

Cover Letter

We hope everyone has enjoyed the holidays & moving nicely along into the New Year_! This regards clarifying & establishing our hardship for variance request. -The current guidelines make it extremely difficult for us to safely and reasonably use our home. We need to add a side entrance because our roommate works late & unusual hours. The back & main entrance is less safe and disruptive as alternate designs suggested did not meet HOA & community criteria. As the homeowner with severe sleeping disorder stemming from PTSD due a fatal car accident. I require medication to sleep through night, as well as early start time. It is crucial that our roommate can enter quietly and securely without disturbing the household. Denying this request would make living here unnecessarily difficult for all of us. -We're not asking for anything unusual or unfair. Other homes in our neighborhood already have side entrances, so we are only requesting what others already enjoy. This request follows the same rules applied to others, and our design has already been approved by the HOA. -Our situation is unique because of the layout of our house, the late hours our roommate works, and my PTSD. The HOA has denied other plans that don't include a side entrance, so this is the only solution that works for everyone. Without the variance, we wouldn't have the same options other homeowners in similar circumstances enjoy. -This is not a common issue that would require the rules to change for everyone. It's specific to our needs: my medical condition, our roommate's schedule & safety, as well as the layout of our home & property. The variance process exists to help with unique cases like ours. -Adding the side entrance is supported by our neighbors & community. It will not hurt the neighborhood or disrupt anyone else's home. Our HOA has approved the design, so it fits with the neighborhood's look and standards. It will improve safety for our roommate and help us live more peacefully without impacting others. -The county's goals include making homes safe and livable while keeping neighborhoods consistent. Adding a side entrance helps meet these goals by improving safety and accessibility for our home. Since the HOA supports our plan and it fits with neighborhood guidelines, granting this variance works in harmony with the county's vision. These points show how the variance is necessary to address our specific needs while staying fair and consistent with community and county standards. It solves a hardship for us without negatively affecting anyone else. I am presently following up with Building Division personnel after meeting their initial requests with a couple quick questions before submitting the design.

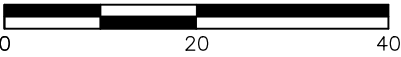
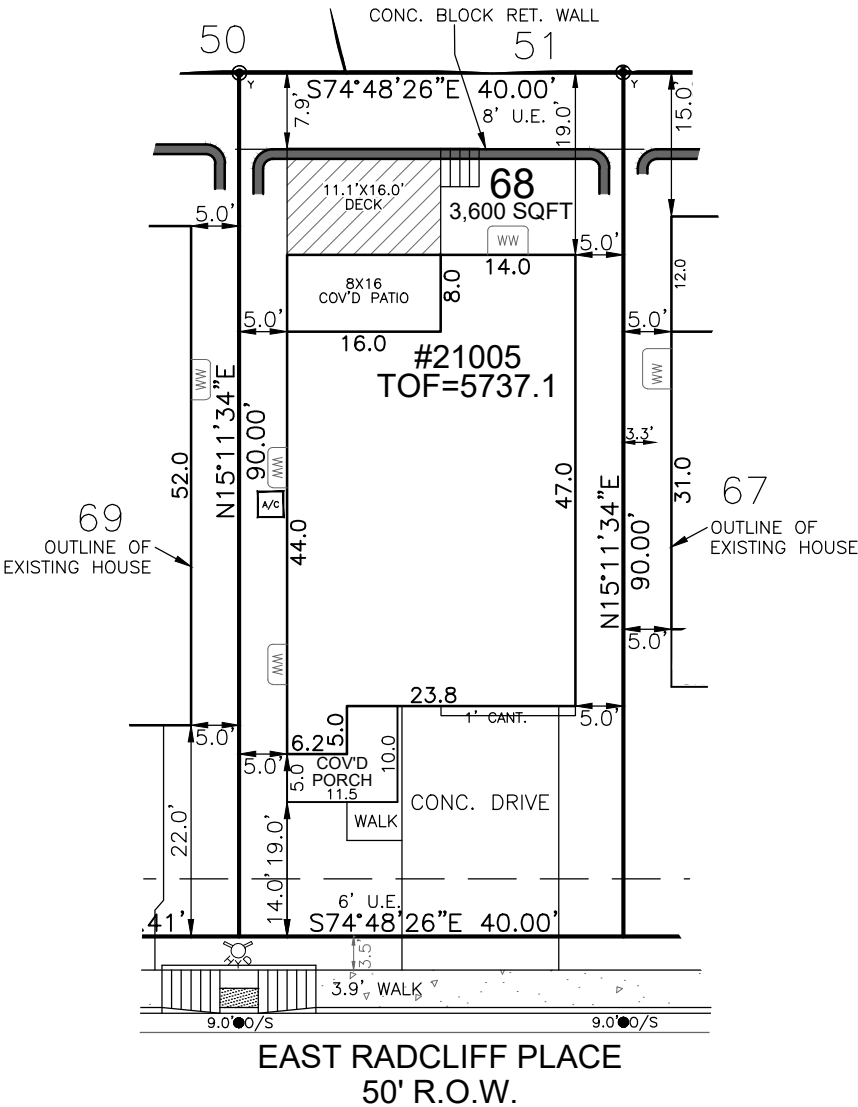
Justin Romero 1-720-626-0357

IMPROVEMENT LOCATION CERTIFICATE



6841 SOUTH YOSEMITE STREET
CENTENNIAL, CO 80112

- DESCRIPTION OF MONUMENTATION
- - #5 REBAR, YELLOW PLASTIC CAP, PLS # 35657
 - - DISK FOUND AT OFFSET TO LOT CORNER AS SHOWN BELOW, PLS # 36567



SCALE: 1"=20'

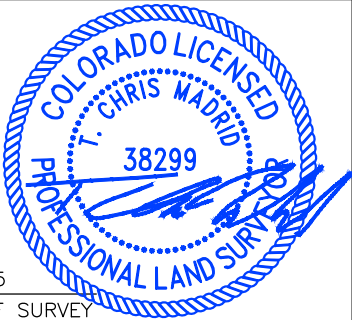
IMPROVEMENT LOCATION CERTIFICATE

I HEREBY CERTIFY THIS IMPROVEMENT LOCATION CERTIFICATE WAS PREPARED FOR JUSTIN ROMERO OF THE PROPERTY DESCRIBED AS:

LOT 68, BLOCK 2, COPPERLEAF FILING NO. 22, COUNTY OF ARAPAHOE, STATE OF COLORADO; ALSO KNOWN AS: 21005 EAST RADCLIFF PLACE.

AND THAT IT IS NOT A LAND SURVEY PLAT OR IMPROVEMENT SURVEY PLAT, AND THAT IT IS NOT TO BE RELIED UPON FOR THE ESTABLISHMENT OF FENCE, BUILDING, OR OTHER FUTURE IMPROVEMENT LINES. I FURTHER CERTIFY THAT THE IMPROVEMENTS ON THE ABOVE DESCRIBED PARCEL ON THIS DATE: 03.06.25 EXCEPT UTILITY CONNECTIONS, ARE ENTIRELY WITHIN THE BOUNDARIES OF THE PARCEL, EXCEPT AS SHOWN, THAT THERE ARE NO ENCROACHMENTS UPON THE DESCRIBED PREMISES BY IMPROVEMENTS ON ANY ADJOINING PREMISES, EXCEPT AS INDICATED, AND THAT THERE IS NO APPARENT EVIDENCE OR SIGN OF ANY EASEMENTS CROSSING OR BURDENING ANY PART OF SAID PARCEL. EASEMENTS SHOWN HEREON WERE TAKEN FROM THE RECORDED PLAT DESCRIBED ABOVE, AND NO OTHER RESEARCH OF TITLE WAS PERFORMED IN CONNECTION WITH THIS CERTIFICATE.

NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS FROM WHEN YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION HEREON.



03.06.25
DATE OF SURVEY

INNOVATIVE INC. STRUCTURAL SERVICES

13719 W. Amherst Way, Lakewood CO 80228

Phone: (303) 359-4678 Fax: (303) 948-1949

April 1, 2025

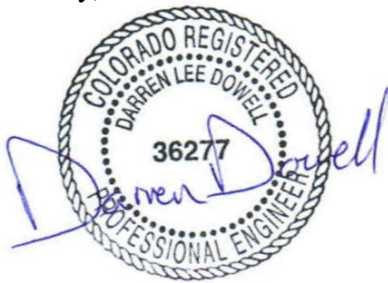
RE: Structural Engineering Plan Review (21005 E. Radcliff Pl., Aurora, CO 80015)

ATTN: Owner, Construction and Municipality Officials.

To All Concerned:

This letter is to provide the attached structural drawing for your review regarding the construction effort of a new egress entrance at the property listed above for your approval. The drawings for project number 2024-172 have been prepared in accordance with the 2021 IBC and as per the general notes.

Sincerely,



Darren Dowell P.E.
President

GENERAL NOTES

THIS DRAWING IS PROVIDED TO ILLUSTRATE THE STRUCTURAL ENGINEERING OF THE MEMBERS ASSOCIATED WITH NEW CONSTRUCTION ONLY. IT IS NOT INTENDED TO BE FULLY DIRECTIVE NOR COVER ENGINEERING DETAILS OF SUCH MATERIALS, PRODUCTS OR EQUIPMENT NOR THE INTERCONNECTION THEREWITH FOR AREAS OF THE STRUCTURE CURRENTLY EXISTING. BECAUSE INNOVATIVE STRUCTURAL SERVICES (ISS) DOES NOT CONTROL JOB SITE ASSEMBLY OR PROCEDURES, GRADE AND QUALITY OF MATERIALS OR EQUIPMENT SUPPLIED BY OTHERS, IT IS THE RESPONSIBILITY OF THE OWNER AND/OR CONTRACTOR(S) TO ADHERE TO WORKMANSHIP CONSISTENT WITH SAFE BUILDING PRACTICES AND COMPLIANCE WITH ALL ASSOCIATED BUILDING CODES AND ENSURE THAT ALL MATERIALS COMPLY WITH THIS DESIGN.

ISS SHALL NOT BE RESPONSIBLE IN THE EVENT OF ANY DEVIATIONS, CHANGES OR ALTERATIONS TO THE RECOMMENDED DETAILS DESCRIBED IN THIS DRAWING UNLESS SUCH DEVIATIONS, CHANGES OR ALTERATIONS ARE ILLUSTRATED IN A REVISED ISS DRAWING OR ARE APPROVED IN WRITING BY AN AUTHORIZED ISS REPRESENTATIVE.

ALL DRAWINGS ARE INTENDED TO BE PRINTED ON 24"x36" (ARCH D) SIZE PAPER. IF PLOTTED TO FIT ON SMALLER PAPER, ADJUST SCALES ACCORDINGLY.

- ALL DIMENSIONS AND DETAILS SHOWN ON THIS LAYOUT MUST BE CHECKED AND VERIFIED BY THE OWNER AND/OR CONTRACTOR(S) BEFORE PROCEEDING WITH THE WORK OR MATERIAL ACQUISITION.
- THE ENGINEERED SYSTEM SHOWN ON THIS LAYOUT IS BASED ON THE 2021 IRC & LIVE AND DEAD LOADS INCLUDED IN ASCE STANDARD 7-16, "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES" .
- LIVE LOADS USED IN DESIGN:
 - ROOF - 30 PSF
GROUND SNOW LOAD: 42.9 PSF
 - TYPICAL FLOOR - 40 PSF
 - STORAGE - 80 PSF
 - CORRIDORS & BALCONIES - 100 PSF
 - MECHANICAL (EQUIPMENT SPECIFIC) - N/A
 - WIND:
 - BASIC WIND SPEED (ULTIMATE)- 135 MPH
 - EXPOSURE - C
 - SEISMIC - B
- ELEMENTS SUCH AS NON-BEARING PARTITIONS, ETC. ATTACHED TO AND/OR SUPPORTED BY THE STRUCTURE SHALL TAKE INTO ACCOUNT DEFLECTIONS AND OTHER STRUCTURAL MOVEMENTS.
- CONTRACTOR IS RESPONSIBLE FOR ALL FALSEWORK, SHORING, AND LATERAL BRACING OF THE STRUCTURE AND RELATED FALSEWORK DURING CONSTRUCTION DEMOLITION AND/OR ERECTION. CONTRACTOR IS ALSO RESPONSIBLE FOR PERMANENT STRUCTURAL LATERAL BRACING SCHEMES FOR ALL TIMBER CONSTRUCTION. THIS ENGINEERED SYSTEM, AS SHOWN, IS DESIGNED ON THE ASSUMPTION THAT MEMBERS WILL BE RESTRAINED FROM LATERAL MOVEMENT. SUFFICIENT LATERAL SUPPORT MUST BE PROVIDED WHERE NECESSARY TO PREVENT LATERAL TRANSLATION AND/OR ROTATION OF THE STRUCTURE.
- THIS PRINT IS THE PROPERTY OF ISS & IS FURNISHED FOR THE EXCLUSIVE USE BY THE STRUCTURE'S OWNER AND PROJECT CONTRACTOR(S) ON THE CONDITION THAT IT IS NOT TO BE COPIED OR USED BY OTHERS WITHOUT ISS PRIOR WRITTEN CONSENT.
- CONCRETE:

ALL CAST-IN-PLACE CONCRETE SHALL BE MADE WITH TYPE I/II PORTLAND CEMENT, STONE AGGREGATE, AND SHALL SATISFY THE FOLLOWING CRITERIA:

MINIMUM COMPRESSIVE STRENGTH FOR CONCRETE (F'c) = 3000 PSI

ALLOWABLE TENSILE STRESS = 410 PSI

CONCRETE MIX DESIGN IS THE RESPONSIBILITY OF THE CONTRACTOR AND/OR RELATED SUPPLIERS.

MAXIMUM SLUMP SHOULD NOT EXCEED: 4 IN.

ALL CONCRETE WORK AND REINFORCEMENT DETAILING SHALL BE IN ACCORDANCE WITH ACI BUILDING CODE 318 2019 EDITION

USE STANDARD HOOKS FOR DOWELS UNLESS NOTED OTHERWISE.

EXPOSED EDGES OF CONCRETE SHALL HAVE ¾" CHAMFER(S).

IF CONCRETE SUPPLIER PROPOSES THE USE OF FLYASH, HE SHALL PROVIDE THE OWNER WITH LETTER INDICATING COST REDUCTION AT TIME OF BID. THE MINIMUM MODULUS OF ELASTICITY OF ALL CONCRETE SHALL EXCEED (57,000)*(F'c)^{0.5} FOR NORMAL WEIGHT CONCRETE.

CONTRACTOR SHALL SAWCUT OR TROWEL CUT CONTROL JOINTS IN SLABS ON GRADE. JOINTS SHALL BE SPACED AT A MAXIMUM DISTANCE OF 15'-0" o.c. AND SAWCUT OR TROWELCUT TO A DEPTH EQUAL TO ¼ OF THE SLAB THICKNESS (¾" MINIMUM THICKNESS) WITHIN 12 HRS. AFTER POURING. CARRY ALL SLAB REINFORCEMENT THROUGH JOINT.

SLABS, FOOTINGS, BEAMS AND WALLS SHALL NOT HAVE JOINTS IN A HORIZONTAL PLANE. ANY STOP IN CONCRETE WORK MUST BE MADE AT THIRD POINTS OF SPAN WITH VERTICAL BULKHEADS AND HORIZONTAL SHEAR KEYS UNLESS OTHERWISE SHOWN. ALL CONSTRUCTION JOINTS SHALL BE AS DETAILED OR AS REVIEWED BY THE ENGINEER OF RECORD (EOR).

8. FOUNDATIONS:

GENERAL:

IN THE ABSENCE OF A CURRENT SOILS REPORT, THE DESIGN IS BASED UPON THE FOLLOWING ASSUMPTIONS WHICH MAY NOT ADEQUATELY CONTROL FOUNDATION MOVEMENT:

SOIL CONSISTENCY = MEDIUM-STIFF CLAY

SOIL COHESION FACTOR = 150 PSF

SOIL ADHESION FACTOR = 0.76

SPREAD FOOTINGS:

ALLOWABLE SOIL BEARING PRESSURE = 1500 PSF

MIN. BELOW GRADE DEPTH @ BOTTOM OF FOOTING = 36 IN.

DRILLED PIERS:

ALLOWABLE SOIL BEARING PRESSURE = 1500 PSF

CAISSON SIDE SHEAR RESISTANCE = 500 PSF

MINIMUM CAISSON DEPTH = 3 FT.

IN ORDER TO ACHIEVE 100% ACCURACY, OWNER SHOULD PERFORM A STANDARD SOILS ANALYSIS TEST AND REPORT.

IF PERFORMED, OWNER SHOULD ENSURE THAT CONTRACTOR FOLLOWS ALL RECOMMENDATIONS AS OUTLINED BY THE SOILS REPORT PREPARED BY:

_____ DATE: _____

-DO NOT PLACE BACKFILL AGAINST BELOW GRADE WALLS UNTIL ALL RELATED FLOOR STRUCTURES ARE IN PLACE. CONTRACTOR IS RESPONSIBLE FOR ALL FOUNDATION DRAINAGE SYSTEMS AND SITE GRADING AS REQUIRED TO PREVENT WATER INFILTRATION OF THE FOUNDATION SOIL.

-ALL FOOTING BEARING ELEVATIONS ARE ASSUMED, EXACT BEARING ELEVATIONS SHALL BE VERIFIED IN THE FIELD WITH ACTUAL CONDITIONS BY CONTRACTOR WITH APPROVAL OF SOILS ENGINEER.

-CENTER ALL FOOTINGS ON COLUMNS OR GRID LINES UNLESS NOTED OTHERWISE.

SLABS ON GRADE AND FOUNATION BEARING SOIL:

-THE PREPARATION OF THE SUBGRADE SHALL BE COMPACTED TO WITHIN 95% OF STANDARD PROCTOR MAXIMUM DENSITY UNLESS OTHERWISE SPECIFIED BY THE PROJECT SOILS REPORT REFERENCED ABOVE THE CONTRACTOR SHALL DIRECT QUESTIONS REGARDING THE SUBGRADE PREPARATION REQUIREMENTS TO THE GEOTECHNICAL ENGINEER.

-MOVEMENT OF THE SLAB ON GRADE MAY CAUSE DAMAGE TO ANYTHING CONNECTED TO BOTH THE SLAB AND OTHER PORTIONS OF THE SUPERSTRUCTURE. ISOLATION DETAILS FOR PARTITION WALLS, BASEBOARDS, PIPING AND OTHER ITEMS MAY BE REQUIRED, REFER TO THE APPROPRIATE DRAWINGS OR CONSULT WITH THE RESPONSIBLE MEMBER OF THE DESIGN TEAM PRIOR TO CONNECTING ITEMS TO BOTH THE SLAB ON GRADE AND OTHER PORTIONS OF THE SUPERSTRUCTURE.

-UNSTABLE SOIL CONDITIONS IDENTIFIED AS SUBJECT TO EXCESSIVE SETTLING AND/OR HEAVING SHALL BE OVEREXCAVATED AND COMPACTED ADEQUATELY IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S WRITTEN GUIDANCE AND OBSERVATION.

-STRUCTURAL FILL SHALL BE PER THE RECOMMENDATION OF GEOTECHNICAL ENGINEER. CONTRACTOR SHALL VERIFY THE ADEQUACY OF FIELD COMPACTION AS REQUIRED.

-COMPACTION WITHIN FIVE FEET OF EXISTING STRUCTURAL ELEMENTS SHALL BE ACCOMPLISHED WITH LIGHTWEIGHT, HAND HELD EQUIPMENT. EXERCISE CARE SO EXISTING WALLS, SLABS, FOOTINGS ETC. ARE NOT DISPLACED OR CRACKED

9. REINFORCING:

ALL REINFORCING SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60 (EXCEPT TIES).

WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 GRADE 65 AND SHALL BE LAPPED ONE FULL MESH AT SIDE AND END SPICES AND WIRED TOGETHER.

REINFORCEMENT PLACEMENT AND TOLERANCES SHALL BE IN ACCORDANCE WITH SECTIONS 7.5, 7.6, & 7.7 OF ACI 318 LATEST EDITION.

NO SPLICES OF REINFORCEMENT SHALL BE MADE EXCEPT AS DETAILED OR AUTHORIZED BY THE EOR. LAP SPLICES, WHERE PERMITTED, SHALL BE A MINIMUM OF 48 BAR DIAMETERS FOR #6 BARS AND SMALLER. #7 & #8 BARS SHALL HAVE A MINIMUM LAP DISTANCE OF 80 BAR DIAMETERS. MAKE BARS CONTINUOUS AROUND CORNERS.

- MINIMUM CONCRETE COVER (ACI 318 7.7.1):

CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH = 3" MIN.

EXPOSED TO WEATHER:

- #5 BARS OR SMALLER = 1½" MIN.
- #6 OR LARGER BARS = 2" MIN.

NOT EXPOSED TO WEATHER OR EARTH:

- #11 BARS OR SMALLER = ¾" MIN.
- #12 OR LARGER BARS = 1½" MIN.

10. MASONRY:

MASONRY: DEVELOP 1800 PSI ULTIMATE COMPRESSIVE STRENGTH (F'm) IN 28 DAYS. MORTAR: TYPE M OR S AS REQUIRED FOR BELOW GRADE CONSTRUCTION.

FILL BLOCK CELLS AND VOIDS SOLIDLY WITH GROUT A DISTANCE OF 24" BENEATH AND 12" EACH SIDE OF BEAM AND JOIST REACTIONS OR OTHER CONCENTRATED LOADS UNLESS NOTED OTHERWISE.

SPLICES NOT PERMITTED IN REINFORCING BARS EXCEPT AS DETAILED OR AUTHORIZED BY STRUCTURAL ENGINEER. WHERE PERMITTED, SPLICES MADE BY CONTACT LAPS, A MINIMUM OF 48 BAR DIAMETERS.

10. MASONRY (CONTINUED): :

GROUT SOLID ALL CELLS CONTAINING REINFORCING & ALL OTHER CELLS NOTED.

REFER TO DRAWINGS AND SPECIFICATIONS FOR REINFORCING AND OTHER REQUIREMENTS.

ALL PRIMARY REINFORCING SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60 EXCEPT HORIZONTAL JOINT REINFORCING SHALL CONFORM TO ASTM A82 OR PROPRIETARY LADDER TYPE AS PER MANUFACTURER'S GUIDANCE.

INSTALLER SHALL TERMINATE HORIZONTAL JOINT REINFORCEMENT WITH THE EXCEPTION OF CONTINUOUS HORIZONTAL BOND BEAM REBAR IN ORDER TO PRODUCED CONTINUOUS VERTICAL CONTROL JOINTS WITH A MAXIMUM SPACING OF 25'-0" HORIZONTALLY.

11. TIMBER MEMBERS:

THE STANDARD LUMBER DETAILS SHOWN ARE BASED ON ANSI/AF AND PA NDS - 2005 RECOMMENDATIONS FOR VISUALLY GRADED SOUTHERN PINE #1:

UNADJUSTED STRESS VALUES FOR ABOVE LUMBER:
EXTREME FIBER STRESS IN BENDING - 1500 PSI
HORIZONTAL SHEAR - 115 PSI
BEARING PERPENDICULAR TO GRAIN - 565 PSI
MODULUS of ELASTICITY - 1,400,000 PSI

TRUSS-JOIST (WEYERHAEUSER) 1.9E MICROLLAM LVL DESIGNS ARE BASED UPON THE FOLLOWING DESIGN CRITERIA:

ALLOWABLE STRESS VALUES:
EXTREME FIBER STRESS IN BENDING - 2,600 PSI
HORIZONTAL SHEAR - 285 PSI
BEARING PERPENDICULAR TO GRAIN - 150 PSI
MODULUS of ELASTICITY - 2,000,000 PSI

CONTRACTOR(S) MUST ENSURE THAT ALL FRAMING AND RELATED CONNECTIONS MEET CURRENT INDUSTRY STANDARDS AS OUTLINED BY THE BUILDING CODE ENFORCED BY THE LOCAL MUNICIPALITY.

WHEN PRESERVATIVE TREATED LUMBER IS REQUIRED BY CODE, ALL CONNECTIONS AND NAILING SHALL BE ADEQUATELY GALVANIZED (DOUBLEDIPPED OR BETTER).

PROVIDE BRIDGING OR BLOCKING FOR ALL 2x WOOD JOISTS NOT OVER 8'-0" o.c. SOLID BLOCKING IS REQUIRED AT ALL SUPPORT LOCATIONS AS REQUIRED TO PREVENT LATERAL TRANSLATION AND/OR ROTATION

- ALL JOISTS, STRINGERS, HEADERS, LEDGERS, OR OTHER MEMBERS MUST BE CENTERED DIRECTLY OVER THEIR SUPPORTS, UNLESS DESIGNED AND SPECIFICALLY NOTED OTHERWISE.

13. SHEATHING DESIGN:

PLYWOOD AND ORIENTED STRAND BOARD (OSB) DESIGNS ARE BASED ON AMERICAN PLYWOOD ASSOCIATION (APA) RECOMMENDATIONS WITH THE FACE GRAIN OF THE PLYWOOD RUNNING AT RIGHT ANGLES TO IT'S SUPPORT AND WITH STAGGERED JOINTS.

PANEL THICKNESS SHALL BE AS SHOWN ON THE DRAWINGS. APPLICATION SHALL BE IN ACCORDANCE WITH RECOMMENDATIONS OF THE APA.

EACH PANEL SHALL BE IDENTIFIED WITH THE GRADE TRADEMARK OF THE APA AND SHALL MEET THE REQUIREMENTS OF THE U.S. PRODUCTS STANDARD PSI, LATEST EDITION FOR PLYWOOD. ALL PANELS WHICH HAVE ANY EDGE OR SURFACE PERMANENTLY EXPOSED TO THE WEATHER SHALL BE OF THE EXTERIOR TYPE.

FOR FLOORS, USE 3/4" 24/16 SPAN RATED PLYWOOD SHEATHING. WITH 10d NAILS @ 4" o.c. MAX. AROUND PANEL EDGES. INTERIOR SUPPORTS CAN BE NAILED WITH 10d NAILS @ 6" o.c. MAX. FASTEN SHEATHING TO SUPPORT BLOCKING UTILIZING 10d NAILS @ 4" o.c. MAX.

FOR ROOFS, USE 15/32" 24/16 SPAN RATED EXPOSURE 1 PLYWOOD OR OSB SHEATHING. WITH 8d NAILS @ 4" o.c. MAX. AROUND PANEL EDGES. INTERIOR SUPPORTS CAN BE NAILED WITH 8d NAILS @ 12" o.c. MAX. FASTEN SHEATHING TO SUPPORT BLOCKING UTILIZING 8d NAILS @ 4" o.c. MAX.

FOR EXTERIOR WALLS USE 15/32" EXPOSURE 1 PLYWOOD OR OSB SHEATHING. NAILED WITH 10d NAILS AT 4" o.c. MAX. ALONG PANEL EDGES. INTERIOR SUPPORTS CAN BE NAILED WITH 10d NAILS AT 12" o.c. MAX. FASTEN SHEATHING TO SUPPORT BLOCKING UTILIZING 10d NAILS @ 4" o.c. MAX.

REFER TO SHEARWALL SCHEDULE IF APPLICABLE. ALL PANEL EDGES SHALL BE BLOCKED. INSTALL SUITABLE EDGE SUPPORT BY USE OF PLYCLIPS, TONGUE AND GROOVE PANELS OR SOLID WOOD BLOCKING SUPPORTS.

- SHEARWALL DESIGN IS ACCORDING TO PERFORATED SHEARWALL DESIGN PROCEDURES AND TABLE 4.2C OF THE 2015 AMERICAN FOREST & PAPER ASSOCIATION SPECIAL DESIGN PROVISIONS FOR WIND & SEISMIC DESIGN. ALL EXTERIOR WALLS SHALL BE CONSTRUCTED PER THE SHEATHING, NAILING & BLOCKING REQUIREMENTS OUTLINED IN GENERAL NOTE #13, UNLESS NOTED OTHERWISE. FRAMING CONNECTIONS & TIE DOWNS ARE THE RESPONSIBILITY OF THE CONTRACTOR UNLESS SPECIFICALLY DETAILED ON THIS DRAWING. CONTRACTOR SHALL FASTEN ALL WOOD MEMBERS WITH COMMON NAILS.

15. STRUCTURAL STEEL:

STRUCTURAL STEEL SHALL CONFORM TO ASTM A992 (50 KSI) EXCEPT PIPE & TUBE COLUMNS WHICH CONFORM TO ASTM A53 & A500 (GRADE B) RESPECTIVELY. SUPPLIER MAY SUPPLY ASTM A572 (GRADE 50) AT HIS OPTION. MISCELLANEOUS EMBODIMENT AND SHEAR TABS MAY BE A36.

ALL STRUCTURAL BOLTS SHALL BE A325N INSTALLED TO A MINIMUM OF SNUG TIGHT CONDITION. ALL ANCHOR BOLTS SHALL CONFORM TO ASTM A307 UNLESS NOTED OTHERWISE.

STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH THE AISC "MANUAL OF STEEL CONSTRUCTION" 13TH. ED.

EXCEPT WHERE DETAILED OTHERWISE, FABRICATOR SHALL SELECT STEEL CONNECTIONS PER AISC "MANUAL OF STEEL CONSTRUCTION" (ASD) TABLE II-A AND/OR ANY STANDARD SIMPLE SHEAR CONNECTION AS OUTLINED IN AISC "SIMPLE SHEAR CONNECTION MANUAL" BASED UPON LOADS SHOWN ON DRAWING. IF LOADS ARE NOT INDICATED, SELECT CONNECTION TO SUPPORT 60% OF TOTAL UNIFORM LOAD CAPACITY PER AISC "MANUAL OF STEEL CONSTRUCTION" 13TH ED. FOR EACH GIVEN BEAM AND SPAN FOR NON-COMPOSITE MEMBERS. FOR COMPOSITE MEMBERS, CONNECTION SHALL SUPPORT 75% OF THE TOTAL CAPACITY FOR EACH BEAM AND SPAN.

15. STRUCTURAL STEEL (CONTINUED):

SUBMIT DESIGN CALCULATIONS, BEARING THE STAMP AND SIGNATURE OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF COLORADO, AND EMPLOYED BY THE STEEL FABRICATOR, FOR ALL CONNECTIONS NOT COMPLETELY DETAILED ON THESE STRUCTURAL DRAWINGS AND FOR ANY PROPOSED ALTERNATE CONNECTION DETAILS.

ALL WELDERS SHALL HAVE EVIDENCE OF PASSING THE AMERICAN WELDING SOCIETY STANDARD QUALIFICATIONS TESTS AS OUTLINED IN AWS-D11.

MINIMUM WELDS ARE TO BE PER AISC TABLE J2.4 BUT NOT LESS THAN ¾" CONTINUOUS FILLET UNLESS NOTED OTHERWISE.

THE TERMINOLOGY "CONTINUOUS" MEANS QUANTITY. PROVIDE THE NECESSARY JOINT DETAILS TO ALLOW FOR BUILDING MOVEMENT. COORDINATE LOCATIONS WITH ARCHITECTURAL, MECHANICAL CONTROLS & EXPANSION JOINTS.

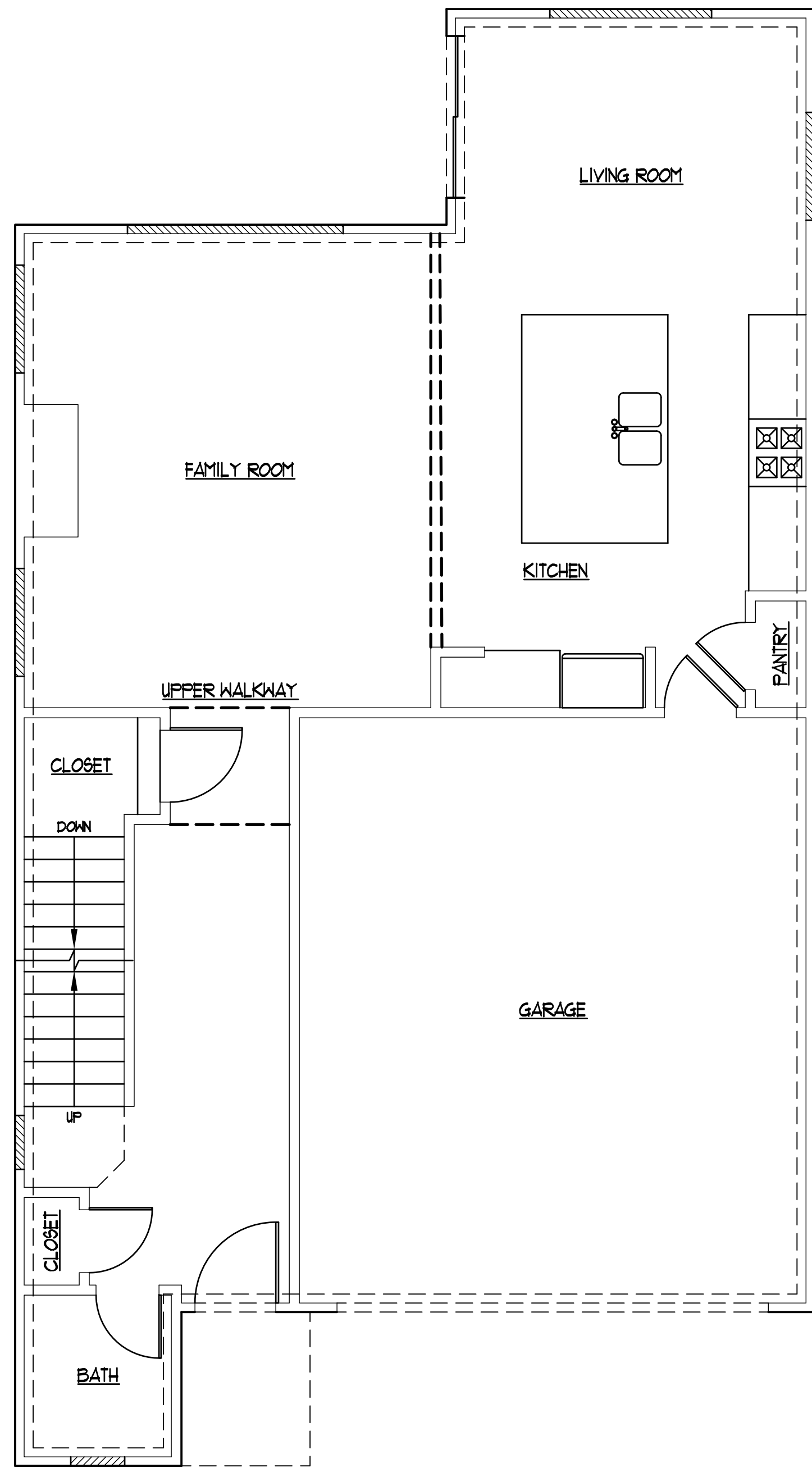
PROVIDE ANCHOR BOLTS FOR BEAMS AND SILL PLATES THAT BEAR ON CONCRETE OR MASONRY WALLS AS REQUIRED.

STEEL FABRICATOR SHALL NOT RECEIVE ADDITIONAL COMPENSATION FOR SHOP DRAWING TIME FOR ANY REVISIONS OF ERECTION DRAWINGS NOR FOR ANY REVISIONS TO PIECE DRAWINGS PRIOR TO ENGINEER'S APPROVAL OF ERECTION DRAWINGS.

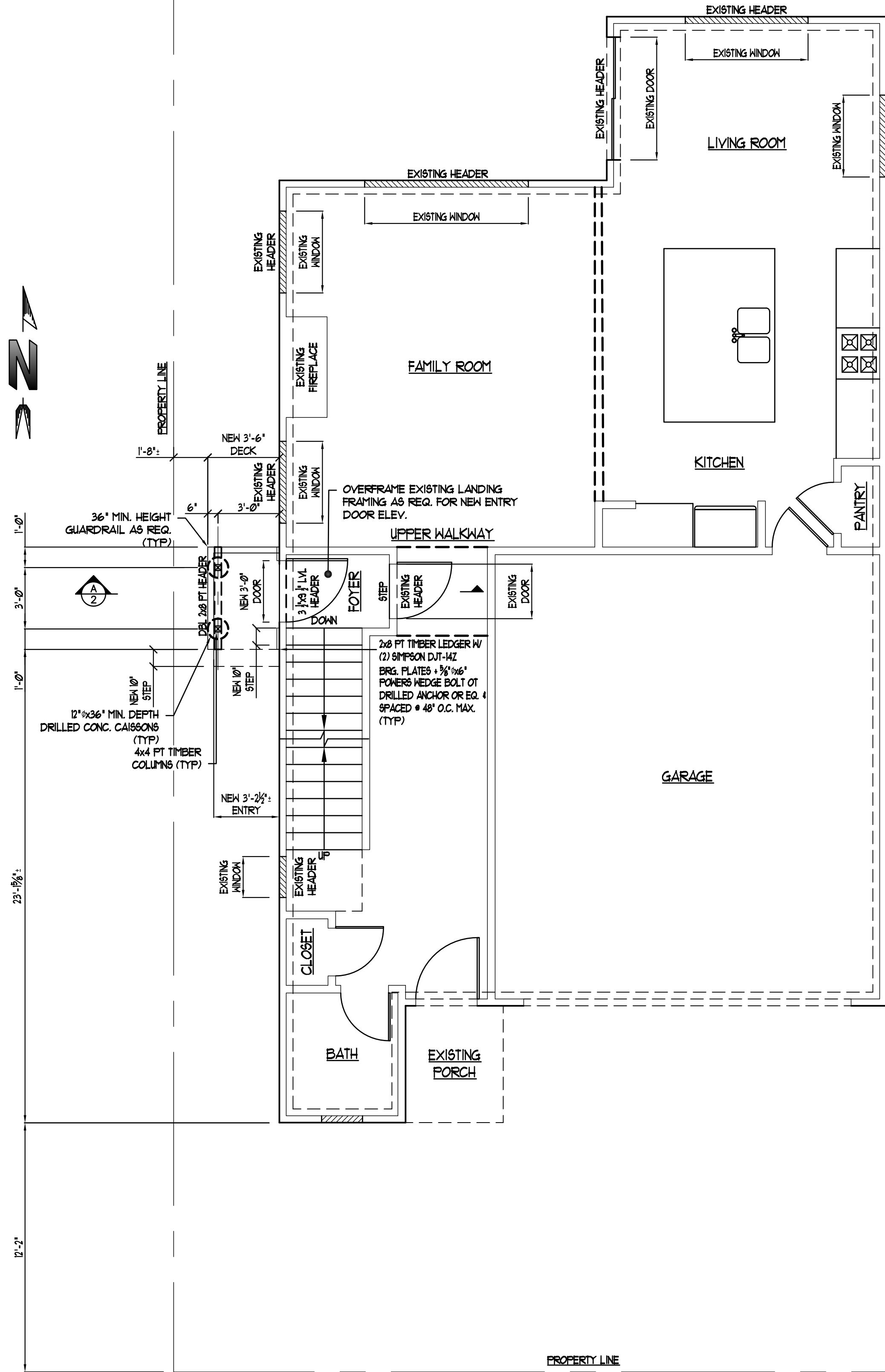
WHENEVER MASONRY RESTS ON STEEL BEAM BEAMS WITH FLANGES NARROWER THAN THE ACTUAL MASONRY THICKNESS, WELD ½" THICK CONTINUOUS PLATE TO BEAM FLANGE ½" NARROWER THAN MASONRY.

- FRAMING CONNECTIONS & TIE DOWNS ARE THE RESPONSIBILITY OF THE CONTRACTOR UNLESS SPECIFICALLY DETAILED ON THIS DRAWING. CONTRACTOR SHALL FASTEN ALL WOOD MEMBERS WITH COMMON NAILS ACCORDING TO THE IBC SCHEDULE TABLE 2304.10.1 UNLESS NOTED OTHERWISE. CONTRACTOR WILL CONNECT STRUCTURAL STEEL UTILIZING ESTABLISHED METHODS AS OUTLINED IS AISC "MANUAL OF STEEL CONSTRUCTION".

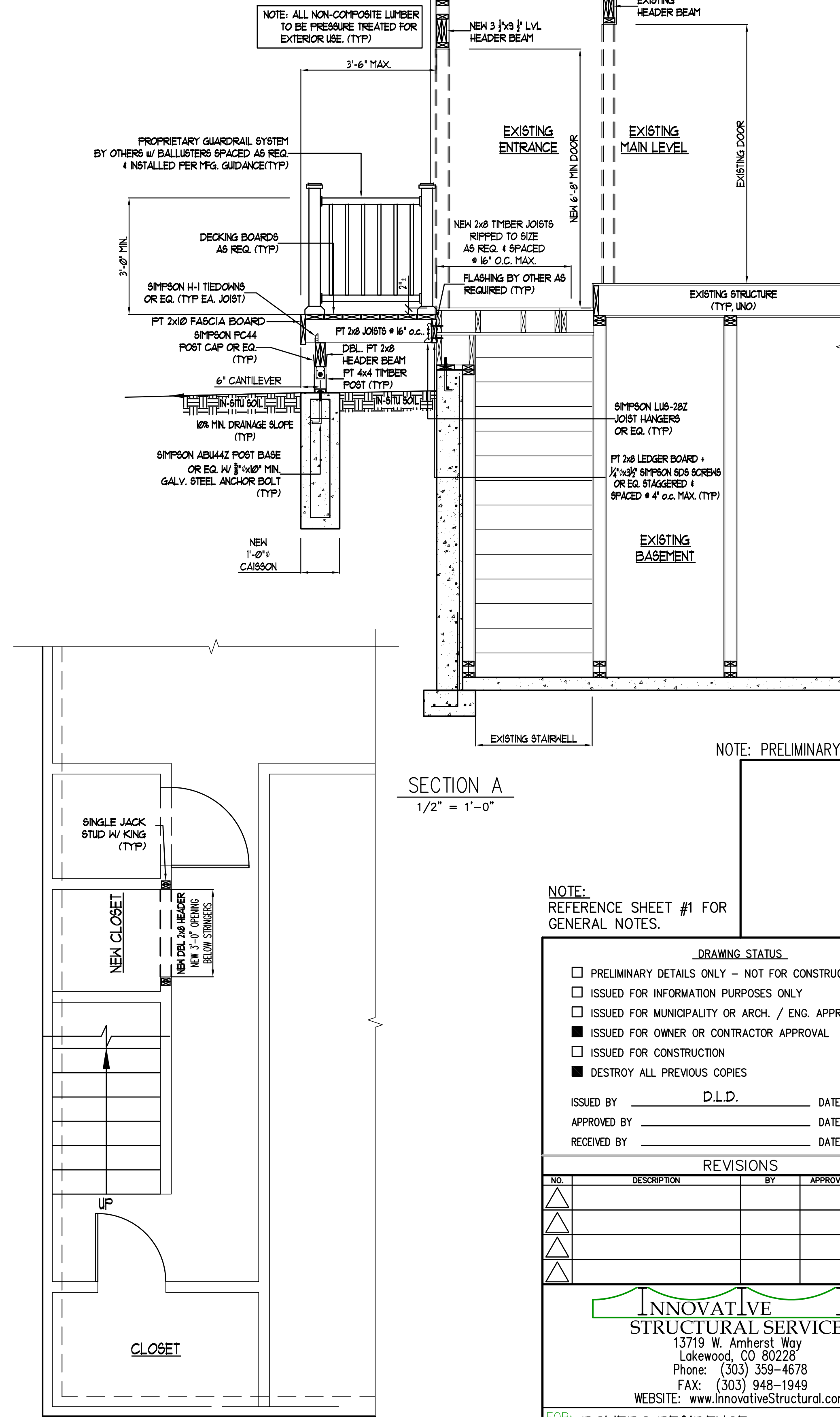
DRAWING STATUS				
☐ PRELIMINARY DETAILS ONLY – NOT FOR CONSTRUCTION				
☐ ISSUED FOR INFORMATION PURPOSES ONLY				
☐ ISSUED FOR MUNICIPALITY OR ARCH. / ENG. APPROVAL				
☒ ISSUED FOR OWNER OR CONTRACTOR APPROVAL				
☐ ISSUED FOR CONSTRUCTION				
☒ DESTROY ALL PREVIOUS COPIES				
ISSUED BY		D.L.D.		DATE
APPROVED BY		DATE		10/14/2024
RECEIVED BY		DATE		
REVISIONS				
NO.	DESCRIPTION	BY	APPROVED	DATE
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INNOVATIVE INC. STRUCTURAL SERVICES 13719 W. Amherst Way Lakewood, CO 80228 Phone: (303) 359-4678 FAX: (303) 948-1949 WEBSITE: www.InnovativeStructural.com				
FOR: ROMERO RESIDENCE				
CONTRACTOR:				
PROJECT: NEW EGRESS STAIRWELL				
LOCATION: 21005 E. RADCLIFF PL., AURORA, CO 80015				
ADD NEW ENTRANCE & EGRESS STAIRWELL				
DRAWN	D.L.D.	DATE	10/24	DRAWING NO.
APPROVED	J.R.	DATE		2024-112
				SHEET NO.
				1 OF 2



PLAN VIEW (EXISTING)
1/4" = 1'-0"



PLAN VIEW (RENOVATED)
1/4" = 1'-0"



PLAN VIEW (RENOVATED BASEMENT)
3/8" = 1'-0"

NOTE: FROST DEPTH FOUNDATION ONLY,
OWNER MUST FOLLOW RECOMMENDATIONS IN SOILS
REPORT IF MOVEMENT POTENTIAL IS UNACCEPTABLE

NOTE: PRELIMINARY DETAILS ONLY

NOTE: REFERENCE SHEET #1 FOR GENERAL NOTES.

DRAWING STATUS

- ☐ PRELIMINARY DETAILS ONLY - NOT FOR CONSTRUCTION
- ☐ ISSUED FOR INFORMATION PURPOSES ONLY
- ☐ ISSUED FOR MUNICIPALITY OR ARCH. / ENG. APPROVAL
- ☒ ISSUED FOR OWNER OR CONTRACTOR APPROVAL
- ☐ ISSUED FOR CONSTRUCTION
- ☒ DESTROY ALL PREVIOUS COPIES

ISSUED BY: D.L.D. DATE: 10/14/2024
APPROVED BY: _____ DATE: _____
RECEIVED BY: _____ DATE: _____

REVISIONS

NO.	DESCRIPTION	BY	APPROVED	DATE
1				
2				
3				
4				

INNOVATIVE INC.
STRUCTURAL SERVICES
13719 W. Amherst Way
Lakewood, CO 80228
Phone: (303) 359-4678
FAX: (303) 948-1949
WEBSITE: www.innovativestructural.com

FOR: ROMERO RESIDENCE
CONTRACTOR: _____
PROJECT: NEW EGRESS STAIRWELL
LOCATION: 21005 E. RADCLIFF PL., AURORA, CO 80015
ADD NEW ENTRANCE & EGRESS STAIRWELL

DRAWN: D.L.D. DATE: 10/24 DRAWING NO: 2024-112 SHEET NO: 2 OF 2
APPROVED: J.R. DATE: _____

GENERAL NOTES

THIS DRAWING IS PROVIDED TO ILLUSTRATE THE STRUCTURAL ENGINEERING OF THE MEMBERS ASSOCIATED WITH NEW CONSTRUCTION ONLY. IT IS NOT INTENDED TO BE FULLY DIRECTIVE NOR COVER ENGINEERING DETAILS OF SUCH MATERIALS, PRODUCTS OR EQUIPMENT NOR THE INTERCONNECTION THEREWITH FOR AREAS OF THE STRUCTURE CURRENTLY EXISTING. BECAUSE INNOVATIVE STRUCTURAL SERVICES (ISS) DOES NOT CONTROL JOB SITE ASSEMBLY OR PROCEDURES, GRADE AND QUALITY OF MATERIALS OR EQUIPMENT SUPPLIED BY OTHERS, IT IS THE RESPONSIBILITY OF THE OWNER AND/OR CONTRACTOR(S) TO ADHERE TO WORKMANSHIP CONSISTENT WITH SAFE BUILDING PRACTICES AND COMPLIANCE WITH ALL ASSOCIATED BUILDING CODES AND ENSURE THAT ALL MATERIALS COMPLY WITH THIS DESIGN.

ISS SHALL NOT BE RESPONSIBLE IN THE EVENT OF ANY DEVIATIONS, CHANGES OR ALTERATIONS TO THE RECOMMENDED DETAILS DESCRIBED IN THIS DRAWING UNLESS SUCH DEVIATIONS, CHANGES OR ALTERATIONS ARE ILLUSTRATED IN A REVISED ISS DRAWING OR ARE APPROVED IN WRITING BY AN AUTHORIZED ISS REPRESENTATIVE.

ALL DRAWINGS ARE INTENDED TO BE PRINTED ON 24"x36" (ARCH D) SIZE PAPER. IF PLOTTED TO FIT ON SMALLER PAPER, ADJUST SCALES ACCORDINGLY.

- ALL DIMENSIONS AND DETAILS SHOWN ON THIS LAYOUT MUST BE CHECKED AND VERIFIED BY THE OWNER AND/OR CONTRACTOR(S) BEFORE PROCEEDING WITH THE WORK OR MATERIAL ACQUISITION.
- THE ENGINEERED SYSTEM SHOWN ON THIS LAYOUT IS BASED ON THE 2021 IRC & LIVE AND DEAD LOADS INCLUDED IN ASCE STANDARD 7-16, "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES" .
- LIVE LOADS USED IN DESIGN:
 - ROOF - 30 PSF
GROUND SNOW LOAD: 42.9 PSF
 - TYPICAL FLOOR - 40 PSF
 - STORAGE - 80 PSF
 - CORRIDORS & BALCONIES - 100 PSF
 - MECHANICAL (EQUIPMENT SPECIFIC) - N/A
 - WIND:
 - BASIC WIND SPEED (ULTIMATE)- 135 MPH
 - EXPOSURE - C
 - SEISMIC - B
- ELEMENTS SUCH AS NON-BEARING PARTITIONS, ETC. ATTACHED TO AND/OR SUPPORTED BY THE STRUCTURE SHALL TAKE INTO ACCOUNT DEFLECTIONS AND OTHER STRUCTURAL MOVEMENTS.
- CONTRACTOR IS RESPONSIBLE FOR ALL FALSEWORK, SHORING, AND LATERAL BRACING OF THE STRUCTURE AND RELATED FALSEWORK DURING CONSTRUCTION DEMOLITION AND/OR ERECTION. CONTRACTOR IS ALSO RESPONSIBLE FOR PERMANENT STRUCTURAL LATERAL BRACING SCHEMES FOR ALL TIMBER CONSTRUCTION. THIS ENGINEERED SYSTEM, AS SHOWN, IS DESIGNED ON THE ASSUMPTION THAT MEMBERS WILL BE RESTRAINED FROM LATERAL MOVEMENT. SUFFICIENT LATERAL SUPPORT MUST BE PROVIDED WHERE NECESSARY TO PREVENT LATERAL TRANSLATION AND/OR ROTATION OF THE STRUCTURE.
- THIS PRINT IS THE PROPERTY OF ISS & IS FURNISHED FOR THE EXCLUSIVE USE BY THE STRUCTURE'S OWNER AND PROJECT CONTRACTOR(S) ON THE CONDITION THAT IT IS NOT TO BE COPIED OR USED BY OTHERS WITHOUT ISS PRIOR WRITTEN CONSENT.
- CONCRETE:

ALL CAST-IN-PLACE CONCRETE SHALL BE MADE WITH TYPE I/II PORTLAND CEMENT, STONE AGGREGATE, AND SHALL SATISFY THE FOLLOWING CRITERIA:

MINIMUM COMPRESSIVE STRENGTH FOR CONCRETE (F'c) = 3000 PSI

ALLOWABLE TENSILE STRESS = 410 PSI

CONCRETE MIX DESIGN IS THE RESPONSIBILITY OF THE CONTRACTOR AND/OR RELATED SUPPLIERS.

MAXIMUM SLUMP SHOULD NOT EXCEED: 4 IN.

ALL CONCRETE WORK AND REINFORCEMENT DETAILING SHALL BE IN ACCORDANCE WITH ACI BUILDING CODE 318 2019 EDITION

USE STANDARD HOOKS FOR DOWELS UNLESS NOTED OTHERWISE.

EXPOSED EDGES OF CONCRETE SHALL HAVE ¾" CHAMFER(S).

IF CONCRETE SUPPLIER PROPOSES THE USE OF FLYASH, HE SHALL PROVIDE THE OWNER WITH LETTER INDICATING COST REDUCTION AT TIME OF BID. THE MINIMUM MODULUS OF ELASTICITY OF ALL CONCRETE SHALL EXCEED (57,000)*(F'c)^{0.5} FOR NORMAL WEIGHT CONCRETE.

CONTRACTOR SHALL SAWCUT OR TROWEL CUT CONTROL JOINTS IN SLABS ON GRADE. JOINTS SHALL BE SPACED AT A MAXIMUM DISTANCE OF 15'-0" o.c. AND SAWCUT OR TROWELCUT TO A DEPTH EQUAL TO ¼ OF THE SLAB THICKNESS (¾" MINIMUM THICKNESS) WITHIN 12 HRS. AFTER POURING. CARRY ALL SLAB REINFORCEMENT THROUGH JOINT.

SLABS, FOOTINGS, BEAMS AND WALLS SHALL NOT HAVE JOINTS IN A HORIZONTAL PLANE. ANY STOP IN CONCRETE WORK MUST BE MADE AT THIRD POINTS OF SPAN WITH VERTICAL BULKHEADS AND HORIZONTAL SHEAR KEYS UNLESS OTHERWISE SHOWN. ALL CONSTRUCTION JOINTS SHALL BE AS DETAILED OR AS REVIEWED BY THE ENGINEER OF RECORD (EOR).

8. FOUNDATIONS:

GENERAL:

IN THE ABSENCE OF A CURRENT SOILS REPORT, THE DESIGN IS BASED UPON THE FOLLOWING ASSUMPTIONS WHICH MAY NOT ADEQUATELY CONTROL FOUNDATION MOVEMENT:

SOIL CONSISTENCY = MEDIUM-STIFF CLAY

SOIL COHESION FACTOR = 150 PSF

SOIL ADHESION FACTOR = 0.76

SPREAD FOOTINGS:

ALLOWABLE SOIL BEARING PRESSURE = 1500 PSF

MIN. BELOW GRADE DEPTH @ BOTTOM OF FOOTING = 36 IN.

DRILLED PIERS:

ALLOWABLE SOIL BEARING PRESSURE = 1500 PSF

CAISSON SIDE SHEAR RESISTANCE = 500 PSF

MINIMUM CAISSON DEPTH = 3 FT.

IN ORDER TO ACHIEVE 100% ACCURACY, OWNER SHOULD PERFORM A STANDARD SOILS ANALYSIS TEST AND REPORT.

IF PERFORMED, OWNER SHOULD ENSURE THAT CONTRACTOR FOLLOWS ALL RECOMMENDATIONS AS OUTLINED BY THE SOILS REPORT PREPARED BY:

_____ DATE: _____

-DO NOT PLACE BACKFILL AGAINST BELOW GRADE WALLS UNTIL ALL RELATED FLOOR STRUCTURES ARE IN PLACE. CONTRACTOR IS RESPONSIBLE FOR ALL FOUNDATION DRAINAGE SYSTEMS AND SITE GRADING AS REQUIRED TO PREVENT WATER INFILTRATION OF THE FOUNDATION SOIL.

-ALL FOOTING BEARING ELEVATIONS ARE ASSUMED, EXACT BEARING ELEVATIONS SHALL BE VERIFIED IN THE FIELD WITH ACTUAL CONDITIONS BY CONTRACTOR WITH APPROVAL OF SOILS ENGINEER.

-CENTER ALL FOOTINGS ON COLUMNS OR GRID LINES UNLESS NOTED OTHERWISE.

SLABS ON GRADE AND FOUNATION BEARING SOIL:

-THE PREPARATION OF THE SUBGRADE SHALL BE COMPACTED TO WITHIN 95% OF STANDARD PROCTOR MAXIMUM DENSITY UNLESS OTHERWISE SPECIFIED BY THE PROJECT SOILS REPORT REFERENCED ABOVE THE CONTRACTOR SHALL DIRECT QUESTIONS REGARDING THE SUBGRADE PREPARATION REQUIREMENTS TO THE GEOTECHNICAL ENGINEER.

-MOVEMENT OF THE SLAB ON GRADE MAY CAUSE DAMAGE TO ANYTHING CONNECTED TO BOTH THE SLAB AND OTHER PORTIONS OF THE SUPERSTRUCTURE. ISOLATION DETAILS FOR PARTITION WALLS, BASEBOARDS, PIPING AND OTHER ITEMS MAY BE REQUIRED, REFER TO THE APPROPRIATE DRAWINGS OR CONSULT WITH THE RESPONSIBLE MEMBER OF THE DESIGN TEAM PRIOR TO CONNECTING ITEMS TO BOTH THE SLAB ON GRADE AND OTHER PORTIONS OF THE SUPERSTRUCTURE.

-UNSTABLE SOIL CONDITIONS IDENTIFIED AS SUBJECT TO EXCESSIVE SETTLING AND/OR HEAVING SHALL BE OVEREXCAVATED AND COMPACTED ADEQUATELY IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S WRITTEN GUIDANCE AND OBSERVATION.

-STRUCTURAL FILL SHALL BE PER THE RECOMMENDATION OF GEOTECHNICAL ENGINEER. CONTRACTOR SHALL VERIFY THE ADEQUACY OF FIELD COMPACTION AS REQUIRED.

-COMPACTION WITHIN FIVE FEET OF EXISTING STRUCTURAL ELEMENTS SHALL BE ACCOMPLISHED WITH LIGHTWEIGHT, HAND HELD EQUIPMENT. EXERCISE CARE SO EXISTING WALLS, SLABS, FOOTINGS ETC. ARE NOT DISPLACED OR CRACKED

9. REINFORCING:

ALL REINFORCING SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60 (EXCEPT TIES).

WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 GRADE 65 AND SHALL BE LAPPED ONE FULL MESH AT SIDE AND END SPICES AND WIRED TOGETHER.

REINFORCEMENT PLACEMENT AND TOLERANCES SHALL BE IN ACCORDANCE WITH SECTIONS 7.5, 7.6, & 7.7 OF ACI 318 LATEST EDITION.

NO SPLICES OF REINFORCEMENT SHALL BE MADE EXCEPT AS DETAILED OR AUTHORIZED BY THE EOR. LAP SPLICES, WHERE PERMITTED, SHALL BE A MINIMUM OF 48 BAR DIAMETERS FOR #6 BARS AND SMALLER. #7 & #8 BARS SHALL HAVE A MINIMUM LAP DISTANCE OF 80 BAR DIAMETERS. MAKE BARS CONTINUOUS AROUND CORNERS.

- MINIMUM CONCRETE COVER (ACI 318 7.7.1):

CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH = 3" MIN.

EXPOSED TO WEATHER:
- #5 BARS OR SMALLER = 1½" MIN.
- #6 OR LARGER BARS = 2" MIN.

NOT EXPOSED TO WEATHER OR EARTH:
- #11 BARS OR SMALLER = ¾" MIN.
- #12 OR LARGER BARS = 1½" MIN.

10. MASONRY:

MASONRY: DEVELOP 1800 PSI ULTIMATE COMPRESSIVE STRENGTH (F'm) IN 28 DAYS. MORTAR: TYPE M OR S AS REQUIRED FOR BELOW GRADE CONSTRUCTION.

FILL BLOCK CELLS AND VOIDS SOLIDLY WITH GROUT A DISTANCE OF 24" BENEATH AND 12" EACH SIDE OF BEAM AND JOIST REACTIONS OR OTHER CONCENTRATED LOADS UNLESS NOTED OTHERWISE.

SPLICES NOT PERMITTED IN REINFORCING BARS EXCEPT AS DETAILED OR AUTHORIZED BY STRUCTURAL ENGINEER. WHERE PERMITTED, SPLICES MADE BY CONTACT LAPS, A MINIMUM OF 48 BAR DIAMETERS.

10. MASONRY (CONTINUED): :

GROUT SOLID ALL CELLS CONTAINING REINFORCING & ALL OTHER CELLS NOTED.

REFER TO DRAWINGS AND SPECIFICATIONS FOR REINFORCING AND OTHER REQUIREMENTS.

ALL PRIMARY REINFORCING SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60 EXCEPT HORIZONTAL JOINT REINFORCING SHALL CONFORM TO ASTM A82 OR PROPRIETARY LADDER TYPE AS PER MANUFACTURER'S GUIDANCE.

INSTALLER SHALL TERMINATE HORIZONTAL JOINT REINFORCEMENT WITH THE EXCEPTION OF CONTINUOUS HORIZONTAL BOND BEAM REBAR IN ORDER TO PRODUCED CONTINUOUS VERTICAL CONTROL JOINTS WITH A MAXIMUM SPACING OF 25'-0" HORIZONTALLY.

11. TIMBER MEMBERS:

THE STANDARD LUMBER DETAILS SHOWN ARE BASED ON ANSI/AF AND PA NDS - 2005 RECOMMENDATIONS FOR VISUALLY GRADED SOUTHERN PINE #1:

UNADJUSTED STRESS VALUES FOR ABOVE LUMBER:
EXTREME FIBER STRESS IN BENDING - 1500 PSI
HORIZONTAL SHEAR - 115 PSI
BEARING PERPENDICULAR TO GRAIN - 565 PSI
MODULUS of ELASTICITY - 1,400,000 PSI

TRUSS-JOIST (WEYERHAEUSER) 1.9E MICROLLAM LVL DESIGNS ARE BASED UPON THE FOLLOWING DESIGN CRITERIA:

ALLOWABLE STRESS VALUES:
EXTREME FIBER STRESS IN BENDING - 2,600 PSI
HORIZONTAL SHEAR - 285 PSI
BEARING PERPENDICULAR TO GRAIN - 150 PSI
MODULUS of ELASTICITY - 2,000,000 PSI

CONTRACTOR(S) MUST ENSURE THAT ALL FRAMING AND RELATED CONNECTIONS MEET CURRENT INDUSTRY STANDARDS AS OUTLINED BY THE BUILDING CODE ENFORCED BY THE LOCAL MUNICIPALITY.

WHEN PRESERVATIVE TREATED LUMBER IS REQUIRED BY CODE, ALL CONNECTIONS AND NAILING SHALL BE ADEQUATELY GALVANIZED (DOUBLEDIPPED OR BETTER).

PROVIDE BRIDGING OR BLOCKING FOR ALL 2x WOOD JOISTS NOT OVER 8'-0" o.c. SOLID BLOCKING IS REQUIRED AT ALL SUPPORT LOCATIONS AS REQUIRED TO PREVENT LATERAL TRANSLATION AND/OR ROTATION

- ALL JOISTS, STRINGERS, HEADERS, LEDGERS, OR OTHER MEMBERS MUST BE CENTERED DIRECTLY OVER THEIR SUPPORTS, UNLESS DESIGNED AND SPECIFICALLY NOTED OTHERWISE.

13. SHEATHING DESIGN:

PLYWOOD AND ORIENTED STRAND BOARD (OSB) DESIGNS ARE BASED ON AMERICAN PLYWOOD ASSOCIATION (APA) RECOMMENDATIONS WITH THE FACE GRAIN OF THE PLYWOOD RUNNING AT RIGHT ANGLES TO IT'S SUPPORT AND WITH STAGGERED JOINTS.

PANEL THICKNESS SHALL BE AS SHOWN ON THE DRAWINGS. APPLICATION SHALL BE IN ACCORDANCE WITH RECOMMENDATIONS OF THE APA.

EACH PANEL SHALL BE IDENTIFIED WITH THE GRADE TRADEMARK OF THE APA AND SHALL MEET THE REQUIREMENTS OF THE U.S. PRODUCTS STANDARD PSI, LATEST EDITION FOR PLYWOOD. ALL PANELS WHICH HAVE ANY EDGE OR SURFACE PERMANENTLY EXPOSED TO THE WEATHER SHALL BE OF THE EXTERIOR TYPE.

FOR FLOORS, USE 3/4" 24/16 SPAN RATED PLYWOOD SHEATHING. WITH 10d NAILS @ 4" o.c. MAX. AROUND PANEL EDGES. INTERIOR SUPPORTS CAN BE NAILED WITH 10d NAILS @ 6" o.c. MAX. FASTEN SHEATHING TO SUPPORT BLOCKING UTILIZING 10d NAILS @ 4" o.c. MAX.

FOR ROOFS, USE 15/32" 24/16 SPAN RATED EXPOSURE 1 PLYWOOD OR OSB SHEATHING. WITH 8d NAILS @ 4" o.c. MAX. AROUND PANEL EDGES. INTERIOR SUPPORTS CAN BE NAILED WITH 8d NAILS @ 12" o.c. MAX. FASTEN SHEATHING TO SUPPORT BLOCKING UTILIZING 8d NAILS @ 4" o.c. MAX.

FOR EXTERIOR WALLS USE 15/32" EXPOSURE 1 PLYWOOD OR OSB SHEATHING. NAILED WITH 10d NAILS AT 4" o.c. MAX. ALONG PANEL EDGES. INTERIOR SUPPORTS CAN BE NAILED WITH 10d NAILS AT 12" o.c. MAX. FASTEN SHEATHING TO SUPPORT BLOCKING UTILIZING 10d NAILS @ 4" o.c. MAX.

REFER TO SHEARWALL SCHEDULE IF APPLICABLE. ALL PANEL EDGES SHALL BE BLOCKED. INSTALL SUITABLE EDGE SUPPORT BY USE OF PLYCLIPS, TONGUE AND GROOVE PANELS OR SOLID WOOD BLOCKING SUPPORTS.

- SHEARWALL DESIGN IS ACCORDING TO PERFORATED SHEARWALL DESIGN PROCEDURES AND TABLE 4.2C OF THE 2015 AMERICAN FOREST & PAPER ASSOCIATION SPECIAL DESIGN PROVISIONS FOR WIND & SEISMIC DESIGN. ALL EXTERIOR WALLS SHALL BE CONSTRUCTED PER THE SHEATHING, NAILING & BLOCKING REQUIREMENTS OUTLINED IN GENERAL NOTE #13, UNLESS NOTED OTHERWISE. FRAMING CONNECTIONS & TIE DOWNS ARE THE RESPONSIBILITY OF THE CONTRACTOR UNLESS SPECIFICALLY DETAILED ON THIS DRAWING. CONTRACTOR SHALL FASTEN ALL WOOD MEMBERS WITH COMMON NAILS.

15. STRUCTURAL STEEL:

STRUCTURAL STEEL SHALL CONFORM TO ASTM A992 (50 KSI) EXCEPT PIPE & TUBE COLUMNS WHICH CONFORM TO ASTM A53 & A500 (GRADE B) RESPECTIVELY. SUPPLIER MAY SUPPLY ASTM A572 (GRADE 50) AT HIS OPTION. MISCELLANEOUS EMBODIMENT AND SHEAR TABS MAY BE A36.

ALL STRUCTURAL BOLTS SHALL BE A325N INSTALLED TO A MINIMUM OF SNUG TIGHT CONDITION. ALL ANCHOR BOLTS SHALL CONFORM TO ASTM A307 UNLESS NOTED OTHERWISE.

STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH THE AISC "MANUAL OF STEEL CONSTRUCTION" 13TH. ED.

EXCEPT WHERE DETAILED OTHERWISE, FABRICATOR SHALL SELECT STEEL CONNECTIONS PER AISC "MANUAL OF STEEL CONSTRUCTION" (ASD) TABLE II-A AND/OR ANY STANDARD SIMPLE SHEAR CONNECTION AS OUTLINED IN AISC "SIMPLE SHEAR CONNECTION MANUAL" BASED UPON LOADS SHOWN ON DRAWING. IF LOADS ARE NOT INDICATED, SELECT CONNECTION TO SUPPORT 60% OF TOTAL UNIFORM LOAD CAPACITY PER AISC "MANUAL OF STEEL CONSTRUCTION" 13TH ED. FOR EACH GIVEN BEAM AND SPAN FOR NON-COMPOSITE MEMBERS. FOR COMPOSITE MEMBERS, CONNECTION SHALL SUPPORT 75% OF THE TOTAL CAPACITY FOR EACH BEAM AND SPAN.

15. STRUCTURAL STEEL (CONTINUED):

SUBMIT DESIGN CALCULATIONS, BEARING THE STAMP AND SIGNATURE OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF COLORADO, AND EMPLOYED BY THE STEEL FABRICATOR, FOR ALL CONNECTIONS NOT COMPLETELY DETAILED ON THESE STRUCTURAL DRAWINGS AND FOR ANY PROPOSED ALTERNATE CONNECTION DETAILS.

ALL WELDERS SHALL HAVE EVIDENCE OF PASSING THE AMERICAN WELDING SOCIETY STANDARD QUALIFICATIONS TESTS AS OUTLINED IN AWS-D11.

MINIMUM WELDS ARE TO BE PER AISC TABLE J2.4 BUT NOT LESS THAN ¾" CONTINUOUS FILLET UNLESS NOTED OTHERWISE.

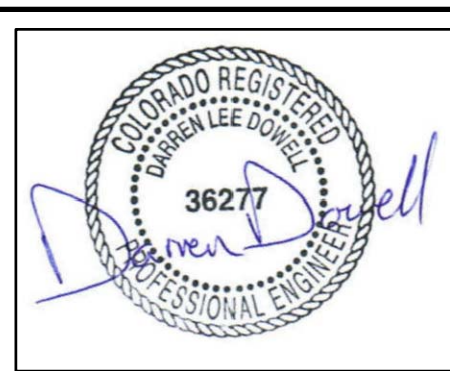
THE TERMINOLOGY "CONTINUOUS" MEANS QUANTITY. PROVIDE THE NECESSARY JOINT DETAILS TO ALLOW FOR BUILDING MOVEMENT. COORDINATE LOCATIONS WITH ARCHITECTURAL, MECHANICAL CONTROLS & EXPANSION JOINTS.

PROVIDE ANCHOR BOLTS FOR BEAMS AND SILL PLATES THAT BEAR ON CONCRETE OR MASONRY WALLS AS REQUIRED.

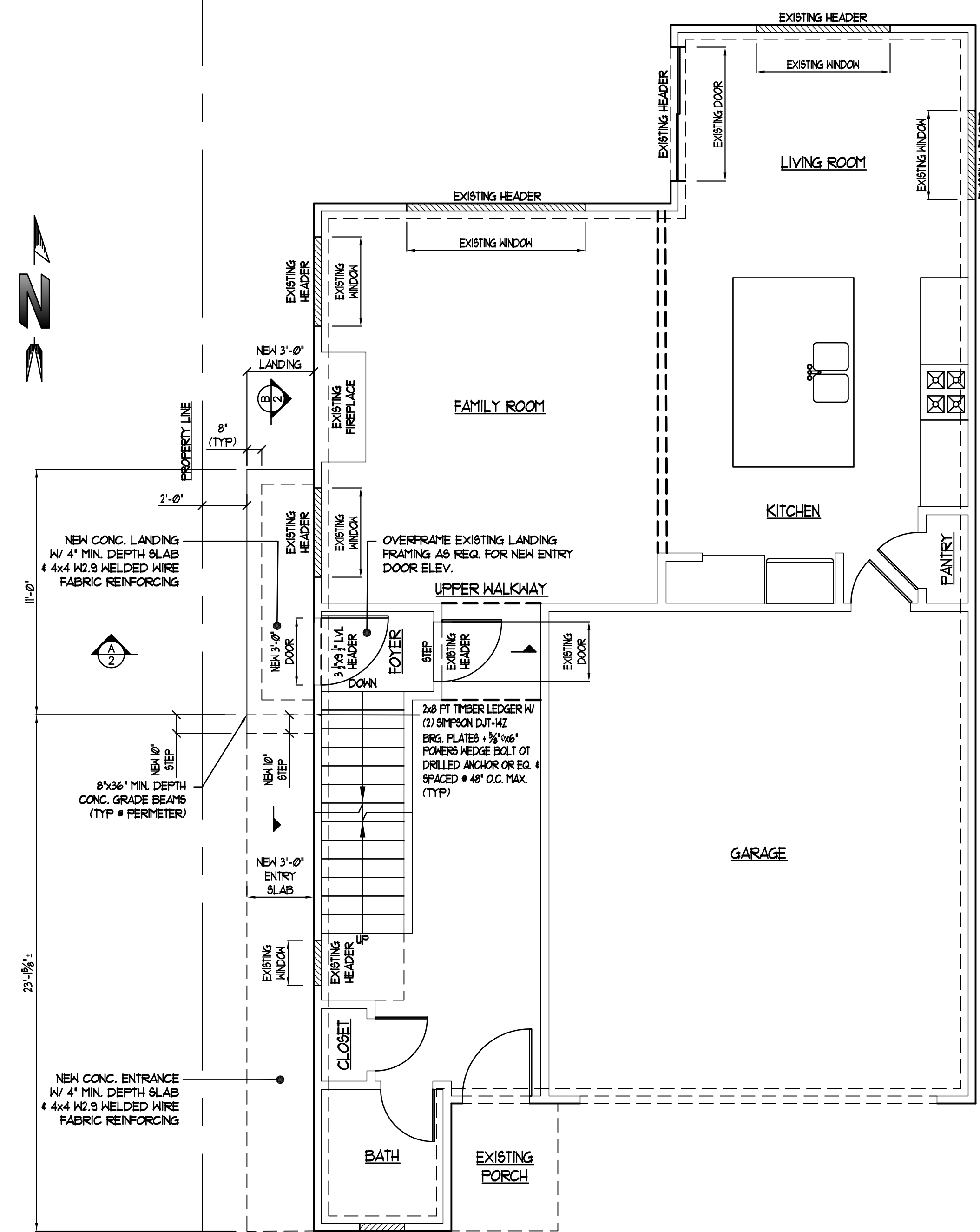
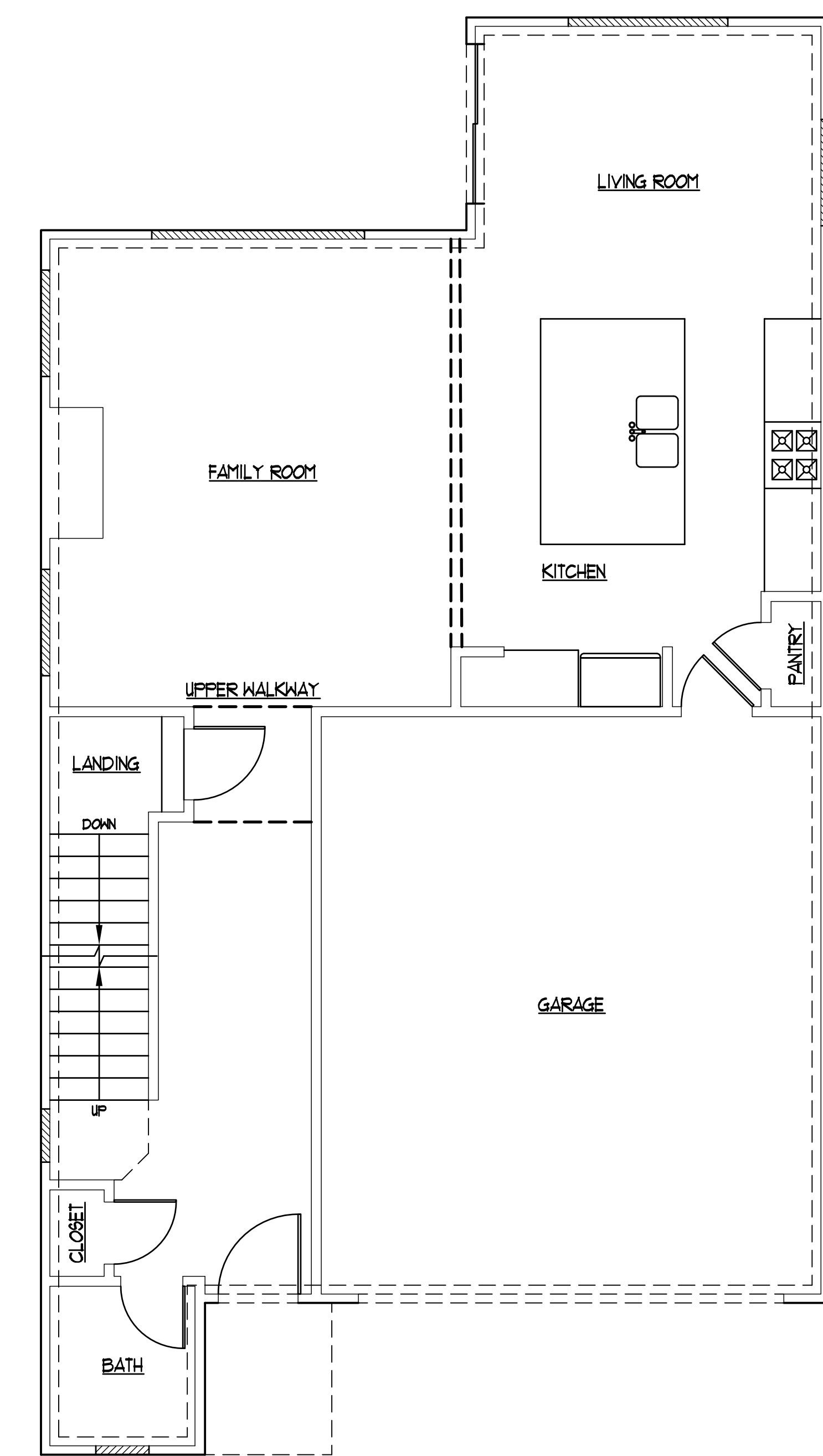
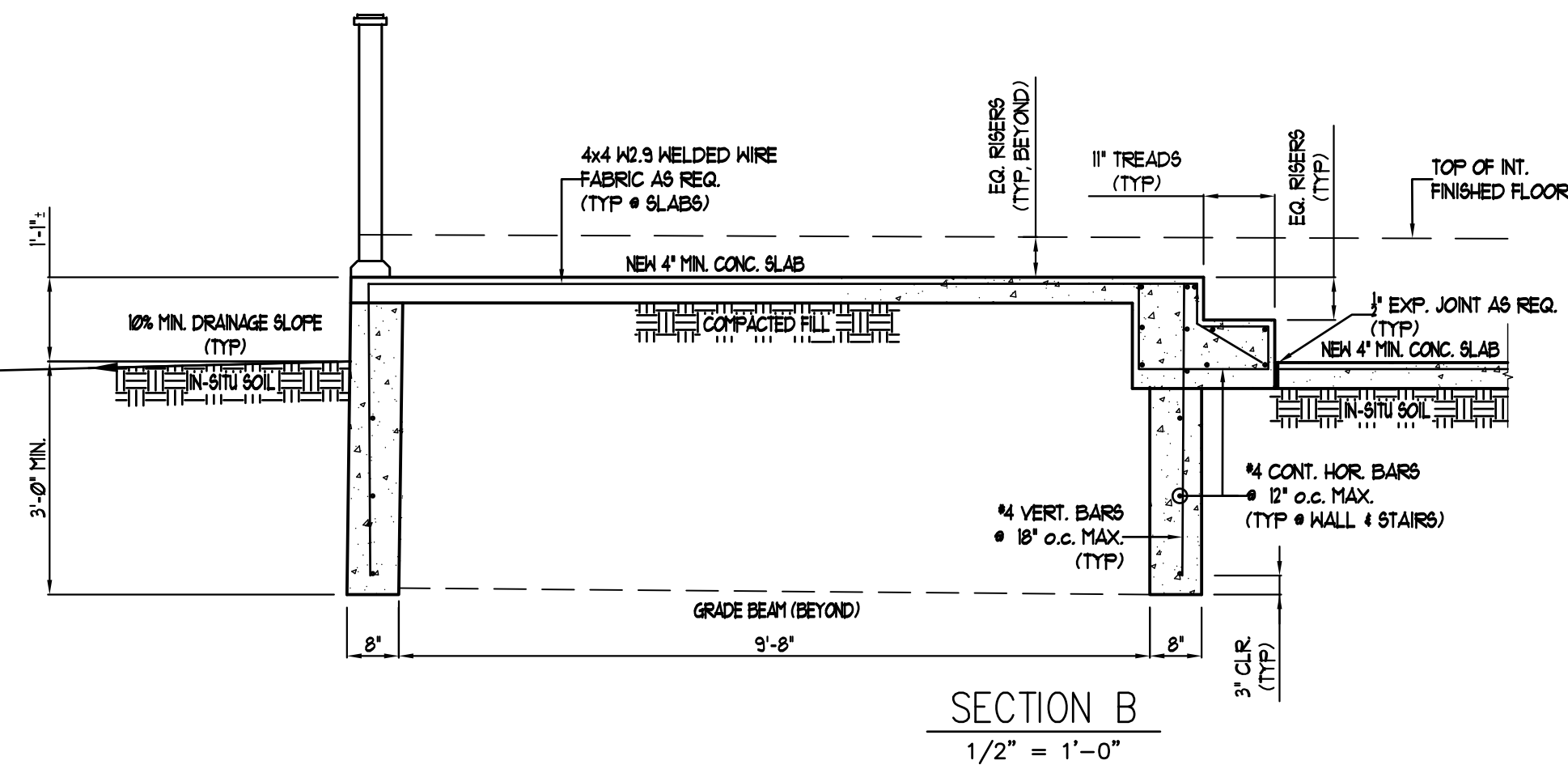
STEEL FABRICATOR SHALL NOT RECEIVE ADDITIONAL COMPENSATION FOR SHOP DRAWING TIME FOR ANY REVISIONS OF ERECTION DRAWINGS NOR FOR ANY REVISIONS TO PIECE DRAWINGS PRIOR TO ENGINEER'S APPROVAL OF ERECTION DRAWINGS.

WHENEVER MASONRY RESTS ON STEEL BEAM BEAMS WITH FLANGES NARROWER THAN THE ACTUAL MASONRY THICKNESS, WELD ¼" THICK CONTINUOUS PLATE TO BEAM FLANGE ½" NARROWER THAN MASONRY.

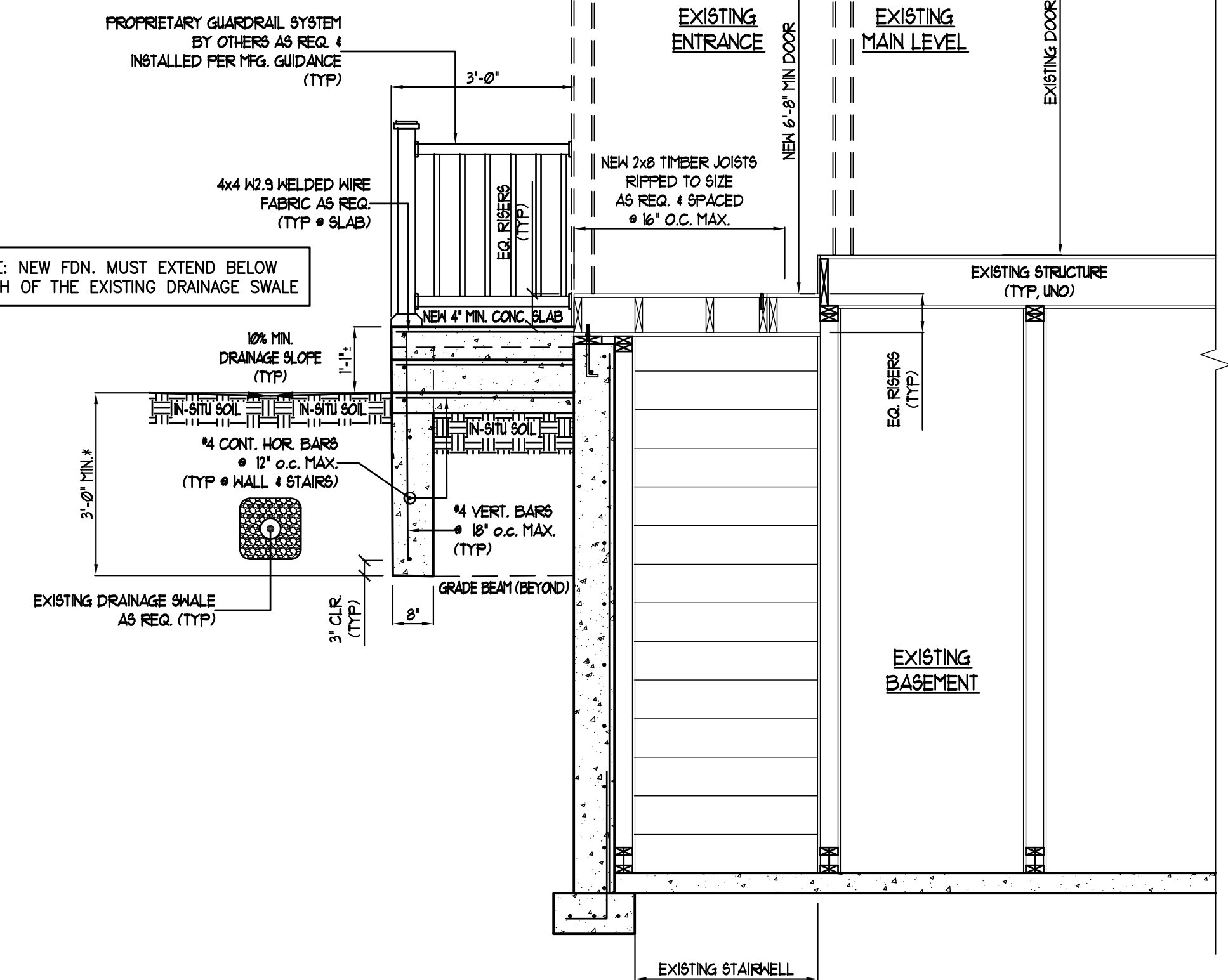
- FRAMING CONNECTIONS & TIE DOWNS ARE THE RESPONSIBILITY OF THE CONTRACTOR UNLESS SPECIFICALLY DETAILED ON THIS DRAWING. CONTRACTOR SHALL FASTEN ALL WOOD MEMBERS WITH COMMON NAILS ACCORDING TO THE IBC SCHEDULE TABLE 2304.10.1 UNLESS NOTED OTHERWISE. CONTRACTOR WILL CONNECT STRUCTURAL STEEL UTILIZING ESTABLISHED METHODS AS OUTLINED IS AISC "MANUAL OF STEEL CONSTRUCTION".



<u>DRAWING STATUS</u>				
☐ PRELIMINARY DETAILS ONLY – NOT FOR CONSTRUCTION				
☐ ISSUED FOR INFORMATION PURPOSES ONLY				
☐ ISSUED FOR MUNICIPALITY OR ARCH. / ENG. APPROVAL				
☐ ISSUED FOR OWNER OR CONTRACTOR APPROVAL				
☒ ISSUED FOR CONSTRUCTION				
☒ DESTROY ALL PREVIOUS COPIES				
ISSUED BY <u>D.L.D.</u>		DATE <u>3/27/2025</u>		
APPROVED BY _____		DATE _____		
RECEIVED BY _____		DATE _____		
<u>REVISIONS</u>				
NO.	DESCRIPTION	BY	APPROVED	DATE
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INNOVATIVE STRUCTURAL SERVICES 13719 W. Amherst Way Lakewood, CO 80228 Phone: (303) 359-4678 FAX: (303) 948-1949 WEBSITE: www.InnovativeStructural.com				
FOR: ROMERO RESIDENCE				
CONTRACTOR:				
PROJECT: NEW EGRESS STAIRWELL				
LOCATION: 21005 E. RADCLIFF PL., AURORA, CO 80015				
ADD NEW ENTRANCE & EGRESS STAIRWELL				
DRAWN <u>D.L.D.</u>	DATE <u>10/24</u>	DRAWING NO. <u>2024-112</u>	SHEET NO.	
APPROVED <u>J.R.</u>	DATE		1 OF 2	

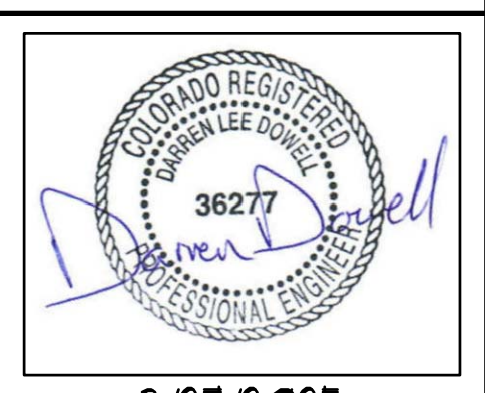


*-NOTE: NEW FDN. MUST EXTEND BELOW THE DEPTH OF THE EXISTING DRAINAGE SWALE



SECTION A
1/2" = 1'-0"

NOTE:
REFERENCE SHEET #1 FOR
GENERAL NOTES.



DRAWING STATUS	
☐	PRELIMINARY DETAILS ONLY - NOT FOR CONSTRUCTION
☐	ISSUED FOR INFORMATION PURPOSES ONLY
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☐	ISSUED FOR OWNER OR CONTRACTOR APPROVAL
☒	ISSUED FOR CONSTRUCTION
☒	DESTROY ALL PREVIOUS COPIES
ISSUED BY	D.L.D. DATE 3/27/2025
APPROVED BY	DATE
RECEIVED BY	DATE

REVISIONS			
NO.	DESCRIPTION	BY	DATE
1			
2			
3			
4			

INNOVATIVE INC. STRUCTURAL SERVICES 13719 W. Amherst Way Lakewood, CO 80228 Phone: (303) 359-4678 FAX: (303) 948-1949 WEBSITE: www.innovativestructural.com	
FOR: ROMERO RESIDENCE	
CONTRACTOR:	
PROJECT: NEW EGRESS STAIRWELL	
LOCATION: 21005 E. RADCLIFF PL., AURORA, CO 80015	
ADD NEW ENTRANCE & EGRESS STAIRWELL	
DRAWN D.L.D.	DATE 10/24
APPROVED J.R.	DATE
DRAWING NO. 2024-112	SHEET NO. 2 OF 2

NOTE: FROST DEPTH FOUNDATION ONLY,
OWNER MUST FOLLOW RECOMMENDATIONS IN SOILS
REPORT IF MOVEMENT POTENTIAL IS UNACCEPTABLE

Revised

04/19/2021 2:18:27 PM

REVIEWED FOR CODE COMPLIANCE:
REVIEW SUBJECT TO CONFORMANCE OF
APPLICABLE CODES, RELEVANT LAWS,
ORDINANCES, RULES AND REGULATIONS
AND NOTATIONS RECORDED ON PLANS

ARAPAHOE COUNTY BUILDING DEPARTMENT

BY: MCH

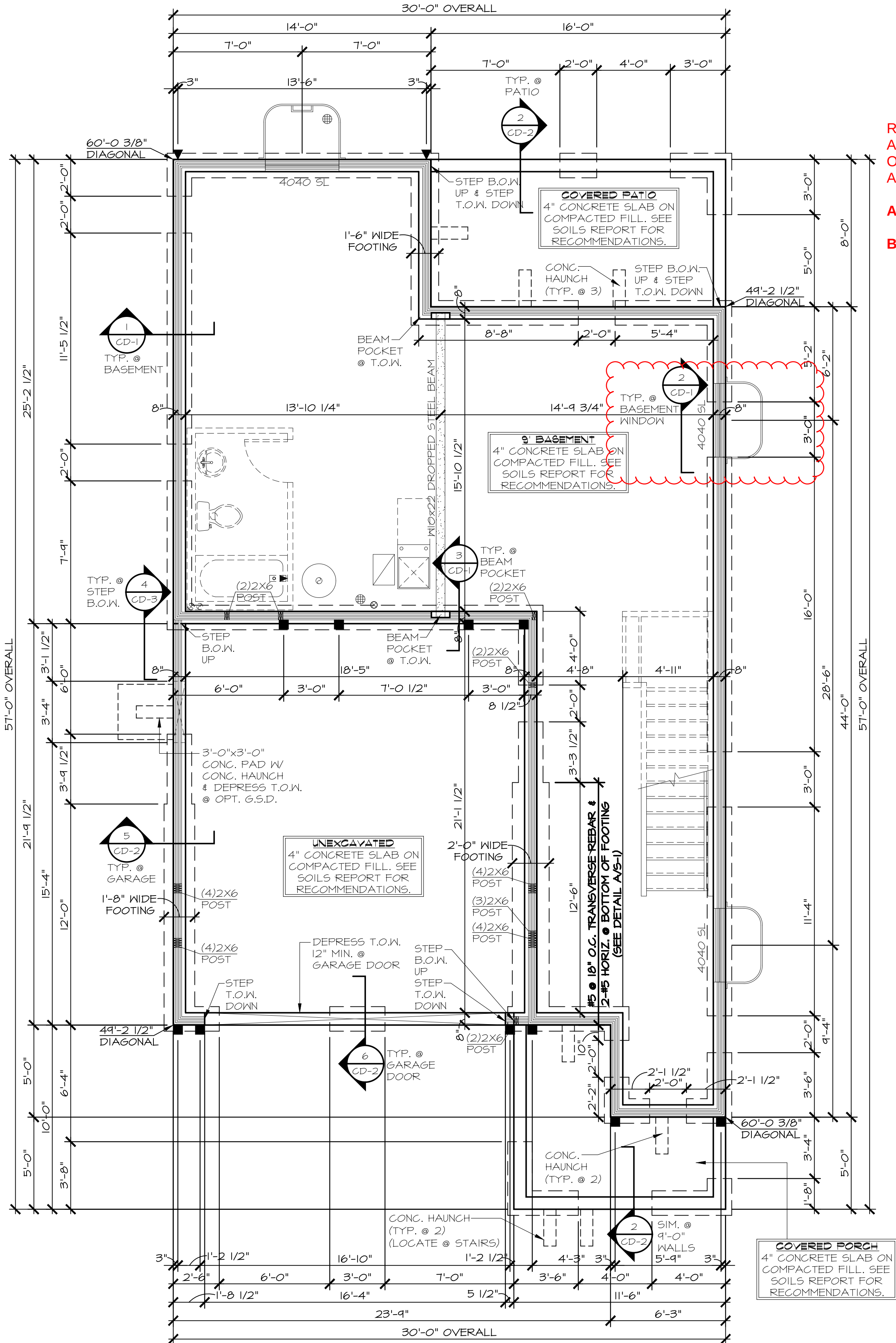
04/19/2021

HOLDOWN SCHEDULE	
SYMBOL	DESCRIPTION
▼	SIMPSON STHD10/RJ
■	SIMPSON STHD14/RJ
◆	SIMPSON HTT22
●	SIMPSON HD8A

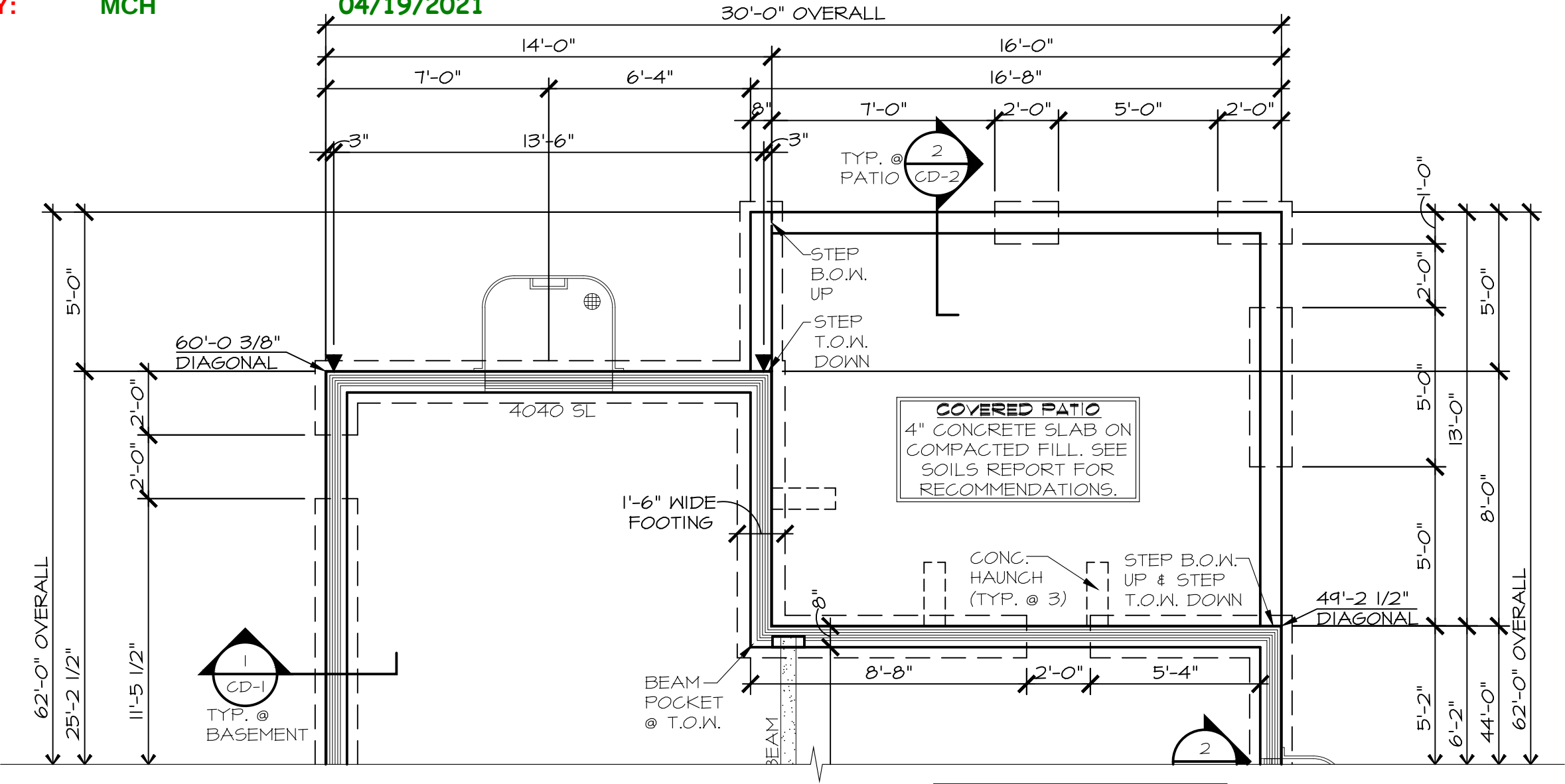
NOTES:
1. HOLDDOWN ARE SHOWN TO CENTERLINE OF BOLT OR STRAP.
2. CONTRACTOR TO VERIFY EXACT LOCATION IN FIELD.
3. SIMPSON STHD14RJ CAN BE SUBSTITUTED FOR STHD10RJ.

GENERAL FOUNDATION NOTES

DESIGN IS BASED ON THE INTERNATIONAL RESIDENTIAL CODE, 2015 EDITION. DESIGN LIVE LOADS ARE: 1 ROOF(SNOW).....30 PSF GROUND(SNOW).....43 PSF FLOOR.....40 PSF	DESIGN WIND LOADS ARE: 2 WIND SPEED (VULT).....136 MPH EXPOSURE.....'C'
THE SOILS CRITERIA PRESENTED HEREIN ARE PER THE GEO-TECHNICAL REPORT: PREPARED BY.....XXXXXXXXXXXX DATED.....XXXXXXXX XX, 20XX 3 SUBDIVISION.....XXXXXXXXXXXXXXXXXXXX FILING.....XXXXXXXX LOT.....N/A BLOCK.....N/A MUNICIPALITY.....AURORA PROJECT NUMBER.....N/A LAST REVISED.....N/A	FOUNDATION DESIGN IS BASED ON THE FOLLOWING: ALLOWABLE BEARING.....2500 PSF MINIMUM DEAD LOAD.....800 PSF EQUIVALENT FLUID PRESSURE.....60 PCF THE ABOVE FOUNDATION CRITERIA SHALL BE CONFIRMED BY A COLORADO LICENSED GEOTECHNICAL ENGINEER PRIOR TO THE START OF WORK.
CONCRETE SHALL CONFORM TO THE FOLLOWING: (PER THE GEOTECH REPORT OR ACI)	MINIMUM CONC. STRENGTH 3000 PSI CEMENT TYPE II WATER CEMENT RATIO .50 NEGLECTIBLE SULFATE EXPOSURE
MINIMUM CONC. STRENGTH 4000 PSI CEMENT TYPE II WATER CEMENT RATIO .50 MODERATE SULFATE EXPOSURE	MINIMUM CONC. STRENGTH 4500 PSI CEMENT TYPE II W/ CLASS "F" FLY ASH WATER CEMENT RATIO .45 SEVERE TO VERY SEVERE SULFATE EXPOSURE
FOUNDATION WALL THICKNESS (U.N.O.).....8" FOOTING SIZE (U.N.O.).....8" x 16" VOID FORM SIZE (U.N.O.).....8" (NOTE: VOID TO BE PROVIDED AS A SINGLE PIECE AT SPECIFIED DEPTH AND WIDTH, NOT BUILT UP FROM SMALLER DEPTHS & WIDTHS) MINIMUM DEPTH OF BOTTOM OF FOOTING BELOW FINAL GRADE.....3'-0"	6 VERTICAL REINFORCEMENT IN ALL BASEMENT WALLS#5 @ 18" O.C. HORIZONTAL REINFORCEMENT (CENTERED IN WALL TYP. U.N.O.)#4 @ 12" O.C. OR #5 @ 18" O.C. ANCHOR BOLT SPACING (U.N.O. SEE FOUNDATION PLANS) 1/2" DIA. ANCHOR BOLTS (BASEMENT).....1'-0" O.C. 1/2" DIA. ANCHOR BOLTS (NON-BASEMENT).....2'-0" O.C.
CONTRACTOR SHALL PROVIDE TEMPORARY ADEQUATE BRACING FOR ALL BASEMENT FOUNDATION WALLS UNTIL FIRST FLOOR FRAMING AND SHEATHING IS INSTALLED.	7
CONCRETE SUB-CONTRACTOR SHALL OBTAIN FROM RICHMOND SUPERINTENDENT LOCATION OF PLUMBING PENETRATIONS THROUGH THE WALL OR FOOTING	8
FOR CONTINUOUS FOOTING FOR INTERIOR DRAIN ONLY, PARTICULARLY ON SUB-EXCAVATED LOTS, IN BASEMENT AREAS, PLACE AN 8" THICK BY 8" WIDE SECTION OF VOID FORM @ 12'-0" O.C. MAX. & UNDER WINDOW WELLS. (FOR FOOTING FOUNDATIONS ONLY)	9
PROVIDE GROOVED OR SAW-CUT CONTROL JOINT (SEE 4/CD-1) @ ALL SLABS (BASEMENT, GARAGE, & DRIVEWAYS) @ 10'-0" ON CENTER MAX. SPACING ON BOTH DIRECTIONS. ALIGN JOINTS W/ INTERIOR CORNERS OF SLAB & ON STEEL COLUMN CENTER LINES.	10
SEISMIC DESIGN: DESIGN CATEGORY.....'B'	11

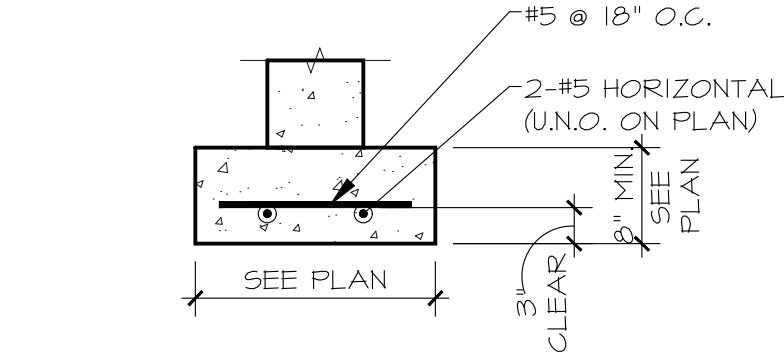


1 FOUNDATION PLAN
SCALE: 1/4" = 1'-0"
FULL BASEMENT
ELEVATION 'A' SHOWN
ELEVATION 'D' SIM.



2 PART'L. FOUNDATION PLAN
SCALE: 1/4" = 1'-0"
OPT. EXTENDED COVERED PATIO
ELEVATION 'A' SHOWN
ELEVATION 'D' SIM.

9'-0" BASEMENT
SEE PLOT PLAN TO CONFIRM THE
ACTUAL HANDING OF THE HOUSE



TYP. DETAIL FOR
2'-0" AND WIDER FOOTINGS
SCALE: 1/4" = 1'-0"

FIRST FLOOR STEEL BEAM SCHEDULE		
SIZE	APPROXIMATE LENGTH	DESCRIPTION
W10x22	16'-5 1/2"	MAIN STEEL BEAM
SECOND FLOOR STEEL BEAM SCHEDULE		
SIZE	APPROXIMATE LENGTH	DESCRIPTION
W12x26	19'-8"	STEEL BEAM OVER GARAGE
N.S.F. FOUNDATION W/ SLAB ON GRADE		
PLAN D712 - COPPERLEAF FULL BASEMENT ELEVATIONS 'A' & 'D'		
RICHMOND AMERICAN HOMES 4350 S. MONACO ST. DENVER, CO 80213		©2008 GREEN CITY CONSULTING, L.L.C.
GREEN CITY CONSULTING 3801 E. FLORIDA AVE. SUITE #102 DENVER, CO 80210 PHONE: (303)758-8880 FAX: (303)758-8881		35657 PROFESSIONAL ENGINEER DATE: 04/13/2021
DESIGNED BY: RAN	DRAWN BY: JCP	CHECKED BY: RAN
SCALE: SEE PLAN	ISSUE DATE: 04/13/2021	DESIGN CODE: 2015 IRC
PROJECT #: GCC001-0392018		CLIENT: RICHMOND
REVISIONS		
DATE:	#	DESCRIPTION:
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BY:		SHEET #: S=1

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9'-0" BASEMENT

SEE PLOT PLAN TO CONFIRM THE
ACTUAL HANDING OF THE HOUSE

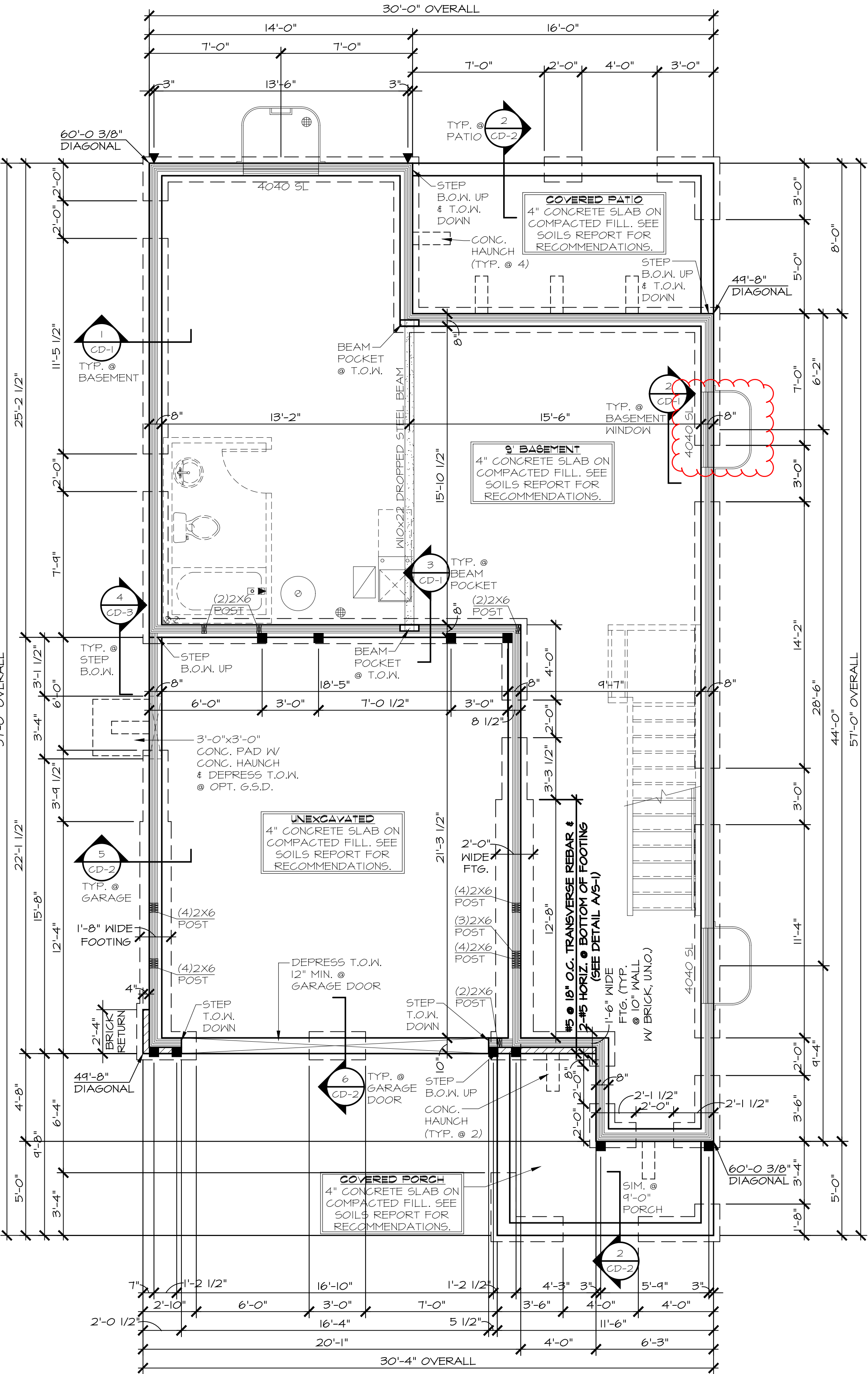
HOLDOWN SCHEDULE

SYMBOL	DESCRIPTION
▼	SIMPSON STHD10/RJ
■	SIMPSON STHD14/RJ
◆	SIMPSON HTT22
●	SIMPSON HD8A

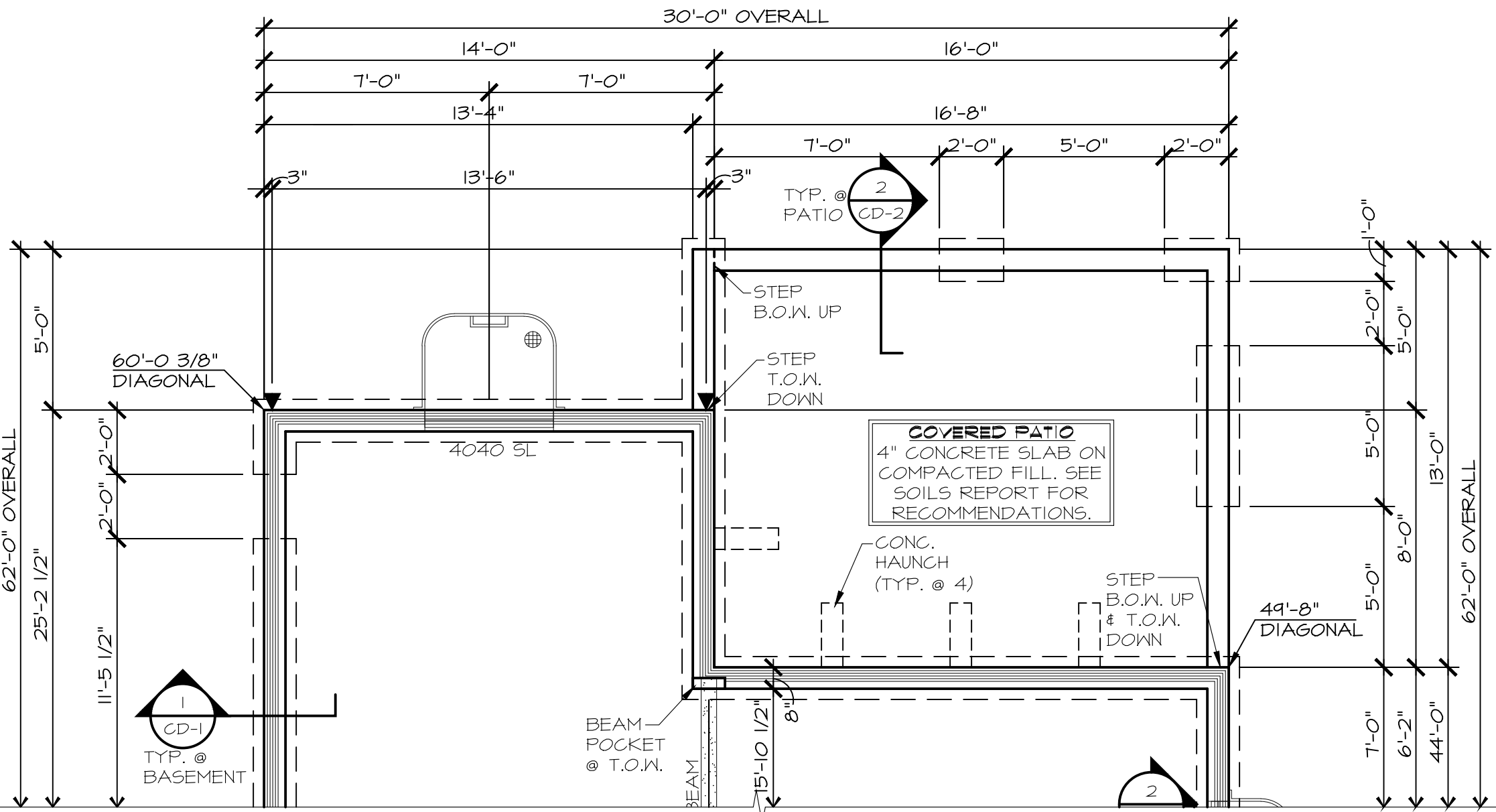
NOTE:
1. HOLD DOWN ARE SHOWN TO CENTERLINE OF BOLT OR STRAP.
2. CONTRACTOR TO VERIFY EXACT LOCATION IN FIELD.
3. SIMPSON STHD14RJ CAN BE SUBSTITUTED FOR STHD10RJ.

GENERAL FOUNDATION NOTES

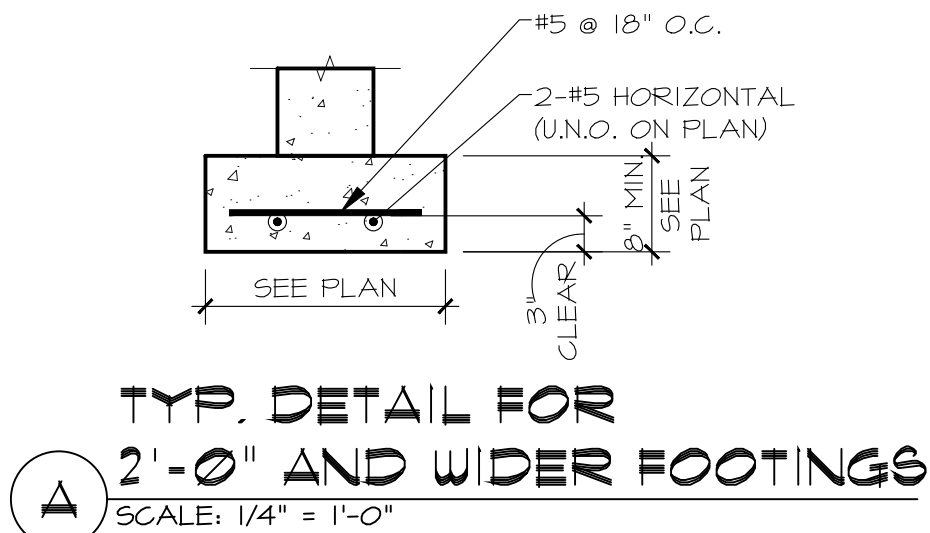
DESIGN IS BASED ON THE INTERNATIONAL RESIDENTIAL CODE, 2015 EDITION. DESIGN LIVE LOADS ARE: ROOF(SNOW).....30 PSF GROUND(SNOW).....43 PSF FLOOR.....40 PSF	
DESIGN WIND LOADS ARE: WIND SPEED (VULT).....136 MPH EXPOSURE.....C	
THE SOILS CRITERIA PRESENTED HEREIN ARE PER THE GEO-TECHNICAL REPORT: PREPARED BY.....XXXXXXXXXX DATED.....XXXXXXXX XX, 20XX SUBDIVISION.....XXXXXXXXXXXXXXXXXX FILING.....XXXXXXXX LOT.....N/A BLOCK.....N/A MUNICIPALITY.....AURORA PROJECT NUMBER.....N/A LAST REVISED.....N/A	
FOUNDATION DESIGN IS BASED ON THE FOLLOWING: ALLOWABLE BEARING.....2500 PSF MINIMUM DEAD LOAD.....800 PSF EQUIVALENT FLUID PRESSURE.....60 PCF THE ABOVE FOUNDATION CRITERIA SHALL BE CONFIRMED BY A COLORADO LICENSED GEOTECHNICAL ENGINEER PRIOR TO THE START OF WORK.	
CONCRETE SHALL CONFORM TO THE FOLLOWING: (PER THE GEOTECH REPORT OR ACI)	
MINIMUM CONC. STRENGTH 3000 PSI CEMENT TYPE I WATER CEMENT RATIO .50 NEGLECTIBLE SULFATE EXPOSURE	
MINIMUM CONC. STRENGTH 4000 PSI CEMENT TYPE II WATER CEMENT RATIO .50 MODERATE SULFATE EXPOSURE	
MINIMUM CONC. STRENGTH 4500 PSI CEMENT TYPE II W/ CLASS "F" FLY ASH WATER CEMENT RATIO .45 SEVERE TO VERY SEVERE SULFATE EXPOSURE	X
FOUNDATION WALL THICKNESS (U.N.O.).....8" FOOTING SIZE (U.N.O.).....8" x 16" VOID FORM SIZE (U.N.O.).....8" (NOTE: VOID TO BE PROVIDED AS A SINGLE PIECE AT SPECIFIED DEPTH AND WIDTH, NOT BUILT UP FROM SMALLER DEPTHS & WIDTHS) MINIMUM DEPTH OF BOTTOM OF FOOTING BELOW FINAL GRADE.....3'-0" VERTICAL REINFORCEMENT IN ALL BASEMENT WALLS	
HORIZONTAL REINFORCEMENT (CENTERED IN WALL TYP. U.N.O.)#5 @ 18" O.C. ANCHOR BOLT SPACING (U.N.O. SEE FOUNDATION PLANS) 1/2" DIA. ANCHOR BOLTS (BASEMENT).....1'-0" O.C. 1/2" DIA. ANCHOR BOLTS (NON-BASEMENT).....2'-0" O.C.	
CONTRACTOR SHALL PROVIDE TEMPORARY ADEQUATE BRACING FOR ALL BASEMENT FOUNDATION WALLS UNTIL FIRST FLOOR FRAMING AND SHEATHING IS INSTALLED.	
CONCRETE SUB-CONTRACTOR SHALL OBTAIN FROM RICHMOND SUPERINTENDENT LOCATION OF PLUMBING PENETRATIONS THROUGH THE WALL OR FOOTING	
FOR CONTINUOUS FOOTING FOR INTERIOR DRAIN ONLY, PARTICULARLY ON SUB-EXCAVATED LOTS, IN BASEMENT AREAS, PLACE AN 8" THICK BY 8" WIDE SECTION OF VOID FORM @ 12'-0" O.C. MAX. & UNDER WINDOW WELLS. (FOR FOOTING FOUNDATIONS ONLY)	
PROVIDE GROOVED OR SAW-CUT CONTROL JOINT (SEE 4/CD-1) @ ALL SLABS (BASEMENT, GARAGE, & DRIVENAYS) @ 10'-0" ON CENTER MAX. SPACING ON BOTH DIRECTIONS. ALIGN JOINTS W/ INTERIOR CORNERS OF SLAB & ON STEEL COLUMN CENTER LINES.	
SEISMIC DESIGN: DESIGN CATEGORY.....B	



1 FOUNDATION PLAN
FULL BASEMENT
ELEVATION 'B' SHOWN
ELEVATION 'C' SIM.



2 PART L FOUNDATION PLAN
SCALE: 1/4" = 1'-0"
OPT. EXTENDED COVERED PATIO
ELEVATION 'B' SHOWN
ELEVATION 'C' SIM.



FIRST FLOOR STEEL BEAM SCHEDULE		
SIZE	APPROXIMATE LENGTH	DESCRIPTION
W10x22	16'-5 1/2"	MAIN STEEL BEAM
SECOND FLOOR STEEL BEAM SCHEDULE		
SIZE	APPROXIMATE LENGTH	DESCRIPTION
W12x26	19'-8"	STEEL BEAM OVER GARAGE
N.S.F. FOUNDATION W/ SLAB ON GRADE		
PLAN D712 - COPPERLEAF FULL BASEMENT ELEVATIONS 'B' & 'C'		
RICHMOND AMERICAN HOMES 4350 S. MONACO ST. DENVER, CO 80213		©2008 GREEN CITY CONSULTING, L.L.C.
GREEN CITY CONSULTING 3801 E. FLORIDA AVE. SUITE #108 DENVER, CO 80210 PHONE: (303)758-8880 FAX: (303)758-8881		 DATE: 04/13/2021
DESIGNED BY: RAN	DRAWN BY: JCP	CHECKED BY: RAN
SCALE: SEE PLAN	ISSUE DATE: 04/13/2021	PROJECT #: GCC001-0392018
DESIGN CODE: 2015 IRC		CLIENT: RICHMOND
REVISIONS		
DATE:	#	DESCRIPTION:
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BY:		SHEET #: S = 1

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9'-0" BASEMENT

SEE PLOT PLAN TO CONFIRM THE
ACTUAL HANDING OF THE HOUSE

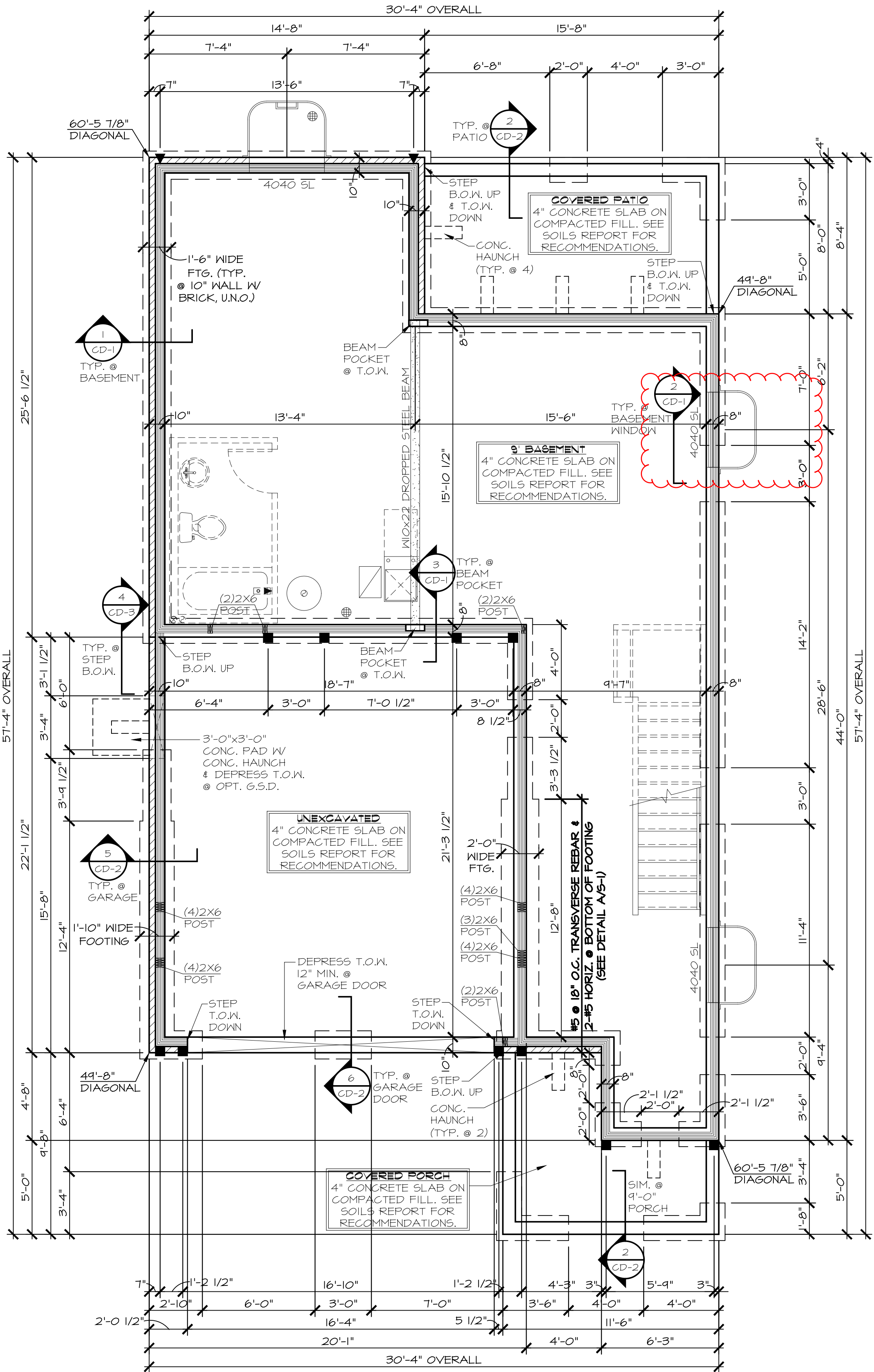
HOLDOWN SCHEDULE

SYMBOL	DESCRIPTION
▼	SIMPSON STHD10/RJ
■	SIMPSON STHD14/RJ
◆	SIMPSON HTT22
●	SIMPSON HD8A

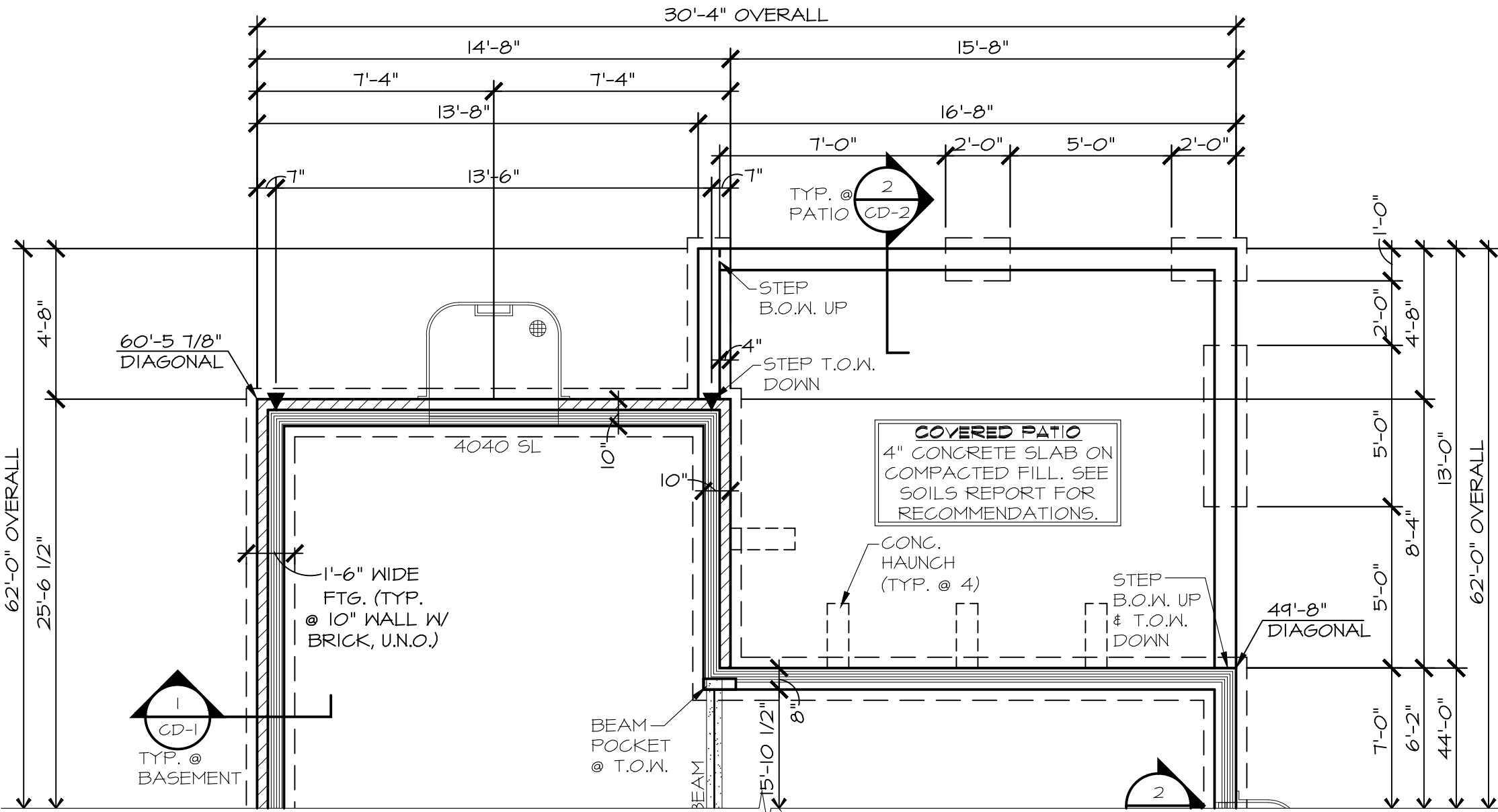
NOTE:
1. HOLDDOWN ARE SHOWN TO CENTERLINE OF BOLT OR STRAP.
2. CONTRACTOR TO VERIFY EXACT LOCATION IN FIELD.
3. SIMPSON STHD14RJ CAN BE SUBSTITUTED FOR STHD10RJ.

GENERAL FOUNDATION NOTES

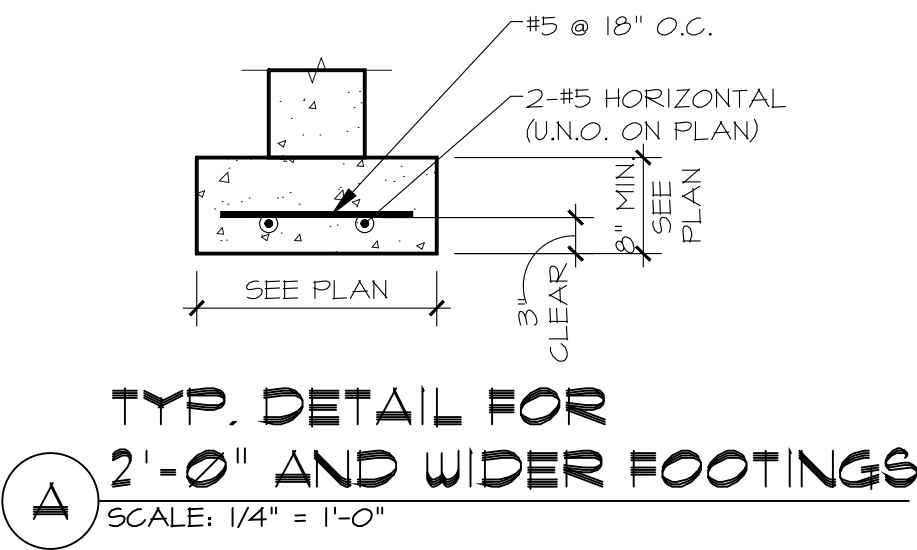
DESIGN IS BASED ON THE INTERNATIONAL RESIDENTIAL CODE, 2015 EDITION. DESIGN LIVE LOADS ARE: 1 ROOF(SNOW).....30 PSF GROUND(SNOW).....43 PSF FLOOR.....40 PSF	DESIGN WIND LOADS ARE: 2 WIND SPEED (VULT).....136 MPH EXPOSURE.....C
THE SOILS CRITERIA PRESENTED HEREIN ARE PER THE GEO-TECHNICAL REPORT: PREPARED BY.....XXXXXXXXXXXX DATED.....XXXXXXXX XX, 20XX 3 SUBDIVISION.....XXXXXXXXXXXXXXXXX FILING.....XXXXXXXX LOT.....N/A BLOCK.....N/A MUNICIPALITY.....AURORA PROJECT NUMBER.....N/A LAST REVISED.....N/A	FOUNDATION DESIGN IS BASED ON THE FOLLOWING: ALLOWABLE BEARING.....2500 PSF MINIMUM DEAD LOAD.....800 PSF EQUIVALENT FLUID PRESSURE.....80 PCF THE ABOVE FOUNDATION CRITERIA SHALL BE CONFIRMED BY A COLORADO LICENSED GEOTECHNICAL ENGINEER PRIOR TO THE START OF WORK.
CONCRETE SHALL CONFORM TO THE FOLLOWING: (PER THE GEOTECH REPORT OR ACI)	MINIMUM CONC. STRENGTH 3000 PSI CEMENT TYPE II WATER CEMENT RATIO .50 NEGLECTIBLE SULFATE EXPOSURE
MINIMUM CONC. STRENGTH 4000 PSI CEMENT TYPE II WATER CEMENT RATIO .50 MODERATE SULFATE EXPOSURE	MINIMUM CONC. STRENGTH 4500 PSI CEMENT TYPE II W/ CLASS "F" FLY ASH WATER CEMENT RATIO .45 SEVERE TO VERY SEVERE SULFATE EXPOSURE
FOUNDATION WALL THICKNESS (U.N.O.).....8" FOOTING SIZE (U.N.O.).....8" x 16" VOID FORM SIZE (U.N.O.).....8"	(NOTE: VOID TO BE PROVIDED AS A SINGLE PIECE AT SPECIFIED DEPTH AND WIDTH NOT BUILT UP FROM SMALLER DEPTHS & WIDTHS) 6 MINIMUM DEPTH OF FOOTING BELOW FINAL GRADE.....3'-0" VERTICAL REINFORCEMENT IN ALL BASEMENT WALLS.....#5 @ 18" O.C. HORIZONTAL REINFORCEMENT (CENTERED IN WALL TYP. UNO).....#4 @ 12" O.C. OR #5 @ 18" O.C. ANCHOR BOLT SPACING (U.N.O. SEE FOUNDATION PLANS) 1/2" DIA. ANCHOR BOLTS (BASEMENT).....1'-0" O.C. 1/2" DIA. ANCHOR BOLTS (NON-BASEMENT).....2'-0" O.C.
CONTRACTOR SHALL PROVIDE TEMPORARY ADEQUATE BRACING FOR ALL BASEMENT FOUNDATION WALLS UNTIL FIRST FLOOR FRAMING AND SHEATHING IS INSTALLED.	7
CONCRETE SUB-CONTRACTOR SHALL OBTAIN FROM RICHMOND SUPERINTENDENT LOCATION OF PLUMBING PENETRATIONS THROUGH THE WALL OR FOOTING	8
FOR CONTINUOUS FOOTING FOR INTERIOR DRAIN ONLY, PARTICULARLY ON SUB-EXCAVATED LOTS, IN BASEMENT AREAS, PLACE AN 8" THICK BY 8" WIDE SECTION OF VOID FORM @ 12'-0" O.C. MAX. & UNDER WINDOW WELLS. (FOR FOOTING FOUNDATIONS ONLY)	9
PROVIDE GROOVED OR SAW-CUT CONTROL JOINT (SEE 4/CD-1) @ ALL SLABS (BASEMENT, GARAGE, & DRIVENAYS) @ 10'-0" ON CENTER MAX. SPACING ON BOTH DIRECTIONS. ALIGN JOINTS W/ INTERIOR CORNERS OF SLAB & ON STEEL COLUMN CENTER LINES.	10
SEISMIC DESIGN: DESIGN CATEGORY.....B	11



1 FOUNDATION PLAN
SCALE: 1/4" = 1'-0"
FULL BASEMENT W/ PARTIAL BRICK WRAP
ELEVATION 'B' SHOWN
ELEVATION 'C' SIM.



2 PART L FOUNDATION PLAN
SCALE: 1/4" = 1'-0"
OPT. EXT. COV. PATIO W/ PARTIAL BRICK WRAP
ELEVATION 'A' SHOWN
ELEVATION 'D' SIM.



TYP. DETAIL FOR
2'-0" AND WIDER FOOTINGS
SCALE: 1/4" = 1'-0"

FIRST FLOOR STEEL BEAM SCHEDULE

SIZE	APPROXIMATE LENGTH	DESCRIPTION
W10x22	16'-5 1/2"	MAIN STEEL BEAM

SECOND FLOOR STEEL BEAM SCHEDULE

SIZE	APPROXIMATE LENGTH	DESCRIPTION
W12x26	19'-8"	STEEL BEAM OVER GARAGE

N.S.F. FOUNDATION W/ SLAB ON GRADE

PLAN D712 - COPPERLEAF
FULL BASEMENT W/ PARTIAL BRICK WRAP
ELEVATIONS 'B' & 'C'

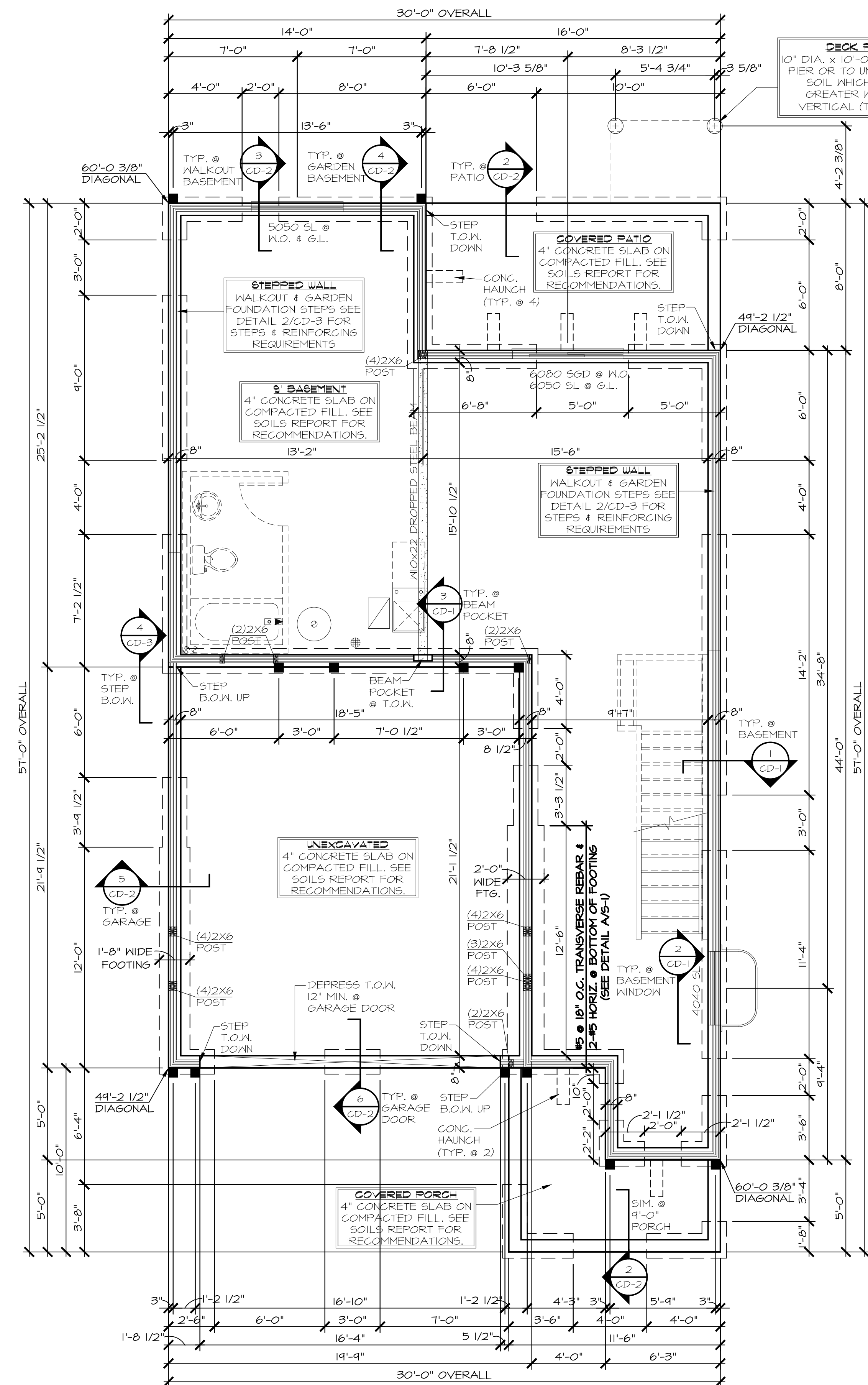
4350 S. MONACO ST.
DENVER, CO 80213

3801 E. FLORIDA AVE. SUITE #108
DENVER, CO 80210
PHONE: (303) 758-8880
FAX: (303) 758-8881

DATE: 04/13/2021

DESIGNED BY: RAN	DRAWN BY: JCP	CHECKED BY: RAN	PROJECT #: GCC001-0392018
SCALE: SEE PLAN	ISSUE DATE: 04/13/2021	DESIGN CODE: 2015 IRC	CLIENT: RICHMOND

REVISIONS			SHEET #: 5 = 1
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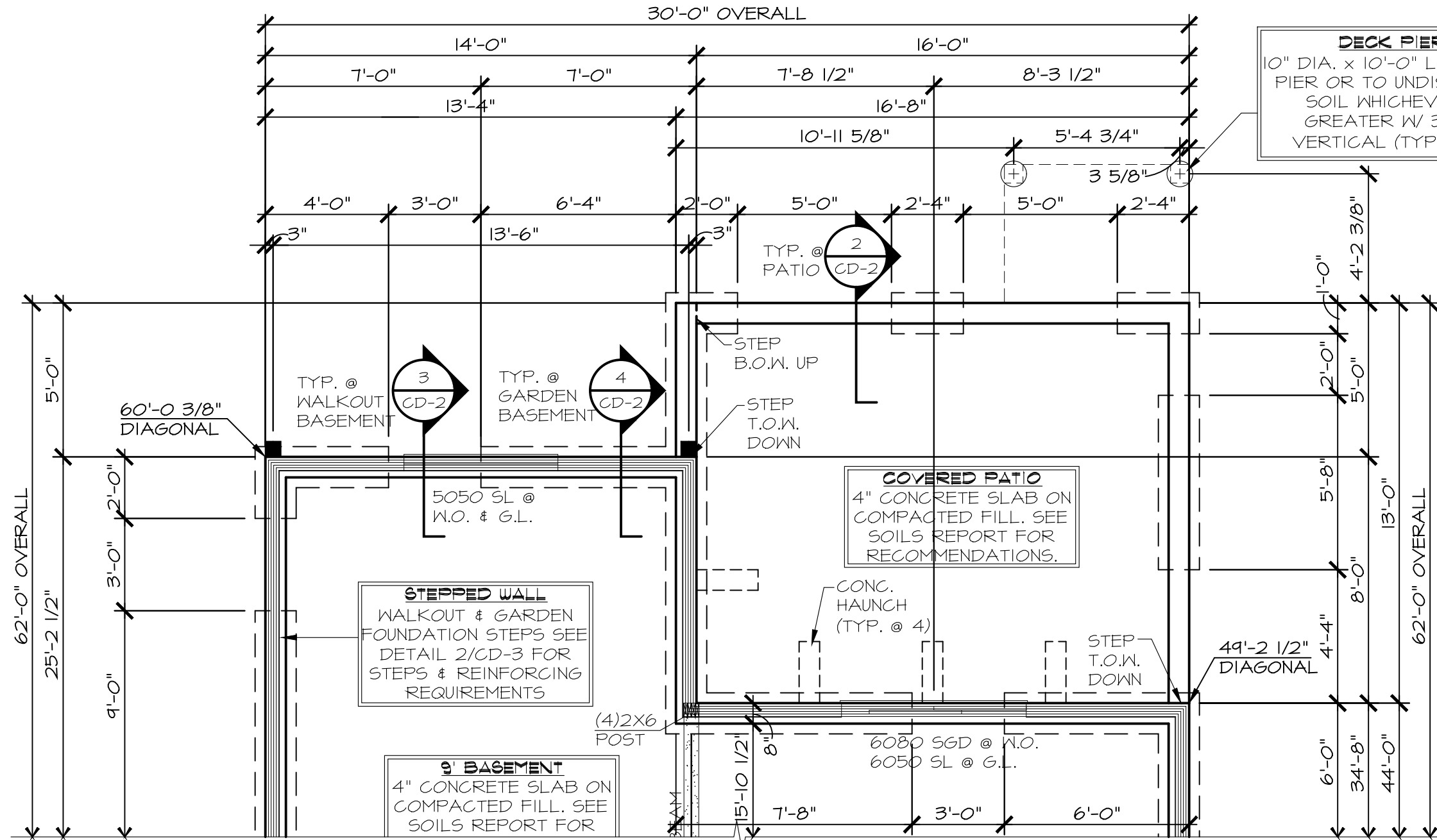


1 FOUNDATION PLAN
SCALE: 1/4" = 1'-0"
W.O./GARDEN BASEMENT
ELEVATION 'A' SHOWN
ELEVATION 'D' SIM.

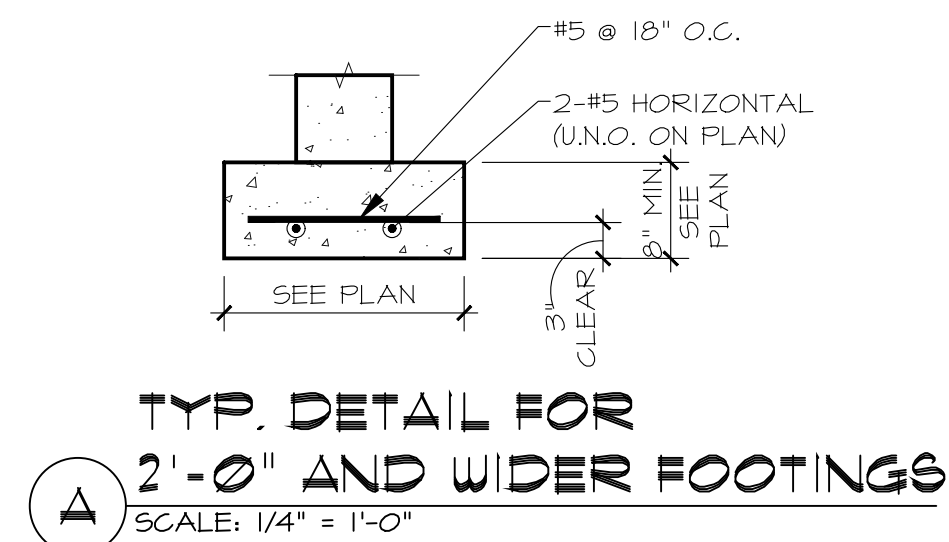
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9'-0" BASEMENT

SEE PLOT PLAN TO CONFIRM THE
ACTUAL HANDING OF THE HOUSE



2 PART'L. FOUNDATION PLAN
SCALE: 1/4" = 1'-0"
OPT. EXTENDED COVERED PATIO
ELEVATION 'A' SHOWN
ELEVATION 'D' SIM.



HOLDOWN SCHEDULE	
SYMBOL	DESCRIPTION
▼	SIMPSON STHD10/RJ
■	SIMPSON STHD14/RJ
◆	SIMPSON HTT22
●	SIMPSON HD8A

NOTE:
1. HOLDDOWN ARE SHOWN TO CENTERLINE OF BOLT OR STRAP.
2. CONTRACTOR TO VERIFY EXACT LOCATION IN FIELD.
3. SIMPSON STHD14RJ CAN BE SUBSTITUTED FOR STHD10RJ.

GENERAL FOUNDATION NOTES

- DESIGN IS BASED ON THE INTERNATIONAL RESIDENTIAL CODE, 2015 EDITION. DESIGN LIVE LOADS ARE:
ROOF(SNOW).....30 PSF
GROUND(SNOW).....43 PSF
FLOOR.....40 PSF
- DESIGN WIND LOADS ARE:
WIND SPEED (MILT).....136 MPH
EXPOSURE.....C
- THE SOILS CRITERIA PRESENTED HEREIN ARE PER THE GEO-TECHNICAL REPORT. PREPARED BY.....XXXXXXXXXX DATED.....XXXXXXXX XX, 20XX
SUBDIVISION.....XXXXXXXXXXXXXXXXXX FILING.....XXXXXXXX
LOT.....N/A BLOCK.....N/A MUNICIPALITY.....AURORA
PROJECT NUMBER.....N/A LAST REVISED.....N/A
- FOUNDATION DESIGN IS BASED ON THE FOLLOWING:
ALLOWABLE BEARING.....2500 PSF
MINIMUM DEAD LOAD.....800 PSF
EQUIVALENT FLUID PRESSURE.....60 PCF
THE ABOVE FOUNDATION CRITERIA SHALL BE CONFIRMED BY A COLORADO LICENSED GEOTECHNICAL ENGINEER PRIOR TO THE START OF WORK.
- CONCRETE SHALL CONFORM TO THE FOLLOWING:
(PER THE GEOTECH REPORT OR ACI)
MINIMUM CONC. STRENGTH 3000 PSI
CEMENT TYPE II
WATER CEMENT RATIO .50
NEGLECTIBLE SULFATE EXPOSURE
- MINIMUM CONC. STRENGTH 4000 PSI
CEMENT TYPE II
WATER CEMENT RATIO .50
MODERATE SULFATE EXPOSURE
- MINIMUM CONC. STRENGTH 4500 PSI
CEMENT TYPE II W/ CLASS "F" FLY ASH
WATER CEMENT RATIO .45
SEVERE TO VERY SEVERE SULFATE EXPOSURE
- FOUNDATION WALL THICKNESS (U.N.O.).....8"
FOOTING SIZE (U.N.O.).....8" x 16"
VOID FORM SIZE (U.N.O.).....8"
(NOTE: VOID TO BE PROVIDED AS A SINGLE PIECE AT SPECIFIED DEPTH AND WIDTH, NOT BUILT UP FROM SMALLER DEPTHS & WIDTHS)
MINIMUM DEPTH OF FOOTING BELOW FINAL GRADE.....3'-0"
VERTICAL REINFORCEMENT IN ALL BASEMENT WALLS.....#5 @ 18" O.C.
HORIZONTAL REINFORCEMENT (CENTERED IN WALL TYP. U.N.O.).....#4 @ 12" O.C. OR #5 @ 18" O.C.
ANCHOR BOLT SPACING (U.N.O. SEE FOUNDATION PLANS)
1/2" DIA. ANCHOR BOLTS (BASEMENT).....1'-0" O.C.
1/2" DIA. ANCHOR BOLTS (NON-BASEMENT).....2'-0" O.C.
- CONTRACTOR SHALL PROVIDE TEMPORARY ADEQUATE BRACING FOR ALL BASEMENT FOUNDATION WALLS UNTIL FIRST FLOOR FRAMING AND SHEATHING IS INSTALLED.
- CONCRETE SUB-CONTRACTOR SHALL OBTAIN FROM RICHMOND SUPERINTENDENT LOCATION OF PLUMBING PENETRATIONS THROUGH THE WALL OR FOOTING
- FOR CONTINUOUS FOOTING FOR INTERIOR DRAIN ONLY, PARTICULARLY ON SUB-EXCAVATED LOTS, IN BASEMENT AREAS, PLACE AN 8" WIDE SECTION OF VOID FORM @ 12'-0" O.C. MAX. & UNDER WINDOW WELLS. (FOR FOOTING FOUNDATIONS ONLY)
- PROVIDE GROOVED OR SAW-CUT CONTROL JOINT (SEE 4/CD-1) @ ALL SLABS (BASEMENT, GARAGE, & DRIVEWAYS) @ 10'-0" ON CENTER MAX. SPACING ON BOTH DIRECTIONS. ALIGN JOINTS W/ INTERIOR CORNERS OF SLAB & ON STEEL COLUMN CENTER LINES.
- SEISMIC DESIGN:
DESIGN CATEGORY.....B

FIRST FLOOR STEEL BEAM SCHEDULE

SIZE	APPROXIMATE LENGTH	DESCRIPTION
W10x22	16'-9 1/2"	MAIN STEEL BEAM

SECOND FLOOR STEEL BEAM SCHEDULE

SIZE	APPROXIMATE LENGTH	DESCRIPTION
W12x26	19'-8"	STEEL BEAM OVER GARAGE

N.S.F. FOUNDATION W/ SLAB ON GRADE

PLAN D712 - COPPERLEAF
W.O./GARDEN BASEMENT
ELEVATIONS 'A' & 'D'



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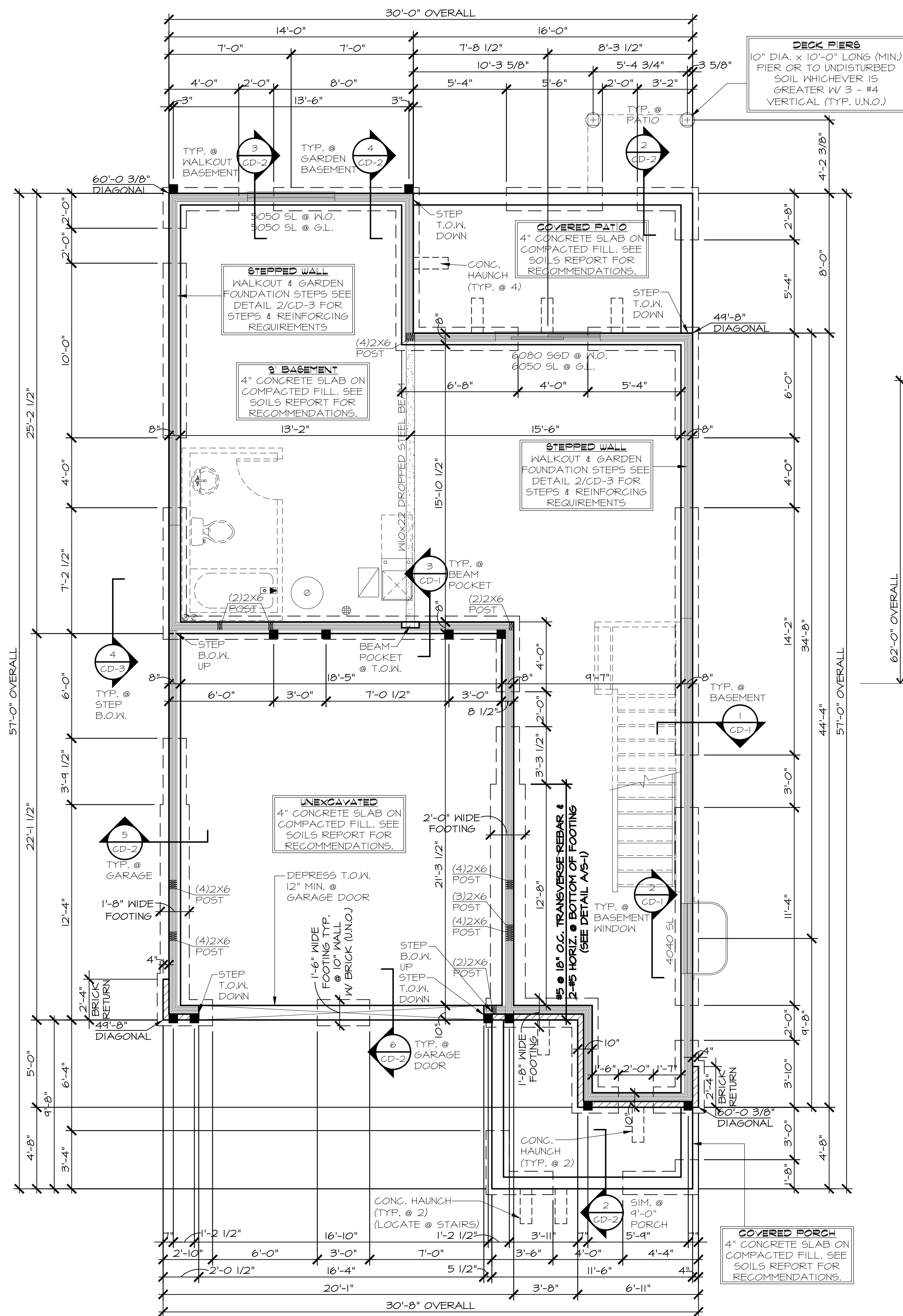
GREEN CITY CONSULTING
3801 E. FLORIDA AVE. SUITE #108
DENVER, CO 80210
PHONE: (303)758-8880
FAX: (303)758-8881



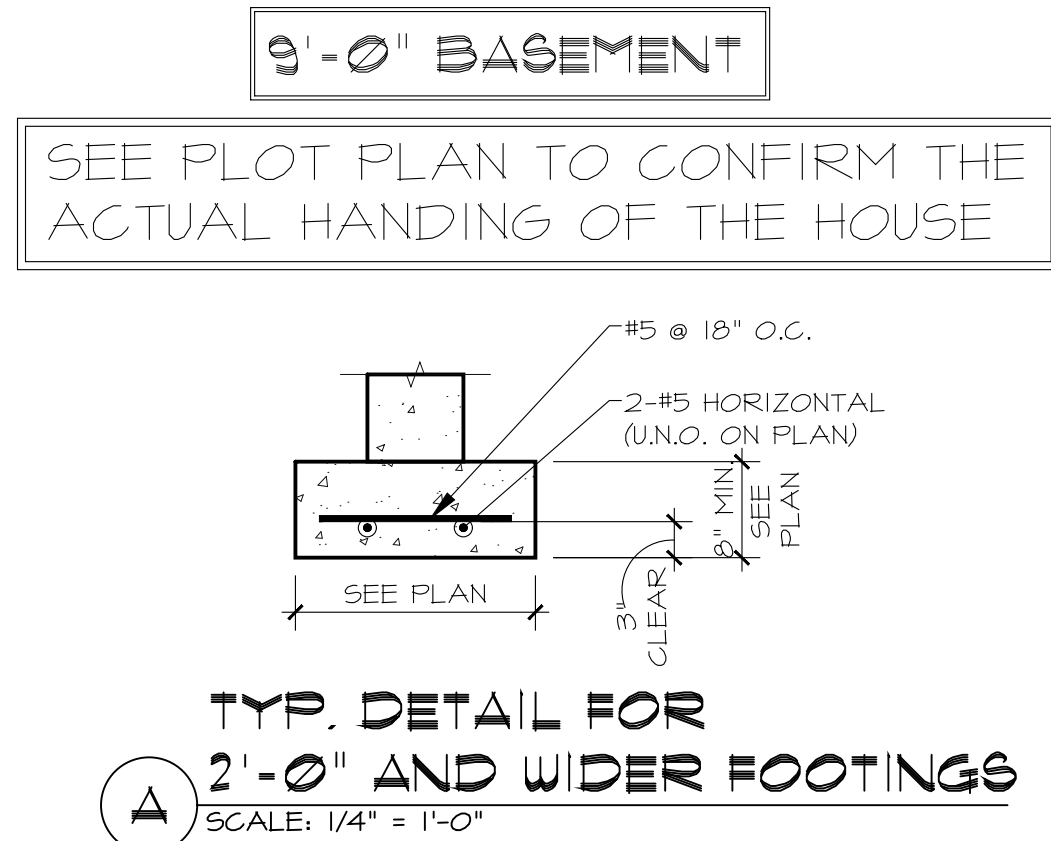
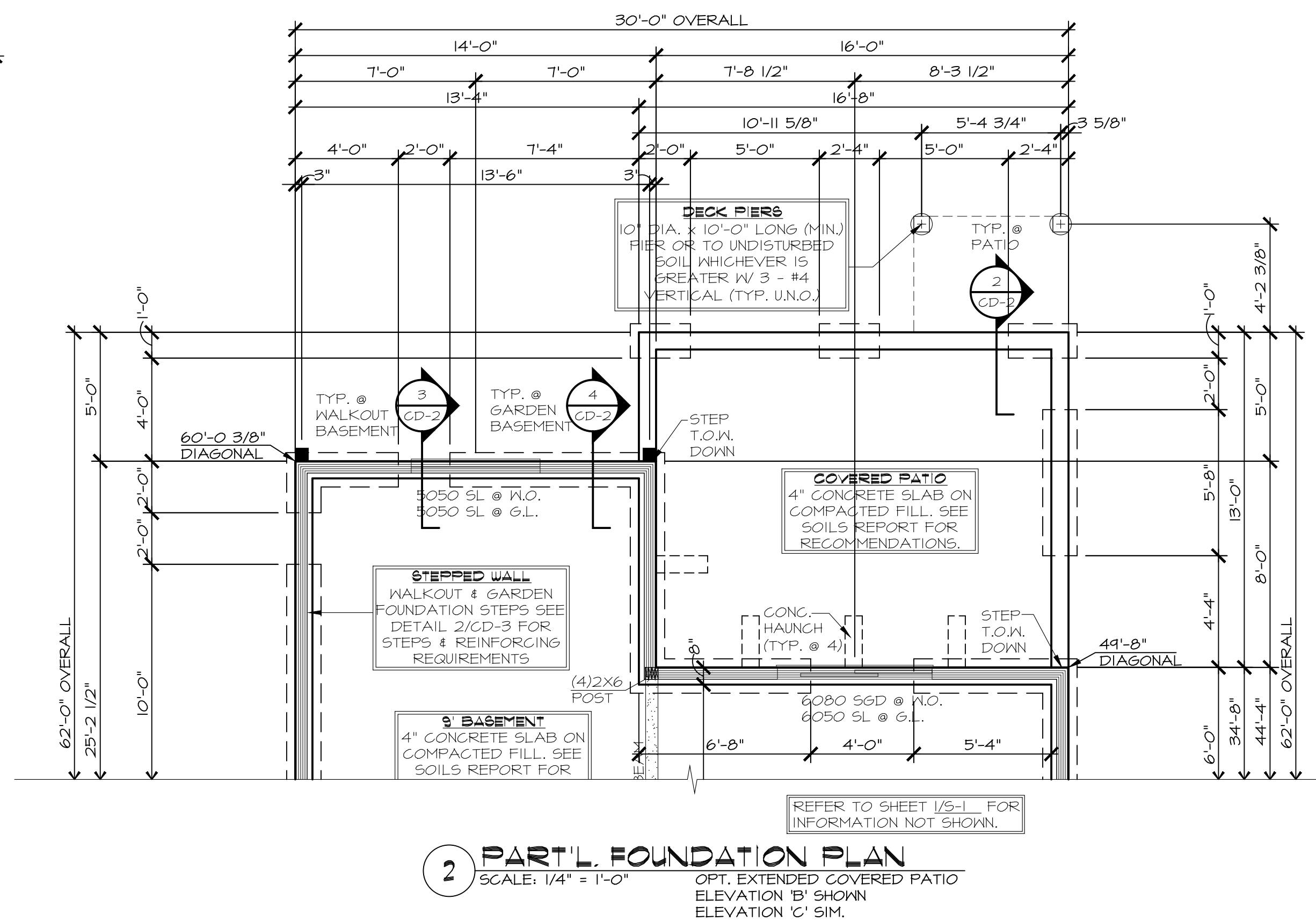
DATE: 04/13/2021

DESIGNED BY:	DRAWN BY:	CHECKED BY:	PROJECT #:
RAN	JCP	RAN	GCCC001-0392018
SCALE:	ISSUE DATE:	DESIGN CODE:	CLIENT:
SEE PLAN	04/13/2021	2015 IRC	RICHMOND

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HOLDOWN SCHEDULE	
SYMBOL	DESCRIPTION
▼	SIMPSON STD10/RJ
■	SIMPSON STD14/RJ
◆	SIMPSON HTT22
●	SIMPSON HD8A
NOTE:	
1. HOLDUP ARE SHOWN TO CENTERLINE OF BOLT OR STRAP.	
2. CONTRACTOR TO VERIFY EXACT LOCATION IN FIELD.	
3. SIMPSON STD14RJ CAN BE SUBSTITUTED FOR STD10RJ.	

GENERAL FOUNDATION NOTES							
1	DESIGN IS BASED ON THE INTERNATIONAL RESIDENTIAL CODE, 2015 EDITION. DESIGN LIVE LOADS ARE: ROOF(SNOW).....30 PSF GROUND(SNOW).....43 PSF FLOOR.....40 PSF						
2	DESIGN WIND LOADS ARE: WIND SPEED (VULT).....136 MPH EXPOSURE.....'C'						
3	THE SOILS CRITERIA PRESENTED HEREIN ARE PER THE GEO-TECHNICAL REPORT: PREPARED BY.....XXXXXXXXXXXX DATED.....XXXXXXXX XX, 20XX SUBDIVISION.....XXXXXXXXXXXXXXXXX FILING.....XXXXXXXX LOT.....N/A BLOCK.....N/A MUNICIPALITY.....AURORA PROJECT NUMBER.....N/A LAST REVISED.....N/A						
4	FOUNDATION DESIGN IS BASED ON THE FOLLOWING: ALLOWABLE BEARING.....2500 PSF MINIMUM DEAD LOAD.....800 PSF EQUIVALENT FLUID PRESSURE.....60 PCF THE ABOVE FOUNDATION CRITERIA SHALL BE CONFIRMED BY A COLORADO LICENSED GEOTECHNICAL ENGINEER PRIOR TO THE START OF WORK.						
5	CONCRETE SHALL CONFORM TO THE FOLLOWING: (PER THE GEOTECH REPORT OR ACI) <table border="1"> <tr> <td>MINIMUM CONC. STRENGTH 3000 PSI CEMENT TYPE II WATER CEMENT RATIO .50 NEGLECTIBLE SULFATE EXPOSURE</td> <td></td> </tr> <tr> <td>MINIMUM CONC. STRENGTH 4000 PSI CEMENT TYPE II WATER CEMENT RATIO .50 MODERATE SULFATE EXPOSURE</td> <td></td> </tr> <tr> <td>MINIMUM CONC. STRENGTH 4500 PSI CEMENT TYPE II W/ CLASS "F" FLY ASH WATER CEMENT RATIO .45 SEVERE TO VERY SEVERE SULFATE EXPOSURE</td> <td align="center">X</td> </tr> </table>	MINIMUM CONC. STRENGTH 3000 PSI CEMENT TYPE II WATER CEMENT RATIO .50 NEGLECTIBLE SULFATE EXPOSURE		MINIMUM CONC. STRENGTH 4000 PSI CEMENT TYPE II WATER CEMENT RATIO .50 MODERATE SULFATE EXPOSURE		MINIMUM CONC. STRENGTH 4500 PSI CEMENT TYPE II W/ CLASS "F" FLY ASH WATER CEMENT RATIO .45 SEVERE TO VERY SEVERE SULFATE EXPOSURE	X
MINIMUM CONC. STRENGTH 3000 PSI CEMENT TYPE II WATER CEMENT RATIO .50 NEGLECTIBLE SULFATE EXPOSURE							
MINIMUM CONC. STRENGTH 4000 PSI CEMENT TYPE II WATER CEMENT RATIO .50 MODERATE SULFATE EXPOSURE							
MINIMUM CONC. STRENGTH 4500 PSI CEMENT TYPE II W/ CLASS "F" FLY ASH WATER CEMENT RATIO .45 SEVERE TO VERY SEVERE SULFATE EXPOSURE	X						
6	FOUNDATION WALL THICKNESS (U.N.O.).....2" FOOTING SIZE (U.N.O.).....2" x 16" VOID FORM SIZE (U.N.O.).....2" (NOTE: VOID TO BE PROVIDED AS A SINGLE PIECE AT SPECIFIED DEPTH AND WIDTH, NOT BUILT UP FROM SMALLER DEPTHS & WIDTHS) MINIMUM DEPTH OF BOTTOM OF FOOTING BELOW FINAL GRADE.....3'-0" VERTICAL REINFORCEMENT IN ALL BASEMENT WALLS #5 @ 18" O.C. HORIZONTAL REINFORCEMENT (CENTERED IN WALL TYP. U.N.O.) #4 @ 12" O.C. OR #5 @ 18" O.C. ANCHOR BOLT SPACING (U.N.O. SEE FOUNDATION PLANS) 1/2" DIA. ANCHOR BOLTS (BASEMENT).....1'-0" O.C. 1/2" DIA. ANCHOR BOLTS (NON-BASEMENT).....2'-0" O.C.						
7	CONTRACTOR SHALL PROVIDE TEMPORARY ADEQUATE BRACING FOR ALL BASEMENT FOUNDATION WALLS UNTIL FIRST FLOOR FRAMING AND SHEATHING IS INSTALLED.						
8	CONCRETE SUB-CONTRACTOR SHALL OBTAIN FROM RICHMOND SUPERINTENDENT LOCATION OF PLUMBING PENETRATIONS THROUGH THE WALL OR FOOTING						
9	FOR CONTINUOUS FOOTING FOR INTERIOR DRAIN ONLY, PARTICULARLY ON SUB-EXCAVATED LOTS, IN BASEMENT AREAS, PLACE AN 8" THICK BY 8" WIDE SECTION OF VOID FORM @ 12'-0" O.C. MAX. & UNDER WINDOW WELLS. (FOR FOOTING FOUNDATIONS ONLY)						
10	PROVIDE GROOVED OR SAW-CUT CONTROL JOINT (SEE 4/CD-1) @ ALL SLABS (BASEMENT, GARAGE, & DRIVEWAYS) @ 10'-0" ON CENTER MAX. SPACING ON BOTH DIRECTIONS. ALIGN JOINTS W/ INTERIOR CORNERS OF SLAB & ON STEEL COLUMN CENTER LINES.						
11	SEISMIC DESIGN: DESIGN CATEGORY.....'B'						

FIRST FLOOR STEEL BEAM SCHEDULE		
SIZE	APPROXIMATE LENGTH	DESCRIPTION
W10x22	16'-10"	MAIN STEEL BEAM

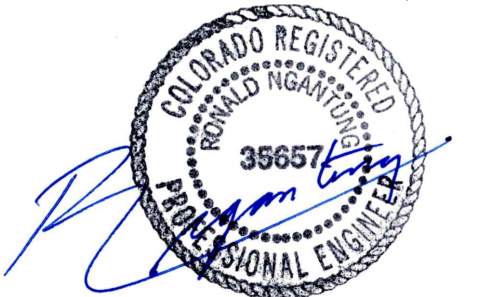
SECOND FLOOR STEEL BEAM SCHEDULE		
SIZE	APPROXIMATE LENGTH	DESCRIPTION
W12x26	19'-8"	STEEL BEAM OVER GARAGE

N.S.F. FOUNDATION W/ SLAB ON GRADE

PLAN D712 - COPPERLEAF
W.O./GARDEN BASEMENT
ELEVATIONS 'B' & 'C'



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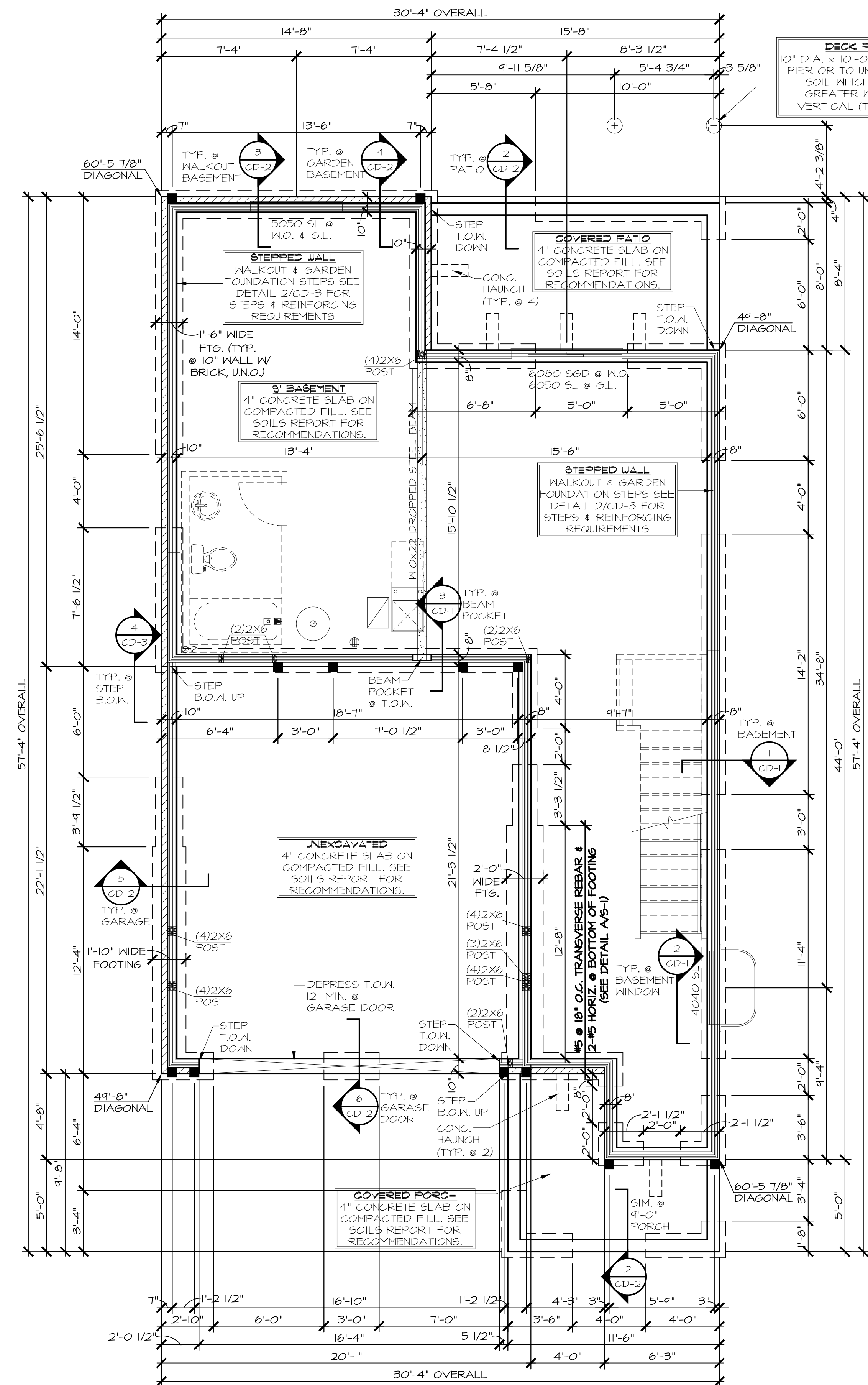


ATE: 04/13/2021

DESIGNED BY: RAN	DRAWN BY: JCP	CHECKED BY: RAN	PROJECT #: GCC001-0392018
SCALE: SEE PLAN	ISSUE DATE: 04/13/2021	DESIGN CODE: 2015 IRC	CLIENT: RICHMOND

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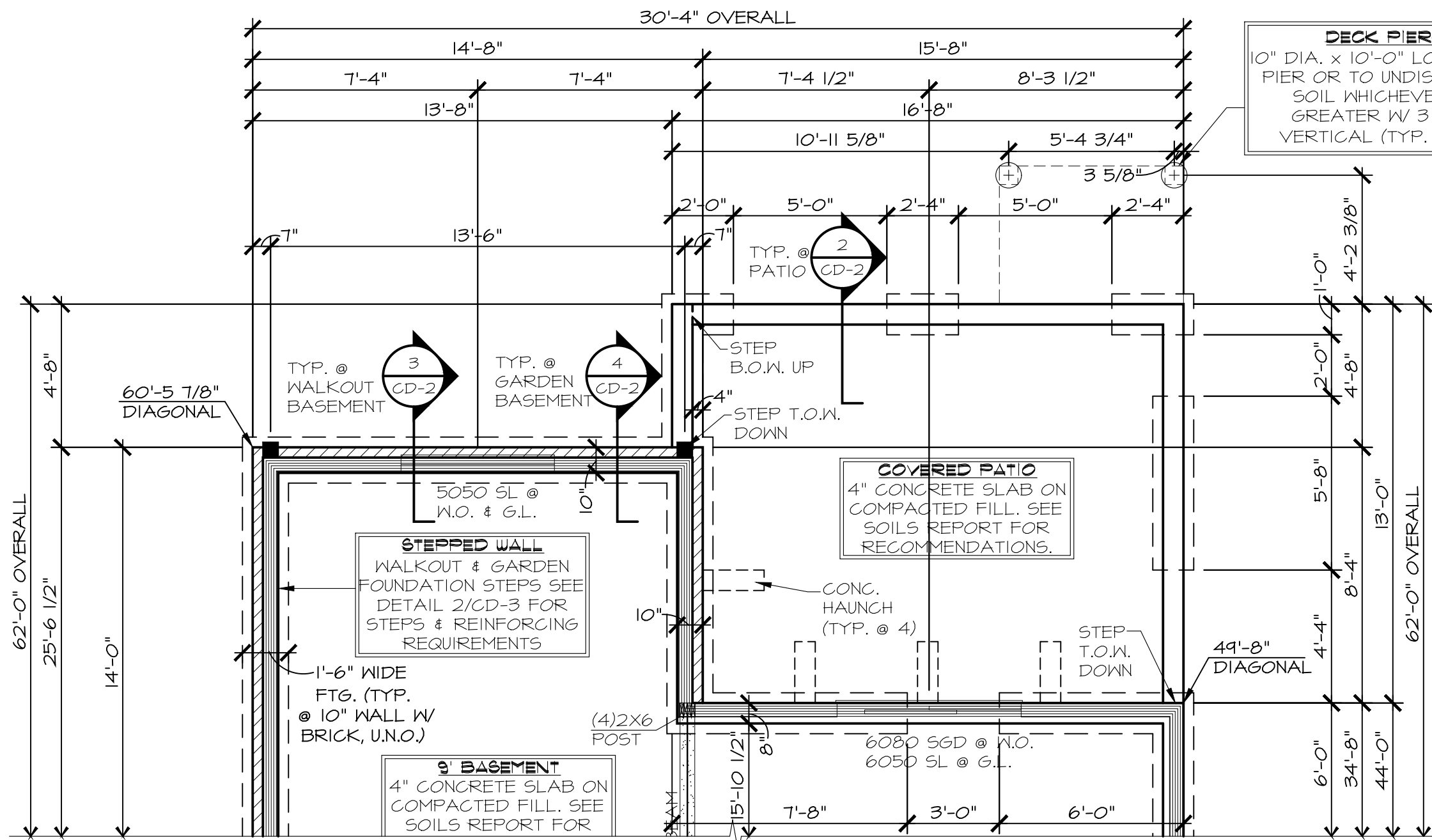
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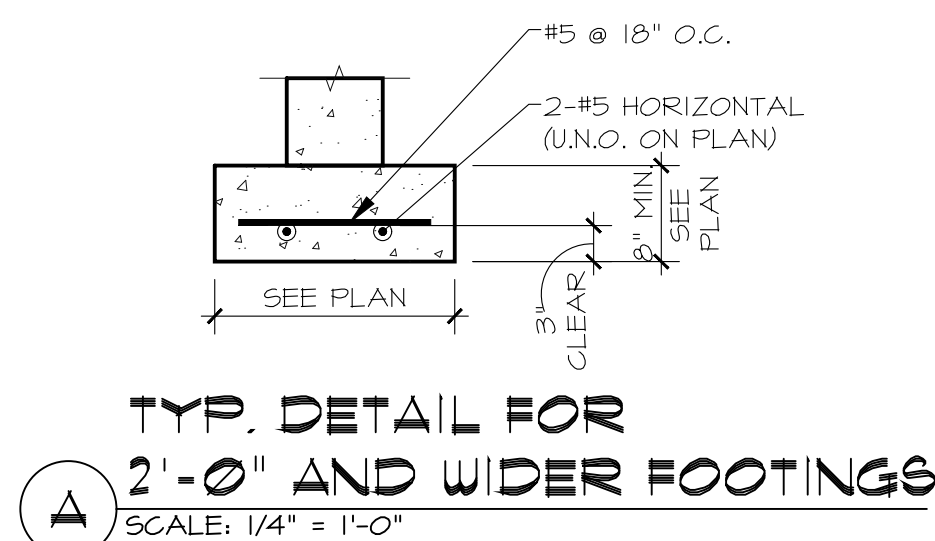
1 FOUNDATION PLAN
SCALE: 1/4" = 1'-0"
W.O./GARDEN BASEMENT W/ PARTIAL BRICK WRAP
ELEVATION 'B' SHOWN
ELEVATION 'C' SIM.

Revised
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SEE PLOT PLAN TO CONFIRM THE
ACTUAL HANDING OF THE HOUSE



2 PART'L. FOUNDATION PLAN
SCALE: 1/4" = 1'-0"
OPT. EXT. COV. PATIO W/ PARTIAL BRICK WRAP
ELEVATION 'A' SHOWN
ELEVATION 'D' SIM.



HOLDOWN SCHEDULE	
SYMBOL	DESCRIPTION
▼	SIMPSON STHD10/RJ
■	SIMPSON STHD14/RJ
◆	SIMPSON HTT22
●	SIMPSON HD8A

NOTE:
1. HOLDDOWN ARE SHOWN TO CENTERLINE OF BOLT OR STRAP.
2. CONTRACTOR TO VERIFY EXACT LOCATION IN FIELD.
3. SIMPSON STHD14RJ CAN BE SUBSTITUTED FOR STHD10RJ.

GENERAL FOUNDATION NOTES

- DESIGN IS BASED ON THE INTERNATIONAL RESIDENTIAL CODE, 2015 EDITION. DESIGN LIVE LOADS ARE:
ROOF(SNOW).....30 PSF
GROUND(SNOW).....43 PSF
FLOOR.....40 PSF
- DESIGN WIND LOADS ARE:
WIND SPEED (VULT).....136 MPH
EXPOSURE.....C
- THE SOILS CRITERIA PRESENTED HEREIN ARE PER THE GEO-TECHNICAL REPORT:
PREPARED BY.....XXXXXXXXXX DATED.....XXXXXXXX XX, 20XX
SUBDIVISION.....XXXXXXXXXXXXXXXXXX FILING.....XXXXXXXX
LOT.....N/A BLOCK.....N/A MUNICIPALITY.....AURORA
PROJECT NUMBER.....N/A LAST REVISED.....N/A
- FOUNDATION DESIGN IS BASED ON THE FOLLOWING:
ALLOWABLE BEARING.....2500 PSF
MINIMUM DEAD LOAD.....200 PSF
EQUIVALENT FLUID PRESSURE.....80 PCF
THE ABOVE FOUNDATION CRITERIA SHALL BE CONFIRMED BY A COLORADO LICENSED GEOTECHNICAL ENGINEER PRIOR TO THE START OF WORK.
- CONCRETE SHALL CONFORM TO THE FOLLOWING:
(PER THE GEOTECH REPORT OR ACI)
MINIMUM CONC. STRENGTH 3000 PSI
CEMENT TYPE II
WATER CEMENT RATIO .50
NEGLECTABLE SULFATE EXPOSURE
- MINIMUM CONC. STRENGTH 4000 PSI
CEMENT TYPE II
WATER CEMENT RATIO .50
MODERATE SULFATE EXPOSURE
- MINIMUM CONC. STRENGTH 4500 PSI
CEMENT TYPE II W/ CLASS 'F' FLY ASH
WATER CEMENT RATIO .45
SEVERE TO VERY SEVERE SULFATE EXPOSURE
- FOUNDATION WALL THICKNESS (U.N.O.).....8"
FOOTING SIZE (U.N.O.).....8" x 16"
VOID FORM SIZE (U.N.O.).....8"
(NOTE: VOID TO BE PROVIDED AS A SINGLE PIECE AT SPECIFIED DEPTH AND WIDTH NOT BUILT UP FROM SMALLER DEPTHS & WIDTHS)
MINIMUM DEPTH OF BOTTOM OF FOOTING BELOW FINAL GRADE.....3'-0"
VERTICAL REINFORCEMENT IN ALL BASEMENT WALLS
HORIZONTAL REINFORCEMENT (CENTERED IN WALL TYP. U.N.O.)
ANCHOR BOLT SPACING (U.N.O. SEE FOUNDATION PLANS)
1/2" DIA. ANCHOR BOLTS (BASEMENT).....1'-0" O.C.
1/2" DIA. ANCHOR BOLTS (NON-BASEMENT).....2'-0" O.C.
- CONTRACTOR SHALL PROVIDE TEMPORARY ADEQUATE BRACING FOR ALL BASEMENT FOUNDATION WALLS UNTIL FIRST FLOOR FRAMING AND SHEATHING IS INSTALLED.
- CONCRETE SUB-CONTRACTOR SHALL OBTAIN FROM RICHMOND SUPERINTENDENT LOCATION OF PLUMBING PENETRATIONS THROUGH THE WALL OR FOOTING
- FOR CONTINUOUS FOOTING FOR INTERIOR DRAIN ONLY, PARTICULARLY ON SUB-EXCAVATED LOTS, IN BASEMENT AREAS, PLACE AN 8" WIDE SECTION OF VOID FORM @ 12'-0" O.C. MAX. & UNDER WINDOW WELLS. (FOR FOOTING FOUNDATIONS ONLY)
- PROVIDE GROOVED OR SAW-CUT CONTROL JOINT (SEE 4/CD-1) @ ALL SLABS (BASEMENT, GARAGE, & DRIVEWAYS) @ 10'-0" ON CENTER MAX. SPACING ON BOTH DIRECTIONS. ALIGN JOINTS W/ INTERIOR CORNERS OF SLAB & ON STEEL COLUMN CENTER LINES.
- SEISMIC DESIGN:
DESIGN CATEGORY.....B

FIRST FLOOR STEEL BEAM SCHEDULE

SIZE	APPROXIMATE LENGTH	DESCRIPTION
W10x22	16'-9 1/2"	MAIN STEEL BEAM

SECOND FLOOR STEEL BEAM SCHEDULE

SIZE	APPROXIMATE LENGTH	DESCRIPTION
W12x26	19'-8"	STEEL BEAM OVER GARAGE

N.S.F. FOUNDATION W/ SLAB ON GRADE
PLAN D712 - COPPERLEAF
W.O./GARDEN BSMT. W/ PART. BRICK WRAP
ELEVATIONS 'B' & 'C'



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DENVER, CO 80210
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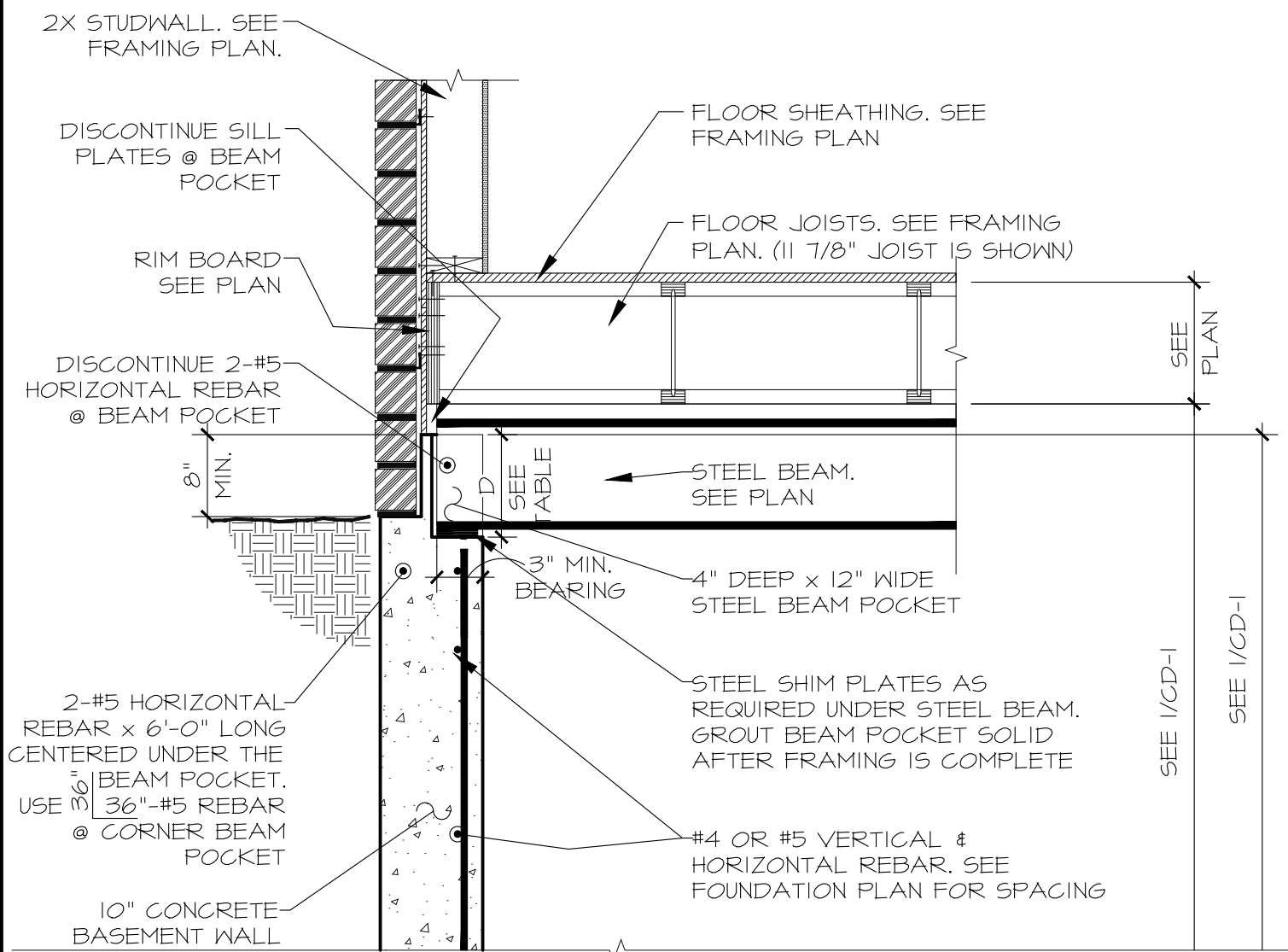
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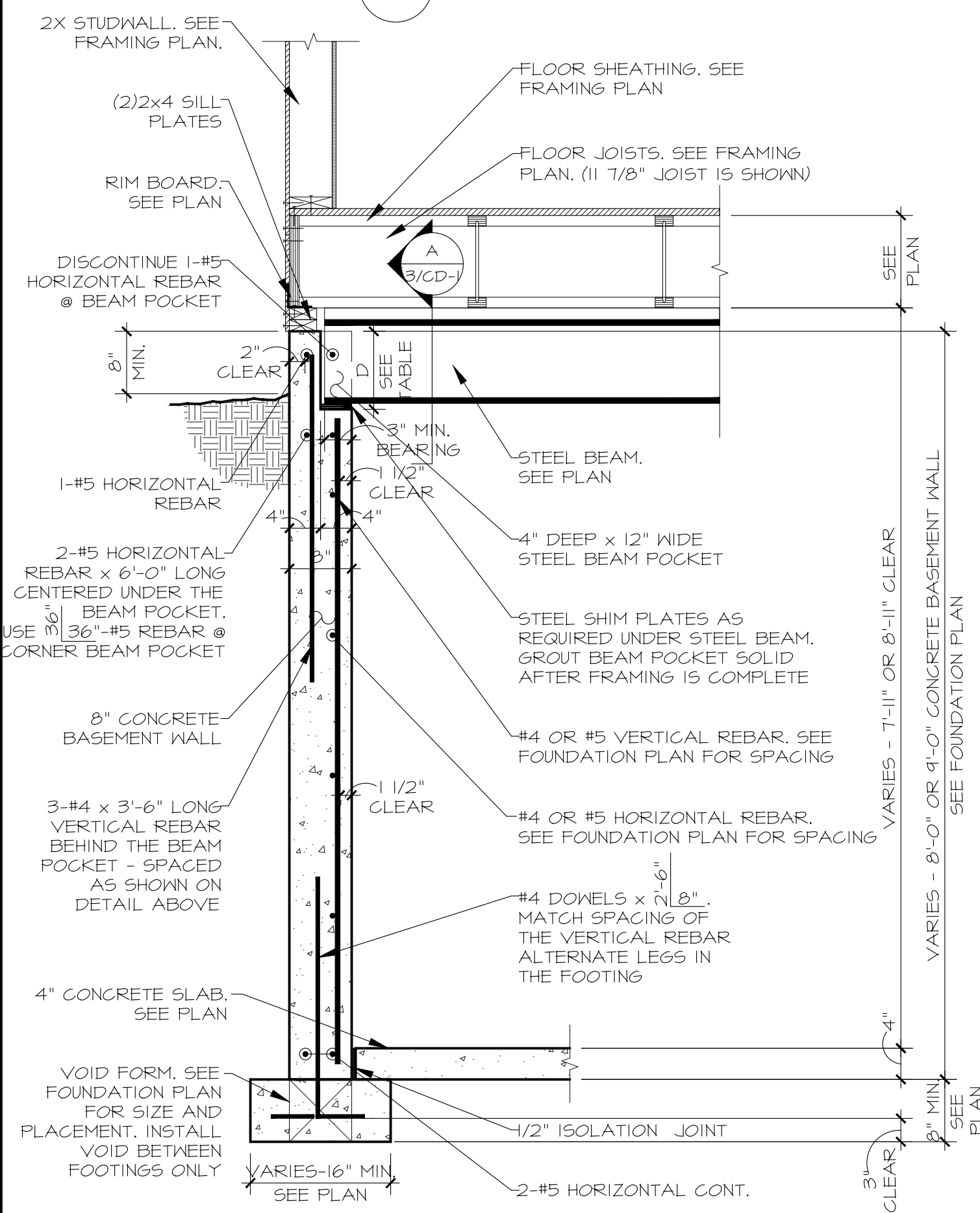
DATE: 04/13/2021

DESIGNED BY:	DRAWN BY:	CHECKED BY:	PROJECT #:
RAN	JCP	RAN	GCC001-0392018
SCALE:	ISSUE DATE:	DESIGN CODE:	CLIENT:
SEE PLAN	04/13/2021	2015 IRC	RICHMOND

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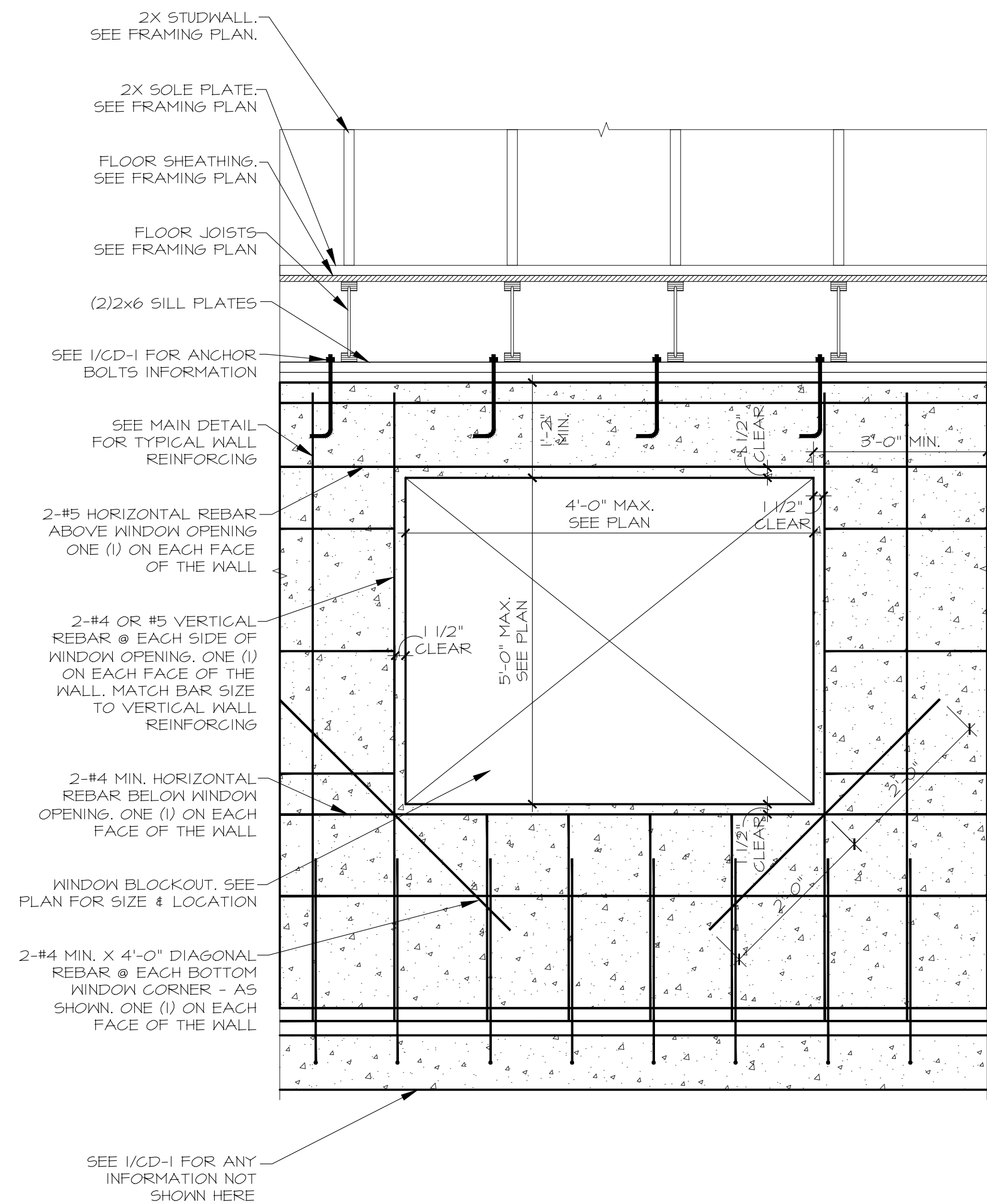
BEAM POCKET DEPTH SCHEDULE	
BEAM SIZE	D (in.)
W8 x	7"
W10 x	9"
W12 x	11"
W14 x	13 1/2"
W16 x	15 1/2"



3 TYP. FOUNDATION WALL DETAIL @ BEAM POCKET

REBAR SPLICE SCHEDULE						
REINFORCEMENT BAR SIZE	TENSION LAP SPLICE LENGTH				COMPRESSION LAP SPLICE LENGTH	
	TYPE A		TYPE B		3000PSI	4000PSI
	3000PSI	4000PSI	3000PSI	4000PSI		
#3	16"	14"	21"	18"	12"	12"
#4	22"	19"	28"	25"	15"	15"
#5	27"	24"	36"	31"	19"	19"
#6	33"	28"	43"	37"	23"	23"
#7	48"	42"	62"	54"	27"	27"
#8	55"	47"	71"	62"	30"	30"
#9	62"	54"	80"	70"	34"	34"
1.	LAP LENGTHS SHOWN ABOVE BASED ON MINIMUM CONCRETE STRENGTH OF 3,000 & 4,000 PSI & GRADE 60 REINFORCING BARS.					
2.	USE TYPE B TENSION SPLICE LENGTHS TYPICALLY. CLASS A TENSION SPLICES MAY BE USED IF LESS THAN ONE HALF OF THE TENSION REINFORCEMENT IS SPLICED IN THE SAME LOCATION.					
3.	PROVIDE MINIMUM CLEAR SPACING OF 2 BAR DIAMETERS BETWEEN BARS.					
4.	INCREASE SPLICE LENGTHS AS FOLLOWS FOR: a. EPOXY COATED BARS.....TYPE A SPLICE LENGTH x 1.5					
5.	SPLICING LOCATIONS ARE AS FOLLOWS FOR: a. FOR BEAMS WHICH ARE CONTINUOUS OVER TWO OR MORE SPANS, LOCATE LAP SPLICES FOR BOTTOM BARS OVER SUPPORTS & LAP SPLICES FOR TOP BARS IN THE MIDDLE THIRD OF THE SPAN. b. FOR BASEMENT WALL WITH SPREAD FOOTINGS OR PIER FOUNDATION LOCATE LAP SPLICES FOR BOTTOM BARS OVER SUPPORTS (PIER OR FOOTING) AND LAP SPLICES FOR TOP BARS IN THE MIDDLE OF THE SPAN.					

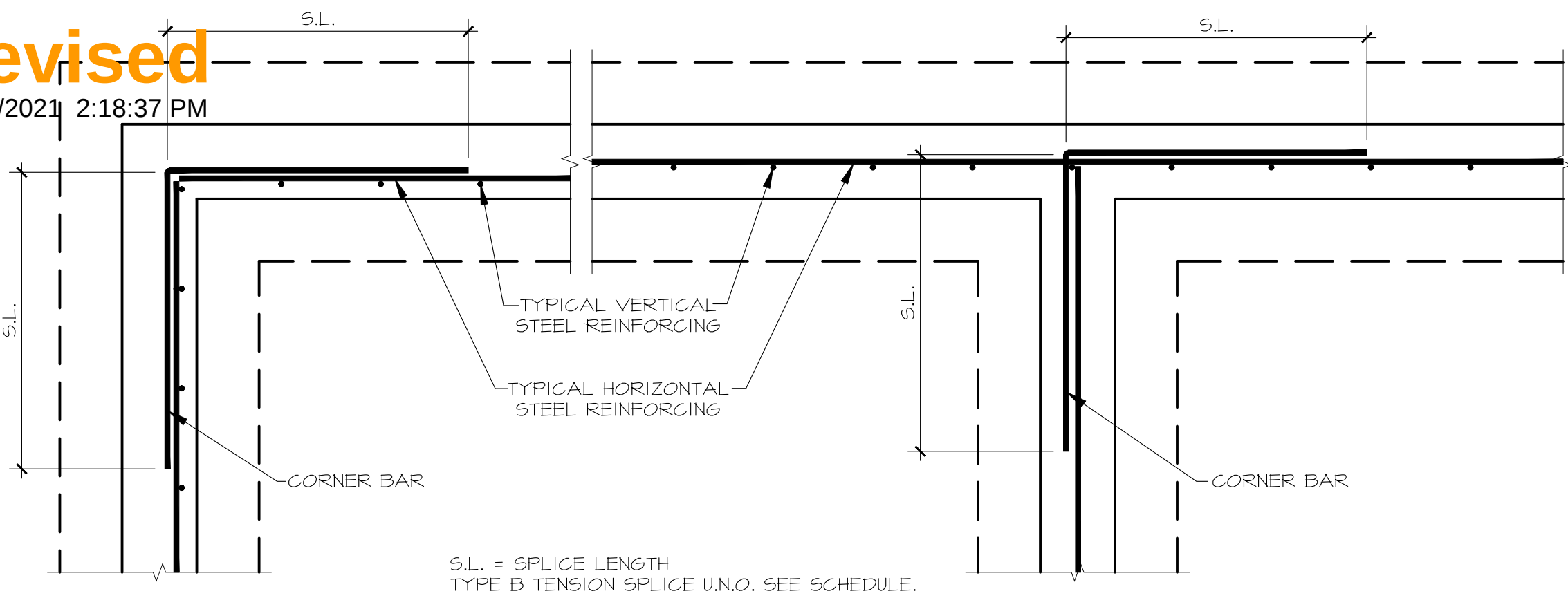
4 TYP. CORNER AND INTERSECTION REINFORCING



2 TYP. BASEMENT WINDOW OPENING REINFORCING

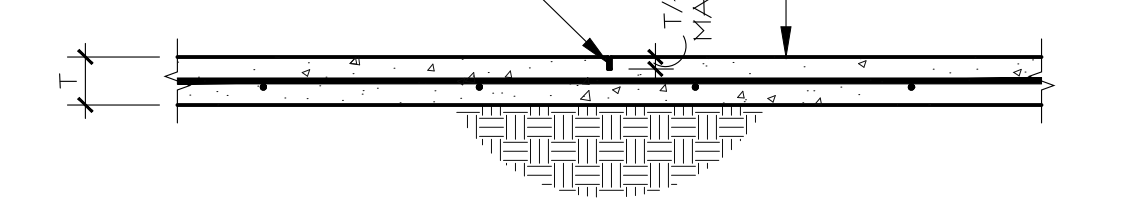
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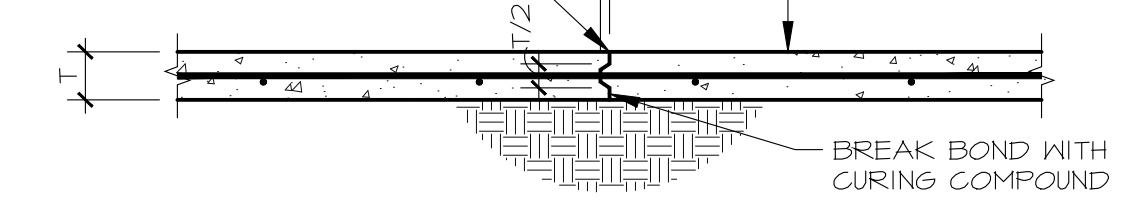
1 TYPICAL BASEMENT FOUNDATION WALL

3/16" WIDE CONTROL JOINT. GROOVE OR SAWCUT SEE PLAN FOR LOCATION

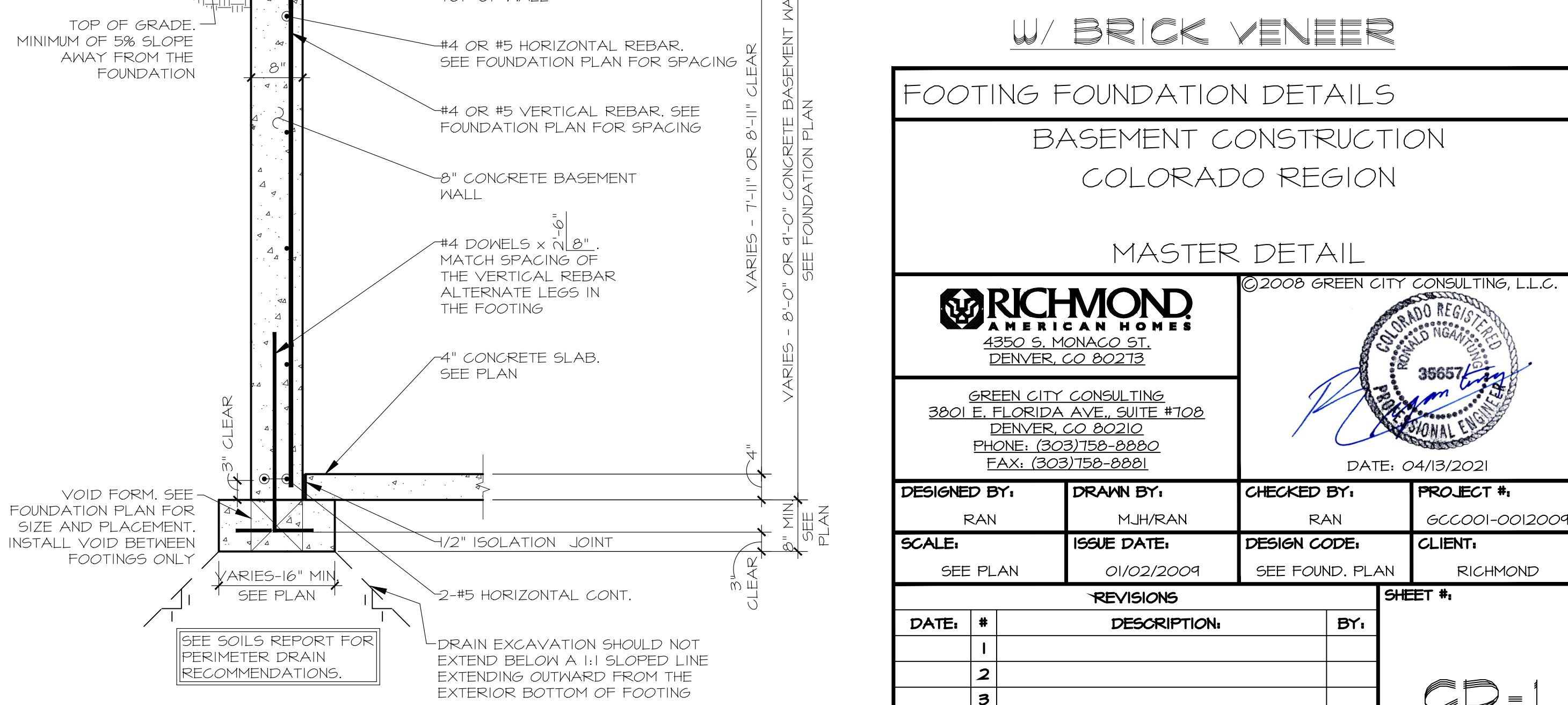
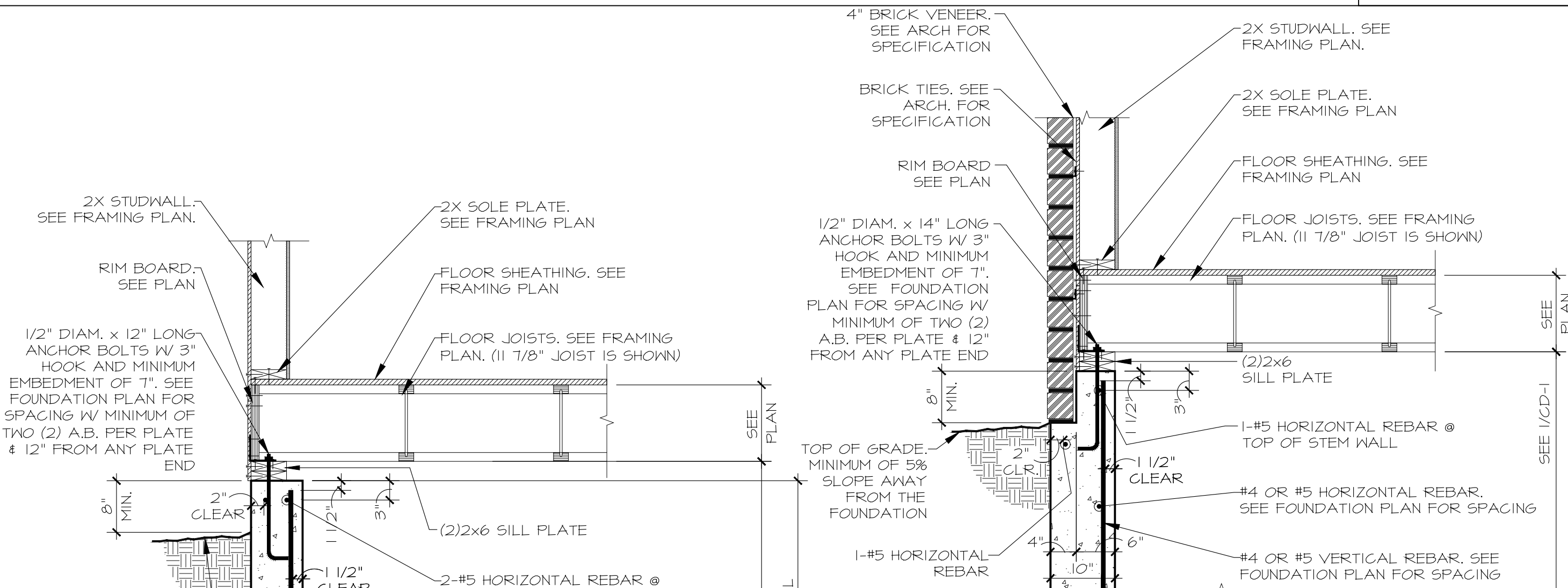


GROOVED OR SAWCUT C.J.

KEYED JOINT SEE PLAN FOR LOCATION

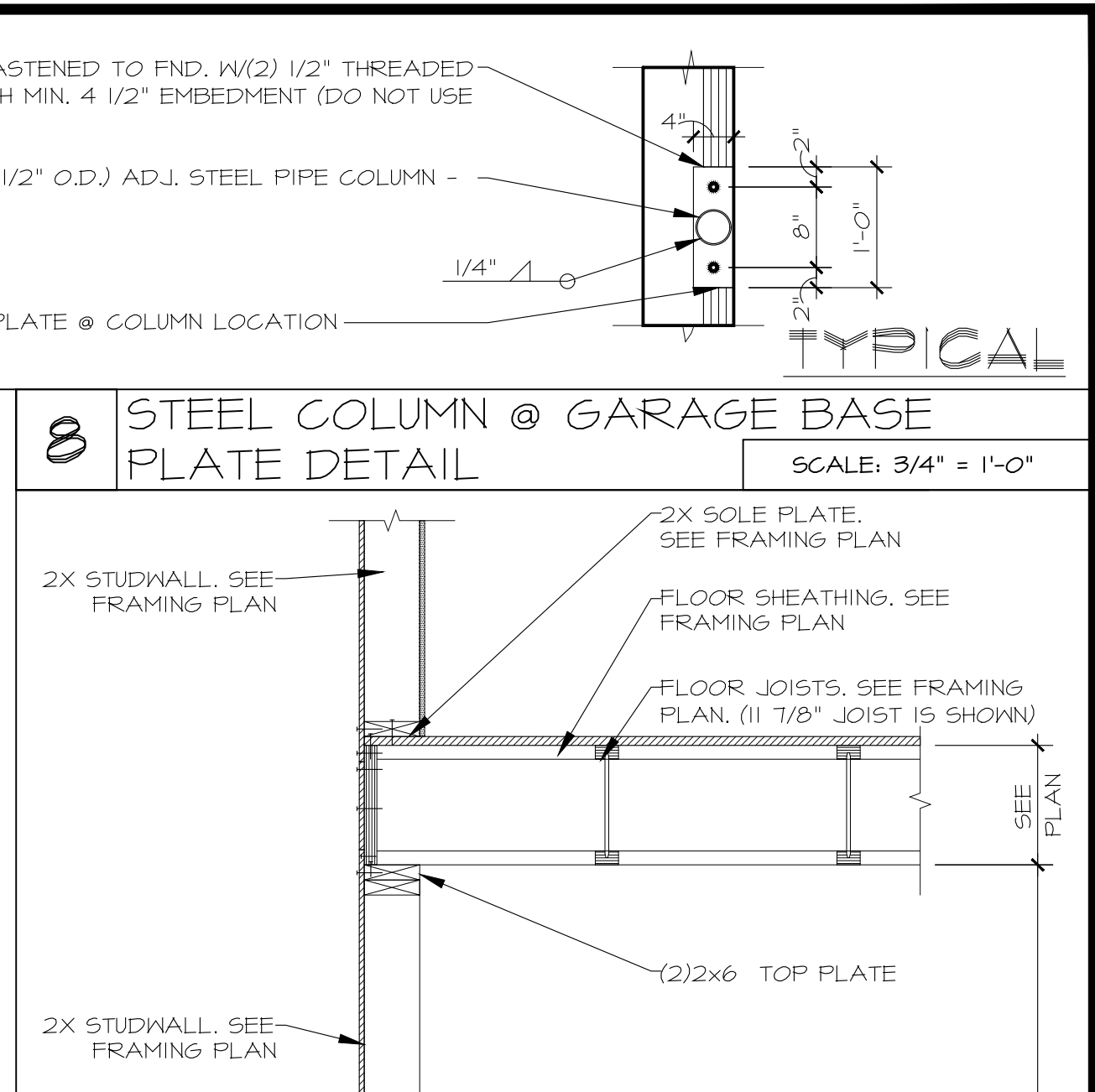
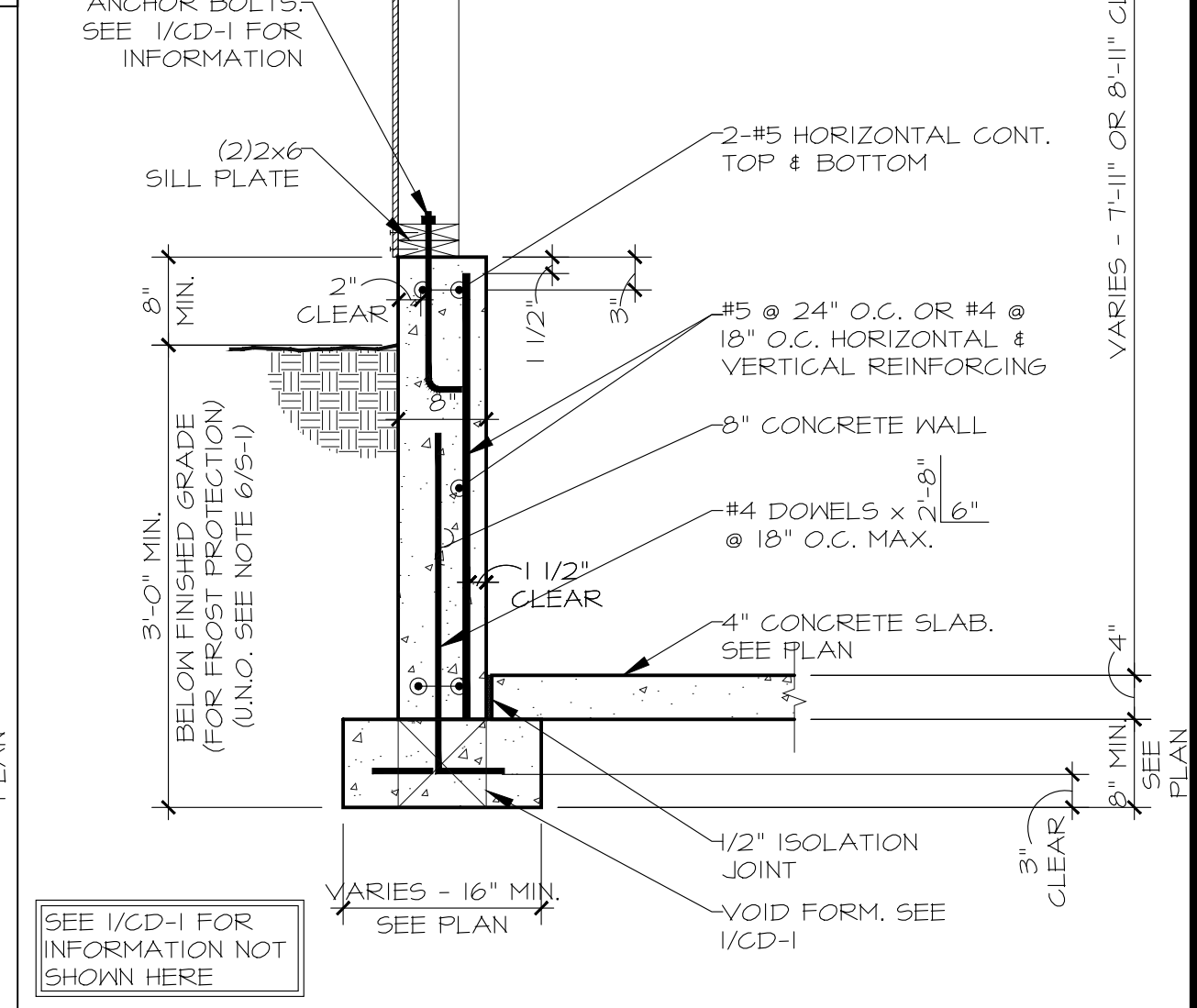


KEYED CONSTRUCTION JOINT

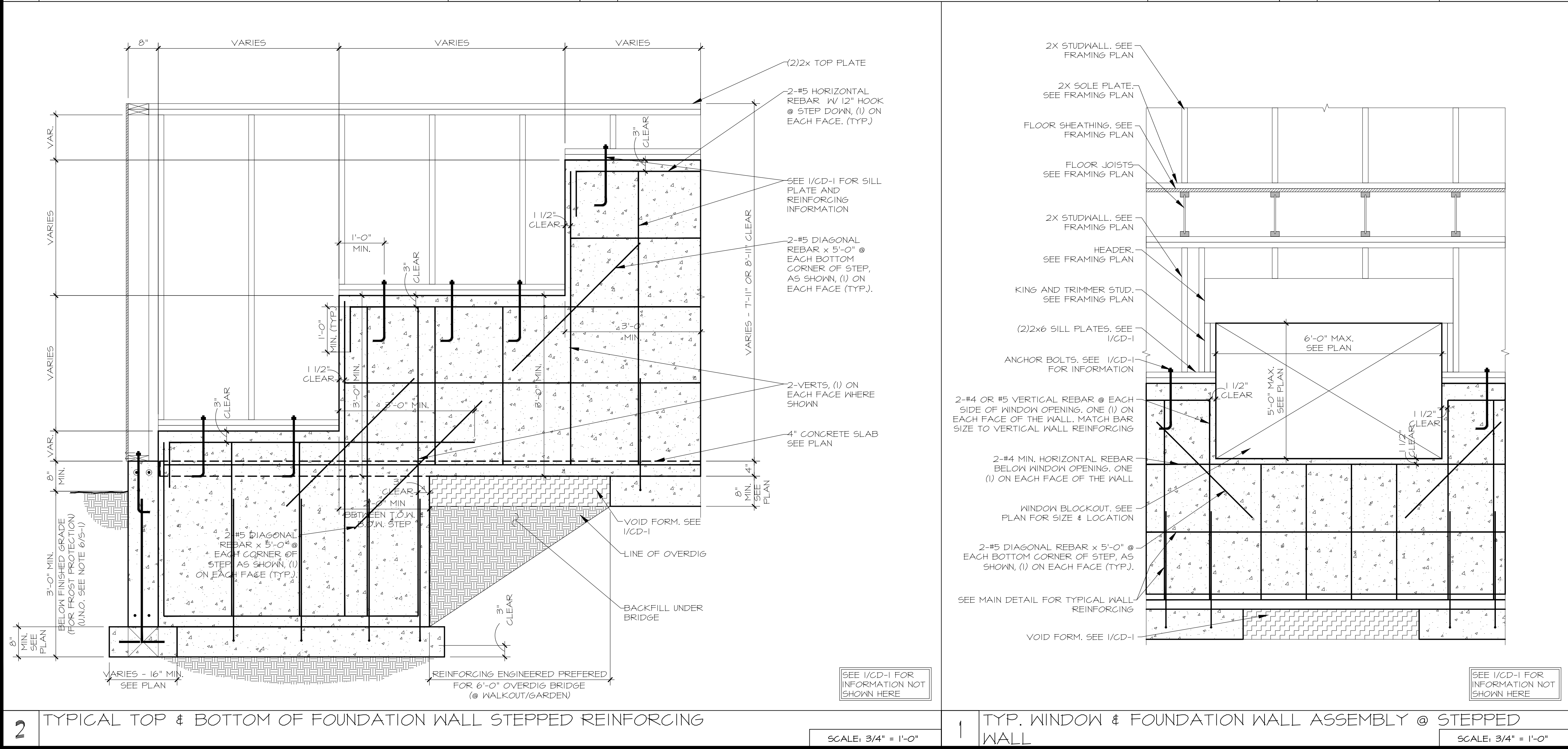
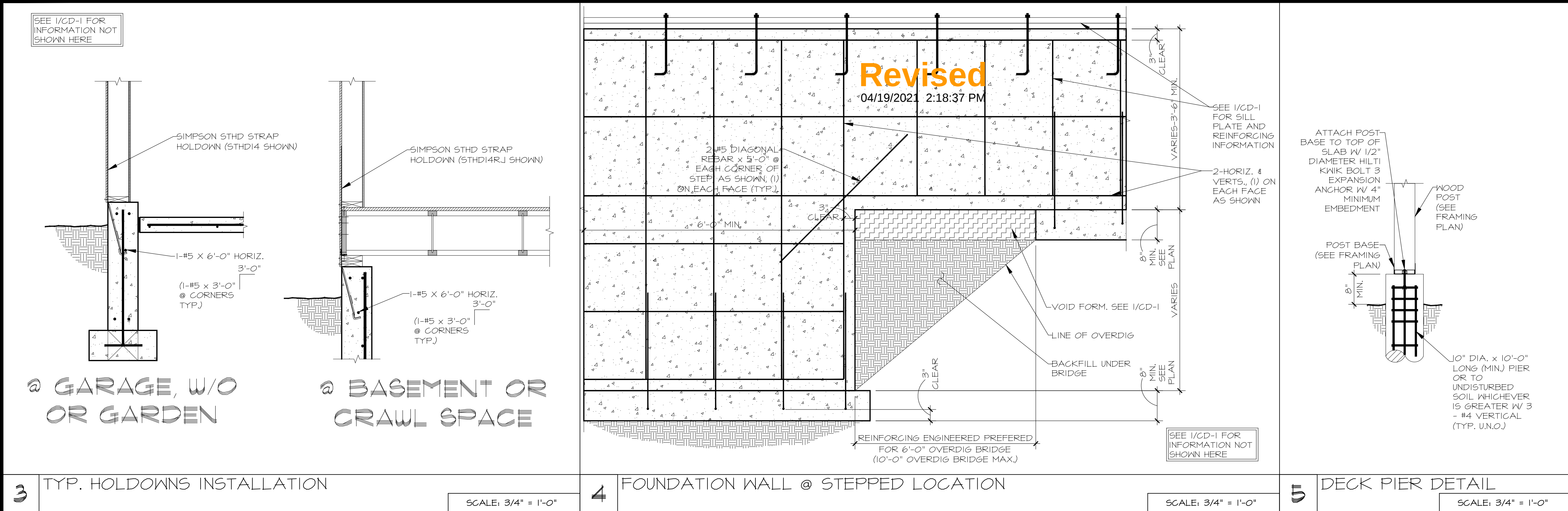


1 TYPICAL BASEMENT FOUNDATION WALL

FOOTING FOUNDATION DETAILS			
BASEMENT CONSTRUCTION			
COLORADO REGION			
MASTER DETAIL			
RICHMOND AMERICAN HOMES 4350 S. MONACO ST. DENVER, CO 80212		©2008 GREEN CITY CONSULTING, L.L.C.	
GREEN CITY CONSULTING 3801 E. FLORIDA AVE., SUITE #102 DENVER, CO 80210 PHONE: (303) 758-8880 FAX: (303) 758-8881		DATE: 04/13/2021	
DESIGNED BY: RAN	DRAWN BY: MJH/RAN	CHECKED BY: RAN	PROJECT #: GCC001-0012009
SCALE: SEE PLAN	ISSUE DATE: 01/02/2009	DESIGN CODE: SEE FOUND. PLAN	CLIENT: RICHMOND
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4	TYP. GARDEN BASEMENT WALL DETAIL	SCALE: 3/4" = 1'-0"
FOOTING FOUNDATION DETAILS BASEMENT CONSTRUCTION COLORADO REGION MASTER DETAIL		
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GREEN CITY CONSULTING 3801 E. FLORIDA AVE., SUITE #108 DENVER, CO 80210 PHONE: (303) 758-8880 FAX: (303) 758-8881		DATE: 04/13/2021
DESIGNED BY: RAN	DRAWN BY: MJH/RAN	CHECKED BY: RAN
SCALE: SEE PLAN	ISSUE DATE: 01/02/2009	DESIGN CODE: SEE FOUND. PLAN
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CONCRETE:

A. ALL CONCRETE WORK (MIXING, PLACING AND CURING) SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS OF THE AMERICAN CONCRETE INSTITUTE:

1. ACI 318 (LATEST REVISION) "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"

2. ACI 306 (LATEST REVISION) "RECOMMENDED PRACTICE FOR COLD WEATHER CONCRETING"

3. ACI 305 (LATEST REVISION) "RECOMMENDED PRACTICE FOR HOT WEATHER CONCRETING"

4. ACI 613 (LATEST REVISION) "RECOMMENDED PRACTICE FOR SELECTING PROPORTIONS FOR CONCRETE"

5. ACI 332 (LATEST REVISION) "GUIDE TO RESIDENTIAL CAST-IN-PLACE CONCRETE CONSTRUCTION"

6. ACI 315 (LATEST REVISION) "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT"

B. ALL CONCRETE MATERIALS SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS OF THE AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) LATEST EDITION:

1. CEMENT - TYPE II: ASTM C150 - SPECIFICATIONS FOR PORTLAND CEMENTS

2. FLY ASH: ASTM C618 - SPECIFICATIONS FOR COAL FLY ASH FOR USE IN CONCRETE

3. AGGREGATES: ASTM C33 - SPECIFICATIONS FOR CONCRETE AGGREGATES

4. MIXING & DELIVERY: ASTM C94 - SPECIFICATIONS FOR READY-MIXED CONCRETE

5. ADMIXTURES: ASTM C494 - SPECIFICATIONS FOR CHEMICAL ADMIXTURES FOR CONCRETE

6. STEEL REINFORCEMENTS (GRADE 60): ASTM A615 - SPECIFICATIONS FOR DEFORMED & PLAIN BILLET STEEL BARS FOR CONCRETE REINFORCEMENTS

7. WELDED WIRE REINFORCEMENT: ASTM A185 - SPECIFICATIONS FOR STEEL WELDED WIRE REINFORCEMENT, PLAIN, FOR CONCRETE

C. THE MINIMUM 28 DAY DESIGN COMPRESSIVE STRENGTH FOR CONCRETE SHALL BE AS FOLLOWS:

1. FOOTING & FOUNDATION WALLS: SEE LOT SPECIFIC FNDN. PLAN

2. INTERIOR FLOOR SLAB (EXCLUDING GARAGE): 3,000 PSI

3. EXTERIOR FLATWORK (INCLUDING GARAGE): 4,000 PSI

4. STRUCTURAL FLOOR SLAB: SEE STRUCTURAL FLOOR PLAN

D. MINIMUM CLEAR CONCRETE PROTECTION FOR REINFORCING STEEL SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE ON PLAN:

1. CONCRETE PLACED AGAINST FORMS AND PERMANENTLY EXPOSED TO EARTH: 3"

2. CONCRETE PLACED AGAINST FORMS AND EXPOSED TO WEATHER OR EARTH:

a. #5 OR SMALLER: 1 1/2"

b. #6 OR LARGER (UP TO #11): 2"

3. CONCRETE PLACED AGAINST FORMS & IS NOT EXPOSED TO WEATHER OR EARTH:

a. IN COLUMNS BEAMS & GIRDERS (#11 OR SMALLER): 1 1/2"

b. IN WALLS AND SLABS (#11 OR SMALLER): 3/4"

c. IN JOISTS (#11 OR SMALLER): 1"

4. STRUCTURAL SLAB (IN BASEMENT, COURTYARD & FRONT PORCH): MIDDLE OF SLAB

5. SLAB ON GRADE (WALKWAY, REAR PATIO & GARAGE SLAB): MIDDLE OF SLAB

E. SEE 4/CD-1 FOR REBAR SPLICE REQUIREMENTS

F. HORIZONTAL CONTINUOUS BARS IN WALLS, BEAMS & GRADE BEAMS SHALL BE SPLICED @ MID-SPAN FOR TOP BARS & OVER SUPPORTS FOR BOTTOM BARS

G. FLY ASH CONTENT SHALL NOT EXCEED 20% BY WEIGHT FOR ALL CEMENTOUS MATERIALS. USE ONLY CLASS C OR CLASS F FLY ASH

H. CONCRETE CONTRACTOR SHALL SUBMIT CONCRETE MIXED DESIGN TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL PRIOR TO CONSTRUCTION

I. THE USE OF CALCIUM CHLORIDE SHALL BE PERMITTED ONLY IN CONVENTIONAL BASMT. FLOOR SLAB ON GRADE AND IS NOT PERMITTED IN ANY OTHER CONG. ELEMENT. THE AMOUNT OF CALCIUM CHLORIDE PERMITTED IN UN-REINFORCED BASMT. FLOOR SLABS SHALL NOT EXCEED 1% BY WEIGHT OF CEMENT.

J. REINFORCEMENT FOR SLABS ON GRADE SHALL BE 6 X 6 - W2.9 X W2.9 WELDED WIRE FABRIC FOR 4" THICK SLABS AND 6 X 6 - W4.0 X W4.0 WELDED WIRE FABRIC FOR 5" THICK SLABS UNLESS NOTED OTHERWISE.

K. ALL CONCRETE INCLUDING FOUNDATION WORK IS TO BE VIBRATED. VIBRATORS SHALL NOT BE USED TO TRANSPORT CONCRETE

L. ALL EMBEDMENTS, INCLUDING ANCHOR BOLTS, SHALL BE IN PLACE PRIOR TO POURING CONCRETE

FOUNDATION & EARTHWORK:

A. ALL EARTHWORK AND SUB GRADE PREPARATION SHALL BE EXECUTED AS PER RECOMMENDATIONS DESCRIBED IN THE SOIL AND FOUNDATION REPORT.

B. A QUALIFIED SOILS ENGINEER SHALL OBSERVE THE FTG. EXCAVATIONS PRIOR TO POURING FTG. TO VERIFY THE BEARING STRATUM IS PROPERLY PREPARED.

C. PROVIDE WEATHER TIGHT COVERING FOR ALL FOUNDATIONS AFTER EXCAVATION; DO NOT EXPOSE TO RAINWATER OR FREEZING.

6 GENERAL NOTES

SCALE: N/A

FOOTING FOUNDATION DETAILS

BASEMENT CONSTRUCTION

COLORADO REGION

MASTER DETAIL

RICHMOND AMERICAN HOMES

4350 S. MONACO ST. DENVER, CO 80212

GREEN CITY CONSULTING

3801 E. FLORIDA AVE., SUITE #102 DENVER, CO 80210

PHONE: (303) 758-8880 FAX: (303) 758-8881

DATE: 04/13/2021

DESIGNED BY: RAN

DRAWN BY: MJH/RAN

CHECKED BY: RAN

PROJECT #: GCC001-0012009

SCALE: SEE PLAN

ISSUE DATE: 01/02/2009

DESIGN CODE: SEE FOUND. PLAN

CLIENT: RICHMOND

REVISIONS

DATE: # DESCRIPTION: BY:

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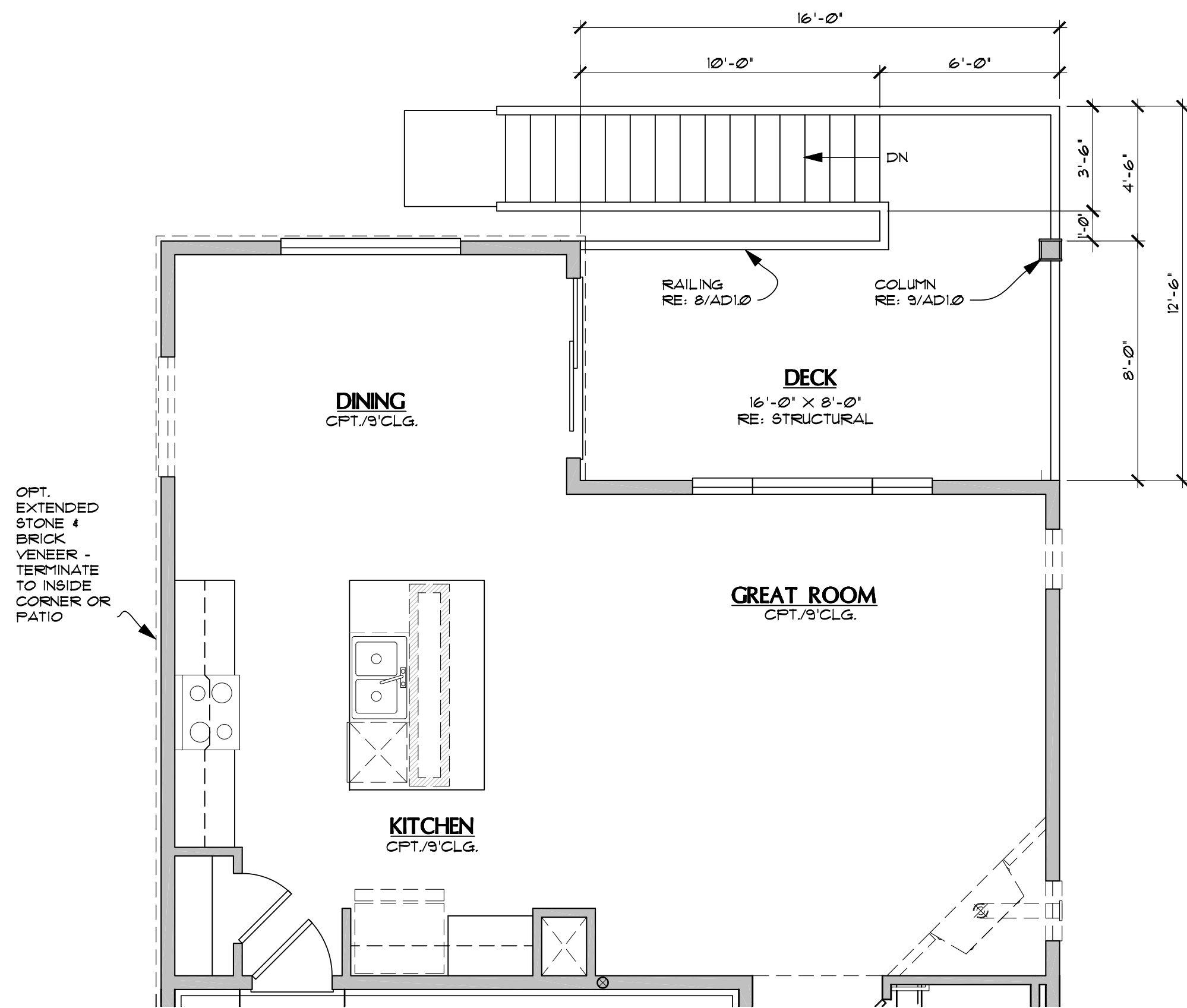
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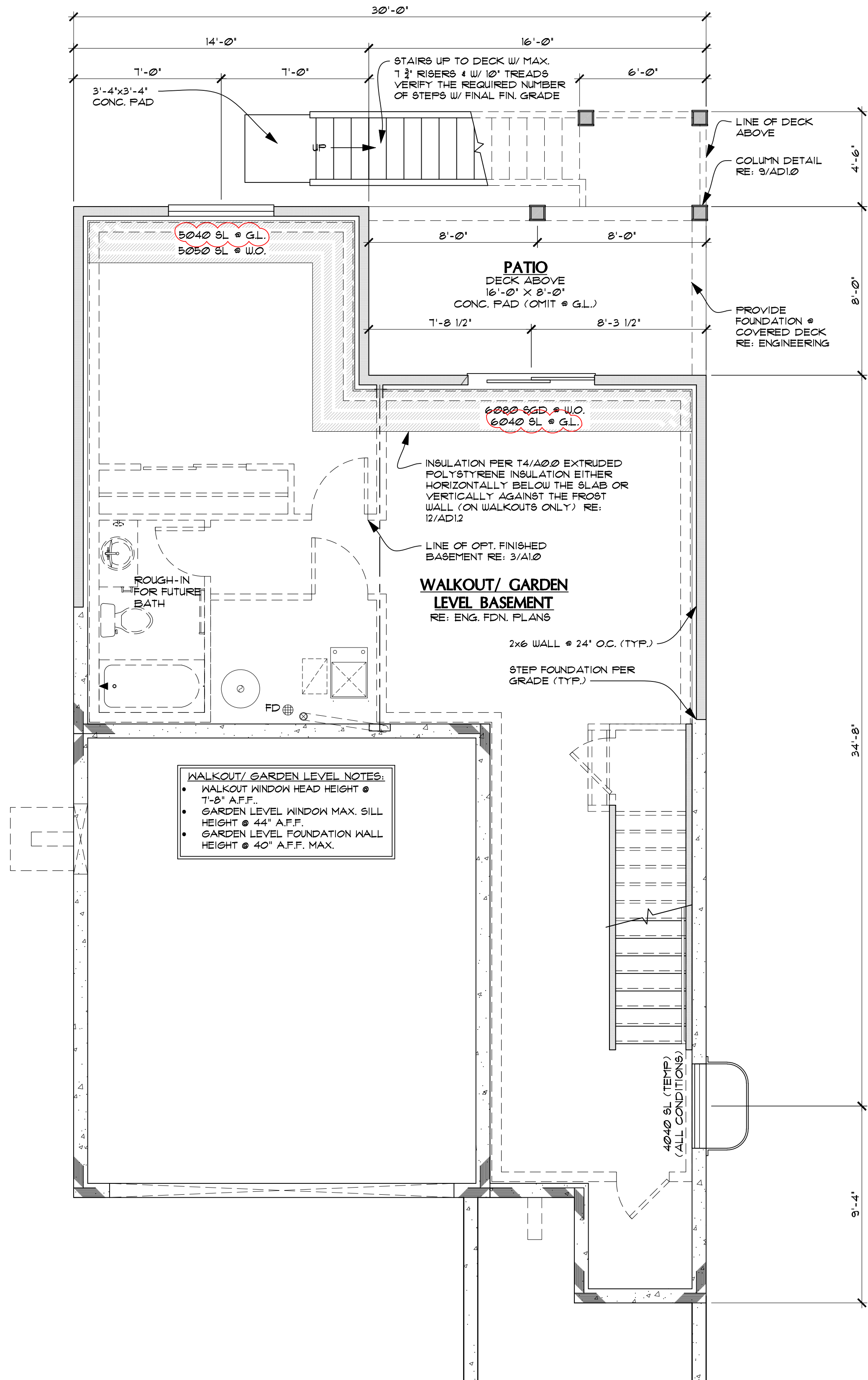
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SHEET #: CD-3

REVIEWED
By Joe Richards at 12:26 pm, Aug 31, 2021



2 OPT. WALKOUT/GARDEN LEVEL FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"
SIMILAR AT ALL ELEVATIONS
RE: 1/A1.0 FOR ADDITIONAL NOTES AND DIMENSIONS



1 OPT. WALKOUT/GARDEN LEVEL BASEMENT FLOOR PLAN
SCALE: 1/4" = 1'-0"
SIMILAR AT ALL ELEVATIONS
RE: 1/A1.0 FOR ADDITIONAL NOTES AND DIMENSIONS

ARAPAHOE COUNTY BUILDING DIVISION PLAN
REVIEW DOES NOT GRANT APPROVAL FOR ANY
VIOLATIONS OF ADOPTED BUILDING CODES. CODE
VIOLATIONS FOUND DURING FIELD INSPECTIONS
MUST BE CORRECTED.

RICHMOND
AMERICAN HOMES

DENVER
4350 S. Monaco Street
Denver, CO 80237 (303) 773-2727

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Date: 08/06/19

Revisions:
D712-001 03/26/21
D712-002 08/17/21

COPPERLEAF

Plan Number:

D712

Plan Name:

LIESEL

Sheet Title:

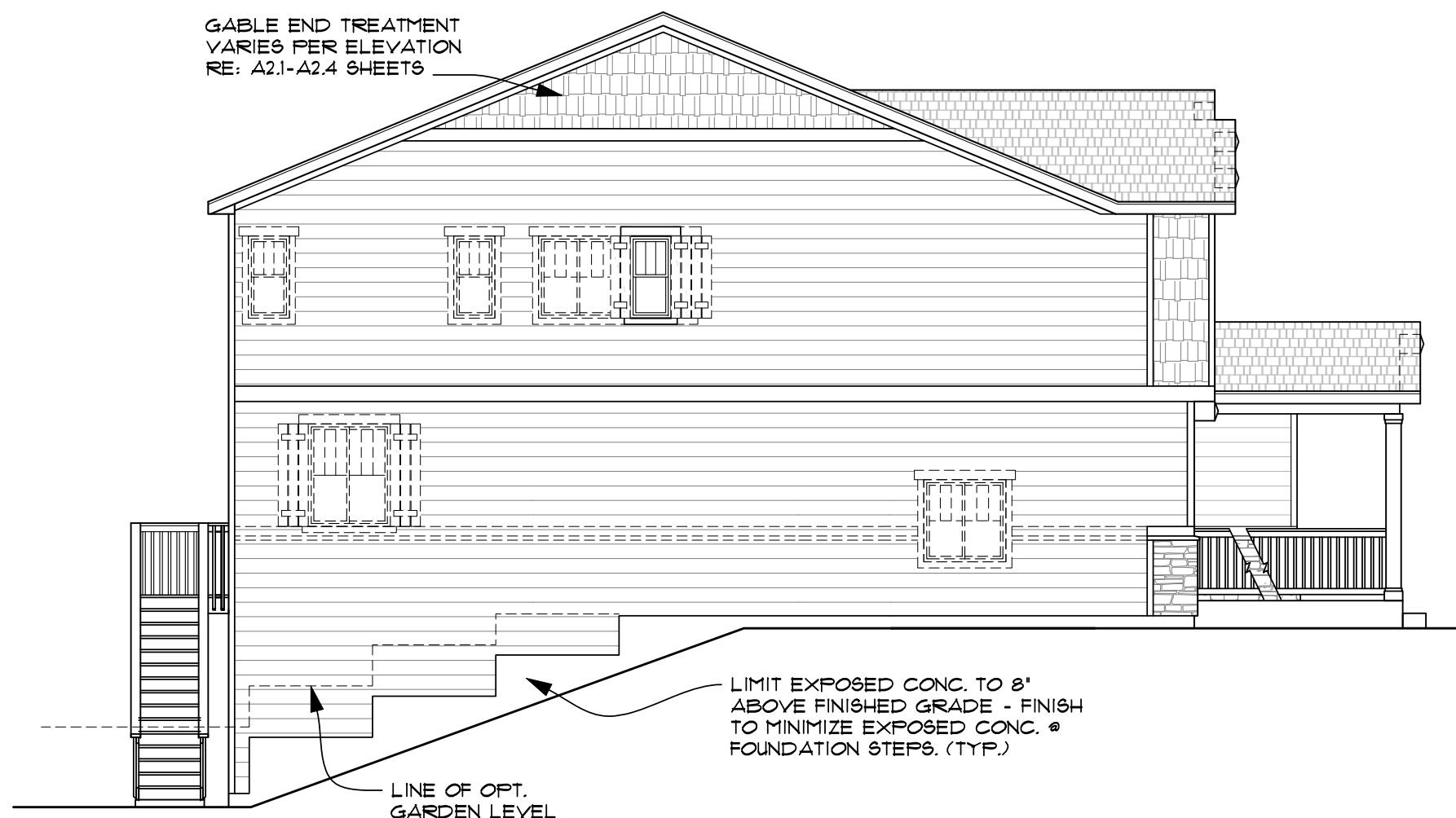
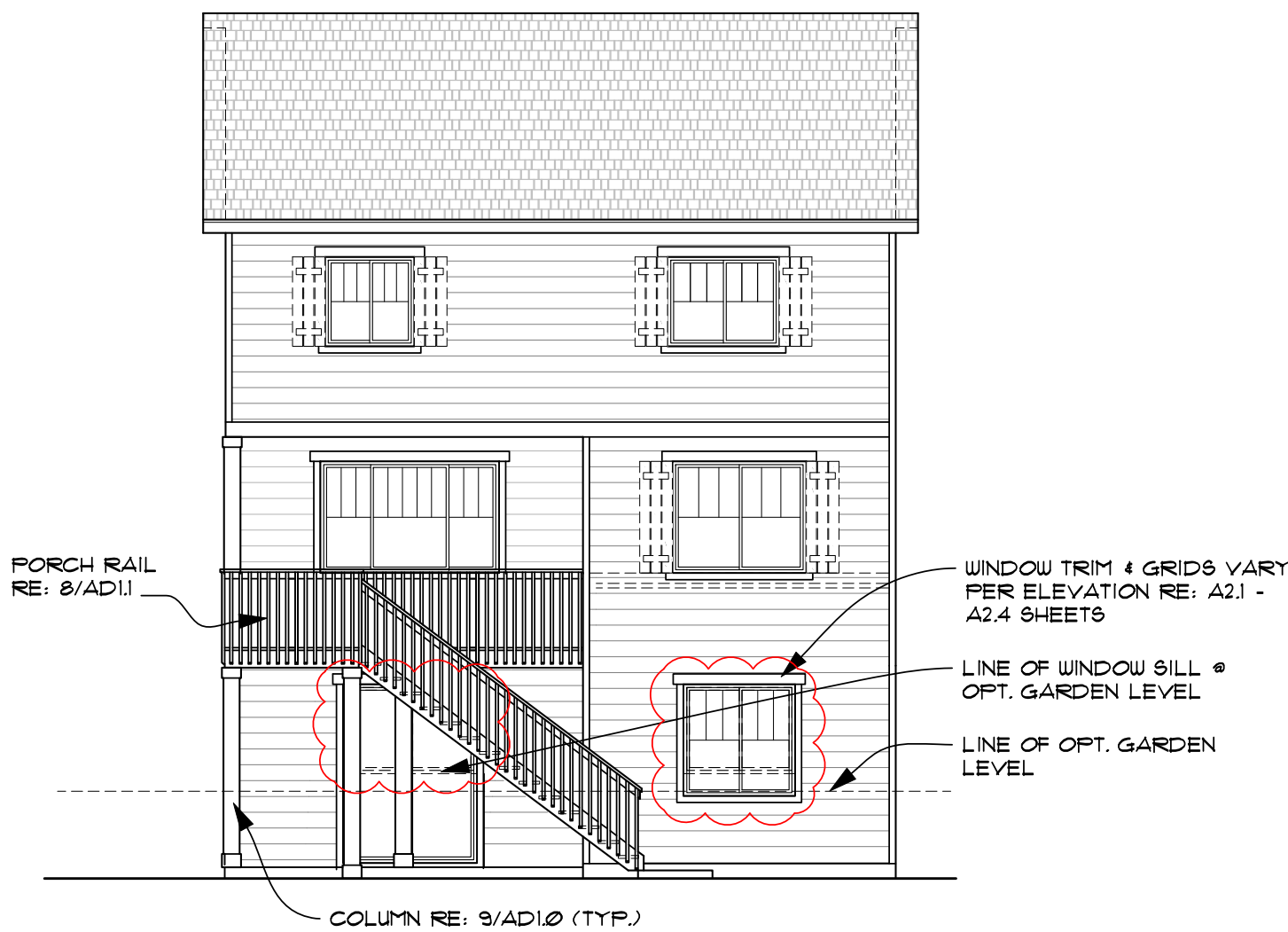
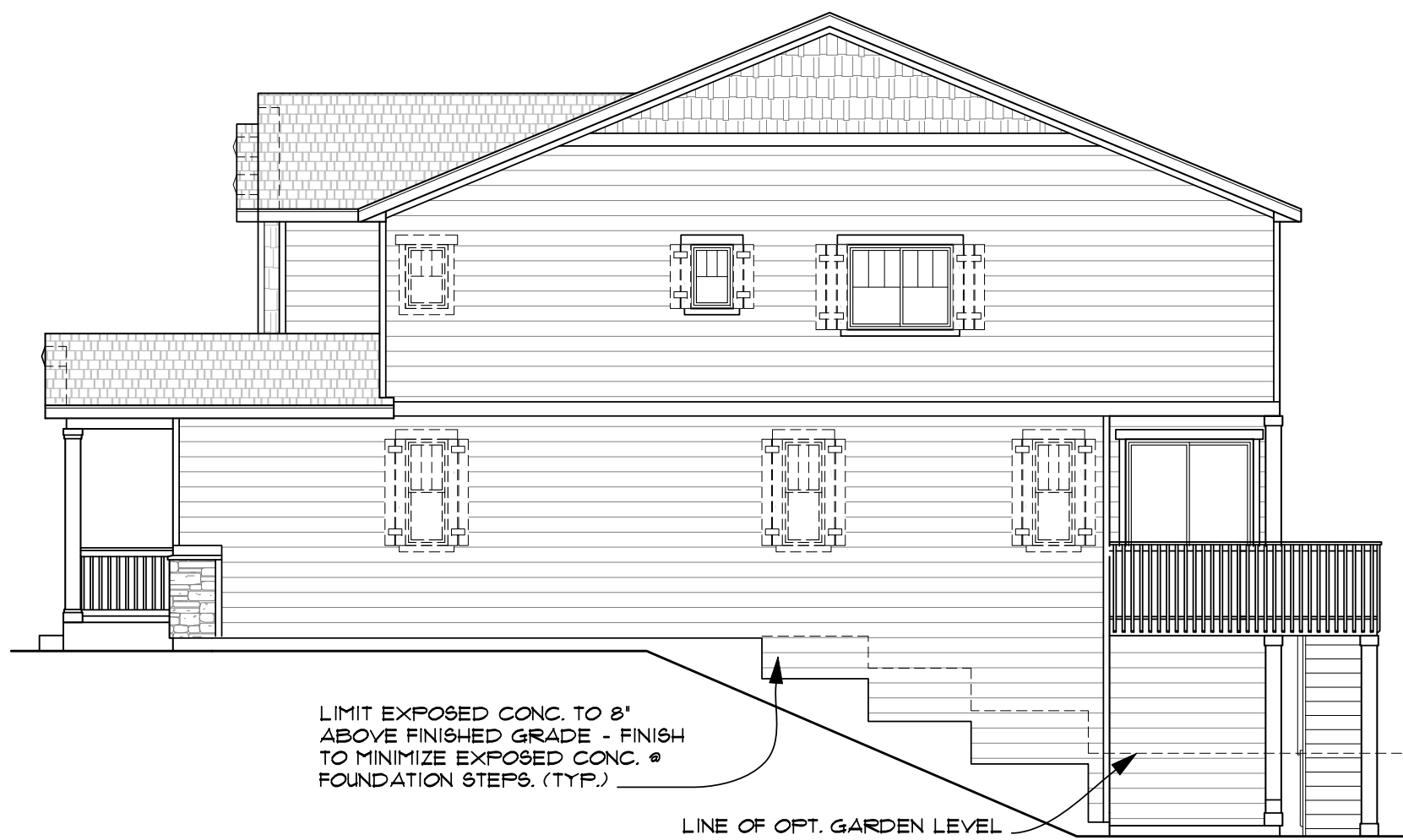
OPTIONAL
WALKOUT/
GARDEN
LEVEL PLANS

Sheet Number:

A3.2

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REVISED
12:27 pm, Aug 31, 2021



3

OPTIONAL WALKOUT/ GARDEN LEVEL RIGHT, REAR & LEFT ELEVATION A

SCALE: 1/8" = 1'-0"

FRONT ELEVATION DOES NOT CHANGE WITH THIS OPTION
ELEVATION A SHOWN - SIMILAR AT ALL ELEVATIONS
RE: A2.1-A2.4 SHEETS FOR ADDITIONAL NOTES & DIMENSIONS

REVIEWED
By Joe Richards at 12:27 pm, Aug 31, 2021

ARAPAHOE COUNTY BUILDING DIVISION PLAN
REVIEW DOES NOT GRANT APPROVAL FOR ANY
VIOLATIONS OF ADOPTED BUILDING CODES. CODE
VIOLATIONS FOUND DURING FIELD INSPECTIONS
MUST BE CORRECTED.



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Date: 08/06/19
Revisions:
D712-002 08/17/21

COPPERLEAF

Plan Number:
D712

Plan Name:
LIESEL

Sheet Title:
OPT.
WALKOUT/
GARDEN LEVEL
ELEVATIONS

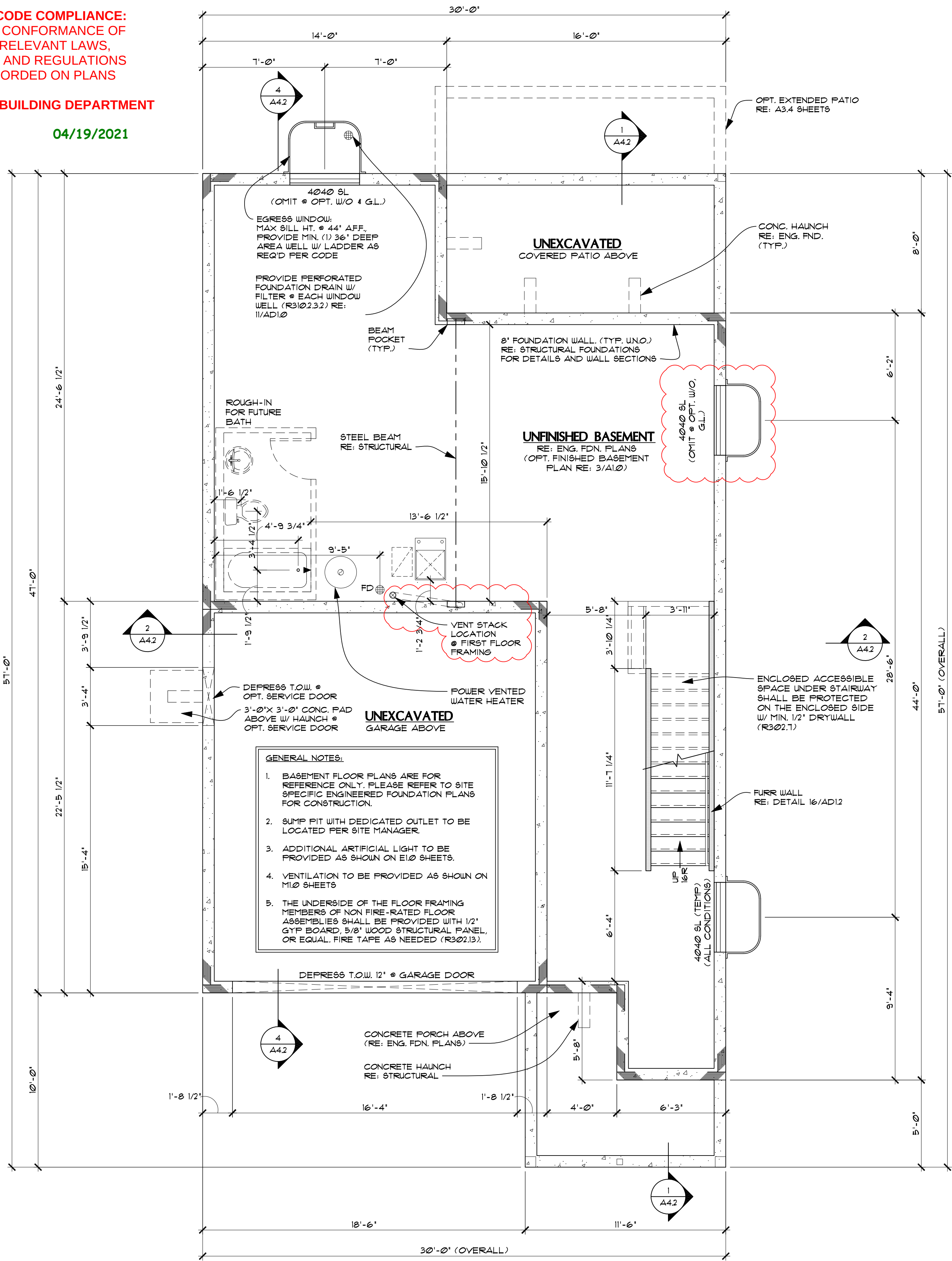
Sheet Number:
A3.2
b

REVISED
12:27 pm, Aug 31, 2021

REVIEWED FOR CODE COMPLIANCE:
REVIEW SUBJECT TO CONFORMANCE OF
APPLICABLE CODES, RELEVANT LAWS,
ORDINANCES, RULES AND REGULATIONS
AND NOTATIONS RECORDED ON PLANS

ARAPAHOE COUNTY BUILDING DEPARTMENT

BY: MCH 04/19/2021



1 BASEMENT FLOOR PLAN @ ELEVATION A
SCALE: 1/4" = 1'-0" SIMILAR AT ELEVATION D



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Date: 08/06/19

Revisions:
D712-001 03/26/21

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Plan Number:

D712

Plan Name:

LIESEL

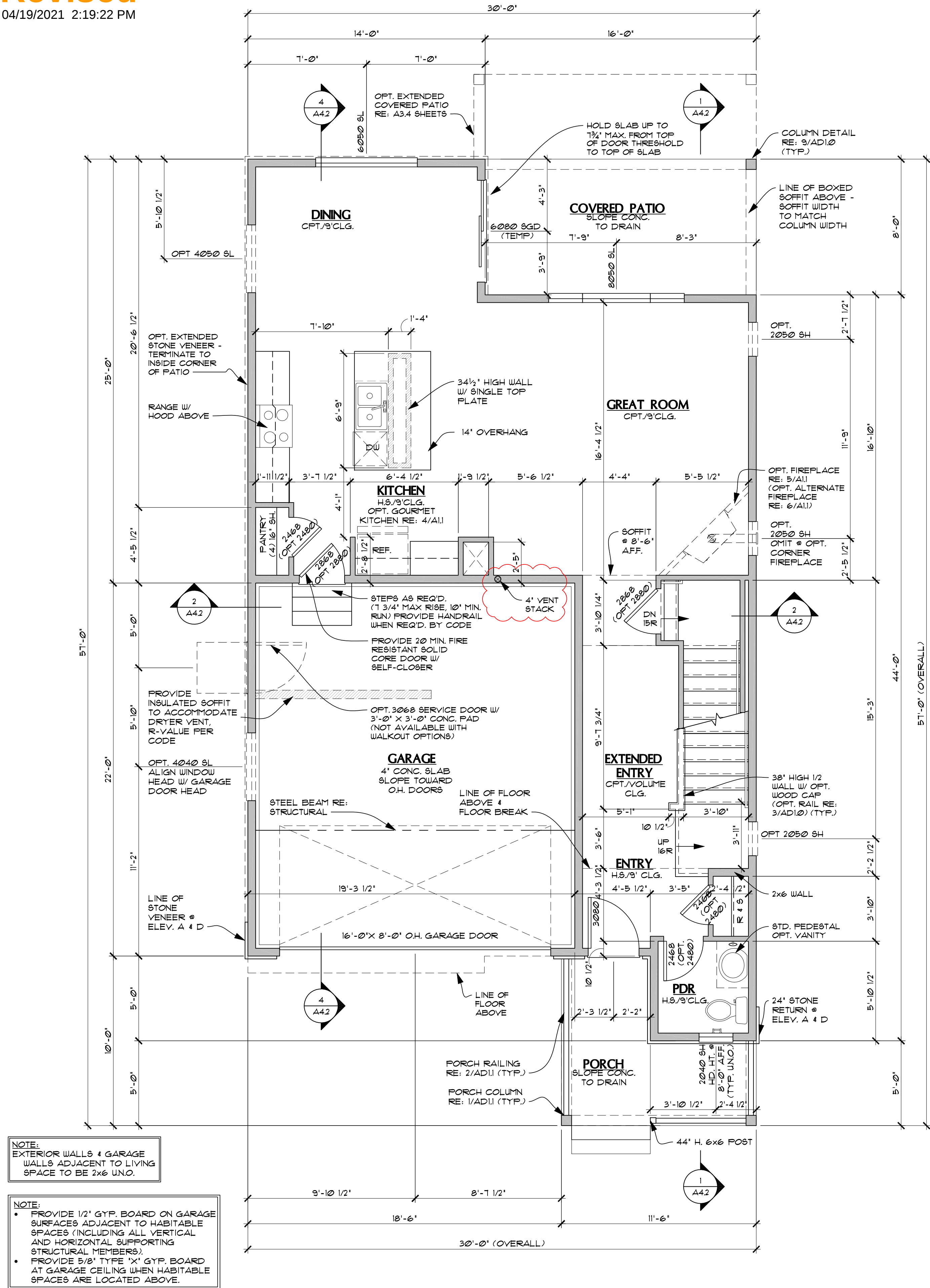
Sheet Title:

BASEMENT
FLOOR PLAN

Sheet Number:

A1.0

a



1 FIRST FLOOR PLAN @ ELEVATION A
SCALE: 1/4" = 1'-0"

SIMILAR AT ELEVATION D



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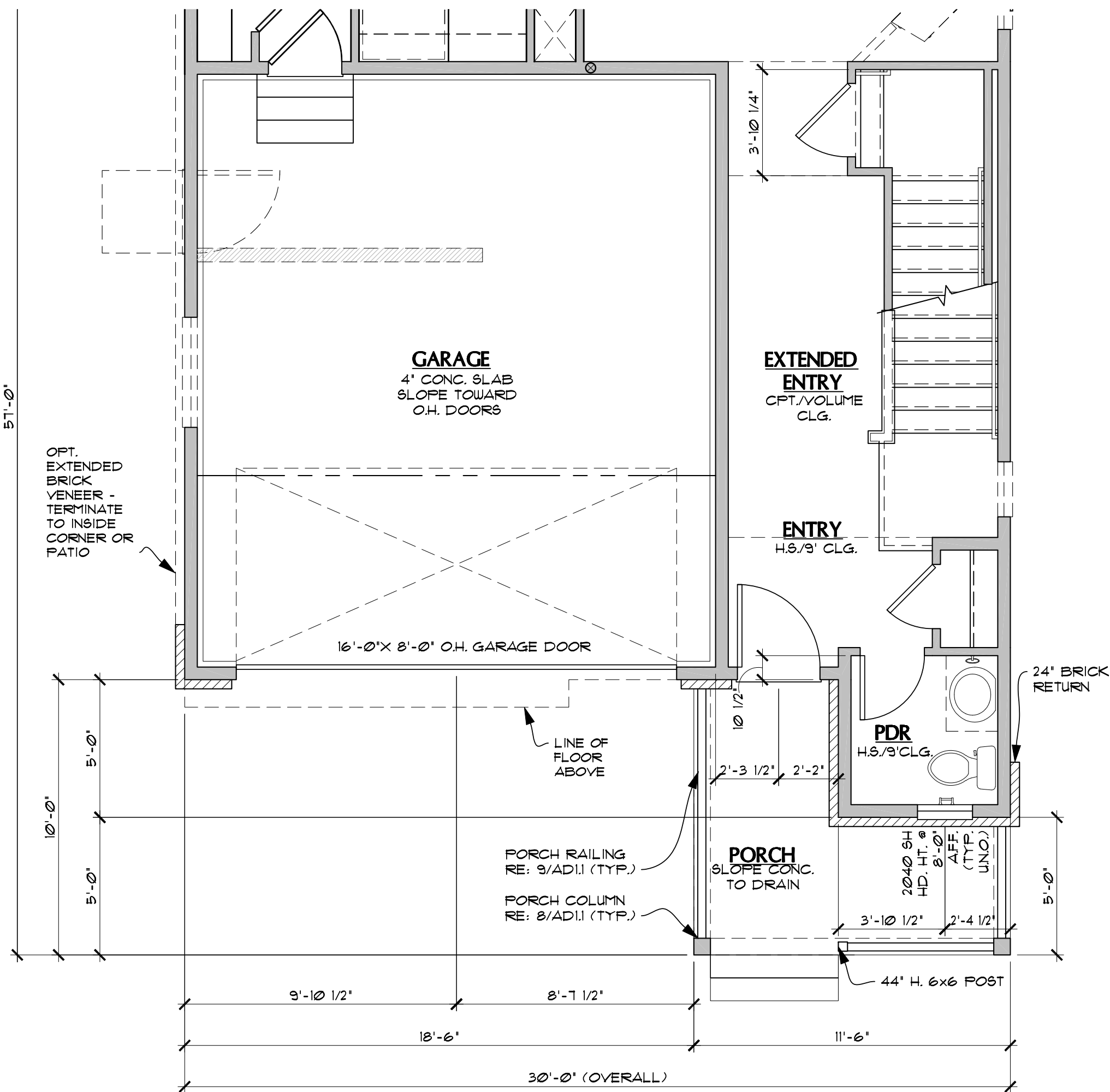
Plan Number:
D712

Plan Name:
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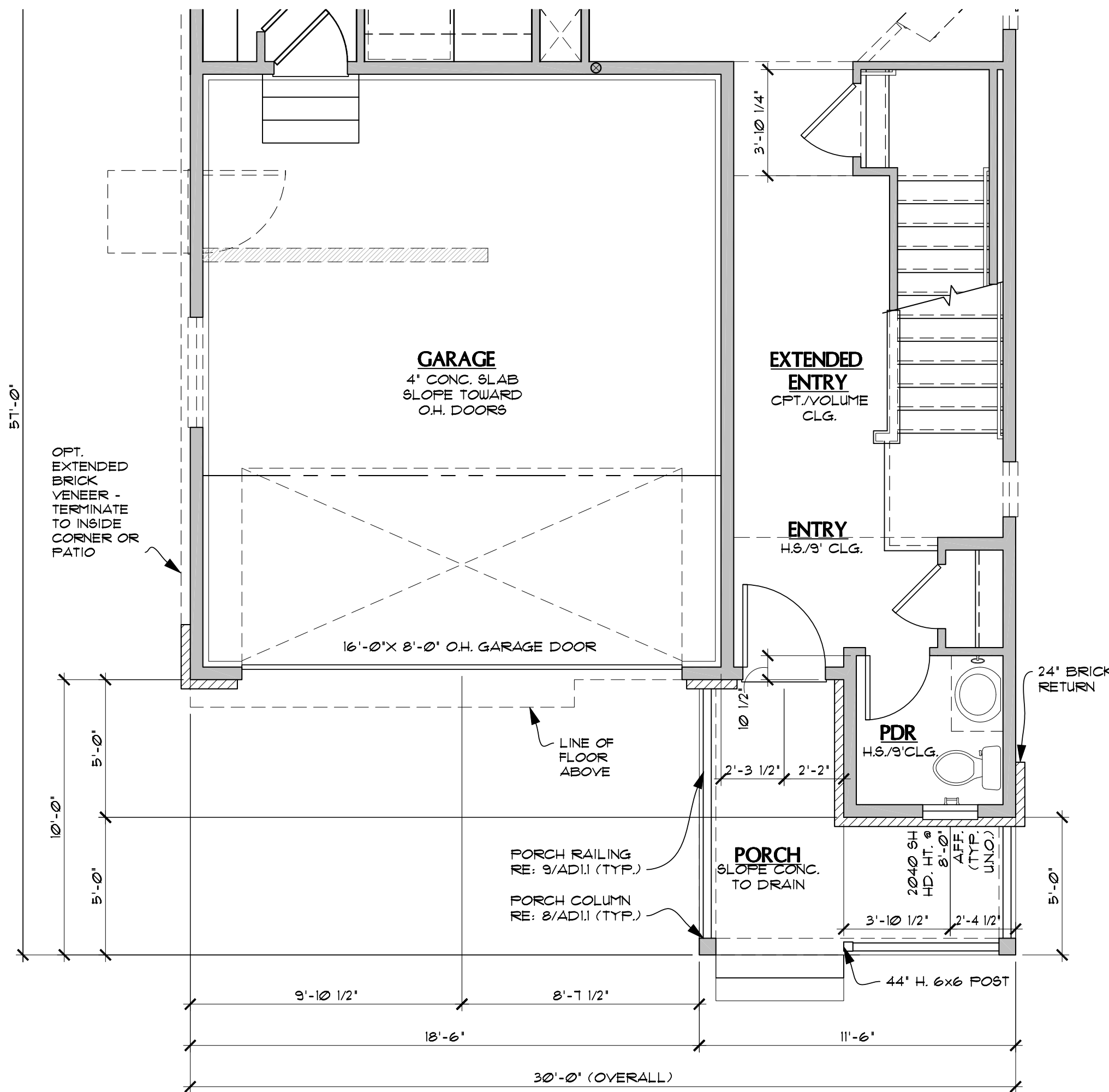
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FIRST FLOOR PLANS

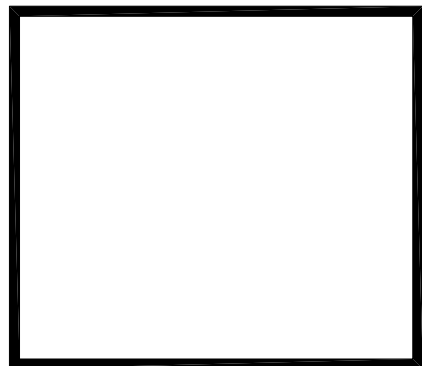
Sheet Number:
A1.1
a



3 FIRST FLOOR PLAN @ ELEVATION C
SCALE: 1/4" = 1'-0"
RE: 1/A10 FOR ADDITIONAL NOTES AND DIMENSIONS



2 FIRST FLOOR PLAN @ ELEVATION B
SCALE: 1/4" = 1'-0"
RE: 1/A10 FOR ADDITIONAL NOTES AND DIMENSIONS



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Sheet Title:

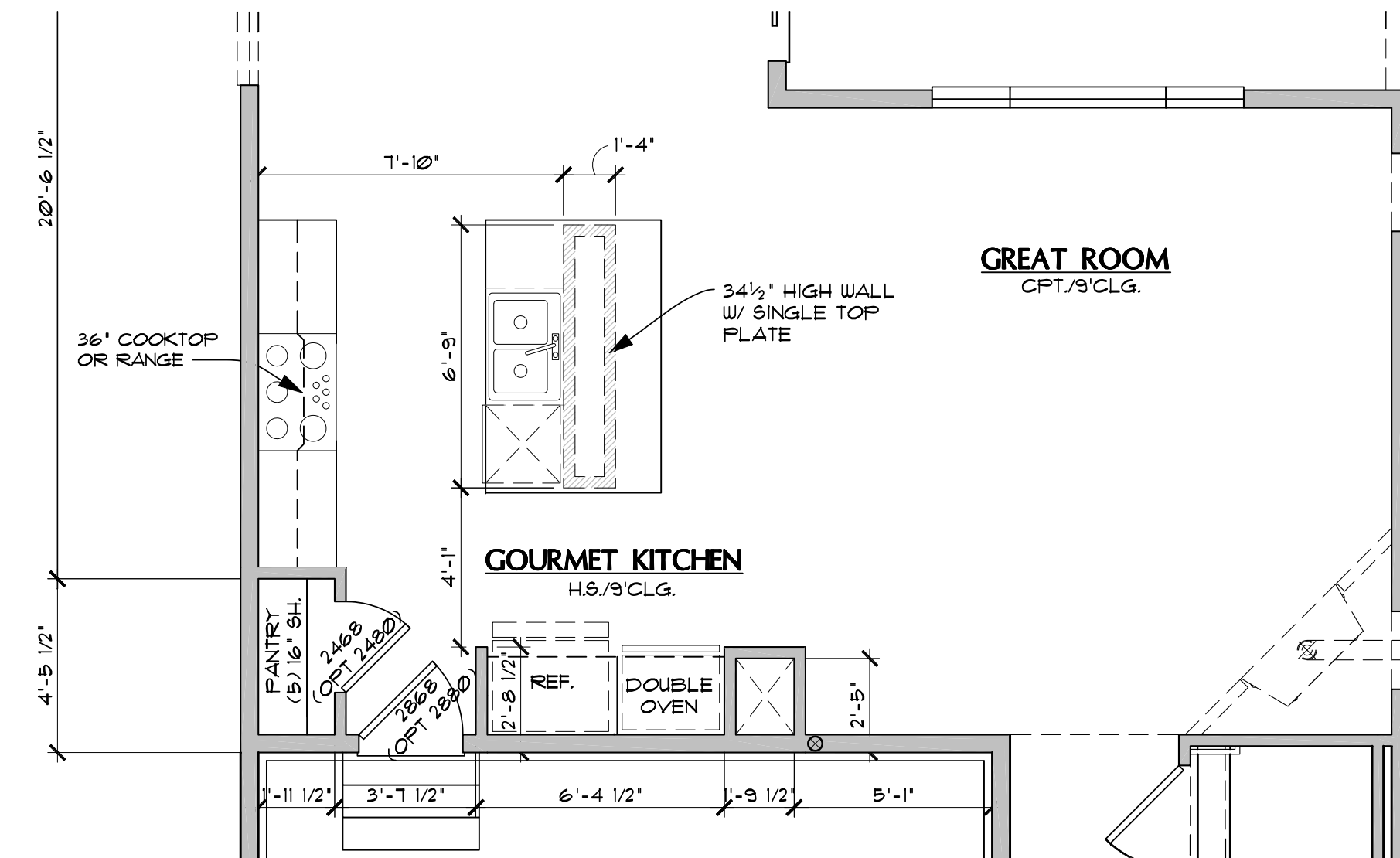
FIRST FLOOR
PARTIAL
PLANS

Sheet Number:

A1.1

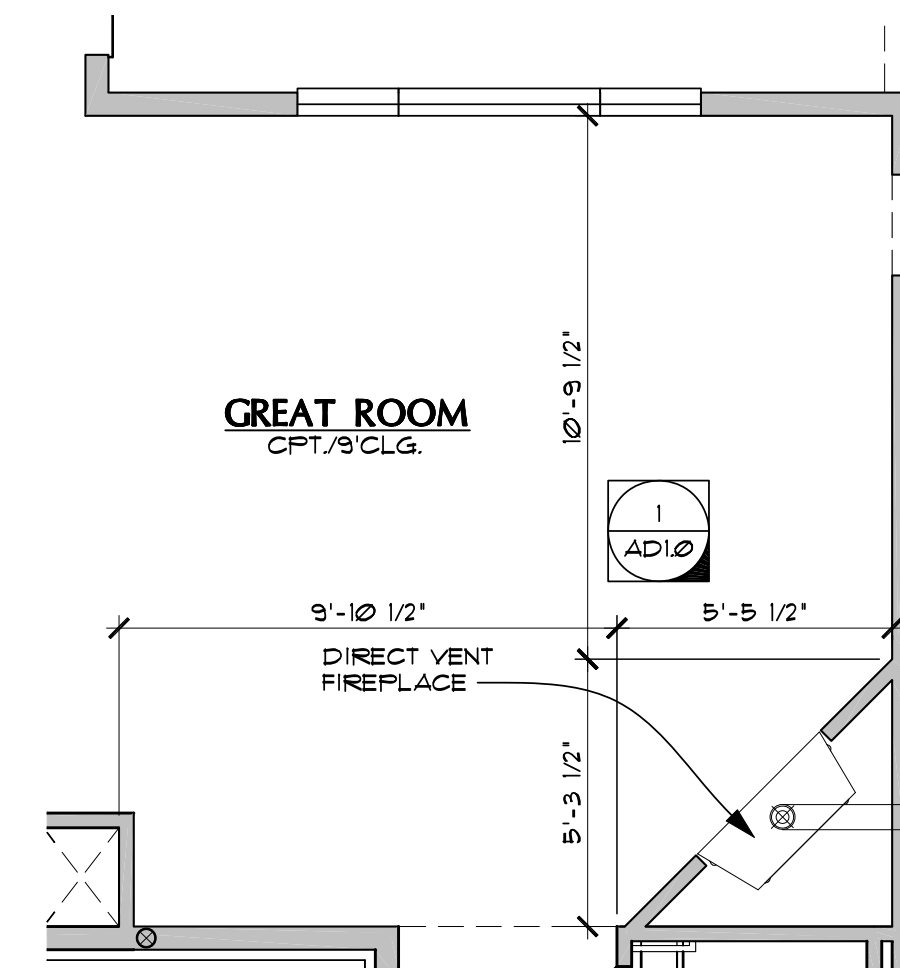
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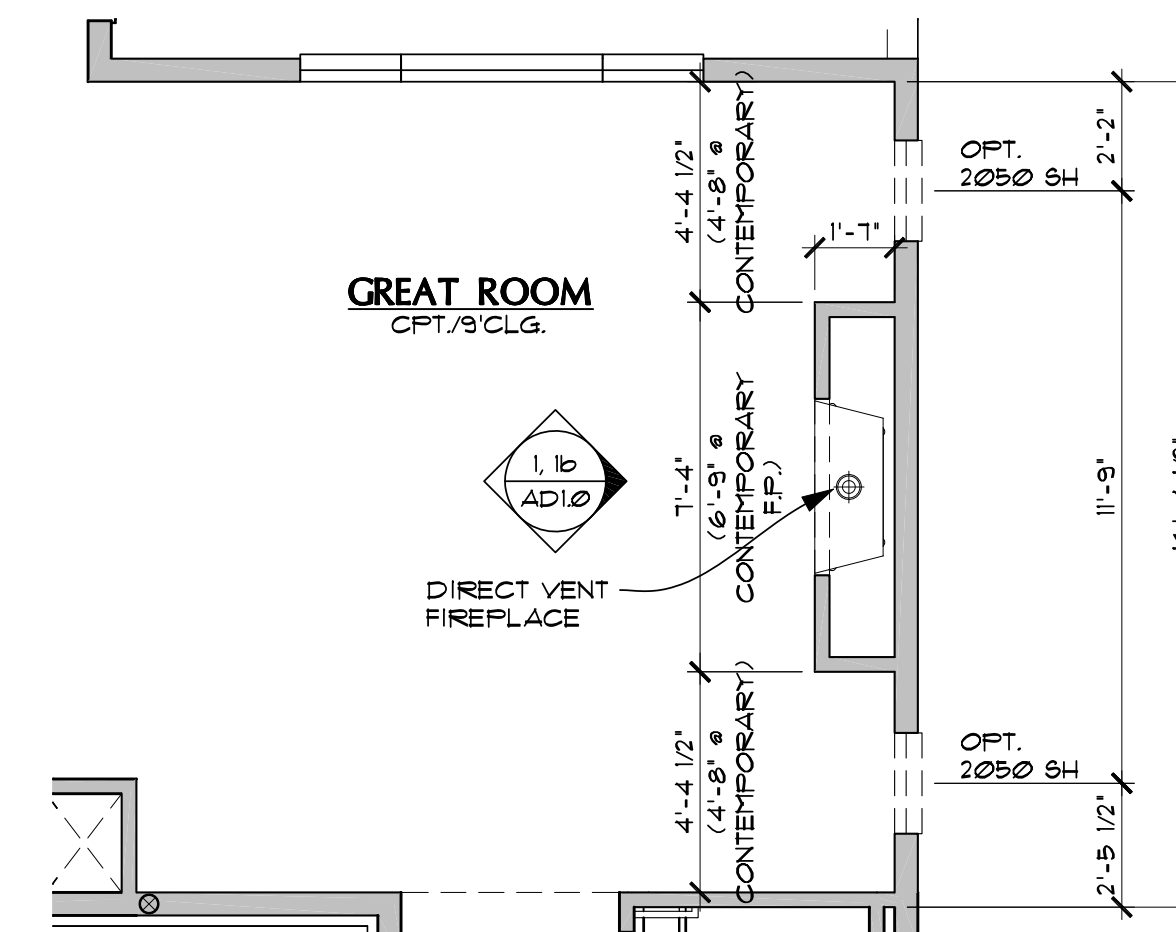
4 OPT. GOURMET KITCHEN
SCALE: 1/4" = 1'-0" SIMILAR

SIMILAR AT ALL ELEVATIONS



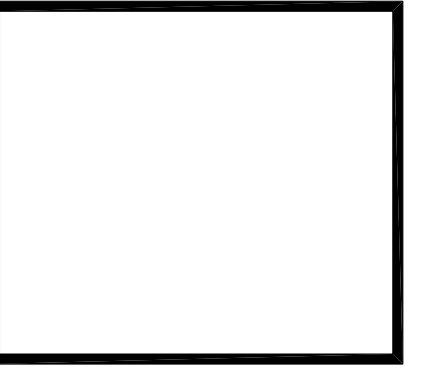
5 OPT. FIREPLACE
SCALE: 1/4" = 1'-0" RE: 1/A1.1

RE: 1/A1.1 FOR ADDITIONAL NOTES AND DIMENSIONS



6 OPT. ALTERNATE FIREPLACE
SCALE: 1/4" = 1'-0" SIMILAR AT A

SIMILAR AT ALL ELEVATIONS



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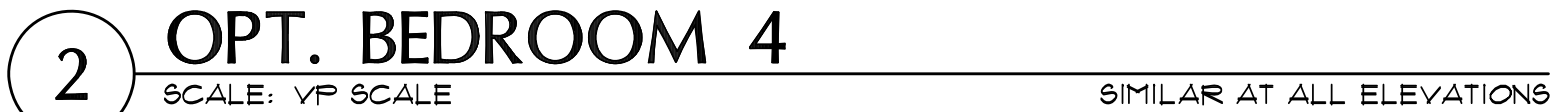
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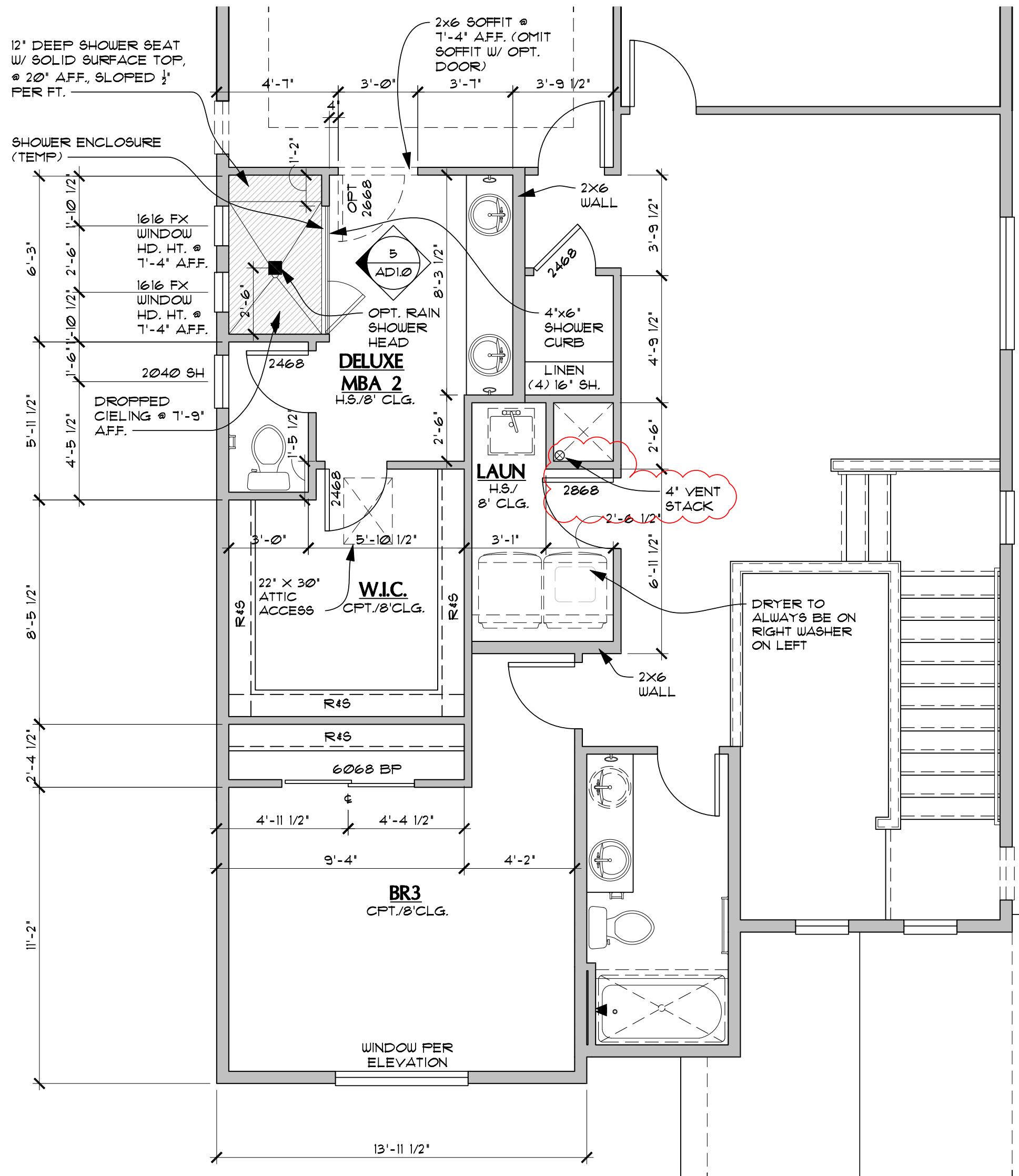
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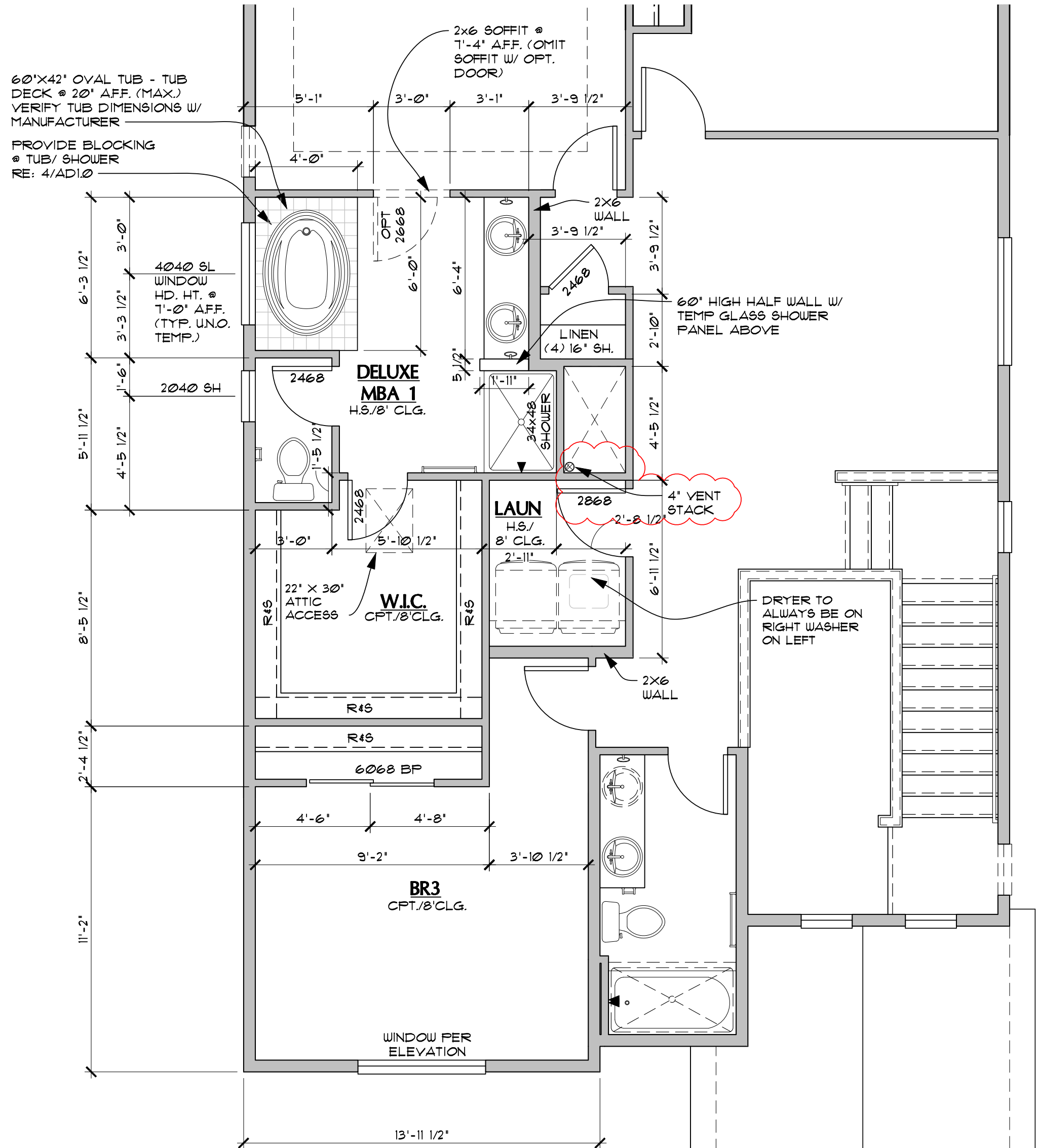
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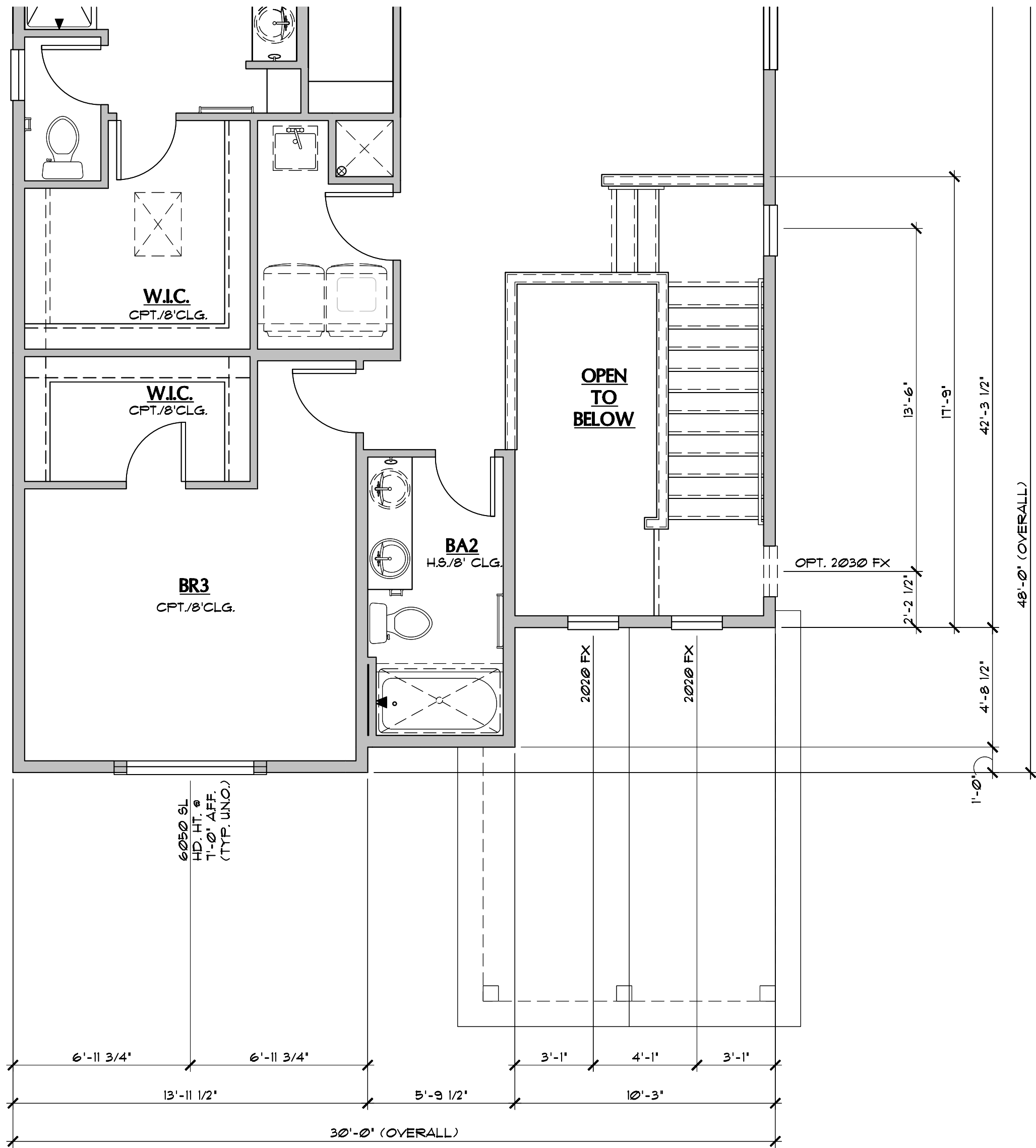
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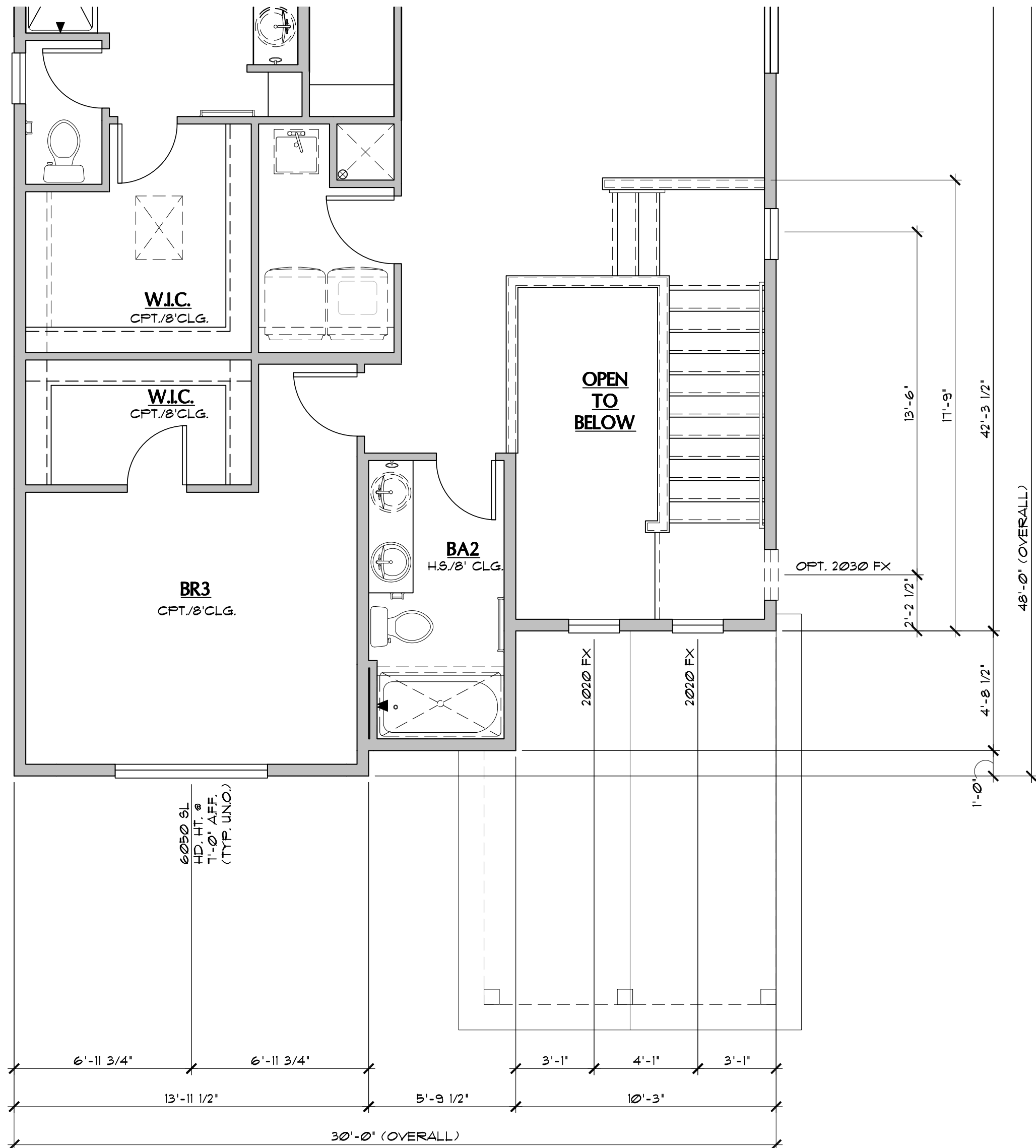


- MASTER BATH SHOWER NOTES:
- PROVIDE BLOCKING @ SHOWER RE: 4/AD10
 - PROVIDE SHOWER SEAT W/ OPT. SOLID SURFACE TOP, TOP OF SEAT @ 20" AFF. SLOPED 1/2" PER FT.
 - PROVIDE 4" WIDE X 6" HIGH CURB AT SHOWER W/ TEMPERED GLASS ENCLOSURE
 - PROVIDE DROPPED CEILING OVER SHOWER @ 1'-3" AFF.
 - TILE TO WRAP INSIDE WALLS TO CEILING - NO TILE ON CEILING
 - WINDOWS TO BE WRAPPED WITH WALL TILE
 - FRONT SIDE OF SHOWER CURB TO BE FINISHED WITH TILE IN LIEU OF BASE TRIM





6 SECOND FLOOR PARTIAL PLAN @ ELEV. C
SCALE: 1/4" = 1'-0"
RE: 1/A12 FOR ADDITIONAL NOTES AND DIMENSIONS
SIMILAR AT ELEVATION D



5 SECOND FLOOR PARTIAL PLAN @ ELEV. B
SCALE: 1/4" = 1'-0"
RE: 1/A12 FOR ADDITIONAL NOTES AND DIMENSIONS



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Plan Number:

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Plan Name:

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Sheet Title:

SECOND FLOOR
PARTIAL PLANS

Sheet Number:

A1.2

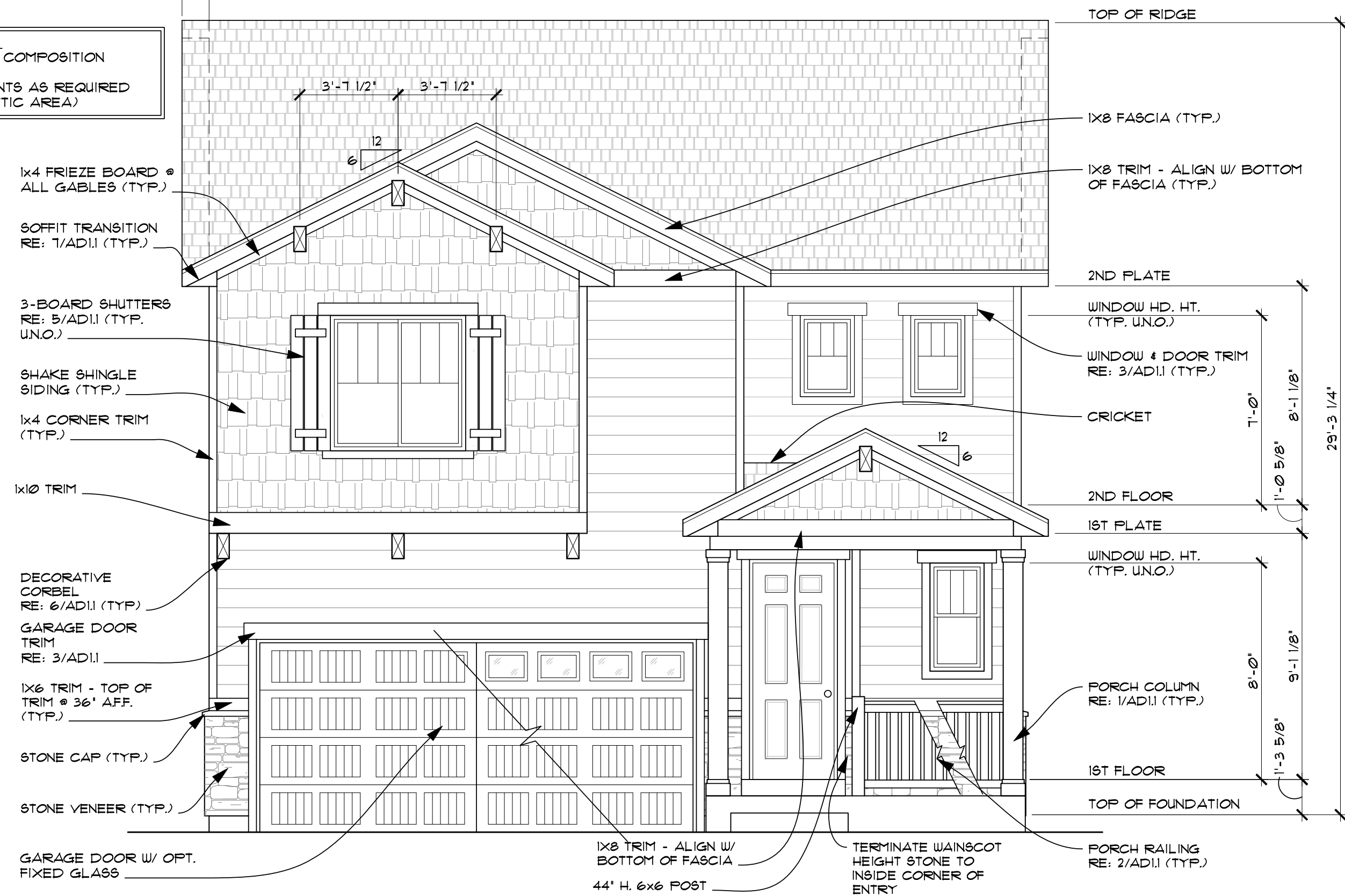
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R:\Colorado\Denver Division\Copperleaf (Arapahoe County)\Copperleaf D712 Elevations.dwg, 3/26/2021 9:25:20 AM, T:\media

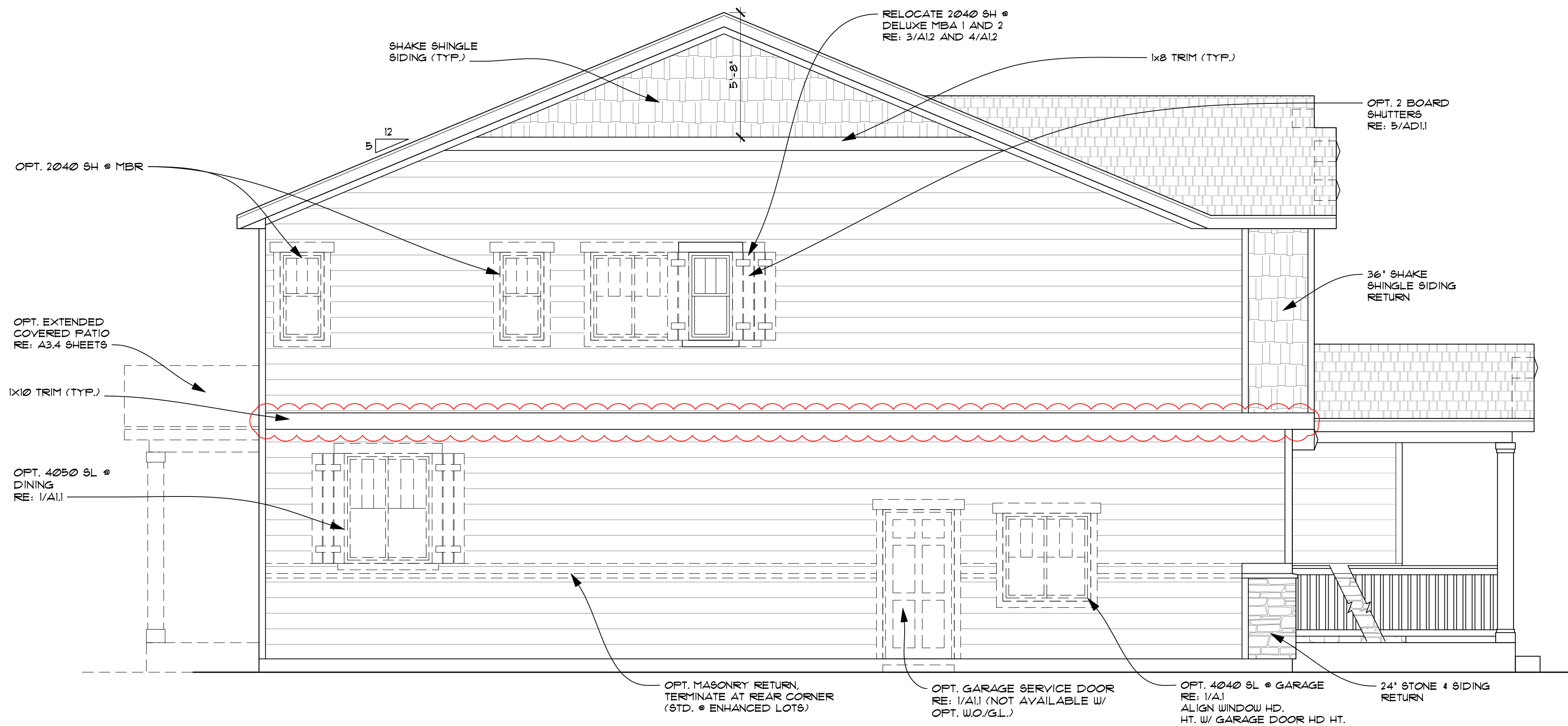
Revised

04/19/2021 2:19:23 PM

ROOF NOTES:
• ASPHALT COMPOSITION SHINGLES
• ROOF VENTS AS REQUIRED (1/300 ATTIC AREA)



1 FRONT ELEVATION A
SCALE: 1/4" = 1'-0"



2 LEFT ELEVATION A
SCALE: 1/4" = 1'-0"

ENHANCED LOT ELEVATIONS TO INCLUDE:

- LEFT ELEVATION/ GARAGE SIDE – EXTENDED STONE TO REAR CORNER, SHUTTERS, WINDOW AT GARAGE, WINDOW @ DINING & WINDOW @ MBR
- REAR ELEVATION – SHUTTERS & WAINSCOT HT. MASONRY ON REAR OR EXTENDED COVERED PATIO (RETURN MASONRY 24" ON LEFT SIDE AND TO INSIDE CORNER OF PATIO)
- RIGHT ELEVATION/ NON-GARAGE SIDE – WINDOWS @ STAIR LANDING, WINDOWS @ GREAT ROOM & SHUTTERS

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Revisions:

D712-001 03/26/21

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Plan Number:

D712

Plan Name:

LIESEL

Sheet Title:

ELEVATION A

Sheet Number:

A2.1

a



ELECTRICAL NOTES:

1. SUMP PIT WITH DEDICATED GFCI OUTLET SHALL BE LOCATED PER THE SITE MANAGER.
2. PROVIDE HIGH EFFICACY LAMPS FOR A MINIMUM OF 90% OF PERMANENTLY INSTALLED LIGHT FIXTURES.
3. OUTLETS IN THE FOLLOWING LOCATIONS SHALL BE GFCI PROTECTED:
 - DISHWASHER OUTLET (BOTH HARD-WIRED AND CORD & PLUG)
 - WITHIN 6'-0" OF ANY SINK, BATH TUB, OR SHOWER
 - WITHIN THE LAUNDRY ROOM
4. ALL TEST / RESET BUTTONS FOR GFCI DEVICES SHALL BE READILY ACCESSIBLE OR SHALL BE PROTECTED BY A GFCI BREAKER
5. ALL RECEPTACLES IN WET AREAS SHALL HAVE LISTED "EXTRA-DUTY" IN USE COVERS
6. MAIN ELECTRICAL DISCONNECT TO BE LOCATED ON EXTERIOR OF HOUSE
7. TAMPER RESISTANT RECEPTACLES SHALL BE INSTALLED AS REQUIRED BY CODE



Electrical Legend

- | | |
|---|--|
|  | RECESSED LIGHT |
|  | WATER-PROOF RECESSED LIGHT |
|  | RECESSED DIRECTIONAL LIGHT |
|  | WALL MOUNTED SCONCE |
|  | FRONT ENTRY COACH LIGHT (SMALL) |
|  | FRONT ENTRY COACH LIGHT (LARGE) |
|  | REAR ENTRY COACH LIGHT (SMALL) |
|  | REAR ENTRY COACH LIGHT (LARGE) |
|  | GARAGE COACH LIGHT (SMALL) |
|  | GARAGE COACH LIGHT (LARGE) |
|  | 24' INCANDESCENT LIGHT BAR |
|  | 36' INCANDESCENT LIGHT BAR |
|  | FRONT ENTRY PENDANT LIGHT |
|  | CEILING MOUNTED LIGHT |
|  | NOOK CHANDELIER |
|  | DINING ROOM CHANDELIER (SMALL) |
|  | DINING ROOM CHANDELIER (MEDIUM) |
|  | DINING ROOM CHANDELIER (LARGE) |
|  | ENTRY PENDANT (SMALL) |
|  | ENTRY PENDANT (MEDIUM) |
|  | ENTRY PENDANT (LARGE) |
|  | FLUSH ENTRY MOUNTED LIGHT |
|  | SEMI-FLUSH ENTRY MOUNTED LIGHT |
|  | KITCHEN ISLAND PENDANT |
|  | BILLIARD/KITCHEN ISLAND PENDANT |
|  | FULL CHAIN LIGHT |
|  | KEYLESS LIGHT FIXTURE |
|  | LIGHT/EXHAUST FAN COMBINATION UNIT |
|  | 1X4 FLUORESCENT LIGHT FIXTURE |
|  | 2X4 FLUORESCENT LIGHT FIXTURE |
|  | DUPLEX OUTLET |
|  | WEATHER PROOF DUPLEX OUTLET (WP) |
|  | GROUND FAULT INTERRUPT DUPLEX OUTLET (GFI) |
|  | DEDICATED CIRCUIT OUTLET (DED) |
|  | SWITCHED DUPLEX OUTLET |
|  | CEILING MOUNTED DUPLEX OUTLET |
|  | CLG OUTLET FOR GARAGE DOOR OPENER |
|  | 220 VOLT OUTLET |
|  | FLOOR OUTLET |
|  | TELEPHONE OUTLET |
|  | CABLE TV OUTLET |
|  | SMOKE DETECTOR |
|  | CARBON MONOXIDE DETECTOR |
|  | DISPOSAL |
|  | EXHAUST FAN - MECH VENTED TO EXTERIOR |
|  | LOW VOLTAGE |
|  | JUNCTION BOX |
|  | THERMOSTAT |
|  | DOOR BELL |
|  | ELECTRICAL PANEL |
|  | SINGLE-POLE SWITCH |
|  | 3 WAY SWITCH |
|  | 4 WAY SWITCH |
|  | LOW VOLTAGE SWITCH FOR GAS FIREPLACE |



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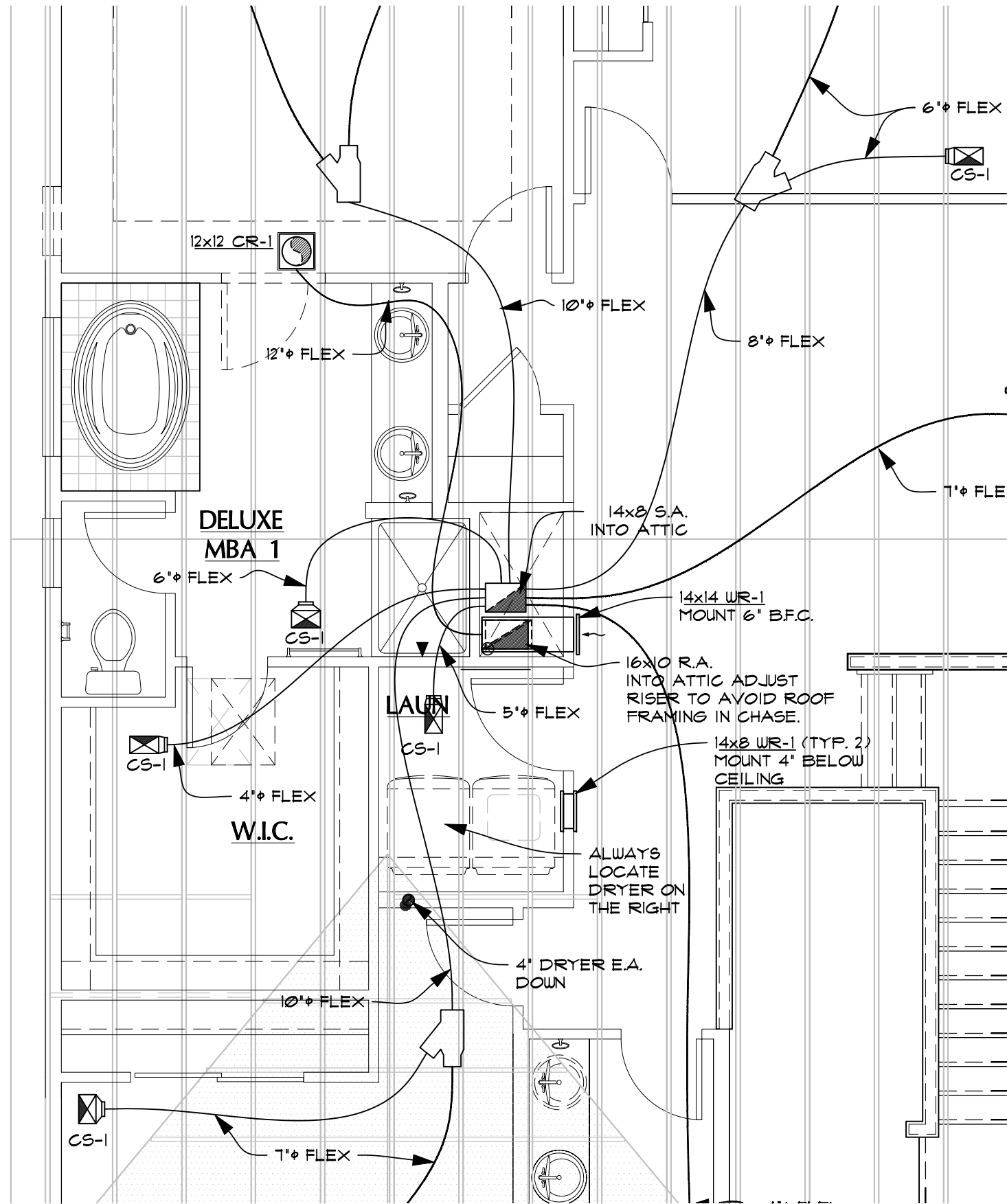
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SECOND FLOOR ELECTRICAL PLAN & OPTIONS

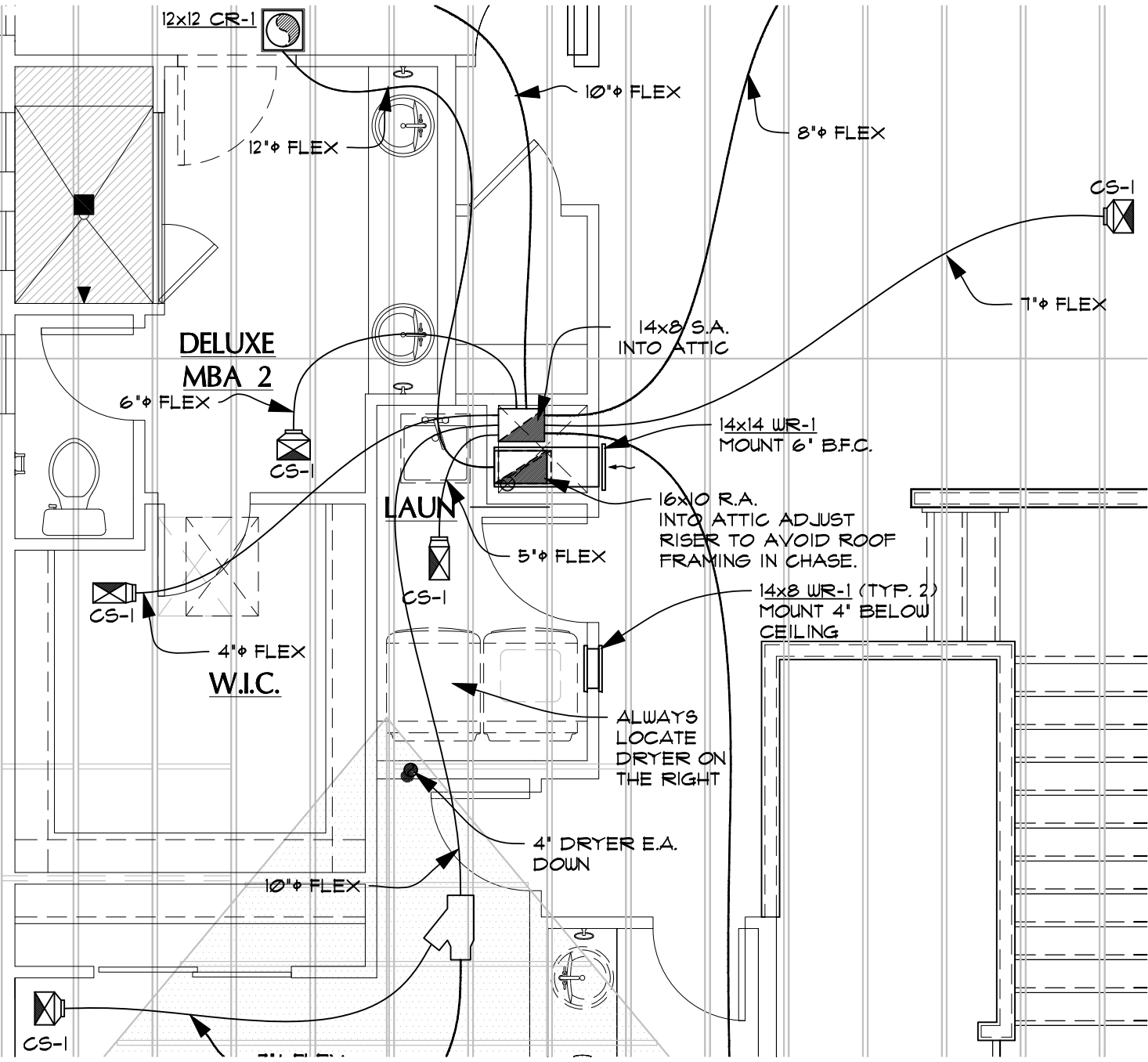
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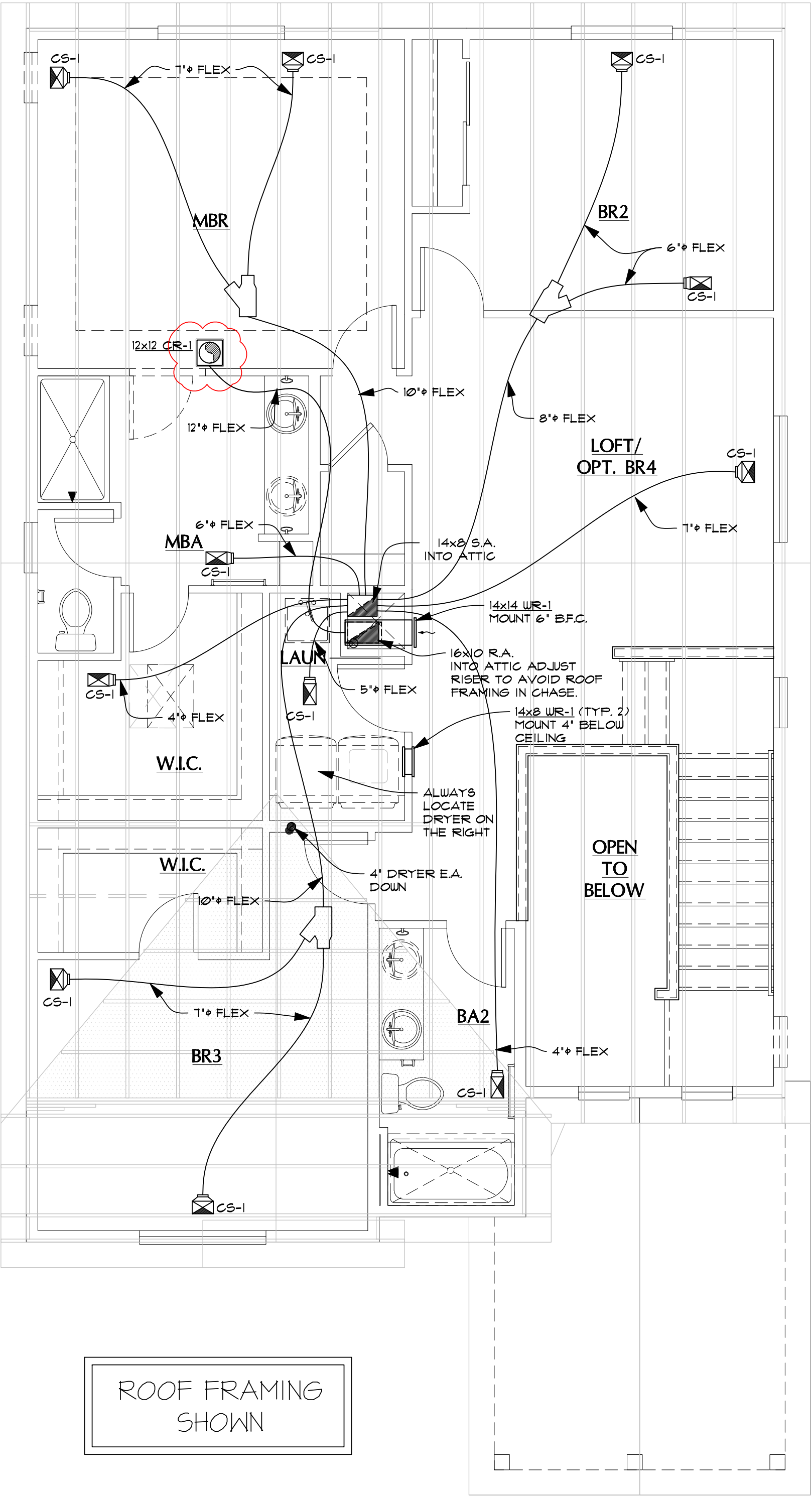
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2 OPT. DELUXE MBA 1 HVAC PLAN
SCALE: 1/4" = 1'-0"



3 OPT. DELUXE MBA 2 HVAC PLAN
SCALE: 1/4" = 1'-0"



1 SECOND FLOOR HVAC PLAN
SCALE: 1/4" = 1'-0"

MECHANICAL LEGEND AND FITTINGS SCHEDULE			
ID. NUMBER	EQUAL LENGTH	FITTING DESCRIPTION	SYMBOL
1A	35	90 DEG. ROUND TAKE OFF - NO TRANSITION	
2K0	50	ROUND FROM TOP WITH RECT. TRANSITION, 0 DSTR. BR	
2K1	60	ROUND FROM TOP WITH RECT. TRANSITION, 1 DSTR. BR	
2K2	65	ROUND FROM TOP WITH RECT. TRANSITION, 2 DSTR. BR	
2K3	70	ROUND FROM TOP WITH RECT. TRANSITION, 3 DSTR. BR	
2K4	75	ROUND FROM TOP WITH RECT. TRANSITION, 4 DSTR. BR	
2K5	80	ROUND FROM TOP WITH RECT. TRANSITION, 5 OR MORE BR	
2A0	35	ROUND TAKE OFF FROM SIDE, NO TRANSITION, 0 DSTR. BR	
2A1	45	ROUND TAKE OFF FROM SIDE, NO TRANSITION, 1 DSTR. BR	
2A2	55	ROUND TAKE OFF FROM SIDE, NO TRANSITION, 2 DSTR. BR	
2A3	65	ROUND TAKE OFF FROM SIDE, NO TRANSITION, 3 DSTR. BR	
2D0	40	RECT. TAKE OFF FROM SIDE	
2L	10-115	RECT. FROM TOP, NO TRANSITION	
4AD	60	ROUND TO RECT. 90 DEG. BOOT	
4G	80	FLOOR FROM ROUND HORIZ. - CUT RT. ANG.	
4H	50	FLOOR FROM ROUND HORIZ. - PARALLEL	
5G2	70	ROUND RETURN INTO PLENUM WITH 2 OR MORE RETURNS	
5H1	45	SQUARE ELBOW	
5N	55	VERTICAL DROP	
6B	10-110	RECTANGULAR BRANCH ON RETURN	
6C	10-115	ROUND BRANCH ON RETURN	
6O	10	CEILING RETURN BOOT	
8AA	20	5 PIECE ELBOW, R/D = 10	
8AT	30	5 PIECE ELBOW, R/D = 0.75	
8B5	30	RADIUS ELBOW WITH H/W = 1, R/W = 0.25	
8D1	80	SQUARE HARD BEND ELBOW, NO VANES	
8G	200	SQUARE ANGLE OFFSET, NO VANES	
9Q	55	RECT. HEADER - FLOW FROM HEADER	
11G	5	FLEX DUCT 90 DEG. RADIUS BEND, VELOCITY = 400	
11S	15	WYE	
12R	5	CONVERGING RECT. TRANSITION	
12S	30	ROUND TO OVAL WITH ANGLE TRANSITION	
101	120	RECT. TEE, NO VANES, H/W=0.5	
FITTING DESCRIPTION			SYMBOL
RETURN AIR WALL GRILLE			UR-1, UR-2, UR-3
SUPPLY AIR GRILLE			CS-1, CS-2
THERMOSTAT			FS-1
WALL TRANSFER GRILLE			
DIAMETER			
SUPPLY AIR RISER (BETWEEN FLOORS)			
RETURN AIR RISER (BETWEEN FLOORS)			
DAMPER			
SUPPLY AIR			SA
RETURN AIR			RA



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D712-001 03/26/21

COPPERLEAF

Plan Number:

D712

Plan Name:

LIESEL

Sheet Title:

SECOND FLOOR HVAC PLANS

Sheet Number:

M1.2

a