STRUCTURAL GENERAL NOTES

GENERAL CRITERIA

1. THESE GENERAL NOTES SHALL APPLY UNLESS SPECIFICALLY NOTED ON THE PLANS AND DETAILS.
2. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE, AND SHALL BE RESPONSIBLE FOR CONDITIONS OF ALL WORK AND MATERIALS, INCLUDING THOSE FURNISHED BY SUBCONTRACTORS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THE STRUCTURAL WORK WITH THE ARCHITECTURAL, CIVIL, MEP CONTRACT DOCUMENTS, AS WELL AS ANY OTHER APPLICABLE TRADES
3. DISCREPANCIES AND/OR VARIATIONS SHALL IMMEDIATELY BE REPORTED TO THE ARCHITECT AND ENGINEER.
4. PERFORM ALL CONSTRUCTION IN CONFORMANCE WITH THE BUILDING CODE AND DESIGN CODES REFERENCED WITHIN THESE DOCUMENTS. THE PROJECT CODES REFER TO THE BUILDING CODES AND DESIGN STANDARDS REFERENCED IN "DESIGN CRITERIA" GENERAL NOTES.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE UNTIL THE CONSTRUCTION OF THE STRUCTURE REACHES ITS FINAL CONDITION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, INSTALLATION, AND REMOVAL OF TEMPORARY BRACING AND CONSTRUCTION SUPPORTS, FOR NEW AND EXISTING STRUCTURES, AS NECESSARY TO COMPLETE THE PROJECT. NO PORTION OF THE PROJECT WHILE UNDER CONSTRUCTION IS INTENDED TO BE STABLE IN THE ABSENCE OF THE CONTRACTOR'S TEMPORARY SUPPORTS AND BRACES.
6. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
7. THE DRAWINGS SHOW ONLY REPRESENTATIVE AND TYPICAL DETAILS TO ASSIST THE CONTRACTOR. THE DRAWINGS DO NOT ILLUSTRATE EVERY CONDITION. ALL ATTACHMENTS, CONNECTIONS, FASTENINGS, ETC., SHALL BE PROPERLY SECURED IN CONFORMANCE WITH THE BEST PRACTICE, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING THEM.
8. ASSUME EQUAL SPACING BETWEEN ESTABLISHED DIMENSIONS, IF NOT INDICATED ON DRAWINGS. CENTERLINES OF COLUMNS AND FOUNDATIONS COINCIDE WITH GRID LINE INTERSECTIONS, U.N.O. CENTERLINES OF GRADE BEAMS AND WALLS COINCIDE WITH CENTERLINES OF FOUNDATIONS, U.N.O. CENTERLINES OF FRAMING MEMBERS COINCIDE WITH COLUMN CENTERLINES, U.N.O. THE CONTRACTOR SHALL PROTECT EXISTING FACILITIES, STRUCTURES AND UTILITIES FROM DAMAGE.
9. THE CONTRACTOR SHALL VERIFY THAT CONSTRUCTION LOADS DO NOT EXCEED THE CAPACITY OF THE STRUCTURE AT THE TIME THE LOAD IS APPLIED.
10. THE CONTRACTOR SHALL COORDINATE THE BOTTOM OF BASE PLATE ELEVATIONS WITH THE AS-BUILT TOP OF SUPPORT ELEVATIONS.
11. THE CONTRACT STRUCTURAL DRAWINGS SHALL NOT BE USED IN WHOLE OR IN PART FOR SHOP DRAWING SUBMITTALS.
12. CONTRACTOR SHALL NOTE THAT THE STRUCTURAL ENGINEER OF RECORD (SER) REQUIRES A MINIMUM OF TWO WEEKS TO REVIEW ALL SHOP DRAWING SUBMITTALS.
13. THE GEOTECHNICAL REPORT IS A SEPARATE DOCUMENT (NOT PART OF THE CONTRACT DOCUMENTS) FURNISHED BY THE PROJECT OWNER. THE CONTRACTOR SHALL OBTAIN A COPY OF THE REPORT FOR REFERENCE AS IT DESCRIBES SUB-SURFACE CONDITIONS THAT MAY BE ENCOUNTERED DURING INSTALLATION OF FOUNDATIONS AND CONTAINS OTHER INFORMATION PERTINENT TO CONSTRUCTION DRAWINGS.
14. THE GEOTECHNICAL ENGINEER SHALL BE RETAINED TO REVIEW THE FINAL DESIGN PLANS AND SPECIFICATIONS SO COMMENTS CAN BE MADE REGARDING INTERPRETATION AND IMPLEMENTATION OF THE GEOTECHNICAL RECOMMENDATIONS IN THE DESIGN AND SPECIFICATIONS.
15. THE GEOTECHNICAL ENGINEER SHALL BE RETAINED TO PROVIDE TESTING AND OBSERVATIONS DURING EXCAVATION, GRADING, FOUNDATION INSTALLATION, AND OTHER CONSTRUCTION PHASES OF THE PROJECT.

DESIGN CRITERIA

1. PROJECT CODE:
   - A. BUILDING CODE.....2021 INTERNATIONAL BUILDING CODE
   - B. STRUCTURAL CONCRETE .....ACI 318*
   - C. CONCRETE MASONRY.....ACI 530*
   - D. STRUCTURAL STEEL.....AISC-360*
   - E. COLD FORMED STEEL.....AISI S100*
   - F. WOOD.....NDS*

   *CODE EDITION AS REFERENCED IN BUILDING CODE
2. GRAVITY LOADS
   - A. DEAD LOADS
     - a. 6" CONC SLAB.....75 PSF
   - B. LIVE LOADS
     - a. PLAYGROUND.....100 PSF
   - C. SNOW LOADS
     - a. GROUND SNOW LOAD, Pg.....40 PSF
     - b. IMPORTANCE FACTOR, I.....1.0
     - c. SNOW EXPOSURE FACTOR, Ce.....1.0
     - d. THERMAL FACTOR, Ct.....1.0
3. WIND LOADS
   - A. Vult.....115 MPH
   - B. RISK CATEGORY.....III
   - C. EXPOSURE.....C
   - D. INTERNAL PRESSURE COEFFICIENT.....+/- 0.18
   - E. IMPORTANCE FACTOR.....1.0
4. SEISMIC LOADS
   - A. SEISMIC DESIGN CATEGORY.....B
   - B. SITE CLASS.....D
   - C. SEISMIC IMPORTANCE FACTOR, Ie.....1.0
   - D. RISK CATEGORY.....III
   - E. Ss.....0.196
   - F. S1.....0.056
   - G. Sds.....0.209
   - H. Sd1.....0.089
5. FOUNDATION DESIGN
   - A. FOUNDATION TYPE.....SHALLOW SPREAD FOOTINGS
   - B. ALLOWABLE BEARING PRESSURE.....2,000 PSF
   - C. MIN. BEARING DEPTH BELOW GRADE.....3'-0"
   - D. LATERAL SOIL PRESSURES:
     1. ACTIVE LATERAL PRESSURE.....39 PSF/FT
     2. RETAINED LATERAL PRESSURE.....60 PSF/FT
     3. PASSIVE PRESSURE.....440 PSF/FT
     4. COEFFICIENT OF FRICTION.....0.45
   - E. GEOTECHNICAL REPORT
     - REPORT TITLE: GEOTECHNICAL EVALUATION - AXL ACADEMY PHASE 1 PLAY AREA IMPROVMENTS - AURORA, COLORADO - REVISED
     - JOB NUMBER: 24-3005, MARCH 7, 2025

EXISTING CONDITIONS

1. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO DEMOLITION. CONTACT ENGINEER IF CONDITIONS ARE DIFFERENT THAN SHOWN.
2. PROVIDE SHORING, BRACING, ETC. OF REMAINING STRUCTURE AS REQ'D. FOR SAFETY AND STRUCTURAL INTEGRITY.
3. PROVIDE WEATHER PROTECTION FOR THE DURATION OF THE DEMOLITION WORK.
4. REF. ARCH'L. DRAWINGS FOR ALL OPENING DIMENSIONS AND LOCATIONS TO LOCATE NEW FRAMING AND FOOTING LOCATIONS.
5. REPLACE ANY DAMAGED FRAMING WITH MEMBERS OF SAME SIZE AND SPACING. NOTIFY ENGINEER OF ANY STRUCTURAL DEFICIENCIES FOUND IN EXISTING FRAMING THAT NEED TO BE ADDRESSED (I.E. SPLIT, CUT, OR MEMBERS SHOWING EXCESSIVE DEFLECTIONS.

SUBGRADE PREPARATION

1. THE IS INTENDED AS A SUMMARY, NOT A REPLACEMENT OF THE GEOTECHNICAL REPORT. REFER TO GEOTECHNICAL REPORT AND ADHERE TO ALL REQUIREMENTS AND RECOMMENDATIONS SET FORTH BY GEOTECHNICAL REPORT. GEOTECHNICAL ENGINEER TO VERIFY IN THE FIELD.
2. THE FOUNDATIONS HAVE BEEN DESIGNED FOR BEARING ON EXISTING SOILS PER GEOTECHNICAL REPORT. POTENIAL SETTLEMENT IS UP TO 3" PER THE REPORT. PREPARE ALL SUBGRADE AS REQUIRED BY REPORT FOR BEARING ON EXISTING SITE SOILS
3. THE SUBGRADE NOTES PROVIDED BELOW ARE INTENDED ONLY AS A SUMMARY OF THE GEOTECHNICAL ENGINEERS RECOMMENDATION. THE CONTRACTOR SHALL VERIFY FOUNDATION INSTALLATION AND CONSTRUCTION IS IN CONFORMANCE WITH THE RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL REPORT.
4. FOR A DISTANCE OF 5'-0" OUTSIDE THE BUILDING LINE, REMOVE VEGETATION (TREE STUMPS AND MAJOR ROOT SYSTEMS SHALL BE COMPLETELY REMOVED), DEBRIS, TOPSOILS, FILL SOILS, UNDERGROUND FEATURES, AND ANY OTHER DELETERIOUS MATERIAL FROM THE BUILDING AREA.
5. UNDER THE SLAB-ON-GROUND, A MINIMUM OF 2'-0" OF ON-SITE LOW EXPANSIVE SOILS OR IMPORTED ENGINEERED FILL MATERIAL. THE GEOTECHNICAL ENGINEER SHOULD CONFIRM ALL FILL PRIOR TO PLACEMENT.
6. PRIOR TO PLACEMENT OF FILL, THE EXPOSED SUBGRADE SHOULD BE SCARIFIED AND MOISTENED OR DRY AS REQUIRED. COMPACT ALL SUBGRADE SOILS TO A MINIMUM DEPTH OF 8 INCHES. THE SUBGRADE PREPARATION SHOULD BE ACCOMPLISHED IN A MANNER WHICH WILL RESULT IN UNIFORM WATER CONTENTS AND DENSITIES AFTER COMPACTION. REFILL THE EXCAVATION WITH PROPERLY COMPACTED, LOW EXPANSIVE ON-SITE OR IMPORTED ENGINEERED FILL MEETING THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEERING REPORT.
7. FILL BACK TO REQUIRED GRADE WITH MATERIAL SELECTED AND COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. FILL SHALL EXTEND AT LEAST 5'-0" BEYOND THE FOUNDATION PERIMETER.
8. ANY STANDING WATER ON THE SURFACE OF THE VAPOR BARRIER SHALL BE REMOVED OR DRIED PRIOR TO CONCRETE PLACEMENT.
9. LABORATORY MOISTURE-DENSITY CURVE OR CURVES AS REQUIRED AND RESULTS OF AT LEAST 2 FIELD DENSITY CHECKS PER LIFT ARE TO BE SUBMITTED TO THE ARCHITECT OR ENGINEER.
10. ALL FOUNDATION EXCAVATIONS SHALL BE EXTENDED TO FINAL GRADE AND THE FOOTINGS CONSTRUCTED AND POURED AS SOON AS POSSIBLE TO MINIMIZE POTENTIAL DAMAGE (DUE TO WETTING AND/OR DRYING) TO BEARING SOILS. FOUNDATION CONCRETE SHALL NOT BE PLACED ON SOILS THAT HAVE BEEN DISTURBED BY RAINFALL OR SEEPAGE.
11. EXTEND ALL FOOTINGS A MINIMUM OF 3'-0" BELOW FINAL GRADE.
12. PROVIDE 10 MIL. VAPOR RETARDER UNDER ALL CONCRETE SLABS. VAPOR RETARDERS SHALL CONFORM TO ASTM E 1745 CLASS A REQUIREMENTS. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND ASTM E 1643-98.

CONTROLLED BACKFILL BEHIND RETAINING WALLS

1. BACKFILL MATERIAL SHALL BE SELECT GRANULAR FILL (CDOT CLASS 1 STRUCTURE BACKFILL. MAX ACTIVE DESIGN PRESSURE: 39 psf/ft MAX AT-REST DESIGN PRESSURE: 60 psf/ft
2. HEAVY EQUIPMENT SHALL NOT BE USED ABOVE RETAINED SOILS. USE HAND EQUIPMENT ONLY FOR SOILS COMPACTION.
3. BACKFILL MATERIAL SHALL BE PLACED IN HORIZONTAL LOOSE LIFTS NOT TO EXCEED 8" IN THICKNESS.
4. EACH LIFT SHOULD BE COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY BASED ON ASTM D698.
5. THE MOISTURE CONTENT SHOULD BE WITHIN 3 PERCENTAGE POINTS OF THE OPTIMUM MOISUTRE CONTENT AT THE TIME OF COMPACTION.
6. BACKFILL MATERIAL SHALL NOT BE PLACED AGAINST WALLS UNTIL ALL SUPPORTING SLABS, BEAMS, STRUTS, ETC., HAVE ATTAINED THEIR 28 DAY DESIGN STRENGTH UNLESS PROPER BRACING IS INSTALLED.
7. WHERE BACKFILL IS REQUIRED ON BOTH SIDES OF A STRUCTURE OR BUILDING ELEMENT, BACKFILL SHALL BE PLACED SIMULTANEOUSLY ALONG BOTH SIDES SO THAT THE BACKFILL HEIGHT ON ONE SIDE DOES NOT EXCEED THE HEIGHT ON THE OPPOSITE SIDE BY MORE THAN 4'-0".
8. COMPACTION AND MOISTURE CONTENT OF SUBGRADE AND EACH LIFT OF STRUCTURAL FILL SHALL BE INSPECTED AND APPROVED BY A QUALIFIED ENGINEERING TECHNICIAN, SUPERVISED BY A GEOTECHNICAL ENGINEER
9. GEOTECHNICAL ENGINEER SHALL BE RETAINED TO VERIFY BACKFILL MATERIAL PRIOR TO PLACEMENT.

CONCRETE NOTES

1. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST AMERICAN CONCRETE INSTITUTE BUILDING CODE (ACI 318 -CODE ADOPTED EDITION). ALL CONCRETE FLOOR AND SLAB CONSTRUCTION SHALL CONFORM TO ACI 302.1R. ALL CONCRETE WORK SHALL ALSO CONFORM TO "SPECIFICATIONS FOR STRUCTURAL CONCRETE", ACI 301.
2. PROVIDE NORMALWEIGHT CONCRETE WITH CURED DENSITY OF 145 +/- 5 PCF, AND AGGREGATE CONFORMING TO ASTM C33, U.N.O. WHERE INDICATED, PROVIDE LIGHTWEIGHT CONCRETE WITH CURED DENSITY OF 112+/-3 PCF AND AGGREGATE CONFORMING TO ASTM C330
3. CONCRETE STRENGTH SHALL MEET THE FOLLOWING 28-DAY COMPRESSIVE STRENGTHS (f'c) U.N.O.:

		MAX SLUMP:
A.	28 DAY COMPRESSIVE STRENGTH	
a.	FOOTINGS, PIERS.....4,500 PSI	4 IN
b.	SLAB ON GRADE.....4,500 PSI	5 IN
c.	WALLS, BEAMS, COLUMNS.....4,000 PSI	4 IN
B.	MAXIMUM WATER/CEMENT 0.45	
C.	NOMINAL MAX AGGREGATE SIZE	
a.	FOOTINGS.....1"	
b.	TYPICAL.....3/4"	
D.	AIR CONTENT	
a.	CONCRETE EXPOSED TO FREEZE/THAW.....4 1/2% +/- 1 1/2"	
b.	TROWEL-FINISHED INTERIOR SLABS.....LESS THAN 3%	

4. FLY ASH CAN BE SUBSTITUTED FOR CEMENT UP TO 25% BY WEIGHT. CALCIUM CHLORIDE IS NOT ACCEPTABLE FOR USE IN MIX..
5. FURNISH MIX DESIGNS FOR ALL CLASSES OF CONCRETE. RETAIN A QUALIFIED TESTING LABORATORY TO MAKE CONCRETE CYLINDERS AND PERFORM COMPRESSIVE TESTS.
6. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150 AND ACI 318 TYPE II CEMENT FOR STRENGTH DESIGN METHOD. AGGREGATE SHALL CONFORM TO ASTM C-33.
7. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED IN PLACE BY EXPERIENCED WORKMEN IN ORDER TO CONSOLIDATE THE IN-PLACE CONCRETE. THE CONTRACTOR SHALL AVOID OVER-VIBRATION LEADING TO SEGREGATION OF THE CONCRETE COMPONENTS
8. NO ADMIXUTRES SHALL BE USED WITOUT PRIOR WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER. ADMIXTURES USING ANY FORM OF CHLORIDES SHALL NOT BE USED.
9. PROVIDE CONTROL JOINTS IN ALL SLABS AT A SPACING NOT TO EXCEED 15'-0" O.C. EACH WAY. JOINT DEPTH SHALL BE A MINIMUM OF 1/4 THE SLAB THICKNESS. IF JOINTS ARE SAW-CUT, THE CUTTING SHALL TAKE PLACE IMMEDIATELY AFTER FINISHING THE SLAB. JOINTS SHALL NOT BE LOCATED IN LINE WITH AND ABOVE GRADE BEAMS IF APPLICABLE. COORDINATE LOCATION OF JOINTS WITH ARCHITECT.
10. SEE ARCHITECTURAL AND MECHANICAL PLANS FOR VERIFICATION OF ALL DEPRESSIONS, OPENINGS, CAST-IN-PLACE ACCESSORIES, ETC.
11. ALL FLOOR SLABS SHALL BE CONSTRUCTED TO HAVE A MINIMUM FLATNESS OF FF=35 AND A MINIMUM LEVELNESS OF FL=25 IN ACCORDANCE WITH ASTM E 1155.
12. CURE CONCRETE SURFACE EITHER BY WATER CURING, WET COVERING, OR APPLYING A LIQUID MEMBRANE-FORMING CURING COMPOUND THAT MEETS OR EXCEEDS THE REQUIREMENTS OF ASTM C 309.
13. WHEN WATER CURING OR WET COVERING IS USED PROVIDE 7 DAYS OF UNINTERRUPTED CURING.
14. IF A CURING COMPOUND IS USED, PROVIDE A LETTER OF COMPATIBILITY FROM THE MFR. INSURING THAT THE CURING COMPOUND WILL NOT INTERFERE WITH SUBSEQUENT FLOOR FINISHES.
15. EMBEDDED CONDUITS AND PIPES, AND SLEEVES SHALL MEET THE REQUIREMENTS OF ACI 318-14, INCLUDING THE FOLLOWING REQUIREMENTS:
    - CONDUITS AND PIPES EMBEDDED WITHIN A SLAB, WALL, OR BEAM (OTHER THAN THOSE PASSING THROUGH) SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN 1/3 THE OVERALL THICKNESS OF THE SLAB, WALL, OR BEAM IN WHICH THEY ARE EMBEDDED.
    - CONDUITS, PIPES, AND SLEEVES SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS OR WIDTHS ON CENTER.
    - CONDUITS, PIPES, AND SLEEVES SHALL BE OF UN-COATED OR GALVANIZED IRON OR STEEL NOT THINNER THAN STANDARD SCHEDULE 40 PIPE.

CONCRETE REINFORCING NOTES

1. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, UNLESS OTHERWISE NOTED, MUST FOLLOW THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE", ACI 315 LATEST EDITION.
2. ALL REINFORCING BARS SHALL SHALL CONFORM TO THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES, UNO:
   DEFORMED BARS.....ASTM A615 (GR 60)
   WELDED WIRE REINFORCEMENT.....ASTM A1064
   WELDABLE DEFORMED BARS.....ASTMA70
3. STANDARD PROTECTIVE COVER OF REINFORCING BARS UNLESS OTHERWISE NOTED SHALL BE:

CONCRETE EXPOSURE	MEMBER	REINFORCEMENT	SPECIFIED COVER
CAST AGAINST PERMANENTLY IN CONTACT WITH GROUND	ALL	ALL	3 IN
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	ALL	NO 6. THRU NO. 18	2 IN
		NO. 5, W31, OR D31 WIRE OR SMALLER	1 1/2 IN
NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	SLABS, JOISTS, & WALLS	PRIMARY REINFORCEMENT	1 1/2 IN
	BEAMS, COLS. AND TENSION TIES	STIRRUPS, TIES, SPIRALS, AND HOOPS	1 1/2 IN

4. CORNER REINFORCING BARS SHALL BE USED AT ALL CORNERS AND INTERSECTIONS. SEE TYPICAL DETAIL.
5. LAP REINFORCING AT SPLICES PER LAP SPLICE SCHEDULE UNLESS NOTED OR DETAILED OTHERWISE.
6. WELDING OR HEAT BENDING OF REINFORCING BARS SHALL NOT BE PERMITTED, UNLESS APPROVED BY THE ENGINEER.
7. PROVIDE (2) #4 X 4'-6' LONG DIAGONAL BARS AT ALL RE-ENTRANT CORNERS.
8. U.N.O. IN SHEARWALL SCHEDULE: PROVIDE 1/2" DIAMETER X 10" LONG HOT DIPPED GALVANIZED ANCHOR BOLTS AT 4'-0" O.C. IN THE FOUNDATION AT THE LOCATIONS OF ALL EXTERIOR WOOD FRAMED WALLS. REFER TO SHEAR WALL SCHEDULE AT SHEAR WALLS.
9. AT CORNERS AND "T" INTERSECTIONS OF ALL BEAMS EXTEND 4 CORNER BARS EQUAL TO THE SCHEDULED STEEL IN THE ADJACENT BEAMS 2'-0" EACH WAY, 2 BARS TOP AND 2 BARS BOTTOM. PROVIDE CORNER BARS AT ALL INTERMEDIATE REINFORCING BARS IN WALLS AND DEEP BEAMS
10. PROVIDE ACCESSORIES FOR SUPPORT OF ALL REINFORCING.
11. WHERE A 90-DEG, 135-DEG, OR 180-DEG HOOK IS GRAPHICALLY INDICATED, PROVIDE CORRESPONDING ACI STARDARD HOOKS UNO
12. WELDED WIRE REINFORCMENT (WWR) SHALL BE SUPPLIED IN FLAT SHEETS - ROLLED STOCK IS NOT ALLOWED.
13. WWR SHALL BE LAPPED SO THAT THE OVERLAP MEASURED BETWEE OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF CROSS WIRES PLUS SIX INCHES

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
FOOTING MARK F (-x'-x") T.O. FOOTING ELEVATION	SPREAD FOOTING, REF SCHEDULE ON S105
	STEEL COLUMN
	SLAB OR DECK SPAN DIRECTION
	DROP IN SLAB OR DECK
	DROP AND SLOPE IN SLAB OR DECK
	SLOPE IN SLAB OR DECK

NOTE(S):
1. ITEMS IN LEGEND MAY NOT APPEAR ON ALL PLANS

SUBMITTALS

SUBMITTAL REVIEW

1. TEN WORKING DAYS PRIOR TO SUBMITTING SHOP DRAWINGS, THE CONTRACTOR SHALL SUBMIT FOR STRUCTURAL ENGINEER' S REVIEW A SCHEDULE WHICH DETAILS THE ESTIMATED QUANTITY OF SHOP DRAWINGS AND THE DATE THE SHOP DRAWINGS WILL BE RECEIVED BY THE STRUCTURAL ENGINEER. THE STRUCTURAL ENGINEER SHALL HAVE THE OPPORTUNITY TO REVIEW THE PROPOSED SCHEDULE AND SUBMIT COMMENTS TO THE CONTRACTOR. THE FINAL SHOP DRAWING SCHEDULE SHALL BE DEVELOPED AND SUBMITTED TO THE STRUCTURAL ENGINEER. IN ACCORDANCE WITH THE SHOP DRAWING SCHEDULE, THE STRUCTURAL ENGINEER WILL RETURN THE SHOP DRAWING ITEMS WITHIN TEN WORKING DAYS AFTER HAVING RECEIVED THE REPRODUCIBLE SHOP DRAWING.
2. THE CONTRACTOR IS TO REVIEW EACH SUBMITTAL PRIOR TO FORWARDING TO ARCHITECT AND STRUCTURAL ENGINEER. THE CONTRACTOR IS TO STAMP EACH SUBMITTAL VERIFYING THAT THE FOLLOWING IS ADDRESSED:
   - A. THE SHOP DRAWING IS REQUESTED.
   - B. THE SHOP DRAWING IS BASED ON THE LATEST DESIGN.
   - C. THE ARCHITECT' S AND STRUCTURAL ENGINEER' S COMMENTS FROM ANY PREVIOUS SUBMITTALS ARE ADDRESSED.
   - D. THE WORK IS COORDINATED AMONG ALL CONSTRUCTION TRADES.
   - E. REVISIONS FROM PREVIOUS SUBMITTALS ARE CLEARLY MARKED BY CIRCLING OR CLOUDS.
   - F. SUBMITTAL IS COMPLETE.
   - G. SUBMITTAL DOES NOT INCLUDE SUBSTITUTION REQUEST
   - H. SUBMITTAL SHALL INCLUDE A STAMP INDICATING PROJECT NAME AND LOCATION, SUBMITTAL NUMBER, SPECIFICATION SECTION NUMBER.
3. THE STRUCTURAL ENGINEER SHALL RETURN, WITHOUT COMMENT, SUBMITTALS WHICH THE CONTRACTOR HAS NOT STAMPED OR WHICH DO NOT MEET THE ABOVE REQUIREMENTS. THE STRUCTURAL ENGINEER' S REVIEW OF SUBMITTALS SHALL BE FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT. NO WORK SHALL BE STARTED WITHOUT SUCH REVIEW.
4. FOR COMPONENTS THAT REQUIRE ENGINEERING BY THE CONTRACTOR, PROVIDE A NOTE ON EACH SHOP DRAWING, WRITTEN AND SIGNED BY THE SUPPLIER' S ENGINEER, INDICATING THAT THE SHOP DRAWING IS IN CONFORMANCE WITH THE CALCULATIONS OF THE CONTRACTOR' S ENGINEER.

REQUIRED SUBMITTALS

1. THE FOLLOWING ITEMS REQUIRE SUBMITTALS FOR STRUCTURAL REVIEW AS OUTLINED IN THE SPECIFICATIONS:
   1. 03200 - CONCRETE REINFORCING LAYOUT
   2. 03300 - CONCRETE MIX DESIGNS
   3. 03300 - CONCRETE CONSTRUCTION JOINT LAYOUT
   4. 05100 - STRUCTURAL STEEL

   CALC = CALCULATIONS TO BE PROVIDED TO ENGINEER OF RECORD
   S/S=SIGNED AND SEALED BY ENGINEER IN PROJECT STATE

ARCHITECT:

enlight10architecture

CONSULTANTS:

JCA
4100 Wadsworth Blvd.
Wheat Ridge, CO 80033
p 303.985.3260
#25.013

CLIENT:

PROJECT:

AXL ACADEMY
450 S CHAMBERS RD
AURORA, CO 80017

STAMP:

COLORADO LICENSED
NICHOLAS ROHR
57594
PROFESSIONAL ENGINEER
03/11/25

PROJECT NUMBER: 25.013
INITIAL DATE: NOV. 2024
DRAWN BY: SG

#	DESCRIPTION	DATE
1	FOR CONSTRUCTION	03-11-2025

GENERAL NOTES

S001

REQUIRED SPECIAL INSPECTIONS

IN ADDITION TO THE REGULAR INSPECTIONS REQUIRED BY SECTION 110 OF THE INTERNATIONAL BUILDING CODE, THE FOLLOWING ITEMS ALSO REQUIRE SPECIAL INSPECTION IN ACCORDANCE WITH SECTION 1705

ITEM	SECTION
STRUCTURAL STEEL	IBC 1705.2 / AISC 360 SECTION N5
FIELD WELDING	IBC 1705.5
STRUCTURAL CONCRETE	IBC 1705.3 / ACI 318 17.8, 26.13
ANCHOR BOLTS, POST INSTALLED ANCHORS IN CONC.	ACI 318 17.8
SOILS COMPLIANCE PRIOR TO FOUNDATION INSPECTION	IBC 1705.6 / PER GEOTECH REQUIREMENTS

1. THE ARCHITECT IS THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE (RDPIRC) FOR THIS PROJECT. SUBMIT ALL INSPECTION REPORTS DIRECTLY TO THE RDPIRC FOR REVIEW. INDIVIDUAL INSPECTION REPORTS SHALL INDICATE IF WORK WAS COMPLETED IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE GC FOR CORRECTION. IF NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND RDPIRC PRIOR TO COMPLETION OF THAT PHASE OF WORK.
2. IN ORDER TO COMPLY WITH THE BUILDING CODE REQUIREMENTS, THE SPECIAL INSPECTORS AND TESTING TECHNICIANS MAY NOT BE EMPLOYED BY THE GENERAL CONTRACTOR (GC), SUBCONTRACTORS OR MATERIAL SUPPLIERS. IN THE CASE OF AN OWNER / CONTRACTOR, THE BUILDING OFFICIAL SHALL BE CONSULTED.
3. THESE INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS IDENTIFIED IN SECTION 110 OF THE IBC. CONSTRUCTION SHALL REMAIN ACCESSIBLE AND EXPOSED FOR INSPECTION PURPOSES UNTIL APPROVED
4. SPECIAL INSPECTIONS REPORT REQUIREMENTS 1704.2.4: SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF WORK. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED AT A POINT IN TIME AGREED UPON PRIOR TO THE START OF WORK BY THE APPLICANT AND THE BUILDING OFFICIAL.

1. THE OWNER SHALL EMPLOY THE SERVICES OF ONE OR MORE SPECIAL INSPECTORS TO PROVIDE SPECIAL INSPECTIONS DURING CONSTRUCTION FOR THE FOLLOWING:
   - A. SHALLOW FOUNDATIONS:
     1. INSPECT SOILS BELOW FOOTINGS FOR ADEQUATE BEARING CAPACITY AND CONSISTENCY WITH GEOTECHNICAL REPORT.
     2. INSPECT REMOVAL OF UNSUITABLE MATERIAL AND PREPARATION OF SUBGRADE PRIOR TO PLACEMENT OF CONTROLLED FILL.
   - B. CONTROLLED STRUCTURAL FILL:
     1. PERFORM SIEVE TESTS (ASTM D422 & D1140) AND MODIFIED PROCTOR TESTS (ASTM D1557) ON EACH SOURCE OF FILL MATERIAL.
     2. INSPECT PLACEMENT, LIFT THICKNESS & COMPACTION OF CONTROLLED FILL.
     3. TEST DENSITY OF EACH LIFT OF FILL BY NUCLEAR METHODS (ASTM D2922).
     4. VERIFY EXTENT AND SLOPE OF FILL PLACEMENT.
   - C. STRUCTURAL STEEL:
     1. REVIEW SHOP FABRICATION AND QUALITY CONTROL PROCEDURES.
     2. REVIEW CERTIFIED MILL TEST REPORTS & IDENTIFICATION MARKINGS ON HSS SHAPES.
     3. INSPECT INSTALLATION AND TIGHTENING OF HIGH-STRENGTH BOLTS. VERIFY THAT SPLINES HAVE SEPARATED FROM TENSION CONTROL BOLTS. VERIFY PROPER TIGHTENING SEQUENCE.
     4. INSPECT STEEL FRAME FOR COMPLIANCE WITH STRUCTURAL DRAWINGS, INCLUDING BRACING, MEMBER CONFIGURATIONS AND CONNECTION DETAILS.
     5. INSPECT WELDS IN ACCORDANCE WITH AWS D1.1.
   - D. POST-INSTALLED ANCHOR BOLTS:
     1. PERIODIC OR CONTINUOUS INSPECTIONS PER THE REQUIREMENTS OF THE ICC-ES REPORT FOR THE PRODUCT USED.
2. THE INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
3. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
   - A. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS. THE INSPECTOR MAY NOT ALTER, MODIFY, ENLARGE OR WAIVE ANY OF THE REQUIREMENTS OF THE DOCUMENTS.
   - B. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE PROFESSIONAL OF RECORD, AND THE CONTRACTOR. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, SUBMIT A COMPLETE LIST OF ALL OUTSTANDING DISCREPANCIES ON A WEEKLY BASIS TO THE OWNER, THE BUILDING OFFICIAL, AND THE PROFESSIONAL OF RECORD UNTIL ALL CORRECTIONS HAVE BEEN COMPLETED.
   - C. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.
4. STRUCTURAL OBSERVATION BY THE SEOR IS NOT REQUIRED.
5. WHERE INSPECTION REQUIREMENTS DUPLICATE THE REQUIREMENTS OF SPECIFIED QUALITY ASSURANCE TESTING, DUPLICATE INSPECTIONS SHALL NOT BE REQUIRED.

SPECIAL INSPECTIONS

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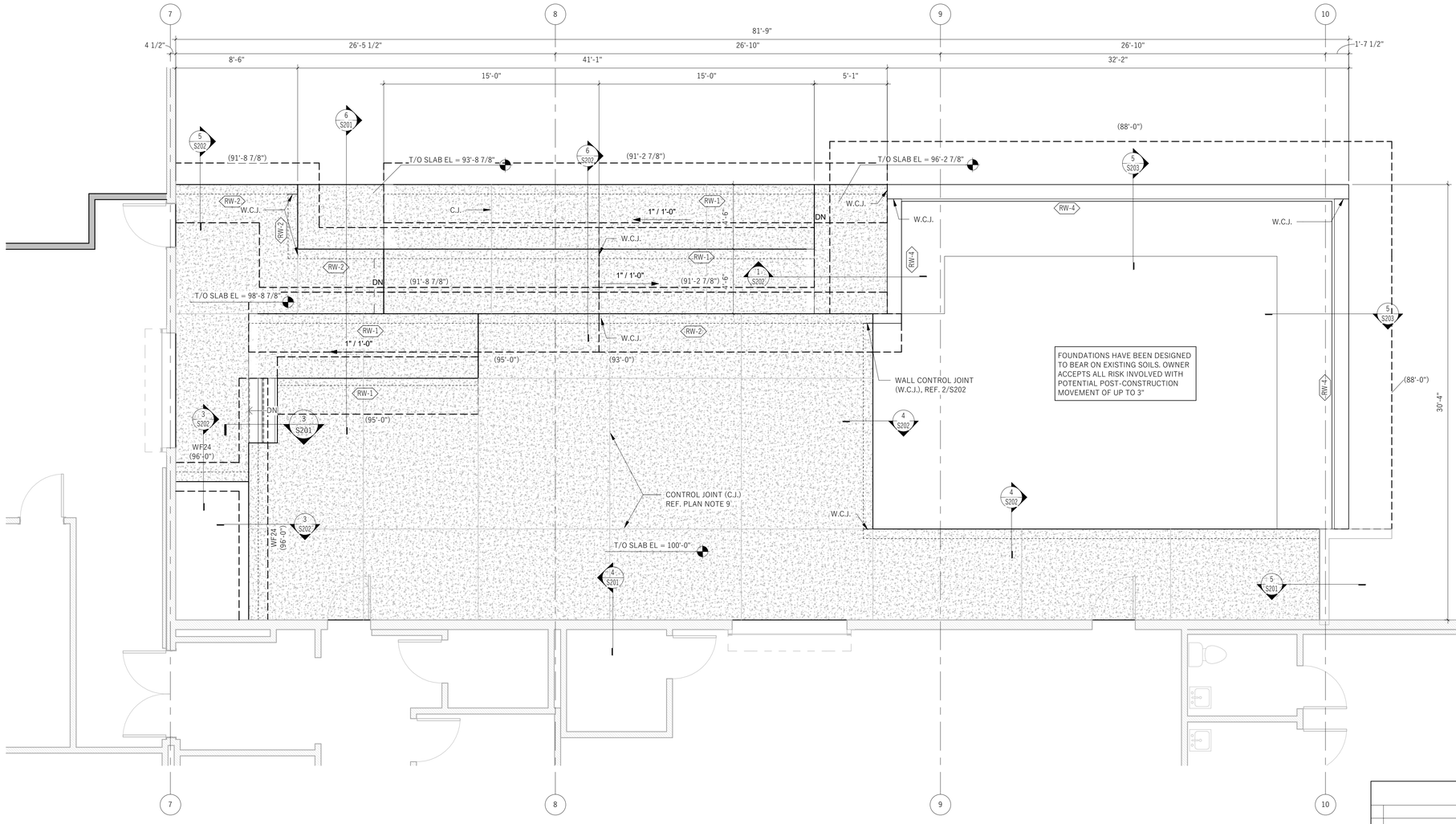
03/11/25

PROJECT NUMBER: 25.013
INITIAL DATE: NOV. 2024
DRAWN BY: SG

#	DESCRIPTION	DATE
1	FOR CONSTRUCTION	03-11-2025

GENERAL NOTES

S002



1 S101 ENLARGED FOUNDATION PLAN

1/4" = 1'-0"

CONTINUOUS WALL FOOTING SCHEDULE

MARK	WIDTH	THICKNESS	REINFORCING
WF24	2'-0"	1'-2"	(3) #5 BARS CONT. WITH #5 BARS AT 12" O.C. TRAVERSE

FOUNDATION SHEET NOTES

1	REF. S000 SERIES FOR GENERAL NOTES, DESIGN CRITERIA.
2	REF. S200 SERIES FOR FOUNDATION TYPICAL DETAILS.
3	DO NOT SCALE WALL LENGTH ON PLAN. REF. ARCHITECTURAL DRAWINGS FOR DIMENSIONS.
4	REFERENCE ELEVATION - TOP OF EXISTING FINISHED FLOOR ELEVATION = EL. 100'-0" = 510.61' N.A.V.D. - VERIFY IN FIELD WITH CIVIL
5	WALL FOOTINGS (U.N.O.) = WF24, BOT. OF FTG. = 3'-0" MIN. BELOW GRADE, TYP.
6	SLAB-ON-GRADE SHALL BE 5" CONCRETE SLAB REINFORCED WITH #4 BARS AT 16" ON CENTER LOCATED 2" FROM TOP OF SLAB, OVER A 4 INCH (MIN) THICK BASE COURSE LAYER OVER THE PREPARED FILL AND SUBGRADE. REF. SHEET S001 FOR SUBGRADE PREPARATION AND SLAB-ON-GRADE NOTES.
7	REF. ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF ALL SLOPED SLABS AND SLAB DEPRESSIONS.
8	SEE APPROVED FINAL GRADING PLAN FOR GRADING INFORMATION. CONTRACTOR SHALL VERIFY THAT BOTTOM OF FOOTING ELEVATIONS MEET THE MINIMUM BEARING REQUIREMENTS GIVEN IN THE SOILS REPORT.
9	LOCATE CONTROL JOINTS AT A MAXIMUM OF 15'-0" O.C. REF. DETAIL 2/S201 AT CONTROL JOINTS OR CONSTRUCTION JOINTS AT CONTRACTOR'S OPTION. DO NOT LOCATE CONTROL JOINTS ABOVE GRADE BEAMS.
10	REFERENCE ARCHITECTURAL AND PLUMBING DRAWINGS FOR ALL CONCRETE SLAB LEAVE OUTS, FLOOR DRAIN, AND SLAB PENETRATION LOCATIONS. REFER TO 7/S202
11	VERIFY ALL OPENING DIMENSIONS AND LOCATIONS WITH ARCHITECTURAL DRAWINGS.
12	REFERENCE CIVIL DRAWINGS FOR ALL EXTERIOR SIDEWALKS, RAMPS, AND DOOR STOOPS.
13	SLOPE SLAB AS REQUIRED WHILE MAINTAINING UNIFORM SLAB THICKNESS. SEE ARCH FOR SLAB SLOPES.

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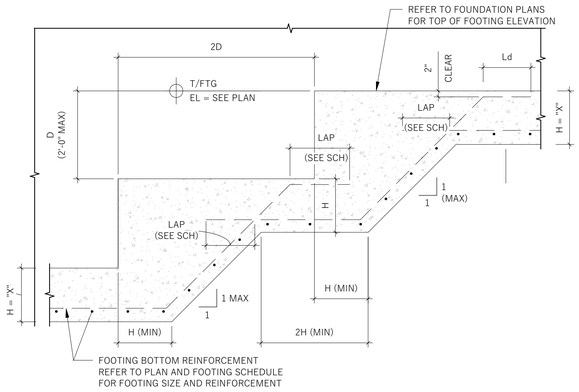
ENLARGED FOUNDATION PLAN

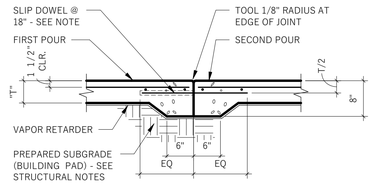
S101



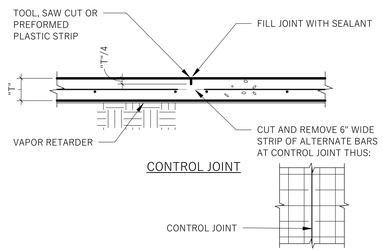
1 S201 TYPICAL FOOTING STEP

1/2" = 1'-0"

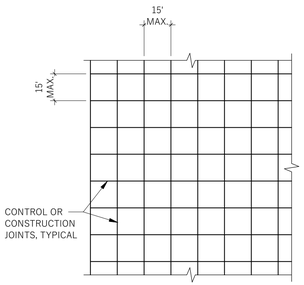
NOTE:
PROVIDE ONE OF THE FOLLOWING SLIP DOWELS:
- PNA CONSTRUCTION TECHNOLOGIES 1/4" x 4 1/2" x 4 1/2" "DIAMOND DOWEL" PLATE DOWEL SYSTEM.
- GREENSTREAK 5/8" DIA. SMOOTH x 24" "SPEED DOWEL" SYSTEM.
- 1/2" DIA. x 2'-0" A36 SMOOTH ROD.



CONSTRUCTION JOINT



CONTROL JOINT

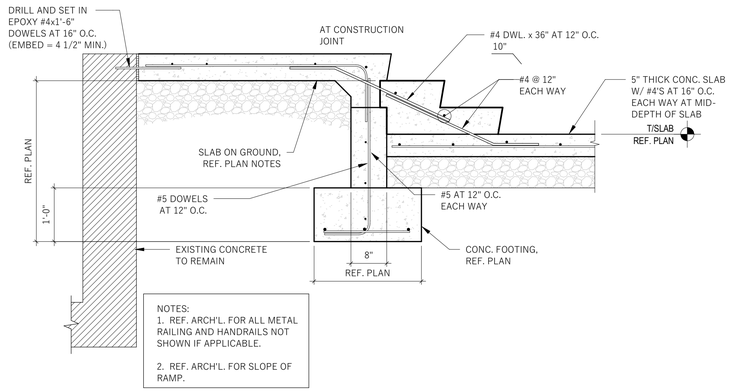


SLAB-ON-GRADE NOTES:

1. SEE PLAN FOR THICKNESS OF SLAB (T) AND REINFORCING.
2. SAWCUT JOINTS WITH IN THE TIME FRAME NOTED BELOW:
   a. 12 HOURS FOR SLABS COVERED BY FINISHES OR NON-PUBLIC SPACES.
   b. 4 HOUR FOR SLABS EXPOSED TO PUBLIC VIEW OR WHERE NOTED "SOFF-CUT" BRAND SAW SHALL BE USED.
3. IF METAL FORMS ARE USED, REMOVE THEM BEFORE PLACING ADJACENT SLAB.
4. FOR SLABS WITH THICKNESS (T) GREATER THAN 6", THICKENED EDGES ARE NOT REQUIRED AT JOINTS.
5. PROVIDE A CONSTRUCTION OR A CONTROL JOINT ON THE CENTERLINES OF COLUMNS.
6. LAP REINFORCING 38 BAR DIAMETER MINIMUM.

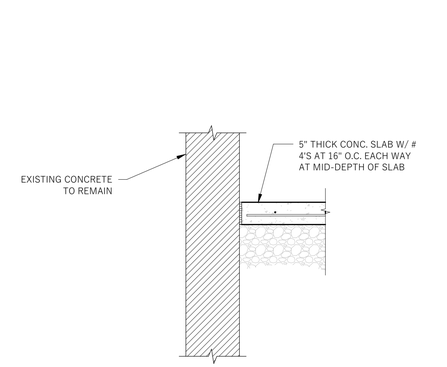
2 S201 TYPICAL SLAB-ON-GRADE DETAIL

3/4" = 1'-0"



3 S201 SECTION AT NEW EXTERIOR STAIR

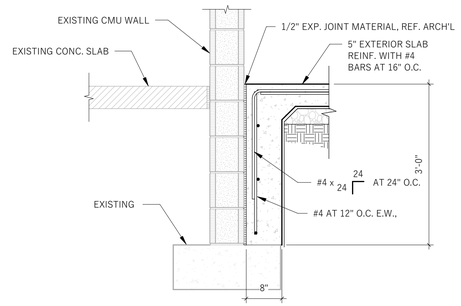
3/4" = 1'-0"



NEW SLAB-ON-GRADE AT EXISTING FOUNDATION WALL

4 S201

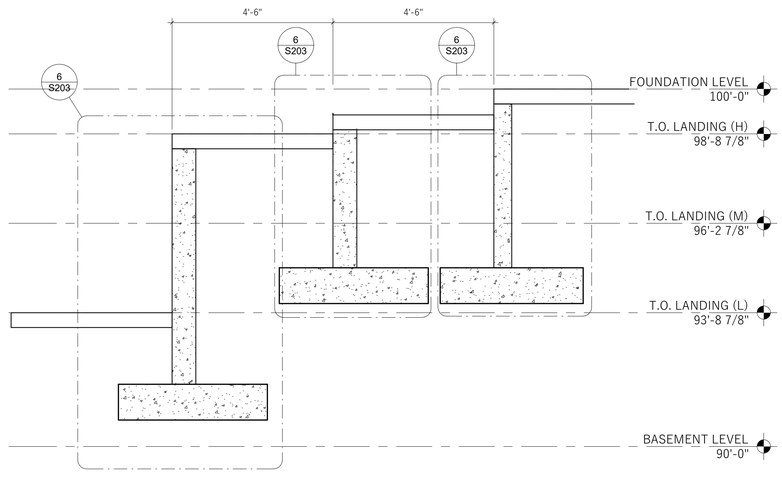
3/4" = 1'-0"



SLAB TURN DOWN AT EXIST. CMU WALL

5 S201

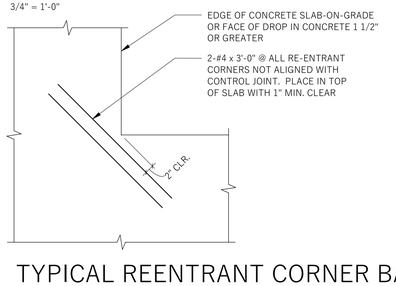
3/4" = 1'-0"



SECTION AT RAMP SYSTEM

6 S201

1/2" = 1'-0"



TYPICAL REENTRANT CORNER BAR DETAIL

7 S201

3/4" = 1'-0"

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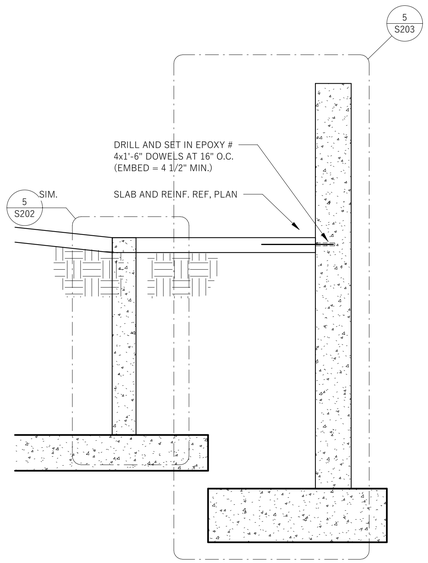
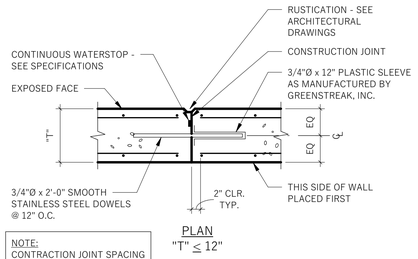
FOUNDATION SECTIONS

S201



1 S202 SECTION AT UPPER RAMP SYSTEM LANDING

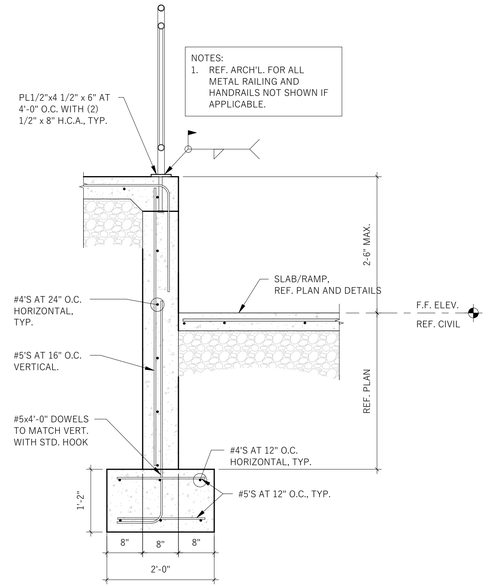
1/2" = 1'-0"



NOTE:
CONTRACTION JOINT SPACING NOT TO EXCEED ((NOTE 3)).

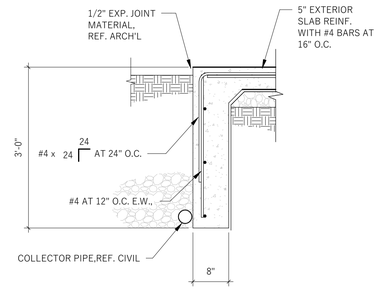
2 S202 TYPICAL RETAINING WALL CONTROL/CONTRACTION JOINT DETAIL

3/4" = 1'-0"



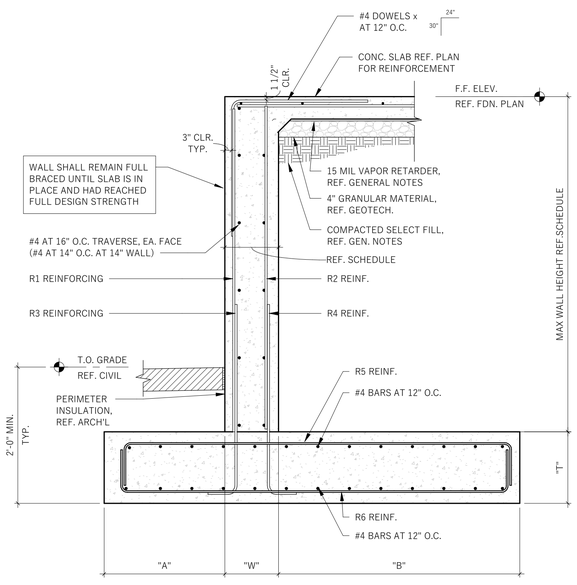
3 S202 FOUNDATION WALL WITH WF24 FTG.

3/4" = 1'-0"



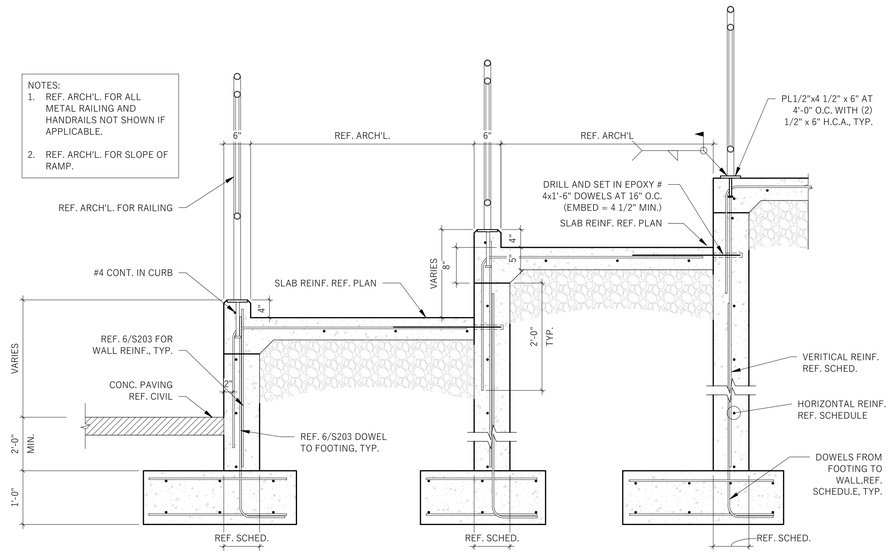
4 S202 SLAB TURN DOWN

3/4" = 1'-0"



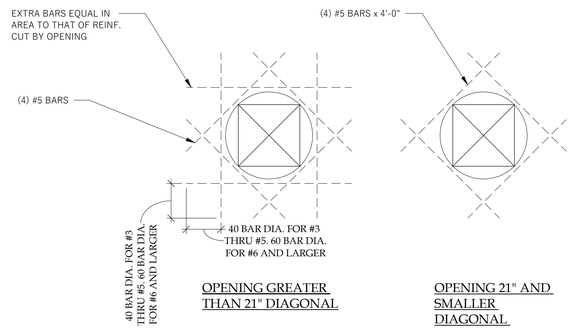
5 S202 SECTION AT RETAINING WALL

3/4" = 1'-0"



6 S202 SECTION AT RAMP SYSTEM

3/4" = 1'-0"



7 S202 TYP. REINF. AT CONC. OPENINGS

3/4" = 1'-0"

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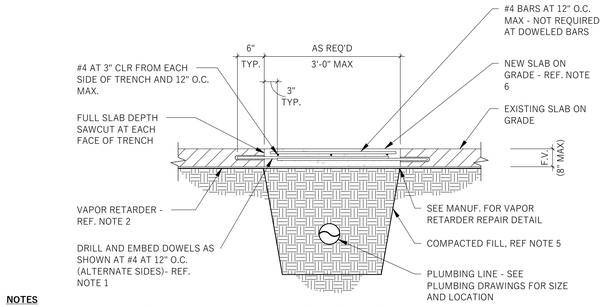
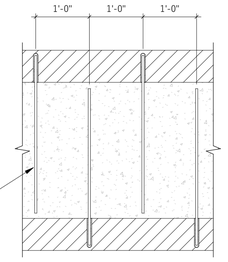
FOUNDATION SECTIONS

S202



NOTES

1. ADHESIVE ANCHORING SYSTEM SHALL BE HILTI "HIT-HY 200" PER GENERAL NOTES
2. VAPOR RETARDER SHALL MEET THE FOLLOWING PROPERTIES:
   A. 10 MIL MINIMUM THICKNESS
   B. MEET ASTM E 1745 CLASS A
   C. WATER VAPOR PERMEANCE PER ASTM E96 SHALL BE 0.01 OR LESS
3. LAP JOINTS IN VAPOR RETARDER 6" MIN. USE MANUFACTURER'S STANDARD ADHESIVE OR PRESSURE SENSITIVE TAPE FOR SEALING MEMBRANE AT SEAMS, PIPE PENETRATIONS, TEARS, ETC.
4. PROVIDE 2-#4x2'-0" DIAGONAL BARS AT RE-ENTRANT CORNERS IN SAWCUT. PLACE AT MID- DEPTH OF SLAB.
5. SOIL REMOVED FOR SLAB TRENCH SHALL BE REPLACED AND RECOMPACTED TO A MINIMUM OF 95% STANDARD PROCTER DENSITY (ASTM D698).
6. PLACE SLAB BACK TO THICKNESS TO MATCH EXISTING WITH A MINIMUM 3,500 PSI NORMAL WEIGHT CONCRETE AND A RATIO OF 0.50 OR LESS.
7. THE CONTRACTOR SHALL ENSURE THAT TRENCHING FOR THE UTILITY LINE IS NOT OVER- EXCAVATED AND THAT NO PORTION OF THE SURROUNDING SLAB-ON-GRADE IS LEFT UNSUPPORTED
8. CONTRACTOR SHALL PROVIDE A COLD JOINT EVERY 30 LINEAR FEET IN THE PORTION OF NEW CONCRETE SLAB THAT IS PLACED DUE TO UNDER-SLAB TRENCHING.

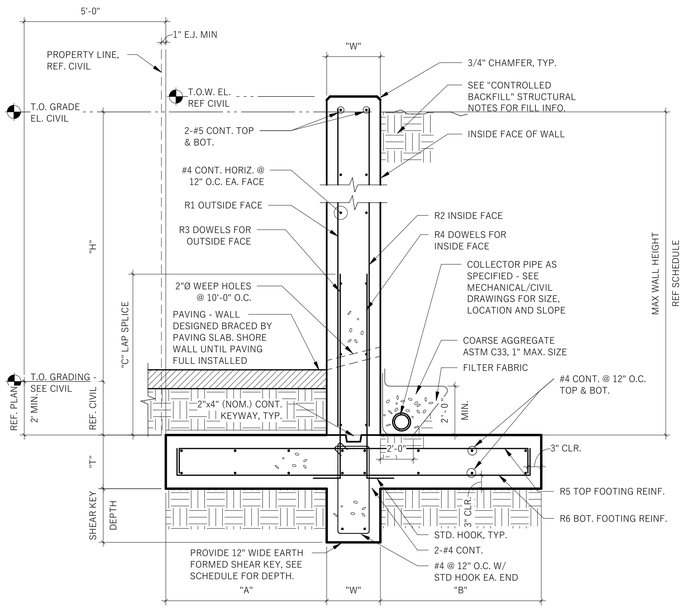


PLAN

CONFIRM LOCATION AND EXTENTS OF ALL CONCRETE WORK WITH ARCHITECT

1 S203 TYP. SLAB TRENCH REPAIR

3/4" = 1'-0"

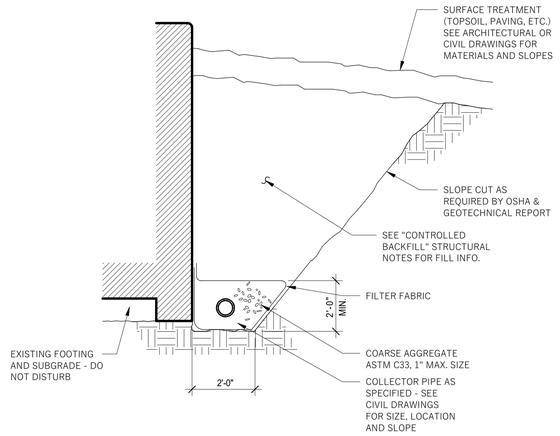


NOTES:

1. FOOTING SHALL BE PLACED ON UNDISTURBED EXISTING SOIL OR ROCK. FOOTING EXCAVATION SHALLBE INSPECTED BY THE GEOTECHNICAL LABORATORY TO DETERMINE THAT THE PROPER BEARING STRATUM IS OBTAINED AND THAT EXCAVATIONS ARE PROPERLY CLEAN & DRY BEFORE CONCRETE IS PLACED.
2. FOR BACKFILL BEHIND RETAINING WALLS SEE STRUCTURAL NOTES.
3. REFERENCE DETAIL 10/S301 FOR TYPICAL CONTROL AND CONTRACTION JOINT DETAILS.
4. PROVIDE CONTROL JOINTS @ 15'-0" O.C.
5. PROVIDE CONTRACTION JOINTS @ 40'-0" O.C.
6. RETAINING WALL WAS DESIGNED ACCORDING WITH IBC 2018
   A. SAFETY FACTOR FOR SLIDING = SEE RETAINING WALL FACTOR OF SAFETY SCHEDULE BELOW (1.5 MIN. REQUIRED BY IBC 2018)
   B. SAFETY FACTOR FOR OVERTURNING = SEE RETAINING WALL FACTOR OF SAFETY SCHEDULE BELOW (1.5 MIN. REQUIRED BY IBC 2018)
   C. SAFETY FACTOR FOR BEARING = SEE RETAINING WALL FACTOR OF SAFETY SCHEDULE BELOW (1.0 MIN. REQUIRED BY IBC 2018)

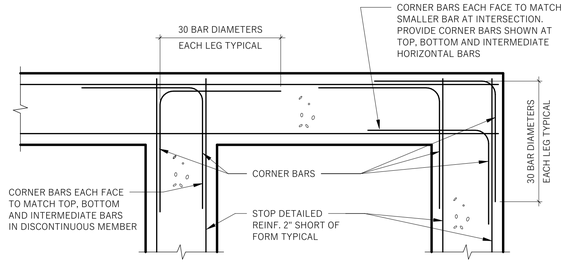
5 S203 TYPICAL RETAINING WALL DETAIL

3/4" = 1'-0"



3 S203 TYPICAL BACKFILL DETAIL

3/4" = 1'-0"



NOTES:

1. MATCH SIZE, LOCATION AND NUMBER OF HORIZONTAL BEAM AND WALL BARS, EXCEPT THAT WHERE THERE ARE MORE THAN 2 TOP OR BOTTOM BARS, ONLY THE INSIDE AND OUTSIDE BARS MUST BE MATCHED.
2. WHERE 90 DEGREE HOOKS ARE PROVIDED FOR TOP BARS CORNER BARS MAY BE OMITTED AT TOP. WHERE 90 DEGREE HOOKS ARE PROVIDED FOR BOTTOM BARS, CORNER BARS MAY BE OMITTED AT BOTTOM.

PLAN

4 S203 TYPICAL CORNER BARS AT WALL OR GRADE BEAM INTERSECTION DETAIL

3/4" = 1'-0"

STEEL REINF. LAP SCHEDULE

BAR SIZE	CONCRETE LAP SPLICE (INCHES)						CMU LAP SPLICE (INCHES)
	f'c = 3,000psi		f'c = 3,500psi		f'c = 4,000psi		
	TOP	OTHER	TOP	OTHER	TOP	OTHER	
3	22	17	20	16	20	15	18
4	29	22	27	21	25	19	24
5	36	28	33	26	32	24	30
6	43	33	40	31	38	29	36
7	63	48	58	45	55	42	42
8	72	55	66	51	63	48	48

2 S203 STEEL REINF. LAP SCHEDULE

3/4" = 1'-0"

RETAINING WALL SCHEDULE

	DIMENSIONS							REINFORCING						SHEAR KEY
MARK	MAX WALL HEIGHT	"H" MAX.	"A"	"B"	"C"	"T"	"W"	R1	R2	R3	R4	R5	R6	DEPTH
RW-1	5'-0"	3'-0"	1'-6"	2'-0"	2'-0"	1'-0"	8"	#4 @ 12"	N/A	#4 @ 12" x	N/A	#5 @ 12" x	#5@ 12" x	N/A
RW-2	7'-0"	5'-0"	1'-6"	2'-0"	2'-0"	1'-0"	8"	#4 @ 12"	N/A	#4 @12"	N/A	#5 @ 12" x	#5 @ 12" x	N/A
RW-3	9'-0"	7'-0"	4'-6"	1'-6"	2'-0"	1'-0"	8"	#5 @ 14"	N/A	#5 @14"	N/A	#5 @ 12" x	#5 @ 12" x	N/A
RW-4	12'-0"	10'-0"	3'-0"	4'-0"	2'-0"	1'-0"	12"	#4 @ 18"	#5 @ 6"	#4 @ 18"	#5 @ 6" x	#8 @ 6" x	#5 @ 12" x	N/A

6 S203 RETAINING WALL SCHEDULE

3/4" = 1'-0"

ARCHITECT:

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FOUNDATION DETAILS

S203