# ELK RIDGE SALT SHED

## 645 WEST GOOSENEST DRIVE
## ELK RIDGE CITY, UTAH, 84651

### ARCHITECT

DAVID PROCTER ARCHITECT PLLC
5929 COUNTRY HILLS DR
SALT LAKE CITY, UTAH 84118
(801) 966-8280

### STRUCTURAL

ACUTE ENGINEERING
744 SOUTH 400 EAST
OREM, UTAH 84097
(801) 229 9020

### MECHANICAL

DESIGN BUILD

### ELECTRICAL

DESIGN BUILD

### OWNER

AQUA ENGINEERING
533 W 2600 S SUITE 275
BOUNTIFUL, UTAH 84010
(801) 299-1327

### PROJECT DATA

APPLICABLE CODE: 2018 IBC
BUILDING OCCUPANCY: S-2 (304.1)
CONSTRUCTION TYPE: V-B (601)
AREA LIMITATIONS: 13,500 SF AREA (506.2)
BUILDING AREA: 7,000SF
HEIGHT LIMITATIONS: S-2 ; 2 STORIES ( 504.4) 40 FEET (504.3)
BUILDING HEIGHT: 27 FEET

FIRE SPRINKLER: NO
SEISMIC ZONE: D 1
WIND LOAD: 105MPH EXPOSURE C
OCCUPANCY SEPARATION: NA
AREA SEPARATION: NA
FIRE RESISTANCE RATINGS: (601)
Primary Structural Frame: 0; Bearing Walls EXT & INT: 0
Non bearing walls:0; Floor Construction:0; Roof:0
PROJECT OCCUPANCY LOAD: NON OCCUPIED

### BUILDING KEY MAP

### DRAWING SYMBOLS

- ELEVATION
- WINDOW NUMBER
- BUILDING SECTION
- WALL SECTION
- BREAK LINE
- KEY NOTE
- DETAIL REF.
- WALL ELEVATION
- PARTITION TYPE
- ROOM/SPACE NUMBER
- DOOR NUMBER

### MATERIAL SYMBOLS

- METAL SECTION
- ALUMINUM SECTION
- WOOD FRAME CONTINUOUS
- WOOD FRAME DISCONTINUE.
- PLYWOOD SECTION
- STONE SECTION
- GYPSUM BOARD
- WOOD PARTICLE BD.
- WOOD FINISH
- WOOD ELEVATION
- RIGID INSULATION
- BATT INSULATION
- CARPET SECTION
- ACOUSTICAL TILE

### ABBREVIATIONS

| | |
|---|---|
| A. | AMPS. |
| ACC. | ACCORDING |
| ACOUS | ACOUSTICAL |
| A.C.F. | ABOVE CONC. FL. |
| A.F.F. | ABOVE FIN. FL. |
| ALUM. | ALUMINUM |
| @ | AT |
| BLDG. | BUILDING |
| BOT | BOTTOM |
| BRG | BEARING |
| CAB. | CABINET |
| CLG. | CEILING |
| CLR. | CLEAR |
| ℄ | CENTER LINE |
| CMU | CONC. MASONRY UNIT |
| COL. | COLUMN |
| CONC | CONCRETE |
| CONT. | CONTINUOUS |
| DBL. | DOUBLE |
| DTL. | DETAIL |
| DIA. | DIAMETER |
| DIM | DIMENSION |
| DWG. | DRAWING |
| ELEC | ELECTRICAL |
| EL./ELEV. | ELEVATION |
| EQ. | EQUAL |
| EQUIP. | EQUIPMENT |
| EXIST. | EXISTING |
| FD | FLOOR DRAIN |
| FDN. | FOUNDATION |
| FIN. | FINISH |
| FL. | FLOOR |
| FTG. | FOOTING |
| GA | GAGE |
| GALV. | GALVANIZED |
| GD | GRADE |
| GEN. | GENERAL |
| GYP. BD. | GYPSUM BOARD |
| H.C. | HANDICAPPED |
| HDW. | HARDWARE |
| HGT./HT. | HEIGHT |
| H.M. | HOLLOW METAL |
| HVAC | HEAT/VENT/AIR COND. |
| INS. | INSULATION |
| LAV. | LAVATORY |
| MAX. | MAXIMUM |
| MECH | MECHANICAL |
| MFR | MANUFACTURER |
| MIN. | MINIMUM |
| N.I.C. | NOT IN CONTRACT |
| NO | NUMBER |
| OC. | ON CENTER |
| OPG | OPENING |
| OPP. | OPPOSITE |
| PL | PLATE |
| PLY.WD. | PLYWOOD |
| PREFAB. | PREFABRICATED |
| P.V.C. | POLY VINYL CHLORIDE |
| RAD. | RADIUS |
| RD. | ROOF DRAIN |
| REF | REFERENCE |
| REINF | REINFORCE |
| REQ | REQUIRED |
| RM | ROOM |
| SCHED | SCHEDULE |
| SEC. | SECTION |
| SHT. | SHEET |
| SIM. | SIMILAR |
| SPEC | SPECIFICATION |
| STD | STANDARD |
| STL | STEEL |
| STO | STORAGE |
| STR. | STRUCTURAL |
| TELE. | TELEPHONE |
| T.O. | TOP OF |
| TYP | TYPICAL |
| VCT | VINYL COMPOSITE TILE |
| W/ | WITH |
| WD. | WOOD |
| W.W.M. | WELDED WIRE MESH |

### DRAWING INDEX


| NO. | SHEET TITLE |
|---|---|
| **ARCHITECTURAL** | |
| A001 | TITLE SHEET |
| A101 | CONSTRUCTION NOTES |
| A102 | CONSTRUCTION NOTES / SPECIFICATIONS |
| A201 | FLOOR PLAN REFLECTED CEILING PLAN |
| A301 | EXTERIOR ELEVATIONS |
| A401 | BUILDING SECTIONS |
| A402 | WALL SECTIONS |
| A601 | DETAILS |
| **STRUCTURAL** | |
| SN1 | STRUCTURAL NOTES |
| S0.0 | FOOTING AND FIUNDATION PLAN |
| S1.1 | MAIN FLOOR SHEAR WALL PLAN |
| S3.0 | ROOF FRAMING PLAN |
| SD1 | STRUCTURAN DETAILS |
| **MECHANICAL** | |
| **ELECTRICAL** | |
| **CIVIL** | |
| G-1 | TITLE SHEET / DRAWING INDEX |
| G-2 | LEGENDS, SYMBOLS, & ABBREVIATIONS |
| G-3 | GENERAL NOTES |
| C-1 | SITE UTILITIES AND GRADING PLAN |
| CD-1 | CIVIL DETAILS |
| CD-2 | CIVIL DETAILS |



David Procter ARCHITECTS PLLC
5929 Country Hills Dr
Salt Lake City, UT, 84118
(801) 966-8280


JOB NO.

STATE OF UTAH
DAVID H. PROCTER
No. 4243 ARCHITECT


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Elk Ridge, Utah 84651

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CONTENTS

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SHEET NO.
A001

## GENERAL NOTES

### FINISH NOTES: GENERAL

1. REVIEW GENERAL NOTES BEFORE COMMENCING WORK.

2. REVIEW FINISH PLAN BEFORE COMMENCING WORK.

3. CONTRACTOR SHALL PROPERLY PREPARE SURFACES PER FINISH MANUFACTURER'S SPECIFICATIONS PRIOR TO APPLICATION OF FINISH.

4. ENSURE SURFACES TO RECEIVE FINISHES ARE CLEAN, TRUE AND FREE OF IRREGULARITIES – DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED. STARTING WORK SHALL INDICATE APPLICATOR'S ACCEPTANCE OF SUBSTRATE.

5. REPAIR AND PREPARE EXISTING SURFACES AS REQUIRED FOR APPLICATION OF FINISHES.

6. BUILDERS HARDWARE SHALL MATCH EXISTING PUBLIC WORKS BUILDING HARDWARE.

7. CONTRACTOR SHALL SUBMIT SAMPLES FOR ARCHITECT'S REVIEW OF FINISH MATERIALS. CONSULT ARCHITECT'S SPECIFICATIONS FOR SUBMITTAL REQUIREMENTS. PLACE FULL ORDERS ONLY UPON RECEIPT OF ARCHITECT'S WRITTEN ACCEPTANCE OF SUBMITTED SAMPLES. ALLOW TIME FOR SUBMITTED REVIEW AND RESUBMITTALS AS REQUIRED.

8. THE CONTRACTOR/BIDDER SHALL VISIT AND BECOME FAMILIAR & VERIFY EXISTING CONDITIONS PRIOR SUBMISSION OF BID.

9. CONTRACTOR SHALL PROVIDE AND MAINTAIN PROTECTION FOR PERSONS, ADJACENT AREA, FINISHES, FIXTURES, FURNISHINGS, FURNITURE AND EQUIPMENT DURING DEMOLITION/CONSTRUCTION.

### CONSTRUCTION NOTES

1. REVIEW GENERAL NOTES BEFORE COMMENCING WORK.

2. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN. PARTITION LOCATIONS, DIMENSIONS AND TYPES, DOOR AND WINDOW LOCATIONS SHALL BE AS SHOWN ON CONSTRUCTION PLAN. IN CASE OF CONFLICT, NOTIFY ARCHITECT FOR WRITTEN CLARIFICATION PRIOR TO PROCEEDING WITH CONSTRUCTION. CONSTRUCTION PLAN BY ARCHITECT SUPERSEDES OTHER PLANS.

3. PARTITIONS ARE DIMENSIONED FROM FINISH FACE TO FINISH FACE, UNLESS OTHERWISE NOTED. DIMENSIONS MARKED "CLEAR" SHALL BE MAINTAINED AND SHALL ALLOW FOR THICKNESS OF FINISHES INCLUDING CARPET, CERAMIC TILE, VCT, ETC. CONTRACTOR SHALL NOT ADJUST DIMENSIONS WITHOUT WRITTEN INSTRUCTIONS FROM THE ARCHITECT.

4. DIMENSIONS MARKED "CLEAR" ARE TO BE WITHIN 1/16" ALONG FULL HEIGHT AND FULL WIDTH OF WALLS, DIMENSIONS ARE AS FOLLOWS, UNLESS NOTED OTHERWISE:

A. TO FINISHED FACE OF GYPSUM BOARD
B. TO INSIDE FACE OF JAMB AT DOORS AND OTHER OPENINGS
C. TO TOP OF FINISHED FLOORS
D. TO BOTTOM OF FINISHED CEILINGS

5. WHERE A WALL IS SHOWN IN ALIGNMENT WITH MORE THAN ONE COLUMN OR CORE ELEMENT WHICH ARE NOT ALIGNED, THE CONTRACTOR SHALL LAYOUT PARTITIONS ALONG THE ENTIRE LENGTH ALIGNING WITH THE FURTHEST PROJECTION. UNLESS OTHERWISE NOTED OTHER SURFACES ALONG THE ALIGNMENT SHALL BE FURRED TO THIS LINE AND ARCHITECT NOTIFIED.

6. PARTITIONS AT BUILDING PERIMETER SHALL BE CENTERED ON CENTER LINE OF COLUMN OR WINDOW MULLION, UNLESS OTHERWISE NOTED.

7. BASE BUILDING GRID LINES ARE SHOWN FOR DIMENSIONING, VERIFY EXACT LOCATIONS IN FIELD.

8. CONTRACTOR SHALL LAYOUT PARTITIONS FOR ARCHITECT TO REVIEW FOR DESIGN INTENT. DO NOT PROCEED WITH INSTALLATION OF STUDS WITHOUT THIS REVIEW APPROVAL. CONTRACTOR SHALL COORDINATE AND VERIFY CONDITIONS TO ENSURE PROPER FIT. REVIEW FOR DESIGN INTENT DOES NOT RELEASE CONTRACTOR FROM THE RESPONSIBILITY TO MAINTAIN CRITICAL DIMENSIONS AND CLEARANCES.

9. DIMENSIONS SHOWN AS F.V. SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD BY LAYING OUT THE PARTITIONS. CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY DISCREPANCY IN DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK IN THAT AREA.

10. DRYWALL FINISHING: COMPLY WITH MANUFACTURER'S PRINTED INSTRUCTIONS AND SPECIFICATIONS, EXCEPTION: COMPLY WITH MORE STRINGENT REQUIREMENTS OF GYPSUM ASSOCIATION GA-216 RECOMMENDED SPECIFICATION FOR THE APPLICATION AND FINISHING OF GYPSUM BOARD.

11. EXPOSED GYPSUM BOARD EDGES SHALL HAVE METAL TRIM. PROVIDE CORNER BEADS ALONG FULL LENGTH OF OUTSIDE CORNERS AND J BEADS ALONG ENDS OF GYPSUM BOARD, UNLESS OTHERWISE SPECIFICALLY NOTED. TAPE, SPACKLE AND SAND JOINTS. PARTITIONS SHALL HAVE A SMOOTH FINISH CONDITION READY FOR PAINT AND FINISH MATERIAL APPLICATION, UNLESS OTHERWISE NOTED.

## GENERAL NOTES

### GENERAL NOTES

1. WORK SHALL CONFORM TO THE CONTRACT DOCUMENTS WHICH INCLUDE THE OWNER/CONTRACTOR AGREEMENT, THE AIA A201 GENERAL CONDITIONS FOR THE THE PERFORMANCE OF THE CONTRACT, AND ANY ADDITIONAL DRAWINGS, AND ALL ADDENDA AND MODIFICATIONS ISSUED BY THE ARCHITECT. PAYMENT REQUEST SHALL BE SUBMITTED ON AIA PAY REQUEST FORM WITH ATTACHED SCHEDULES OF VALUES.

2. THESE NOTES APPLY TO THE CONTRACT DOCUMENTS.

3. THE CONTRACTOR SHALL REVIEW DOCUMENTS AND VERIFY DIMENSIONS AND FIELD CONDITIONS. ANY CONFLICTS/OMISSIONS OR DISCREPANCIES SHALL BE REPORTED IN WRITING THREE (3) BUSINESS DAYS BEFORE RETURN OF BID. THE GENERAL CONTRACTOR WARRANTS, BY TENDERING HIS BID THAT WORK IS BUILDABLE AS SHOWN.

4. IF DOCUMENTS ARE AT VARIANCE WITH ONE ANOTHER ON A PARTICULAR ITEM OR ITEMS, CONTRACTOR SHALL BASE HIS PROPOSAL ON THE BETTER QUALITY OR MORE EXPENSIVE OF THE CONDITIONS. ITEMS OR EQUIPMENT SPECIFIED UNDER ONE TRADE SHALL BE BINDING AS IF SPECIFIED UNDER ALL APPLICABLE TRADES.

5. DRAWINGS OF BUILDING ARE BASED ON LIMITED FIELD OBSERVATION BY THE ARCHITECT. ACTUAL CONDITIONS MAY DIFFER FROM THOSE SHOWN.

6. THE CONTRACTOR SHALL INCLUDE IN HIS BID AND SHALL ARRANGE FOR HOISTING, CARTING.

7. THE CONTRACTOR SHALL FILE THE NECESSARY PLANS WITH THE BUILDING DEPT. AND COMPLY WITH ALL REGULATIONS REQUIRED TO SECURE THE NECESSARY MAIN BUILDING PERMIT.
THE CONTRACTOR SHALL PICK-UP THE MAIN BUILDING PERMIT. THE CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS, INSPECTIONS, TESTS, & APPROVALS FOR ALL TRADES AND SHALL BEAR THE COSTS ASSOCIATED WITH SAME.

8. THE CONTRACTOR SHALL ARRANGE FOR INSPECTIONS NECESSARY TO OBTAIN A CERTIFICATE OF OCCUPANCY.

9. WORK SHALL CONFORM TO LOCAL BUILDING CODES AND ORDINANCES AND OTHER AGENCIES HAVING JURISDICTION. THE RULES AND REGULATIONS OF OSHA SHALL BE ADHERED TO FOR THIS PROJECT.

10. THE CONTRACTOR SHALL MAINTAIN FOR THE ENTIRE LENGTH OF HIS CONTRACT EXITS, EXIT LIGHTING, FIRE PROTECTIVE DEVICES AND ALARMS TO CONFORM TO LOCAL BUILDING CODE REQUIREMENTS.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING WORK DURING CONSTRUCTION AGAINST DAMAGE, BREAKAGE, COLLAPSE, DISTORTION, AND/OR MISALIGNMENT IN ACCORDANCE WITH APPLICABLE CODES, STANDARDS, AND GOOD PRACTICE.

12. THE CONTRACTOR SHALL VERIFY THAT DRAWINGS ARE THE LATEST ISSUE PRIOR TO COMMENCING CONSTRUCTION.

13. IN CASE OF CONFLICT BETWEEN ARCHITECT'S AND ENGINEER'S DRAWINGS IN LOCATION OF MATERIALS/EQUIPMENT, THE ARCHITECTURAL DRAWINGS OR MOST STRINGENT SHALL GOVERN.

14. THE CONTRACTOR SHALL NOT PROCEED WITH WORK FOR WHICH HE EXPECTS ADDITIONAL COMPENSATION BEYOND THE CONTRACT AMOUNT WITHOUT WRITTEN AUTHORIZATION FROM THE ARCHITECT. FAILURE TO OBTAIN SUCH AUTHORIZATION SHALL INVALIDATE A CLAIM FOR EXTRA COMPENSATION.

15. THE CONTRACTOR SHALL REVIEW AND COORDINATE THE SCHEDULING OF CONSTRUCTION AND SHALL SUBMIT TO THE ARCHITECT A SCHEDULE OF WORK WITHIN TEN DAYS AFTER AWARD OF CONTRACT FOR CONSTRUCTION. THE SCHEDULE SHALL INTEGRATE "WORK BY OTHERS" AND SHALL BE REISSUED TO THE ARCHITECT UPON MODIFICATION. SCHEDULE SHALL INDICATE THE PHASE DURING WHICH WORK BY OTHERS SHALL BE PERFORMED AND SHALL ALLOW SUFFICIENT TIME FOR THE WORK TO BE DONE EFFICIENTLY ON A NON-OVERTIME STATUS.

16. WORK SHALL BE PERFORMED DURING REGULAR BUSINESS HOURS WHENEVER POSSIBLE.

17. THE CONTRACTOR SHALL APPLY, INSTALL, CONNECT, ERECT, CLEAN, AND/OR CONDITION MANUFACTURED ARTICLES, MATERIALS, AND/OR EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS. IN CASE OF CONFLICT BETWEEN MANUFACTURER'S INSTRUCTIONS AND THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL OBTAIN WRITTEN CLARIFICATION FROM THE ARCHITECT BEFORE PROCEEDING.

18. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, SAFETY TECHNIQUES, SEQUENCES AND PROCEDURES, AND FOR THE COORDINATION OF WORK AND FOR THE WORK PERFORMED BY HIS SUBCONTRACTORS.

19. THE CONTRACTOR SHALL COORDINATE AND SCHEDULE WORK BY OTHERS FURNISHED-AND/OR -INSTALLED-OWNER-PROVIDED" ITEMS. CONTRACTOR SHALL COORDINATE EXACT LOCATIONS AND SHALL DO THE CUTTING, FITTING, AND PATCHING THAT MAY BE REQUIRED TO MAKE THE PARTS OF THE WORK WHICH WILL RECEIVE THE WORK OF OTHERS

## GENERAL NOTES

### GENERAL NOTES CONT.

20. THE CONTRACTOR SHALL, UPON AWARD OF THE CONTRACT FOR CONSTRUCTION, DETERMINE THE DELIVERY SCHEDULE OF MATERIALS NEEDED FOR THE COMPLETION OF THE WORK. CONTRACTOR SHALL PROCURE, DELIVER, AND STORE MATERIALS AND LABOR IN SUFFICIENT QUANTITY AND ON A TIMELY BASIS SO AS TO NOT IMPEDE THE COMPLETION OF THE WORK. CONTRACTOR SHALL SUBMIT CONFIRMATIONS WITH DELIVERY DATES FOR ORDERS OF MATERIALS AND EQUIPMENT AND FOR LONG LEAD ITEMS. IF THE DELIVERY TIME OF ANY PRODUCT IMPEDES THE CONSTRUCTION SCHEDULE, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT WITHIN TEN (10) WORKING DAYS OF THE AWARD OF THE CONTRACT FOR CONSTRUCTION. CONTRACTOR SHALL PROVIDE COMPLETE SCHEDULE OF WORK WITHIN 5 DAYS AFTER NOTICE TO PROCEED.

21. REQUESTS FOR SUBSTITUTIONS OF SPECIFIED ITEMS SHALL BE SUBMITTED IN WRITING WITHIN TEN (10) WORKING DAYS OF THE AWARD OF THE CONTRACT FOR CONSTRUCTION TO THE ARCHITECT AND WILL BE CONSIDERED ONLY IF THEY PROVIDE BETTER SERVICES, HAVE A MORE ADVANTAGEOUS DELIVERY DATE, OR HAS A LOWER PRICE PROVIDING A CREDIT TO THE OWNER AND WILL NOT SACRIFICE QUALITY, APPEARANCE OR FUNCTION. UNDER NO CIRCUMSTANCES WILL THE ARCHITECT BE REQUIRED TO PROVE THAT A PRODUCT PROPOSED FOR SUBSTITUTION IS OR IS NOT OF EQUAL QUALITY TO THE SPECIFIED PRODUCT.

22. THE CONTRACTOR SHALL PROVIDE A FULL-TIME SUPERINTENDENT OR REPRESENTATIVE AT THE JOB SITE WHO SHALL SUPERVISE AND DIRECT THE WORK ACCORDING TO THE SPECIFIED QUALITY STANDARDS.

23. SHOP DRAWINGS/SUBMITTALS ARE REQUIRED FOR BUT NOT LIMITED TO THE FOLLOWING: STRUCTURAL/MISCELLANEOUS STEEL, HARDWARE, PLATE TRUSSES, REINFORCING STEEL METAL DOORS, AND EQUIPMENT. SHOP DRAWINGS SHOULD INCLUDE, DETAILED FABRICATION AND ERECTION DRAWINGS, SETTING DRAWINGS, AND MATERIAL SCHEDULES. FABRICATION SHALL BEGIN ONLY AFTER ARCHITECT'S REVIEW AND APPROVAL OF SHOP DRAWINGS.

24. THE CONTRACTOR SHALL REVIEW REQUIRED SHOP DRAWINGS/SUBMITTALS PRIOR TO SUBMISSION TO THE ARCHITECT AND SHALL INDICATE ON THE SHOP DRAWING/SUBMITTAL THAT SUCH REVIEW HAS TAKEN PLACE. SHOP DRAWINGS SHALL BE SUBMITTED WITH (3) PRINTS OF EACH SHEET. EACH SUBMITTAL SHALL CONTAIN THREE (3) COPIES OF PRODUCT DATA OR SAMPLES. REVIEW OF SHOP DRAWINGS/SUBMITTALS BY ARCHITECT IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION INCLUDED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRELATING AND CONFIRMING DIMENSIONS AND QUANTITIES, CHOOSING THE FABRICATION PROCESSES AND CONSTRUCTION TECHNIQUES, COORDINATING RELATED TRADES, AND PERFORMING THE WORK IN A SAFE AND SATISFACTORY MANNER.
THE ARCHITECT WILL NOT REVIEW SHOP DRAWINGS/SUBMITTALS THAT DO NOT CONTAIN A SIGNED CONTRACTOR REVIEW STATEMENT.

25. SUBSTITUTIONS, REVISIONS, OR CHANGES MUST BE SUBMITTED TO ARCHITECT FOR REVIEW AND APPROVAL (IN CONFORMANCE WITH SPECIFIED PROCEDURES) PRIOR TO PURCHASE, FABRICATION, OR INSTALLATION.

26. IMMEDIATELY PRIOR TO THE OWNER'S OCCUPANCY OF ANY PHASE, THE CONTRACTOR SHALL CLEAN SURFACES OF DUST, DEBRIS, LOOSE CONSTRUCTION MATERIAL AND EQUIPMENT AND SHALL LEAVE FLOORS VACUUMED AND CLEAN. REMAINING CONSTRUCTION MATERIAL AN EQUIPMENT, IF ANY, SHALL BE MOVED AND TEMPORARILY SECURED IN AN AREA DIRECTED BY THE OWNER.

27. THE CONTRACTOR SHALL CLEAN STRUCTURE AND CONSTURCTION SITE IMMEDIATELY PRIOR TO OWNER OCCUPANCY.

28. SUBMIT MANUFACTURER'S LITERATURE (OPERATIONAL AND MAINTENANCE) TO ARCHITECT UPON COMPLETION AND PRIOR TO CLOSE OUT FOR EACH APPLIANCE OR PIECE OF EQUIPMENT. SUBMIT MANUFACTURER'S WRITTEN WARRANTY FOR EACH.

29. DO NOT SCALE DRAWINGS. CLARIFICATION OF INFORMATION REQUIRED BY THE CONTRACTOR SHALL BE FURNISHED, UPON WRITTEN REQUEST, BY THE ARCHITECT.

30. "TYPICAL" OR "TYP" SHALL MEAN THAT THE CONDITION IS REPRESENTATIVE FOR SIMILAR CONDITIONS THROUGHOUT, UNLESS OTHERWISE NOTED. DETAILS ARE USUALLY KEYED AND NOTED "TYP" WHEN THEY FIRST OCCUR.

31. "SIMILAR" OR "SIM" MEANS COMPARABLE CHARACTERISTICS FOR THE CONDITIONS NOTED. VERIFY DIMENSIONS AND ORIENTATION ON PLANS AND ELEVATIONS.

32. DIMENSIONS AND NOTES FOR A GIVEN CONDITION ARE TYPICAL FOR SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.

33. PAY REQUEST SHALL BE SUBMITTED ON AIA (TYPE) APPLICATION FOR PAYMENT AND BE ACCOMPANIED WITH THE SCHEDULES OF VALUES

## GENERAL NOTES

### GENERAL NOTES CONT.


David Procter
ARCHITECTS PLLC
5820 Country Hills Dr
Salt Lake City, UT, 84118
(801) 966-8280


JOB NO.


STATE OF UTAH
DAVID F. PROCTER
No. 424357-0301
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645 West Goosenest Dr
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CONTENTS

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## DIVISION 0 – CONDITIONS OF CONTRACT

Standard From of Agreement Between Owner and Contractor (AIA Document)

General Conditions of the Contract for Construction (AIA Document A201 2007) Supplementary Conditions

## SECTION 03300 CAST IN PLACE CONCRETE

A. Concrete Materials, quality, and construction shall comply with current IBC; ACI 318-05 refer to structural documents for additional requirements.

B. Work included in this Section: Cast-in Place Architectural concrete including forms facings, reinforcement, accessories, concrete materials, concrete mix design, placement, and finishes.

C. Quality assurance: ASTM C 94/C94M ACI303.1 specification for Cast-in Place Architectural Concrete.

D. Concrete materials: Cement shall conform to ASTM C150, Type II, Portland Cement; Hardrock aggregates shall conform to ASTM C33; Light weight aggregate shall conform to ASTM C330; Water shall be potable; Air Entrainment shall conform conform to ASTM C260; Flyashshall conform to ASTM C618; Calcium Chloride shall NOT be used.

E. Flat work exposed toweather shall have 6% +-1% Air entrainment. Flat work shall be treated with ASTM approved curing and sealingcompounds. All exposed edges or corners of flat work shall be chamfered 3/4 inches.

F. Concrete slump shall be 4 inches maximum UNO and properly viberalyed during placement.

G. Interior slabs on grade shall be 6" thick UNO with bearing on 6" of free draining gravel, minimum UNO.

H. Reinforcing steel details, bolstering and supports shall comply with CRSI manual of standard practice, ACI 315 (or SP-66) Detailing Manual.

I. Reinforcing steel shall be free of loose, flaky rust, scale, grease, oil, dirt or other materials that might affect or impede bonding.

J. Epoxy-coated Reinforcing ASTM A 775/A 775M with less than 2 percent damaged coating in ea 12-inches.

K. Finish:

1. Interior floor slab: Steel Trowel Finish after applying float finish until surface is free of trowel marks and has has uniform texture and appearancefinish and measure surface so gap at any point between surface and 10-foot straight edge resting2high spots and placed anywhere on the surface does not exceed 1/8 inch.

2. Exterior concrete pavement: Broom Finish after applying float finish.

L. Penetrating Sealer: Apply Pentreat 244-100 water repellant penetrating sealer to interior floors and walls per manufactures recommendation. Coordinate curing methods so there is no incompatibility with application of penetrating sealer.

## SECTION 05500 METAL FABRICATION

A. Work Included in this Section: Miscellaneous Steel Framing and supports, Steel weld plates and angles, Loose steel lintels, Ballards.

B. Ferrous Metals: Steel Plates, Shapes & Bars: ASTM A 36/a 36M
Steel Tubing: ASTM A500, Clod Formed steel tubing.
Steel Pipe: ASTM A 53/A 53M Standard weight UNO
Slotted Channel Framing: Cold formed metal channels comply with MFMA-3

C. Lintels in exterior walls: Galvanized

D. Shelf Angles in exterior walls: Galvanized

E. Metal Ballards: Galvanized

F. Exterior miscellaneous steel trim: Galvanized

G. Steel and Iron Finishes
- Hot-Dip Galvanized comply with ASTM A 123/A 123M or ASTM A 153/A 153M as applicable

## SECTION 06100 ROUGH CARPENTRY

A. Work Included in this Section: lumber for blocking, nailers, and furring; and plywood-type structural-use panels; as shown on drawings and specified below.

B. Lumber: Per American Softwood Lumber Standard DOC PS 20, surfaced four sides (S4S), maximum 19 percent moisture content (S-Dry or KD-19); any acceptable species listed in inspection agency manuals. Construction grade: Construction, Stud, Standard, or No. 3.

C. Plywood-type wood-based panels: per Performance Standard for Wood-based Structural-Use Panels, DOC PS 2; Including all-veneer, mat-formed, or composite panels. Panels used for mounting electrical or telephone equipment: APA C-D Plugged, fire-retardant-treated. Other panels: APA Rated Sheathing type.

D. Provide grounds , furring, nailers, and blocking as required to support finish materials, fixtures, specialty items, and trim, whether or not specifically shown on drawings.

E. Fabricate work straight and true, free from warpage and other defects. Joints, covers, copes, and miters shall be accurately and neatly cut, machined, fitted, and smoothly filed. Carry out welding per American Welding Society approved methods and procedures.

F. Grout: factory-packaged, non-shrink, per ASTM C 1107.

## SECTION 07411 METAL ROOF PANELS

A Work Included in this Section: Metal roof Panels, as shown on drawings and specified below.

B Hydrostatic-Head Resistance: No water penetration when tested according to ASTM E2140.

C Wind-Uplift Resistance: UL 580 for wind uplift resistance class UL90

D QUALITY ASSURANCE: Installers trained and approved by Manufacture.

E WARRANTY: ASSURANCE: Installers trained and approved by Manufacture.
1. Special Warranty Manufacturer's standard form to repair or replace that fail in materials or workmanship for period of 10years from substantial completion.
2. Special Warranty Panel Finishes, Manufacturer's standard form to repair or replace that fall in materials or workmanship for period of 20years from substantial completion.

F Panel Materials:
1. Zinc-Coated steel sheets ASTM A653/A 653M G90
2. Surface: Smooth, Flat Finish
3. Exposed Coil-Coated Finish: Siliconized Polyester: Epoxy primer 0.2mil, and silicone-modified, ploy-enamel topcoatSurface: Smooth, Flat Finish 0.8 mil

G UNDERLAYMENT MATERIALS
1. Self-Adhering, High-Temp Sheet 30 to 40 mils, stable after testing at 240 degF continuous under all mtl roofing with min 6" shingled overlap
2. Slip Sheet: Manufactures recommendation, apply between Self-Adhering sheet and metal roo

H Fasteners and clips/cleats: stainless steel typical.

I Standing-Seam Roofing with double nailed cleats at 12 o.c.

J Submittals under this Section shall In installation instructions, and shop drawings.

## SECTION 07900 JOINT SEALANTS

A Work included in this Section: joint sealants, as shown on drawings and specified below.

B Sealant at joints in typical vertical surfaces: one-part, non-sag, paintable butyl or acrylic latex calking compound. Acceptable butyl products include Pecora BC-158, PTI 757, Sonneborn Multi-Purpose Sealant, Tremco Butyl Sealant. Acceptable latex products include Pecora AC-20, Sonneborn Sonolac, Tremco Acrylic Latex 834.

D Sealant at joints in horizontal surf aces: one or two-part pourable self-levelling polyurethane, per ASTM C 920, Type M or S, Grade P, Class 25, Use T. Acceptable products include Mameco Vulkem 45, 245, or 255; W. R. Meadows Pourthane; Pecora NR-200 and NR-201 Urexpan; PRC Permapol RC-270SL; Sika Sikaflex-2c SL; Sonnebom Sonolastic SL-1; Tremco THC-900.

E Install sealant with hand or power gun, pushed along joint. Sealant shall completely fill joint void. Tool vertically-installed sealants to slightly concave surface. Clean adjacent surfaces after completion.

## VINYL CEILING PANELS

A Work included in this Section: Vinyl Ceiling Panels, as shown on drawings and specified below.

B Accetable Manufactures: Extrutech Plastic, INC. Or approved equivilant manufactures.

C Vinyl ceiling Panel system: EPI P2400 1/2" thick x 24"wide, Design: Flat, Glossy, Interlocking T&G. Panel trim as recomended by manufacture for a compleat system. Color: standard white.
Stainless steel screws as recomended by manufacturer.

D QUALITY ASSURANCE: Installers trained and approved by Manufacture.

E WARRANTY:
1. Limited Warranty Manufacturer's standard form replace panels that fail in materials or workmanship for period of 20years from substantial completion.

## SECTION 09900 PAINTING

A Work included in this Section:
– Field-finishing exposed-to-view surfaces of all newly-installed materials customarily receiving field finish, including miscellaneous steel, wood trim, and gypsum board.

B Acceptable manufacturers: Benjamin Moore, Fuller-O'Brien, ICI, Pratt & Lambert, PPG/Pittsburgh, Sherwin-Williams. Provide one of listed manufacturers' top quality consumer-sale or professional-type products.

C Use primer recommended by manufacturer for particular combination of substrate and finish coat. Where painting over shop-applied primers, verify that finish paint proposed for field application is compatible with shop primers actually used. Paint thickness: per manufacturer's recommendation, or as specified below if not specified by manufacturer.

D Finish various substrates as follows:

1. Metal: primer and two coats alkyd semi-gloss enamel, dry film thickness 2.0-to-2.5 mils per coat: ICI Ultra-Hide Durus, Moore Impervo Enamel, PPG/Pittsburgh Quick-Dry Alkyd Enamel, or equal. Primer may be omitted when steel is shop-primed.

2. Typical interior painted surfaces: primer and two coats acrylic latex, eggshell or satin texture, 1.5-to-2 dry mils per coat;

E Colors: as selected by Architect from stock range of one of listed manufacturers. Where accent colors are selected, provide additional coats over those specified, if required for proper coverage and hiding.

F Verify that substrates are in suitable condition to receive specified work – clean as required. Apply finish materials with suitable brushes, rollers, and spraying equipment. Rate of application shall not exceed paint manufacturer's recommendations. Comply with recommendations of product manufacturer for temperature restrictions, mil thickness, and drying time between succeeding coats.

## 10520 FIRE EXTINGUISHERS

A Firefighting devices described in this section consist of portable fire extinguishers located where shown on the Drawings and as required by code. Contractor shall furnish all supplementary items necessary for proper installation using Manufacturer's components.
Design is based on products manufactured by: Larsen's Manufacturing Company, Extinguishers: Multi Purpose Dry Chemical MP5, Nominal 5 pounds capacity
Rating: 2A-10B:C per U.L.
Approval: FM and State Fire Marshall.


David Procter
ARCHITECTS PLLC
5920 Country Hills Dr
Salt Lake City, UT, 84118
(801) 966-8260


JOB NO.

DAVID F. PROCTER No. 4243517-0301 STATE OF UTAH

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ELK RIDGE SALT SHED
645 West Goosenest Dr
Elk Ridge, Utah 84651

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CONTENTS

Notes-Specs

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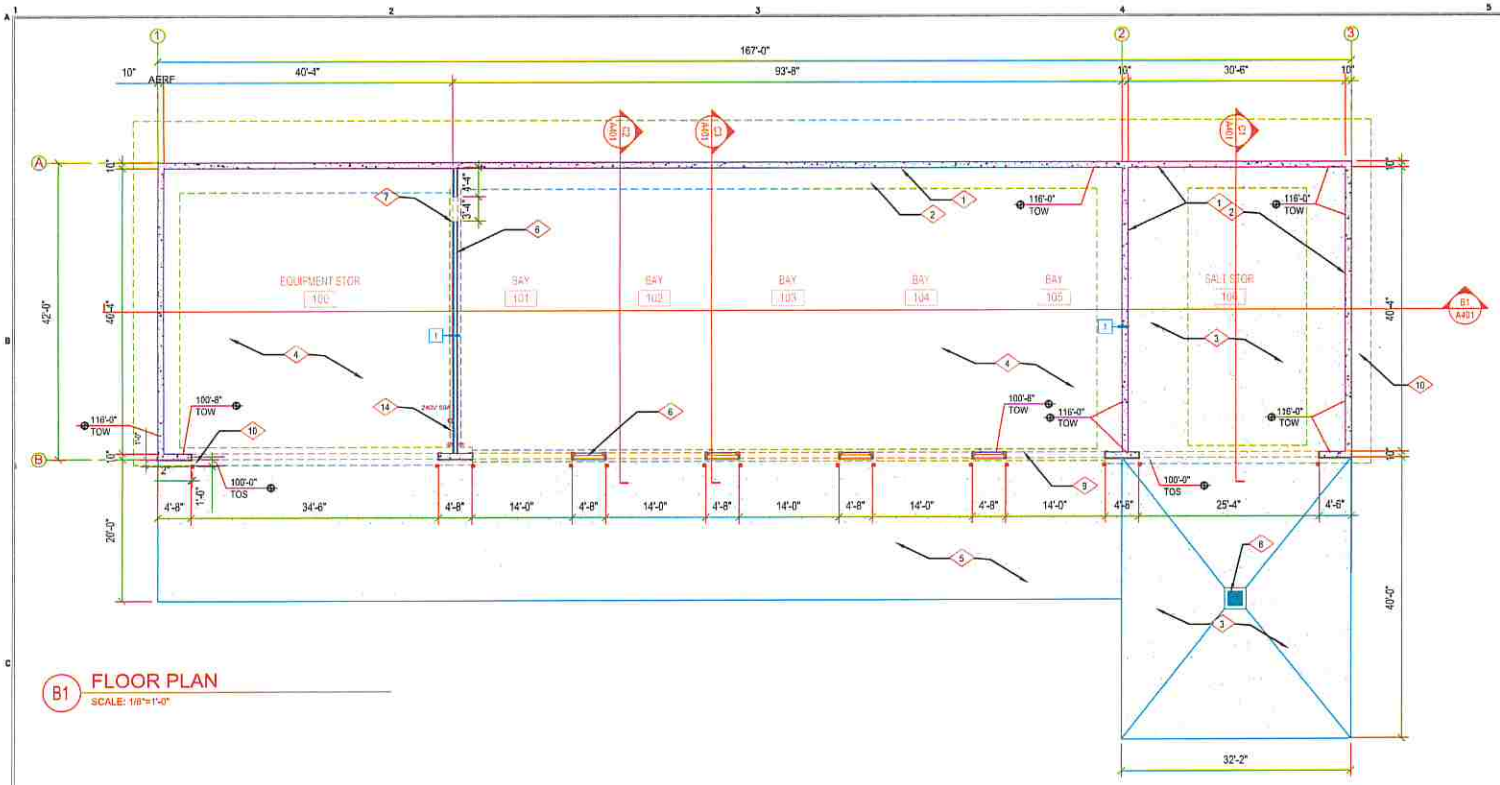
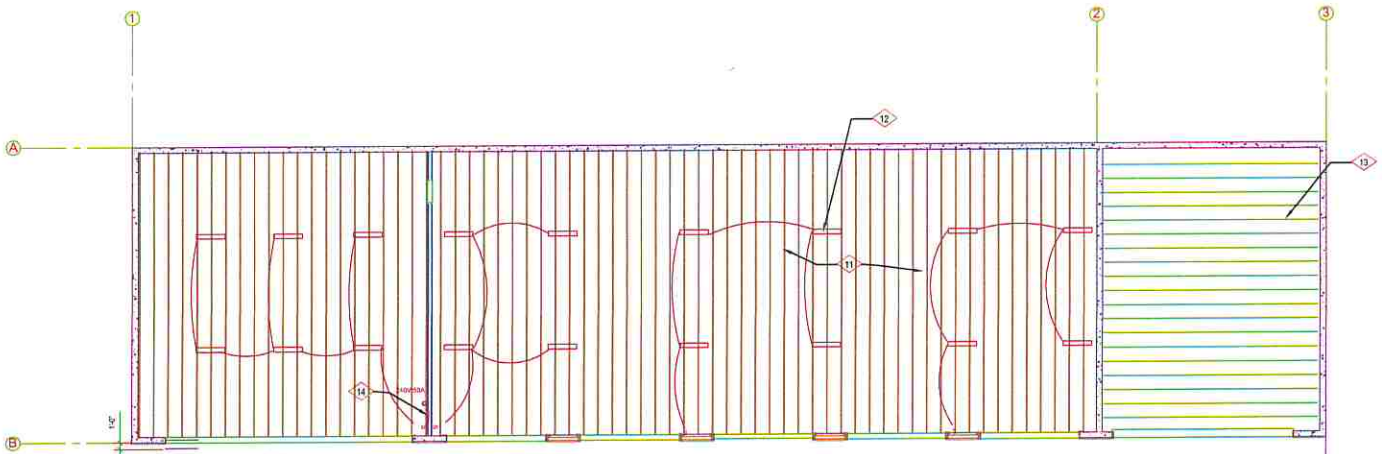



B1 FLOOR PLAN
SCALE: 1/8"=1'-0"



C1 REFLECTED CEILING PLAN
SCALE: 1/8"=1'-0"

## GENERAL NOTES

A. AT ALL VISIBLE CONCRETE WALLS, PROVIDE NEW, OR NEWLY REFINISHED/SURFACED FORMS TYPICAL.

## KEY NOTES

1. REINFORCED CONCRETE WALLS (EPOXY REBAR IN SALT STORAGE BAY, & NO COLD JOINTS IN WALL) SEALED W/ PENTREAT 244 SEALER TYP.
2. REINFORCED CONCRETE FOUNDATION (EPOXY REBAR IN SALT STORAGE BAY AND SEALED W/ PENTREAT 244 SEALER TYP)
3. 8" THICK REINFORCED CONCRETE SLAB WITH EPOXY COATED REBAR W/ PENTREAT 244 SEALER TYP.
4. 6" REINFORCED CONCRETE SLAB WITH PENTREAT 244 SEALER TYP.
5. 8" THICK REINFORCED CONCRETE PAVEMENT W/ PENTREAT 244 SEALER TYP.
6. 2X6 WOOD STUD PAINTED PARTITION W/ 1 LAYER 5A SIDE 7/16 DSB BD
7. ROUGH OPENING FOR FUTURE 3'X7' HM. HIGA DOOR AND FRAME
8. CATCH BASIN REFER TO CIVIL DOCUMENTS.
9. ROUGH OPENING FOR FUTURE 14'W X 14'H SECTIONAL OVERHEAD DOOR WITH HD DOOR OPENER.
10. STEEL BALLARD REF TO DETAILS
11. PREFABRICATED WOOD TRUSSES
12. LED LIGHTS
13. VINYL CEILING PANELS
14. 125 AMP SUBPANEL, PULL POWER FROM EXIATING ADJECENT BUILDING IN UNDER GROUND CONDUET

## LEGEND

NORTH GRAPHIC


David Procter ARCHITECTS PLLC
5829 Country Hills Dr
Salt Lake City, UT, 84118
(801) 966-8280


JOB NO.

STATE OF UTAH
DAVID F. PROCTER
No. 4243574-0301

ELK RIDGE SALT SHED
645 West Goosenest Dr
Elk Ridge, Utah 84651

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CONTENTS

FLOOR PLAN

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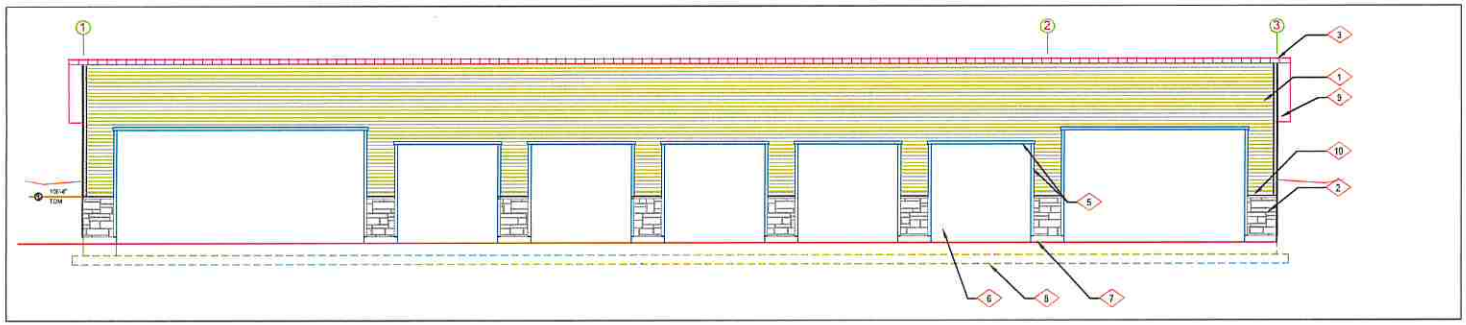
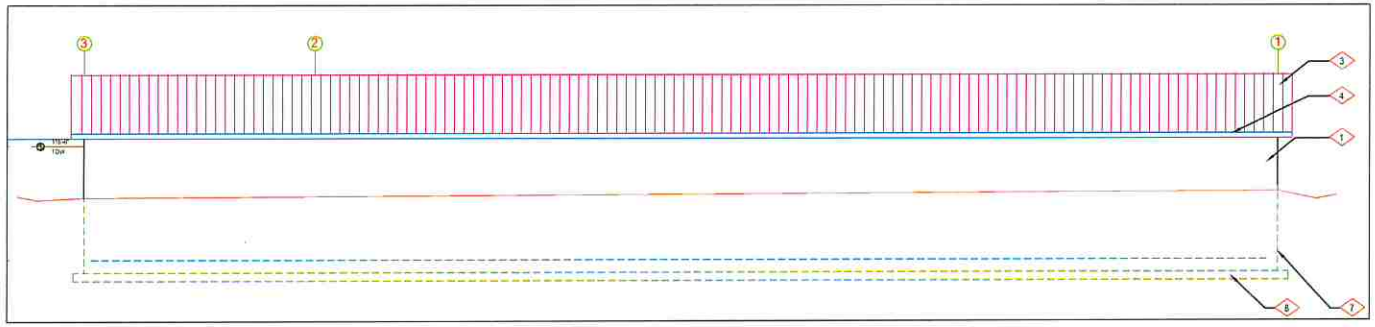
A201



B1 NORTH ELEVATION
SCALE: 1/8"=1'-0"



C1 SOUTH ELEVATION
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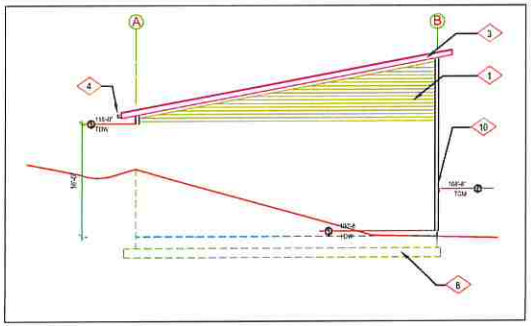
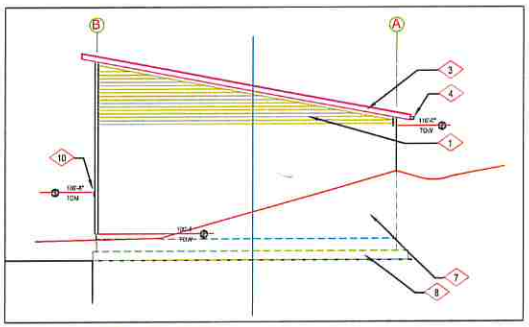


D1 WEST ELEVATION
SCALE: 1/8"=1'-0"



D2 EAST ELEVATION
SCALE: 1/8"=1'-0"

## GENERAL NOTES

A. AT ALL VISIBLE CONCRETE WALLS, PROVIDE NEW, OR NEWLY REFINISHED/SURFACED FORMS TYPICAL.

## KEY NOTES

1. SIDING TO MATCH PUBLIC WORKS BLD
2. STONE VENEER TO MATCH PUBLIC WORKS BLD
3. STANDING SEAM METAL ROOF
4. GUTTERS AND DOWN SPOUTS TO MATCH PUBLIC WORKS BLD
5. PREFINISHED TRIM AT OPNINGS TO MATCH PUBLIC WORKS BLD. TYP
6. OPENING FOR FURTURE 14'X14' OVER-HEAD DOOR
7. REINFORCED CONCRETE FOUNDATION
8. REINFORCED CONCRETE FOOTING
9. METAL SOFFITS TO MATCH PUBLIC WORKS BLD
10. CAST STONE CAP TO MATCH PUBLIC WORKS BLD.

## LEGEND


David Procter
ARCHITECTS PLLC
5829 Country Hills Dr
Salt Lake City, UT, 84118
(801) 966-8280


JOB NO.

STATE OF UTAH
DAVID F. PROCTER
No. 424367-0301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645 West Goosenest Dr
Elk Ridge, Utah 84651

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EXTERIOE ELEVATIONS

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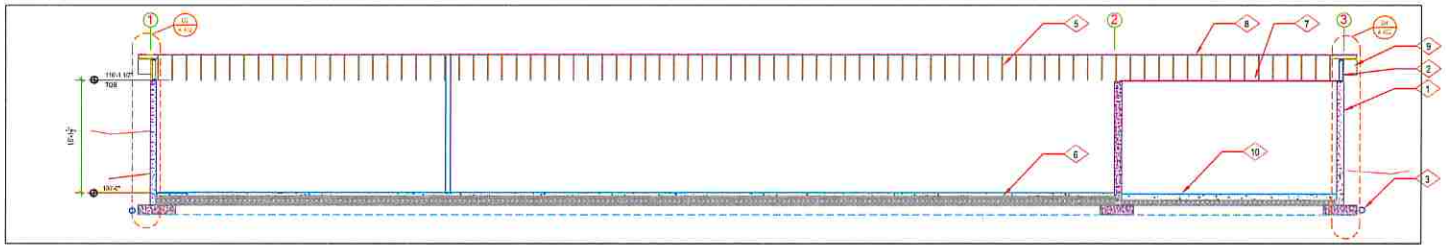

B1 LONGITUDINAL SECTION
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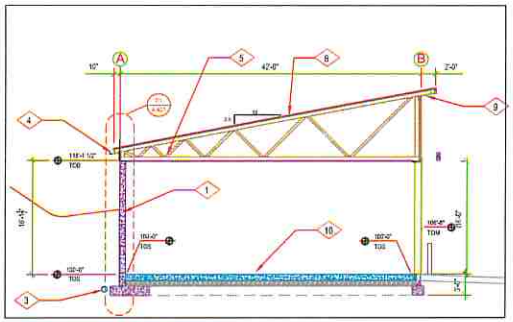

C1 CROSS SECTION
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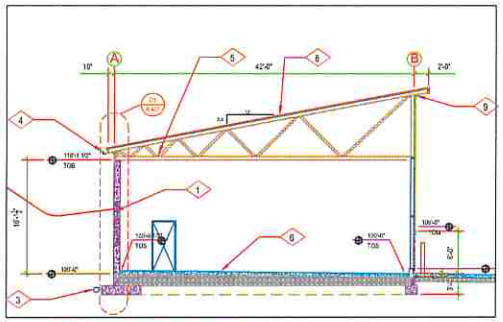

C2 CROSS SECTION
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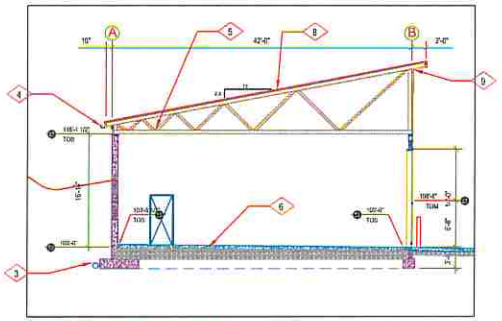

C3 CROSS SECTION
SCALE: 1/8"=1'-0"

## GENERAL NOTES

A. AT ALL VISIBLE CONCRETE WALLS, PROVIDE NEW, OR NEWLY REFINISHED/SURFACED FORMS TYPICAL.

## KEY NOTES

1. REINFORCED CONCRETE WALL
2. 2X6 STUD WALL WITH TREATED SILL AND DOUBLE TOP PLATES
3. FRENCH DRAIN SYSTEM REF TO CIVIL DOCUMENTS
4. GUTTER TO MATCH ROOFING FINISH
5. PLATE TRUSSES
6. 6" REINFORCED CONCRETE SLAB WITH SEALER AS NOTED
7. VINYL CEILING PANEL
8. STANDING SEAM ROOF
9. METAL SOFFITS TO MATCH ROOFING FINISH/PUBLIC WORKS BLD
10. 6" THICK REINFORCED CONCRETE SLAB WITH EPOXY REBAR AND SEALER AS NOTED

## LEGEND


David Procter ARCHITECTS PLLC
5820 Country Hills Dr
401
(801) 944-8280


JOB NO.

STATE OF UTAH
DAVID E. PROCTER
No. 4011 Licensed Architect


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# ELK RIDGE SALT SHED

645 West Goosenest Dr
Elk Ridge, Utah 84651

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DATE
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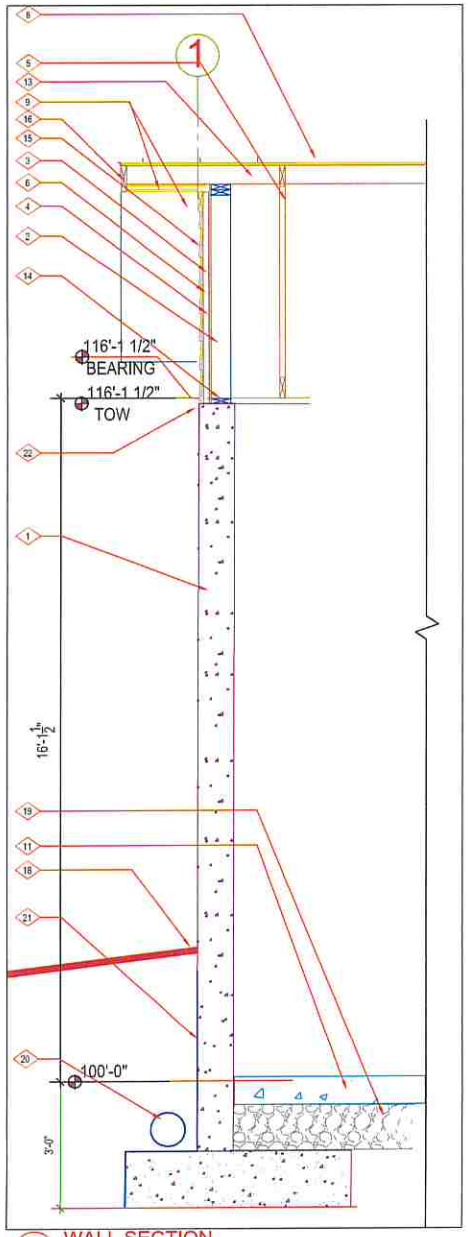


D2 WALL SECTION
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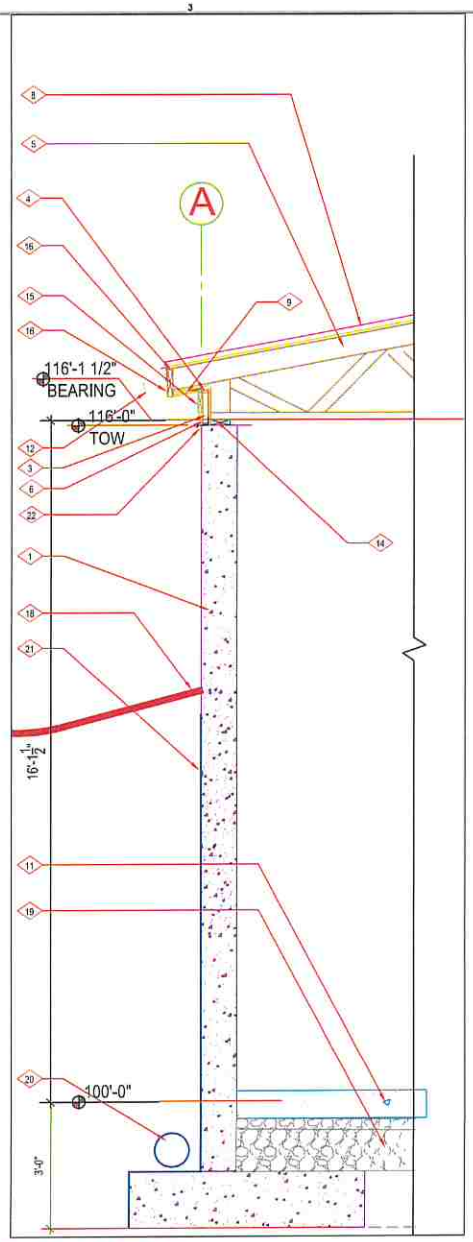


D3 WALL SECTION
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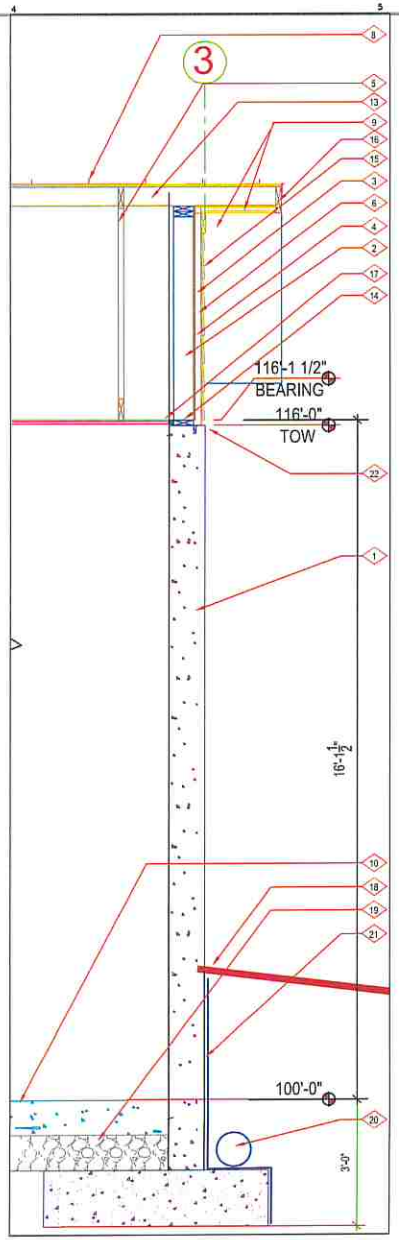


D4 WALL SECTION
SCALE: 3/4"=1'-0"

## GENERAL NOTES

A. AT ALL VISIBLE CONCRETE WALLS; PROVIDE NEW, OR NEWLY REFINISHED SURFACED FORMS TYPICAL.

## KEY NOTES

1. REINFORCED CONCRETE WALL
2. 2X6 STUD WALL WITH TREATED SILL AND DOUBLE TOP PLATES.
3. WOOD SHEATHING
4. BUILDING WRAP
5. PLATE TRUSS
6. 2X TREATED FURRING 16" O.C. TYP PROVIDE CONTINUOUS INSECT SCREENING TOP AND BOTTOM.
7. VINYL CEILING PANEL
8. STANDING SEAM ROOF
9. METAL SOFFITS TO MATCH ROOFING FINISH PUBLIC WORKS BLD
10. REINFORCED CONCRETE SLAB
11. 6" REINFORCED CONCRETE SLAB WITH SEALER AS NOTED
12. GUTTER TO MATCH ROOFING FINISH
13. 2X OUTRIGGER ROOF FRAMING
14. 2X TREATED WOOD BASE PLATE
15. SIDING TO MATCH EXISTING PUBLIC WORKS BLD.
16. 2X 8 FASCIA ROOF FRAMING TYP
17. VINYL FLASHING SET IN CONTINUOUS SEALANT FOR AIR TIGHT PERIMETER TYP
18. GRADE VARIES REF TO CIVIL DOCUMENTS.
19. 8" MIN COMPACTED CRUSHED GRAVEL
20. FRENCH DRAIN REF TO CIVIL DOCUMENTS.
21. BASE BID DAMPPROOFING. ADD ALT SHEET WATER PROOFING WITH PROTECTION COURSE
22. METAL FLACHING CONT. TYP.

## LEGEND


David Procter ARCHITECTS PLLC
5929 Country Hills Dr
#21
(801) 966-8280


JOB NO.

STATE OF UTAH
DAVID J. PROCTER
No. 4043174-0301


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645 West Goosenest Dr
Elk Ridge, Utah 84651

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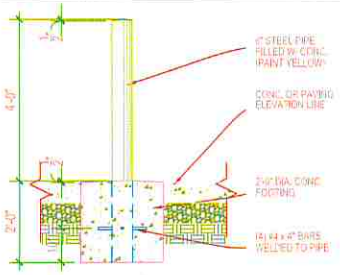


A1 BALLARD DETAIL
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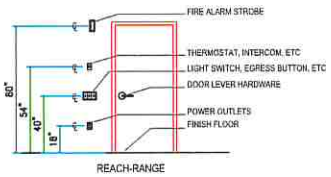
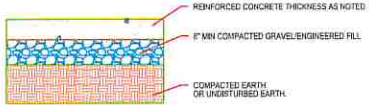



A2 DETAIL
NTS

A3 DETAIL
NTS

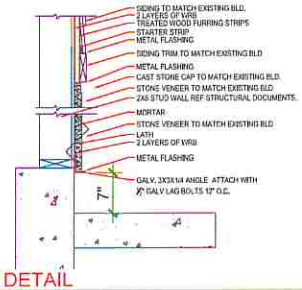



A4 SLAB AND BASE DETAIL
NTS

B1 DETAIL
NTS

B2 DETAIL
NTS

B3 DETAIL
NTS




B4 DETAIL
NTS

C1 DETAIL
NTS

C2 DETAIL
NTS

C3 DETAIL
NTS

C4 DETAIL
NTS

D1 DETAIL
NTS

D2 DETAIL
NTS

D3 DETAIL
NTS

D4 DETAIL
NTS


David Procter ARCHITECTS PLLC
5825 Country Hills Dr
Salt Lake City, UT, 84118
(801) 966-8260


JOB NO.

STATE OF UTAH
DAVID J. PROCTER
No. 4241-6-2001

ELK RIDGE SALT SHED
645 West Goosenest Dr
Elk Ridge, Utah 84651

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SHEET NO.
A601

# GENERAL STRUCTURAL NOTES

**DESIGN CRITERIA** David Procter Elk Ridge Salt Shed (Elk Ridge) 6140120

1. Building code: Utah Code, Title 15A
   1.1 Model building code: 2018 IBC
   1.2 Use and occupancy classification: S-2 (Storage - low hazard)
   1.3 Risk Category: II (Not occupancy categories I, III, IV)
2. Dead loads
   2.1 Roof = 15 psf (10 psf top chord, 5 psf bottom chord)
   2.2 Floor = 12 psf
   2.3 Walls = 10 psf (interior walls), 12 psf (exterior walls)
3. Live loads
   - Roofs (ordinary construction) = 20 psf (or 300 lb point load)
   - Storage warehouses (light) = 125 psf
4. Rain load
   4.1 Median 15-minute duration rainfall intensity = 4.05 in/hr
   4.2 Median 60 minute duration rainfall intensity = 1.69 in/hr
5. Snow load
   5.1 Ground snow load, $P_g$ = 41 psf (elevation 4989 ft)
   5.2 Exposure factor, $C_e$ = 1
   5.3 Thermal factor, $C_t$ = 1
   5.4 Snow importance factor, $I_s$ = 1
   5.5 Flat roof snow load, $P_f$ = 29 psf
   5.6 Roof slope factor, $C_s$ = 1
6. Earthquake design data
   6.1 Mapped acceleration parameters
      6.1.1 Latitude, Longitude: 40.02, -111.681
      6.1.2 MCE short period $S_s$ = 1.59 $S_{DS}$ = 1.27
      6.1.3 MCE 1.0 sec. period $S_1$ = 0.6 $S_{D1}$ = 0.66
   6.2 Seismic design category: D
   6.3 Seismic importance factor, $I_e$ = 1
   6.4 Basic structural system: Bearing wall systems
   6.5 Seismic force-resisting system: Light-frame wood walls (wood sheathing)
      6.5.1 Response modification factor R = 6.5
      6.5.2 System overstrength factor Omega = 3
      6.5.3 Deflection amplification factor $C_d$ = 4
   6.6 Equivalent Lateral Force Procedure
      6.6.1 Seismic response coefficient $C_s$ = 0.2
      6.6.2 Seismic base shear (LRFD) V = 16542 lb
7. Wind design data
   7.1 Exposure category: C
   7.2 Basic design wind speed, V = 105 mph
   7.3 Components and cladding pressure = 23 psf (end), 20 psf (interior)
   7.4 Internal pressure coeff., $G_{cp}$ = 0.18
8. Geotechnical design basis
   - Presumptive values, 2018 IBC Table 1806.2
   8.2 Site class = D Default
   8.3 Soil notes: None
   8.4 Lateral earth pressure
      8.4.1 Active = 30 psf/ft
      8.4.2 At rest = 60 psf/ft
   8.5 Allowable foundation parameters
      8.5.1 Allowable soil bearing, $Q_a$ = 1500 psf
      8.5.2 Allowable lateral bearing = 150 psf/ft
      8.5.3 Coefficient of friction = 0.25
   8.6 Minimum frost cover = 30 in.

**DEFERRED SUBMITTALS**

1. The following items are to submitted subsequent to the time of application (deferred submittals):
   Prefabricated metal plate wood trusses - roof (truss manufacturer)
2. Deferred submittals shall have the prior approval of the building official (2018 IBC 107.3.4.1).
3. Deferred submittal documents shall be submitted to the registered design professional in responsible charge who shall review and forward them to the building official with a notation indicating that the documents have been reviewed and found to be in general conformance to the design of the building (2018 IBC 107.3.4.1).
4. Deferred submittal items shall not be installed until the design and submittal documents have been approved by the building official (2018 IBC 107.3.4.1).

**GENERAL**

1. Construction documents are valid for a single use at the project location and shall not be reused, copied, or reproduced without written approval of the registered design professional in responsible charge.
2. General notes and typical details are provided as a supplement to the construction documents and apply where specific notes and details are not available. Specific notes and structural details shall take precedence over general notes and typical details. Structural requirements shown in the framing plans and in structural details shall take precedence over structural notes indicated in architectural sections.
3. Printed dimensions shall take precedence over scales shown on construction documents. The registered design professional in responsible charge does not warrant the accuracy of scaled dimensions.
4. Approval by the inspector does not imply approval by the registered design professional in responsible charge. Structural specifications that are unclear or ambiguous shall be referred to the registered design professional in responsible charge for interpretation or clarification.
5. The registered design professional in responsible charge assumes no liability for the accuracy, completeness, or code compliance of architectural, electrical, mechanical, drainage, or other non structural specifications.
6. Omissions in and conflicts between the various elements of the construction documents shall be brought to the immediate attention of the registered design professional in responsible charge and shall be resolved by the same before proceeding with any work involved.
7. Requests for substitutions shall be submitted in writing to the registered design professional in responsible charge and shall include the reasons for the request and any cost differentials. Substitutions are not allowed unless approved in writing by the registered design professional in responsible charge.
8. The contractor shall become familiar with all portions of the construction documents and shall ensure that all subcontractors are familiar with those portions pertaining to their area of work. The contractor shall verify all site conditions, dimensions, elevations, coordinate all doors, windows, non bearing interior and exterior walls, elevations, slopes, stairs, curbs, drains, recesses, depressions, railings, waterproofing, finishes, chamfer, kerfs, and so forth, and immediately notify the registered design professional in responsible charge regarding actual conditions which are not in agreement with the construction documents.
9. The contractor is responsible for the method, means, and sequence of all structural erection except when specifically noted otherwise in the construction documents. The contractor shall provide temporary shoring and bracing, providing adequate vertical and lateral support during erection. Shoring and bracing shall remain in place until all permanent members are placed and all final connections are completed.
10. The contractor is responsible for standard connections, unless noted otherwise. The contractor shall obtain additional assistance from the registered design professional in responsible charge for non standard connections.

**POST-INSTALLED ANCHORS**

1. Epoxy adhesive anchoring systems
   1.1 Concrete: Hilti HIT RE 500 V3 (ICC ES ESR 3814) or Simpson SET-XP (ICC ES ESR 2508) or USP/Mitek CIA-GEL 7000-C (IAMPO ER-473)
   1.2 Masonry (grouted): Hilti HIT RE100 (ICC ES ESR 3829) or Simpson SET (ICC ES ESR-1772) or USP/Mitek CIA-GEL 7000 (ICC ES ESR 1700)
   1.3 The calculated strength of anchorage assumes the following conditions for installation: 21 day minimum age of concrete, maximum short term concrete temperature = 150°F, maximum long term concrete temperature = 110°F, dry concrete surface, and normal weight concrete. See adhesive manufacturer notes for minimum temperature requirements. If conditions are otherwise, contact engineer for anchor specifications.
   1.4 Steel reinforcement and rods shall be embedded 10 bar diameters unless noted otherwise in the structural drawings and details. Where 10 bar diameters exceeds the member thickness minus minimum cover, steel reinforcement shall be embedded the member thickness minus minimum cover with a standard hook.
   1.5 Embedded portions of steel reinforcement and rods shall be clean, straight, and free of mill scale, rust and other coatings that impair the bond with the adhesive. Reinforcement must not be bent after installation (ICC ES ESR 3829).
   1.6 Installation of adhesive anchors shall be performed by personnel trained to install adhesive anchors.
2. Mechanical expansion anchors
   2.1 Concrete: Hilti KWIK BOLT TZ (ICC ES ESR 1917)
   2.2 Masonry: Hilti KWIK BOLT 3 (ICC ES ESR 1385)
   2.3 Expansion anchors shall not be used in tensile load applications (e.g. hold downs, moment frames).
3. Post-installed anchoring systems shall be installed according to the Manufacturer's Printed Installation Instructions (MPII). Hole cleaning method shall be based on drilling method and borehole conditions and shall conform to the manufacturer's instructions.

**SOIL AND FOUNDATIONS**

1. Geotechnical investigations shall conform to 2018 IBC 1803. Excavation, grading and fill shall conform to 2018 IBC 1804. Footings and foundations shall be constructed in accordance with 2018 IBC 1807 through 1810.
2. Where required, the owner shall submit a geotechnical investigation report to the building official in accordance with 2018 IBC 1803. The contractor shall inform the registered design professional in responsible charge if the soil conditions are not consistent with the investigation report and the foundation design data.
3. Excavations for any purpose shall not remove lateral support from any footing or foundation without first underpinning or protecting the footing or foundation against settlement or lateral translation (2018 IBC 1804.1).
4. Excavation outside the foundation shall be backfilled with soil that is free of organic material, construction debris, cobbles and boulders or with a controlled low strength material (CLSM). The backfill shall be placed in lifts and compacted, in a manner that does not damage the foundation or the waterproofing or dampproofing material (2018 IBC 1804.3).
5. The ground immediately adjacent to the foundation shall have a 5 percent slope away from the building for a minimum distance of 10 feet measured perpendicular to the face of the foundation wall. If physical obstructions or lot lines prohibit 10 feet of horizontal distance, a 5 percent slope shall be provided to an approved alternative method of diverting water away from the foundation. Impervious surfaces within 10 feet of the building foundation shall have a minimum 2 percent slope (2018 IBC 1804.4).
6. Footings and foundations shall be built on undisturbed soil, compacted fill material or CLSM. Compacted fill material and CLSM shall conform to 2018 IBC 1804.6 and 2018 IBC 1804.7, respectively (2018 IBC 1808.2).
7. The top surface of the footings shall be level. The bottom surface of footings is permitted to have a maximum 10 percent slope. Footings shall be stepped where it is necessary to change the elevation of the top surface of the footing or where the surface of the ground has more than a 10 percent slope (2018 IBC 1809.3).
8. The minimum depth of footings below the undisturbed ground surface shall be 12 inches (2018 IBC 1809.4). Foundation walls, piers and other permanent supports shall be extended below the frost line, except where otherwise protected from frost (2018 IBC 1809.5).
9. The placement of footings on or adjacent to 33 percent slopes and steeper shall conform to 2018 IBC 1808.7.
10. Floors of basements shall be placed over base course not less than 4 inches in thickness and a drain shall be installed around the foundation perimeter that consists of gravel or crushed stone containing not more than 10 percent material that passes through a No. 4 sieve (2018 IBC 1805.4.1, 1805.4.2).
11. Backfill shall not be placed against a foundation wall until the wall has sufficient strength and is anchored to the floor above, or is sufficiently braced to prevent damage by the backfill, except bracing is not required for walls supporting less than 4 feet of unbalanced backfill (R404.1.7).

**CONCRETE**

1. Concrete materials, quality control, and construction shall comply with 2018 IBC Chapter 19 and ACI 318-14.
2. Compressive strength (minimum specified at 28 days)
   2.1 Footings: 3,000 psi (2018 IBC 1808.8.1) (2,500 psi used in design)
   2.2 Interior floor slabs on grade: 4,000 psi
   2.3 Exterior floor slabs on grade: 4,000 psi
   2.4 Suspended slabs: 4,000 psi
   2.5 Walls: 3,000 psi (2018 IBC 1904.1) for R-2, R-3 occupancies and appurtenances; 4,000 psi for other occupancies
3. Materials
   3.1 Cements (ASTM C 150). Concrete exposed to freezing and thawing or deicing chemicals shall conform to the maximum water cementitious material ratios and minimum compressive strength requirements of ACI 318-14 table 19.3.1.1 & 19.3.2.1
   3.2 Aggregates (ASTM C 33): nominal maximum size of coarse aggregate shall not be larger than 1/5 the narrowest dimension between forms, nor 1/3 the depth of slabs, nor 3/4 the minimum clear spacing between reinforcing bars or wires, tendons, or ducts (ACI 318-14 26.4.2.1)
   3.3 Water used in mixing concrete shall be potable, clean and free from injurious amounts of oils, acids, alkalis, salts, organic materials, or other substances deleterious to concrete or reinforcement (ACI 318-14 26.4.1.3.1.b)
   3.4 Admixtures shall be subject to prior approval by the registered design professional in responsible charge (ACI 318-14 26.4.1.4.1.b)
   3.5 Concrete exposed to freezing and thawing or deicing chemicals shall be air entrained with air content indicated in ACI 318-14 Table 19.3.3.1. Tolerance on air content as delivered shall be plus/minus 1.5 percent (ACI 318-14 R26.4.2.1(a)(5))
4. Steel Reinforcement
   4.1 Deformed bars: fy = 60 ksi (ASTM A615)
   4.2 Welded plain wire: fy = 60 ksi (ASTM A1064)
   4.3 Deformed Bar Anchors (DBA) (ASTM A1064)
   4.4 Headed Stud Anchors (HSA) (ASTM A108)
   4.5 At the time concrete is placed, reinforcement shall be free from ice, mud, oil, or other nonmetallic coatings that decrease bond (ACI 318-14 26.6.1.2).
   4.6 Reinforcement shall be accurately placed and adequately supported before concrete is placed, and shall be secured against displacement (ACI 318-14 26.6.2.2).
   4.7 Details of reinforcement shall conform to ACI 318-14 Chapter 25
5. Minimum concrete cover (ACI 318-14 Table 20.6.1.3.1)
   5.1 Concrete cast against and exposed to earth: 3 inches
   5.2 Concrete exposed to earth or weather:
      5.2.1 No. 6 through No. 18 bars: 2 inches
      5.2.2 No. 5 bar, W31 wire, and smaller: 1.5 inches
   5.3 Concrete not exposed to earth or weather:
      5.3.1 Slabs, walls, joists No. 11 bar and smaller: 0.75 inches
      5.3.2 Beams, columns primary reinf., ties, stirrups: 1.5 inches
6. Formwork shall conform to ACI 318-14 Sections 26.11 and 26.12 and ACI 347. Forms shall be removed in a manner as not to impair safety and serviceability of the structure. Concrete exposed by form removal shall have sufficient strength not to be damaged by removal operation (ACI 318-14 26.11.2).
7. Conduits, pipes, and sleeves of any material not harmful to concrete and within the limitations of ACI 318-14 20.7 shall be approved by the registered design professional in responsible charge (ACI 318-14 20.7).
8. Construction joints shall be so made and located as not to impair the strength of the structure (ACI 318-14 18.10.9).
9. The thickness of concrete floor slabs on grade shall not be less than 3.5 inches. A 6-mil polyethylene vapor retarder with joints lapped not less than 6 inches (or an equivalent material) shall be placed between the base course or subgrade and the concrete floor slab, except a vapor retarder is not required in detached utility buildings or other unheated facilities (2018 IBC 1907).

**MASONRY**

1. Masonry materials, construction, and quality shall conform to 2018 IBC 2103-2105, TMS 402/602-16
   1.1 Compressive strength: f'c = 2,000 psi (TMS 602-16 1.4B.2 TABLE 2)
2. Concrete masonry units (CMU) (ASTM C 90)
   2.1 Grade N
   2.2 Compressive strength: fm = 2,000 psi (TMS 602-16 1.4B.2 TABLE 2)
3. Mortar (ASTM C 270)
   3.1 Type S Portland cement (TMS 402-16 7.4.4.2.2)
   3.2 Compressive strength: fc = 2,000 psi (TMS 602-16 1.4B.2 TABLE 2)
4. Grout (ASTM C 476)
   4.1 Type: fine or coarse (2018 IBC 2103.3)
   4.2 Compressive strength (minimum specified at 28 days): f'c = 2,000 psi (ASTM C 1019)
5. Steel reinforcement
   5.1 Deformed bars: fy = 60 ksi (ASTM A 615 Gr. 60)
   5.2 Deformed Bar Anchors (DBA) (ASTM A1064)
   5.3 Headed Stud Anchors (HSA) (ASTM A108)
6. Bed joint thickness shall be 5/8 inch maximum (TMS 602-16 1.4B.2)
7. Grout shall have an 8"-11" slump using a 3/8" maximum aggregate. Grout lifts shall not exceed 5 feet in height unless noted otherwise. Consolidate by mechanical vibration pours that exceed 12 inches in height.
8. The clear distance between parallel bars shall not be less than the nominal diameter of the bars, nor less than 1 inch (TMS 402-16 6.1.3). Joint reinforcement shall have cover not less than 5/8". (TMS 402-16 6.1.4.2)
9. The diameter of bend measured on the inside of reinforcing bars, other than for stirrups and ties, shall not be less than specified in table 6.1.8 (TMS 402-16 6.1.8.2)
10. All masonry below grade shall be solid grouted.
11. Control joint spacing not to exceed 30'-0". See Architectural for locations.

**MASONRY AND STONE VENEER**

1. Masonry veneer materials, construction, and quality shall conform to 2018 IBC 2103-2105 and TMS 402-16 Chap. 6.
2. Lintels
   2.1 Veneer shall not support any vertical load other than the dead load of the veneer above. Veneer above openings shall be supported on lintels of noncombustible materials. Lintels shall have 1 inch of bearing for each 1 foot of span, but not less than 4 inches of bearing.
3. Anchorage
   3.1 Veneer shall be anchored to the supporting wall framing with hot dipped galvanized metal ties. (Strand wire or corrugated sheet metal)
   3.2 Engage all anchor ties with a No. 9 gage wire in the center of the veneer and embedded in the mortar joint. (R703.8.4.1)
   3.3 Each tie shall be spaced not more than 16 inches on center horizontally and vertically and shall support not more than 2 square feet of wall area. Additional metal ties shall be provided around all wall openings greater than 16 inches in either dimension. (R703.8.4.1)

**WOOD**

1. Wood materials, quality, and construction shall conform to 2018 IBC Chapter 23 and Table 2304.10
2. Structural lumber (2018 IBC 2303.1.1.9, 2018 NDS)
   2.1 Bearing walls: Douglas Fir Larch (DF) Stud (ASTM D 1990, DOC PS 20)
   2.2 Posts: Douglas Fir Larch (DF) Stud (ASTM D 1990, DOC PS 20)
   2.3 Beams and headers: Douglas Fir Larch (DF) No. 2 (ASTM D 1990, DOC PS 20)
   2.4 Heavy timber: Douglas Fir Larch (DF) No. 1 (ASTM D 1990, DOC PS 20)
   2.5 Sill plates: Preservative-treated wood, redwood (AWPA U1 M4)
   2.6 Naturally durable or preservative-treated wood shall be used where structural lumber is 18 inches or closer to exposed ground; where structural lumber is in contact with exterior masonry or concrete walls below grade; where sleepers, sills, posts, and columns are on a concrete or masonry slab or footing that is in direct contact with earth; and where structural lumber is attached directly to exterior masonry or concrete walls, unless a 0.5 inch air space on top, sides, and end is provided (2018 IBC 2304.12)
3. Structural logs (ASTM D 3957) - ICC - 400 standard for the design and construction of log structures
4. Structural glued laminated timber (2018 IBC 2303.1.3, 2018 NDS 5.1.1)
   4.1 Single span: 24F-1.8E (24F-V4) (ASTM D 3737, ANSI/AITC A190.1)
   4.2 Multiple span: 24F-1.8E Balanced layup (24F-V8) (ASTM D 3737, ANSI/AITC A190.1)
   4.3 Cantilever span: 24F-1.8E Balanced layup (24F-V8) (ASTM D 3737, ANSI/AITC A190.1)
5. Structural composite Lumber and engineered wood (2018 IBC 2303.1.10, 2018 NDS 8.1.1)
   5.1 Laminated strand lumber (LSL)
      5.1.1 Ex = 1.3E (ASTM D 5456)
      5.1.2 Ex = 1.5E (ASTM D 5456)
      5.1.3 Ex = 1.55E (ASTM D 5456)
      5.1.4 1.125 inch APA Performance Rated (or equivalent) rim board (2018 IBC 2303.1.13, ASTM 7672, ANSI/APA PRR410)
   5.2 Laminated veneer lumber (LVL)
      5.2.1 Ex = 2.0E (ASTM D 5456)
   5.3 Parallel strand lumber (PSL)
      5.3.1 Ex = 2.0E (beams) (ASTM D 5456)
      5.3.2 Ex = 1.8E (columns) (ASTM D 5456)
   5.4 Prefabricated wood I-joist (2018 IBC 2303.1.2, 2018 NDS 7.1.1) (ASTM D 5055)
6. Wood structural panels (2018 IBC 2304.8, 2018 NDS 9.1.3)
   6.1 Roof, floor, and wall sheathing: oriented strand board (OSB) (DOC PS 1,2)
   6.2 Sheathing shall be manufactured with exterior glue and not less than 4X8 feet, except at boundaries and at changes in framing (2018 IBC 2305.1, AWC SDPWS-2015)
   6.3 Wall sheathing
      6.3.1 Oriented strand board (OSB) (DOC PS 1,2)
      6.3.2 All panel joints in walls shall occur over studs or blocking using a minimum of 8d common nails spaced a maximum of 6 inches at panel edges and 12 inches at intermediate framing (2018 IBC 2306.3)
   6.4 Roof and floor sheathing shall be placed perpendicular to supporting framing. Stagger sheathing joints.
7. Fasteners
   7.1 Nails (2018 IBC 2303.6, 2018 NDS Table L4) (ASTM F 1667)

| Pennyweight | Common | Box | Sinker |
|---|---|---|---|
| 7.1.1 8d = | 0.131" X 2.5" | 0.113" X 2.5" | 0.113" X 2.375" |
| 7.1.2 10d = | 0.148" X 3.0" | 0.128" X 3.0" | 0.120" X 2.875" |
| 7.1.3 16d = | 0.162" X 3.5" | 0.135" X 3.5" | 0.148" X 3.250" |
| 7.1.4 20d = | 0.192" X 4.0" | 0.148" X 4.0" | 0.177" X 3.750" |
| 7.1.5 30d = | 0.207" X 4.5" | 0.148" X 4.5" | 0.192" X 4.250" |

   7.2 Staples (2018 IBC 2303.6)
      7.2.1 16 gage = 1.500 .4375 inch crown (ASTM F 1667)
   7.3 Bolts (2018 NDS 12.1.3, Table L1)
      7.3.1 Connector bolts (A307)
      7.3.2 Anchor bolts (A307) with a 3X3X0.229 inch washer (2018 IBC 2308.3.1) and 7" min embedment
      7.3.3 Bolt holes shall be drilled with a bit 1/32 inch to 1/16 inch larger than the nominal bolt diameter.
   7.4 Lag Screws (2018 NDS 12.1.4, Table L2) (A307)
      7.4.1 Lag screws shall be inserted in a drilled pilot hole that is 60%-75% of the shank diameter by turning with a wrench. Do not drive screws with a hammer. Lag screws shall be provided with an oversized washer.
   7.5 Fasteners in preservative treated and fire-retardant treated wood shall be of hot dipped zinc coated galvanized steel, silicon bronze or copper (2018 IBC 2304.10.5)
   7.6 Sheathing fasteners shall be driven so the head or crown is flush with the sheathing surface (2018 IBC 2304.10.2)
8. Joist hangers and connectors (2018 IBC 2303.5)
   8.1 Hanger hardware and other wood connections shall be designed to carry the capacity of the supporting members.
9. Floor framing (2018 IBC 2308.4.2)
   9.1 Joists shall not have less than 1.5 inches of bearing on wood or metal, or less than 3 inches on masonry (2018 IBC 2308.4.2.2). Pre-fabricated wood I-joists shall have minimum bearing according to the manufacturer's recommendations and specifications.
   9.2 Joists shall be supported laterally at the ends and at each support by full depth solid blocking, except where nailed to a header or band or rim joist. Solid blocking shall not be less than 2 inches thick (2018 IBC 2308.4.2.3).
   9.3 Where the nominal depth to thickness ratio of the framing member exceeds 6:1, there shall be one line of bridging for each 8 feet of span. Bridging shall consist of not less than 1X3 inch lumber, metal bracing, or full-depth solid blocking (2018 IBC 2308.4.6).
   9.4 Notches on the ends of joists shall not exceed one fourth the joist depth. Holes bored in joists shall not be within 2 inches of the top or bottom of the joist. Notches in the top or bottom of joists shall not exceed one-sixth the depth and shall not be located in the middle third of the span (2018 IBC 2308.4.2.4)
   9.5 The diameter of holes bored or cut into structural floor members shall not exceed one third the depth of the member. Holes shall not be closer than 2 inches to the top or bottom of the member, or to any other hole located in the member. Where the member is also notched, the hole shall not be closer than 2 inches to the notch (R502.8.1)
10. Wall construction (2018 IBC 2308.5)
   10.1 Studs shall be placed with their wide dimension perpendicular to the wall. Not less than three studs shall be installed at each corner of an exterior wall (2018 IBC 2308.5.2).
   10.2 Bearing and exterior wall studs shall be capped with 2-inch thick nominal double top plates, have a width at least equal to the width of the studs, and shall be installed to provide overlapping at corners and intersections with other partitions. End joints in partitions shall be offset at least 48 inches, and shall be nailed with not less than eight 16d common face nails on each side of the joint. (2018 IBC 2308.5.3.2)
   10.3 In nonbearing walls and partitions studs shall be capped with no less than a single top plate installed to provide overlapping at corners and at intersections with other walls and partitions. The plate shall be continuously tied at joints by solid blocking at least 16 inches in length and equal in size to the plate or metal ties with spliced sections fastened on each side of the joint (2018 IBC 2308.5.4).
   10.4 Studs shall have full bearing on a 2-inch thick nominal (or larger) bottom plate or sill having a width at least equal to the width of the stud (2018 IBC 2308.5.3.1).
   10.5 Bearing partitions parallel to joists shall be supported on beams, girders, doubled joists, walls or other bearing partitions. Bearing partitions perpendicular to joists shall not be offset from supporting girders, walls or partitions more than the joist depth unless noted otherwise (2018 IBC 2308.4.5).
   10.6 In exterior walls and bearing partitions, any wood stud is permitted to be cut or notched to a depth not exceeding 25 percent of its width. In nonbearing partitions, cutting or notching of studs to a depth of not greater than 40 percent of the width is permitted (2018 IBC 2308.5.9).
   10.7 A hole with a diameter not greater than 40 percent of the stud width is permitted to be bored in any wood stud. In no case shall the edge of the bored hole be nearer than 0.625 inches to the edge of the stud. Bored holes shall not be located at the same section of stud as a cut or notch (2018 IBC 2308.5.10).
   10.8 Bearing walls without wood sheathing or gypsum wall board on either side shall have blocking between wall studs at mid height.
   10.9 Studs shall be spaced at 16 inches on center for exterior walls, interior bearing walls, and shear walls, unless noted otherwise on the plans.
11. Posts and columns
   11.1 Columns shall be as wide as the member they support, laterally supported at all floor levels, and extend down through the structure to the foundation. Provide squash blocking at rim joist below all columns, trimmers, and posts.
   11.2 Wood columns and posts shall be framed to provide full end bearing (2018 IBC 2304.10.7).
   11.3 Posts and columns shall be supported by concrete piers or metal pedestals projecting above concrete or masonry floors or decks exposed to weather or water splash, or in basements, and which support permanent structures, unless naturally durable or preservative treated wood is used. The pedestal shall project at least 6 inches above exposed earth and at least 1 inch above floors.
12. Roof and ceiling framing (2018 IBC 2308.7)
   12.1 Roof rafters and ceiling joists shall be supported laterally to prevent rotation and lateral displacement in accordance with 2018 IBC 2308.7.8.
   12.2 Rafters and joists over three feet long shall be supported using hanger hardware if not supported by bearing.

**PREFABRICATED METAL PLATE WOOD TRUSSES**

1. Prefabricated metal plate wood trusses shall be designed in accordance with 2018 IBC 2303.4 and shall conform to the structural specifications and design criteria.
2. The truss designer shall provide a truss package that includes the following items:
   2.1 Design drawings of each individual truss (2018 IBC 2303.4.3)
   2.2 Truss placement diagram for the project (2018 IBC 2303.4.2)
   2.3 Truss member permanent bracing specification (2018 IBC 2303.4.1.2)
3. Transfer of loads and anchorage of each truss to the supporting structure shall be approved by the registered design professional in responsible charge (2018 IBC 2303.4.4)
4. Truss members and components shall not be cut, notched, drilled, spliced or otherwise altered in any way without written concurrence and approval of the registered design professional in responsible charge. Alterations resulting in the addition of loads to any member (e.g. HVAC equipment) shall not be permitted without verification that the truss is capable of supporting such additional loading (2018 IBC 2303.4.5)

**STEEL**

1. Structural steel work shall conform to 2018 IBC 2205, AISC 341-16, AISC 358-16, and AISC 360-16
2. Structural shapes
   2.1 W: fy = 50 ksi (ASTM A992)
   2.2 M,S,C,MC, and L: fy = 36 ksi (ASTM A36)
   2.3 HP: fy = 50 ksi (ASTM A572 Gr. 50)
   2.4 HSS Rectangular: fy = 46 ksi (ASTM A500 Gr.B)
   2.5 HSS Round: fy = 42 ksi (ASTM A500 Gr.B)
   2.6 Pipe: fy = 35 ksi (ASTM A53 Gr.B)
   2.7 All structural steel shall be properly primed and painted
3. Plates and bars: fy = 36 ksi (ASTM A36)
4. Structural fasteners
   4.1 High strength bolts: fu = 120-150 ksi (ASTM F3125)
   4.2 Common bolts: fu = 60 ksi (ASTM A307 Gr. A)
      4.2.1 Nuts (ASTM A563)
      4.2.2 Washers (ASTM F436)
      4.2.3 Steel to steel bolted connections shall be made with high strength bolts, unless noted otherwise. Bolts shall carry the identifying mark of three radial lines. All other bolted connections shall be made with bolts and nuts conforming to ASTM A307 unless note otherwise. Bolted connections shall be tightened and shall have washers as required by AISC unless noted otherwise. Enlarging holes shall be accomplished by means of reaming. Do not use a torch on any bolt holes.
   4.3 Shear studs: fu = 65 ksi (ASTM A108)
   4.4 Threaded rods: fy = 36 ksi (ASTM A36)
   4.5 Anchor rods: fy = 36 ksi (ASTM F1554 Gr. 36)
5. Steel deck: fy = 36 ksi (ASTM A1008)
6. Welding: fu = 70 ksi
   6.1 Welding work shall comply with the American Welding Society (AWS) "Structural Welding Code," excluding items conflicting with AISC requirements.

**STRUCTURAL OBSERVATIONS**

1. Where required by the Provisions of Section 1704.6.1 or 1704.6.2, the owner shall employ a registered design professional to perform structural observations as defined in 2018 IBC 202. Prior to the commencement of observations, the structural observer shall submit to the building official a written statement identifying the frequency and extent of the structural observations. At the conclusion of the work, the structural observer shall submit to the building official a written statement that the site visits have been made and identify any reported deficiencies which have not been resolved (2018 IBC 1704.6).

ACUTE ENGINEERING, INC.

ORIGINAL PROJECT # 6140120
DRAWN BY KZG
CHECKED BY MCW
DATE 29 JAN 2020

DAVID PROCTER ELK RIDGE SALT SHED (ELK RIDGE)

GENERAL STRUCTURAL NOTES

ISSUES / REVISIONS
19 FEB 2020 CLIENT CHANGES
24 JUN 2020 SLAB & FRAMING CHANGES

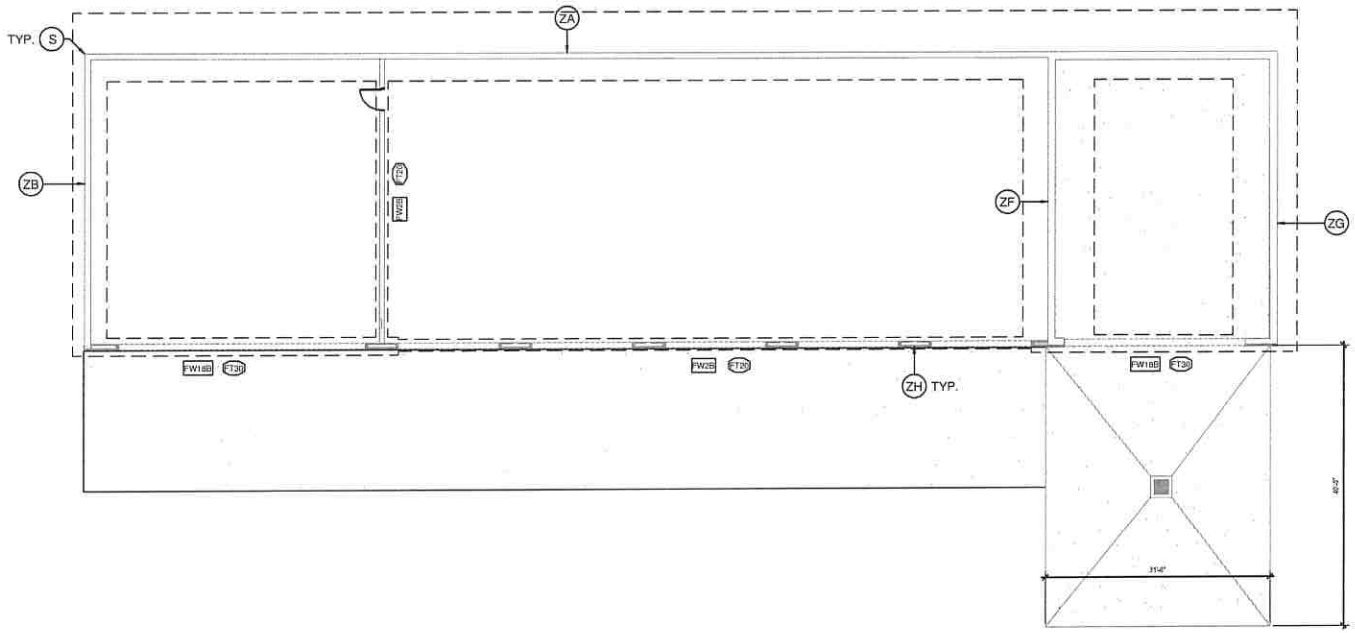
STRUCTURAL ENGINEER PAUL ROLLINS THORLEY 29 Jun 2020 STATE OF UTAH

SN1

| FOOTING SCHEDULE | | | | | |
|---|---|---|---|---|---|
| | | | | REINFORCEMENT | |
| MARK | WIDTH | LENGTH | THICKNESS | TRANSVERSE | LENGTHWISE |
| FT20 | 20" | 20'-0" | 12" | | (2) #4 |
| FT30 | 30" | 30'-0" | 12" | | (3) #4 |
| 1. CONTRACTOR TO VERIFY ALL DIMENSIONS AND SPECIFICATIONS PRIOR TO CONSTRUCTION. | | | | | |
| 2. FOOTINGS AND FOUNDATIONS TO BE PLACED ON UNDISTURBED NATURAL SOIL OR ENGINEERED FILL. | | | | | |

| FOUNDATION WALL SCHEDULE | | | | | |
|---|---|---|---|---|---|
| | | | REINFORCEMENT | | |
| MARK | HEIGHT | WIDTH | VERTICAL | HORIZONTAL | PLACEMENT |
| FW18B | 2'-6" | 18" | #4 @ 48" | (1) #4 | (2) #4 | (1) #4 |
| FW18E | 18" | 18" | #5 @ 48" | (1) #4 | (2) #4 | (1) #4 |
| 1. CONFIRM SOIL BEARING AND FOOTING. | | | | | |
| 2. PLACE TOP REBAR 1.5" BELOW TOP OF FOUNDATION WALL. | | | | | |
| 3. PLACE #5 REBAR 48" IN CENTER OF WALL OPENINGS (EACH SIDE). | | | | | |

FROM CONTRACTOR'S ALTERNATE SALT STORAGE BAY AS NEGOTIATED PRIOR TO BID ITEM 1 & 2 AREAS




FOOTING AND FOUNDATION PLAN

1/8" = 1'-0"


ACUTE ENGINEERING, INC.
1448 S. 400 E.
Orem, UT 84097
Phone: 801.229.9620
Fax: 801.224.0791
info@acuteengineering.com



THESE STRUCTURAL DRAWINGS ARE BASED ON THE ACTIVE 2015 IBC. THEY ORIGINALLY CAME FROM CODE OR REFERENCE.

OUR WORK IMPLIES THAT EACH AND EVERY STAMP ON THE SHEETS OF THE SET IS ACTUALLY THERE AND THE PROPER SEAL IS ON THE CONTRACTOR'S PLAN AND THE PROPER SEAL IS ON THE CONTRACTOR'S PLAN AND THE PROPER SEAL IS ON THE ARCHITECT'S PLAN AND THE PROPER SEAL IS ON THE STRUCTURAL DRAWINGS.


ORIGINAL PROJECT #
6146170
DRAWN BY
KZG
DESIGN BY
MCW
SCALE
1/8" = 1'-0"
DATE
29 JAN 2020

DAVID PROCTER ELK RIDGE SALT SHED (ELK RIDGE)

FOOTING AND FOUNDATION PLAN

ISSUES / REVISIONS

15 FEB 2021 [illegible]
CLIENT CHANGES

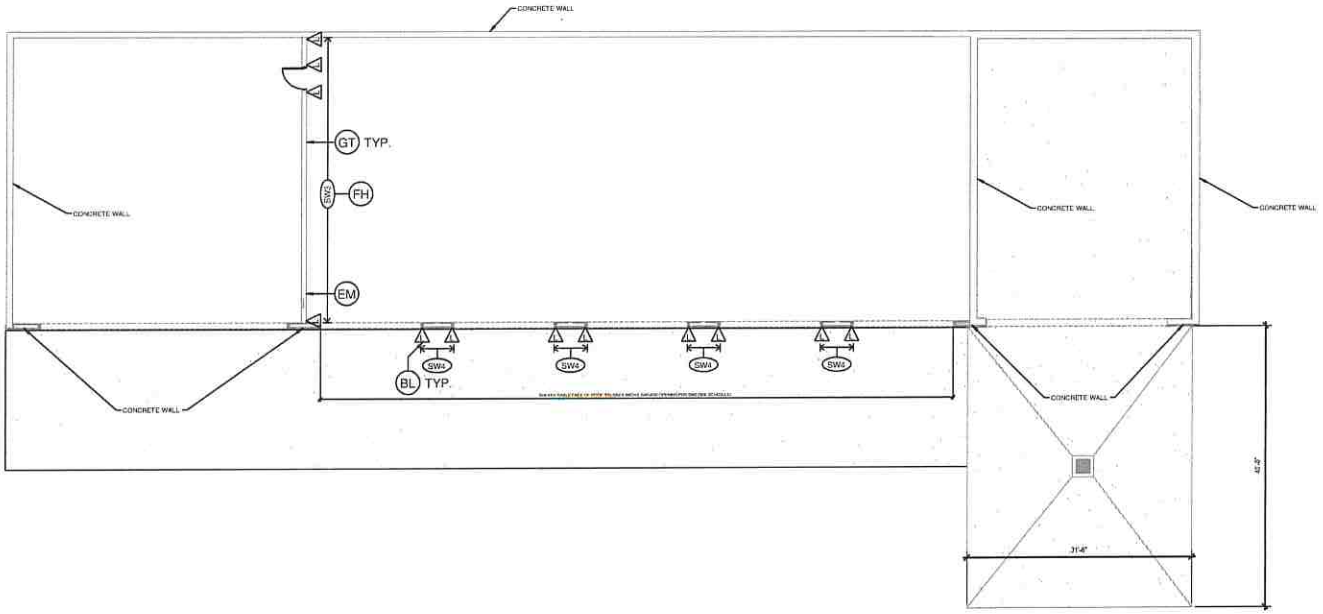
24 JUN 2020 [illegible]
SUMB & HAMPIG CHANGES

NATIONAL PAUL ROLLING THORLEY
25 JUN 2020
STATE OF UTAH

S0.0

| HOLD-DOWN SCHEDULE | | | | |
|---|---|---|---|---|
| MARK | HOLD-DOWN | MINIMUM FASTENERS | ANCHOR | POST |
| 1. | HDU8-SDS2.5 | SDS2.5" X 2 1/2" (MINIMUM) | SB5-4424 | (2) 2X POST |
| 1. HOLD-DOWNS SHALL BE SIMPSON STRONG-TIE COMPANION UNIT. | | | | |
| 2. SHEAR WALL STUD MAY NOT SPLICE (E. EXCEPT AT DOWN POST | | | | |
| 3. STRUCTURAL SHALL BE "SLC TYPE A" ANCHOR LOCATIONS | | | | |

| SHEAR WALL SCHEDULE | | | | | |
|---|---|---|---|---|---|
| MARK | SHEATHING | EDGE NAILING | ABUTTING PANEL EDGE FENDING | ANCHORAGE | |
| | | | | SILL PLATE | SILL PLATE |
| SW2 | 7/16" | 6x @ 4" | 2x | 1/2x @ 12" | 1/2" X 6 @ 12" |
| SW3 | 7/16" | 6x @ 3" | 2x or (2)2x | 1/2x @ 12" | 1/2" X 6 @ 12" |
| SW4 | 7/16" | 6x @ 2" | 2x or (2)2x | 2x @ 12" | 1/2" X 6 @ 12" |
| 1. SHEATHING NAILS SHALL BE SPACED TO MAXIMUM PANEL EDGE SPAN. | | | | | |
| 2. SHEETED WOOD SHEARWALL THROUGH STRUCTURAL BAND SHALL BE SPACED AT 12" O.C. | | | | | |
| 3. SHEATHING NAILS SHALL BE COMMON OR DEFORMED SHANK TO EDGE PANEL. (10) EDGE NAILS SPACING SHALL BE 12" FOR LINEAL SPACING 24" O.C. (8) EDGE NAILS SPACING 16" O.C. FOR LINEAL SPACING AT 24" O.C. | | | | | |
| 4. FOR DOWN UNIT, USE INSTALLATION TYPE FOR LIMITED EDGE NAILS. (4) NAILS SPACED AT 6" O.C. AND (2) NAILS MAY BE OMITTED TO BE IN LINEAL SPACING AT 12" O.C. | | | | | |
| 5. ANCHORAGE NAILS SHALL BE COMMON NAILS | | | | | |
| 6. ANCHORAGE PLATE SHALL HAVE A SATISFACTORY MATCH WITH WALL MATERIAL. USE MINIMUM FASTENERS AS NOTED ON THE DETAILS. | | | | | |
| 7. FOR SHEAR, DIAG. DIAG. MAY CONTROL. MEMBER FRAMING OVER THE WALL TO BLOCK THE SHEARWALL FOR WALLS @ 4, MAY BE SPACED AT ABUTTING PANEL EDGE IN PLACE OF THE NORMAL FENDING. | | | | | |




MAIN FLOOR SHEAR WALL PLAN

1/8" = 1'-0"


ACUTE ENGINEERING, INC.
144 S 400 E
Orem, UT 84097
Phone (801) 224-9020
Fax (801) 224-0944
e-mail@acuteengineering.com



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ORIGINAL PROJECT #
6140120
DRAWN BY
KDS
CHECKED BY
MCW
SCALE
1/8" = 1'-0"
DATE
29 JAN 2020

DAVID PROCTER ELK RIDGE SALT SHED (ELK RIDGE)

MAIN FLOOR SHEAR WALL PLAN

ISSUES / REVISIONS

19 FEB 2020 - 2nd CCD CLIENT CHANGES

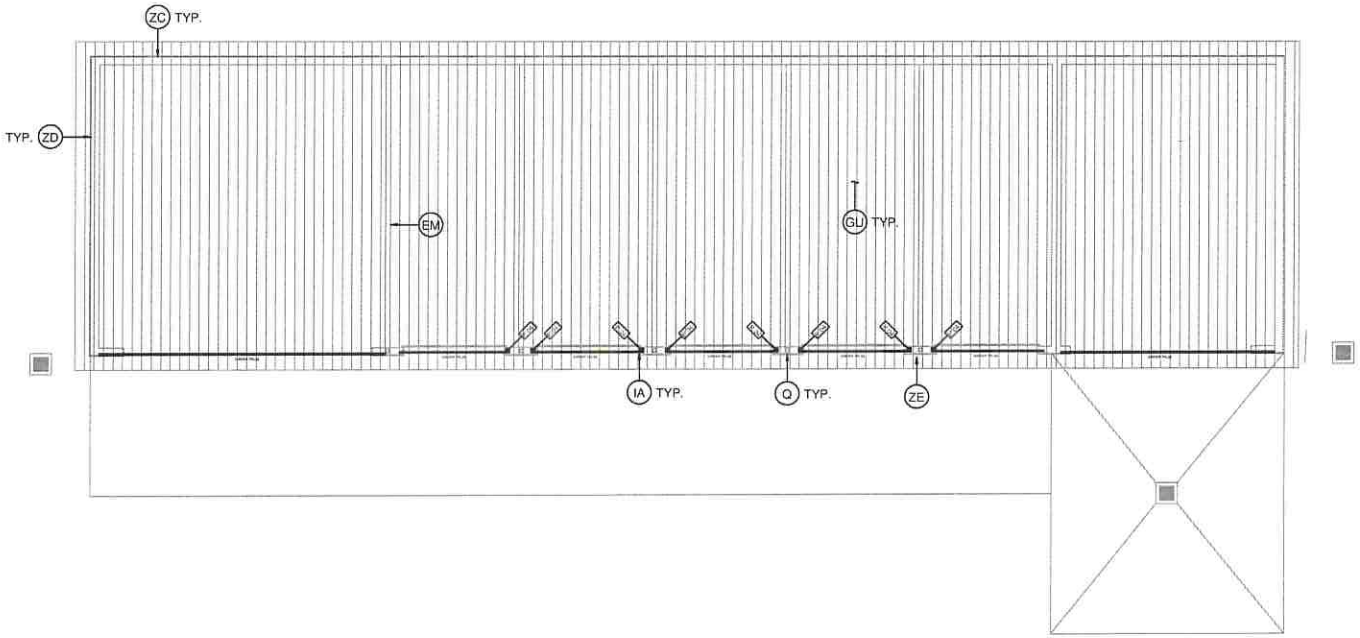
24 JUN 2020 - 60 60620 SLAB & FOUNDATION CHANGES

LICENSED PROFESSIONAL ENGINEER
NEIL FRANK HOLLINS THORLEY
29 Jun 2020
STATE OF UTAH

S1.1

| SHEATHING SCHEDULE | |
|---|---|
| TYPE | THICKNESS |
| [illegible] | [illegible] |
| 1. [illegible] | |
| 2. [illegible] | |
| 3. [illegible] | |
| 4. [illegible] | |

| POST SCHEDULE | |
|---|---|
| MARK | TYPE |
| P-04 | [illegible] POST |
| 1. [illegible] | |
| 2. [illegible] | |
| 3. [illegible] | |
| 4. [illegible] | |
| 5. [illegible] | |




ROOF FRAMING PLAN

1/8" = 1'-0"


ACUTE ENGINEERING, INC.
[illegible]
Phone [illegible]
Fax [illegible]
[illegible]



[illegible]


ORIGINAL PROJECT #
6140120
DRAWN BY
KZG
CHECKED BY
MCW
SCALE
1/8" = 1'-0"
DATE
29 JAN 2020

DAVID PROCTER ELK RIDGE SALT SHED (ELK RIDGE)

ROOF FRAMING PLAN

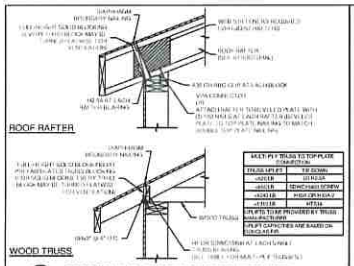
ISSUES / REVISIONS

19 FEB 2020 [illegible]
CLIENT CHANGES

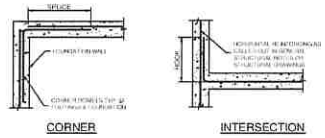
24 JUN 2020 [illegible]
SLAB & FRAMING CHANGES

PROFESSIONAL STRUCTURAL ENGINEER
NO. 17844
PAUL ROLLINS THORLEY
29 Jun 2020
STATE OF UTAH

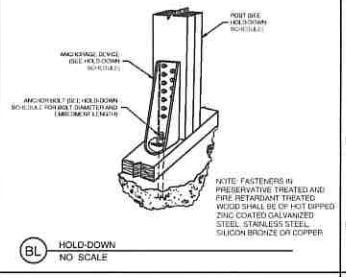
S3.0



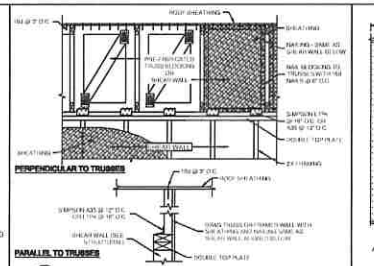

Q ROOF FRAMING - BLOCKING (150 PLF UNIT SHEAR)
NO SCALE



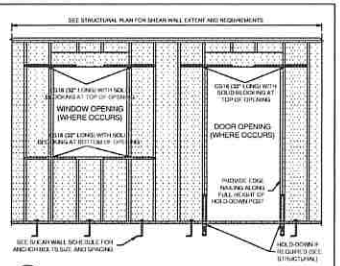

S FOUNDATION WALL - CORNER & INTERSECTION REINFORCING
NO SCALE



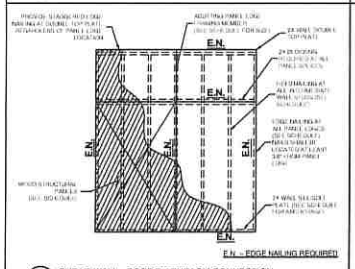

BL HOLD-DOWN
NO SCALE



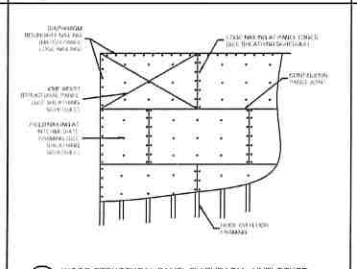

EM SHEAR WALL - ROOF DIAPHRAGM CONNECTION
NO SCALE



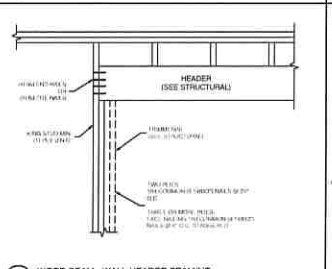

FH SHEAR WALL - FORCE TRANSFER AROUND OPENINGS
NO SCALE



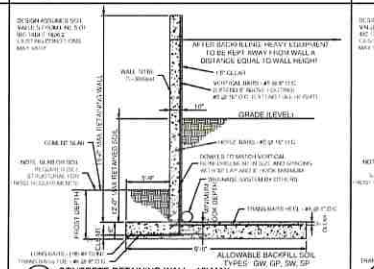

GT SHEAR WALL - ROOF DIAPHRAGM CONNECTION
NO SCALE



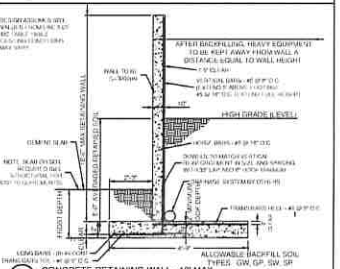
GU WOOD STRUCTURAL PANEL DIAPHRAGM - UNBLOCKED
NO SCALE



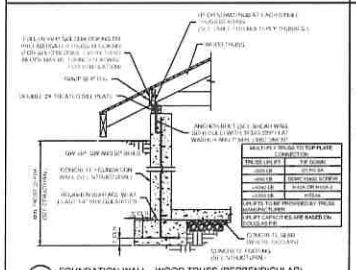

IA WOOD BEAM - WALL HEADER FRAMING
NO SCALE



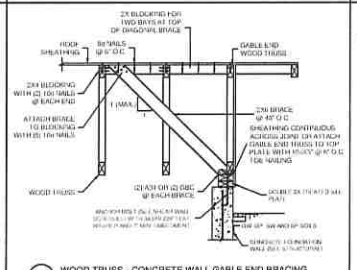

ZA CONCRETE RETAINING WALL - 18' MAX
NO SCALE



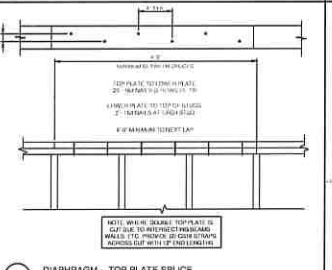

ZB CONCRETE RETAINING WALL - 18' MAX
NO SCALE



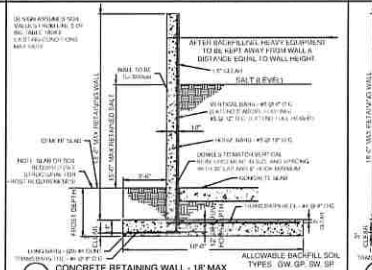

ZC FOUNDATION WALL - WOOD TRUSS (PERPENDICULAR)
NO SCALE



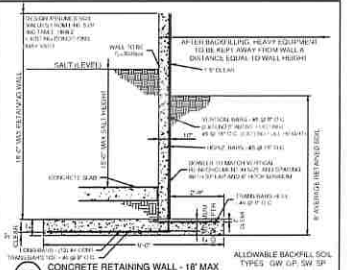

ZD WOOD TRUSS - CONCRETE WALL GABLE END BRACING
NO SCALE



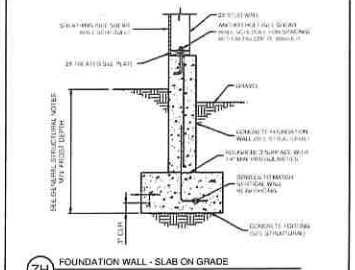

ZE DIAPHRAGM - TOP PLATE SPLICE
NO SCALE



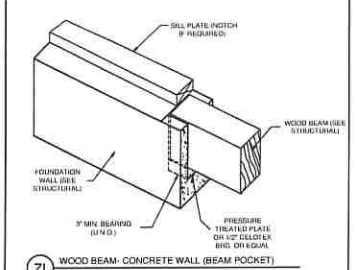

ZF CONCRETE RETAINING WALL - 18' MAX
NO SCALE




ZG CONCRETE RETAINING WALL - 18' MAX
NO SCALE




ZH FOUNDATION WALL - SLAB ON GRADE
NO SCALE




ZI WOOD BEAM- CONCRETE WALL (BEAM POCKET)
NO SCALE

ACUTE ENGINEERING, INC.
1445 W 6
Orem, UT 84057
Phone 801.229.1922
Fax 801.224.4996
email@acuteengineering.com

ORIGINAL PROJECT #
6140120
DRAWN BY
KZG
CHECKED BY
MGW
SCALE
DATE
29 JAN 2020

DAVID PROCTER ELK RIDGE SALT SHED (ELK RIDGE)

STRUCTURAL DETAILS

ISSUES / REVISIONS
19 FEB 2020 - 2ND ISSUE CLIENT CHANGES
24 JUN 2020 - 60 DAYS SEAL & FOR PERMIT CHANGES

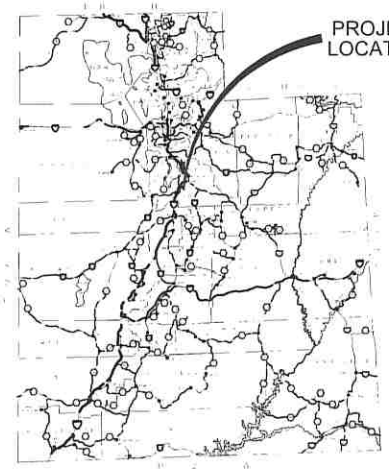
SD1

# DRAWINGS
# FOR
# ELK RIDGE CITY

# STORAGE AND SALT BUILDING PROJECT

## BID SET

**SEPTEMBER 2020**




LOCATION MAP

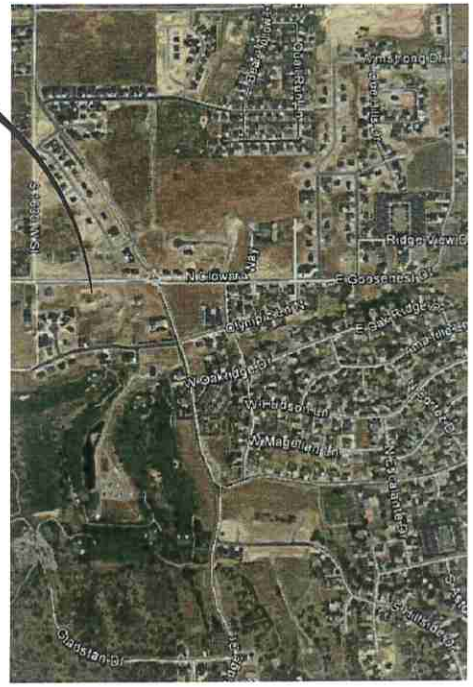
### DRAWING INDEX

| DWG# | SHT# | |
|---|---|---|
| | | GENERAL |
| G-1 | - | COVER AND SHEET INDEX |
| G-2 | - | LEGEND, SYMBOLS, & ABBREVIATIONS |
| G-3 | - | GENERAL NOTES |
| | | CIVIL |
| C-1 | - | SITE UTILITY AND GRADING PLAN |
| | | DETAILS |
| CD-1 | - | CIVIL |
| CD-2 | - | CIVIL |


ELK RIDGE CITY
80 EAST PARK DRIVE
ELK RIDGE, UT 84651
801-423-2300

AQUA ENGINEERING
533 W 2600 S, SUITE 275, BOUNTIFUL, UT 84010
PHONE (801) 299-1327 FAX (801) 299-0163


REGISTERED PROFESSIONAL ENGINEER
No.5252489
DARIN M. HAWKES
09/16/2020
STATE OF UTAH




VICINITY MAP


KRB 09/20/2020 W:\Elk Ridge\Special City Projects\Public Works Storage Structures\001582.C Salt Storage Facility\Drafting\General\G-1.dwg

# LEGEND

| PLAN VIEW | EXISTING | PROPOSED |
|---|---|---|
| PROPERTY OR R/W LINE | | |
| EASEMENT LINE | | |
| FENCE | | |
| EDGE OF ASPHALT | | |
| EDGE OF CONCRETE | | |
| EDGE OF GRAVEL | | |
| CONTOUR LINE | 4250 | 4250 |
| SPOT ELEVATION | 4200.00 | 550.00 TOA |
| STORM DRAIN LINE | SD | SD |
| WATER LINE | W | W |
| GAS LINE | G | G |
| TELEPHONE CABLE | T | T |
| ELECTRIC CABLE | E | E |
| SANITARY SEWER LINE | SS | SS |
| FIRE HYDRANT | | |
| WATER VALVE | WV | WV |
| WATER METER | WM | WM |
| MANHOLE | | |
| CATCH BASIN | CB | |
| CLEAN OUT BOX | COB | |
| OVERHEAD POWER LINE | OP | OP |
| POLE & ANCHOR | | |
| STREET LIGHT | | |
| STRUCTURE | | |
| ASPHALT PAVING | | |
| CONCRETE PAVING | | |
| GRAVEL PAVING | | |
| FLOW DIRECTION | | |

**NOTICE:**

EXISTING UTILITIES ARE SHOWN ON PLANS FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES. THE ENGINEER BEARS NO RESPONSIBILITY FOR THE UTILITIES NOT SHOWN OR SHOWN INCORRECTLY.

AVOID CUTTING UNDERGROUND UTILITIES. IT'S COSTLY

**Call BLUE STAKES** BEFORE YOU **Dig**

1-800-662-4111

UNDERGROUND SERVICE (USA)

# ABBREVIATIONS

| | |
|---|---|
| @ | AT |
| # | DIAMETER |
| AB | ANCHOR BOLT |
| ABUT | ABUTMENT |
| AC | ASBESTOS CEMENT PIPE OR ASPHALT CONCRETE |
| AL | AIR LINE |
| ALUM | ALUMINUM |
| ASPH | ASPHALT |
| ADT | AVERAGE DAILY TRAFFIC |
| APPROX | APPROXIMATELY |
| AZ | AZIMUTH |
| BAL | BALANCE |
| BEG | BEGINNING / BEGIN |
| BDRY | BOUNDARY |
| BK | BACK |
| BKFL | BACKFILL |
| BLD FLG | BLIND FLANGE |
| BLDG | BUILDING |
| BLM | BUREAU OF LAND MANAGEMENT |
| BM | BENCH MARK |
| BLK | BLOCK |
| BOD | BLOCK |
| BOT | BOTTOM |
| BRG | BEARING |
| BSMT | BASEMENT |
| BTWN | BETWEEN |
| CALC | CALCULATED |
| CB | CATCH BASIN |
| CCW | COUNTER CLOCKWISE |
| C-C | CENTER TO CENTER |
| C&G | CURB AND GUTTER |
| CFS | CUBIC FEET PER SECOND |
| CJ | CONSTRUCTION JOINT |
| CL | CENTERLINE |
| CLR | CLEARANCE |
| CIP | CAST IRON PIPE |
| CMP | CORRUGATED METAL PIPE |
| CMP-A | CORRUGATED METAL PIPE-ARCH |
| CO | CLEAN OUT |
| COB | CLEAN OUT BOX |
| COL | COLUMN |
| CONC | CONCRETE |
| CONN | CONNECT |
| COR | CORNER |
| CTR | CENTER |
| CU FT | CUBIC FEET |
| CU YD | CUBIC YARD |
| CUL | CULINARY |
| CULV | CULVERT |
| CW | CLOCKWISE |
| D | DEGREE |
| DET | DETAIL |
| DIA | DIAMETER |
| DIP | DUCTILE IRON PIPE |
| DIST | DISTANCE |
| DL | DRAIN LINE |
| DMH | DRAINAGE MANHOLE |
| DN | DOWN |
| DWG | DRAWINGS |
| E | EAST |
| EA | EACH |
| EB | ELECTRICAL BOX |
| EG | EDGE OF GRAVEL |
| ELEV | ELEVATION |
| ELEC | ELECTRIC / ELECTRICAL |
| EMB | EMBANKMENT |
| EMH | ELECTRICAL MANHOLE |
| ENGR | ENGINEER |
| ENT | ENTRANCE |
| EO | EDGE OF OIL |
| EOA | EDGE OF ASPHALT |
| EQUIP | EQUIPMENT |
| ES | EDGE OF SHOULDER |
| EST | ESTIMATE |
| EW | EACH WAY |
| EXC | EXCAVATION |
| EX | EXISTING |
| FEN COR | FENCE CORNER |
| FE | FIRE EXTINGUISHER |
| FD | FLOOR DRAIN |
| FDN | FOUNDATION |
| FF | FINISHED FLOOR |
| FG | FINISHED GRADE |
| FH | FIRE HYDRANT |
| FIN | FINISH |
| FLG | FLANGE |
| FLR | FLOOR |
| FRP | FIBERGLASS REINFORCED PIPE |
| FT | FEET |
| FTG | FOOTING |
| G | GAS |
| GA | GAGE OR GAUGE |
| GALV | GALVANIZED |
| GEN | GENERAL |
| GLB | GLUED LAMINATED BEAM |
| GM | GAS METER |
| GSP | GALVANIZED STEEL PIPE |
| GV | GATE VALVE |
| HC | HYPOCHLORITE |
| HDG | HOT DIPPED GALVANIZED |
| HDWL | HEADWALL |
| H&T | HUB & TACK |
| HX | HEAT EXCHANGER |
| HORIZ | HORIZONTAL |
| HSS | HOLLOW STRUCTURAL SECTION |
| HWL | HIGH WATER LEVEL |
| HWY | HIGHWAY |
| HYD | HYDRANT |
| ID | INSIDE DIAMETER |
| IJ | ISOLATION JOINT |
| IN | INCH |
| INFO | INFORMATION |
| IRR | IRRIGATION |
| INV | INVERT |
| JCT | JUNCTION |
| L | LENGTH |
| LB | POUND |
| LIC | LICENSE |
| LIN | LINEAR / LINEAL |
| LP | LIGHT POLE |
| LS | LAND SURVEYOR |
| LT | LEFT |
| LWL | LOW WATER LEVEL |
| MAINT | MAINTENANCE |
| MATL | MATERIAL |
| MAX | MAXIMUM |
| MB | MACHINE BOLT |
| MKR | MARKER |
| MH | MANHOLE |
| MI | MILE |
| MIN | MINIMUM |
| MJ | MECHANICAL JOINT |
| ML | MIXED LIQUOR |
| MISC | MISCELLANEOUS |
| MON | MONUMENT |
| MPH | MILES PER HOUR |
| N | NORTH |
| NO OR # | NUMBER |
| NPW | NON-POTABLE WATER |
| NTS | NOT TO SCALE |
| OC | ON CENTER |
| OD | OUTSIDE DIAMETER |
| O-O | OUTSIDE TO OUTSIDE |
| OFF REV | OFFICE REVISION |
| ORIG | ORIGINAL |
| OSB | ORIENTED STRAND BOARD |
| PVMT | PAVEMENT |
| PC | POINT OF CURVATURE |
| PCC | POINT OF COMPOUND CURVATURE |
| PD | POND EFFLUENT |
| PE | PLANT EFFLUENT |
| PERF | PERFORATED |
| PI | POINT OF INTERSECTION |
| PI | PRIMARY INFLUENT |
| PL | PROPERTY LINE |
| POC | POINT ON CURVE |
| PP | POWER POLE |
| PRC | POINT OF REVERSE CURVE |
| PROJ | PROJECT |
| PROP | PROPERTY |
| PS | PUMP STATION |
| PSF | POUNDS PER SQUARE FOOT |
| PSI | POUNDS PER SQUARE INCH |
| PT | POINT OF TANGENCY |
| POB | POINT OF BEGINNING |
| PVC | POLYVINYL CHLORIDE |
| PW | POTABLE WATER |
| QTY | QUANTITY |
| R | RANGE / RADIUS |
| RAS | RETURN ACTIVATED SLUDGE |
| RCP | REINFORCED CONCRETE PIPE |
| RCCP | REINFORCED CONCRETE CYLINDER PIPE |
| RD | ROAD |
| REF | REFERENCE |
| REINF | REINFORCED |
| REQ'D | REQUIRED |
| REV | REVISION |
| RP | REFERENCE POINT |
| RR | RAILROAD |
| RT | RIGHT / ROUTE |
| R/W | RIGHT OF WAY |
| S | SOUTH / SLOPE |
| SAN | SANITARY |
| SCH | SCHEDULE |
| SD | STORM SEWER |
| SEC COR | SECTION CORNER |
| SHT | SHEET |
| SJ | SAWED JOINT |
| SKT | SOCKET |
| SL | SOLIDS LINE |
| SOVFL | SURFACE OVERFLOW |
| SPECS | SPECIFICATIONS |
| SQ | SQUARE |
| SQ FT | SQUARE FEET |
| SQ YD | SQUARE YARD |
| SS | STAINLESS STEEL |
| SE | SECONDARY EFFLUENT |
| ST | STREET |
| STL | STEEL |
| STN STL | STAINLESS STEEL |
| STA | STATION |
| STD | STANDARD |
| STRUCT | STRUCTURE |
| T | TOWNSHIP / TELEPHONE |
| TAN | TANGENT |
| TBC | TOP BACK CURB |
| TEMP | TEMPORARY |
| TELE | TELEPHONE / TELEGRAM |
| THD | THREADED |
| THK | THICK |
| TKN | TOTAL KIELDAHL NITROGEN |
| TOA | TOP OF ASPHALT |
| TOC | TOP OF CONCRETE |
| TOF | TOP OF FOOTING |
| TOG | TOP OF GRAVEL |
| TOP | TOP OF PIER |
| TOS | TOP OF SLAB |
| TOW | TOP OF WALL |
| TP | TELEPHONE POLE |
| TSS | TOTAL SUSPENDED SOLIDS |
| TYP | TYPICAL |
| UB | UTILITY BOX |
| UG | UNDERGROUND |
| UNO | UNLESS NOTED OTHERWISE |
| UW | UTILITY WATER |
| VC | VERTICAL CURVE |
| VERT | VERTICAL |
| VIC | VICTAULIC COUPLING |
| VOL | VOLUME |
| VPI | VERTICAL POINT OF INTERSECTION |
| VPC | VERTICAL POINT OF CURVE |
| VPT | VERTICAL POINT OF TANGENCY |
| VSS | VOLITILE SUSPENED SOLIDS |
| W | WEST / WATER |
| WAS | WASTE ACTIVATED SLUDGE |
| WM | WATER METER |
| WO | WEIR OVERFLOW |
| W/ | WITH |
| W/O | WITHOUT |
| XING | CROSSING |
| X-SEC | CROSS SECTION |
| YH | YARD HYDRANT |

# SECTION AND DETAIL IDENTIFICATION

**SECTION IDENTIFICATION**

SECTION LETTER — B — DRAWING NUMBER ON WHICH SECTION APPEARS — 2

B / 2 **SECTION** B / 4

SECTION LETTER — DRAWING NUMBER FROM WHICH SECTION WAS TAKEN

**DETAIL IDENTIFICATION**

DETAIL NUMBER — SEE DETAIL — 5 — DRAWING NUMBER ON WHICH DETAIL APPEARS — 3

5 / 3 **DETAIL** 5 / 4

DETAIL NUMBER — DRAWING NUMBER FROM WHICH DETAIL WAS TAKEN

NOTE: IF PLAN AND SECTION (OR DETAIL REFERENCE AND DETAIL) ARE SHOWN ON THE SAME DRAWING, THE DRAWING NUMBER IS REPLACED WITH A LINE.

## SECTION AND DETAIL NOTES:

REGISTERED PROFESSIONAL ENGINEER No.5252489 DARIN M. HAWKES 09/16/2020 STATE OF UTAH

0 1/2 1

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

| NO. | DATE | DESIGN | DRAWN | CHECKED |
|---|---|---|---|---|
| B | 09/16/20 | DMH | DCH | DMH |

REVISIONS

ELK RIDGE CITY

STORAGE AND SALT BUILDING PROJECT

GENERAL

LEGEND, SYMBOLS, AND ABBREVIATIONS

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633 W 2600 S, SUITE 275, BOUNTIFUL, UT 84010
PHONE (801) 298-1327 FAX (801) 298-0163

SHEET G-2

## GENERAL NOTES

1. THE CONTRACTOR SHALL EXAMINE THE DRAWINGS AND SHALL NOTIFY THE OWNER OF ANY DISCREPANCIES OR CONFLICTS BEFORE PROCEEDING WITH THE WORK.
2. THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS AT THE SITE AND SHALL NOTIFY THE ENGINEER OF DISCREPANCIES BETWEEN THE ACTUAL CONDITIONS AND INFORMATION SHOWN ON THE DRAWINGS BEFORE PROCEEDING WITH THE WORK.
3. ALL WORK SHALL CONFORM TO AT LEAST THE MINIMUM STANDARDS OF THE INTERNATIONAL BUILDING CODE (LATEST EDITION) AND OTHER REGULATORY AGENCIES EXERCISING AUTHORITY OVER ANY PORTION OF THE WORK WHERE APPLICABLE.
4. SPECIFIC NOTES AND DETAILS SHALL TAKE PRECEDENCE OVER GENERAL NOTES, TYPICAL DETAILS AND SPECIFICATIONS.
5. THE CONTRACTOR SHALL REFER TO THE TECHNICAL PROVISIONS FOR INFORMATION NOT COVERED BY THESE GENERAL NOTES OR THE DRAWINGS.
6. THE CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE TEMPORARY ERECTION OF BRACING AND SHORING AS REQUIRED FOR STABILITY OF STRUCTURES AND EXCAVATIONS DURING ALL PHASES OF CONSTRUCTION.
7. PROJECT HORIZONTAL AND VERTICAL DATUM ARE SHOWN ON SHEET C-1.
8. A BUILDING PERMIT SHALL BE OBTAINED FROM THE CITY. THE CONTRACTOR SHALL COMPLY WITH THE BUILDING PERMIT AND COORDINATE THROUGHOUT CONSTRUCTION.
9. THE CONTRACTOR SHALL BE REQUIRED TO FURNISH ALL TEMPORARY WATER, POWER, OR OTHER UTILITIES AS REQUIRED TO COMPLETE CONSTRUCTION OF THE PROJECT AS DETAILED. WATER FOR COMPACTION, FLUSHING AND HYDROSTATIC TESTING WILL BE SUPPLIED BY THE OWNER AT NO CHARGE TO THE CONTRACTOR. THE CONTRACTOR WILL NEED TO OBTAIN A HYDRANT METER FROM THE CITY TO MONITOR USAGE THROUGHOUT CONSTRUCTION.
10. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ALL FLAGGING, BARRICADES AND TRAFFIC CONTROL AS MAY BE NECESSARY TO ENSURE SAFETY TO THE GENERAL PUBLIC DURING CONSTRUCTION. A TRAFFIC CONTROL PLAN SHALL BE DEVELOPED BY THE CONTRACTOR AND SUBMITTED TO THE CITY.
11. THE CONTRACTOR SHALL HOLD A VALID UTAH'S CONTRACTOR'S LICENSE PRIOR TO BEGINNING CONSTRUCTION.
12. THE CONTRACTOR SHALL MAINTAIN CLEAN CONSTRUCTION AREAS. ALL DEBRIS, RUBBISH AND TRASH MUST BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER.
13. THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN A SET OF DRAWINGS AT THE JOB SITE FOR THE PURPOSE OF RECORDING ALL ACTUAL MEASUREMENTS AND DETAILS TO BE USED IN THE PREPARATION OF "AS-BUILTS" OR "RECORD" DRAWINGS. FINAL PAYMENT WILL NOT BE RELEASED UNTIL "AS-BUILTS" OR "RECORD" DRAWINGS HAVE BEEN SUBMITTED TO AND ACCEPTED BY THE ENGINEER.

## PIPING NOTES

1. ALL STORM DRAIN LINES AND FITTINGS SHALL BE HDPE WITH SMOOTH INTERIOR AND CORRUGATED EXTERIOR CONFORMING TO AASHTO M294.
2. ALL BOLTS FOR DIRECT BURY FITTINGS SHALL BE COATED WITH FM GREASE, AND THE ENTIRE FITTING SHALL BE WRAP WITH 8 mil. POLYETHYLENE PRIOR TO BACKFILLING.
3. ALL OPEN ENDS OF PIPE SHALL BE EFFECTIVELY SEALED AT THE END OF THE DAY'S WORK.

## CONCRETE NOTES

1. ALL WORK PERTAINING TO CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318 (LATEST EDITION), ACI 301 (LATEST EDITION), AND THE PROJECT SPECIFICATIONS.
2. ALL STRUCTURAL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI AND CONTAIN 4% TO 6% ENTRAINED AIR. ALL CONCRETE FOR THRUST RESTRAINT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI.
3. NO CONCRETE SHALL BE PLACED WITH A SLUMP IN EXCESS OF 4 INCHES.
4. THE CONTRACTOR SHALL SUBMIT A CONCRETE MIX DESIGN FOR APPROVAL AT LEAST 5 WORKING DAYS BEFORE PLACING ANY CONCRETE PRODUCED WITH THAT MIX DESIGN.
5. AGGREGATE FOR CONCRETE SHALL CONFORM TO ALL THE REQUIREMENTS AND TESTS OF ASTM C33 AND PROJECT SPECIFICATIONS. MAXIMUM AGGREGATE SIZE SHALL BE 1 INCH.
6. ANY USE OF HIGH-EARLY CONCRETE SHALL BE CONTINGENT ON ENGINEER'S APPROVAL WHICH SHALL BE BASED ON TIMELY SUBMITTAL OF MIX DESIGN PRIOR TO PLACEMENT.
7. ALL CONCRETE PLACEMENTS SHALL BE SCHEDULED AT LEAST 24 HOURS IN ADVANCE TO ALLOW SCHEDULING OF FIELD TESTING. ALL CONCRETE TESTING SHALL BE PROVIDED BY THE OWNER.
8. EXCEPT AS OTHERWISE NOTED, EXPOSED CONCRETE CORNERS AND EDGES SHALL HAVE 3/4" CHAMFERS.
9. ALL REINFORCING STEEL DOWELS, ANCHOR BOLTS, AND OTHER INSERTS OR EMBEDMENTS SHALL BE SECURED IN POSITION PRIOR TO PLACING CONCRETE.
10. CONCRETE SHALL NOT BE ALLOWED TO DROP MORE THAN 6 FEET VERTICALLY DURING PLACEMENT. TREMIE HOSES AND CHUTE EXTENSIONS SHALL BE USED TO ALLOW CONCRETE TO BE PLACED AS CLOSE TO ITS FINAL RESTING POSITION AS POSSIBLE.
11. INTERNAL VIBRATORS SHALL BE USED TO CONSOLIDATE ALL PLACED CONCRETE. VIBRATORS SHALL NOT BE USED TO TRANSPORT CONCRETE.
12. ALL CONCRETE WALLS SHALL BE ALLOWED TO CURE A MINIMUM OF 21 DAYS OR REACH A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI BEFORE BACKFILLING.
13. ALL CONCRETE THRUST BLOCKS, COLLARS, AR RESTRAINTS SHALL BE ALLOWED TO CURE A MINIMUM OF 3 DAYS BEFORE BACKFILLING. ALL THRUST RESTRAINTS MUST BE INSPECTED AND APPROVED BY THE ENGINEER BEFORE BACKFILLING. THRUST BLOCKS SHALL BE RATED AT 250 PSI GAUGE.
14. ALL CONCRETE SHALL BE PROPERLY AND ADEQUATELY PROTECTED AND CURED AS FOLLOWS:

    TEMPERATURE – THE TEMPERATURE OF THE CONCRETE SHALL BE MAINTAINED BETWEEN 50 AND 70 DEGREES FAHRENHEIT FOR A MINIMUM OF 7 DAYS. THIS MAY REQUIRE HEATING AND/OR COOLING OF CONCRETE.

    MOISTURE – ALL CONCRETE SURFACES, HORIZONTAL AND VERTICAL SHALL BE KEPT MOIST FOR A MINIMUM OF 7 DAYS AFTER PLACEMENT. CURING COMPOUNDS MAY ONLY BE USED WITH WRITTEN PERMISSION OF THE ENGINEER.
15. CONSTRUCTION JOINTS NOT SHOWN ON THE DRAWINGS BUT PROPOSED BY THE CONTRACTOR SHALL BE LOCATED AND DETAILED ON CONTRACTOR DRAWINGS AND SUBMITTED TO THE ENGINEER FOR REVIEW AND ACCEPTANCE.

## EARTHWORK NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT BLUE STAKES TO HAVE UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO ALL EARTHWORK OPERATIONS.
2. THE SITE SHALL BE CLEARED OF ALL GRASSES, SHRUBS, TREES, AND ROOTS. TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR REUSE ON FILL SLOPES, AND DISTURBED NON-TRAFFIC AREAS. SIDE SLOPES SHALL BE LAID BACK AT SLOPES NO STEEPER THAN 3:1.
3. ALL TRENCHES AND EXCAVATIONS SHALL BE CUT, PROTECTED AND SUPPORTED AS PRESCRIBED BY OSHA.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND MAINTAIN ANY EQUIPMENT NECESSARY TO DEWATER EXCAVATIONS.
5. TOPSOIL SHALL BE REPLACED AND GRADED PRIOR TO REVEGETATION. DISTURBED AREAS SHALL BE RESEEDED USING A SEED MIX SPECIFIED BY ON THE EROSION CONTROL PLAN AND DETAILS.

## GRADING NOTES

1. IMPROVEMENT ELEVATION LABELS AND ELEVATION CONTOURS REFERENCE FINISH ELEVATIONS. REFER TO ABBREVIATIONS AND SYMBOL LEGEND INCLUDED HEREIN.

## EROSION CONTROL NOTES

1. PER UDEQ, STORM WATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES GENERAL PERMIT NO UTR 300000, CONSTRUCTION ACTIVITY INCLUDING CLEARING, GRADING, EXCAVATION, AND DEMOLITION THAT DISTURBS ONE OR MORE ACRES OF LAND SHALL REQUIRE INCLUSION IN THE GENERAL PERMIT AND COMPLY WITH THE REQUIREMENTS THEREIN.
2. THE TOTAL PROJECT AREA OF DISTURBANCE IS LESS THAN 1 ACRE; THEREFORE AN UPDES STORM WATER PERMIT IS NOT REQUIRED.
3. THE CONTRACTOR SHALL PROVIDE EROSION CONTROL THROUGHOUT CONSTRUCTION AS REQUIRED.

REGISTERED PROFESSIONAL ENGINEER
NO. 5252489
DARIN M. HAWKES
09/16/2020
STATE OF UTAH

0 1/2 1

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REVISIONS

ELK RIDGE CITY

STORAGE AND SALT BUILDING PROJECT

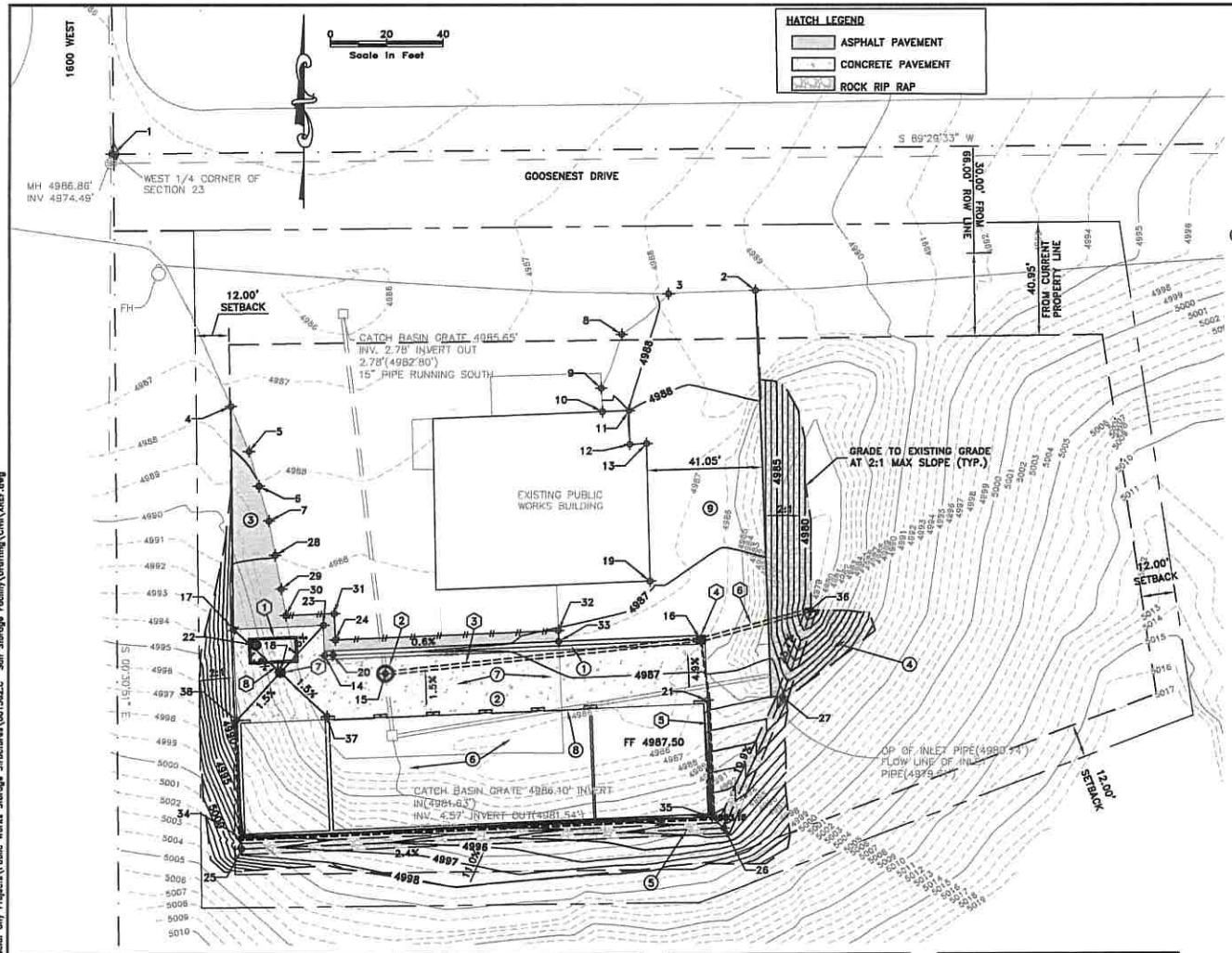
GENERAL

GENERAL NOTES

AQUA ENGINEERING
533 W 2600 S, SUITE 275, BOUNTIFUL, UT 84010
PHONE (801) 298-1327 FAX (801) 298-0153

SHEET

G-3




| HORIZONTAL CONTROL | | | | |
|---|---|---|---|---|
| PNT | NORTHING | EASTING | ELEVATION | DESCRIPTION |
| 1 | 7488.60 | 10022.95 | 4986.88 | WEST 1/4 CORNER OF SECTION 23 |
| 2 | 7439.21 | 10250.92 | 4988.72 | ME FG |
| 3 | 7437.95 | 10220.09 | 4988.09 | ME FG |
| 4 | 7397.05 | 10064.64 | 4987.57 | MEP |
| 5 | 7380.93 | 10071.05 | 4987.93 | MEP |
| 6 | 7368.45 | 10074.71 | 4988.21 | MEP |
| 7 | 7355.97 | 10078.38 | 4988.52 | MEP |
| 8 | 7425.34 | 10203.40 | 4987.73 | ME FG |
| 9 | 7403.73 | 10196.14 | 4987.99 | ME FG |
| 10 | 7395.18 | 10196.61 | 4988.01 | ME FG |

| HORIZONTAL CONTROL | | | | |
|---|---|---|---|---|
| PNT | NORTHING | EASTING | ELEVATION | DESCRIPTION |
| 11 | 7395.57 | 10206.00 | 4988.01 | ME FG |
| 12 | 7383.57 | 10206.36 | 4988.01 | ME FG |
| 13 | 7383.88 | 10212.27 | 4987.56 | ME FG |
| 14 | 7307.55 | 10098.18 | 4987.50 | FL |
| 15 | 7300.94 | 10119.75 | 4987.43 | RIM |
| 16 | 7313.09 | 10231.90 | 4986.40 | FL AND RIM |
| 17 | 7317.21 | 10065.75 | 4987.50 | P |
| 18 | 7301.40 | 10082.42 | 4987.19 | RIM |
| 19 | 7334.34 | 10213.72 | 4987.05 | ME FG |
| 20 | 7307.87 | 10101.18 | 4987.20 | FL |

| HORIZONTAL CONTROL | | | | |
|---|---|---|---|---|
| PNT | NORTHING | EASTING | ELEVATION | DESCRIPTION |
| 21 | 7291.19 | 10234.31 | 4987.50 | P |
| 22 | 7311.41 | 10073.87 | 4987.39 | RIM |
| 23 | 7318.53 | 10097.73 | 4987.50 | P |
| 24 | 7313.20 | 10101.95 | 4987.25 | MEP |
| 25 | 7237.84 | 10069.04 | 4997.30 | FL |
| 26 | 7244.94 | 10240.23 | 4993.15 | FL |
| 27 | 7292.38 | 10261.01 | 4987.49 | FL |
| 28 | 7343.78 | 10080.55 | 4988.05 | MEP |
| 29 | 7331.80 | 10082.73 | 4987.99 | MEP |
| 30 | 7321.98 | 10084.43 | 4987.78 | MEP |

| HORIZONTAL CONTROL | | | | |
|---|---|---|---|---|
| PNT | NORTHING | EASTING | ELEVATION | DESCRIPTION |
| 31 | 7322.68 | 10101.56 | 4987.53 | MEP |
| 32 | 7318.54 | 10181.21 | 4987.08 | MEP |
| 33 | 7312.50 | 10181.37 | 4986.87 | P |
| 34 | 7241.84 | 10068.88 | 4997.09 | FG |
| 35 | 7248.77 | 10236.07 | 4993.16 | FG |
| 36 | 7323.75 | 10271.02 | 4979.02 | FL AND IE |
| 37 | 7285.59 | 10099.09 | 4987.50 | P |
| 38 | 7284.26 | 10067.12 | 4987.50 | P |

**GRADING ABBREVIATIONS**

FG – FINISH GRADE ELEVATION
FL – FINISH FLOW LINE ELEVATION
BP – BOTTOM OF POND ELEVATION
P – PAVEMENT ELEVATION
ME – MATCH EXISTING
FF – FINISHED FLOOR ELEVATION
IE – INVERT ELEVATION
RIM – RIM ELEVATION

**SITE KEYNOTES**

1– FURNISH, PLACE, AND INSTALL 132 LF OF 3' WIDE VALLEY GUTTER PER DETAIL 111/CD–1.

2– FURNISH, PLACE, AND INSTALL 3,970 SF OF 6" PCC REINFORCED CONCRETE ON 6" UBC PER DETAIL 110/CD–1.

3– FURNISH, PLACE, AND INSTALL 1,342 SF OF 3" ASPHALT ON 6" UBC PER DETAIL 110/CD–1.

4– FURNISH, PLACE, AND INSTALL 2,039 SF ROCK RIP RAP, $D_{50}$= 3", DEPTH= 6", OVER WEED BARRIER FABRIC.

5– FURNISH, PLACE, AND INSTALL 256 LF OF 4' ROCK RIP RAP LINED CHANNEL PER DETAIL 115/CD–1.

6– REFER TO ARCHITECTURAL PLANS FOR BUILDING INFORMATION.

7– SEALED CONSTRUCTION JOINTS AS REQUIRED TO MAINTAIN LXW RATIO OF 0.8 TO 1.2 PER DETAIL 147/CD–2.

8– SEALED EXPANSION JOINT BETWEEN BUILDING AND CONCRETE SLAB PER DETAIL 147/CD–2.

9– REGRADE EXISTING MATERIAL AS SHOWN. PRESERVE EXISTING ASPHALT MILLINGS TO EXTENT POSSIBLE.

**UTILITY KEYNOTES**

1– FURNISH AND INSTALL 350 $FT^3$ MIN CAPACITY PRECAST VAULT WITH 30–INCH FRAME AND COVER. RIM=4987.25, 15" S (IN) IE=4982.38.

2– FURNISH, PLACE, AND INSTALL 4' DIAMETER STORM DRAIN MANHOLE PER DETAIL 103/CD–1. RIM=4987.43, 15" N (IN) IE=4981.79±, 15" E (OUT) IE=4981.69±.

3– FURNISH, PLACE, AND INSTALL 110 LF– 15" DIAMETER HDPE STORM DRAIN LINE, SLOPE=1.66% PER DETAIL 102/CD–1.

4– FURNISH, PLACE, AND INSTALL 3' SQUARE STORM DRAIN CATCH BASIN WITH SNOUT PER DETAIL 104/CD–1. RIM=4986.40, 15" W (IN) IE=4979.85, 4" S (IN) IE=4980.37, 15" NE (OUT) IE=4979.75.

5– 276 LF – 4" FRENCH DRAIN PER DETAIL 116/CD–1.

6– FURNISH, PLACE, AND INSTALL 40 LF– 15" DIAMETER HDPE STORM DRAIN LINE, SLOPE=1.82% PER DETAIL 102/CD–1.

7– FURNISH, PLACE, AND INSTALL 3' SQUARE STORM DRAIN CATCH BASIN WITH SNOUT PER DETAIL 104/CD–1. RIM=4987.19, 15" W (OUT) IE=4982.46.

8– FURNISH, PLACE, AND INSTALL 4 LF– 15" DIAMETER HDPE STORM DRAIN LINE, SLOPE=2.0% PER DETAIL 102/CD–1.

REGISTERED PROFESSIONAL ENGINEER
NO. 5252489
DARIN M. HAWKES
09/16/2020
STATE OF UTAH

**EARTHWORK (ESTIMATED)**

ESTIMATED 743 CY (CUT), 740 CY (FILL). NET = 3 CY (CUT) WHICH CAN BE DISPOSED OF IN CITY GRAVEL PIT ADJACENT TO THE SITE. CONTRACTOR SHALL MAKE OWN DETERMINATIONS OF EARTHWORK QUANTITIES.

**DATUM AND SITE BENCHMARKS**

VERTICAL DATUM WAS TAKEN FROM THE UTAH COUNTY SURVEY AND LISTED AS NGVD 29. SITE BENCHMARKS ARE LISTED IN HORIZONTAL CONTROL POINT TABLE.

0 1/2 1
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| B | 09/16/20 | DMH | DCH | DMH |

REVISIONS

ELK RIDGE CITY

STORAGE AND SALT BUILDING PROJECT - PHASE 1

CIVIL

SITE / UTILITY AND GRADING PLAN

AQUA ENGINEERING
633 W 2600 S, SUITE 275 BOUNTIFUL, UT 84010
PHONE (801) 298-1222 FAX (801) 298-0165

SHEET
C-1

W:\Elk Ridge\Special City Projects\Public Works Storage Structures\001562.C Salt Storage Facility\Drafting\Civil\XREF.dwg 8/18/2020 12:10:54 PM dcrek.hyde
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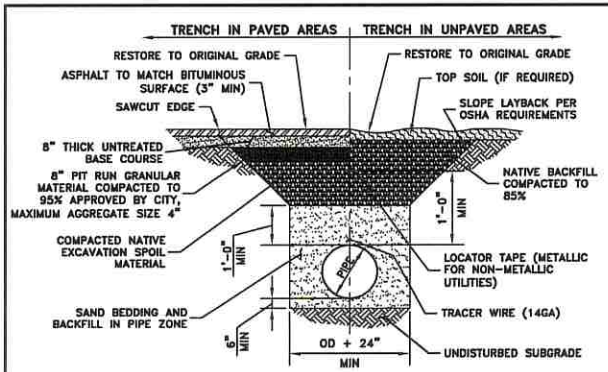
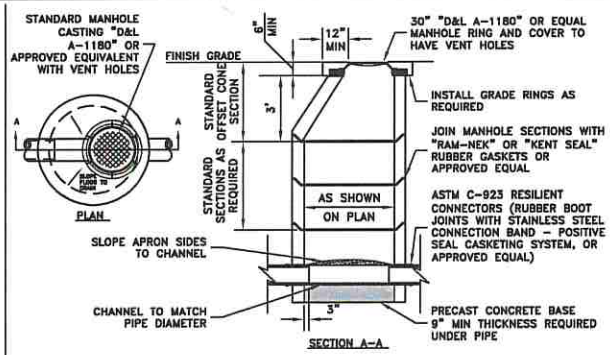
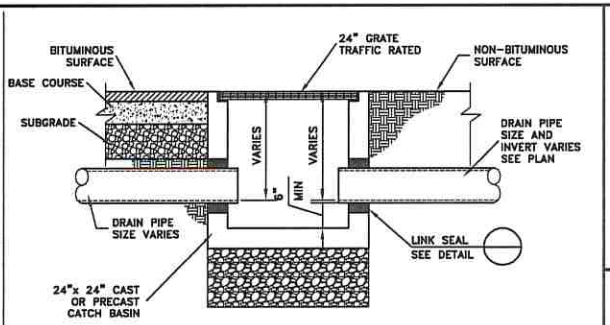
KRB



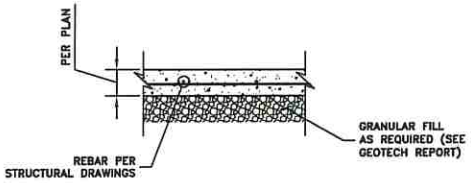

TYPICAL TRENCH
SCALE: NTS



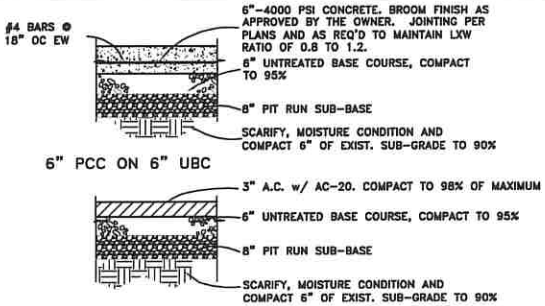

PRECAST MANHOLE
SCALE: NTS




CATCH BASIN
SCALE: NTS




CONCRETE SLAB ON GRADE
SCALE: NTS




PAVEMENT DETAILS
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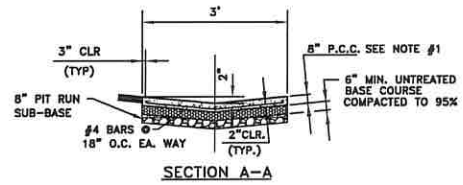
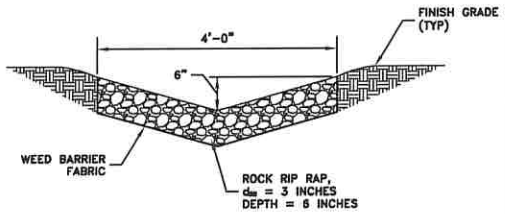


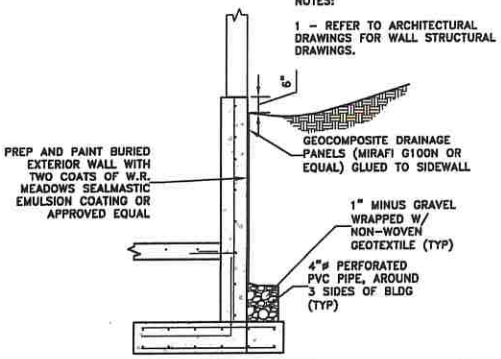

NOTES:
1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH @ 28 DAYS, AIR ENTRAINMENT 6% ±1%, MAX SLUMP AT 4 INCHES. ALL MATERIALS SHALL CONFORM TO HYRUM CITY STANDARDS.
2. VALLEY GUTTER SHALL HAVE WEAKENED PLANE JOINTS EVERY 10 FEET.

P.C.C. VALLEY GUTTER
SCALE= NTS




ROCK RIP RAP CHANNEL
SCALE: NTS

NOTES:
1 - REFER TO ARCHITECTURAL DRAWINGS FOR WALL STRUCTURAL DRAWINGS.




FRENCH DRAIN
SCALE: NTS

0 1/2 1

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| B | 09/16/20 | DMH | DCH | DMH |

REVISIONS

ELK RIDGE CITY

STORAGE AND SALT BUILDING PROJECT

DETAILS

CIVIL

AQUA ENGINEERING
633 W 2600 S, SUITE 275, BOUNTIFUL, UT 84010
PHONE (801) 298-1327 FAX (801) 294-0163

SHEET
CD-1

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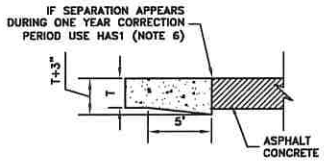
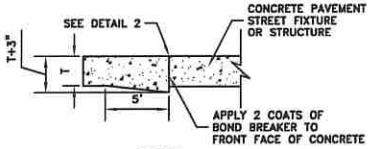
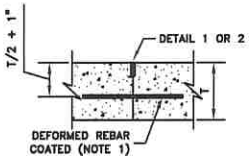



TYPE A




TYPE B

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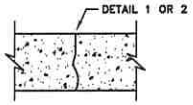


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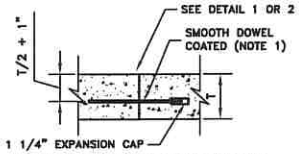


FOR DOWEL SIZE, SEE TABLE OF DIMENSION ON DRAWING 2

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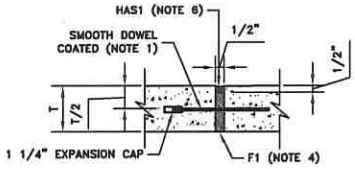


FOR DOWEL SIZE, SEE TABLE OF DIMENSION ON DRAWING 2

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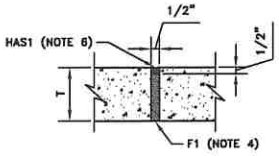
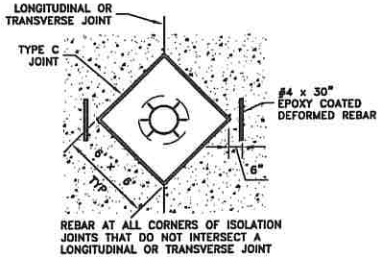
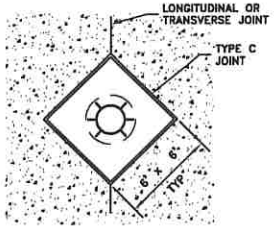


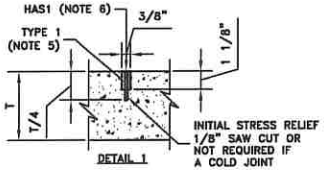

TYPE G



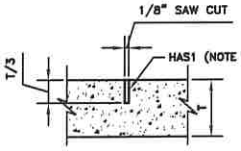

EXAMPLE 1



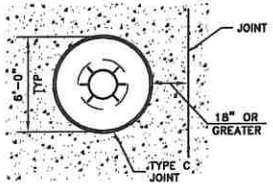

EXAMPLE 2




DETAIL 1

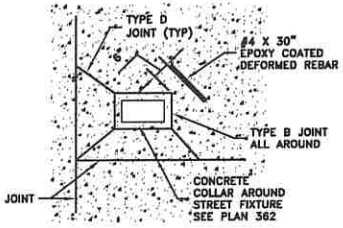



DETAIL 2




USE ROUND TYPE 'G' JOINT WHEN DISTANCE BETWEEN EXPANSION JOINT AND SLAB JOINT IS LESS THAN 18"

EXAMPLE 3




EXAMPLE 4

TYPICAL STREET FIXTURE ISOLATION JOINTS

| DOWEL OR REBAR SIZE CHART | | | |
|---|---|---|---|
| T | DIAMETER (INCHES) | TOTAL LENGTH (INCHES) | SPACING |
| 5"-8" | 5"-8" | 14 | 12" O.C. |
| 9"-12" | 1 | 18 | 12" O.C. |

NOTES:

1- STEEL REINFORCEMENT SHALL BE ASTM A 615, GRADE 60, EPOXY COATED DEFORMED STEEL REBAR OR SMOOTH STEEL DOWELS WITH DIAMETER AND LENGTH AS INDICATED. SPACE REBAR AND DOWELS AT 12 TO 15" ON CENTER. GREASE DOWELS TO PROVIDE MOVEMENT IN EXPANSION JOINTS. KEEP TIE BARS IN THE VERTICAL CENTER OF THE CONCRETE SLAB AND PERPENDICULAR TO THE JOINT DURING CONCRETE PLACEMENT.

2- CONTRACTION JOINTS IN CONCRETE PAVEMENT SHALL BE SAWCUT. CONTRACTION JOINTS IN SIDEWALK, WATERWAYS, OR CURB AND GUTTER MAY BE TOOLED.

3- KEEP AT LEAST 3 WORKING POWER SAWS ON-SITE WHEN CONCRETE IS BEING PLACED. SAW CRACK CONTROL JOINTS (CONTRACTION JOINTS) BEFORE SHRINKAGE CRACKING TAKES PLACE. DO NOT TEAR OR RAVEL CONCRETE DURING SAWING. IN COOL WEATHER, THE JOINT SAWING MAY BE DELAYED ONLY FOR THE TIME REQUIRED TO PREVENT TEARING AND RAVELING THE CONCRETE. CUT JOINT TO DIMENSIONS RECOMMENDED BY SEALANT MANUFACTURER AND APPROVED BY ENGINEER.

4- LAY OUT JOINTS TO AID CONSTRUCTION AND CONTROL RANDOM CRACKING.
   A. LONGITUDINAL JOINT SPACING IS 12FEET FOR CONCRETE PAVEMENT LESS THAN 9 INCHES THICK AND 15 FEET FOR CONCRETE PAVEMENT 9 INCHES THICK AND THICKER.
   B. TRANSVERSE JOINTS SPACING IS 30 X T (SLAB THICKNESS IN FEET) WHERE THE MAXIMUM SLAB LENGTH TO SLAB WIDTH RATIO IS 1 TO 1, AND MAXIMUM SPACING SHALL NOT EXCEED 15'.
   C. EXTEND TRANSVERSE CONTRACTION JOINTS CONTINUOUSLY ACROSS THE FULL WIDTH OF THE CONCRETE. MAKE THE JOINTS COINCIDE WITH CURB AND GUTTER JOINTS.
   D. MAKE ADJUSTMENTS IN JOINT LOCATIONS TO MEET INLET OR MANHOLE LOCATIONS.

5- JOINT FILLER: ASTM D 1751 OR D1752, EXTENDING TO THE BOTTOM OF THE CONCRETE SLAB.

6- BACKER ROD: BACKER ROD SHALL BE OVERSIZED APPROXIMATELY 25% TO FIT TIGHTLY INTO EACH JOINT AND COMPATIBLE WITH SEALANT USED.

7- JOINT SEALANT: REMOVE DIRT, OIL AND CURING COMPOUNDS FROM JOINT RESERVOIR. SEAL JOINTS Z IMMEDIATELY AFTER CLEANING.

REGISTERED PROFESSIONAL ENGINEER
No. 5252489
DARIN M. HAWKES
09/16/2020
STATE OF UTAH

CONCRETE PAVEMENT JOINTS
SCALE: NTS

0 1/2 1

| NO. | DATE | DESIGN | DRAWN | CHECKED |
|---|---|---|---|---|
| B | 09/16/20 | DMH | DCH | DMH |

REVISIONS

ELK RIDGE CITY
STORAGE AND SALT BUILDING PROJECT
DETAILS
CIVIL

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AQUA ENGINEERING
533 W 2600 S, SUITE 275, BOUNTIFUL, UT 84010
PHONE (801) 295-1327 FAX (801) 295-0153

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