

3543 Shannon Rd. CLEVELAND HEIGHTS, OH 44118

CS	COVER SHEET AND NOTES
A-1	EXISTING FLOOR PLANS
A-2	1st FLOOR PLAN
A-3	2nd FLOOR PLAN
A-4	FRONT & REAR ELEVATIONS; WALL SECTION
A-5	LEFT & RIGHT ELEVATIONS

EXISTING AREA : 1st FLOOR - 1,848 S.F.
2nd FLOOR - 1,690 S.F.
TOTAL: 3,538 S.F.

PROPOSED AREA:	1st FLOOR - 2,044 S.F.
	2nd FLOOR - 1,846 S.F.
TOTAL:	3,890 S.F.
ADDED LIVING AREA:	352 S.F.
ATTACHED GARAGE:	535 S.F.

CODE: 040 RESIDENTIAL CODE, CURRENT ED.	
ROOF LIVE LOAD:	20 PSF MIN.
GROUND SNOW LOAD:	30 PSF
SNOW IMPORTANCE FACTOR:	1.0
SNOW EXPOSURE FACTOR:	0.9
ROOF SNOW LOAD:	30 PSF
FLOOR LIVE LOAD:	
FIRST FLOOR	40 PSF
SECOND FLOOR	30 PSF
STAIR LOADS:	100 PSF
GUARDRAIL LOADS:	200 LBS ANY DIRECTION
	50 PLF ANY DIRECTION W/
	APPLIED SABLE DANNED

WIND LOAD:	
DESIGN VELOCITY:	90 MPH
EXPOSURE	B
IMPORTANCE FACTOR	1.0
DESIGN PRESSURE	15 PSF MINIMUM

DEFLECTION CRITERIA	
NORMAL FLOOR LOADS	L/160 LIVE LOAD L/180 TOTAL LOAD
STONE TILE FLOORS	L/720 FOR SPANS <= 13'-0" 0.25" FOR SPANS > 13'-0"
CERAMIC TILE FLOORS	L/160 LIVE LOAD L/180 TOTAL LOAD
BEAMS AND HEADERS	L/600 FOR CONC. 300 LB L/180 TOTAL LOAD

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED OF

- MORE COSTLY REQUESTS GOVERN FOR BIDDING. SUBMIT CLARIFICATION REQUESTS PRIOR TO PROCEEDING WITH WORK. IF REQUESTS ARE CONSIDERED NECESSARY, THE ENGINEER WILL PROVIDE DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY REQUESTS THAT OBTAIN CLARIFICATION AFTER THE START OF THE ATTENTION OF THE ENGINEER PRIOR TO START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK REQUESTS IN CONFLICT WITH THE DRAWINGS OR SPECIFICATIONS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND SPECIFICATIONS. WHEN NO DETAIL ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK. UNLESS NOTED OTHERWISE, DETAILS IN STRUCTURAL DRAWINGS ARE TYPICAL AS INDICATED BY CUTS, REFERENCES OR TITLES.
- ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE GOVERNING CODES AND REQUIRE CODES AND LATEST VERSIONS THEREOF. HEREIN AS THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING REFERENCES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE

WORK.

8. REPRESENT CONTRACT STRUCTURE, DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO: PROTECTING EXISTING WORK DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.

9. ADDITIONAL INFORMATION REQUIRED BY THE ENGINEER SHALL BE OF THE LATEST REVISION. A CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES, SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC. IF ANY SUCH STRUCTURES ARE FOUND, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

7. CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMED ROOF. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING AND BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.

GENERAL CONTRACTOR TO OBTAIN GEOTECHNICAL ENGINEER TO VERIFY SOIL BEARING CAPACITY AND ADEQUACY OF SOLE FOR FOUNDATION. CONTRACTOR TO OBTAIN NECESSARY PERMITS AND LOCAL BUILDING AUTHORITY.

CONTRACTOR TO PROVIDE THE FOLLOWING INFORMATION: ALLOWABLE BEARING - 3000 PSF. FOOTINGS SHALL BEAR ON UNDISTURBED NATURAL SOIL.

CONTRACTOR TO PROVIDE FOR DEWATERING OF EXCAVATIONS BY EITHER SURFACE WATER, GROUND WATER, OR SEEPAGE.

CONTRACTOR SHALL PROVIDE FOR DESIGN AND INSTALLATION OF ALL REQUIRED RETAINING WALLS. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROBLEMS INCLUDING LAGGING, SHIELDING AND PROTECTION OF ADJACENT PROPERTY.

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY NATIONAL, STATE, AND LOCAL OFFICIAL APPROVANCES.

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS. CONTRACTOR SHALL NOT STOP PLACE BACKFILL BEHIND RETAINING WALLS BEFORE CONCRETE OR GROUT IS PLACED.

FOUNDATIONS SHALL BE PLACED AND ESTIMATED ACCORDING TO DEPTH SHOWN ON DRAWINGS. SHOULD SOIL BE ENCOUNTERED AT DEPTH SHOWN ON DRAWINGS, CONTRACTOR SHALL CONSULT WITH GEOTECHNICAL ENGINEER. FOUNDATION ELEVATIONS WILL BE DETERMINED BY CHARGE.

ALL FOUNDATION SHALL BE SUPPORTED ON NATURAL GRADE OR COMPACTED FILL. POOR FILL, POOR TOP PLACING BACK, REPLACEMENT OF FILL, OR OTHER DEFECTIVE FILL SHALL BE REMOVED AND REPLACED WITH FILL TO THE CONTRACTOR IN MAXIMUM LIFTS. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS. WHEN TESTED IN ACCORDANCE WITH ASTM.

DO NOT BACKFILL AGAINST BARRIER WALLS UNTIL WALL IS COMPLETELY CURED. CONTRACTOR SHALL BE RESPONSIBLE FOR USING STRUCTURAL TYPE BRACING. CONTRACTOR IS RESPONSIBLE FOR THE

1. ALL CONCRETE CONSTRUCTION SHALL CONFORM WITH CHAPTER 19 OF THE CODE AND WITH THE PROVISIONS OF ACI 318, LATEST EDITION.

2. SCHEDULE OF STRUCTURAL CONCRETE 28-DAY STRENGTH AND TYPES (SLUMP LISTED IS MAX):

LOCATION IN STRUCTURE	
ALL CONCRETE FOOTINGS	
DENSITY	145 PCF
W/C RATIO	0.55
STRENGTH	3000 PSI
SLAB-ON-GRADE (INT & EXT)	
DENSITY	145 PCF
W/C RATIO	0.45
STRENGTH	4000 PSI
AIR ENTRAINMENT	8% FOR EXT & GARAGE SLAB

CONTRACTOR AT HIS OPTION MAY INCREASE SLUMP WITH USE OF HIGHW AD MIXTURE. LIMIT SLUMP INCREASE TO 3"

- THAT THAT ALLOWING BOLD WITHIN MINIMUM.
3. ALL REINFORCING BARS, ANCHOR BOLTS, AND OTHER CONCRETE ADVERTISEMENTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
- CUT JOINTS FOR SLABS ON GRADE A MAXIMUM OF 12" O.C. UNLESS NOTED OTHERWISE ON THE CONTRACT DOCUMENTS. CUT JOINTS SHALL BE PLACED AT LEAST 12" FROM THE FACE OF THE CONCRETE.
5. EXPOSED TO THE WEATHER, FREEZE-THAW, DYEING CHEMICALS, AND OR PARKED VEHICLES SHALL CONTAIN 8% (8% BY WEIGHT) ENTRAINED AIR BY USING TYPE "A" PORTLAND CEMENT AND ADMIXTURES EXPOSED TO ASTM C 672.
6. CURE CONCRETE BY WET CURING OR LIQUID SPRAY CONFORMING TO ASTM C 309. CONTRACTOR TO VERIFY CURING AGENT IS COMPATIBLE WITH ANY FLOOR ADHESIVES SPECIFIED WITHIN THE CONTRACT DOCUMENTS.
7. CALCIUM CHLORIDE OR CHLORIDE CONTAINING ADMIXTURES SHALL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES. 18. DURING HOT WEATHER PLACE CONCRETE IN ACCORDANCE WITH AC 308. DURING COLD WEATHER PLACE CONCRETE IN ACCORDANCE WITH AC 308.

1. REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 12 OF THE A/CI CODE, ASTM A615, GRADE 60 U.N.O. BARS SHALL BE CLEAN OF RUST, GREASE, OR OTHER MATERIALS LIKELY TO IMPAIR BOND. ALL REINFORCING BAR BENDS SHALL BE MADE COLD. WELDING OF FABRIC SHALL BE LIMITED TO ASTM A-501 SEAMS ONLY. PROVIDE LAPS PER THE A/CI CODE, SECTION 12.3, 1" MINIMUM. WFFS IF BE SUPPORTED ON APPROVED CHAIRS.
4. CONCRETE PROTECTION FOR REINFORCEMENT CAST-IN-PLACE CONCRETE (NON-PRESTRESSED) THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT: %N/COVER UNLESS NOTED OTHERWISE:
 - A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 2"
 - B. CONCRETE EXPOSED TO EARTH OR WEATHER: 2"
 - C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: 1"
 - D. SLABS, WALLS, JOISTS: 3/4"

1. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED BY AN APPROVED AND LICENSED FABRICATOR IN ACCORDANCE WITH THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, LATEST EDITION (EXCLUDING SECTION A7).
2. ALL STRUCTURAL STEEL SHALL CONFORM TO THE ASTM DESIGNATION A572/GR50-50 (F50) OR A572/GR60-60 (F60).

- ALL W/ SWAPPER, U.N.O. ASTM A992
BASE PLATES, CONNECTION PLATES, ANGLES, CHANNELS, AND
MISCELLANEOUS: ASTM A36
PIPE COLUMNS: ASTM A-53, GRADE B
-60, GRADE B
TUBE SECTIONS: A-325, S.C.U.N.O.
H.S. BOLTS: A-307
NON-CORROSION BOLTS: A-307
3. ALL WELDING IS TO BE DONE BY CERTIFIED WELDERS USING E70XX
ELECTRODES (U.N.O.). ALL WELDS SHALL BE IN CONFORMITY WITH
THE PROJECT SPECIFICATIONS AND THE CODE FOR WELDING IN
BUILDING CONSTRUCTION (AWS D1.1 LATEST REVISION) OF THE
AMERICAN WELDING SOCIETY. SEE SPECIAL INSPECTION SECTION
AND STEEL DETAIL DRAWINGS FOR WELDING INSPECTION
REQUIREMENTS.

1. CONSTRUCT ALL MASONRY WALLS IN ACCORDANCE WITH ACI 530 AND ACI 530.1 UNLESS OTHERWISE SHOWN OR NOTED.
2. MATERIALS:
ASTM C-90 LOAD BEARING UNITS.

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1. PROVIDE STEEL LINTELS AS PER THE FOLLOWING SCHEDULE IN ALL MASONRY WALL OPENINGS WHEN NOT SHOWN ON DRAWINGS, OR IN OPENINGS REQUIRED BY THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS.

L3 12x3 12x14 FOR OPENINGS UP TO 4'-0"

L5x3 12x 5/16 FOR OPENINGS FROM 4'-1" TO 6'-0"

L8x3 12x16 FOR OPENINGS FROM 6'-1" TO 7'-0"

WB16 with 5/16" Flange FOR OPENINGS FROM 7'-1" TO 12'-0"

FOR OPENINGS GREATER THAN 12'-0" AND NOT SHOWN ON PLANS ALLOW FOR A MINIMUM BEAM HEIGHT OF 36 PLF PLUS 5/16" x

- PLATE**
- ALL LINTELS SHALL BEAR ON 8" OF SOLID MASONRY, U.O.D.
 - USE ONE ANGLE FOR EACH 4' WYTHE OF MASONRY. PLATES ARE TO BE 1" LESS THAN NOMINAL WALL THICKNESS.
 - MINIMUM THICKNESS OF LINTELS IN EXTERIOR WALLS TO BE 5/16" ANGLES ON PLATES IN EXTERIOR WIDTHS OF MASONRY WALLS ARE TO BE HOT DIP GALVANIZED.
 - FOR 1" WYTHE WALLS WITH AIR SPACES, CONTRACTOR IS TO INCLUDE 6" ADDITIONAL ANGLES, PLATES, AND CHANNELS TO CLOSE OFF AIRSPACE AT LINTEL LOCATIONS. SEE DETAILS ON DRAWINGS. IF NO DETAILS ARE SHOWN, CONTACT ENGINEER FOR FURTHER INFORMATION AND DETAILS.

1. DETAIL, FABRICATE, AND ERECT ALL STRUCTURAL LUMBER IN ACCORDANCE WITH NATIONAL DESIGN SPECIFICATION BY NATIONAL FOREST PRODUCTS ASSOCIATION AND TIMBER CONSTRUCTION MANUAL BY AMERICAN INSTITUTE OF TIMBER CONSTRUCTION, LATEST EDITION
2. MATERIALS:

- S4S LAMINATE** (ALLS 200 SPECIES: DOUGLAS FIR, HEMLOCK OR S-P-F OR AS SELECTED BY ARCHITECT GRADE) NO. 2 OR BETTER, WPC ALLS (UNGRADED) ENGINEERED LVL, PLANGED WITH OSB W/EL. ASTM D 805 AND APA PRG-400 ALTERNATE MANUFACTURERS MAY BE SUBSTITUTED FOR SIZES SPECIFIED. VALUES EQUAL OR EXCEED THOSE PROVIDED BOTH MOMENT CAPACITY AND E OF SPECIFIED PRODUCT
- QUELUMINATED LAMINATE** (ASTM 1033 AND 1117) Pk = 2800 PSI, Fv = 200 PSI
- 1/8" (100) LAMINATE Pk ADHESIVE TO BE WATER RESISTANT TYPE**
- LAMINATED VENEER LUMBER (5.1X) ASTM D 5406, Pk = 2800 PSI, Fv = 125 PSI**
- E = 1,900,000 PSI**
- SHEATHING - APA RATED FOR APPLICATION:**
- EXTERIOR GRADE AT ROOFS**
- EXPOSURE 1 FOR WALLS AND FLOORS**
- PLYWOOD - APA VOLUNTARY STANDARDS**
- PERFECTED, FERNANDO ROJO P. / VOLUNTARY STANDARDS**

- TREATED LUMBER. TO FACTORY SPECIFICATIONS AS FOLLOWS:
 EXTERIOR EXPOSURES: GROUND CONTACT: AMPA LUGS OR LUGS
 FIRE RESISTANT: AMPA LUGS FOR INTERIOR AND LUGS FOR EXTERIOR.
 SEE ARCHITECTURAL DRAWINGS FOR FIRE TREATED LUMBER LOCATIONS.
3. LUMBER SUPPLIER SHALL FURNISH ALL APPROPRIATE CONNECTIONS FOR ATTACHING LUMBER FRAMING AND ANCHORS TO ADJACENT CONSTRUCTION. CONNECTIONS SHALL BE MADE WITH STANDARD DECKING, PARTICLES FROM 1/8" OR 3/4" SIZED WET NUTS. ALL BOLTS AND NUTS SHALL BE 304 STAINLESS STEEL. ALL BOLTS SHALL BE FOR MULTIPLE PLY. GULAM OR LUG MEMBERS, AS MANUFACTURED BY GLEVE SIST, GULP, S.P. (SP) IMPROVED TONGRUE, OR OTHER. DETAILS SHALL CONFORM TO AISC STEEL EDITION 10. BOLTS, NUTS, SPIRES, AND OTHER CONNECTIONS SHALL BE APPROPRIATE FOR THE INTENDED. FASTENERS EXPOSED TO FIRE-TREATED LUMBER, CHEMICAL FUMES, WEATHER AND HIGH-HUMIDITY SHALL BE NOT OXYDIZED GALVANIZED. UNLESS OTHERWISE SPECIFIED, ALL FASTENERS SHALL BE 304 STAINLESS STEEL.
4. ALL CONNECTIONS, FASTENERS, NUTS, BOLTS AND SPIRES USED FOR FIRE-TREATED LUMBER CONNECTIONS SHALL BE FABRICATED FROM STAINLESS STEEL, TYPE 304 OR 316.
5. CONTRACTOR SHALL ERRECT FIRE-ENGINEERED MOUNTING TRUSSES IN ACCORDANCE WITH TRUSS PLATE INSTITUTE DESIGN SPECIFICATION FOR METAL PLATE CONNECTIONS.

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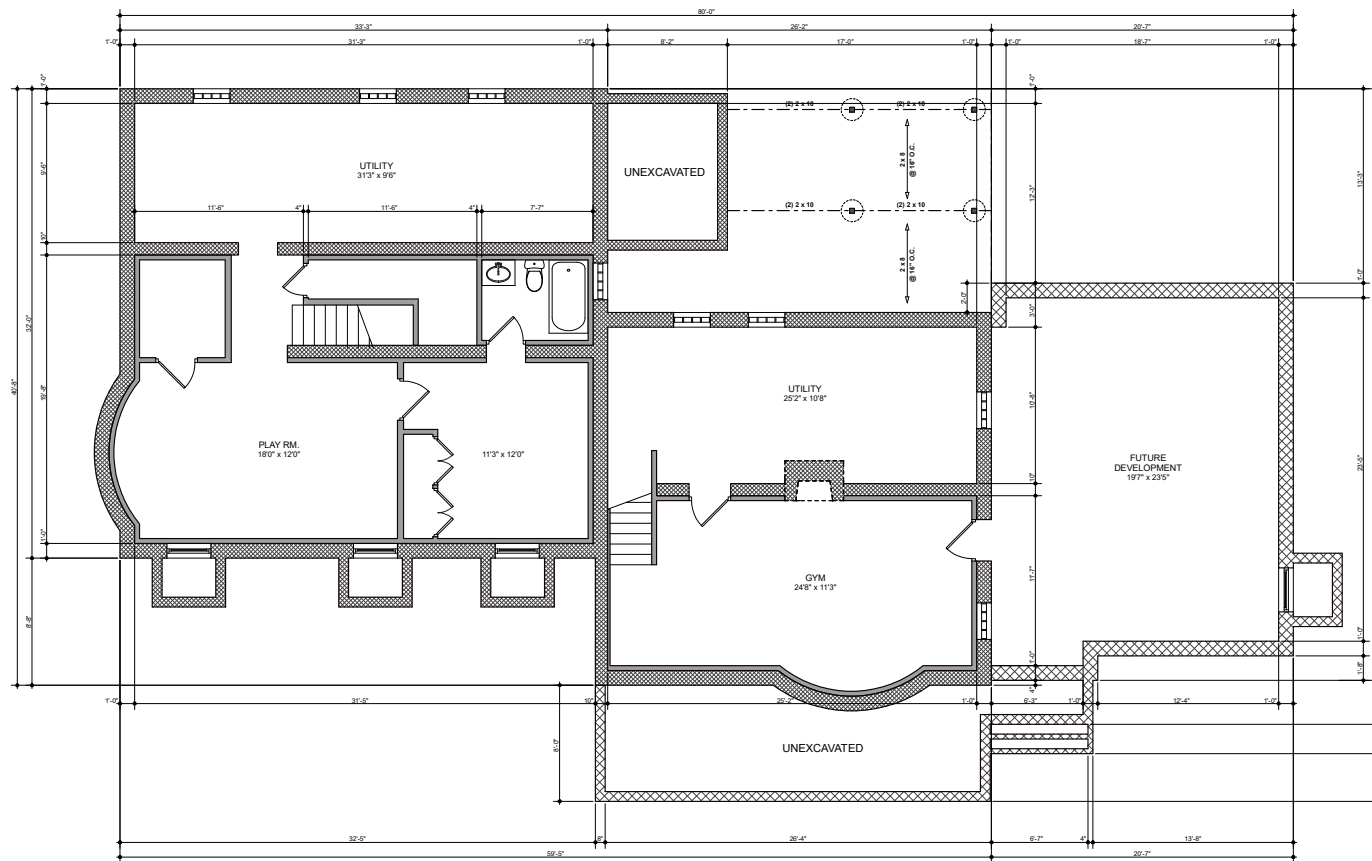
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PRIVATE RESIDENCE
ALTERATIONCOVER SHEET,
GENERAL STRUCTURAL

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NOVEMBER 28, 2024

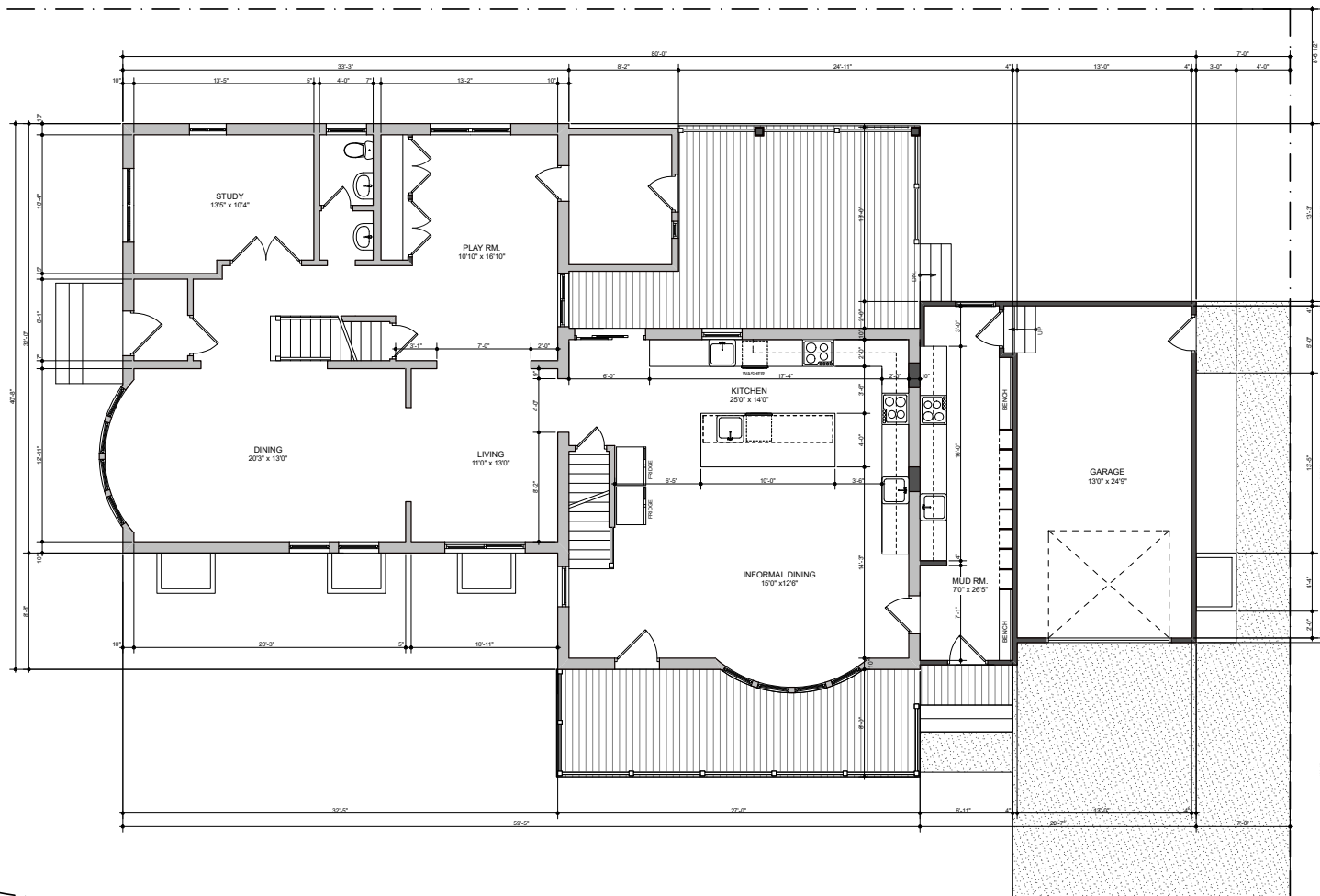
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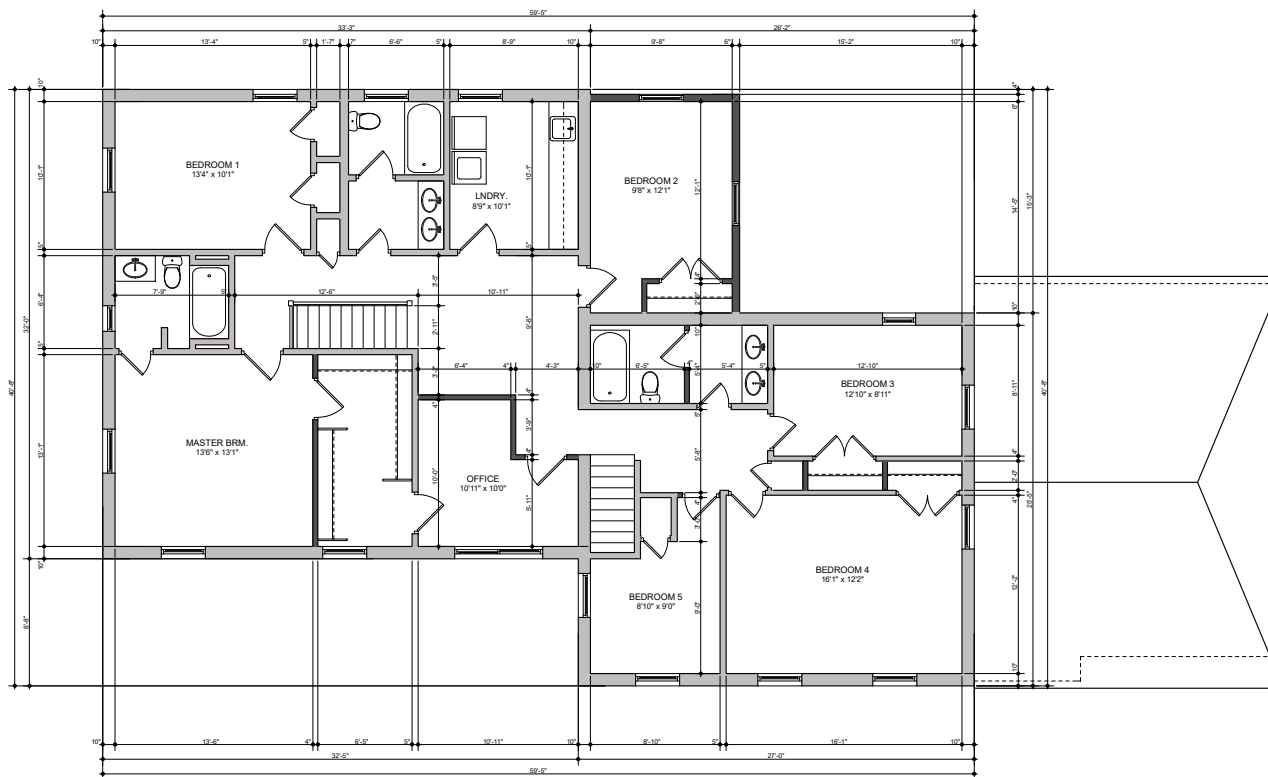


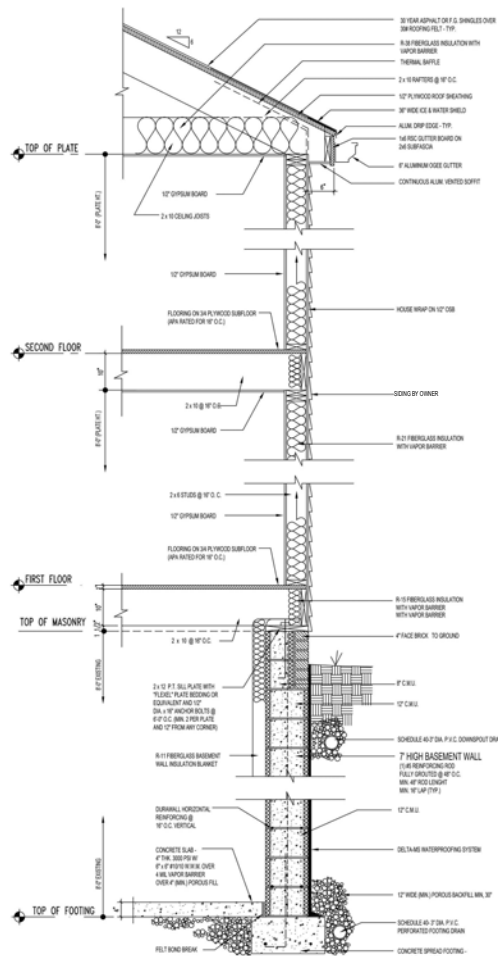
BASEMENT PLAN

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

EXISTING WALL TO REMAIN
NEW WALLS







WALL SECTION

SCALE: 3/4"=1'-0"



FRONT ELEVATION

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



REAR ELEVATION

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



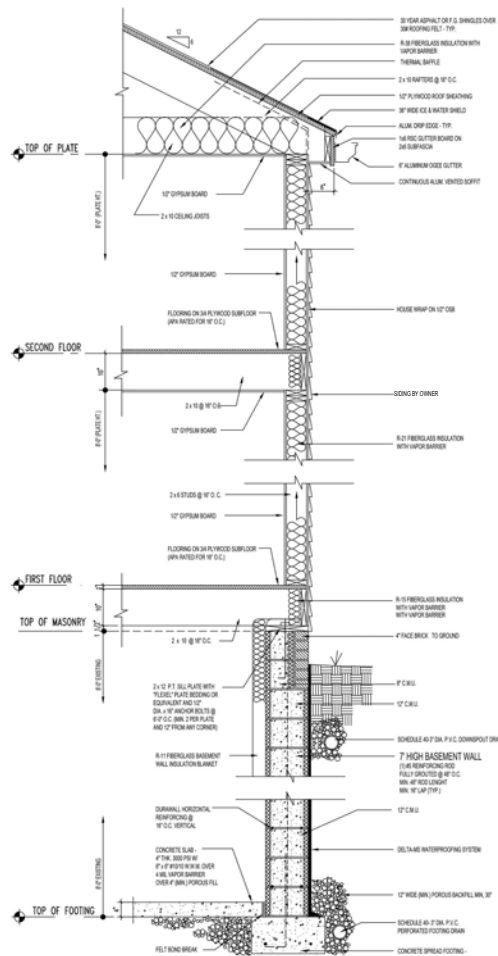
RIGHT ELEVATION

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



LEFT ELEVATION

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



WALL SECTION

SCALE: 3/4"=1'-0"



FRONT ELEVATION

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



REAR ELEVATION

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