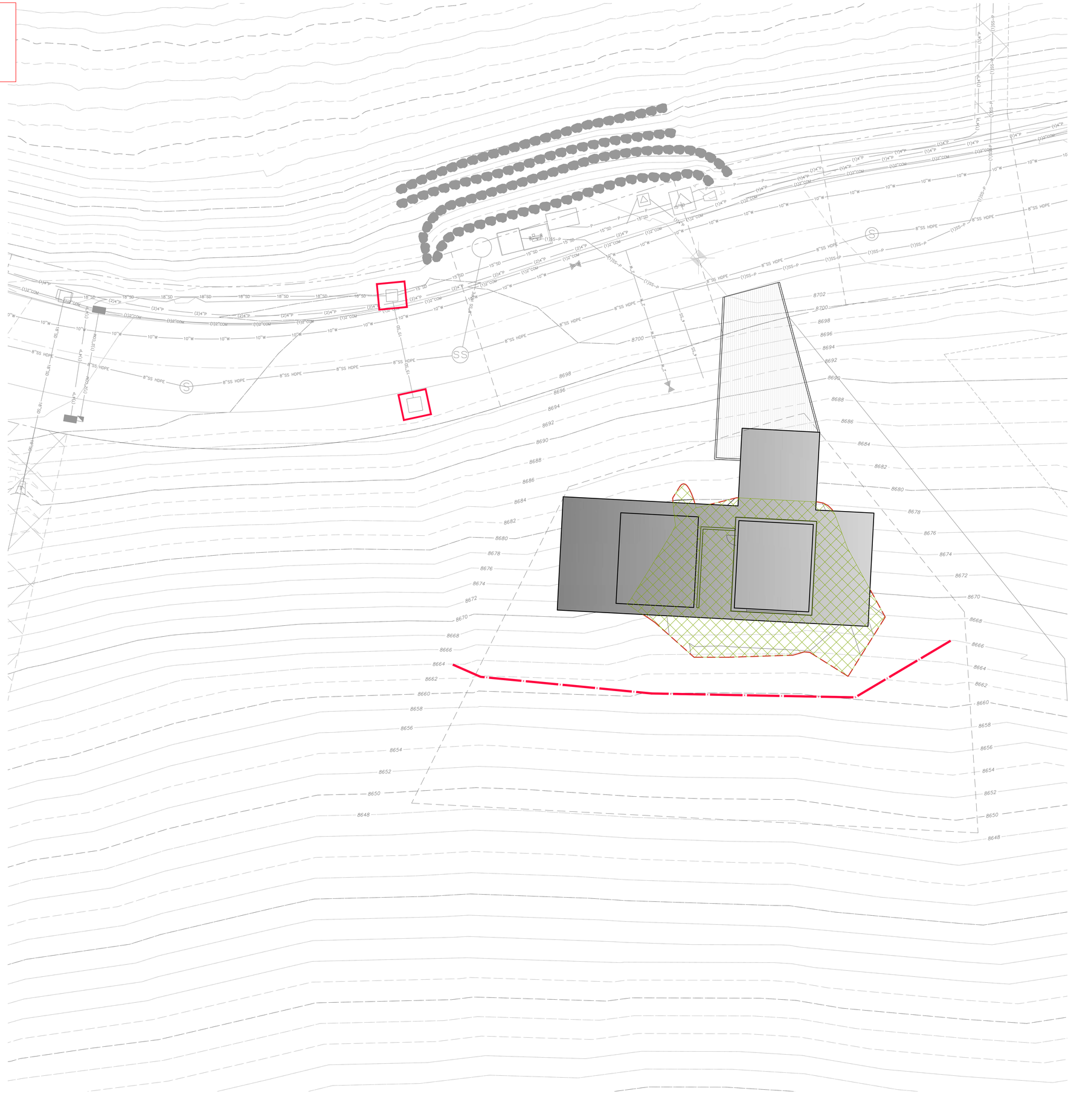
SCALE
HORIZONTAL 1" = 10'

Grading & Drainage Plan

scale: 1": 10'
date: 05.15.201[illegible]
drawn: [illegible]LB
chk'd: RWC

C301

Exhibit A



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ALL AREAS DISTURBED DUE TO CONSTRUCTION ACTIVITIES OUTSIDE OF DESIGNATED SITE GRADING SHALL BE RETURNED TO NATURAL GRADE AND SEEDED PER SEEDING INSTRUCTIONS UNDER SCOPE OF WORK.

MAINTENANCE:

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B) TRACKING STRAW PERPENDICULAR TO SLOPES
C) INSTALLING A LIGHT-WEIGHT, TEMPORARY EROSION CONTROL BLANKET

SCOPE OF WORK:

PROVIDE, INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED, THE DETAILS NOTED, AND/OR AS SHOWN ON THE CONSTRUCTION DRAWINGS:

HATCHING INDICATES AREAS TO RECEIVE 4" TOPSOIL AND TO BE SEEDED FOR NATURAL VEGETATION. AREAS RECEIVING SEEDING FOR NATURAL REVEGETATION ON SLOPES OF 3:1 OR STEEPER MUST BE COVERED WITH AN EROSION CONTROL BLANKET AFTER THE FINAL GRADING AND SEEDING ARE FINISHED. INSTALL NORTH AMERICAN GREEN SC-150 BLANKET OR APPROVED EQUAL. FOLLOW MANUFACTURER'S SPECIFICATIONS.

INSTALL INLET PROTECTION IN FORM OF CONCRETE BLOCKS / FILTER CLOTH / GRAVEL OR SILT SACK AT EXISTING AND PROPOSED CATCH BASINS AS SHOWN ON PLAN. SEE EROSION CONTROL DETAILS ON SHEET C701.

INSTALL SILT FENCE ALONG DOWN GRADIENT LIMITS OF DISTURBANCE AS SHOWN ON PLAN. SEE EROSION CONTROL DETAILS ON SHEET C701.

INSTALL ORANGE SAFETY FENCING AROUND OUTER LIMITS OF PROJECT PRIOR TO GRADING.

SEED MIXTURE FOR REVEGETATION
40% MOUNTAIN BROME (BROMUS MARGINATUS)
25% SLENDER WHEATGRASS (ELYMUS TRACHYCAULUS SSP. TRACHYCAULUS)
5% SHEEP FESCUE (FESTUCA OVINA SPP. DURIUSCULA)
5% ALPINE BLUEGRASS (POA ALPINE)
25% THICKSPIKE WHEATGRASS (ELYMUS LANCEOLATUS SSP. LANCEOLATUS)

SEEDING RATE IS 40 POUNDS PER ACRE.

SCALE

LOT 14 | | esidence

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Erosion Control Plan

scale: 1": 10'
date: 05.15.2015
drawn: LB
chk'd: RWC

C601

Exhibit A

Silt fence

1. **GENERAL**
   - A. Description. A temporary sediment barrier consisting of a filter fabric stretched across and attached to supporting posts and entrenched.
   - B. Application. To intercept sediment from disturbed areas of limited extent.
   - C. Perimeter Control: Place barrier at down gradient limits of disturbance.
   - D. Sediment Barrier: Place barrier at toe of slope or soil stockpile.
   - E. Protection of Existing Waterways: Place barrier at top of stream bank.
   - F. Inlet Protection.
2. **PRODUCTS**
   - A. Fabric. Synthetic filter fabric shall be a pervious sheet of propylene, nylon, polyester, or polyethylene yarn. Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0 deg F to 120 deg F.
   - B. Burlap. 10 ounces per square yard of fabric.
   - C. Posts. Either 2" x 4" diameter wood, or 1.33 pounds per linear foot steel with a minimum length of 5 feet, or steel posts with projections for fastening wire to them.
3. **EXECUTION**
   - A. Cut the fabric on site to desired width, unroll, and drape over the barrier. Secure the fabric toe with rocks or dirt and secure the fabric to the mesh with twin, staples or similar devices.
   - B. When attaching two silt fences together, place the end post of the second fence inside the end post of the first fence. Rotate both posts at least 180 degrees on a clockwise direction to create a tight seal with the filter fabric. Drive both posts into the ground and bury the flap.
   - C. When used to control sediments from a steep slope, place silt fences away from the toe of the slope for increased holding capacity.
   - D. Maintenance.
     1) Inspect immediately after each rainfall and at least daily during prolonged rainfall.
     2) Should the fabric on a silt fence or filter barrier decompose or become ineffective before the end of the expected usable life and the barrier still be necessary, replace the fabric promptly.
     3) Remove sediment deposits after each storm event. They must be removed when deposits reach approximately one-half the height of the barrier.
     4) Re-anchor fence as necessary to prevent shortcutting.
     5) Inspect for runoff bypassing ends of barriers or undercutting barriers.

Inlet protection – fence or straw bale

1. **GENERAL**
   - A. Description. A temporary sediment barrier around storm drain inlet.
   - B. Application. At inlets in paved or unpaved areas where up gradient area is to be disturbed by construction activities.
2. **PRODUCT** (Not used)
3. **EXECUTION**
   - A. Installation and application criteria.
     1) Provide up gradient sediment controls, such as silt fence during construction of inlet.
     2) When construction of inlet is complete erect straw bale barrier, silt fence or other approved sediment barrier surrounding perimeter of inlet.
     3) Install filter fabric completely around grate.
   - B. Maintenance.
     1) Inspect inlet protection after every large storm event and at a minimum of once monthly.
     2) Remove sediment accumulated when it reaches 4-inches in depth.
     3) Repair or re-align barrier or fence as needed.
     4) Look for bypassing or undercutting and re-compact soil around barrier or fence as required.

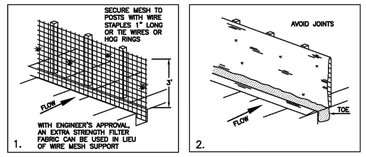
3/4" and 1" meter

1. **GENERAL**
   - A. In street surfaces or other vehicular traffic areas (like driveway approaches), Install the same type of meter box as required for 1 1/2" and 2" service meters. See Plan 522.
   - B. Before backfilling, secure inspection of installation by ENGINEER.
2. **PRODUCTS**
   - A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   - B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
   - C. Castings: Grey iron class 35 minimum per ASTM A 48, coated with asphalt based paint or better.
3. **EXECUTION**
   - A. Meter Placement:
     1) All meters are to be installed in the park strip or within 7 feet of the property line (street side).
     2) Do not install meters under driveway approaches, sidewalks, or curb and gutter.
   - B. Meter Box: Set box so grade of the frame and cover matches the grade of the surrounding surface.
   - C. Pipe Outside of Right-of-Way: Coordinate with utility agency or adjacent property owner for type of pipe to be used outside of right-of-way.
   - D. Inspection: Before backfilling around meter box, secure inspection of installation by ENGINEER.
   - E. Base Course and Backfill Placement: Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26. Maximum lift thickness before compaction is 8-inches.

Cover collar for water valve box

1. **GENERAL**
   - A. In a pavement surface, fill an annular space around a frame and cover casting with concrete. The concrete will support the casting under traffic loadings.
2. **PRODUCTS**
   - A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   - B. Concrete: Class 4000, APWA Section 03 30 04.
   - C. Concrete Curing Agent: Type ID Class A (clear with fugitive dye), membrane forming compound, APWA Section 03 39 00.
3. **EXECUTION**
   - A. Base Course: Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   - B. Pavement Preparation: Provide a neat vertical and concentric joint between concrete collar and existing asphalt concrete surface. Clean edges of all dirt, oil, and loose debris.

NARRATIVE: THIS PLAN MAY BE USED FOR THE CONSTRUCTION OF A STORM WATER BEST MANAGEMENT PRACTICE (BMP). IT IS NOT INCLUSIVE OF ALL PRACTICES AVAILABLE AND IS ONLY SPECIFIC TO THE CONSTRUCTION OF THIS TYPE. MAINTENANCE OF THIS TYPE OF INSTALLATION IS IMPORTANT AND SHOULD BE CONTINUOUSLY MONITORED BY THE CONTRACTOR AND ENGINEER. DETAILS SHOWN HERE HIGHLIGHT IMPORTANT PARTS OF CONSTRUCTION, AND SHOULD BE MODIFIED AS NEEDED.

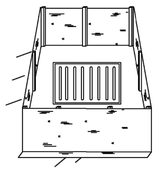


INSTALLATION SEQUENCE

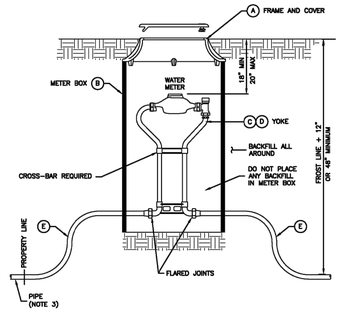
TOE DETAIL

NARRATIVE: THIS PLAN MAY BE USED FOR THE CONSTRUCTION OF A STORM WATER BEST MANAGEMENT PRACTICE (BMP). IT IS NOT INCLUSIVE OF ALL PRACTICES AVAILABLE AND IS ONLY SPECIFIC TO THE CONSTRUCTION OF THIS TYPE. MAINTENANCE OF THIS TYPE OF INSTALLATION IS IMPORTANT AND SHOULD BE CONTINUOUSLY MONITORED BY THE CONTRACTOR AND ENGINEER. DETAILS SHOWN HERE HIGHLIGHT IMPORTANT PARTS OF CONSTRUCTION, AND SHOULD BE MODIFIED AS NEEDED.

STRAW BALE BARRIER
(PLAN No. 121)



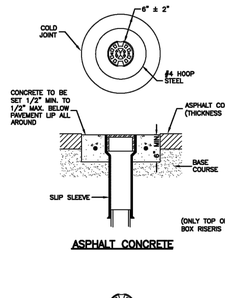
SILT FENCE
(PLAN No. 122)



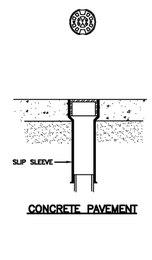
SECTION

LEGEND			
No.	*	ITEM	DESCRIPTION
A		FRAME AND COVER	CAST IRON COVER (grass) DUCTILE IRON COVER (driveway)
B		METER BOX (18" TO 21" DIAMETER) (30" TO 36" DEEP)	CORRUGATED PE, PVC, CMP OR MATERIAL ACCEPTABLE TO AGENCY
C		3/4" METER YOKE	OPTIONAL BACKFLOW PROTECTION PER AGENCY REQUIREMENTS
D		1" METER YOKE	OPTIONAL BACKFLOW PROTECTION PER AGENCY REQUIREMENTS
E		COPPER PIPE	TYPE K (SOFT)

* FURNISHED BY UTILITY AGENCY

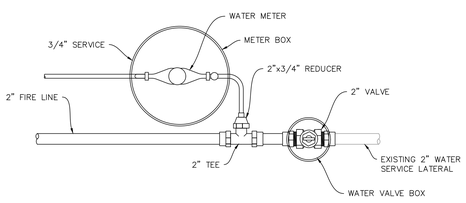


ASPHALT CONCRETE

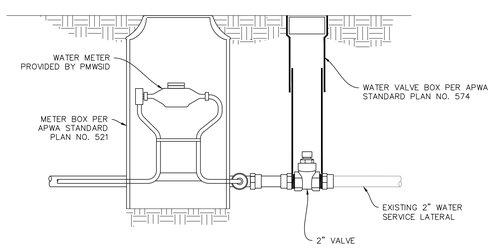


CONCRETE PAVEMENT

LANDSCAPED AREA

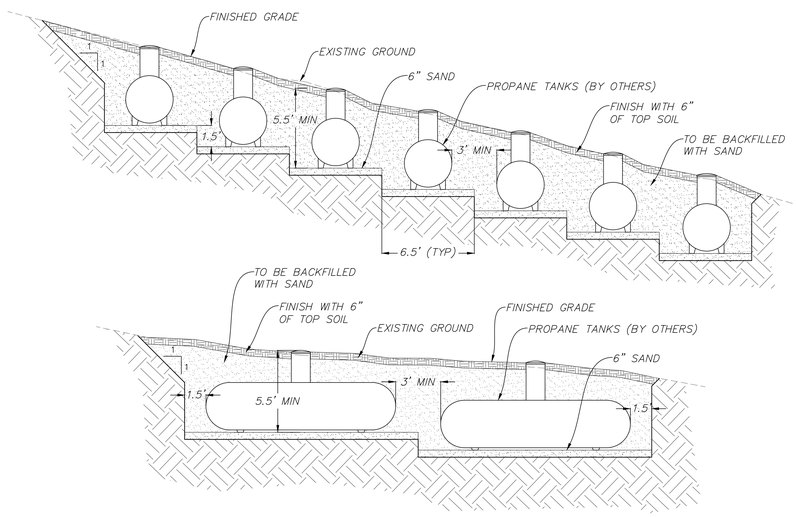


PLAN



SECTION

A — *FIRE LINE AND WATER METER DETAIL*
NTS



B — *PROPANE TANK PIT TYPICAL DETAIL*
NTS

LOT 14 | esidence
Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple
Architects Limited
2188 Gottingen St.
Halifax, Nova Scotia
Canada B3K 3B4
ph: (902) 429.1667
fax: (902) 429.6376

TALISMAN
CIVIL CONSULTANTS
5217 SOUTH STATE STREET
SUITE 200
MURRAY, UT 84107
801.743.1300

No.	Description	Date
Revision		

NOTES:

COP: RIGHT RELATED TO THE USE OF THIS DRAWING:
The use of this drawing shall | e governed | y standard copyright law as generally accepted in architectural practice.

ARCHITECT'S RE: UIREMENTS AND APPROVALS:
It is the Builders responsi: ility to notify MacKay-Lyons Sweetapple Architects Ltd. and to seek prior written approval for materials and workmanship which deviates from instructions provided | y the Architect.

ENGINEER'S RE: UIREMENTS AND APPROVALS:
It is the Builders responsi: ility to notify MacKay-Lyons Sweetapple Architects Ltd. and to seek prior written approval for materials and workmanship which deviates from instructions provided | y the Engineer.

AUTHORITIES' RE: UIREMENTS AND APPROVALS:
All materials and workmanship must comply with the re: uirements of all authorities having jurisdiction over the work. It is the Builders responsi: ility to gain necessary approval from all relevant Authorities.

DIMENSIONS:
All dimensions must | e verified on site. Do not scale off drawings. Plans take precedent over elevations. In the a: sence of dimensions, or if discrepancies exist, consult Architect. All minimum dimensions are to comply with the International Building Code, 2009 Edition.

SHOP DRAWINGS:
Su: mit shop drawings to the Architect and Engineer for approval prior to manufacture of prefa: ricated elements of the | uilding.

Details

scale: N.A
date: 05.15.201:
drawn: LB
chk'd: RWC

C701

Exhibit A

RAL

RM TO THE REQUIREMENTS OF THE BUILDING CODE OF IBC 2015, LATEST EDITION, AND
HER APPLICABLE LOCAL CODES AND REGULATIONS OF AGENCIES HAVING
ICTION.
TRUCTURAL DRAWINGS IN CONJUNCTION WITH THE SPECIFICATIONS AND ALL OTHER
ACT DOCUMENTS.
E PROCEEDING WITH WORK, CHECK ALL THE DIMENSIONS SHOWN ON THE
TURAL DRAWINGS WITH THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL
NGS AND REPORT DISCREPANCIES TO THE CONSULTANT.
TO THE ARCHITECTURAL AND OTHER DRAWINGS FOR LOCATIONS AND DIMENSIONING
ENINGS AND SLEEVES NOT SHOWN ON THE STRUCTURAL DRAWINGS. HOWEVER,
THE CONSULTANT'S PRIOR APPROVAL BEFORE INSTALLING OPENINGS, SLEEVES, ETC.
ARE NOT SHOWN ON STRUCTURAL DRAWINGS.

5. SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS OF PITS, BASES, SUMPS, TRENCHES, DEPRESSIONS, GROOVES, CURBS, CHAMFERS AND SLOPES NOT SHOWN ON STRUCTURAL DRAWINGS.
6. HORIZONTAL AND VERTICAL DESIGN LOADS ARE NOTED. THEY SHALL NOT BE EXCEEDED DURING CONSTRUCTION.
7. TYPICAL STRUCTURAL DETAILS SHALL GOVERN THE WORK. IF DETAILS DIFFER ON THE DRAWINGS, THE MOST STRINGENT SHALL GOVERN.
8. ALL TEMPORARY WORKS INCLUDING SHORING ARE TO BE PROVIDED BY THE CONTRACTOR.

010001 DESIGN NOTES

1. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS AND REQUIREMENTS OF THE FOLLOWING CODES:
2. THE IBC 2015, AND ALL OTHER APPLICABLE LOCAL CODES AND REGULATIONS HAVING JURISDICTION.
3. AMERICAN SOCIETY OF CIVIL ENGINEERS: ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
4. AMERICAN CONCRETE INSTITUTE (ACI): ACI-318-14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
5. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC): AISC-325 AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL 14TH EDITION.
6. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC): AISC 360-16 SPECIFICATIONS FOR STRUCTURAL STEEL STRUCTURES.
7. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC): AISC-341-16 SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS.
8. AMERICAN WOOD COUNCIL (AWC): NDS-2015 NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION COMMENTARY - WITH SUPPLEMENT 2015 EDITION.
9. AMERICAN WOOD COUNCIL (AWC): SDPWS-2015 SPECIAL DESIGN PROVISIONS FOR WIND AND SEISMIC.
10. FORCES ON STRUCTURAL FRAME:

A. LIVE: VARIES REFER TO NOTES UNDER PLANS
B. DEAD: VARIES REFER TO NOTES UNDER PLANS
C. SNOW: EXPOSURE FACTOR (CE) = 1.0
THERMAL FACTOR (CT) = 1.0
IMPORTANCE FACTOR (I) = 1
ROOF SLOPE FACTOR (CS) = 1
GROUND SNOW LOAD (PG): = 270psf
FLAT ROOF SNOW LOAD (PF): = 189psf
SLOPED ROOF SNOW LOAD (PS): = 189psf

FROST DEPTH: = 40in

D. WIND: BASIC WIND SPEED (V): =115mph
WIND IMPORTANCE FACTOR (I): = 1
EXPOSURE FACTOR: = C

11. SEISMIC ANALYSIS:

E. SEISMIC IMPORTANCE FACTOR (I): = 1
F. RISK CATEGORY: = II

G. SPECTRAL RESPONSE ACCEL (Ss): = 0.831g
H. SPECTRAL RESPONSE ACCEL (S1): = 0.277g
I. SITE CLASSIFICATION: = C
J. DESIGN SPECTRAL RESPONSE (SDS): = 0.592g
K. DESIGN SPECTRAL RESPONSE (SD1): = 0.281g
L. SEISMIC DESIGN CATEGORY: = D

12. LATERAL LOAD RESISTING SYSTEMS

M. THE LATERAL FORCES ARE RESISTED BY:
I) LATERAL SYSTEM: STEEL SPECIAL CONCENTRICALLY BRACED FRAMES

RESPONSE MOD. COEFFICIENT(R): 6
OVERSTRENGTH FACTOR(Ω): 2
DEFLECTION MODIFICATION FACTOR(Cd): 5

II) LATERAL SYSTEM: STEEL ORDINARY CONCENTRICALLY BRACED FRAMES

RESPONSE MOD. COEFFICTIENT(R): 3.5
OVERSTRENGTH FACTOR(Ω): 2
DEFLECTION MODIFICATION FACTOR(Cd): 3.5

III) LATERAL SYSTEM: ORDINARY CONCRETE SHEAR WALLS

RESPONSE MOD. COEFFICTIENT(R): 4
OVERSTRENGTH FACTOR(Ω): 2.5
DEFLECTION MODIFICATION FACTOR(Cd): 4

N. SEISMIC ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE.
O. ANALYSIS SOFTWARE: RISA FLOOR/3D

13. LATERAL LOAD ON FOUNDATIONS

P. A GEOTEHCNICAL REPORT "GEOTCHNICAL AND GEOLOGIC HAZARD INVESTIGATION: LOT 14R OF SUMMIT EDEN PHASE 1A POWDER MOUNTAIN RESORT WEBER COUNTY, UTAH" PROJECT NUMBER 02693-001, DATED MARCH 8TH, 2017 HAS BEEN PREPARED BY IGES INC. THE CONTRACTOR IS TO READ THE REPORT AND BE FAMILIAR WITH IT'S CONTENTS.
Q. FOUNDATION WALLS ARE DESIGNED ASSUMING THERE IS FREE-DRAINING BACKFILL OR THAT OTHER PROVISIONS HAVE BEEN MADE, SUCH THAT THE WALLS ARE NOT SUBJECT TO HYDROSTATIC PRESSURE.

030000 CONCRETE

1. NOMINAL MAXIMUM SIZE OF AGGREGATE SHALL BE 3/4". USE SMALLER AGGREGATES AS APPROPRIATE IN AREAS OF CONGESTED REINFORCING STEEL OR TO IMPROVE WORKABILITY. MODIFY MIX DESIGNS TO SUIT.

CATEGORY	DESCRIPTION	EXPOSURE CLASS PER A23.1	CONCRETE STRENGTH f'c (psi)	MAX W/C RATIO	AIR CONTENT [1]	SCOPE
CM1	FOUNDATION MIX		3500		5-8%	FOOTING AND CAPS
CM2	SLAB ON GRADE MIX		3000			SLABS ON GRADE
CM3	SLAB AND BEAM MIX		4500			FRAMED SLABS AND BEAMS
CM4	COLUMN AND WALL MIX		4500			CONC. COLUMNS AND WALLS NOT EXPOSED TO FREEZE THAW OR DE-ICING CHEMICALS
CM5	TOPPING MIX		3000			TOPPINGS ON CONCRETE
CM6	COMPOSITE DECK MIX		3000			SLABS ON METAL DECKS
CM7	PARKING SLAB AND BEAM MIX	C-1 [2]	5000	0.40	5-8%	FOUNDATION WALLS ADJACENT TO PAVING FRAMED SLABS AND BEAMS EXPOSED TO DE-ICING CHEMICALS
CM8	PAVING MIX	C-2	4700	0.45	5-8%	EXTERIOR PAVING AND SIDEWALKS
CM9	PARKING MIX	C-4	3500	0.55	4-7%	SLAB ON GRADE IN PARKING GARAGE EXPOSED TO DE-ICING CHEMICALS BUT NOT TO FREEZE THAW
CM10	INTENTIONALLY LEFT BLANK					
CM11	EXTERIOR WALL MIX	F-2	3500	0.55	4-7%	FOUNDATION WALLS AND OTHER WALLS AND OTHER WALLS EXPOSED TO FREEZE THAW BUT NOT EXPOSEDTO DE-ICING CHEMICALS

1. WHERE AGGREGATES SMALLER THAN 14 mm ARE USED, INCREASE AIR CONTENT BY 1%
2. REINFORCED CONCRETE EXPOSED TO DE-ICING CHEMICALS TO HAVE DCI CORROSION INHIBITOR @ 11L/cu.m. DOSAGE OR APPROVED EQUIVALENT

2. REINFORCEMENT:
CONFORM TO THE REQUIREMENTS OF ASTM A615 AND ASTM A706 IF WELDABLE REINFORCEMENT IS USED.
A. REINFORCING BARS SHALL BE MINIMUM ASTM A615 GRADE 60 AND WELDED WIRE FABRIC SHALL BE MINUMUM ASTM A185, SUPPLY IN FLAT SHEETS.

3. SLAB ON GRADE:
A. PLACE SLABS ON GRADE ON MATERIAL CAPABLE OF OS SUSTAINING 500psf WITHOUT SETTLEMENT RELATIVE TO BUILDING FOOTING.
B. BEFORE PLACING SLAB, PLACE MINIMUM 6" OF 3/4" MAXIMUM SIZE CLEAR CRUSHED STONE OVER THE SUB GRADE. THOROUGHLY ROLL AND CONSOLIDATE TO THE LINES AND LEVELS REQUIRED.
4. CONCRETE AND REINFORCEMENT:
A. PROVIDE DOWELS TO WALLS AND COLUMNS SIMILAR IN NUMBER, SIZE, AND SPACING TO VERTICAL STEEL IN THE WALL OR COLUMN EXCEPT WHEN NOTED OTHERWISE.
B. PROVIDE 1.5"x2.5" KEYS AT ALL CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.
C. CONCRETE COVER TO REINFORCEMENT TO CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE AND ACI 318 AND THE FOLLOWING COVER REQUIREMENTS:

REINFORCING TYPE:	
SLABS NOT EXPOSED TO WEATHER AND INTERIOR WALL SURFACES	3/4in
EXTERIOR WALL SURFACES, SLABS EXPOSED TO WEATHER #5 AND SMALLER	1 1/2in
EXTERIOR WALL SURFACES, SLABS EXPOSED TO WEATHER LARGER THAN #5	2in
COLUMN AND BEAM TIES	1 1/2in
CLEAR DISTANCE BETWEEN BARS	2in
FORMED DIRECTLY AGAINST EARTH	3in

D. SECURELY TIE IN PLACE AND ADEQUATELY SUPPORT ALL REINFORCEMENT. LAP ALL BARS MARKED 'CONTINUOUS JOINTS' (CONT.) MINIMUM 40db.
E. WHERE CHEMICAL ANCHORS ARE QEQUIRED, USE HILTI HIT HY 200 EPOXY OR APPROVED EQUAL.

050000 STRUCTURAL STEEL:

1. ALL STRUCTURAL STEEL AND MISCELANEOUS METAL SHALL BE DETAILED, FABRICATED AND ERECTED IN CONFORMANCE WITH AISC 325.
2. MATERIALS:
ALL STRUCTURAL STEEL SHALL CONFORM TO THE NOTED ASTM STANDARDS UNO.

A. W-SHAPES A992
B. HSS (RECTANGULAR AND SQUARE) A500 (Fy = 45ksi)
C. HSS (CIRCULAR) A500 (Fy = 42ksi)
D. ANGLES/C-CHANNELS/MC-CHANNELS A36
E. ALL OTHER STEEL PLATES A36

3. WHERE SPECIFIED, GALVANIZED STEEL IS TO BE COMPLETED IN ACCORDANCE WITH ASTM A123 HOT DIP PROCESS.
4. ALL TEMPORARY BRACING, SHORING, AND ERECTION CLIPS REQUIRED BY THE CONTRACTOR ARE NOT SHOWN. WORK IS TO CONFORM TO OSHA REQUIREMENTS.
5. SHOP DRAWINGS ARE TO BE SUBMITTED TO CONSULTANTS FOR REVIEW PRIOR TO FABRICATION.
6. TESTING AND INSPECTION AGENCIES SHALL SEND STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE CONSULTANT.
7. CONNECTIONS
F. ALL STEEL-TO -STEEL BOLTED CONNECTIONS TO BE MADE WITH HIGH STRENGTH BOLTS AS PER 'SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS"
G. UNLESS NOTED BOLTS IN CONNECTIONS SHALL BE BEARING TYPE WITH THREADS EXCLUDED FROM THE SHEAR PLANE. USE ASTM A325 BOLTS UNLESS NOTED.
H. STEEL WASHERS CONFORM TO A436. NUTS TO CONFORM TO A563
I. ANCHOR BOLTS AND ANCHOR RODS TO CONFORM TO ASTM F1554 GRADE 36.
J. ALL WELDED CONNECTIONS TO BE COMPLETED IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE - STEEL (AWS-01.1) AND HAVE A MINIMUM TENSILE STRENGTH OF 70ksi FOR ALL ELECTRODES.
K. ALL WELDERS ARE TO BE QUALIFIED IN ACCORDANCE WITH AWS.01.1 FOR ALL WELDS THEY WILL BE COMPLETING.
L. WELD LENGTHS CALLED FOR ON STRUCTURAL DRAWINGS ARE NET EFFECTIVE LENGTH. IF NO LENGTH IS SPECIFIED USE THE MINIMUM SIZE AS SPECIFIED IN AISC 360, SECTION J2.2B.
M. ALL WELDING TO BE PERFORMED IN ACCORDANCE WITH A WRITTEN WELDING PROCEDURE SPECIFICATION (WPS). SUBMIT ALL WPS TO CONSULTANT WHICH OUTLINES ALL PROCEDURES, ELECTRODE SPECIFICATIONS, DATA SHEETS AND LIMITATIONS.
N. RUN-OFF TABS PER AWS D1.1 ARE REQUIRED FOR ALL COMPLETE JOINT PENETRATION WELDS. START AND COMPLETE ALL WELDS ON RUN-OFF TABS. WELDS ARE NOT TO BE COMPLETED AT COPE HOLE LOCATIONS.
O. COMPLETE PENETRATION AND PARTIAL PENETRATION WELDS SHALL BE INSPECTED AND EXAMINED BY ULTRASONIC TESTING. ALL TESTING AND INSPECTION SHALL CONFORM TO IBC REQUIREMENTS.
8. ALL HEADED STUDS WELDED TO BEAMS OR CONCRETE CONNECTIONS SHALL BE NELSON STUDS OR APPROVED EQUAL.
9. HEADED STUDS SHALL BE AUTOMATICALLY WELDED IN SHOP OR FIELD WELDED WITH EQUIPMENT APPROVED BY THE MANUFACTURER OF THE STUDS.

310000 FOUNDATIONS

1. A GEOTEHCNICAL REPORT "GEOTCHNICAL AND GEOLOGIC HAZARD INVESTIGATION: LOT 71R OF SUMMIT EDEN PHASE 1C 8488 E. SPRING PARK ROAD SUMMIT POWDER MOUNTAIN RESORT WEBER COUNTY, UTAH" PROJECT NUMBER 02565-001, DATED AUGUST 30TH, 2017 HAS BEEN PREPARED BY IGES INC.. READ THIS REPORT, AND BE THOROUGHLY FAMILIARIZED WITH THEIR FINDINGS.
2. FOUND ALL FOOTINGS ON NATURALLY CONSOLIDATED UNDISTURBED SOIL CAPABLE OF SAFELY SUSTAINING AN ALLOWABLE BEARING VALUE OF 2900 PSF.
3. FOUND FOOTINGS EXPOSED TO FREEZING BELOW THE LEVEL AT WHICH POTENTIAL DAMAGE RESULTING FROM FROST ACTION CAN OCCUR, BUT A MINIMUM OF 40in BELOW FINISHED GRADE IF NOT NOTED TO BE FOUNDED LOWER.
4. THE LINE OF SLOPE BETWEEN ADJACENT FOOTINGS OR EXCAVATIONS OR ALONG STEPPED FOOTINGS SHALL NOT EXCEED A RISE OF 7 IN A RUN OF 10.
5. DO NOT PLACE BACKFILL AGAINST WALLS RETAINING EARTH (OTHER THAN CANTILEVER WALLS) UNTIL THE FLOOR CONSTRUCTION AT TOP AND BOTTOM OF THE WALLS IS POURED AND HAS ATTAINED 70% OF ITS SPECIFIED STRENGTH.
6. CARRY OUT BACKFILLING AGAINST FOUNDATION WALLS WHERE THERE IS GRADE ON BOTH SIDES IN SUCH A MANNER THAT THE LEVEL OF BACKFILLING ON ONE SIDE OF THE WALL IS NEVER MORE THAN 1'-8" DIFFERENT FROM THE LEVEL ON THE OTHER SIDE OF THE WALL.

060000 WOOD:

1. FRAMING LUMBER SHALL BE DOUGLAS FIR-LARCH AND MEET THE FOLLOWING MINIMUM REQUIREMENTS UNLESS NOTED OTHERWISE.

2x6 STUDS, SILLS AND PLATES No2
2x_ JOISTS & BLOCKING No2
6x6 AND LARGER No1

2. ENGINEERED FRAMING BEAMS AND MATERIAL SHALL MEET THE FOLLOWING MINUMUM REQUIREMENTS UNLESS NOTED OTHERWISE.

"PSL" PARALLEL STRAND LUMBER
BENDING STRESS (EDGE LOADED) Fb = 2,900psi
SHEAR STRESS (EDGE LOADED) Fv = 290psi
COMPRESSIVE STRESS (PERP TO GRAIN) Fc = 750psi
COMPRESSIVE STRESS (PARA TO GRAN) Fc = 2,900psi
MODULUS OF ELASTICITY E = 2,000ksi

"LVL" LAMINATED VENEER LUMBER
BENDING STRESS (EDGE LOADED) Fb = 2,600psi
SHEAR STRESS (EDGE LOADED) Fv = 285psi
COMPRESSIVE STRESS (PERP TO GRAIN) Fc = 750psi
COMPRESSIVE STRESS (PARA TO GRAN) Fc = 2,510psi
MODULUS OF ELASTICITY E = 1,800ksi

"LSL" LAMINATED STRAND LUMBER
BENDING STRESS (EDGE LOADED) Fb = 2,325psi
SHEAR STRESS (EDGE LOADED) Fv = 310psi
COMPRESSIVE STRESS (PERP TO GRAIN) Fc = 900psi
COMPRESSIVE STRESS (PARA TO GRAN) Fc = 2,170psi
MODULUS OF ELASTICITY E = 1,550ksi

3. ALL LOAD BEARING STUD WALLS NOT INDICATED AS SHEARWALLS ON PLANS TO BE SHEATHED WITH PLYWOOD OR OSB PANELS. BLOCK ALL PANEL EDGES. TYPICAL NAILING TO BE 10d @ 6" c/c AT ALL SUPPORTED EDGES AND 10d @ 12" c/c AT INTERMEDIATE SUPPORTS UNLESS NOTED OTHERWISE.
4. ENGINEERED FLOOR JOISTS TO BE MANUFACTURED FLOOR JOIST SYSTEM BY REDBUILT ENGINEERED WOOD PRODUCTS. PROVIDE SEALED ENGINEERED FLOOR LAYOUTS FROM MANUFACTURER PRIOR TO FABRICATION OF ELEMENTS.
5. ALL BLOCKING IN ENGINEERED FLOOR SYSTEM TO BE FULL DEPTH LVL MATERIAL.
6. SUBSTITUTION OF FLOOR SYSTEM CAN BE MADE WITH THE SUBMISISON OF EQUIVALENCY REPORT FROM ALTERNATE SUPPLIER.
7. ALL WOOD-TO-WOOD CONNECTIONS ARE TO BE BY SIMPSON STRONG TIE OR APPROVED EQUIVALENT. ALL HANGERS TO BE RATED FOR MINUIMUM CONNECTION FORCES NOTED ON PLANS.
8. EXECUTION:
A. ALL SILL PLATES TO BE STAMPED "KD" WHICH INDICATES KILN DRIED WITH A MOISTURE CONTENT NOT EXCEEDING 13%.
B. PROVIDE SOLID BLOCKING, INCLUDING SQUASH BLOCKS, BELOW ALL POINT LOADS, EXTENDING DOWN TO THE TOP OF FOUNDATIONS.
C. PROVIDE BRIDGING IN FLOOR AND ROOF ASSEMBLIES AT 8'-0" c/c MAXIMUM UNLESS SPECIFICALLY DETAILED OTHERWISE BY THE ENGINEERED FLOOR SUPPLIER.
D. REFER TO TYPICAL DETAILS FOR STANDARD FRAMING REQUIREMENTS AT WOOD TO STEEL, WOOD TO FOUNDATION AND WOOD TO WOOD FLOOR ASSEMBLIES. PROTECT ALL WOOD PRODUCTS FROM DAMAGE AND STAINING DUE TO WETTING AND MOISTURE.
E. RE-TIGHTEN ALL ANCHORS JUST PRIOR TO COVERING THE WALL FRAMING.

010003 NOTABLE SUBMITTALS

1. GENERAL REVIEW BY COMPONENT ENGINEERS
A. COMPONENT ENGINEERS ARE RESPONSIBLE FOR GENERAL REVIEW OF THE CONSTRUCTION FOR THE PORTION OF THE WORK PREPARED UNDER THEIR PROFESSIONAL SEALS. THEY SHALL PROVIDE:
I) REPORTS FOR EACH SITE VISIT
II) A PROJECT COMPLETION NOTICE
A. ENGINEERED COMPONENTS INCLUDE; PRECAST CONCRETE, OPEN WEB STEEL JOISTS, METAL DECK, PRE-ENGINEERED WOOD TRUSSES, DEEP FOUNDATIONS, MISCELLANEOUS METALS, STRUCTURAL GLASS, GLASS CONNECTIONS, CURTAINWALL, HELICAL PEIRS, GEOPIERS, MICROPILES.

010004 SUBMITTALS

1. GEOMETRY
A. SUBMIT SURVEY RECORDS CONFIRMING THAT THE BUILT GEOMETRY MATCHES THE DESIGN GEOMETRY.
2. CONCRETE REINFORCEMENT
A. SUBMIT REINFORCING PLACING DRAWINGS AND BAR LISTS FOR REVIEW BY THE CONSULTANT.
B. PROVIDE TEST CYLINDERS IN ACCORDANCE WITH ASTM STANDARDS.
3. STRUCTURAL STEEL
A. SUBMIT DETAILED SHOP DRAWINGS AND DETAILED CONNECTIONS FOR ALL STEEL COMPONENTS, BASED ON SECTION DETAILS AND CONNECTION DETAILS PROVIDED, FOR THE REVIEW OF THE CONSULTANT PRIOR TO ANY FABRICATION.
B. ERECTION AND SETTING DRAWINGS FOR THE REVIEW OF THE CONSULTANT.

FRAMING PLAN LEGEND	
REPEAT FRAMING ELEMENTS (SPAN)	
REPEAT FRAMING ELEMENTS (EXTENT)	
BEAM MEMBERS	
EXTERIOR STUD & LOAD BEARING STUDS	
WALLS (NON-LOAD BEARING)	
STUD WALL ABOVE	
CONCRETE WALLS	
COLUMN (HSS)	
COLUMN (WOOD)	
COLUMN ABOVE	
CANTILEVERS	CANT.
MOMENT CONNECTIONS	
EXTENT OF FINISHES	
EXTENT OF ROOF	
EXTENT OF ELEMENTS BELOW	

SCHEDULE OF SPECIAL INSPECTIONS

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	DETAILED INSTRUCTIONS AND FREQUENCIES
REINFORCED CONCRETE (IBC 1705.3 & 1705.12.1)			
REINFORCING STEEL		X	VERIFY PRIOR TO PLACING CONCRETE THAT REINFORCING IS OF SPECIFIED TYPE, GRADE AND SIZE; THAT IT IS FREE OF OIL, DIRT AND RUST; THAT IT IS LOCATED AND SPACED PROPERLY; THAT HOOKS, BENDS, TIES, STIRRUPS, AND SUPPLEMENTAL REINFORCEMENT ARE PLACED CORRECTLY; THAT TAP LENGTHS, STAGGER AND OFFSETS ARE PROVIDED; AND THAT ALL MECHANICAL CONNECTIONS ARE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS AND/OR EVALUATION REPORT.
ANCHORAGE		X	INSPECTION OF ANCHORS CAST IN CONCRETE.
USE OF REQUIRED MIX DESIGN		X	VERIFY THAT ALL MIXTURES USED COMPLY WITH THE APPROVED CONSTRUCTION DOCUMENTS; ACI 318: Ch. 4, 5.2-5.4; AND IBC 1904.3, 1913.2, 1913.3.
CONCRETE SAMPLING FOR STRENGTH TESTS, SLUMP, AIR CONTENT, AND TEMPERATURE	X		
CONCRETE PLACEMENT	X		
CURING TEMPERATURE AND TECHNIQUES		X	VERIFY THAT AMBIENT TEMPERATURE FOR CONCRETE IS KEPT > 50°F FOR AT LEAST 7 DAYS AFTER PLACEMENT. HIGH-EARLY-STRENGTH CONCRETE SHALL BE KEPT > 50°F FOR AT LEAST 3 DAYS. ACCELERATED CURING METHODS MAY BE USED (SEE ACI 318:5.11.3). ALL CONCRETE MATERIALS, REINFORCEMENT, FORMS, FILLERS, AND GROUND SHALL BE FREE FROM FROST. IN HOT WEATHER CONDITIONS ENSURE THAT APPROPRIATE MEASURES ARE TAKEN TO AVOID PLASTIC SHRINKAGE CRACKING AND THAT THE SPECIFIED WATER/CEMENT RATIO IS NOT EXCEEDED.
STRENGTH VERIFICATION		X	VERIFY THAT ADEQUATE STRENGTH HAS BEEN ACHIEVED PRIOR TO THE REMOVAL OF FORMS.
FORMWORK		X	VERIFY THAT FORMS ARE PLACED PLUMB AND CONFORM TO THE SHAPES, LINES, AND DIMENSIONS OF THE MEMBERS AS REQUIRED BY THE APPROVED CONSTRUCTION DOCUMENTS.
STRUCTURAL STEEL - PRIOR TO WELDING (TABLE N5.4-1, AISC 360-10)			
VERIFY WELDING PROCEDURES (WPS) AND CONSUMABLE CERTIFICATES	X		
MATERIAL IDENTIFICATION		X	VERIFY TYPE AND GRADE OF MATERIAL.
WELDER IDENTIFICATION		X	A SYSTEM SHALL BE MAINTAINED BY WHICH A WELDER WHO HAS WELDED A JOINT OR MEMBER CAN BE IDENTIFIED.
FIT-UP GROOVE WELDS		X	VERIFY JOINT PENETRATION, DIMENSIONS, CLEANLINESS, TACKING, AND BACKING.
ACCESS HOLES		X	VERIFY CONFIGURATION AND FINISH.
FIT-UP FILLET WELDS		X	VERIFY ALIGNMENT, GAPS AT ROOT, CLEANLINESS OF STEEL SURFACES, AND TACK WELD QUALITY AND LOCATION.
STRUCTURAL STEEL - DURING WELDING (TABLE N5.4-2, AISC 360-10)			
USE OF QUALIFIED WELDERS		X	VERIFY THAT WELDERS ARE APPROPRIATELY QUALIFIED.
CONTROL AND HANDLING OF WELDING CONSUMABLES		X	VERIFY PACKAGING AND EXPOSURE CONTROL.
CRACKED TACK WELDS		X	VERIFY THAT WELDING DOES NOT OCCUR OVER CRACKED TACK WELDING.
ENVIRONMENTAL CONDITIONS		X	VERIFY THAT WIND SPEED, PRECIPITATION, AND TEMPERATURE ARE WITHIN LIMITS.
WPS FOLLOWED		X	VERIFY ITEMS SUCH AS SETTINGS ON WELDING EQUIPMENT, TRAVEL SPEED, WELDING MATERIALS, SHIELDING GAS TYPE/FLOW RATE, PREHEAT APPLIED, INTERPASS TEMPERATURE MAINTAINED, AND PROPER POSITION.
WPS FOLLOWED		X	VERIFY ITEMS SUCH AS SETTINGS ON WELDING EQUIPMENT, TRAVEL SPEED, WELDING MATERIALS, SHIELDING GAS TYPE/FLOW RATE, PREHEAT APPLIED, INTERPASS TEMPERATURE MAINTAINED, AND PROPER POSITION.
WELDING TECHNIQUES		X	VERIFY INTERPASS AND FINAL CLEANING, EACH PASS IS WITHIN PROFILE LIMITATIONS, AND QUALITY OF EACH PASS.
STRUCTURAL STEEL - AFTER WELDING (TABLE N5.4-3, AISC 360-10)			
WELDS CLEANED		X	VERIFY THAT WELDS HAVE BEEN PROPERLY CLEANED.
SIZE, LENGTH, AND LOCATION OF WELDS	X		
WELDS MEET VISUAL ACCEPTANCE CRITERIA	X		
ARC STRIKES	X		
K-AREA	X		
BACKING AND WELD TABS REMOVED	X		
REPAIR ACTIVITIES	X		
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT/MEMBER	X		

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	DETAILED INSTRUCTIONS AND FREQUENCIES
NON-DISTRUCTIVE TESTING (SECTION N5.5, AISC 360-10)			
CJP WELDS		X	ULTRASONIC TESTING SHALL BE PERFORMED ON 10% OF CJP GROOVE WELDS IN BUTT, T- AND CORNER JOINTS SUBJECTED TO TRANSVERSELY APPLIED TENSION LOADING IN MATERIALS 5/16" THICK OR GREATER. TESTING RATE MUST BE INCREASED IF >5% OF WELDS TESTED HAVE UNACCEPTABLE DEFECTS.
ACCESS HOLES (FLANGE > 2")	X		
WELD JOINTS SUBJECT TO FATIGUE	X		
OTHER STEEL INSPECTIONS (SECTION N5.7, AISC 360-10; TABLES J8-1 & J10-1, AISC 341-10)			
STRUCTURAL STEEL DETAILS		X	ALL FABRICATED STEEL OR STEEL FRAMES SHALL BE INSPECTED TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN IN THE CONSTRUCTION DOCUMENTS, SUCH AS BRACES, STIFFENERS, MEMBER LOCATIONS, AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.
ANCHOR RODS AND OTHER EMBEDMENTS SUPPORTING STRUCTURAL STEEL		X	SHALL BE ON THE PREMISES DURING THE PLACEMENT OF ANCHOR RODS AND OTHER EMBEDMENTS SUPPORTING STRUCTURAL STEEL FOR COMPLIANCE WITH CONSTRUCTION DOCUMENTS. VERIFY THE DIAMETER, GRADE, TYPE, AND LENGTH OF THE ANCHOR ROD OR EMBEDMENT ITEM, AND THE EXTENT OR DEPTH OF EMBEDMENT PRIOR TO PLACEMENT OF CONCRETE.
WOOD CONSTRUCTION (IBC 1705.10.1 & 1705.11.2)			
HIGH-LOAD DIAPHRAGMS		X	VERIFY THICKNESS AND GRADE OF SHEATHING, SIZE OF FRAMING MEMBERS AT PANEL EDGES, NAIL/STAPLE DIAMETERS AND LENGTH, AND THE NUMBER OF FASTENER LINES AND FASTENER SPACING PER APPROVED PLANS. *PERFORMED BY CODE INSPECTION FIRM.*
STRUCTURAL WOOD		X	WHERE FASTENER SPACING IS < 4" o.c.: VERIFY PROPER NAILING, BOLTING, ANCHORING, AND OTHER FASTENING OF SHEAR WALLS, DIAPHRAGMS, BRACES, AND HOLDOWNS. *PERFORMED BY CODE INSPECTION FIRM.*
SOILS (IBC 1705.6)			
VERIFY SUBGRADE IS ADEQUATE TO ACHIEVE DESIGN BEARING CAPACITY		X	PRIOR TO PLACEMENT OF CONCRETE.
VERIFY EXCAVATIONS EXTEND TO PROPER DEPTH AND MATERIAL		X	PROIR TO PLACEMENT OF COMPACTED FILL OR CONCRETE.
VERIFY THAT SUBGRADE HAS BEEN APPROPRIATELY PREPARED PRIOR TO PLACING COMPACTED FILL		X	PROIR TO PLACEMENT OF COMPACTED FILL.
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS		X	ALL MATERIALS SHALL BE CHECKED AT EACH LIFT FOR PROPER CLASSIFICATIONS AND GRADATIONS NOT LESS THAN ONCE FOR EACH 10,000 SQ.FT. OF SURFACE AREA.
VERIFY PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION.	X		ALL MATERIALS SHALL BE CHECKED AT EACH LIFT FOR PROPER CLASSIFICATIONS AND GRADATIONS NOT LESS THAN ONCE FOR EACH 10,000 SQ.FT. OF SURFACE AREA.

1. SPECIAL INSPECTORS SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO PERFORMING ANY DUTIES.
2. SPECIAL INSPECTORS SHALL PROVIDE PROOF OF LICENSURE BY THE STATE OF UTAH FOR EACH TYPE OF INSPECTION.
3. SPECIAL INSPECTIONS AND TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, THIS STATEMENT, AND THE IBC SECTIONS 1704 AND 1705.
4. INSPECTION REPORTS WILL BE SUBMITTED TO THE CODE CONSULTANT, THE ARCHITECT, AND THE STATE OF UTAH BUILDING OFFICIAL WITHIN 48 HOURS OF PERFORMING INSPECTIONS.
5. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS, TESTING AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS AND A STATEMENT INDICATING THAT THE STRUCTURE IS IN COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND APPLICABLE CODES SHALL BE SUBMITTED.

PLOT DATE: May 30, 2018
FILE: J:\Job-2017 - 170900 to 170999\170950 Summit Lot 14R\Drawings Structural\170950_X-TB-E.dwg

Lot 14 Mountain House
Summit Powder Mountain
Eden, Utah

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No.	Description	Date
01	Issued for Costing	2018.05.30

Revision:

NOTES:

ARCHITECT'S REQUIREMENTS AND APPROVALS:
It is the Builder's responsibility to notify MacKay-Lyons Sweetapple Architects Ltd. and to seek prior written approval for materials and workmanship which deviates from instructions provided by the Architect.

ENGINEER'S REQUIREMENTS AND APPROVALS:
It is the Builder's responsibility to notify MacKay-Lyons Sweetapple Architects Ltd. and to seek prior written approval for materials and workmanship which deviates from instructions provided by the Engineer.

AUTHORITIES' REQUIREMENTS AND APPROVALS:
All materials and workmanship must comply with the requirements of all authorities having jurisdication over the work. It is the Builder's responsibility to gain necessary approval from all relevant Authorities.

DIMENSIONS:
All dimensions must be verified on site. Do not scale off drawings. Plans take precedent over elevations. In the absence of dimensions, or if discrepancies exist, consult Architect. All minimum dimensions are to comply with the National Building Code of Canada.

SHOP DRAWINGS:
Submit shop drawings to the Architect and Engineer for approval prior to manufacture of prefabricated elements of the building.

General Notes

scale: NOT TO SCALE
date: 2018-05-20
drawn: DP
chk'd: TJ

S001

Exhibit A

ABBREVIATIONS 0001

ANBOLT	=	ANCHOR BOLT	kN	=	KILONEWTON
ALT.	=	ALTERNATE	kN/m	=	KILONEWTON PER METRE
ALT.	=	ALTERNATE	kN/sq.m	=	KILONEWTON METRES PER SQUARE METRE
ARCH.	=	ARCHITECTURAL	kN/m	=	KILONEWTON PER METRE
B	=	BOTTOM	L.L.	=	LIVE LOAD
BLL	=	BOTTOM LOWER LAYER	LG	=	LONG
BUL	=	BOTTOM UPPER LAYER	LLV.	=	LONG LEG VERTICAL
BLDG.	=	BUILDING	LLH.	=	LONG LEG HORIZONTAL
BM.	=	BEAM			
BB	=	BASE OR BEARING PLATE			
BSMT.	=	BASEMENT	MAX.	=	MAXIMUM
			MECH.	=	MECHANICAL
CA.	=	COLUMN ABOVE	MEZZ.	=	MEZZANINE
C-C	=	CENTRE TO CENTRE	MIN.	=	MINIMUM
C	=	CENTRE LINE	MISC.	=	MISCELLANEOUS
CANT.	=	CANTILEVER	ML	=	MIDDLE LAYER
COL.	=	COLUMN	mm	=	MILLIMETRE
CONC.	=	CONCRETE	MOM.	=	MOMENT
CONSTR.	=	CONSTRUCTION	m	=	METRE OR METRE
CONT.	=	CONTINUOUS	MPa	=	MEGAPASCAL
c/w	=	COMPLETE WITH	Mf	=	FACTORED MOMENT
			N	=	NEWTONS
DET.	=	DETAIL	N.F.	=	NEAR FACE
DIAG.	=	DIAGONAL	N/S	=	NORTH/SOUTH
DIA.	=	DIAMETER	NTS.	=	NOT TO SCALE
DIA.	=	DIAMETER, BAR DIAMETER			
DIM.	=	DIMENSION	OWSJ	=	OPEN WEB STEEL JOISTS
D.J.	=	DOUBLE JOIST	OPEN	=	OPENING
DO.	=	DITTO			
D.L.	=	DEAD LOAD	PL.	=	PLATE
DWG.	=	DRAWING	P.C.	=	PRECAST
DWL.	=	DOWEL	PROJ.	=	PROJECTION
EA.	=	EACH	R	=	REACTION
EA.F.	=	EACH FACE	RAD	=	RADIUS
EA.W.	=	EACH WAY	REF	=	REFERENCE
EL.	=	ELEVATION	REINF.	=	REINFORCING/REINFORCEMENT
ELECT.	=	ELECTRICAL	REQ'D	=	REQUIRED
ELEV.	=	ELEVATION	REV.	=	REVISION/REVISED
E-W	=	EAST-WEST	r/w	=	REINFORCED WITH
EW	=	EACH WAY	SECT.	=	SECTION
EXIST.	=	EXISTING	SDF	=	STEP DOWN FOOTING
EXP.J.	=	EXPANSION JOINT	SIM.	=	SIMILAR
EXT.	=	EXTERIOR	SPEC'S.	=	SPECIFICATIONS
			STD.	=	STANDARD
			SQ.	=	SQUARE
F.F.	=	FAR FACE	STRUCT.	=	STRUCTURAL
FDN.	=	FOUNDATION			
FIN.	=	FINISHED	T	=	TOP
FLR.	=	FLOOR	T.J.	=	TIE JOIST
FTG.	=	FOOTING	TLL	=	TOP LOWER LAYER
			TUL	=	TOP UPPER LAYER
GA.	=	GAUGE	TEMP.	=	TEMPERATURE
GALV.	=	GALVANIZED	TYP.	=	TYPICAL
GEN.	=	GENERAL	UN	=	UNLESS OTHERWISE NOTED
			UFS	=	UNDERSIDE
H. HOR.	=	HORIZONTAL			
HH	=	HOOKED EACH END	Vf	=	FACTORED SHEAR FORCE
			V. VERT.	=	VERTICAL
INT.	=	INTERIOR			
			WWF	=	WELDED WIRE FABRIC
			w/	=	WITH
JT.	=	JOINT	w/o, wl.	=	UNIFORMLY DISTRIBUTED LOADS

REINFORCEMENT DEVELOPMENT LENGTHS 0301

TABLE 1 - TENSION DEVELOPMENT LENGTH (m)

BAR SIZE	f'c 20Mpa	25Mpa	30Mpa	35Mpa	40Mpa	50Mpa
4	12.6	11.8	11.8	11.8	11.8	11.8
5	18.9	16.9	15.4	14.6	13.4	12.6
6	25.2	22.8	20.9	19.3	18.1	17.0
8	39.8	35.4	32.3	29.9	28.0	26.4
9	47.6	42.5	39.0	35.8	33.5	31.6
11	55.5	49.6	45.3	41.7	39.4	37.2
14	71.7	63.8	58.3	53.9	50.8	47.9
18	87.4	78.0	71.3	66.1	61.8	58.4

TABLE 2 - TENSION LAP SPLICE (CLASS B) LENGTH (m)

BAR SIZE	f'c 20Mpa	25Mpa	30Mpa	35Mpa	40Mpa	50Mpa
4	16.5	15.0	13.4	12.4	11.8	
5	24.8	22.0	20.1	19.1	17.5	
6	33.1	29.7	27.2	25.2	23.6	
8	51.8	46.1	42.1	39.0	36.4	
9	54.1	55.3	50.9	46.5	43.5	
11	72.4	64.6	58.9	55.3	51.2	
14	LAP SPLICES NOT PERMITTED					
18						

TABLE 3 - DEVELOPMENT LENGTH (m) FOR STANDARD HOOKS.

BAR SIZE	f'c 20Mpa	25Mpa	30Mpa	35Mpa	40Mpa	50Mpa
4	6.1	5.9	5.9	5.9	5.9	
5	9.4	8.3	7.5	6.9	6.7	
6	12.4	11.0	10.2	9.4	8.9	
8	15.4	13.8	12.6	11.6	11.0	
9	18.5	16.5	15.2	14.2	13.0	
11	21.7	16.9	17.7	16.3	15.2	
14	38.5	34.4	31.4	29.1	27.2	
18	49.6	44.4	40.6	37.5	35.1	

TABLE 4 - COMPRESSION DEVELOPMENT LENGTH (m)

BAR SIZE	f'c=20Mpa	f'c=25Mpa	f'c=30Mpa	f'c=35Mpa	f'c=40Mpa	f'c=50Mpa
4	8.3	7.9	7.9			
5	12.6	11.4	10.2			
6	16.9	15.0	13.8			
8	21.3	18.9	17.3			
9	25.2	22.8	20.9			
11	29.5	26.4	24.4			
14	38.2	33.9	31.1			
18	46.5	41.7	38.2			

TABLE 5 - COMPRESSION LAP SPLICE LENGTH (m)

BAR SIZE	USUAL CONFINEMENT
4	11.8
5	17.3
6	22.8
8	28.7
9	34.6
11	40.2

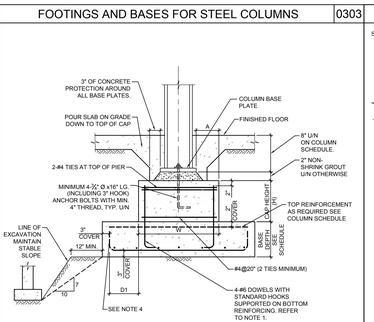
NOTE: #14 AND #18 BARS SHALL BE SPLICED WITH MECHANICAL CONNECTORS

TABLE 6 - STANDARD HOOK DIMENSION FOR BLACK REINFORCING.

BAR SIZE	400R OR 500R 90° HOOK (in)	180° HOOK (in)	400W OR 500W 90° HOOK (in)	180° HOOK (in)
4	7.1	5.5	7.1	5.1
5	10.2	7.1	9.8	6.7
6	12.2	8.7	11.8	7.9
8	15.7	11.0	15.7	11.0
9	20.1	15.7	19.3	13.8
11	24.0	18.9	23.2	16.9
14	31.1	26.8	30.3	24.4
18	40.6	35.4	39.8	32.7

REFER TO REINFORCING STEEL MANUAL OF STANDARD PRACTICE FOR MORE INFORMATION.

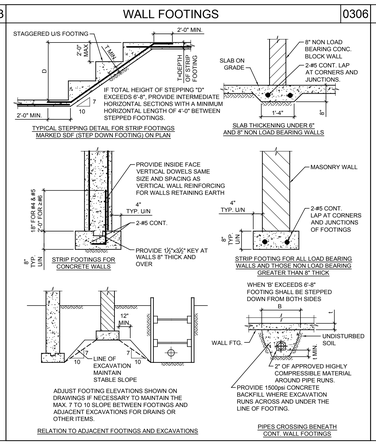
FOOTINGS AND BASES FOR STEEL COLUMNS 0303



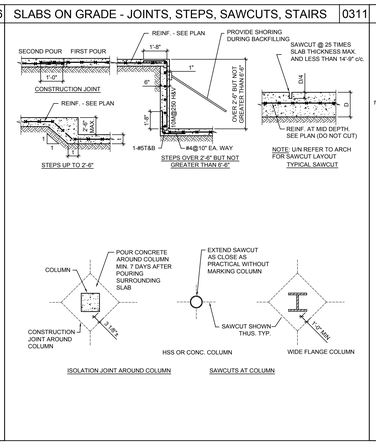
NOTE:

1. WHERE RATIO OF CAP HEIGHT TO CAP WIDTH (H/W) EXCEEDS 3, PROVIDE 0.5% VERTICAL STEEL (8-#6 MINIMUM) WITH #4 TIES SPACED AT THE LESSER OF 20" o/c OR THE LEAST CAP DIMENSION (2 TIES MINIMUM).
2. HEIGHT (H) OF CAP SHALL BE A MINIMUM OF 2 X PROJECTION (A) BUT NOT LESS THAN 8".
3. SEE COLUMN SCHEDULE FOR ADDITIONAL REQUIREMENTS.
4. IF D1 IS LESS THAN THE TENSION DEVELOPMENT LENGTH FOR THE SPECIFIED BAR (REFER TO TABLE 1, DETAIL 0301), PROVIDE STANDARD HOOK.
5. TIE ARRANGEMENT IN PIERS AS PER TYPICAL DETAIL 0329.

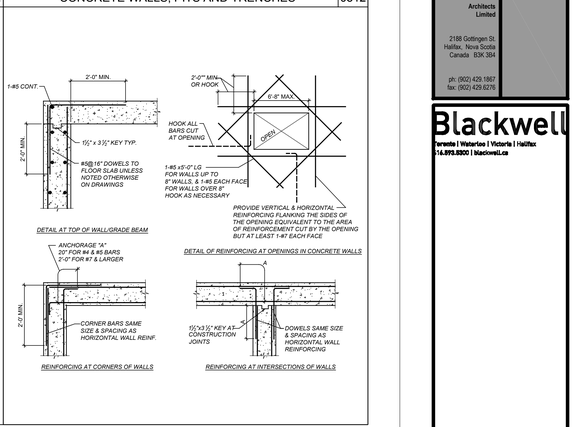
WALL FOOTINGS 0306



SLABS ON GRADE - JOINTS, STEPS, SAWCUTS, STAIRS 0311

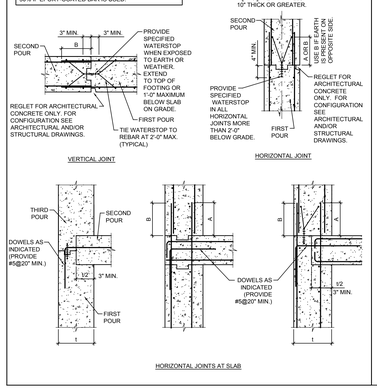


CONCRETE WALLS, PITS AND TRENCHES 0312

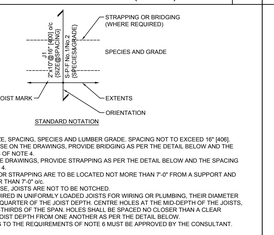


CONSTRUCTION JOINTS IN WALLS 0314

SPLICE LENGTHS
A - REFER TO TABLE 5, DETAIL 0301
B - REFER TO TABLE 2, DETAIL 0301. INCREASE BY 50% IF EPOXY-COATED BAR IS USED.

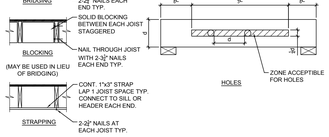


WOOD FRAMING FOR FLOORS (1 OF 2) 0601

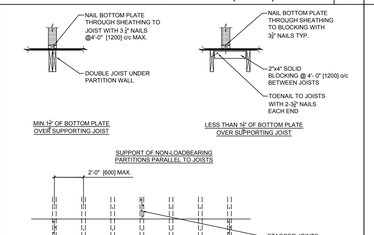


NOTES:

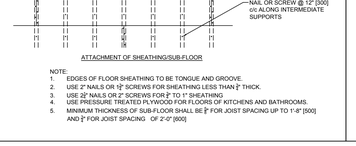
1. SEE PLANS FOR JOIST SIZE, SPACING, SPECIES AND LUMBER GRADE. SPACING NOT TO EXCEED 16" [406].
2. UNLESS NOTED OTHERWISE ON THE DRAWINGS, PROVIDE BRIDGING AS PER THE DETAIL BELOW AND THE SPACING REQUIREMENTS OF NOTE 4.
3. WHERE SPECIFIED ON THE DRAWINGS, PROVIDE STRAPPING AS PER THE DETAIL BELOW AND THE SPACING REQUIREMENTS OF NOTE 4.
4. LINES OF BRIDGING AND/OR STRAPPING ARE TO BE LOCATED NOT MORE THAN 7'-0" FROM A SUPPORT AND SPACED AT NOT GREATER THAN 7'-0" o/c.
5. UNLESS NOTED OTHERWISE, JOISTS ARE NOT TO BE NOTCHED.
6. WHERE HOLES ARE REQUIRED IN UNIFORMLY LOADED JOISTS FOR WIRING OR PLUMBING, THEIR DIAMETER SHALL NOT EXCEED ONE QUARTER OF THE JOIST DEPTH. CENTRE HOLES AT THE MID-DEPTH OF THE JOISTS, WITHIN THE MIDDLE TWO-THIRDS OF THE SPAN. HOLES SHALL BE SPACED NO CLOSER THAN A CLEAR DISTANCE OF ONE FULL JOIST DEPTH FROM ONE ANOTHER AS PER THE DETAIL BELOW.
7. HOLES NOT CONFORMING TO THE REQUIREMENTS OF NOTE 6 MUST BE APPROVED BY THE CONSULTANT.



WOOD FRAMING FOR FLOORS (2 OF 2) 0602



SUPPORT OF NON-LOADBEARING PARTITIONS PARALLEL TO JOISTS

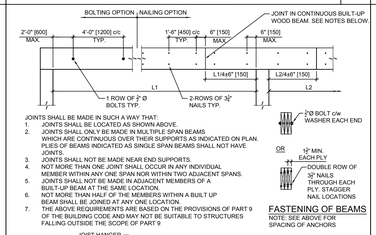


ATTACHMENT OF SHEATHING/SUB-FLOOR

NOTE:

1. EDGES OF FLOOR SHEATHING TO BE TONGUE AND GROOVE.
2. USE 2" NAILS OR ½" SCREWS FOR SHEATHING LESS THAN ¾" THICK.
3. USE 2½" NAILS OR 2" SCREWS FOR ¾" TO 1" SHEATHING
4. USE PRESSURE TREATED PLYWOOD FOR FLOORS OF KITCHENS AND BATHROOMS.
5. MINIMUM THICKNESS OF SUB-FLOOR SHALL BE ¾" FOR JOIST SPACING UP TO 1'-8" [500] AND ¾" FOR JOIST SPACING OF 2'-0" [600]

BUILT-UP WOOD BEAMS 0604

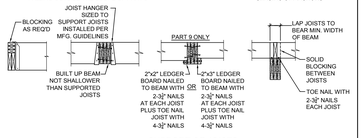


JOISTS SHALL BE MADE IN SUCH A WAY THAT:

1. JOINTS SHALL BE LOCATED AS SHOWN ABOVE.
2. JOINTS SHALL ONLY BE MADE IN MULTIPLE SPAN BEAMS WHICH ARE CONTINUOUS OVER THEIR SUPPORTS AS INDICATED ON PLAN. PLIES OF BEAMS INDICATED AS SINGLE SPAN BEAMS SHALL NOT HAVE JOINTS.
3. JOINTS SHALL NOT BE MADE NEAR END SUPPORTS.
4. NOT MORE THAN ONE JOINT SHALL OCCUR IN ANY INDIVIDUAL MEMBER WITHIN ANY ONE SPAN NOR WITHIN TWO ADJACENT SPANS.
5. JOINTS SHALL NOT BE MADE IN ADJACENT MEMBERS OF A BUILT-UP BEAM AT THE SAME LOCATION.
6. NOT MORE THAN HALF OF THE MEMBERS WITHIN A BUILT UP BEAM SHALL BE JOINED AT ANY ONE LOCATION.
7. THE ABOVE REQUIREMENTS ARE BASED ON THE PROVISIONS OF PART 9 OF THE BUILDING CODE AND MAY NOT BE SUITABLE TO STRUCTURES FALLING OUTSIDE THE SCOPE OF PART 9

FASTENING OF BEAMS

NOTE: SEE ABOVE FOR SPACING OF ANCHORS



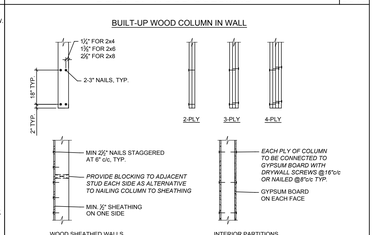
SUPPORT OF JOISTS

NOTES:

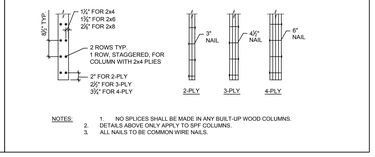
1. THE PLIES OF 4- AND 5-PLY BEAMS ARE TO BE FASTENED USING BOLTS ONLY. 2- AND 3-PLY BEAMS MAY BE NAILED OR BOLTED.
2. 4- AND 5-PLY BEAMS ARE TO BE TOP LOADED WHENEVER POSSIBLE; THEY MAY BE SIDE LOADED PROVIDED THEY ARE LOADED EQUALLY FROM BOTH SIDES.

BUILT-UP WOOD COLUMNS 0610

BUILT-UP WOOD COLUMN IN WALL



FREE STANDING BUILT-UP WOOD COLUMN



NOTES:

1. NO SPLICES SHALL BE MADE IN ANY BUILT-UP WOOD COLUMNS.
2. DETAILS ABOVE ONLY APPLY TO SPF COLUMNS.
3. ALL NAILS TO BE COMMON WIRE NAILS.

Lot 14 Mountain House
Summit Powder Mountain
Eden, Utah

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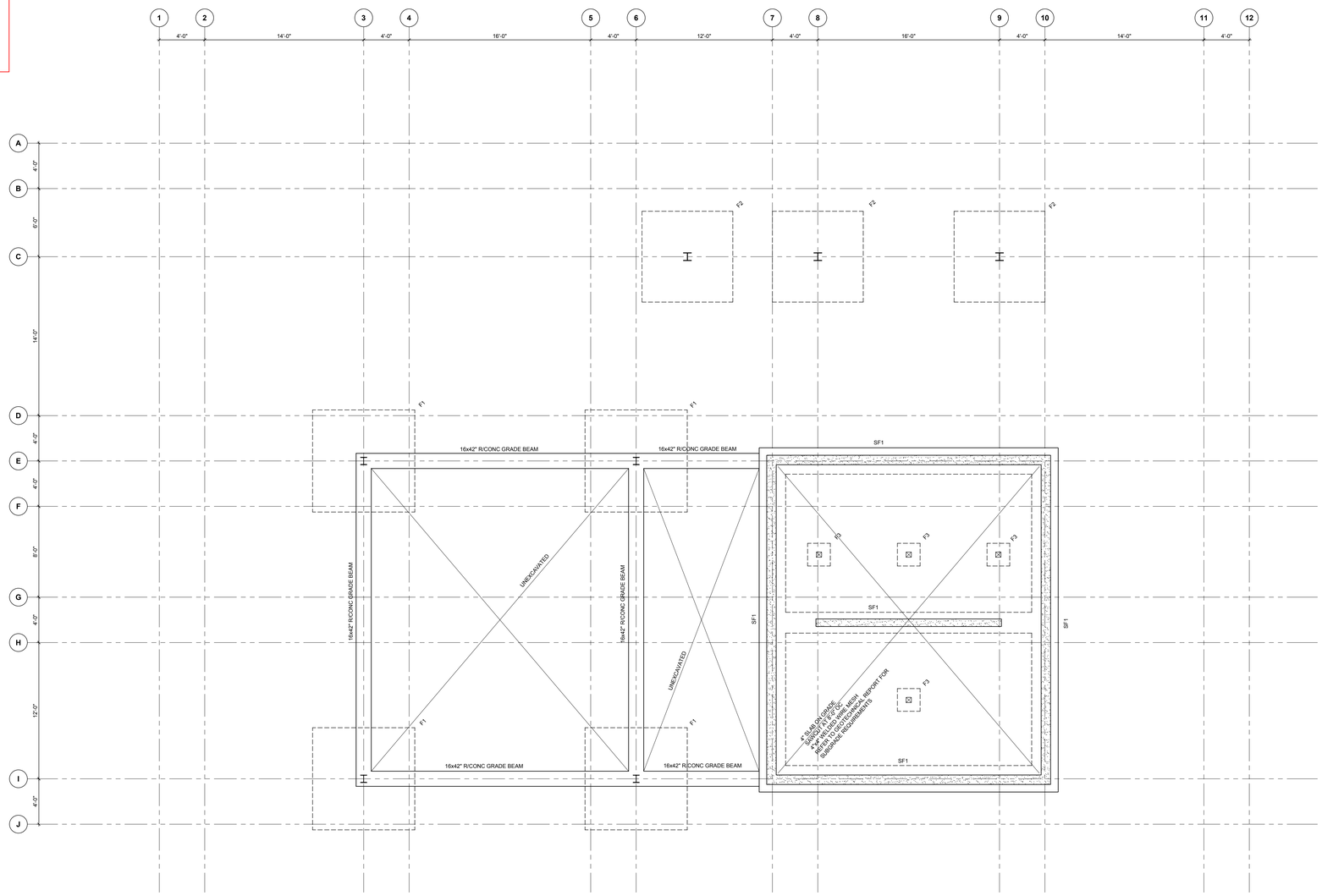
SHOP DRAWINGS:
Submit shop drawings to the Architect and Engineer for approval prior to manufacture of prefabricated elements of the building.

Typical Details1

scale: NOT TO SCALE
date: 2018-05-30
drawn: DP
chk'd: TJ

S002

Exhibit A



1 / S100 FOUNDATION PLAN
1/4"=1'-0"

FOUNDATION PLAN NOTES

1. BASEMENT FLOOR DATUM ELEVATION, -20'-0" BELOW MAIN FLOOR DATUM.
2. WHERE CROSSED AND NOTED THE LOCAL DATUM FOR RAISED OR LOWERED AREAS ARE GIVEN RELATIVE TO THE LOWER FLOOR DATUM.
3. EXCEPT AS CROSSED AND NOTED TOP OF FINISHED FLOOR IS 0" BELOW THE LOWER FLOOR DATUM.
4. WHERE CROSSED AND NOTED, SLAB DEPRESSIONS OR LOCALLY RAISED AREAS ARE GIVEN RELATIVE TO THE BASEMENT FLOOR DATUM.
5. FOUND FOOTINGS AT THE ELEVATIONS RELATIVE TO THE GROUND FLOOR DATUM SHOWN IN PLAN
6. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE GEODETIC ELEVATION OF THE GROUND FLOOR DATUM

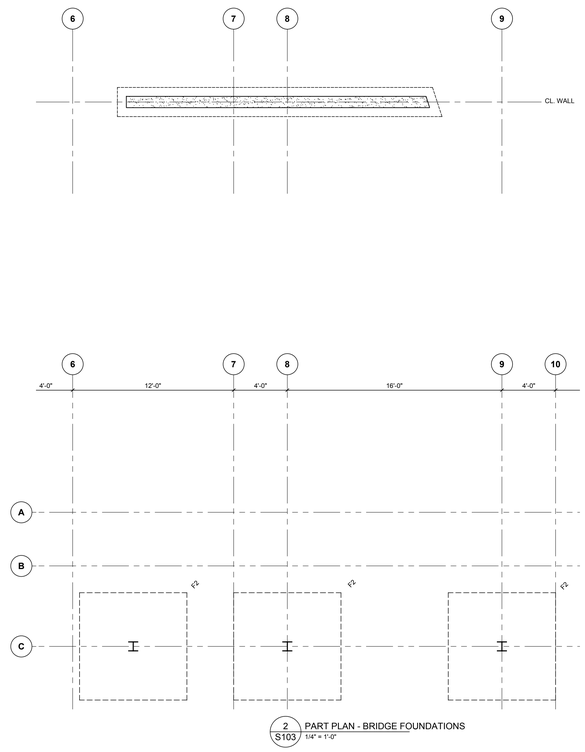
FOOTING SCHEDULE

F1: 9'-0"x9'-0"x1'-6" PAD FOOTING
12-20M BARS BOTTOM EACH WAY

F2: 8'-0"x8'-0"x1'-2" PAD FOOTING
10-20M BARS BOTTOM EACH WAY

F3:
2'-0"x2'-0"x10" PAD FOOTING
PLAIN

SF1: 2'-6"x10" STRIP FOOTING
4-20M CONTINUOUS LONG DIRECTIION



2 / S103 PART PLAN - BRIDGE FOUNDATIONS
1/4" = 1'-0"

Lot 14 Mountain House

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SHOP DRAWINGS:
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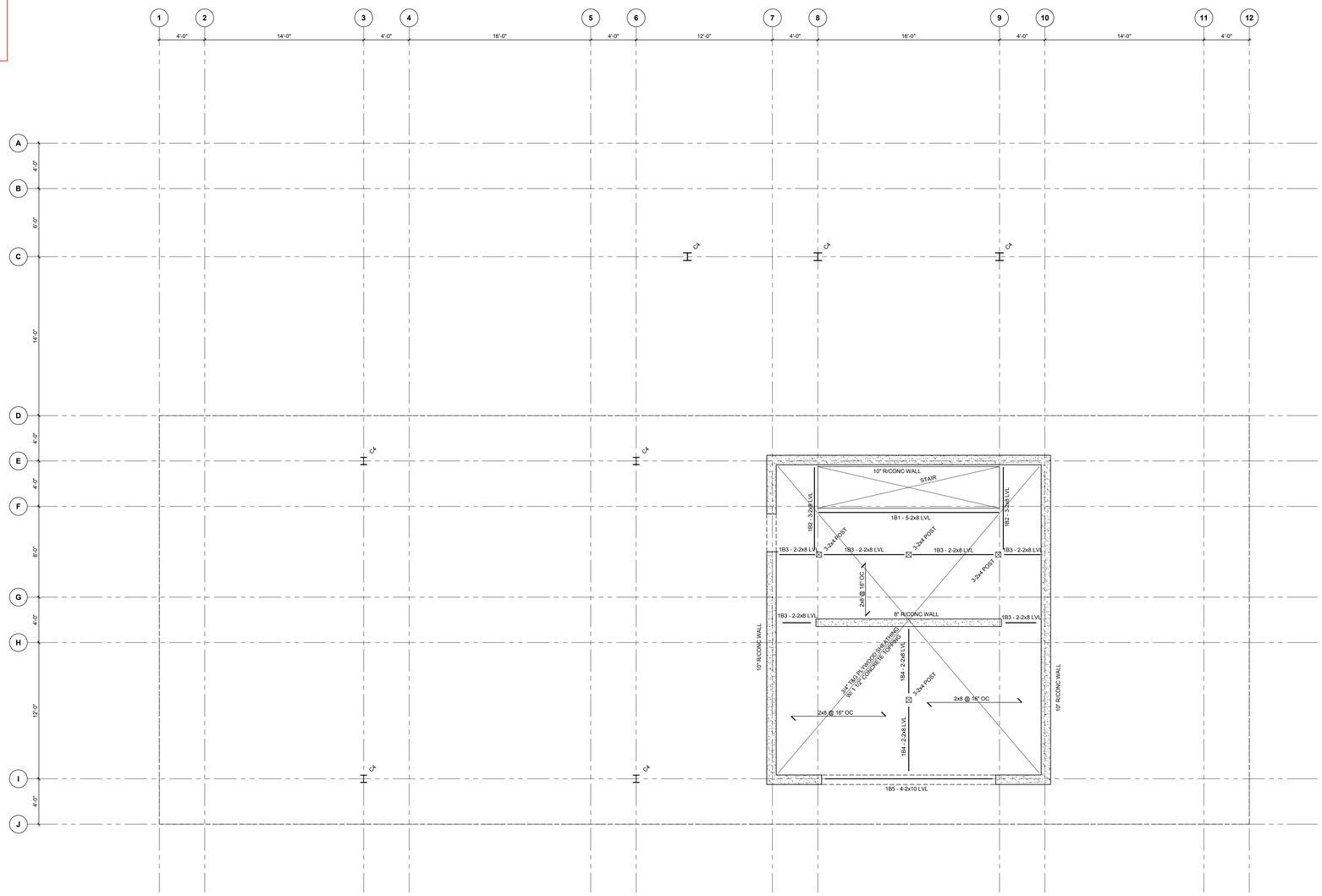
Foundation Plan

scale: 1/4" = 1'-0"
date: 2018-05-20
drawn: DP
chk'd: TJ

S100

PLOT DATE: May 30, 2018
FILE: J:\Job-2017 - 170900 to 170999\170950 Summit Lot 14R\Drawings Structural\170950_X-TB-E.dwg

Exhibit A



1 / S101 LOWER LEVEL FRAMING PLAN
1/4"=1'-0"

LOWER FLOOR FRAMING PLAN NOTES

1. THE LOWER LEVEL FLOOR DATUM IS AT -11'-0" BELOW MAIN FLOOR DATUM.
2. THE TOP OF THE FINISHED FLOOR IS 0" BELOW THE DATUM.
3. THE TOP OF THE FLOOR SHEATHING IS 1 1/2" mm BELOW THE DATUM.
4. TOP OF WOOD FRAMING IS 2 1/4" BELOW THE DATUM UNLESS NOTED OTHERWISE IN PLAN.
5. LOADS USED IN THE DESIGN:

LIVE LOAD:	40psf
DEAD LOADS:	
PARTITIONS	10psf
FLOOR FINISH	5psf
CONC TOPPING	20psf - 1 1/2" MAX
SHEATHING	2psf
JOISTS	2psf kPa
SUSPENDED	6psf kPa
TOTAL	45psf

BEAM SCHEDULE

BEAM MARK	BEAM SECTION	REACTIONS				CAMBER	REMARKS
		LEFT END		RIGHT END			
		LIVE	DEAD	LIVE	DEAD		
1B-1	5-2x8 LVL						
1B-2	3-2x8 LVL						
1B-3	2-2x8 LVL						
1B-4	2-2x8 LVL						
1B-5	4-2x10 LVL						

BEAM SCHEDULE NOTES

1. LEFT AND RIGHT ENDS OF BEAMS ARE DEFINED BY THE ORIENTATION OF THE BEAM MARK ON PLAN.
2. WHERE A BEAM MARK IS INDICATED WITH THE SUFFIX "R" ON PLAN THE REACTIONS ARE TO APPLY AT THE OPPOSITE ENDS.
3. REACTIONS GIVEN ARE SERVICE LOADS IN kps.
4. BEARING PLATE DIMENSION GIVEN FIRST IS PARALLEL TO THE BEAM WEB.
5. CENTRE BEARING PLATES UNDER BEAMS UNLESS NOTED OTHERWISE. PROVIDE 2-3/4" DIA. ANCHOR BOLTS, 16" LG. WITH 3" HOOK AND 4" THREADS, FOR BEARING PLATES BEARING ON CONCRETE OR MASONRY, UNLESS NOTED OTHERWISE. ALTERNATIVELY ANCHOR RODS MAY BE WELDED TO UNDERSIDE OF BEARING PLATE. GROUT MASONRY AS INDICATED IN THE GENERAL NOTES, UNLESS NOTED.
6. DESIGN CONNECTIONS FOR AXIAL FORCE (fP), END MOMENT (Mf), TORSION (Tf) OR OUT OF PLANE HORIZONTAL FORCE (Hf) SHOWN IN THE REMARKS COLUMN, IN ADDITION TO THE VERTICAL SHEAR PROVIDED IN THE REACTION COLUMN.
7. CAMBERS ARE IN INCHES.

COLUMN SCHEDULE

MEMBER MARK	MEMBER DESCRIPTION	REMARKS
C1	HSS10x8x3/8	MAX LOAD, Pf = 1305 kN
C2	W8x28	MAX LOAD, Pf = 1340 kN
C3	HSS6x6x1/4	MAX LOAD, Pf = 320kN

STEEL COLUMN SCHEDULE NOTES

1. CENTRE COLUMNS, CAPS AND FOOTINGS ON GRIDS UNLESS NOTED OTHERWISE.
2. COLUMN LOADS INDICATED ARE FACTORED COMPRESSION.
3. REFER TO STANDARD DETAIL 0303 TYPICAL FOOTING AND COLUMN BASE DETAILS UNLESS NOTED OTHERWISE.
4. PROVIDE 4-3/4" DIAM. ANCHOR BOLTS AS PER STANDARD DETAIL 0303 UNLESS NOTED OTHERWISE.

PLOT DATE: May 30, 2018

FILE: J:\Job-2017 - 170900 to 170999\170950 Summit Lot 14\R\Drawings Structural\170950_X-TB-E.dwg

Lot 14 Mountain House

Summit Powder Mountain
Eden, Utah

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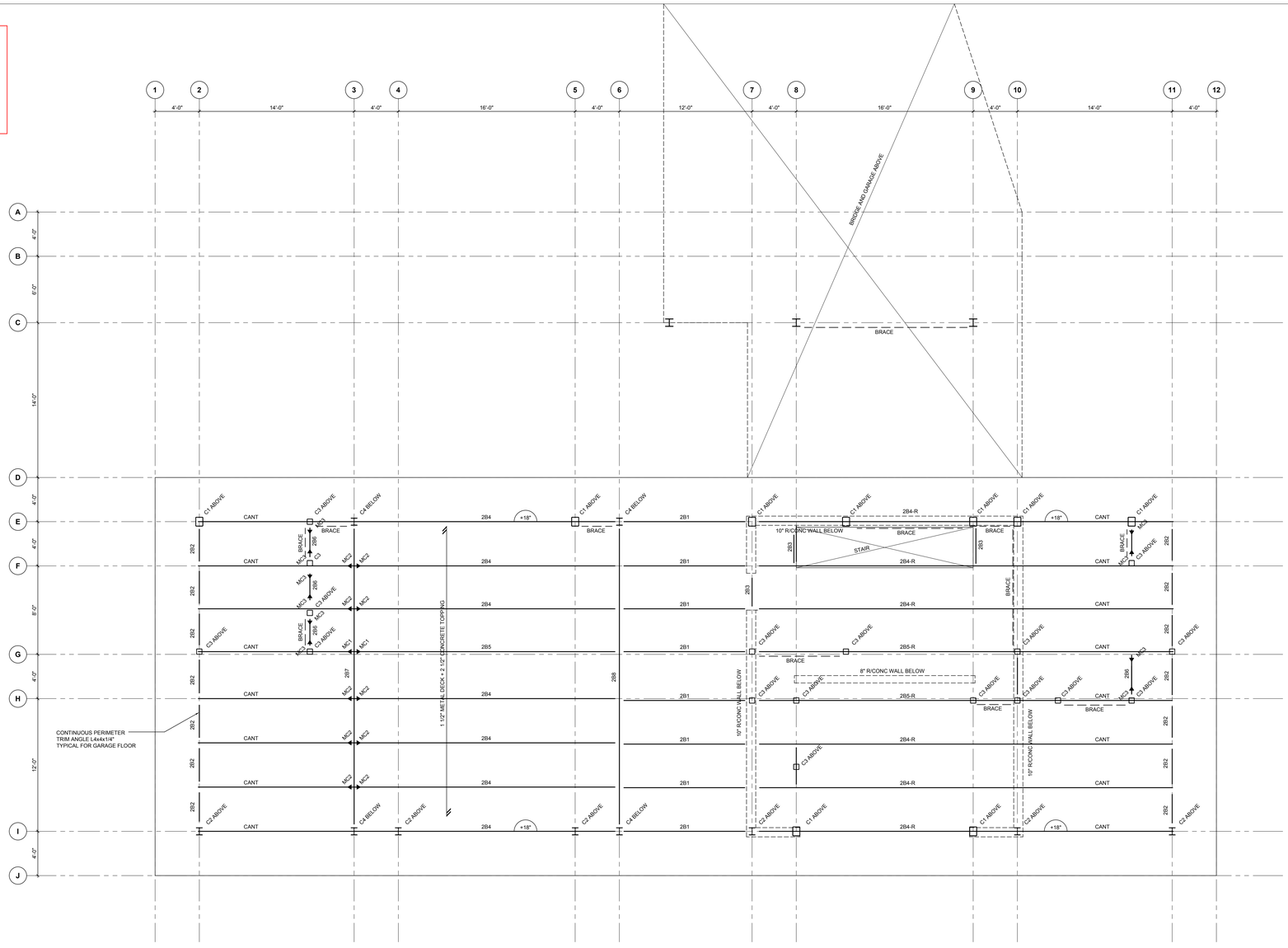
SHOP DRAWINGS:
Submit shop drawings to the Architect and Engineer for approval prior to manufacture of prefabricated elements of the building.

Lower Floor Framing Plan

scale: 1/4" = 1'-0"
date: 2018-05-20
drawn: DP
chk'd: TJ

S101

Exhibit A



1 / S102 MAIN FLOOR FRAMING PLAN
1/4"=1'-0"

MAIN FLOOR FRAMING PLAN NOTES

1. THE MAIN FLOOR DATUM IS AT +0'-0"
2. TOP OF STEEL FRAMING IS 4" BELOW THE DATUM UNLESS NOTED OTHERWISE IN PLAN.
3. LOADS USED IN THE DESIGN:

LIVE LOAD:	40psf
DEAD LOADS:	
PARTITIONS	10psf
FLOOR FINISH	5psf
4" COMPOSITE SLAB	40psf
STEEL BEAMS	8psf
SUSPENDED	12psf
TOTAL	85psf

BEAM SCHEDULE

BEAM MARK	BEAM SECTION	REACTIONS				CAMBER	REMARKS
		LEFT END		RIGHT END			
		LIVE	DEAD	LIVE	DEAD		
2B-1	W12x26	1.0	2.2	1.0	2.2		
2B-2	W12x26	1.0	1.0	1.0	1.0		
2B-3	W12x26	1.0	1.0	1.0	1.0		
2B-4	W27x102						CAMBER FOR DEAD LOAD MC2 = 650 ft-kips
2B-5	W33x118						CAMBER FOR DEAD LOAD MC1 = 950 ft-kips
2B-6	W12x26	1.0	1.0	1.0	1.0		AXIAL Peq = 200k MC3 = 25 ft-kips
2B-7	W27x146						CAMBER FOR DEAD LOAD
2B-8	W16x67	10.3	22.8	10.3	22.8		
BRACE	HSS 152x152x6.4						

STEEL BEAM SCHEDULE NOTES

1. LEFT AND RIGHT ENDS OF BEAMS ARE DEFINED BY THE ORIENTATION OF THE BEAM MARK ON PLAN.
2. WHERE A BEAM MARK IS INDICATED WITH THE SUFFIX "R" ON PLAN THE REACTIONS ARE TO APPLY AT THE OPPOSITE ENDS.
3. REACTIONS GIVEN ARE SERVICE LOADS IN kips.
4. BEARING PLATE DIMENSION GIVEN FIRST IS PARALLEL TO THE BEAM WEB.
5. CENTRE BEARING PLATES UNDER BEAMS UNLESS NOTED OTHERWISE. PROVIDE 2-3/4" DIA. ANCHOR BOLTS, 16" LG, WITH 3" HOOK AND 4" THREADS, FOR BEARING PLATES BEARING ON CONCRETE OR MASONRY, UNLESS NOTED OTHERWISE. ALTERNATIVELY ANCHOR RODS MAY BE WELDED TO UNDERSIDE OF BEARING PLATE. GROUT MASONRY AS INDICATED IN THE GENERAL NOTES, UNLESS NOTED.
6. DESIGN CONNECTIONS FOR AXIAL FORCE (Pf), END MOMENT (Mf), TORSION (Tf) OR OUT OF PLANE HORIZONTAL FORCE (Hf) SHOWN IN THE REMARKS COLUMN, IN ADDITION TO THE VERTICAL SHEAR PROVIDED IN THE REACTION COLUMN.
7. CAMBERS ARE IN INCHES.

COLUMN SCHEDULE

MEMBER MARK	MEMBER DESCRIPTION	REMARKS
C1	HSS10x8x3/8	MAX LOAD, Pf = 300kips
C2	W8x28	MAX LOAD, Pf = 300kips
C3	HSS6x6x1/4	MAX LOAD, Pf = 100kips
C4	W10x49	MAX LOAD, Pf = 330 kips

STEEL COLUMN SCHEDULE NOTES

1. CENTRE COLUMNS, CAPS AND FOOTINGS ON GRIDS UNLESS NOTED OTHERWISE.
2. COLUMN LOADS INDICATED ARE FACTORED COMPRESSION.
3. REFER TO STANDARD DETAIL 0303 TYPICAL FOOTING AND COLUMN BASE DETAILS UNLESS NOTED OTHERWISE.
4. PROVIDE 4-3/4" DIAM. ANCHOR BOLTS AS PER STANDARD DETAIL 0303 UNLESS NOTED OTHERWISE.

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Summit Powder Mountain
Eden, Utah

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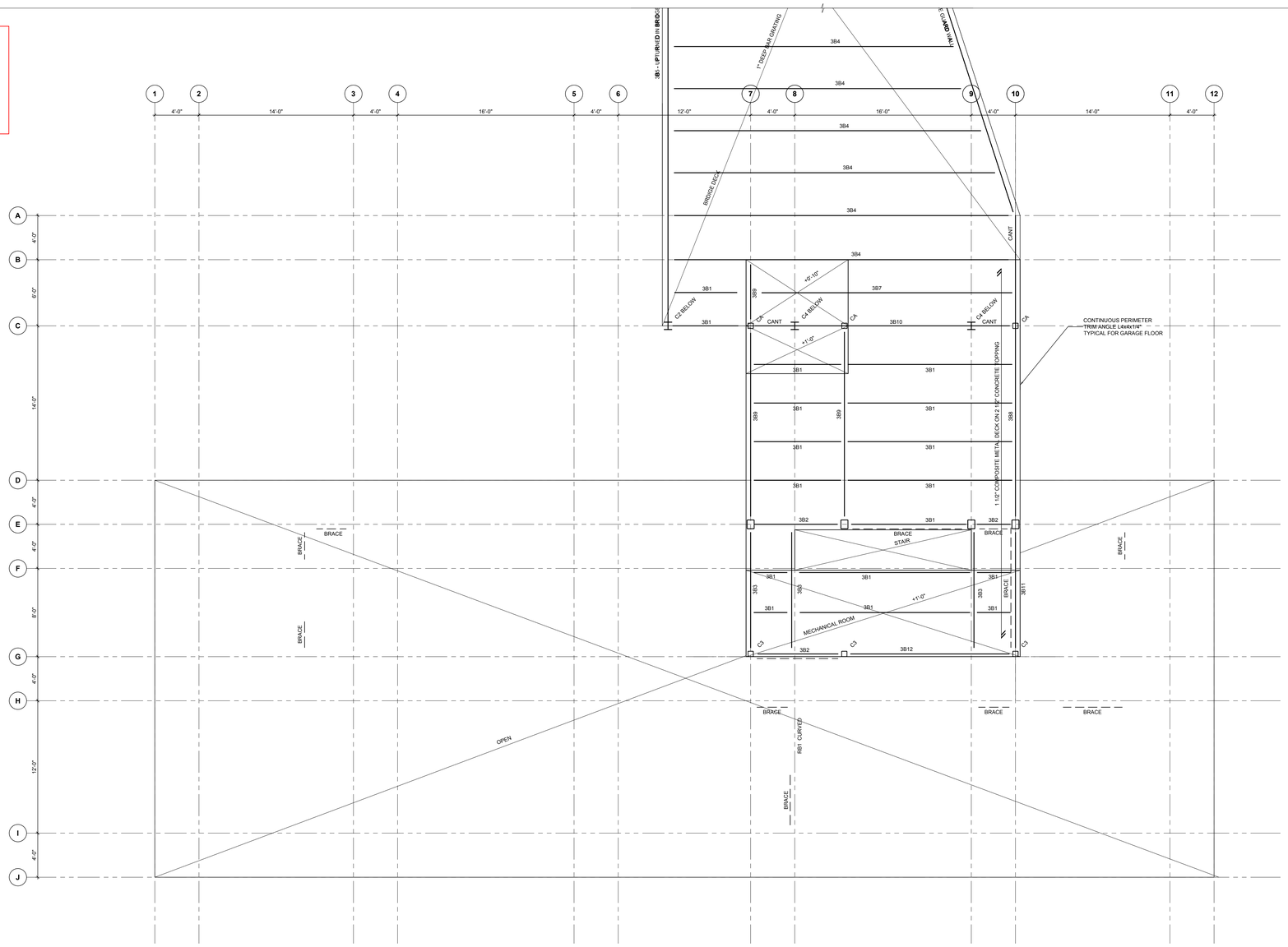
Main Floor Framing Plan

scale: 1/4" = 1'-0"
date: 2018-05-20
drawn: DP
chk'd: TJ

S102

PLOT DATE: May 30, 2018
FILE: J:\Job-2017 - 170900 to 170999\170950 Summit Lot 14R\Drawings Structural\170950_X-TB-E.dwg

Exhibit A

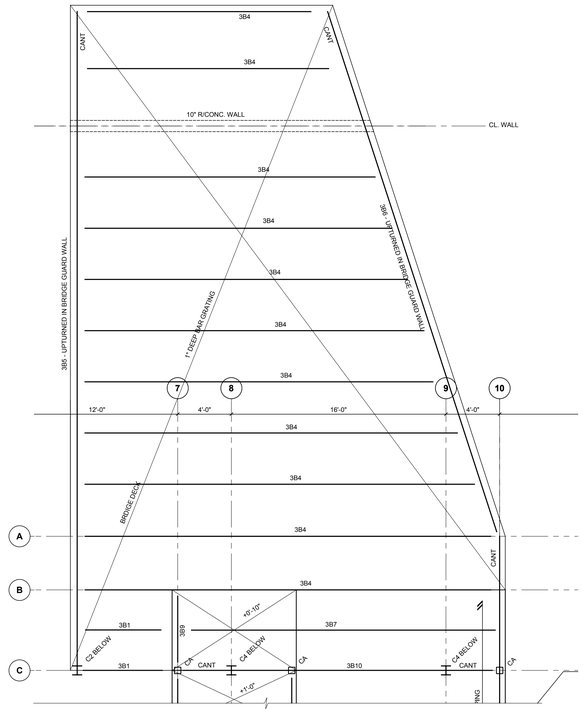


1 S103 GARAGE FLOOR FRAMING PLAN
1/4"=1'-0"

GARAGE FLOOR FRAMING PLAN NOTES

1. THE GARAGE FLOOR DATUM IS AT + 7'-0" ABOVE THE 2ND FLOOR DATUM
2. TOP OF STEEL FRAMING IS 4" BELOW THE DATUM UNLESS NOTED OTHERWISE IN PLAN.
3. LOADS USED IN THE DESIGN:

LIVE LOAD:	40psf
DEAD LOADS:	
PARTITIONS	10psf
FLOOR FINISH	5psf
4" COMPOSITE SLAB	40psf
STEEL BEAMS	8psf
SUSPENDED	12psf
TOTAL	85psf



2 S103 PART PLAN - BRIDGE FRAMING
1/4" = 1'-0"

BEAM SCHEDULE

BEAM MARK	BEAM SECTION	REACTIONS				CAMBER	REMARKS
		LEFT END		RIGHT END			
		LIVE	DEAD	LIVE	DEAD		
3B-1	C12x20.7	1.3	2.8	1.3	2.8		
3B-2	W12x26	4.3	2.0	4.3	2.0		AXIAL FORCE Peq = 200kips
3B-3	W12x26	2.4	5.2	2.4	2.8		
3B-4	W12x35	12.2	1.2	12.2	1.2		
3B-5	W30x90	4.7	56.6	6.4	68.6		UPTURNED IN BRIDGE GUARD WALL
3B-6	W30x90	4.7	60.4	3.1	44.2		UPTURNED IN BRIDGE GUARD WALL
3B-7	W12x35	9.3	4.5	9.3	4.5		
3B-8	W30x90	-32.6	4.7	107.4	15.2		UPTURNED IN GARAGE WALL
3B-9	W12x26	4.4	9.6	4.4	9.6		
3B-10	W30x90	82.3	19.1	180.9	24.8		
3B-11	W12x26	2.4	5.2	2.4	2.8		AXIAL FORCE Peq = 200kips
3B-12	W12x26	0.7	1.6	1.8	4.1		
BRACE	HSS 152x152x6.4						

STEEL BEAM SCHEDULE NOTES

1. LEFT AND RIGHT ENDS OF BEAMS ARE DEFINED BY THE ORIENTATION OF THE BEAM MARK ON PLAN.
2. WHERE A BEAM MARK IS INDICATED WITH THE SUFFIX "R" ON PLAN THE REACTIONS ARE TO APPLY AT THE OPPOSITE ENDS.
3. REACTIONS GIVEN ARE SERVICE LOADS IN kips.
4. BEARING PLATE DIMENSION GIVEN FIRST IS PARALLEL TO THE BEAM WEB.
5. CENTRE BEARING PLATES UNDER BEAMS UNLESS NOTED OTHERWISE. PROVIDE 2-3/4" DIA. ANCHOR BOLTS, 16" LG. WITH 3" HOOK AND 4" THREADS, FOR BEARING PLATES BEARING ON CONCRETE OR MASONRY, UNLESS NOTED OTHERWISE. ALTERNATIVELY ANCHOR RODS MAY BE WELDED TO UNDERSIDE OF BEARING PLATE. GROUT MASONRY AS INDICATED IN THE GENERAL NOTES, UNLESS NOTED.
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7. CAMBERS ARE IN INCHES.

COLUMN SCHEDULE

MEMBER MARK	MEMBER DESCRIPTION	REMARKS
C1	HSS10x8x3/8	MAX LOAD, Pf = 300kips
C2	W8x28	MAX LOAD, Pf = 300kips
C3	HSS6x6x1/4	MAX LOAD, Pf = 100kips
C4	W10x49	MAX LOAD, Pf = 330kips

STEEL COLUMN SCHEDULE NOTES

1. CENTRE COLUMNS, CAPS AND FOOTINGS ON GRIDS UNLESS NOTED OTHERWISE.
2. COLUMN LOADS INDICATED ARE FACTORED COMPRESSION.
3. REFER TO STANDARD DETAIL 0303 TYPICAL FOOTING AND COLUMN BASE DETAILS UNLESS NOTED OTHERWISE.
4. PROVIDE 4-3/4" DIAM. ANCHOR BOLTS AS PER STANDARD DETAIL 0303 UNLESS NOTED OTHERWISE.

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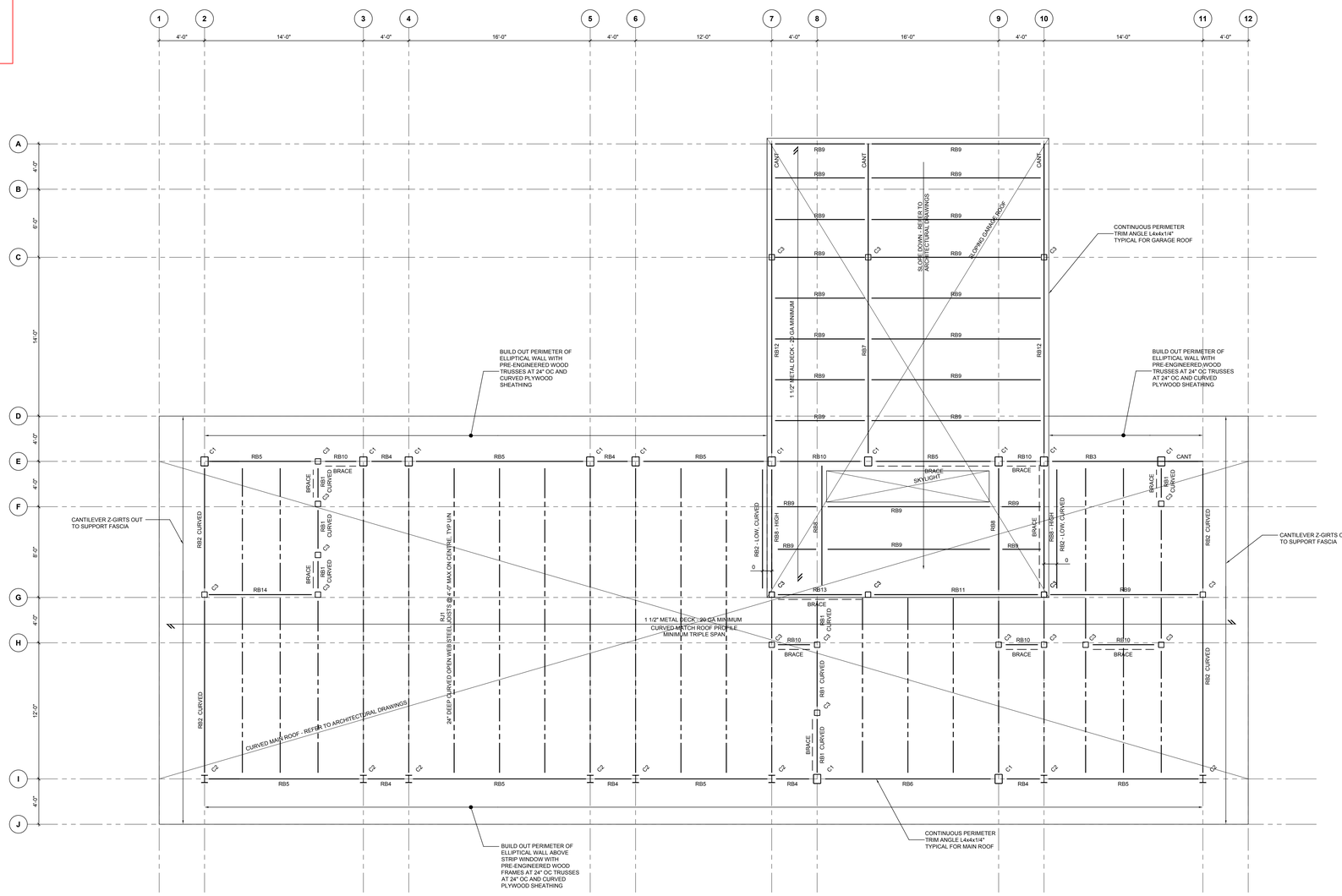
Garage Floor Framing Plan

scale: 1/4" = 1'-0"
date: 2018-05-30
drawn: DP
chk'd: TJ

S103

PLOT DATE: May 30, 2018
FILE: J:\Job-2017 - 170900 to 170999\170950 Summit Lot 14\R\Drawings Structural\170950_X-TB-E.dwg

Exhibit A



1 / S104 ROOF FRAMING PLAN
1/4"=1'-0"

ROOF FRAMING NOTES

1. ROOF IS CURVED - REFER TO ARCHITECTURAL DRAWINGS FOR UNDERSIDE OF DECK ELEVATIONS
2. TOP OF STEEL BEAMS ARE 4" BELOW THE UNDERSIDE OF THE METAL DECK UNLESS NOTED OTHERWISE IN PLAN.
3. SUPERIMPOSED LOADS USED IN THE DESIGN:
   SNOW + RAIN - 192psf PLUS SNOW ACCUMULATION SHOWN ON PLAN
   DEAD:
   - ROOFING AND INSULATION 10psf
   - SUSPENDED 5psf
   - MECHANICAL EQUIPMENT 5psf
4. SELF WEIGHT OF STRUCTURE USED IN THE DESIGN:
   - METAL DECK 2psf
   - STRUCTURAL STEEL 8psf (INLUDES OPEN WEB STEEL JOISTS)

ROOF BEAM SCHEDULE

BEAM MARK	BEAM SECTION	REACTIONS (kips)				CAMBER	REMARKS
		LEFT END		RIGHT END			
		SNOW	DEAD	SNOW	DEAD		
RB-1	W10x22	2.4	0.5	2.4	0.5		AXIAL FORCE Peq = 200kips CURVE TO MATCH ROOF
RB-2	W16x26	10.0	1.5	10.0	1.5		CURVE TO MATCH ROOF
RB-3	W16x26	4.2	0.5	19.8	3.7		
RB-4	W16x26	0.5	0.5	0.5	0.5		
RB-5	W16x26	19.6	2.8	19.6	2.8		
RB-6	W10x22	12.6	1.9	12.6	1.9		
RB-7	W10x60	14.6	2.3	50.2	7.8		CAMBER FOR DEAD LOAD
RB-8	W10x22	11.9	1.7	11.9	1.7		
RB-9	C10x15.3	6.1	1.0	6.1	1.0		
RB-10	W16x26	5.3	0.8	5.3	0.8		AXIAL FORCE Peq = 200kips
RB-11	W16x26	19.1	2.7	23.8	3.4		
RB-12	W16x26	8.8	1.4	30.3	4.8		CAMBER FOR DEAD LOAD
RB-13	W16x26	15.2	2.2	15.2	2.2		AXIAL FORCE Peq = 200kips
RB-14	W16x26	14.0	2.0	14.0	2.0		
RB-15	W16x26	11.0	1.7	11.0	1.7		
BRACE	HSS 152x152x6.4						

STEEL BEAM SCHEDULE NOTES

1. LEFT AND RIGHT ENDS OF BEAMS ARE DEFINED BY THE ORIENTATION OF THE BEAM MARK ON PLAN.
2. WHERE A BEAM MARK IS INDICATED WITH THE SUFFIX "R" ON PLAN THE REACTIONS ARE TO APPLY AT THE OPPOSITE ENDS.
3. REACTIONS GIVEN ARE SERVICE LOADS IN kips.
4. BEARING PLATE DIMENSION GIVEN FIRST IS PARALLEL TO THE BEAM WEB.
5. CENTRE BEARING PLATES UNDER BEAMS UNLESS NOTED OTHERWISE. PROVIDE 2 - 3/4" DIA. ANCHOR BOLTS, 16" LG. WITH 3" HOOK AND 4" THREADS, FOR BEARING PLATES BEARING ON CONCRETE OR MASONRY, UNLESS NOTED OTHERWISE. ALTERNATIVELY ANCHOR RODS MAY BE WELDED TO UNDERSIDE OF BEARING PLATE. GROUT MASONRY AS INDICATED IN THE GENERAL NOTES, UNLESS NOTED.
6. DESIGN CONNECTIONS FOR AXIAL FORCE (Pf), END MOMENT (Mf), TORSION (Tf) OR OUT OF PLANE HORIZONTAL FORCE (Hf) SHOWN IN THE REMARKS COLUMN. IN ADDITION TO THE VERTICAL SHEAR PROVIDED IN THE REACTION COLUMN.
7. CAMBERS ARE IN INCHES.

COLUMN SCHEDULE

MEMBER MARK	MEMBER DESCRIPTION	REMARKS
C1	HSS10x8x3/8	MAX LOAD, Pf = 1305 kN
C2	W8x28	MAX LOAD, Pf = 1340 kN
C3	HSS6x6x1/4	MAX LOAD, Pf = 320kN

STEEL COLUMN SCHEDULE NOTES

1. CENTRE COLUMNS, CAPS AND FOOTINGS ON GRIDS UNLESS NOTED OTHERWISE.
2. COLUMN LOADS INDICATED ARE FACTORED COMPRESSION.
3. REFER TO STANDARD DETAIL 0303 TYPICAL FOOTING AND COLUMN BASE DETAILS UNLESS NOTED OTHERWISE.
4. PROVIDE 4-3/4" DIAM. ANCHOR BOLTS AS PER STANDARD DETAIL 0303 UNLESS NOTED OTHERWISE.

Lot 14 Mountain House
Summit Powder Mountain
Eden, Utah

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No.	Description	Date
01	Issued for Costing	2018.05.30
Revision:		

NOTES:

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AUTHORITIES' REQUIREMENTS AND APPROVALS:
All materials and workmanship must comply with the requirements of all authorities having jurisdiction over the work. It is the Builder's responsibility to gain necessary approval from all relevant Authorities.

DIMENSIONS:
All dimensions must be verified on site. Do not scale off drawings. Plans take precedent over elevations. In the absence of dimensions, or if discrepancies exist, consult Architect. All minimum dimensions are to comply with the National Building Code of Canada.

SHOP DRAWINGS:
Submit shop drawings to the Architect and Engineer for approval prior to manufacture of prefabricated elements of the building.

Roof Framing Plan

scale: 1/4" = 1'-0"
date: 2018-05-20
drawn: DP
chk'd: TJ

S104

Exhibit A

GENERAL NOTES

1. CONSULT ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL LIGHTING FIXTURES.
2. VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATIONS BEFORE BEGINNING ROUGH IN. CONSULT ALL APPLICABLE CONTRACT DRAWINGS AND SHOP DRAWINGS TO INSURE NEC CODE CLEARANCES REQUIRED AROUND ALL ELECTRICAL EQUIPMENT.
3. CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC.) OF EQUIPMENT FURNISHED UNDER DIVISION 23 (15) WITH APPROVED MECHANICAL SHOP DRAWINGS BEFORE BEGINNING ROUGH IN.
4. SEE SECTION 265100 (16510) OF THE SPECIFICATION REQUIRED COORDINATION MEETINGS WITH MECHANICAL AND CEILING CONTRACTORS.
5. SEE APPLICABLE SHOP DRAWINGS FOR ROUGH IN LOCATION OF ALL EQUIPMENT, WIRING DEVICES, ETC. WHERE APPLICABLE MOUNT ALL WIRING DEVICES ABOVE BACK SPLASH EXCEPT THOSE SERVING UNDER COUNTER EQUIPMENT.
6. SEE SPECIFICATION FOR ENERGY SAVING LAMP AND BALLAST REQUIREMENTS.
7. FINISHES OF ALL LIGHT FIXTURES SHALL BE AS SELECTED BY ARCHITECT.
8. THE ELECTRICAL CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE MECHANICAL CONTRACTOR SUCH THAT NO PIPING, DUCTS, OR EQUIPMENT FOREIGN TO THE OPERATION OF THE ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED IN, ENTER OR PASS THRU ELECTRICAL ROOMS OR SPACES, OR ABOVE OR BELOW ELECTRICAL EQUIPMENT IN OTHER AREAS.
9. ELECTRICAL BOXES SHALL NOT BE LOCATED IN MASONRY COLUMNS IN BRICK WALLS OR IN GROUTED CELLS ADJACENT TO OPENINGS. COORDINATE LOCATION OF BOXES WITH MASONRY CONTRACTOR.
10. ALL PENETRATIONS OF FIRE RATED FLOORS, WALLS, AND CEILINGS SHALL BE SEALED WITH APPROVED MATERIAL TO MAINTAIN FIRE RATING OF SURFACE PENETRATED.
11. CIRCUITS EXTENDING OVER 70' FOR 120 VOLT AND 115' FOR 277 VOLT 20 AMP CIRCUITS SHALL BE RUN WITH CONDUCTORS PER TABLE BELOW.

20 AMP MINIMUM BRANCH CIRCUIT CONDUCTOR SIZING		
MAXIMUM LENGTH	BRANCH CIRCUIT VOLTAGE	
CONDUCTOR LENGTH (FT)	120 VOLT	277 VOLT
<70	MIN. #12 AWG	MIN. #12 AWG
70 – 115	MIN. #10 AWG	MIN. #12 AWG
115 – 170	MIN. #8 AWG	MIN. #10 AWG
170 – 270	MIN. #6 AWG	MIN. #8 AWG
271 – 380	NOTE B	MIN. #8 AWG
>380	NOTE B	NOTE B

A. THESE ARE BASED ON MAXIMUM LENGTH OF CIRCUIT.
B. PERFORM VOLTAGE DROP CALCULATIONS AND PROVIDE CONDUCTOR SIZE TO KEEP BRANCH CIRCUIT VOLTAGE DROP LESS THAN 3% WITH A 15 AMP LOAD.
C. CONTRACTOR SHALL ENSURE THAT THE INSTALLATION OF EACH BRANCH CIRCUIT STAYS WITHIN 3% VOLTAGE DROP FOR A 15 AMP LOAD. IF NECESSARY, CONTRACTOR SHALL INCREASE WIRE AND CONDUIT SIZE TO MEET THE STANDARD AT NO ADDITIONAL COST TO OWNER.

FLOOR BOX SCHEDULE

FB X

LIGHT FIXTURE ABBREVIATION SCHEDULE

NOTE: NOT ALL ABBREVIATIONS WILL NECESSARILY BE USED.

A.F.F.	ABOVE FINISH FLOOR
WALL@CLG	WALL MOUNT AT CORNER OF WALL AND CEILING
CCBA	CUSTOM PAINTED COLOR AS SELECTED BY THE ARCHITECT
SCBA	STANDARD PAINTED COLOR AS SELECTED BY THE ARCHITECT
CFBA	CUSTOM FINISH AS SELECTED BY THE ARCHITECT
SFBA	STANDARD FINISH AS SELECTED BY THE ARCHITECT
MOD	MODIFY STANDARD LIGHT FIXTURE AS INDICATED

LIGHT FIXTURE GENERAL NOTES

1. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF LIGHT FIXTURES. BRING ALL DISCREPANCIES OF LOCATIONS AND QUANTITIES TO THE ATTENTION OF THE ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO BIDDING.
2. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS AND LOCATIONS OF LIGHT FIXTURES. BRING ALL DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT PRIOR TO BIDDING.
3. REFER TO THE SPECIFICATIONS FOR OTHER LIGHT FIXTURE, FUSING, BALLAST, AND LAMP REQUIREMENTS AND ACCEPTABLE MANUFACTURERS.
4. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR LOUVER REQUIREMENTS AS REQUIRED.
5. CONFIRM AVAILABLE MOUNTING DEPTHS OF ALL LIGHT FIXTURES AND COMPARE WITH DEPTHS SHOWN ON SHOP DRAWINGS. BRING ALL POTENTIAL CONFLICT AREAS TO THE ATTENTION OF THE ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO RELEASE.

BIDDING REQUIREMENTS

1. BID ONLY PRODUCTS THAT ARE SPECIFIED OR APPROVED BY ADDENDUM.
2. PACKAGING OF LIGHT FIXTURES WITH OTHER SYSTEMS IS NOT ALLOWED.
3. WHEN ONLY ONE PRODUCT IS APPROVED FOR BIDDING, THE PRICE FOR THAT ITEM SHALL BE BROKEN OUT SEPARATELY WHEN SUBMITTING PRICING TO VARIOUS DISTRIBUTORS AND/OR CONTRACTORS.
4. WHEN A CONTRADICTION EXISTS BETWEEN A SPECIFIC MODEL NUMBER AND THE DESCRIPTION, THE DESCRIPTION SHALL GOVERN.

PRIOR APPROVAL REQUIREMENTS

1. PRIOR APPROVAL IS REQUIRED BEFORE BIDDING THIS PROJECT.
2. PRIOR APPROVALS SHALL BE SUBMITTED TO THE ELECTRICAL ENGINEER'S OFFICE AT LEAST (8) EIGHT WORKING DAYS BEFORE THE BID. PRIOR APPROVALS RECEIVED AFTER THIS TIME PERIOD SHALL BE REJECTED.
3. PRIOR APPROVALS SHALL BE SIGNED BY A PRINCIPAL OF THE SUBMITTING ORGANIZATION STATING THAT THEY HAVE PREPARED AND/OR REVIEWED THE SUBMITTAL AND THAT THE PRODUCTS PROPOSED ARE EQUIVALENT TO THOSE SPECIFIED. ANY EXCEPTIONS SHALL BE SO NOTED.
4. ITEMS THAT ARE SUBMITTED AND HAVE BEEN APPROVED WILL BE LISTED IN THE ADDENDUM(S). VERBAL APPROVAL WILL NOT BE GIVEN ON ANY ITEM.
5. IT IS NOT THE RESPONSIBILITY OF THE ELECTRICAL ENGINEER TO NOTIFY THE SUBMITTING PARTY OF ERRORS IN THE SUBMITTAL. NOTIFICATION OF ERRORS BY THE ELECTRICAL ENGINEER PRIOR TO ISSUANCE OF THE ADDENDUM(S) MAY NOT BE GIVEN.
6. PRIOR APPROVALS SHALL CONSIST OF TWO SETS OF CUT SHEETS DESCRIBING THE PRODUCTS BEING SUBMITTED AS EQUIVALENTS. FAXES ARE NOT ACCEPTABLE. ALL SPECIFICATION INFORMATION SHALL BE CLEARLY MARKED, WITH NON–APPLICABLE INFORMATION CROSSED OUT. COMPLETE PHOTOMETRIC DATA SHALL BE PROVIDED. PRODUCTS WITHOUT PHOTOMETRIC DATA WILL NOT BE APPROVED.
7. SUPPLY POINT–BY–POINTS AS REQUIRED BY THE ELECTRICAL ENGINEER AND/OR LIGHTING DESIGNER.
8. SAMPLE FIXTURES MUST BE SUPPLIED WITH A CORD, PLUG AND 120V BALLAST.

LIGHTING SHOP DRAWING REQUIREMENTS

1. REFER TO SPECIFICATIONS 260500, 265100 & 265600 (16001, 16510 & 16551).
2. MUST INCLUDE BALLAST AND LAMP CUT SHEETS.
3. LINEAR LIGHTING MUST INCLUDE DETAILED DRAWINGS WITH SUPPORT DETAILS, STEM LOCATIONS AND HAVE ALL LENGTHS IDENTIFIED WITH STEM LOCATIONS.
4. COLOR SAMPLES MUST BE INCLUDED IN FIRST SUBMITTAL.
5. CUT SHEETS MUST BE STAMPED WITH THE FACTORY REPRESENTATIVE'S COMPANY NAME.
6. VALUE ENGINEERING CONDUCTED WITHOUT THE DESIGN TEAM IE; ARCHITECT, OWNER, ENGINEER & LIGHTING CONSULTANT/DESIGNER WILL NOT BE ALLOWED, REVIEWED OR APPROVED.
7. PROVIDE A LIST OF SPARE PARTS, EQUIPMENT & LAMPS.

FIXTURE SCHEDULE

Project Manager: *Carol F.*

TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLTS	TOTAL WATTS	LAMPS
DM	RECESSED RIMLESS ADJUSTABLE MULTIPLE'S					
DR	RECESSED ROUND WHITE TRIM FINISH AND REFLECTOR ADUSTABLE	3G	3G-DL4500-15-580-27K-60D-120V-DIM-WT-WI-NC-SF70	120	15.6	LED INCLUDED
DS	RECESSED SQUARE TRIMLESS IN WOOD CEILING	LIGHTHEADED	2-520-TLW-SCBA-BR040-27-8010-SL	120	9	LED INCLUDED
L	PENDANT 3" WIDE ALUMINUM FINISH	LUMENWERX	VIA3PD-HL0-LED-80-500-30K-XX-120V-D1-1-53WAC36-AL	120	16W/4'	LED INCLUDED
O1	LINEAR WET LOCATION LED STRIP LIGHT W/ POWER SUPPLY	QTRAM	iQ67-2700K-35-90-1.6-i1A-WIDE			
O2	WALL MOUTNED LIGHT FIXTURE IN EXERIOR SKI IN/OUT					
S1	DECORATIVE WALL SCONCE					
SHR	ROUND RECESSED WET LOCATION DOWNLIGHT, WHITE FINISH WITH LENSE	CONTECH	R4NC-3-27K-12-D/C4322-WHT-SL-WL	120	20	LED INCLUDED
UC	UNDERCOUNTER LINEAR LIGHTING	QTRAM	IQA-VEVE-XX-DF-CLIPS	120		LED INCLUDED
V1	WALL MOUNTED VANITY LIGHT FIXTURE			120		LED INCLUDED
V2	WALL MOUNTED VANITY LIGHT FIXTURE			120		LED INCLUDED
V3	WALL MOUNTED VANITY LIGHT FIXTURE			120		LED INCLUDED
WL	WALL MOUNTED LINEAR, WHITE FINISH, FLAT LENSE, MOUNTED ABOCE DOOR. 4' IN LENGTH	LUMAX	CNLED-40L-3K-48-G-FAF-WHITE-(MOTION SENSOR)	120	39	LED INCLUDED
WL2	WALL MOUNTED LINEAR, WHITE FINISH, FLAT LENSE, MOUNTED ABOCE DOOR. 2' IN LENGTH	LUMAX	CNLED-27L-3K-24-G-FAF-WHITE-(MOTION SENSOR)	120	28	LED INCLUDED
WS	RECESSED SQUARE STEP LIGHT WHITE FINISH	LUCIFIER	SSL1-LED-1-WH-80L-02B-1-PSA-24V-40-1-L22	120	3.4	LED INCLUDED

EQUIPMENT SCHEDULE

UNIT #	FUNCTION	LOAD	VOLT	PHASE	FULL LOAD AMPS	CONDUIT SIZE	WIRES: NO. SETS	WIRES: NO.	WIRES: SIZE	WIRES: EQUIP. GND(1)	OCPD: TYPE	OCPD: AMPS	REF. NOTES: STARTER	REF. NOTES: DISCONNECT	REF. NOTES: OTHER	REMARKS
B-1	BOILER	54 VA	120	1	0.45	3/4"	1	2	12	12	CB	15				
C-1	CONDENSER	35.6 FLA	240	1	35.60	3/4"	1	2	6	60	CB	45				
F-1	FURNACE	12.8 FLA	120	1	12.80	3/4"	1	2	12	20	CB	20				
HP-1	HEATPUMP OUTDOOR UNIT	42 MCA	240	1	33.60	3/4"	1	2	6	60	CB	60				

NOTES:
1. NON-FUSED DISCONNECT SWITCH
2. FUSED DISCONNECT SWITCH
3. BREAKER IN ENCLOSURE
4. MANUAL STARTER W/THERMAL OVERLOAD
5. MAGNETIC STARTER
6. MAGNETIC STARTER/NON-FUSED DISCONNECT COMBINATION
7. MAGNETIC STARTER/FUSED DISCONNECT COMBINATION
8. MAGNETIC STARTER/BREAKER COMBINATION
9. VARIABLE FREQUENCY DRIVE
10. REDUCED VOLTAGE STARTER
11. DIRECT CONNECTION
12. RECEPTACLE/SPECIAL PURPOSE OUTLET/ETC.
13. TWO-SPEED STARTER, COORDINATE W/MOTOR TYPE
14. SOLID STATE SOFT STARTER

A. FURNISHED, INSTALLED, AND CONNECTED UNDER DIVISION 26
B. FURNISHED AND INSTALLED UNDER ANOTHER DIVISION REQUIRING CONNECTION UNDER DIVISION 26.
C. FURNISHED UNDER ANOTHER DIVISION BUT INSTALLED AND CONNECTED UNDER DIVISION 26.
D. FURNISHED, INSTALLED AND CONNECTED UNDER ANOTHER DIVISION.

CB = CIRCUIT BREAKER - THERMAL MAGNETIC
CKW = CHILLER KILOWATTS

NOTE 1: PER 250.122(A), EQUIPMENT GROUND IS NOT REQUIRED TO BE LARGER THAN PHASE CONDUCTOR.

ELECTRICAL SYMBOL SCHEDULE

1. SEE FIXTURE SCHEDULE FOR TYPE, MOUNTING AND WATTAGE.
2. HEIGHT MEASURED TO CENTER LINE OF THE BOX FROM THE FINISH FLOOR.
3. REFER TO DRAWINGS FOR DIRECTIONAL ARROWS.
4. SUBSCRIPT KEYS SWITCH TO FIXTURES CONTROLLED.
5. NEMA TYPE 'ND' NON–FUSED UNLESS NOTED 'F' (FUSED). USE 'HD' 480 V.
6. HEIGHT MEASURED TO TOP OF THE BOX FROM FINISHED FLOOR.
7. PROVIDE H.O.A. AND S.S. PUSHBUTTONS AS REQUIRED.
8. DOUBLE ARROWS DENOTE A DOUBLE FACE UNIT.
9. COORDINATE WITH MILLWORK SHOP DRAWINGS AND ELEVATIONS FOR HEIGHT.
10. SUBSCRIPT DENOTES NEMA CONFIGURATION.
11. HEIGHT MEASURED TO BOTTOM OF THE BOX FROM FINISH FLOOR.
12. COORDINATE WITH DOOR HARDWARE SUPPLIER.

* TYPICAL SYMBOL SCHEDULE. SOME SYMBOLS MAY NOT BE USED IN THIS SET OF DRAWINGS.

STANDARD MOUNTING HEIGHT UNLESS OTHERWISE NOTED ON PLANS

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
	ONE CIRCUIT, HOME RUN TO PANEL		
	TWO CIRCUIT, HOME RUN TO PANEL		
	THREE CIRCUIT, HOME RUN TO PANEL		
	CONDUIT RUN CONCEALED IN WALL OR CEILING		
	CONDUIT RUN CONCEALED IN FLOOR OR GROUND		
	CONDUIT UP		
	CONDUIT DOWN		
	CONDUIT STUB LOCATION	CAP CONDUIT	
	CONDUIT/CIRCUIT CONTINUATION		
	CABLE TRAY	AS NOTED	
	CEILING LIGHT FIXTURE	CEILING	1.
	WALL LIGHT FIXTURE	AS NOTED	1.
	RECESSED DOWNLIGHT FIXTURE	CEILING	1.
	RECESSED WALL–WASH FIXTURE	CEILING	1.
	LIGHT FIXTURE	AS NOTED	1
	EGRESS LIGHT FIXTURE	AS NOTED	UNSWITCHED
	AREA LIGHT POLE AND FIXTURE	CONCRETE BASE	SEE DIAGRAM
	FLOOD OR TRACK FIXTURE	AS NOTED	
	CEILING/WALL MOUNTED EXIT LIGHT	CEILING/ AS NOTED	1. 3. 8.
$X	SINGLE POLE SWITCH	+4'–0"	4. 6.
$3	THREE–WAY SWITCH	+4'–0"	6.
$4	FOUR–WAY SWITCH	+4'–0"	6.
$K	KEY OPERATED SWITCH	+4'–0"	6.
$P	SWITCH WITH PILOT LIGHT	+4'–0"	6.
$D	VARIABLE INTENSITY SWITCH	+4'–0"	6.
$TM	TIMER SWITCH	+4'–0"	6.
	MOMENTARY CONTACT SWITCH, CENTER POSITION OFF	+4'–0"	6.
X	LOW VOLTAGE WALL STATION (SUBSCRIPT INDICATES CONFIGURATION & CONTROL SEQUENCE) SEE DIAGRAM	+4'–0"	6.
	DUAL TECHNOLOGY CEILING MOUNTED OCCUPANCY SENSOR (PROVIDE WITH ALL ROOM CONTROLLERS)	CEILING	SEE DIAGRAM, SPEC.
	DUAL TECHNOLOGY WALL MOUNTED OCCUPANCY SENSOR (SUBSCIPT D=DIMMING AND DAY–LIGHT CONTROL)	+4'–0"	SEE DIAGRAM, SPEC.
PP	POWER PACK	ABOVE CEILING	SEE DIAGRAM, SPEC.
RC X	DIGITAL ROOM CONTROLLER (SUBSCRIPT INDICATES NUMBER OF RELAYS, #E INDICATES EM ENABLED RC)	ABOVE CEILING	SEE DIAGRAM. SPEC.
EP	EMERGENCY LIGHTING CONTROL UNIT	ABOVE CEILING	SEE DIAGRAM, SPEC.
R	RECEPTACLE SWITCH PACK	ABOVE CEILING	SPEC.
A	AUTOMATIC RELAY PACK	ABOVE CEILING	SEE DIAGRAM. SPEC.
T	LOW VOLTAGE TRANSFORMER		
P	PHOTO–ELECTRIC CONTROL	AS NOTED	TORK 2000A
	DIGITAL DAYLIGHT SENSOR	CEILING	SEE DIAGRAM SPECIFICATION
TC	TIME CLOCK	+5'–0"	2.
	DUPLEX RECEPTACLE UPPER OUTLET SWITCH CONTROLLED	+16" OR AS NOTED	9. 11.
	SIMPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
U	SIMPLEX RECEPTACLE WITH USB OUTLET	+16" OR AS NOTED	9. 11.
	DUPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
U	DUPLEX RECEPTACLE WITH USB OUTLET	+16" OR AS NOTED	9. 11.
C	DUPLEX RECEPTACLE WITH CONTROL	+16" OR AS NOTED	9. 11.
A	DUPLEX RECEPTACLE		9.
W	ELECTRIC WATER COOLER RECEPTACLE		SEE DIAGRAM
WP	WEATHERPROOF RECEPTACLE	+24" OR AS NOTED	2. 9.
IG	ISOLATED GROUND RECEPTACLE	+16" OR AS NOTED	9. 11.
	GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
	DUPLEX RECEPTACLE EMERGENCY POWER (RED)	+16" OR AS NOTED	9. 11.
	FOURPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
	GROUND FAULT INTERRUPTER FOURPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
	FOURPLEX RECEPTACLE EMERGENCY POWER (RED)	+16" OR AS NOTED	9. 11.
	TVSS PROTECTED RECEPTACLE	+16" OR AS NOTED	9. 11.
	SPECIAL PURPOSE OUTLET	+16" OR AS NOTED	10. WITH CAP. 11.
	CORD DROP		SEE DIAGRAM
	CORD REEL		SEE DIAGRAM
	TOMBSTONE RECEPTACLE		
	PLUGMOLD	+46" OR AS NOTED	
	TELEVISION OUTLET	+16" OR AS NOTED	11.
	POWER POLE		
DP	FLAT PANEL DISPLAY WALL BOX, TVSS RECEPT., DATA AND OTHER DEVICES, REFER TO DIAGRAMS	AS NOTED	SEE DIAGRAM & SPEC. 26 2726
CP	CEILING PROJECTION SYSTEM CEILING BOX	ABOVE CEILING	SEE DIAGRAM AND SPEC.
	DATA OUTLET W/(1) CABLE	+16" OR AS NOTED	9. 11.
	DATA OUTLET W/(2) CABLES	+16" OR AS NOTED	9. 11.
	DATA OUTLET W/(3) CABLES	+16" OR AS NOTED	9. 11.
X	DATA OUTLET W/MORE THAN (3) CABLES	+16" OR AS NOTED	9. 11.
	AV DATA OUTLET	+16" OR AS NOTED	9. 11. 13.
	WIRELESS ACCESS POINT, ONE CABLE	CEILING	
	CALL SWITCH	+4'–0"	6.

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
C	CLOCK OUTLET	+7'–6"	8.
FB	FLOOR BOX – SEE SCHEDULE	FLOOR	SEE DIAGRAM, SPEC.
PT	POKE THRU – SEE SCHEDULE	FLOOR	SEE DIAGRAM, SPEC.
FT	FLIP–TOP BOX		9.
J	JUNCTION BOX ('F' IN FLOOR)	AS NOTED	
	MOTOR OUTLET	TO SUIT EQUIP.	
	PUSHBUTTON	+4'–0"	6.
	NON–FUSED DISCONNECT SWITCH	+5'–0"	5.
F	FUSED DISCONNECT SWITCH	+5'–0"	5.
$T	MANUAL STARTER THERMAL OVERLOAD SWITCH WITH PILOT LIGHT	+4'–0"	6.
	MAGNETIC STARTER	+5'–0"	7.
	MAGNETIC STARTER / DISCONNECT COMBINATION	+5'–0"	
VFD	VARIABLE FREQUENCY DRIVE	+6'–6"	
	PANEL BOARD	TOP AT +6'–0"	
	MAIN DISTRIBUTION PANEL		
	TELEPHONE TERMINAL BOARD		
	GROUND BUS BAR		
	EQUIPMENT CABINET/RACK		CIRCUIT TO 120V
	BELL	+7'–6"	
	CHIME	+7'–6"	
F	FIRE ALARM MANUAL STATION	+4'–0"	6.
H	FIRE ALARM SIGNAL HORN/STROBE	+8'–0"	6.
H CLG	CONCEALED FIRE ALARM SIGNAL HORN/STROBE	CEILING	
H	CONCEALED FIRE ALARM SIGNAL HORN/STROBE WALL	+8'–0"	6.
E	FIRE ALARM SIGNAL SPEAKER/STROBE	+8'–0"	6.
E CLG	CONCEALED FIRE ALARM SIGNAL SPEAKER/STROBE	CEILING	
E	CONCEALED FIRE ALARM SIGNAL SPEAKER/STROBE WALL	+8'–0"	6.
S	FIRE ALARM STROBE	+8'–0"	6.
S CLG	CONCEALED FIRE ALARM SIGNAL STROBE	CEILING	
S	CONCEALED FIRE ALARM SIGNAL STROBE WALL	+8'–0"	6.
K	FIRE ALARM SPEAKER ONLY	+8'–0"	6.
B	FIRE ALARM SIGNAL STROBE WITH BLUE COLORED LENS (CO VISUAL ALARM)	+8'–0"/ CEILING	MOUNT AS PER. MAN
V	ASPIRATING SMOKE DETECTION SYSTEM	CEILING	MOUNT AS PER. MAN
S	SMOKE DETECTOR	CEILING	
SC	SMOKE/CARBON MONOXIDE DETECTOR	CEILING	
C	CARBON MONOXIDE DETECTOR	CEILING	
H	HEAT DETECTOR	CEILING	
D	DUCT SMOKE DETECTOR		MTD. IN DUCT
D	FIRE/SMOKE DAMPER		
	DOOR HOLDER	AS NOTED	
FS	FLOW SWITCH		
TS	TAMPER SWITCH		
WF	WATER FLOOD INDICATOR		
	O.S. & Y. VALVE		SEE DIAGRAM
R	FIRE ALARM RELAY OR SECURITY RELAY		
CM	FIRE ALARM CONTROL MODULE		
MM	FIRE ALARM MONITOR MODULE		
TWZ	TWO–WAY COMMUNICATION SYSTEM ANNUNCIATOR PANEL	+4'–0"	6.
TW	TWO–WAY COMMUNICATION CALL STATION	+4'–0"	6.
D	DURESS PUSHBUTTON	+4'–0"	6.
D 1	SECURITY SYSTEM DOOR SWITCH	DOOR JAMB	
D 2	SECURITY SYSTEM OVERHEAD DOOR SWITCH	CEILING	MOUNT AS PER. MAN
ML	MAGNETIC SHEAR LOCK		
A	SECURITY SYSTEM KEYED ACCESS SWITCH	+4'–0"	6.
K	SECURITY SYSTEM KEYED PAD	+4'–0"	6.
I	INFRARED SENSOR	AS NOTED	
M	SECURITY MOTION DETECTOR		MOUNT AS PER. MAN
P	SECURITY SYSTEM POP–IT		MOUNT AS PER. MAN
G	GLASS BREAK DETECTOR	CEILING	
ES	ELECTRIC DOOR STRIKE		12.
EL	ELECTRIC DOOR LOCK		12.
R	ACCESS CONTROL SYSTEM, REQUEST TO EXIT		
CR	ACCESS CONTROL CARD READER	+4'–0"	6.
BR	ACCESS CONTROL BIOMETRIC READER	+4'–0"	6.
	CAMERA – SEE SCHEDULE	AS NOTED	SEE DIAGRAM, SPEC.
	DOOR POSITION INDICATING SWITCH		
A	LIGHT FIXTURE (LETTER DESIGNATES TYPE)		
EQ 34	EQUIPMENT NUMBER		
842	ARCHITECTURAL ROOM NUMBER		
X	DEVICE/EQUIPMENT (TEXT DESIGNATES TYPE) SEE SCHEDULE		

INDEX OF ELECTRICAL DRAWINGS

E000 SCHEDULES AND NOTES
E100 ELECTRICAL SITE PLAN
E200 LIGHTING PLAN GROUND LEVEL
E201 LIGHTING PLAN LOWER LEVEL
E202 LIGHTING PLAN MAIN LEVEL
E203 LIGHTING PLAN UPPER LEVEL
E300 POWER PLAN GROUND LEVEL
E301 POWER PLAN LOWER LEVEL
E302 POWER PLAN MAIN LEVEL
E303 POWER PLAN UPPER LEVEL
E400 ONE–LINE DIAGRAM AND PANELBOARD SCHEDULES
E500 ELECTRICAL DETAILS

Lot 14 Mountain House

Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple
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No.	Description	Date
01	Issued for Coordination	2018.05.08

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Schedules and Notes

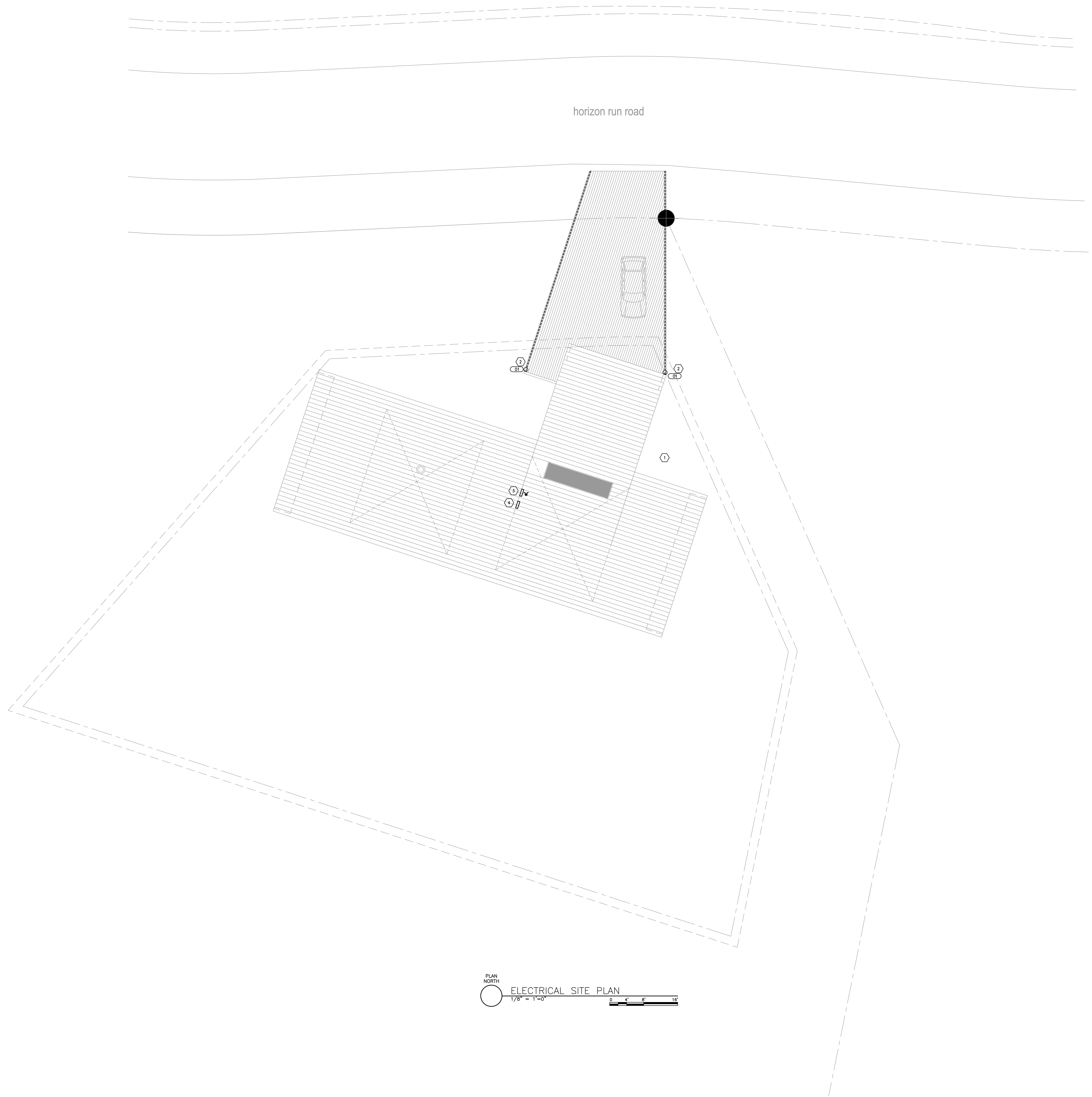
scale: SEE GRAPH
date: 2018-05-11
drawn: BNA
chk'd: CF

E000

Exhibit A

SHEET KEYNOTES

1. REFER TO CIVIL PLAN FOR POWER AND COMMUNCATION SERVICE ENTERANCE REQUIREMENTS.
2. LINEAR WET LOCATION LED STRIP LIGHT REFER TO ARCHITECTURAL DETAIL FOR EXACT MOUNTING LOCATION.
3. PANEL 'M' IN MECHANICAL ROOM.
4. TELE/COMM WALL MOUNTED RACK IN MECHANICAL ROOM. PROVIDED BY OTHERS.



PLAN NORTH

ELECTRICAL SITE PLAN
1/8" = 1'-0"
0 4' 8' 16'

Lot 14 Mountain House

Summit Powder Mountain
Eden, Utah

MacKay-Lyons
Sweetapple

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Electrical
Site Plan

scale: SEE GRAPH
date: 2018-05-11
drawn: BNA
chk'd: CF

E100

By: kody; May 30, 2018 – 3:13pm
J:\2018\115\DRAW\18115-E100.dwg

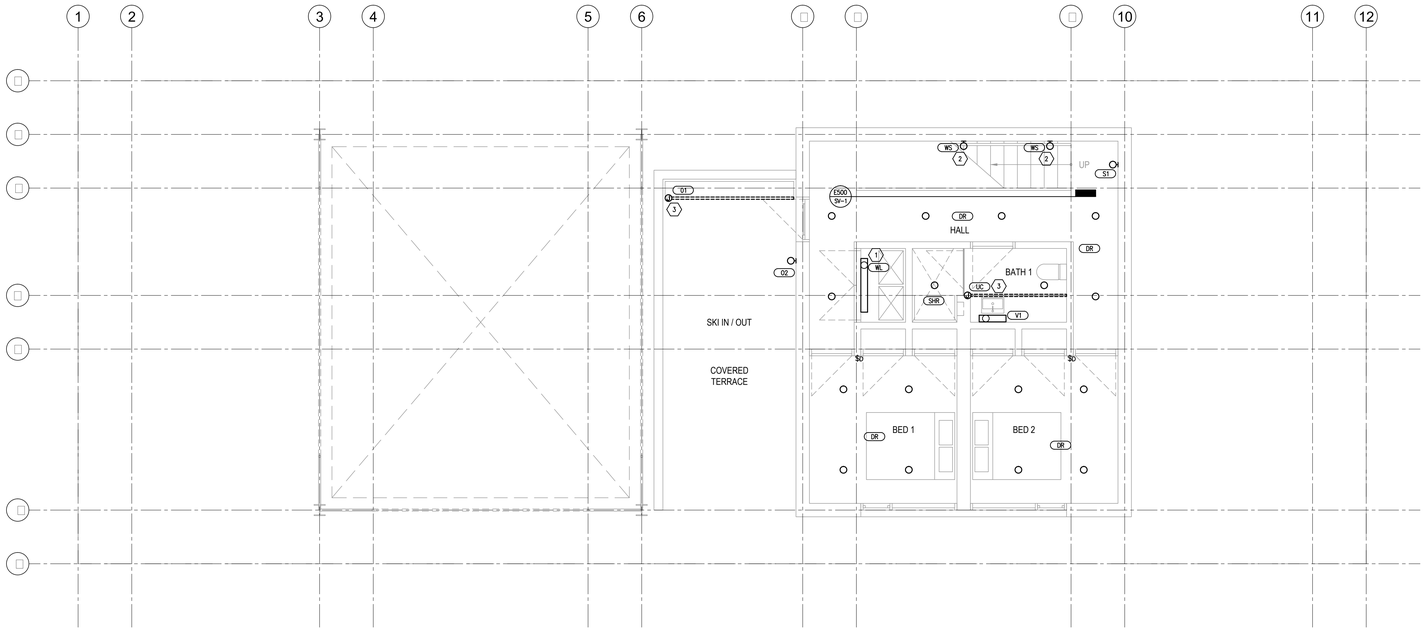
Exhibit A

GENERAL SHEET NOTES

1. CONSULT ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL LIGHTING FIXTURES.
2. CONSULT ALL ARCHITECTURAL PLANS, ELEVATIONS & SECTIONS FOR EXACT LOCATIONS OF ALL ELECTRICAL DEVICES. VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATIONS BEFORE BEGINNING ROUGH IN. CONSULT ALL APPLICABLE CONTRACT DRAWINGS AND SHOP DRAWINGS TO INSURE NEC CODE CLEARANCES REQUIRED AROUND ALL ELECTRICAL EQUIPMENT.

SHEET KEYNOTES

1. MOUNT WALL MOUNTED LIGHT FIXTURE WL ABOVE DOOR OPENING.
2. TYPE WS RECESSED STEP LIGHT SHALL BE MOUNTED +18" ABOVE FINISHED FLOOR AND/OR STEP.
3. MOUNT LIGHT FIXTURE IN TOE KICK.



PLAN NORTH

LIGHTING PLAN GROUND FLOOR
1/4" = 1'-0"
0 2' 4' 6'

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Lot 14 Mountain House
Summit Powder Mountain
Eden, Utah

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Lighting Plan Ground Floor

scale: SEE GRAPH
date: 2018-05-11
drawn: BNA
chk'd: CF

E200

Exhibit A

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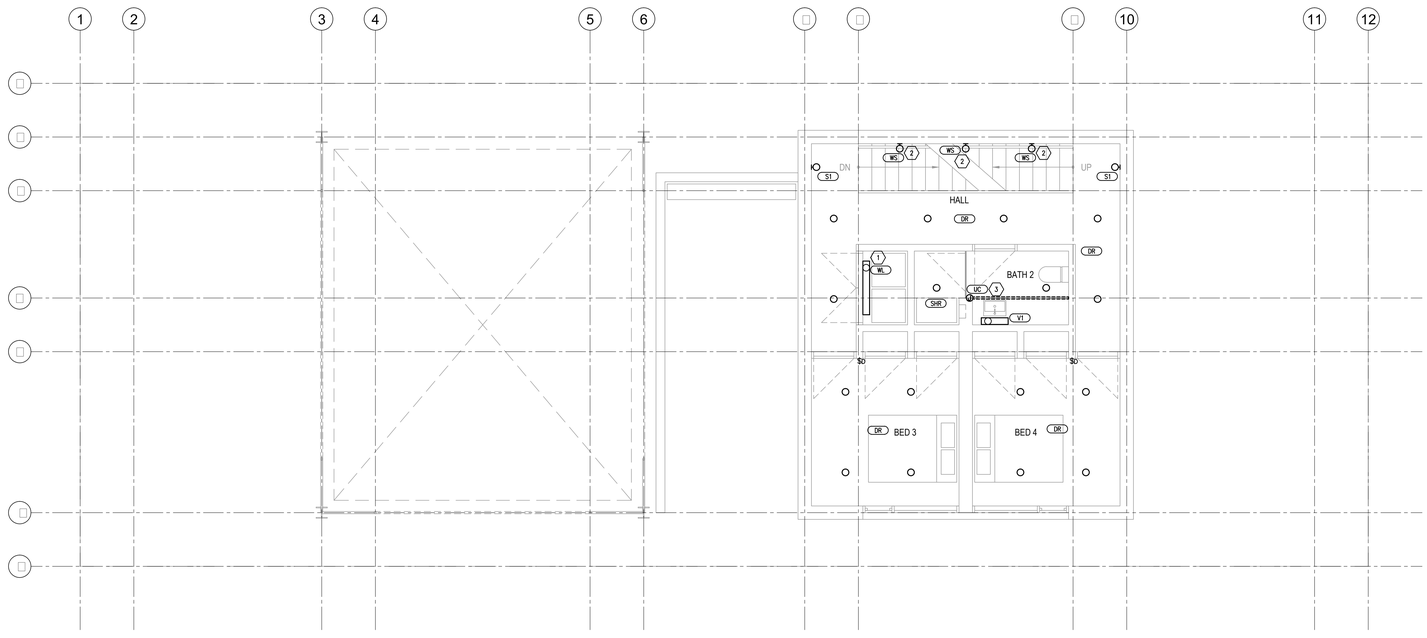
SHEET KEYNOTES

(1) MOUNT WALL MOUNTED LIGHT FIXTURE WL ABOVE DOOR OPENING.
(2) TYPE WS RECESSED STEP LIGHT SHALL BE MOUNTED +18" ABOVE FINISHED FLOOR AND/OR STEP.
(3) MOUNT LIGHT FIXTURE IN TOE KICK.



PLAN NORTH

LIGHTING PLAN LOWER FLOOR
1/4" = 1'-0"
0" 4" 8"

Lot 14 Mountain House
Summit Powder Mountain
Eden, Utah

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Lighting Plan Lower Floor

scale: SEE GRAPH
date: 2018-05-11
drawn: BNA
chk'd: CF

E201

Exhibit A

GENERAL SHEET NOTES

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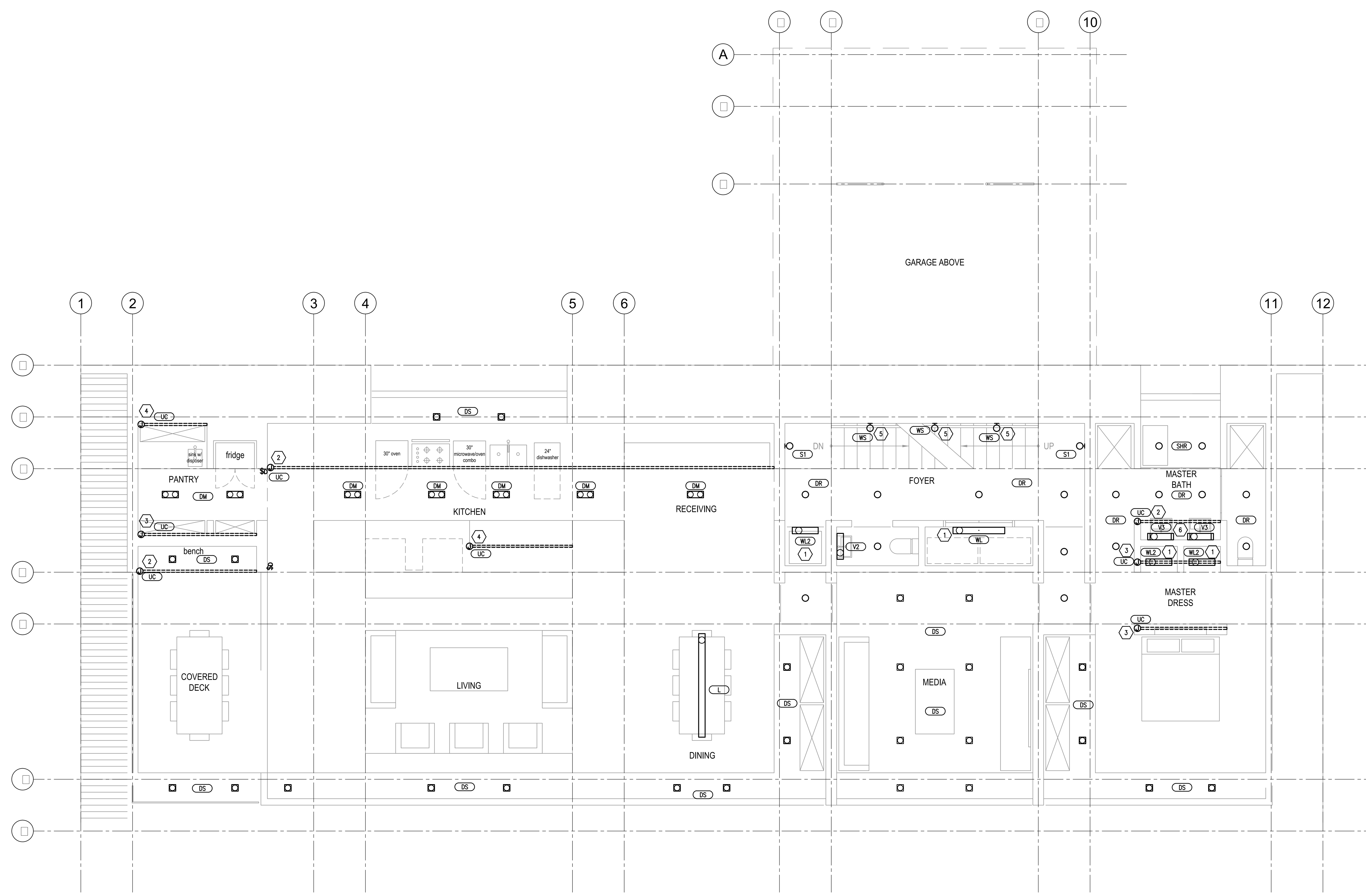
SHEET KEYNOTES

1. WALL MOUNT ABOVE DOOR OPENING.
2. LIGHT FIXTURE MOUNTED IN TOE KICK.
3. LOCATE ABOVE WALL FOR INDIRECT ILLUMINATION ONTO CEILING.
4. UNDER COUNTER LIGHT FIXTURE MOUNT TO FACE OF OVERHANG
5. MOUNT +18" ABOVE FINISH FLOOR OR STEP.
6. FULL MIRROR LIGHTS TO BORDER THE EDGES OF, AND BE MOUNTED ON, THE MIRROR



PLAN NORTH

LIGHTING PLAN MAIN FLOOR
1/4" = 1'-0"

Lot 14 Mountain House

Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple **Architects Limited**

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Lighting Plan Main Floor

scale: SEE GRAPH
date: 2018-05-11
drawn: BNA
chk'd: CF

E202

By: kody; May 30, 2018 – 3:13pm
J:\2018\115\DRAW\18115–E202.dwg

Exhibit A

GENERAL SHEET NOTES

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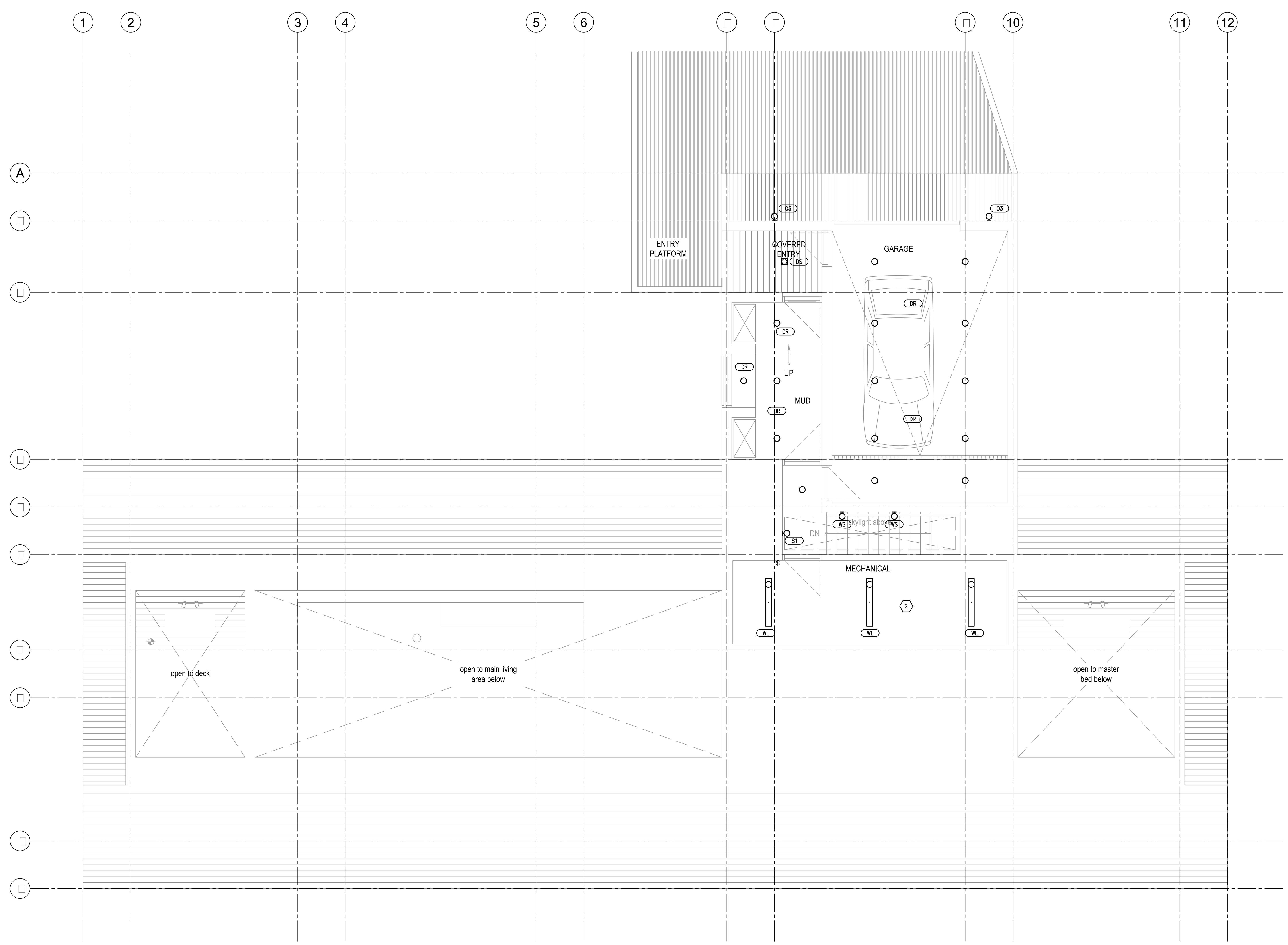
SHEET KEYNOTES

1. MOUNT +18" ABOVE FINISH FLOOR OR STEP.
2. SURFACE OR PENDANT MOUNT.



PLAN NORTH

LIGHTING PLAN UPPER FLOOR
1/4" = 1'=0"

Lot 14 Mountain House
Summit Powder Mountain
Eden, Utah

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fax: (902) 429.6276

No.	Description	Date
01	Issued for Coordination	2018.05.08

Revision:

Lighting Plan Upper Floor

scale: SEE GRAPH
date: 2018-05-11
drawn: BNA
chk'd: CF

E203

Exhibit A

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Lot 14 Mountain House

Summit Powder Mountain
Eden, Utah

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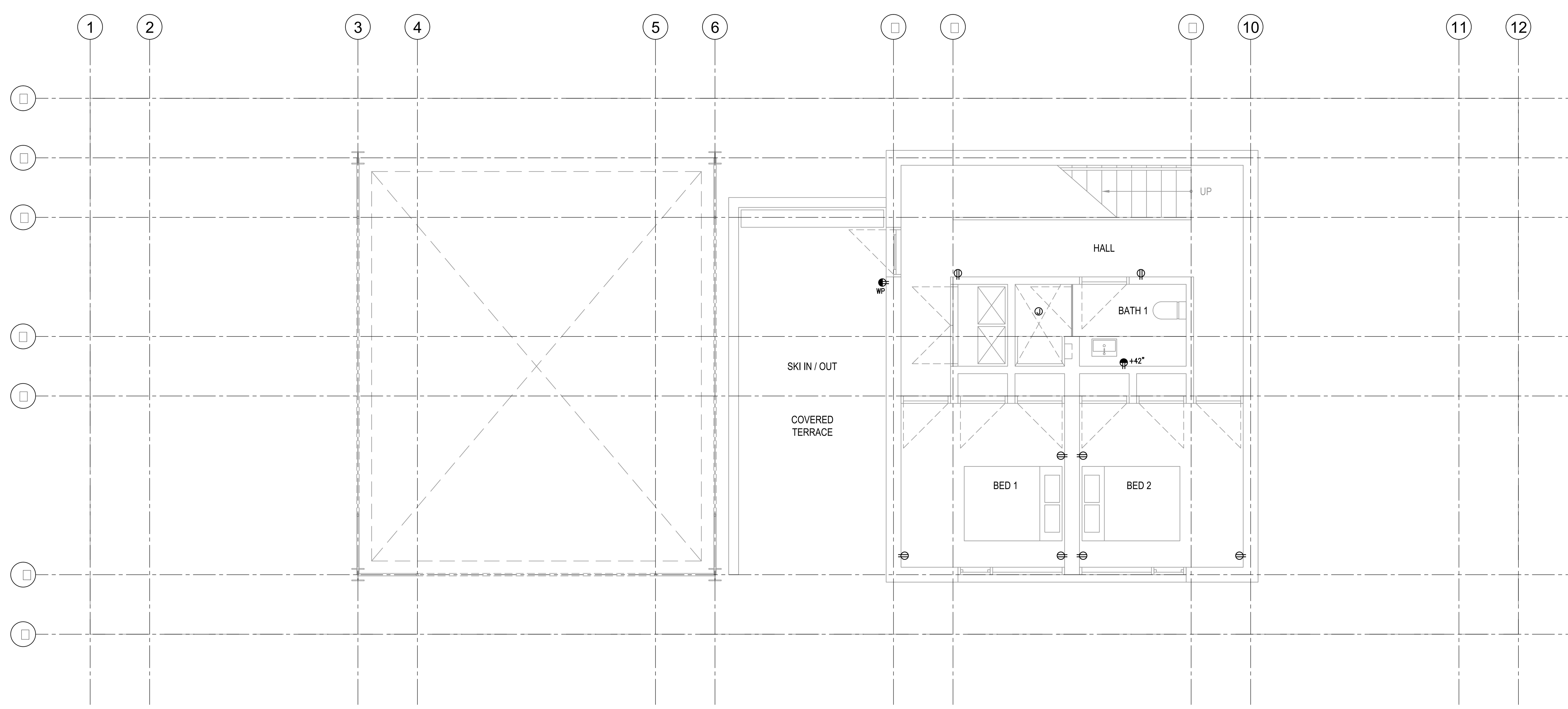

PLAN NORTH

POWER PLAN GROUND FLOOR

1/4" = 1'=0"

0 2' 4' 8'

No.	Description	Date
01	Issued for Coordination	2018.05.08

Revision:

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Power Plan Ground Floor

scale: SEE GRAPH
date: 2018-05-11
drawn: BNA
chk'd: CF

E300

By: kody; May 30, 2018 -- 3:13pm
J:\2018\115\DRAW\18115-E300.dwg

Exhibit A

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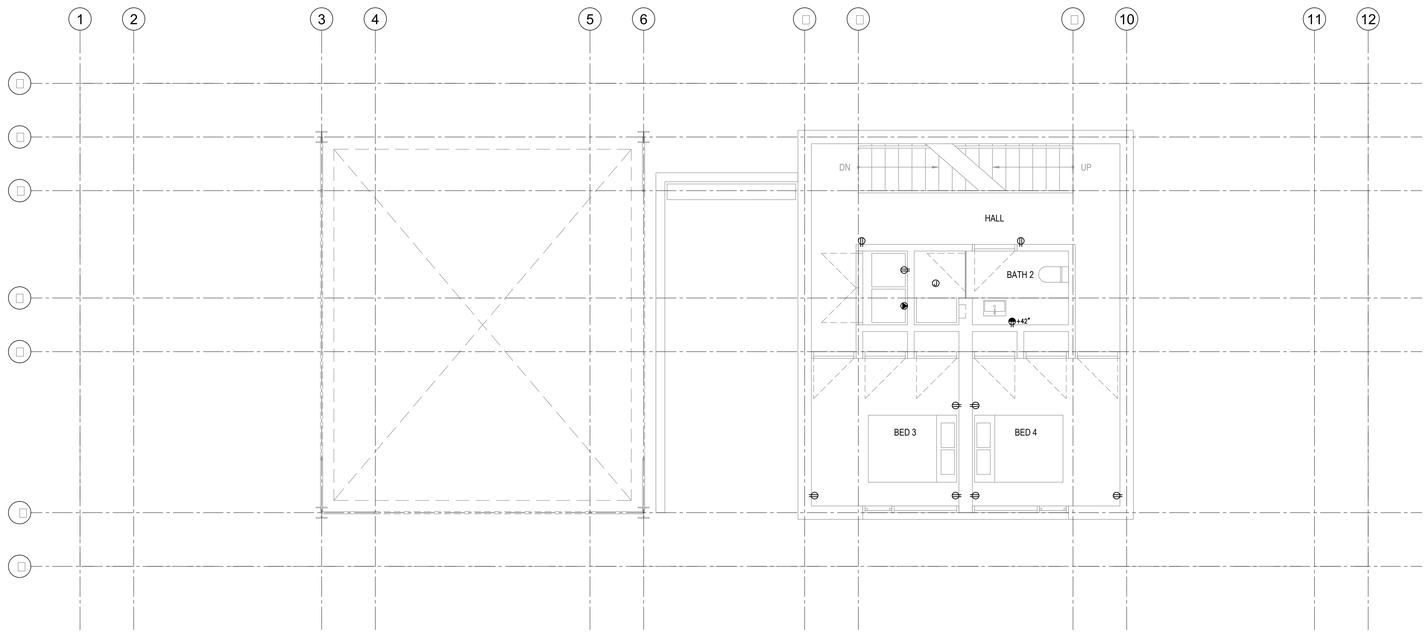

PLAN NORTH

POWER PLAN LOWER FLOOR
1/4" = 1'-0"
0 2' 4' 6'

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Power Plan Lower Floor

scale: SEE GRAPH
date: 2018-05-11
drawn: BNA
chk'd: CF

E301

Exhibit A

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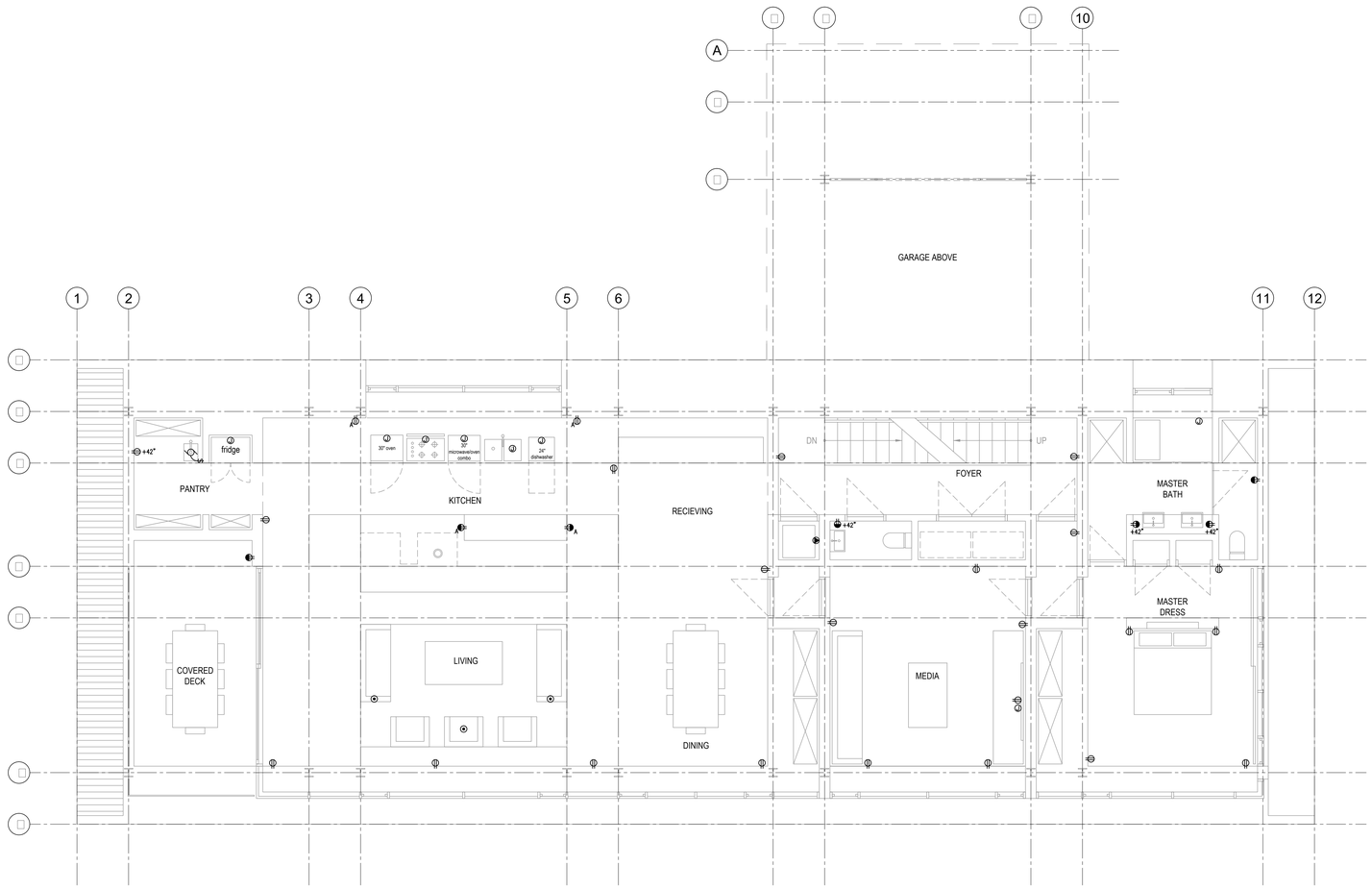

PLAN NORTH

POWER PLAN MAIN FLOOR

1/4" = 1'-0"

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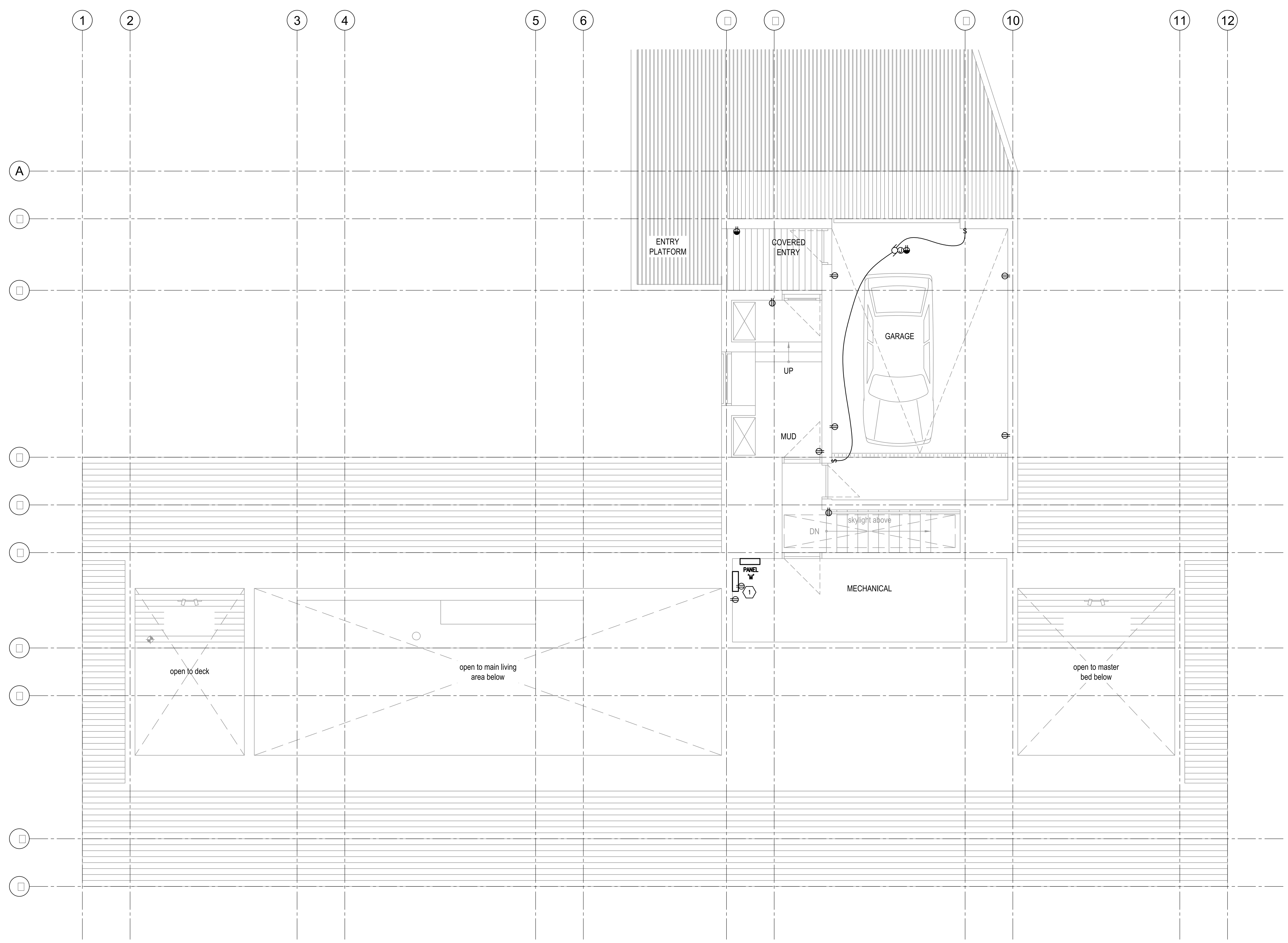
Power Plan Main Floor

scale: SEE GRAPH
date: 2018-05-11
drawn: BNA
chk'd: CF

E302

Exhibit A



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SHEET KEYNOTES

(1) TELE/COMM HEAD END EQUIPMENT

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PLAN NORTH

POWER PLAN UPPER FLOOR
1/4" = 1'=0"
0 2' 4' 8'

Power Plan Upper Floor

scale: SEE GRAPH
date: 2018-05-11
drawn: BNA
chk'd: CF

E303

By: kody; May 30, 2018 – 3:13pm
J:\2018\115\DRAW\18115–E303.dwg

Exhibit A

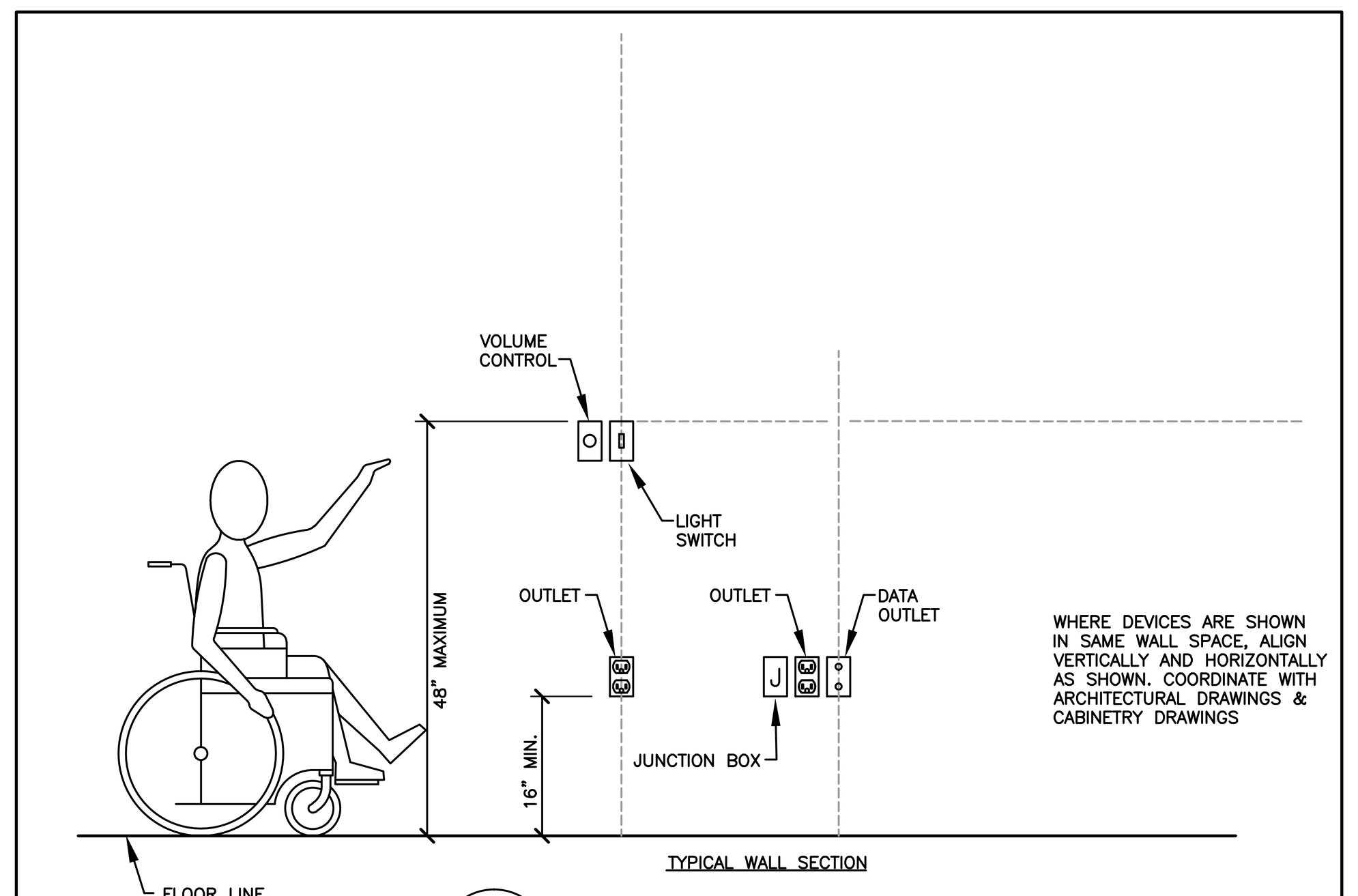
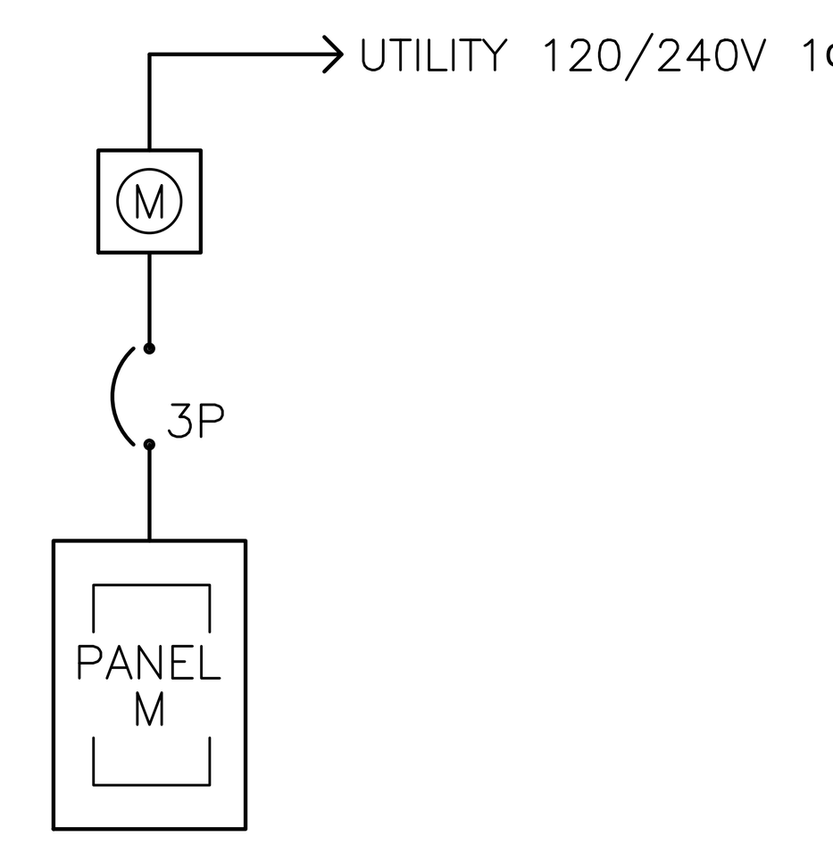


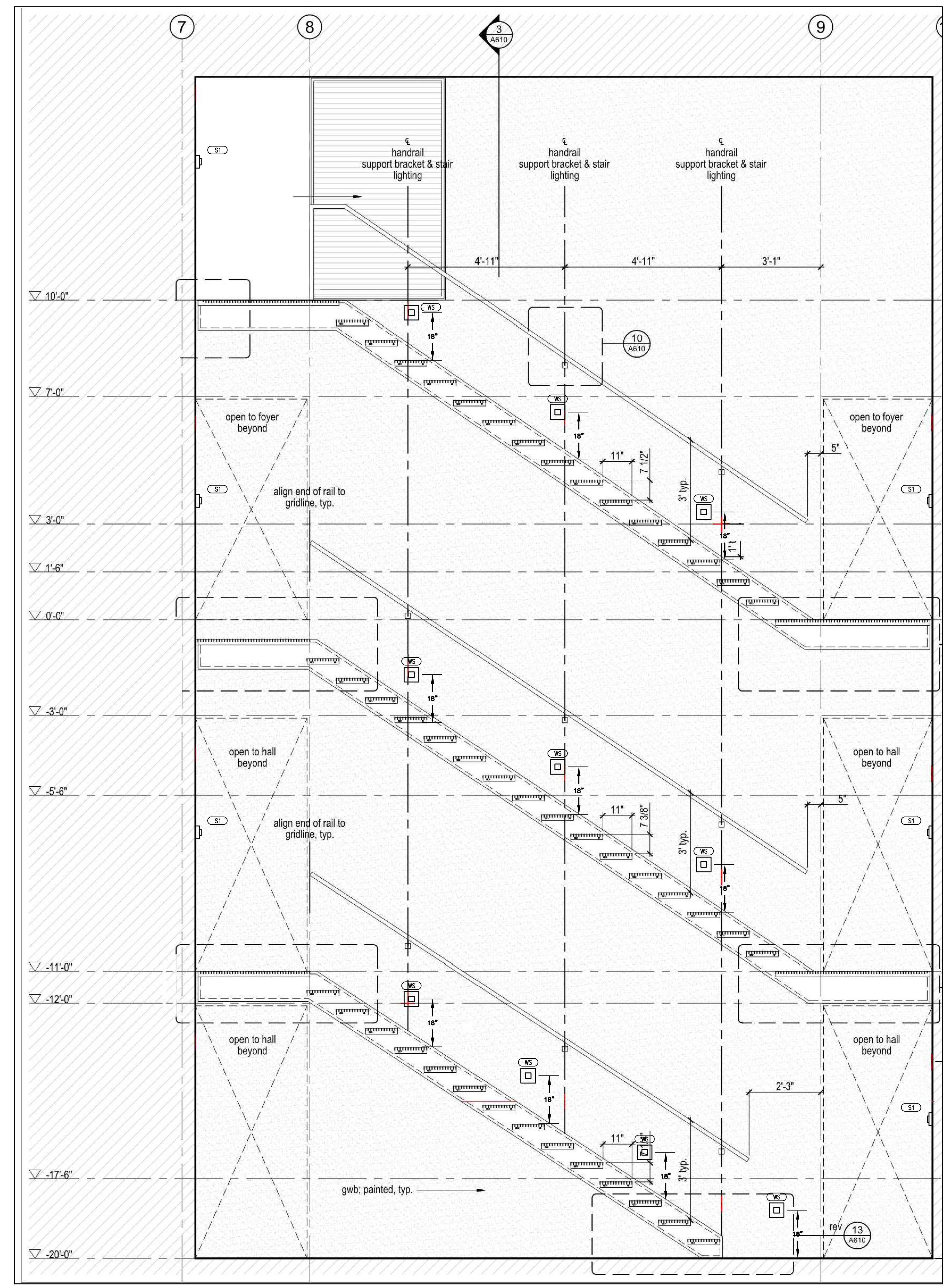
DIAGRAM R001 DEVICE MOUNTING HEIGHTS

NTS



1 ONE-LINE DIAGRAM

NO SCALE



Lot 14 Mountain House

Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple
Architects Limited

2188 Gottingen St.
Halifax, Nova Scotia
Canada B3K 3B4

ph: (902) 429.1867
fax: (902) 429.6276

No.	Description	Date
01	Issued for Coordination	2018.05.08

Revision:

NOTES:

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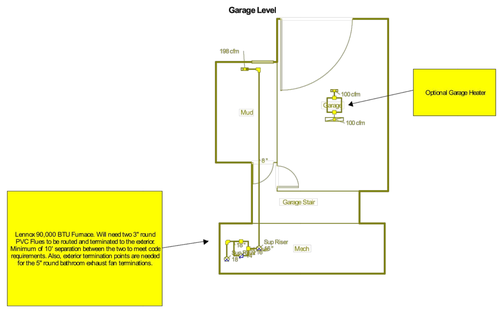
One-line Diagram and Panelboard Schedules

scale: SEE GRAPH
date: 2018-05-11
drawn: BNA
chk'd: CF

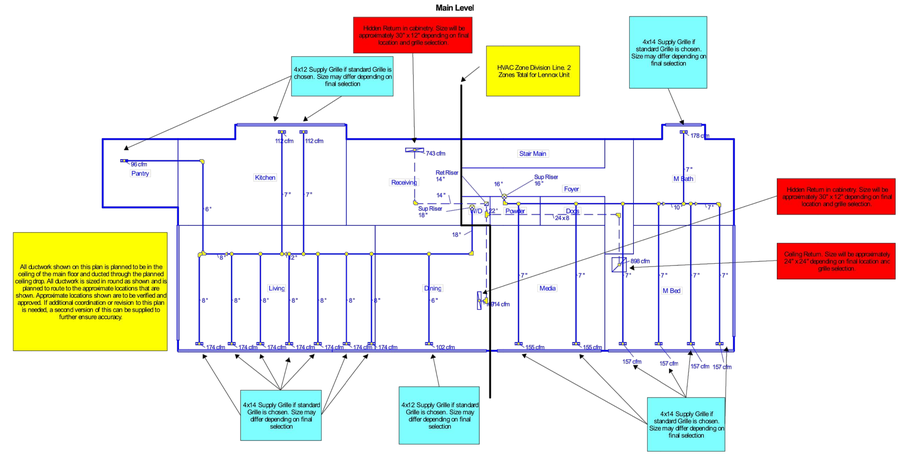
E400

Exhibit A



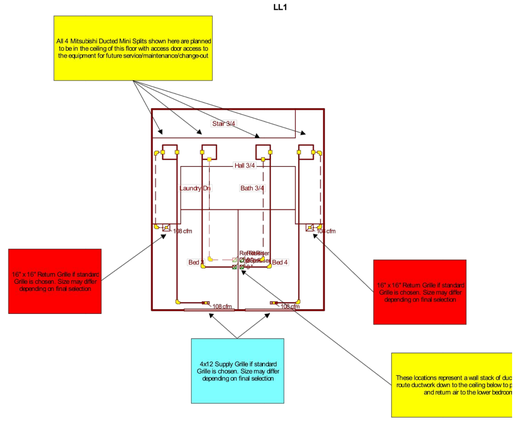
Job #: **Performed by Patrick Wallace for:** Lot 14 Lot 14 Eden, Utah	Park City, Utah	Page 1 Uponor System Design Software 18.0.16 RSU07680 2018-May-18 16:51:42 ... 14\Heat Loss\Lot 14 Updated.rup

203 M200 Duct Design Diagram - Upper Level Floor Plan
Scale 1/8" = 1'-0"



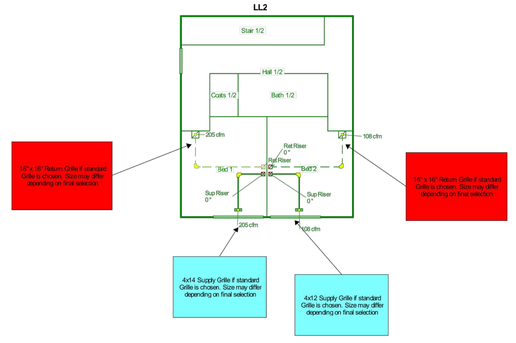
Job #: **Performed by Patrick Wallace for:** Lot 14 Lot 14 Eden, Utah	Park City, Utah	Page 2 Uponor System Design Software 18.0.16 RSU07680 2018-May-18 16:51:42 ... 14\Heat Loss\Lot 14 Updated.rup

202 M200 Duct Design Diagram - Main Level Floor Plan
Scale 1/8" = 1'-0"



Job #: **Performed by Patrick Wallace for:** Lot 14 Lot 14 Eden, Utah	Park City, Utah	Page 3 Uponor System Design Software 18.0.16 RSU07680 2018-May-18 16:51:42 ... 14\Heat Loss\Lot 14 Updated.rup

201 M200 Duct Design Diagram - Lower Level Floor Plan
Scale 1/8" = 1'-0"



Job #: **Performed by Patrick Wallace for:** Lot 14 Lot 14 Eden, Utah	Park City, Utah	Page 4 Uponor System Design Software 18.0.16 RSU07680 2018-May-18 16:51:42 ... 14\Heat Loss\Lot 14 Updated.rup

200 M200 Duct Design Diagram - Ground Level Floor Plan
Scale 1/8" = 1'-0"

Lot 14 Mountain House
Summit Powder Mountain
Eden, Utah

No.	Description	Date
01	DD Issued for Pricing	2018.05.30

Revision:

Duct Design

scale: 1/8" = 1'-0"
date: 2018-05-22
drawn:
chk'd:

M200

Exhibit A

SEE WALL SECTIONS A500 SERIES

6 / A001 Exterior Assemblies
NTS

	Trim		North Wall		East Wall		South Wall		West Wall		Floors		Ceiling		Remarks
	Material	Finish	Material	Finish	Material	Finish	South	Finish	Material	Finish	Material	Finish	Material	Finish	
Ground Level															
Bed 1	WD	PTC2	GWB	PTC1	GWB	PTC1	GWB/GLZ	PTC1	GWB	PTC1	WD / CONC	WD3 / SEALED	GWB	PTC3	Price conc. on floor as option.
Bed 2	WD	PTC2	GWB	PTC1	GWB	PTC1	GWB/GLZ	PTC1	GWB	PTC1	WD / CONC	WD3 / SEALED	GWB	PTC3	Price conc. on floor as option.
Bath 1	WD	PTC2	GWB-W	TILE1	GWB-W	TILE1	GWB-W	TILE1	GWB-W	TILE1	TILE / CONC	TILE3 / SEALED	GWB-W	PTC3	Price conc. on floor as option.
Hall 1	WD	PTC2	GWB	PTC1	GWB	PTC1	GWB-W	PTC1	GWB	PTC1	WD / CONC	WD3 / SEALED	GWB	PTC3	Price conc. on floor as option.
Ski Storage	WD	PTC2	GWB	PTC1	GWB	PTC1	GWB	PTC1	GWB	PTC1	WD / CONC	TILE4 / SEALED	GWB	PTC3	Price conc. on floor as option.
Stair 1	WD	PTC2	GWB	PTC1	GWB	PTC1	STL	STL2	GWB	PTC1	STL	STL1	N/A	N/A	

	Trim		North Wall		East Wall		South Wall		West Wall		Floors		Ceiling		Remarks
	Material	Finish	Material	Finish	Material	Finish	South	Finish	Material	Finish	Material	Finish	Material	Finish	
Lower Level															
Bed 3	WD	PTC2	GWB	PTC1	GWB	PTC1	GWB/GLZ	PTC1	GWB	PTC1	WD	WD3 / CONC	GWB	PTC3	Price conc. on floor as option.
Bed 4	WD	PTC2	GWB	PTC1	GWB	PTC1	GWB/GLZ	PTC1	GWB	PTC1	WD	WD3 / CONC	GWB	PTC3	Price conc. on floor as option.
Bath 2	WD	PTC2	GWB-W	TILE1	GWB-W	TILE1	GWB-W	TILE1	GWB-W	TILE1	TILE	TILE3 / CONC	GWB-W	PTC3	Price conc. on floor as option.
Hall 2	WD	PTC2	GWB	PTC1	GWB	PTC1	GWB-W	PTC1	GWB	PTC1	WD	WD3 / CONC	GWB	PTC3	Price conc. on floor as option.
Stair 2	WD	PTC2	GWB	PTC1	GWB	PTC1	STL	STL2	GWB	PTC1	STL	STL1	N/A	N/A	

	Trim		North Wall		East Wall		South Wall		West Wall		Floors		Ceiling		Remarks
	Material	Finish	Material	Finish	Material	Finish	South	Finish	Material	Finish	Material	Finish	Material	Finish	
Main Level															
Pantry	WD	PTC2	GWB	PTC1	GWB	PTC1	GWB-W	PTC1	GWB	PTC1	WD	WD3	GWB	PTC3	
Kitchen	WD	WD1	WD/GLZ	WD1	WD	WD1	N/A	N/A	WD	WD1	WD	WD3	WD	WD2	
Receiving	WD	WD1	WD/GLZ	WD1	WD	WD1	N/A	N/A	WD	WD1	WD	WD3	WD	WD2	
Water Closet	GWB-W	TILE2	GWB-W	TILE2	GWB-W	TILE2	GWB-W	TILE2	GWB-W	TILE2	TILE	TILE2	GWB-W	PTC3	
Laundry	WD	PTC2	GWB	PTC1	GWB	PTC1	GWB-W	PTC1	GWB	PTC1	WD	WD3	GWB	PTC3	
Master Bath	GWB-W	TILE2	GWB-W	TILE2	GWB-W/G	TILE2	GWB-W	TILE2	GWB-W	TILE2	TILE	TILE2	GWB-W	PTC3	
Living	WD	WD1	N/A	N/A	N/A	N/A	WD/GLZ	WD1	WD/GLZ	WD1	WD	WD3	WD/GLZ	WD2	
Dining	WD	WD1	WD	WD1	WD	WD1	WD/GLZ	WD1	N/A	N/A	WD	WD3	WD/GLZ	WD2	
Foyer	WD	PTC2	GWB	PTC1	GWB	PTC1	GWB-W	PTC1	GWB	PTC1	WD	WD3	GWB	PTC3	
Media	WD	PTC2	GWB	PTC1	GWB	PTC1	GWB-W	PTC1	GWB	PTC1	WD	WD3	GWB	PTC3	
Master Bed	WD	WD1	WD	WD1	WD/GLZ	WD1	WD/GLZ	WD1	WD	WD1	WD	WD3	WD/GLZ	WD2	
Stair 3	WD	PTC2	GWB	PTC1	GWB	PTC1	STL	STL2	GWB	PTC1	STL	STL1	GLZ	N/A	skylight @ ceiling

	Trim		North Wall		East Wall		South Wall		West Wall		Floors		Ceiling		Remarks
	Material	Finish	Material	Finish	Material	Finish	South	Finish	Material	Finish	Material	Finish	Material	Finish	
Upper Level															
Mud	WD	PTC2	GWB	PTC1	GWB	PTC1	GWB-W	PTC1	GWB	PTC1	CONC	SEALED	GWB	PTC3	
Garage	WD	PTC2	GWB	PTC1	GWB	PTC1	GWB-W	PTC1	GWB	PTC1	CONC	SEALED	GWB	PTC3	

Legend

N/A	not applicable
GWB	gypsum wall board per spec.
GWB-W	waterproof sheathing as per spec.
CONC	concrete
TILE	ceramic tile
WD	wood
GLZ	glazing
STL	steel

Finish Types

Paint	PTC1 - Benjamin Moore Decorators White - Egg Shell Finish
	PTC2 - Benjamin Moore Decorators White - Semi Gloss Finish
	PTC3 - Benjamin Moore Decorators White - Flat Finish (Ceilings Only)
Tile	TILE1 - white subway tile 4x16
	TILE2 - white marble tile 12x24
	TILE3 - white floor tile TBD
	TILE4 - slate floor tile TBD
Wood Cladding	WD1 - 1x2 red cedar shiplap, clear sealant, satin
	WD2 - 1x2 red cedar gapped boards, clear sealant, satin
	WD3 - 1x6 engineered hardwood flooring on concrete topping, prefinished
Concrete	SEALED - sealed concrete
Steel	STL1 - open bar grating stair treads/landings, weathering steel finish, clear sealant
	STL2 - wood screen; steel angle frame, weathering steel finish, clear sealant; 1x2 horizontal cedar board infill

Notes

1. "North" is top of drawing page for wall designations
2. All wood surface cladding in bathrooms + mudroom to receive clear sealant, satin

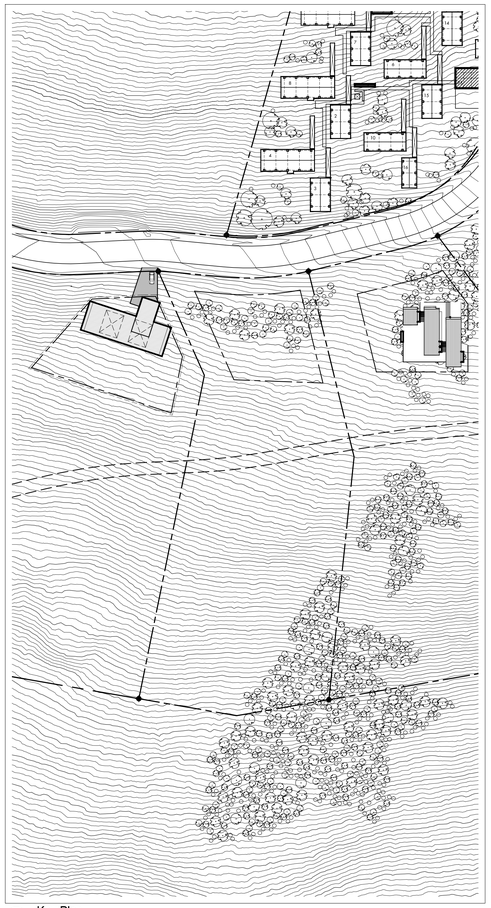
5 / A001 Room Finish Schedule
NTS

TYPE	INTERIOR WALL TYPE DESCRIPTION
P1	6 1/2" + 1/2" GWB, PTD + 2x6 studs @ 16" o.c. + 5 1/2" acoustic batt in cavity + 1/2" GWB, PTD
P1A	6 1/2" + 1/2" GWB, PTD + 2x6 studs @ 16" o.c. + 1/2" GWB, PTD
P2	7 1/8" + 1/2" GWB, PTD + 2x6 studs @ 16" o.c. + 5 1/2" acoustic batt in cavity + 5/8" tile backer board + tile; TBD
P3	8 1/2" + 1x2 horizontal red cedar shiplap + 2x4 staggered studs @ 16" o.c. on 2x8 baseplate + 7-1/4" acoustic batt in cavity + 1/2" GWB, PTD
P4	not in use
P5	9 1/2" + 1x2 horizontal red cedar shiplap + 2x4 staggered studs @ 16" o.c. on 2x8 baseplate + 7-1/4" acoustic batt in cavity + 1/2" steel channel @ 16" o.c. + 2 X 1/2" GWB, PTD
P5A	9 1/2" + 1x2 horizontal red cedar shiplap + 2x4 staggered studs @ 16" o.c. on 2x8 baseplate + 1/2" steel channel @ 16" o.c. + 2 X 1/2" GWB, PTD
P6	9 1/4" + 1/2" GWB, PTD + 2x4 staggered studs @ 16" o.c. on 2x8 baseplate + 7-1/4" acoustic batt in cavity + 1/2" steel channel @ 16" o.c. + 2 X 1/2" GWB, PTD
P7	9 7/8" + tile; TBD + 5/8" tile backer board + 2x4 staggered studs @ 16" o.c. on 2x8 baseplate + 7-1/4" acoustic batt in cavity + 1/2" steel channel @ 16" o.c. + 2 X 1/2" GWB, PTD
P8	9 1/2" + tile; TBD + 5/8" tile backer board + 2x4 staggered studs @ 16" o.c. on 2x8 baseplate + 7-1/4" acoustic batt in cavity + 5/8" tile backer board + tile; TBD
P9	9 1/2" + tile; TBD + 5/8" tile backer board + 2x4 studs @ 16" o.c. + 3 1/2" acoustic batt in cavity + airspace + 3 1/2" acoustic batt in cavity + 2x4 studs @ 16" o.c. + 1/2" GWB, PTD
P10	not in use
P11	1'-0" + 1/2" GWB, PTD + 2x4 studs @ 16" o.c. + 3 1/2" acoustic batt in cavity + airspace + 3 1/2" acoustic batt in cavity + 2x4 studs @ 16" o.c. + 1/2" GWB, PTD
P12	10" + 1/2" GWB, PTD + 1/2" steel channel + 8" concrete as per Structural + 1/2" steel channel + 1/2" GWB, PTD
P13	10 1/8" + tile; TBD + 5/8" tile backer bo + 8" concrete as per Structural + 1/2" steel channel + 1/2" GWB, PTD
P14	not in use
P15	not in use

4 / A001 Interior Partition Types
NTS

TYPE	SHIPLAP CLADDING PROFILE
1	1 3/4" 1 3/4" 3/4" 3/4" 3/8" 1/2" 4 1/2" + 1X2 horizontal shiplap boards; **clear** western red cedar
2	3 3/4" 3/4" 3/4" 3/8" 1/2" 4" + 1X4 horizontal shiplap boards; **select tight knot** western red cedar
3	3/4" 3 1/2" + 1X4 horizontal boards; **select tight knot** western red cedar
4	3/4" 7 1/4" + 1X8 vertical & horizontal boards; **select tight knot** western red cedar boards
5	3/4" 1 3/4" + 1X2 horizontal boards; **clear** western red cedar

3 / A001 Cladding Profiles
NTS



2 / A001 Key Plan
Scale 1/64" = 1'-0"

AD	AREA DRAIN	MO	MASONRY OPENING
ADJ	ADJACENT	MECH	MECHANICAL
AFF	ABOVE FINISHED FLOOR	MEMBR	MEMBRANE
ALUM	ALUMINUM	MIN	MINIMUM
ANOD	ANODIZED		
BSMT	BASEMENT	MRGWB	MOISTURE-RESISTANT GYPSUM WALL BOARD
BYOND	BEYOND		
BOT	BOTTOM	MTL	METAL
B/W	BETWEEN	NIC	NOT IN CONTRACT
CHNL	CHANNEL	NOM	NOMINAL
CJ	CONTROL JOINT	OC	ON CENTER
CLG	CEILING	OH	OPPOSITE HAND
CLR	CLEAR	OZ	OUNCE
CMU	CONCRETE MASONRY UNIT	PCC	PRE-CAST CONCRETE
COF	CENTERLINE OF WOOD FRAMING	PLYD	PLYWOOD
COL	COLUMN	PT	PRESSURE TREATED
CONC	CONCRETE	PTD	PAINTED
CONT	CONTINUOUS	PVC	POLYVINYL CHLORIDE
CPT	CARPET	RCP	REFLECTED CEILING PLAN
CT	CERAMIC TILE	RD	ROOF DRAIN
DBL	DOUBLE	REQD	REQUIRED
DIA	DIAMETER	REV	REVERSE
DIMS	DIMENSIONS	RM	ROOM
DN	DOWN	SIM	SIMILAR
DR	DOOR	SPEC	SPECIFIED OR SPECIFICATION
DWG	DRAWING	SPK	SPRINKLER
EA	EACH	ST STL	STAINLESS STEEL
EL	ELEVATION	STC	SOUND TRANSMISSION COEFFICIENT
ELEC	ELECTRICAL	STL	STEEL
ELEV	ELEVATOR / ELEVATION	STRUCT	STRUCTURAL
EQ	EQUAL	TELE	TELEPHONE
FOC	FACE OF CONCRETE	TLT	TOILET
FOF	FACE OF WOOD FRAMING	TO	TOP OF
FDN	FOUNDATION	TOC	TOP OF CONCRETE
GA	GAUGE	TOS	TOP OF STEEL
GALV	GALVANIZED	TP	TOILET PAPER DISPENSER
GWB	GYPSUM WALL BOARD	T/D	TELEPHONE/DATA
HC	HOLLOW CORE	TYP	TYPICAL
HI	HIGH	UON	UNLESS OTHERWISE NOTED
HM	HOLLOW METAL	U/S	UNDERSIDE
HP	HIGH POINT	VIF	VERIFY IN FIELD
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING	VP	VISION PANEL
		TYP	TYPICAL
ILO	IN LIEU OF	VIF	VERIFY IN FIELD
INSUL	INSULATED	W/	WITH
INT	INTERIOR	WD	WOOD
LO	LOW	FOC	FACE OF CONCRETE
MAX	MAXIMUM	FOF	FACE OF FRAME

1 / A001 Abbreviations
NTS

Lot 14 Mountain House

Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple Architects Limited
2188 Gottingen St
Halifax, Nova Scotia
Canada B3K 3B4
ph: (902) 429 1867
fax: (902) 429 8276

True north

construction north

No.	Description	Date
02	DD Issued for Pricing	2018.05.30
01	Issued for Coordination	2018.05.08

Revision:

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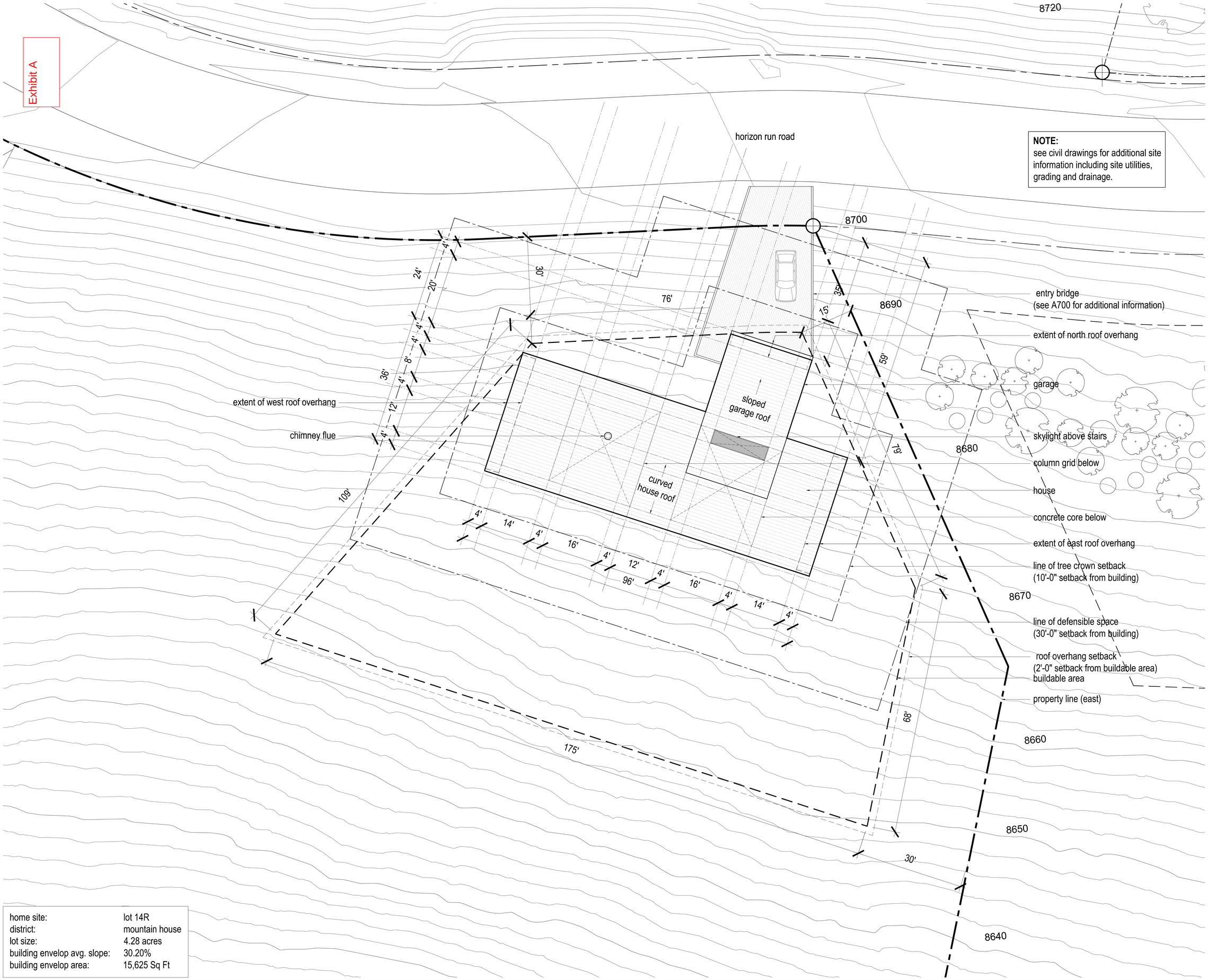
Abbreviations, Key Plan & Partition Types

scale: AS NOTED
date: 2018-02-26
drawn: IF
chk'd: BML

A001

Exhibit A



NOTE:
see civil drawings for additional site information including site utilities, grading and drainage.

home site:	lot 14R
district:	mountain house
lot size:	4.28 acres
building envelop avg. slope:	30.20%
building envelop area:	15,625 Sq Ft

1 / A100 Site Plan
Scale 1/8" = 1'-0"

Lot 14 Mountain House

Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple Architects Limited
2188 Gottingen St
Halifax, Nova Scotia
Canada B3K 3B4
ph: (902) 429.1867
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01	Issued for Coordination	2018.05.08

Revision:

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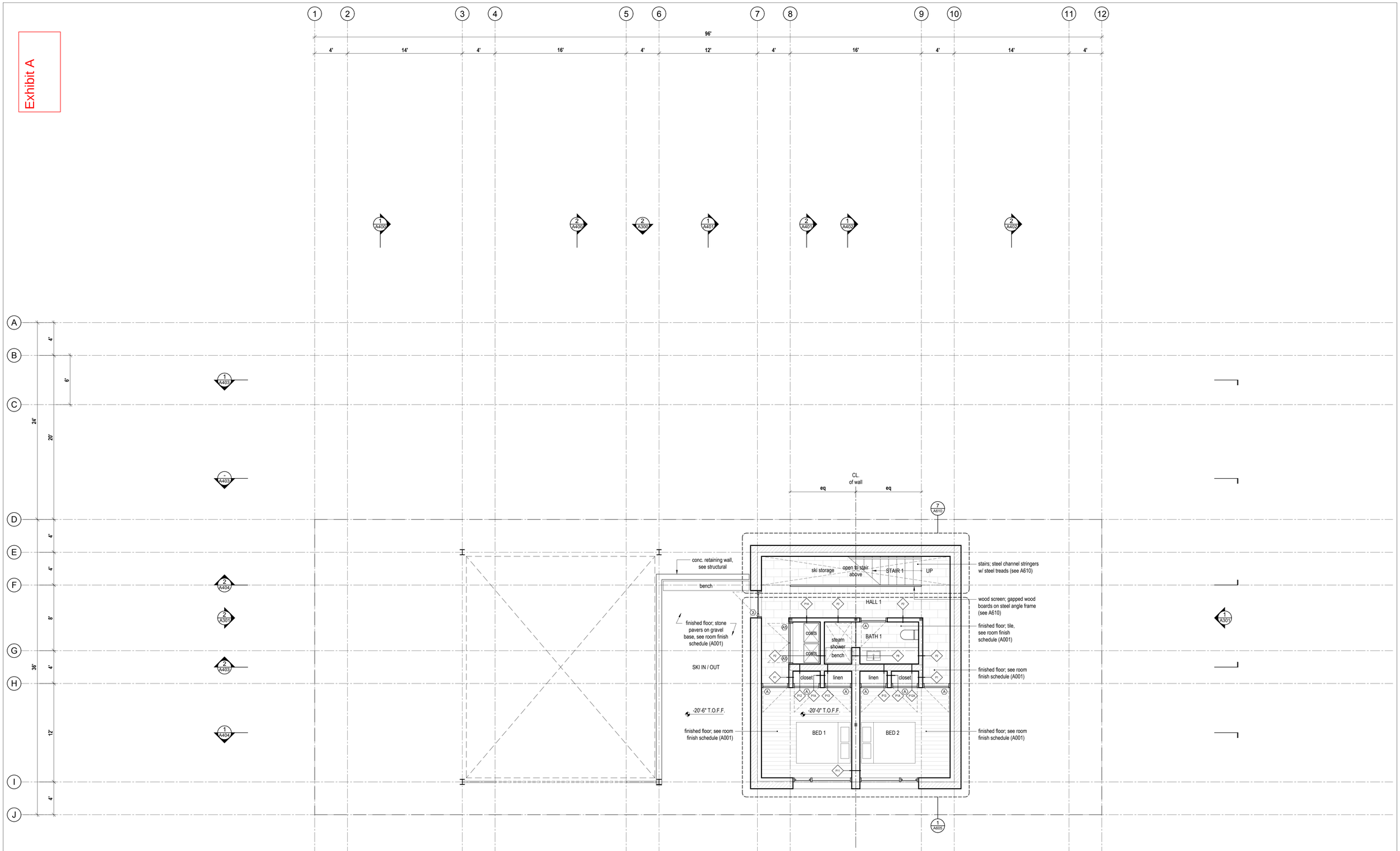
Site Plan

scale: 1/8" = 1'-0"
date: 2018-02-26
drawn: IF
chk'd: BML

A100

Exhibit A



1 A200 Ground Floor Plan
Scale 1/4" = 1'-0"

LEGEND

CENTERLINE	℄
DOOR TYPE	X
PARTITION TYPE	PX
REINFORCED CONC. AS PER STRUCT.	

SQUARE FOOTAGES (ANSI Z765-2003)

GROUND FLOOR	725
LOWER FLOOR	725
MAIN FLOOR	2600
TOTAL	4100
GARAGE	660
DECK	245

Lot 14 Mountain House

Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple

Architects Limited

2188 Gottingen St
Halifax, Nova Scotia
Canada B3K 3B4

ph: (902) 429 1867
fax: (902) 429 6276

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Revision:

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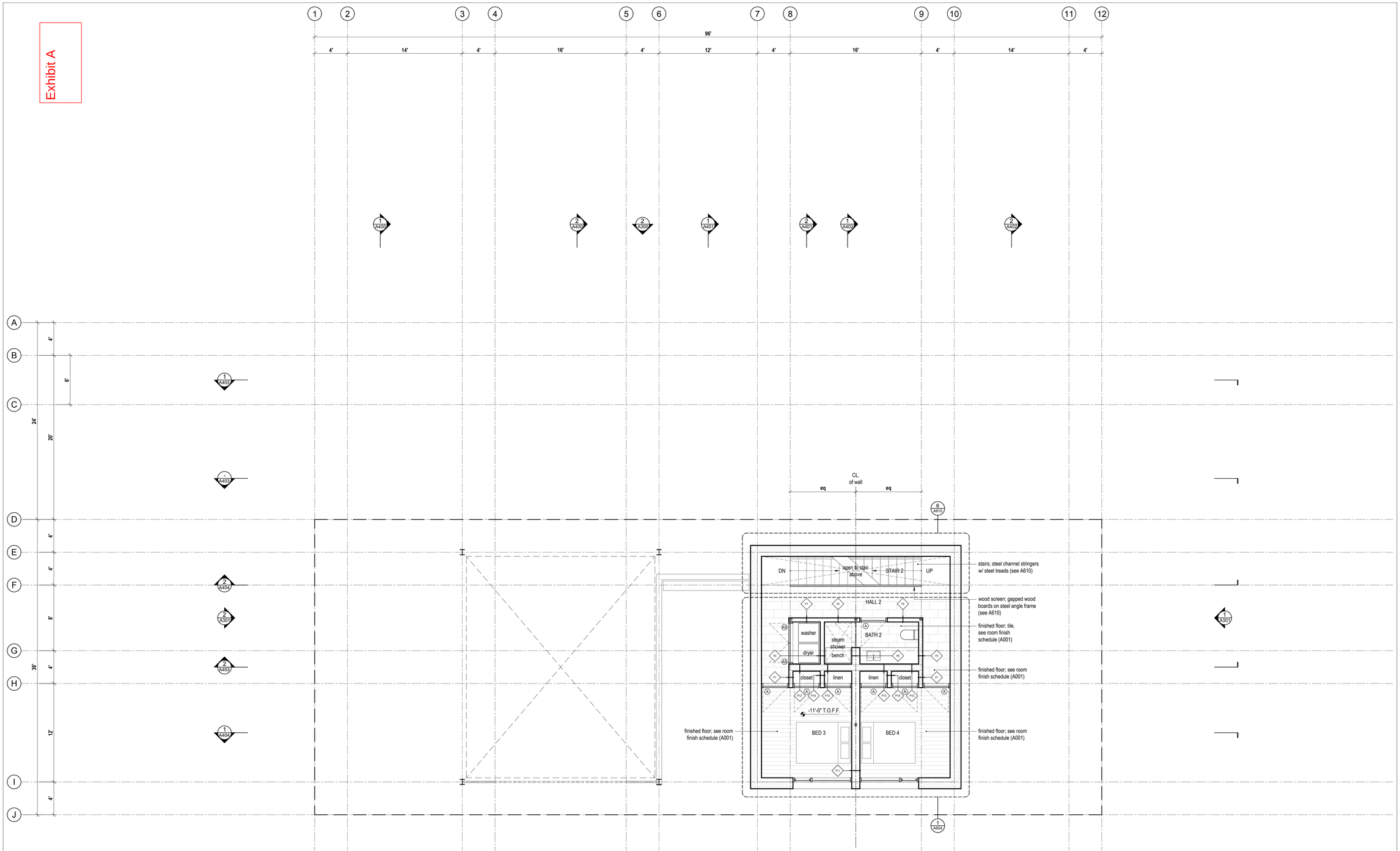
SHOP DRAWINGS:
Submit shop drawings to the Architect and Engineer for approval prior to manufacture of prefabricated elements of the building.

Floor Plans

scale: 1/4" = 1'-0"
date: 2018-02-20
drawn: MB
chk'd: BML

A200

Exhibit A



1 A201 Lower Floor Plan
Scale 1/4" = 1'-0"

LEGEND

CENTERLINE	℄
DOOR TYPE	X
PARTITION TYPE	PX
REINFORCED CONC. AS PER STRUCT.	

SQUARE FOOTAGES (ANSI Z765-2003)

GROUND FLOOR	725
LOWER FLOOR	725
MAIN FLOOR	2600
TOTAL	4100
GARAGE	660
DECK	245

Lot 14 Mountain House

Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple

Architects Limited

2188 Gottingen St
Halifax, Nova Scotia
Canada B3K 3B4

ph: (902) 429 1867
fax: (902) 429 6276

No.	Description	Date
02	DD Issued for Pricing	2018.05.30
01	Issued for Coordination	2018.05.08

Revision:

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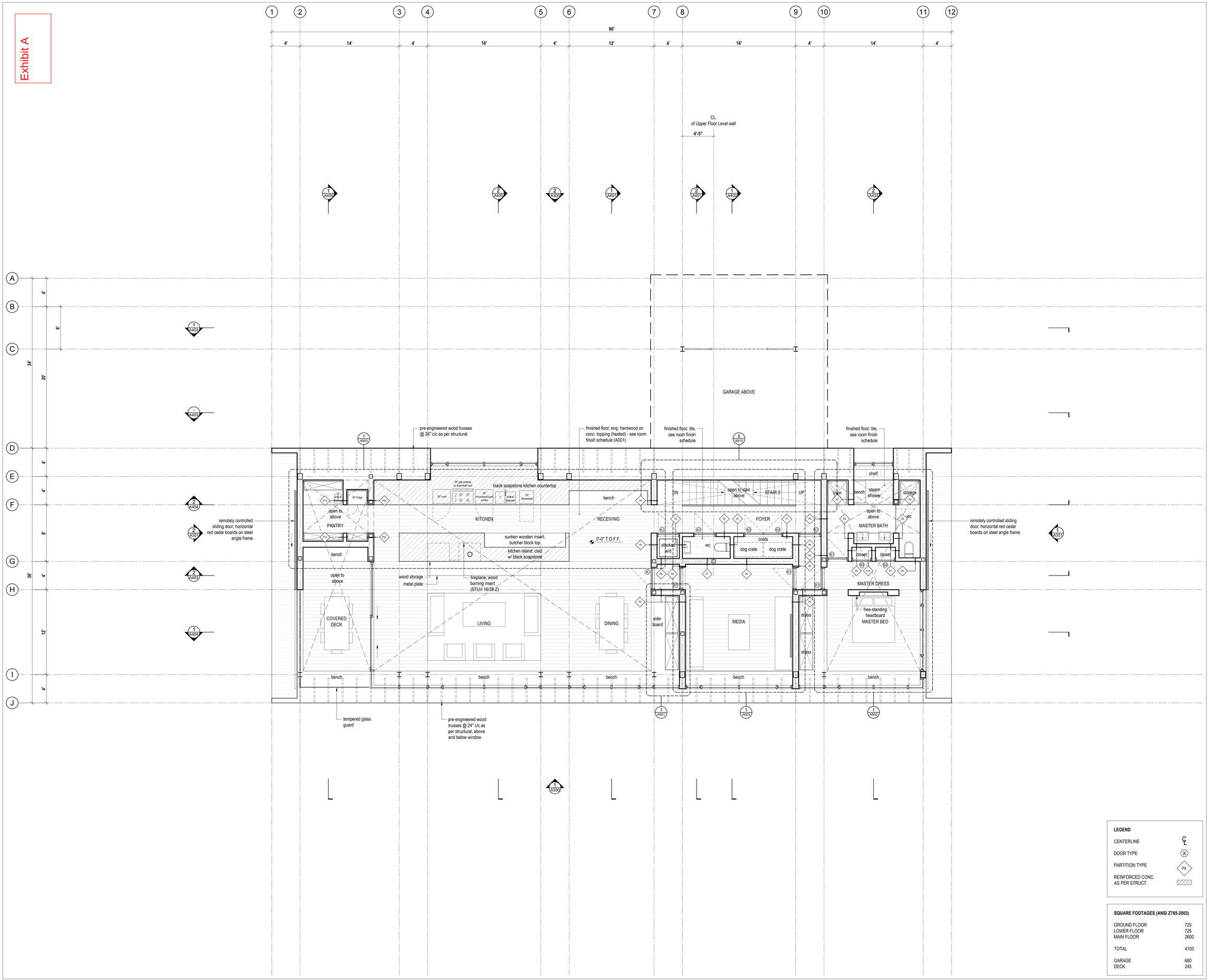
SHOP DRAWINGS:
Submit shop drawings to the Architect and Engineer for approval prior to manufacture of prefabricated elements of the building.

Floor Plans

scale: 1/4" = 1'-0"
date: 2018-02-20
drawn: MB
chk'd: BML

A201

Exhibit A



1 A202 Main Floor Plan
Scale 1/4" = 1'-0"

Lot 14 Mountain House

Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple

Architects Limited

2188 Gottingen St
Halifax, Nova Scotia
Canada B3K 3B4

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SHOP DRAWINGS:
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LEGEND

CENTERLINE	CL
DOOR TYPE	X
PARTITION TYPE	PX
REINFORCED CONC. AS PER STRUCT.	

SQUARE FOOTAGES (ANSI Z765-2003)

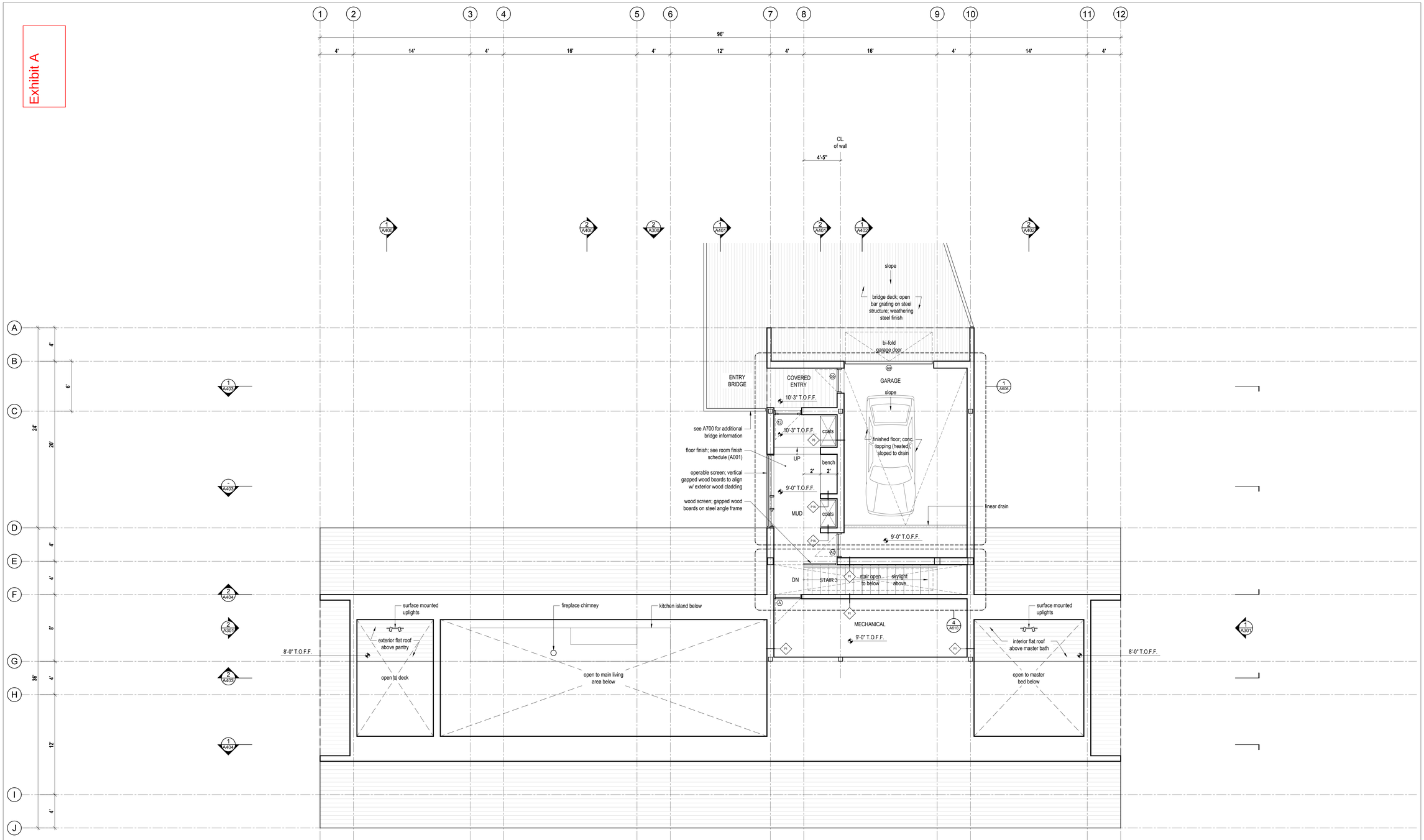
GROUND FLOOR	725
LOWER FLOOR	725
MAIN FLOOR	2600
TOTAL	4100
GARAGE	660
DECK	245

Floor Plans

scale: 1/4" = 1'-0"
date: 2018-02-20
drawn: MB
chk'd: BML

A202

Exhibit A



1 A203 Upper Floor Plan
Scale 1/4" = 1'-0"

LEGEND

CENTERLINE	℄
DOOR TYPE	X
PARTITION TYPE	PX
REINFORCED CONC. AS PER STRUCT.	

SQUARE FOOTAGES (ANSI Z765-2003)

GROUND FLOOR	725
LOWER FLOOR	725
MAIN FLOOR	2600
TOTAL	4100
GARAGE	660
DECK	245

Lot 14 Mountain House

Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple
Architects Limited
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Halifax, Nova Scotia
Canada B3K 3B4
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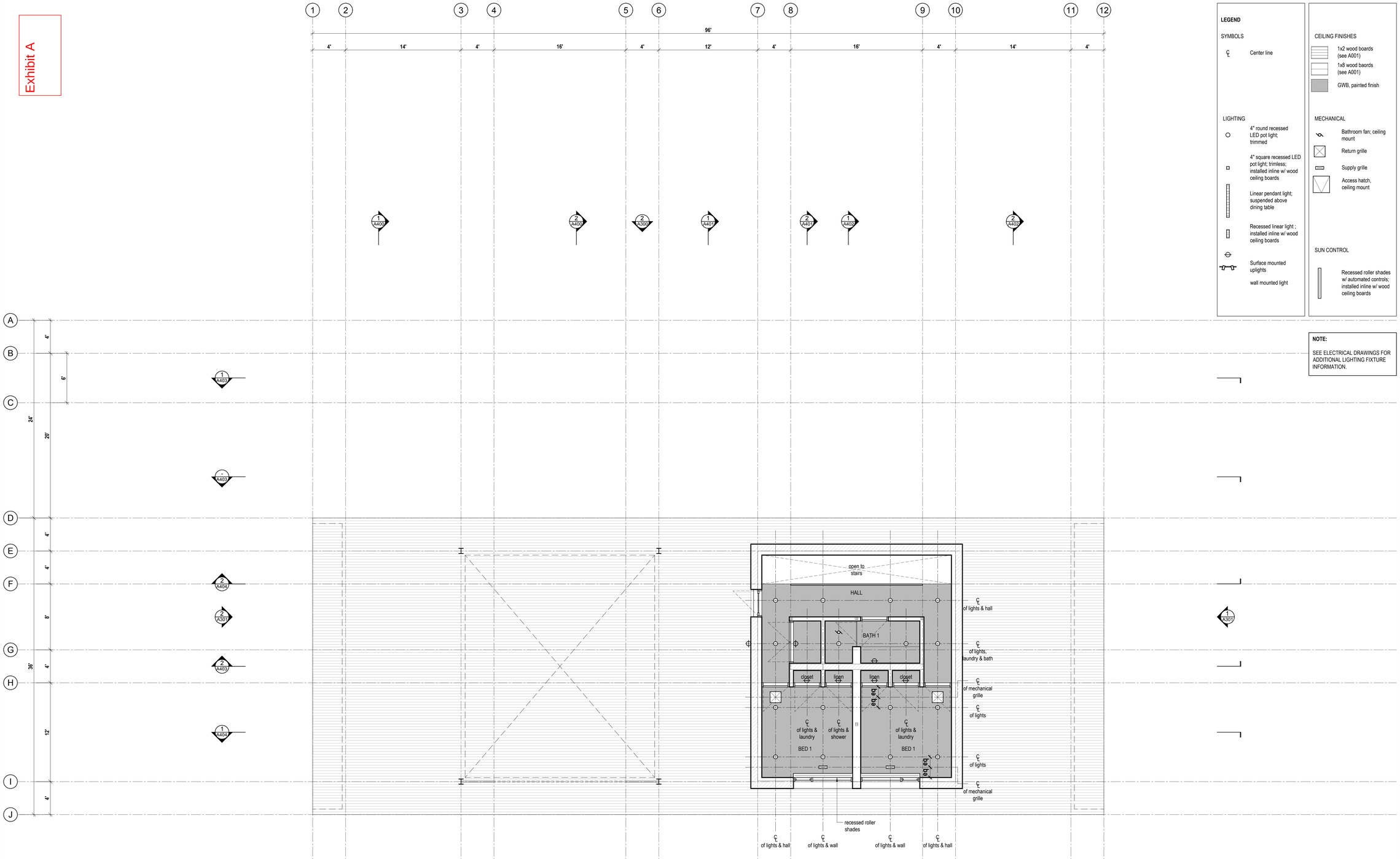
SHOP DRAWINGS:
Submit shop drawings to the Architect and Engineer for approval prior to manufacture of prefabricated elements of the building.

Floor Plans

scale: 1/4" = 1'-0"
date: 2018-02-20
drawn: MB
chk'd: BML

A203

Exhibit A



LEGEND

SYMBOLS

- Center line

LIGHTING

- 4" round recessed LED pot light; trimmed
- 4" square recessed LED pot light; trimless; installed inline w/ wood ceiling boards
- Linear pendant light; suspended above dining table
- Recessed linear light ; installed inline w/ wood ceiling boards
- Surface mounted uplights
- wall mounted light

CEILING FINISHES

- 1x2 wood boards (see A001)
- 1x8 wood baords (see A001)
- GWB, painted finish

MECHANICAL

- Bathroom fan; ceiling mount
- Return grille
- Supply grille
- Access hatch, ceiling mount

SUN CONTROL

- Recessed roller shades w/ automated controls; installed inline w/ wood ceiling boards

NOTE:

SEE ELECTRICAL DRAWINGS FOR ADDITIONAL LIGHTING FIXTURE INFORMATION.

1 Reflected Ceiling Plan - Ground Floor
A204 Scale 1/4" = 1'-0"

Lot 14 Mountain House

Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple
Architects Limited

2188 Gottingen St
Halifax, Nova Scotia
Canada B3K 3B4

ph: (902) 429.1867
fax: (902) 429.6276

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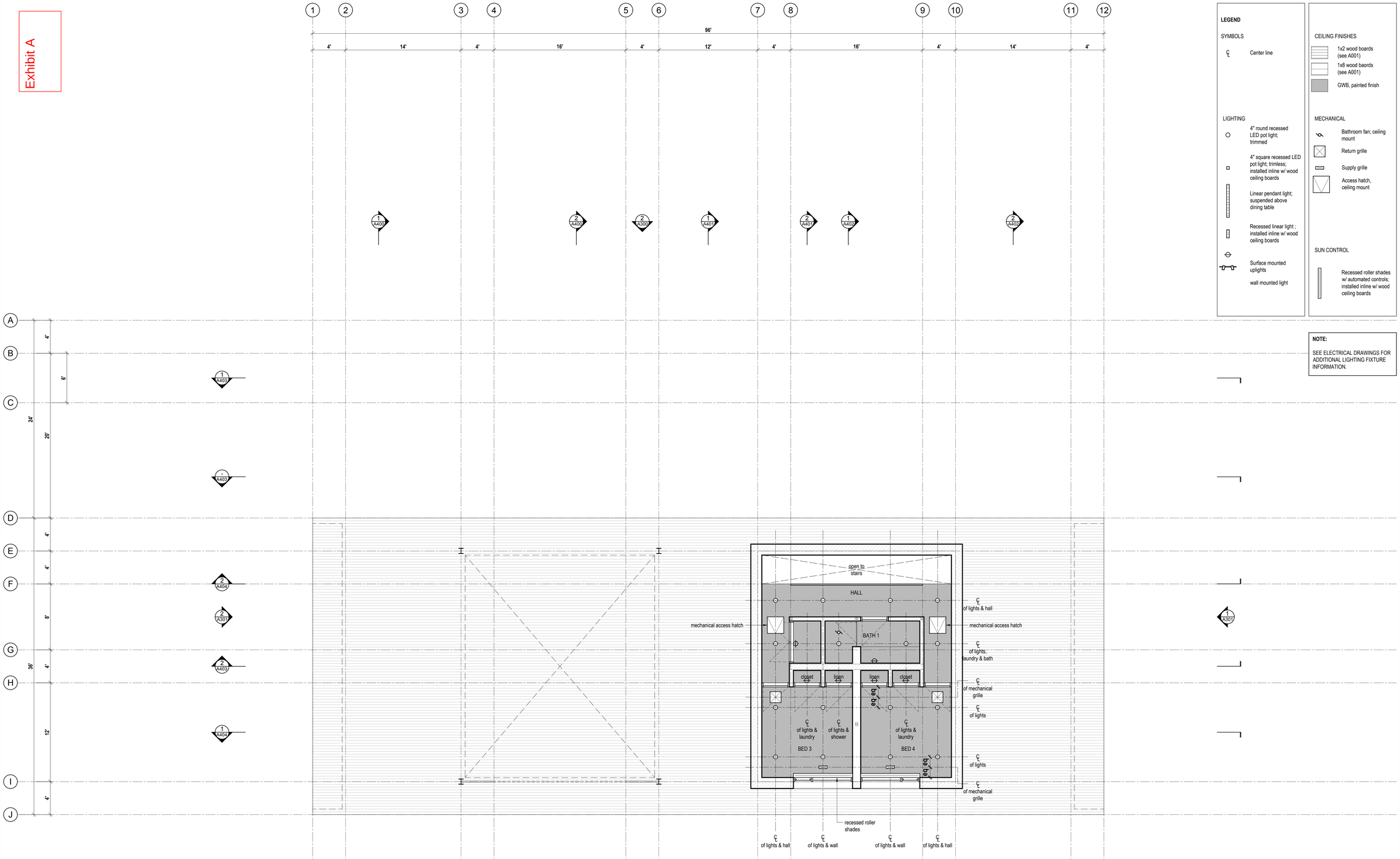
SHOP DRAWINGS:
Submit shop drawings to the Architect and Engineer for approval prior to manufacture of prefabricated elements of the building.

Reflected Ceiling Plans

scale: 1/4" = 1'-0"
date: 2018-04-10
drawn: MB
chk'd: BML

A204

Exhibit A



LEGEND

SYMBOLS

- ℄ Center line

LIGHTING

- 4" round recessed LED pot light; trimmed
- 4" square recessed LED pot light; trimless; installed inline w/ wood ceiling boards
- Linear pendant light; suspended above dining table
- Recessed linear light ; installed inline w/ wood ceiling boards
- Surface mounted uplights
- wall mounted light

CEILING FINISHES

- 1x2 wood boards (see A001)
- 1x8 wood baords (see A001)
- GWB, painted finish

MECHANICAL

- Bathroom fan; ceiling mount
- Return grille
- Supply grille
- Access hatch, ceiling mount

SUN CONTROL

- Recessed roller shades w/ automated controls; installed inline w/ wood ceiling boards

NOTE:

SEE ELECTRICAL DRAWINGS FOR ADDITIONAL LIGHTING FIXTURE INFORMATION.

1 A205 Reflected Ceiling Plan - Lower Floor
Scale 1/4" = 1'-0"

Lot 14 Mountain House
Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple
Architects Limited
2188 Gottingen St
Halifax, Nova Scotia
Canada B3K 3B4
ph: (902) 429.1867
fax: (902) 429.6276

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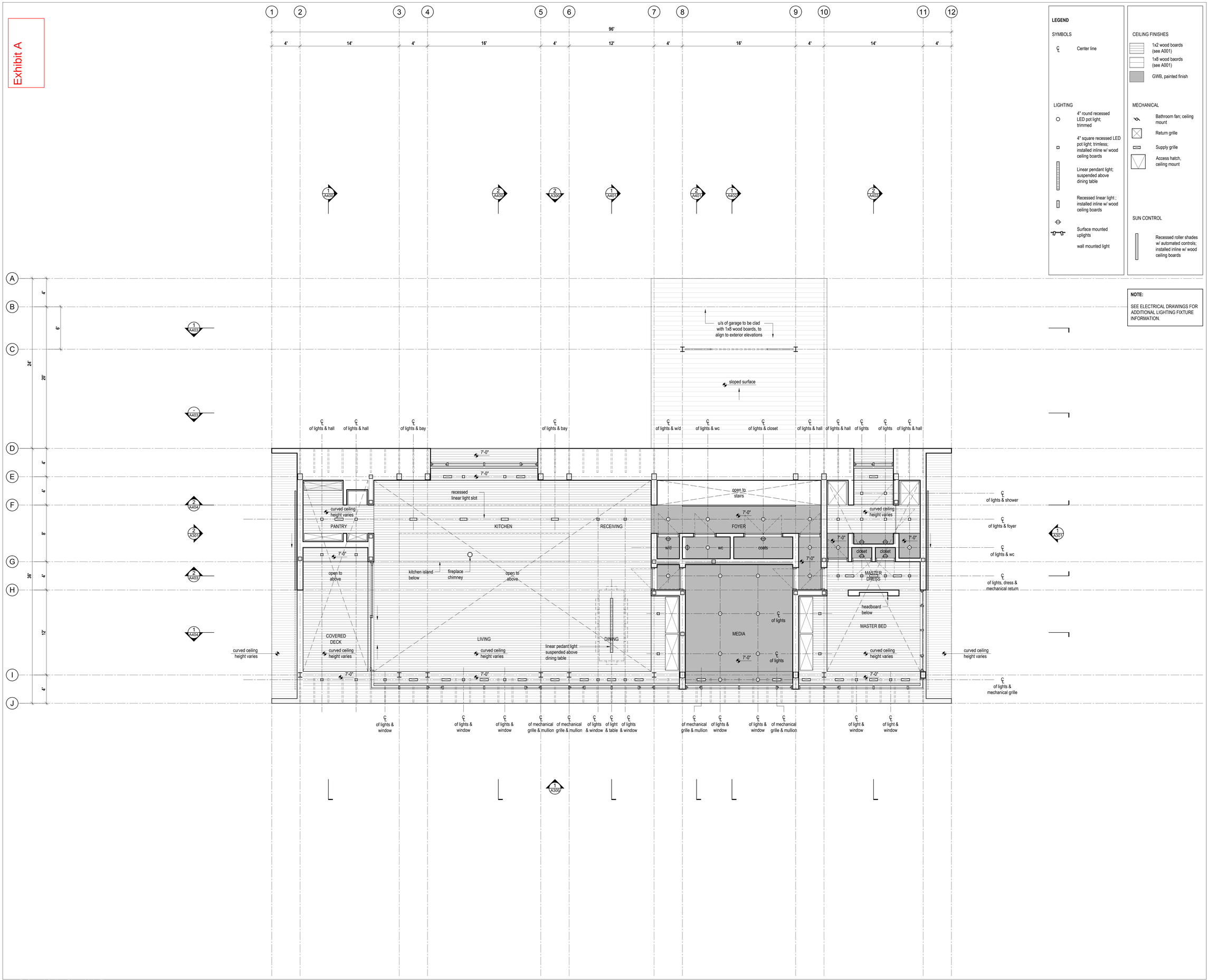
SHOP DRAWINGS:
Submit shop drawings to the Architect and Engineer for approval prior to manufacture of prefabricated elements of the building.

Reflected Ceiling Plans

scale: 1/4" = 1'-0"
date: 2018-04-10
drawn: MB
chk'd: BML

A205

Exhibit A



1 A206 Reflected Ceiling Plan - Main Floor
Scale 1/4" = 1'-0"

LEGEND

SYMBOLS

- Center line

LIGHTING

- 4" round recessed LED pot light; trimmed
- 4" square recessed LED pot light; trimless; installed inline w/ wood ceiling boards
- Linear pendant light; suspended above dining table
- Recessed linear light ; installed inline w/ wood ceiling boards
- Surface mounted uplights
- wall mounted light

CEILING FINISHES

- 1x2 wood boards (see A001)
- 1x8 wood baords (see A001)
- GWB, painted finish

MECHANICAL

- Bathroom fan; ceiling mount
- Return grille
- Supply grille
- Access hatch, ceiling mount

SUN CONTROL

- Recessed roller shades w/ automated controls; installed inline w/ wood ceiling boards

NOTE:

SEE ELECTRICAL DRAWINGS FOR ADDITIONAL LIGHTING FIXTURE INFORMATION.

Lot 14 Mountain House

Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple

Architects Limited

2188 Gottingen St
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ph: (902) 429 1867
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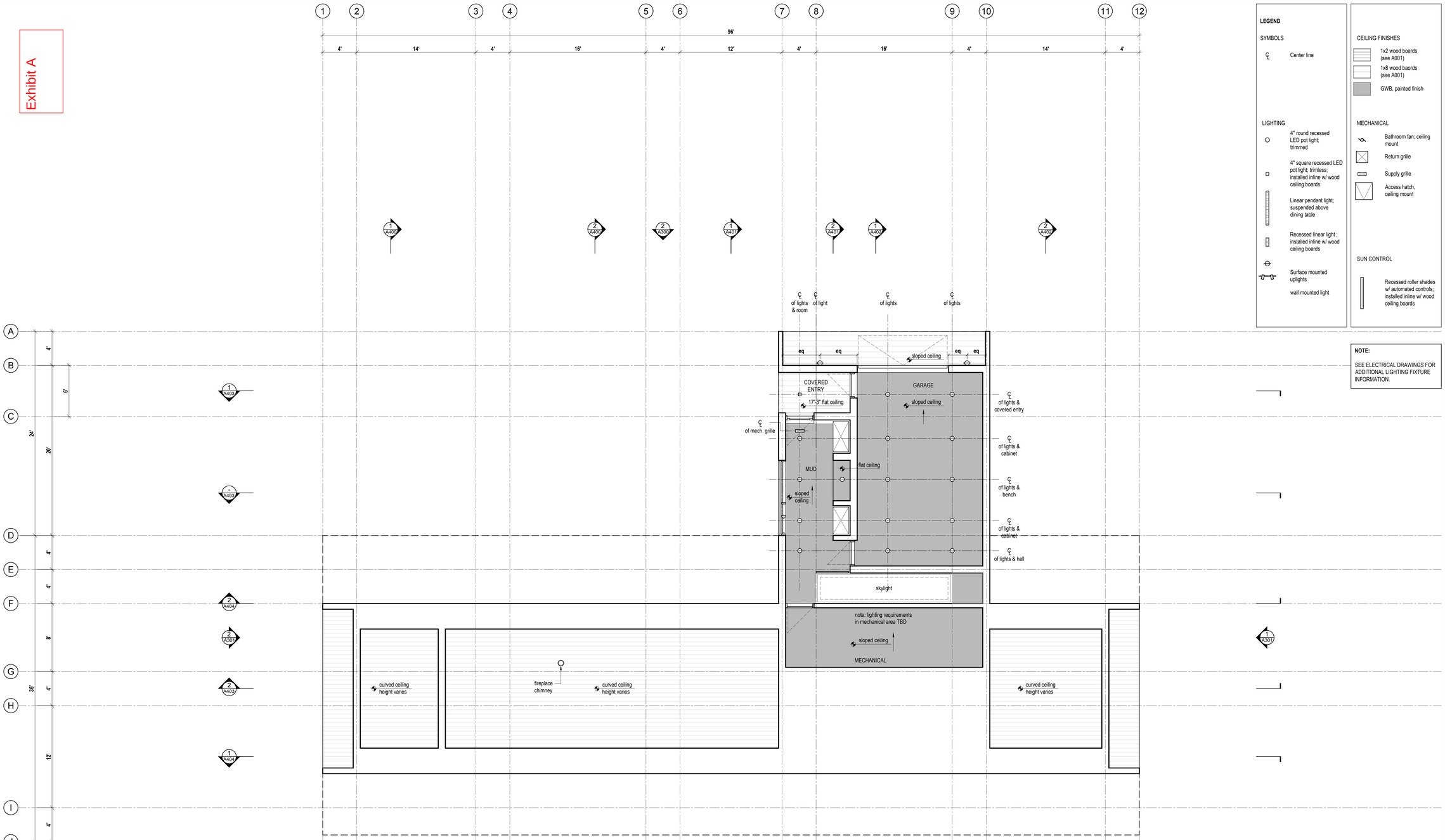
SHOP DRAWINGS:
Submit shop drawings to the Architect and Engineer for approval prior to manufacture of prefabricated elements of the building.

Reflected Ceiling Plans

scale: 1/4" = 1'-0"
date: 2018-04-10
drawn: MB
chk'd: BML

A206

Exhibit A



LEGEND

SYMBOLS

℄ Center line

LIGHTING

- 4" round recessed LED pot light; trimmed
- 4" square recessed LED pot light; trimless; installed inline w/ wood ceiling boards
- Linear pendant light; suspended above dining table
- Recessed linear light ; installed inline w/ wood ceiling boards
- Surface mounted uplights
- wall mounted light

CEILING FINISHES

- 1x2 wood boards (see A001)
- 1x8 wood baords (see A001)
- GWB, painted finish

MECHANICAL

- Bathroom fan; ceiling mount
- Return grille
- Supply grille
- Access hatch, ceiling mount

SUN CONTROL

- Recessed roller shades w/ automated controls; installed inline w/ wood ceiling boards

NOTE:

SEE ELECTRICAL DRAWINGS FOR ADDITIONAL LIGHTING FIXTURE INFORMATION.

1 A207 Reflected Ceiling Plan - Upper Floor
Scale 1/4" = 1'-0"

Lot 14 Mountain House
Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple
Architects Limited
2188 Gottingen St
Halifax, Nova Scotia
Canada B3K 3B4
ph: (902) 429.1867
fax: (902) 429.6276

No.	Description	Date
Revision:		
01	Issued for Coordination	2018.05.08
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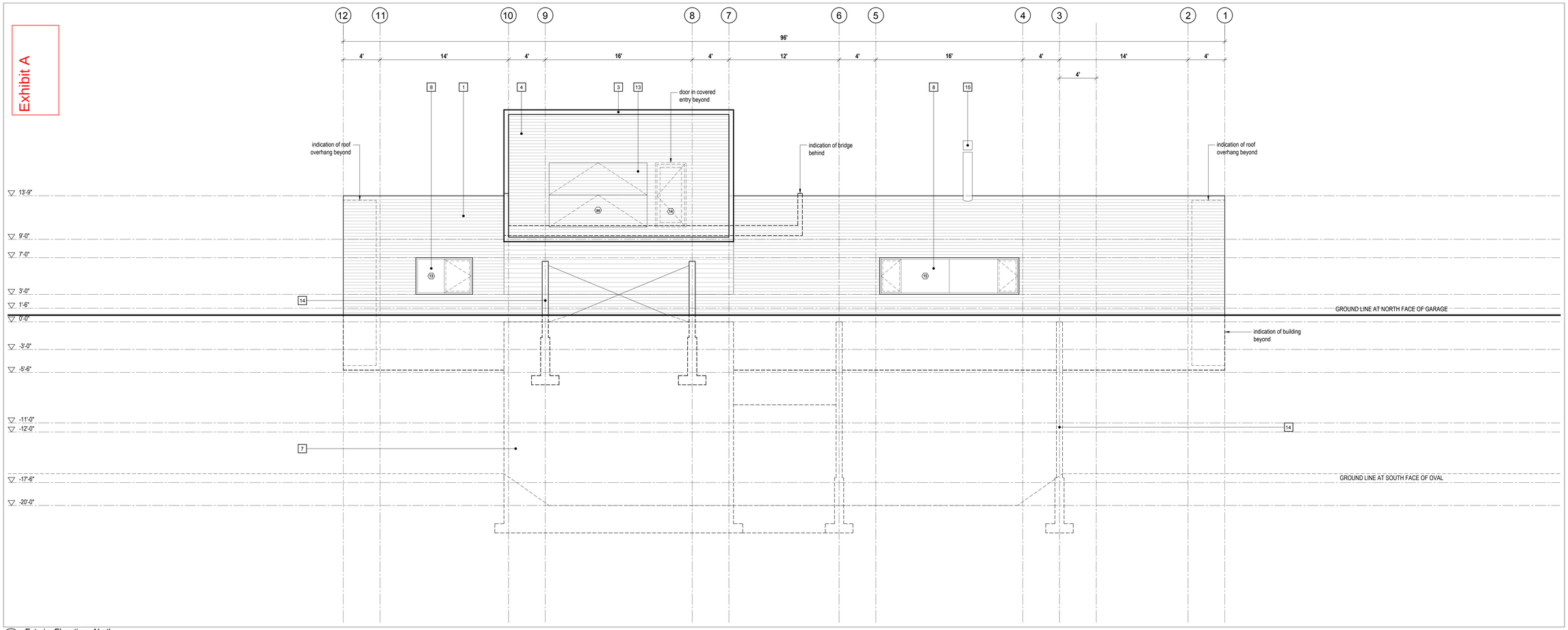
Reflected Ceiling Plans

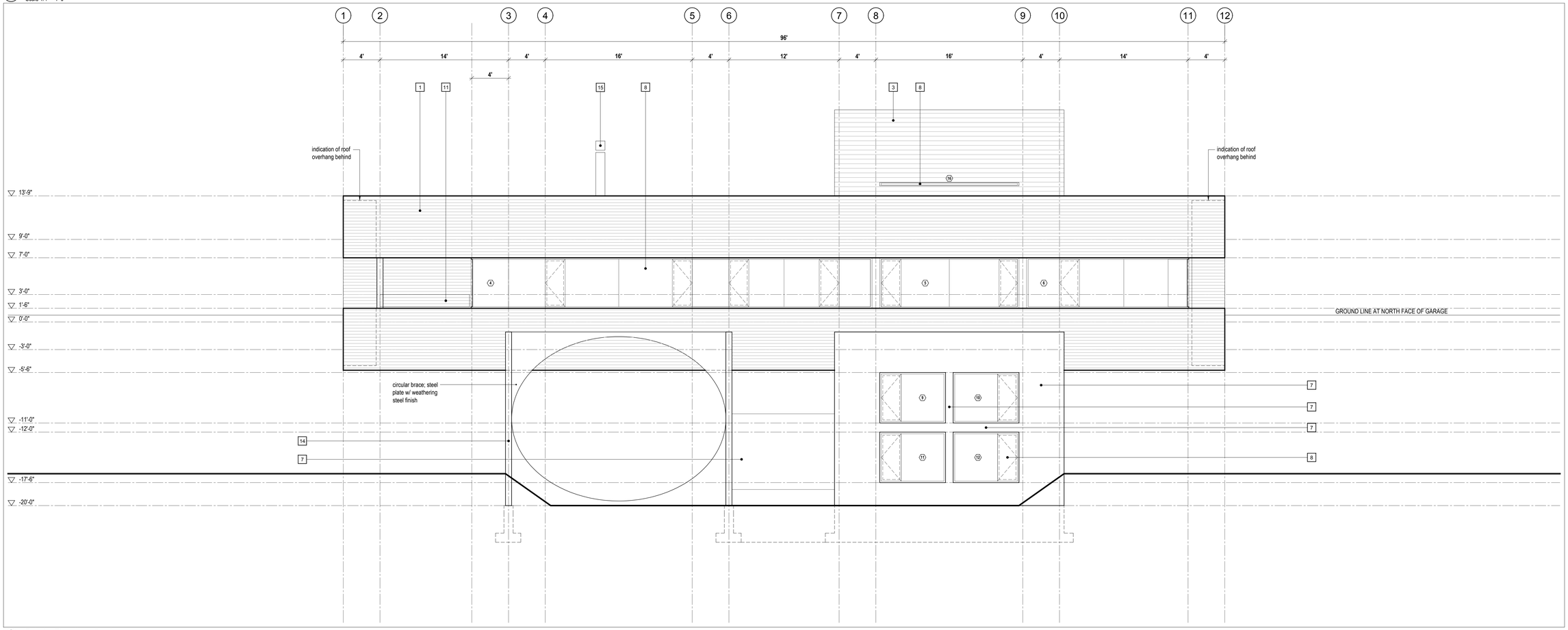
scale: 1/4" = 1'-0"
date: 2018-04-10
drawn: MB
chk'd: BML

A207

Exhibit A



2 A300 Exterior Elevation - North
Scale 1/4" = 1'-0"



1 A300 Exterior Elevation - South
Scale 1/4" = 1'-0"

Lot 14 Mountain House
Summit Powter Mountain
Eden, Utah

MacKay-Lyons Sweetapple
Architects Limited
2188 Gottingen St
Halifax, Nova Scotia
Canada B3K 3B4
ph: (902) 429.1867
fax: (902) 429.6276

LEGEND

1. 1x4 horizontal western red cedar boards
2. 1x8 vertical western red cedar boards
3. 1x8 horizontal western red cedar boards
4. 1x4 horizontal western red cedar shiplap
5. aluminum flashing; to match window finish
6. 1x2 horizontal western red cedar shiplap
7. horizontal 8" board-formed concrete
8. glazing system - see window/door schedule
9. sliding glazing system - see window/door schedule
10. skylight system - see window/door schedule
11. tempered glass guard
12. sliding window shutter; 1x4 horizontal western red cedar boards on steel angle frame
13. bi-fold garage door clad w/ 1x4 horizontal western red cedar shiplap; align w/ exterior siding
14. weathering steel structure
15. weathering steel chimney
16. bridge; open bar grating on steel structure; weathering steel finish

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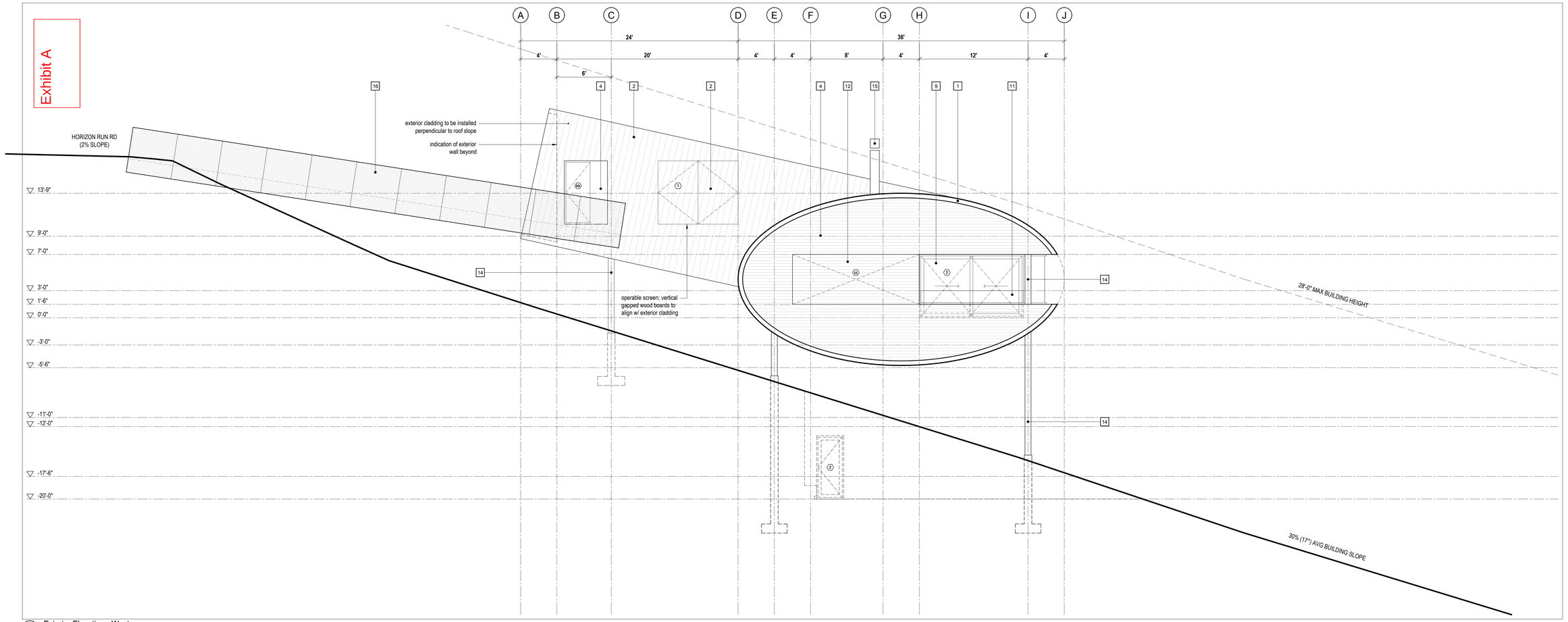
Exterior Elevations

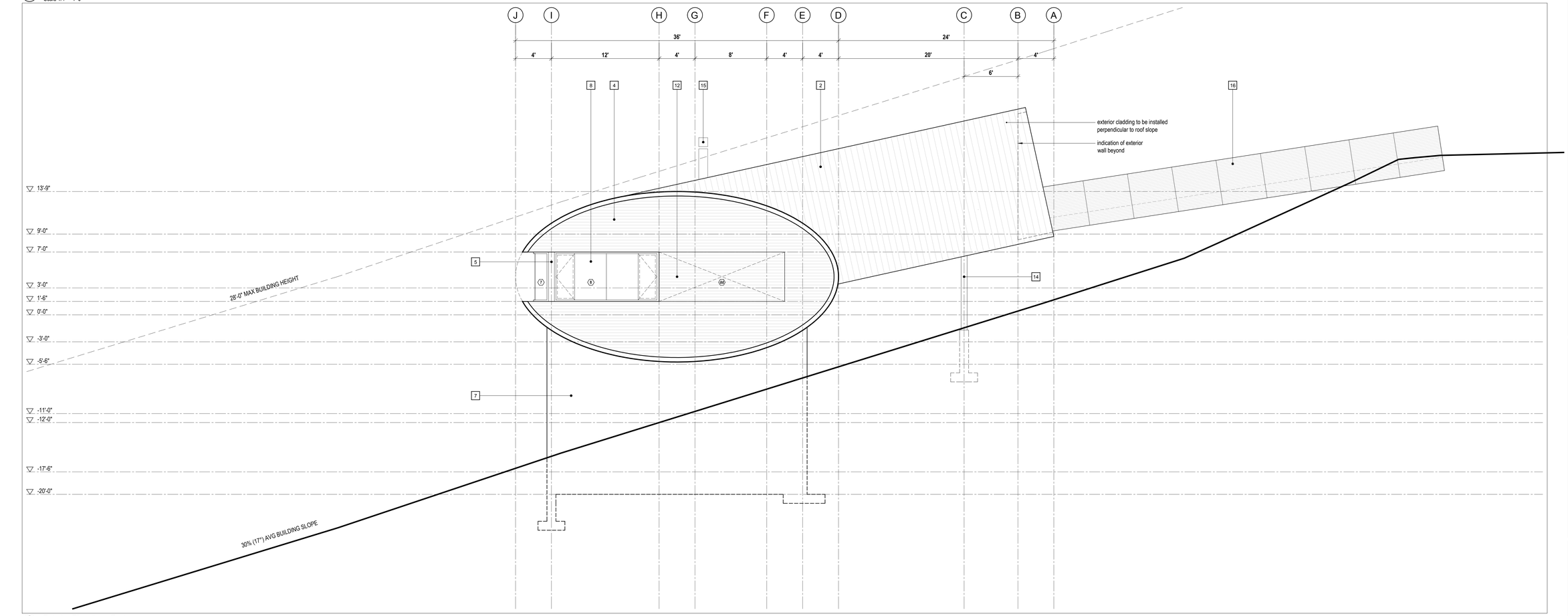
scale: 1/4" = 1'-0"
date: 2018-02-20
drawn: IF
chk'd: BML

A300

Exhibit A



2 A301 Exterior Elevation - West
Scale 1/4" = 1'-0"



1 A301 Exterior Elevation - East
Scale 1/4" = 1'-0"

Lot 14 Mountain House

Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple Architects Limited
2188 Gottingen St
Halifax, Nova Scotia
Canada B3K 3B4
ph: (902) 429 1867
fax: (902) 429 6276

LEGEND

1. 1x4 horizontal western red cedar boards
2. 1x8 vertical western red cedar boards
3. 1x8 horizontal western red cedar boards
4. 1x4 horizontal western red cedar shiplap
5. aluminum flashing; to match window finish
6. 1x2 horizontal western red cedar shiplap
7. horizontal 8" board-formed concrete
8. glazing system - see window/door schedule
9. sliding glazing system - see window/door schedule
10. skylight system - see window/door schedule
11. tempered glass guard
12. sliding window shutter; 1x4 horizontal western red cedar boards on steel angle frame
13. bi-fold garage door clad w/ 1x4 horizontal western red cedar shiplap; align w/ exterior siding
14. weathering steel structure
15. weathering steel chimney
16. bridge; open bar grating on steel structure; weathering steel finish

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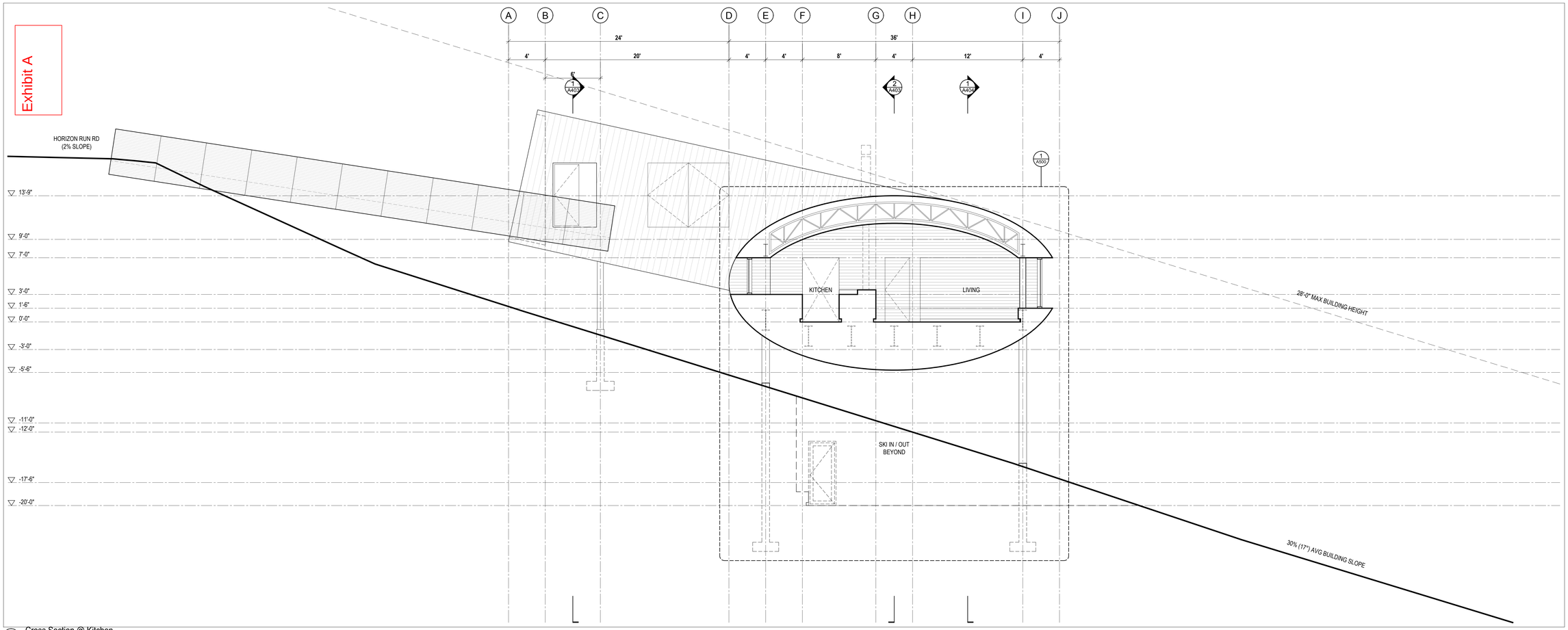
Exterior Elevations

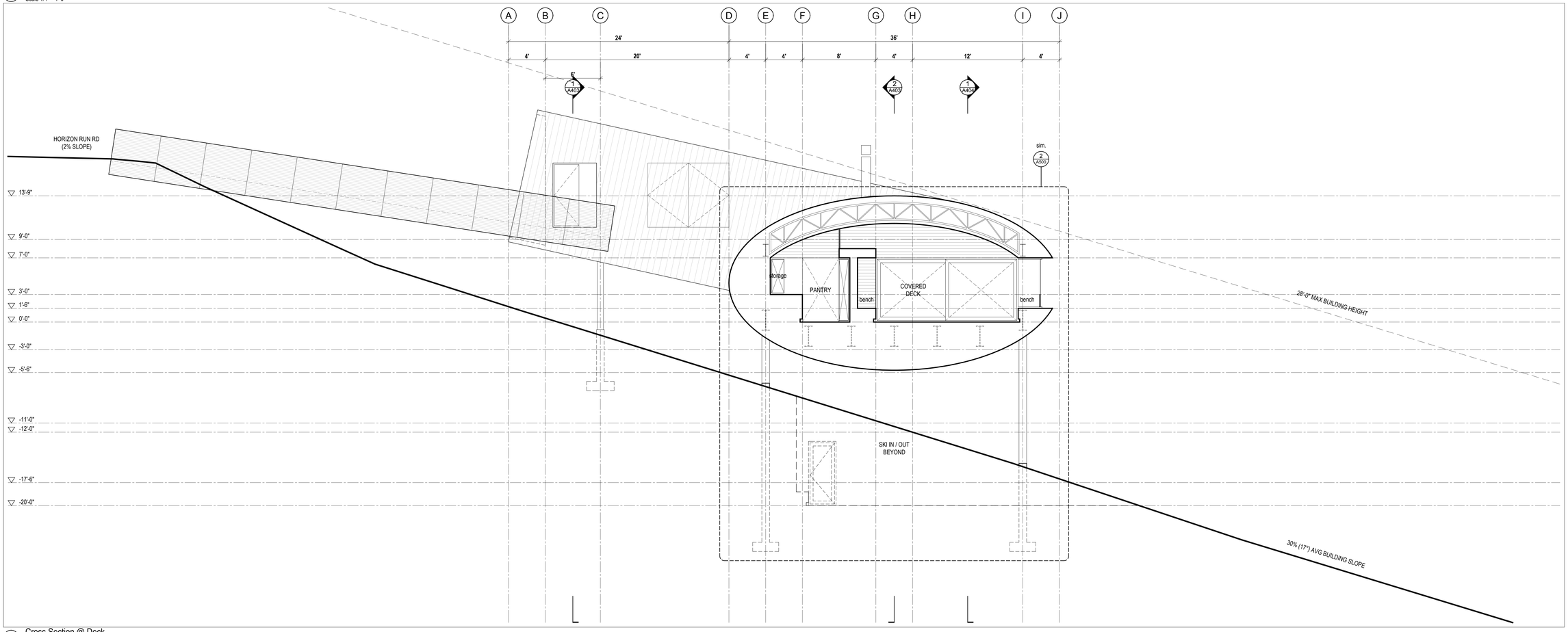
scale: 1/4" = 1'-0"
date: 2018-02-20
drawn: IF
chk'd: BML

A301

Exhibit A



2 A400 Cross Section @ Kitchen
Scale 1/4" = 1'-0"



1 A400 Cross Section @ Deck
Scale 1/4" = 1'-0"

Lot 14 Mountain House

Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple

Architects Limited

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Canada B3K 3B4

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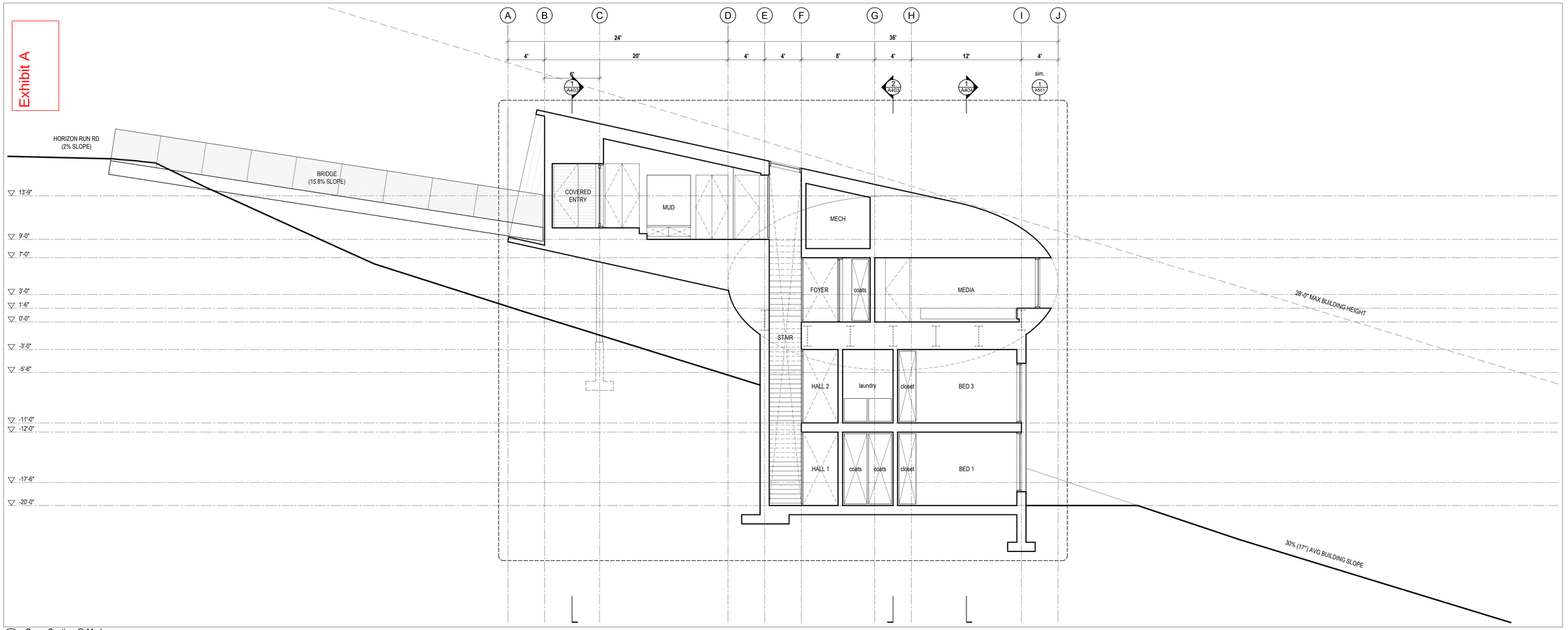
Building Sections

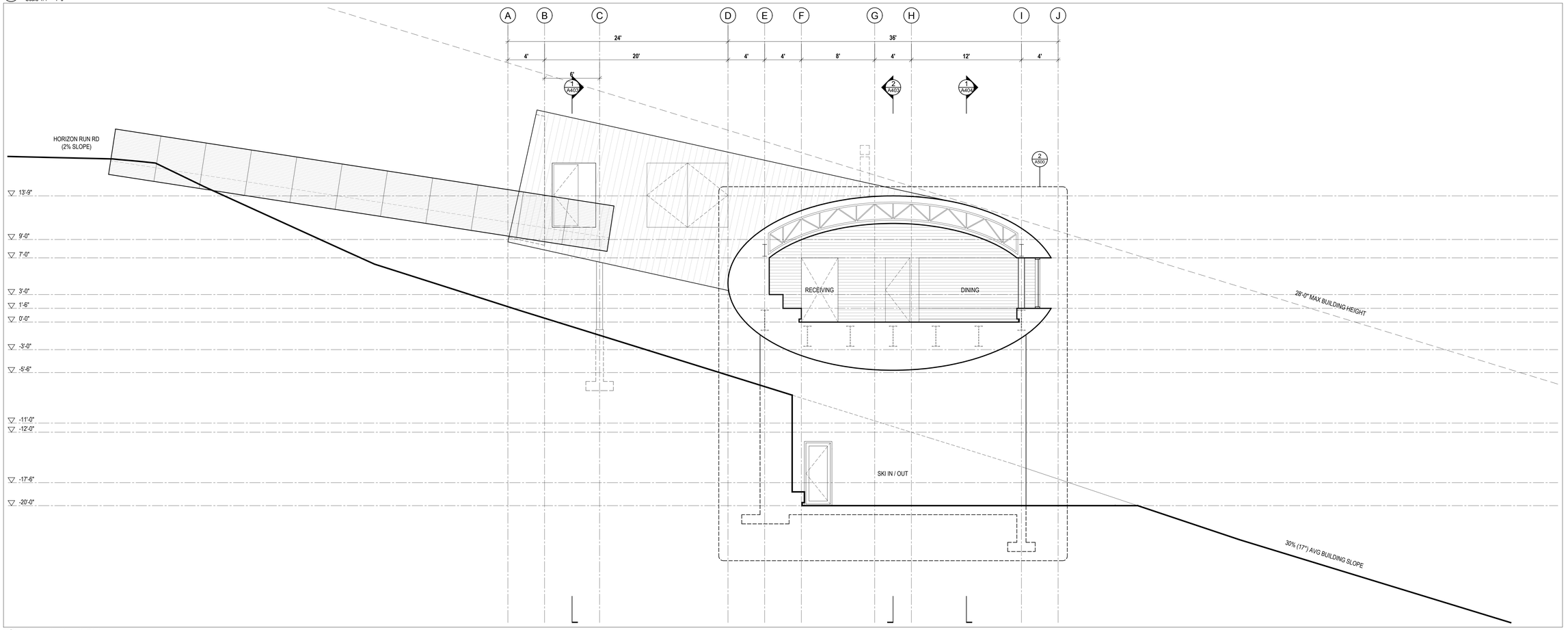
scale: 1/4" = 1'-0"
date: 2018-02-22
drawn: IF
chk'd: BML

A400

Exhibit A



2 A401 Cross Section @ Mud
Scale 1/4" = 1'-0"



1 A401 Cross Section @ Dining
Scale 1/4" = 1'-0"

Lot 14 Mountain House

Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple
Architects Limited

2188 Gottingen St
Halifax, Nova Scotia
Canada B3K 3B4

ph: (902) 429 1867
fax: (902) 429 6276

No.	Description	Date
02	DD Issued for Pricing	2018.05.30
01	Issued for Coordination	2018.05.08

Revision:

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A401

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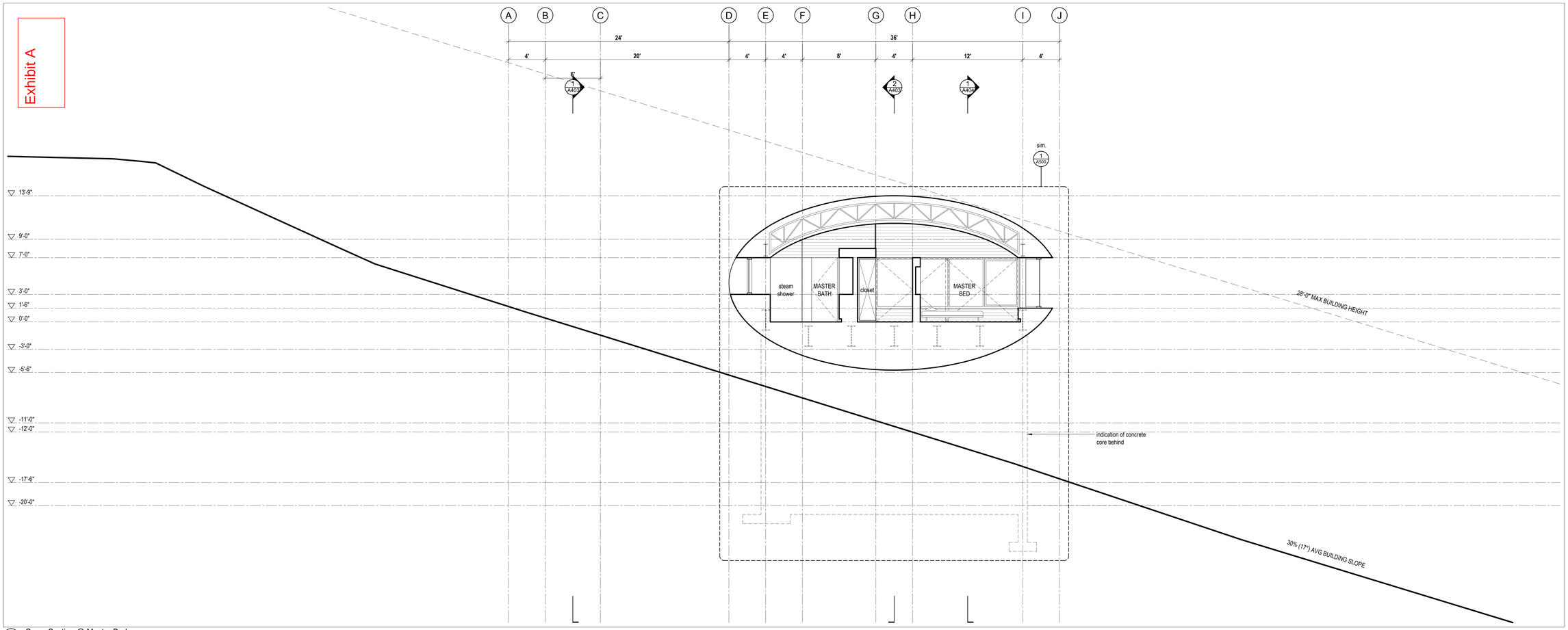
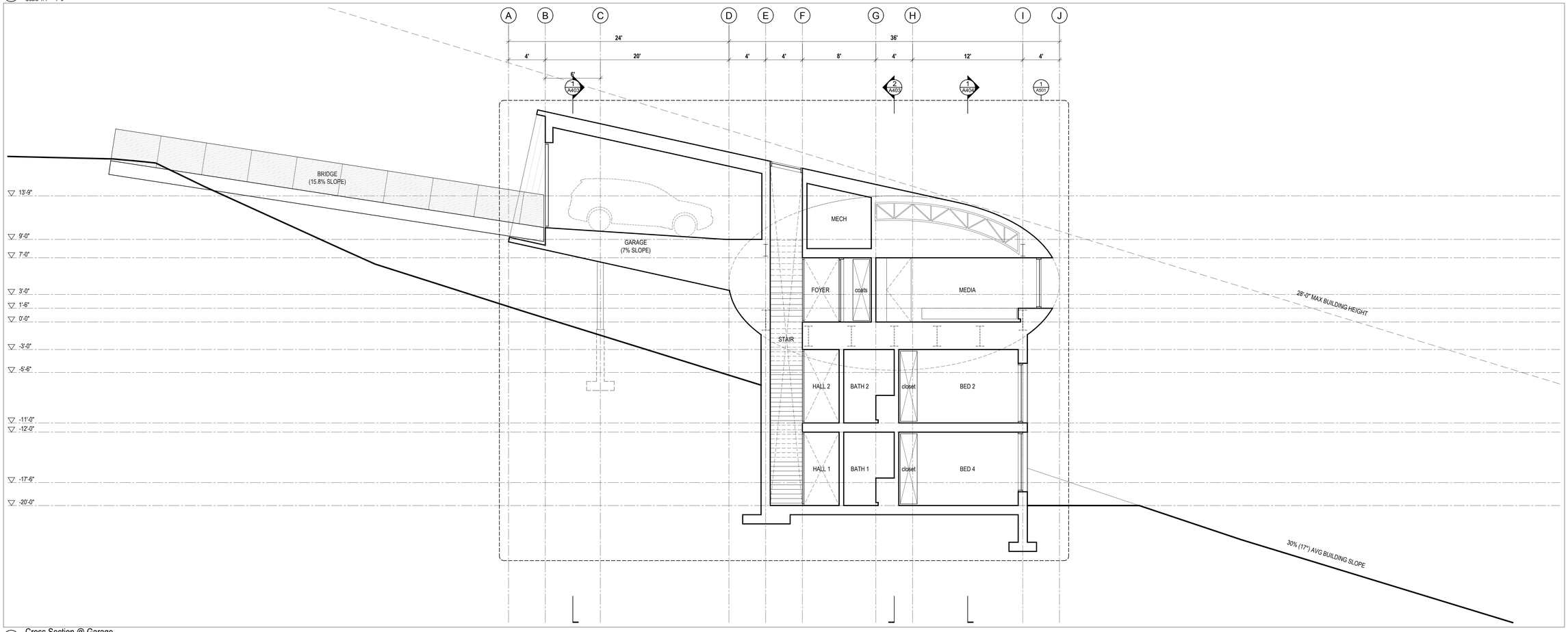


2 A402 Cross Section @ Master Bed
Scale 1/4" = 1'-0"



1 A402 Cross Section @ Garage
Scale 1/4" = 1'-0"

Lot 14 Mountain House

Summit Powter Mountain
Eden, Utah

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A402

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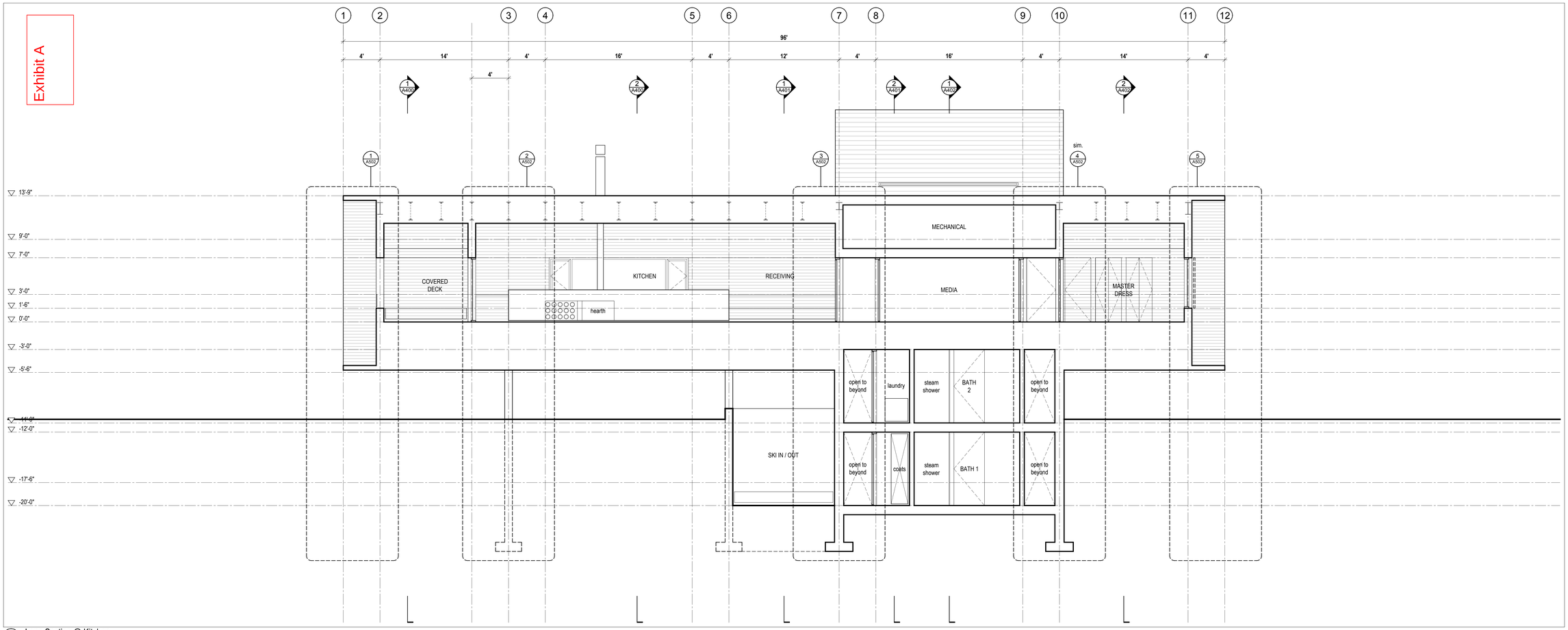
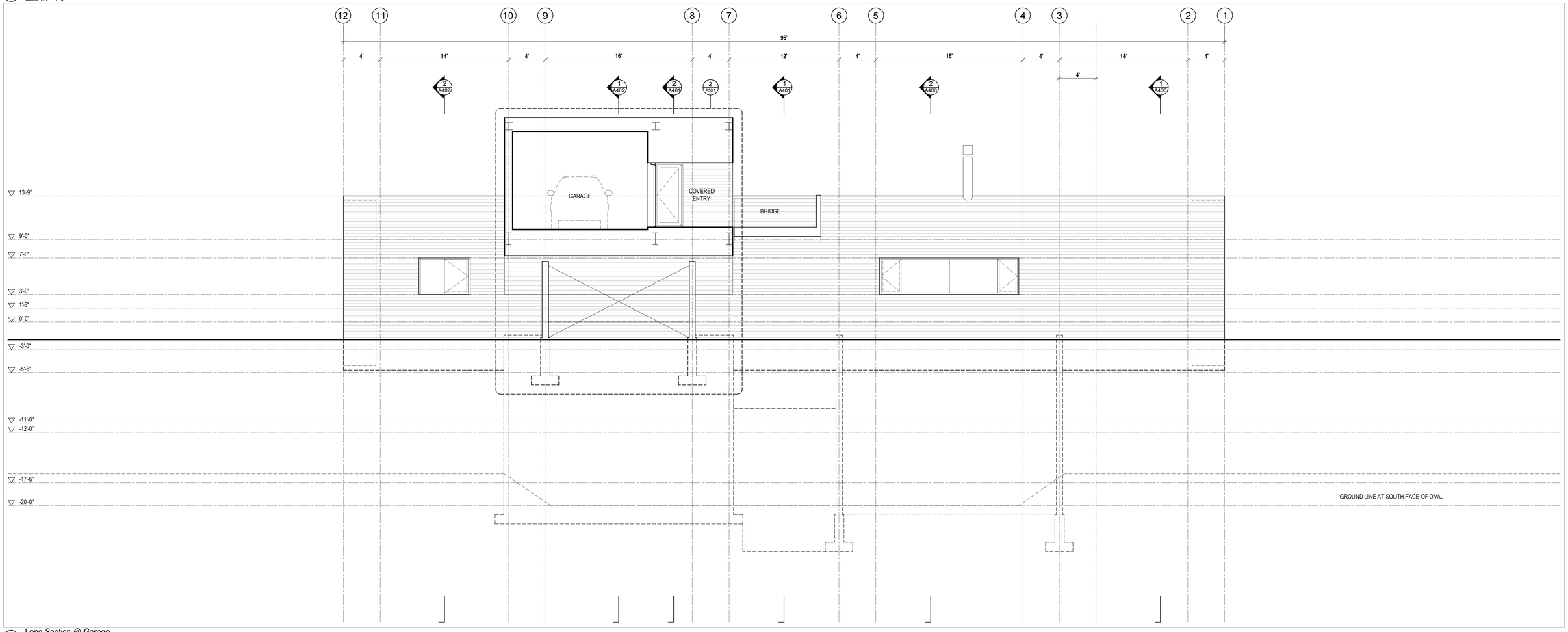


2 A403 Long Section @ Kitchen
Scale 1/4" = 1'-0"



1 A403 Long Section @ Garage
Scale 1/4" = 1'-0"

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Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple
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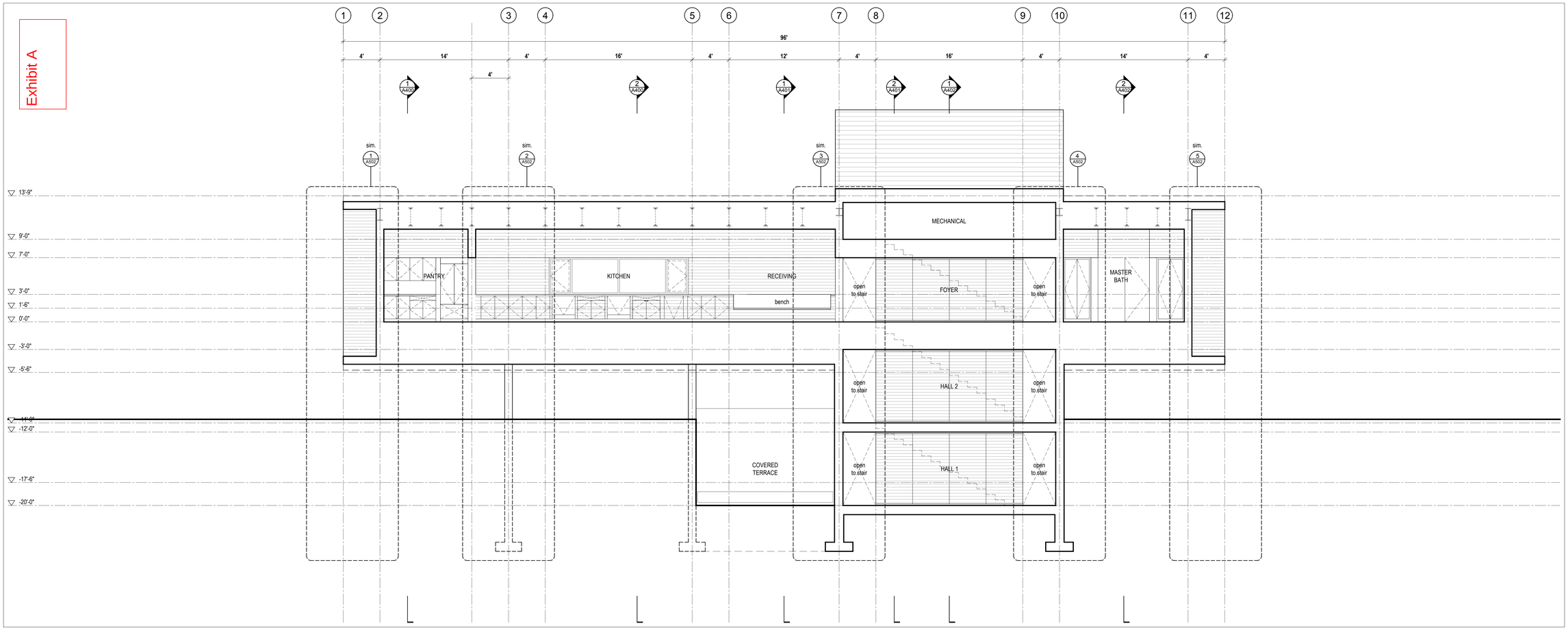

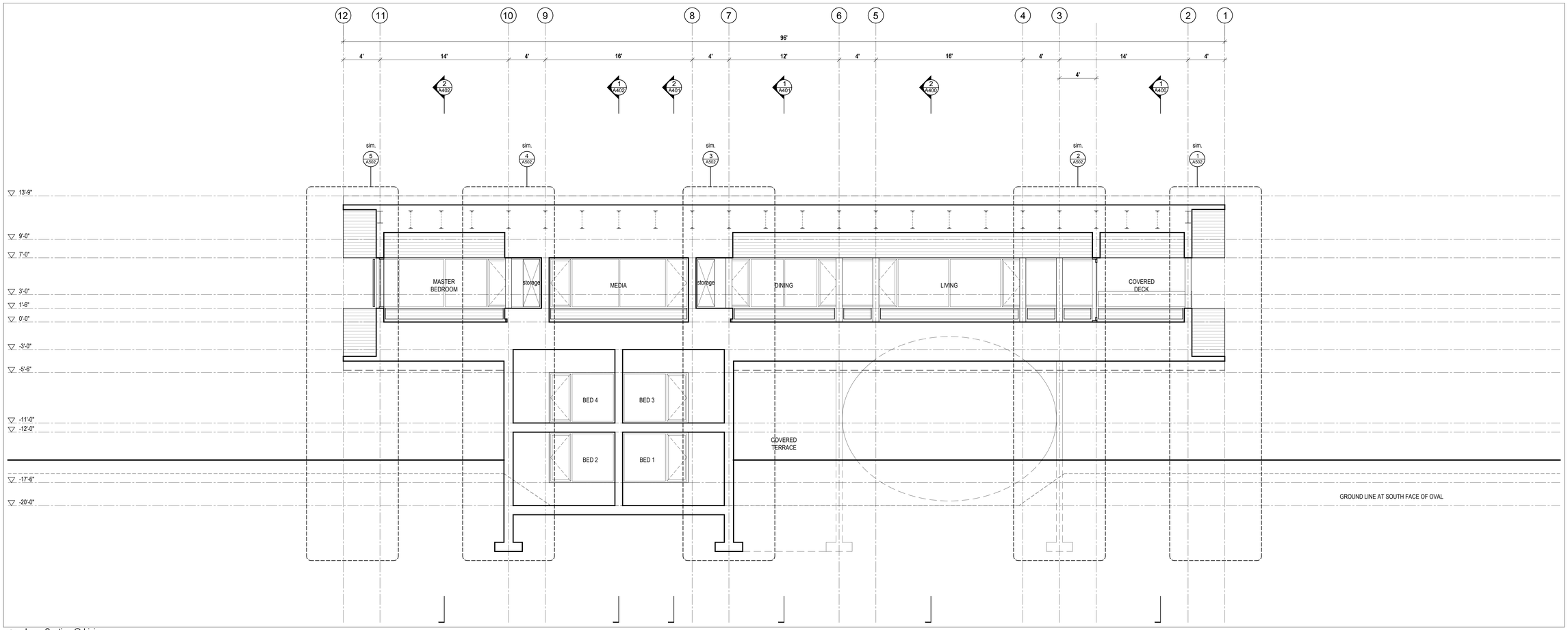

1 A404 Long Section @ Living
Scale 1/4" = 1'-0"

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Summit Powder Mountain
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drawn: IF
chk'd: BML

A404

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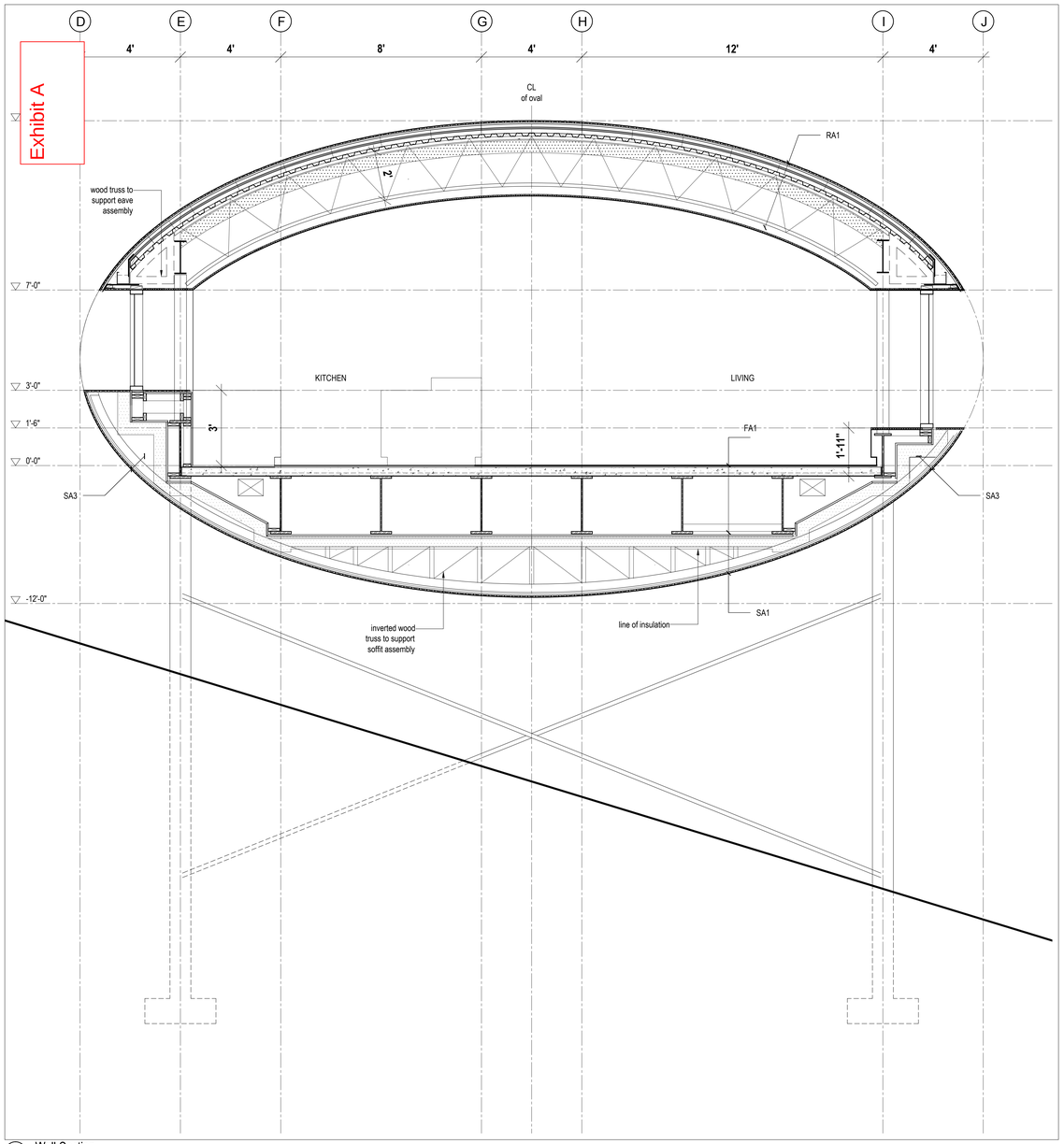
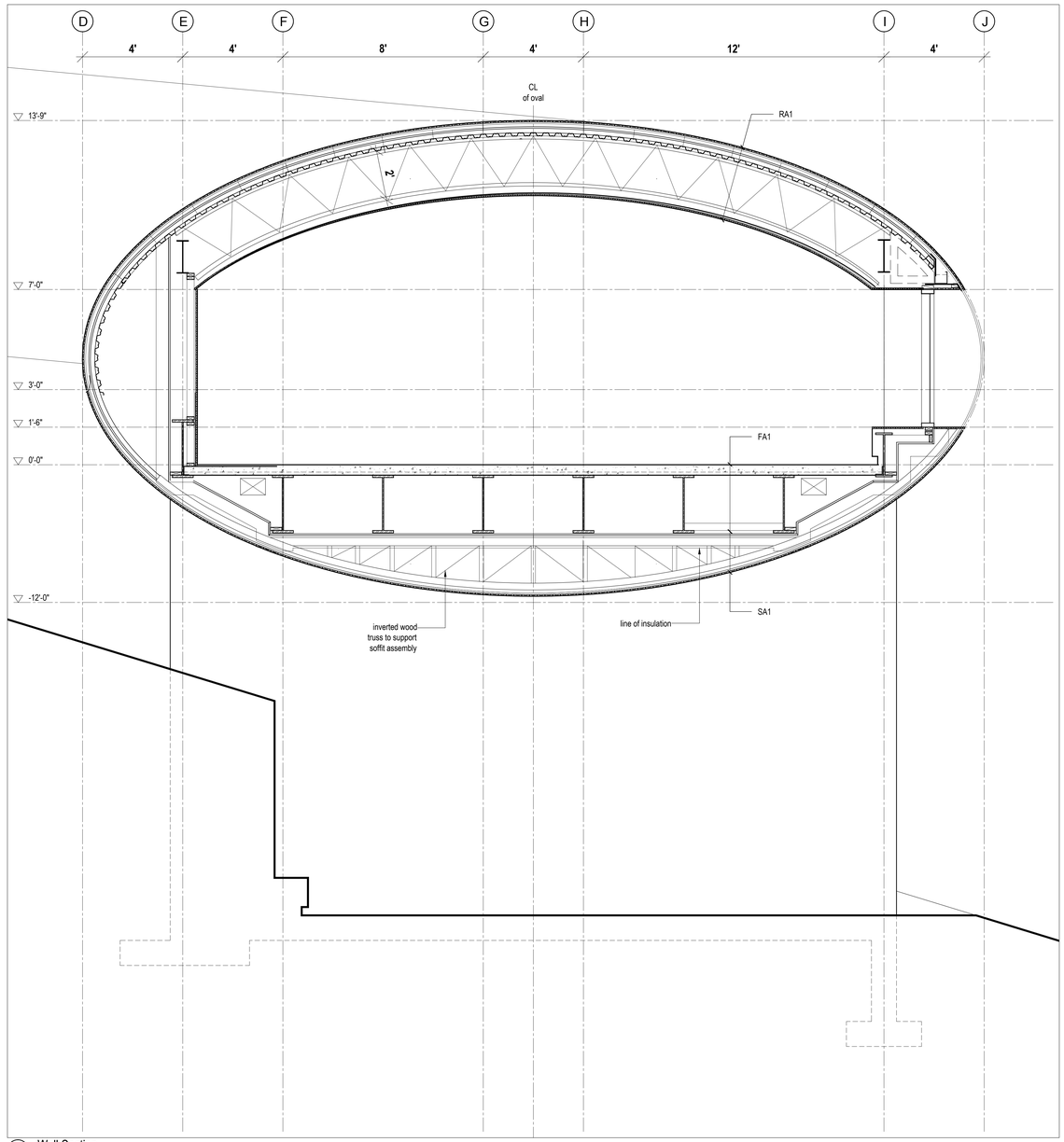


1 A500 Wall Section
Scale 1/2" = 1'-0"



2 A500 Wall Section
Scale 1/2" = 1'-0"

ROOF ASSEMBLIES

RA1 (typical elipse)
+ 1x4 horizontal western cedar boards
+ vertical strapping (tbd)
+ metal thru fastener per spec.
+ fully adhered waterproof membrane
+ 3/4" plywood sheathing - laminated 1/4" layers where required to meet curve of elliptical form
+ 2" insulation - tbd., min r8
+ horizontal metal furring strips
+ vapor control layer - tbd.
+ 1-1/2" composite metal decking - horizontal flutes
+ steel truss as per structural
+ 6" 2.0lb spray foam insulation, r36
+ vertical wood strapping
+ ceiling finish as per room finish schedule

RA2 (ellipse overhang, uninsulated)
+ 1x4 horizontal western cedar boards
+ vertical strapping (tbd)
+ metal thru fastener per spec.
+ fully-adhered continuous waterproof membrane
+ 3/4" plywood sheathing - laminated 1/4" layers where required to meet curve of elliptical form
+ structural steel channels/studs, tbd.
+ 1-1/2" composite metal decking - horizontal ribs
+ vertical strapping (tbd)
+ 1x4 horizontal western cedar boards

RA3 (garage, insulated)
+ 1x8 western red cedar boards
+ 1x3 wood strapping
+ fully-adhered waterproof roofing membrane (tbd)
+ 3" rockwool insulation, r12
+ vapor control membrane
+ 3/4" t+g plywood
+ 1-1/2" composite metal deck, per structural
+ steel channels per structural
+ 6" 2.0 lb sprayfoam insulation, r36
+ wood strapping
+ ceiling as per finish schedule

RA4 (garage, uninsulated)
+ 1x8 western red cedar boards
+ 1x3 wood strapping
+ fully-adhered waterproof roofing membrane (tbd)
+ 3" rockwool insulation, r12
+ vapor control membrane
+ 3/4" t+g plywood
+ 1-1/2" composite metal deck, per structural
+ steel channels per structural
+ wood strapping
+ ceiling as per finish schedule

RA5 (garage overhang)
+ 1x8 western red cedar boards
+ wood strapping
+ fully-adhered waterproof roofing membrane (tbd)
+ 3" rockwool insulation, r12
+ vapor control membrane
+ 3/4" t+g plywood
+ 1-1/2" metal deck
+ 1x3 wood strapping
+ 1x8 western red cedar boards

SOFFIT ASSEMBLIES

SA1 (typical ellipse)
+ 1x4 horizontal western red cedar boards
+ vertical strapping
+ insect screen
+ inverted wood truss
+ 2.0lb spray applied insulation, r40.
+ 5/8 dens-glass sheathing
+ refer to flooring assemblies

SA2 (uninsulated ellipse overhang)
+ 1x4 horizontal western red cedar boards
+ wood strapping
+ insect screen
+ structure t.b.d.
+ insect screen
+ wood strapping
+ 1x4 horizontal western red cedar boards

SA3 (sill to slab)
+ 1x4 horizontal western red cedar boards
+ wood strapping
+ to be determined

SA4 (garage)
+ 1X8 western cedar boards
+ wood strapping
+ insect screen
+ wood framing
+ refer to floor assembly FA4

SA5 (uninsulated garage overhang)
+ 1X8 western cedar boards
+ wood strapping
+ insect screen
+ structure t.b.d
+ insect screen
+ wood strapping
+ 1x8 western cedar boards

EXTERIOR WALL ASSEMBLIES

WA1 (typical ellipse)
+ 1x4 horizontal western cedar boards
+ vertical strapping (tbd)
+ metal thru fastener per spec.
+ fully adhered waterproof membrane
+ 3/4" plywood sheathing - laminated 1/4" layers where required to meet curve of eliptical form
+ 2" 2.0lb spray applied foam insulation, r12
+ 2" steel furring channels
+ air + vapor control membrane - tbd.
+ 1-1/2" composite metal decking - horizontal flutes
+ steel truss as per structural
+ 6" 2.0lb spray applied foam insulation, r36
+ vertical wood strapping
+ wall finish as per room finish schedule

WA2 (ellipse end wall - insulated)
+ 1x4 horizontal western cedar boards
+ 1x3 vertical wood strapping
+ 3" cavity rock insulation (r12)
+ air/vapor control membrane
+ 3/4" plywood
+ 2x6 wood framing
+ 0.5 lb spray foam insulation (r20)
+ 1/2" plywood
+ 1x2 horizontal western cedar boards

WA3 (elipse end wall - uninsulated)
+ 1x4 horizontal western cedar boards
+ 1x3 vertical wood strapping
+ weather barrier
+ 1/2" plywood
+ 2x6 wood framing
+ 1/2" plywood
+ weather barrier
+ 1x3 vertical wood strapping
+ 1x4 horizontal western cedar boards

WA4 (concrete - below grade)
+ 2" rockwool comfortboard insulation, r8
+ waterproofing
+ reinforced concrete, see structural
+ 0.5lb spray applied foam insulation, r22
+ 2x6 studs @ 16" o.c., spaced 1" from face of concrete
+ vapor control membrane
+ 5/8" gypsum wallboard
+ wall finish as per finish schedule

WA5 (concrete - above grade)
+ reinforced boardform concrete, see structural
+ 0.5lb spray applied foam insulation r22
+ 2x6 studs @ 16" o.c., spaced 1" from face of concrete
+ vapor control barrier
+ 5/8" gypsum wallboard (tile backer board in wet areas)
+ wall finish as per finish schedule

WA6 (garage)
+ 1x8 vertical western cedar cladding
+ 2 layers wood strapping (air space)
+ 3" cavityrock insulation, r12
+ air/vapor control membrane
+ 3/4" plywood sheathing
+ 2x6 wood stud framing as per structural
+ 0.5lb spray applied foam insulation, r19
+ 5/8" waterproof drywall w. paint finish per finish schedule

WA7 (garage exterior, uninsulated)
+ 1x8 vertical western red cedar cladding
+ 2 layers wood strapping
+ weather barrier
+ 1/2" plywood sheathing
+ 2x6 wood stud framing
+ 1/2" plywood sheathing
+ weather barrier
+ 2 layers wood strapping
+ 1x8 vertical western red cedar cladding

WA8 (garage overhang, uninsulated)
+ 1x8 vertical western red cedar cladding
+ 2 layers wood strapping
+ 3" wood furring
+ weather membrane
+ 3/4" plywood sheathing
+ 2x6 wood stud framing
+ 1/2" plywood sheathing
+ weather membrane
+ 2 layers wood strapping
+ 1x8 vertical western red cedar cladding

FLOOR ASSEMBLIES

FA1
+ floor finish as per finishes sched.
+ 2-1/2" reinforced concrete w. radiant heating
+ 1-1/2" composite metal deck as per structural
+ steel w-sections as per structural
+ refer to soffit assemblies

FA2
+ floor finish as per finishes sched.
+ 1/8" neoprene acoustic mat
+ 2-1/2" reinforced concrete w. radiant heating
+ 1-1/2" composite metal deck as per structural
+ steel w-sections as per structural
+ acoustic fibre batt insulation
+ suspended 5/8" gwb ceiling

FA3
+ floor finish as per finish schedule
+ warm board - layout by manuf.
+ 3/4" t+g plywood
+ wood joists (size and spacing t.b.d.)
+ acoustic fibre batt insulation
+ metal furring channels
+ 5/8" gwb sheathing, painted.

FA4 (slab on grade)
+ floor finish as per finish schedule
+ reinforced concrete slab per structural
+ underslab vapour barrier
+ 2" rockwool comfortboard rigid insulation

FA5 (exterior deck)
+ 4" cedar decking
+ treated wood sleepers
+ steel beam as per structural
+ refer to soffit assembly SA--

FA6 (garage)
+ 2-1/2" reinforced concrete
+ 1 1/2" composite metal deck
+ steel w-section beams per structural
+ 6" 2.0lb spray applied insulation, r36
+ refer to soffit assmbly,SA4

3 A500 Exterior Assemblies
Scale NTS

Lot 14 Mountain House

Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple
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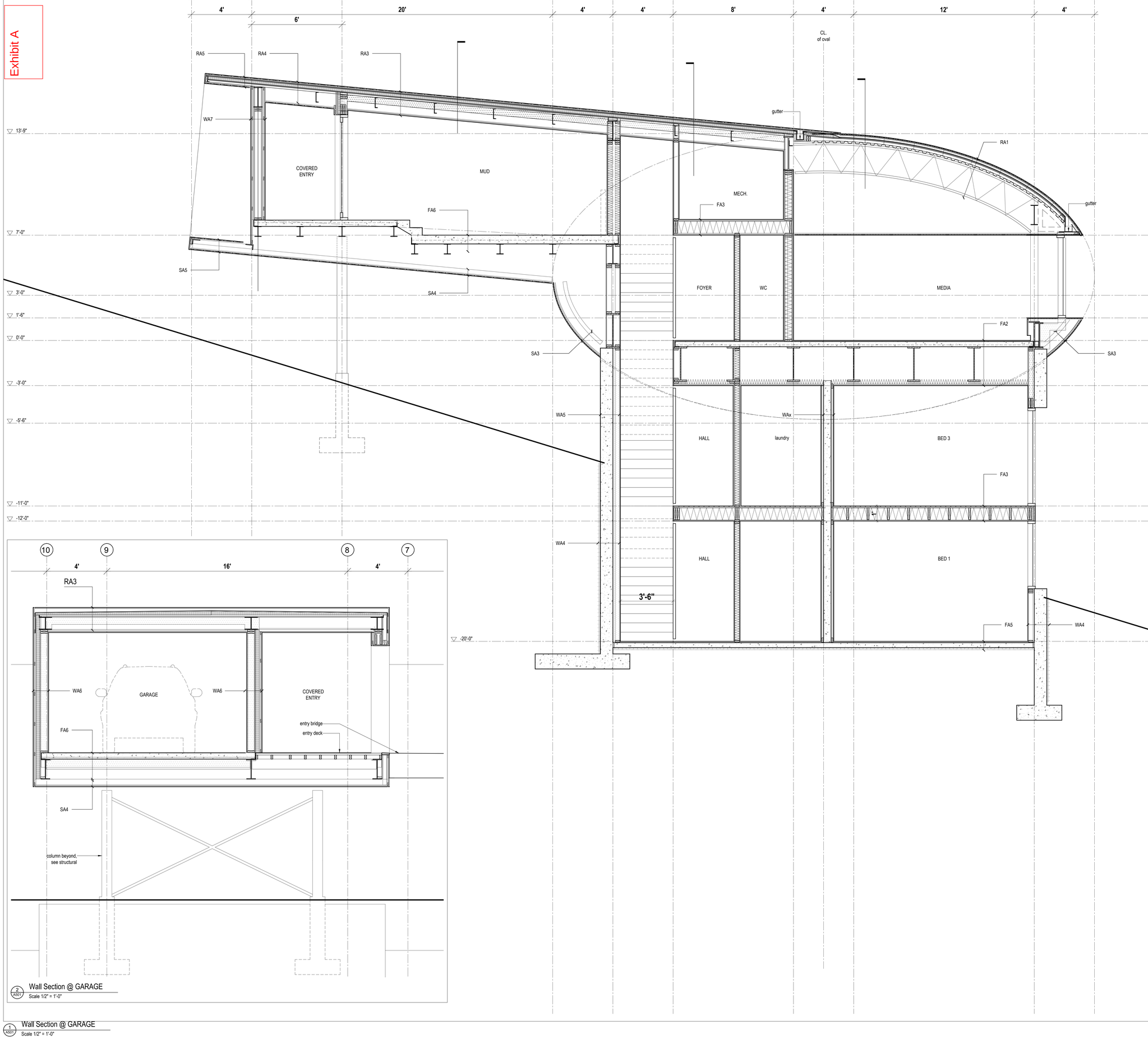
drawn: DC
chk'd: BML

A500

Exhibit A



2 / A501 Wall Section @ GARAGE
Scale 1/2" = 1'-0"

1 / A501 Wall Section @ GARAGE
Scale 1/2" = 1'-0"

Lot 14 Mountain House

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chk'd: BML

A501

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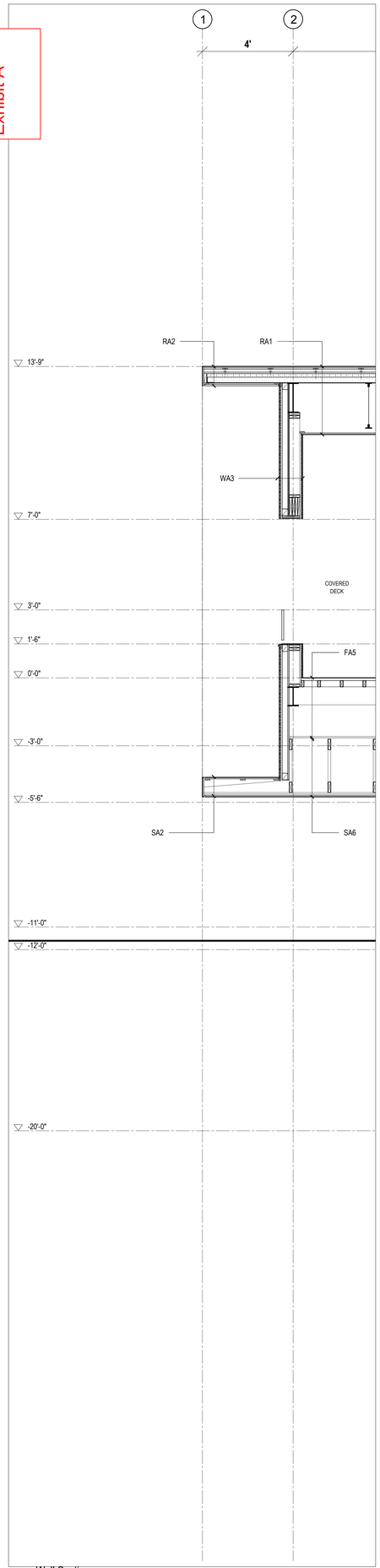
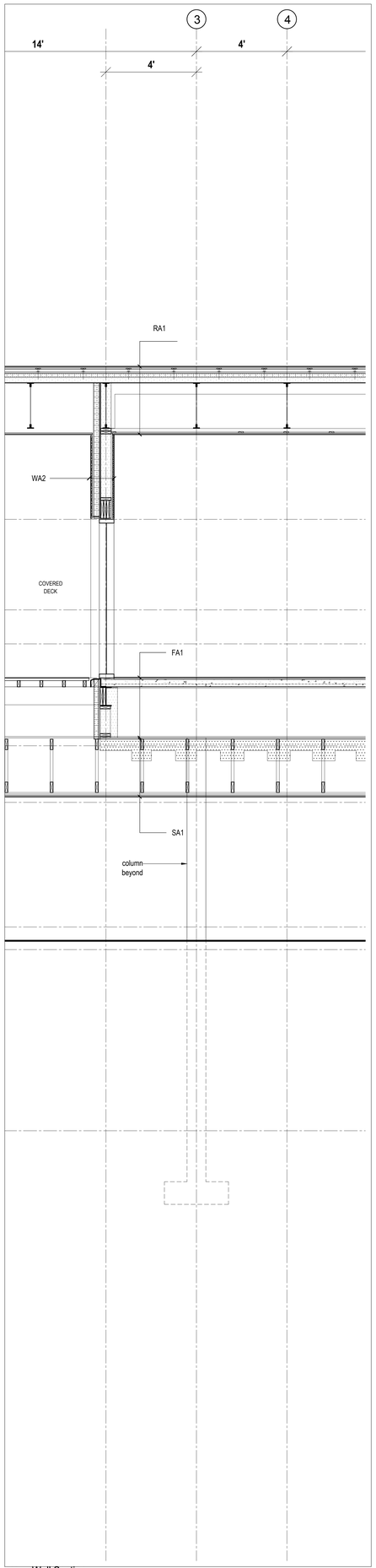


5 A502 Wall Section
Scale 1/2" = 1'-0"



4 A502 Wall Section
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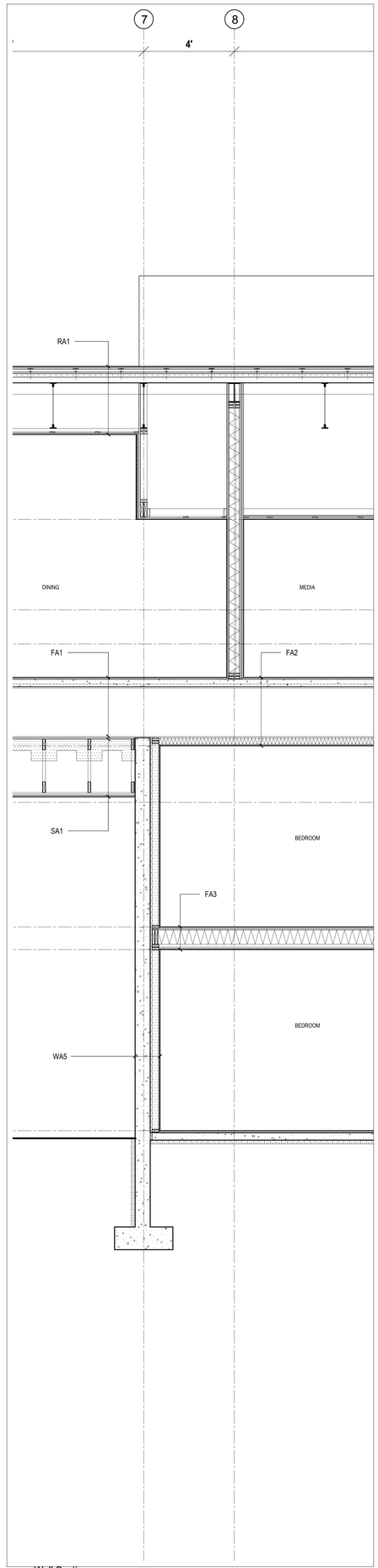

3 A502 Wall Section
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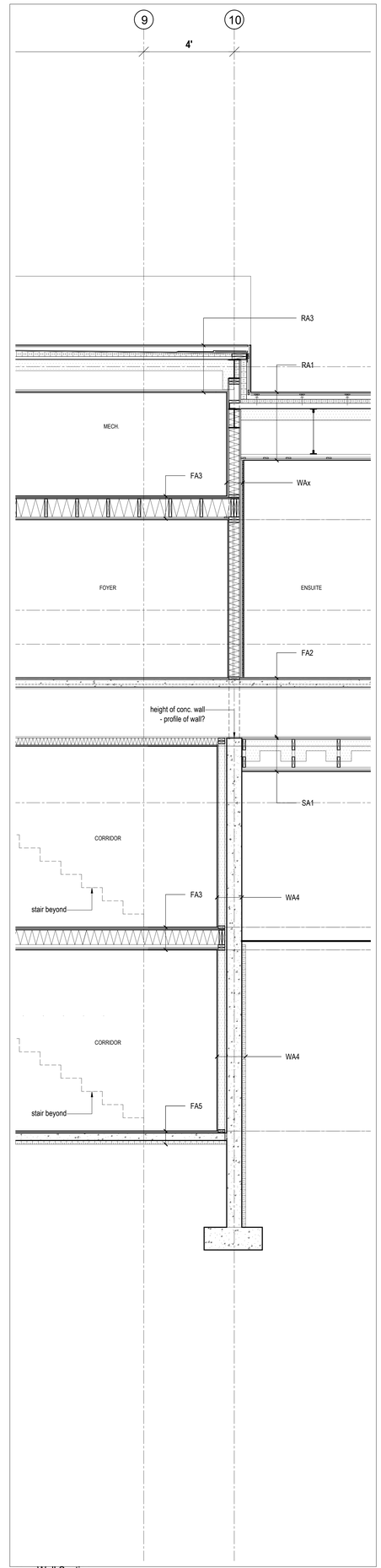
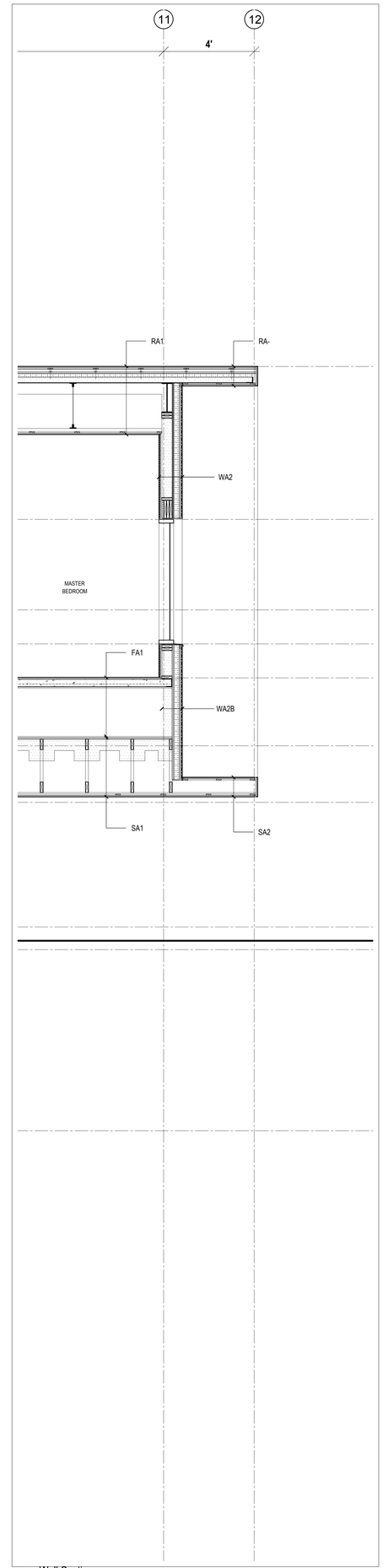


2 A502 Wall Section
Scale 1/2" = 1'-0"



1 A502 Wall Section
Scale 1/2" = 1'-0"

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Summit Powder Mountain
Eden, Utah

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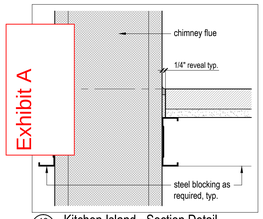
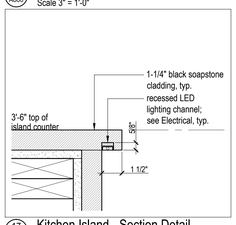


18 A600 Kitchen Island - Section Detail
Scale 3" = 1'-0"



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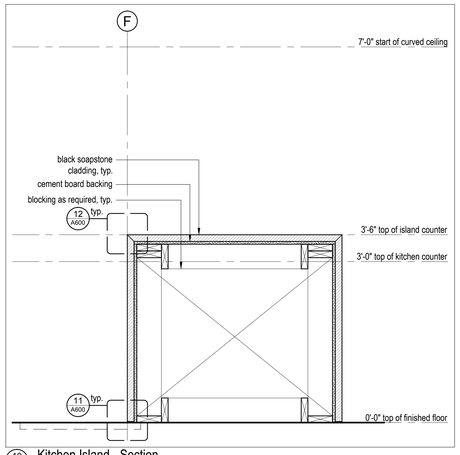
Scale 3" = 1'-0"



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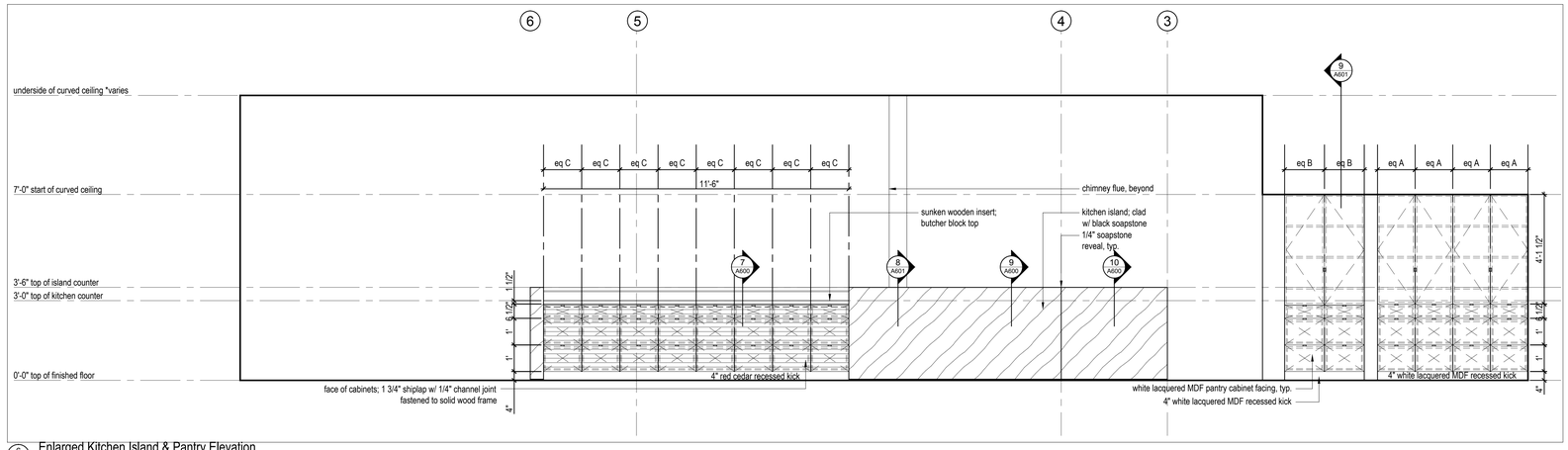
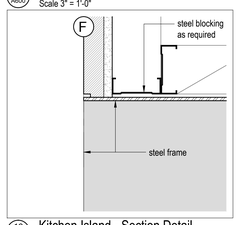
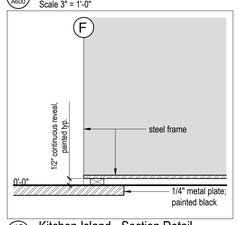
Scale 1" = 1'-0"



6 A600 Enlarged Kitchen Island & Pantry Elevation
Scale 1/2" = 1'-0"



16 A600 Kitchen Island - Section Detail
Scale 3" = 1'-0"



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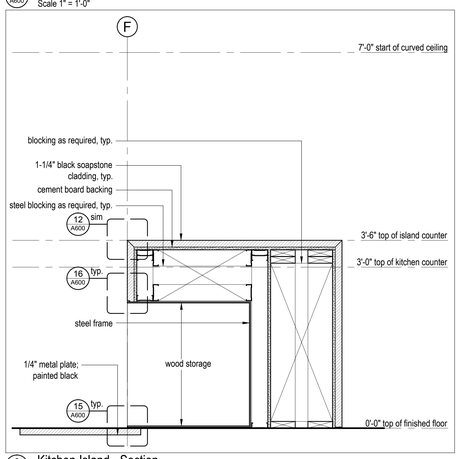
Scale 3" = 1'-0"



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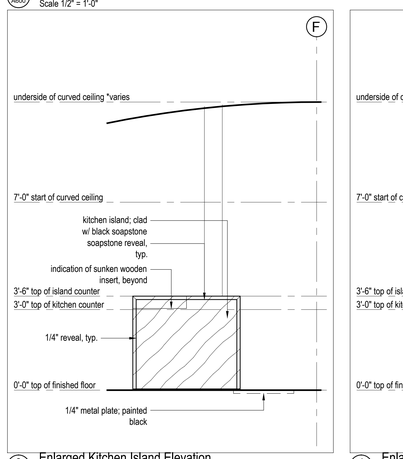

3 A600 Enlarged Kitchen Island Elevation
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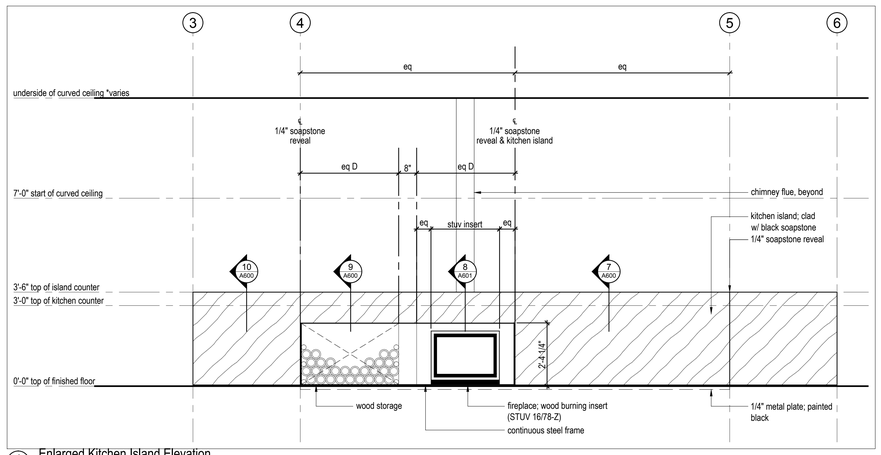

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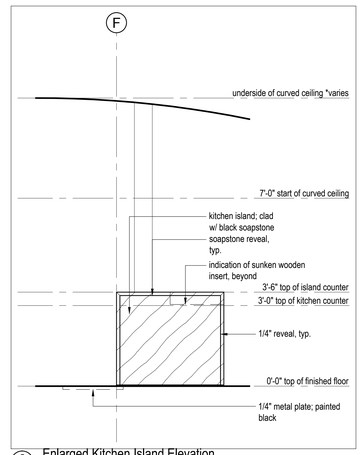

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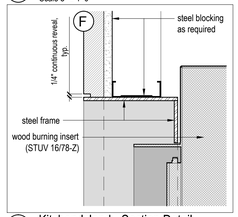
Scale 1/2" = 1'-0"



14 A600 Kitchen Island - Section Detail
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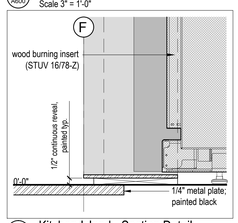

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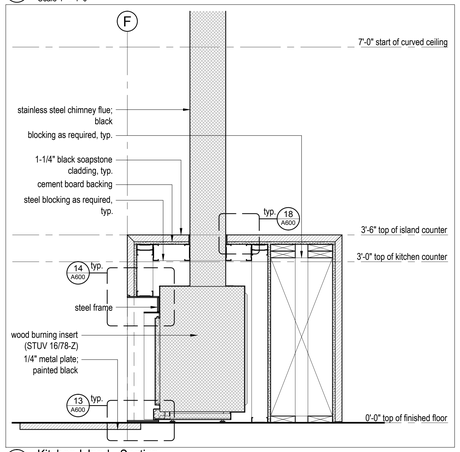

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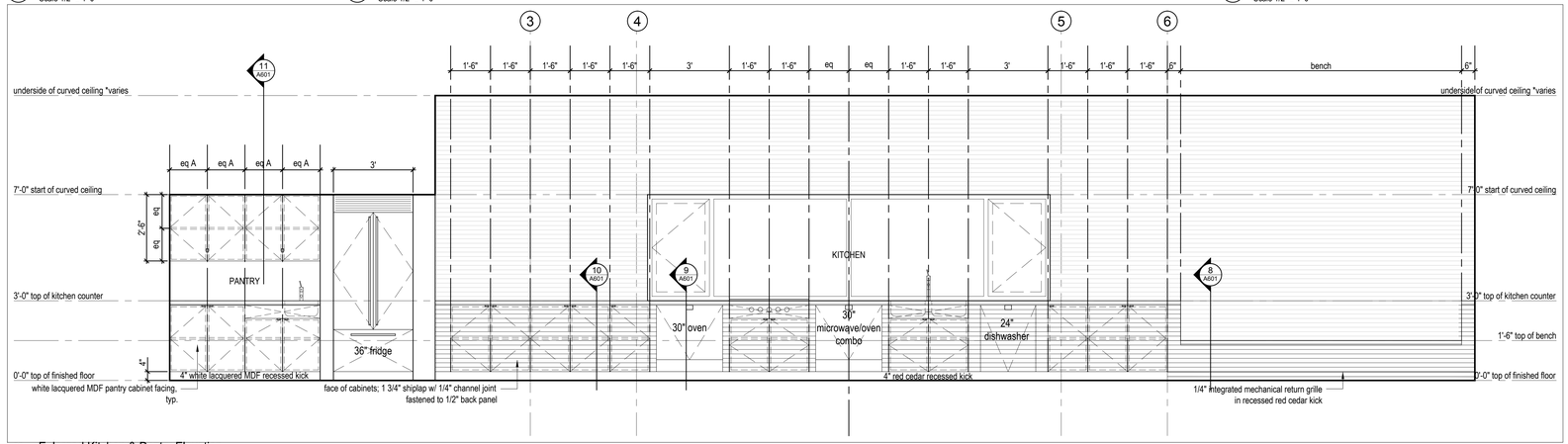
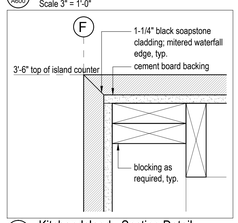


2 A600 Enlarged Kitchen & Pantry Elevation
Scale 1/2" = 1'-0"



12 A600 Kitchen Island - Section Detail
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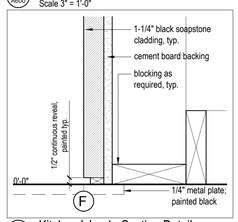

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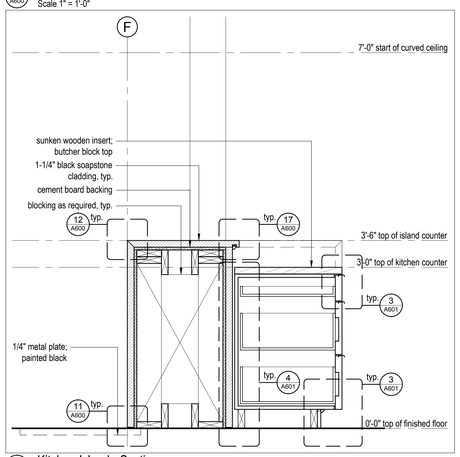

7 A600 Kitchen Island - Section
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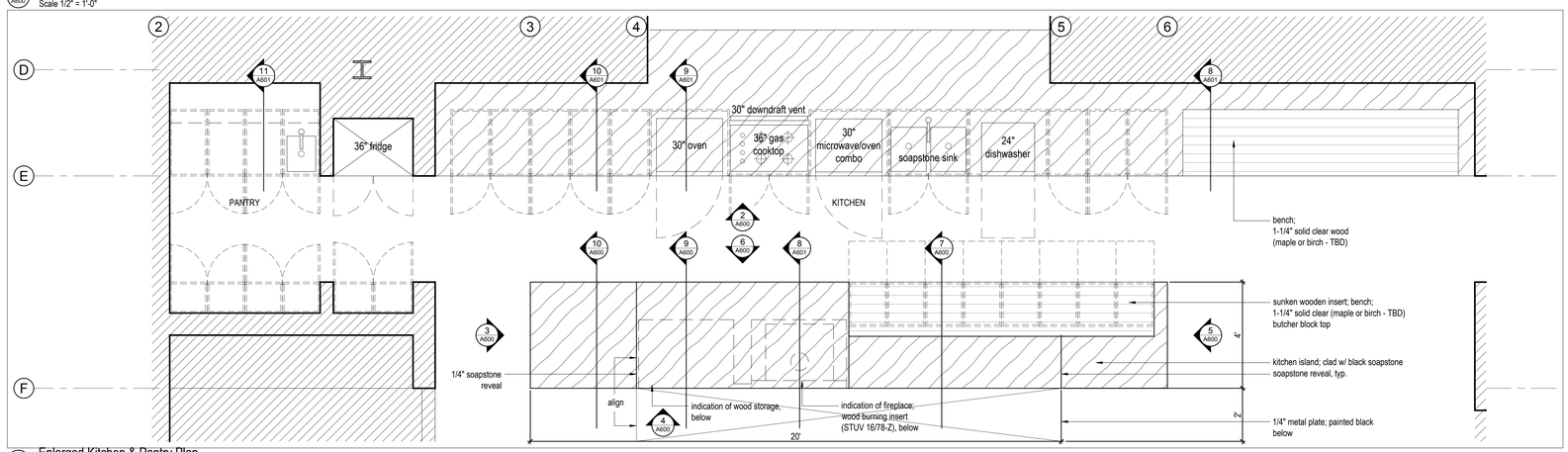

1 A600 Enlarged Kitchen & Pantry Plan
Scale 1/2" = 1'-0"

Lot 14 Mountain House
Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple
Architects Limited
2188 Gottingen St
Halifax, Nova Scotia
Canada B3K 3B4
ph: (902) 429 1867
fax: (902) 429 8276

No.	Description	Date
01	DD Issued for Pricing	2018.05.30

Revision:

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ENGINEER'S REQUIREMENTS AND APPROVALS:
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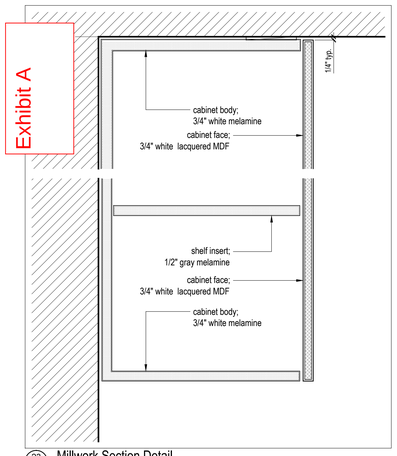
SHOP DRAWINGS:
Submit shop drawings to the Architect and Engineer for approval prior to manufacture of prefabricated elements of the building.

Millwork

scale: 1/2" = 1'-0"
date: 2018-04-20
drawn: IS
chk'd: BML

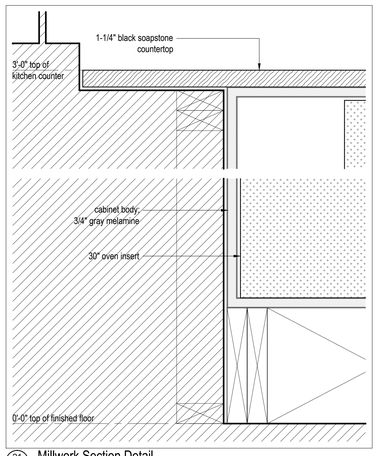
A600

Exhibit A



23 A601 Millwork Section Detail
Scale 3" = 1'-0"

22 A601 TBD



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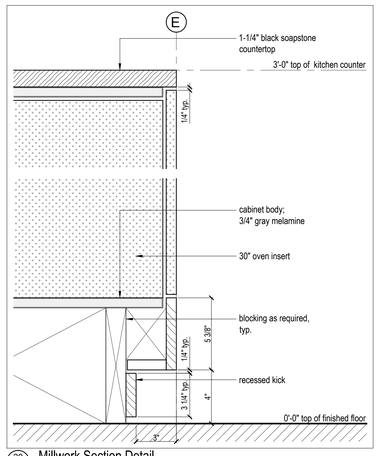

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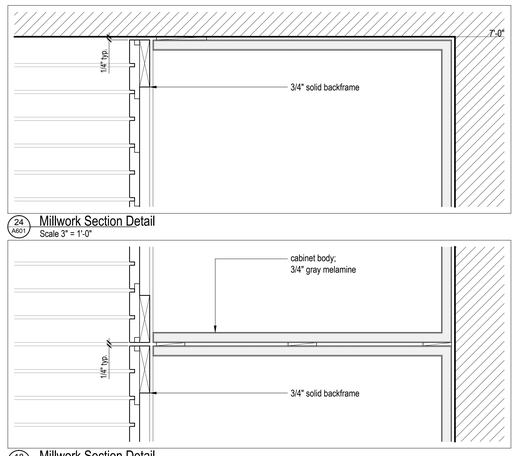
19 A601 TBD



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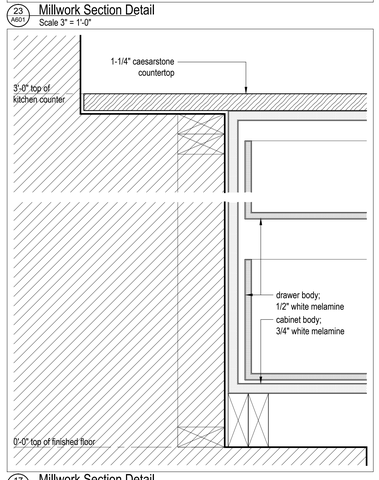

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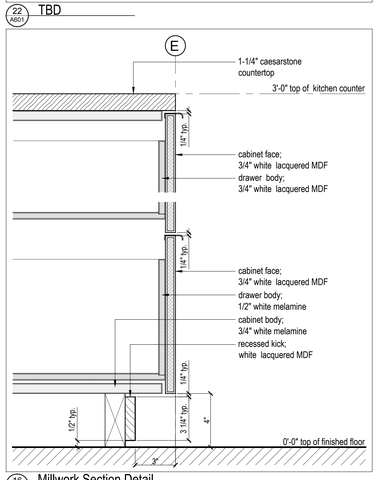

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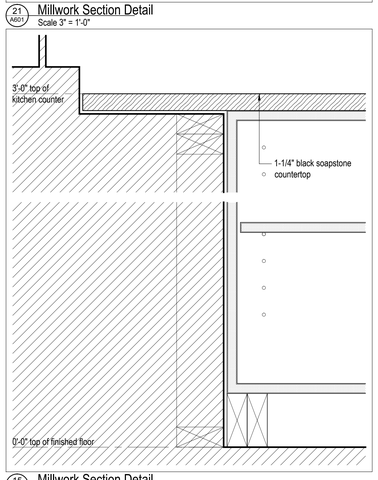

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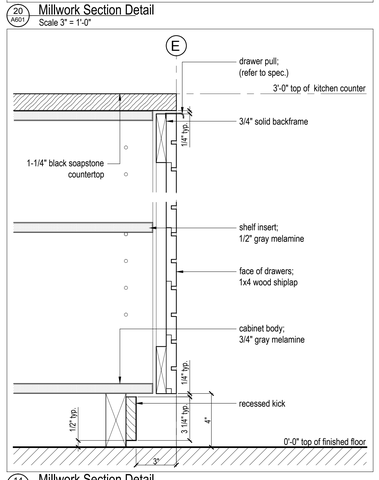

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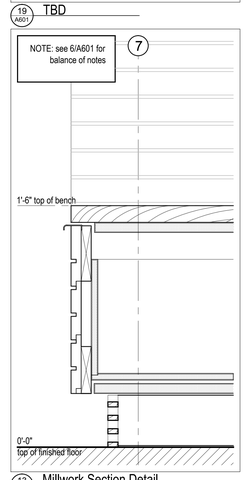

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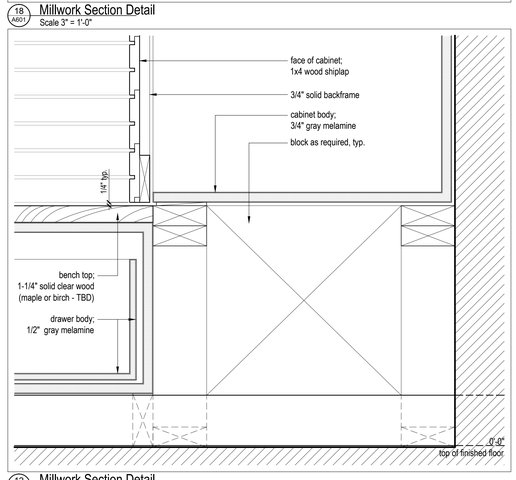

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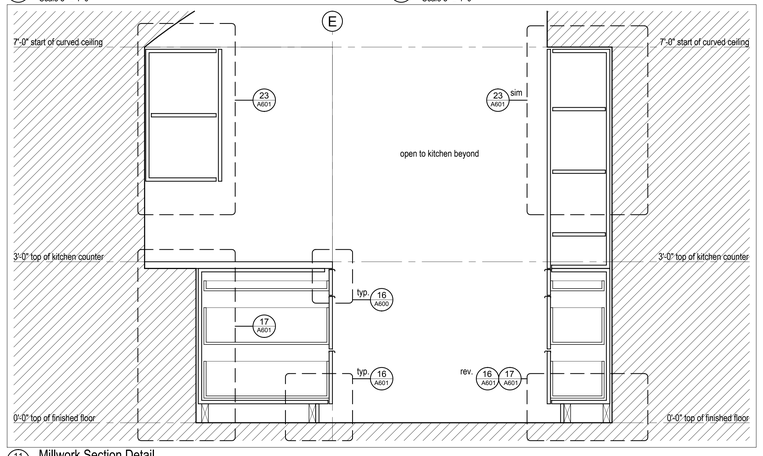

11 A601 Millwork Section Detail
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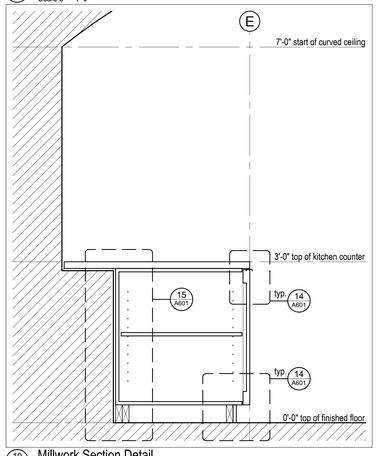

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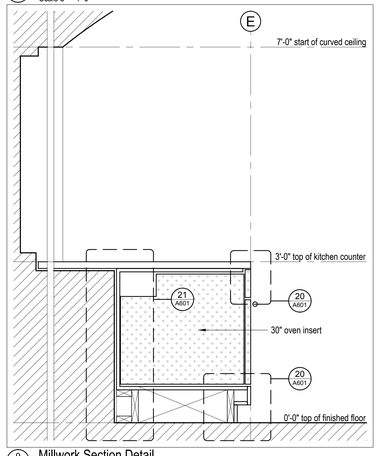

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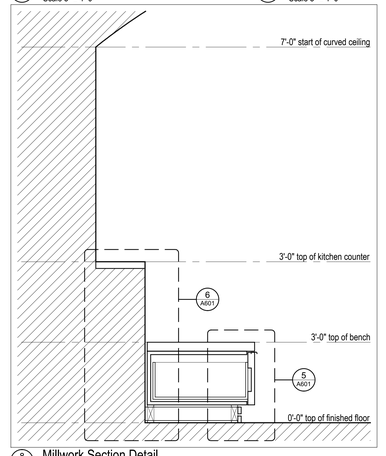

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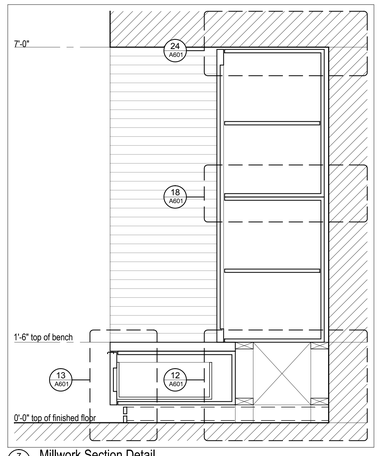

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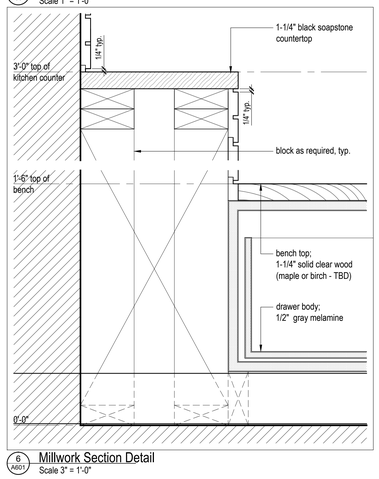

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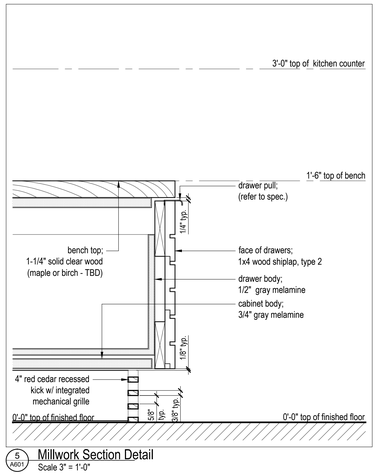

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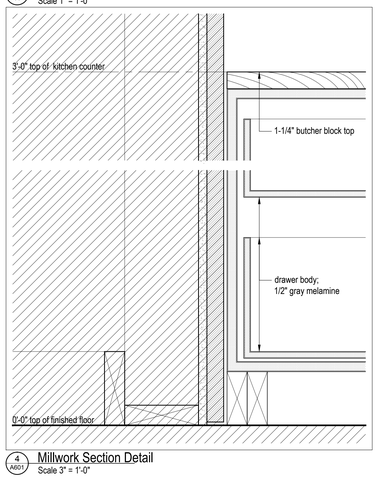

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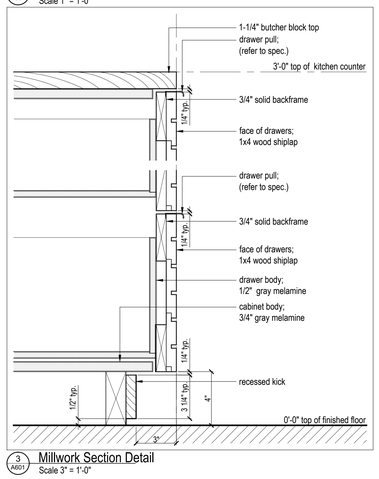

3 A601 Millwork Section Detail
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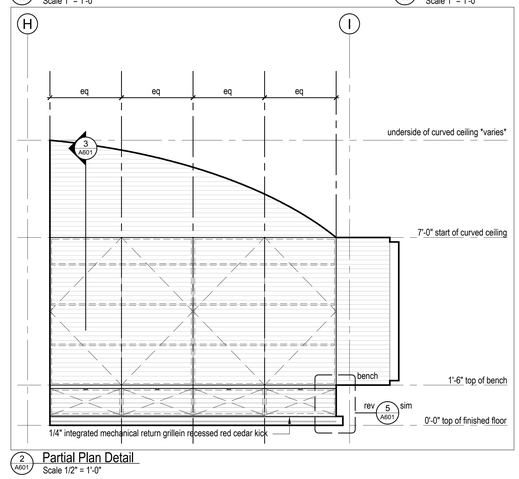
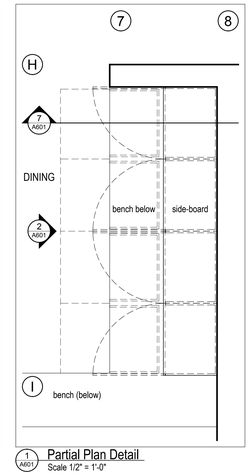


2 A601 Partial Plan Detail
Scale 1/2" = 1'-0"



1 A601 Partial Plan Detail
Scale 1/2" = 1'-0"

Lot 14 Mountain House
Summit Powter Mountain
Eden, Utah

MacKay-Lyons
Sweetapple
Architects
Limited

2188 Gottingen St
Halifax, Nova Scotia
Canada B3K 3B4

ph: (902) 429 1867
fax: (902) 429 6276

No.	Description	Date
01	DD Issued for Pricing	2018.05.30

Revision:

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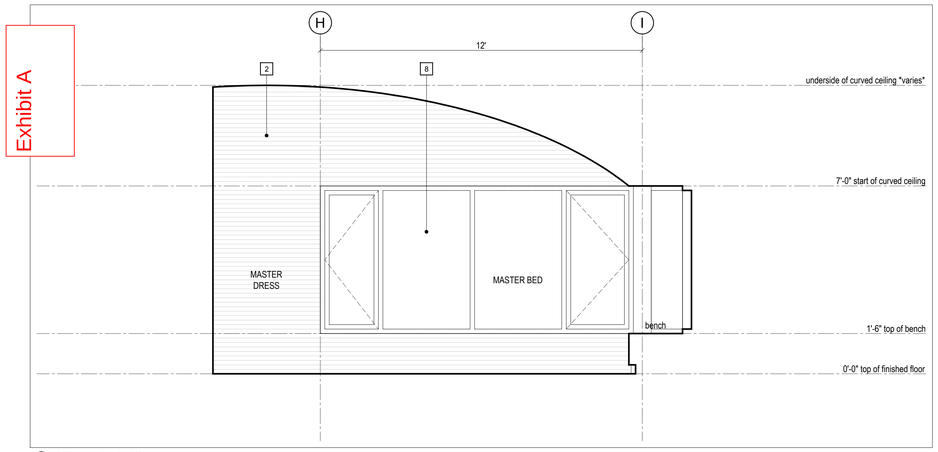
Millwork

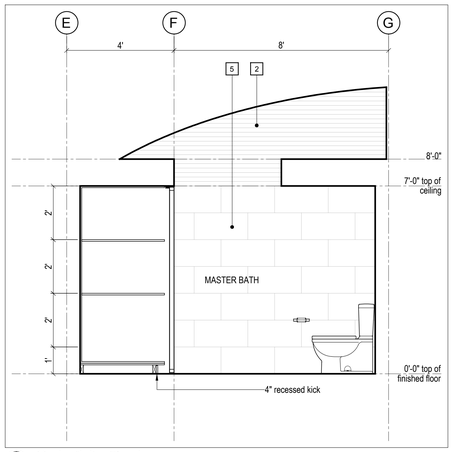
scale: 1/2" = 1'-0"
date: 2018-04-20
drawn: IS
chk'd: BML

A601

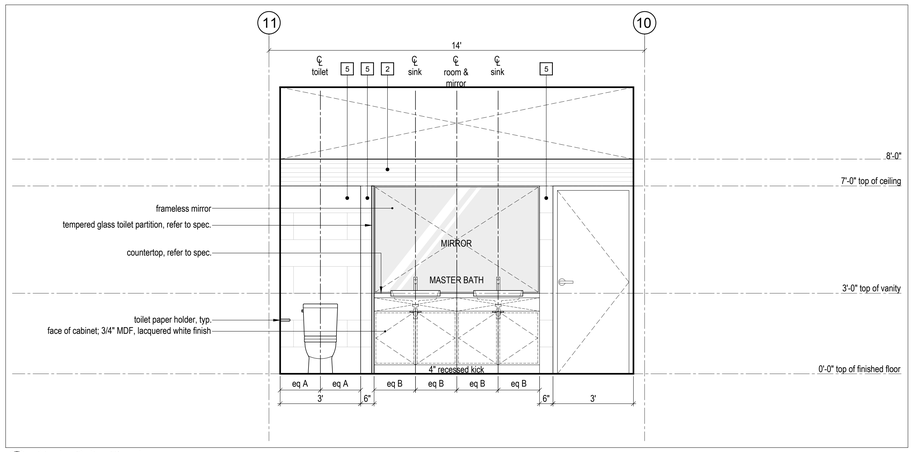
Exhibit A



13 A602 Master Bed - Elevation
Scale 1/2" = 1'-0"



7 A602 Master Bath - Elevation
Scale 1/2" = 1'-0"



3 A602 Master Bath - Elevation
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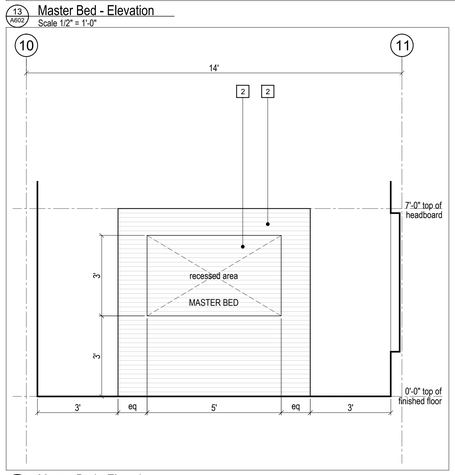
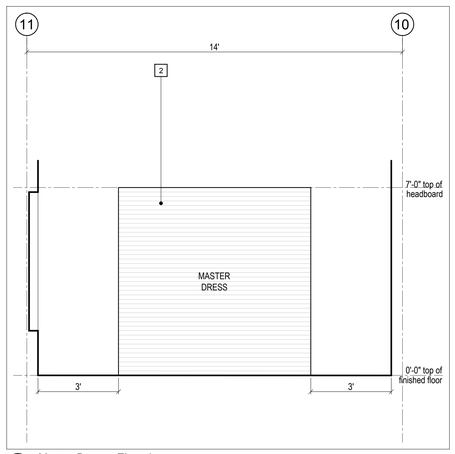
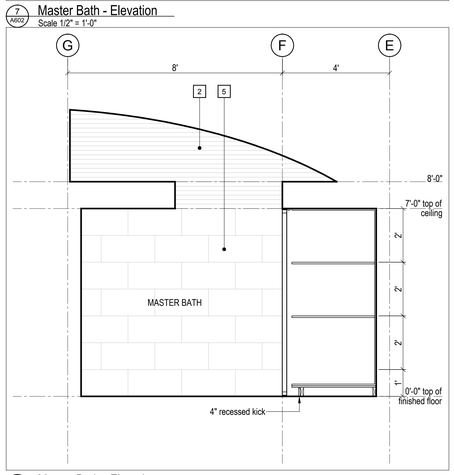


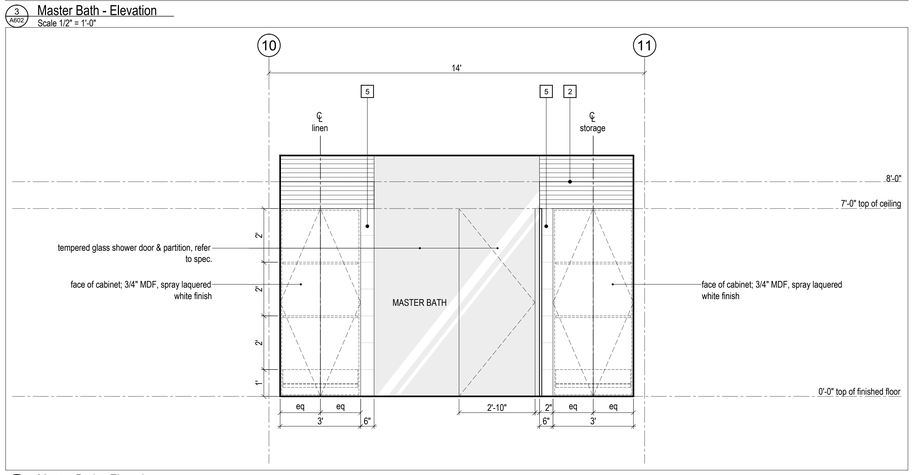
12 A602 Master Bed - Elevation
Scale 1/2" = 1'-0"



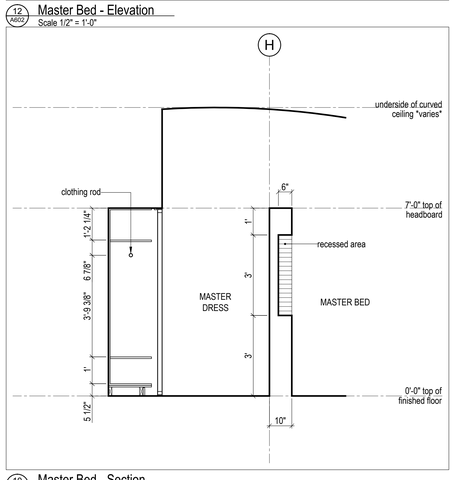
11 A602 Master Dress - Elevation
Scale 1/2" = 1'-0"



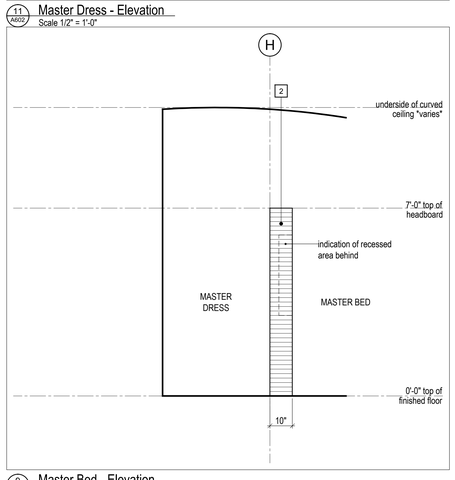
6 A602 Master Bath - Elevation
Scale 1/2" = 1'-0"



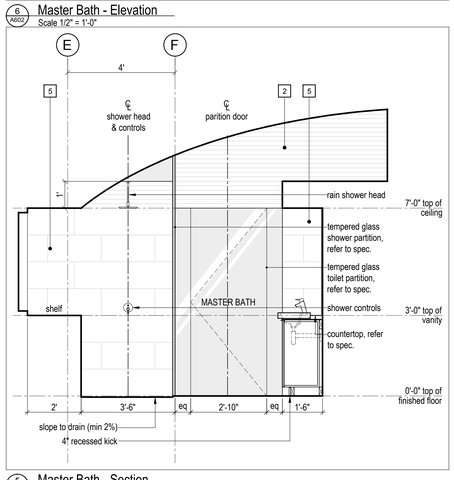
2 A602 Master Bath - Elevation
Scale 1/2" = 1'-0"



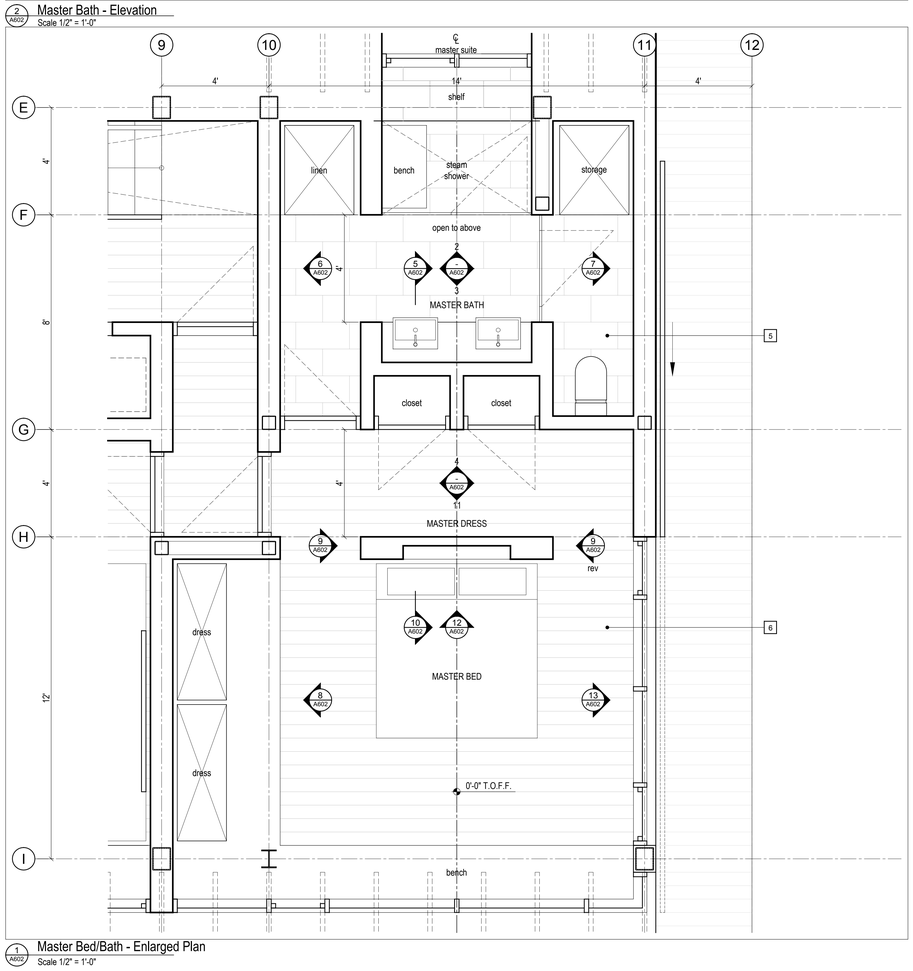
10 A602 Master Bed - Section
Scale 1/2" = 1'-0"



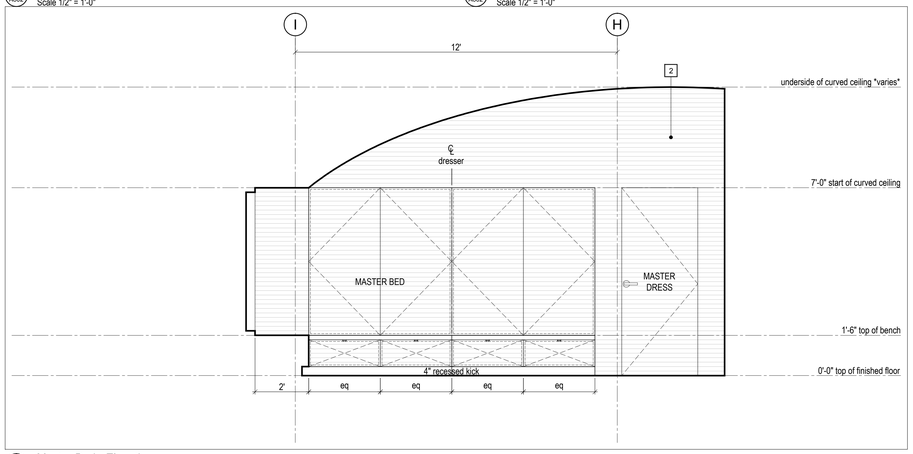
9 A602 Master Bed - Elevation
Scale 1/2" = 1'-0"



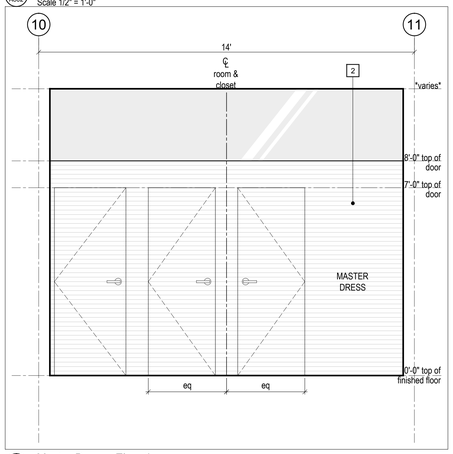
5 A602 Master Bath - Section
Scale 1/2" = 1'-0"



1 A602 Master Bed/Bath - Enlarged Plan
Scale 1/2" = 1'-0"



8 A602 Master Bed - Elevation
Scale 1/2" = 1'-0"



4 A602 Master Dress - Elevation
Scale 1/2" = 1'-0"

Lot 14 Mountain House
Summit Powder Mountain
Eden, Utah

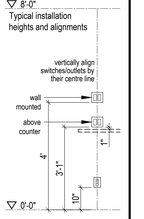
MacKay-Lyons Sweetapple
Architects Limited
2188 Gottingen St.
Halifax, Nova Scotia
Canada B3K 3B4
ph: (902) 429-1867
fax: (902) 429-6276

LEGEND

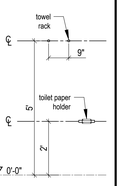
1 gypsum wallboard (painted)
2 2" horizontal red cedar shiplap (clear finish)
3 2" red cedar gapped boards (clear finish)
4 tile 1 as per finish schedule
5 tile 2 as per finish schedule
6 engineered hardwood flooring on concrete topping (heated) - typical
7 exposed concrete topping (heated)
8 glazing system - see window/door schedule

NOTE: all dimensions to be verified in field

▽ 8'-0"
Typical installation heights and alignments



▽ 8'-0"
Typical installation heights; provide backing as needed



▽ 0'-0"

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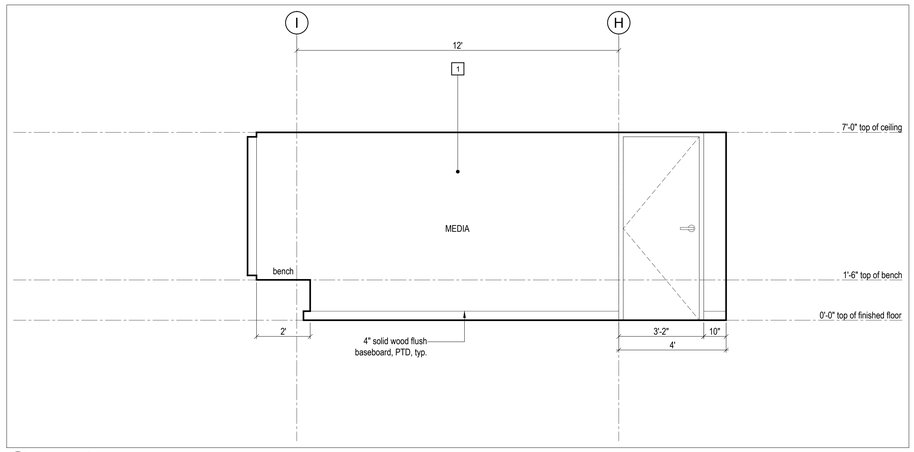
Millwork - Master Suite

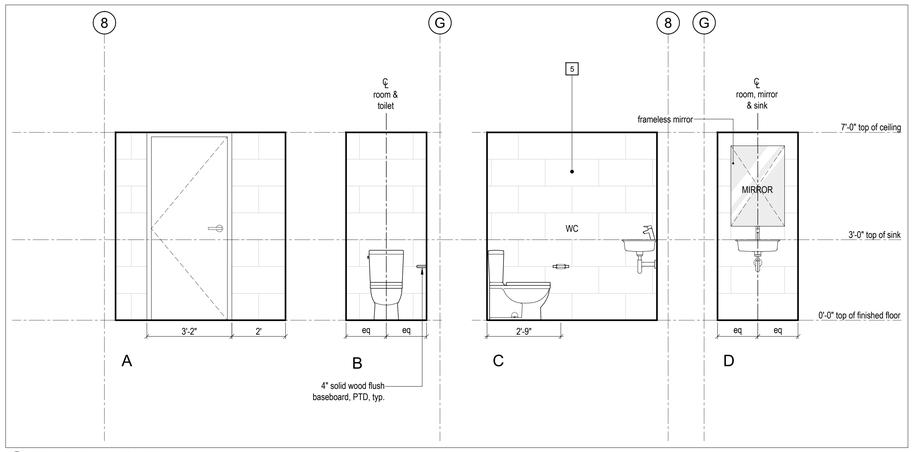
scale: 1/2" = 1'-0"
date: 2018-04-24
drawn: IF
chk'd: BML

A602

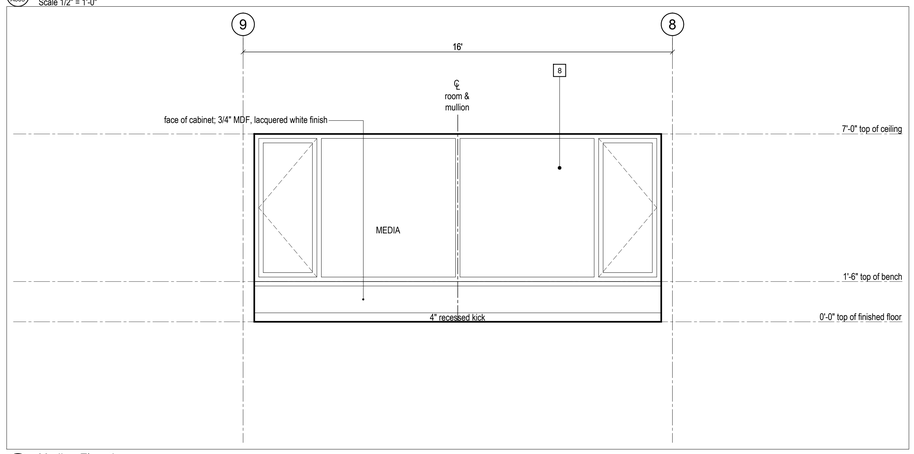
Exhibit A



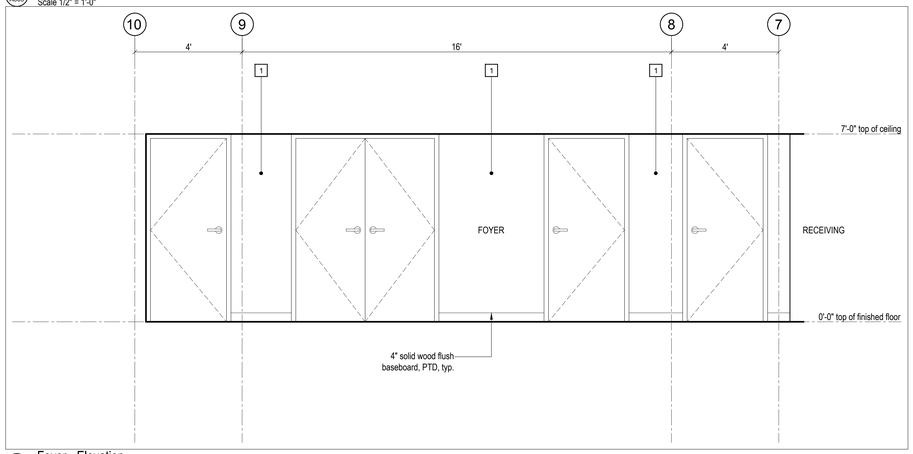
7 A603 Media - Elevation
Scale 1/2" = 1'-0"



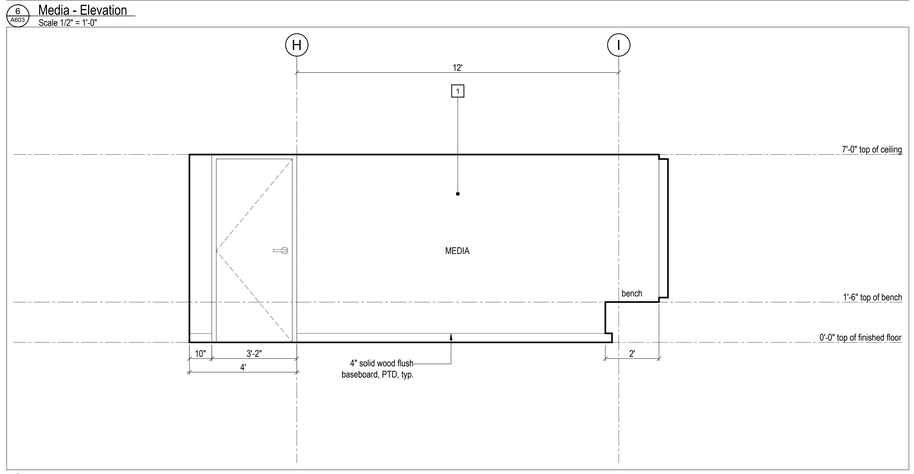
3 A603 Powder Room - Elevation
Scale 1/2" = 1'-0"



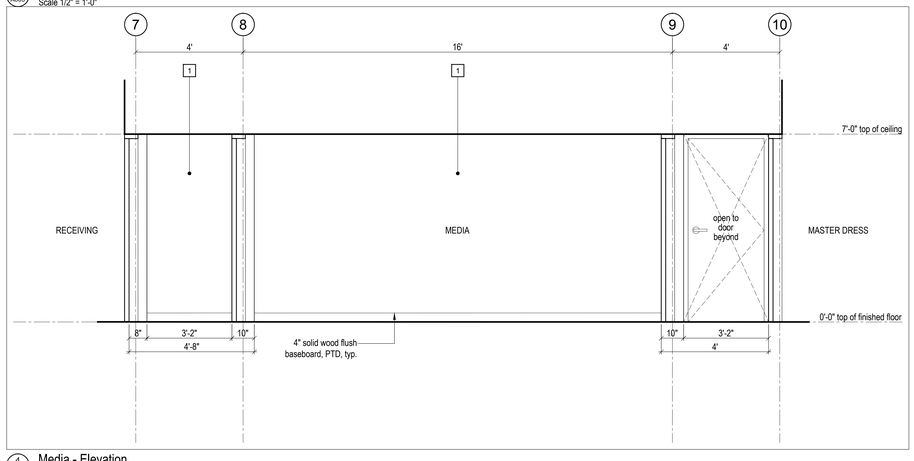
6 A603 Media - Elevation
Scale 1/2" = 1'-0"



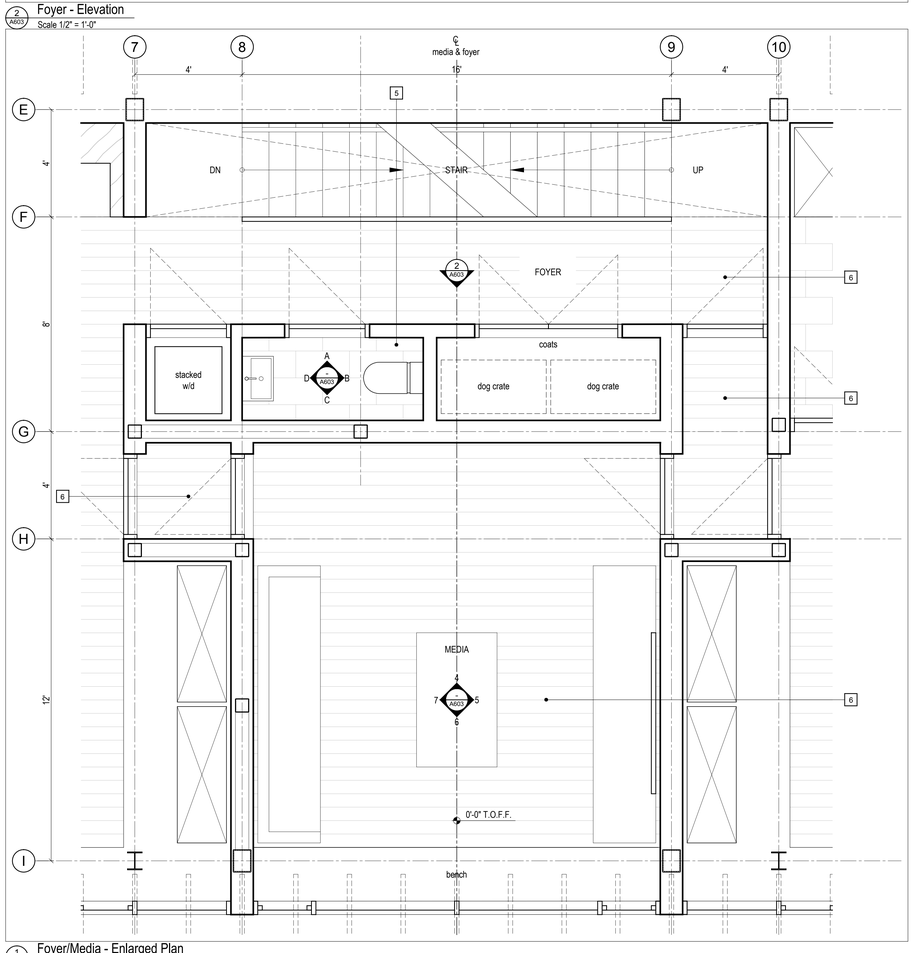
2 A603 Foyer - Elevation
Scale 1/2" = 1'-0"



5 A603 Media - Elevation
Scale 1/2" = 1'-0"



4 A603 Media - Elevation
Scale 1/2" = 1'-0"



1 A603 Foyer/Media - Enlarged Plan
Scale 1/2" = 1'-0"

Lot 14 Mountain House
Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple
Architects Limited
2188 Gottingen St.
Halifax, Nova Scotia
Canada B3K 3B4
ph: (902) 429-1867
fax: (902) 429-6276

LEGEND

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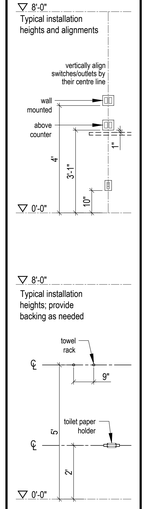
2. 2" horizontal red cedar shiplap (clear finish)
3. 2" red cedar gapped boards (clear finish)
4. tile 1 as per finish schedule
5. tile 2 as per finish schedule
6. engineered hardwood flooring on concrete topping (heated) - typical
7. exposed concrete topping (heated)
8. glazing system - see window/door schedule

NOTE: all dimensions to be verified in field



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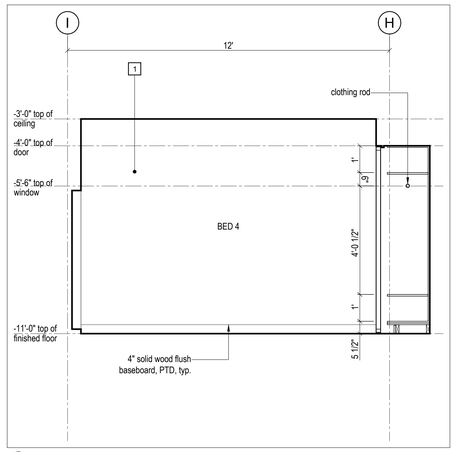
Millwork - Foyer / Media

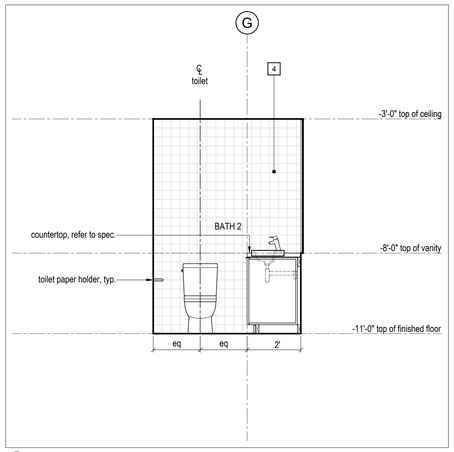
scale: 1/2" = 1'-0"
date: 2018-04-24
drawn: IF
chk'd: BML

A603

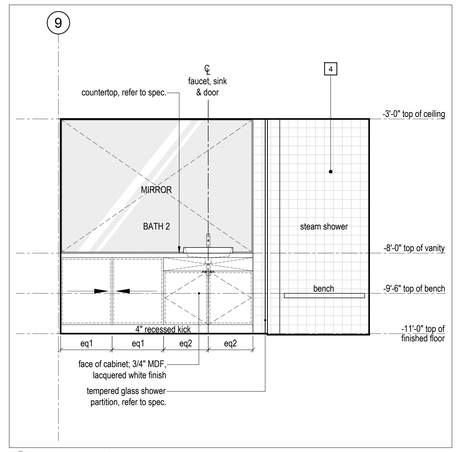
Exhibit A



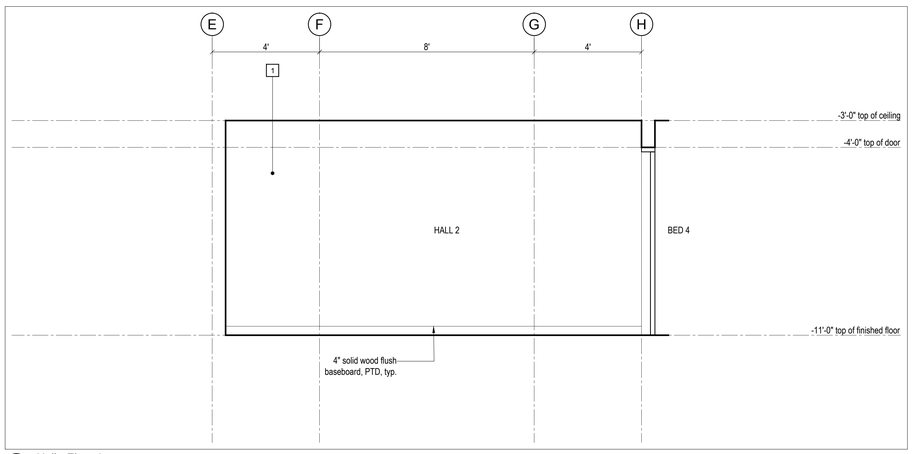
9 A604 Bedroom - Elevation
Scale 1/2" = 1'-0"



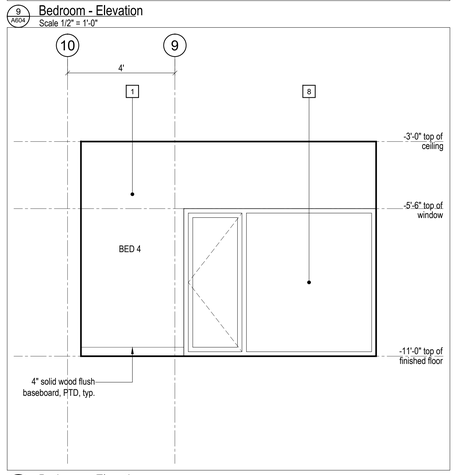
5 A604 Bathroom - Elevation
Scale 1/2" = 1'-0"



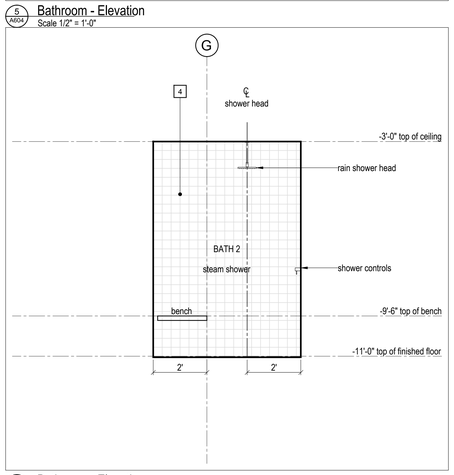
3 A604 Bathroom - Elevation
Scale 1/2" = 1'-0"



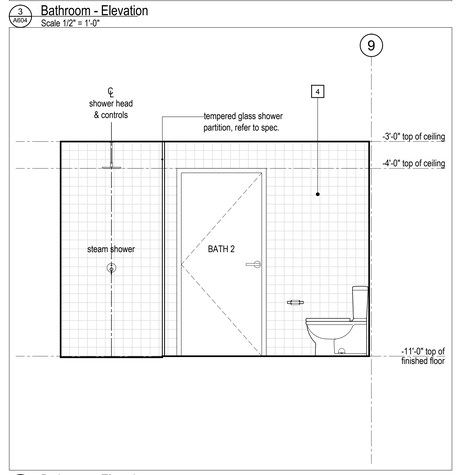
12 A604 Hall - Elevation
Scale 1/2" = 1'-0"



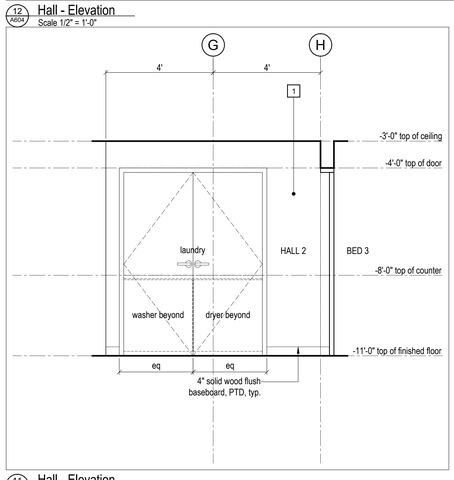
8 A604 Bedroom - Elevation
Scale 1/2" = 1'-0"



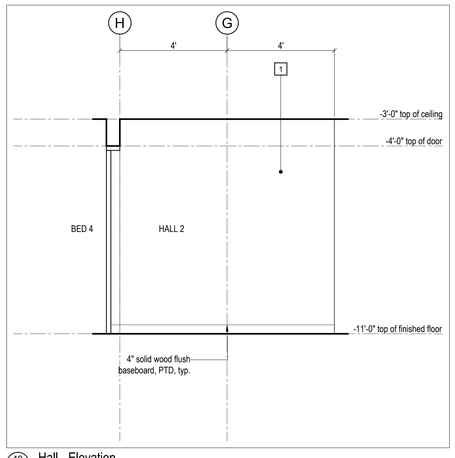
4 A604 Bathroom - Elevation
Scale 1/2" = 1'-0"



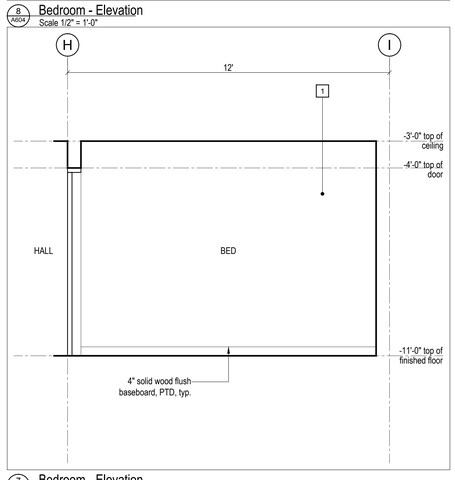
2 A604 Bathroom - Elevation
Scale 1/2" = 1'-0"



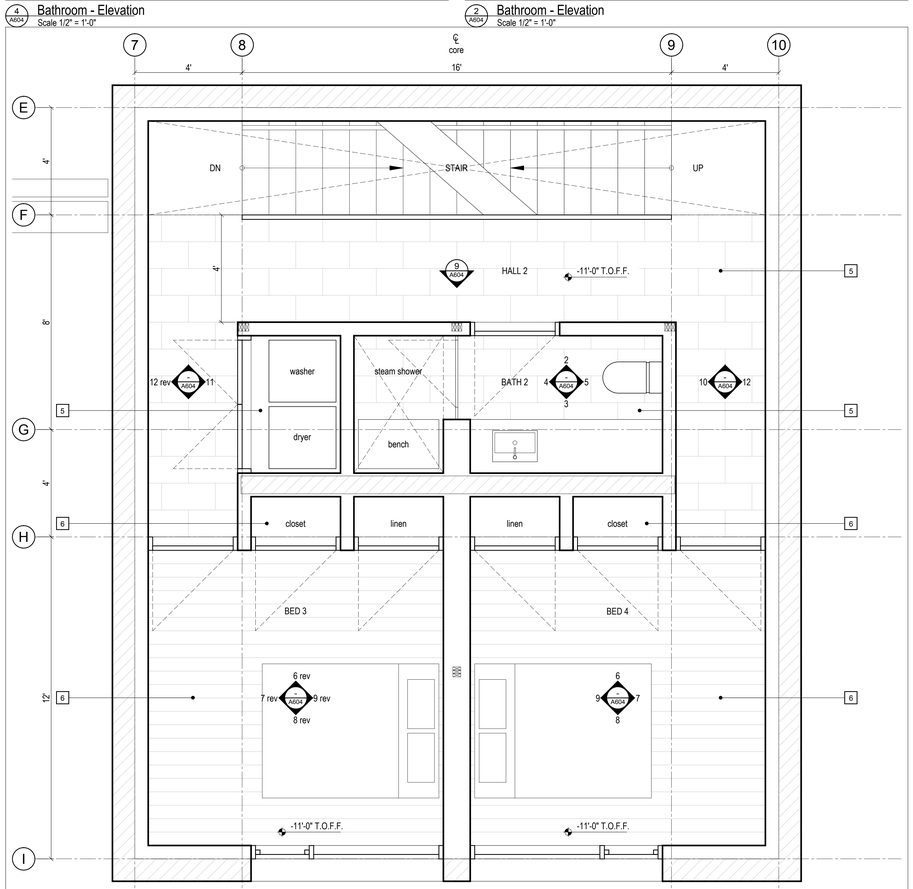
11 A604 Hall - Elevation
Scale 1/2" = 1'-0"



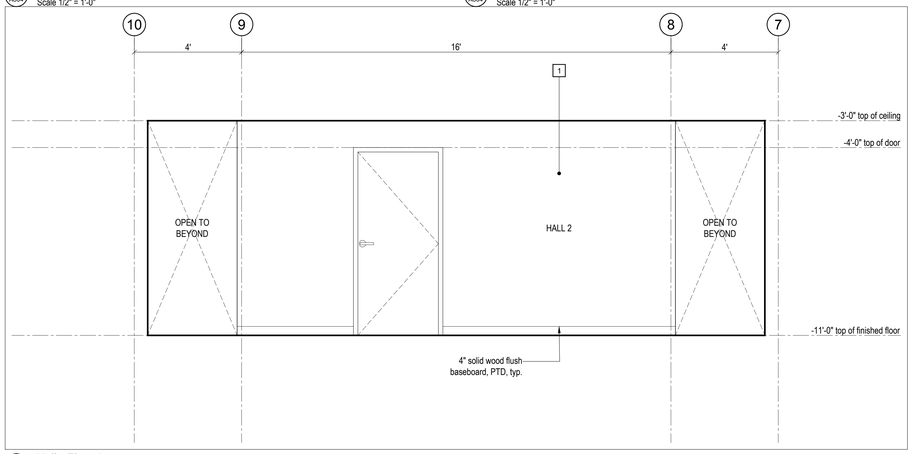
10 A604 Hall - Elevation
Scale 1/2" = 1'-0"



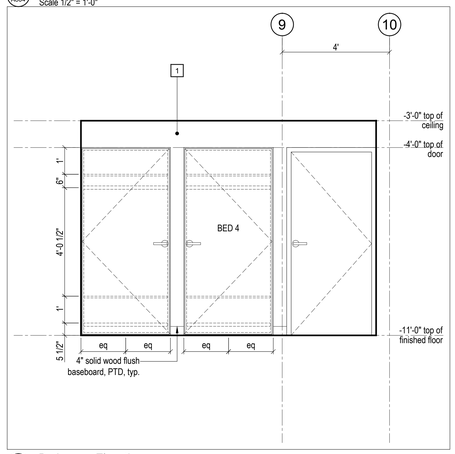
7 A604 Bedroom - Elevation
Scale 1/2" = 1'-0"



1 A604 Lower Level - Enlarged Plan
Scale 1/2" = 1'-0"



9 A604 Hall - Elevation
Scale 1/2" = 1'-0"



6 A604 Bedroom - Elevation
Scale 1/2" = 1'-0"

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Summit Powder Mountain
Eden, Utah

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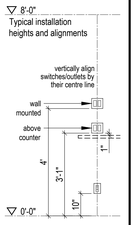
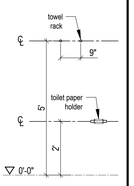
6. engineered hardwood flooring on concrete topping (heated) - typical
7. exposed concrete topping (heated)
8. glazing system - see window/door schedule

NOTE: all dimensions to be verified in field





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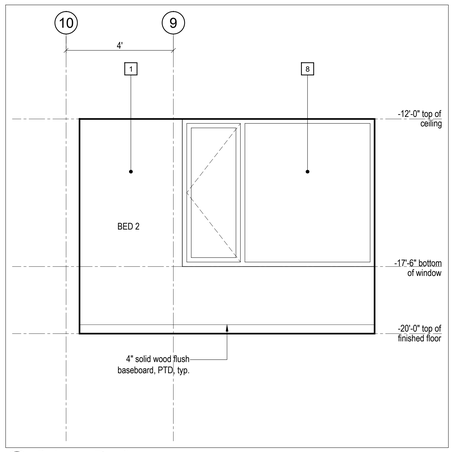
Millwork - Lower Level

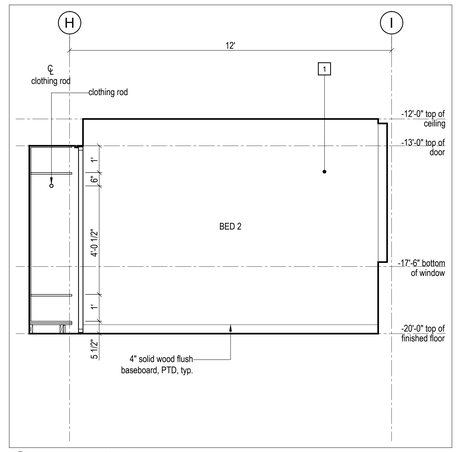
scale: 1/2" = 1'-0"
date: 2018-04-24
drawn: IF
chk'd: BML

A604

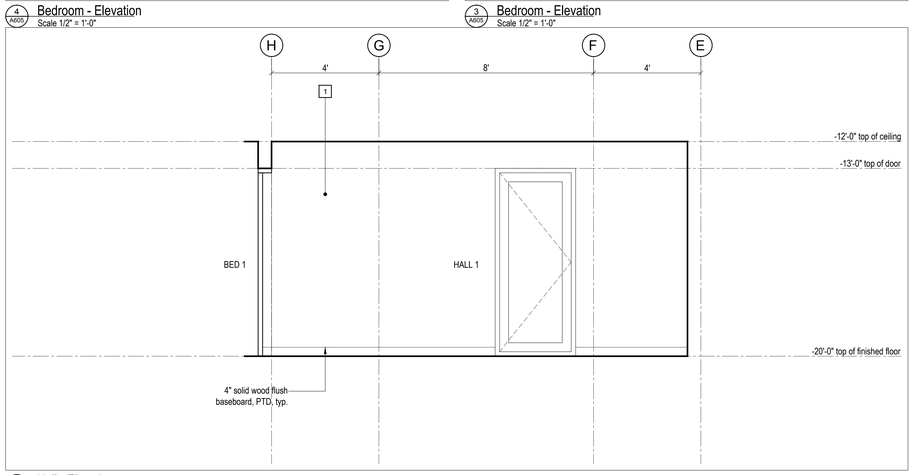
Exhibit A



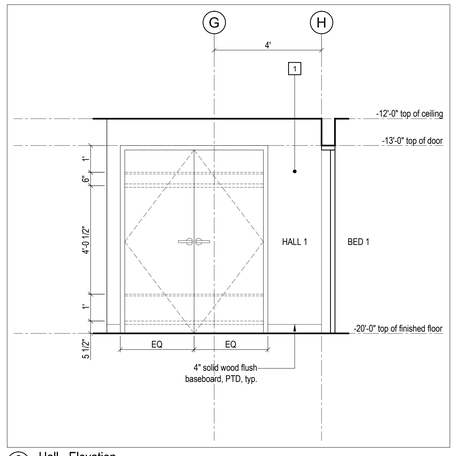
4 A605 Bedroom - Elevation
Scale 1/2" = 1'-0"



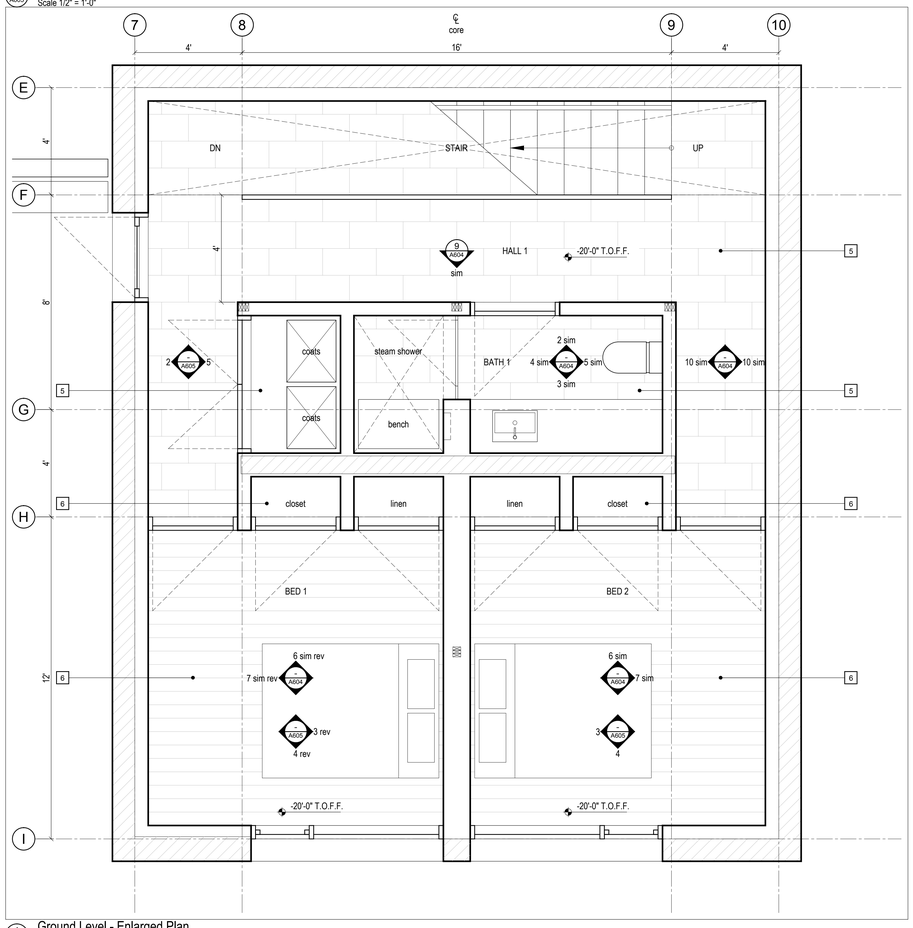
3 A605 Bedroom - Elevation
Scale 1/2" = 1'-0"



2 A605 Hall - Elevation
Scale 1/2" = 1'-0"



5 A605 Hall - Elevation
Scale 1/2" = 1'-0"



1 A605 Ground Level - Enlarged Plan
Scale 1/2" = 1'-0"

Lot 14 Mountain House

Summit Powder Mountain
Eden, Utah

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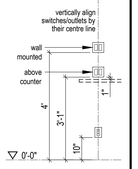
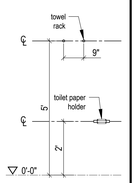
▽ 8'-0"
Typical installation heights and alignments



▽ 8'-0"
Typical installation heights; provide backing as needed



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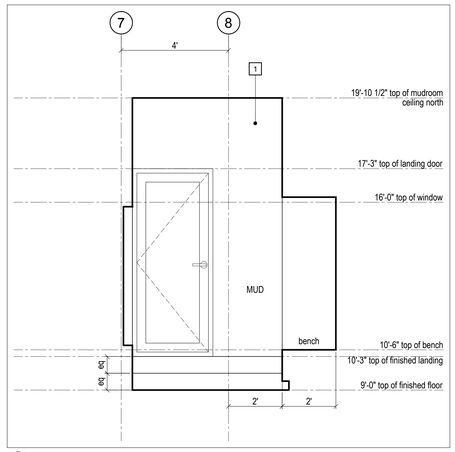
Millwork-Ground Level

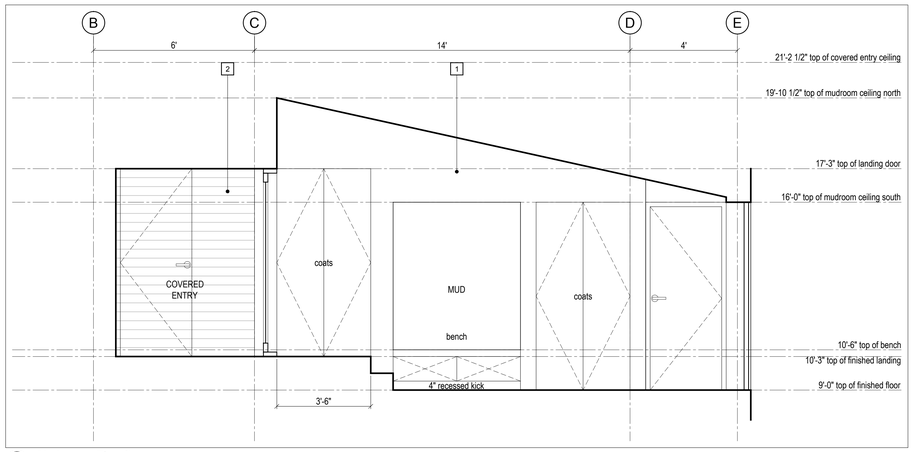
scale: 1/2" = 1'-0"
date: 2018-04-24
drawn: IF
chk'd: BML

A605

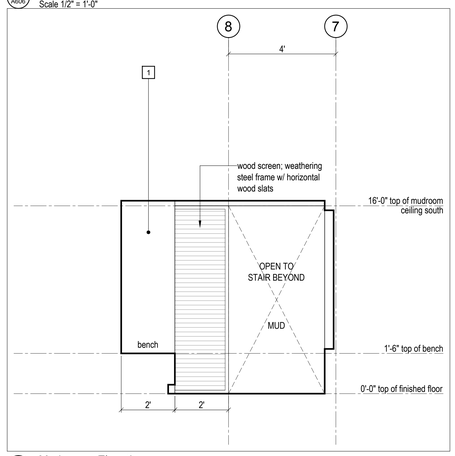
Exhibit A



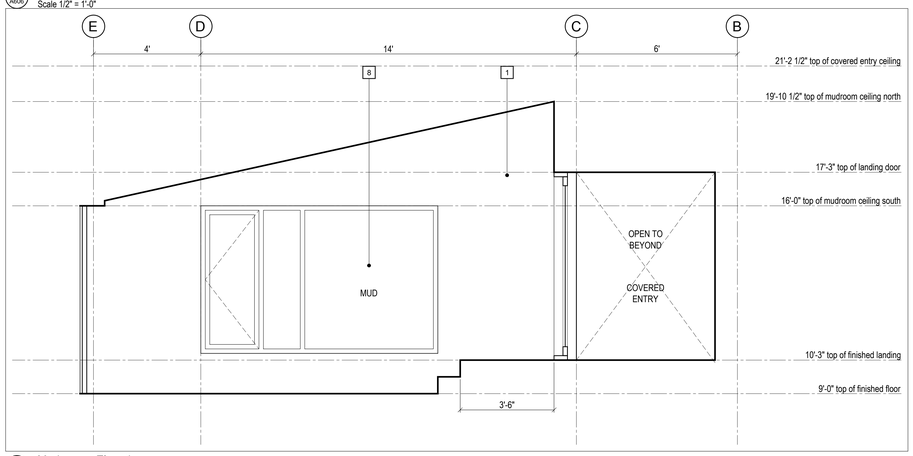
7 A606 Mudroom - Elevation
Scale 1/2" = 1'-0"



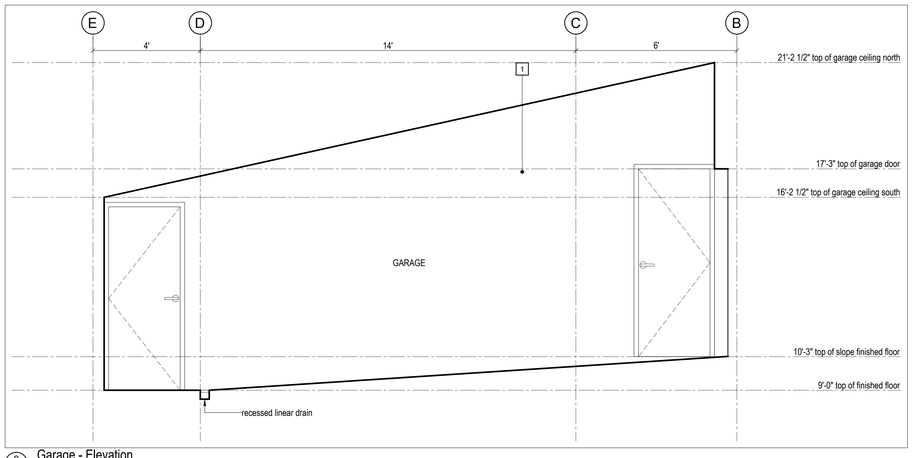
3 A606 Mudroom - Elevation
Scale 1/2" = 1'-0"



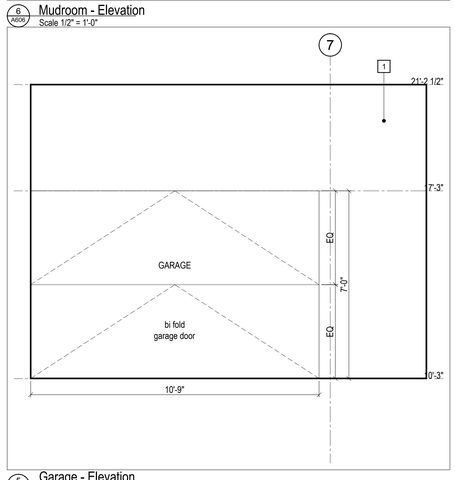
6 A606 Mudroom - Elevation
Scale 1/2" = 1'-0"



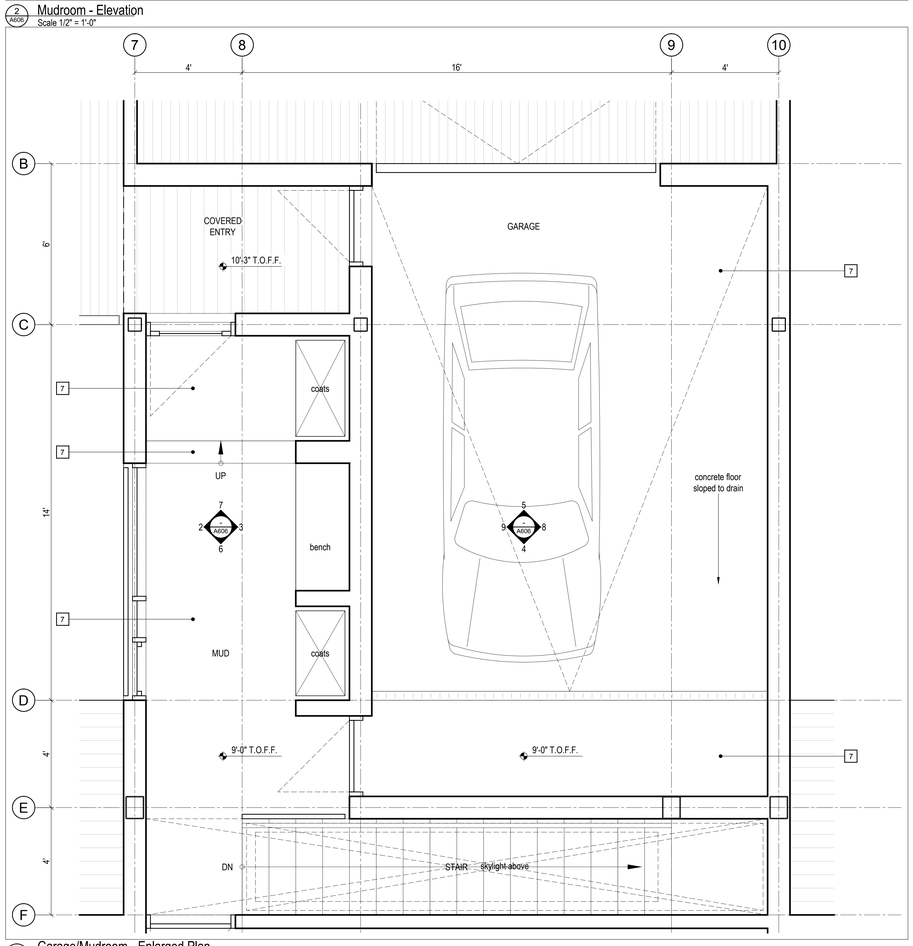
2 A606 Mudroom - Elevation
Scale 1/2" = 1'-0"



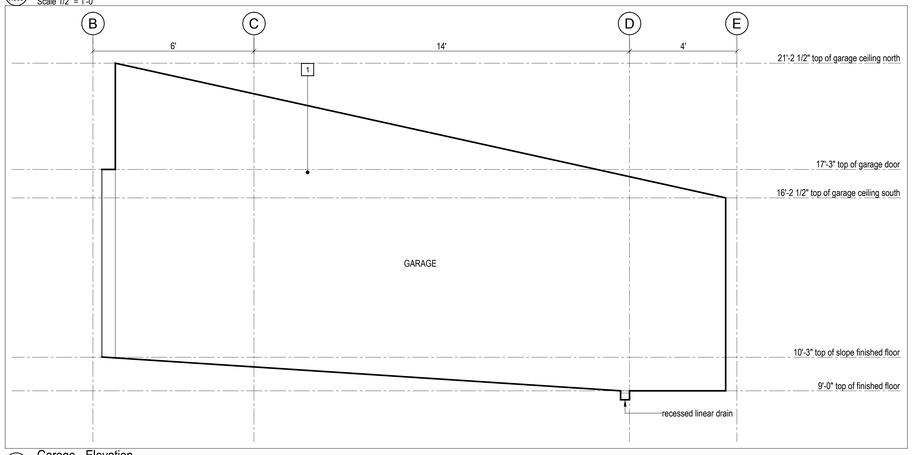
9 A606 Garage - Elevation
Scale 1/2" = 1'-0"



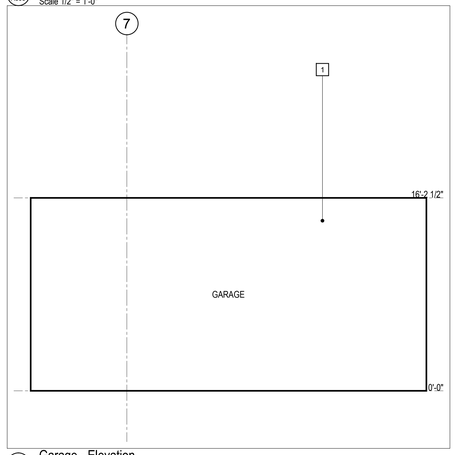
5 A606 Garage - Elevation
Scale 1/2" = 1'-0"



1 A606 Garage/Mudroom - Enlarged Plan
Scale 1/2" = 1'-0"



8 A606 Garage - Elevation
Scale 1/2" = 1'-0"



4 A606 Garage - Elevation
Scale 1/2" = 1'-0"

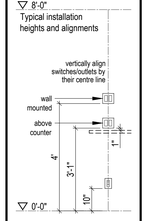
Lot 14 Mountain House
Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple
Architects Limited
2188 Gottingen St.
Halifax, Nova Scotia
Canada B3K 3B4
ph: (902) 429-1867
fax: (902) 429-6276

LEGEND

1 gypsum wallboard (painted)
2 2" horizontal red cedar shiplap (clear finish)
3 2" red cedar gapped boards (clear finish)
4 tile 1 as per finish schedule
5 tile 2 as per finish schedule
6 engineered hardwood flooring on concrete topping (heated) - typical
7 exposed concrete topping (heated)
8 glazing system - see window/door schedule

NOTE: all dimensions to be verified in field



No.	Description	Date
01	DD Issued for Pricing	2018.05.30
Revision:		

NOTES:

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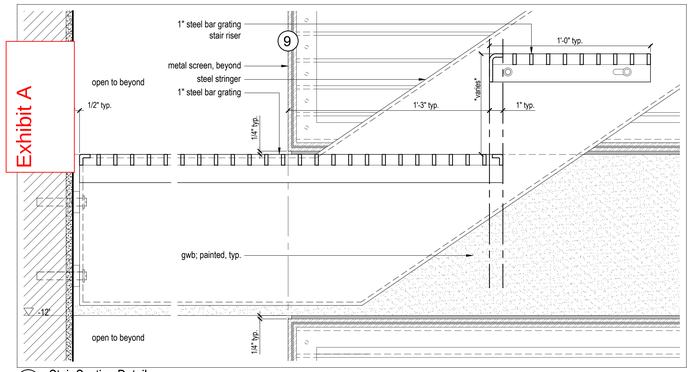
SHOP DRAWINGS:
Submit shop drawings to the Architect and Engineer for approval prior to manufacture of prefabricated elements of the building.

Millwork- Garage / Mudroom

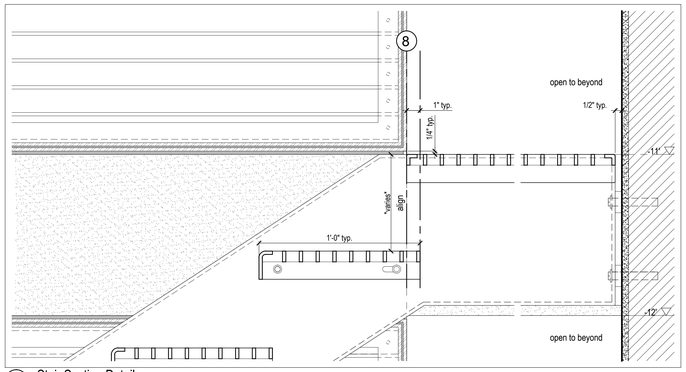
scale: 1/2" = 1'-0"
date: 2018-04-24
drawn: IF
chk'd: BML

A606

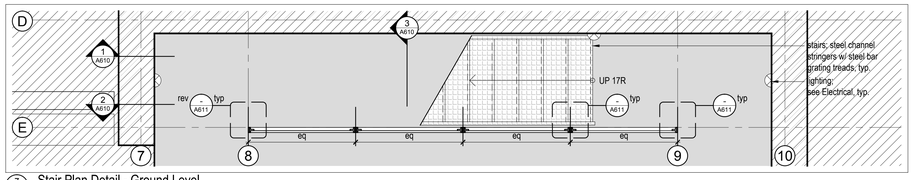
Exhibit A



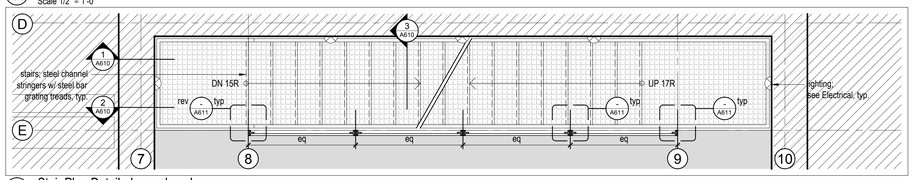
14 A610 Stair Section Detail
Scale 3" = 1'-0"



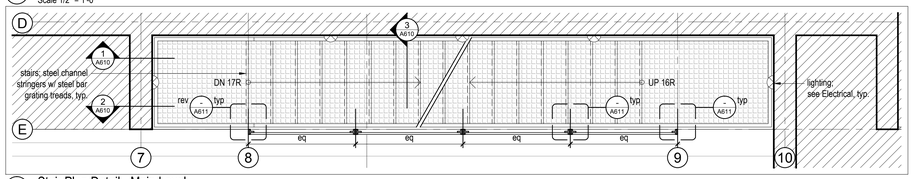
12 A610 Stair Section Detail
Scale 3" = 1'-0"



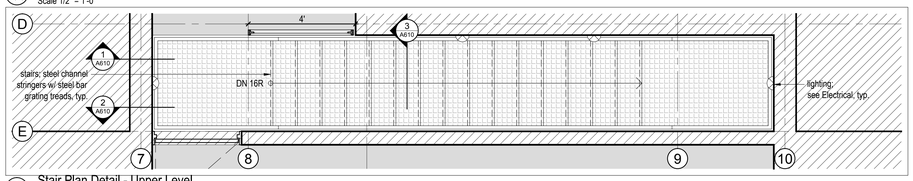
7 A610 Stair Plan Detail - Ground Level
Scale 1/2" = 1'-0"



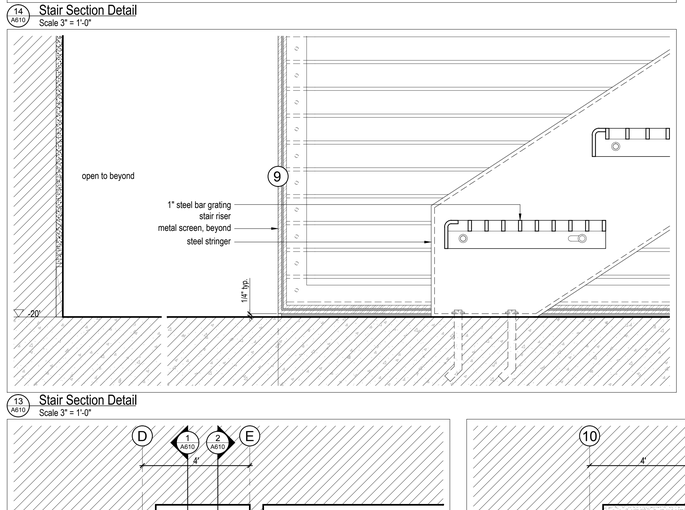
6 A610 Stair Plan Detail - Lower Level
Scale 1/2" = 1'-0"



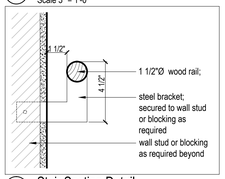
5 A610 Stair Plan Detail - Main Level
Scale 1/2" = 1'-0"



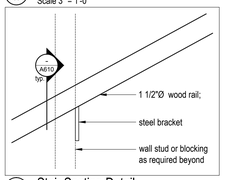
4 A610 Stair Plan Detail - Upper Level
Scale 1/2" = 1'-0"



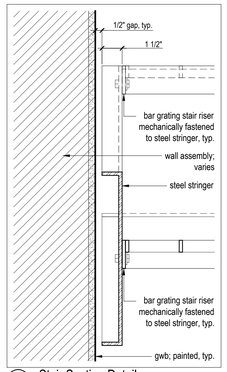
13 A610 Stair Section Detail
Scale 3" = 1'-0"



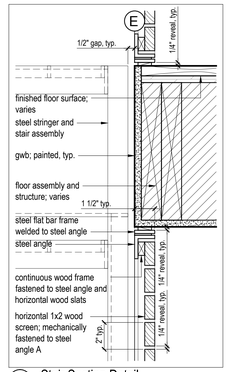
11 A601 Stair Section Detail
Scale 3" = 1'-0"



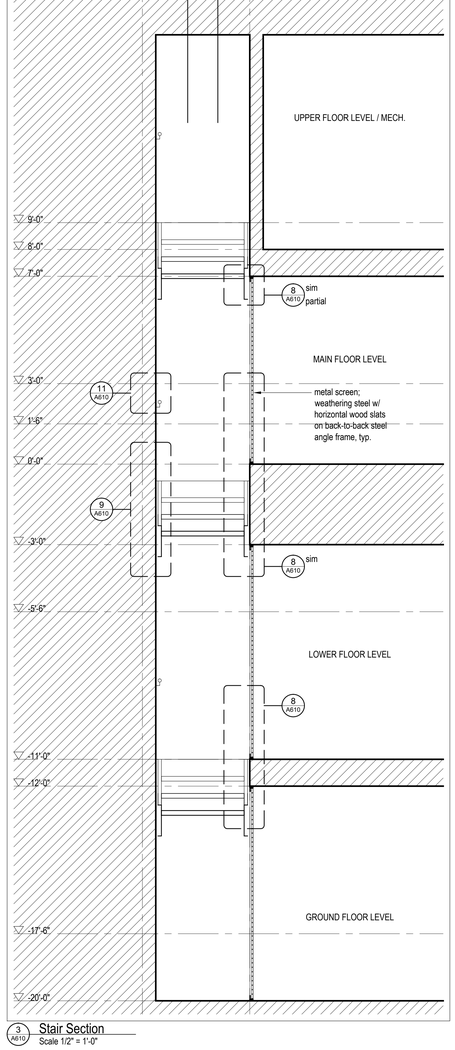
10 A610 Stair Section Detail
Scale 3" = 1'-0"



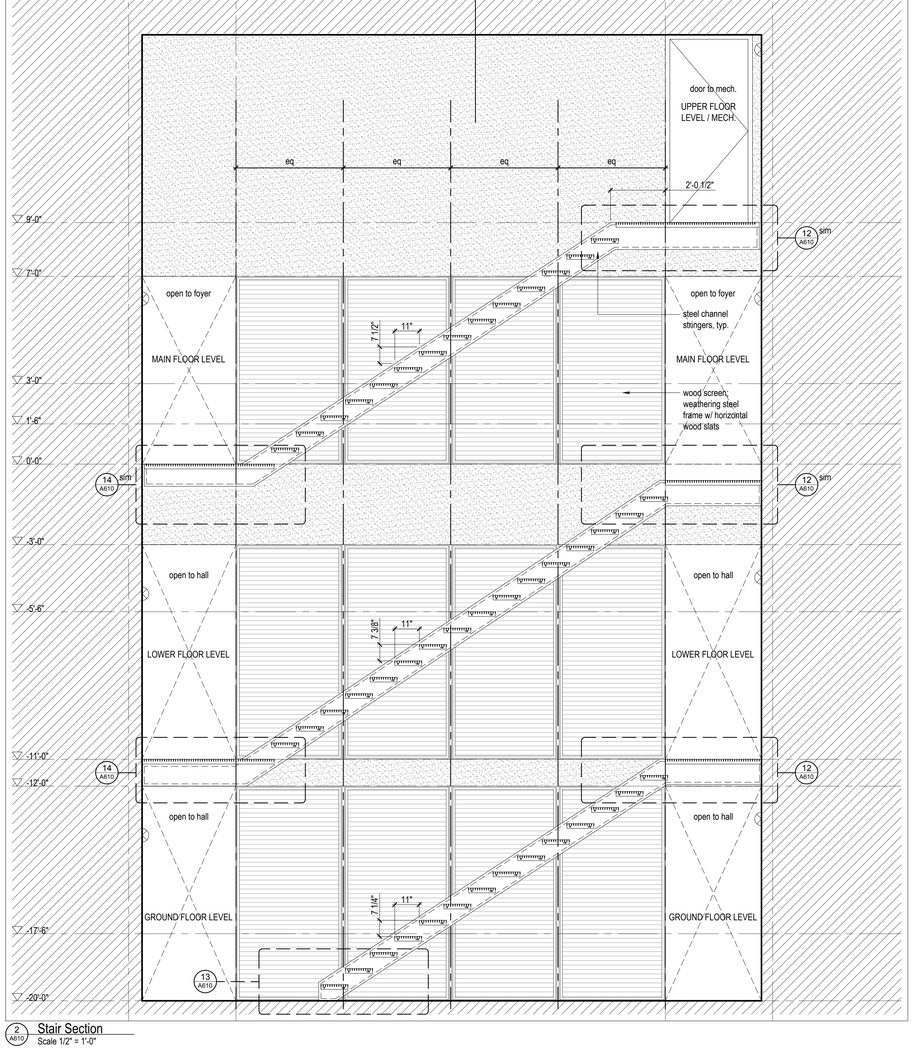
9 A610 Stair Section Detail
Scale 3" = 1'-0"



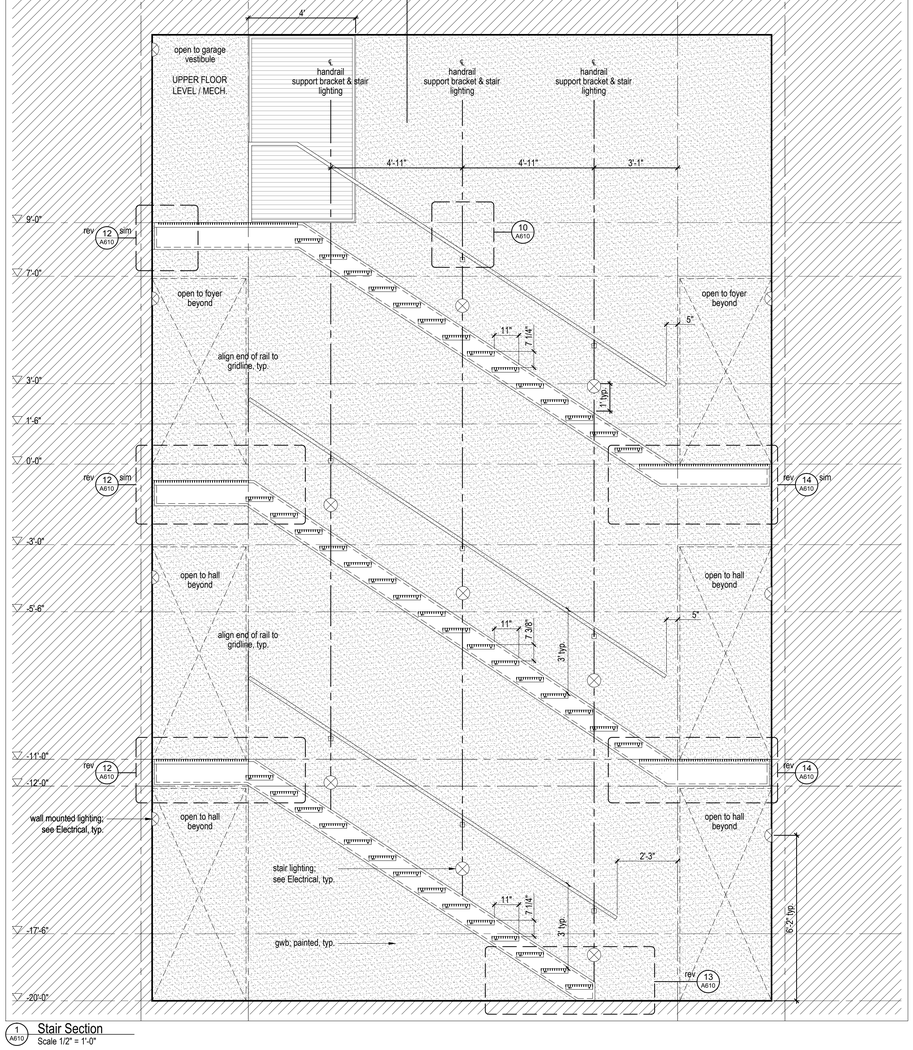
8 A610 Stair Section Detail
Scale 3" = 1'-0"



3 A610 Stair Section
Scale 1/2" = 1'-0"



2 A610 Stair Section
Scale 1/2" = 1'-0"



1 A610 Stair Section
Scale 1/2" = 1'-0"

Lot 14 Mountain House
Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple
Architects Limited
2188 Gottingen St
Halifax, Nova Scotia
Canada B3K 3B4
ph: (902) 429 1867
fax: (902) 429 6276

No.	Description	Date
01	DD Issued for Pricing	2018.05.30

Revision:

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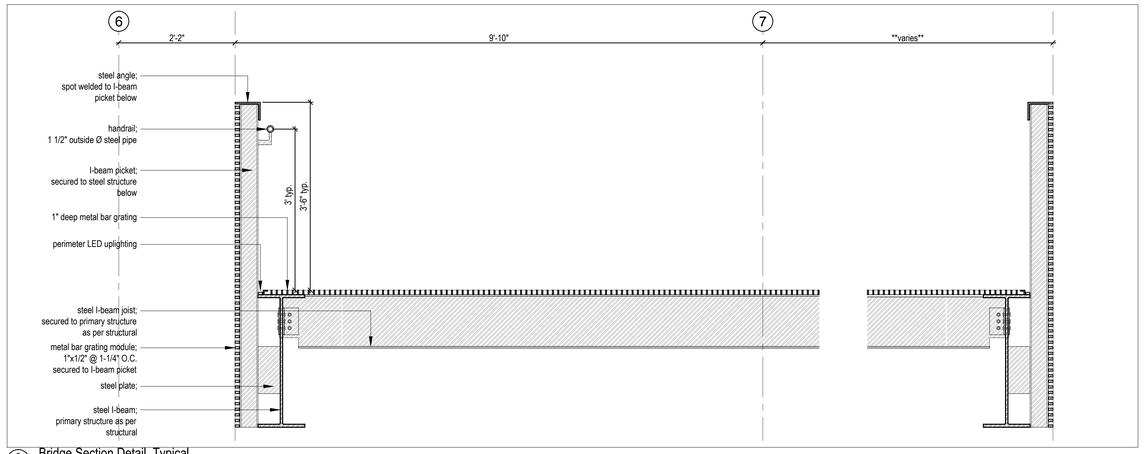
Stairs

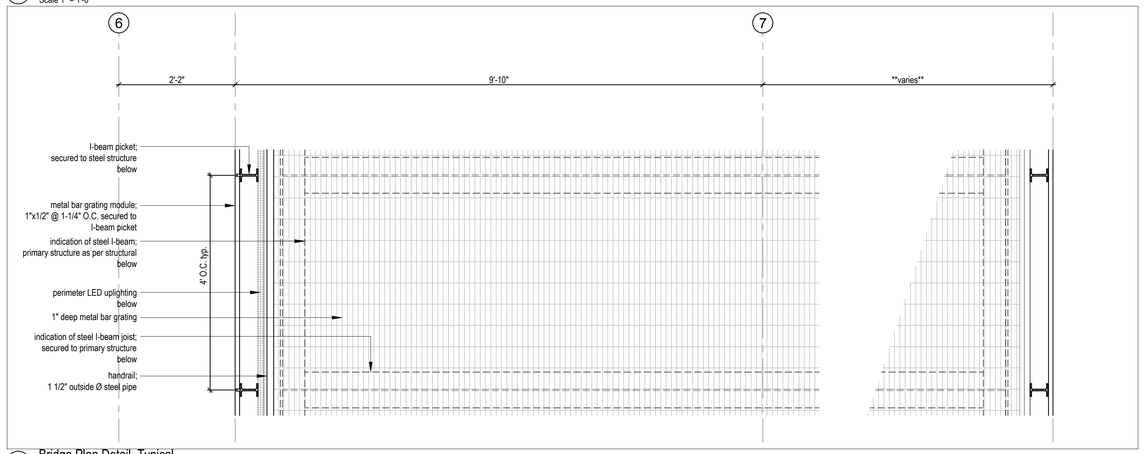
scale: 1/2" = 1'-0"
date: 2018-04-20
drawn: IS
chk'd: BML

A610

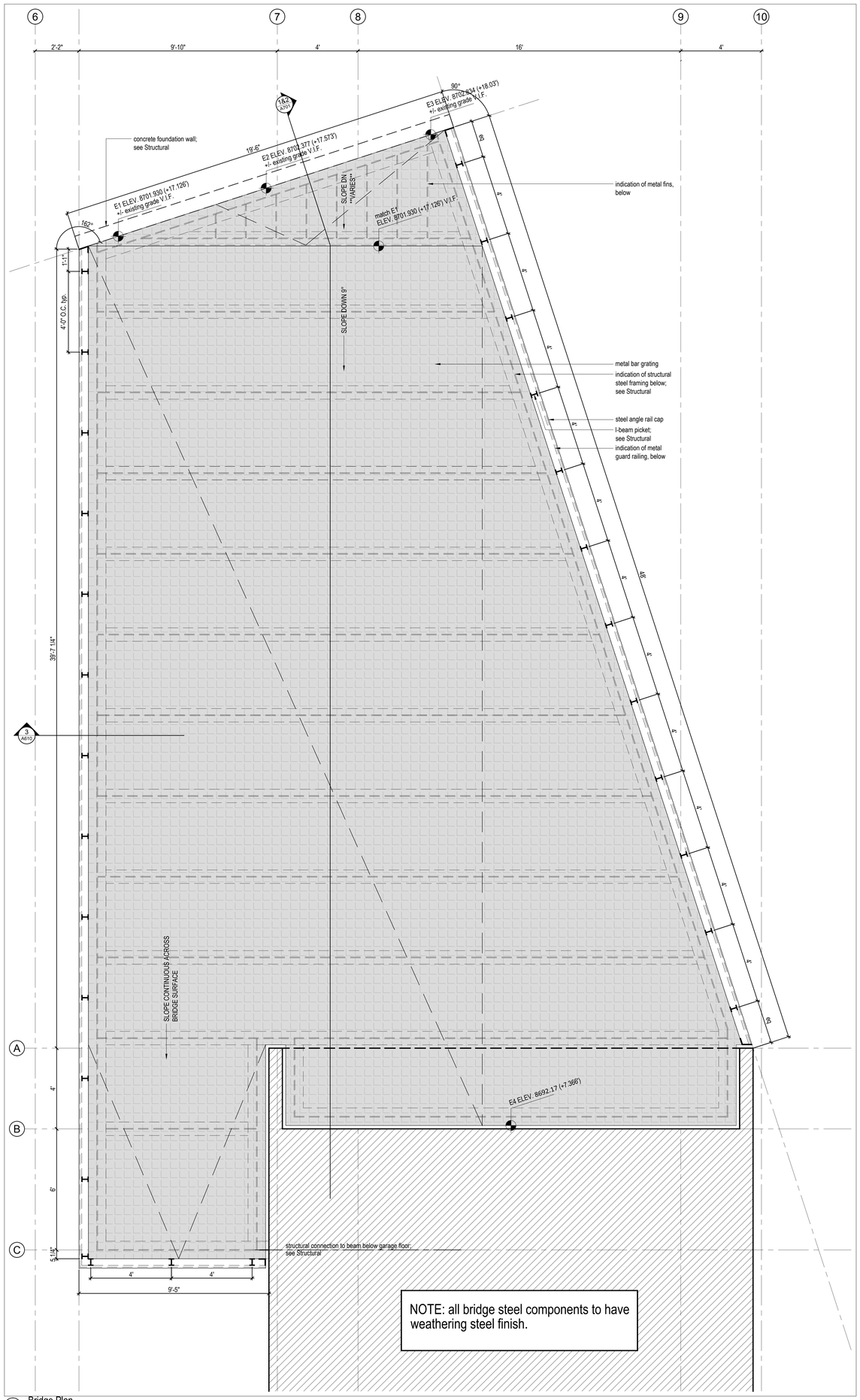
Exhibit A



3 / A700 Bridge Section Detail, Typical
Scale 1" = 1'-0"



2 / A700 Bridge Plan Detail, Typical
Scale 1" = 1'-0"



1 / A700 Bridge Plan
Scale 1/2" = 1'-0"

Lot 14 Mountain House
Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple
Architects Limited
2188 Gottingen St
Halifax, Nova Scotia
Canada B3K 3B4
ph: (902) 429 1867
fax: (902) 429 6276

No.	Description	Date
01	DD Issued for Pricing	2018.05.30

Revision:

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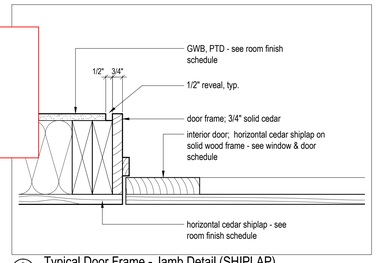
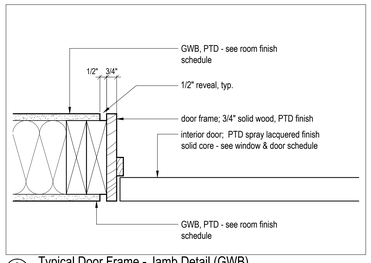
scale: 1/2" = 1'-0"
date: 2018-05-22
drawn: IB
chk'd: BML

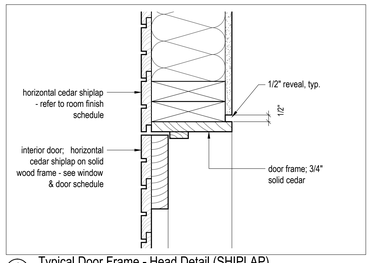
Exhibit A



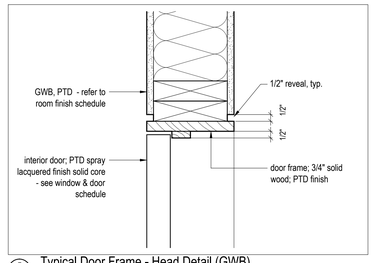
2 A900 Typical Door Frame - Jamb Detail (SHIPLAP)
Scale 3" = 1'-0"



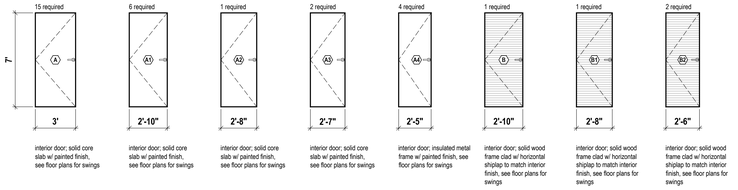
3 A900 Typical Door Frame - Jamb Detail (GWB)
Scale 3" = 1'-0"

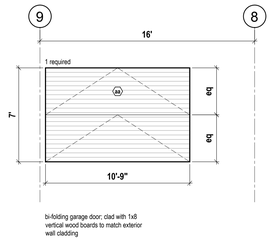


4 A900 Typical Door Frame - Head Detail (SHIPLAP)
Scale 3" = 1'-0"

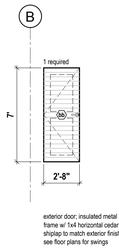


5 A900 Typical Door Frame - Head Detail (GWB)
Scale 3" = 1'-0"

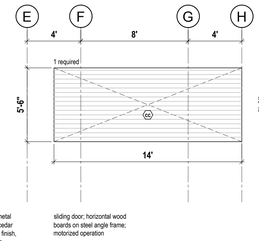




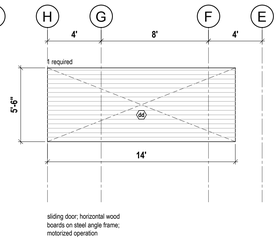
bi-folding garage door; clad with 1x8 vertical wood boards to match exterior wall cladding



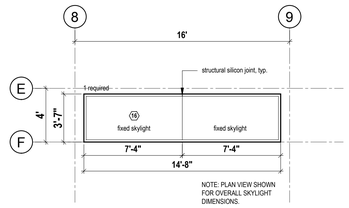
exterior door; insulated metal frame w/ 1x4 horizontal cedar shiplap to match exterior finish, see floor plans for swings



sliding door; horizontal wood boards on steel angle frame; motorized operation

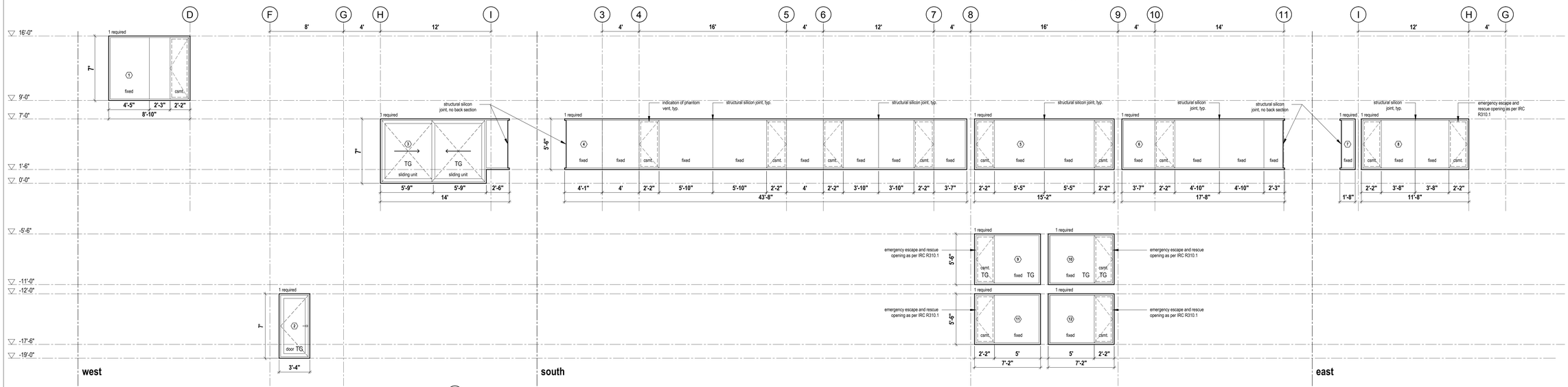


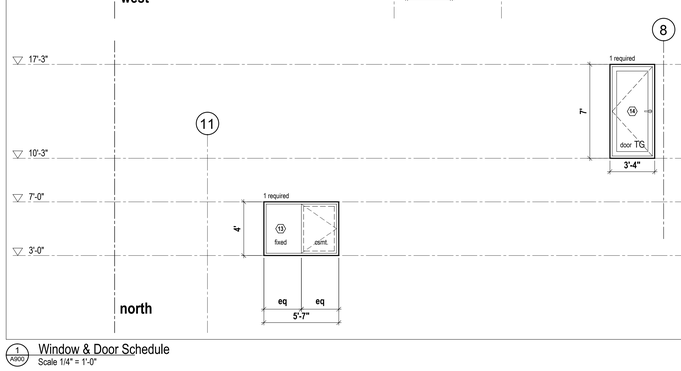
sliding door; horizontal wood boards on steel angle frame; motorized operation

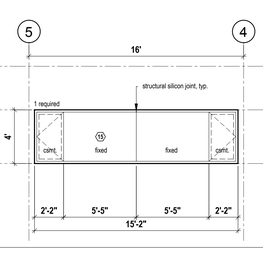


NOTES:

1. Exterior windows and doors to be thermally broken aluminum curtain wall system with clear anodized aluminum finish; mullionless exterior appearance, structural silicone joints.
2. Operable units to be 'phantom vents' with no exterior pressure plates.
3. All glass to be double paned insulated units. Low iron lites with low-e coating on #2 surface.
4. Minimum centre-of-glass U-factor 0.38.
5. All entry doors are to have keyed entry lever and deadbolt. Information to be provided as part of glazing shop drawings and reviewed by architect.
6. The sizes are rough openings. It is the contractor's responsibility to determine finished frames.
7. All operable windows to have screens. Review screen type with architect prior to installation.
8. All window head / sill / jamb flashing to be anodized aluminum to match windows.
9. All window head / sill / jamb assembly details to be designed by window manufacturer and approved by the architect.
10. All operable windows to be outswing.
11. All joints of door cladding to align with joints of wall cladding when doors are in closed position.
12. All window dimensions in this drawing to be verified in field prior to fabrication.
13. Provide shop drawings for all windows and doors for review by architect prior to fabrication and installation.
14. All glazing 18" or less from the finished floor to be tempered, unless otherwise noted
15. Refer to floor plans for door swing directions.
16. TG indicates tempered glazing.
17. All U-factors shall be determined by testing in accordance with NFRC 100 and labeled as such by the manufacturer, per IECC R402.3.







1 A900 Window & Door Schedule
Scale 1/4" = 1'-0"

Lot 14 Mountain House
Summit Powder Mountain
Eden, Utah

MacKay-Lyons Sweetapple
Architects Limited
2188 Gottingen St.
Halifax, Nova Scotia
Canada B3K 3B4
ph: (902) 429-1867
fax: (902) 429-6276

No.	Description	Date
02	DD Issued for Pricing	2018.05.30
01	Issued for Coordination	2018.05.08
Revision:		

Window & Door Schedule

scale: 1/4" = 1'-0"
date: 2018-02-28
drawn: MB
chk'd: BML

A900

Exhibit B

Intermountain GeoEnvironmental Services, Inc.
12429 South 300 East, Suite 100, Draper, Utah 84120
Phone (801) 748-4044 ~ F: (801) 748-4045
www.igesinc.com

GEOTECHNICAL AND GEOLOGIC HAZARD INVESTIGATION
Proposed Hastings Residence
Lot 14R of Summit Eden Phase 1A
Summit Powder Mountain Resort
Weber County, Utah

IGES Project No. 02693-001

March 8, 2018

Prepared for:

Ms. Amy Dee

Exhibit B

Intermountain GeoEnvironmental Services, Inc.
12429 South 300 East, Suite 100, Draper, Utah 84120 ~ T: (801) 748-4044 ~ F: (801) 748-4045

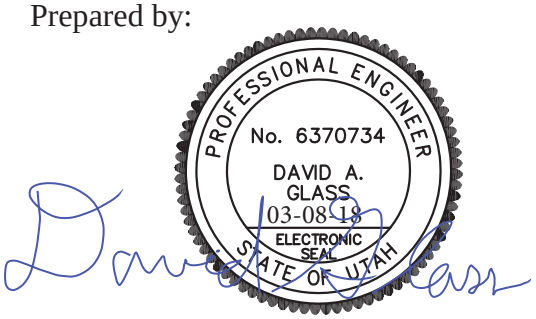
Prepared for:

Ms. Amy Dee
2140 Prince Way
Reno, Nevada 00509

Geotechnical and Geologic Hazard Investigation
Proposed Hastings Residence
Lot 14R of Summit Eden Phase 1A
Summit Powder Mountain Resort
Weber County, Utah

IGES Project No. 02693-001

Prepared by:



David A. Glass, P.E.
Senior Geotechnical Engineer

Peter E. Doumit, P.G., C.P.G.
Senior Geologist

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1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE OF WORK

This report presents the results of a geotechnical and geologic hazard investigation conducted for Lot 14R of Summit Eden Phase 1A, part of the currently on-going expansion at the Summit Powder Mountain Ski Resort in Weber County. The purpose of our investigation was to assess the nature and engineering properties of the subsurface soils at the project site and to provide recommendations for the design and construction of foundations, grading, and drainage. In addition, geologic hazards have been assessed for the property. The scope of work completed for this study included literature review, site reconnaissance, subsurface exploration, engineering analyses, and preparation of this report.

Our services were performed in accordance with our proposal dated November 3, 2017, and your signed authorization. The recommendations presented in this report are subject to the limitations presented in the "Limitations" section of this report (Section 6.1).

1.2 PROJECT DESCRIPTION

Our understanding of the project is based primarily on the preliminary site plan prepared by MacKay-Lyons Sweetapple Architects (MLS) dated February 2, 2018, plus our previous involvement with the Summit Powder Mountain Resort project, which included two geotechnical investigations for the greater 200-acre Powder Mountain Resort expansion project (IGES, 2012a and 2012b) and subsequent geotechnical consulting for several other aspects of the project.

The Summit Powder Mountain Resort expansion project is located southeast of SR-158 (Powder Mountain Road), south of previously developed portions of Powder Mountain Resort, in unincorporated Weber County, Utah. The Summit Powder Mountain project area is accessed by Powder Ridge Road. Lot 14R is located within Phase 1A of the Powder Mountain expansion project (Summit Eden), on the south side of Horizon Run Road (Figure A-1 in Appendix A, *Site Vicinity Map*). The roughly 4.3-acre residential lot has an approximate buildable area (building envelope) of 15,300 square feet. The proposed improvements will include a single-family home with a structural footprint of approximately 3,900 sqft, with associated improvements such as utilities and hardscape. We anticipate the new home will be a two- to three-level structure, the lowest story consisting of a partial walk-out basement, founded on conventional spread footings. Foundation loads are expected to be on the order of 1,500 psf or less. The development will likely include retaining walls or rockeries to accommodate the natural ~3.5H:1V gradient of the lot.

2.0 METHODS OF STUDY

2.1 LITERATURE REVIEW

2.1.1 Geotechnical

The earliest geotechnical report for the area is by AMEC (2001), which was a reconnaissance-level geotechnical and geologic hazard study. IGES later completed a geotechnical investigation for the Powder Mountain Resort expansion in 2012 (2012a, 2012b). Our previous work included twenty-two test pits and one soil boring excavated at various locations across the 200-acre development; as a part of this current study, the logs from relevant nearby test pits and other data from our reports were reviewed.

2.1.2 Geological

Several pertinent publications were reviewed as part of this assessment. Sorensen and Crittenden, Jr. (1979) provides 1:24,000 scale geologic mapping of the Huntsville Quadrangle, and Crittenden, Jr. (1972) provides 1:24,000 scale geologic mapping of the Brown's Hole Quadrangle (Figure A-2, *Regional Geology Map 1*). Coogan and King (2001) provide more recent geologic mapping of the area, but at a 1:100,000 scale. Western Geologic (2012) conducted a reconnaissance-level geologic hazard study for the greater 200-acre Powder Mountain expansion project, including the Lot 14 area (Figure A-3, *Regional Geology Map 2*). The Western Geologic (2012) study modified some of the potential landslide hazard boundaries that had previously been mapped at a regional scale (1:100,000) by Coogan and King (2001) and Elliott and Harty (2010). An updated Coogan and King (2016) regional geologic map (1:62,500 scale) provides the most recent published geologic mapping that covers the project area (Figure A-4, *Regional Geology Map 3*). The corresponding United States Geological Survey (USGS) topographic maps for the Huntsville and Brown's Hole Quadrangles (2014) provide physiographic and hydrologic data for the project area. Regional-scale geologic hazard maps pertaining to landslides (Elliott and Harty, 2010; Colton, 1991), faults (Christenson and Shaw, 2008a; USGS and Utah Geological Survey (UGS), 2006), debris-flows (Christenson and Shaw, 2008b), and liquefaction (Christenson and Shaw, 2008c; Anderson et al., 1994) that cover the project area were also reviewed. The Quaternary Fault and Fold Database (USGS and UGS, 2006), was reviewed to identify the location of proximal faults that have had associated Quaternary-aged displacement.

Stereo-paired aerial imagery for the project site and recent and historic Google Earth imagery was also reviewed to assist in the identification of potential adverse geologic conditions. The aerial photographs reviewed are documented in the *References* section of this report.

2.2 FIELD INVESTIGATION

Subsurface soils were investigated by excavating two test pits at representative locations across the property. The approximate location of the test pits are illustrated on the *Geotechnical & Local*

Geology Map (Figure A-5 in Appendix A). The soil types were visually logged at the time of our field work in general accordance with the *Unified Soil Classification System* (USCS). Soil classifications and descriptions are included on the test pit logs, Figures A-6 and A-7 in Appendix A. A key to USCS symbols and terminology is included as Figure A-8, and a key to physical rock properties is included as Figure A-9.

2.3 LABORATORY TESTING

Samples retrieved during the subsurface investigation were transported to the IGES laboratory for evaluation of engineering properties. Specific laboratory tests included:

- Atterberg Limits (ASTM D4318)
- Grain-Size Distribution (ASTM D6913)
- Fines Content (ASTM D1140)
- In situ Moisture Content (ASTM D7263)
- Direct Shear (ASTM D3080)

Results of the laboratory testing are discussed in this report and presented in Appendix B. Some test results, including moisture content, gradation, and Atterberg Limits, have been incorporated into the test pit logs (Figures A-6 and A-7).

3.0 GEOLOGIC CONDITIONS

3.1 GENERAL GEOLOGIC SETTING

The Lot 14R property is situated in the western portion of the northern Wasatch Mountains, approximately 4 miles north of Ogden Valley. The Wasatch Mountains contain a broad depositional history of thick Precambrian and Paleozoic sediments that have been subsequently modified by various tectonic episodes that have included thrusting, folding, intrusion, and volcanics, as well as scouring by glacial and fluvial processes (Stokes, 1987). The uplift of the Wasatch Mountains occurred relatively recently during the Late Tertiary Period (Miocene Epoch) between 12 and 17 million years ago (Milligan, 2000). Since uplift, the Wasatch Front has seen substantial modification due to such occurrences as movement along the Wasatch Fault and associated spurs, the development of the numerous canyons that empty into the current Salt Lake Valley and Utah Valley and their associated alluvial fans, erosion and deposition from Lake Bonneville, and localized mass-movement events (Hintze, 1988).

The Wasatch Mountains, as part of the Middle Rocky Mountains Province (Milligan, 2000), were uplifted as a fault block along the Wasatch Fault (Hintze, 1988). Ogden Valley itself is a fault-bounded trough that was occupied by Lake Bonneville (Sorensen and Crittenden, Jr, 1979) before being cut through by the Ogden River and subsequently dammed to form the Pineview Reservoir.

The Wasatch Fault and its associated segments are part of an approximately 230-mile long zone of active normal faulting referred to as the Wasatch Fault Zone (WFZ), which has well-documented evidence of late Pleistocene and Holocene (though not historic) movement (Lund, 1990; Hintze, 1988). The faults associated with the WFZ are almost all normal faults, exhibiting block movement down to the west of the fault and up to the east. The WFZ is contained within a greater area of active seismic activity known as the Intermountain Seismic Belt (ISB), which runs approximately north-south from northwestern Montana, along the Wasatch Front of Utah, through southern Nevada, and into northern Arizona. In terms of earthquake risk and potential associated damage, the ISB ranks only second in North America to the San Andreas Fault Zone in California (Stokes, 1987).

The WFZ consists of a series of ten segments of the Wasatch Fault that each display different characteristics and past movement and are believed to have movement independent of one another (UGS, 1996). The Lot 14 property is located approximately 9.4 miles to the northeast of the Weber Segment of the Wasatch Fault, which is the closest documented Holocene-aged (active) fault to the property and trends north-south along the Wasatch Front (USGS and UGS, 2006).

3.2 SURFICIAL GEOLOGY FROM LITERATURE

According to Sorensen and Crittenden, Jr. (1979), the property is entirely underlain by undifferentiated Holocene-aged colluvium[1], slopewash, and landslide deposits, with the northern margin of the property mapped as being near the contact with the undivided Tertiary/Cretaceous Wasatch and Evanston Formations (TKwe), described as "unconsolidated pale-reddish-brown pebble, cobble, and boulder conglomerate, forms boulder-covered slopes. Clasts are mainly Precambrian quartzite and are tan, gray, or purple; matrix is mainly poorly consolidated sand and silt." This map forms the basemap for the *Regional Geology Map 1* (Figure A-2). Coogan and King (2001) produced a regional-scale geologic map that covered the property; this map shows the entire property to be underlain by undivided mass-movement deposits. Western Geologic (2012) identified a number of landslide deposits contained within the Powder Mountain Resort expansion area (Figure A-3). In this map, the entire property is shown to be underlain by deposits mapped as "mixed slope colluvium, shallow landslides, and talus." Finally, Coogan and King (2016) updated their 2001 map, which shows the property to be situated on landslide deposits (unit Qms), with the northern margin of the property at or adjacent to the contact with undivided landslide and colluvial deposits (unit Qmc) (Figure A-4).

3.3 HYDROLOGY

The USGS topographic maps for the Huntsville and Brown's Hole Quadrangles (2014) show that the Lot 14R project area is situated on a slope, with the topographic gradient down to the south towards a west-trending unnamed drainage locally known as Lefty's Canyon (see Figure A-1). No active or ephemeral stream drainages are found on the property, and no springs are known to occur on the property, though it is possible that springs may occur on various parts of the property during peak runoff.

Baseline groundwater depths for the Lot 14 property are currently unknown, but are anticipated to fluctuate both seasonally and annually. Groundwater was not encountered in the two test pits excavated in this investigation.

3.4 GEOLOGIC HAZARDS FROM LITERATURE

Based upon the available geologic literature, regional-scale geologic hazard maps that cover the Lot 14R project area have been produced for landslide, fault, debris-flow, and liquefaction hazards. The following is a summary of the data presented in these regional geologic hazard maps.

[1] Colluvium: A general term applied to any loose, heterogeneous, and incoherent mass of soil material and/or rock fragments deposited by rainwash, sheetwash, or slow continuous downslope creep, usually collecting at the base of gentle slopes or hillsides. (AGI, 2005)

3.4.1 Landslides

Two regional-scale landslide hazard maps have been produced that cover the project area. Colton (1991) shows the property to be underlain by south-trending landslide deposits. Elliott and Harty (2010) shows the entire property to be underlain by deposits mapped as "Landslide undifferentiated from talus and/or colluvial deposits." As noted above, on a site-specific basis, Western Geologic (2012) mapped the area underlying the property as "mixed slope colluvium, shallow landslides, and talus" (Figure A-3), while most recently Coogan and King (2016) on a regional scale show the property to be entirely situated upon landslide deposits (Figure A-4).

3.4.2 Faults

Neither Christenson and Shaw (2008a) nor the Quaternary Fault and Fold Database of the United States (USGS and UGS, 2006) show any Quaternary-aged (~2.6 million years ago to the present) faults to be present on or projecting towards the subject property. The Weber County Natural Hazards Overlay Districts defines an active fault to be "a fault displaying evidence of greater than four inches of displacement along one or more of its traces during Holocene time (about 11,000 years ago to the present)" (Weber County, 2015). The closest active fault to the property is the Weber Segment of the Wasatch Fault Zone, located approximately 9.4 miles southwest of the western margin of the property (USGS and UGS, 2006).

3.4.3 Debris Flows

Christenson and Shaw (2008b) do not show the project area to be located within a debris-flow hazard special study area.

3.4.4 Liquefaction

Anderson, et al. (1994) and Christenson and Shaw (2008c) both show the project area to be located in an area with very low potential for liquefaction.

3.5 REVIEW OF AERIAL IMAGERY

A series of aerial photographs that cover project area were taken from the UGS Aerial Imagery Collection and analyzed stereoscopically for the presence of adverse geologic conditions across the property. This included a review of photos collected from the years 1947, 1953, and 1963. A table displaying the details of the aerial photographs reviewed can be found in the *References* section at the end of this report.

No definitive geologic lineaments, fault scarps, landslide headscarps, or landslide deposits were observed in the aerial photography on the subject property, though irregular topography was observed in the vicinity of the property.

Google Earth imagery of the property from between the years of 1993 and 2017 were also reviewed. No landslide or other geological hazard features were noted in the imagery. The property

was observed to be patchily to densely covered in trees and bushes. Some surficial gravel, cobbles, and boulders were observed, though the property does not contain any drainages. No notable changes to the property, either human or natural, were observed in the aerial imagery across this time frame, aside from the cutting in of Horizon Run between September of 2011 and October of 2014.

At the time of this report, no LiDAR data for the project area was available to be reviewed.

3.6 SEISMICITY

Following the criteria outlined in the 2015 International Building Code (IBC, 2015), spectral response at the site was evaluated for the *Maximum Considered Earthquake* (MCE) which equates to a probabilistic seismic event having a two percent probability of exceedance in 50 years (2PE50). Spectral accelerations were determined based on the location of the site using the *U.S. Seismic "DesignMaps" Web Application* (USGS, 2012/15); this software incorporates seismic hazard maps depicting probabilistic ground motions and spectral response data developed for the United States by the U. S. Geological Survey as part of NEHRP/NSHMP (Frankel et al., 1996). These maps have been incorporated into both *NEHRP Recommended Provisions for Seismic Regulations for New Buildings and Other Structures* (FEMA, 1997) and the *International Building Code* (IBC) (International Code Council, 2015).

Table 3.6
Short- and Long-Period Spectral Accelerations for MCE

Parameter	Short Period (0.2 sec)	Long Period (1.0 sec)
MCE Spectral Response Acceleration (g)	$S_S = 0.831$	$S_1 = 0.277$
MCE Spectral Response Acceleration Site Class C (g)	$S_{MS} = S_s F_a = 0.887$	$S_{M1} = S_1 F_v = 0.421$
Design Spectral Response Acceleration (g)	$S_{DS} = S_{MS*}{}^2/_3 = 0.592$	$S_{D1} = S_{M1*}{}^2/_3 = 0.281$

To account for site effects, site coefficients that vary with the magnitude of spectral acceleration and *Site Class* are used. Site Class is a parameter that accounts for site amplification effects of soft soils and is based on the average shear wave velocity of the upper 100 feet; based on our field exploration and our understanding of the geology in this area, the subject site is appropriately classified as Site Class C (*very dense soil/soft rock*). Based on IBC criteria, the short-period (F_a) coefficient is 1.067 and the long-period (F_v) site coefficient is 1.523. Based on the design spectral response accelerations for a *Building Risk Category* of I, II or III, the site's *Seismic Design Category* is D. The short- and long-period *Design Spectral Response Accelerations* are presented

in Table 3.6; a summary of the *Design Maps* analysis is presented in Appendix B. The *peak ground acceleration* (PGA) may be taken as $0.4*S_{MS}$.

3.7 GEOLOGIC HAZARD ASSESSMENT

Geologic hazard assessments are necessary to determine the potential risk associated with particular geologic hazards that are capable of adversely affecting a proposed development area. As such, they are essential in evaluating the suitability of an area for development and provide critical data in both the planning and design stages of a proposed development. The geologic hazard assessment discussion below is based upon a qualitative assessment of the risk associated with a particular geologic hazard, based upon the data reviewed and collected as part of this investigation.

A “low” hazard rating is an indication that the hazard is either absent, is present in such a remote possibility so as to pose limited or little risk, or is not anticipated to impact the project in an adverse way. Areas with a low-risk determination for a particular geologic hazard do not require additional site-specific studies or associated mitigation practices with regard to the geologic hazard in question. A “moderate” hazard rating is an indication that the hazard has the capability of adversely affecting the project at least in part, and that the conditions necessary for the geologic hazard are present in a significant, though not abundant, manner. Areas with a moderate-risk determination for a particular geologic hazard may require additional site-specific studies, depending on location and construction specifics, as well as associated mitigation practices in the areas that have been identified as the most prone to susceptibility to the particular geologic hazard. A “high” hazard rating is an indication that the hazard is very capable of or currently does adversely affect the project, that the geologic conditions pertaining to the particular hazard are present in abundance, and/or that there is geologic evidence of the hazard having occurred at the area in the historic or geologic past. Areas with a high-risk determination always require additional site-specific hazard investigations and associated mitigation practices where the location and construction specifics are directly impacted by the hazard. For areas with a high-risk geologic hazard, simple avoidance is often considered.

The following is a summary of the geologic hazard assessment for the Lot 14R property.

3.7.1 Landslides/Mass-Movement

The landslide hazard constitutes the greatest geologic hazard risk associated with the property. According to the several most recent geologic maps produced that cover the property, the lot is entirely situated on mapped landslide or other mass-movement deposits (Coogan and King, 2016; Western Geologic, 2012; Elliott and Harty, 2010). Additionally, characteristic hummocky topography associated with landslide deposits and small landslide headscarps were observed south and downslope of the building envelope during the site reconnaissance (see Figure A-5).

Within TP-2, located south of the building envelope, both younger and older landslide deposits were observed in the form of erratic, heterogeneous units with pinhole voids and irregular clay lenses. A clay-rich basal unit in TP-2 may represent weathered Nounan Dolomite bedrock that provided the slip plane for the older landslide deposits, though no natural slickensides were observed within this unit. In TP-1, an identified colluvial unit may include shallow landslide deposits. Based upon surficial morphology and the test pit data, the older landslide deposits may extend into the southern portion of the building envelope (see Figure A-5).

Within the building envelope, the property was observed to have the gentlest grade and not exhibit hummocky topography. Wasatch Formation was found beneath surficial colluvium deposits in TP-1, and it is believed that this bedrock unit underlies most of the building envelope.

Given the geologic data alone, the risk associated with landslide hazards on the property is considered to be moderate to high for all parts of the property except the building envelope, which is considered to be low to moderate. However, slope stability analyses have indicated the slope is stable under the current conditions, as well as a hypothetical scenario with a home with a walk-out basement (see Section 4.3). As such, the corresponding landslide and slope stability hazard risk is considered to be moderate to low.

3.7.2 Rockfall

Though the property is on a slope, no bedrock outcrops are exposed upslope of the property. As such, the rockfall hazard associated with the property is considered to be low.

3.7.3 Surface-Fault Rupture and Earthquake-Related Hazards

No faults are known to be present on or project across the property, and the closest active fault to the property is the Weber Segment of the Wasatch Fault Zone, located approximately 9.4 miles to the west of the property (USGS and UGS, 2006). Given this information, the risk associated with surface-fault-rupture on the property is considered low.

The entire property is subject to earthquake-related ground shaking from a large earthquake generated along the active Wasatch Fault. Given the distance from the Wasatch Fault, the hazard associated with ground shaking is considered to be moderate. Proper building design according to appropriate building code and design parameters can assist in mitigating the hazard associated with earthquake ground shaking.

3.7.4 Liquefaction

The site is underlain at least in part by the Wasatch Formation, a poorly consolidated sedimentary rock unit (conglomerate). Rock units such as these are not considered susceptible to liquefaction; as such, the potential for liquefaction occurring at the site is considered low.

3.7.5 Debris-Flows and Flooding Hazards

The property does not contain and is not located adjacent to any active or ephemeral drainages. Additionally, there are no debris-flow source areas upslope of the property, and the property is on a consistent slope downhill to the south. Given these conditions, the debris-flow and flooding hazard associated with the property is considered to be low.

3.7.6 Shallow Groundwater

Groundwater was not encountered in either of the two test pits excavated as part of this investigation. The test pits were excavated in late November, and the groundwater level was likely to be on its way down to its annual low. No springs were observed on the property, and no plants indicative of shallow groundwater conditions were observed on the property. However, shallow groundwater conditions have been observed at the nearby *Horizon Neighbourhood* property (IGES, 2016).

Given the existing data, it is expected that groundwater levels will fluctuate both seasonally and annually, and the risk associated with shallow groundwater hazards is considered low to moderate. Spring thaw and runoff are likely to significantly contribute to elevated groundwater conditions (localized perched conditions). However, shallow groundwater issues can be mitigated through appropriate grading measures and/or the avoidance of the construction of basement levels, or constructing basements with foundation drains.

4.0 GENERALIZED SITE CONDITIONS

4.1 SITE RECONNAISSANCE

Mr. Peter E. Doumit, P.G., C.P.G., of IGES conducted reconnaissance of the site and the immediate adjacent properties on November 13, 2017. The site reconnaissance was conducted with the intent to assess the general geologic conditions present across the property, with specific interest in those areas identified in the geologic literature and aerial imagery reviews as potential geologic hazard areas. Additionally, the site reconnaissance provided the opportunity to map the surficial geology of the area. Figure A-5 is a site-specific geologic map of the Lot 14R property and adjacent areas.

At the time of the site reconnaissance, the property had patchy snow on the ground, but the surficial morphology was still able to be discerned. In general, the property was observed to have highly irregular, possibly hummocky surface topography with common breaks in slope in various parts. The proposed building envelope was observed to have the gentlest grade and appeared to be a localized topographic high. South of the building envelope, hummocky topography and corresponding landslide deposits were observed (see Figure A-5). Dense to patchy vegetation in the form of aspen trees and low-lying bushes was observed across much of the property. The aspens displayed evidence of moderate to strong soil creep, especially in areas of steeper slope.

Variously-sized boulders and cobbles were found scattered across the property, as part of the surficial colluvial geologic unit derived from weathered Wasatch Formation. These were typically subrounded to rounded and were found to be as large as 8 feet in diameter. The rock clasts[2] were found to be comprised entirely of massive, coarsely crystalline quartzite, which was medium gray in color when unweathered, but commonly weathered to dark reddish orange. The clasts were observed to be weathering out of a sandy lean clay topsoil.

No springs, seeps, or running water were observed on the property at the time of the site visit.

Near the southern margin of the property a distinct landslide toe was observed, evidenced by a sharp break in slope and common boulders and cobbles weathering out of the slope break. This landslide toe was observed to have two lobes, separated by a small headscarp. At the southern margin of the property, the grade levels out and an open area with low-lying bushes and few trees was observed, possibly indicative of a more recent landslide deposit at least in part associated with the headscarp.

[2] Clast: An individual constituent, grain, or fragment of a sediment or rock, produced by the mechanical or chemical disintegration or a larger rock mass. (AGI, 2005)

4.2 SUBSURFACE CONDITIONS

On November 22, 2017, two exploration test pits were excavated at representative locations near the proposed building envelope on the lot (see Figure A-5). The test pits were excavated to depths ranging between 10½ and 12 feet below existing grade with the aid of a Caterpillar 320F tracked excavator. Upon completion of logging, the test pits were backfilled without compactive effort. Detailed logs for the test pits are displayed in Figure A-6 and Figure A-7, respectively. Six distinct geologic units were encountered in the subsurface, with only one of the units (A/B Soil Horizon) being found in both of the test pits. The soil and moisture conditions encountered during our investigation are discussed in the following paragraphs.

4.2.1 Earth Materials

A/B Soil Horizon: This topsoil unit was found to be between approximately 1 to 2 feet thick in both test pits. The unit was a brownish black, loose to medium stiff, moist to wet, sandy lean CLAY with gravel (CL), with gravel and larger-sized quartzite clasts comprising between approximately 5 and 25% of the unit. The unit contained abundant plant and tree roots and had a very wavy basal contact.

Colluvium (Qc): This unit was only encountered in TP-1, being between approximately 1 and 3 feet thick. The unit was variegated between a moderate yellowish brown to light brown to pale yellowish orange color, and consisted of a medium dense, slightly moist, silty, clayey SAND with gravel (SM-SC). Gravel and larger-sized subrounded to subangular quartzite clasts comprised approximately 20% of the unit, with individual clasts up to 8 inches in diameter, though the mode clast size was approximately 1 to 2 inches in diameter. The unit contained abundant 1 to 2 mm diameter pinhole voids throughout, though the fines content had a low plasticity. Occasional calcium carbonate matrix flour was also observed. This unit may be representative of a shallow, surficial landslide deposit, given the highly irregular nature of the upper contact.

Wasatch Formation (Tw): This unit was observed in TP-1 only, being more than 5.5 feet thick and extending to the maximum depth of exploration within the test pit. The unit consisted of weakly consolidated conglomerate bedrock that had been largely disaggregated into a pale yellowish orange to dark reddish brown, dense to very dense, slightly moist mixture of clay, sand, and gravel that collectively classifies as clayey GRAVEL with sand (GC). Gravel and larger-sized subangular to subrounded quartzite clasts comprised between approximately 30 and 60% of the unit, with individual clasts up to 3 feet in diameter, with a mode clast size of 4 to 6 inches. Where clayey, the unit exhibited common pinholes between 1 and 2 mm in diameter.

Young Landslide (Qlsy): This unit was observed in TP-2 only and was found to be between 2 and 4 feet thick. The unit consisted of a highly variegated, dark yellowish brown to black to dark yellowish orange, loose to medium dense, moist to wet, clayey SAND with gravel (SC) gradational to sandy lean CLAY with gravel (CL). Gravel and larger-sized subrounded quartzite clasts

comprised between approximately 10 and 15% of the unit, with individual clasts up to 14 inches in diameter, though the mode clast size was 2 inches and clast sizes were highly variable. The unit was found to be a highly erratic, heterogeneous unit, though no evident basal slide plane was observed.

Older Landslide (Qlso): This unit was observed in TP-2 only, being between 2 and more than 10 feet thick, extending to the maximum depth of exploration in portions of the test pit. The unit consisted of a moderate yellowish brown to light brown, medium dense, slightly moist, clayey SAND with gravel (SC). Gravel and larger-sized subrounded quartzite clasts comprised between approximately 30 and 40% of the unit, with individual clasts up to 2 feet in diameter, though the mode clast size was 1 to 2 inches. Abundant pinhole voids between 1 and 2 mm in diameter were observed. The unit appeared very similar to the colluvium unit observed in TP-1, and contained a sharp, highly irregular basal contact.

Weathered Bedrock? (Cn?): This unit was observed in TP-2 only, being at least 1.5 feet thick and extending to the maximum depth of exploration in most of the test pit. The unit consisted of a dark reddish brown, stiff to very stiff, slightly moist, sandy lean CLAY with gravel (CL). Gravel and larger-sized subrounded to subangular quartzite clasts comprised approximately 10% of the unit, with individual clasts up to 2.5 feet in diameter, though the mode clast size was 1 to 2 inches. The unit was observed to have occasional discontinuous, poorly developed mechanically-induced slickensides when broken, but not in situ. The unit appeared similar to weathered Nounan Dolomite bedrock seen in other places of Powder Mountain, though dolomite clasts were not observed within the unit. It is possible that this unit could represent a possible slide plane for the older landslide deposits.

4.2.2 Groundwater

Groundwater was not encountered in either of the test pits excavated for this project; however, it should be noted that groundwater has been encountered in several test pit excavations located east of the subject lot in the *Horizon Neighbourhood* property (IGES, 2016). Additionally, the young landslide unit observed in TP-2 was wet in places, and it is quite possible that groundwater, or local seeps, could be encountered locally in excavations that exceed a depth of 12 feet below existing grade.

4.2.3 Strength of Earth Materials

One consolidated-drained direct shear test was completed under drained conditions on a remolded sample obtained the prevailing coarse, granular soils – the sample was obtained from TP-1 at a depth of 3½ feet from colluvium deposits that classifies as Clayey SAND with gravel (SC). The test results indicate that the soil tested has a friction angle of 30 degrees and a cohesion of 54 psf. A summary of the direct shear test is presented in Appendix B.

4.3 SLOPE STABILITY

4.3.1 Global Stability

The stability of the existing natural slope has been assessed in accordance with methodologies set forth in Blake et al. (2002) and AASHTO LRFD for Bridge Design Specifications with respect to a representative cross-section, illustrated on Figure D-1 in Appendix D (the section is identified in plan-view on Figure A-5). The stability of the slope was modeled using SLIDE, a computer application incorporating (among others) Spencer's Method of analysis. Calculations for stability were developed by searching for the minimum factor of safety for a rotational-type failure occurring through surficial soils (colluvium and shallow landslide deposits), just above the underlying conglomerate bedrock. Analysis was performed for both static and seismic (pseudo-static) cases. The slope was modeled under both existing conditions and assuming a basement excavation with a typical residential foundation load (estimated, since grading plans are not yet available).

Groundwater, e.g. a piezometric groundwater surface, was not encountered during our subsurface investigation; however, seepage was noted in test pits on nearby properties (IGES, 2016). Accordingly, groundwater was not modeled in our limit-equilibrium analysis. Saturated parallel seepage has been modeled in a separate analysis (see Section 4.3.2).

Soil strength parameters were selected based on soil types observed, local experience, correlation with index properties (Atterberg Limits, fines content), site-specific strength testing (direct shear test), and comparisons with soil strength laboratory data from a nearby site (IGES, 2016). Based on this assessment, the following soil strength parameters were selected for this analysis:

Table 4.3.1a
Soil Strength Parameters

Earth Materials	Friction angle (degrees)	Cohesion (psf)	Unit Weight (pcf)
Colluvium	30	100	120
Bedrock (Tw)	40	100	130
Undocumented Fill (Af)	35	75	125
Old Landslide (Qlso)	30	100	120
Young Landslide (Qlsy)	30	100	120
Nounan Formation (Cn)	25	1,500	120

Pseudo-static (seismic screening) analysis of the proposed slope was performed in general conformance with Blake et al. (2002), ASCE 7-10 and AASHTO LRFD for Bridge Design Specifications. The design seismic event was taken as the ground motion with a 2 percent probability of exceedance in 50 years (2PE50). Based on information provided on the USGS website ground motion calculator, the Peak Ground Acceleration (PGA) associated with a 2PE50 event is estimated to be 0.36g. Half of the PGA, (0.177g), was taken as the horizontal seismic

coefficient (k_h) (Hynes and Franklin, 1984), and used in the pseudo-static seismic screen analysis. The results of the analyses have been summarized in Table 4.3.1b.

Table 4.3.1b
Results of Slope Stability Analyses

Section	Static Factor of Safety	Pseudo-Static Factor of Safety
Existing Condition	1.88	1.23
Estimated Grading	2.56	1.62

The results of the analysis indicated the existing conditions meet the minimum required factors-of-safety of 1.5 and 1.0 for both the static and seismic (pseudo-static) case, respectively. The planned improvements will include a basement level, which would tend to unload the slope and further improve the stability of the slope; significant fill placement on the slope, which would tend to load the slope and decrease stability, is not anticipated. A summary of the slope stability analysis is presented in Appendix D.

4.3.2 Surficial Stability

Our subsurface investigation indicates that the near-surface soils generally consist of clayey sand with gravel (SC). Material identified as 'topsoil' (A/B Horizon) generally ranges in thickness from 1 to 2 feet; the topsoil has developed on the prevailing colluvial cover identified within the building envelope, and therefore consists largely of clayey sand with gravel, but with a higher organic component (abundant roots).

IGES assessed the potential for the upper three feet to become mobilized under saturated parallel seepage conditions. Our assessment assumes three feet of coarse colluvium or topsoil, fully saturated, and a 3.5H:1V slope (this would be a transient condition that could occur during primary spring run-off and snowmelt). Our model assumes an estimated effective friction angle of 30 degrees and a cohesion of 50 psf, and a saturated unit weight of 135 pcf. Based on this model, a factor-of-safety of 1.56 results. Sample calculations are presented in Appendix D.

Our calculations do not take into account the beneficial effects of plant roots, which were commonly observed throughout the topsoil units. Many of the existing natural slopes are thickly vegetated, which is expected to reduce the likelihood of shallow surficial slope instability. Conversely, slopes that have been grubbed, or new fill slopes constructed steeper than about 2.5H:1V, may experience localized shallow surficial failures during spring snowmelt until vegetation is established.

Based on our infinite slope model, and the foregoing discussion, IGES considers the potential for surficial slope instability impacting natural, vegetated slopes on this site to be low.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 GENERAL CONCLUSIONS

Based on the results of the field observations, literature review, and slope stability analyses, **the subsurface conditions are considered suitable for the proposed development provided that the recommendations presented in this report are incorporated into the design and construction of the project.**

Supporting data upon which the following conclusions and recommendations are based have been presented in the previous sections of this report. The recommendations presented herein are governed by the physical properties of the earth materials encountered in the subsurface explorations. If subsurface conditions other than those described herein are encountered in conjunction with construction, and/or if design and layout changes are initiated, IGES must be informed so that our recommendations can be reviewed and revised as deemed necessary.

5.2 GEOLOGIC CONCLUSIONS AND RECOMMENDATIONS

Based upon the data collected and reviewed as part of the geologic hazard assessment, IGES makes the following conclusions regarding the geological hazards present at the Lot 14R project area:

- **The Lot 14R project area appears to have geological hazards that are capable of adversely impacting the development as currently proposed under the existing conditions, in the form of landslide deposits. However, engineered mitigation practices for the proposed development are capable of reducing the landslide hazard risk to a level that is considered to be suitable from a geologic hazards perspective.**

- Landsliding represents the greatest geologic risk to the property. The property is located on mapped landslide deposits, and landslide deposits and a headscarp was observed in the southern part of the property. In addition, both younger and older landslide deposits were observed in the subsurface in TP-2, and the older landslide deposits may extend into the southern part of the building envelope. However, geologic evidence indicative of active movement was not observed within the building envelope, and the slope stability analysis indicates a stable slope for the property in the vicinity of the building envelope. As such, the landslide hazard for the property is considered to be moderate to low, as there is always some inherent risk when developing on known landslide deposits.

- Earthquake ground shaking is the only other identified hazard that may potentially affect all parts of the project area and is considered to pose a moderate risk.

- Shallow groundwater conditions were not observed in either of the two test pits, though groundwater seepage has been observed in test pits on nearby properties and are common

within landslide deposits; therefore, shallow groundwater hazards are considered to be low to moderate for the property.

- Rockfall, surface-fault-rupture, liquefaction, debris-flow, and flooding hazards are considered to be low for the property.

Given the conclusions listed above, IGES makes the following recommendations:

- Because landslide deposits are noted on the property, an IGES engineering geologist or geotechnical engineer should observe the foundation excavation to assess the absence (or presence) of landslide-induced shearing.

- Development should not take place on landslide deposits; over-excavation of the landslide deposits (if present) to competent native materials (Wasatch Formation) should be performed within the building envelope.

- The contact between the older landslide deposits and the Wasatch Formation may be within the southern part of the building envelope. As such, it is recommended that the northern portion of the building envelope be utilized for the proposed development in order to avoid the landslide deposits and the associated landslide mitigation. In the event that the southern portion of the building envelope is to be used for the development, an IGES engineering geologist should be present to identify the contact, note its trend, and provide recommendations for over-excavation of the landslide deposits and the placement of structural fill, if necessary.

- Effort should be made to limit the introduction of water into the subsurface near the proposed residence. Appropriate grading and drainage away from the home and xeriscape or natural landscaping will assist in reducing the risk of landsliding.

- Young landslide deposits associated with a notable scarp are located within 50 feet of the southern margin of the building envelope. If tension cracks or other ground deformation is observed near this area, or near the building envelope, IGES should be contacted to evaluate the ground deformation and assess whether mitigation is needed.

5.3 EARTHWORK

5.3.1 General Site Preparation and Grading

Below proposed structures, fills, and man-made improvements, all vegetation, topsoil, debris and undocumented fill (if any) should be removed. Any existing utilities should be re-routed or protected in place. The exposed native soils should then be proof-rolled with heavy rubber-tired

equipment such as a scraper or loader*. Any soft/loose areas identified during proof-rolling should be removed and replaced with structural fill. All excavation bottoms should be observed by an IGES representative during proof-rolling or otherwise prior to placement of engineered fill to evaluate whether soft, loose, or otherwise deleterious earth materials have been removed, and to assess compliance with the recommendations presented in this report.

*not required where bedrock is exposed in the foundation subgrade

5.3.2 Excavations

Soft, loose, or otherwise unsuitable soils beneath structural elements, hardscape or pavements may need to be over-excavated and replaced with structural fill. This includes landslide deposits, if encountered in the subsurface. If over-excavation is required, the excavations should extend one foot laterally for every foot of depth of over-excavation. Excavations should extend laterally at least two feet beyond flatwork, pavements, and slabs-on-grade. Structural fill should consist of granular materials and should be placed and compacted in accordance with the recommendations presented in this report.

Prior to placing structural fill, all excavation bottoms should be scarified to at least 6 inches, moisture conditioned as necessary at or slightly above optimum moisture content (OMC), and compacted to at least 90 percent of the maximum dry density (MDD) as determined by ASTM D-1557 (Modified Proctor). Scarification is not required where hard bedrock is exposed.

5.3.3 Excavation Stability

The contractor is responsible for site safety, including all temporary trenches excavated at the site and the design of any required temporary shoring. The contractor is responsible for providing the "competent person" required by Occupational Safety and Health (OSHA) standards to evaluate soil conditions. For planning purposes, Soil Type C is expected to predominate at the site (sands and gravels). Close coordination between the competent person and IGES should be maintained to facilitate construction while providing safe excavations.

Based on OSHA guidelines for excavation safety, trenches with vertical walls up to 5 feet in depth may be occupied. Where very moist soil conditions or groundwater is encountered, or when the trench is deeper than 5 feet, we recommend a trench-shield or shoring be used as a protective system to workers in the trench. As an alternative to shoring or shielding, trench walls may be laid back at one and one-half horizontal to one vertical (1½H:1V) (34 degrees) in accordance with OSHA Type C soils. Trench walls may need to be laid back at a steeper grade pending evaluation of soil conditions by the geotechnical engineer. Soil conditions should be evaluated in the field on a case-by-case basis. Large rocks exposed on excavation walls should be removed (scaled) to minimize rock fall hazards.

5.3.4 Structural Fill and Compaction

All fill placed for the support of structures, flatwork or pavements should consist of structural fill. Structural fill should consist of granular native soils, which may be defined as soils with less than 25% fines, 10-60% sand, and contain no rock larger than 4 inches in nominal size (6 inches in greatest dimension). Structural fill should also be free of vegetation and debris. All structural fill should be 1-inch minus material when within 1 foot of any base coarse material. Soils not meeting these criteria may be suitable for use as structural fill; however, such soils should be evaluated on a case by case basis and should be approved by IGES prior to use.

All structural fill should be placed in maximum 4-inch loose lifts if compacted by small hand-operated compaction equipment, maximum 6-inch loose lifts if compacted by light-duty rollers, and maximum 8-inch loose lifts if compacted by heavy duty compaction equipment that is capable of efficiently compacting the entire thickness of the lift. Additional lift thickness may be allowed by IGES provided the Contractor can demonstrate sufficient compaction can be achieved with a given lift thickness with the equipment in use. We recommend that all structural fill be compacted on a horizontal plane, unless otherwise approved by IGES. Structural fill underlying all shallow footings and pavements should be compacted to at least 95 percent of the MDD as determined by ASTM D-1557. **The moisture content should be at, or slightly above, the OMC for all structural fill**. Any imported fill materials should be approved prior to importing. Also, prior to placing any fill, the excavations should be observed by IGES to confirm that unsuitable materials have been removed. In addition, proper grading should precede placement of fill, as described in the General Site Preparation and Grading subsection of this report.

Specifications from governing authorities such as Weber County and/or special service districts having their own precedence for backfill and compaction should be followed where more stringent.

5.3.5 Oversize Material

Based on our observations, there is a significant potential for the presence of oversize materials (larger than 6 inches in greatest dimension). Large rocks, particularly boulders (>12 inches), may require special handling, such as segregation from structural fill, and disposal.

5.3.6 Utility Trench Backfill

Utility trenches should be backfilled with structural fill in accordance with Section 5.3.4 of this report. Utility trenches can be backfilled with the onsite soils free of debris, organic and oversized material. Prior to backfilling the trench, pipes should be bedded in and shaded with a uniform granular material that has a Sand Equivalent (SE) of 30 or greater. Pipe bedding may be water-densified in-place (jetting). Alternatively, pipe bedding and shading may consist of clean ¾-inch gravel. Native earth materials can be used as backfill over the pipe bedding zone. All utility trenches backfilled below pavement sections, curb and gutter, and hardscape, should be backfilled with structural fill compacted to at least 95 percent of the MDD as determined by ASTM D-1557.

All other trenches should be backfilled and compacted to approximately 90 percent of the MDD (ASTM D-1557). However, in all cases the pipe bedding and shading should meet the design criteria of the pipe manufacturer. Specifications from governing authorities having their own precedence for backfill and compaction should be followed where they are more stringent.

5.4 FOUNDATION RECOMMENDATIONS

Based on our field observations and considering the presence of relatively competent native earth materials, we recommend that the footings for proposed single-family home be founded either *entirely* on competent native soils or *entirely* on structural fill. Native/fill transition zones are not allowed. Where soft, loose, or otherwise deleterious earth materials (such as landslide deposits or undocumented fill) are exposed on the foundation subgrade, IGES recommends a minimum over-excavation of 2 feet and replacement with structural fill. Alternatively, the foundations may be extended such that the foundations bear directly on competent earth materials (Wasatch Formation, e.g. conglomerate bedrock). We recommend that IGES assess the bottom of the foundation excavation prior to the placement of steel or concrete, or structural fill, to identify the competent native earth materials as well as any unsuitable soils or transition zones. Additional over-excavation may be required based on the actual subsurface conditions observed.

Shallow spread or continuous wall footings constructed entirely on structural fill, or entirely on competent, uniform native earth materials (Wasatch Formation conglomerate) may be proportioned utilizing a maximum net allowable bearing pressure of **3,200 pounds per square foot (psf)** for dead load plus live load conditions. The net allowable bearing values presented above are for dead load plus live load conditions. The allowable bearing capacity may be increased by one-third for short-term loading (wind and seismic). The minimum recommended footing width is 20 inches for continuous wall footings and 30 inches for isolated spread footings.

All conventional foundations exposed to the full effects of frost should be established at a minimum depth of 42 inches below the lowest adjacent final grade. Interior footings, not subjected to the full effects of frost (i.e., *a continuously heated structure*), may be established at higher elevations, however, a minimum depth of embedment of 12 inches is recommended for confinement purposes.

Foundation drains should be installed around below-ground foundations (e.g., basement walls) to minimize the potential for flooding from shallow groundwater or seepage, which may be present at various times during the year, particularly spring run-off.

5.5 SETTLEMENT

5.5.1 Static Settlement

Static settlements of properly designed and constructed conventional foundations, founded as described in Section 5.4, are anticipated to be on the order of 1 inch or less. Differential settlement is expected to be half of total settlement over a distance of 30 feet.

5.5.2 Dynamic Settlement

Dynamic settlement (or seismically-induced settlement) consists of dry dynamic settlement of unsaturated soils (above groundwater) and liquefaction-induced settlement (below groundwater). During a strong seismic event, seismically-induced settlement can occur within loose to moderately dense sandy soil due to reduction in volume during, and shortly after, an earthquake event. Settlement caused by ground shaking is often non-uniformly distributed, which can result in differential settlement.

Based on the subsurface conditions encountered, dynamic settlement arising from a MCE seismic event is expected to be low; for design purposes, settlement on the order of ½ inch over 40 feet may be assumed.

5.6 EARTH PRESSURES AND LATERAL RESISTANCE

Lateral forces imposed upon conventional foundations due to wind or seismic forces may be resisted by the development of passive earth pressures and friction between the base of the footing and the supporting soils. In determining the frictional resistance against concrete, a coefficient of friction of 0.45 for sandy/gravelly native soils or structural fill should be used.

Ultimate lateral earth pressures from *granular* backfill acting against retaining walls, temporary shoring, or buried structures may be computed from the lateral pressure coefficients or equivalent fluid densities presented in Table 5.6. These lateral pressures should be assumed even if the backfill is placed in a relatively narrow gap between a vertical bedrock cut and the foundation wall. These coefficients and densities assume no buildup of hydrostatic pressures. The force of water should be added to the presented values if hydrostatic pressures are anticipated.

Clayey soils drain poorly and may swell upon wetting, thereby greatly increasing lateral pressures acting on earth retaining structures; therefore, clayey soils should not be used as retaining wall backfill. Backfill should consist of native granular soil with an Expansion Index (EI) less than 20.

Walls and structures allowed to rotate slightly should use the active condition. If the element is to be constrained against rotation (i.e., a basement wall), the at-rest condition should be used. These values should be used with an appropriate factor of safety against overturning and sliding. A value of 1.5 is typically used. Additionally, if passive resistance is calculated in conjunction with frictional resistance, the passive resistance should be reduced by ½.

Table 5.6
Lateral Earth Pressure Coefficients

Condition	Level Backfill		2H:1V Backfill	
	Lateral Pressure Coefficient	Equivalent Fluid Density (pcf)	Lateral Pressure Coefficient	Equivalent Fluid Density (pcf)
Active (Ka)	0.33	41.7	0.53	66.5
At-rest (Ko)	0.50	55	0.80	85
Passive (Kp)	3.0	375	—	—
Seismic Active	0.12	15.1	0.38	47.4
Seismic Passive	-0.33	-40.8	—	—
Seismic At-rest	0.18	22.5	0.57	71.7

For seismic analyses, the *active* earth pressure coefficient provided in the table is based on the Mononobe-Okabe pseudo-static approach and only accounts for the dynamic horizontal thrust produced by ground motion. Hence, the resulting dynamic thrust pressure *should be added* to the static pressure to determine the total pressure on the wall. The pressure distribution of the dynamic horizontal thrust may be closely approximated as an inverted triangle with stress decreasing with depth and the resultant acting at a distance approximately 0.6 times the loaded height of the structure, measured upward from the bottom of the structure.

5.7 CONCRETE SLAB-ON-GRADE CONSTRUCTION

To minimize settlement and cracking of slabs, and to aid in drainage beneath the concrete floor slabs, all concrete slabs should be founded on a minimum 4-inch layer of compacted gravel overlying properly prepared subgrade. The gravel should consist of free-draining gravel or road base with a 3/4-inch maximum particle size and no more than 5 percent passing the No. 200 mesh sieve. The layer should be compacted to at least 95 percent of the MDD as determined by ASTM D-1557.

All concrete slabs should be designed to minimize cracking as a result of shrinkage. Consideration should be given to reinforcing the slab with a welded wire fabric, re-bar, or fibermesh. Slab reinforcement should be designed by the structural engineer; however, as a minimum, slab reinforcement should consist of 4’’×4’’ W2.9×W2.9 welded wire mesh within the middle third of the slab. We recommend that concrete be tested to assess that the slump and/or air content is in compliance with the plans and specifications. We recommend that concrete be placed in general accordance with the requirements of the American Concrete Institute (ACI). A Modulus of Subgrade Reaction of **250 psi/inch** may be used for design.

A moisture barrier (vapor retarder) consisting of 10-mil thick Visqueen (or equivalent) plastic sheeting should be placed below slabs-on-grade where moisture-sensitive floor coverings or

equipment is planned. Prior to placing this moisture barrier, any objects that could puncture it, such as protruding gravel or rocks, should be removed from the building pad. Alternatively, the subgrade may be covered with 2 inches of clean sand**.**

5.8 MOISTURE PROTECTION AND SURFACE DRAINAGE

Surface moisture should not be allowed to infiltrate into the soils in the vicinity of the foundations. As such, design strategies to minimize ponding and infiltration near the structures should be implemented.

We recommend roof runoff devices be installed to direct all runoff a minimum of 10 feet away from foundations. The builder should be responsible for compacting the exterior backfill soils around the foundation; failure to properly compact the basement backfill can result in excessive settlement and damage to exterior improvements such as pavement or other flatwork. Additionally, the ground surface within 10 feet of the structures should be constructed so as to slope a minimum of **five** percent away from the structure. Irrigation valves should be placed a minimum of 5 feet from foundation walls and must not be placed within the basement backfill zone. Over-watering near the foundation walls is discouraged; use of Xeriscape and/or a drip irrigation system should be considered. Pavement sections should be constructed to divert surface water off the pavement into storm drains, curb/gutter, or another suitable location.

Where basements are planned, IGES recommends a perimeter foundation drain be constructed in accordance with the International Residential Code (IRC).

5.9 SOIL CORROSION POTENTIAL

Laboratory testing of representative soil samples obtained during previous nearby investigations (IGES, 2017, 2012b) indicated that the soil samples tested had sulfate contents less than 100 ppm. Accordingly, the soils in this area are appropriately classified as having a ‘low potential’ for deterioration of concrete due to the presence of soluble sulfate. As such, conventional Type II Portland cement may be used for all concrete in contact with site soils.

To evaluate the corrosion potential of ferrous metal in contact with onsite native soil, we have reviewed laboratory tests conducted for nearby soil samples obtained during previous nearby geotechnical investigation (IGES, 2017, 2012b). Three samples were tested for soil resistivity (AASHTO T288), soluble chloride content, and pH. The tests indicated that the onsite soil tested had a minimum soil resistivity of ranging from 980 to 5,311 OHM-cm, soluble chloride content ranging from 6 to 12 ppm, and a pH ranging from 6.3 to 6.6. Based on this result, the onsite native soil is considered *severely* corrosive to ferrous metal. Consideration should be given to retaining the services of a qualified corrosion engineer to provide an assessment of any metal that will be in contact with native clay soils.

5.10 CONSTRUCTION CONSIDERATIONS

5.10.1 Over-Size Material

Large boulders (up to 36 inches in diameter) were observed on the surface and within the test pits; as such, excavation of the basement may generate an abundance of over-size material that may require special handling, processing, or disposal.

6.0 CLOSURE

6.1 LIMITATIONS

The concept of risk is a significant consideration of geotechnical analyses. The analytical means and methods used in performing geotechnical analyses and development of resulting recommendations do not constitute an exact science. Analytical tools used by geotechnical engineers are based on limited data, empirical correlations, engineering judgment and experience. As such the solutions and resulting recommendations presented in this report cannot be considered risk-free and constitute IGES's best professional opinions and recommendations based on the available data and other design information available at the time they were developed. IGES has developed the preceding analyses, recommendations and designs, at a minimum, in accordance with generally accepted professional geotechnical engineering practices and care being exercised in the project area at the time our services were performed. No warrantees, guarantees or other representations are made.

The information contained in this report is based on limited field testing and understanding of the project. The subsurface data used in the preparation of this report were obtained largely from the explorations made for the Lot 14R project. It is very likely that variations in the soil, rock, and groundwater conditions exist between and beyond the points explored. The nature and extent of the variations may not be evident until construction occurs and additional explorations are completed. If any conditions are encountered at this site that are different from those described in this report, IGES must be immediately notified so that we may make any necessary revisions to recommendations presented in this report. In addition, if the scope of the proposed construction or grading changes from those described in this report, our firm must also be notified.

Landslide deposits were observed in the subsurface south of the building envelope of the property and may possibly extend into the southernmost extent of the building envelope. Although the current plans indicate the new home will be constructed within the northern half of the building envelope, and therefore outside of the identified landslide deposits, there is always a risk of the existing landslide to become reactivated and subsequently propagate uphill toward the home. It should be noted that while the slope stability assessment as performed as part of this investigation indicate that the slope is currently stable and anticipated to be stable following development, the landslide risk cannot be assumed to be zero.

This report was prepared for our client's exclusive use on the project identified in the foregoing. Use of the data, recommendations or design information contained herein for any other project or development at or near the subject site *not as specifically described in this report* is at the user's sole risk and without the approval of IGES, Inc. It is the client's responsibility to see that all parties to the project including the designer, contractor, subcontractors, etc. are made aware of this report

in its entirety. The use of information contained in this report for bidding purposes should be done at the contractor's option and risk.

We recommend that IGES be retained to review the final design plans, grading plans and specifications to determine if our engineering recommendations have been properly incorporated in the project development documents. We also recommend that IGES be retained to evaluate construction performance and other geotechnical aspects of the project as construction initiates and progresses through its completion.

6.2 ADDITIONAL SERVICES

The recommendations made in this report are based on the assumption that an adequate program of tests and observations will be made during the construction. IGES staff or other qualified personnel should be on site to verify compliance with these recommendations. These tests and observations should include at a minimum the following:

- Observations and testing during site preparation, earthwork and structural fill placement.
- Consultation as may be required during construction.
- Quality control on concrete placement to verify slump, air content, and strength.

We also recommend that project plans and specifications be reviewed by us to verify compatibility with our conclusions and recommendations. Additional information concerning the scope and cost of these services can be obtained from our office.

We appreciate the opportunity to be of service on this project. Should you have any questions regarding the report or wish to discuss additional services, please do not hesitate to contact us at your convenience at (801) 748-4044.

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AERIAL PHOTOGRAPHS

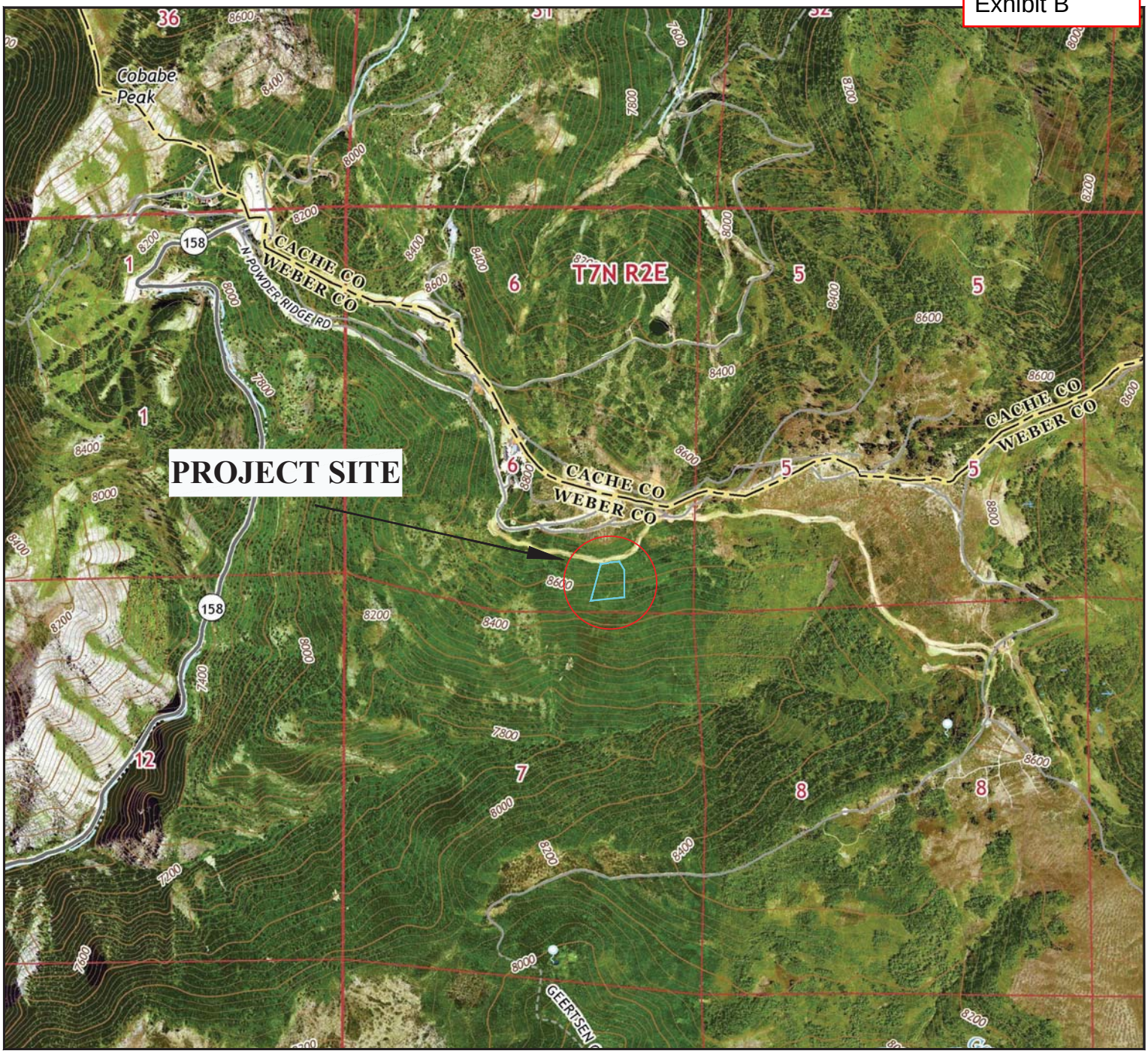
Data Set	Date	Flight	Photographs	Scale
1947 AAJ	August 10, 1946	AAJ_1B	88, 89, 90	1:20,000
1953 AAI	September 14, 1952	AAI_4K	34, 35, 36	1:20,000
1963 ELK	June 25, 1963	ELK_3	57, 58, 59	1:15,840

*https://geodata.geology.utah.gov/imagery/

Exhibit B

APPENDIX A

Exhibit B



BASE MAPS:

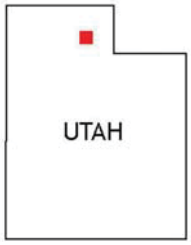
-USGS HUNTSVILLE, BROWN'S HOLE, JAMES PEAK AND SHARP MOUNTAIN 7.5-MINUTE QUADRANGLE TOPOGRAPHIC MAPS (2017)

N

0 1000 2000 3000

FEET

1" = 2000'



QUADRANGLE LOCATION

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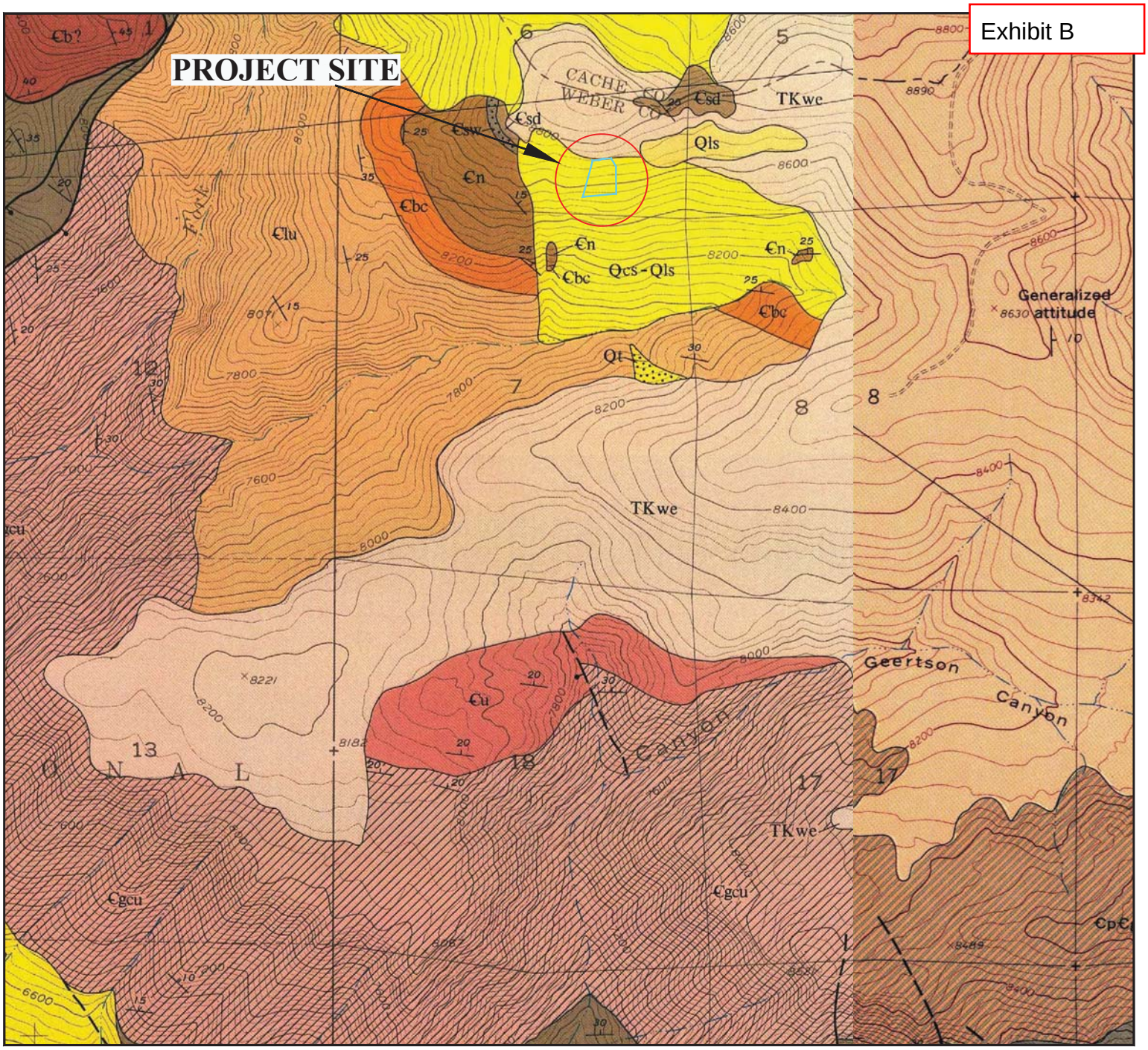
LOT 14R OF SUMMIT EDEN PHASE 1A
POWDER MOUNTAIN RESORT
WEBER COUNTY, UT

SITE VICINITY MAP

FIGURE

A-1

Exhibit B



BASE MAPS:

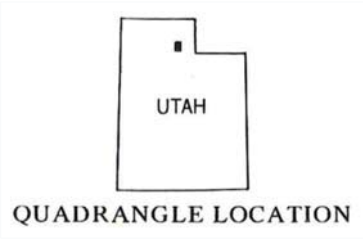
-USGS HUNTSVILLE 7.5-MINUTE GEOLOGIC QUADRANGLE MAP (GQ-1503), SORENSEN AND CRITTENDEN, JR. (1979)

-USGS BROWN'S HOLE 7.5-MINUTE GEOLOGIC QUADRANGLE MAP (GQ-968), CRITTENDEN, JR. (1972)

N

0 1000 2000 3000
FEET

1" = 2000'



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GEOTECHNICAL AND GEOLOGIC HAZARDS ASSESSMENT
LOT 14R OF SUMMIT EDEN PHASE 1A
POWDER MOUNTAIN RESORT
WEBER COUNTY, UT

REGIONAL GEOLOGY MAP 1

FIGURE

A-2a

Exhibit B

MAP LEGEND

Qcs — COLLUVIUM AND SLOPEWASH (Holocene) – Bouldery colluvium and slopewash chiefly along eastern margin of Ogden Valley; in part, lag from Tertiary units; thickness 0-30 m

Qls — LANDSLIDE DEPOSITS (Holocene) – thickness 0-6 m

Qt — TALUS DEPOSITS (Holocene) – thickness 0-6 m

TKwe — WASATCH AND EVANSTON(?) FORMATIONS, UNDIVIDED (Eocene, Paleocene, and Upper Cretaceous?) – Unconsolidated pale-reddish-brown pebble, cobble, and boulder conglomerate; forms boulder-covered slopes. Clasts are mainly Precambrian quartzite and are tan, gray, or purple; matrix is mainly poorly consolidated sand and silt; thickness 0-150 m

Ꞓsd — ST. CHARLES LIMESTONE (Upper Cambrian) – Includes:
Dolomite member – Thin- to thick-bedded, finely to medium crystalline, light- to medium-gray, white- to light-gray-weathering, cliff-forming dolomite; linguloid brachiopods common in basal 15 m; thickness 150-245 m

Ꞓsw — Worm Creek Quartzite Member – Thin-bedded, fine- to medium-grained, medium- to dark-gray, tan- to brown-weathering calcareous quartzitic sandstone; detrital grains well-sorted and well-rounded; thickness 6 m

Ꞓn — NOUNAN DOLOMITE (Upper and Middle Cambrian) – Thin- to thick-bedded, finely crystalline, medium-gray, light- to medium-gray-weathering, cliff-forming dolomite; white twiggy structures common throughout unit; thickness 150-230 m

Ꞓbc — CALLS FORT SHALE MEMBER OF BLOOMINGTON FORMATION (Middle Cambrian) – Olive-drab to light-brown shale and light- to dark-blue-gray limestone with intercalated orange to rusty-brown silty limestone; intraformational conglomerate common throughout unit; thickness 23-90 m

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GEOTECHNICAL AND GEOLOGIC HAZARDS ASSESSMENT
LOT 14R OF SUMMIT EDEN PHASE 1A
POWDER MOUNTAIN RESORT
WEBER COUNTY, UT

REGIONAL GEOLOGY MAP 1

FIGURE

A-2b

Exhibit B

MAP LEGEND

€lu CAMBRIAN LIMESTONES, UNDIVIDED (Middle Cambrian) – Includes limestone and Hodges Shale Members of Bloomington Formation, and Blacksmith and Ute Limestones

€u UTE LIMESTONE (Middle Cambrian) – Medium- to thin-bedded, finely crystalline, light- to dark-gray silty limestone with irregular wavy partings, mottled and streaked surfaces, worm tracks, and twiggy structures common throughout unit; oolites and *Girvanella* in many beds; olive-drab fissile shale interbedded throughout unit. Includes thin-bedded, gray-weathering, pale-tan to brown dolomite exposed at base of unit, 18-24 m at head of Geertsen Canyon and 0-3 m elsewhere; thickness 245? m

€gcu BRIGHAM GROUP (Crittenden and others, 1971) – Includes:
GEERTSEN CANYON QUARTZITE (Lower Cambrian) – Includes:
Upper member – Pale-buff to white or flesh-pink quartzite, locally streaked with pale red or purple. Coarse-grained; small pebbles occur throughout unit and increase in abundance downward. Base marked by zone 30-60 m thick of cobble conglomerate in beds 30 cm to 2 m thick; clasts, 5-10 cm in diameter, are mainly reddish vein quartz or quartzite, sparse gray quartzite, or red jasper; thickness 730-820 m

Contact

Dashed where approximately located; dotted where concealed

Fault showing dip

Dashed where approximately located; dotted where concealed; queried where doubtful; bar and ball on downthrown side; arrows show direction of relative displacement

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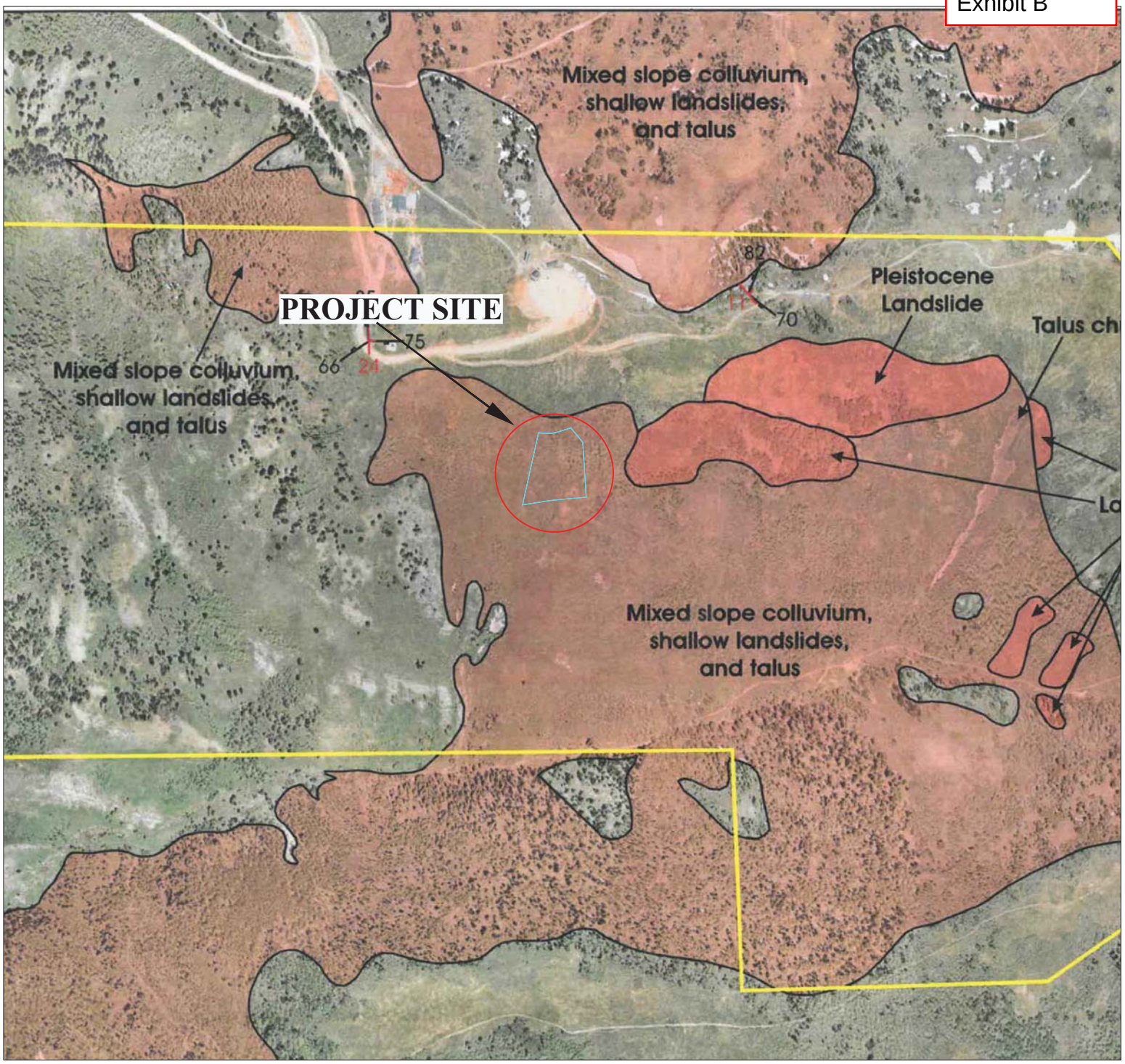
GEOTECHNICAL AND GEOLOGIC HAZARDS ASSESSMENT
LOT 14R OF SUMMIT EDEN PHASE 1A
POWDER MOUNTAIN RESORT
WEBER COUNTY, UT

REGIONAL GEOLOGY MAP 1

FIGURE

A-2c

Exhibit B



BASE MAP:

-WESTERN GEOLOGIC (2012)
GEOLOGIC HAZARDS
RECONNAISSANCE REPORT, FIGURE 3

0 1000 2000
FEET

1" = 1000'

N

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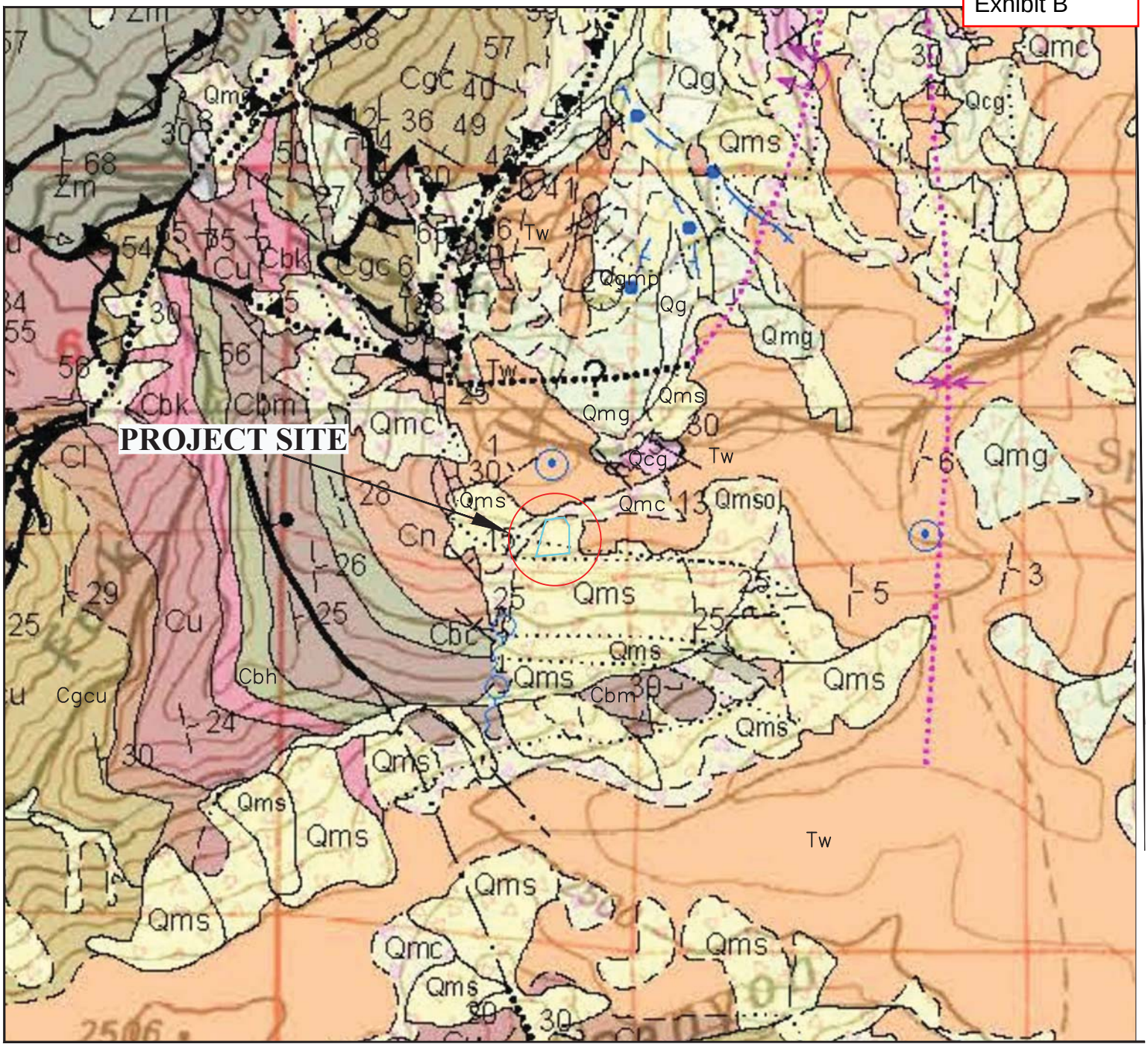
GEOTECHNICAL AND GEOLOGIC HAZARDS ASSESSMENT
LOT 14R OF SUMMIT EDEN PHASE 1A
POWDER MOUNTAIN RESORT
WEBER COUNTY, UT

REGIONAL GEOLOGY MAP 2

FIGURE

A-3

Exhibit B



BASE MAP:

-UGS OGDEN 30'x 60' GEOLOGIC QUADRANGLE MAP (OFR-653DM, PLATE 1) COOGAN AND KING (2016)

N

0 1000 2000 3000
FEET

1" = 2000'

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GEOTECHNICAL AND GEOLOGIC HAZARDS ASSESSMENT
LOT 14R OF SUMMIT EDEN PHASE 1A
POWDER MOUNTAIN RESORT
WEBER COUNTY, UT

REGIONAL GEOLOGY MAP 3

FIGURE

A-4a

Exhibit B

MAP LEGEND

Qg, Qg?, Qgm, Qgm?, Qga, Qga?

Glacial till and outwash, undivided age (Holocene and upper and middle? Pleistocene) – Qg is undivided glacial deposits (till and outwash) of various ages; till is non-stratified, poorly sorted clay, silt, sand, and gravel, to boulder size; Qgm is moraines of unknown age that are mapped where distinct shapes of end, recessional and lateral moraines are visible; outwash (Qga) is stratified and variably sorted, but better sorted and bedded than till due to alluvial reworking; Qga is mapped directly downslope from other glacial deposits where it is thick enough to obscure older deposits and bedrock, and where it can be separated from ground moraine (mapped as Qg) and alluvium (mapped as Qa_); locally include mass-movement (Qms, Qmt, Qct) and rock glacier deposits that are too small to show separately at map scale; 6 to 150 feet (2-45 m) thick. Undivided because age uncertain or where deposits with multiple ages cannot be shown separately at map scale; queried where interpretation as glacial deposits is uncertain. Glacial deposits are prone to slope failures.

Qms, Qms?, Qmsy, Qmsy?, Qmso, Qmso?

Landslide deposits (Holocene and upper and middle? Pleistocene) – Poorly sorted clay- to boulder-sized material; includes slides, slumps, and locally flows and floods; generally characterized by hummocky topography, main and internal scarps, and chaotic bedding in displaced blocks; composition depends on local sources; morphology becomes more subdued with time and amount of water in material during emplacement; Qms may be in contact with Qms when landslides are different/distinct; thickness highly variable, up to about 20 to 30 feet (6-9 m) for small slides, and 80 to 100 feet (25-30 m) thick for larger landslides. Qmsy and Qmso queried where relative age uncertain; Qms queried where classification uncertain. Numerous landslides are too small to show at map scale and more detailed maps shown in the index to geologic mapping should be examined.

Qmc **Landslide and colluvial deposits, undivided (Holocene and Pleistocene)** – Poorly sorted to unsorted clay- to boulder-sized material; mapped where landslide deposits are difficult to distinguish from colluvium (slopewash and soil creep) and where mapping separate, small, intermingled areas of landslide and colluvial deposits is not possible at map scale; locally includes talus and debris flow and flood deposits; typically mapped where landslides are thin ("shallow"); also mapped where the blocky or rumpled morphology that is characteristic of landslides has been diminished ("smoothed") by slopewash and soil creep; composition depends on local sources; 6 to 40 feet (2-12 m) thick. These deposits are as unstable as other landslide units (Qms, Qmsy, Qmso).

Qcg **Gravelly colluvial deposits (Holocene and Pleistocene)** – Gravelly materials present downslope from gravel-rich deposits of various ages (for example units Keh, Tw, Tcg, Thv, QTaf, QTa, Qafoe, Qaoe, Qafo, and Qa); may contain residual deposits; typically differentiated from colluvium and residual gravel (Qc, Qng) by prominent stripes trending downhill on aerial photographs; stripes are concentrations of gravel up to boulder size; generally 6 to 20 feet (2-6 m) thick.

Qmg, Qmg?

Mass-movement and glacial deposits, undivided (Holocene and Pleistocene) – Unsorted and unstratified clay, silt, sand, and gravel; mapped where glacial deposits lack typical moraine morphology, and appear to have failed or moved down slope; also mapped in upper Strawberry Bowl (Snow Basin quadrangle) where glacial deposits have lost their distinct morphology and the contacts between them and colluvium and talus in the cirques cannot be mapped; likely less than 30 feet (9 m) thick, but may be thicker in Mantua, James Peak, North Ogden, Huntsville, and Peterson quadrangles.

Exhibit B

MAP LEGEND

Tw, Tw?

Wasatch Formation (Eocene and upper Paleocene) – Typically red to brownish-red sandstone, siltstone, mudstone, and conglomerate with minor gray limestone and marlstone locally (see Twl); lighter shades of red, yellow, tan, and light gray present locally and more common in uppermost part, complicating mapping of contacts with overlying similarly colored Norwood and Fowkes Formations; clasts typically rounded Neoproterozoic and Paleozoic sedimentary rocks, mainly Neoproterozoic and Cambrian quartzite; basal conglomerate more gray and less likely to be red, and containing more locally derived angular clasts of limestone, dolomite and sandstone, typically from Paleozoic strata, for example in northern Causey Dam quadrangle; sinkholes indicate karstification of limestone beds; thicknesses on Willard thrust sheet likely up to about 400 to 600 feet (120-180 m) in Sharp Mountain, Dairy Ridge, and Horse Ridge quadrangles (Coogan, 2006a-b), about 1300 feet (400 m) in Monte Cristo Peak quadrangle, about 1100 feet (335 m) in northeast Browns Hole quadrangle, about 2200 feet (670 m) in southwest Causey Dam quadrangle, about 2600 feet (800 m) at Herd Mountain in Bybee Knoll quadrangle, and about 1300 feet (400 m) in northwest Lost Creek Dam quadrangle, estimated by elevation differences between pre-Wasatch rocks exposed in drainages and the crests of gently dipping Wasatch Formation on adjacent ridges (King); thickness varies locally due to considerable relief on basal erosional surface, for example along Right Fork South Fork Ogden River, and along leading edge of Willard thrust; much thicker, about 5000 to 6000 feet (1500-1800 m), south of Willard thrust sheet near Morgan. Wasatch Formation is queried (Tw?) where poor exposures may actually be surficial deposits. The Wasatch Formation is prone to slope failures. Other information on the Wasatch Formation is in Tw descriptions under the heading "Sub-Willard Thrust - Ogden Canyon Area" since Tw strata are extensive near Morgan Valley and cover the Willard thrust, Ogden Canyon, and Durst Mountain areas.

- Contact, approximately located
- Contact, approximately located, queried
- Contact, concealed
- Contact, concealed, queried
- Contact, scratch, used where map units combined
- Contact, well located
- Normal fault, well located
- Thrust fault, concealed
- Thrust fault, well located
- Syncline, overturned, concealed
- Bedding, strike & dip, upright
- Select spring

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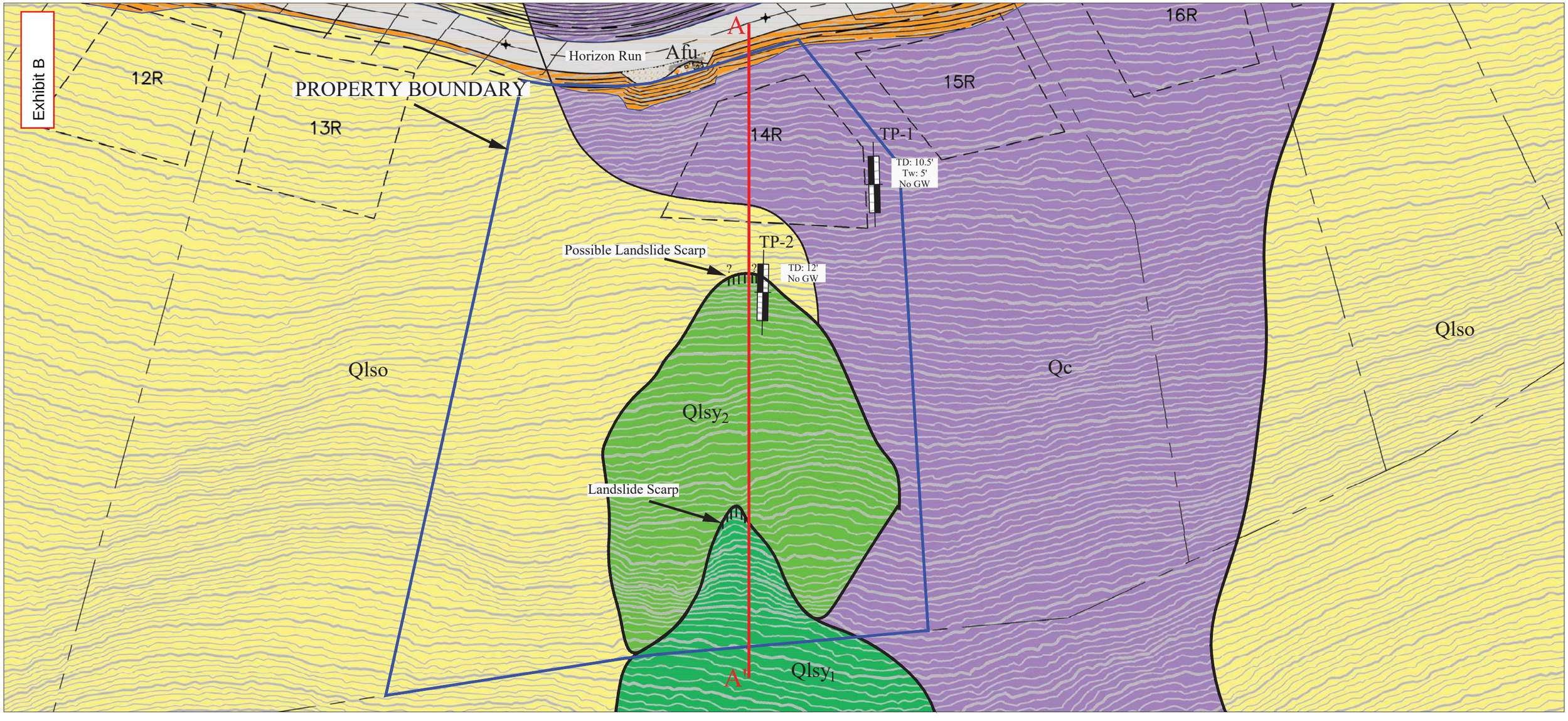
GEOTECHNICAL AND GEOLOGIC HAZARDS ASSESSMENT
LOT 14R OF SUMMIT EDEN PHASE 1A
POWDER MOUNTAIN RESORT
WEBER COUNTY, UT

REGIONAL GEOLOGY MAP 2

FIGURE

A-4c

Exhibit B



LEGEND

$Qlsy_1$	YOUNG LANDSLIDE UNIT 1	Qlso	OLD LANDSLIDE DEPOSIT	Afu	UNDOCUMENTED FILL	TP-1	TEST PITS
$Qlsy_2$	YOUNG LANDSLIDE UNIT 2	Qc	COLLUVIUM		PROPERTY BOUNDARY		APPROXIMATE GEOLOGIC CONTACTS

A — A' CROSS SECTION

N

0 80 160

FEET

1" = 80'

BASE MAP:

-UNDATED 100-SCALE MAP OF PHASE 1A PREPARED BY NV5

CONTOUR INTERVAL: 2'

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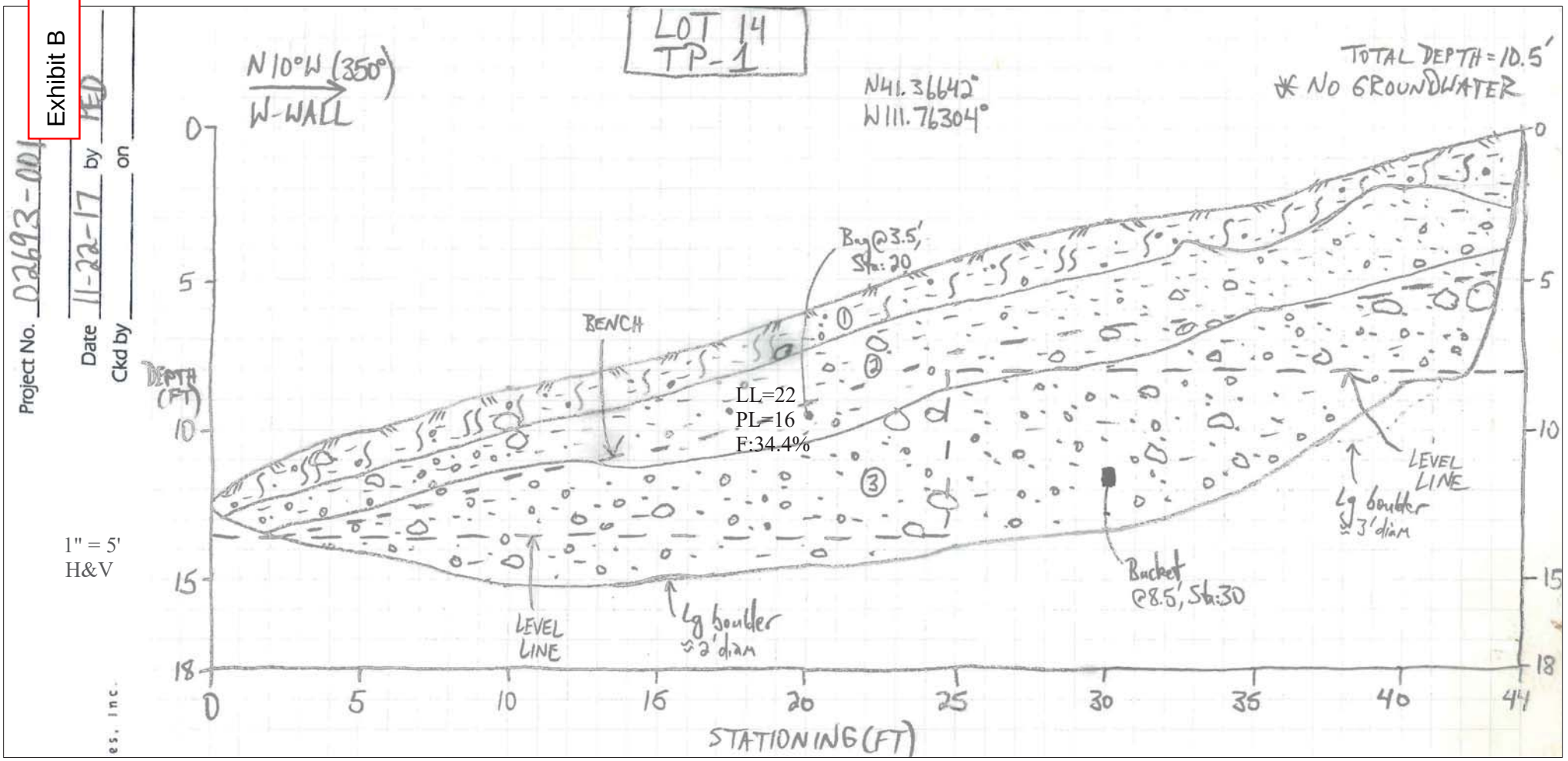
GEOTECHNICAL AND GEOLOGIC HAZARDS ASSESSMENT
LOT 14R OF SUMMIT EDEN PHASE 1A
POWDER MOUNTAIN RESORT
WEBER COUNTY, UTAH

GEOTECHNICAL AND LOCAL GEOLOGY MAP

FIGURE

A-5

Exhibit B



LITHOLOGIC UNIT DESCRIPTIONS:

1. A/B Soil Horizon:~1-2' thick; brownish black (5YR $\frac{2}{1}$) sandy lean CLAY with gravel (CL), medium stiff to loose, moist to wet, low plasticity, massive; gravel and larger sized clasts comprise ~5-10% of the unit; clasts entirely pale yellowish orange (10YR $\frac{8}{6}$) to medium gray (N5) quartzite, subrounded to subangular and up to 10" in diameter, though mode size is ~2"; abundant plant and tree roots; grades to dark yellowish brown (10YR $\frac{4}{2}$) with depth; sharp, highly irregular basal contact.

2. Colluvium (Shallow Landslide?): ~1-3' thick; moderate yellowish brown (10YR $\frac{5}{4}$) to light brown (5YR $\frac{6}{4}$) to pale yellowish orange (10YR $\frac{8}{6}$) silty, clayey SAND with gravel (SC-SM) gradational to sandy lean CLAY with gravel (CL), medium dense, slightly moist, low plasticity fines, massive; gravel and larger sized clasts comprise ~20% of the unit; clasts entirely subrounded to subangular quartzite as above, up to 8" in diameter, though mode size is ~1-2"; abundant 1-2mm diameter pinhole voids throughout; occasional calcium carbonate matrix flour; occasional plant and tree roots; gradational, irregular basal contact.

3. Wasatch Formation: >5.5' thick; weakly consolidated conglomerate bedrock, readily disaggregates to pale yellowish orange (10YR $\frac{8}{6}$) to dark reddish brown (10R $\frac{3}{4}$) clayey GRAVEL with sand (GC) gradational to well-graded sandy GRAVEL (GW), dense to very dense, slightly moist, low plasticity fines, massive; gravel and larger sized clasts comprise ~30-60% of the unit; clasts entirely subangular to subrounded quartzite as above, up to 3' in diameter, though mode size is ~4-6"; common 1-2mm diameter pinholes where clayey; occasional to few plant and tree roots; poorly sorted and heterogenous unit; matrix supported.

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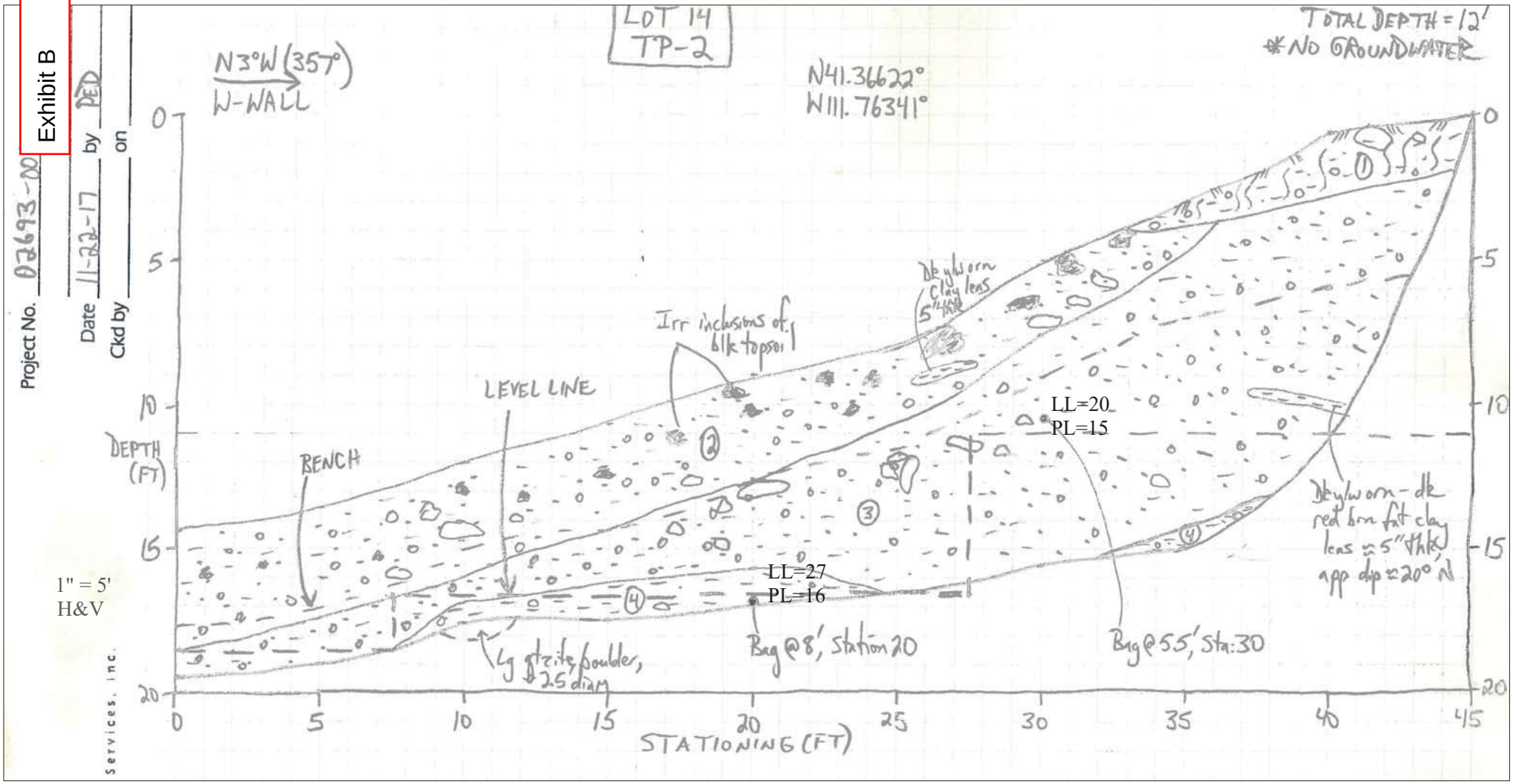
GEOTECHNICAL AND GEOLOGIC HAZARDS ASSESSMENT
LOT 14R OF SUMMIT EDEN PHASE 1A
POWDER MOUNTAIN RESORT
WEBER COUNTY, UT

TEST PIT 1 LOG

FIGURE

A-6

Exhibit B



LITHOLOGIC UNIT DESCRIPTIONS
ON FIGURE A-7b

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GEOTECHNICAL AND GEOLOGIC HAZARDS ASSESSMENT
LOT 14R OF SUMMIT EDEN PHASE 1A
POWDER MOUNTAIN RESORT
WEBER COUNTY, UT

TEST PIT 2 LOG

FIGURE
A-7a

Exhibit B

LITHOLOGIC UNIT DESCRIPTIONS:

A/B Soil Horizon:~ Up to 2' thick; black (N1) to brownish black (5YR $\frac{2}{1}$) sandy lean CLAY with gravel (CL), loose, wet, low plasticity, massive; gravel and larger sized clasts comprise ~25% of unit; clasts entirely medium gray (N5) to pale yellowish orange (10YR $\frac{8}{6}$) quartzite up to 1.5' diameter, though mode size is ~2-4"; clasts are subrounded; abundant plant and tree roots; sharp, planar basal contact; becomes erratically incorporated into Unit 2 downslope.

2. Young Landslide: ~2-4' thick; highly variegated between dark yellowish brown (10YR $\frac{4}{2}$), black (N1), and dark yellowish orange (10YR $\frac{6}{6}$), clayey SAND with gravel (SC) gradational to sandy lean clay (CL), loose to medium dense, moist to wet, low plasticity fines, massive; gravel and larger sized clasts comprise up to ~10-15% of the unit; clasts all subrounded quartzite as above, up to 14" in diameter, though mode size is ~2', though highly variable; highly erratic, heterogenous unit; sharp, irregular basal contact; no evident basal shear plane.

3. Old Landslide: ~2-10' + thick; moderate yellowish brown (10YR $\frac{5}{4}$) to light brown (5YR $\frac{6}{4}$) clayey SAND with gravel (SC), medium dense, slightly moist, low plasticity fines, massive; gravel and larger sized clasts comprise ~30-40% of the unit; clasts entirely subangular to subrounded quartzite as above, up to 2' in diameter, though mode size is ~1-2"; abundant 1-2mm pinholes throughout; matrix-supported and poorly sorted; common to occasional plant and tree roots; similar to Unit 2 in TP-1; sharp, irregular basal contact.

*~1' thick dark yellowish orange (10YR $\frac{6}{6}$) fat CLAY (CH) seam observed in the middle of Unit 3 on the east wall that was not observed on the west wall.

4. Weathered Bedrock (Slide Plane?): >1.5' thick; dark reddish brown (10R $\frac{3}{4}$) sandy lean CLAY with gravel (CL), stiff to very stiff, slightly moist, moderate plasticity, massive; gravel and larger sized clasts comprise ~10% of the unit, all quartzite as above up to 2.5' in diameter, though mode size is ~1-2"; occasional discontinous, poorly developed slickensides observed when broken, but not in-situ.

Exhibit B

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			USCS SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS (More than half of material is larger than the #200 sieve)	GRAVELS (More than half of coarse fraction is larger than the #4 sieve)	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE OR NO FINES
			GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE OR NO FINES
		GRAVELS WITH OVER 12% FINES	GM	SILTY GRAVELS, GRAVEL-SILT-SAND MIXTURES
			GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
	SANDS (More than half of coarse fraction is smaller than the #4 sieve)	CLEAN SANDS WITH LITTLE OR NO FINES	SW	WELL-GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE OR NO FINES
			SP	POORLY-GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE OR NO FINES
		SANDS WITH OVER 12% FINES	SM	SILTY SANDS, SAND-GRAVEL-SILT MIXTURES
			SC	CLAYEY SANDS SAND-GRAVEL-CLAY MIXTURES
FINE GRAINED SOILS (More than half of material is smaller than the #200 sieve)	SILTS AND CLAYS (Liquid limit less than 50)		ML	INORGANIC SILTS & VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS, CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			OL	ORGANIC SILTS & ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS (Liquid limit greater than 50)		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILT
			CH	INORGANIC CLAYS OF HIGH PLASTICITY FAT CLAYS
			OH	ORGANIC CLAYS & ORGANIC SILTS OF MEDIUM-TO-HIGH PLASTICITY
HIGHLY ORGANIC SOILS			PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

LOG KEY SYMBOLS

- BORING SAMPLE LOCATION
- TEST-PIT SAMPLE LOCATION
- WATER LEVEL (level after completion)
- WATER LEVEL (level where first encountered)

CEMENTATION

DESCRIPTION	DESCRIPTION
WEAKELY	CRUMBLES OR BREAKS WITH HANDLING OR SLIGHT FINGER PRESSURE
MODERATELY	CRUMBLES OR BREAKS WITH CONSIDERABLE FINGER PRESSURE
STRONGLY	WILL NOT CRUMBLE OR BREAK WITH FINGER PRESSURE

OTHER TESTS KEY

C	CONSOLIDATION	SA	SIEVE ANALYSIS
AL	ATTERBERG LIMITS	DS	DIRECT SHEAR
UC	UNCONFINED COMPRESSION	T	TRIAXIAL
S	SOLUBILITY	R	RESISTIVITY
O	ORGANIC CONTENT	RV	R-VALUE
CBR	CALIFORNIA BEARING RATIO	SU	SOLUBLE SULFATES
COMP	MOISTURE/DENSITY RELATIONSHIP	PM	PERMEABILITY
CI	CALIFORNIA IMPACT	-200	% FINER THAN #200
COL	COLLAPSE POTENTIAL	Gs	SPECIFIC GRAVITY
SS	SHRINK SWELL	SL	SWELL LOAD

MODIFIERS

DESCRIPTION	%
TRACE	<5
SOME	5 - 12
WITH	>12

MOISTURE CONTENT

DESCRIPTION	FIELD TEST
DRY	ABSENCE OF MOISTURE, DUSTY, DRY TO THE TOUCH
MOIST	DAMP BUT NO VISIBLE WATER
WET	VISIBLE FREE WATER, USUALLY SOIL BELOW WATER TABLE

STRATIFICATION

DESCRIPTION	THICKNESS	DESCRIPTION	THICKNESS
SEAM	1/16 - 1/2"	OCCASIONAL	ONE OR LESS PER FOOT OF THICKNESS
LAYER	1/2 - 12"	FREQUENT	MORE THAN ONE PER FOOT OF THICKNESS

GENERAL NOTES

1. Lines separating strata on the logs represent approximate boundaries only. Actual transitions may be gradual.
2. No warranty is provided as to the continuity of soil conditions between individual sample locations.
3. Logs represent general soil conditions observed at the point of exploration on the date indicated.
4. In general, Unified Soil Classification designations presented on the logs were evaluated by visual methods only. Therefore, actual designations (based on laboratory tests) may vary

APPARENT / RELATIVE DENSITY - COARSE-GRAINED SOIL

APPARENT DENSITY	SPT (blows/ft)	MODIFIED CA. SAMPLER (blows/ft)	CALIFORNIA SAMPLER (blows/ft)	RELATIVE DENSITY (%)	FIELD TEST
VERY LOOSE	<4	<4	<5	0 - 15	EASILY PENETRATED WITH 1/2-INCH REINFORCING ROD PUSHED BY HAND
LOOSE	4 - 10	5 - 12	5 - 15	15 - 35	DIFFICULT TO PENETRATE WITH 1/2-INCH REINFORCING ROD PUSHED BY HAND
MEDIUM DENSE	10 - 30	12 - 35	15 - 40	35 - 65	EASILY PENETRATED A FOOT WITH 1/2-INCH REINFORCING ROD DRIVEN WITH 5-LB HAMMER
DENSE	30 - 50	35 - 60	40 - 70	65 - 85	DIFFICULT TO PENETRATED A FOOT WITH 1/2-INCH REINFORCING ROD DRIVEN WITH 5-LB HAMMER
VERY DENSE	>50	>60	>70	85 - 100	PENETRATED ONLY A FEW INCHES WITH 1/2-INCH REINFORCING ROD DRIVEN WITH 5-LB HAMMER

CONSISTENCY - FINE-GRAINED SOIL

CONSISTENCY	SPT (blows/ft)	TORVANE UNTRAINED SHEAR STRENGTH (tsf)	POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH (tsf)	FIELD TEST
VERY SOFT	<2	<0.125	<0.25	EASILY PENETRATED SEVERAL INCHES BY THUMB. EXUDES BETWEEN THUMB AND FINGERS WHEN SQUEEZED BY HAND.
SOFT	2 - 4	0.125 - 0.25	0.25 - 0.5	EASILY PENETRATED ONE INCH BY THUMB. MOLDED BY LIGHT FINGER PRESSURE.
MEDIUM STIFF	4 - 8	0.25 - 0.5	0.5 - 1.0	PENETRATED OVER 1/2 INCH BY THUMB WITH MODERATE EFFORT. MOLDED BY STRONG FINGER PRESSURE.
STIFF	8 - 15	0.5 - 1.0	1.0 - 2.0	INDENTED ABOUT 1/2 INCH BY THUMB BUT PENETRATED ONLY WITH GREAT EFFORT.
VERY STIFF	15 - 30	1.0 - 2.0	2.0 - 4.0	READILY INDENTED BY THUMBNAIL.
HARD	>30	>2.0	>4.0	INDENTED WITH DIFFICULTY BY THUMBNAIL.

KEY TO SOIL SYMBOLS AND TERMINOLOGY

Project No. 02693-001
Engr. DAG
Drafted By DAG
Date March 2018

IGES
Intermountain Geo-Environmental Services, Inc.

Figure A-8

Exhibit B

Rock Classification Should Include:
1. Rock name (or classification) 2. Color 3. Weathering 4. Fracturing 5. Competency 6. Additional comments indicating rock characteristics which might affect engineering properties

Weathering

Weathering	Field Test
Fresh	No visible sign of decomposition or discoloration. Rings under hammer impact.
Slightly Weathered	Slight discoloration inwards from open fractures, otherwise similar to Fresh.
Moderately Weathered	Discoloration throughout. Weaker minerals such as feldspar are decomposed. Strength somewhat less than fresh rock but cores cannot be broken by hand or scraped with a knife. Texture preserved.
Highly Weathered	Most minerals somewhat decomposed. Specimens can be broken by hand with effort or shaved with a knife. Core stones present in rock mass. Texture becoming indistinct but fabric preserved.
Completely Weathered	Minerals decomposed to soil but fabric and structure preserved. Specimens easily crumble or penetrated.

Fracturing

Spacing	Description
>6 ft	Very Widely
2-6 ft	Widely
8-24 in	Moderately
2 ½-8 in	Closely
¾-2 ½ in	Very Closely

Bedding of Sedimentary Rocks

Splitting Property	Thickness	Stratification
Massive	>4.0 ft	Very thick bedded
Blocky	2.0-4.0 ft	Thick-bedded
Slabby	2 ½-24 in	Thin-bedded
Flaggy	½-2 ½ in	Very thin-bedded
Shaly or platy	⅛ – ½ in	Laminated
Papery	< ⅛ in	Thinly laminated

RQD

RQD (%)	Rock Quality
90-100	Excellent
75-90	Good
50-75	Fair
25-50	Poor
0-25	Very Poor

Competency

Class	Strength	Field Test	Approximate Range of Unconfined Compressive Strength (tsf)
I	Extremely Strong	Many blows with geologic hammer required to break intact specimen.	>2000
II	Very Strong	Hand-held specimen breaks with pick end of hammer under more than one blow.	2000-1000
III	Strong	Cannot by scraped or peeled with knife, hand-held specimen can be broken with single moderate blow with pick end of hammer	1000-500
IV	Moderately Strong	Can just be scraped or peeled with knife. Indentations 1-3 mm show in specimen with moderate blow with pick end of hammer.	500-250
V	Weak	Material crumbles under moderate blow with pick end of hammer and can be peeled with a knife, but is hard to hand-trim for triaxial test specimen.	250-10
VI	Friable	Material crumbles in hand.	N/A

KEY TO PHYSICAL ROCK PROPERTIES

Project No. 02693-001
Engr. DAG
Drafted By DAG
Date March 2018

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Figure A-9

Exhibit B

APPENDIX B

Exhibit B

Water Content and Unit Weight of Soil

(In General Accordance with ASTM D7263 Method B and D2216)

Project: **Dee Lot 14**
No: **02693-001**
Location: Powder Mountain, UT
Date: 1/16/2018
By: JDF/EH/BRR

Sample Info.	Boring No.	TP-1	TP-2	TP-2					
	Sample								
	Depth	3.5'	5.5'	8.0'					
	Split	Yes	Yes	Yes					
	Split sieve	No.4	3/8"	3/8"					
	Total sample (g)	3192.39	4130.78	3911.20					
	Moist coarse fraction (g)	663.25	1846.48	539.05					
	Moist split fraction (g)	2529.14	2284.30	3372.15					
	Sample height, H (in)								
	Sample diameter, D (in)								
	Mass rings + wet soil (g)								
	Mass rings/tare (g)								
	Moist unit wt., γ_m (pcf)								
Coarse Fraction	Wet soil + tare (g)	952.00	2195.00	753.20					
	Dry soil + tare (g)	944.46	2182.54	749.63					
	Tare (g)	221.88	309.46	214.14					
	Water content (%)	1.0	0.7	0.7					
Split Fraction	Wet soil + tare (g)	379.63	349.91	525.69					
	Dry soil + tare (g)	369.83	340.96	497.01					
	Tare (g)	123.04	121.47	117.94					
	Water content (%)	4.0	4.1	7.6					
	Water Content, w (%)	**3.3**	**2.5**	**6.6**					
	Dry Unit Wt., γ_d (pcf)								

Entered by:_____
Reviewed:_____

Exhibit B

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(ASTM D4318)

Project: Dee Lot 14
No: 02693-001
Location: Powder Mountain, UT
Date: 1/16/2018
By: BRR
Grooving tool type: Plastic
Liquid limit device: Mechanical
Rolling method: Hand

Boring No.: TP-1
Sample:
Depth: 3.5'
Description: Reddish brown silty clay

Preparation method: Air Dry
Liquid limit test method: Multipoint
Screened over No.40: Yes
Larger particles removed: Dry sieved
Approximate maximum grain size: 3/4"
Estimated percent retained on No.40: See Particle Size Distribution
As-received water content (%): 3.3

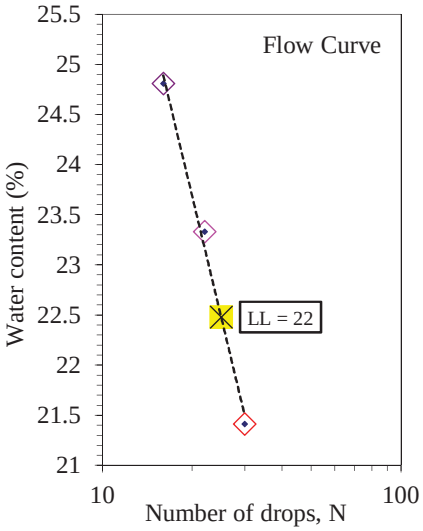
Plastic Limit

Determination No	1	2				
Wet Soil + Tare (g)	29.37	28.46				
Dry Soil + Tare (g)	28.35	27.56				
Water Loss (g)	1.02	0.90				
Tare (g)	21.90	22.00				
Dry Soil (g)	6.45	5.56				
Water Content, w (%)	15.81	16.19				

Liquid Limit

Determination No	1	2	3			
Number of Drops, N	30	22	16			
Wet Soil + Tare (g)	31.86	30.99	29.86			
Dry Soil + Tare (g)	30.13	29.21	28.24			
Water Loss (g)	1.73	1.78	1.62			
Tare (g)	22.05	21.58	21.71			
Dry Soil (g)	8.08	7.63	6.53			
Water Content, w (%)	21.41	23.33	24.81			
One-Point LL (%)	22	23				

Liquid Limit, LL (%)	**22**
Plastic Limit, PL (%)	**16**
Plasticity Index, PI (%)	**6**



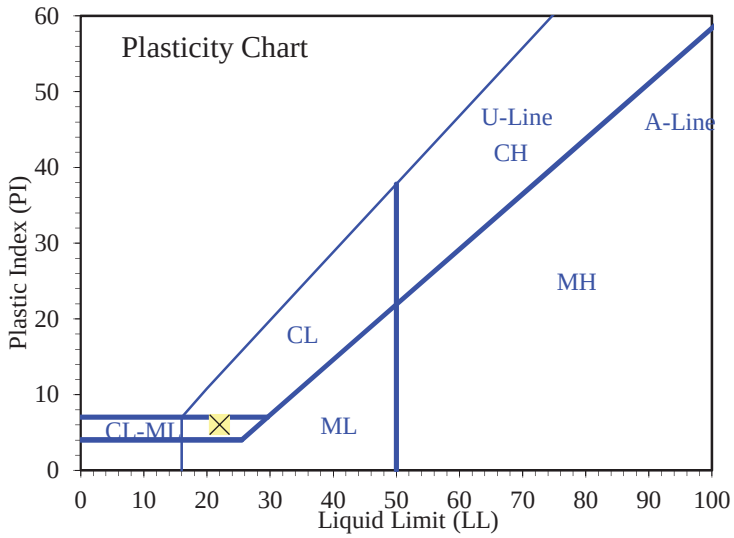


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Exhibit B

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(ASTM D4318)

Project: Dee Lot 14
No: 02693-001
Location: Powder Mountain, UT
Date: 1/16/2018
By: BRR
Grooving tool type: Plastic
Liquid limit device: Mechanical
Rolling method: Hand

Boring No.: TP-2
Sample:
Depth: 5.5'
Description: Brown silty clay

Preparation method: Air Dry
Liquid limit test method: Multipoint
Screened over No.40: Yes
Larger particles removed: Dry sieved
Approximate maximum grain size: 3/8"
Estimated percent retained on No.40: Not requested
As-received water content (%): 2.5

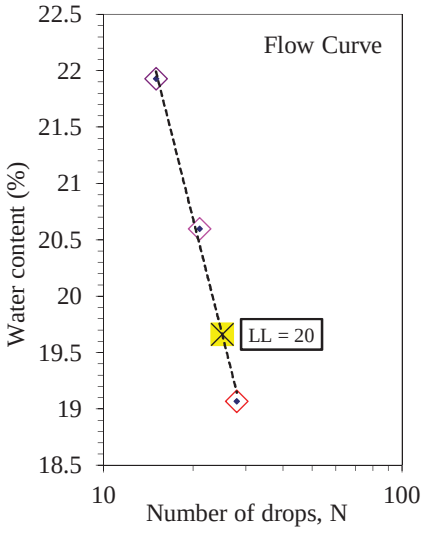
Plastic Limit

Determination No	1	2				
Wet Soil + Tare (g)	30.40	28.75				
Dry Soil + Tare (g)	29.30	27.80				
Water Loss (g)	1.10	0.95				
Tare (g)	21.78	21.35				
Dry Soil (g)	7.52	6.45				
Water Content, w (%)	14.63	14.73				

Liquid Limit

Determination No	1	2	3			
Number of Drops, N	28	21	15			
Wet Soil + Tare (g)	33.97	29.65	31.58			
Dry Soil + Tare (g)	32.05	28.27	29.85			
Water Loss (g)	1.92	1.38	1.73			
Tare (g)	21.98	21.57	21.96			
Dry Soil (g)	10.07	6.70	7.89			
Water Content, w (%)	19.07	20.60	21.93			
One-Point LL (%)	19	20				

Liquid Limit, LL (%)	**20**
Plastic Limit, PL (%)	**15**
Plasticity Index, PI (%)	**5**



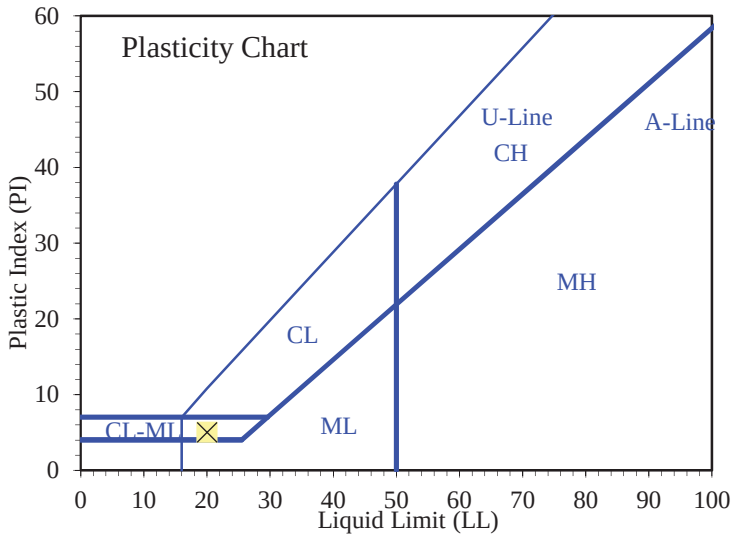


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Exhibit B

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(ASTM D4318)

Project: Dee Lot 14
No: 02693-001
Location: Powder Mountain, UT
Date: 1/16/2018
By: BRR
Grooving tool type: Plastic
Liquid limit device: Mechanical
Rolling method: Hand

Boring No.: TP-2
Sample:
Depth: 8.0'
Description: Reddish brown lean clay

Preparation method: Air Dry
Liquid limit test method: Multipoint
Screened over No.40: Yes
Larger particles removed: Dry sieved
Approximate maximum grain size: 1-1/2"
Estimated percent retained on No.40: Not requested
As-received water content (%): 6.6

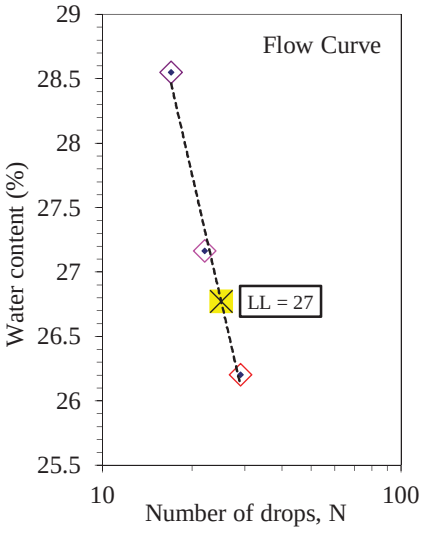
Plastic Limit

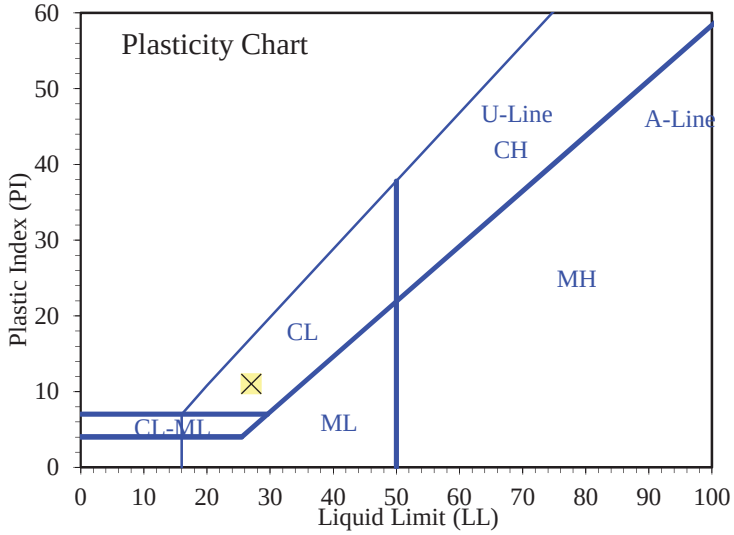
Determination No	1	2				
Wet Soil + Tare (g)	29.01	30.64				
Dry Soil + Tare (g)	27.98	29.43				
Water Loss (g)	1.03	1.21				
Tare (g)	21.42	21.75				
Dry Soil (g)	6.56	7.68				
Water Content, w (%)	15.70	15.76				

Liquid Limit

Determination No	1	2	3			
Number of Drops, N	29	22	17			
Wet Soil + Tare (g)	31.73	30.83	29.92			
Dry Soil + Tare (g)	29.66	28.82	28.11			
Water Loss (g)	2.07	2.01	1.81			
Tare (g)	21.76	21.42	21.77			
Dry Soil (g)	7.90	7.40	6.34			
Water Content, w (%)	26.20	27.16	28.55			
One-Point LL (%)	27	27				

Liquid Limit, LL (%)	**27**
Plastic Limit, PL (%)	**16**
Plasticity Index, PI (%)	**11**





Entered by:_____
Reviewed:_____

Exhibit B

Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis

(ASTM D6913)

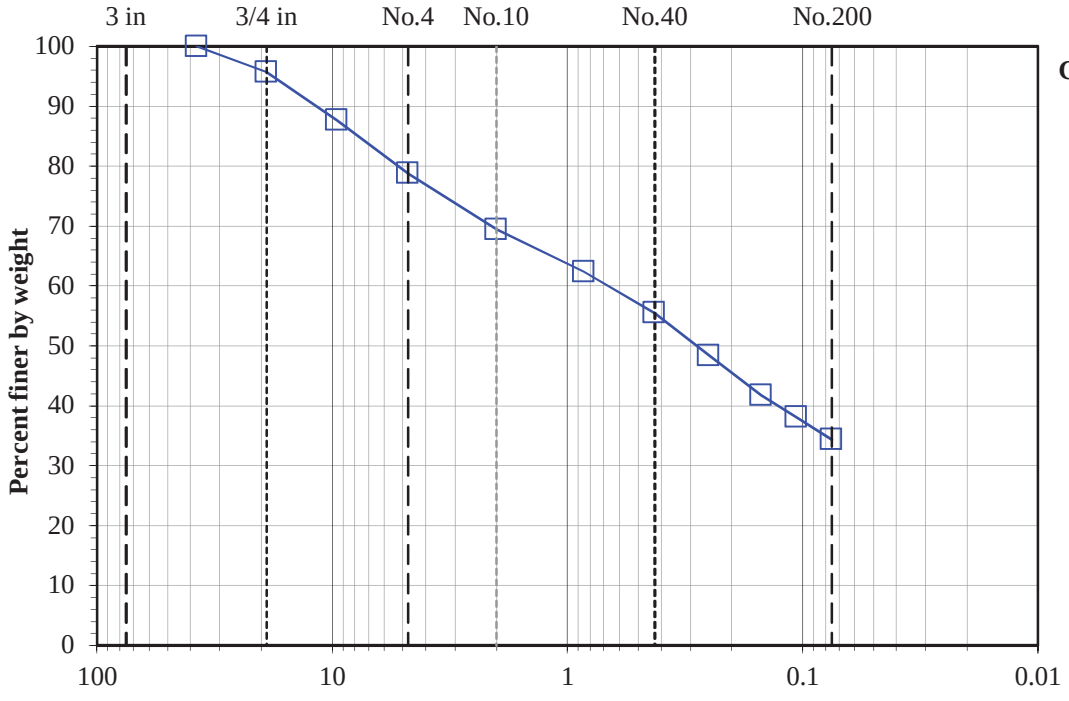
Project: Dee Lot 14
No: 02693-001
Location: Powder Mountain, UT
Date: 1/16/2018
By: JDF

Boring No.: TP-1
Sample:
Depth: 3.5'
Description: Reddish brown silty, clayey sand with gravel

Split:	Yes	
Split sieve:	No.4	
	Moist	Dry
Total sample wt. (g):	3192.39	3088.94
+No.4 Coarse fraction (g):	663.25	656.40
-No.4 Split fraction (g):	256.59	246.79
Split fraction:	0.788	

Water content data	C.F.(+No.4)	S.F.(-No.4)
Moist soil + tare (g):	952.00	379.63
Dry soil + tare (g):	944.46	369.83
Tare (g):	221.88	123.04
Water content (%):	1.0	4.0

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer	
8"	-	200	-	
6"	-	150	-	
4"	-	100	-	
3"	-	75	-	
1.5"	-	37.5	100.0	
3/4"	132.05	19	95.7	
3/8"	382.03	9.5	87.6	
No.4	656.40	4.75	78.8	←Split
No.10	29.21	2	69.4	
No.20	51.40	0.85	62.3	
No.40	72.98	0.425	55.5	
No.60	95.18	0.25	48.4	
No.100	115.98	0.15	41.7	
No.140	127.45	0.106	38.1	
No.200	139.13	0.075	34.4	



Gravel (%): 21.2
Sand (%): 44.4
Fines (%): 34.4

Entered by:_____
Reviewed:_____

Exhibit B

Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis

(ASTM D6913)

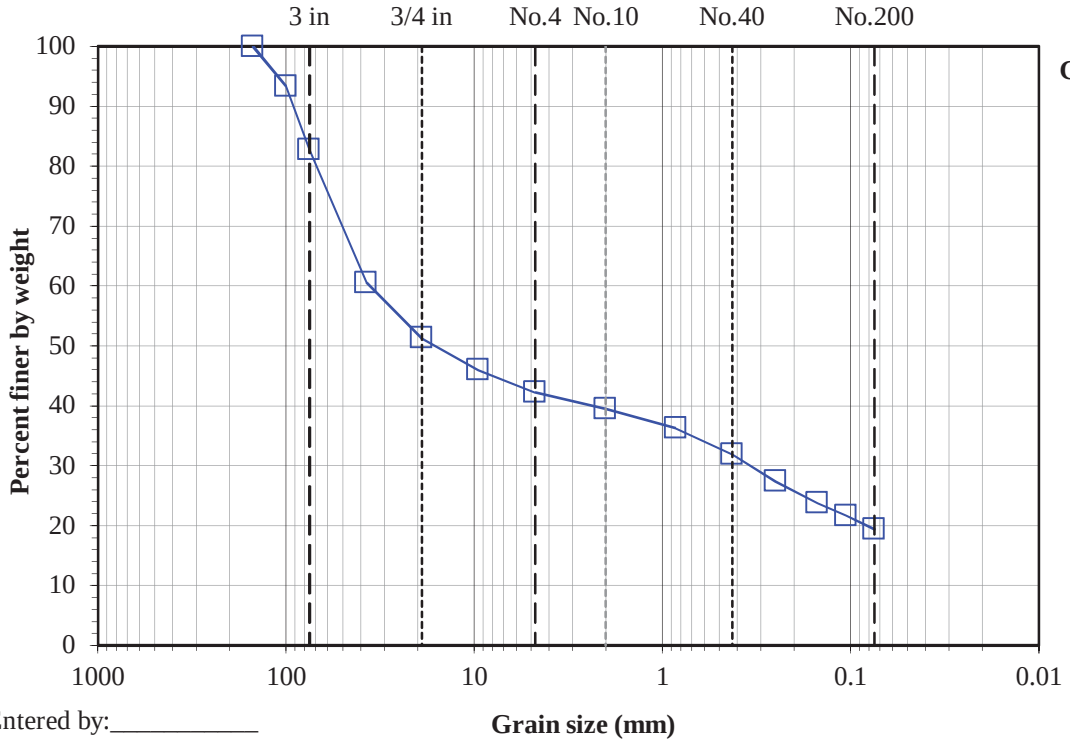
Project: Dee Lot 14
No: 02693-001
Location: Powder Mountain, UT
Date: 1/15/2018
By: DKS/BSS

Boring No.: TP-1
Sample:
Depth: 8.5'
Description: Brown clayey gravel with sand

	Moist	Dry
Split:	Yes	
Split sieve:	3/8"	
Total sample wt. (g):	26357.30	25774.38
+3/8" Coarse fraction (g):	13969.20	13927.65
-3/8" Split fraction (g):	551.25	527.16
Split fraction:	0.460	

Water content data	C.F.(+3/8")	S.F.(-3/8")
Moist soil + tare (g):	4170.13	959.14
Dry soil + tare (g):	4158.94	935.05
Tare (g):	408.47	407.89
Water content (%):	0.3	4.6

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer	
8"	-	200	-	
6"	-	150	100.0	
4"	1709.90	100	93.4	
3"	4460.59	75	82.7	
1.5"	10167.66	37.5	60.6	
3/4"	12547.26	19	51.3	
3/8"	13927.65	9.5	46.0	←Split
No.4	42.68	4.75	42.2	
No.10	74.99	2	39.4	
No.20	111.18	0.85	36.3	
No.40	161.87	0.425	31.8	
No.60	212.94	0.25	27.4	
No.100	255.01	0.15	23.7	
No.140	278.63	0.106	21.7	
No.200	304.55	0.075	19.4	



Gravel (%): 57.8
Sand (%): 22.8
Fines (%): 19.4

Entered by:_____
Reviewed:_____

Exhibit B

Amount of Material in Soil Finer than the No. 200 (75µm) Sieve

(ASTM D1140)

Project: Dee Lot 14
No: 02693-001
Location: Powder Mountain, UT
Date: 1/17/2018
By: EH

Sample Info.	Boring No.	TP-2							
	Sample								
	Depth	5.5'							
	Split	Yes							
	Split Sieve*	3/8"							
	Method	B							
Specimen soak time (min)		240							
Moist total sample wt. (g)		4130.78							
Moist coarse fraction (g)		1846.48							
Moist split fraction + tare (g)		349.91							
Split fraction tare (g)		121.47							
Dry split fraction (g)		219.49							
Dry retained No. 200 + tare (g)		240.03							
Wash tare (g)		121.47							
No. 200 Dry wt. retained (g)		118.56							
Split sieve* Dry wt. retained (g)		1834.28							
Dry total sample wt. (g)		4029.08							
Coarse Fraction	Moist soil + tare (g)	2195.00							
	Dry soil + tare (g)	2182.54							
	Tare (g)	309.46							
	Water content (%)	0.67							
Split Fraction	Moist soil + tare (g)	349.91							
	Dry soil + tare (g)	340.96							
	Tare (g)	121.47							
	Water content (%)	4.08							
Percent passing split sieve* (%)		**54.5**							
Percent passing No. 200 sieve (%)		**25.0**							

Entered by:_____
Reviewed:_____

Exhibit B

Direct Shear Test for Soils Under Drained Conditions

(ASTM D3080)

Project: Dee Lot 14 **Boring No.:** TP-1

No: 02693-001 **Sample:**

Location: Powder Mountain, UT **Depth:** 3.5'

Date: 1/17/2018 Sample Description: Reddish brown silty, clayey sand with gravel

By: EH Sample type: Arbitrary remold

Test type: Inundated

Lateral displacement (in.): 0.3

Shear rate (in./min): 0.0058

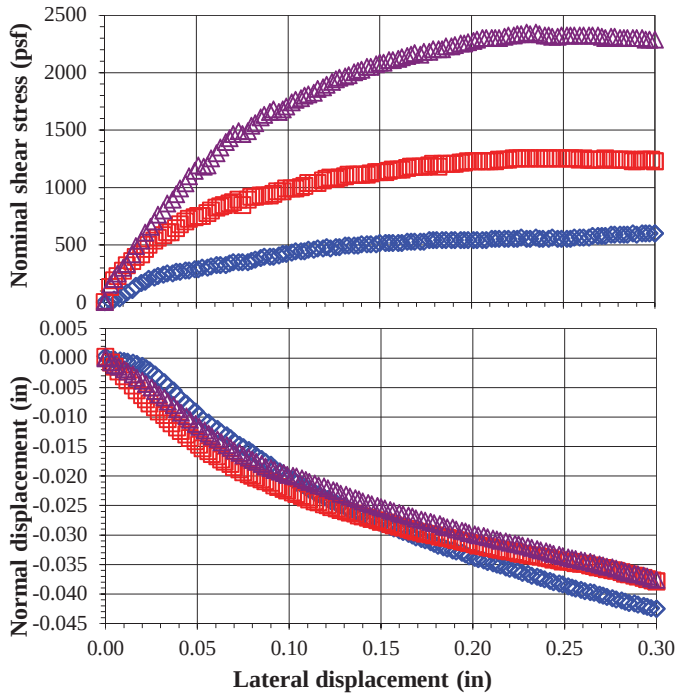
Specific gravity, Gs: 2.70 Assumed

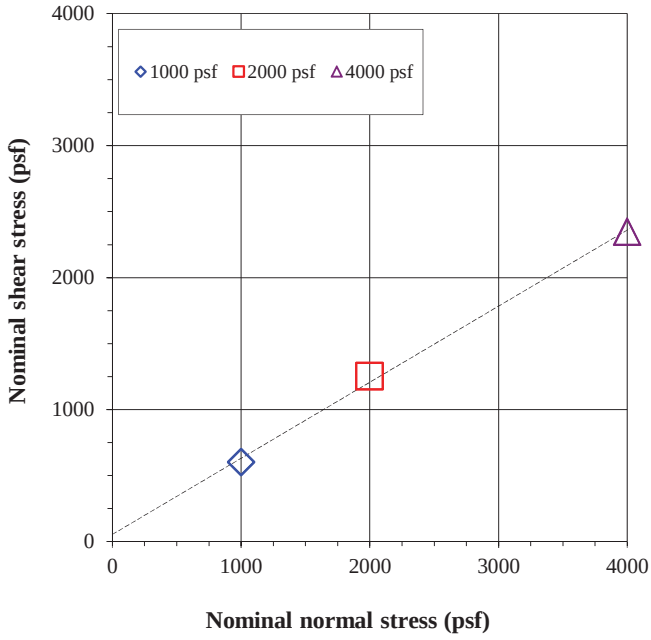
	Sample 1		Sample 2		Sample 3	
Nominal normal stress (psf)	1000		2000		4000	
Peak shear stress (psf)	601		1252		2346	
Lateral displacement at peak (in)	0.288		0.223		0.230	
Load Duration (min)	1026		1121		271	
	Initial	Pre-shear	Initial	Pre-shear	Initial	Pre-shear
Sample height (in)	0.9990	0.9793	0.9950	0.9493	0.9990	0.9330
Sample diameter (in)	2.413	2.413	2.424	2.424	2.425	2.425
Wt. rings + wet soil (g)	188.28	200.98	186.31	197.10	186.81	196.12
Wt. rings (g)	44.86	44.86	42.14	42.14	41.93	41.93
Wet soil + tare (g)	243.82		243.82		243.82	
Dry soil + tare (g)	233.24		233.24		233.24	
Tare (g)	117.47		117.47		117.47	
Water content (%)	9.1	18.8	9.1	17.3	9.1	16.2
Dry unit weight (pcf)	109.6	111.7	109.6	114.8	109.6	117.3
Void ratio, e, for assumed Gs	0.54	0.51	0.54	0.47	0.54	0.44
Saturation (%)*	45.8	100.0	45.9	100.0	45.9	100.0

ϕ' (deg)	30
c' (psf)	54

Average of 3 samples	Initial	Pre-shear
Water content (%)	9.1	17.4
Dry unit weight (pcf)	109.6	114.6

*Pre-shear saturation set to 100% for phase calculations





Entered by:_____

Reviewed:_____

Exhibit B

Direct Shear Test for Soils Under Drained Conditions

(ASTM D3080)

Project: Dee Lot 14 **Boring No.:** TP-1

No: 02693-001 **Sample:**

Location: Powder Mountain, UT **Depth:** 3.5'

Nominal normal stress = 1000 psf			Nominal normal stress = 2000 psf			Nominal normal stress = 4000 psf		
Lateral Displacement (in.)	Nominal Shear Stress (psf)	Normal Displacement (in.)	Lateral Displacement (in.)	Nominal Shear Stress (psf)	Normal Displacement (in.)	Lateral Displacement (in.)	Nominal Shear Stress (psf)	Normal Displacement (in.)
0.000	0	0.000	0.000	0	0.000	0.000	0	0.000
0.003	12	0.000	0.003	131	-0.001	0.000	12	0.000
0.005	24	0.000	0.005	191	-0.002	0.003	155	-0.001
0.008	36	0.000	0.007	226	-0.002	0.005	202	-0.001
0.010	60	-0.001	0.010	274	-0.003	0.007	250	-0.002
0.012	84	-0.001	0.012	322	-0.004	0.010	298	-0.002
0.015	108	-0.001	0.015	358	-0.005	0.012	333	-0.002
0.017	144	-0.001	0.017	393	-0.006	0.015	417	-0.003
0.020	168	-0.001	0.020	417	-0.006	0.017	488	-0.003
0.022	180	-0.002	0.022	465	-0.007	0.020	536	-0.004
0.024	204	-0.002	0.024	501	-0.008	0.022	607	-0.004
0.027	217	-0.003	0.027	536	-0.008	0.025	655	-0.005
0.029	229	-0.003	0.029	560	-0.009	0.027	703	-0.006
0.032	241	-0.004	0.032	584	-0.010	0.029	762	-0.006
0.034	253	-0.005	0.034	608	-0.010	0.032	798	-0.007
0.037	253	-0.006	0.036	608	-0.011	0.034	858	-0.007
0.039	265	-0.006	0.039	644	-0.012	0.037	893	-0.008
0.041	265	-0.007	0.041	679	-0.012	0.039	941	-0.009
0.044	277	-0.008	0.044	703	-0.013	0.041	989	-0.009
0.046	277	-0.008	0.046	727	-0.014	0.044	1036	-0.010
0.049	289	-0.009	0.049	739	-0.014	0.046	1096	-0.011
0.051	289	-0.010	0.051	751	-0.015	0.049	1143	-0.011
0.053	301	-0.010	0.053	751	-0.015	0.051	1191	-0.012
0.056	301	-0.011	0.056	775	-0.016	0.054	1179	-0.012
0.058	313	-0.012	0.058	799	-0.016	0.056	1191	-0.013
0.061	325	-0.012	0.061	822	-0.017	0.058	1251	-0.013
0.063	325	-0.013	0.063	834	-0.017	0.061	1298	-0.014
0.066	325	-0.013	0.065	846	-0.018	0.063	1346	-0.014
0.068	337	-0.014	0.068	858	-0.018	0.066	1394	-0.015
0.070	349	-0.014	0.070	870	-0.019	0.068	1429	-0.015
0.073	349	-0.015	0.073	894	-0.019	0.070	1465	-0.016
0.075	349	-0.015	0.075	846	-0.019	0.073	1489	-0.016
0.078	349	-0.016	0.078	894	-0.020	0.075	1465	-0.017
0.080	361	-0.016	0.080	918	-0.020	0.078	1489	-0.017
0.082	373	-0.017	0.082	918	-0.020	0.080	1536	-0.017
0.085	385	-0.017	0.085	930	-0.021	0.082	1560	-0.018
0.087	397	-0.018	0.087	930	-0.021	0.085	1608	-0.018
0.090	397	-0.018	0.090	930	-0.021	0.087	1632	-0.018
0.092	397	-0.019	0.092	942	-0.022	0.090	1656	-0.019
0.095	409	-0.019	0.094	966	-0.022	0.092	1679	-0.019
0.097	421	-0.020	0.097	966	-0.022	0.095	1656	-0.019
0.099	421	-0.020	0.099	989	-0.023	0.097	1679	-0.020
0.102	433	-0.021	0.102	989	-0.023	0.099	1703	-0.020
0.104	445	-0.021	0.104	989	-0.023	0.102	1739	-0.020
0.107	445	-0.022	0.107	1001	-0.023	0.104	1763	-0.020
0.109	445	-0.022	0.109	1013	-0.024	0.107	1775	-0.020
0.111	457	-0.022	0.111	1037	-0.024	0.109	1798	-0.021
0.114	457	-0.023	0.114	1037	-0.024	0.111	1810	-0.021
0.116	469	-0.023	0.116	1037	-0.025	0.114	1822	-0.021
0.119	469	-0.024	0.119	1061	-0.025	0.116	1858	-0.022
0.121	481	-0.024	0.121	1073	-0.025	0.119	1870	-0.022
0.123	469	-0.024	0.123	1085	-0.025	0.121	1894	-0.022
0.126	481	-0.025	0.126	1073	-0.026	0.124	1918	-0.022
0.128	481	-0.025	0.128	1085	-0.026	0.126	1941	-0.023
0.131	493	-0.025	0.131	1097	-0.026	0.128	1953	-0.023
0.133	493	-0.026	0.133	1109	-0.026	0.131	1965	-0.023
0.136	493	-0.026	0.136	1109	-0.026	0.133	1977	-0.024
0.138	493	-0.026	0.138	1109	-0.027	0.136	2001	-0.024
0.140	505	-0.027	0.140	1109	-0.027	0.138	2013	-0.024
0.143	505	-0.027	0.143	1109	-0.027	0.140	2025	-0.024
0.145	505	-0.027	0.145	1120	-0.027	0.143	2049	-0.025
0.148	505	-0.028	0.148	1132	-0.028	0.145	2049	-0.025
0.150	517	-0.028	0.150	1132	-0.028	0.148	2072	-0.025
0.153	517	-0.028	0.153	1132	-0.028	0.150	2084	-0.025
0.155	517	-0.029	0.155	1144	-0.028	0.152	2084	-0.026

Exhibit B

Direct Shear Test for Soils Under Drained Conditions

(ASTM D3080)

Project: Dee Lot 14 **Boring No.:** TP-1

No: 02693-001 **Sample:**

Location: Powder Mountain, UT **Depth:** 3.5'

Nominal normal stress = 1000 psf			Nominal normal stress = 2000 psf			Nominal normal stress = 4000 psf		
Lateral Displacement (in.)	Nominal Shear Stress (psf)	Normal Displacement (in.)	Lateral Displacement (in.)	Nominal Shear Stress (psf)	Normal Displacement (in.)	Lateral Displacement (in.)	Nominal Shear Stress (psf)	Normal Displacement (in.)
0.157	517	-0.029	0.157	1156	-0.028	0.155	2108	-0.026
0.160	517	-0.029	0.160	1156	-0.029	0.157	2108	-0.026
0.162	517	-0.030	0.162	1156	-0.029	0.160	2120	-0.026
0.165	529	-0.030	0.165	1168	-0.029	0.162	2132	-0.027
0.167	529	-0.030	0.167	1180	-0.029	0.165	2144	-0.027
0.169	529	-0.030	0.169	1180	-0.029	0.167	2156	-0.027
0.172	529	-0.031	0.172	1180	-0.030	0.169	2168	-0.027
0.174	529	-0.031	0.174	1180	-0.030	0.172	2156	-0.027
0.177	541	-0.031	0.177	1192	-0.030	0.174	2180	-0.028
0.179	541	-0.032	0.179	1204	-0.030	0.177	2180	-0.028
0.181	541	-0.032	0.182	1180	-0.030	0.179	2203	-0.028
0.184	541	-0.032	0.184	1204	-0.030	0.182	2203	-0.028
0.186	541	-0.032	0.186	1204	-0.031	0.184	2203	-0.029
0.189	541	-0.033	0.189	1204	-0.031	0.186	2227	-0.029
0.191	541	-0.033	0.191	1204	-0.031	0.189	2227	-0.029
0.194	541	-0.033	0.194	1216	-0.031	0.191	2239	-0.029
0.196	541	-0.033	0.196	1216	-0.031	0.194	2251	-0.029
0.198	541	-0.034	0.198	1228	-0.031	0.196	2251	-0.029
0.201	541	-0.034	0.201	1228	-0.032	0.198	2263	-0.030
0.203	541	-0.034	0.203	1228	-0.032	0.201	2275	-0.030
0.206	541	-0.034	0.206	1228	-0.032	0.203	2287	-0.030
0.208	541	-0.035	0.208	1228	-0.032	0.206	2299	-0.030
0.211	553	-0.035	0.210	1228	-0.032	0.208	2299	-0.030
0.213	553	-0.035	0.213	1228	-0.032	0.211	2299	-0.031
0.215	553	-0.035	0.215	1240	-0.033	0.213	2299	-0.031
0.218	553	-0.036	0.218	1240	-0.033	0.215	2299	-0.031
0.220	553	-0.036	0.220	1240	-0.033	0.218	2311	-0.031
0.223	553	-0.036	0.223	1252	-0.033	0.220	2323	-0.031
0.225	553	-0.036	0.225	1252	-0.033	0.223	2323	-0.032
0.227	565	-0.036	0.227	1252	-0.033	0.225	2334	-0.032
0.230	553	-0.037	0.230	1252	-0.033	0.227	2334	-0.032
0.232	553	-0.037	0.232	1252	-0.034	0.230	2346	-0.032
0.235	565	-0.037	0.235	1252	-0.034	0.232	2334	-0.032
0.237	553	-0.037	0.237	1252	-0.034	0.235	2346	-0.032
0.239	553	-0.038	0.240	1252	-0.034	0.237	2334	-0.033
0.242	553	-0.038	0.242	1252	-0.034	0.240	2323	-0.033
0.244	565	-0.038	0.244	1252	-0.034	0.242	2323	-0.033
0.247	553	-0.038	0.247	1252	-0.034	0.244	2311	-0.033
0.249	553	-0.038	0.249	1252	-0.035	0.247	2311	-0.033
0.252	553	-0.039	0.252	1252	-0.035	0.249	2323	-0.034
0.254	553	-0.039	0.254	1252	-0.035	0.252	2323	-0.034
0.256	565	-0.039	0.256	1252	-0.035	0.254	2323	-0.034
0.259	565	-0.039	0.259	1240	-0.035	0.256	2323	-0.034
0.261	565	-0.040	0.261	1252	-0.035	0.259	2323	-0.034
0.264	565	-0.040	0.264	1240	-0.035	0.261	2323	-0.034
0.266	577	-0.040	0.266	1240	-0.035	0.264	2323	-0.035
0.269	577	-0.040	0.268	1240	-0.036	0.266	2323	-0.035
0.271	577	-0.040	0.271	1240	-0.036	0.269	2323	-0.035
0.273	577	-0.041	0.273	1252	-0.036	0.271	2311	-0.035
0.276	589	-0.041	0.276	1240	-0.036	0.273	2299	-0.035
0.278	589	-0.041	0.278	1240	-0.036	0.276	2311	-0.036
0.281	589	-0.041	0.281	1240	-0.036	0.278	2311	-0.036
0.283	589	-0.041	0.283	1240	-0.037	0.281	2299	-0.036
0.285	589	-0.042	0.285	1240	-0.037	0.283	2299	-0.036
0.288	601	-0.042	0.288	1228	-0.037	0.285	2299	-0.036
0.290	589	-0.042	0.290	1228	-0.037	0.288	2299	-0.037
0.293	601	-0.042	0.293	1240	-0.037	0.290	2299	-0.037
0.295	601	-0.042	0.295	1240	-0.038	0.293	2299	-0.037
0.297	601	-0.042	0.298	1240	-0.038	0.295	2287	-0.037
0.300	601	-0.043	0.300	1228	-0.038	0.297	2287	-0.037
0.300	601	-0.043	0.300	1228	-0.038	0.300	2287	-0.038

Exhibit B

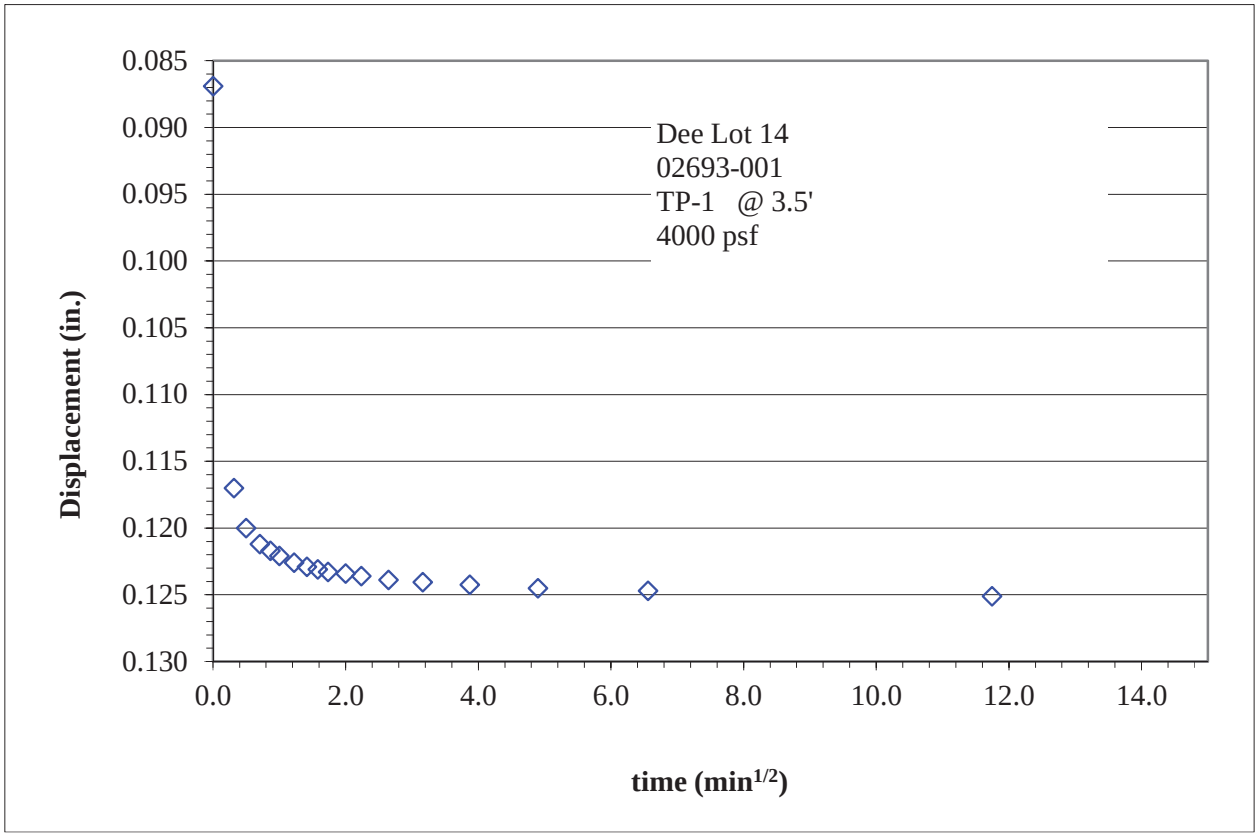
Direct Shear Test for Soils Under Drained Conditions

(ASTM D3080)

Project: Dee Lot 14 **Boring No.:** TP-1

No: 02693-001 **Sample:**

Location: Powder Mountain, UT **Depth:** 3.5'



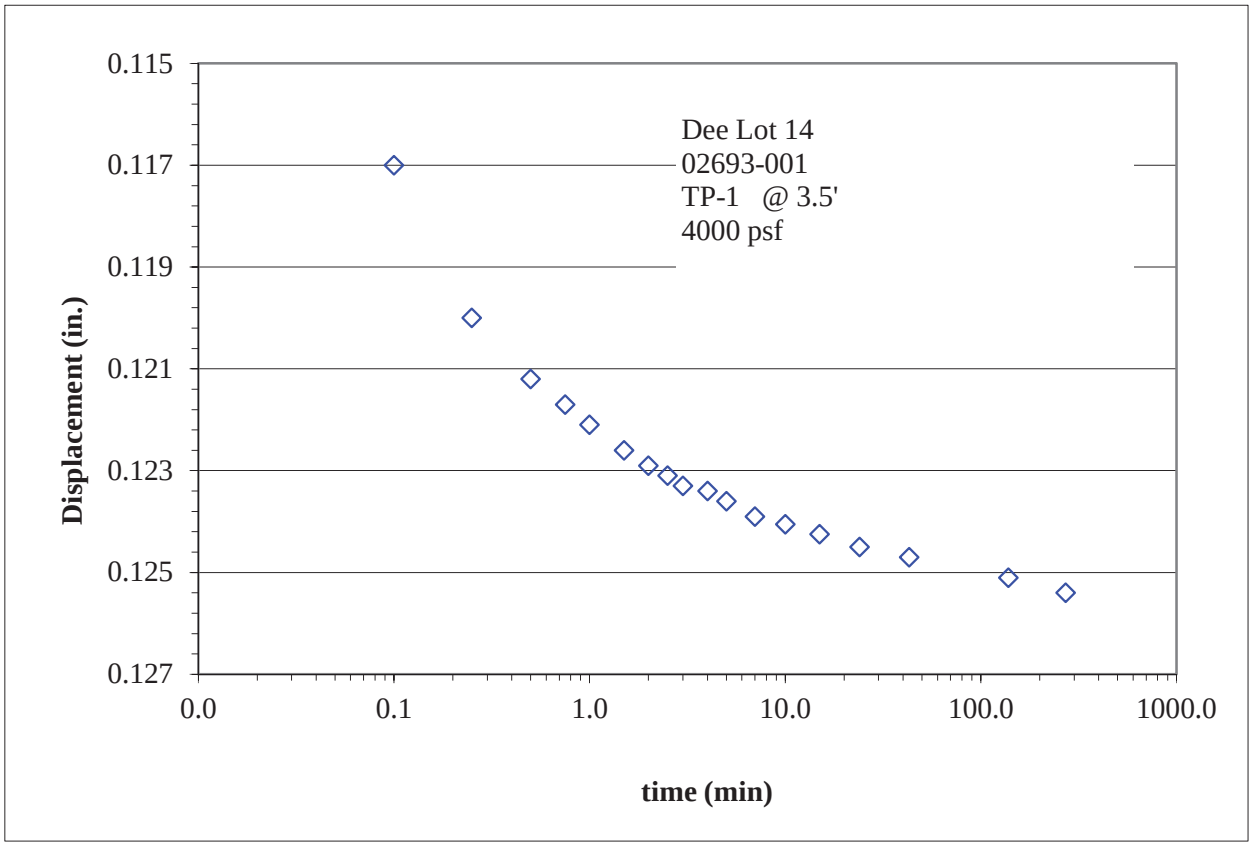


Exhibit B

APPENDIX C

Exhibit B

USGS Design Maps Summary Report

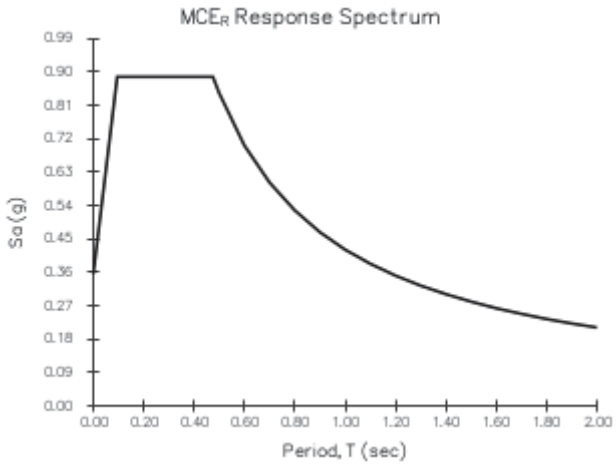
User–Specified Input

Report Title	Lot 14R Thu March 1, 2018 20:06:25 UTC
Building Code Reference Document	2012/2015 International Building Code (which utilizes USGS hazard data available in 2008)
Site Coordinates	41.36642°N, 111.76304°W
Site Soil Classification	Site Class C – “Very Dense Soil and Soft Rock”
Risk Category	I/II/III

USGS–Provided Output

S_S =	0.831 g	S_{MS} =	0.887 g	S_{DS} =	0.592 g
S_1 =	0.277 g	S_{M1} =	0.421 g	S_{D1} =	0.281 g

For information on how the SS and S1 values above have been calculated from probabilistic (risk-targeted) and deterministic ground motions in the direction of maximum horizontal response, please return to the application and select the “2009 NEHRP” building code reference document.



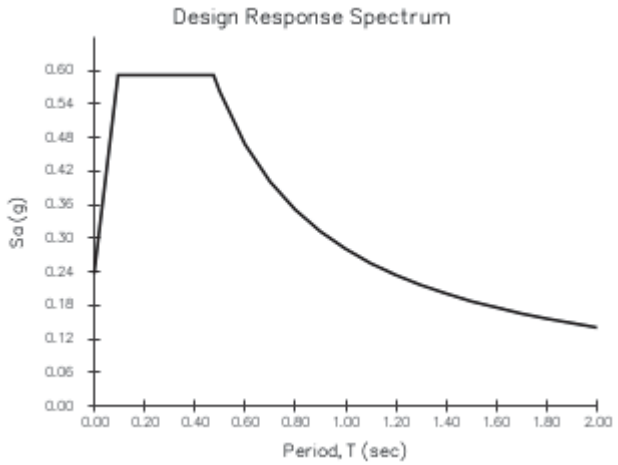


Exhibit B

USGS Design Maps Detailed Report

2012/2015 International Building Code (41.36642°N, 111.76304°W)

Site Class C – “Very Dense Soil and Soft Rock”, Risk Category I/II/III

Section 1613.3.1 — Mapped acceleration parameters

Note: Ground motion values provided below are for the direction of maximum horizontal spectral response acceleration. They have been converted from corresponding geometric mean ground motions computed by the USGS by applying factors of 1.1 (to obtain S_S) and 1.3 (to obtain S_1). Maps in the 2012/2015 International Building Code are provided for Site Class B. Adjustments for other Site Classes are made, as needed, in Section 1613.3.3.

From Figure 1613.3.1(1) [1] $S_S = 0.831$ g

From Figure 1613.3.1(2) [2] $S_1 = 0.277$ g

Section 1613.3.2 — Site class definitions

The authority having jurisdiction (not the USGS), site-specific geotechnical data, and/or the default has classified the site as Site Class C, based on the site soil properties in accordance with Section 1613.

2010 ASCE-7 Standard – Table 20.3-1
SITE CLASS DEFINITIONS

Site Class	$\bar{v}_s$	$\bar{N}$ or $\bar{N}_{ch}$	$\bar{s}_u$
A. Hard Rock	>5,000 ft/s	N/A	N/A
B. Rock	2,500 to 5,000 ft/s	N/A	N/A
C. Very dense soil and soft rock	1,200 to 2,500 ft/s	>50	>2,000 psf
D. Stiff Soil	600 to 1,200 ft/s	15 to 50	1,000 to 2,000 psf
E. Soft clay soil	<600 ft/s	<15	<1,000 psf
	Any profile with more than 10 ft of soil having the characteristics: • Plasticity index PI > 20, • Moisture content w ≥ 40%, and • Undrained shear strength $\bar{s}_u$ < 500 psf		
F. Soils requiring site response analysis in accordance with Section 21.1	See Section 20.3.1		

For SI: 1ft/s = 0.3048 m/s 1lb/ft² = 0.0479 kN/m²

Exhibit B

Section 1613.3.3 — Site coefficients and adjusted maximum considered earthquake spectral response acceleration parameters

TABLE 1613.3.3(1)
VALUES OF SITE COEFFICIENT F_a

Site Class	Mapped Spectral Response Acceleration at Short Period				
	$S_S \le 0.25$	$S_S = 0.50$	$S_S = 0.75$	$S_S = 1.00$	$S_S \ge 1.25$
A	0.8	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.2	1.2	1.1	1.0	1.0
D	1.6	1.4	1.2	1.1	1.0
E	2.5	1.7	1.2	0.9	0.9
F	See Section 11.4.7 of ASCE 7				

Note: Use straight–line interpolation for intermediate values of S_S

For Site Class = C and S_S = 0.831 g, F_a = 1.067

TABLE 1613.3.3(2)
VALUES OF SITE COEFFICIENT F_v

Site Class	Mapped Spectral Response Acceleration at 1–s Period				
	$S_1 \le 0.10$	$S_1 = 0.20$	$S_1 = 0.30$	$S_1 = 0.40$	$S_1 \ge 0.50$
A	0.8	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.7	1.6	1.5	1.4	1.3
D	2.4	2.0	1.8	1.6	1.5
E	3.5	3.2	2.8	2.4	2.4
F	See Section 11.4.7 of ASCE 7				

Note: Use straight–line interpolation for intermediate values of S_1

For Site Class = C and S_1 = 0.277 g, F_v = 1.523

Exhibit B

Equation (16-37):	$S_{MS} = F_a S_S = 1.067 \times 0.831 = 0.887$ g
Equation (16-38):	$S_{M1} = F_v S_1 = 1.523 \times 0.277 = 0.421$ g

Section 1613.3.4 — Design spectral response acceleration parameters

Equation (16-39):	$S_{DS} = \frac{2}{3} S_{MS} = \frac{2}{3} \times 0.887 = 0.592$ g
Equation (16-40):	$S_{D1} = \frac{2}{3} S_{M1} = \frac{2}{3} \times 0.421 = 0.281$ g

Exhibit B

Section 1613.3.5 — Determination of seismic design category

TABLE 1613.3.5(1)
SEISMIC DESIGN CATEGORY BASED ON SHORT-PERIOD (0.2 second) RESPONSE ACCELERATION

VALUE OF S_{DS}	RISK CATEGORY		
	I or II	III	IV
$S_{DS} < 0.167g$	A	A	A
$0.167g \le S_{DS} < 0.33g$	B	B	C
$0.33g \le S_{DS} < 0.50g$	C	C	D
$0.50g \le S_{DS}$	D	D	D

For Risk Category = I and S_{DS} = 0.592 g, Seismic Design Category = D

TABLE 1613.3.5(2)
SEISMIC DESIGN CATEGORY BASED ON 1-SECOND PERIOD RESPONSE ACCELERATION

VALUE OF S_{D1}	RISK CATEGORY		
	I or II	III	IV
$S_{D1} < 0.067g$	A	A	A
$0.067g \le S_{D1} < 0.133g$	B	B	C
$0.133g \le S_{D1} < 0.20g$	C	C	D
$0.20g \le S_{D1}$	D	D	D

For Risk Category = I and S_{D1} = 0.281 g, Seismic Design Category = D

Note: When S_1 is greater than or equal to 0.75g, the Seismic Design Category is **E** for buildings in Risk Categories I, II, and III, and **F** for those in Risk Category IV, irrespective of the above.

Seismic Design Category ≡ “the more severe design category in accordance with Table 1613.3.5(1) or 1613.3.5(2)” = D

Note: See Section 1613.3.5.1 for alternative approaches to calculating Seismic Design Category.

References

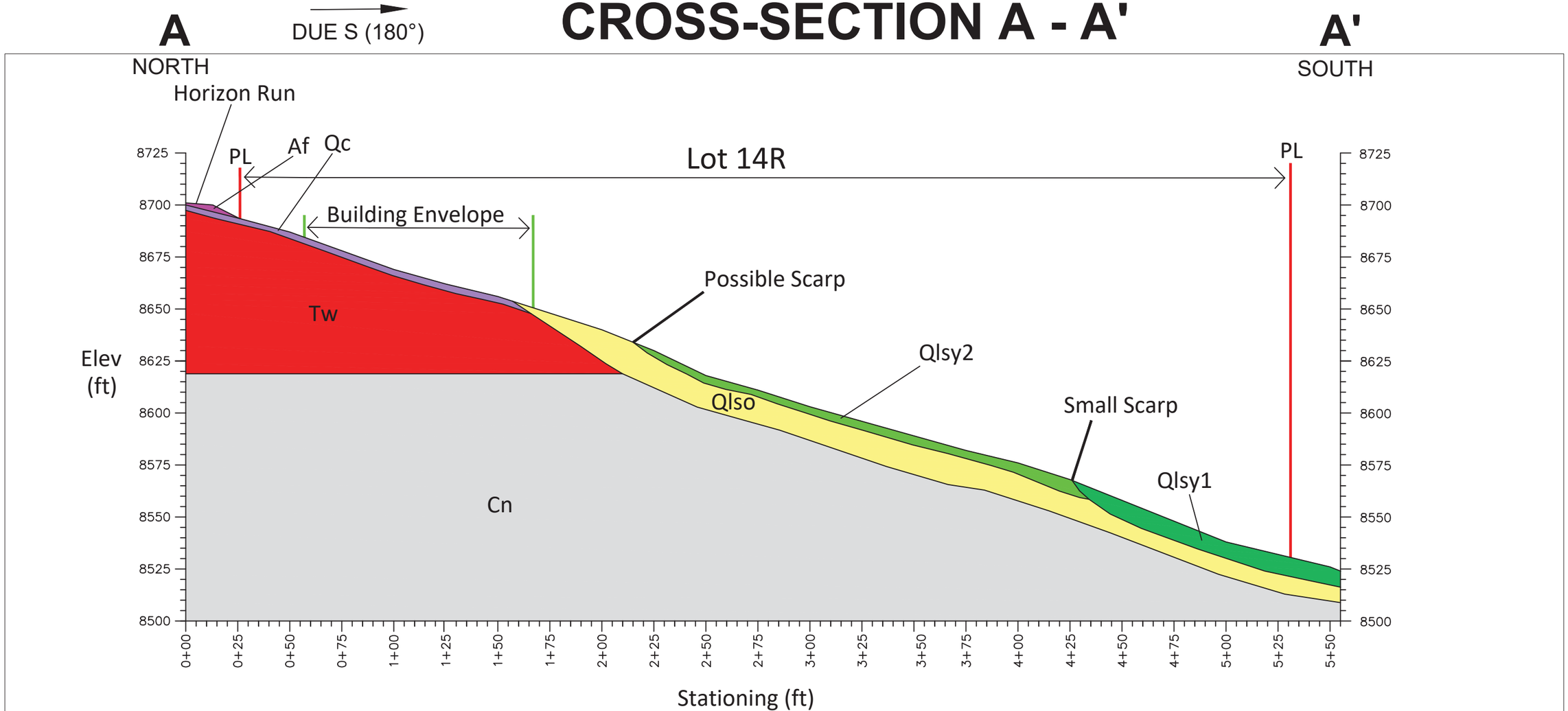
1. *Figure 1613.3.1(1)*: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/IBC-2012-Fig1613p3p1(1).pdf
2. *Figure 1613.3.1(2)*: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/IBC-2012-Fig1613p3p1(2).pdf

Exhibit B

APPENDIX D

Exhibit B

CROSS-SECTION A - A'



LEGEND

- Af = Artificial Fill
- Qc = Colluvium
- Qlsy1 = Youngest Landslide Deposits
- Tw = Wasatch Formation
- Qlsy2 = Young Landslide Deposits
- Cn = Nounan Dolomite
- Qlso = Old Landslide Deposits

NO VERTICAL EXAGGERATION

VIEW EAST

0 25 50

FEET

1" = 50' (H&V) (11" x 17" Only)

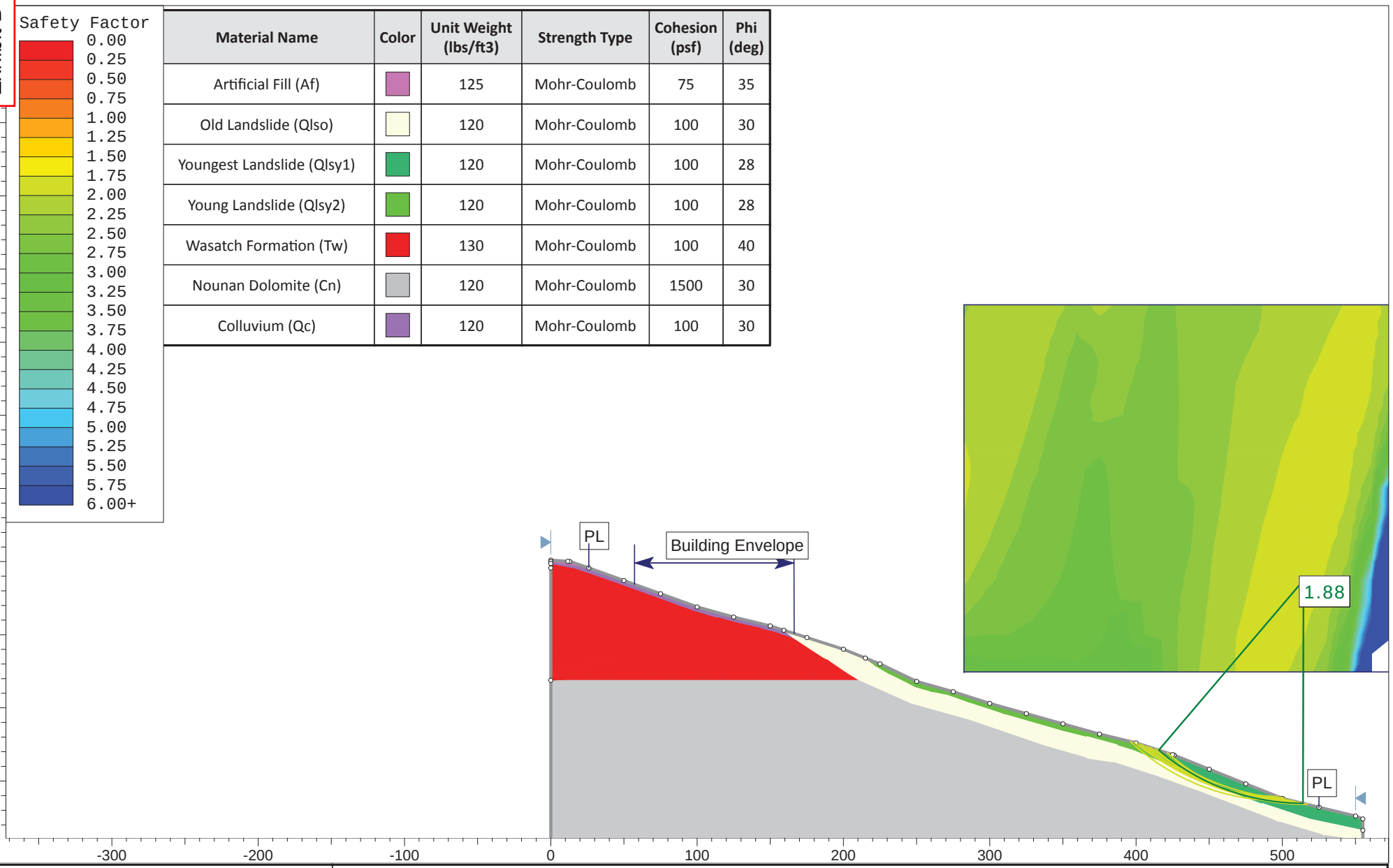
FIGURE D-1

CROSS-SECTION A - A'

GEOTECHNICAL AND GEOLOGIC HAZARDS INVESTIGATION
LOT 14R OF SUMMIT EDEN PHASE 1A
POWDER MOUNTAIN RESORT
WEBER COUNTY, UTAH

DATE: 3/05/2018
PROJECT:02693-001
SCALE: 1"=50'
IGES

Exhibit B



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)
Artificial Fill (Af)		125	Mohr-Coulomb	75	35
Old Landslide (Qlso)		120	Mohr-Coulomb	100	30
Youngest Landslide (Qlsy1)		120	Mohr-Coulomb	100	28
Young Landslide (Qlsy2)		120	Mohr-Coulomb	100	28
Wasatch Formation (Tw)		130	Mohr-Coulomb	100	40
Nounan Dolomite (Cn)		120	Mohr-Coulomb	1500	30
Colluvium (Qc)		120	Mohr-Coulomb	100	30

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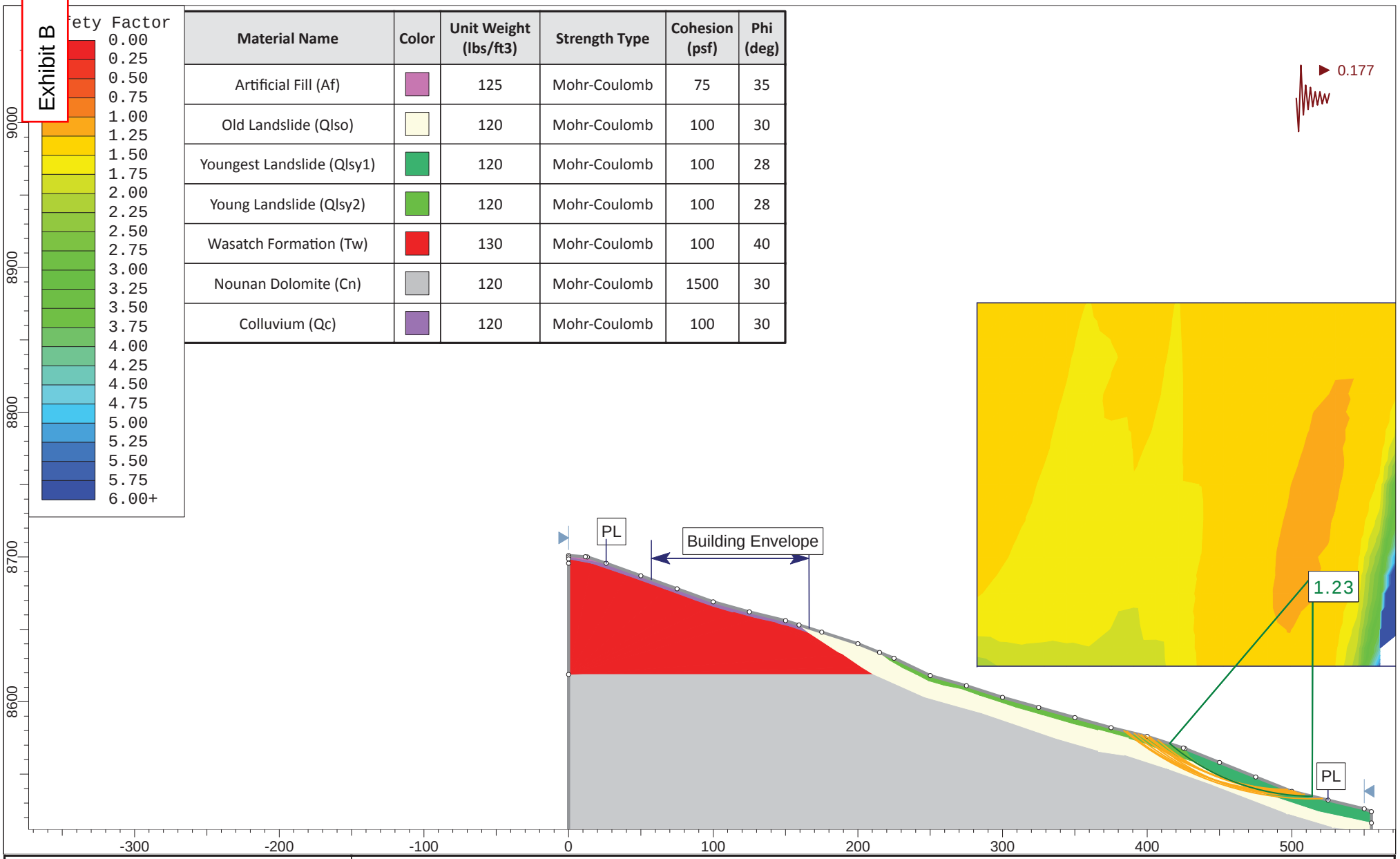
SLIDEINTERPRET 7.029

Project	Lot 14R		
Analysis Description	Slope Stability		
Drawn By	EBF	*Scale* 1:1100	*Company* IGES Inc.
Date	3/6/2018, 7:57:47 AM		*File Name* 02693-001 Dee Lot 14R.slim

Exhibit B



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SLIDEINTERPRET 7.029

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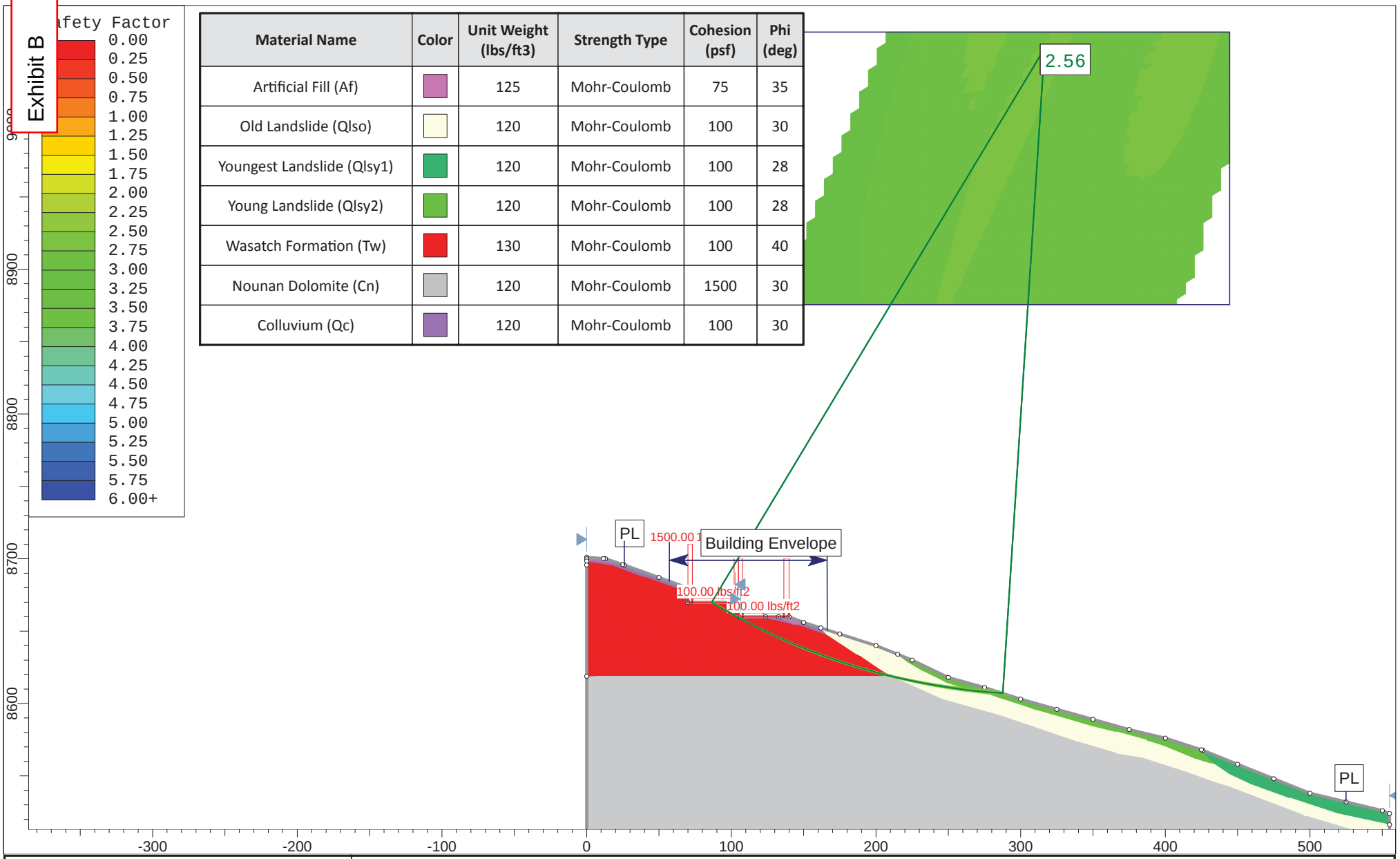
Date	3/6/2018, 7:57:47 AM		File Name 02693-001 Dee Lot 14R.slim

Exhibit B



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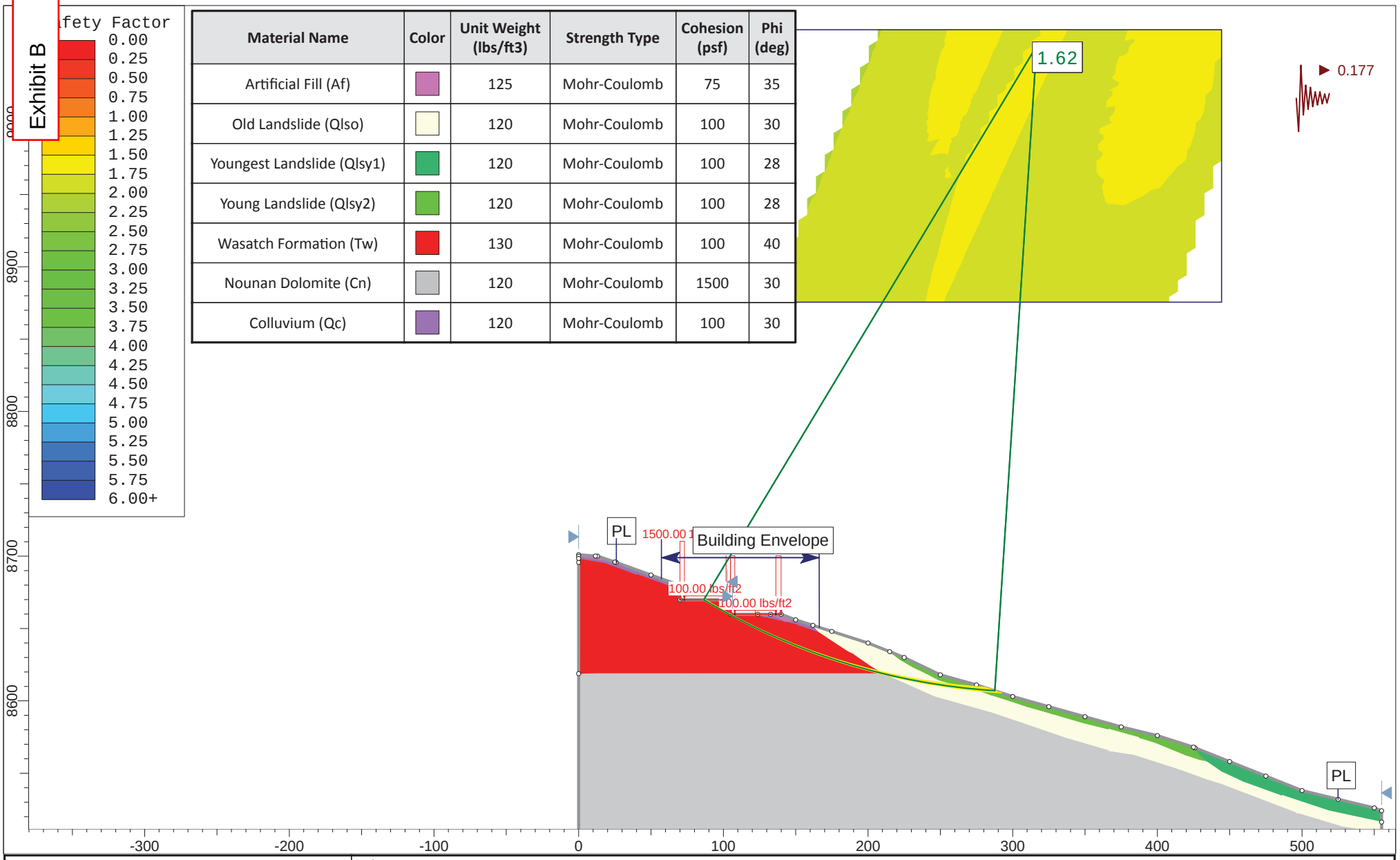
IGES®

SLIDEINTERPRET 7.029

Project	Lot 14R		
Analysis Description	Slope Stability		
Drawn By	EBF	Scale	1:1100
Company	IGES Inc.		
Date	3/6/2018, 7:57:47 AM	File Name	02693-001 Dee Lot 14R.slim

Exhibit B



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SLIDEINTERPRET 7.029

Project	Lot 14R			
Analysis Description	Slope Stability			
Drawn By	EBF	Scale	1:1100	Company: IGES Inc.
Date	3/6/2018, 7:57:47 AM			File Name: 02693-001 Dee Lot 14R.slim

Exhibit B

Dee/Lot 14R
02693-001
3/7/2018

c'	50	psf	Effective Cohesion
ϕ'	30	deg	Effective Friction Angle
Y_{sat}	135	pcf	Saturated Unit Weight of Soil
Y_w	62.4	pcf	Unit weight of water
h	3	ft	Depth to shear surface
β	15.9	deg	Slope Gradient (3.5H:1V)

FS 1.56

Input Variable
Calculated Value

This model assumes c>0 and the face of the slope is saturated to depth h

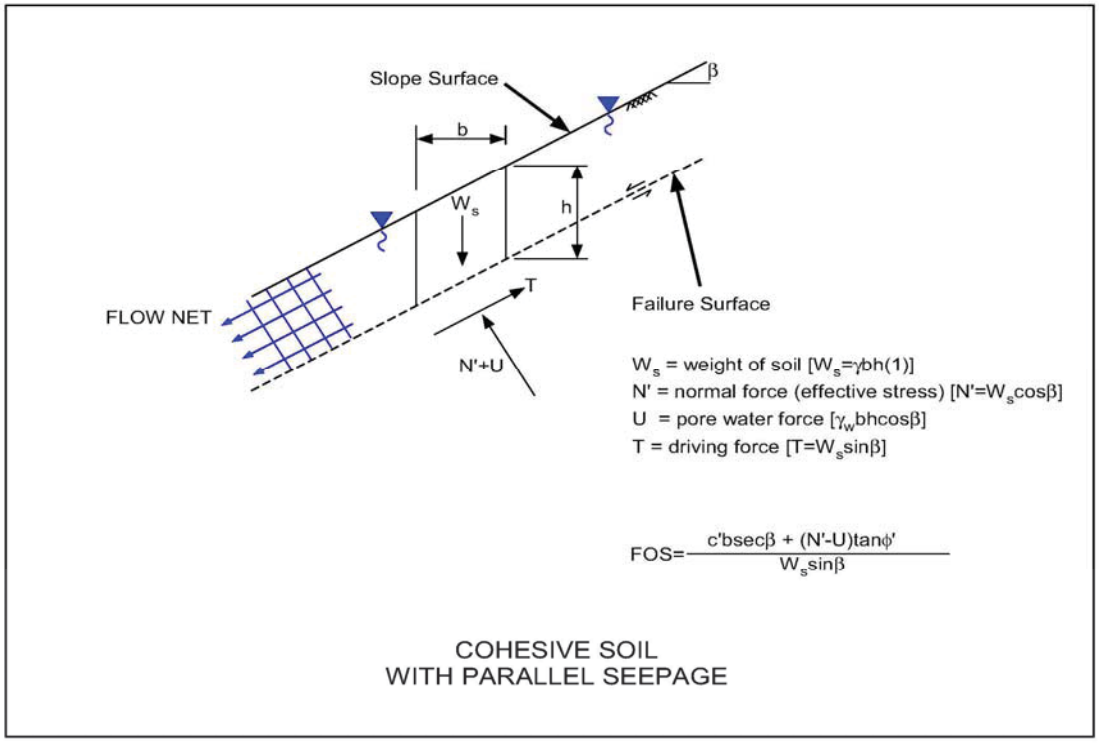

Figure D-2