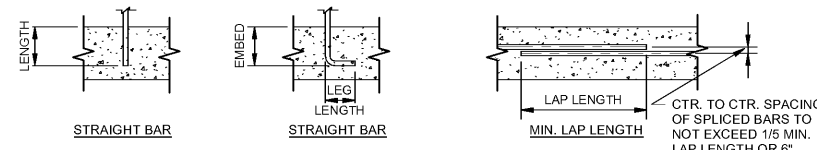


TENSION DEVELOPMENT / LAP SPLICE SCHEDULE (UNCOATED BARS)							
DEVELOPMENT / LAP SPLICE LENGTH IN CONCRETE ($f_c = 4500$ PSI)							
BAR SIZE	DEVELOPMENT LENGTH (IN)		CLASS 'B' LAP SPLICE LENGTH (IN)		STD 90 DEG. HOOK (IN)		
	BAR TYPE 1	BAR TYPE 2	BAR TYPE 1	BAR TYPE 2	EMBED	LEG LENGTH	BEND DIA.
4	18	27	24	35	7	8	3
5	23	34	30	44	9	10	3 3/4
6	27	41	35	53	10	12	4 1/2
7	40	59	51	77	12	14	5 1/4
8	45	67	59	88	14	16	6
9	51	76	66	99	15	19	9 1/2
10	57	86	74	111	17	22	10 3/4



BAR TYPE 1 - CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN D_b . CLEAR COVER NOT LESS THAN D_b , AND STIRRUPS OR TIES THROUGHOUT L_d NOT LESS THAN CODE MINIMUM

OR

CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN $2'D_b$ AND CLEAR COVER NOT LESS THAN D_b .

BAR TYPE 2 - TOP BARS WITH MORE THAN 12" OF FRESH CONCRETE CAST BELOW AND OTHER CASES

STRUCTURAL STEEL

- A. REFERENCES:**
- AISC STEEL CONSTRUCTION MANUAL, 14TH EDITION
 - AWS D1.1 STRUCTURAL WELDING CODE - STEEL
- B. MATERIALS:**
- GRADE STEEL
WIDE FLANGES.....ASTM A992, GRADE 50
CHANNELS, ANGLES, AND PLATES.....ASTM A36
SHEAR CONNECTOR PLATES.....ASTM A572, GRADE 50
STRUCTURAL PIPE.....ASTM A53, GRADE B, $F_y=35$ KSI
ROUND HSS.....ASTM A500, GRADE B, $F_y=42$ KSI
SQUARE OR RECTANGLE HSS.....ASTM A500, GRADE B, $F_y=46$ KSI
 - WELDED STUDS: ASTM A108, GRADE 60
 - ANCHOR BOLTS: ASTM F1554, GRADE 55, WELDABLE.
 - STRUCTURAL BOLTS: ASTM A325-N
 - WELDS: E70XX ELECTRODES
- C. CONNECTIONS**
- AISC MANUAL STANDARD CONNECTIONS UNLESS NOTED. HIGH-STRENGTH BOLTS: ASTM A325-N, 3/4" UNLESS NOTED OTHERWISE. BEARING TYPE INSTALLED IN CONFORMANCE WITH "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS". RESEARCH COUNCIL ON RIVETED AND BOLTED STRUCTURAL JOINTS, UNLESS NOTED OTHERWISE, STANDARD AISC "USUAL GAGE" DIMENSIONS SHALL BE USED FOR LOCATING HOLES FOR BOLTS, EXPANSION ANCHORS, ETC., IN ALL ANGLES, BEAM FLANGES, ETC.
 - THE ASSEMBLY SURFACE, INCLUDING THOSE ADJACENT TO THE WASHER, SHALL BE FREE OF MILL SCALE, OIL, PAINT OR OTHER COATINGS.
 - ALL HIGH STRENGTH BOLTS SHALL BE TIGHTENED TO A BOLT TENSION NOT LESS THAN THAT SPECIFICATION IN THE AISC MANUAL. FULL TENSIONING SHALL BE BY THE TURN OF NUT METHOD, BY A DIRECT TENSION INDICATOR, OR BY PROPERLY CALIBRATED WRENCHES. PROVIDE HARDENED WASHERS UNDER THE NUT OR BOLT HEAD, WHICHEVER IS THE ELEMENT TURNED IN TIGHTENING.
 - WELDING - PERFORM ALL WELDING IN ACCORDANCE WITH AWS D1.1 CODE, LATEST EDITION. WELDS SHALL BE MADE ONLY BY OPERATORS CERTIFIED BY AWS IN PERFORMING THE TYPE OF WORK INDICATED.
 - ALL BEAMS SHALL HAVE SIMPLE SHEAR CONNECTIONS DESIGNED TO SUPPORT 1/2 THE TOTAL UNIFORM LOAD LISTED IN THE AISC MANUAL OF STEEL CONSTRUCTION OR THE REACTION NOTED ON THE DRAWINGS, WHICHEVER IS GREATER.
 - WHERE INDICATED ON THE DRAWINGS, CONNECTIONS SHALL BE DESIGNED FOR THE REACTIONS SHOWN. WHERE NO REACTIONS ARE INDICATED, REFER TO NOTE #5 ABOVE OR DESIGN FOR A MINIMUM REACTION OF 10 KIPS.
- D. TOLERANCES:** AISC CODE OF STANDARD PRACTICE (LATEST EDITION)
- E. CAMBER:** PROVIDE POSITIVE CAMBER AS NOTED ON DRAWINGS. WHERE NO CAMBER IS NOTED, RESIDUAL MILL CAMBER IS TO BE UPWARDS.
- F. SHOP DRAWINGS**
- SUBMIT ERECTION AND FABRICATION SHOP DRAWINGS.
 - SUBMIT ERECTION PROCEDURES AND TEMPORARY BRACING PLAN FOR A/E REVIEW.
 - SUBMIT CONNECTION CALCULATIONS FOR ALL BEAM TO BEAM AND BEAM TO COLUMN CONNECTIONS
 - SHOP DRAWINGS AND CALCULATIONS MUST BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE STRUCTURAL STEEL WILL BE INSTALLED.
- G. ALL EXPOSED STEEL** SHALL BE HOT DIPPED GALVANIZED OR EPOXY COATED COATING REQUIREMENTS WITH ARCHITECTURAL.
- H. PAINTING:** AFTER MATERIAL HAS BEEN PROPERLY CLEANED AND TREATED, APPLY SHOP PRIME COAT TO ALL SURFACES, EXCEPT THOSE PROVIDED FOR EPOXY COATING INTO CONCRETE OR TO RECEIVE FIELD WELDING. SLIP CRITICAL BOLTS TO RECEIVE CEMENTitious PROOFING.
- J. COORDINATE SELECTION OF SHOP PRIMERS WITH TOPCOATS TO BE APPLIED OVER THEM, COMPLY WITH PAINT AND COATING MANUFACTURERS' WRITTEN RECOMMENDATIONS TO ENSURE THAT SHOP PRIMERS AND TOPCOATS ARE COMPATIBLE WITH ONE ANOTHER.**
- K. SHOP DRAWINGS: SHOW FABRICATION OF STRUCTURAL-STEEL COMPONENTS.**
- INCLUDE DETAILS OF CUTS, CONNECTIONS, SPLICES, CAMBER, HOLES, AND OTHER PERTINENT DATA.
 - INDICATE WELDS BY STANDARD AWS SYMBOLS, DISTINGUISHING BETWEEN SHOP AND FIELD WELDS, AND SHOW SIZE, LENGTH, AND TYPE OF EACH WELD. SHOW BACKING BARS THAT ARE TO BE REMOVED AND SUPPLEMENTARY FILLET WELDS WHERE BACKING BARS ARE TO REMAIN.
- L. FABRICATOR QUALIFICATIONS:** A QUALIFIED FABRICATOR THAT PARTICIPATES IN THE AISC QUALITY CERTIFICATION PROGRAM AND IS DESIGNATED AN AISC-CERTIFIED PLANT, CATEGORY STD, OR IS ACCREDITED BY THE AISC FABRICATOR INSPECTION PROGRAM FOR STRUCTURAL STEEL (AC 172).
- M. WELDING QUALIFICATIONS:** QUALIFY PROCEDURES AND PERSONNEL ACCORDING TO AWS D1.1:2015, "STRUCTURAL WELDING CODE - STEEL"
- HOT-DIP GALVANIZED FINISH:** APPLY ZINC COATING BY THE HOT-DIP PROCESS TO STRUCTURAL STEEL ACCORDING TO ASTM A 123/A 123M.
- O. ERECTOR QUALIFICATIONS:** A QUALIFIED INSTALLER WHO PARTICIPATES IN THE AISC QUALITY CERTIFICATION PROGRAM AND IS DESIGNATED AN AISC-CERTIFIED ERECTOR.

STEEL DECK

- A. REFERENCES:**
- SDI DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, AND ROOF DECKS
 - SDI DIAPHRAGM DESIGN MANUAL
- B. MATERIAL:** A653 GRADE A (33,000 PSI MIN.), GALVANIZED (G90).
- C. INSTALLATION:**
- WHERE POSSIBLE, EXTEND OVER 3 OR MORE SUPPORTS. DECK ATTACHMENTS SHALL BE IN ACCORDANCE WITH SDI SPECS UNLESS NOTED OTHERWISE AND SHALL BE ADEQUATELY SHOWN ON SHOP DRAWING SUBMITTAL.

SPECIAL INSPECTIONS AND TESTING NOTES

- THE OWNER SHALL EMPLOY ONE OR MORE QUALIFIED INDEPENDENT TESTING COMPANIES, APPROVED BY THE BUILDING OFFICIAL, TO PERFORM SPECIAL INSPECTIONS AND TESTING.
- SPECIAL INSPECTIONS AND TESTING ARE REQUIRED PER THESE NOTES AND PER CHAPTER 17 OF IBC 2012 FOR THE FOLLOWING PORTIONS OF CONSTRUCTION:
 - SOILS PER SECTION 1705.6 & TABLE 1705.6
 - CONCRETE CONSTRUCTION PER SECTION 1705.3 & TABLE 1705.3
 - PRE-FABRICATED ELEMENTS PER SECTION 1705.5
- THE CONTRACTOR SHALL COORDINATE THE INSPECTION AND TESTING SERVICES WITH THE PROGRESS OF THE WORK. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE TO ALLOW PROPER SCHEDULING OF ALL PERSONNEL.

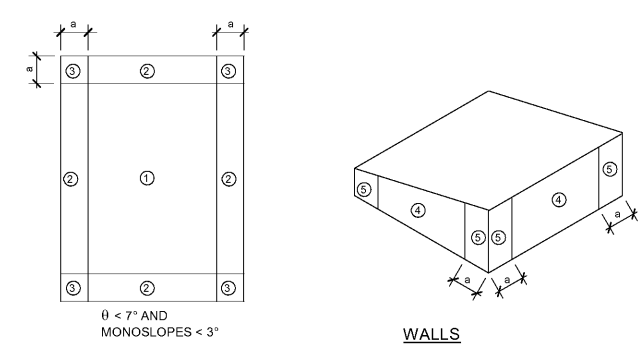
COMPONENTS & CLADDING WIND PRESSURES

FACTORED (ULTIMATE) COMPONENTS & CLADDING WIND PRESSURES (PSF)			
WIND ZONES	EFFECTIVE TRIBUTARY AREA*		
	10 SF	50 SF	100 SF
ROOF			
NEGATIVE ZONE 1	-34	-34	-34
NEGATIVE ZONE 2	-38	-36	-36
NEGATIVE ZONE 3	-48	-39	-36
POSITIVE WALL ZONES	17	16	16
WALLS			
WALL ZONES	EFFECTIVE TRIBUTARY AREA*		
	10 SF	50 SF	100 SF
NEGATIVE ZONE 4	-31	-29	-28
NEGATIVE ZONE 5	-37	-32	-30
POSITIVE ZONE 4 & 5	30	27	26

NOTES:

- EDGE DISTANCE 'a' = 3'-0"
- * EFFECTIVE TRIBUTARY AREA: SPAN LENGTH MULTIPLIED BY AN EFFECTIVE WIDTH THAT NEED NOT BE LESS THAN 1/3 THE SPAN LENGTH
- NEGATIVE VALUE DENOTES PRESSURE ACTING AWAY FROM THE SURFACE
- UNFACTORED (NOMINAL) COMPONENTS AND CLADDING PRESSURES MAY BE OBTAINED BY MULTIPLYING THE VALUES IN THE TABLE BY 0.60

LOCATION OF WIND PRESSURE ZONES



ROOF

WALLS

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MARK	DATE	DESCRIPTION	BY
1	02/11/19	ISSUED FOR BID	

CITY OF ALPHARETTA
OLD ROSWELL STREET
PARKING LOT MODIFICATIONS
GENERAL NOTES

PROJ: 200-01297-19012
DESN: TJM
DRWN: BRF
CHKD: JLB

S-002