

**GENERAL CONSTRUCTION NOTES**

- NOTES
1. ALL WORK SHALL CONFORM WITH THE 2017 Pikes Peak Regional Building Code, the 2015-IBC, AND ALL APPLICABLE OSHA REGULATIONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR LOCATION OF UTILITIES PRIOR TO CONSTRUCTION.
3. ALL DIMENSIONS SHOWN ARE BASED ON ROUGH FIELD MEASUREMENTS. ANY DISCREPANCIES BETWEEN THIS PLAN AND THE VERIFIED FIELD DIMENSIONS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
4. ELEVATIONS, DIMENSIONS, FOUNDATION STEPS, AND FINISHED WALL HEIGHTS ARE AS OBSERVED DURING A SITE VISIT ON FEBRUARY 14, 2024, BY PERSONNEL OF CORNELL ENGINEERING, LLC AND SHOULD BE VERIFIED BY THE CONTRACTOR. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INFORM THE DESIGN ENGINEER AND/OR MANUFACTURER OF ANY DISCREPANCIES AS SOON AS THE DISCREPANCY IS FOUND. THE BLOCK MANUFACTURER SHALL CONSULT THE CONTRACTOR WITH ANY SPECIFIC LAYOUT, DIMENSION, OR ELEVATION QUESTIONS.
5. FOOTINGS AND FOUNDATIONS HAVE BEEN DESIGNED PER THE SUBSURFACE SOILS INVESTIGATION FOR LOT 60, PHASE I, FLYING HORSE NORTH SUBDIVISION, 14982 LONGWALL COURT, BY GEOTECH, JOB #H-0420, DATED OCTOBER 16, 2019. PER SAID REPORT, AN ACTIVE LATERAL EARTH PRESSURE OF 45 PSF AND AN ALLOWABLE BEARING PRESSURE OF 1,000 PSF HAVE BEEN ASSUMED FOR THIS RETAINING WALL DESIGN.
6. THIS DESIGN HAS BEEN COMPLETED IN ACCORDANCE WITH PERTINENT STANDARDS, RECOMMENDED DESIGN SOIL PARAMETERS, AND ACCEPTED ENGINEERING DESIGN PROCEDURES, AND IS BASED ON THE BEST INFORMATION AVAILABLE AT THE TIME OF COMPLETION. THE DESIGN IS INTENDED TO MINIMIZE DIFFERENTIAL MOVEMENT RESULTING FROM THE HEAVING OF EXPANSIVE SOIL INDUCED BY SEASONAL MOISTURE CHANGES. IT MUST BE RECOGNIZED THAT FOUNDATION COMPONENTS, AND IN PARTICULAR THE CONCRETE BLOCKS AND SUPPORTING FOUNDATION MEMBERS, WILL UNDERGO MOVEMENT. ADHERENCE TO OUR DRAINAGE RECOMMENDATIONS IS EXTREMELY IMPORTANT TO PREVENT DAMAGE TO THE SUPERSTRUCTURE. IT IS TO BE MINIMIZED. ANY SUBSEQUENT OWNERS SHOULD BE ADVISED OF THE EXPANSIVE SOIL CONDITION AND ADVISED TO MAINTAIN GOOD PRACTICES IN THE FUTURE WITH REGARD TO SURFACE AND SUBSURFACE DRAINAGE.
7. THIS DESIGN AND DETAILING IS BASED ON THE AS-BUILT CONSTRUCTION OF THE PRE-MANUFACTURED BLOCK WALLS. SPECIFIC MANUFACTURER RECOMMENDATIONS AND/OR SPECIFICATIONS SHALL BE FOLLOWED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY SUCH MANUFACTURER RECOMMENDATIONS AND/OR SPECIFICATIONS PRIOR TO CONSTRUCTION.
8. THIS STRUCTURAL PLAN IS NOT TO BE REPRODUCED, MODIFIED, OR USED FOR ANY OTHER PROJECT EXCEPT THE RETAINING WALLS AT THE GAIN RESIDENCE, 14982 LONGWALL DRIVE, COLORADO SPRINGS, COLORADO, 80908.

**GRADING**

9. ALL FILL PLACED AT THE SITE SHOULD BE COMPACTED TO THE REQUIREMENTS OF STRUCTURAL FILL. THE STRUCTURAL FILL AND BACKFILL SHOULD CONSIST OF GRANULAR, NON-EXPANSIVE NATIVE SAND AND GRAVEL OR IMPORTED STRUCTURAL FILL (AASHTO CLASS 6 OR APPROVED EQ) MATERIALS COMPACTED TO 90 PERCENT OF THE MAXIMUM MODIFIED PROCTOR DRY DENSITY AT +/- 2% OF THE OPTIMUM MOISTURE CONTENT PER ASTM D-1557. FOUNDATION LEVELING PADS SHALL MEET THE REQUIREMENTS OF AASHTO NO. 51 OR APPROVED EQUAL AND COMPACTED TO 95% RELATIVE DENSITY PER ASTM D-4253/4254 IN MAXIMUM 4-INCH LIFTS.
10. PRIOR TO PLACING FILL, ALL SURFACES TO RECEIVE COMPACTED FILL SHOULD BE LEVELED AND COMPLETELY CLEANED OF ALL DEBRIS AND ORGANIC MATERIAL. NO FILL MATERIAL SHOULD BE PLACED OVER SLOPING GROUND OR CONTAIN ANY GRASS, ROOTS, MOOD, OR OTHER DELETERIOUS DEBRIS.
11. WHERE THE DEPTHS OF FOUNDATION EXCAVATIONS VARY, THE EXCAVATIONS SHOULD BE STEPPED IN A VERTICAL AND HORIZONTAL MANNER.
12. PRIOR TO PLACEMENT OF STRUCTURAL FILL, THE BOTTOM GRADE SHOULD BE SCARIFIED, BROUGHT TO AN OPTIMUM MOISTURE CONDITION AND PROOF ROLLED.
13. PRIOR TO COMPACTION, STRUCTURAL FILL AND BACKFILL SHOULD BE BROUGHT TO NEAR THE OPTIMUM MOISTURE CONTENT. THE FILL SHOULD BE PLACED IN LEVEL LIFTS, APPROXIMATELY 8 TO 10-INCHES (MAX) IN LOOSE THICKNESS, AND MECHANICALLY COMPACTED PRIOR TO PLACEMENT OF THE NEXT LIFT. THE FILL SHOULD BE TESTED FOR COMPACTION EVERY 2 FEET OF ELEVATION OR EVERY 500 CUBIC YARDS OF FILL PLACED, WHICHEVER IS LESS. RESULTS TO BE PRESENTED TO CORNELL ENGINEERING FOR APPROVAL.
14. BOULDERS AND COBBLES GREATER THAN 6-INCHES IN DIAMETER SHOULD BE REMOVED FROM THE FILL MATERIALS PRIOR TO PLACEMENT.
15. THE RETAINING WALLS SHALL BE BRACED PRIOR TO BACKFILLING. CARE MUST BE TAKEN DURING BACKFILLING OPERATIONS TO PREVENT DAMAGE TO THE FOUNDATION AND RETAINING WALL SYSTEM, AS HIGH LATERAL PRESSURES CAN RESULT FROM BACKFILLING WITH HEAVY EQUIPMENT. ONLY LIGHT EQUIPMENT SUCH AS JUMPING JACKS OR WALK BEHIND VIBRATORY COMPACTORS, ARE RECOMMENDED WHERE FOUNDATION WALLS ARE NOT BRACED. WHEN BACKFILLING IS REQUIRED ON BOTH SIDES OF A WALL, THE BACKFILL SHOULD BE BROUGHT UP EVENLY DURING GRADING PROCEDURES TO LIMIT DAMAGING THE WALLS AND BRACING REQUIREMENTS.
16. SLOPE BACKFILL AWAY FROM THE RETAINING WALLS A MINIMUM OF 5% FOR THE FIRST 10 FEET. DO NOT ALLOW WATER TO POND IN THE VICINITY OF THE RETAINING WALLS.

**TEMPORARY EXCAVATIONS**

17. TEMPORARY EXCAVATIONS FOR THE PROPOSED RETAINING WALL CONSTRUCTION SHOULD NOT EXCEED 5 FEET IN VERTICAL HEIGHT. ALL EXCAVATIONS ABOVE 5 FEET SHOULD BE STEPPED OR SLOPED AT A MINIMUM 1:1 GRADE TO DAYLIGHT ON THE UPSLOPE SIDE. TEMPORARY SHORING IN LIEU OF 1:1 GRADING FOR EXCAVATIONS ABOVE 5 FEET IS THE RESPONSIBILITY OF THE CONTRACTOR.

**SUBDRAINS**

18. SUBDRAINS ARE RECOMMENDED AT THE BASE OF EACH RETAINING WALL.
19. WHERE REQUIRED, THE PERIMETER SUBDRAIN SHOULD CONSIST OF 4-INCH PERFORATED PIPE SURROUNDED BY A BOTTOM BLANKET OF CLEAN GRAVEL WRAPPED IN A CLASS 2, NON-WOVEN GEOTEXTILE FABRIC. THE DRAINS SHOULD SLOPE AT A 2 PERCENT MINIMUM GRADE AND DRAIN THROUGH THE FRONT FACE OF THE BLOCKS AS SHOWN. COORDINATE WITH MANUFACTURER THE PLACEMENT OF KEEP HOLES PRIOR TO MANUFACTURING BLOCKS.

**SURFACE DRAINAGE**

20. EARTH FORMED DRAINAGE SWALES SHOULD BE GRADED INTO THE FINAL PROFILE FOR THE SITE AND SHOULD BE DESIGNED TO COLLECT SITE SURFACE DRAINAGE AND DIRECT IT TO THE BELOW GRADE SUBDRAINS. DRAINAGE SHOULD NOT BE ALLOWED TO POND AGAINST ANY FOUNDATION WALLS OR RETAINING WALLS. IN GENERAL, GROUND SURFACES SHOULD SLOPE AWAY FROM THE STRUCTURE AT A 5% MINIMUM GRADE FOR 10 FEET.

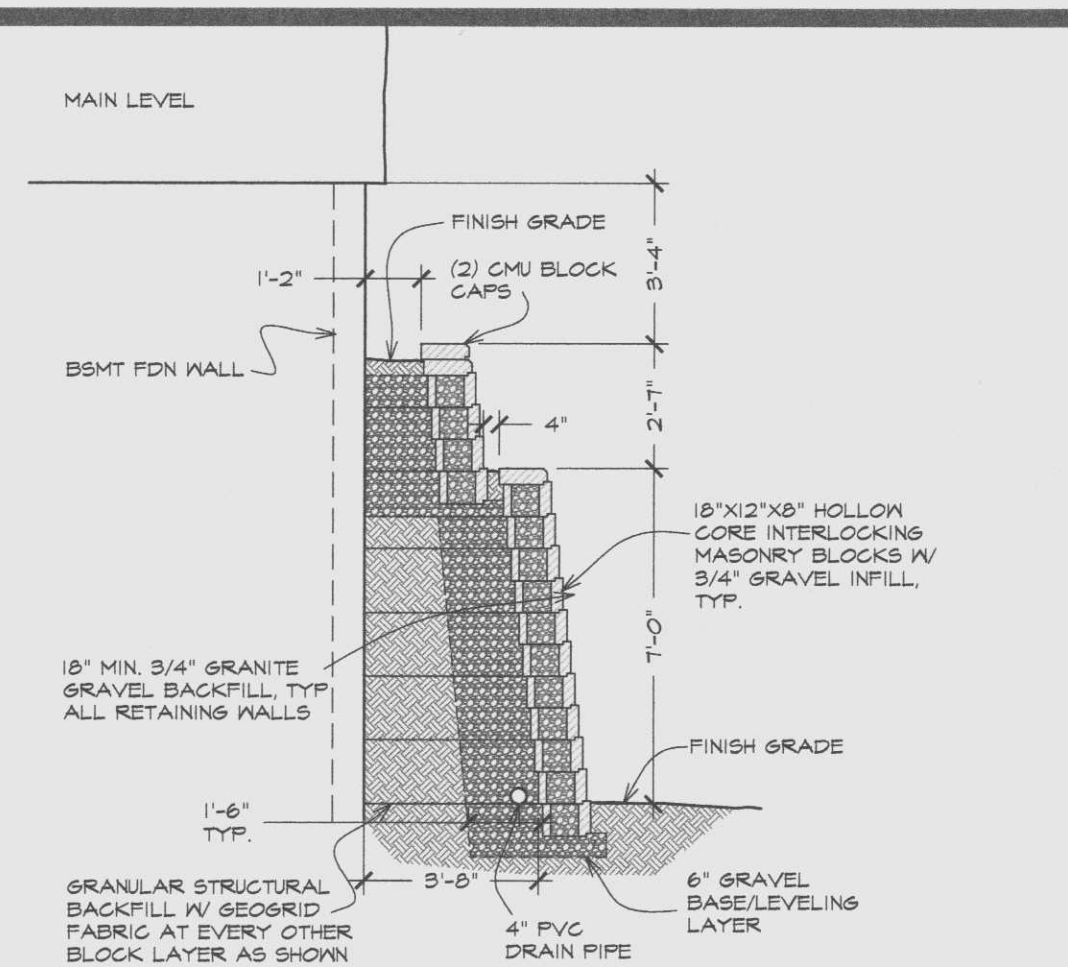
**GENERAL PROJECT PROCEDURE NOTES**

1. BEST PRACTICE DICTATES THAT WALL CONSTRUCTION SHOULD CONTINUE WITHOUT INTERRUPTION OR DELAYS. THIS WILL HELP EXPEDITE CONSTRUCTION AND MINIMIZE THE TIME THE EXCAVATION IS OPEN.
2. THE CONSTRUCTION SITE SHOULD BE GRADED AND MAINTAINED TO DIRECT SURFACE WATER RUNOFF AWAY FROM THE RETAINING WALL THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS.
3. DO NOT EXCEED THE ALLOWABLE CONSTRUCTION TOLERANCES SPECIFIED IN THE CONTRACT DOCUMENTS, PLANS, AND SPECIFICATIONS. AT NO TIME SHOULD TOLERANCES AT THE WALL FACE EXCEED 1" VERTICALLY AND 1" IN 10' (25.4 MM IN 3048 MM) (1:100) HORIZONTALLY.
4. IMMEDIATELY REPORT THE FOLLOWING SITE CONDITIONS, IF ENCOUNTERED, TO THE ENGINEER OR OWNER'S REPRESENTATIVE TO DETERMINE THE CORRECTIVE ACTION NEEDED:
- A.A.A.A. ANY OBSERVED GROUNDWATER SEEPAGE.
  - A.A.A.B. SURFACE WATER RUN-OFF DIRECTED TOWARD THE RETAINING WALL DURING CONSTRUCTION.
  - A.A.A.C. EROSION OR SCOUR OF MATERIAL NEAR THE WALL.
  - A.A.A.D. PONDED WATER NEAR THE WALL.
  - A.A.A.E. WET, SOFT, OR EASILY COMPRESSIBLE SOILS IN THE FOUNDATION ZONE.
  - A.A.A.F. EXISTING ROCK THAT DIFFERS IN LOCATION FROM THAT SHOWN ON THE PROJECT PLANS OR ROCK LOCATED ABOVE THE ELEVATION OF THE BOTTOM OF THE LEVELING PAD.
  - A.A.A.S. EXISTING OR PROPOSED TOE OR CREST SLOPES THAT DIFFER FROM TYPICAL CROSS-SECTIONS SHOWN IN THE PROJECT PLANS.
  - A.A.A.H. ANY OTHER ITEMS NOT SPECIFICALLY MENTIONED WHICH RAISE QUESTIONS OR CAUSE CONCERNS DURING WALL CONSTRUCTION.

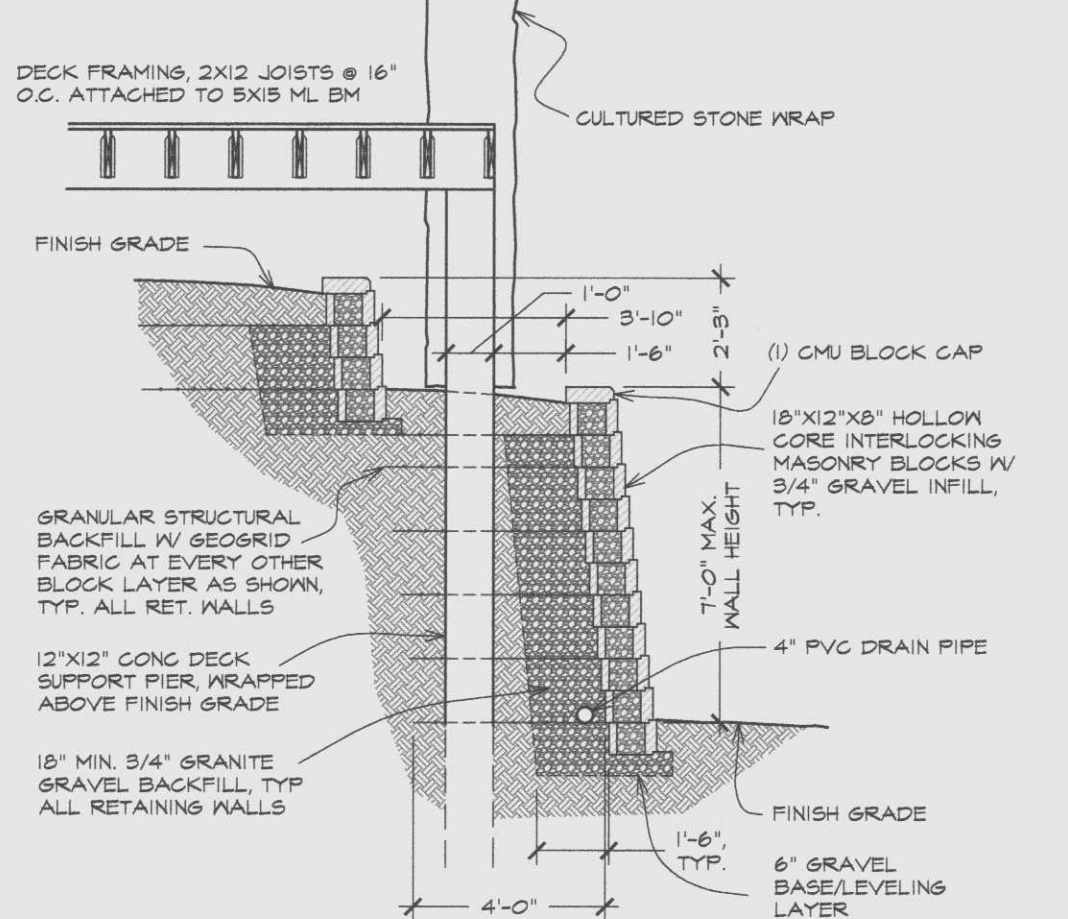
**OTHER**

5. IN ADDITION TO THE REQUIREMENTS PRESENTED HERE AND IN THESE DRAWINGS, ALL PROJECT SPECIFIC SPECIFICATIONS, TITLED PRECAST MODULAR BLOCK GRAVITY RETAINING WALL SECTION 32 52 15) AND CONSTRUCTION SPECIFICATIONS-CONCRETE MASONRY UNITS BY CORNELL ENGINEERING SHALL BE FOLLOWED. CONTRACTOR IS RESPONSIBLE FOR HAVING A COPY OF THE PROJECT SPECIFIC SPECIFICATIONS. A COPY CAN BE REQUESTED BY CONTACTING CORNELL ENGINEERING.

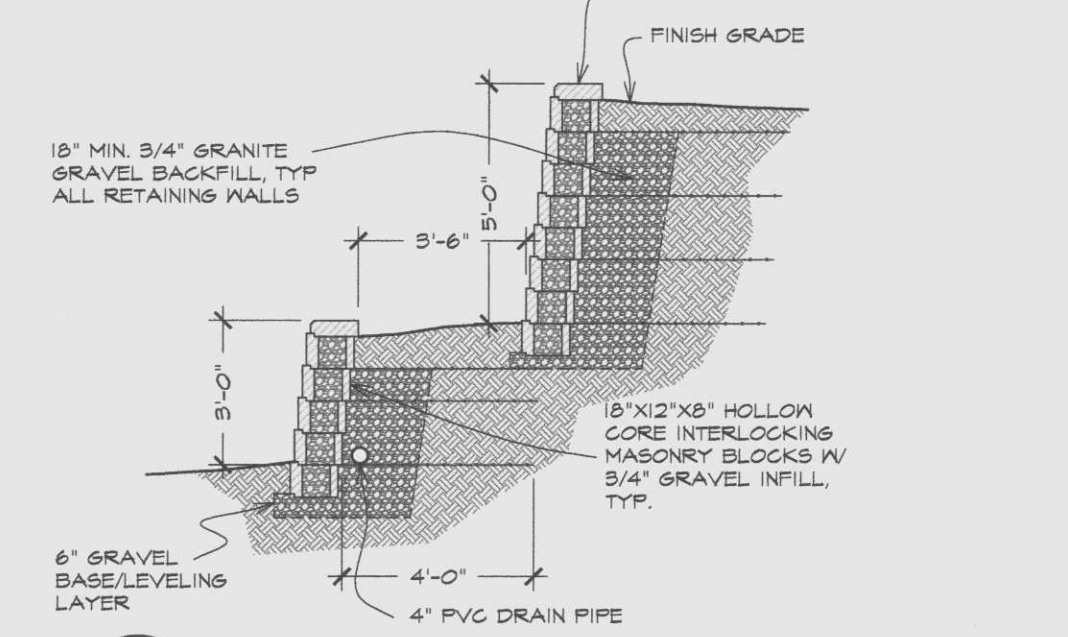
(\*Per call with engineer)  
2023 2021



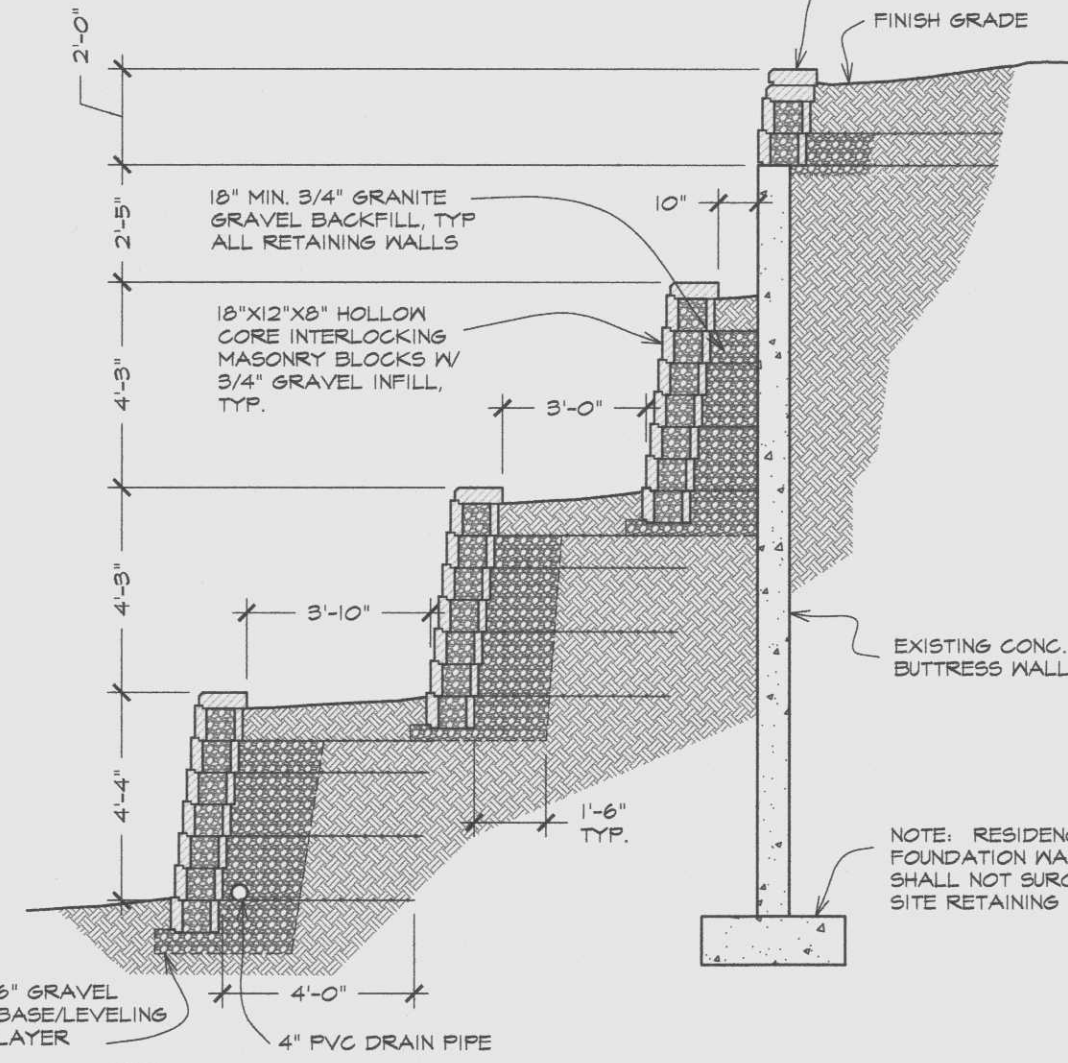
**1 TYPICAL BLOCK WALL SECTION**  
Scale: 1" = 4'-0"



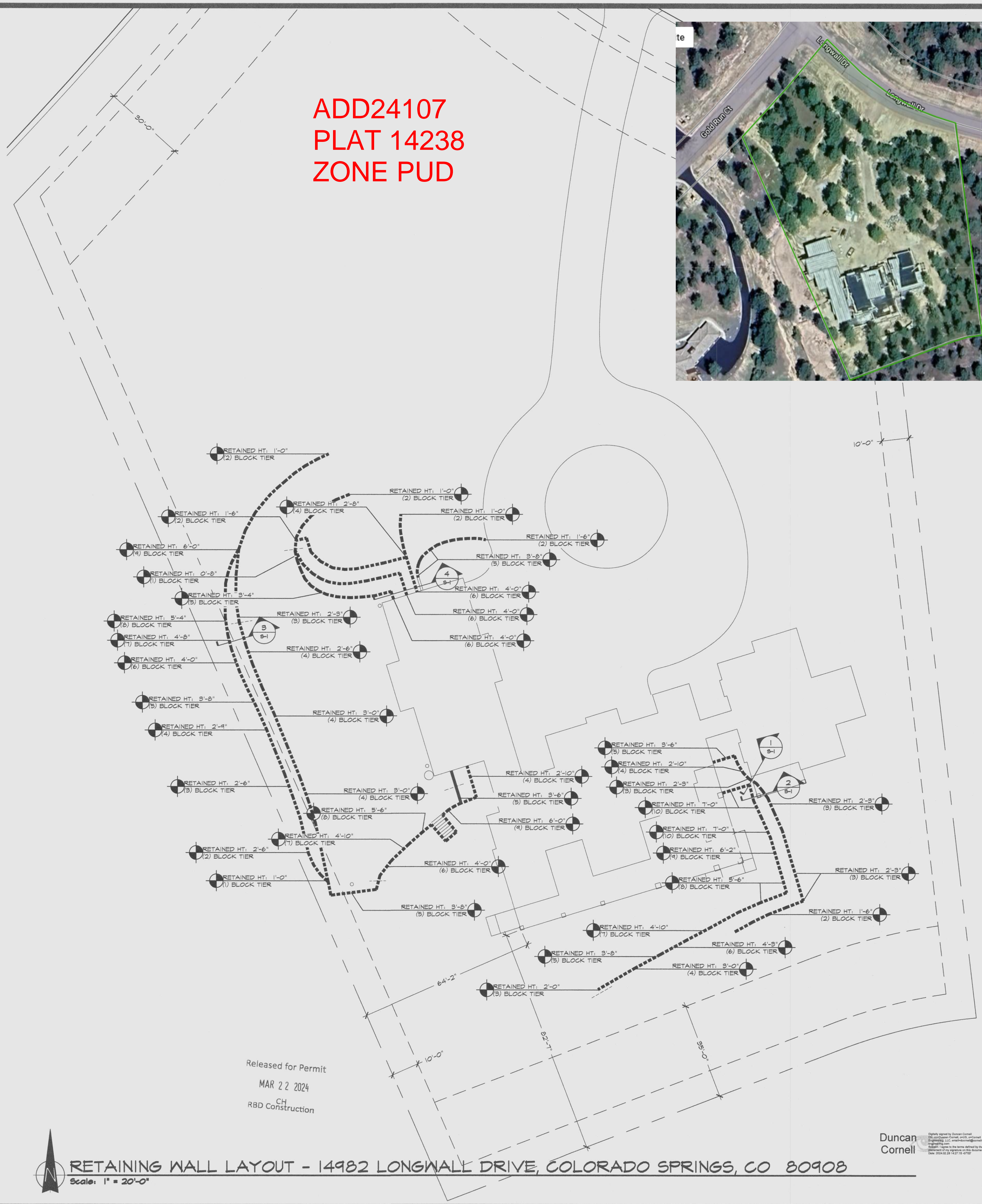
**2 TYPICAL BLOCK WALL SECTION**  
Scale: 1" = 4'-0"



**3 TYPICAL BLOCK WALL SECTION**  
Scale: 1" = 4'-0"



**4 TYPICAL BLOCK WALL SECTION**  
Scale: 1" = 4'-0"



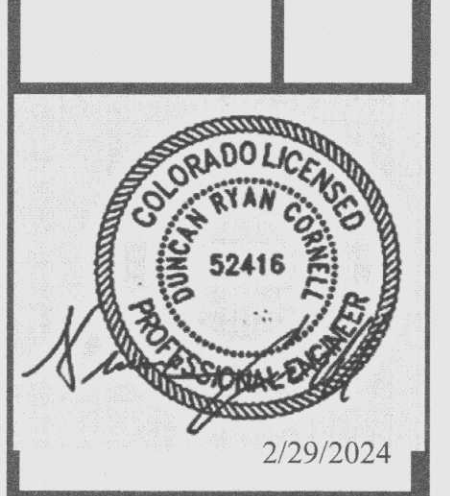
**ADD24107  
PLAT 14238  
ZONE PUD**



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NO.	REVISIONS	BY	DATE

**CAIN RESIDENCE RETAINING WALLS**  
CLIENT: JASON & MEGAN CAIN  
14982 LONGWALL DRIVE  
COLORADO SPRINGS, CO 80908  
(719) 459-5152  
AS-BUILT RETAINING WALL PLAN - LAYOUT, DETAILS & GENERAL NOTES



2/29/2024  
CHECKED BY: DRC  
DESIGNED BY: DRC  
DRAWN BY: AMH  
DATE: 2/29/2024  
SCALE: AS NOTED  
PROJECT NO.: 240211