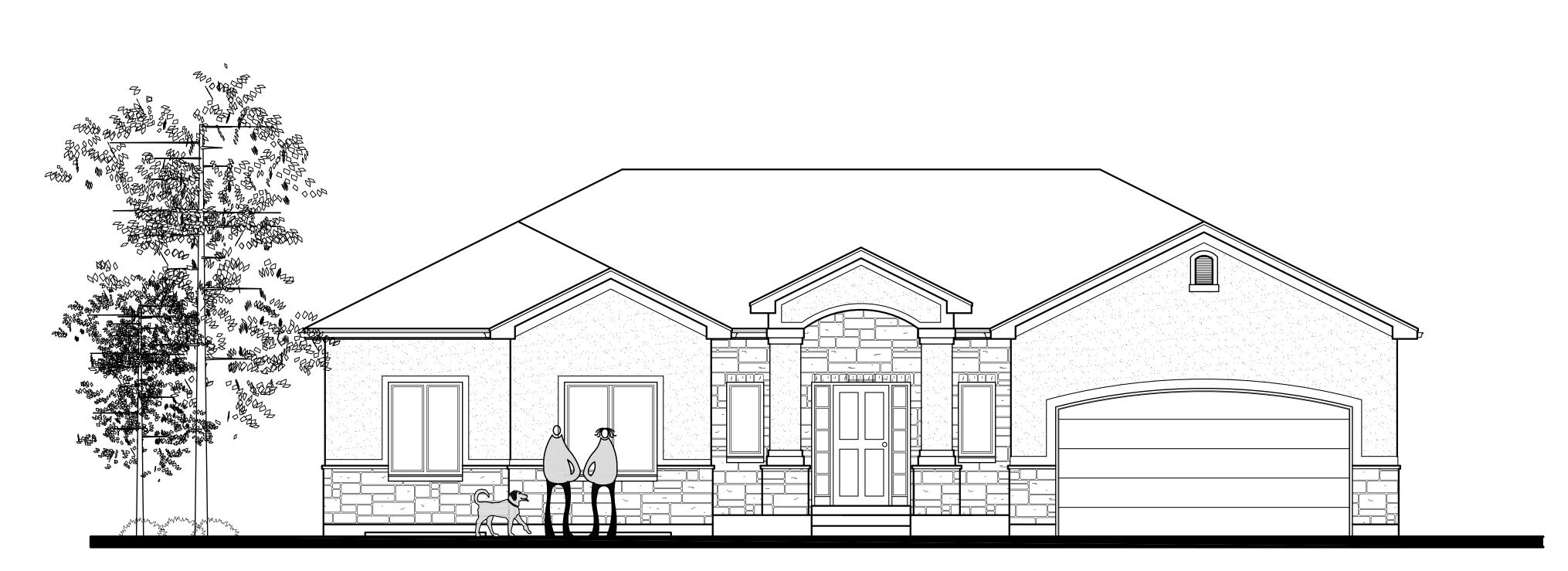
- CARLA

KOTA HOMES

DA



# DAKOTA HOMES - CARLA

RIVERTON UTAH

**ARCHITECT** 

STRUCTURAL ENGINEER

GENERAL CONTRACTOR

KEN HARRIS ARCHITECT **PROVO** UTAH

**ACUTE ENGINEERING OREM** UTAH

DAKOTA HOMES SANDY, UTAH

ARCHITECTURAL	STRUCTURAL	ELECTRICAL
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A1 - SITE PLAN A2 - BASEMENT FLOOR PLAN

A3 - MAIN FLOOR PLAN

A4 - FRONT ELEVATION

A5 - LEFT SIDE ELEVATION A6 - REAR ELEVATION

A7 - RIGHT SIDE ELEVATION A8 - CROSS SECTION

A9 - ROOF PLAN

S3 A10 - GENERAL NOTES

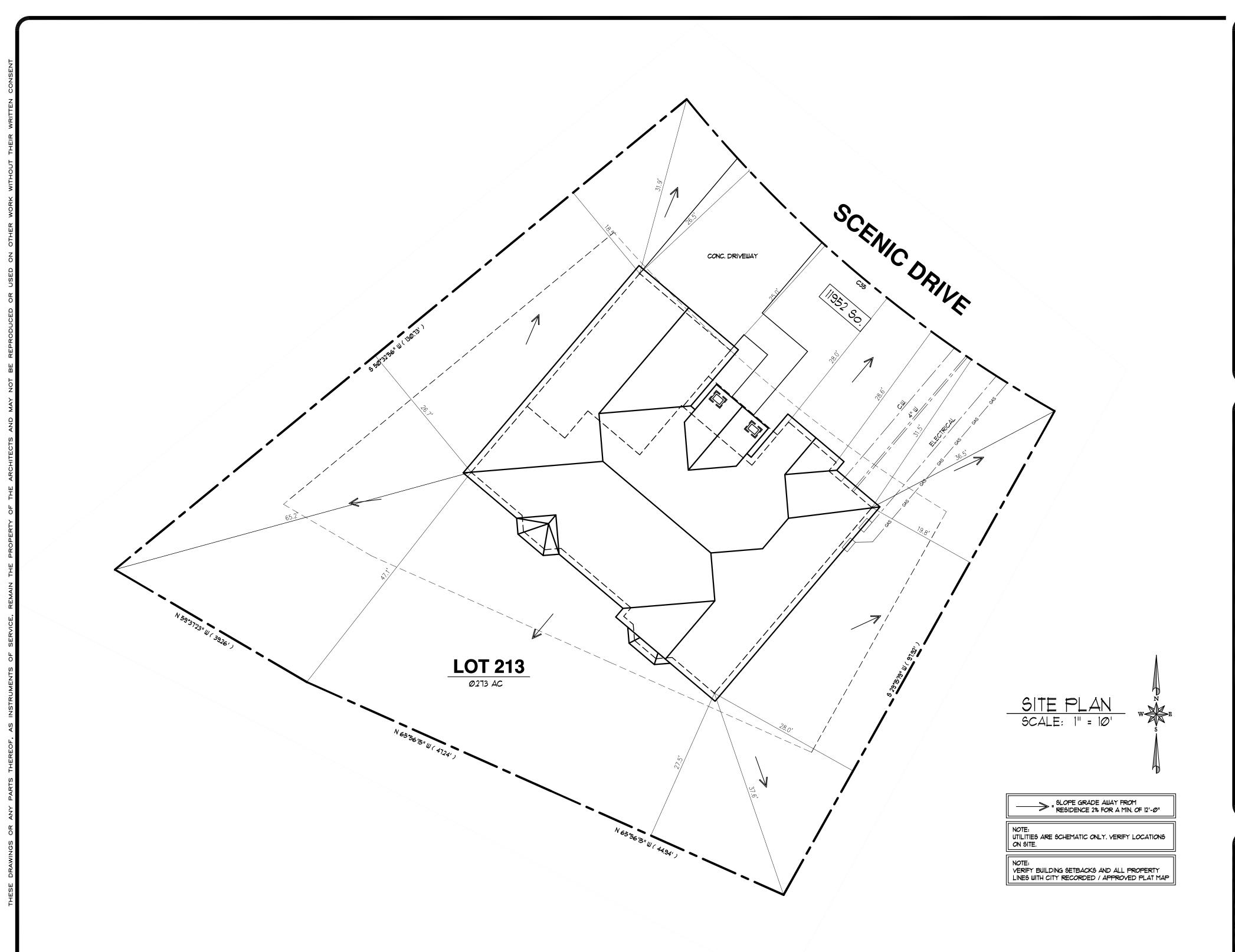
S1 - FOOTING & FOUNDATION PLAN

- MAIN FLOOR FRAMING PLAN **S2** 

- ROOF FRAMING PLAN
- STRUCTURAL DETAILS
- STRUCTURAL NOTES

E1 - BASEMENT FLOOR ELECTRICAL

E2 - MAIN FLOOR ELECTRICAL



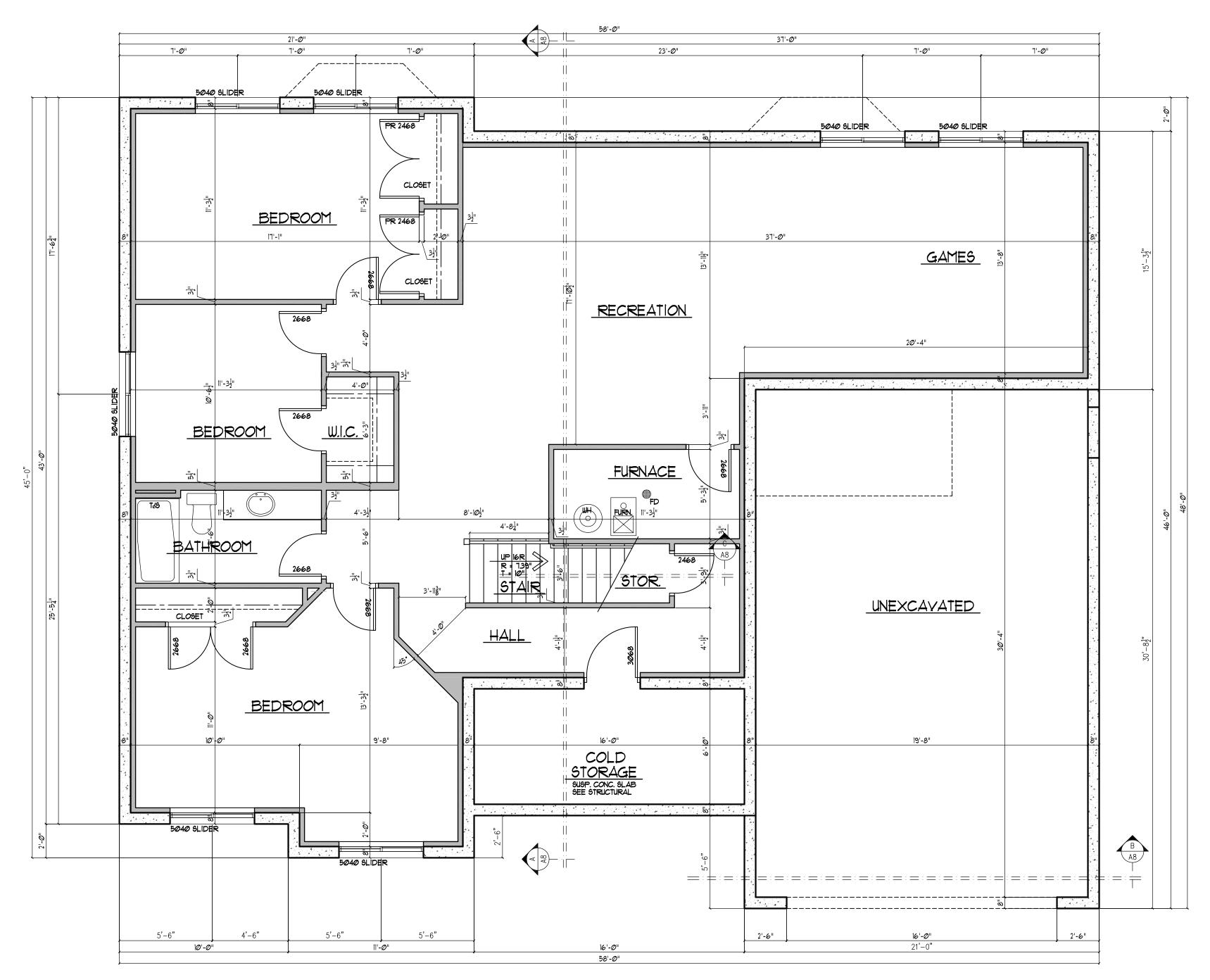


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DRAWN JLH

CHECKED KBH DATE DECEMBER 2010

> PLOTTED 12-20-2010 SCALE SEE PLAN



BASEMENT FLOOR PLAN

SCALE: 1/4" = 1'-0"

BASEMENT - 1,786 SF COLD STORAGE - 125 SF

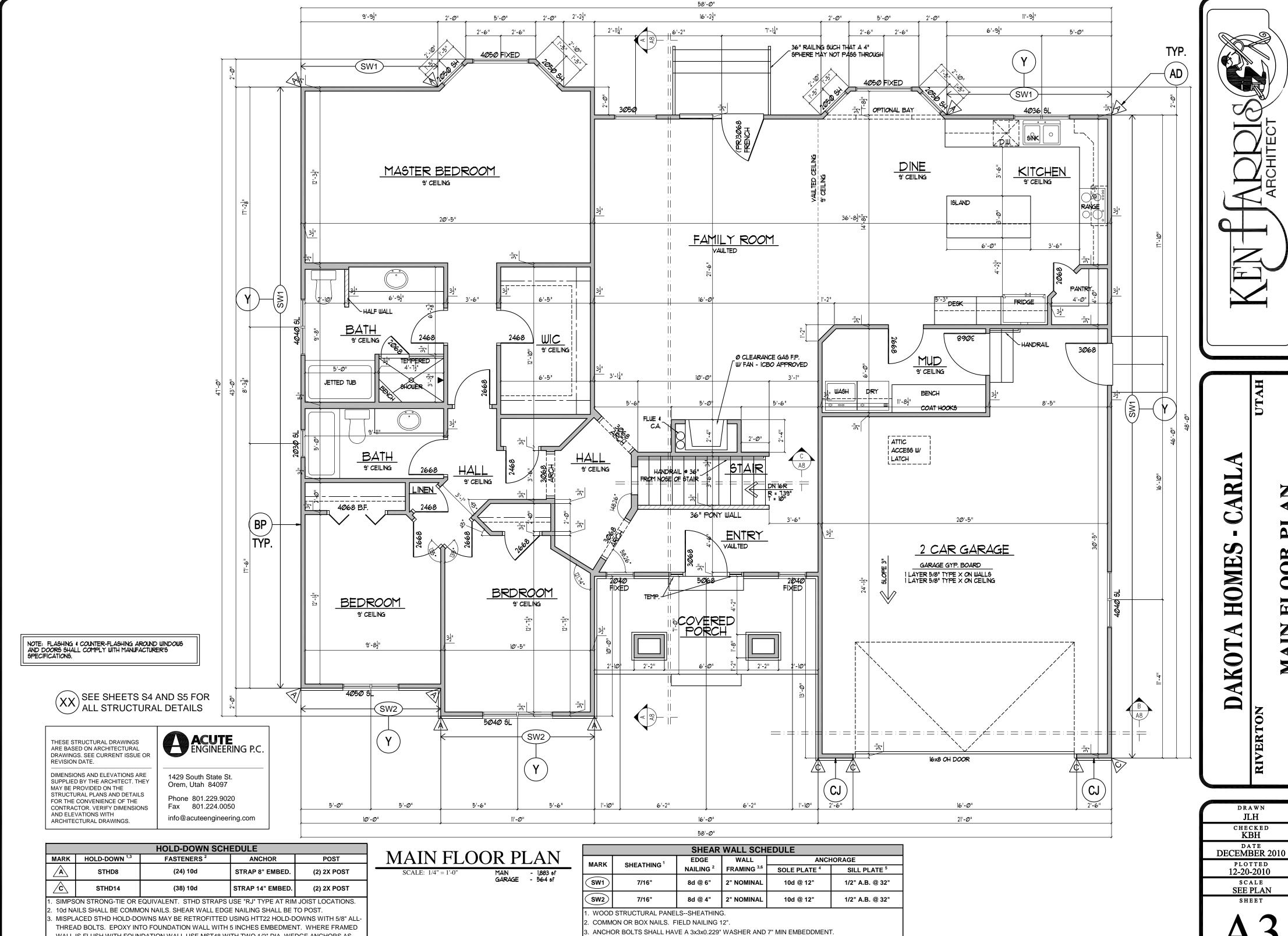
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RASEMENT FLOOR PLAN

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DATE
DECEMBER 2010
PLOTTED
12-20-2010

12-20-2010 SCALE SEE PLAN

A2



WALL IS FLUSH WITH FOUNDATION WALL USE MST48 WITH TWO 1/2" DIA. WEDGE ANCHORS AS

OPTION. FASTEN WITH 16-16d COMMON NAILS TO POST ABOVE.

12-20-2010 SCALE SEE PLAN SHEET

FRONT ELEVATION

scale - 1/4"=1'-0"

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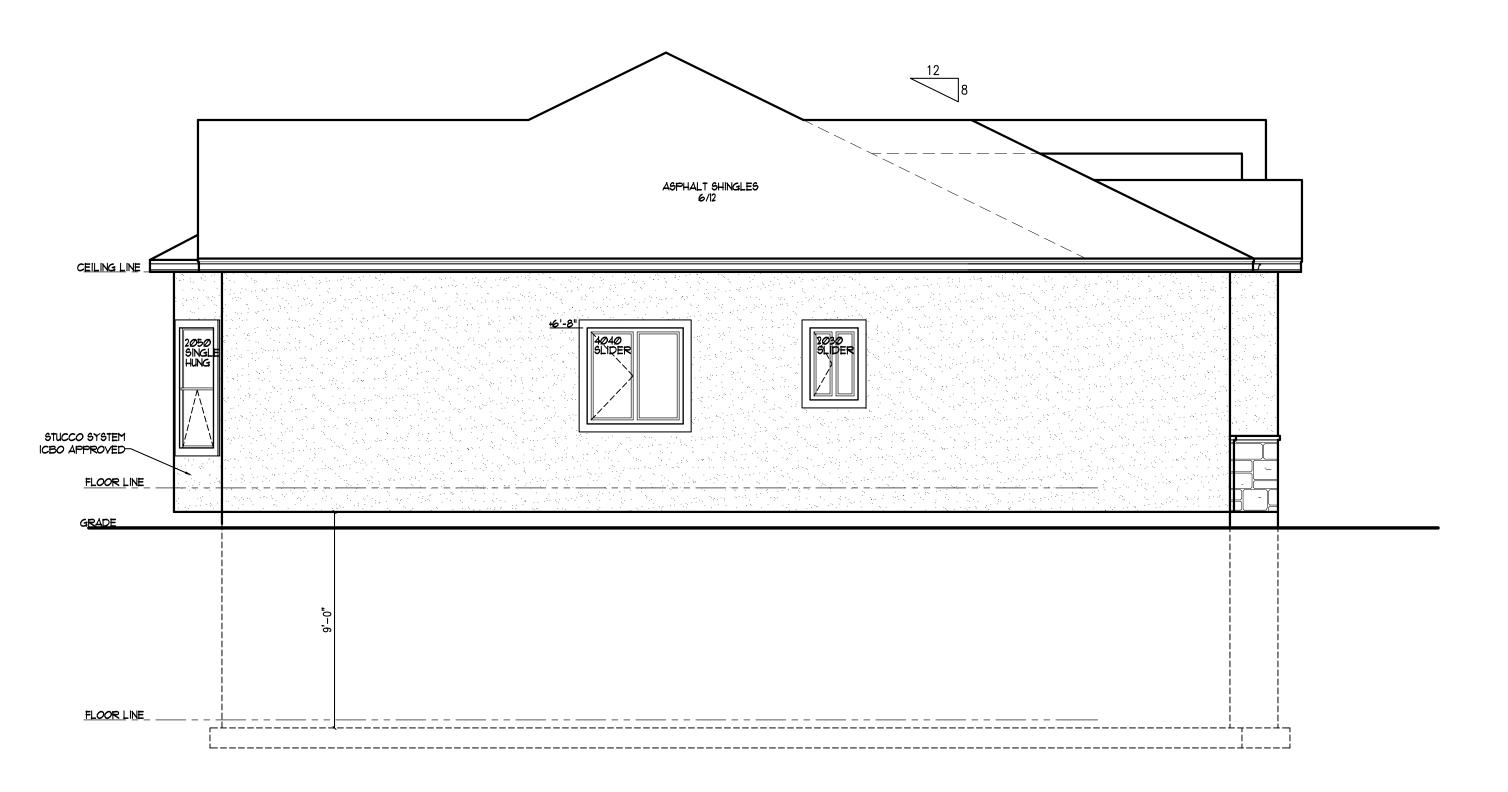
DECEMBER 2010 PLOTTED 12-20-2010

SCALE SEE PLAN

DECEMBER 2010

PLOTTED 12-20-2010

SCALE SEE PLAN



LEFT SIDE ELEVATION

SCALE: 1/4" = 1'-0"

REAR ELEVATION

SCALE: 1/4" = 1'-0"

FLOOR LINE \_

THE ARCHITECT AS20 NORTH UNIVERSITY AVENUE SUITE #200 PROVO UT 84604 PHONE 801 377 6303

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DATE
DECEMBER 2010

ECEMBER 20 PLOTTED 12-20-2010

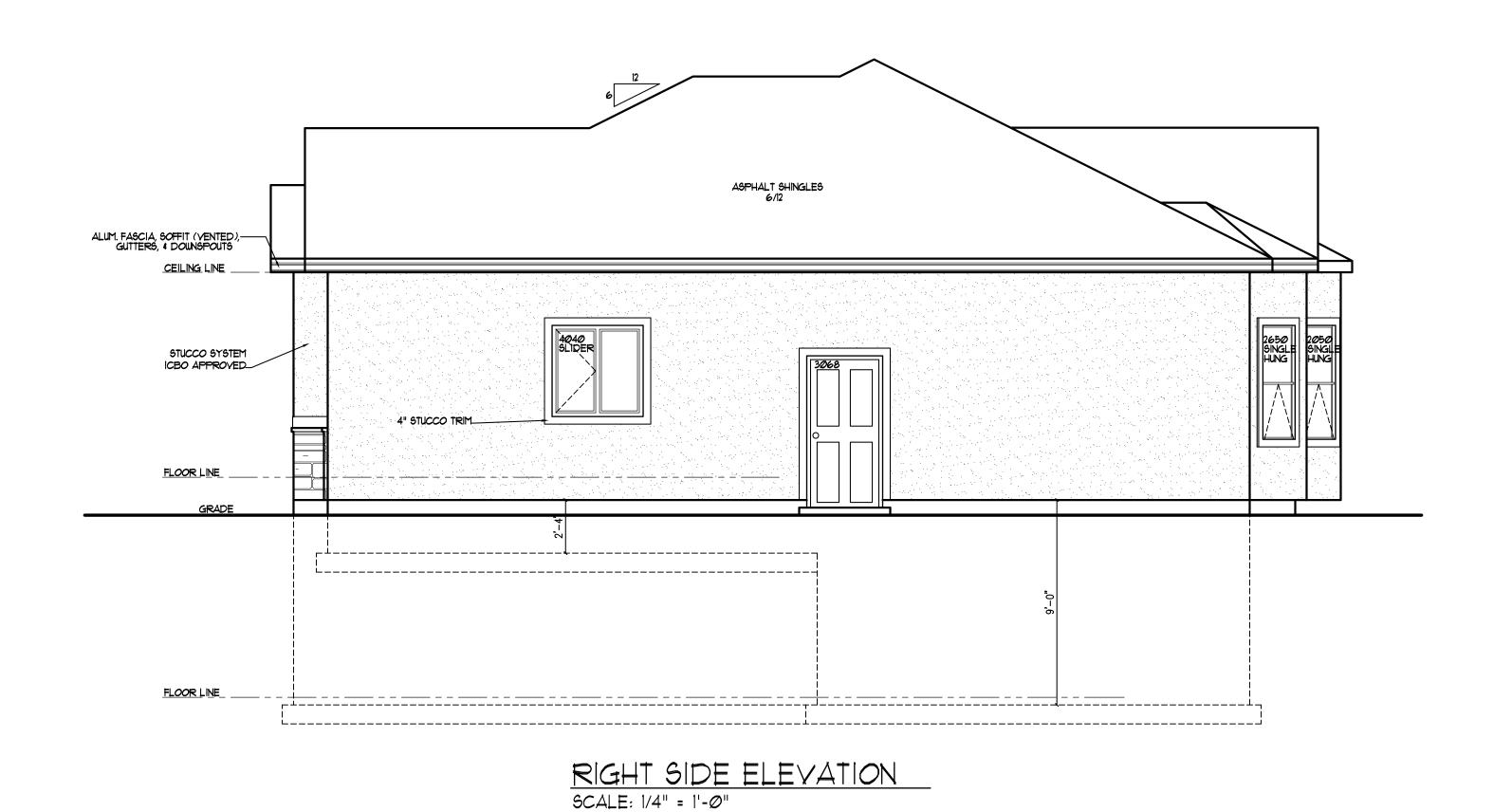
SCALE SEE PLAN

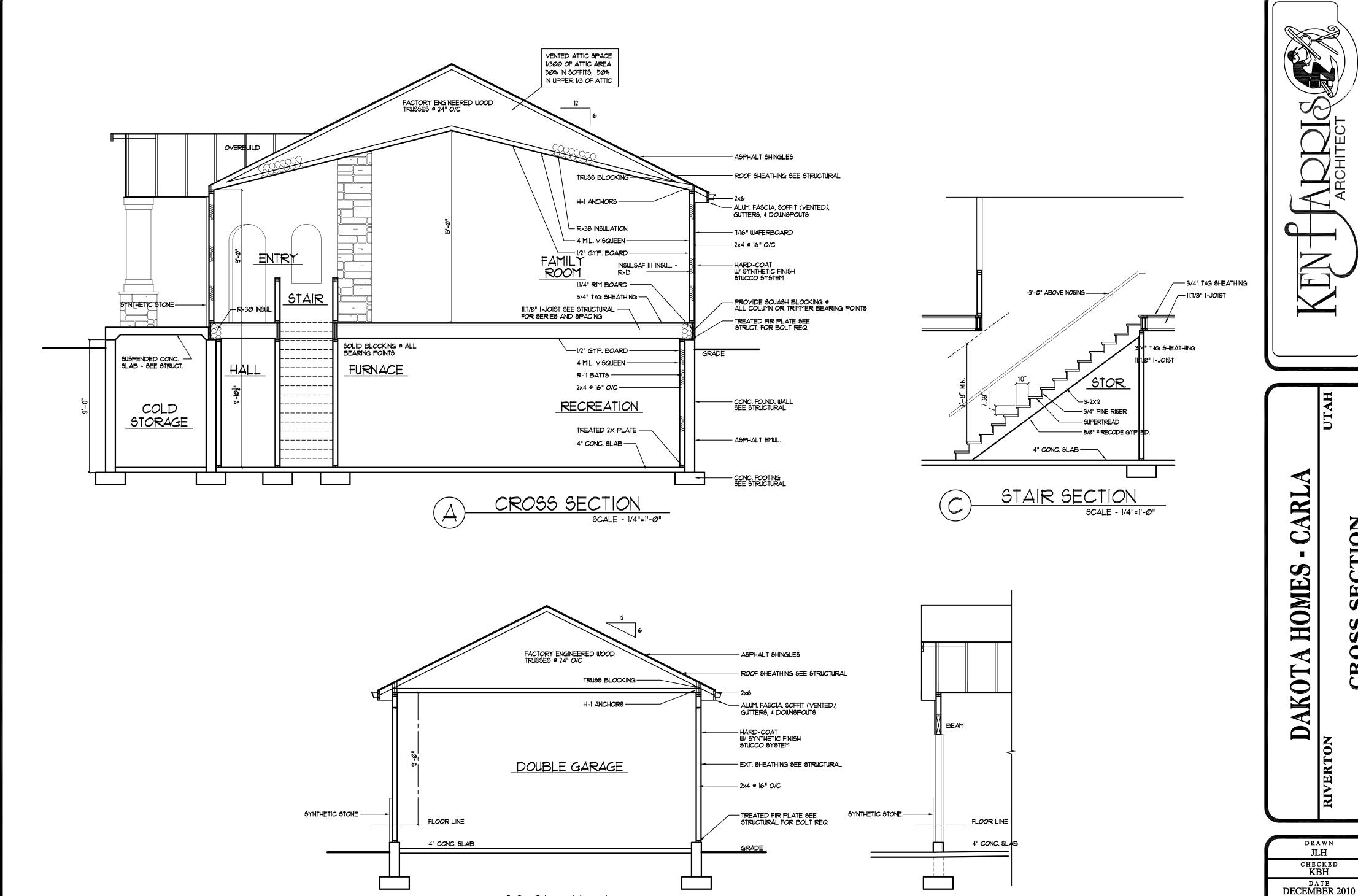
**A6** 

RIGHT

PLOTTED 12-20-2010

SCALE SEE PLAN





CROSS SECTION

SCALE - 1/4"=1'-0"

- CARLA KOTA HOMES

CROSS

DRAWN

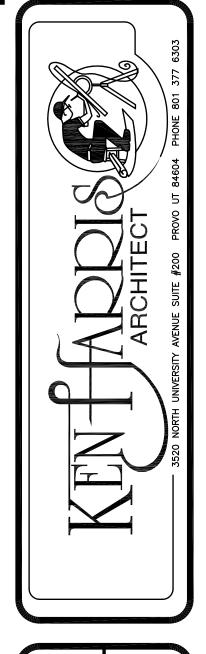
JLH CHECKED KBH

PLOTTED 12-20-2010

SCALE SEE PLAN

PROVIDE ICE AND WATER SHIELD AT ALL EAVE, RIDGE, AND VALLEY LINES - 3'-0" MIN.

ENTIRE ROOF IS 6/12 PITCH WITH ASPHALT SHINGLES - UN.O.



KOTA HOMES - CARLA DA

JLH CHECKED KBH

DECEMBER 2010

PLOTTED 12-20-2010 SCALE SEE PLAN

REFER TO THE 2009 IRC & 2009 IBC FOR SECTIONS & TABLES

#### SITE PLAN

- 1- Building location must comply with all city zoning regulations.
- 2- "Height of Building" means the vertical distance between a reference datum and the highest part of the building excluding roof structures such as chimneys, penthouses. towers and steeples. The reference datum shall be selected by one of the following:
- 3- Building walls closer than 5 feet to property line shall be of one-hour fire resistive construction without doors or
- windows. Table 302.1 4- Eaves, overhangs and projections shall conform to Table 302.1
- 5- Parapets or special roof construction is required on common walls for townhouses. See R317.2.2 for requirements. 6— Building cannot be located on any easement or right of way.
- 7- Ground slopes may not exceed 2 horizontal to 1 vertical unless retained in an approved manner. IBC Appendix J
- 8- Footings of structures located adjacent to slopes steeper than 3 horizontal to 1 vertical must be set back from the slope at least 1/3 the height of the slope if at the top, and the height of the slope at the bottom. R403.1.7
- 9— Site shall be graded such that the ground slopes away from the foundation dropping at least 6 inches within 10 feet of the foundation, R401.3 10- Any retaining walls over 4 feet in height from the bottom of the footing to the top of the wall shall be of an approved
- design with engineer's details provided. R105.2 11- Cuts or fills are not permitted within 2 feet of the property line, IBC Appendix J.
- 12- Drainage from the property may not exceed that which existed prior to development. Paved areas and roof drains may need to be supplied with appropriate sumps or other means of mitigating their flow. IBC Appendix J
- 13— Driveway shall have an all weather driving surface. A driveway, serving as an egress path, shall not have slopes exceeding 1 vertical to 8 horizontal. Such driveways exceeding 1 vertical to 12 horizontal slope shall have a handrail on one side, R311.6.3
- 14- The owner/contractor shall verify with the city as to the need of a Soils observation report from a licsensed
- soils engineer. A recommendation to proceed may be needed from the engineer prior to approval of a footing inspection. Foundation drains will be required, if indicated in the soils report. 15— Water meter cannot be located in the driveway, sidewalk or similar area. Meter must be placed in landscaping area.
- Sewer line cannot be located under the driveway. 16- Homes located in potential flood hazard areas will be required to have elevation certificates prior to construction and
- after completion. R106.1.3 & R 324

17- Addresses shall be provided which are plainly visible and legible from the street. R321.1

## FLOOR PLANS

- 1— Fire Separation between House and Garage:
- The gargae shall be separated form the residence and its attic area by not less than 1/2 inch ayosum board applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable space above by not less than 5/8 inch type X gypsum board or equivalent. R 309.2 Where the separation is a floor/ceiling assembly, the structure supporting the separation shall also be protected by  $\frac{1}{2}$ inch avosum board or equivalent.
- 2- Any door between the house and garage shall be a tight fitting, solid wood or hollow metal door, 1-3/8" thick or a 0 minute labeled door (closer not required). R309.1
- 3- Duct penetrations shall be by minimum 26 gauge sheet metal, no openings into the garage are
- 4- No windows are permitted in garage separation wall or in door between the house and garage. R309 5- Electrical boxes in wall between house and garage shall be steel or rated for at least 1-hour construction by an approved testing agency and separated by at least one stud space. R309.2 and 321.3.2 Ut Amend Separation need not be provided between a house and a carport having no enclosed uses above, provided the carport is entirely open on two or more sides. R309.4
- 6- Under no circumstances shall a garage have any openings into a room used for sleeping purposes. R309.1

#### STAIRWAYS

- 1- Stair treads shall have a maximum RISE of 7.75" and a minimum rise of 4". The minimum RUN shall be 10". Length of tread is measured from nose to nose. The largest tread run or riser within any flight of stairs shall not exceed the smallest by more than 3/8". Stairs shall meet all other requirements of the IRC 2009 code.
- 2- Winder treads shall have a minimum tread depth of 10 inches measured as above at a point 12 inches from the side where the treads are narrower. Winder treads shall have a minimum tread depth of 6 inches at any point. Within any flight of stairs, the greatest winder tread depth at the 12 inch walk line shall not exceed the smallest by more than 3/8 inch. R311.5.3.2
- 3- Stairways shall not be less than 36" in width.
- 4- Every stairway and ramp shall have a landing with a dimension of at least exceed 36" measured in the direction
- 5- Stairways with 4 or more risers shall have at least one handrail. Handrails shall be placed 34" to 38" above the nose of the treads vertically to the top of the rail. They shall be continuous the full length of the stairs. The handgrip portion shall be not less than 1-1/4" and no more than 2.5/8" in cross-sectional dimension. Handrails projecting from a wall shall have a space of not less than 1-1/2" between the wall and the handrail. Ends shall be returned to the wall or terminate in Newel posts or safety terminals. —— Exception: Non-circular handrails may have a maximum cross sectional dimension of 3 1/4 inches measured 2 inches down from the top of the crown. The handrail is required to have an indentation on both sides between 5/8 inch and 1—1/2 inches down from the top or crown of the cross section. The indentation shall be a minimum of 1/4 inch deep on each side and shall be at least 1/2 high.
- 6- Stairs shall have a headroom clearance of not less than 6'-8". Clearance is measured vertically from a line along the tread nosing to the soffit above at all points.
- 7- Enclosed space under stairs shall have the walls and soffit protected on the enclosed side with 1/2" sheetrock.
- 8- 36" high guards shall be provided on porches, balconies and raised floor surfaces located more than 30" above the figor or grade below. Open sides of stairs with a total rise of 30" above the floor or grade below shall have guards at least 34"
- 9- Guards will have an ornamental pattern such that a sphere 4" in diameter cannot pass through. The triangular space created by the stair and a bottom rail may be constructed so a 6" sphere will not pass through. 10- Ramps slope not to exceed 1 unit vertical in 12 units horizontal. (IRC section 311.8.1)
- 11- Guardrail connection details shall be adequate to support 200 lbs. Of horizontal force per lineal foot acting at a right
- 12- A continuous handrail is required along a stairway. It is required to be 34 to 38 inches above the nosing of the steps.
- Show the hand grip portion of handrails shall have circular cross section not less than 1-1/4 inches nor more than 2-5/8 inches in cross section. (see exceptions). Show that handrails terminate in a safety terminal or return to the wall. -- sec. R315 and state amendments.

#### EXITING FACILITIES

- 1- Houses shall have at least one  $3'-0" \times 6'-8"$  swinging type exit door to the exterior. Any lock shall be openable from the
- inside without a key. R311.4.1
- 2- Landings are required on both sides of exterior doors. Door may open at a landing that is not more than 7 3/4" than the floor level, provided the door does not swing over the landing. Landing shall be at least 36" deep.
- 3- Hallways shall be not less than 36" wide. R311.3
- 4- Hallways shall have a clear ceiling height of not less than 7' measured to the lowest projection. R305.1
- 5- Every sleeping room and basement shall have at least one operable, exterior window or door for emergency escape or ue. The units shall be operable from the inside to provide a full clear opening without the use of tools. ALL of the
- following apply. R310 A) Minimum net clear opening of 5.7 sq.ft. (opening at grade level floor may be 5.0 Sq. Ft.)
- B) Minimum net clear opening beight dimension of 24 C) Minimum net clear opening width dimension of 20"
- D) Maximum finished sill height of 44" above the floor (5)\* All doors or windows provided for emergency escape or rescue shall open directly to a street, alley, yard or court.

  E) Window wells for emergency escape and rescue windows shall have a net clear opening of 9 sq. ft. with a minimum
- dimension of 36". Window wells deeper than 44" shall have a permanent ladder accessible from the window when fully open. Ladders shall be at least 12" wide and 3" from the well with rungs no more than 18" apart.
- F) Emergency escape windows are allowed to be installed under decks and proches provided the location of the deck allows the emergency escape window to be fully opened and provides a path not less than 36 inches in height to a court or G) In dwelling units, where the opening of an operable window is located more than 72 inches above the finished grade or
- surface below, the lowest part of the clear opening of the window shall be a minimum of 24 inches above the finished floor of the room in which the window is located. Glazing between the floor and 24 inches shall be fixed or have openings through which a 4—inch diameter sphere cannot pass. R613.2 Exceptions.
- 1) Windows whose openings will not allow a 4-inch diameter sphere to pass through the opening when the opening is in its largest opened
- 2) Openings that are provided with window guards that comply with ASTM F2006 or F 2009

#### ARCHITECTURE & PLANS

- 1— These drawings or any parts thereof, as instruments of service, remain the Property of Ken Harris Architect and may not be reproduced or used on other work without written consent.
- Square footages and dimensions are subject to change to comply with city ordinances, site and/or craftmanship. 3- Verify all dimensions, conditions, and measurements on site prior to construction.

#### <u>LIGHT VENTILATION and SANITATION</u>

- 1- All habitable rooms (bedrooms, living rooms, dining rooms, family rooms, etc.) shall be provided with natural light from windows with an area of not less than 8% or artificial light producing 6 ft candles throughou
- 2- All habitable rooms shall be provided with natural ventilation by means of exterior openings with an area of not less than 4% of the floor area of each room. In lieu of natural ventilation, habitable rooms may be provided wit
- mechanical ventilation capable of 0.35 air changes per hour with 15 cfm of outside air per occupant. R303.1 3- For the purpose of light and ventilation, a room may be considered as a portion of an adjoining room when at least one-half of the area of the common wall is open, unobstructed and provides an opening of not less than 1/10th of the floor area of the interior room or 25 sq.ft. which ever is greater. R303.2
- 4- Bathrooms shall have ventilation provided by an exterior window with an area of 3 sq.ft. but not less than 1-1/2sq.ft. openable. A fan providing 50 cfm intermittent or 20 cfm continuous may be substituted. Fan must discharge
- directly to the outside, M1507 5- The house shall have at least one water closet, lavatory, bathtub or shower and kitchen sink equipped with hot and cold running water necessary for normal operation. R305
- 6- Enclosed attics and enclosed rafter spaces shall have ventilation for each separate space by ventilating openings protected against rain or snow. Openings shall be covered with a 1/8" to 1/4" mesh. The net free ventilating area shall be not less than 1/150 of the area of the space ventilated, or 1/300 if 50% to 80% is located in the upper 3' of the attic and the remainder is provided by soffit vents. Where soffit vents are used, an insulation dam must be provided between every truss and/or rafter. Attic ventilation may also be 1/300 when a vapor barrier is used at the warm side of
- 7- Enclosed attics and enclosed rafter spaces shall have ventilation for each separate space by ventilating openings protected against rain or snow. Openings shall be covered with a 1/8" to 1/4" mesh. The net free ventilating area shall be not less than 1/150 of the area of the space ventilated, or 1/300 if 50% to 80% is located in the upper 3' of the attic and the remainder is provided by soffit vents. Where soffit vents are used, an insulation dam must be provided between every truss and/or rafter. Attic ventilation may also be 1/300 when a vapor barrier is used at the warm side of
- 8- An attic access 22"x 30" shall be provided at roof/ceiling areas and shall be located in a corridor, hallway, of other readily accessible location. There shall be 30" of headroom over the opening. If there is less than 30" maximum height in the attic, access need not be provided. R807

#### <u>GLAZING</u>

- 1- Glass in doors shall be safety glazed. R308.4
- 2- Glazing adjacent to a door within a 24" arc of either door edge when closed, must be safety glazed if the bottom edge is
- within 60" of the floor or walking surface. R308.4 3- Glazing panels larger than 9 sq. ft. located less than 18" above & within 36" horizontally of a fioor or walking surface
- shall be safety glazed. In lieu of safety glazing, glass may be protected by a horizontal member 1-1/2" in width capable of resisting 501bs. per lineal foot, located between 34" and 38" above walking surface. R308.4
- 4- Glazing in shower and bathtub rooms within 60" above the drain inlet, including any walls, windows in walls and doors shall be safety glazed. R308.4 5- Glazing within 5' horizontally and 60" vertically of an indoor or outdoor pool or spa deck area shall be safety
- alazed, R308.4 6- Glazing at walls enclosing stairs and landings (and for 5' beyond the top or bottom of the stair) shall be safety glazed if
- less than 60" above the walking surface. R308.4
- 7- Glass in railings shall be tempered or laminated. R308.4 8- Safety alazina material shall be permanently labeled, R308.1

#### ELECTRICAL

- 1- Lighting Outlets
- A-At least one wall switch controlled lighting outlet shall be installed in every habitable room; in bathrooms, hallways, stairways, attached garages and detached garages with electric power; and at outdoor entrances (not including garage overhead or vehicle doors). In habitable rooms, other than kitchens and bathrooms, receptacles controlled by a wall switch is permitted in lieu of lighting outlets. NEC 210.70
- B-At least one switch controlled, lighting outlet is required at the entry of attic, crawl space, utility room or basement with storage or equipment. The lighting outlet shall be provided at or near any equipment requiring servicing. NEC 210.70(A)(3) C-Lighting is required for all interior and exterior stairways. Lighting outlets at stairs shall be switched at each floor level
- where the difference between floor levels is six steps or more. NEC 210.70(A)(2) D-Incandescent fixtures in closets shall be a minimum of 12" from any shelf edge, measured horizontally (6" for fluorescent fixtures). The dimension for shelves less than 12" wide will be 24" from the wall. NEC 410.16(C)
- E-Fixtures cannot be located within 3 feet horizontally or 8 feet vertically of bathtubs or showers. NEC 410.10(D) F-Switches shall not be installed in tub or shower spaces. NEC 404.4
- A-In every kitchen, family room, dining room, living room, parlor, library, den, sun room, bedroom, recreation room, or similar room recentacle outlets shall be installed so that no point along the floor line in any wall space is more than 6' from an outlet (measured horizontally). The wall space afforded by fixed room dividers, such as, free-standing counters or railings shall be included in the 6' measurement. Any wall or space 2' or more wide shall be considered as another wall space within the room. NEC 210.50(A)
- B-Kitchen and dining area counter tops shall have receptacle outlets at each counter space wider than 12". Receptacles shall be installed so that no point along the wall line is more than 24" from an outlet. One outlet is required for island and peninsular counter tops which shall be installed above or within 12" below the counter top. Receptacles shall not be installed in a face—up position. NEC 210.50(B)
- C-120V receptacles for service and maintenance shall be located within 25' of furnaces and air conditioning equipment in attics and crawlspaces. NEC 210.63 D-Outlets shall be installed in bathrooms within 36" of the outside edge of the basin on the wall adjacent to the basin
- NEC 210.32(b)

  F-At least two outlets accessible at ground level shall be installed outdoors. There shall be a minimum of one outlet
- at the front and one outlet at the back of dwelling within 6'-6" of grade. NEC 210.52(E) F-At least one outlet shall be installed for the laundry. NEC 210.52(F)
- G-At least one outlet, in addition to any provided for laundry, shall be installed in each basement and each attached garage, and in each detached garage with electric power. NEC 210.52(G)
- H-For hallways 10' or more long, one outlet shall be provided. NEC 210.52(H)
- I- Arc fault receptacles required in bedrooms per NEC 210.12
- 3- Permanent access must be provided to all hot tub and whirlpool tub equipment requiring service. 4- Smoke and multiple station smoke alarms R314 In new construction, the required alarms shall receive their primary
- power from the building wiring and be equipped with a battery back-up.
  Single and multiple station alarms shall be mounted on the ceiling of wall at a poir
- centrally located in the hall or area giving access to each separate sleeping area and in every bedroom.
- 5- When a house has more than one story and/or has a basement, a detector shall be installed on each story and in the basement. Where a story or basement is split into two or more levels, the smoke detector shall be installed on the upper level of each story. However, when the lower level contains a sleeping area, a detector shall be installed on each level of the story or basement.
- 6— Detectors shall be wired in series so that an audible alarm sounds in all sleeping areas at the same time. 7- The electrical panel shall have a clear working space 30" wide, 36" deep and 6'-6" high in front. NEC 110.26
- 8— All receptacles serving kitchen countertops, in garages, baths, unfinished basements and outside receptacles shall
- be GFCI protected. NEC 210.8(A) 9- NOT USED
- 10- GFCI protection is required at:
  - 1— All Exterior outlets (must be waterproof and a minimum of one). 2- All unfinished basement outlets (minimum of one).
- 3- Attached garage outlets (except dedicated) (minimum of one).
- 11- Outlet to be shown within 25' of HVAC equipment. 12- A carbon monoxide detector is rea'd on each level of the house.
- 13- All light fixtures above tubs and showers will be rated for damp location.

#### ROOM DIMENSIONS / MISC.

- 1- Ceiling heights of all habitable rooms (hallways, bathrooms, toilet rooms, laundry rooms, and portions of basements containing these spaces shall have a ceiling height of not less than 7 feet. IRC 305.1 see same section for
- exceptions 2— Houses shall have at least one room which shall have not less than 120 sq.ft. of floor area. Other habitable rooms except kitchens shall have and area of not less than 70 sa.ft. No portion of a room may be used to
- compute minimum area where the ceiling is less than 5'. R304 3— Habitable rooms other than kitchens shall be not less than 7' in any dimension. R304.3
- 4— Exception there shall be a clear passageway of not less than 3' between counter fronts and appliances or walls. R304.3 UT Amendment issued August 24, 2009

- Roofing materials must have an approval by an approved testing agency. Roof slope will determine the types of roofing that can be used. Roofing materials must be installed exactly as intended by the approval. Asphalt shingles on roofs less than 4/12 pitch must be over an approved water shield. Asphalt shingles cannot be used for slopes less than
- lce and water shield shall be used at roof eaves form eave edge to 24" inside the exterior wall. R905.2.7.1 3— Step flashing shall be used where the roof meets a vertical surface. Counter flashing shall be installed at roof and wall junctures. R905.2.8

#### MASONRY

- 1- See IRC Section R606 for reinforced masonry construction.
- 2- Wood members shall not be used to permanently support the load of any masonry or concrete except
- nonstructural floor or roof surfacing not more than 4" thick. 3- Brick and stone veneer are only permitted on the first floor above grade unless all provisions of the state amendment for additional bracing are met. Veneer shall be attached with corrosion resistant sheet metal ties 22 gao x 718" or 9 gao wire. Stud spacina shall be a maximum of 16" on center. Tie spacina shall be such that no more than 2 sa.ft. of wall is supported (16" on center both ways). A #9 goo wire shall be provided as horizontal bed joint reinforcement to ties. Brick ties shall engage the #9 wire. R703.7.4.1
- 4 Stone units, 5" maximum thickness, may be applied with a 1" minimum grouted backing space which is reinforced by not less than 2"x 2" 16 gap aglyanized wire mesh placed over waterproof paper backing and anchored directly o studs spaced no more than 16" on center. Mesh must be furred out from sheathing for embedment in grout.
- 5- Fireplace and Chimney
  - a. Masonry and Concrete Fireplaces. See R1001 & R1003 b. Factory—built Chimneys and Fireplaces
  - (1) Factory-built chimneys and fireplaces shall be listed by an approved testing igency and have an ICC ES approval number. They shall be installed in exact
  - accordance with the terms of their listings and the manufacturer's instructions Specific approval numbers and installation standards must be made available to the building inspector. R1004 (2) Fire blocking with non-combustible material is
  - required at spaces between floors and cellings through which chirmneys pass. R1001.1.16 (3) Hearth extensions of listed factory built fireplaces shall conform to the conditions of listing and manufacturers installation instructions, R1001.9
  - c. Fireplace chimneys shall extend at least 2' above the roof, any opening or any part of the building within

#### CONSTRUCTION DETAILS

- 1— Any trusses to be used must have details provided for the specific house. R502.11 A truss layout indicating ocations and orientation of all types of trusses must be provided from the truss manufacturer before a review can be completed. This information is necessary to accurately determine loading of structural members. Details are required for ALL types of trusses used (scissor, mono, girder, etc.). Truss details must be provided from an approved fabricator. Homemade trusses are not acceptable unless designed, stamped and inspected by a structural engineer. All details must indicate correct design snow loads for the area. Specific engineered design for connections of trusses to each other and other framing members which are supported by trusses must accompany the details. Details must be stamped by a Utah registered structural engineer.
- 2- Joist spans shall be accordance with Table R502.3.1 or designed under IBC criteria.
- 3- Joist spans shall be accordance with Table R502.3.1 or designed under IBC criteria.
- 4- Any product used should be approved as an alternate by an ICBO Evaluation Report. 5- Walls supporting two floors shall be 2x6 or 3x4 study at not less than 16" o.c. Stud height in bearing walls cannot exceed 10'. Stud height in non-bearing wall cannot exceed 14' for 2x4s or 20' for 2x6s unless
- ngineered. Footnote "a" Table R602.3.1 Subfloor and roof sheathing should be in accordance with R503 and R803
- All weather exposed surfaces shall have a weather—resistive barrier to protect the walls under finish material. The most common type is a waterproof building paper or felt applied weatherboard fashion, lapped at least 2" at horizontal joints and at least 6" at vertical joints. "One coat" stuccos require 2 layers. R703.2
- 8- Stucco system shall be installed in accordance with R703.6 or shall be an approved system with an ICBO Evaluation Service number. All "systems" must be applied in strict compliance with the manufacturers' recommendations ncluding requirements for selffurring lath, flashing, corner treatment, expansion control joints, and drainage system. 9- Any component of a house which does not fall under the provisions for IRC conventional construction

#### ENERGY ANALYSIS (MEC-CHECK)

1- An energy analysis should be attached to / or included with the plan when turned into the city. Ken Harris Architecture does not provide this service, it must be provided by the Mechanical or

## MISCELLANEOUS

may require structural engineering. R301.2

- 1- Laundry chute, 26ga sheet metal with locklapped joints. All openings to the enclosure shall be
- protected by not less than a self closing wood door 1.3/8" thick or equivalent.
- 2- A double wrap of rebar is required around all windows and over the tops of all doors in foundations. - Waterproofing is required for all foundations enclosing basements below finish grade.
- Wet Dry Mastic at cold joints or cracks. — Beam pockets in concrete or masonry walls shall be sized to allow a minimum 1/2' air space on the top, sides, and ends of the beam.
- 5- Provide a 1/2" minimum clearance between top plate of interior partitions and bottom chord of trusse
- (to ensure that loading will be as designed)
- Provide a double top plate with a minimum 48" lap splice.
- 7— Design and details of factory built trusses must be signed by utah licensed engineer, and are to be on job site for rough inspection.
- 8- Columns and posts located on concrete or masonry floors or decks exposed to the weather or columns and posts recated in Contracte of Indisonly most of decks exposed to the Medicine for to water splash or in basements, and which support permanent structures, shall be supported by concrete piers or metal pedestals projecting avove floors unless approved wood of natural resistance to decay or treated wood is used. the pedestals shall project at least 6" above
- posed earth and at least 1" above such floors. 9- Use 9" flashing and caulk for windows, and to have windows installed as per manufactures specs.
- 10- Individual concrete or masonry piers shall project at least 6" above exposed ground unless the columns or posts which they support are of approved wood with natural tance to decay or of treated wood.
- Ridaeboards, hips and valley rafters shall be the same depth as the cut end of the supported rafters. 12- Platforms, catwalks, light, and gfi outlets are req'd for attic appliances, insulation shall be kept away from attic appliances.

#### PLUMBING and MECHANICAL

- 1- Each water closet shall be located in a clear space not less than 30" in width (15" from the center to any obstruction) and have a clear space in front of not less than 21". Figure 307.1
- 2— A shower compartment shall nave at least 900 square inches of floor area and be of sufficient size to inscribe a
- circle with a diameter of not less the 30 inches. P2708 Cement, fiber-cement or glass mat gypsum backers installed in accordance with manufactures recommendations
- shall be used as backers for wall tile in tub and shower areas and wall panels in shower areas, 702.4.2 4- All appliances (water heater, boiler, etc.) which require pressure relief valves shall be provided with a full sized drain which shall extend from the valve to an indirect waste, such as a floor drain. All floor drains shall have trap primers or deep seal design. P2803.6.1 & P3201.2
- 5— Gas fired furnaces and water heaters shall not be located in a bedroom, bathroom, storage closet, toilet room or in any
- enclosed space with access only through such a room or space. G2406 6— Water heaters and heating appliances located in garages which generate a glow, spark or flame shall be installed with the pilots, burners or heating elements and switches at least 18" above the floor level. G2408.2
- The water heater space and furnace room shall have an opening or door with a continuous passageway at least 2' in width and large enough to permit removal of the largest equipment in the room. M130S.1.2
- 8- It shall be possible to remove water heaters without first removing any permanent part of the structure. M130S.1
- 9- An unobstructed working space at least 30" deep and the height of the furnace or water heater (30" minimum) shall be provided along the entire front or firebox side of the furnace. M1305
- 10- The building shall comply with Chapter 17 of the IRC Section M1701. 11- A furnace shall not be installed in a closet or alcove less than 12" wider than the furnace and shall provide a
- 12- A furnace shall not be installed with a clearance of less than 6" along the combustion chamber opening side. 13— Ducts used for kitchen range, dryer, bathroom and laundry room ventilation shall have a smooth, noncombustible, non-absorbent surface. Ducts shall terminate outside the building and shall be equipped with back draft dampers. Flexible ducts are allowed for bathroom exhaust fans, but must be tested to UL181 and installed in accordance with the listing. IRC ch 16, also cannot terminate in Soffit, attic crawl space or ridge vents. 1S01.2
- 14- All dryer exhaust systems shall be compliant with RM1502

minimum working space of 3" along the sides, back, and top. M1305.1.1

- 15— Cooking appliances shall be tested, listed and labeled as household type for domestic use and installed per the
- manufacturer's instructions. G2447 16- A evaporative cooler must be located a minimum of 10' from all vents, flues and exhaust terminations. Flues may be extended 3' above intake opening of evaporative cooler in lieu of 10' horizontal separation.
- 17— Water closets shall have a maximum flow rate of 1.6 gallons per flush. Shower heads shall have a maximum flow rate of 2.5 gpm. P2903.2 18— Water hammer arresters are required with quick—closing valves (dish clothes washers). P2903.5
- 19— The hot water supplied to bathtubs and whirlpool tubs shall be limited to a maximum temperature of 120 F by a water temperature limiting device that conforms to ASSE 1070, except where such protection is otherwise provided by a combination tub/shower valve in accordance with Section P2708.3 20-Fixtures that have flood level rims located below the elevation of the next upstream manhole cover of the public sewer
- serving such fixtures shall be protected from backflow or sewage by installing an approved backwater valve. P 3008 21- Provide access to motors and pumps on all jetted tubs.
- 22-Provide tank type water closets with a flow rate of not more than 1.6 gallons per flush. Irc r2903.2
- 23-Provide shower heads with a flow rate of not more than 2.5 gpm. IRC p2903.2 24—Provide non-freeze type backflow preventer hase bibbs irc p2902.3.3 & p2603.6 25—Provide an expansion tank on the culinary water system.
- Locate in mechanical room. Irc p2903.4 26—The water heater shall be adequately braced to resist seismic forces. 27-Floor drains shall be provided near all water heaters.
- 28—Floor drains shall be fully visible and accessible. 29—Plumbing and conduit penetrations of the separation wall between the garage and the residence shall be of copper of ferrous. 30-Provide combustion air for all fuel-burning appliances at a minimum rate
- of 1 square inch per 3000 btu/hour input. The one opening must be in the top 12 inches of the room. Provide minimum 1 inch clearance around equipment at sides and rear of the appliance. Provide minimum 6 inch clearance in front of the appliance. IRC M1703
- 31- Provide gas logs and each gas appliance with a shutoff valve within 6 feet of the appliance. IRC G2420 (G2420.5)
- 32—Hydromassage motors shall be provided with adequate ventilation, be accessible by way of removable panel or door and be on a dedicated GFCI circuit. 33- Any jetted tubs to have a 12x12 access door to motor.
- -Heating and cooling system shall be designed to ACCA manual J&D or other approved calculation. 35- Shower door must have a 22" clear opening & tile around tubs must have
- 36-Shower pans must have an approved liner ending 3" above the finished threshold.
- solid blocking is req'd behind the liner. Note that the slope must be built up under the liner. 37- All bathtubs and showers shall have and anti scald valve
- miting water temperature to 120 degrees. 38-Hot water heaters must have an expansion tank, 2 seismic straps, and a T&P valve. A pan is req'd if a leak will damage the property.
- 39-Provide backflow preventors or vacuum breakers for protection of potable water on hose bibs, irrigation or sprinkler systems, boilers, etc.
  40-Provide backwater valves for dwv that are lower than the nearest manhole cover. This will require that basement waste systems will be plumbed independently.
- 41- A certificate shall be posted in the furnace room or by electrical panel showing insulation R-values, window U-factors, and efficiencies of the mechanical systems components.
- 42-Ductwork in unconditioned spaces will have R-8 value insulation. 43— Contractor to verify all rough opening sizes with equipment, fixture, windows, doors, and other items were different manufactures with have different rough opening sizes. Contractor to verify all tub dimensions with tubs to be used.

T IS THE CONTRACTORS RESPONSIBILITY TO COMPLY WITH THE LOCAL JURISDICTIONS CURRENT ADOPTED CODES.

CARLA

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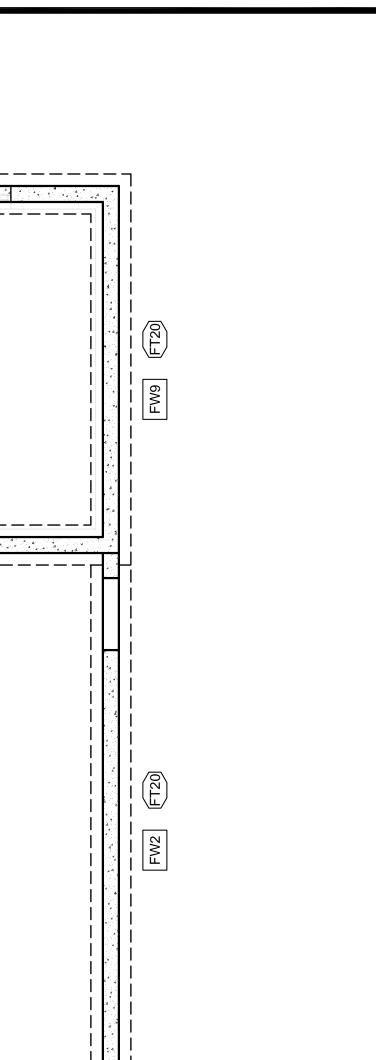
HOME

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DRAWN JLH CHECKED KBH

DECEMBER 2010 PLOTTED 12-20-2010 SCALE

SEE PLAN

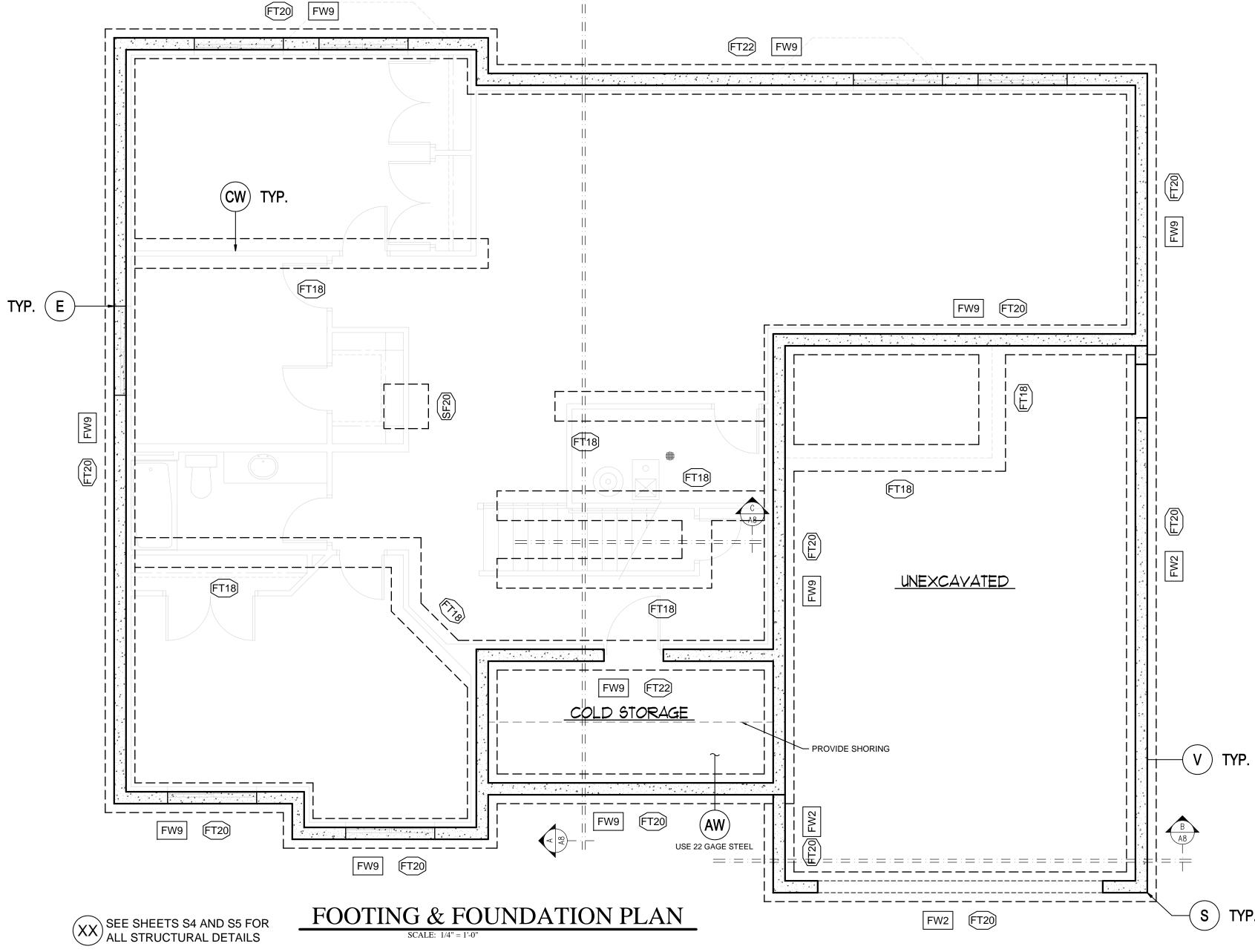


KOTA HOMES - CARLA

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DECEMBER 2010

PLOTTED 12-20-2010 SCALE SEE PLAN



FOOTING SCHEDULE					
				REINFORCEMENT	
MARK	WIDTH 1	LENGTH	THICKNESS	TRANSVERSE	LENGTHWISE
FT18	18 "	CONT.	10 "	-	(2) #4
FT20	20 "	CONT.	10 "	-	(2) #4
FT22	22 "	CONT.	10 "	-	(2) #4
SF20	20 "	20 "	10 "	(2) #4	(2) #4
1. CONTINUOUS FOOTINGS SHALL BE CENTERED UNDER WALLS AND SPOT FOOTINGS					
SHALL BE CENTERED UNDER COLUMNS UNLESS NOTED OTHERWISE.					

FOUNDATION WALL SCHEDULE					
			REINFORCEMENT 1,2,3		
MARK	HEIGHT	WIDTH	VERTICAL	HORIZONTAL	PLACEMENT
FW2	2.5'	8"	#4 @ 24"	(2) #4	CENTER
FW9	9'	8"	#4 @ 16"	(7) #4	CENTER
1. DOWEL VERTICAL BARS INTO FOOTING.					

. PLACE TOP AND BOTTOM BARS WITHIN 4" OF TOP AND BOTTOM OF WALL. . PLACE REINFORCEMENT IN CENTER OF WALL OR NEAR EACH FACE, AS NOTED.

FOR INTERIOR AND EXTERIOR DIMENSIONS SEE BASEMENT FLOOR PLAN

THESE STRUCTURAL DRAWINGS ARE BASED ON ARCHITECTURAL DRAWINGS. SEE CURRENT ISSUE OR REVISION DATE.

DIMENSIONS AND ELEVATIONS ARE SUPPLIED BY THE ARCHITECT. THEY MAY BE PROVIDED ON THE STRUCTURAL PLANS AND DETAILS FOR THE CONVENIENCE OF THE CONTRACTOR. VERIFY DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.

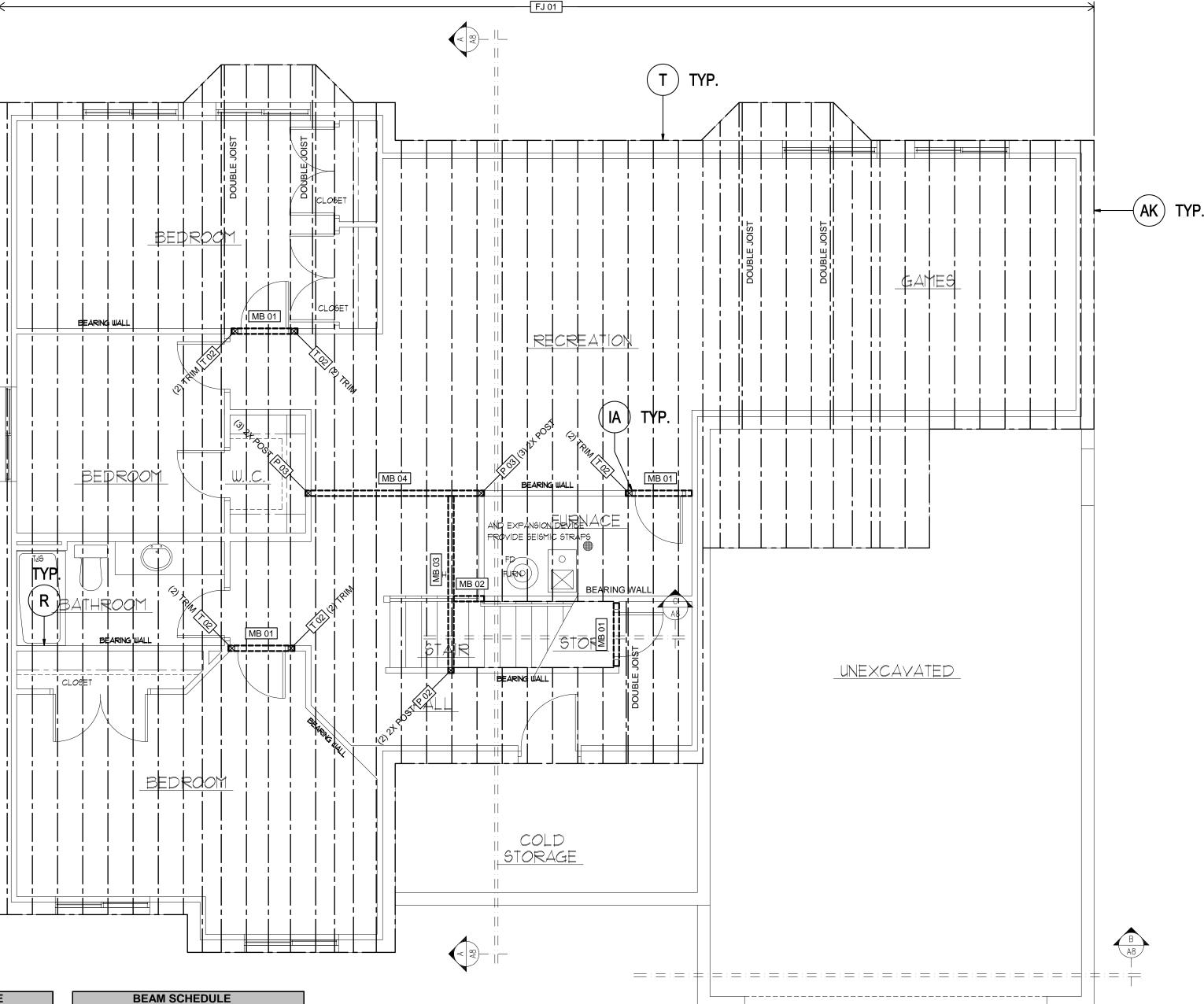


1429 South State St. Orem, Utah 84097 Phone 801.229.9020 Fax 801.224.0050 info@acuteengineering.com

DRAWN JLH **KBH** DECEMBER 2010 PLOTTED

12-20-2010 SCALE

SEE PLAN



SHEATHING SCHEDULE			
TYPE	THICKNESS		
FLOOR	3/4" (48/24 SPAN RATING)		
ROOF	7/16" (24/16 SPAN RATING)		
1. SHEATH	HING PERPENDICULAR TO SUPPORTS.		

2. FLOOR SHEATHING NAILED & GLUED TO SUPPORT. B. 8d COMMON NAILS 6" O.C. (EDGES) 12" O.C. (FIELD) 4. NAILING NO CLOSER THAN 3/8" FROM PANEL EDGE.

POST SCHEDULE			
MARK	TYPE		
P 02	(2)2X POST		
P 03	(3)2X POST		
P 04	(4)2X POST		
P 06	4X6 POST		
P 09	3.5X5.25 PSL		
T 02	(2)TRIM		

1. PARALLEL STRAND LUMBER (PSL) 1.8E

2. STEEL PIPE (PIPE STD) A53

3. STEEL HOLLOW SECTION (HSS) A500

4. STEEL COLUMNS REQUIRE BEARING PLATES 5. CONTINUE POSTS TO FDN / STRUCT MEMBER

BEAM SCHEDULE			
MARK	TYPE		
MB 01	(2)2X6		
MB 02	11.875" TJI 110		
MB 03 11.875" TJI 110			
MB 04	(2)1.75X9.5 LVL		
1. DIMENSIONAL LUMBER DF#2 U.N.O.			
2. LAMINATED VENEER LUMBER (LVL) 1.9E			
3. GLUED-LAMINATED TIMBER (GLB) 24F-1.8E			

	FLOOR JOIST SCHEDULE		
MARK	TYPE		
FJ 01	11.875" TJI 210 @ 16" O.C.		
1. DIMENSIONAL LUMBER DF#2 U.N.O.			

4. STEEL W-SHAPES A992-50

XX SEE SHEETS S4 AND S5 FOR ALL STRUCTURAL DETAILS

# MAIN FLOOR FRAMING PLAN

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REVISION DATE.

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DECEMBER 2010
PLOTTED 12-20-2010

SCALE SEE PLAN

	SHEATHING SCHEDULE				
	TYPE	THICKNESS			
	FLOOR	3/4" (48/24 SPAN RATING)			
	ROOF	7/16" (24/16 SPAN RATING)			
	1. SHEATH	HING PERPENDICULAR TO SUPPORTS.			

. STEEL PIPE (PIPE STD) A53 3. STEEL HOLLOW SECTION (HSS) A500 4. STEEL COLUMNS REQUIRE BEARING PLATES 5. CONTINUE POSTS TO FDN / STRUCT MEMBER

2. FLOOR SHEATHING NAILED & GLUED TO SUPPORT.

3. 8d COMMON NAILS 6" O.C. (EDGES) 12" O.C. (FIELD)

4. NAILING NO CLOSER THAN 3/8" FROM PANEL EDGE.

GROUND SNOW LOAD, Pg = 44 PSF FLAT ROOF SNOW LOAD = 30 PSF TOP CHORD DEAD LOAD = 10 PSF **BOTTOM CHORD DEAD LOAD = 5 PSF** DESIGN SNOW LOADS SHALL BE IN ACCORDANCE

MAY BE PROVIDED ON THE AND ELEVATIONS WITH WITH ASCE 7-05 CHAP.7 (2009 IBC 1608.1)

DIMENSIONS AND ELEVATIONS ARE SUPPLIED BY THE ARCHITECT. THEY STRUCTURAL PLANS AND DETAILS FOR THE CONVENIENCE OF THE CONTRACTOR. VERIFY DIMENSIONS

Orem, Utah 84097 Phone 801.229.9020 Fax 801.224.0050 info@acuteengineering.com ARCHITECTURAL DRAWINGS.

FOR USE ON LOT 213 OF SCENIC COVE 11952 So. SCENIC ACERS DRIVE

T 02 (2)TRIM PARALLEL STRAND LUMBER (PSL) 1.8E

RB 08

RB 09

(2)1.75X9.5 LVL

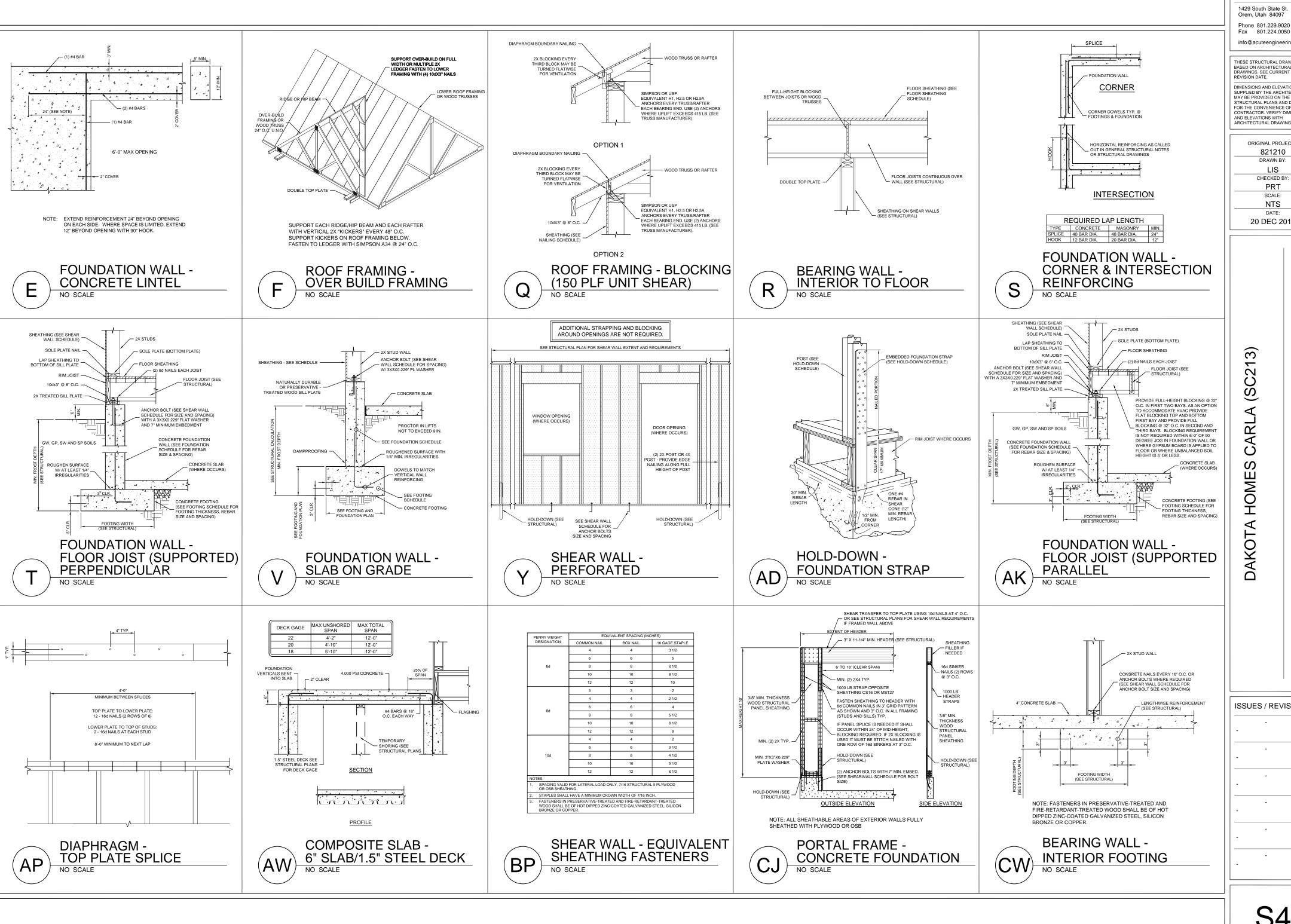
(2)2X10

1. DIMENSIONAL LUMBER DF#2 U.N.O.

4. STEEL W-SHAPES A992-50

2. LAMINATED VENEER LUMBER (LVL) 1.9E

3. GLUED-LAMINATED TIMBER (GLB) 24F-1.8E



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ORIGINAL PROJECT #

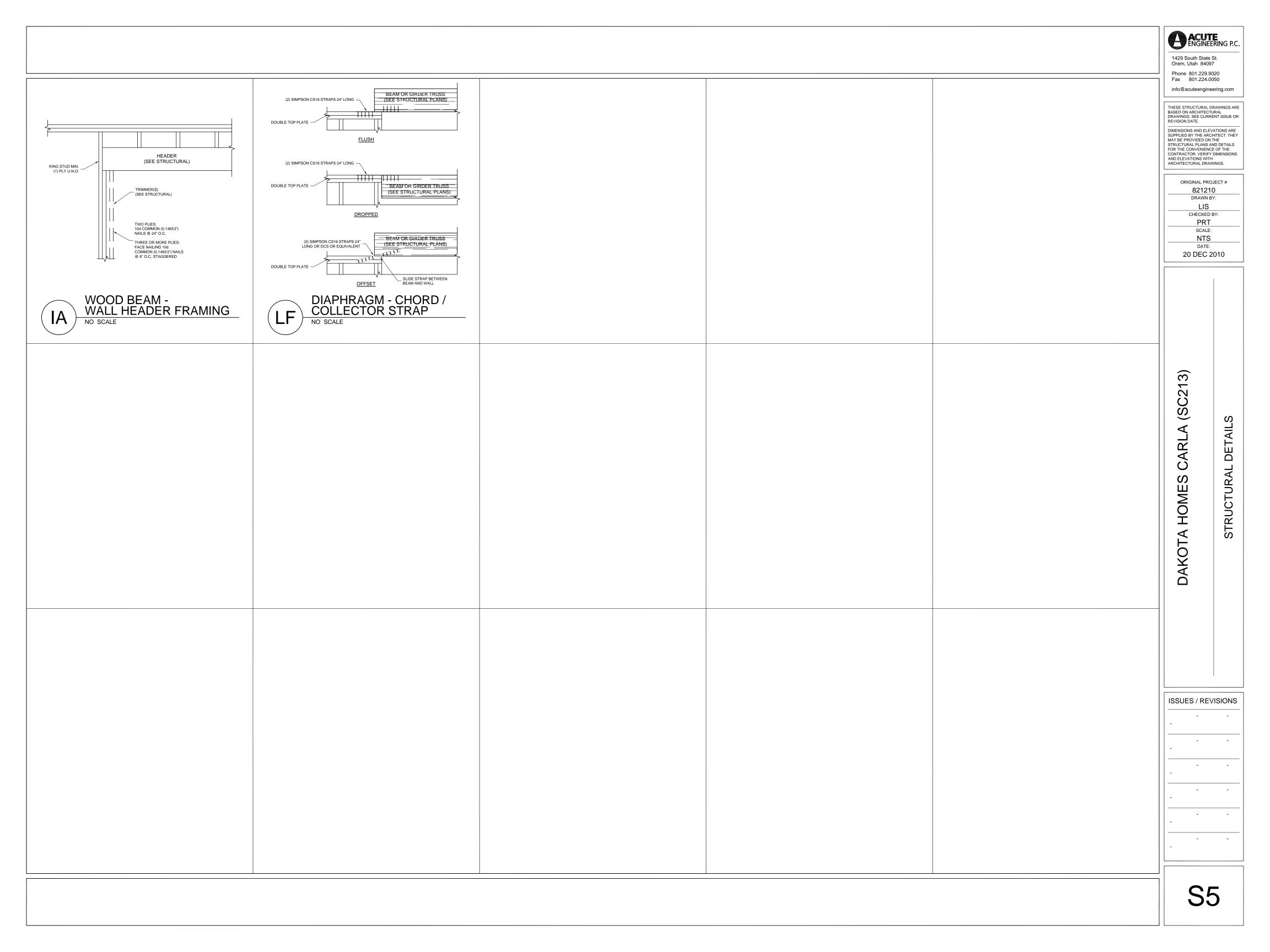
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#### **GENERAL STRUCTURAL NOTES**

#### **DESIGN CRITERIA** 1. Building code: Utah State Construction Code 1.1 Model building code: 2009 IRC 1.2 Use and occupancy classification: R-3 (Residential - 1-unit dwelling) 1.3 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 = 10 psf2.3 Walls = 10 psf (interior walls), 11 psf (exterior walls) Live loads = 20 psf (or 300 lb point load) Roofs (ordinary construction) Residential (1-2 unit dwelling) = 40 psfStairs and exits (residential 1-2 unit dwelling) Decks (residential 1-2 unit dwelling in Utah) 4. Snow load 4.1 Ground snow load, Pg = 44 psf (elevation 4677 ft) 4.2 Exposure factor, Ce = 1 4.3 Thermal factor, Ct = 1

4.4 Occupancy importance factor, Is = 1

4.5 Flat roof snow load, Pf = 30 psf 5. Earthquake design data 5.1 Mapped acceleration parameters 5.1.1 Latitude, Longitude: 40.534, -111.992 Ss = 1.07 SDS = 0.76 5.1.2 MCE short period 5.1.3 MCE 1.0 sec. period S1 = 0.42 SD1 = 0.44 5.2 Seismic design category: D1

5.3 Occupancy importance factor, le = 1 5.4 Basic structural system: Bearing wall systems 5.5 Seismic force-resisting system: Light-frame walls (wood or steel sheathing) 5.5.1 Response modification factor R = 6.55.5.2 System overstrength factor Omega = 35.5.3 Deflection amplification factor Cd = 45.5 Equivalent Lateral Force Procedure 5.5.1 Seismic response coefficient Cs = 0.125.5.2 Seismic base shear (LRFD) V = 6451

Wind design data 6.1 Exposure category: C 6.2 Basic wind speed, V = 90 mph 6.3 Occupancy importance factor, lw = 1 6.4 Internal pressure coeff., Gcpi = 0.18 7. Geotechnical design basis - Presumptive values, 2009 IBC Table 1806.2 7.2 Site class = D 7.3 Soil notes: None 7.4 Lateral earth pressure 7.4.1 Active = 30 psf 7.4.2 At-rest = 60 psf 7.5 Allowable foundation parameters 7.5.1 Allowable soil bearing, Qa = 1500 psf 7.5.2 Allowable lateral bearing = 150 psf 7.5.3 Coefficient of friction = 0.25

**DEFERRED SUBMITTALS** 

7.6 Minimum frost cover = 30 in.

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 (2009 IBC 107.3.4.2).

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 (2009 IBC 107.3.4.2).

4. Deferred submittal items shall not be installed until the design and submittal documents have been approved by the building official (2009 IBC 107.3.4.2).

#### **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

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

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 insure 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

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-SD (ICC ES ESR-2322) or Simpson SET-XP (ICC ES ESR-2508)

1.2. Masonry (grouted): Hilti HIT-HY 150-MAX (ICC ES ESR-1967) or Simpson SET (ICC ES ESR-1772)

1.3. 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.

1.4. Embedded portions of steel reinforcement and rods shall be clean, straight, and free of mill scale, rust and othe coatings that impair the bond with the adhesive. Reinforcement must not be bent after installation (ICC ES ESR-2322).

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 manufacture's instructions. Hole cleaning method shall be based on drilling method and borehole conditions and shall conform to the manufacture's instructions.

SOIL AND FOUNDATIONS

Geotechnical investigations shall conform to 2009 IBC 1803. Excavation, grading and fill shall conform to 2009 IBC 1804. Footings and foundations shall be constructed in accordance with 2009 IBC 1807 through 1810.

Where required, the owner shall submit a geotechnical investigation report to the building official in accordance with 2009 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 (2009 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 soil that is 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 (2009 IBC

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 eet 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

(2009 IBC 1804.3). 6. Footings and foundations shall be built on undisturbed soil, compacted fill material or CLSM. Compacted fill material and

CLSM shall conform to 2009 IBC 1804.5 and 2009 IBC 1804.6, respectively (2009 IBC 1809.2). 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 (2009 IBC 1809.3). 8. The minimum depth of footings below the undisturbed ground surface shall be 12 inches (2009 IBC 1809.4). Foundation walls, piers and other permanent supports shall be extended below the frost line, except where otherwise protected from

frost (2009 IBC 1809.5). 9. The placement of footings on or adjacent to 33-percent slopes and steeper shall conform to 2009 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 (2009 IBC 1805.4.1).

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

. Concrete materials, quality control, and construction shall comply with 2009 IBC Chapter 19 and ACI 318-08.

2. Compressive strength (minimum specified at 28 days) 3,000 psi (2009 IBC Table 1808.8.1) 2.1. Footings:

2.2. Interior floor slabs on grade: 4,000 psi 2.3. Exterior floor slabs on grade: 4,000 psi (2009 IBC Table 1904.3) 4,000 psi (2009 IBC Table 1904.3) 2.4. Suspended slabs:

3,000 psi (2009 IBC Table 1904.3) for R-2, R-3 occupancies and appurtenances 4,000 psi (2009 IBC Table 1904.3) for other occupancie

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 318-08 Table 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 318-08 3.3.2). 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 318-08 3.4.1-2). 3.4. Admixtures shall be subject to prior approval by the registered design professional in responsible charge (ACI 318-08

3.5. Concrete exposed to freezing and thawing or deicing chemicals shall be air-entrained with air content indicated in ACI 318-08 Table 4.4.1. Tolerance on air content as delivered shall be plus/minus 1.5 percent (ACI 318-08 4.4.1).

4. Steel Reinforcement fy = 60 ksi (ASTM A615) 4.1. Deformed bars:

fy = 60 ksi (ASTM A185) 4.3. Deformed Bar Anchors (DBA) (ASTM A496)

4.4. Headed Stud Anchors (HSA) (ASTM A108)

4.5. At the time concrete is placed, reinforcement shall be free from mud, oil, or other nonmetallic coatings that decrease bond (ACI 318-08 7.4.1).

4.6. Reinforcement shall be accurately placed and adequately supported before concrete is placed, and shall be secured

against displacement (ACI 318-08 7.5.1).
4.7. Details of reinforcement shall conform to 2009 IBC 1907.

5. Minimum concrete cover (ACI 318-05 7.7.1) 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: 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 318-08 chapter 6 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 318-08 6.2.1).

7. Conduits, pipes, and sleeves of any material not harmful to concrete and within the limitations of ACI 318-08 6.3 shall be approved by the registered design professional in responsible charge (ACI 318-08 6.3.1).

8. Construction joints shall be so made and located as not to impair the strength of the structure (ACI 318-08 6.4.3).

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 (2009

. Masonry materials, construction, and quality shall conform to IBC 2103-2105 and ACI 530-05.

1.1. Compressive strength: f'c = 1.500 psi (IBC Table 2105.2.2.1.2) Concrete masonry units (CMU) (ASTM C 90)

2.2. Comprehensive strength: f'm = 1,500 psi (IBC Table 2105.2.2.1.2) 3.1. Type S Portland cement (ACI 530-05 1.14.6.6)

4 inches along panel edges (R703.7.2).

3.2. Compressive strength: f'c = 1,900 psi (IBC Table 2105.2.2.1.2)

4. Grout (ASTM C 476) Type: fine or coarse (IBC 2103.12). 4.2. Compressive strength (minimum specified at 28 days): fc = 2,000 psi (ASTM C 1019)

5.1. Deformed bars: fv = 60 ksi (ASTM A 615 Gr. 60) 5.2. Deformed Bar Anchors (DBA) (ASTM A496)

5.3. Headed Stud Anchors (HSA) (ASTM A108) 6. Bed joint thickness shall be 5/8 inch maximum (IBC 2105.2.2.1.2) 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 (ACI

530-05 1.13.3.1). Joint reinforcement shall have cover not less than 5/8". 9. The diameter of bend measured on the inside of reinforcing bars, other than for stirrups and ties, shall not be less than 6

bar diameters (ACI 530-05 1.13.6).

MASONRY AND STONE VENEER . Masonry veneer materials, construction, and quailty shall conform to IBC 2103-2105 and ACI 530-5 Chp. 6. 2. Veneer with backing of wood framing shall have 7/16 inch minimum structural panel sheathing with 8d common nails every

3.1. 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.

4.1. Veneer shall be anchored to the supporting wall with hot-dipped galvanized Hohmann & Barnard DW - 10HS anchor

4.2. Engage all anchor ties with a No. 9 gage wire in the center of the veneer and embedded in the mortar joint. 4.3. 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.

. Wood materials, quality, and construction shall conform to 2009 IBC Chapter 23 and Table 2304.9.1 2. Structural lumber (2009 IBC 2303.1.1-8, 2005 NDS) 2.1. Bearing walls:2.2. Posts:

Douglas-Fir Larch (DF) Stud (ASTM D 1990, DOC PS 20) 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)

Preservative-treated wood, redwood (AWPA U1 M4) 2.5. Sill plates: 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 attached directly to 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 (2009 IBC 2304.11).

Structural logs (ASTM D 3957) - new ICC - 400 standard for the design and construction of log structures Structural glued-laminated timber (IBC 2303.1.3,2005 NDS 5.1.1) 24F-1.8E (24F-V4) (ASTM D 3737, ANSI/AITC A190.1) 4.1. Single span:

24F-1.8E Balanced layup (24F-V8) (ASTM D 3737, ANSI/AITC A190.1) 4.2. Multiple span: 4.3. Cantilever span: 24F-1.8E Balanced layup (24F-V8) (ASTM D 3737, ANSI/AITC A190.1) Structural composite lumber and engineered wood (2005 NDS 8.1.1) 4.3. Cantilever span: 5.1. Laminated strand lumber (LSL)

5.1.1. Ex = 1.3E (ASTM D 5456) 5.1.2. Ex = 1.55E (ASTM D 5456)

5.1.3. 1.125 inch APA Performance-Rated (or equivalent) rim board 5.2. Laminated veneer lumber (LVL) 5.2.1. Ex = 1.9E (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 (2009 IBC 2303.1.2,2005 NDS 7.1.1) (ASTM D 5055) Wood structural panels (2009 IBC 2304.7.1, 2005 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 (2009 IBC 2305.2.4).

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 mum of 6 inches at panel edges and 12 inches at intermediate framing (2009 IBC 2306.2.1).

6.4. Roof and floor sheathing shall be placed perpendicular to supporting framing. Stagger sheathing joints Fasteners 7.1. Nails (2009 IBC 2303.6, 2005 NDS Table L4) (ASTM F 1667)

Pennyweight Common 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 0.162" X 3.5" 0.135" X 3.5" 7.1.3. 16d = 0.148" X 3.250 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 (2009 IBC 2303.6)

7.2.1. 14 gage = 1.5X0.4375 inch crown (ASTM F 1667) 7.2.2. 16 gage = 1.5X0.4375 inch crown (ASTM F 1667) 7.3. Power-driven pins (2009 IBC 2304.9)

7.3.1. Concrete drive pin = 0.145X2.5 inch with pre-assembled washer (ASTM A 510) = 0.145X2 inch (ASTM A 510) 7.3.2. Steel drive pin 7.4. Bolts (2005 NDS 11.1.2, Table L1)

7.4.1. Connector bolts (A307) 7.4.2. Anchor bolts (A307) with a 3X3X0.229 inch washer (2009 IBC 2305.3.11) and 7" min embedment. 7.4.3. Bolt holes shall be drilled with a bit 1/32 inch to 1/16 inch larger than the nominal bolt diameter

7.5. Lag Screws (2005 NDS 11.1.3, Table L2) (A307) 7.5.1. 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. 7.6. Fasteners in preservative-treated and fire-retardant-treated wood shall be of hot dipped zinc-coated galvanized steel.

silicon bronze or copper (2009 IBC 2304.9.5). 7.7. Sheathing fasteners shall be driven so the head or crown is flush with the sheathing surface (2009 IBC 2304.9.2). 8. Joist hangers and connectors (2009 IBC 1715 - 1716)

8.1. Hanger hardware and other wood connections shall be designed to carry the capacity of the supporting members. 9. Floor framing (2009 IBC 2308.8) 9.1. Joists shall not have less than 1.5 inches of bearing on wood or metal, or less than 3 inches on masonry (2009 IBC

2308.8.1). Pre-fabricated wood I-joists shall have minimum bearing according to the manufacture's recommendations 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. Solid blocking shall not be less than 2 inches thick (2009 IBC 2308.8.2).

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 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 (2009 IBC 2308.8.2). 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 framing (2009 IBC 2308.9) 10.1.Studs shall be placed with their wide dimension perpendicular to the wall. Not less than three studs shall in installed at each corner of an exterior wall (2009 IBC 2308.9.2).

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. Plates shall have a width at least equal to the width of the studs (2009 IBC 2308.9.2.1)

10.3.In nonbearing walls and partitions study 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 (2009 IBC 2308.9.2.3). 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

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 (2009 IBC 2308.8.4).

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 (2009 IBC 2308 9 10)

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. 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 (2009 IBC 2308.9.11).

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 (2009 IBC 2304.9.7). 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 (2009 IBC 2308.10). 12.1.Roof rafters and ceiling joists shall be supported laterally to prevent rotation and lateral displacement in accordance with 2009 IBC 2308.8.5 (2009 IBC 2308.10.6).

12.2.Rafters and joists over three feet long shall be supported using hanger hardware if not supported by bearing.

the structural specifications and design criteria. The truss designer shall provide a truss package that includes the following items:

2.3. Truss member permanent bracing specification (2009 IBC 2303.4.1.5). 3. Transfer of loads and anchorage of each truss to the supporting structure shall be approved by the registered design

Truss members and components shall not be cut, notched, drilled, spliced of 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 (2009 IBC 2303.4.5).

2. Structural shapes

. Structural steel work shall conform to IBC 2205, AISC 341-05, AISC 358-05, and AISC 360-05.

PREFABRICATED METAL PLATE WOOD TRUSSES

the width of the stud (2009 IBC 2304.3.1).

Prefabricated metal plate wood trusses shall be designed in accordance with 2009 IBC Section 2303.4 and shall conform to

2.1. Design drawings of each individual truss (2009 IBC 2303.4.1.2)

professional in responsible charge (2009 IBC 2303.4.4).

2.2. Truss placement diagram for the project (2009 IBC 2303.4.1.3).

fv = 50 ksi (ASTM A992) 2.2. M,S,C,MC, and L: fy = 36 ksi (ASTM A36)

**COLD-FORMED STEEL FRAMING** Cold-formed (light-gage) steel framing shall conform to IBC 2209-2210 and AISI-2004 standards.

conflicting with AISC requirements.

2.4. HSS Rectangular

2.5. HSS Round:

2.6. Pipe:

3. Plates and bars:

Structural fasteners

4.3. Shear studs:

4.5. Anchor rods:

Steel deck

4.4. Threaded rods:

4.2. Common bolts:

4.1. High-strength bolts:

4.2.1. Nuts (ASTM A563)

torch on any bolt holes.

4.2.2. Washers (ASTM F436)

2. Material: fy = 33 ksi (ASTM A1003) 3. Corrosion protection: steel framing shall have a metallic coating complying with ASTM A1003 (AISI-2004 A4).

fy = 36 ksi (ASTM F1554 Gr. 36 or A307)

fy = 50 ksi (ASTM A572 Gr. 50)

fy = 46 ksi (ASTM A500 Gr.B)

fu = 105-150 ksi (ASTM A325, A490)

fy = 42 ksi (ASTM A500 Gr.B)

fy = 35 ksi (ASTM A53 Gr.B)

fu = 60 ksi (ASTM A307 Gr. A)

fy = 36 ksi (ASTM A36)

fu = 65 ksi (ASTM A108)

fy = 36 ksi (ASTM A36)

fy = 36 ksi (ASTM A611)

2.7. All structural steel shall be properly primed and painted

4. Fastening requirements: screws for steel-to-steel connections shall be installed with a minimum edge distance and center-to-center spacing of 0.5 inches, self-drilling tapping, and conform to SAEJ78. Screws for attaching structural sheathing to steel wall framing shall be self-drilling tapping, and conform to SAEJ78. Gypsum board shall be attached to steel wall framing with minimum No. 6 screws conforming to ASTM C954. For all connections, screws shall extend thorough the steel a minimum of three exposed threads. All self-drilling tapping screws shall have a Type II coating in accordance with ASTM B633 (R603.2.4).

6.1. Welding work shall comply with the American Welding Society (AWS) "Structural Welding Code," excluding items

Tracks shall have the same minimum thickness as the wall studs (R603.3.2).

6. The flanges of steel study shall be laterally braced in accordance with one or both of the following methods: gypsum board or structural sheathing; horizontal steel strapping (1.5 inches wide and 33 mils thick) with blocking at strap ends and spaced vertically at the mid-point for walls up to 8 feet, third points for walls up to 10 feet, and spacing determined by the structural engineer for taller walls (R603.3.3).

4.2.3. Steel to steel bolted connections shall be made with high strength-bolts, unless noted otherwise. Bolts shall

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

carry the identifying mark of three radial lines. All other bolted connections shall be made with bolts and nuts

STATEMENT OF SPECIAL INSPECTIONS

1. Special inspections shall conform to 2009 IBC 1704. Special inspections are not required for occupancies in Group R-3, occupancies in Group U that are accessory to a residential occupancy, and work of a minor nature, unless otherwise required by the building official (2009 IBC 1704.1).

2. The owner shall employ one or more special inspectors to provide inspections during construction where special inspections are required. The special inspector shall be a qualified person who shall demonstrate competence, to the satisfaction of the building official, for inspection of the particular type of construction or operation requiring special inspection (2009 IBC 1704.1). 3. Special inspectors shall keep records of inspections. The special inspector shall furnish inspection reports to the building

official, and to the registered design professional in responsible charge. Reports shall indicate that work inspected was or was not done in conformance to approved construction documents. Discrepancies shall be brought to the immediate attention of the contractor for correction. If they are not corrected, the discrepancies shall be brought to the attention of the building official and to the registered design professional in responsible charge prior to the completion of that phase of the work. A final report documenting required special inspections and correction of any discrepancies noted in the inspections shall be submitted at a point in time agreed upon by the permit applicant and the building official prior to the start of work (2009 IBC 1704.1.2).

Special inspections shall be required for proposed work that is, in the opinion of the building official, unusual in nature, such as, but not limited to, construction materials and systems that are alternatives to materials and systems prescribed by code and materials and systems required to be installed in accordance with additional manufacturer's instructions that prescribe requirements not contained in code (2009 IBC 1704.15).

5.1. Special inspections for existing site soil conditions, fill placement, and load-bearing requirements shall be as required by 2009 IBC 1704.7 and 2009 IBC Table 1704.7.

5.2. The approved soils report, required by IBC 1802.2, and the documents prepared by the registered design professiona in responsible charge shall be used to determine compliance. During fill placement, the special inspector shall determine that proper materials and procedures are used in accordance with the provisions of the approved soils report (2009 IBC 1704.7).

6.1. Special inspections for concrete construction shall conform to 2009 IBC 1704.4 and 2009 IBC Table 1704.4. 6.2. Special inspections are not required for isolated spread concrete footings of buildings three stories or less in height

that are fully supported on earth or rock, or for continuous concrete footings supporting walls of buildings three stories or less in height that are fully supported on earth or rock where (1) the footings support walls of light-frame construction, (2) the footings are designed in accordance with 2009 IBC Table 1809.7, or (3) the structural design of the footing is based on a specified compressive strength no greater than 2,500 psi, regardless of the compressive strength specified in the construction documents or used in the footing construction. Special inspections are not required for nonstructural concrete slabs on grade, including pre-stressed slabs on grade, where the effective pre-stress in the concrete is less than 150 psi. Special inspections are not required for concrete foundation walls constructed in accordance with 2009 IBC Table 1807.1.6.2, or for concrete patios, driveways and sidewalks on grade (2009 IBC 1704.4).

7.1. Special inspection is required for wood shear walls, shear panels and diaphragms, including nailing, bolting, anchoring and other fastening to other components of the seismic-force-resisting system, where the fastener spacing of the sheathing is more than 4 inches on center (2009 IBC 1707.3).

7.2. The special inspector shall inspect high-load diaphragms built on site. The special inspector shall inspect the wood structural panel sheathing to ascertain whether it is of the grade and thickness shown on the approved building plans. The special inspector must verify the nominal size of framing. The special inspector shall inspect members at adjoining panel edges, the nail or staple diameter and length, the number of fastener lines and that the spacing between asteners in each line and at edge margins agrees with the approved building plans (2009 IBC 1704.6.1).

8.1. Special inspections for steel elements shall be as required by 2009 IBC 1704.3, 2009 IBC Table 1704.3, AISC 341 and AWS D1.1 (2009 IBC 1707.2 and 2009 IBC 1708.4). 8.2. Special inspection of the steel fabrication process shall not be required where the fabricator does not perform any

welding, thermal cutting or heating operation of any kind as part of the fabrication process. In such cases, the fabricator shall be required to submit a detailed procedure for material control that demonstrates the fabricator's ability to maintain suitable records and procedures such that, at any time during the fabrication process, the materia specification, grade and mill test reports for the main stress-carrying elements are capable of being determined (2009) IBC 1704.3). 8.3. If welding materials, procedures, and qualifications of welders are verified prior to the start of the work; periodic inspections are made of the work in progress; and a visual inspection of all welds is made prior to completion or prior

to shipment of shop welding, then the special inspector need not be continuously present during welding of the

studs when used for structural diaphragm, (4) welded sheet steel for cold-formed steel framing members and (5)

following items: (1) single-pass fillet welds not exceeding 5/16 inch in size, (2) floor and roof deck welding, (3) welded

welding of stairs and railing systems (2009 IBC 1704.3). 9.1. Special inspections for masonry elements shall comform to 2009 IBC 1704.5 and 2009 IBC Table 1704.5.1. 9.2. Special inspections shall not be required for (1) empirically designed masonry, glass unit masonry or masonry venee when they are not part of structures classified as Occupancy Category I, II, or III in accordance with 2009 IBC 1604.5;

(2) masonry foundation walls constructed in accordance with 2009 IBC Tables 1807.1.6.3 (1-4); (3) masonry foundation walls constructed in accordance with 2009 IBC Tables 1807.1.6.3 (1-4); (3) masonry foundation walls constructed in accordance with 2009 IBC Tables 1807.1.6.3 (1-4); (3) masonry foundation walls constructed in accordance with 2009 IBC Tables 1807.1.6.3 (1-4); (3) masonry foundation walls constructed in accordance with 2009 IBC Tables 1807.1.6.3 (1-4); (3) masonry foundation walls constructed in accordance with 2009 IBC Tables 1807.1.6.3 (1-4); (3) masonry foundation walls constructed in accordance with 2009 IBC Tables 1807.1.6.3 (1-4); (3) masonry foundation walls constructed in accordance with 2009 IBC Tables 1807.1.6.3 (1-4); (3) masonry foundation walls constructed in accordance with 2009 IBC Tables 1807.1.6.3 (1-4); (3) masonry foundation walls constructed in accordance with 2009 IBC Tables 1807.1.6.3 (1-4); (3) masonry foundation walls constructed in accordance with 2009 IBC Tables 1807.1.6.3 (1-4); (3) masonry foundation walls constructed in accordance with 2009 IBC Tables 1807.1.6.3 (1-4); (3) masonry foundation walls constructed in accordance with 2009 IBC Tables 1807.1.6.3 (1-4); (3) masonry foundation walls constructed in accordance with 2009 IBC Tables 1807.1.6.3 (1-4); (3) masonry foundation walls constructed in accordance with 2009 IBC Tables 1807.1.6.3 (1-4); (3) masonry foundation walls constructed in accordance with 2009 IBC Tables 1807.1.6.3 (1-4); (3) masonry foundation walls constructed in accordance with 2009 IBC Tables 1807.1.6.3 (1-4); (3) masonry foundation walls constructed in accordance with 2009 IBC Tables 1807.1.6.3 (1-4); (3) masonry foundation walls constructed in accordance with 2009 IBC Tables 1807.1.6.3 (1-4); (3) masonry foundation walls constructed in accordance with 2009 IBC Tables 1807.1.6.3 (1-4); (3) masonry foundation walls constructed in accordance with 2009 IBC Tables 1807.1.6.3 (1-4); (3) masonry foundation walls constructed in accordance with 2009 IBC Tab fireplaces, masonry heaters or masonry chimney installed or constructed in accordance with 2009 IBC 2111, 2112, or 9.3. The minimum special inspection program for empirically designed masonry, glass unit masonry and masonry veneer in occupancy category IV shall comply with 2009 IBC Table 1704.5.1 (2009 IBC 1704.5.1).

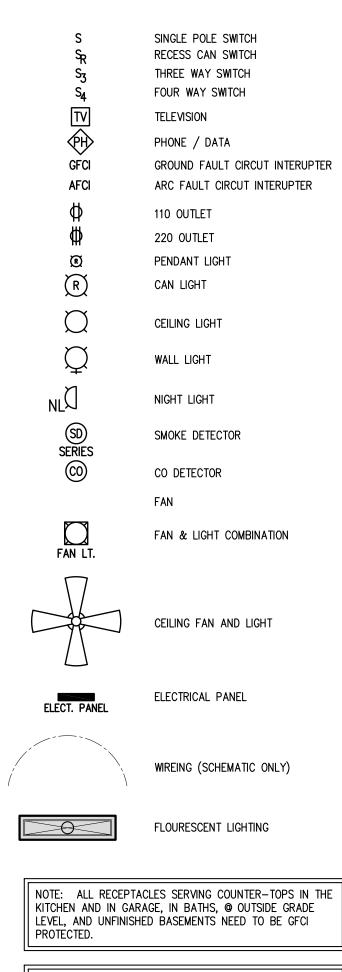
9.4. The minimum special inspection program for engineered masonry in occupancy category I, II or III shall comply with 2009 IBC Table 1704.5.1 (2009 IBC 1704.5.2).  $9.5. \ \ The minimum special inspection program for engineered masonry in occupancy category IV shall comply with 2009$ 

IBC Table 1704.5.3 (2009 IBC 1704.5.3). 10. Architectural components 10.1.Periodic special inspection is required during the erection and fastening of exterior cladding and veneer except for

architectural components in structures 30 feet or less in height, or for cladding and veneer weighing 5 psf or less (2009

IBC 1707.6). STRUCTURAL OBSERVATIONS

The owner shall employ a registered design professional to perform structural observations as defined in 2009 IBC 1702 for those structures where one or more of the conditions stated in 2009 IBC 1710.2 through 1710.3 exist. 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 (2009 IBC 1710.0).



FLOURESCENT LIGHTING

NOTE: ALL RECEPTACLES SERVING COUNTER-TOPS IN THE KITCHEN AND IN GARAGE, IN BATHS, @ OUTSIDE GRADE LEVEL, AND UNFINISHED BASEMENTS NEED TO BE GFCI PROTECTED.

NOTE: WRING WITHIN 6' OF ATTIC ACCESS MUST HAVE LUMBER-GUARD STRIP.

NOTE: ELECTRICAL IS SCHEMATIC ONLY VERIFY WITH CONTRACTOR AND OWNER

NOTE: PROVIDE DIMMERS MASTER BEDROOM, TV ROOM AND SITTING ROOM LIGHTS

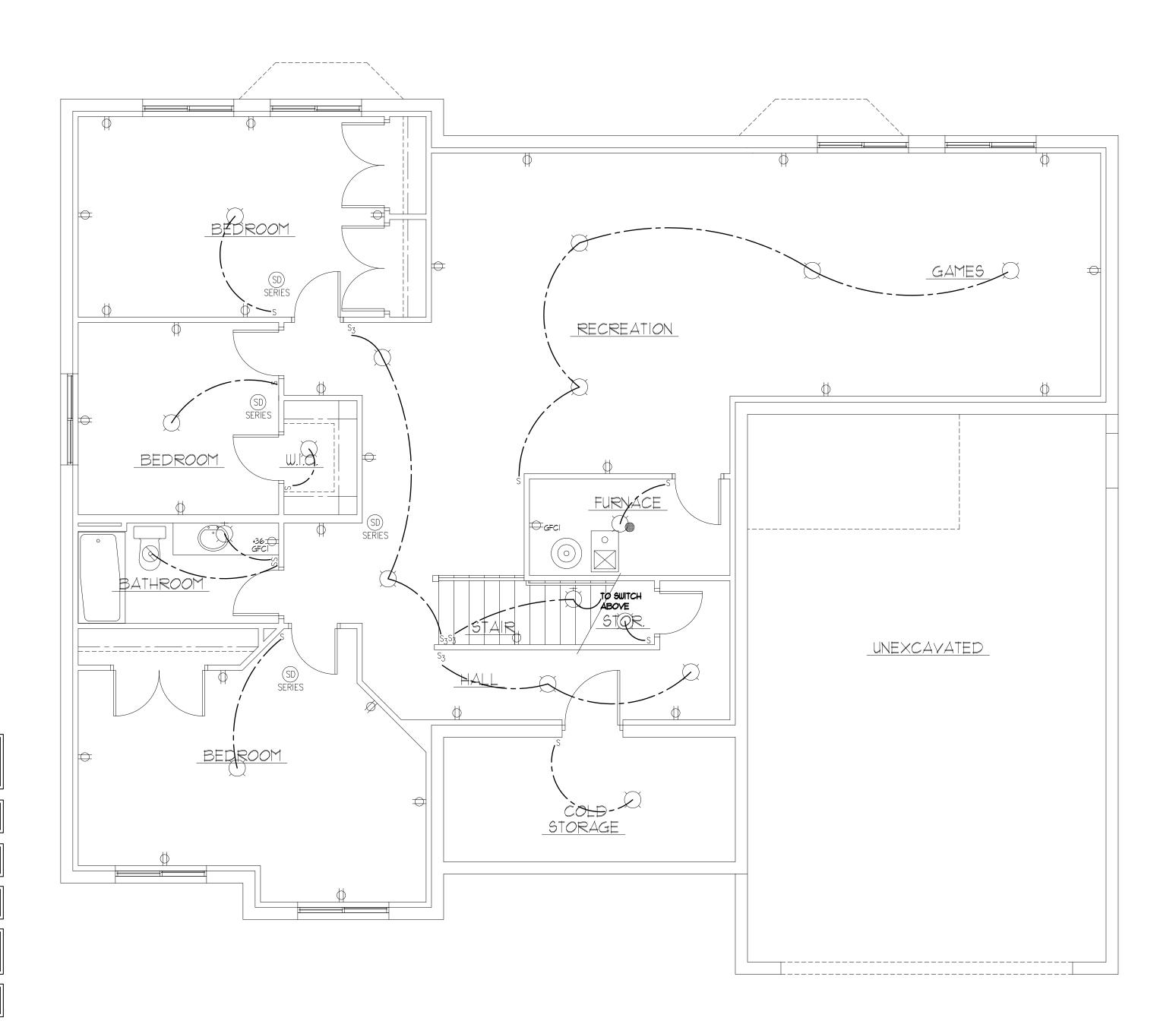
COMBINATION ARC FAULTS PROTECTION REQUIRED AT ALL BEDROOM LIGHTS, SWITCHES, SMOKE

NOTE: CAN LIGHTS ABOVE TUBS OR SHOWERS TO

DETECTORS, AND RECEPTACLES.

HAVE A GASKETED LENS (TYPICAL)

NOTE: ALL EXTERIOR OUTLETS TO HAVE APPROVED BUBBLE COVERS.



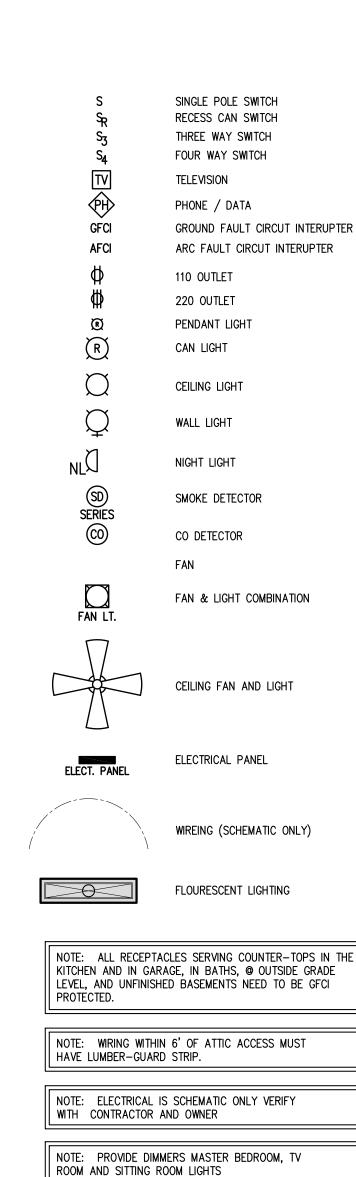
## BASEMENT ELECTRICAL PLAN

DAKOTA HOMES - CARLA

DRAWN
JLH
CHECKED
KBH
DATE
DECEMBER 2010
PLOTTED
12-20-2010

SCALE SEE PLAN SHEET

LOT 213 OF SCENIC COVE



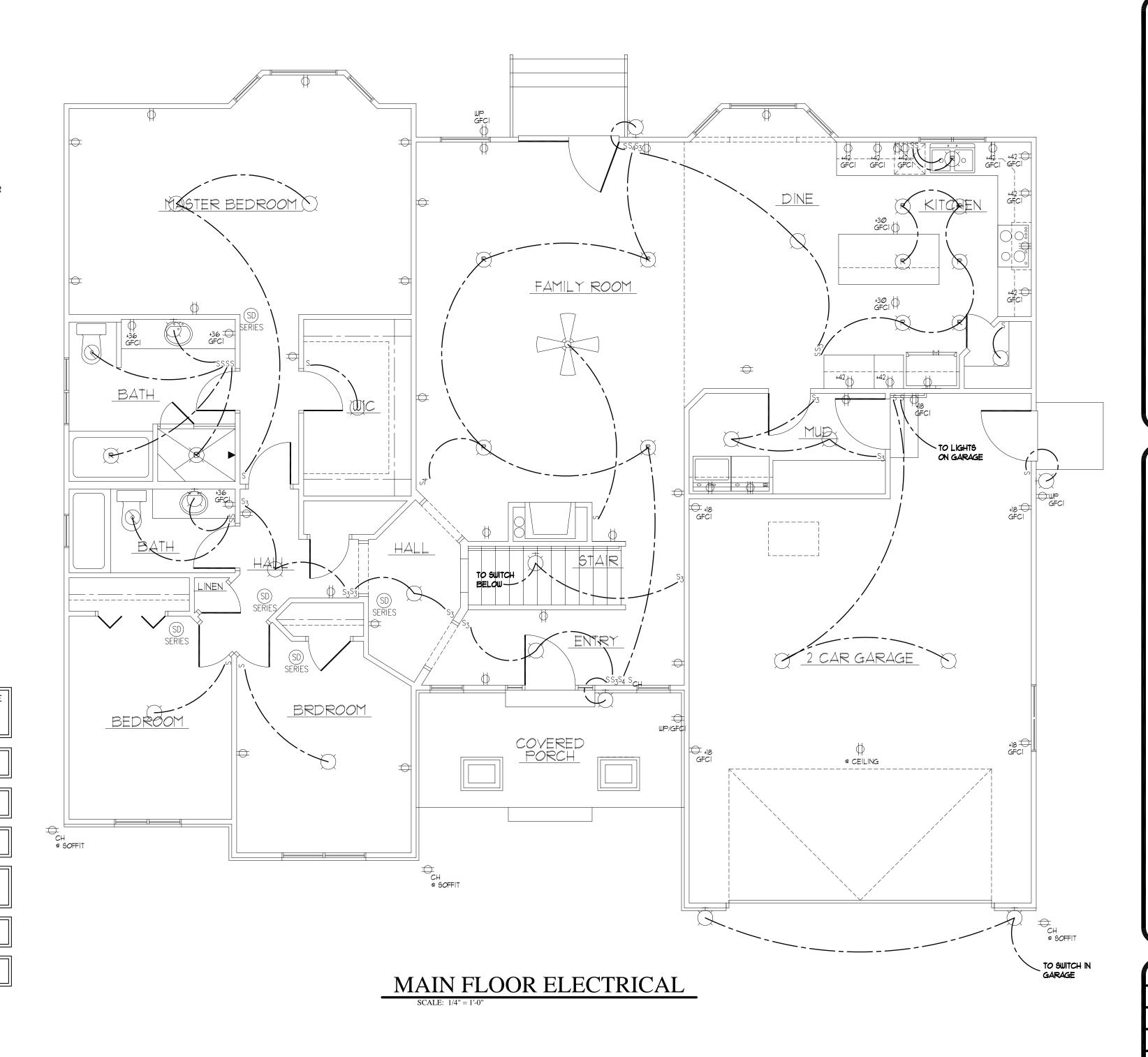
COMBINATION ARC FAULTS PROTECTION REQUIRED AT ALL BEDROOM LIGHTS, SWITCHES, SMOKE

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NOTE: ALL EXTERIOR OUTLETS TO HAVE APPROVED BUBBLE COVERS.

DETECTORS, AND RECEPTACLES.

HAVE A GASKETED LENS (TYPICAL)



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