



West



East

South



A photograph of a dark grey house with a steep gable roof. A wooden fence runs across the middle ground. In the foreground, there are two trash bins (one green, one brown) and some green plants. The sky is clear blue.

North

GENERAL NOTES

SECTION 1 - GENERAL REQUIREMENTS

BUILDING JURISDICTION: EL PASO COUNTY, CO
JURISDICTION'S ADOPTED CODE: 2015 IBC/IRC (2017 PIKES PEAK REGIONAL BUILDING CODE)
BUILDING DESIGN LOADS:

ROOF SNOW LOAD: 30 PSF
ROOF DEAD LOAD: 15 PSF
FLOOR DEAD LOAD: 15 PSF
FLOOR LIVE LOAD: 40 PSF
WIND: ULT. WIND SPEED V3'S - 130 MPH, EXP. C
SEISMIC DESIGN CATEGORY: B

1. **ENGINEER: REFERENCES ON THE STRUCTURAL DRAWINGS TO 'ENGINEER' MEAN THE STRUCTURAL ENGINEER OF RECORD (SER). OTHER ENTITIES ARE SPECIFICALLY NOTED AS "CONTRACTOR'S ENGINEER", "MECHANICAL ENGINEER", ETC.**
2. **THESE NOTES SUPPLEMENT THE SPECIFICATIONS, WHICH SHALL BE REFERRED TO FOR ADDITIONAL REQUIREMENTS.**
3. **UNDERGROUND UTILITIES: LOCATE EXISTING UTILITIES, AND NOTIFY ENGINEER OF EXISTING UTILITIES OR SUB GRADE CONDITIONS WHICH INTERFERE WITH WORK.**
4. **EXISTING STRUCTURES:**
 - A. **CONTRACT DOCUMENTS HAVE BEEN PREPARED USING AVAILABLE DRAWINGS PROVIDED BY THE OWNER DURING DESIGN.**
 - B. **DURING CONSTRUCTION, THE CONTRACTOR MAY ENCOUNTER EXISTING CONDITIONS WHICH ARE NOT NOW KNOWN OR ARE AT VARIANCE WITH PROJECT DOCUMENTATION (DISCOVERY).**
 - C. **CONTRACTOR SHALL NOTIFY THE ENGINEER OF ALL CONDITIONS NOT PER THE CONTRACT DOCUMENTS. EXAMPLES INCLUDE:**
 - **SIZES OR DIMENSIONS OTHER THAN THOSE SHOWN.**
 - **DAMAGE OR DEGRADATION TO MATERIALS AND COMPONENTS.**
 - **CONDITIONS OF INSTABILITY OR LACK OF SUPPORT.**
 - **CONTRACTOR SHALL MAKE ALLOWANCE FOR THE RESOLUTION OF SUCH DISCOVERIES IN THE CONSTRUCTION AND CONTINGENCY FEE SCHEDULES.**
5. **USE OF DRAWINGS:**
 - A. **DO NOT SCALE DRAWINGS.**
 - B. **WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES AND SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN. DETAILS ON DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. DETAILS NOTED TO APPLY TO ALL SIMILAR CONDITIONS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ELSEWHERE ON THE PROJECT OR STANDARD CONSTRUCTION PRACTICES.**
6. **TEMPORARY CONDITIONS:**
 - A. **THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES. CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.**
 - B. **FOUNDATION WALLS SHALL NOT BE BACK FILLED UNTIL THE SLABS-ON-GRADE AND UPPER SLABS ARE IN PLACE AND REACH FULL STRENGTH UNLESS ADEQUATE BRACING IS PROVIDED. PROVIDE BACK FILL ADJACENT TO FOUNDATION WALLS PER GEOTECHNICAL REPORT. USE ONLY HAND OPERATED TOOLS FOR COMPACTION ADJACENT TO FOUNDATION WALLS.**
7. **SUBMITTALS AND SUBSTITUTIONS:**
 - A. **SUBMITTALS: REFER TO SPECIFICATIONS FOR DETAILED REQUIREMENTS. IF THE CONTRACTOR REQUESTS A CHANGE FROM THE STRUCTURAL DRAWINGS, IT SHALL BE APPROVED BY THE ARCHITECT AND DESIGNED BY THE SER.**
 - B. **CONSTRUCTION DOCUMENTS SHALL NOT BE REPRODUCED FOR USE IN SUBMITTALS.**
 - C. **SUBSTITUTION OF APPROVAL SHALL BE SECURED FOR ALL SUBSTITUTIONS.**
 - D. **NON-CONFORMANCE: NOTIFY ENGINEER OF CONDITIONS NOT CONSTRUCTED PER THE CONTRACT DOCUMENTS PRIOR TO PROCEEDING WITH CORRECTIVE WORK. SUBMIT PROPOSED REPAIR TO THE ARCHITECT/OWNER/BUILDER FOR ACCEPTANCE.**
8. **OSHA STANDARDS:**
 - A. **THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. NOTHING SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE CONSTRUED AS ELIMINATING THE NEED FOR THE CONTRACTOR TO COMPLY WITH ALL OSHA REQUIREMENTS.**
 - B. **THE CONTRACTOR SHALL ADD ALL NECESSARY BOLTS, STIFFENERS, PLATES, STABILIZERS, BRIDGING, BRACING, BEARING SEATS, COLUMN SPLICES, ETC. AS WELL AS CLOSURES FOR WELDS. IN ADDITION, FIELD WELD ANYTHING THAT MAY BE CONSIDERED A TRIP HAZARD, SUCH AS SHEAR STUDS, AFTER PROTECTIVE DECKING IS INSTALLED.**
 - C. **WHERE THE STRUCTURAL DRAWINGS APPEAR TO CONFLICT WITH OSHA REQUIREMENTS, THE STRUCTURAL DRAWINGS REPRESENT FINAL CONDITION ONLY. THE CONTRACTOR SHALL ADD ALL ERECTION FRAMING AS MAY BE NECESSARY TO COMPLY WITH OSHA.**
9. **COORDINATION:**
 - A. **STRUCTURAL DRAWINGS ARE NOT STAND-ALONE DOCUMENTS AND ARE INTENDED TO BE USED IN CONJUNCTION WITH CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND DRAWINGS FROM OTHER DISCIPLINES. THE CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS INTO SHOP DRAWINGS AND WORK.**
 - B. **FOUNDATIONAL DESIGNING, DRAWINGS FROM OTHER DISCIPLINES, PROJECT SHOP DRAWINGS, AND FIELD CONDITIONS PRIOR TO SHOP DRAWING SUBMITTAL.**

SECTION 2 - FOUNDATIONS

- DESIGN CRITERIA:
- A. REFER TO SILLS REPORT PROVIDED BY GEOQUEST, PROJECT NO. 18-0422, DATED 10/25/2018. USE MAXIMUM ALLOWABLE BEARING PRESSURE OF 3000 PSF.
2. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AFTER 28 DAYS. CEMENT SHALL BE TYPE 1.
3. STRUCTURAL CONCRETE:
- A. ALL WORK SHALL CONFORM WITH THE LATEST ACI SPECIFICATIONS UNLESS NOTED OTHERWISE IN DRAWINGS OR PROJECT SPECIFICATIONS.
- B. DETAIL BARS IN ACCORDANCE WITH THE LATEST EDITIONS OF "ACI DETAILING MANUAL," PUBLICATION SP-66 WITH ADDED REQUIREMENTS OF THE PROJECT SPECIFICATION, AND "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE," ACI 318.
4. REINFORCEMENT:
- A. REINFORCING BARS: ASTM A615, 60 KSI
- B. WELDED AND FIELD BENT REINFORCING: ASTM A706, 60 KSI
- C. WELDED WIRE FABRIC: ASTM 185 OR ASTM 497, 70 KSI
- D. SPLICES:
- NO SPLICING OF REINFORCEMENT PERMITTED EXCEPT AS NOTED ON DRAWINGS.
 - MAKE BARS CONTINUOUS AROUND CORNERS.
 - WHERE PERMITTED, SPLICES MAY BE MADE BY CLASS B CONTACT LAPS OR MECHANICAL CONNECTORS.
 - LAP BARS A MINIMUM OF 48 BAR DIAMETERS.
 - SPLICING CONTINUOUS TOP AND BOTTOM BARS IN WALLS, BEAMS, AND GRADE BEAMS AS FOLLOWS:
 - + TOP BARS - AT MID SPAN
 - + BOTTOM BARS - OVER SUPPORT
5. PLACING REINFORCEMENT:
- A. REINFORCEMENT PROTECTION
- CONCRETE PLACED AGAINST EARTH3"
 - CONCRETE PLACED IN FORMS BUT EXPOSED TO WEATHER OR EARTH:
 - BARS #5 AND SMALLER 1-1/2"
 - BARS LARGER THAN #5 2"
 - COLUMNS, GIRDER, GRADE BEAMS, BEAMS 1-1/2"
 - SLABS OR WALLS NOT EXPOSED TO WEATHER OR EARTH 1"
 - CORE WALLS NOT EXPOSED TO WEATHER OR EARTH 1"
- B. REINFORCING PLACING TOLERANCES: PER ACI 117.
- C. PROVIDE ACCESSORIES NECESSARY TO PROPERLY SUPPORT REINFORCING AND WELDED WIRE FABRIC AT POSITIONS SHOWN ON PLANS. ALL REINFORCING, DOWELS, BOLTS, AND EMBED PLATES SHALL BE SET AND TIED IN PLACE BEFORE THE CONCRETE IS POURED. "STABBING" INTO PREVIOUSLY PLACED CONCRETE IS NOT PERMITTED.
6. CONSTRUCTION JOINTS:
- A. CONSTRUCTION JOINT LOCATIONS AND CASTING SEQUENCE SHOWN ON THE DRAWINGS MAY BE SUBSTITUTED AND HAVE BEEN ARRANGED TO MINIMIZE THE EFFECTS OF ELASTIC AND LONG-TERM SHORTENING. SUBMIT DRAWINGS SHOWING PROPOSED CONSTRUCTION JOINT LOCATION AND CASTING SEQUENCE.
7. MEP AND OTHER OPENINGS AND EMBEDMENTS:
- A. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS BEFORE PLACING CONCRETE. DO NOT CUT REINFORCING WHICH MAY CONFLICT. CORING OF CONCRETE IS NOT PERMITTED.
- B. REFER TO TYPICAL DETAILS FOR SPACING LIMITS ON SLEEVES AND FOR REQUIREMENTS.

SECTION 3 - STEEL

1. GENERAL:
- A. ALL STRUCTURAL STEEL FABRICATED AND ERECTED PER THE CURRENT EDITION OF AISC STEEL CONSTRUCTION MANUAL.
- B. STRUCTURAL STEEL CONNECTION MATERIALS:
- CONNECTOR BOLTS: ASTM A307
 - ANCHOR BOLTS: ASTM A307 OR A36.
- C. EXPANSION BOLTS SHALL BE "TRU-BOLT", "RED HEAD", OR APPROVED WEDGE TYPE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

SECTION 4 - WOOD

1. ENGINEERED LUMBER SIZES (MICROLAM, PARALAM, TIMBERSTRAND, AND FABRICATED MEMBER SIZES) SHOWN ARE NET: OTHER MEMBER SIZES ARE NOMINAL.
 - A. ALL COMPOSITE LAMINATED VENEER LUMBER (LVL) TO HAVE A MINIMUM ALLOWABLE BENDING STRESS OF 2800 PSI (2800F) AND MODULUS OF ELASTICITY OF 1,900,000 PSI (1.9E) PER ICC/BOC E3 4979.
 - B. ALL COMPOSITE PARALLEL STRAND LUMBER (PSL) TO HAVE A MINIMUM ALLOWABLE BENDING STRESS OF 2850 PSI (2850F) AND MODULUS OF ELASTICITY OF 2,000,000 PSI (2.0E) PER ICC/BOC E3 4979.
 - C. MULTIPLE PLY MEMBERS TO BE NAILED TOGETHER USING 3 ROWS OF 16d COMMON WIRE NAILS SPACED AT 16" O/C (U.O.N.)
 - D. COMPOSITE LAMINATED STRAND LUMBER (LSL) IS MANUFACTURED BY TRUS JOIST AND SHOULD BEAR THE LABEL OF "STRANGARD" OR "TIMBERSTAND" WITH A MINIMUM MODULUS OF ELASTICITY OF 1,300,000 PSI (1.3E) PER ICC/BOC E3 4979.
2. FRAMING LUMBER DRY (19% MAXIMUM MOISTURE CONTENT AT TIME OF INSTALLATION) SHALL BE SHOWN BELOW WITH MINIMUM DESIGN VALUES BASED ON THE 2005 NDS, UNLESS OTHERWISE NOTED.
 - A. EXTERIOR STUDS: DF NO 2 OR BETTER
 - B. LOAD BEARING STUDS (AND COLUMNS ABUTTING FROM STUDS): DF NO 2 OR BETTER
 - C. NON-LOAD BEARING INTERIOR STUDS: DF STUD OR BETTER
 - D. HEADERS AT TYPICAL OPENINGS: DF NO 2 OR BETTER
 - E. 2"x4" NOMINAL MEMBERS: DF NO 2 OR BETTER
 - F. 5" NOMINAL AND LARGER MEMBERS: DF NO 1 OR BETTER

SECTION 4 - WOOD (CONT.)

4. FABRICATED LUMBER.
- A. ALL FRAMING LUMBER TO BE GRADE MARKED PER THE LUMBER SCHEDULE SHOWN ON THESE DRAWINGS. ALL JOINT FRAMING SHALL BE SURFACE DRY TO A MAXIMUM MOISTURE CONTENT OF 19%. GLU-LAM AND COMPOSITE LUMBER MEMBERS (LV) CANNOT EXCEED A MOISTURE CONTENT OF 16%.
- B. THE MANUFACTURER SHALL PROVIDE WE STIFFENERS (ON JOISTS), END BLOCKING, BRIDGING, AND ERECTION BRACING AS REQUIRED. SEE DESIGN CRITERIA FOR SUPERIMPOSED DEAD AND LIVE LOADS.
4. SHEATHING:
- A. ALL PLYWOOD/OSB CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE AMERICAN PLYWOOD ASSOCIATION (APA) OR THE STRUCTURAL BOARD ASSOCIATION (SBA).
- B. ALL ROOF PANEL SHEATHING SHALL BE 7/16" APA RATED 2404, EXP-1 SHEATHING UNLESS OTHERWISE NOTED. NAIL ALL ROOF SHEATHING WITH 100 NAILS AT 6" O.C. AT ALL SUPPORTED PANEL EDGES (E.N.) AND 12" O.C. FIELD NAILING (F.N.) UNLESS OTHERWISE NOTED.
- C. ALL WALL PANEL SHEATHING SHALL BE 15/32" APA RATED 2416, EXP-1 SHEATHING UNLESS OTHERWISE NOTED. NAIL ALL WALL SHEATHING WITH 100 NAILS AT 6" O.C. AT ALL SUPPORTED PANEL EDGES (E.N.) AND 12" O.C. FIELD NAILING (F.N.) UNLESS OTHERWISE NOTED.
- D. INSTALL ALL SHEATHING WITH THE LONG DIMENSION OF THE PANEL PARALLEL TO SUPPORTING FRAMING MEMBERS, WITH EACH PANEL CONTINUOUS OVER TWO OR MORE FRAMING MEMBERS. ALLOW 1/8" SPACING AT PANEL EDGES UNLESS OTHERWISE RECOMMENDED BY THE SHEATHING MANUFACTURER.
- E. ALL JOINTS IN SHEATHING OR OTHER APPROVED SHEATHING CONNECTORS SHALL BE DRIVEN SO THAT THEIR HEAD OR CROWN IS FLUSH WITH THE SURFACE OF THE SHEATHING.
- F. ALL WALLS SHEATHED WITH GYP-BOARD SHALL BE CONNECTED WITH 5d COOLER NAILS SPACED AT 7" O.C. AT SUPPORTED PANEL EDGES AND AT INTERMEDIATE SUPPORTS.
- G. 2x6 BLOCKS AT UNSUPPORTED PANEL EDGES MUST BE INDICATED ON APPROVED PLANS. REFER TO SHEARWALL SCHEDULE OR PLANS FOR SPECIAL BLOCKING REQUIREMENTS.
5. OPENINGS:
- A. CORNINGS, POCKETS, ETC. SHALL NOT BE PLACED IN BEAMS, JOISTS, RAFTERS, STUDS, POSTS, COLUMNS, TIMBER AND OTHER STRUCTURAL MEMBERS UNLESS DETAILED ON THE STRUCTURAL DRAWINGS.
- B. ANCHOR BOLTS: ASTM A307 OR A36.
6. NAILING:
- A. UNLESS NOTED OTHERWISE ON THE DRAWINGS, PROVIDE BOX NAILS WITH SIZES SHOWN ON THE DRAWINGS. MINIMUM NAILING SHALL BE IN ACCORDANCE WITH THE NAILING SCHEDULE PER IBC 2015 TABLE 2304.9-1 UNLESS NOTED OTHERWISE ON DRAWINGS.
7. MISCELLANEOUS WOOD FRAMING:
- A. SILL PLATES SHALL BE BOLTED INTO CONCRETE WITH 1/2" DIA. x 10' LONG BOLTS W/2"x2"x16" WASHERS AND NUTS AT 6'-0" O.C. MAXIMUM WITH AT LEAST TWO BOLTS PER MEMBER, UNLESS OTHERWISE NOTED.
- B. STUDS SHALL BE SPACED AT 16" O.C. MAXIMUM AND OF THE SIZE SHOWN ON PLANS. 2" NOMINAL SILL BLOCKING SHALL BE PLACED BETWEEN ALL JOISTS AND RAFTERS AT ALL SUPPORTS AND UNDER ALL PARTITIONS UNLESS OTHERWISE DETAILED.
- C. ALL ANCHOR BOLTS TO BE USED SHALL BE A BIT OF THE SAME NOMINAL DIAMETER OF THE BOLT, BUT NOT MORE THAN 1/16" LARGER THAN THE BOLT DIAMETER, AND SHALL PENETRATE WOOD MEMBERS SUCH THAT BOLT THREADS DO NOT BEAR AGAINST WOOD MEMBERS. BOLTED CONNECTIONS SHALL BE SNUG TIGHT, BUT NOT TO THE EXTENT OF CRUSHING WOOD UNDER WASHERS.
- D. BOLTS IN WOOD MEMBERS SHALL NOT BE SPACED LESS THAN 7 DIAMETERS FROM THE END OF THE MEMBER AND SHALL NOT BE SPACED LESS THAN THE LESSER OF EITHER 4 DIAMETERS FROM THE EDGE OF THE MEMBER, OR AT THE CENTERLINE OF MEMBER, UNLESS OTHERWISE



PROJECT NAME:

NEW FOUNDATION AND FLOOR FRAME REINFORCEMENT

PROJECT LOCATION:

1327 N. TEJON ST.
COLORADO SPRINGS, CO

PROFESSIONAL SEAL:

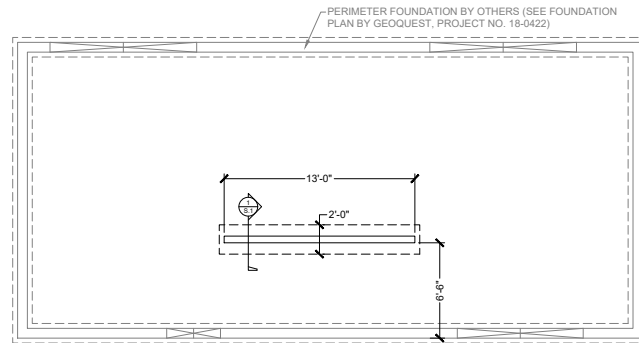
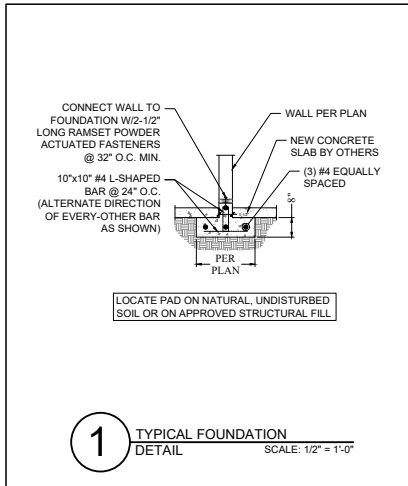
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JOB #: 100093

GENERAL NOTES

SG.1

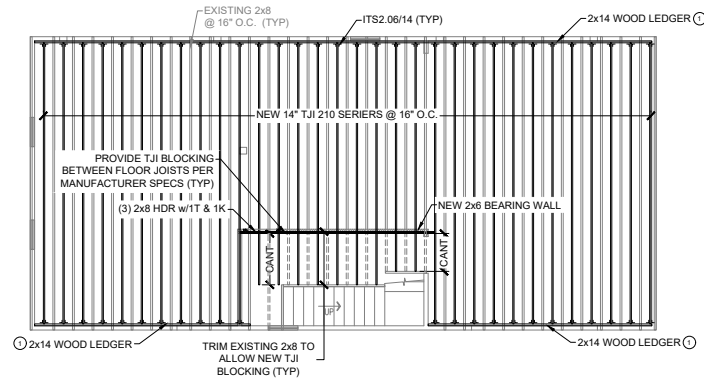


FOUNDATION PLAN

NOTES:

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

- 1) CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION
- 2) REFER TO GENERAL NOTES (SG.1) FOR OTHER FOUNDATION INFORMATION NOT SPECIFIED IN THIS SHEET.
- 3) REFER TO FOUNDATION PLAN BY GEOQUEST, PROJECT NO. 18-0422 FOR PERIMETER FOUNDATION DIMENSIONS.



UPPER LEVEL FLOOR FRAMING PLAN

NOTES:

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

- 1) CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION
- 2) REFER TO GENERAL NOTES (SG.1) FOR OTHER FRAMING INFORMATION NOT SPECIFIED IN THIS SHEET.

FOUNDATION LEGEND

	FOUNDATION WALL
	FND WALL W/ FOOTING
	DETAIL # OR LETTER SHEET DETAIL IS ON
	SEE PLAN NOTES
	HANGER (PER PLAN)
	HEADER / BEAM
	CANT
	A.B. ANCHOR BOLT
	B.O.W. BOTTOM OF WALL
	CL CENTER LINE
	CONT CONTINUOUS
	Ø DIAMETER
	(E) EXISTING
	FND FOUNDATION
	F.F. FINISH FLOOR
	FTG FOOTING
	O.C. ON CENTER
	P.T. PRESSURE TREATED
	REV REVERSE
	SIM SIMILAR
	TYP TYPICAL
	T TRIMMER STUD
	K KING STUD

PLAN NOTES

- ① FASTEN LEDGER TO EACH WALL STUD WITH 4-ROWS OF MITEK'S WSWH45 WASHER HEAD STRUCTURAL WOOD SCREWS. FASTENERS MUST BE INSTALLED TO ACHIEVE THE FOLLOWING:
 - MIN. END DIST.= 6"
 - MIN. EDGE DIST.= 1-1/2"
 - MIN. SPA. BTW ROWS=2"

ELX
Engineering Local Xperts
Phone: 719.308.9146
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Hablamos Español

PROJECT NAME:

NEW FOUNDATION AND FLOOR FRAME REINFORCEMENT

PROJECT LOCATION:

1327 N. TEJON ST.
COLORADO SPRINGS, CO

PROFESSIONAL SEAL:



DATE: DESCRIPTION:

DATE:	DESCRIPTION:
5/26/2021	SUBMITTAL

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JOB #: 100093

FOUNDATION AND UPPER LEVEL FLOOR FRAMING PLAN

S.1

SPECIFICATIONS

SOILS REPORT: No Soils Test has been Performed. A Presumptive Value of 1,500 PSF has been Used to Design this Foundation. An Open Hole Observation of All of the Foundation Excavations by the Geotechnical Engineer is Required Prior to Beginning Construction of the Foundation.

SITE DEVELOPMENT: Rough Grade to Leave Good Drainage During and After Construction. Final Grade After Construction Shall be 6" of Drop Away from the Building in the First 10'. Remove Topsoil and Organic Material from where Components of Your Foundation and Slabs will Go. If You Discover Ground Water, Notify Engineer. Do Not Build on Frozen Soil or Mud.

SOILS: Soils are a Construction Material; However, without Proper Use, They can Behave in Unpredictable Fashions. Here's what We Consider Proper Use:

- Fill and Compact Soft Spots to the Density Required for that Area of the Foundation.

- Soil Under Load Bearing Components of the Structure, Such as Walls and Pads, Shall be Compacted to 95% Modified Proctor Density. Backfill Against Foundation Walls Shall be Compacted to 80% Modified Proctor Density.

- Backfill Should be Made in 6" Layers, Called Lifts, with Each Lift Properly Compacted to the Required Density, Using the Proper Compacting Equipment. Foundation Walls Designed to have Backfill on Both Sides Shall have Fill Brought Up Equally on Both Sides, rather than Backfilling One Side Prior to Backfilling the Other. Generally, Use of a "Jumping Jack" for Cohesive Soils (i.e., Clayey or Silty) or a Vibratory Plate Compactor for Granular Soils (i.e., Sandy) will Provide Good Results. The Soil Should be at the Right Moisture Content; if it Seems Wet or Dry, Notify the Soils Engineer for Advice. Using Boom Mounted Compacting Equipment, such as a Shaker Head or "Stinger", or Pounding the Soil with a Backhoe Exerts a Tremendous Force; if Used to Compact Backfill Around Foundation Walls Failure is Likely. Likewise, Autos, Trucks, Front End Loaders, Etc., are Not Compacting Equipment, and if they are Driven Close (within 10 FT) to a Foundation Wall, it is likely the Wall Will Bow and Crack.

- Compaction Shall be Accomplished so as to Form a Berm of Dense Soil Against the Side of the Structure to Provide Adequate Lateral Support. Each Lift in the Process Shall be Finished Along the Entire Length of Wall Before Starting on the Next Lift. Do Not Compact Too Tightly or in Such a Fashion the Wedging Occurs Against the Foundation Wall or Bowing and Cracking Can Occur. Generally, Floor Joists and Slabs Must be in Place Prior to Backfilling Against the Foundation; the Foundation Design will List Specific Exceptions. Block Between the Foundation Wall and Parallel Floor Joists at 4' O.C. Along Full Height Foundation Walls.

- Do Not Allow the Backfill to Become Saturated with Water at Any Time, During or After Construction. This Places Excessive Pressure Against the Wall and Can Cause Cracking or Bowing.

- Sill Plates Shall be Anchored with 1/2" Diameter Anchor Bolts at a Maximum Spacing of 48" O.C. and within 12" of Plate Ends, Unless Otherwise Noted.

CONCRETE: Concrete Shall be a Minimum of 3,000 PSI with a Maximum Slump of 4" for Walls, Pads and Shallow Piers and a Minimum of 3,500 PSI with a Maximum 4" Slump for Deep Drilled Piers unless Otherwise Specified on Drawings. Slump may be Increased to 6" with Pozzolan Additives if No Additional Water is Used in the Mix. Beware of Concrete Truck Operators Who Wish to Add Water to the Concrete at the Site to Make it More Workable. Additional Water Will Decrease the Strength of the Concrete. The Concrete Must Stay in the Forms for a Minimum of 72 Hours to Cure or to be Covered with Curing Sheets or Sprayed with a Curing Compound. The Water in Concrete is Required to Complete the Chemical Reaction, and if Concrete is Uncovered Too Soon after Placement, it Will Dry Out to the Detriment of the Concrete's Strength and Appearance. Foundations which have Forms Stripped Early End Up with as Little as Half the Strength of Foundation Walls which are Properly Cured. Similarly, Do Not Allow the Concrete to Freeze During the First 7 Days. The Water within the Concrete Freezes and Becomes Unavailable for the Chemical reaction, Possibly Causing a Detriment to the Concrete's Strength and Appearance. Except in Very Massive Structures, the Heat of Hydration of Concrete is Generally Not Sufficient to Prevent Freezing During a Typical Colorado Winter Night.

CONCRETE CONTINUED: Do Not Let the Concrete Drop Farther Than 10' when Placing it. Avoid Dropping Concrete on Reinforcing Steel as Much as Possible, as this will Tend to Displace the Steel. After Placement, Rod or Vibrate the Concrete to Eliminate Joints or Air Pockets, but Do Not Cause the Ingredients to Separate or Water to Pool at the Top. Excessive Vibration can Cause Damage to the Forms. Place Stress Against Concrete for at Least 7 Days after Placement. Use Forms which are Properly Oiled and Braced. Leave Them in Place Until the Concrete has Cured to the Point Where it can Support its Own Weight. Remove Forms Carefully so as Not to Damage the Concrete; Patch Any Voids with Grout Using the Same Mixture as the Original Concrete, but without Coarse Aggregate. Put Control joints in Slabs at No More Than 12' Each Direction. Use of Poly Fiber Mesh in Slabs Less Than 6" Thick and Welded Wire Fabric in Slabs 6" Thick or Greater is Recommended to Reduce Shrinkage Cracking.

If Deep Drilled Piers (Caissons) are Used in the Foundation, a Maximum of 4 Hours Between the Drilling of the Hole and the Placement of the Concrete is Allowed, with Less Than One Hour Being Desired. If Ground Water is Encountered, Immediate Filling is Required. Up to 1" of Water is Authorized in Caisson Holes Prior to Concrete Placement; Deeper Water Must be Pumped or Otherwise Forced Out.

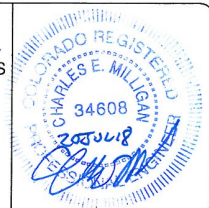
STEEL: Reinforcing Steel is Grade 60, unless Otherwise Called Out on the Plans. Free of Rust, Dirt, Oil, Scale, or Anything Else which will Impair its Ability to Adhere to Concrete. All Reinforcing Steel Shall be Securely Tied at All Intersections and Supported to Prevent Displacement during Concrete Placing Operations. Steel Must Not be any Closer Than 3" to Surfaces which will be Exposed to Earth and 2" from Other Surfaces. See the Reinforcement Details for Additional Placement Requirements. Overlap and Tie Splices 18". Bend and Tie Corners 24". Placement of Reinforcing Steel According to the Design is Important in Order to Allow the Steel and Concrete to Work Together to Develop Maximum Strength.

LIABILITY: All Design and Construction Represents Compromise. This Foundation has been Accomplished with Economy, Constructibility, and Reliability as Primary Considerations and Reflects the Current Standards of Practice in the Front Range Area. It has Not been Designed to Withstand Every Conceivable Event which Might Occur, as that Would Render the Foundation Exceptionally Difficult to Build and Exceedingly Expensive. Likewise, the Details are Not Intended to Provide Step-By-Step Installation Instructions; the IRC/IBC Building Code Provides Other Information Needed for Foundation Construction. A Working Knowledge of the Code as well as Practical Experience in Local Foundation Construction Practices (in the Specific Type of Foundation Being Built) is Required to Complete the Foundation. If You or any Member of the Construction Team has a Question About Any Portion of This Foundation Design, Contact this Office to Resolve the Situation Prior to Proceeding with Construction. While the Design of this Foundation Should Provide a Structure which will Function Well for the Life of the Building under Normal Circumstances, Unforeseen Events, Such as Flooding, Exceptional Loads, or Even Improper Construction not Noticed during Building can Cause Problems. Therefore, the Limits of Liability Extend to the Fee Rendered for the Professional Services Provided.

GEOQUEST, LLC.

6825 SILVER PONDS HEIGHTS
SUITE 101
COLORADO SPRINGS, CO
80908

OFFICE: (719) 481-4560
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Project: 18-0422

Sheet: 1 of 3

Date: 10 July 2018

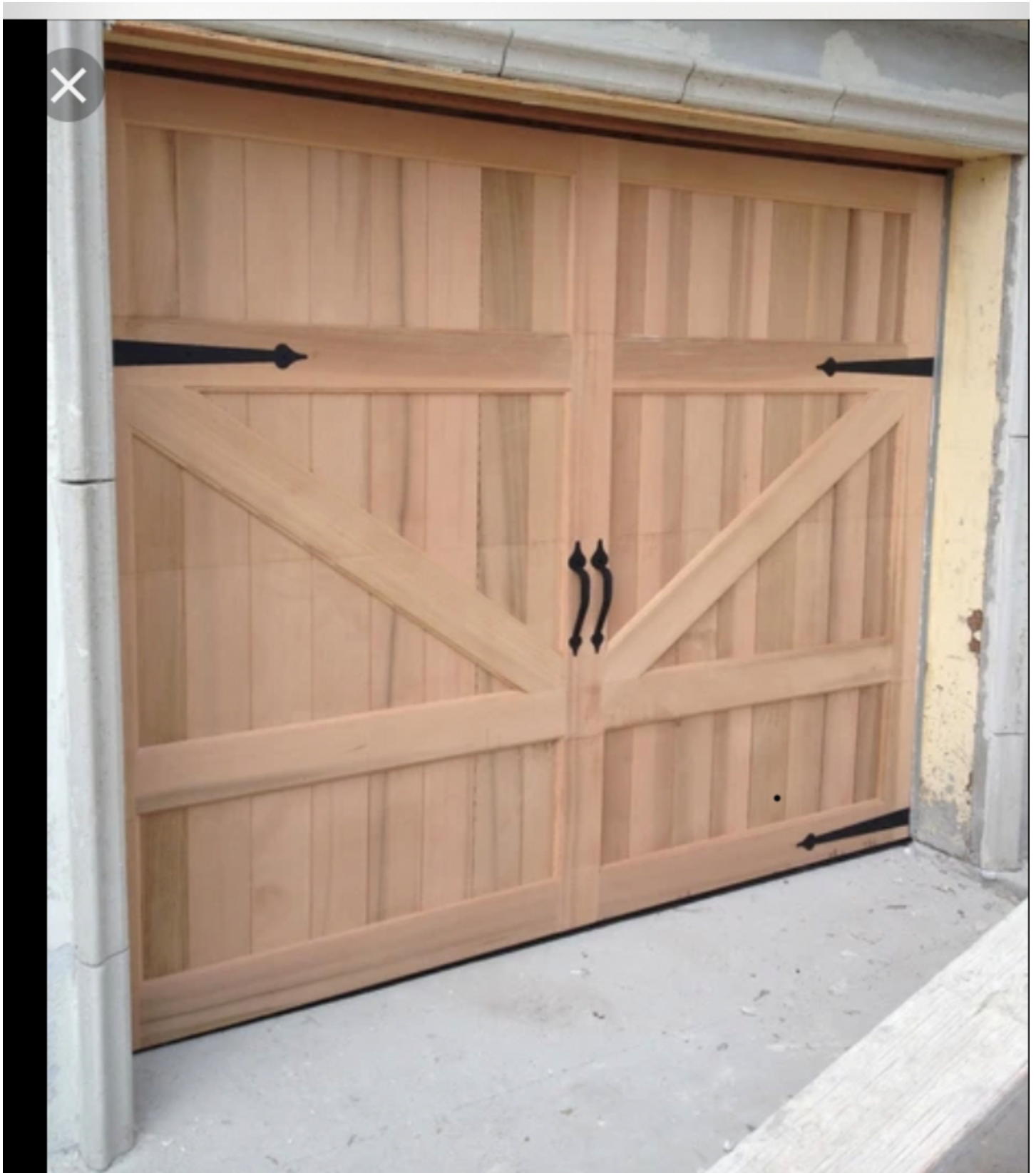
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Checked by: cem

Project Name and Address

Mandy Collins

Cottage Foundation
1327 North Tejon Street,
El Paso County, Colorado





1603: GRAPHITE BY
DENHAMINI MOORE