

# STRUCTURAL NOTES

1. This structural design complies with the International Building Code, 2012 edition.  
 Metal building deflection limits per Section 1604.3.3 and Table 1604.3.  
 Dead loads per ASCE 7, Table C3-1  
 Metal building collateral load = 3 p.s.f.  
 Roof live load = 20 psf, reducible  
 Ground snow load,  $P_g = 10$  psf,  $V = 115$  mph, exposure = B  
 Seismic design category = C, Site class = D, Rain load - n.a.  
 Design soil press. max. = 2.0 ksf (assumed).

Wind load procedure = ASCE 7, Envelope Procedure Risk Category = II,  $K_z = 110$ , Exposure = B,  
 $K_d = 0.57$

Seismic importance factor = 1,  $S_s = 0.374$ ,  $S_1 = 0.125$   
 $S_a = 438$ ,  $S_u = 192$ , Basic seismic resisting system = steel ordinary moment frames.  
 $R = 3$ ,  $C_d = 0.146$   
 Design base shear = see metal building calculations  
 Flood design data (n/a).

The pre-engineered metal building for this project shall be designed and certified by a State registered engineer. The design criteria used shall equal or exceed the loads stated in the referenced edition of the IBC and loads shown above.

Where a structural detail or statement that is shown on the structural plans or notes and this detail is erroneously repeated or referenced in other parts of the plans, this error shall be brought to the attention of the Architect. The structural information shall supersede similar information elsewhere. The engineer will not be responsible for any deviations from information shown on the Plans, without his prior approval.

The Contractor is responsible to provide temporary lateral bracing of the building until all walls are sheathed both sides and roof is decked.

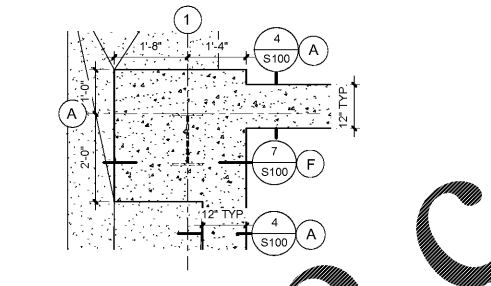
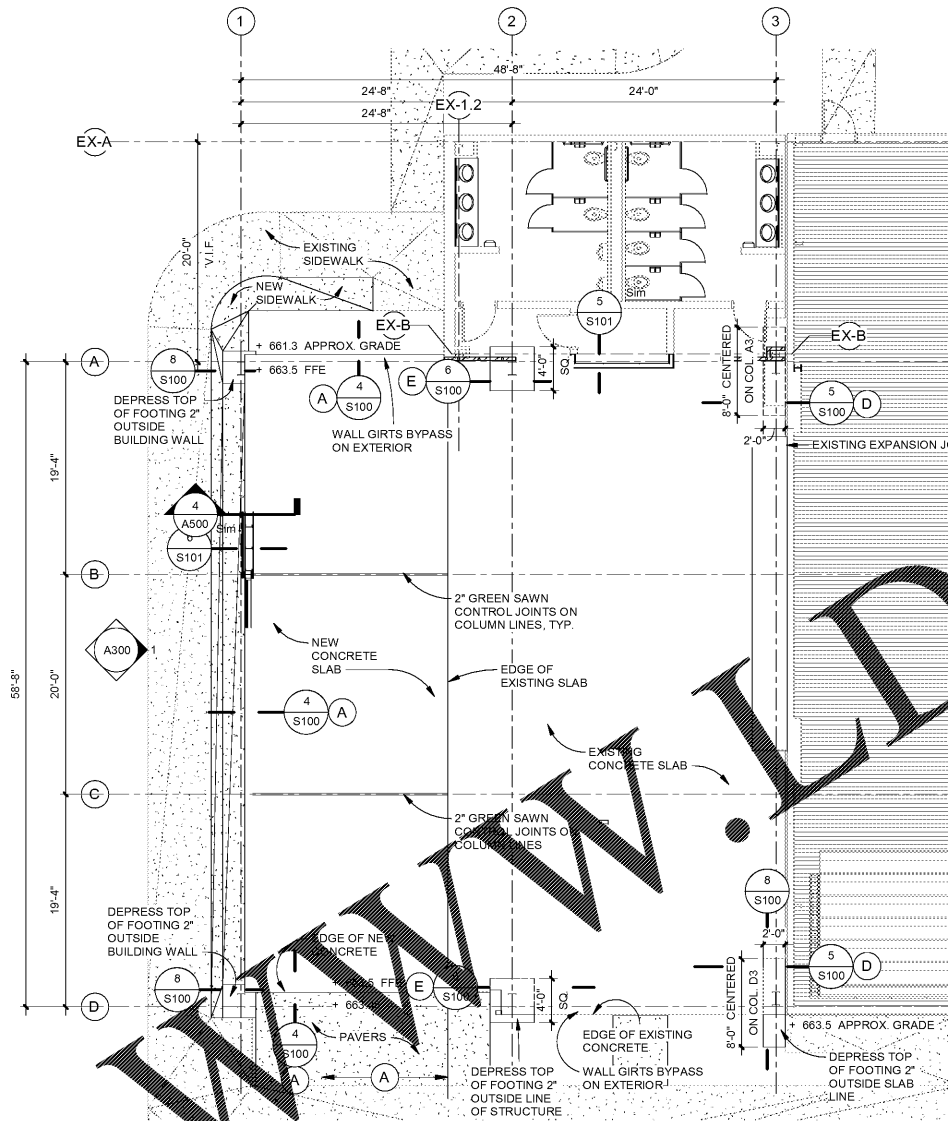
2. The assumed allowable soil pressure used to proportion footings is 2,000 p.s.f. It is the Contractor's responsibility to insure that the actual value equals or exceeds this amount and do so in a manner acceptable to the Local Building Authority. Compacted fill shall be placed in such a manner as to achieve 95% of maximum dry density per ASTM D-698.

3. The footing design that is shown on the Plans for PRE-ENGINEERED metal building columns is based on estimated loads. The actual footing sizes and reinforcement are subject to change by the Engineer based on certified column reactions furnished by the metal building supplier. Foundation construction shall not be started until the Engineer has reviewed the design based on the certified loads.

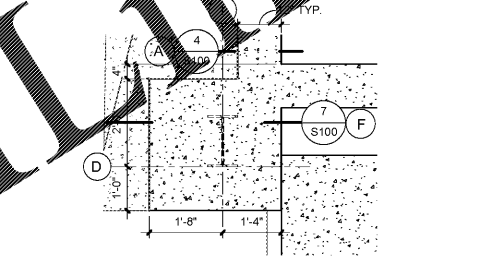
The construction of concrete work shall be in accordance with applicable provisions of the Building Code Requirements for Reinforced Concrete (ACI 318 - current).  
 Ultimate strength - concrete (interior) = 3,000 p.s.i. at 28 days  
 Ultimate strength - concrete (exterior) = 4,000 p.s.i. at 28 days  
 Ultimate strength - reinf. steel = 60,000 p.s.i.

Materials shall conform to the following:  
 Portland cement ASTM C 150, Type 1  
 Normal weight aggregate ASTM C33  
 Reinforcing steel ASTM A 615, Grade 60  
 Wielded wire fabric ASTM A 185-85  
 Fibermesh ICC-ES ESR #1165  
 Water drinkable  
 Air entrainment ASTM C260, 5%

PRE-ENGINEERED metal building and components shall be designed and manufactured in accordance with the applicable provisions of the National Metal Building Manufacturers Association. Certified shop drawings and column reactions shall be submitted for approval.

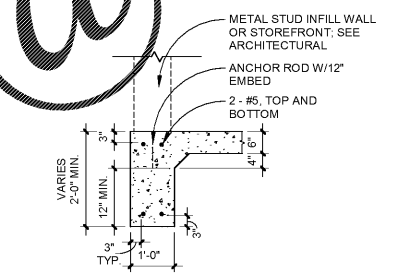


2 COLUMN A FOOTING PLAN  
 SCALE: 1/2" = 1'-0"

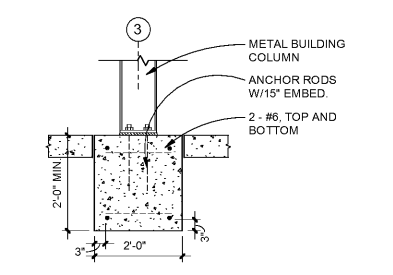


3 COLUMN D1 FOOTING PLAN  
 SCALE: 1/2" = 1'-0"

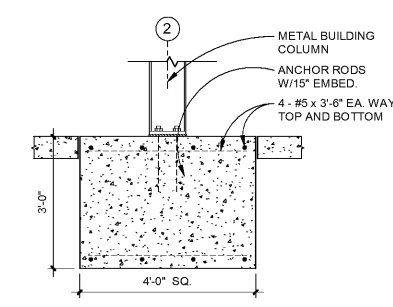
1 Gym Addition Structural Plan  
 SCALE: 1/8" = 1'-0"



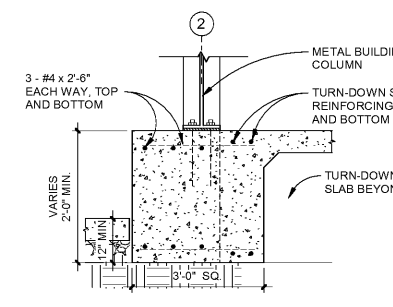
4 TURN-DOWN SLAB A  
 SCALE: 1/2" = 1'-0"



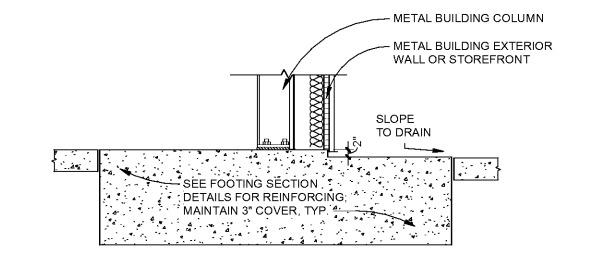
5 COLUMN FOOTING D  
 SCALE: 1/2" = 1'-0"



6 COLUMN FOOTING E  
 SCALE: 1/2" = 1'-0"



7 COLUMN FOOTING F  
 SCALE: 1/2" = 1'-0"



8 INT./EXT. COLUMN FOOTING, TYP.  
 SCALE: 1/2" = 1'-0"

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In association with:

CCS Gym  
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 for  
**Chattanooga  
 Christian School**

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Construction Documents

Revisions		
No.	Issue	Date

Sheet Information	
Date	11/26/18
Job No.	6774.3 / 6774.4

**STRUCTURAL**  
 STRUCTURAL PLANS,  
 NOTES, + DTLS.

Sheet  
**S100**  
 ORIENTATION

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