

GENERAL CONSTRUCTION NOTES

- 1. ALL MATERIAL & WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF BOTH LOCAL CODE & CODE LISTED IN DESIGN
- 2. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE JOB SITE AND REPORT ANY ERRORS. OMISSIONS, OR POSSIBLE DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCING ANY WORK. SPECIAL CARE SHALL BE GIVEN TO THE SITE AND TO THE BUILDING LAYOUT THEREON.
- COSTS OF ADDITIONAL DESIGN WORK NECESSITATED BY SELECTION OF AN OPTION OR DUE TO ERRORS OR OMISSIONS IN CONSTRUCTION, SHALL BE BORNE BY THE CONTRACTOR.
- WHERE SOIL REPORT IS CITED, ITS REQUIREMENTS SHALL BE ADOPTED HEREIN.
- 5. ALL MANUFACTURED PRODUCTS MUST BE INSTALLED PER MANUFACTURER'S RECOMMENDATION.
- 6. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT IN CONJUNCTION WITH THE EXECUTION OF
- THIS WORK.
 REFER TO PROJECT SPECIFICATIONS FOR MATERIAL SPECIFICATIONS AND PERFORMANCE REQUIREMENTS NOT COVERED BY THE STRUCTURAL DRAWINGS.
- 8. ALL DETAILS, SECTIONS AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE SHOWN.
- 9. NO CONCRETE OR MASONRY WORK SHALL BE PERFORMED DURING HEAVY RAIN, SNOW, OR HAIL, OR WHEN THE TEMPERATURE OF THE OUTSIDE AIR IS BELOW 40 DEGREES F UNLESS APPROVED METHODS ARE USED TO PREVENT FREEZING OF CONCRETE AND MASONRY. SUCH METHODS SHALL PREVENT THE MATERIALS FROM FREEZING FOR A LEAST 48 HOURS. ALL MATERIALS USED AND MATERIALS BUILT UPON SHALL BE FREE FROM ICE AND SNOW. ALL MATERIALS ALLOWED TO FREEZE SHALL BE REMOVED AND REPLACED WITH NEW WORK. ALL AT THE EXPENSE OF THE CONTRACTOR.

REINFORCING STEEL

- REINFORCING STEEL SHALL BE INTERMEDIATE GRADE DEFORMED BARS CONFORMING TO ASTM A-615, GRADE 60 TYPICALLY. LAP BARS A MINIMUM OF 36 DIAMETERS. WHERE GRADE 40 IS REQUIRED ON PLANS, LAP 30 DIAMETERS. STAGGER LAPS WHERE PERMISSIBLE. LAP BARS A MINIMUM OF 48 DIAMETERS IN MASONRY. USE GRADE 60 TYPICALLY, USE GRADE 40 FOR TIES & DOWELS (#3 OR SMALLER).
- 2. WIRE MESH SHALL CONFORM TO ASTM A-185. LAP 6" MINIMUM. FOOTING DOWELS SHALL MATCH VERTICAL WALL OR COLUMN
- STEEL. LAP 36 DIAMETERS. 4. AT ALL OPENINGS IN CONCRETE, CONCRETE BLOCK AND BRICK MASONRY, PROVIDE AT LEAST 2-#5 BARS AT JAMBS, HEAD AND
- SILL, EXTENDING 2'-0" BEYOND EDGES OF OPENING. 5. MINIMUM CONCRETE COVER SHALL BE:
 - ...CONCRETE POURED AGAINST EARTH. ...FORMED CONCRETE WHICH WILL REMAIN IN CONTACT WITH EARTH. 1 1/2".....BEAMS, MEASURED TO MAIN STEEL; COLUMNS

MEASURED TO TIES OR SPIRALS; EXPOSED TO EARTH

- OR WEATHER. 3/4".....SLABS; INSIDE FACES OF WALLS.
- 6. ALL WELDED REINFORCING BARS SHALL BE A706 REINFORCING BARS.

FOUNDATION NOTES

- 1. FOOTINGS ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING CAPACITY OF 2,000 PSF. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SOIL PROPERTIES OF THE SITE. CONTRACTOR SHALL ORDER A SOIL TEST REPORT AND FOLLOW ALL RECOMMENDATIONS. IF RESULTS FROM THE SOIL INVESTIGATION ARE IN CONTRADICTION WITH THIS DESIGN, CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
- VERIFY ALL DIMENSIONS, SLOPES, DEPRESSIONS, EMBEDMENT, ETC. BEFORE PLACING CONCRETE.
- 3. THE SOILS REPORT SHALL BE KEPT AT THE JOB SITE AT ALL TIMES. SUBGRADE PREPARATION, COMPACTED FILL AND
- BACKFILL SHALL CONFORM TO THE SOIL REPORT AND SHALL BE INSPECTED AND APPROVED IN WRITING BY A QUALIFIED SOILS ENGINEER AND AS CALLED OUT ON THE GRADING PLAN.
- 5. PRIOR TO PLACING FORM WORK, REINFORCING, OR CONCRETE, A QUALIFIED SOILS ENGINEER SHALL INSPECT AND APPROVE IN WRITING THE FOOTING EXCAVATION RELATIVE TO NATURAL GRADE, COMPACTED FILL AND FINISH GRADE AND SHALL VERIFY THE ALLOWABLE SOIL BEARING STRESS. COPIES OF THE INSPECTION REPORT SHALL BE SENT TO THE ARCHITECTS AND OWNERS
- REPRESENTATIVE IMMEDIATELY. 6. PROTECT BOTTOM OF EXCAVATION FOR FOUNDATION AGAINST FROST AND KEEP FREE OF WATER, DEBRIS AND LOOSE
- CONCRETE MATERIAL 7. THE FOUNDATION DESIGN IS BASED ON POTENTIAL VERTICAL MOVEMENT, PVM, OF THE ORDER OF 1" OR LESS. IF THIS VALUE IS NOT ACCEPTABLE TO THE CLIENT THE FOUNDATION DESIGN MUST BE REVISED.
- 8. THE ENGINEER SHALL BE NOTIFIED OF ALL SITE CONDITIONS AND/OR OBSTRUCTIONS NOT SPECIFICALLY COVERED BY THE SOIL'S REPORT BEFORE ANY ACTION IS TAKEN BY THE CONTRACTOR.
- 9. PIERS ARE CENTERED UNDER THE COLUMNS, UNLESS NOTED OTHERWISE.
- 10. BECAUSE OF THE ELAPSED TIME AND LOCATION OF ACTUAL FOOTING EXCAVATION THE CURRENT SOIL CONDITION MAY DIFFER SIGNIFICANTLY FROM THE SAMPLES THAT WERE USED IN THE DEVELOPMENT OF THE PROJECT GEO-TECH. REPORT. THEREFORE IT IS RECOMMENDED THAT THE BUILDING OWNER CONSULT WITH THE PROJECT GEO-TECH. ENGINEER TO DETERMINE IF THE FOUNDATION DESIGN PARAMETERS ARE CONSISTENT WITH THE CURRENT SOIL CONDITION.
- 11. THIS FOUNDATION DESIGN MEETS THE REQUIREMENTS OF IBC 2015

CONCRETE AND EMBEDDED ITEMS

- 1. ALL CONCRETE SHALL BE MIXED, FORMED AND PLACED ACCORDING TO FOLLOWING A.C.I. CODES, LATEST EDITION. ACI 318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE. ACI 305 HOT WEATHER CONCRETING ACI 306 COLD WEATHER CONCRETING
- 2. THE MAXIMUM WATER / CEMENT RATIO SHALL BE 0.5. READYMIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C-94. MAXIMUM SLUMP SHALL BE 5" AS MEASURED BY THE ASTM "STANDARD METHOD OF TESTING FOR SLUMP OF PORTLAND CEMENT
- 3. CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF
- 3500 PSI AT 28 DAYS PER ASTM C 39. 4. CEMENT FOR CONCRETE OR MASONRY MORTAR SHALL BE A STANDARD BRAND "PORTLAND CEMENT", MEETING THE REQUIREMENT OF ASTM C-150M TYPE 1. CEMENT SHALL BE 'TYPE II'. (USE TYPE V CEMENT IF
- REQUIRED BY SOILS REPORT) 5. AGGREGATES FOR CONCRETE SHALL MEET THE REQUIREMENTS OF ASTM
- 6. CONTRACTOR MAY USE AN APPROVED WATER REDUCING ADMIXTURE CONFORMING TO ASTM C-494.
- 7. SLAB ON GRADE AS NOTED ON PLAN SHALL BE POURED ON FIRM, MOISTENED, COMPACT EARTH. CONSTRUCTION OR CONTRACTION JOINTS SHALL BE SPACED A MAXIMUM OF 15' APART.
- 8. BEFORE PLACEMENT OF CONCRETE, THE CONTRACTOR SHALL VERIFY PROPER PLACEMENT OF ALL ITEMS OF WORK WHICH ARE EMBEDDED IN THE CONCRETE WORK. THE FOOTINGS SHALL HAVE BEEN INSPECTED AND APPROVED BY A QUALIFIED SOILS ENGINEER BEFORE CONCRETE
- PLACEMENT. FOOTINGS SHALL BE FREE OF STANDING WATER. 9. ALL ANCHOR BOLTS SHALL HAVE A STANDARD HEAD AT EMBEDDED END. ANCHOR BOLTS SHALL BE SPACED 12 BOLT DIAMETERS MINIMUM. MINIMUM EMBEDMENT OF ANCHOR BOLTS SHALL BE 7" IN FOOTINGS AND 7" INTO
- VERTICAL CONCRETE SURFACES, U.N.O. 10. BOLTS IN SIMPSON SET EPOXY, MAY BE USED IN LIEU OF ANCHOR BOLTS WHERE SPECIAL CONDITIONS WARRANT THEIR USE, PROVIDED THAT WRITTEN APPROVAL OF THE ENGINEER IS OBTAINED. SIZE OF SUCH ANCHORS SHALL BE ONE NOMINAL SIZE LARGER OR THEIR NUMBER SHALL BE

INCREASED BY 25% WHERE APPLIED TO VERTICAL SURFACES.

- 11. GROUT SHALL CONSIST OF 1 PART CEMENT, TO NOT MORE THAN 3 PARTS SAND AND NOT LESS THAN 1 PART NOR MORE THAN 2 PARTS PEA GRAVEL BASED ON DRY LOOSE VOLUMES. GROUT SHALL BE OF FLUID CONSISTENCY. APPROVED ADMIXTURES MAY BE ADDED TO GROUT MIX. GROUT SHALL ATTAIN A MINIMUM ULTIMATE COMPRESSED STRENGTH OF 3000 PSI AT 28 DAYS.
- 12. DRYPACK SHALL CONSIST OF 1 PART CEMENT, 4 PARTS SAND. BASED ON DRY LOOSE VOLUMES AND NOT LESS THAN 1/4 PART NOR MORE THAN 1/2 PART LIME PUTTY OR DRY HYDRATED LIME. DRYPACK SHALL OBTAIN A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
- 13. ALL CONCRETE EMBEDMENTS, INCLUDING FOUNDATION BOLTS, SHALL BE TIED IN PLACE PRIOR TO FOUNDATION EXCAVATION INSPECTION.
- 14. FINE AGGREGATE SHALL BE COMPOSED OF CLEAN HARD PARTICLES WITH NOT MORE THAN 2% BY WEIGHT OF DELETERIOUS SUBSTANCES.
- 15 COMBINED GRADING OF AGGREGATES SHALL CONFORM TO THE REQUIREMENT OF THE PROJECT SPECIFICATION.
- 16. THE CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI 318 AND

2~#4 BAR AT-

TOP & BOTTOM

- 17. CONCRETE FINISHES AND CURING SHALL CONFORM TO THE PROJECT SPECIFICATIONS. 18. ANCHOR BOLTS SHALL BE POSITIONED WITH A TEMPLATE PRIOR TO
- PLACING CONCRETE IN PIER OR FOOTING. NUTS SHALL BE TIGHTENED ON EACH SIDE OF TEMPLATE TO HOLD THE ANCHOR BOLTS IN PLACE. 19. ADDITIONAL MATERIALS INCLUDE: VAPOR BARRIER 10 MIL POLYETHYLENE. EXPANSION JOINT MATERIAL - PREFORMED STRIPS COMPLYING WITH ASTM D1752 TYPE 1, CURE/SEAL COMPOUND - COMPLY WITH ASTM C309 TYPE

SOIL AND FOUNDATION

REFERANCE STANDARDS: Comform to IBC Chapter 18 "Soils and Foundation"

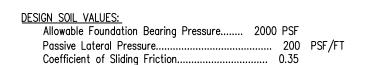
GEOTECHNICAL REPORT: No geotechnical report was provided.

1 CLASS B WATER-BASE ACRYLIC MEMBRANE.

CONTRACTOR'S RESPONSIBILITIES: Contractor shall be responsible to review the geotechnical report and shall follow the recommendations specified therein including, but not limited to, subgrade preparations, pile installation procedure, ground water management and steep slope Best Management practices.

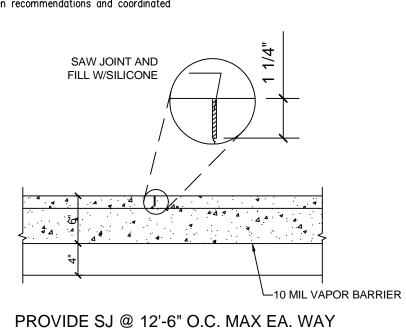
GEOTECHNICAL SUBGRADE INSPECTION: The Geotechnical Engineer shall inspect all sub-grades and prepared soil bearing surfaces. prior to placement of foundation reinforcing steel and comcrete. Geotecnical Engineers shall provide a letter to the owner stating that soils are adequate to support the "Allowable Foundation Bearing Pressure (S)" shown below.

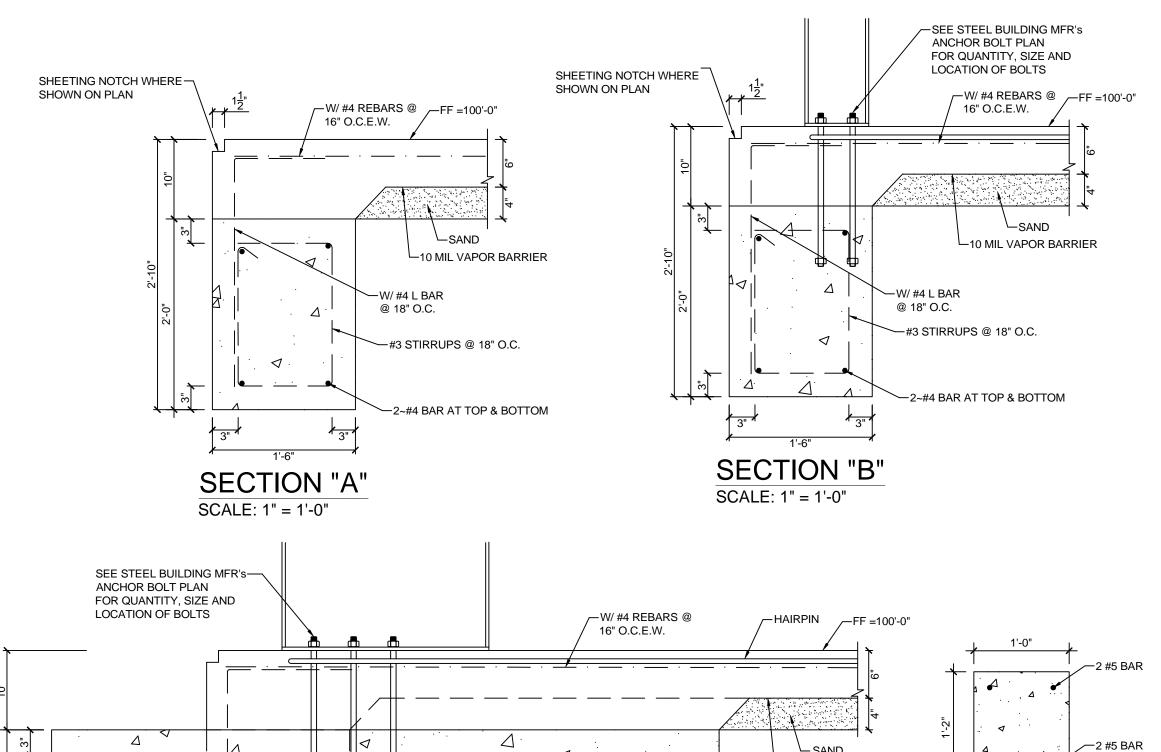
Assumed values shall be field verified by Building Officials or Geotechnical Engineer

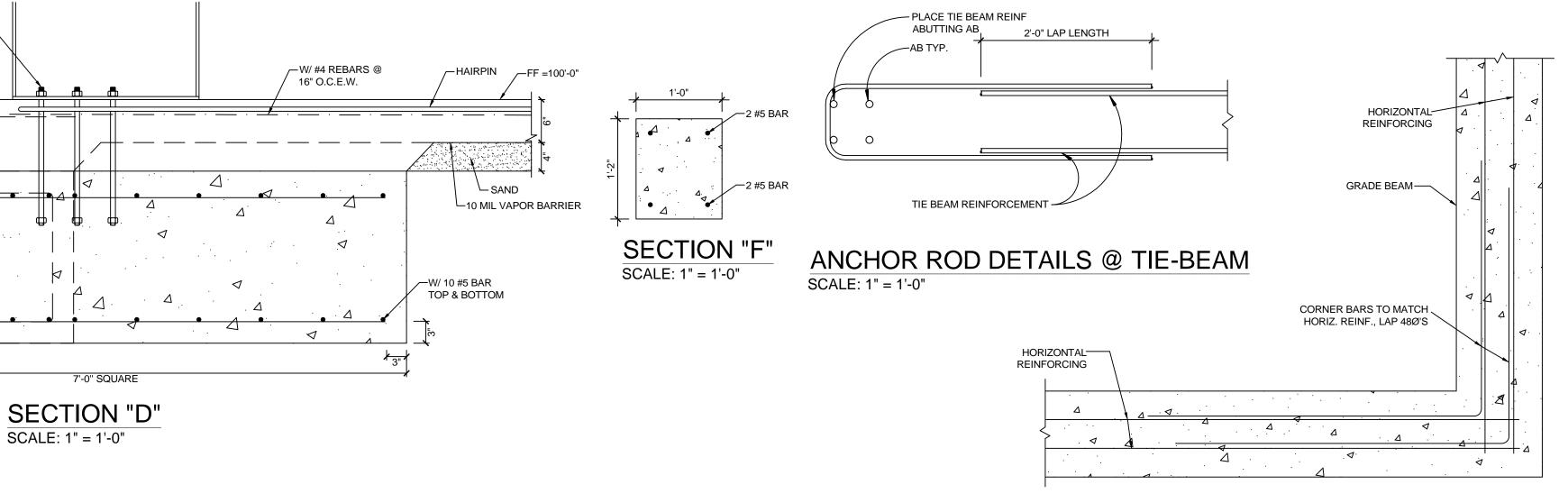


FOUNDATION AND FOOTING: Foundations shall bear on either on soil or compacted structural fill as per the geotechnical report. Exterior perimeter footing shall bear not less than 24 inches below finish grade, unless otherwise specified by the geotechnical engineer and/or the building official.

<u>SLABS-ON-GRADE:</u> All slabs-on-grade shall bear on compacted structural fill or competent native soil per the geotechnical report. All moisture senstive slabs—on—grade or those subject to receive moisture sensitive coatings/covering shall be provided with an appropriate capillary break and vapor barrier/retardant over the subgrade prepared and install as noted in the getechnical report, barrier manufacturer's written recommendations and coordinated specified by the Architect.







SEE STEEL BUILDING MFR's—

6'-0" SQUARE

SECTION "2" - REINFORCEMENT PLAN

SECTION "C"

SCALE: 1" = 1'-0"

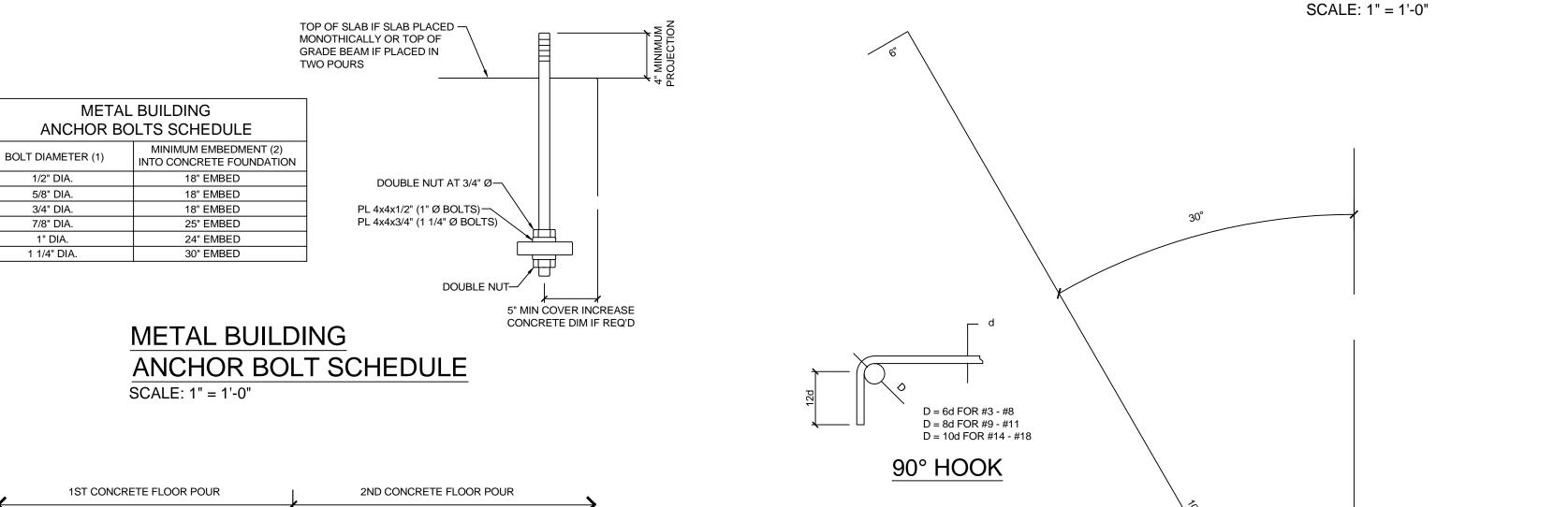
ANCHOR BOLT PLAN

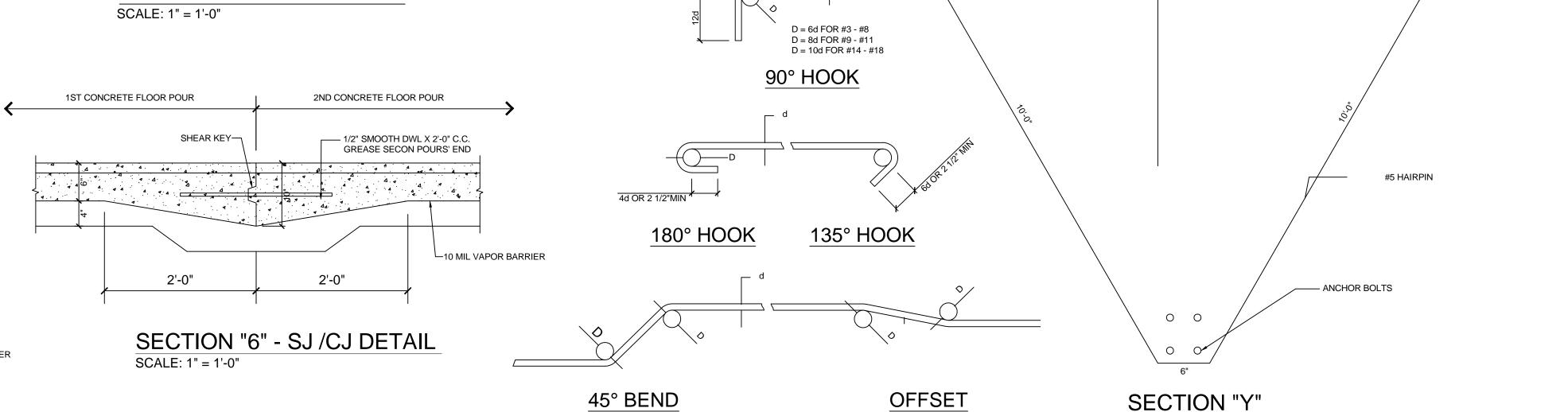
LOCATION OF BOLTS

2~#4 BAR AT-

TOP & BOTTOM

FOR QUANTITY, SIZE AND





-W/ #4 REBARS @

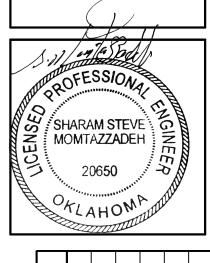
└─10 MIL VAPOR BARRIER

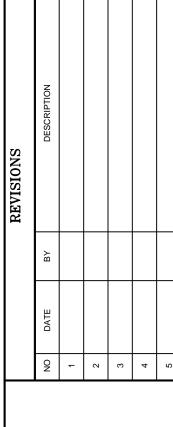
10/23/2022

-W/ 8 #5 BAR

TOP & BOTTOM

16" O.C.E.W.





74820 COLLIS **OKLAHOMA**

ADA,

NOL

S2 OF 3

CASE 1: CLASS B SPLICE LENGTHS OF REINFORCEMENT IN TENSION, Ld (IN) CASE 2: CLASS B SPLICE LENGTHS OF REINFORCEMENT IN TENSION, Ld (IN) FY = 60,000 PSI FY = 60,000 PSINORMALWEIGHT CONCRETE, f'c (PSI) NORMALWEIGHT CONCRETE, f'c (PSI) BAR SIZE db (IN) f'c = 3,000f'c = 5,000f'c = 5,000BAR SIZE db (IN) f'c = 3,000f'c = 4,000f'c = 5,000f'c = 5,000f'c = 4,0000.375 0.5 25 22 20 37 29 #5 0.625 30 #5 0.625 46 36 31 28 0.75 37 0.75 56 43 0.875 54 48 0.875 81 63 1.00 50 1.00 93 72 62 1.128 1.128 104 #10 1.27 #10 1.27 118 #11 113 101 1.41 #11 1.41 131 SPLICE LENGTH CASE 1 APPLIES TO REINFORCEMENT THAT HAS LESS THAN 12" OF FRESH CONCRETE PLACED BELOW HORIZONTAL REINFORCEMENT. ALL VERTICAL REINFORCEMENT FALLS UNDER CASE 1.

BAR SIZE

#4

#5

ÇASE 2 LAP SPLICE

CASE 1: DEVELOPMENT LENGTHS OF REINFORCEMENT IN TENSION, Ld (IN)

f'c = 4,000

14

19

24

28

f'c = 5,000

17

21

FY = 60,000 PSI

f'c = 3,000

22

27

0.375

0.5

0.625

0.75

NORMALWEIGHT CONCRETE, f'c (PSI)

SEE STEEL BUILDING MFR's — ANCHOR BOLT PLAN FOR QUANTITY, SIZE AND LOCATION OF BOLTS /--W/ #4 REBARS @ FF =100'-0" 16" O.C.E.W. Δ 10 MIL VAPOR BARRIER ∕--W/ 11 #5 BAR TOP & BOTTOM 8'-0" SQUARE 2~#4 BAR AT—/ TOP & BOTTOM SECTION "E" SCALE: 1" = 1'-0"

f'c = 5,000

20

25

30

f'c = 5,000

22

28

BAR SIZE

OUT OF THE CONCRETE)

0.375

0.5

0.625

0.75

DEVELOPMENT LENGTHS OF STANDARD HOOKS IN TENSION, Ldh (IN)

f'c = 4,000

10

12

17

19

22

25

f'c = 6,000

8

10

12

14

16

18

20

22

f'c = 5,000

FY = 60,000 PSI

f'c = 3,000

11

14

20

22

25

28

NORMALWEIGHT CONCRETE, f'c (PSI)

10/23/2022

Momtazzadeh

SHARAM STEVE

COLLISION LATTA RD. 74820 **OKLAHOMA**

ADA,

MANUAL 501

DETAIL

S3 OF 3

ATION

FOUND,

0.875 #7 42 37 34 #7 0.875 54 48 44 #7 0.875 #8 1.00 55 47 39 1.00 62 #8 1.00 42 #9 1.128 54 44 1.128 70 1.128 62 62 #9 48 #10 1.27 60 49 1.27 78 64 #10 1.27 70 54 #10 90 70 #11 1.41 1.41 100 STD 90° HOOK NOTES:
1. CASE 1 APPLIES TO REINFORCEMENT THAT HAS LESS THAN 12" OF FRESH CONCRETE PLACED BELOW HORIZONTAL REINFORCEMENT. ALL VERTICAL THE HOOK SHALL BE LOCATED WITHIN THE CONFINED CORE OF A COLUMN OR BOUNDARY ELEMENT, WITH THE HOOK BENT INTO THE JOINT. REINFORCEMENT FALLS UNDER CASE 1. CASE 2 APPLIES TO REINFORCEMENT THAT HAS MORE THAN 12" OF FRESH CONCRETE PLACED BELOW HORIZONTAL REINFORCEMENT. CLEAR SPACING OF BARS BEING DEVELOPED MUST BE AT LEAST THE DEVELOPMENT LENGTH SHALL BE MULTIPLIED BY A FACTOR OF 1.2 FOR EXCONNTED REINFORCING BARS. 2db (DIA OF BAR) & CLEAR COVER AT LEAST db, INCREASE DEVELOPMENT LENGTH BY 1.5 IF OTHERWISE. FOR EPOXY COATED REINFORCEMENT INCREASE THE LENGTH BY A FACTOR OF 1.2. DEVELOPMENT LENGTH, Ld IS THE BONDED LENGTH REQUIRED TO ACHIEVE THE DESIGN STRENGTH OF A BAR (TO PRECLUDE THE BAR FROM SLIPPING

BAR SIZE

f'c = 5,000

12

15

19

23

CASE 2: DEVELOPMENT LENGTHS OF REINFORCEMENT IN TENSION, Ld (IN)

f'c = 4,000

25

31

FY = 60,000 PSI

f'c = 3,000

28

0.375

0.5

0.625

0.75

NORMALWEIGHT CONCRETE, f'c (PSI)

24 #11 19 14 3/4 D AORG

STANDARD END HOOK DIMENSIONS (IN)

A or G

6

7

8

10

15

17

180º HOOKS

STD 90° HOOK

5 STANDARD END HOOK DIMENSIONS 1" = 1'-0"

3 TENSION LAP SPLICE LENGTH
1" = 1'-0"

2 1/4

3 3/4

4 1/2

5 1/4

9 1/2

10 3/4

BAR SIZE

#3

#4

#5

#7

#10

STD 180° HOOK

11 3/4

13 1/4

CASE 2 APPLIES TO REINFORCEMENT THAT HAS MORE THAN 12" OF FRESH CONCRETE PLACED BELOW HORIZONTAL REINFORCEMENT. CLEAR SPACING OF BARS BEING DEVELOPED MUST BE AT LEAST 2db (DIA OF BAR) & CLEAR COVER AT LEAST db, INCREASE DEVELOPMENTELYENGTF

ADJACENT BARS THAT ARE TO BE SPLICED SHALL BE IN CONTACT AND TIED TOGETHER WHERE POSSIBLE. WHERE CONTACT IS NOT POSSIBLE, THE

90º HOOKS

A or G

6

8

10

12

14

16

19

22

FOR EPOXY COATED REINFORCEMENT INCREASE THE LENGTH BY A FACTOR OF 1.2.

MAXIMUM OFFSET SHALL BE ONE THE THE REQUIRED LAP SPLICE LENGTH OR 6", WHICHEVER IS LESS.

6 TENSION DEVELOPMENT LENGTH
1" = 1'-0"