

TYPICAL ABBREVIATIONS

|            |                                           |         |                                 |        |                                        |
|------------|-------------------------------------------|---------|---------------------------------|--------|----------------------------------------|
| (A)        | ABOVE                                     | FD      | FLOOR DRAIN                     | P/C    | PRECAST                                |
| AB         | ANCHOR BOLT                               | FDN     | FOUNDATION                      | PEMB   | PRE-ENGINEERED METAL BUILDING          |
| AC         | ASPHALTIC CONCRETE                        | FIN     | FINISH, FINISHED                | PERP   | PERPENDICULAR                          |
| ACI        | AMERICAN CONCRETE INSTITUTE               | FF      | FINISHED FLOOR, FAR FACE        | PJ     | PANEL JOINT                            |
| ADDL       | ADDITIONAL                                | FLG     | FLANGE                          | PL     | PLATE (STEEL), PROPERTY LINE           |
| ADJ        | ADJACENT                                  | FLR     | FLOOR                           | PL     | PLATE (WOOD)                           |
| AESS       | ARCHITECTURALLY EXPOSED STRUCTURAL STEEL  | FLASH   | FLASHING                        | PLCS   | PLACES                                 |
| AGGR       | AGGREGATE                                 | FOS     | FACE OF STUDS                   | PLWD   | PLYWOOD                                |
| AISC       | AMERICAN INSTITUTE OF STEEL CONSTRUCTION  | FP      | FIREPROOF, FULL PENETRATION     | PP     | PARTIAL PENETRATION                    |
| AISI       | AMERICAN IRON AND STEEL INSTITUTE         | FS      | FINISH SLAB ELEVATION, FAR SIDE | P/S    | PRESTRESSED                            |
| AITC       | AMERICAN INSTITUTE OF TIMBER CONSTRUCTION | FT OR   | FOOT, FEET                      | PSF    | POUNDS PER SQUARE FOOT                 |
| ALT        | ALTERNATE                                 | FTG     | FOOTING                         | PSI    | POUNDS PER SQUARE INCH                 |
| ALUM       | ALUMINUM                                  | FUT     | FUTURE                          | PSL    | PARALLEL STRAND LUMBER                 |
| ARCH       | ARCHITECT, ARCHITECTURAL                  | FV      | FIELD VERIFY                    | PT     | PRESSURE TREATED                       |
| @          | AT                                        |         |                                 | P/T    | POST TENSION                           |
| APPROX     | APPROXIMATELY                             | GA      | GAUGE, GAGE                     | PVC    | POLYVINYL CHLORIDE                     |
| ASCE       | AMERICAN SOCIETY OF CIVIL ENGINEERS       | GALV    | GALVANIZED                      | PVMT   | PAVEMENT                               |
| ASPH       | ASPHALT                                   | GEN     | GENERAL                         |        |                                        |
| ASTM       | AMERICAN SOCIETY FOR TESTING MATERIAL     | GIRD    | GIRDER                          | R      | RADIUS                                 |
| AWS        | AMERICAN WELDING SOCIETY                  | GL      | GLUE LAMINATED                  | RD     | ROOF DRAIN, ROUND                      |
| &          | AND                                       | GND     | GROUND                          | REF    | REFERENCE                              |
|            |                                           | GR      | GRADE                           | REINF  | REINFORCING, REINFORCEMENT, REINFORCED |
| (B)        | BELOW                                     | GWB     | GYP SUM WALL BOARD              | REQD   | REQUIRED                               |
| B          | BOTTOM (BEAM AND JOIST SCHEDULES ONLY)    | GYP     | GYP SUM                         | RO     | ROUGH OPENING                          |
| BD         | BOARD                                     |         |                                 | RS     | RING SHANK                             |
| BITUM      | BITUMINOUS                                | HDG     | HOT DIPPED GALVANIZED           | S      | AMERICAN STANDARD STEEL SHAPE, SOUTH   |
| BL         | BUILDING LINE                             | HEF     | HORIZONTAL EACH FACE            | SCHED  | SCHEDULE                               |
| BLDG       | BUILDING                                  | HORIZ   | HORIZONTAL                      | SEC-   | SECTION                                |
| BLK        | BLOCK                                     | HP      | HIGH POINT, HP STEEL SHAPE      | SH     | SHEAR PLATE                            |
| BLKG       | BLOCKING                                  | HSB     | HIGH STRENGTH BOLT              | SHT    | SHEET                                  |
| BOD        | BOTTOM OF DECK ELEVATION                  | HT      | HEIGHT                          | SHTG   | SHEETING                               |
| BM         | BEAM                                      |         |                                 | SHTHG  | SHEATHING                              |
| BOT        | BOTTOM                                    | IBC     | INTERNATIONAL BUILDING CODE     | SIM    | SIMILAR                                |
| BRG        | BEARING                                   | ID      | INSIDE DIAMETER                 | SIP    | STRUCTURAL INSULATED PANEL             |
| BSMT       | BASEMENT                                  | IE      | INVERT ELEVATION                | SLBB   | SHORT LEGS BACK TO BACK                |
| BTWN       | BETWEEN                                   | IF      | INSIDE FACE                     | SMS    | SHEET METAL SCREWS                     |
|            |                                           | IN OR   | INCH                            | SOG    | CONCRETE SLAB ON GRADE                 |
| C          | AMERICAN CHANNELS                         | INCL    | INCLUDE                         | SP     | SPIRAL                                 |
| CB         | CATCH BASIN                               | INSUL   | INSULATION, INSULATED, INSULATE | SPA    | SPACE, SPACING                         |
| CG         | CENTER OF GRAVITY                         | INT     | INTERIOR                        |        | SPACES                                 |
| CJ         | CONSTRUCTION JOINT                        |         |                                 | SPEC   | SPECIFICATION                          |
| CIP        | CAST-IN-PLACE                             | JT      | JOINT                           | SQ     | SQUARE                                 |
| CL         | CENTER LINE                               | JST     | JOIST                           | SS     | STAINLESS STEEL                        |
| CJP        | COMPLETE JOINT PENETRATION                |         |                                 | SSL    | SHORT SLOTTED HOLE                     |
| CLKG       | CAULKING                                  | K       | KIP, KIPS                       | ST     | STRUCTURAL T FROM S SERIES SECTION     |
| CLR        | CLEAR                                     | KSI     | KIPS PER SQUARE INCH            | STA    | STATION                                |
| CMP        | CORRUGATED METAL PIPE                     |         |                                 | STD    | STANDARD                               |
| CMU        | CONCRETE MASONRY UNIT                     | LB OR # | POUND                           | STIFF  | STIFFENED                              |
| CO         | CLEANOUT, CONCRETE OPENING                | LLBB    | LONG LEG BACK TO BACK           | STIRR  | STIRRUP                                |
| COL        | COLUMN                                    | LLH     | LONG LEGS HORIZONTAL            | STL    | STEEL                                  |
| CONC       | CONCRETE                                  | LLV     | LONG LEGS VERTICAL              | STRUCT | STRUCTURAL                             |
| CONN       | CONNECTION                                | LONGIT  | LONGITUDINAL                    | SUP    | STRUCTURAL USE PANEL                   |
| CONSTR     | CONSTRUCTION                              | LP      | LOW POINT                       | SUPT   | SUPPORT                                |
| CONT       | CONTINUOUS                                | LSL     | LONG SLOTTED HOLES              | SUSP   | SUSPENDED                              |
| CONTR      | CONTRACTOR                                | LT      | LIGHT                           | SYMM   | SYMMETRICAL                            |
| CTJ, CJ    | CONTROL JOINT, CONTRACTION JOINT          | LT WT   | LIGHT WEIGHT                    |        |                                        |
| CTR        | CENTER                                    | L       | ANGLE                           | T      | TOP                                    |
| CTSK       | COUNTERSUNK                               | LVF     | LOW VELOCITY FASTENERS          | TC     | TOP OF CURB                            |
| CU         | CUBIC                                     |         |                                 | T&G    | TONGUE AND GROOVE                      |
|            |                                           | M       | MISCELLANEOUS SHAPE             | TEMP   | TEMPERATURE, TEMPORARY                 |
| DBL        | DOUBLE                                    | MAS     | MASONRY                         | THK    | THICK                                  |
| DEPT       | DEPARTMENT                                | MATL    | MATERIAL                        | THRU   | THROUGH                                |
| DET        | DETAIL                                    | MAX     | MAXIMUM                         | TOB    | TOP OF BEAM ELEVATION                  |
| DIA, Ø     | DIAMETER                                  | MC      | MISCELLANEOUS CHANNEL SECTION   | TOC    | TOP OF CONCRETE ELEVATION,             |
| DIAA       | DRILLED-IN ADHESIVE ANCHOR                | MECH    | MECHANICAL                      |        | TOP OF CMU ELEVATION                   |
| DIAB       | DRILLED-IN ADHESIVE BOLT                  | MEMB    | MEMBRANE                        | TOF    | TOP OF FOOTING ELEVATION               |
| DIAG       | DIAGONAL                                  | MFR     | MANUFACTURER                    | TOS    | TOP OF STEEL ELEVATION                 |
| DIAPH      | DIAPHRAGM                                 | MFRG    | MANUFACTURING                   | TOSH   | TOP OF SHEATHING ELEVATION             |
| DIEB       | DRILLED-IN EXPANSION BOLT                 | MIN     | MINIMUM                         | TOW    | TOP OF WALL ELEVATION                  |
| DIM        | DIMENSION                                 | MISC    | MISCELLANEOUS                   | TP     | TOP OF PAVEMENT                        |
| DN         | DOWN                                      | MT      | STRUCTURAL TEE FROM             | TRANS  | TRANSVERSE                             |
| do         | DITTO                                     |         | M SERIES SECTION                | TS     | STRUCTURAL TUBE                        |
| DP         | DEEP                                      | MTD     | MOUNTED                         | TYP    | TYPICAL                                |
| DWG        | DRAWING                                   | MTL     | METAL                           |        |                                        |
| DWL        | DOWEL                                     |         |                                 | UBC    | UNIFORM BUILDING CODE                  |
|            |                                           | N       | NORTH                           | UL     | UNDERWRITERS LABORATORY                |
| E          | EAST                                      | NDT     | NON-DESTRUCTIVE TESTING         | UON    | UNLESS OTHERWISE NOTED                 |
| EA         | EACH                                      | NF      | NEAR FACE                       | UT     | ULTRASONIC TEST                        |
| EB         | EXPANSION BOLT                            | NIC     | NOT IN CONTRACT                 |        |                                        |
| EF         | EACH FACE                                 | No OR # | NUMBER                          | VEF    | VERTICAL EACH FACE                     |
| EXJ        | EXPANSION JOINT                           | NOM     | NOMINAL                         | VERT   | VERTICAL                               |
| EL         | ELEVATION (HEIGHT)                        | NS      | NEAR SIDE                       | VIF    | VERTICAL EACH FACE                     |
| ELEC       | ELECTRICAL                                | NTS     | NOT TO SCALE                    | VOF    | VERTICAL OUTSIDE FACE                  |
| ELEV       | ELEVATOR                                  |         |                                 |        |                                        |
| ENCL       | ENCLOSURE                                 | OA      | OVERALL                         | W      | WEST, W SERIES SECTION                 |
| ENGR       | ENGINEER                                  | OC      | ON CENTER                       | W/     | WITH                                   |
| EOD        | EDGE OF DECK                              | OD      | OUTSIDE DIAMETER                | W/O    | WITHOUT                                |
| EQ         | EQUAL                                     | OF      | OUTSIDE FACE                    | WD     | WOOD                                   |
| EQJ        | EARTHQUAKE JOINT                          | OPNG    | OPENING                         | WH     | WEEP HOLE                              |
| EQUIP      | EQUIPMENT                                 | OPP     | OPPOSITE                        | WHS    | WELDED HEADED STUD                     |
| ES         | EACH SIDE                                 | OVS     | OVERSIZED                       | WP     | WATERPROOF, WORK POINT                 |
| EW         | EACH WAY                                  |         |                                 | WPJ    | WEAKENED PLANE JOINT                   |
| EXIST, (E) | EXISTING                                  |         |                                 | WT     | WEIGHT, STRUCTURAL TEE FROM W SERIES   |
| EXP        | EXPANSION                                 |         |                                 |        | SECTION                                |
| EXT        | EXTERIOR                                  |         |                                 | WWF    | WELDED WIRE FABRIC                     |
|            |                                           |         |                                 | YD     | YARD                                   |

GENERAL NOTES

THE FOLLOWING NOTES APPLY UNLESS INDICATED OTHERWISE:

CODE:

INTERNATIONAL BUILDING CODE, 2012 EDITION.

DESIGN SOIL PRESSURE:

1500 PSF MAX DEAD + LIVE LOAD, PLUS 150 PSF PER FOOT OF BURIAL DEPTH

CAST FOOTINGS ON COMPACTED SUBGRADE. SPECIAL INSPECTION REQUIRED.

DESIGN LIVE LOADS:

RETAINING WALLS 90 PCF INCLUDING SEISMIC

REINFORCED CONCRETE:

ALL CONCRETE -  $f_c$  = 3500 PSI, MAXIMUM W/C = 0.50, SUBMIT MIX DESIGN. SPECIAL INSPECTION REQUIRED.

UNLESS OTHERWISE NOTED, REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. PROVIDE CLASS B SPLICE. SUBMIT REINFORCING STEEL SHOP DRAWINGS WITH DETAILS PER ACI 315 MANUAL OF STANDARD PRACTICE.

ASTM A706, GRADE 60, REINFORCING STEEL SHALL BE USED FOR WELDED OR FIELD-BENT BARS.

WELDED WIRE FABRIC PER ASTM A185. FURNISH IN FLAT SHEETS, NOT ROLLS. LAP EDGES 1'-0".

CONCRETE COVER:

FOOTINGS 3". PILASTERS AND WALLS 2".

GROUT:

GROUT - 5000 PSI MINIMUM 7-DAY CUBE STRENGTH PER ASTM C1107. GROUT TO BE PREMIXED, NONMETALLIC, SHRINKAGE-RESISTANT GROUT PER ASTM C1107. USE SPECIFIC GROUT MIX RECOMMENDED BY MANUFACTURER FOR EACH GROUT APPLICATION AND FOLLOW MANUFACTURER'S INSTRUCTIONS.

DRILL-IN EXPANSION ANCHORS:

"KWIK BOLT TZ" BY HILTI FASTENING SYSTEMS OR APPROVED EQUAL. ICC-ES CERTIFICATION FOR SEISMIC RESISTANCE IN CRACKED CONCRETE REQUIRED. SPECIAL INSPECTION REQUIRED.

DRILL-IN ADHESIVE ANCHORS:

"HIT HY 200" ADHESIVE ANCHOR SYSTEM BY HILTI FASTENING SYSTEMS FOR CONCRETE OR APPROVED EQUAL. ICC-ES CERTIFICATION FOR SEISMIC RESISTANCE IN CRACKED CONCRETE REQUIRED. SPECIAL INSPECTION REQUIRED.

CONCRETE SCREW ANCHORS:

"KWIK HUS EZ" ANCHOR SYSTEM BY HILTI FASTENING SYSTEMS FOR CONCRETE OR APPROVED EQUAL. ICC-ES CERTIFICATION FOR SEISMIC LOAD RESISTANCE IN CRACKED CONCRETE REQUIRED. SPECIAL INSPECTION REQUIRED.

PRECAST CONCRETE:

$f_c$  = 3500 PSI, MAXIMUM W/C = 0.50, SUBMIT MIX DESIGN. SPECIAL INSPECTION REQUIRED.

REINFORCING STEEL, DETAILS AND SUBMITTALS AS NOTED FOR REINFORCED CONCRETE. SUBMIT SHOP DRAWINGS SHOWING EMBEDDED ITEMS, BLOCKOUTS, ADDED REINFORCING REQUIRED FOR LIFTING, AND TYPE AND LOCATION OF ALL LIFTING DEVICES. PROVIDE TEMPORARY BRACING TO RESIST WIND LOADING UNTIL PERMANENT SUPPORT IS INSTALLED. FABRICATION, TRANSPORTATION, AND ERECTION PER PCI STANDARDS.

STRUCTURAL STEEL:

ALL STEEL ASTM A36, EXCEPT PIPE SECTIONS TO BE ASTM A53 TYPE E GRADE B. SPECIAL INSPECTION REQUIRED. FABRICATION AND ERECTION PER AISC SPECIFICATIONS. FABRICATOR SHALL PARTICIPATE IN AISC QUALITY CERTIFICATION PROGRAM AND BE DESIGNATED AN AISC CERTIFIED PLANT, CATEGORY BU. SUBMIT SHOP DRAWINGS.

WELDING PER AWS D1.1. MINIMUM SIZE WELDS 3/16" CONTINUOUS FILLET. WELDERS CERTIFIED PER AMERICAN WELDING SOCIETY FOR ROD AND POSITION. ELECTRODES SHALL BE E70XX MINIMUM, WITH MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FT-LB AT -20 DEG F.

HEADED SHEAR STUDS - SHEAR STUDS PER ASTM A108, GRADES 1010 THRU 1020, HEADED TYPE, AWS D1.1, TYPE B, AUTOMATICALLY END WELDED.

MISCELLANEOUS:

CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED. THE EXISTING CONDITIONS SHOWN ON THE DRAWINGS ARE BASED ON EITHER SITE OBSERVATION, ORIGINAL DRAWINGS OR WERE ASSUMED BASED ON EXPECTED CONDITIONS. IF THE EXISTING CONDITIONS DO NOT CLOSELY MATCH THE CONDITIONS SHOWN ON THE DRAWINGS, OR IF THE EXISTING MATERIALS ARE OF QUESTIONABLE OR SUBSTANDARD QUALITY, NOTIFY THE ARCHITECT PRIOR TO COMMENCING ANY WORK.

DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER.

REFER TO ARCHITECTURAL DRAWINGS FOR WALL OPENINGS, ARCHITECTURAL TREATMENT AND DIMENSIONS NOT SHOWN.

SHOP DRAWINGS SHALL BE SUBMITTED AND REVIEWED PRIOR TO FABRICATION.

PROVIDE TEMPORARY ERECTION BRACING AND SHORING AS REQUIRED FOR STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION.



RESIDENTIAL RETAINING WALL

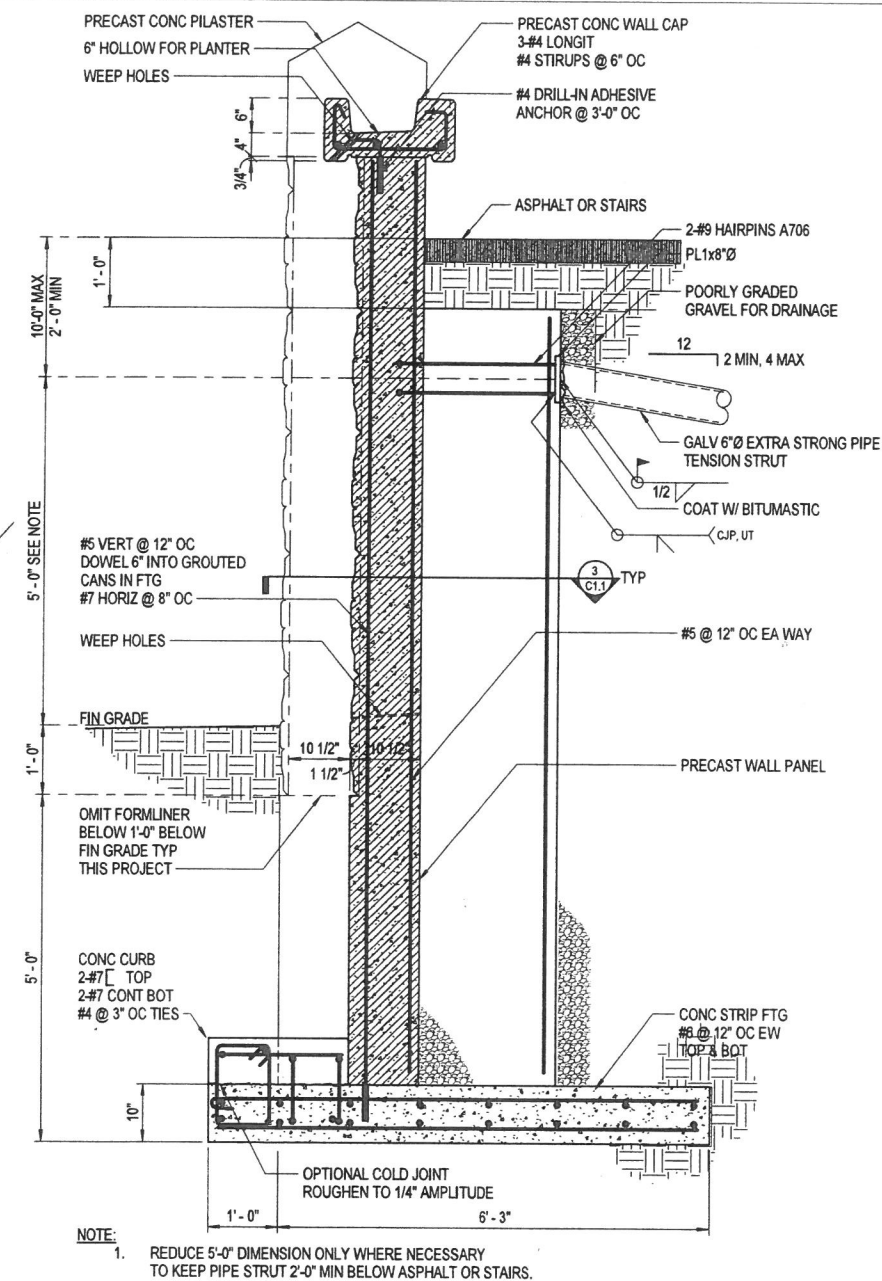
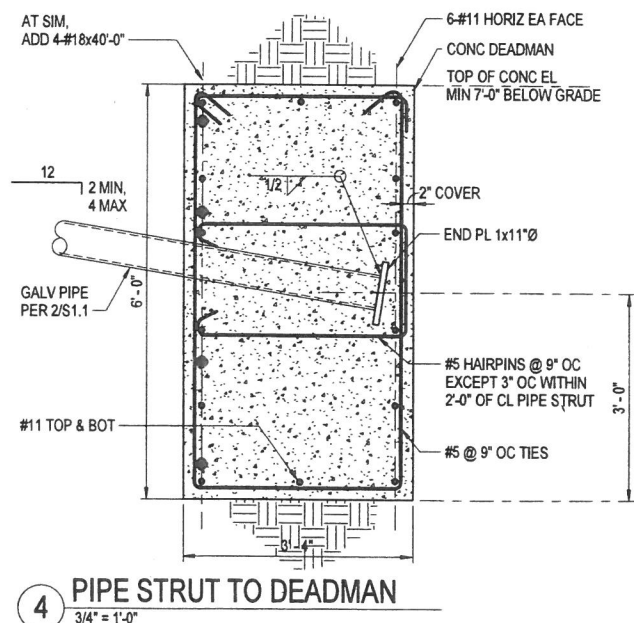
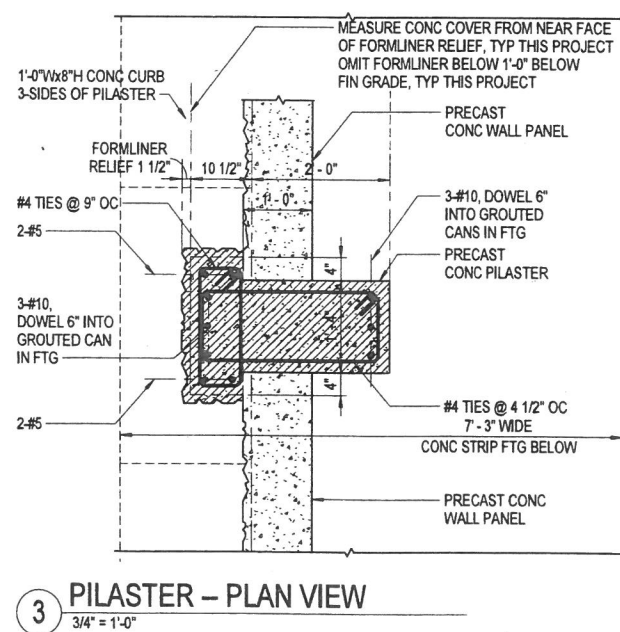
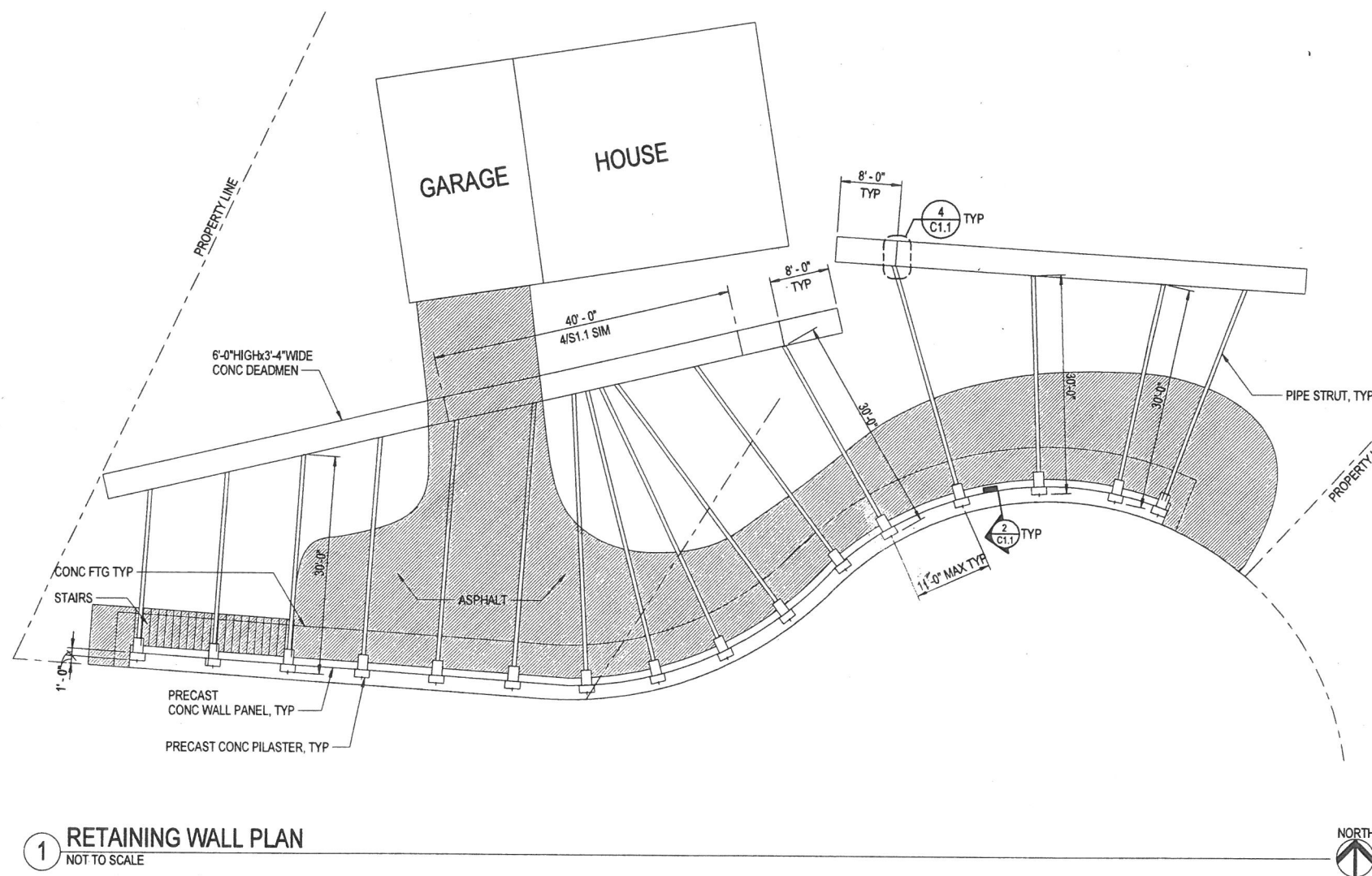
555 CLIFFSIDE COURT VALDEZ, ALASKA

| Revision Schedule |      |      |
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| CMS     | 3-7-2019 |
| Checked | Job No.  |
| SMG     | 219026   |

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| Sheet Contents |
| GENERAL NOTES  |

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| Drawing No. |
| C0.1        |



| CLASS B SPLICE SCHEDULE |                |                                  |
|-------------------------|----------------|----------------------------------|
| F'c = 3500 PSI          |                |                                  |
| BAR SIZE                | CLASS B SPLICE | CLASS B SPLICE<br>TOP BARS (NOTE |
| #3                      | 1'-4"          | 1'-4"                            |
| #4                      | 1'-4"          | 1'-9"                            |
| #5                      | 1'-9"          | 2'-3"                            |
| #6                      | 2'-6"          | 3'-3"                            |
| #7                      | 2'-11"         | 3'-9"                            |
| #8                      | 3'-4"          | 4'-4"                            |
| #9                      | 4'-3"          | 5'-6"                            |
| #10                     | 5'-4"          | 6'-11"                           |
| #11                     | 6'-7"          | 8'-7"                            |

**NOTES:**

SPLICE LENGTHS SHOWN ARE FOR BARS MEETING THE FOLLOWING REQUIREMENTS.

1. MIN CLEAR COVER = 1 1/2" EXCEPT 2" AT #7 AND LARGER BARS.
2. MIN ON CENTER SPACING = 3" EXCEPT 5" AT #7 AND LARGER BARS.
3. WHERE REINFORCING IS HORIZONTAL AND MORE THAN 12" OF FRESH CONCRETE IS CAST BELOW THE SPLICE, USE TOP BAR VALUES.

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| Drawn<br>CMS   | Date<br>3-7-2019  |
| Checked<br>SMG | Job No.<br>219026 |

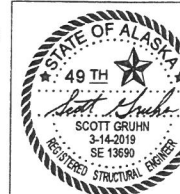
Sheet Contents

RETAINING WALL PLAN  
& DETAILS

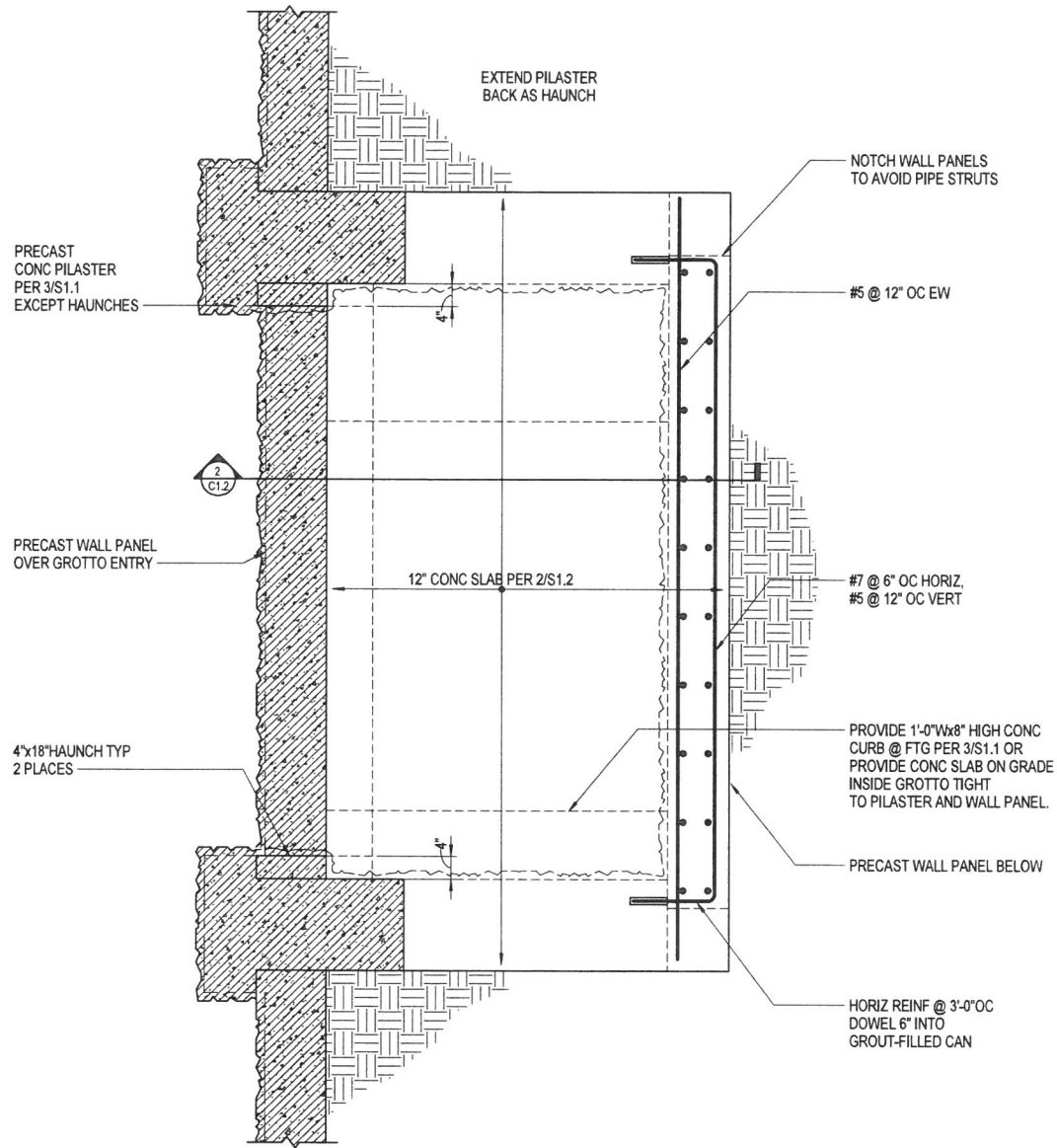
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### C1.1

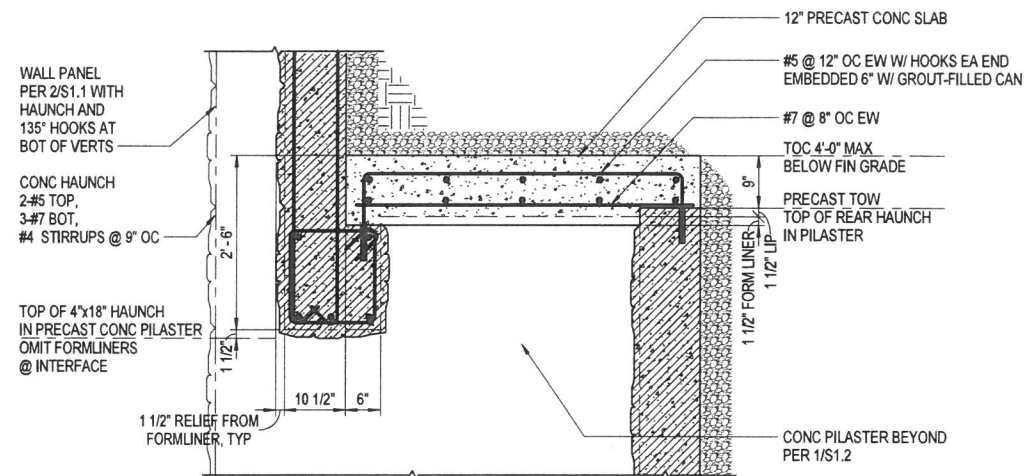
**BBFM**  
**Engineers Inc.**  
945 K Street  
Anchorage, AK 99501-1949  
Phone: (907) 274-2236 Fax: 274-2520



RESIDENTIAL RETAINING WALL



1 PLAN @ GROTTO  
3/4" = 1'-0"



2 SECTION @ GROTTO  
3/4" = 1'-0"

**BBFM**  
Engineers Inc.

845 K Street  
Anchorage, AK 99501-1949  
Phone: (907) 274-2236 Fax: 274-2520  
Corporate Authorization No. C725



RESIDENTIAL RETAINING WALL

555 CLIFFSIDE COURT VALDEZ, ALASKA

| Revision Schedule |      |      |
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| Drawn   | Date     |
| CMS     | 3-7-2019 |
| Checked | Job No.  |
| SMG     | 219026   |

Sheet Contents  
GROTTO DETAILS

Drawing No.  
C1.2