

Fire

- Garage- 5/8" type "x" gypsum board on walls and ceilings , or to roof - nail @ 6" O.C. All beams and structural members covered with 5/8" gypsum board.
- Door between Garage and Dwelling-Solid core wood or "B" label door not less than 1 -3/4"
- Smoke Detectors- Shall receive their primary power from the building wiring and shall be equipped with battery backup. All detectors shall be wired in a series so the alarm is audible in all sleeping areas.
- Smoke Detectors Install in each sleeping room. Mount at a central point in the corndor or area giving access to each separate sleeping rooms.
- Smoke Detectors in dwellings with basements and more than one story, a detector shall be installed on each story and in the basement. When sleeping rooms are in an upper level, the detector shall be placed on the ceiling in close proximity to the stairway.
- Smoke Detectors - Where ceiling height of a room open to the hallway serving the bedrooms exceeds that of the hallway by 24" or more detectors shall be installed in the hallway and the adjacent room.
- Space under Stairs - Enclose any usable space under stairs with 5/8' gypsum board.
- Stair Stringers - Fire block walls at all stair stringers.
- Fire Blocking-All stud cavities greater than 1 O'.
- Carbon monoxide alarms shall be installed on each habitable level of a dwelling unit equipped with fuel burning appliances. All carbon monoxide detectors shall be listed and comply with U.L. 2034 and shall be installed in accordance with provisions of this code and NFPA 720. R315.3

EXCAVATION

- Footings - Bear on natural undisturbed soil, free of plant material or debris.
- Final Grade - Provide positive drainage away from all project foundations -Minimum slope of 5% for first 10'.
- Footings on or adjacent to slope surfaces shall be founded in material with an embedment and setback from the slope surface sufficient to provide vertical and lateral support for the footing without detrimental settlement. Except as provided for in Section R403.1.7.4 and figure R403.1.7.1, the following setback is deemed adequate to meet the crteria, where the slope is steeper than one unit vertical in one unit horizontal (100 percent slope), the required setback shall be measured from an imaginary plane 45 degree (0.79 rad) to the horizontal, projected upward from the toe of the slope. (R402.1.7.2)
- On graded sites, the top, of any exterior foundation shall extend above the elevation of the street gutter at point of discharge or the inlet of an approved drainage device a minimum of 12 inches (305 mm) plus 2 percent. Alternate elevations are permitted subject to the approval of the building official, provided it can be demonstrated that required drainage to the point of discharge and away from the structure is provided at all locations on the site. (R403.1.7.3)
- Alternate setbacks and clearances are permitted, subject to the approval of the building official. The building official is permitted to require an investigation and recommendation of a qualified engineer to demonstrate that the intent of this section has been satisfied. Such an investigation shall include consideration of material, height of slope, slope gradient, load intensity, and erosion characteristics of slope material. (R403.1.7.4)
- If a land drain has been installed to the lot in which you are building, it shall be extended to the building and connected to a footing drain, R405.1. If a land drain is provided to the home, al window well drains must connect to the footing/ foundation drainage system. R310.2.2.
- Drains shall be provided around all concrete or masonry foundations that retain earth and enclose habitable or usable spaces located below grade. Drainage tiles, gravel or crushed stone drains, perforated pipe or other approved systems or materials shall be installed at or below the area to be protected and shall discharge by gravity or mechanical means into an approved drainage system.
- In other than Group I soils, a sump shall be provided to drain the porous layer and footings. The sump shall be at least 24 inches (610 mm) in diameter or 20 inches square (0.0129 m2), extend at least 24 inches (610 mm) below the bottom of the basement floor and shall be capable of positive gravity or mechanical drainage to remove any accumulated water. The drainage system shall discharge into an approved sewer system.

ATTIC VENTILATION/ ACCESS

- Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of the roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain or snow. Ventilation openings shall be provided with corrosion-resistant wire mesh, with the least dimension being 1/8 inch. R806.1
- The total net free ventilating area shall not be less than 1 to 150 of the area of the space ventilated except that the total area is permitted to be reduced to 1 to 300, Provided at least 50% and not more than 80 by ventilators located in the upper portion of the space to be ventilated at least 3 feet above the required ventilation provided by eave or cornice vents. As an alternative, the net free cross-ventilation area may be reduced to 300 when a vapor barrier having a transmission rate not exceeding 1 perm is installed on the warm side of the ceiling. R806.2
- Where eave or, cornice vents are installed, insulation shall not block the free flow of air. A minimum of 1 inch space shall be provided between the insulation and the roof Sheathing at the location of the vent. R806.3
- Provide a 22" x 30" Attic Access to all attic areas, not located above a closet shelf, with 30 minimum headroom above access door.
- The attic access door from the conditioned space to unconditioned space (attic) shall be weather stripped and insulated to a level equivalent to the insulation on the surrounding surfaces.

FLASHING

- Flashing shall be installed in such a manner so as to prevent moisture from entering a wall, roof, or floor and redirect it to the exterior. Flashing shall be installed at the perimeters of exterior door and window assemblies, penetrations and terminations of exterior wall assemblies, exterior wall intersections with roofs, chimneys, porches, decks, balconies and similar projections and at built-in gutters and similar locations where moisture could enter the wall. Flashing with projected flanges shall be installed on both sides and the ends of copings, under sills and continuously above projected trim. A flashing shall be installed at the intersection of the foundation to stucco, masonry, siding or brick veneer. The flashing shall be approved corrosion-resistant flashing. R703.7.5, R703.8, R903.2,R905
- R905.2.7.1 Ice Barrier. In areas where there has been a history of ice forming along the eaves causing a backup of water, an ice barrier that consists of at least two layers of under-layment cemented together or of a self-adhering polymer modified bitumen sheet, shall be used in lieu of normal under-layment and extend from the lowest edges of all roof structures to a point at least 24 inches inside the exterior wall line of the building.

ENERGY EFFICIENCY

- The thickness of blown or sprayed roof/ceiling insulation (fiberglass or cellulose) shall be written in inches (mm) on markers that are installed at least one every 300 ft2 (28 m2) throughout the attic space. The markers shall be affixed to the trusses or joists and marked with the minimum initial installed thickness, with numbers a minimum of 1 inch (25 mm) high. Each marker shall face the attic access opening.
- All materials, systems and equipment shall be installed in accordance with the manufacturer's installation instructions and the provisions of this code.
- A permanent certificate shall be posted on or in the electrical distribution panel. The certificate shall be completed by the builder or registered design professional. The certificate shall list the predominant R-values of insulation installed in or on ceiling /roof, walls, foundation (slab, basement wall, crawlspace wall and/or floor) and ducts outside conditioned spaces. The certificate shall also list the type and efficiency of heating, cooling and service water heating equipment.

FOOTINGS, FOUNDATION & CONCRETE

- Footings - Bear on undisturbed soil. Not to be placed on frozen ground or in water. Continuous monolithic pour. Minimum 30" below grade.
- Footings - Changes in elevation shall be stepped not higher than 1/2 the step length, and not greater than 4". Minimum 6" thickness on vertical step.
- Footings, Foundation, Interior Slabs - Normal weight concrete with compressive strength equal to at least 3,000 PSI within 28 days of pouring.
- Water/Cement Ratio - No greater than .50 and slump shall be 3" or less - Minimum cement content shall be 504 lbs. per cubic yard.
- Reinforcement - Free from mud and oil and other non-metallic coatings that hamper bonding capacity.
- Foundation - Any opening to have two vertical #4 bars on each side of opening, tied to horizontal bar.7. Foundation -2 #4 bar above and below each window opening extending 36" beyond opening.
- Anchor Bolts- 1/2" x 10"@ 32" O.C.
- Splices - Reinforcement shall lap a minimum of 30 bar diameters unless otherwise noted.
- Foundation - Width is 8" unless otherwise noted.

MASONRY

- Ties - Brick or stone veneer shall have corrosion resistant ties of not less than 22 ga. x 3/4" or #9 ga. wire spaced not more than 16" O.C. horizontal and 18" O.C. vertical. Anchor ties shall have a lip or hook, on the extended leg, that will engage or enclose the #9 ga. horizontal joint reinforcement wire.
- Moisture barrier required, or full 1" airspace.
- Wall Reinforcement - Minimum of .0007 each way, or a total of .002.
- R703.7.6 Weep holes. Weep holes shall be provided in the outside of masonry walls at a maximum spacing of 33 inches on center. Weep holes shall not be less than 3/16 inch in diameter. Weep holes shall be located immediately above the flashing.

STAIR & HANDRAIL

- Risers-4" minimum and 7 3/4" maximum height.
- Treads - Minimum of 10" depth.
- Headroom - Minimum 6' 8" clearance.
- Handrails - Required on all stairways having more than 3 risers.
- Handrails - Placed not less than 34" and not more than 38" high. Continuous and full length of stairs.
- Guardrails - Required at all landings, decks, or floor levels more than 30" above finished grade. Minimum height 36".
- Ballisters - For handrails and guardrails shall be spaced such that a 4" sphere will not pass through.
- Enclosed Usable Space under Stairway-shall have walls and soffits protected on the enclosed side as required for 1-hour fire-resistive construction.

MECHANICAL

- All heating and ventilating equipment shall be installed in accordance with current mechanical code requirements.
- HVAC system shall be designed by mechanical contractor.
- Heat loss calculations and MECC Check to Be performed by mechanical contractor.
- Provide clearance from combustible on side of furnace and 30" working space in front of all heating controls.
- Provide fresh air for combustion by ducts leading from gas appliance enclosure to outside of building. Mechanical system provider to determine size of duct required by mechanical code. Cover inlet with corrosion resistant metal insect screen. Vents shall terminate 4" below of 48" horizontally and at least 12' above a door, operable window, or gravity inlet into building.
- Combustion air shall be supplied for one vertical or horizontal opening, which has an area of 1 square inch per 3,000 BTU/H of the total input rating of all appliances within the space. IRC G2407.6.2
- Heating duct joints shall be mechanically secured using at least 3 sheet metal screws evenly spaced. Support ducts with approved metal hangers
- Flue vents and exhaust vents shall be at least 36' above and outside air inlet located 10' - 0" and at least 4' - 0' from a property line.
- All restrooms to be provided with an exhaust fan capable of providing 5 air changes per hour.
- Dwelling to garage openings and penetrations with ducts and plumbing penetrations through walls or ceilings separating the dwelling from the garage shall be protected in accordance with R302.5.
1. A water heater or furnace located in a garage will be elevated a minimum of 18' and be enclosed inside of walls to protect from vehicular impact. IRC M1303.7 IRC F2801.7
2. Condensate from all cooling coils or evaporators shall be conveyed from the drain pan outlet to an approved place of disposal. Condensate shall not discharge into a street, alley or other areas so as to cause a nuisance. IRC M1411.3
3. A secondary drain or auxiliary drain pan shall be required for each cooling or evaporator coil where damage to any building components will occur as a result from overflow from the equipment drain pan or stoppage in the condensate drain piping, or stoppage in the condensate drain piping. Drain piping shall be minimum of 3/4 inch (19.1 mm) nominal pipe size. IRC M1411.2.1 IRC M1411.3
4. Clothes dryer duct shall terminate outdoors and shall not exceed a total combined horizontal and vertical length of 35 feet. Maximum length of duct shall be reduced 2-1/2' for each 45 degree bend or 5 feet for each 90 degree bend. Duct shall be a minimum nominal size of 4". IRC M1502.4.4 (and State Amendment).
5. All buildings are considered to be unusually tight construction and all combustion air to rooms or spaces containing fuel-burning appliances shall be obtained from the outdoors or from spaces freely communicating with the outdoors. IRC M2407.1

FRAMING & SHEATHING

- Studs - Maximum of 16" O.C.
- Floor Sheathing - 3/4" T&G 40/20 OSB nailed with 8d nails 6 O.C. at all panel edges, supported edges, and all blocking. Field to be nailed with 8d nails 10" O.C.
- Sheathing - Nails shall be a minimum of 3/8" from panel edge.
- Floor Joists - Block at all bearing points.
- Wall Sheathing - 2x4 blocking at all horizontal edges. Use 8d nails 6' O.C. at edges, and 10" O.C. in field. 6. Wall Sheathing - Extend over rim joist and nail to wall studs above and below. Extend connected with metal connectors.
- Wall Sheathing - Extend over rim joist and nail to wall studs above and below down to sill plate and nail.
- Roof Sheathing - 7/16" OSB nailed with 8d nails 6" O.C. at panel edges, and 12" O.C. in field.
- Blocking- Solid 2" nominal blocking at ends or points of support of all wood joists and trusses.
- Connections - Wood to concrete, wood to steel, and wood to wood (except stud to plate connected with metal connectors).
- Hangers - Install joist, rafter, and beam hangers according to manufacturer's specifications
1. Staples - May be substituted for nails at rate equal to load values.
- 2.Solid Bearing - Through floor systems and posts down to concrete footings.
3. Attic Access - 22"x30" with a switched light in attic space. 30" headroom required.
4. Basement Ceiling - Minimum unfinished height of 7' 6".
- Structural framing for all exterior decks, which are not sheltered by the roof or eaves, shall be constructed with naturally durable wood or pressure-preservative-treated wood as required by IRC R317.1.3 This would include the deck support joists treated as required by IRC R317.3.

WINDOWS


- Basement and Sleeping Rooms – Below the fourth story, shall have at least one operable window or exterior door approved for emergency escape or rescue. Same shall have a minimum net clearance opening minimum net clearance of 5.7 square feet. Shall have a minimum net clear opening height dimension of 24". Shall have a minimum net clear opening dimension of 20". Shall have finished sill height of not more than 44" above the finished floor.
- Escape & Rescue Windows – Shall have a window well if finished sill height is below the adjacent ground elevation. The clear horizontal dimensions of the window well shall allow the window to be fully opened and provide a minimum accessible net clear opening more than 44", shall be equipped with an approved permanently fixed ladder or stairs that are accessible with the window in fully open position. The ladder or stairs shall not encroach into the required dimensions of the window well by more than 6".
- Glass Size –10% of square feet.
- Ventilation - 5% of square feet.
- Glazing - All doors, enclosures for bathtubs, showers, hot tubs, saunas, whirlpools, and steam rooms shall be impact resistant Glazing in any portion of a building wall above a standing surface and drain inlet shall be impact resistant.
- Glazing - In all fixed or operable panels adjacent to a door where the nearest exposed edge of the glazing is within a 24 arc of either vertical edge of the door in a closed position, and where the bottom exposed edge of the glazing is less than 60" above the walking surface shall be impact resistant.
- Glazing - In all individual fixed or operable panels, other than stated above, shall be impact resistant when it meets all the following conditions: Exposed area of an individual pane is greater than 9 square feet; Exposed bottom edge is less than 18" above floor; Exposed top edge is greater than 36" above the floor; One or more walking surfaces are within 36" horizontally of the plane of the glazing.
- Glazing - in doors and enclosures for hot tubs, whirlpools, saunas, steam rooms, bathtubs, and showers. Glazing in any part of a building wall enclosing these compartments where the bottom exposed edge of the glazing is less than 60 inches measured vertically above any standing or walking surface. Glazing that is more than 60' horizontally from the water's edge of a hot tub, whirlpool tub, or bathtub need not comply with this section.
- All U-factors shall be determined by testing in accordance with_ NFRC 100 and labeled as such by the manufacturer, per section 102.13 of the 2006 IECC. U-Factors are .25 or less.
- Window labels: F=Fixed C=Casement SH=Single Hung SV=Slider
1. All habitable rooms shall be provided with natural ventilation by means of operable exterior openings with an area of not less than 4 percent of the floor area of such rooms. IRC R303.1
- Exceptions: The glazed area need not be openable where the opening is not required by Sections R310 and an approved mechanical ventilation system capable of production 0.35 air change per hour in the room is installed or a whole-house mechanical ventilation system is installed capable of supplying outdoor ventilation air of 5 cubic feet per minute(cfM)(78l/s) per occupant computed based on two occupants for the first bedroom.

BATHROOM

- Shower and Bathtub Enclosures - Fully tempered. Laminated safety glass or approved plastic.
- Glazing - All within 5' of shower or tub to be tempered glass.
- Shower - Height to be not less than 70". Compartment shall have a minimum finished interior of 1024 square inches and shall also be capable of encompassing a 30" diameter circle. Threshold should be of sufficient width to accommodate a minimum of 22 tempered door that swings out.
- Material -All material in tub or shower enclosure shall be of type not adversely affected by moisture.

PLUMBING

- All plumbing shall be installed in accordance with current plumbing code requirements, ordinances, and industry standards.
- Contractor is responsible for design of new plumbing equipment.
- Provide all equipment, accessories and components required to constitute installation of new equipment.
- Provide all low water usage water closets, 1.6-GAL flush.
- Provide anti-scald device at all lavatory faucets.
- Water Heaters - Located in a garage and which generates a glow, spark, or flame capable of igniting flammable vapors shall be installed with the pilots, burners, or heating elements and switches at least 18" above the floor level.
- Water Heaters - anchor or strap water heater to resist seismic motion. Locate anchor or strip within the upper and lower third of the appliance.
- Provide expansion tank on supply line to water heater.
- Backflow Prevention- Install on all hose bibbs and lawn sprinklers.
- Fixtures that have flood level nms located below the elevation of the next upstream manhole cover of the public sewer serving such fixtures shall be protected from back flow of sewage by installing an approved backwater valve. Fixtures having flood level nms above the elevation of the next upstream manhole shall not discharge through the backwater valve. Backwater valves shall be provided with an access. IRC P300B.1
1. Provide hose bibbs at the front and back of the home and shall have atmosphenc or pressure type vacuum breakers. IRC P2902.4.3

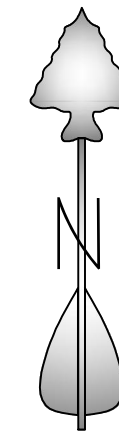
bsc-contractors.com	Bert Smith & Sons General Contractors	GO2
Requirements		
		

Print Date:	5/23/2022
Sackett Residence Addition	
5689 W. 4000 S. Hooper, UT 84315	

Sackett Residence Addition

Jay R Beus Subdivision No.3
Section 7, T5N, R2W

5689 W. 4000 S.
Hooper, Utah 84315
.975 Acres



- Building Setbacks
- Property Lines
- Addition Footprint (520 Square Feet)

Note: All storm water and dirt will be kept on site during construction until final landscaping is done.

Note: Surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection so as to not create a hazard. Lot shall be graded so as to drain surface water away from foundation walls. The grade away from the foundation walls shall fall a minimum of 6 inches within the first 10 feet. (Min 5% slope)

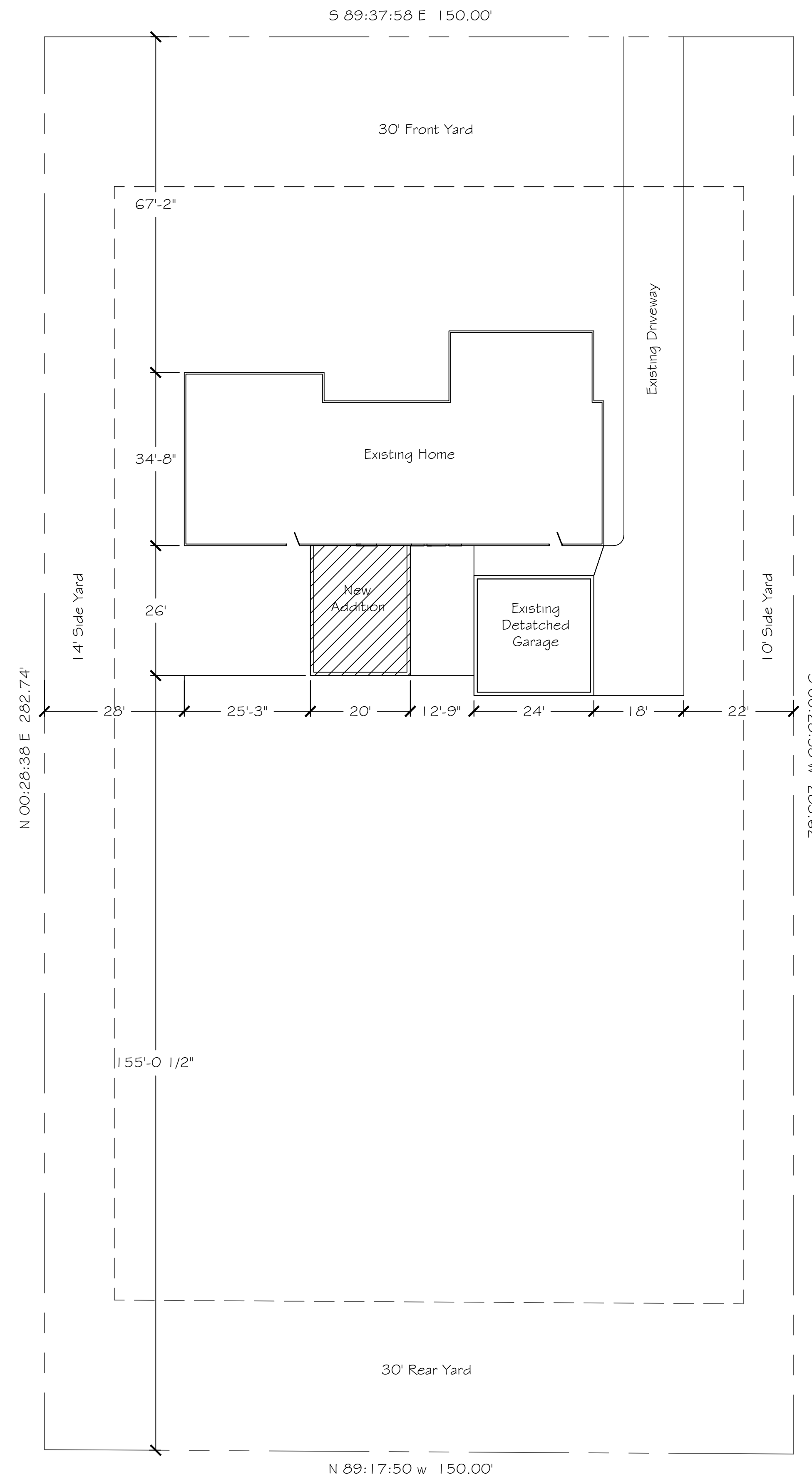
Note: Landings, ramps, patios, porches or decks, which are required to be level or can have a minimum slope of $\frac{1}{4}$ " per foot. All other impervious surfaces within 10 ft of the foundation walls must slope a minimum of $\frac{1}{4}$ " per foot away from the walls.

Note: Street, curb and gutter will be inspected and cleaned of all mud and dirt at the end of the day.

Note: Berms or swells may be required along property lines to prevent storm water flow onto adjacent lots.

Note: Gravel bags or equivalent BMP to be placed and maintained around any storm drain inlet adjacent to or immediately downstream from site during construction.

Note: A lined concrete washout area must be provided at the site for all concrete, paint, stucco, or masonry work. Washout on the ground is prohibited.



bsc-contractors.com

Bert Smith & Sons
General Contractors

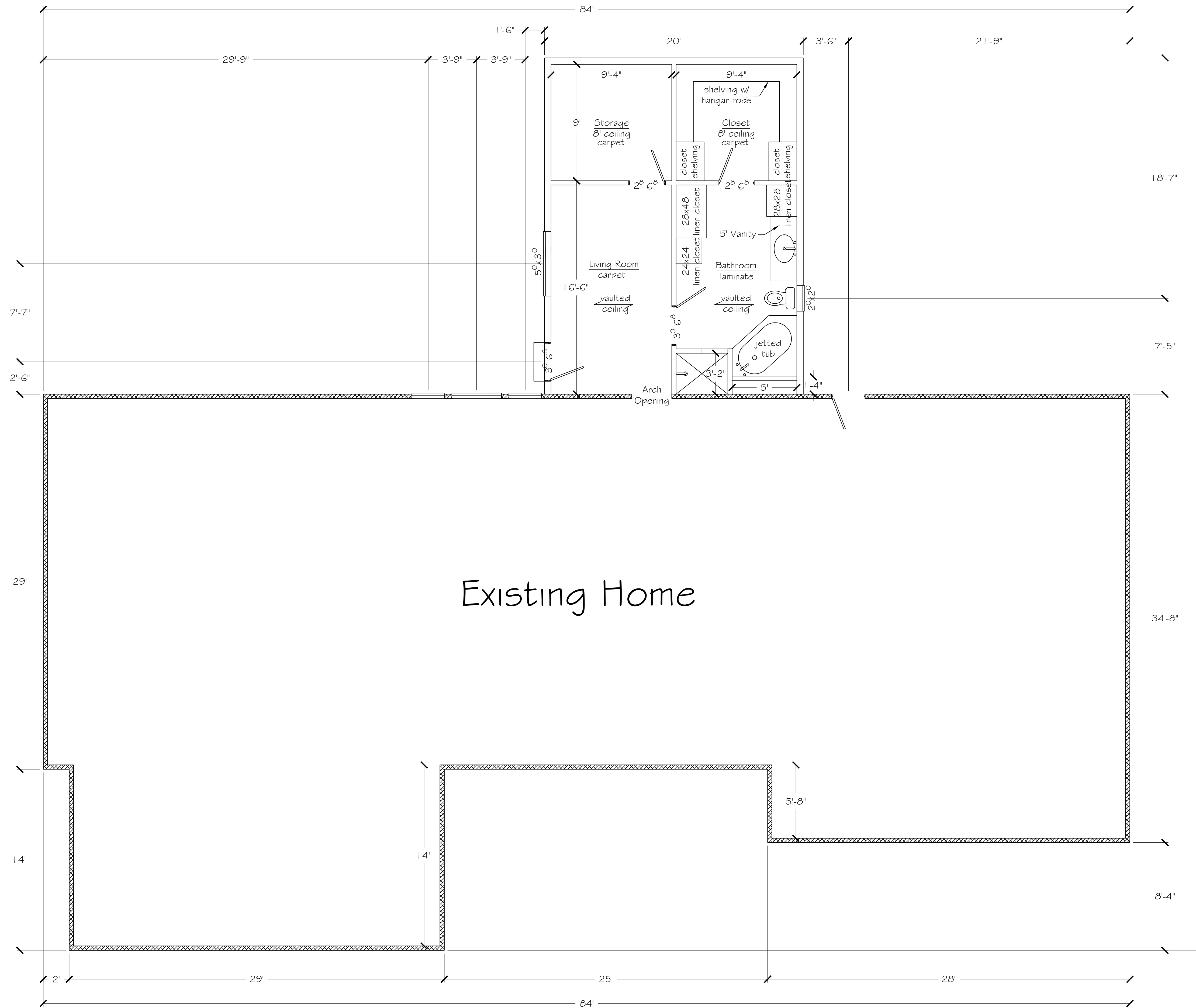
SOI $\frac{1}{16} = 1'$
Site Plan



Print Date: 5/18/2022

Sackett Residence Addition

5689 W. 4000 S.
Hooper, UT 84315



Existing Home

Addition Floor Plan

520 sq.ft.

 Existing Structure

bsc-contractors.com

Bert Smith & Sons
General Contractors

Floor Plan

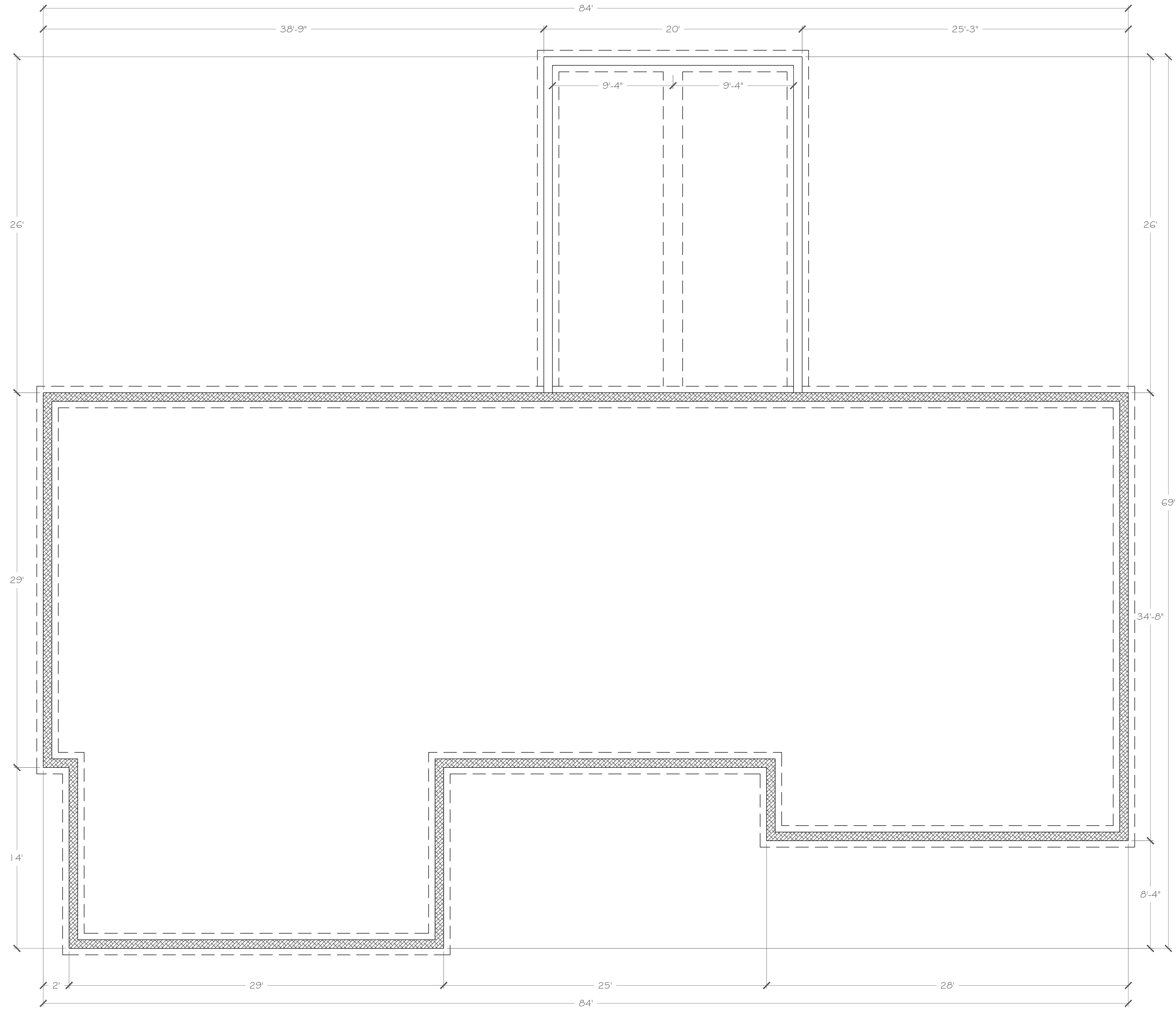
AOI 1/4" = 1'



Print Date: 5/18/2022

Sackett Residence Addition

5689 W. 4000 S.
Hooper, UT 84315



Foundation Plan

 Existing Foundation

bsc-contractors.com

Bert Smith & Sons
General Contractors

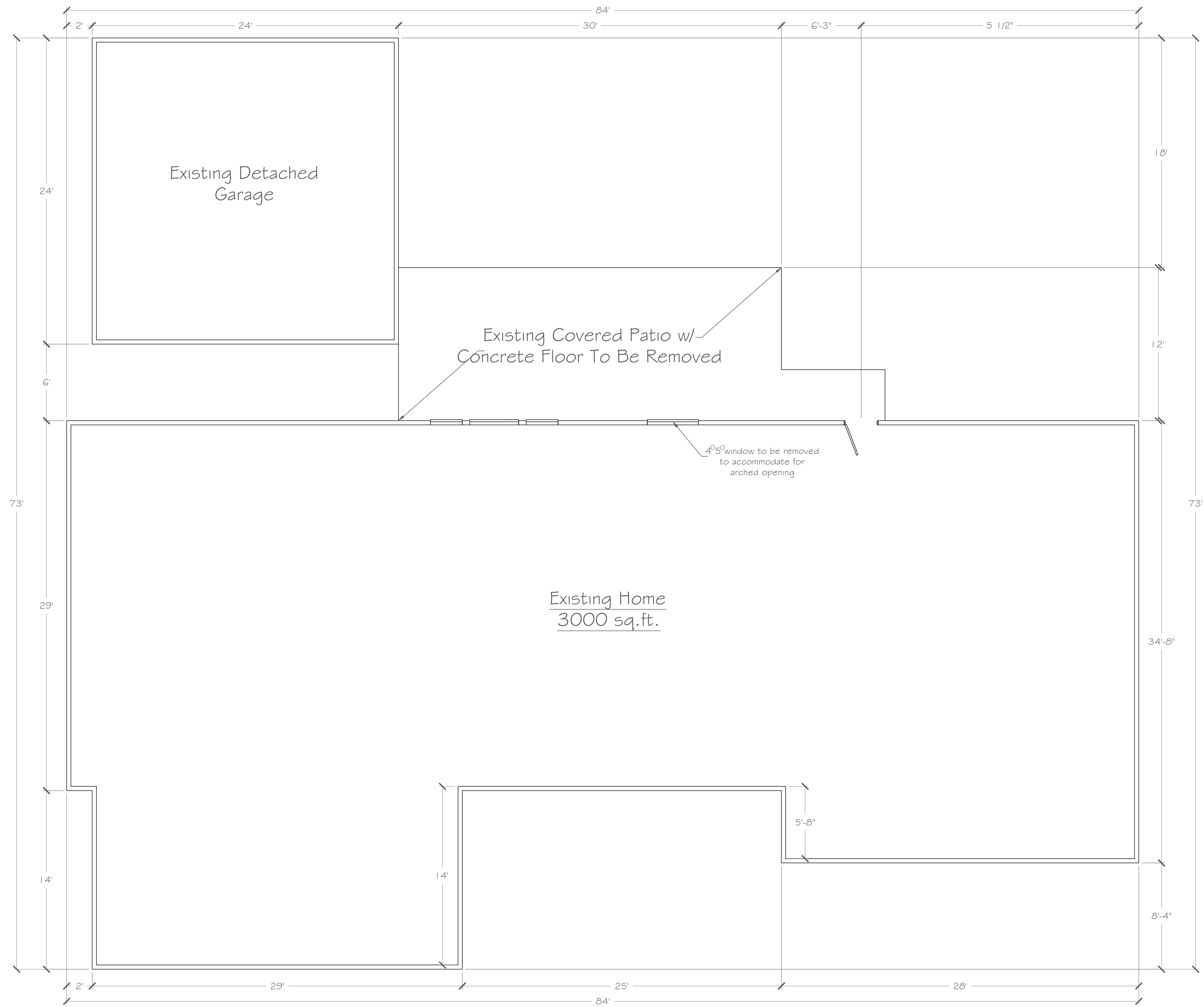
Foundation Plan **A02** 1/4" = 1'



Print Date: 5/18/2022

Sackett Residence Addition

5689 W. 4000 S.
Hooper, UT 84315

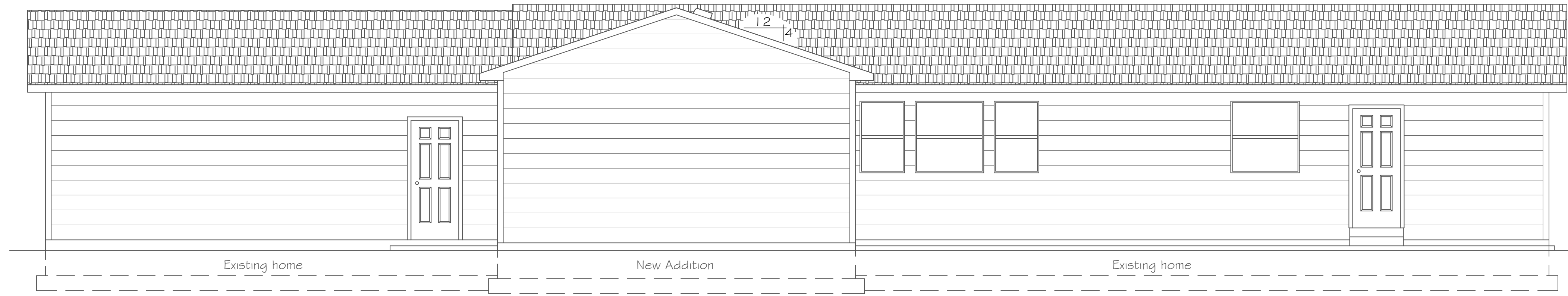


Existing Home

bsc-contractors.com
 Bert Smith & Sons
 General Contractors
 Existing Home
 A03 1/4" = 1'



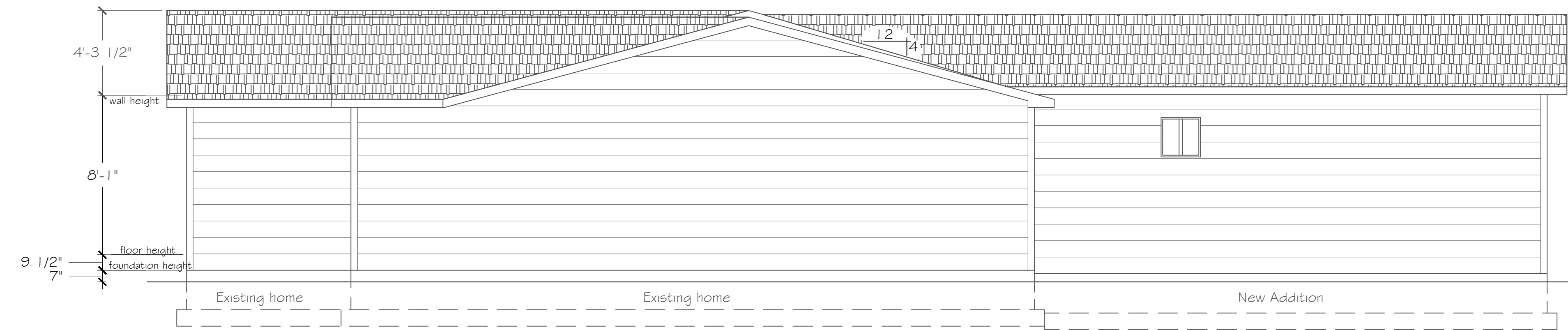
Print Date: 5/18/2022
 Sackett Residence Addition
 5689 W. 4000 S.
 Hooper, UT 84315



Back Elevation



Right Elevation



Left Elevation

Elevations

bsc-contractors.com

Bert Smith & Sons
General Contractors

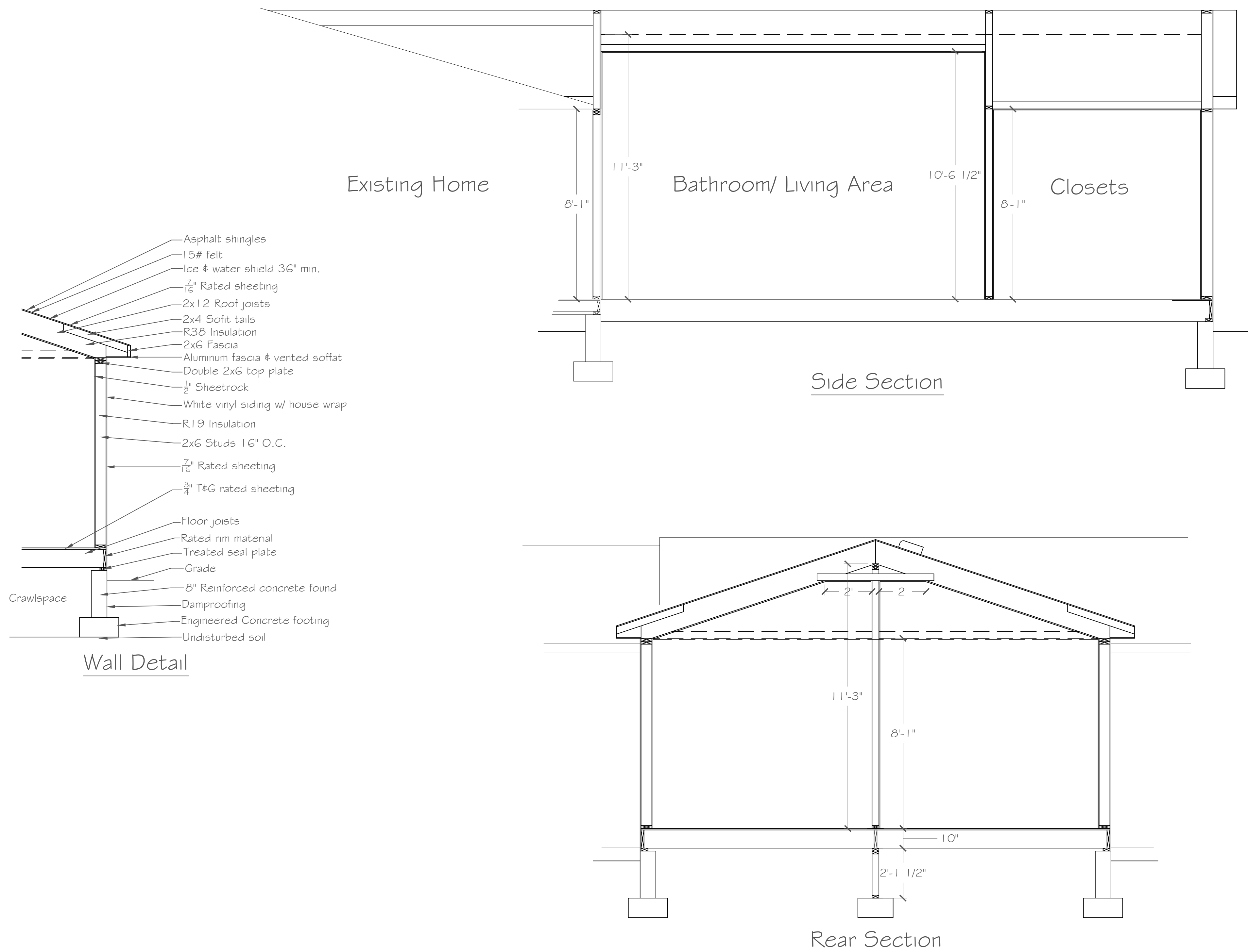
Elevations A04 1/4" = 1'



Print Date: 5/19/2022

Sackett Residence Addition

5689 W. 4000 S.
Hooper, UT 84315



Wall Sections

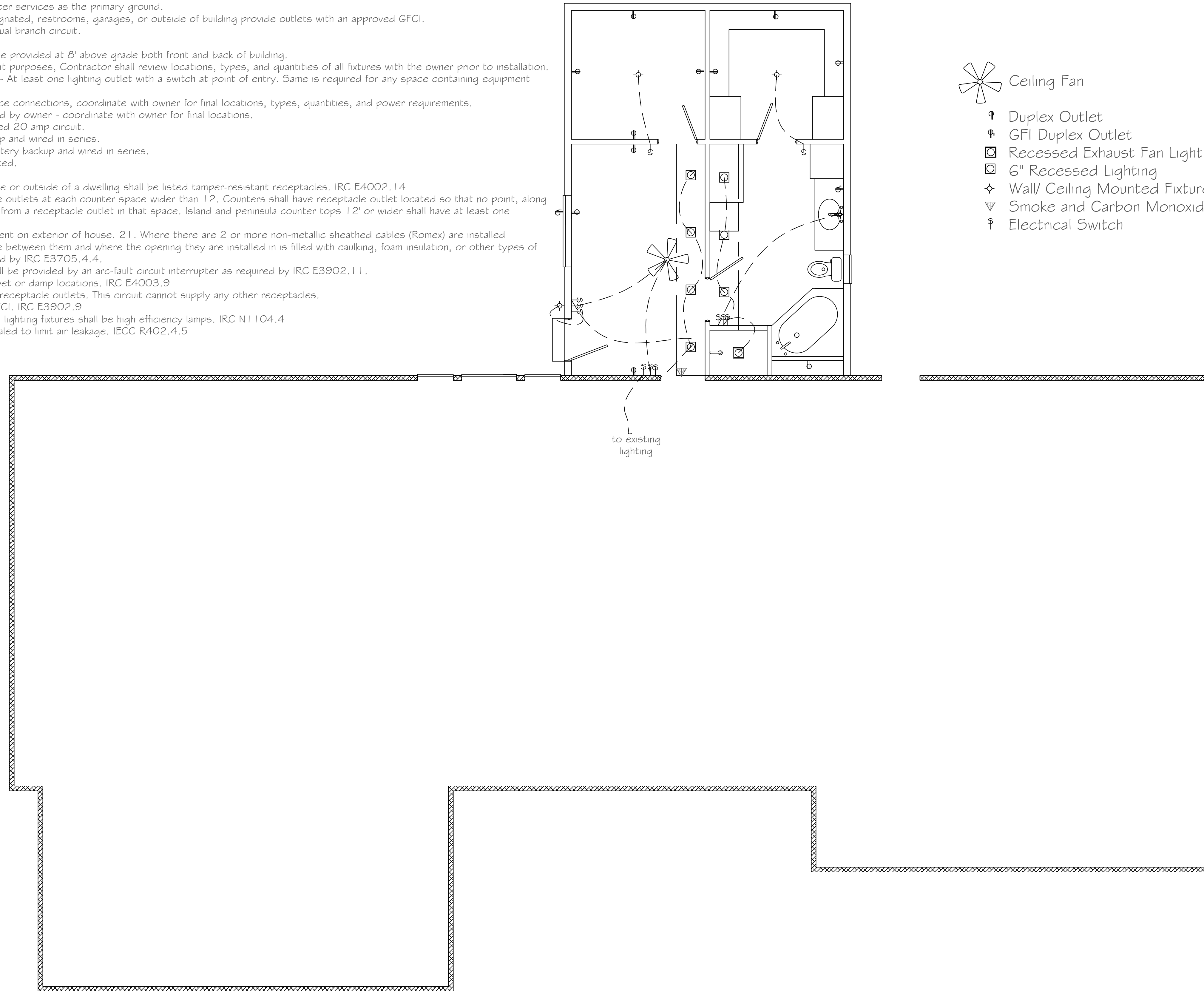
bsc-contractors.com	
Bert Smith & Sons General Contractors	
Sections	A05 3/8" = 1'



Print Date:	5/19/2022
Sackett Residence Addition	
5689 W. 4000 S. Hooper, UT 84315	

ELECTRICAL

1. All electrical shall be installed in accordance with current electrical code requirements. Contractor shall obtain required permit and comply with all required codes.
2. Provide all new fixtures, switches, outlets, and wiring.
3. Electrical Panel - Fire rated and located in mechanical room unless otherwise noted. Provide minimum clearance of 30" width and 60" in height. Cannot be located facing the garage side of firewall.
4. Provide secondary grounding system when using the water services as the primary ground.
5. In all locations where required, designated or none designated, restrooms, garages, or outside of building provide outlets with an approved GFCI.
6. Central heating equipment shall be supplied by an individual branch circuit.
7. Temporary wiring shall conform to N.E.C. article 305.
8. At least one weatherproof GFCI protected outlet shall be provided at 8' above grade both front and back of building.
9. Lighting and electrical plans are preliminary and for permit purposes, Contractor shall review locations, types, and quantities of all fixtures with the owner prior to installation.
10. Attic, Crawl Space, Utility Room, & Basement Storage - At least one lighting outlet with a switch at point of entry. Same is required for any space containing equipment requiring service.
11. Provide J-boxes and/or whips as required for all appliance connections, coordinate with owner for final locations, types, quantities, and power requirements.
12. Pre-wire for voice/data and cable TV in rooms requested by owner - coordinate with owner for final locations.
13. All outlets in restrooms shall be GFCI and on a dedicated 20 amp circuit.
14. Smoke detectors shall be hardwired with battery backup and wired in series.
15. Carbon monoxide detectors shall be hardwired with battery backup and wired in series.
16. All GFI outlets at 18' AFF minimum unless otherwise noted.
17. All exterior GFI outlets to have weather proof covers.
18. All 125-volt, 15 and 20 amp receptacles installed inside or outside of a dwelling shall be listed tamper-resistant receptacles. IRC E4002.1.4
19. Kitchen and Dining Area - Counters shall have receptacle outlets at each counter space wider than 12". Counters shall have receptacle outlet located so that no point, along the wall line, is more than 24" measured horizontally, from a receptacle outlet in that space. Island and peninsula counter tops 12' or wider shall have at least one receptacle for each 4' of counter top.
20. Install a water-proof GFCI within 20' of the A/C equipment on exterior of house. 21. Where there are 2 or more non-metallic sheathed cables (Romex) are installed together in the same space without maintaining space between them and where the opening they are installed in is filled with caulking, foam insulation, or other types of insulation the conductors must be derated as required by IRC E3705.4.4.
22. All electrical circuits providing power to bedrooms shall be provided by an arc-fault circuit interrupter as required by IRC E3902.1.1.
23. All lighting over showers or tubs must be suitable for wet or damp locations. IRC E4003.9
24. Install a dedicated 20-amp branch circuit for bathroom receptacle outlets. This circuit cannot supply any other receptacles.
25. The dishwasher branch circuit shall be protected by GFCI. IRC E3902.9
26. No less than 75% of the lamps permanently installed in lighting fixtures shall be high efficiency lamps. IRC N1104.4
27. All recessed luminaires will be airtight, IC rated and sealed to limit air leakage. IECC R402.4.5



Electrical Plan

bsc-contractors.com

Bert Smith & Sons
General Contractors

EOI $\frac{1}{4} = 1'$
Electrical



Print Date: 5/23/2022

Sackett Residence Addition

5689 W. 4000 S.
Hooper, UT 84315