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DESIGN TEAM

GRIMM + PARH KCI TECHNOL COLUMBIA EN JAMES POSEY NYIKOS ASSO WRIGHT ENGIN SUSTAINABLE FACILITY DYNA **GEOTECH ENG HENNING ASSO APPLIED ENVI EHT TRACERIE FORELLA GRO ERBSCHLOE**

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LANSDOWNE ELEMENTARY SCHOO 2301 ALMA ROAD, BALTIMORE, MD



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[O GRIMM AND PARKER, P.C. 2016 GENERAL NOTES	16	15	14
	FOUNDATION AND SLAB ON GRADE:	CONCRETE CONTINUED:		STEEL CONT
M	NOTE: 1 FOOTINGS LOCATED IN EASTERN AND NORTHERN PORTIONS OF BUILDING ARE DESIGNED FOR A BEARING CAPACITY OF 3000 PSF AND WESTERN AND SOUTHERN PORTION OF BUILDING ARE SUPPORTED OVER RAMMED AGGREGATE PIERS (RAP) AND ARE DESIGNED FOR BEARING CAPACITY OF 5000 PSF BASED ON THE GEOTECHNICAL REPORT PREPARED BY GEOTECH ENGINEERS, INC. DATED MAY 13, 2016. FOOTINGS SHALL BEAR ON NATURAL UNDISTURBED SOIL 1'-0" BELOW ORIGINAL GRADE OR ON STRUCTURALLY COMPACTED FILL. BOTTOM OF EXTERIOR FOOTINGS SHALL BE 2'-6" MINIMUM BELOW FINISHED GRADE. A GEOTECHNICAL ENGINEER REGISTERED IN THE LOCAL JURISDICTION SHALL VERIFY THE SOIL BEARING CAPACITY IN THE FIELD. IF FOUND TO BE LESS THAN THE REQUIRED BEARING PRESSURE, THE FOOTINGS WILL HAVE TO BE REDESIGNED. FOOTINGS SUPPORTED ON RAP SHALL BEAR ON 2'-0" THICK PAD OF CR-6 STONE PLACED OVER RAP. BOTTOM OF EXTERIOR FOOTINGS SHALL BE MINIMUM OF 2'-6" BELOW FINISHED GRADE. THE	NOTE: 18 CONCRETE FORMWORK SH HARDENED SUFFICIENTLY CONSTRUCTION LOADS. AS THE LENGTH OF TIME RECO CONCRETE" (LATEST LOCAL SIMULTANEOUS RESHORIN CONCRETE HAS ATTAINED RECOMMENDATIONS ESTAL FIELD CURED CYLINDERS T THE CONTRACTOR SHALL H SIZE AND STRENGTH OF FO TEMPERATURE DEPENDEN PROCEDURE. THE PLANS S PROFESSIONAL ENGINEER	IALL NOT BE DISTURBED UNTIL THE CONC TO SUPPORT ITS OWN WEIGHT PLUS SUPE S A MINIMUM, FORMS MUST REMAIN IN PLA DMMENDED BY ACI 347, "GUIDE TO FORMW L APPROVED EDITION). FORM REMOVAL R G. RESHORING SHALL REMAIN IN PLACE U THE SPECIFIED DESIGN STRENGTH. IN LIE BLISHED IN ACI 347, THE CONTRACTOR MA TO CONFIRM EARLY CONCRETE DESIGN ST IAVE A FORMWORK PLAN AT THE SITE SHO DRMWORK, SEQUENCE OF CONSTRUCTION T FORMWORK REMOVAL AND RESHORING SHALL BE PREPARED AND SIGNED AND SEA REGISTERED IN THE LOCAL JURISDICTION	RETE HAS RETE HAS RETE HAS RIMPOSED CE FOR ORK FOR EQUIRES U OF THE CU OF THE RENGTH. DWING THE ALED BY A RETE HAS RENGTH. CLATEST LOC NOTE: 4 NOTE: 5 ALED BY A NOTE: 5 ALED BY A NOTE: 5 ALED BY A COTE: 5 COTE: 5 COTE: 5 COTE: 6 COTE: 7 COTE: 7
L	INSTALLATION OF THE RAP SYSTEM SHALL BE PERFORMED BY A QUALIFIED CONTRACTOR UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER REGISTERED IN THE STATE OF MARYLAND. SIGNED AND SEALED SHOP DRAWINGS AND CALCULATIONS FOR THE DESIGN AND LAYOUT OF THE RAP SYSTEM SHALL BE SUBMITTED BY THE CONTRACTOR FOR REVIEW BY THE ARCHITECT/ENGINEER. UNPON COMPLETION OF THE INSTALLATION OF THE RAP SYSTEM, THE GEOTECHNICAL ENGINEER SHALL CERTIFY THE DESIGN BEARING CAPACITY HAS BEEN ACHIEVED. IF THE DESIGN BEARING CAPACITY CAN NOT BE ACHIEVED, THE FOOTINGS WILL HAVE TO BE REDISIGNED.	NOTE: 19 CONCRETE SLABS ON MET/ UNSHORED. SLABS SHALL THE PLAN. FOR BIDDING PL ASSUME AN AVERAGE OF 1 THE FLOOR TO ACCOUNT F LOAD OF THE CONCRETE.	AL DECK AND STEEL FRAMING ARE DESIGN BE POURED LEVEL TO THE ELEVATIONS NO JRPOSES, THE CONCRETE CONTRACTOR S /2" ADDITIONAL CONCRETE OVER THE FOC OR DEFLECTION OF THE FRAMING UNDER	VED AS NED AS OTED ON SHALL DTPRINT OF THE WET ALL GROOVE ACCORDANC LOCAL APPR OPERATORS WELDING CO
K	DO NOT BACKFILL AGAINST WALLS UNTIL SUPPORTING SLABS ARE IN PLACE AND HAVE ATTAINED DESIGN STRENGTH. NOTE: 3 BASEMENT AND CANTILEVER RETAINING WALLS HAVE NOT BEEN DESIGNED FOR SURCHARGE LOADINGS ASSOCIATED WITH CONSTRUCTION TRAFFIC, TEMPORARY STORAGE, ETC. THE CONTRACTOR SHALL KEEP CONSTRUCTION SURCHARGES AWAY FROM THE INFLUENCE LINE OF THESE WALLS OR THE CONTRACTOR SHALL INSTALL TEMPORARY BRACING FOR THESE WALLS. DESIGN OF THE TEMPORARY BRACING IS THE RESPONSIBILITY OF THE CONTRACTOR.	MASONRY: NOTE: 1 CONCRETE MASONRY SHA SPECIFICATION C90. CON TESTED BY THE MASONRY CONCRETE MASONRY CON 530/ASCE 5, "BUILDING CO STRUCTURES" (LATEST LC 530.1/ASCE 6, "SPECIFICAT LOCAL APPROVED EDITION	ALL CONFORM TO THE LATEST EDITION OF CRETE MASONRY SHALL BE SAMPLED AND Y SUPPLIER ACCORDING TO ASTM C140. AI NSTRUCTION SHALL CONFORM TO TMS 402 DE REQUIREMENTS FOR MASONRY OCAL APPROVED EDITION) AND TMS 602/AC TON FOR MASONRY STRUCTURES" (LATES N).	ASTM NOTE: 7 HOLES AND C LL THE WORK C 2/ACI SUBMITTED F T FIELD MODIF WITHOUT PR
	CONCRETE: NOTE: 1 ALL CONCRETE, EXCEPT AS NOTED, SHALL BE fc=3000 PSI NORMAL WEIGHT CONCRETE AT 28 DAYS. ALL CONCRETE EXPOSED TO THE WEATHER SHALL BE fc=4500 PSI NORMAL WEIGHT CONCRETE AND SHALL BE AIR ENTRAINED FOR EXPOSURE CLASS F2 PER ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (LATEST LOCAL APPROVED EDITION).	UNLESS OTHERWISE NOTE MINIMUM COMPRESSIVE S BRICK SHALL HAVE A MINIE THE NET AREA. NOTE: 3 ALL MORTAR SHALL CONF BE SAMPLED AND TESTED ACCORDING TO ASTM C78	ED, CONCRETE MASONRY UNITS SHALL HA TRENGTH OF 2000 PSI ON THE NET AREA. MUM COMPRESSIVE STRENGTH OF 3350 PS ORM TO ASTM C270. MORTAR TO BE USED BY THE BRICK AND MASONRY SUPPLIERS 0 AND RESULTS SUBMITTED TO THE ENGIN	VE A ALL SI ON OF STEEL ME NOTE: 10 ALL STRUCTU PRIMER. ALL HOT-DIPPED GALVANIZED
	ALL REINFORCING STEEL SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM DESIGNATION A615 (LATEST LOCAL APPROVED EDITION), GRADE 60. ALL REINFORCING STEEL SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI SP-66, "ACI DETAILING MANUAL" (LATEST LOCAL APPROVED EDITION). NOTE: 4	FOR APPROVAL. MORTAR TYPE "S" AS A MINIMUM. NOTE: 4 UNLESS NOTED OTHERWIS SOLID MASONRY CONTINU LINES. PROVIDE 16" MINIM LINTELS AND/OR MINOR W	STIALL BE PORTLAND CEMENT/LIME MORT SE, PROVIDE 8" MINIMUM OF BRICK OR 100 IOUS BELOW ALL JOISTS OR SLAB BEARING IUM BRICK OR 100% SOLID MASONRY BELC ALL BEARING BEAMS.	NOTE: 11 THE SYMBOL THE NUMBER OF THE BEAN ABOVE THE I DETERMINED OW ALL REDUCTION
Н	ALL SPLICES IN REINFORCING SHALL BE CLASS "B" SPLICES IN ACCORDANCE WITH ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (LATEST LOCAL APPROVED EDITION) EXCEPT AS OTHERWISE NOTED. NOTE: 5 WELDED WIRE FABRIC (W.W.F.) SHALL HAVE ENDS LAPPED ONE FULL MESH. NOTE: 6 WALL FOOTING REINFORCING SHALL EXTEND 2'-0" INTO ADJACENT COLUMN FOOTING, UNLESS OTHERWISE NOTED.	NOTE: 5 LOOSE LINTELS FOR OPEN FOLLOWS FOR EACH 4" WI • 0'-0" TO 3'-0" • 3'-1" TO 5'-0" • 5'-1" TO 6'-0" • 6'-1" TO 8'-0" ALL ANGLES SHALL HAVE T BEARING.	NINGS IN MASONRY BEARING WALLS SHALI DTH: 3 1/2 "x3 1/2"x5/16"ANGLE 4"x3 1/2"x5/16" ANGLE 5"x3 1/2"x3/8" ANGLE 6"x3 1/2"x3/8" ANGLE THEIR SHORT LEG OUTSTANDING AND 6" M	L BE AS L BE AS INIMUM INIM
	NOTE: 7 UNLESS OTHERWISE NOTED ON STRUCTURAL DRAWINGS, PROVIDE CONCRETE PROTECTION FOR REINFORCING AS FOLLOWS: CAST AGAINST EARTH = 3" EXPOSED TO EARTH OR WEATHER: NO. 6 AND LARGER BARS = 2" NO. 5 AND SMALLER BARS = 1 1/2" NOT EXPOSED TO EARTH OR WEATHER: SLABS AND WALLS = 3/4"	NOTE: 6 LINTELS OVER OPENINGS MASONRY PARTITIONS NC LIGHTWEIGHT CONCRETE BOTTOM FOR EACH 4" WID NOTE: 7 ALL SOLID CMU SHALL BE CELLS FILLED 100% SOLID	10'-0" WIDE OR LESS IN INTERIOR NON-BEA TOTHERWISE SPECIFIED SHALL BE PRECA LINTELS REINFORCED WITH 1-#5 BAR TOP TH. 100% SOLID BLOCK OR HOLLOW BLOCK WI WITH F'C=3000 PSI COARSE AGGREGATE (ARING AST NOTE: 1 AND FABRICATION LATEST EDIT NOTE: 2 FLOOR DECK GROUT GRADE 50. R
G	BEAMS AND COLUMNS = 1 1/2" TO TIES, STIRRUPS OR SPIRALS NOTE: 8 OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS ARE PRINCIPAL OPENINGS. SEE MEP AND ARCHITECTURAL DRAWINGS FOR HOLES IN SLABS NOT SHOWN.	CONFORMING TO ASTM C4 NOT TO EXCEED 4'-0" AS C OF THE MASONRY UNITS S GROUTED CELLS. NOTE: 8 ALL REINFORCED CELLS IN PER NOTE ABOVE.	176. GROUT SHALL BE PLACED IN POUR HE MU CONSTRUCTION PROGRESSES. THE V SHALL BE FULLY MORTARED AROUND ALL N HOLLOW BLOCK SHALL BE GROUTED 100	EIGHTS A653 SS GRA G60. NOTE: 3 METAL DECK • ROOF DEC • ROOF DEC • COMPOSI
F	 NOTE: 9 NO OPENINGS SHALL BE MADE THROUGH ON METAL DECK UNLESS THESE ARE SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS OR ON THE APPROVED STRUCTURAL SHOP DRAWINGS. NOTE: 10 CONDUITS IN STRUCTURAL MEMBERS: a. CONDUITS SHALL ONLY BE PLACED IN THE MIDDLE THIRD OF THE DEPTH OF THE SLAB OR WALL. b. NO CONDUIT WITH AN OUTSIDE DIAMETER GREATER THAN ONE THIRD OF THE 	NOTE: 9 ALL SPLICES IN REINFORC FOLLOWS UNLESS NOTED • #4 BAR 2'-8" • #5 BAR 3'-4" • #6 BAR 4'-0" NOTE: 10	ING STEEL FOR MASONRY WALLS SHALL B OTHERWISE:	BE AS BE AS ALL METAL D MINIMUM AN TWO SPAN C FURNISH HE/ APPLICABLE LAYOUT FOR
	 SLAB OR WALL THICKNESS SHALL BE PLACED IN THE SLAB OR WALL. c. NO CONDUITS SHALL BE PLACED IN THE SLAB OR WALL UNLESS SPECIFICALLY INDICATED ON THE ELECTRICAL DRAWINGS. d. CONDUITS WHICH CROSS OVER ONE ANOTHER IN A CONCRETE SLAB OR WALL SHALL NOT OCCUPY A TOTAL SPACE AT THE POINT OF CROSSOVER GREATER THAN ONE THIRD THE DEPTH OF THE SLAB OR WALL. e. NO CONDUITS SHALL BE PLACED IN A BEAM, COLUMN OR PIER. f. FOR CONCRETE ON METAL DECK, THE DEPTH OF THE SLAB SHALL BE CONSIDERED THE TOTAL SLAB THICKNESS. 	 ALL CIMU WALLS & OK WILL REINFORCING UNLESS NO INTERIOR WALLS EXTERIOR WALLS NOTE: 11 IN ADDITION TO REINFORCE SECTIONS, PROVIDE VERTE OF WALL CONTROL JOINTS OF EACH SIDE OF OPENING 	TED OTHERWISE: #4 AT 72" o.c. #5 AT 48" o.c. CING STEEL NOTED ON PLANS, SCHEDULES TICAL BARS OF SAME SIZE WITHIN 8"OF EAG S, WITHIN 8" OF THE ENDS OF WALLS, WITH GS AND AT ALL CORNERS.	S AND CH SIDE IIN 16" NOTE: 5 DECK SHALL ALL INTERME ACCORDANC SHALL BE WE NOTE: 6 PROVIDE RID CLOSURES, 0 OTHER ACCE
E	NOTE: 11 CONSTRUCTION JOINTS IN WALLS, BEAMS AND SLABS SHALL BE LOCATED MIDWAY BETWEEN SUPPORTS. WHEN AN INTERSECTING MEMBER OCCURS AT MIDSPAN, THE JOINT SHALL BE OFFSET TWICE THE WIDTH OF THE INTERSECTING MEMBER. BEFORE FRESH CONCRETE IS POURED AGAINST CONCRETE IN PLACE, THE CONTACT SURFACES SHALL BE THOROUGHLY	NOTE: 12 REINFORCING BAR POSITI PROPER LOCATION. POSI VERTICAL SPACING OF 48" NOTE: 13	ONERS SHALL BE USED TO HOLD BARS IN TIONERS SHALL BE PLACED AT A MAXIMUN 'o.c.	NOTE: 7 DO NOT HAN ROOF DECK. <u>COLD-FORM</u> NOTE: 1
	SHALL BE THOROUGHLY SLUSHED WITH GROUT CONSISTING OF ONE PART SAND TO ONE PART CEMENT WITH A MINIMUM AMOUNT OF WATER. NOTE: 12 CONSTRUCTION JOINTS SHALL HAVE THE SURFACE OF THE FIRST POUR ROUGHENED TO 1/4" AMPLITUDE, UNLESS OTHERWISE NOTED.	ALL 5" CMU NON-BEARING SLAB WITH #4 AT 48"o.c. UN NOTE: 14 ALL MASONRY ANCHORS S BEEN GROUTED SOLID A M AND A MINIMUM OF 8" EAC	VVALLS SHALL BE DOWELED TO THE SUPP NLESS NOTED OTHERWISE. SHALL BE INSTALLED IN MASONRY THAT H/ /INIMUM OF 8" ABOVE AND BELOW THE AN/ H SIDE OF THE ANCHOR.	GALVANIZED FORMED FR(GALVANIZED BRIDGING, EI BRIDGING, EI CHOR NOTE: 2
D	NOTE: 13 THE CONTRACTOR MUST SUBMIT A CONCRETE DESIGN MIX IN ACCORDANCE WITH ACI 318 (LATEST LOCAL APPROVED EDITION). SUCH DESIGN MIX SHALL BE ACCOMPANIED BY THE APPROPRIATE GRAPHS AND BACKGROUND DATA. CONCRETE DESIGN MIX SHALL INDICATE 7 AND 28 DAY STRENGTHS, CEMENT CONTENT, WATER-CEMENT RATIO, FINE AND COARSE AGGREGATES AND ADMIXTURES FOR EACH DESIGN STRENGTH. THE ADDITION OF WATER AT THE PLANT OR IN THE FIELD GREATER THAN THE SPECIFIED WATER CONTENT IS STRICTLY PROHIBITED.	NOTE: 15 UNLESS OTHERWISE NOTE TO THE STRUCTURE IN TH • AT STEEL BEAMS: A • AT STEEL COLUMNS: A • AT CONCRETE ELEMEN NOTE: 16 MASONRY CONSTRUCTION	ED, PROVIDE ANCHORAGE OF MASONRY W E FOLLOWING MANNER: DJUSTABLE MASONRY ANCHORS AT 16"o.c DJUSTABLE MASONRY ANCHORS AT 16"o.c ITS: DOVETAIL ANCHORS AT 16"o.c.	ALL COLD-FC A G-90 GALV/ /ALLS NOTE: 3 FRAMING CO ERECTING. F ATTACHED IN OF PREFABR TO CAUSE DI
С	NOTE: 14 ALL CONCRETE WORK SHALL CONFORM TO THE LATEST LOCAL APPROVED EDITIONS OF THE FOLLOWING ACI AND ASTM DOCUMENTS: • ACI-301 SPECIFICATIONS FOR STRUCTURAL CONCRETE • ACI-318 CODE • ACI-214 COMPRESSIVE TEST • ACI-306 COLD WEATHER • ACI SP-66 DETAILING	530/ASCE5 , "BUILDING COL STRUCTURES" (LATEST LC ASSURANCE. STEEL: NOTE: 1 ALL STEEL JOISTS SHALL C SPECIFICATIONS IN ALL RES	DE REQUIREMENTS FOR MASONRY DCAL APPROVED EDITION) FOR LEVEL B QU ONFORM TO THE SJI STANDARD SPECTS AND SHALL HAVE BRIDGING IN	JALITY NOTE: 4 PROVIDE UN NOTE: 5 AT TRACK BU WELDED OR NOTE: 6 STUDS SHAL
	 ACI-347 FORWWORK ACI-305 HOT WEATHER ACI-211 PROPORTIONS OF CONCRETE ACI-304 PLACING CONCRETE ATSM C-94 READY-MIX CONCRETE NOTE: 15 ALL FIELD AND LAB TESTING OF CONCRETE SHALL CONFORM TO THE LATEST LOCAL APPROVED EDITIONS OF ASTM: 	ACCORDANCE WITH THE S. TO STEEL SUPPORTS PER S COLUMN SHALL BE WELDEN WELD EACH SIDE UNLESS N STEEL BEAMS, GIRDERS, O SEAT DESIGNED TO TRANS UNLESS NOTED OTHERWIS	II SPECIFICATIONS. JOISTS SHALL BE WEL SJI SPECIFICATIONS. JOISTS SUPPORTED D TO THE COLUMN WITH 1/8"x2" LONG FILLE NOTED OTHERWISE. JOISTS SUPPORTED (R BEARING PLATES SHALL HAVE THE JOIS FER THE LOAD TO THE SUPPORT CENTERI E ON THE PLAN.	DED FLANGES OF BY A AGAINST THE ET OTHERWISE DN T NOTE: 7 LINE SPLICES IN A NOTE: 8
В	 ASTM C-31 FIELD CYLINDER SPECIMENS ASTM C-143 SLUMP TEST ASTM C-231 AIR CONTENT (WHEN REQUIRED) ASTM C-39 LAB TESTING CYLINDERS ASTM C-172 SAMPLING FRESH CONCRETE ASTM C-42 HARDENED CORES (WHEN REQUIRED) TEST RESULTS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE LOCAL JURISDICTION. 	STRUCTURAL STEEL FOR W ASTM SPECIFICATION A992. CONFORM TO ASTM SPECIF FOR PIPES SHALL CONFOR B. ALL OTHER STEEL SHALL TEST REPORTS SHALL BE S SHALL BE DETAILED, FABRI THE AISC MANUAL, AISC SP PRACTICE. ALL CONNECTION	VIDE FLANGE SHAPES SHALL CONFORM TO . STRUCTURAL STEEL FOR TUBES SHALL FICATION A500 GRADE B. STRUCTURAL STE M TO ASTM SPECIFICATION A53 TYPE E, GF . CONFORM TO ASTM SPECIFICATION A36. SUBMITTED TO THE ARCHITECT. ALL STEEL CATED AND ERECTED IN ACCORDANCE WI ECIFICATION AND AISC CODE OF STANDAF INS FOR NON-COMPOSITE BEAMS SHALL	VALL STUD E RESISTANCE ROWS SHALL RADE NOTE: 9 MILL TEMPORARY STRUCTURA TH RD NOTE: 10 SIZES AND G
٨	NOTE: 16 ALL FORMWORK SHALL BE IN ACCORDANCE WITH ACI 347, "GUIDE TO FORMWORK FOR CONCRETE" (LATEST LOCAL APPROVED EDITION).	DEVELOP THE ALLOWABLE FOR COMPOSITE BEAMS SH PLANS. IN GENERAL, FIELD DIAMETER A325 BOLTS UNL CONNECTIONS SHALL BE W ALL FULL PENETRATION W	UNIFORM LOAD OF THE BEAM. CONNECTION HALL DEVELOP THE REACTION NOTED ON CONNECTIONS SHALL BE MADE WITH 3/4" .ESS OTHERWISE NOTED AND SHOP /ELDED. ELDS SHALL BE ULTRASONICALLY TESTED	DNS DRAWINGS A THE FOR THE WIN BE SIGNED A LOCAL JURIS AT EACH SID

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13 12	11	10	9 8	7	6	5 4
STEEL CONTINUED:	SUPPORT FOR DUCTWORK, PIPING AN	ID MECHANICAL UNITS:	MISCELLANEOUS:		DESIGN CODES:	
NOTE: 3 BOLTS, EXCEPT AS NOTED, NEED ONLY BE INSTALLED TO THE "SNUG TIGHT" CONDITION AS DEFINED IN THE RCSC "SPECIFICATION FOR STRUCTURAL JOINTS." BOLTS IN BEAM TO COLUMN CONNECTIONS THAT HAVE SLOTTED HOLES, BOLTS NOTED AS SLIP CRITICAL, AND BOLTS	NOTE: 1 NO MECHANICAL UNITS SHALL BE PLA WITHOUT THE APPROVAL OF THE ENG SUPPORTED FROM THE BOTTOM CHO	CED ON OR HUNG FROM JOISTS SINEER. NO UNITS SHALL BE RD OF THE JOIST.	NOTE: 1 ITEMS AND CONDITIONS NOTED OR IDENTIFIE TO AREAS SIMILAR IN CONDITION TO THOSE I DETAIL MARK.	ED IN SECTIONS AND DETAILS APPLY DENOTED BY THE SECTION CUT OR	INTERNATIONAL BUILDING CODE: IBC 2015 BUILDING CODE REQUIREMENTS FOR ST ACI 318-13	RUCTURAL CONCRETE:
SUBJECT TO DIRECT TENSION SHALL BE FULLY PRE-TENSIONED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL JOINTS" (LATEST LOCAL APPROVED EDITION). NOTE: 4	NOTE: 2 DUCTWORK AND PIPING SHALL ONLY F AT JOISTS, HANGERS SHALL BE SUPPO POINT AND THE LOAD ON INDIVIDUAL F POUNDS.	BE HUNG FROM THE STEEL FRAMING. ORTED FROM THE TOP CHORD PANEL HANGERS SHALL NOT EXCEED 300	NOTE: 2 THE CONTRACTOR SHALL NOTIFY THE CONST DISCREPANCIES BETWEEN THE STRUCTURAL DOCUMENTS OR EXISTING CONDITIONS FOR PROCEEDING WITH FABRICATION OR CONSTR	TRUCTION MANAGER OF ANY L DOCUMENTS AND ANY OTHER RESOLUTION PRIOR TO RUCTION.	BUILDING CODE REQUIREMENTS FOR MA TMS 402-13/ACI 530-13/ASCE 5-13 SPECIFICATION FOR STRUCTURAL STEE	SONRY STRUCTURES:
NOTE: 5 ALL CONNECTIONS, UNLESS OTHERWISE NOTED, SHALL BE DOUBLE ANGLE, SINGLE ANGLE, SINGLE PLATE, OR THRU PLATE CONNECTIONS PER THE TYPICAL DETAILS OF THE CONTRACT DOCUMENTS, CONNECTIONS SHALL	NOTE: 3 PIPE RISERS SHALL BE SUPPORTED FI CLAMP OR STANCHION. NOTE: 4	ROM THE FLOOR SLAB BELOW WITH A	NOTE: 3 SHOP DRAWINGS FOR ALL STRUCTURAL ELEM CONTRACT DOCUMENTS MUST BE SUBMITTE CONTRACTOR OR OWNER FAILS TO SUBMIT T COLUMBIA ENGINEERING, INC., WILL NOT BE F	MENTS SHOWN ON THE ED BY THE CONTRACTOR. IF A THE SHOP DRAWINGS, THE FIRM RESPONSIBLE FOR THE	DESIGN LOADS: IBC RISK CATEGORY III FLOOR LIVE LOADS:	
BE SELECTED BY THE STEEL DETAILER BASED ON THE CONNECTION TABLES PROVIDED IN THE TYPICAL DETAILS. LOADS SHOWN IN THE DRAWINGS ARE ASD LOADS UNLESS OTHERWISE NOTED. NOTE: 6	JOISTS HAVE BEEN DESIGNED FOR AU OF 3 PSF. THE SPRINKLER CONTRACT THAT THE UNIFORM HANGING SPRINK SPRINKLER LINES 4" AND LARGER THA SHALL BE PLACED EVENLY BETWEEN	JNIFORM HANGING SPRINKLER LOAD OR SHALL SPACE THE SPRINKLERS SO LER LOAD IS NOT EXCEEDED. IT RUN PARALLEL WITH THE JOISTS TWO JOISTS. SPRINKLER PIPES SHALL	STRUCTURAL CERTIFICATION AND/OR THE DE AT THE TIME OF SHOP DRAWING SUBMISSION IN WRITING ANY DEVIATIONS OR OMISSIONS I DOCUMENTS. THE CONTRACTOR SHALL REV SUBMISSION AND MAKE ALL CORRECTIONS A	ESIGN OF THE PROJECT. N, THE CONTRACTOR SHALL STATE FROM THE CONTRACT /IEW ALL SHOP DRAWINGS BEFORE AS HE DEEMS NECESSARY AND	SLAB ON GRADE 100 PSF CLASSROOMS 40 PSF PLUS 15 PSF P CORRIDORS ABOVE FIRST FLOOR 80 FIRST FLOOR 80 PSF STORAGE 125 PSF	ARTITION PSF
ALL GROOVE WELDS SHALL BE FULL PENETRATION GROOVE WELDS IN ACCORDANCE WITH ANSI/AWS D1.1, "STRUCTURAL WELDING CODE" (LATEST LOCAL APPROVED EDITION). THESE WELDS SHALL BE MADE ONLY BY OPERATORS QUALIFIED BY PRESCRIBED TESTS IN THE "STRUCTURAL WELDING CODE." ACCEPTANCE SHALL BE SUBJECT TO THE INSPECTION	BE HUNG FROM THE TOP CHORD PANI LOAD ON EACH INDIVIDUAL HANGER S NOTE: 5 THE MAXIMUM TOTAL HUNG LOAD ON	EL POINT OF THE JOISTS AND THE HALL NOT EXCEED 300 POUNDS. ANY SINGLE JOIST FROM MULTIPLE	SHALL CERTIFY ON EACH DRAWING AS FOLLO "I CERTIFY THAT THE CONTRACT DOCUMENT AND ALL DIMENSIONS, CONDITIONS, AND QUA AND/OR AS CORRECTED ON THIS DRAWING."	OWS: REQUIREMENTS HAVE BEEN MET, ANTITIES ARE VERIFIED AS SHOWN	MECHANICAL ROOMS 150 PSF MEDIA AREA 150 PSF <u>ROOF LOADS:</u> LIVE LOAD = 30 PSF	
AND REVIEW OF AN INDEPENDENT INSPECTION AGENCY. ALL FULL PENETRATION WELDS SHALL BE ULTRASONICALLY TESTED. NOTE: 7 HOLES AND OPENINGS REQUIRED IN STRUCTURAL STEEL MEMBERS FOR	HANGERS SHALL NOT EXCEED 900 PO <u>POST-INSTALLED ANCHORS AND REI</u> NOTE: 1	unds. <u>NFORCING:</u>	SIGNED:	WILL NOT BE ACCEPTED AS SHOP	GROUND SNOW LOAD, pg = 30 PSF FLAT ROOF SNOW LOAD, pf = 23 PSF SNOW EXPOSURE FACTOR, Ce = 1.0 SNOW LOAD IMPORTANCE FACTOR, Is = THERMAL FACTOR, Ct = 1.0	1.1
NOTE: 8 FIELD MODIFICATION OF THE STRUCTURAL STEEL IS NOT ALLOWED WITHOUT PRIOR REVIEW BY THE ARCHITECT AND STRUCTURAL ENGINEER	 ANCHORS SHALL BE THE FOLLOWING a. ADHESIVE ANCHORS IN CONCRET ICC ESR-3187 WITH HILTI HIT-Z THE b. ADHESIVE ANCHORS IN SOLID GRE ADHESIVE SYSTEM PER ICC ESR-2 	& TYPES MANUFACTURED BY HILTI, INC.: E: HILTI HIT-HY200 ANCHORING SYSTEM PE READED ROD. OUTED MASONRY: HILTI HIT-HY70 MASONR` 2682 WITH HILTI HAS-E CONTINUOUSLY	AWVINGS. R NOTE: 5 Y SHOP DRAWINGS FOR THE FOLLOWING ITEMS ARCHITECT/ENGINEER REVIEW: CONCRETE/GROUT MIX DESIGNS	IS SHALL BE SUBMITTED FOR	<u>SEISMIC DESIGN DATA:</u> SOIL SITE CLASS D SEISMIC DESIGN CATEGORY B SEISMIC IMPORTANCE FACTOR, le = 1.25	
NOTE: 9 WELDING SEQUENCE AND TECHNIQUE SHALL BE SUCH THAT DISTORTION OF STEEL MEMBERS IS MINIMIZED AND UNDUE DISTORTION IS AVOIDED.	 THREADED ROD. c. ADHESIVE ANCHORS IN HOLLOW A HY70 MASONRY ADHESIVE SYSTEL CONTINUOUSLY THREADED ROD A d. MECHANICAL ANCHORS IN CONCR ANDUOD DED 100 FOD 4047 	AND MULTI-WYTHE MASONRY: HILTI HIT- M PER ICC ESR-2682 WITH HILTI HAS-E AND APPROPRIATE SIZE SCREEN TUBE. RETE: HILTI KWIK BOLT TZ EXPANSION	 a. CONCRETE/GROOT MIX DESIGNS b. CONCRETE/MASONRY REINFORCING STEE c. STRUCTURAL STEEL d. STEEL JOISTS e. METAL DECK SEE SPECIFICATIONS FOR ADDITIONAL REOL 	EL	MAPPED SPECTRAL RESPONSE ACCELE Ss = 0.127 S1 = 0.051 DESIGN SPECTRAL RESPONSE ACCELES	RATION PARAMETERS:
NOTE: 10 ALL STRUCTURAL STEEL SHALL BE SHOP PAINTED WITH A RUST INHIBITIVE PRIMER. ALL EXPOSED STEEL AND LINTELS IN EXTERIOR WALLS SHALL BE HOT-DIPPED GALVANIZED. REFER TO ARCHITECTURAL DRAWINGS FOR GALVANIZED STEEL THAT SHALL RECEIVE A PAINTED FINISH COAT	AINCHUR PER ICC ESR-1917 e. MECHANICAL ANCHORS IN SOLID EXPANSION ANCHOR PER ICC ESP ALTERNATE MANUFACTURERS OR AN ARCHITECT FOR DEVIEW AND ADDRO	GROUTED MASONRY: HILTI KWIK BOLT 3 R-1385 NCHORS MUST BE SUBMITTED TO THE	NOTE: 6 THE FOLLOWING ITEMS SHALL BE DESIGNED LOCAL BUILDING CODE: a. CURTAINWALL SYSTEMS	FOR LOADS INDICATED IN THE	Sds = 0.136 Sd1 = 0.082 BASIC SEISMIC FORCE RESISTING SYSTE RESPONSE MODIFICATION COFFICIENT	EM: CONCENTRIC STEEL BRACE FRAMES
NOTE: 11 THE SYMBOL [No.] ADJACENT TO A BEAM OR PORTION OF A BEAM DENOTES THE NUMBER OF 3/4" DIAMETER HEADED STUDS TO BE WELDED TO THE TOP OF THE BEAM OR PORTION OF THE BEAM. STUDS SHALL EXTEND 1 1/2"	SHALL PROVIDE SIGNED AND SEALED THE PROPOSED SUBSTITUTIONS, BAS EVALUATION REPORTS, ARE CAPABL VALUES EQUAL TO OR GREATER THA	CALCULATIONS DEMONSTRATING THAT SED ON THEIR SPECIFIC ICC-ES E OF ACHIEVING THE PERFORMANCE N THOSE OF THE ANCHORS SPECIFIED.	 b. COLD-FORMED FRAMING c. METAL STAIRS d. HANDRAILS AND GUARDRAILS e. LADDERS f. CANOPIES 		SEISMIC RESPONSE COEFFICIENT, Cs = (DESIGN BASE SHEAR = 180 K ANALYSIS PROCEDURE:).058
ABOVE THE DECK AFTER INSTALLATION. THE NUMBER OF STUDS HAS BEEN DETERMINED BY ASSUMING THE SHAPE OF THE METAL DECK CAUSES NO REDUCTION IN THE SHEAR CAPACITY OF THE STUDS. IF REQUIRED, THE TOTAL NUMBER OF STUDS, [No.], SHALL BE INCREASED IN ACCORDANCE WITH AISC SPECIFICATIONS TO ALLOW FOR ANY REDUCTION IN SHEAR	NOTE: 2 ADHESIVE ANCHORS AND REINFORCE CONCRETE OR GROUT HAS BEEN ALL ATTAINED 70% OF ITS DESIGN STREN	ING SHALL NOT BE INSTALLED UNTIL THE LOWED TO CURE FOR 21 DAYS AND HAS IGTH.	SHOP DRAWINGS AND CALCULATIONS SHALL PROFESSIONAL ENGINEER REGISTERED IN TH SUBMITTED FOR REVIEW. NOTE: 7	BE SIGNED AND SEALED BY A HE LOCAL JURISDICTION AND	EQUIVALENT LATERAL FORCE PROCEDU <u>WIND LOADS:</u> DESIGN WIND SPEED: Vult = 120 MPH (3 SECOND GUST)	RE
CAPACITY DUE TO THE METAL DECK CONFIGURATION. NOTE: 12 TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL THE INSTALLATION OF THE FOLLOWING ITEMS HAS BEEN COMPLETED AND INSPECTED:	NOTE: 3 MECHANICAL ANCHORS SHALL NOT E GROUT HAS ATTAINED 70% OF ITS DE NOTE: 4	BE INSTALLED UNTIL THE CONCRETE OR ESIGN STRENGTH.	ALL SHOP DRAWINGS USED FOR WORK SHAL ARCHITECT/ENGINEER, AND SHALL BE MARKE NOTED." NOTE: 8	L BEAR THE STAMP OF THE ED "REVIEWED" OR "REVIEWED AS	Vasd = 93 MPH (3 SECOND GUST) WIND EXPOSURE B INTERNAL PRESSURE COEFFICIENT, GCp	oi = +/-0.18
 METAL ROOF DECK LATERAL BRACING COMPONENTS INCLUDING ANCHOR BOLTS SHEAR WALLS MOMENT CONNECTIONS 	ALL POST INSTALLED ANCHORS AND DRY HOLES THAT HAVE BEEN DRILLE ACCORDANCE WITH THE MANUFACTU INSTRUCTIONS AND THE RESPECTIVE	REINFORCING SHALL BE INSTALLED IN D, CLEANED AND PREPARED IN STRICT JRER'S WRITTEN INSTALLATION E ICC ES EVALUATION REPORTS.	THE BUILDING FRAME IS NOT SELF-SUPPORT STRUCTURAL SYSTEM HAS BEEN INSTALLED. PROVIDED BY THE CONTRACTOR TO SUPPOR STRUCTURAL SYSTEM HAS BEEN COMPLETED	ING UNTIL THE ENTIRE . TEMPORARY BRACING MUST BE RT THE FRAME UNTIL THE D.	EFFECTIVE COMPONENTS & CLADE WIND AREA ZONE 1 ZONE 2	ING: ULTIMATE WIND PRESSURE ZONE 3 ZONE 4 ZONE 5
NOTE: 1 FABRICATION AND ERECTION OF ALL METAL DECK SHALL CONFORM TO THE LATEST EDITION OF STEEL DECK INSTITUTE SPECIFICATIONS.	NOTE: 5 THE CONTRACTOR SHALL ARRANGE REPRESENTATIVE TO PROVIDE ONSI ANCHORING PRODUCTS SPECIFIED IN INSTALLATION OF ANY ANCHORS, TH	FOR AN ANCHOR MANUFACTURER'S TE INSTALLATION TRAINING FOR ALL THE N THE DRAWINGS. PRIOR TO E CONTRACTOR SHALL SUBMIT TO THE	LOADS GREATER THAN THE DESIGN LIVE LOA STRUCTURE. A CONCRETE STRUCTURE MAY LOADS FOR 28 DAYS, UNLESS THE DESIGN ST BASED ON FIELD CURED CYLINDERS.	ADS SHALL NOT BE PLACED ON THE (NOT SUPPORT ITS DESIGN LIVE TRENGTH IS ACHIEVED EARLIER	10 FT^2 28.8 PSF 48.4 PSF 50 FT^2 27.6 PSF 36.2 PSF	72.8 PSF 31.3 PSF 38.6 PSF 43.5 PSF 28.2 PSF 32.5 PSF
NOTE: 2 FLOOR DECK SHALL BE MADE OF STEEL CONFORMING TO ASTM A653 SS GRADE 50. ROOF DECK SHALL BE MADE OF STEEL CONFORMING TO ASTM A653 SS GRADE 33. GALVANIZED DECK SHALL HAVE COATING DESIGNATION G60.	ARCHITECT DOCUMENTED CONFIRM/ REPRESENTATIVE THAT THE CONTRA THE ANCHORS HAVE BEEN PROPERL ANCHORS.	ATION FROM THE MANUFACTURER'S ACTOR'S PERSONNEL WHO WILL INSTALL Y TRAINED FOR THE SPECIFIED	NOTE: 10 THE CONTRACTOR SHALL SUPPORT ADJACEN EXCAVATIONS. CONTRACTOR SHALL HAVE A SHEETING, SHORING, UNDERPINNING, ETC., A WORK, SIGNED AND SEALED BY A PROFESSIO	NT STRUCTURES, UTILITIES, AND ALL TEMPORARY FORMWORK, AS PART OF THE CONTRACTOR'S ONAL ENGINEER REGISTERED IN	200 FT^2 26.4 PSF 31.3 PSF 500 FT^2 26.4 PSF 31.3 PSF	31.3 PSF 25.8 PSF 27.0 PSF 31.3 PSF 24.0 PSF 24.0 PSF
NOTE: 3 METAL DECK SHALL HAVE THE FOLLOWING MINIMUM SECTION PROPERTIES: • ROOF DECK I = 0.212 in.^4, S = 0.234 in.^3 • ROOF DECK OVER GYM I = 1.079 in.^4, S = 0.552 in.^3	INUTE: 6 IN ADDITION TO TRAINING BY THE MA CONTRACTOR'S PERSONNEL WHO W CONCRETE SHALL BE CERTIFIED BY A INSTALLER CERTIFICATION PROGRAM	NUFACTURER'S REPRESENTATIVE, THE ILL INSTALL ADHESIVE ANCHORS IN AN ACI/CRSI ADHESIVE ANCHOR II.	NOTE: 11 ALL WORK SPECIFIED HEREIN SHALL BE INSP CHAPTER 17 (EXCEPTIONS NOTED SHALL NOT	PECTED IN ACCORDANCE WITH IBC		
 COMPOSITE FLOOR DECK I = 0.409 in.^4, S = 0.495 in.^3 NOTE: 4 ALL METAL DECK HAS BEEN DESIGNED TO BE CONTINUOUS OVER 3 SPANS MINIMUM AND SHALL BEAR AT LEAST 2" ON STEEL SUPPORTS. FOR ONE OR TWO SPAN CONDITIONS, THE CONTRACTOR SHALL PROVIDE SHORING OR FURNISH HEAVIER GAGE DECK AS REQUIRED TO SUPPORT ALL THE APPLICABLE LOADS. THE CONTRACTOR SHALL SUBMIT THE ALTERNATE LAYOUT FOR APPROVAL. 	NOTE: 7 ALL ANCHORS AND REINFORCING SH THE SPACING AND EDGE DISTANCES CONTRACTOR SHALL INFORM THE AF ANCHORS IF THE SPACING AND EDGE CANNOT BE ACHIEVED. IF THIS IS THE AND THE ANCHORS SHOULD NOT BE PROVIDED BY COLUMBIA ENGINEERIN	ALL BE INSTALLED IN ACCORDANCE WITH SHOWN IN THE DRAWINGS. THE RCHITECT PRIOR TO INSTALLING THE E DISTANCES SHOWN IN THE DRAWINGS E CASE, RE-DESIGN MIGHT BE REQUIRED INSTALLED UNTIL APPROVAL HAS BEEN NG, INC.	ORDINANCES. INSPECTIONS REQUIRED SHAL SPECIAL INSPECTIONS NOTED ON THIS SHEE EXPERIENCED, QUALIFIED INSPECTOR TO PE INSPECTION WORK. THE ENGINEER WILL NOT INSPECTION AS A PART OF HIS DESIGN SERVI SITE TO ASCERTAIN GENERAL CONFORMANC AND SUCH VISITS ARE NOT TO BE CONSTRUE REQUIREMENTS.	LL BE PER THE STATEMENT OF ET. THE OWNER SHALL HIRE AN ERFORM ALL THE REQUIRED IT PERFORM THE REQUIRED VICE. THE ENGINEER MAY VISIT THE CE TO THE CONTRACT DOCUMENTS, ED AS MEETING INSPECTION		
NOTE: 5 DECK SHALL BE WELDED TO SUPPORTING STEEL AT ENDS OF UNITS AND AT ALL INTERMEDIATE SUPPORTS AT 12"0.C., AND AS NOTED ON PLANS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. SIDE LAPS	NOTE: 8 DO NOT CUT ANY REINFORCING UNLE THE DRAWINGS OR IS APPROVED BY NOTE: 9	ESS IT IS SPECIFICALLY INDICATED IN COLUMBIA ENGINEERING INC.	NOTE: 12 THE GENERAL CONTRACTOR AND ITS SUBCO MINIMUM OF FIVE YEARS EXPERIENCE IN THE SIMILAR IN NATURE TO THIS PROJECT.	ONTRACTORS SHALL HAVE A E CONSTRUCTION OF WORK		
NOTE: 6 PROVIDE RIDGE AND VALLEY PLATES, REINFORCING CHANNELS, STANDARD CLOSURES, CANT STRIPS, SUMP PANS, FINISH STRIPS, POUR STOPS, AND OTHER ACCESSORIES AS SHOWN ON THE DRAWINGS OR AS REQUIRED.	POST INSTALLED ANCHORS AND REIN SPECIFIED IN THE CONTRACT DRAWI APPROVAL FROM COLUMBIA ENGINE INSTALLED ANCHORS WHERE CAST IN MISPLACED OR DAMAGED.	NFORCING SHALL ONLY BE USED WHERE NGS. THE CONTRACTOR SHALL OBTAIN ERING INC. PRIOR TO INSTALLING POST N PLACE ANCHORS ARE MISSING,	NOTE: 13 <u>LEGAL USE OF DOCUMENTS</u> THE PLANS, SPECIFICATIONS AND OTHER INF DRAWINGS (COLLECTIVELY THE "DRAWINGS") ENGINEERING, INC. AND ARE INSTRUMENTS O RENDERED AND DELIVERED PURSUANT TO TH	FORMATION CONTAINED IN THESE ') WERE PREPARED BY COLUMBIA OF PROFESSIONAL SERVICES 'HE TERMS AND CONDITIONS OF A		
NOTE: 7 DO NOT HANG ANY EQUIPMENT, LIGHTS, DUCTS, PIPES, ETC., FROM METAL ROOF DECK. <u>COLD-FORMED METAL FRAMING:</u>	NOTE: 10 POST INSTALLED ANCHORS AND REIN INSPECTED PER IBC 2012 SECTION 17 REINFORCING INSTALLED IN A VERTIO CONTINUOUSLY INSPECTED.	NFORCING SHALL BE PERIODICALLY 705 EXCEPT ADHESIVE ANCHORS AND CAL OR OVERHEAD SURFACE SHALL BE	WRITTEN AGREEMENT (THE "AGREEMENT") O THEREIN. ANY USE OF THE DRAWINGS BY AN WITH THE TERMS AND CONDITIONS OF THE A PROHIBITED. COLUMBIA ENGINEERING, INC. E COPYRIGHT AND ALL INTELLECTUAL PROPER	ONLY TO THE RECIPIENT NAMED IY PARTY WHICH IS INCONSISTENT AGREEMENT IS EXPRESSLY EXPRESSLY RESERVES ITS RTY AND OTHER RIGHTS IN THE		
NOTE: 1 GALVANIZED STUDS, JOISTS, AND TRACKS, 12, 14, AND 16 GAGE SHALL BE FORMED FROM STEEL THAT CONFORMS TO ASTM A653, GRADE 50. GALVANIZED 18 AND 20 GAGE STUDS, JOISTS, TRACKS, AND ALL GALVANIZED BRIDGING, END CLOSURES AND ACCESSORIES SHALL BE FORMED FROM	RIGGING, HOISTING AND SCAFFOLDI NOTE: 1	NG REQUIREMENTS:	DRAWINGS. NO PORTION OF THE DRAWINGS CHANGED OR OTHERWISE USED IN ANY FORM WHICH IS INCONSISTENT WITH EITHER THE AN FOR WHICH THEY WERE ORIGINALLY PREPAR ASSIGNED TO ANY PERSON OR ENTITY WITHO	ARE TO BE REPRODUCED, M OR MANNER WHATSOEVER AGREEMENT OR THE PURPOSES RED, NOR ARE THEY TO BE DEEMED OUT OBTAINING THE EXPRESS		
STEEL THAT CONFORMS TO THE REQUIREMENTS OF ASTM A653 GRADE 33. NOTE: 2 ALL COLD-FORMED METAL FRAMING SHALL BE FORMED FROM STEEL HAVING A G-90 GALVANIZED COATING.	REVIEW A SITE SPECIFIC RIGGING AN EQUIPMENT THAT WILL BE TRANSPOI THE BUILDING. THE PLAN SHALL INCL THE DESCRIPTION OF THE RIGGING, I EQUIPMENT AND THE SITE PREPARA	ID HOISTING PLAN FOR ALL MAJOR RTED THROUGH OR HOISTED FROM UDE THE SEQUENCE OF ERECTION, HOISTING AND TRANSPORTATION TIONS THAT WILL BE NEEDED TO	PRIOR WRITTEN PERMISSION AND CONSENT THE RECIPIENT OF THE DRAWINGS AGREES T HARMLESS COLUMBIA ENGINEERING, INC., ITS DIRECTORS AND AGENTS, FROM AND AGAINS ARISE OUT OF OR IN CONNECTION WITH ANY	OF COLUMBIA ENGINEERING, INC. TO INDEMNIFY AND HOLD 'S EMPLOYEES, OFFICERS, ST ANY AND ALL DAMAGES WHICH ' VIOLATION OF THE FOREGOING.		
NOTE: 3 FRAMING COMPONENTS MAY BE PRE-ASSEMBLED INTO PANELS PRIOR TO ERECTING. PREFABRICATED PANELS SHALL BE SQUARE WITH COMPONENTS ATTACHED IN A MANNER AS TO PREVENT RACKING. HANDLING AND LIFTING OF PREFABRICATED FRAME PANELS SHALL BE DONE IN A MANNER AS NOT	COMPLETE THE INSTALLATION. NOTE: 2 THE CONTRACTOR SHALL PREPARE A REVIEW A SITE SPECIFIC PLAN FOR A INSTALLED ON FRAMED FLOORS AND	AND SUBMIT TO THE ARCHITECT FOR LL SCAFFOLDING THAT WILL BE ROOFS.				
TO CAUSE DISTORTION IN ANY MEMBER. NOTE: 4 PROVIDE UNIFORM AND LEVEL BEARING SUPPORT FOR THE BOTTOM TRACK.	NOTE: 3 THE PROPOSED RIGGING, HOISTING REVIEWED BY A PROFESSIONAL ENG JURISDICTION. THE PROFESSIONAL E	OR SCAFFOLDING PLAN SHALL BE INEER REGISTERED IN THE LOCAL INGINEER SHALL PROVIDE A SIGNED				
NUTE: 5 AT TRACK BUTT JOINTS, ABUTTING PIECES OF TRACK SHALL BE BUTT WELDED OR SPLICED TOGETHER.	AND SEALED CERTIFICATION STATING	G THAT THE PROPOSED PLAN WILL NOT ICTURE.				
NOTE: 6 STUDS SHALL BE PLUMBED, ALIGNED, AND SECURELY ATTACHED TO THE FLANGES OR WEBS OF THE TRACKS. THE ENDS OF THE STUDS MUST BEAR AGAINST THE WEB OF BOTH UPPER AND LOWER TRACKS, UNLESS OTHERWISE NOTED.	NOTE: 4 IT IS THE CONTRACTOR'S RESPONSIE SUPERIMPOSED BY THE RIGGING, HO WILL NOT EXCEED THE FOLLOWING L • FRAMED FLOORS = 40 PSF • ROOFS = 30 PSF	BILITY TO INSURE THAT THE LOADS DISTING OR SCAFFOLDING SYSTEMS OADS:				
NOTE: 7 SPLICES IN AXIALLY LOADED STUDS ARE NOT PERMITTED.	NOTE: 5 THE CONTRACTOR SHALL PROVIDE P	PROTECTION FOR ALL FINISHES.				
NOTE: 8 WALL STUD BRIDGING SHALL BE INSTALLED IN A MANNER TO PROVIDE RESISTANCE TO BOTH MINOR AXIS BENDING AND ROTATION. BRIDGING ROWS SHALL BE EQUALLY SPACED NOT TO EXCEED 4'-0"o.c.						
NOTE: 9 TEMPORARY BRACING SHALL BE PROVIDED UNTIL ERECTION OF THE STRUCTURAL SYSTEM IS COMPLETE. NOTE: 10						
SIZES AND GAGES OF COLD-FORMED METAL FRAMING SHOWN ON THE DRAWINGS ARE MINIMUM REQUIREMENTS. FRAMING SHALL BE DESIGNED FOR THE WIND LOADS REQUIRED BY THE LOCAL BUILDING CODE AND SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE LOCAL JURISDICTION. FOR BIDDING PURPOSES, PROVIDE MULTIPLE STUDS AT EACH SIDE OF OPENINGS EQUAL TO ONE-HALF OPENING WIDTH DIVIDED BY THE STUD SPACING.						

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STATEMENT OF SPECIAL INSPECTIONS:

NOTE 1: INSPECTION OR TESTING SHALL BE PROVIDED FOR ALL MATERIAL, COMPONENTS AND WORK LISTED IN THE TABLES BELOW.

NOTE 2:

- DEFINITIONS: a. CONTINUOUS INSPECTION: INDICATES SPECIAL INSPECTOR SHALL BE PRESENT DURING CONTRACTOR CONTRACTOR PERFORMANCE OF THE TASK. PERIODIC INSPECTION DOES NOT MEAN RANDOM
- INSPECTION IS ALLOWED. c. RANDOM INSPECTION: INDICATES SPECIAL INSPECTOR SHALL PROVIDE INSPECTION OR TESTING, AS NEEDED, TO INSURE PROPER PERFORMANCE OF THE TASK BY THE CONTRACTOR.

SOILS				
INSPECTION TASK	TYPE OF INSPECTION			
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQ TO ACHIEVE THE DESIGN BEARING CAPACITY.	UATE PERIODIC			
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND REACHED PROPER MATERIAL.	HAVE PERIODIC			
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	PERIODIC			
 VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICH DURING PLACEMENT AND COMPACTION OF COMPACTED FILL. 	KNESSES CONTINUOUS			
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRA VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	ADE AND PERIODIC			

DRIVEN DEEP FOUNDATION ELEMENTS		
INSPECTION TASK	TYPE OF INSPECTION	
1. VERIFY ELEMENT MATERIALS, SIZES AND LENGTHS COMPLY WITH THE REQUIREMENTS.	CONTINUOUS	
2. DETERMINE CAPACITIES OF TEST ELEMENTS AND CONDUCT	CONTINUOUS	

ADDITIONAL LOAD TESTS, AS REQUIRED.	
3. OBSERVE DRIVING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT.	CONTINUOUS
4. VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM TYPE AND SIZE OF HAMMER, RECORD NUMBER OF BLOWS PER FOOT OF PENETRATION, DETERMINE REQUIRED PENETRATIONS TO ACHIEVE DESIGN CAPACITY, RECORD TIP AND BUTT ELEVATIONS AND DOCUMENT ANY DAMAGE TO FOUNDATION ELEMENT.	CONTINUOUS

CONCRETE	
INSPECTION TASK	TYPE OF INSPECTION
1. INSPECTION OF REINFORCING STEEL FOR SIZE, QUANTITY AND PLACEMENT.	PERIODIC
2. INSPECTION OF ANCHORS CAST IN CONCRETE.	PERIODIC
3. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS (FOLLOW MANUFACTURERS WRITTEN INSTALLATION REQUIREMENTS).	CONTINUOUS
4. VERIFY USE OF REQUIRED DESIGN MIX.	PERIODIC
5. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE. FOR LIGHTWEIGHT CONCRETE, PERFORM UNIT WEIGHT TESTS.	CONTINUOUS
6. INSPECTION OF CONCRETE PLACEMENT.	CONTINUOUS
7. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	PERIODIC
8. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	PERIODIC
9. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED AND FOR CONFORMANCE WITH FORMWORK DESIGN.	PERIODIC
10. MEASURE F (F) AND F (L) TOLERANCE FOR FLOORS.	PERIODIC

	MASONRY				
	INSPECTION TASK	TYPE OF INSPECTION			
1.	VERIFICATION OF fm PRIOR TO CONSTRUCTION	PERIODIC			
2.	VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS	PERIODIC			
3.	AS MASONRY CONSTRUCTION BEGINS, VERIFY THE FOLLOWING ARE IN COMPLIANCE:				
	a. PROPORTIONS OF SITE-PREPARED MORTAR	PERIODIC			
	b. CONSTRUCTION OF MORTAR JOINTS	PERIODIC			
	c. LOCATION OF REINFORCEMENT AND CONNECTORS	PERIODIC			
4.	PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:				
	a. GROUT SPACE	PERIODIC			
	b. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS	PERIODIC			
	c. PLACEMENT OF REINFORCEMENT AND CONNECTORS	PERIODIC			
	d. PROPORTIONS OF SITE-PREPARED GROUT	PERIODIC			
	e. CONSTRUCTION OF MORTAR JOINTS	PERIODIC			
5.	VERIFY DURING CONSTRUCTION:				
	a. SIZE AND LOCATION OF STRUCTURAL ELEMENTS	PERIODIC			
	b. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION.	PERIODIC			
	c. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F)	PERIODIC			
	d. PLACEMENT OF GROUT	CONTINUOUS			
δ.	OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS	PERIODIC			
7.	INSTALLATION OF POST INSTALLED ANCHORS.	CONTINUOUS			

STEEL - PRIOR TO WELDING				
INSPECTION TASK	TYPE OF II	TYPE OF INSPECTION		
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	PERIODIC	PERIODIC		
MATERIAL IDENTIFICATION (TYPE/GRADE)	RANDOM	RANDOM		
WELDER IDENTIFICATION SYSTEM	RANDOM	RANDOM		
 FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) JOINT PREPARATION DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOF FACE, BEVEL) CLEANLINESS (CONDITION OF STEEL SURFACES) TACKING (TACK WELD QUALITY AND LOCATION) BACKING TYPE AND FIT (IF APPLICABLE) 	RANDOM	PERIODIC		
CONFIGURATION AND FINISH OF ACCESS HOLES	RANDOM	PERIODIC		
 FIT-UP OF FILLET WELDS DIMENSIONS (ALIGNMENT, GAPS AT ROOT) CLEANLINESS (CONDITION OF STEEL SURFACES) TACKING (TACK WELD QUALITY AND LOCATION) 	RANDOM	RANDOM		
CHECK WELDING EQUIPMENT	RANDOM	NONE		
TES: - DENOTES QUALITY CONTROL PERSONNEL DENOTES SPECIAL INSPECTOR				
STEEL - DURING WELDING	Ì			
ΙΝΙΣΦΕΛΤΙΩΝΙ ΤΛΩΚ	TYPE OF I	NSPECTION		
	QC	SI		
	RANDOM	RANDOM		
 PACKAGING EXPOSURE CONTROL 	RANDOM	RANDOM		
NO WELDING OVER CRACKED TACK WELDS	RANDOM	RANDOM		
ENVIRONMENTAL CONDITIONS WIND SPEED WITHIN LIMITS PRECIPITATION AND TEMPERATURE 	RANDOM	RANDOM		
 WPS FOLLOWED FOR GROOVE WELDS AND MULTI-PASS FILLET WELDS SETTINGS ON WELDING EQUIPMENT TRAVEL SPEED SELECTED WELDING MATERIALS SHIELDING GAS TYPE/FLOW RATE PREHEAT APPLIED INTERPASS TEMPERATURE MAINTAINED (MINIMUM / MAXIMUM) PROPER POSITION (F, V, H, OH) 	RANDOM	CONTINUOUS		
 WPS FOLLOWED FOR SINGLE - PASS FILLET WELDS SETTINGS ON WELDING EQUIPMENT TRAVEL SPEED SELECTED WELDING MATERIALS SHIELDING GAS TYPE/FLOW RATE PREHEAT APPLIED INTERPASS TEMPERATURE MAINTAINED (MINIMUM / MAXIMUM) PROPER POSITION (F, V, H, OH) 	RANDOM	RANDOM		
WELDING TECHNIQUES FOR GROOVE WELDS AND MULTI-PASS FILLET WELDS • INTERPASS AND FINAL CLEANING • EACH PASS WITHIN PROFILE LIMITATIONS • EACH PASS MEETS QUALITY REQUIREMENTS	RANDOM	CONTINUOUS		
WELDING TECHNIQUES FOR SINGLE-PASS FILLET WELDS INTERPASS AND FINAL CLEANING EACH PASS WITHIN PROFILE LIMITATIONS EACH PASS MEETS QUALITY REQUIREMENTS	RANDOM	RANDOM		
TEC.				

- NOTES: QC DENOTES QUALITY CONTROL PERSONNEL SI DENOTES SPECIAL INSPECTOR

STEEL - AF **INSPECTION TASK**

- . WELDS CLEANED . SIZE, LENGTH AND LOCATION OF WELDS . WELDS MEET VISUAL ACCEPTANCE CRITERIA
- CRACK PROHIBITION • WELD / BASE-METAL FUSION
- CRATER CROSS SECTION WELD PROFILES
- WELD SIZE UNDERCUT
- POROSITY 4. ULTRASONICALLY TEST FULL PENETRATION GRO
- 5. ARC STRIKES
- 6. K AREA (1*) 7. BACKING REMOVED AND WELD TABS REMOVED (
- 3. REPAIR ACTIVITIES 9. DOCUMENT ACCEPTANCE OR REJECTION OF WE
- NOTES: QC DENOTES QUALITY CONTROL PERSONNEL SI DENOTES SPECIAL INSPECTOR (1*) DENOTES WHEN WELDING OF DOUBLER PLATE PERFORMED IN THE K-AREA, VISUALLY INSPECT THE THE WELD.

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SI - DENOTES SPECIAL INSPECTOR

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INSPECTION TABLES

STEEL - PRIOR TO BOLTING		
ΙΝΙΩΡΕΩΤΙΩΝΙ ΤΛΩΖ	TYPE OF INSPECTION	
INSPECTION TASK	QC	SI
1. MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	RANDOM	PERIODIC
2. FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	RANDOM	RANDOM
3. PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)	RANDOM	RANDOM
4. PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	RANDOM	RANDOM
 CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS 	RANDOM	RANDOM
6. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	CONTINUOUS	RANDOM
7. PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	RANDOM	RANDOM
<u>NOTES:</u> QC - DENOTES QUALITY CONTROL PERSONNEL SI - DENOTES SPECIAL INSPECTOR		

STEEL - DURING BOLTING			
ΙΝΙΩΡΕΩΤΙΩΝΙ ΤΛΩΚ	TYPE OF INSPECTION		
INSPECTION TASK	QC	SI	
ASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED.	PERIODIC	PERIODIC	
IOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	RANDOM	RANDOM	
PRETENSIONED AND SLIP-CRITICAL JOINTS INSTALLED USING ONE OF THE FOLLOWING METHODS: DIRECT-TENSION-INDICATOR WASHER METHOD TWIST-OFF TYPE TENSION CONTROL BOLT METHOD	PERIODIC	PERIODIC	
ASTENERS COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	RANDOM	RANDOM	
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	RANDOM	RANDOM	
TES: - DENOTES QUALITY CONTROL PERSONNEL			

4. COMPLIANCE OF THE DRAWINGS FOR ITEM CONNECTION DETAIL
5. COMPLIANCE OF THE DOCUMENTS FOR ITE CONNECTION DETAIL
<u>NOTES:</u> QC - DENOTES QUALITY SI - DENOTES SPECIAL I
STEEL E
JILLE
1. PLACEMENT AND INS
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1. PLACEMENT AND INS 2. PLACEMENT AND INS 3. DOCUMENT ACCEPTA NOTES: QC - DENOTES QUALITY SI - DENOTES SPECIAL I

STEEL JOISTS	
INSPECTION TASK	TYPE OF INSPECTION
1. SETTING OF BEARING PLATES	PERIODIC
2. ALIGNMENT OF JOISTS	PERIODIC
3. INSTALLATION OF BRIDGING	PERIODIC
4. SIZE, LENGTH AND LOCATION OF WELDS	PERIODIC
5. ULTRASONICALLY TEST FULL PENETRATION WELDS	PERIODIC
6. HIGH-STRENGTH BOLTS INSTALLED	PERIODIC

STEEL - AFTER BOLTING			
ΙΝΙΩΡΕΩΤΙΩΝΙ ΤΛΩΚ	TYPE OF INSPECTION		
	QC	SI	
1. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	PERIODIC	PERIODIC	
<u>NOTES:</u> QC - DENOTES QUALITY CONTROL PERSONNEL SI - DENOTES SPECIAL INSPECTOR			

STEEL DECK		
INSPECTION TASK	TYPE OF INSPECTION	
 MATERIAL VERIFICATION: a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS. b. MANUFACTURER'S CERTIFIED TEST REPORTS 	PERIODIC	
2. VERIFY WELDING CONSUMABLES AND FASTENERS TO BE USED.	PERIODIC	
3. VERIFY DECK ALIGNMENT AND SUPPORT.	PERIODIC	
4. VERIFY FLOOR AND ROOF DECK ATTACHMENT:a. WELDS TO SUPPORTING MEMBERSb. SIDE LAP SCREWS AND WELDS	PERIODIC	
5. VERIFY TOUCH-UP GALVANIZATION APPLIED TO WELDS.	PERIODIC	

1. VERIFY SIZE AND
2. VERIFY PLUMBNE
3. VERIFY COLD-FO
4. VERIFY CONNECT

FTER WELDING			
,	TYPE OF INSPECTION		
•	QC	SI	
	PERIODIC	PERIODIC	
	PERIODIC	PERIODIC	
	PERIODIC	PERIODIC	
ROOVE WELDS	PERIODIC	PERIODIC	
	PERIODIC	PERIODIC	
	PERIODIC	PERIODIC	
D (IF REQUIRED)	PERIODIC	PERIODIC	
	PERIODIC	PERIODIC	
VELDED JOINT OR MEMBER	PERIODIC	PERIODIC	
TES, CONTINUITY PLATES OR STIFFENERS HAS BEEN			

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STEEL - OTHER			
		TYPE OF INSPECTION	
	QC	SI	
1. COMPLIANCE OF THE FABRICATED STEEL WITH THE SHOP DRAWINGS	PERIODIC	NONE	
2. SETTING OF ANCHOR BOLTS, BEARING PLATES AND EMBEDDED ITEMS PRIOR TO PLACEMENT OF CONCRETE	RANDOM	PERIODIC	
3. STRUCTURAL MEMBERS FOR PLUMBNESS, ELEVATION AND ALIGNMENT	RANDOM	PERIODIC	
4. COMPLIANCE OF THE ERECTED STEEL FRAME WITH ERECTION DRAWINGS FOR ITEMS SUCH AS BRACES, MEMBER LOCATIONS AND CONNECTION DETAILS	PERIODIC	NONE	
5. COMPLIANCE OF THE ERECTED STEEL FRAME WITH CONTRACT DOCUMENTS FOR ITEMS SUCH AS BRACES, MEMBER LOCATIONS AND CONNECTION DETAILS	NONE	PERIODIC	
NOTES: QC - DENOTES QUALITY CONTROL PERSONNEL			

L INSPECTOR

L ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT

ΙΝΩΕΛΤΙΟΝΙ ΤΛΩΚ	TYPE OF INSPECTION		
	QC		
STALLATION OF STEEL DECK	PERIODIC	PERIODIC	
STALLATION OF STEEL HEADED STUD ANCHORS	PERIODIC	PERIODIC	
TANCE OR REJECTION OF STEEL ELEMENTS	PERIODIC	PERIODIC	
Y CONTROL PERSONNEL			

L INSPECTOR

COLD-FORMED STEEL		
INSPECTION TASK	TYPE OF INSPECTION	
1. VERIFY SIZE AND GAGE OF FRAMING.	PERIODIC	
2. VERIFY PLUMBNESS, ALIGNMENT AND PROPER BEARING OF ELEMENTS	PERIODIC	
3. VERIFY COLD-FORMED FRAMING IS PROPERLY FASTENED TOGETHER	PERIODIC	
4. VERIFY CONNECTIONS TO STRUCTURAL FRAME	PERIODIC	
5. VERIFY TOUCH-UP GALVANIZATION IS APPLIED TO WELDS	PERIODIC	





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CO	LUMN SC	HEDULE	
MARK	SIZE	BASE PLATE	ANCHOR BOLTS
C1	HSS 6"x6"x3/8"	14"x14"x3/4"	(4) 3/4" DIAMETER ASTM F1554
C2	HSS 6"x6"x1/2"	14"x14"x1"	(4) 3/4" DIAMETER ASTM F1554
C3	HSS 6"x6"x5/8"	14"x14"x1 1/4"	(4) 3/4" DIAMETER ASTM F1554
C4	HSS 7"x7"x1/2"	16"x16"x1 1/4"	(4) 3/4" DIAMETER ASTM F1554
C5	HSS 8"x8"x1/2"	16"x16"x1 1/2"	(4) 3/4" DIAMETER ASTM F1554
C6	HSS 6"x6"x1/2"	14"x14"x1 1/2"	SEE SHEET S-2.1
C7	BY STAIR MANUFATCURER		
C8	8"DIAMETER STANDARD PIPE	16"x16"x1 1/2"	(4) 3/4" DIAMETER ASTM F1554
C9	10"DIAMETER STANDARD PIPE	18"x18"x3/4"	(4) 3/4" DIAMETER ASTM F1554

CO	CONCRETE PIER SCHEDULE				
MARK	SIZE	REINFORCEMENT	REMARKS		
P1	20"x20"	8-#5 VERTICAL			
P2	24"x24"	8-#6 VERTICAL			
P3	34"x28"	12-#6 VERTICAL			
P4	28"x28"	12-#6 VERTICAL			
P5	24"x20"	8-#6 VERTICAL			

MA	MASONRY PIER SCHEDULE				
MARK	SIZE	REINFORCEMENT			
MP1	2'-0"	1-#5 VERTICAL EACH FACE			
MP2	2'-6"	2-#5 VERTICAL EACH FACE			
MP3	2'-8"	2-#5 VERTICAL EACH FACE			
MP4	2'-8"	2-#6 VERTICAL EACH FACE			
MP5	3'-0"	2-#6 VERTICAL EACH FACE			
MP6	3'-4"	3-#6 VERTICAL EACH FACE			
MP7	3'-8"	3-#6 VERTICAL EACH FACE			
MP8	1'-4"	1-#6 VERTICAL EACH FACE			
MP9	4'-0"	4-#6 VERTICAL EACH FACE			

MARK	WIDTH	THICK	REINFORCEMENT
F1	3'-0"x3'-0"	1'-0"	4-#4 EACH WAY BOTTOM
F2	4'-0"x4'-0"	1'-0"	5-#4 EACH WAY BOTTOM
F3	5'-0"x5'-0"	2'-0"	6-#5 EACH WAY BOTTOM
F4	6'-0"x6'-0"	1'-0"	7-#6 EACH WAY BOTTOM
F5	7'-0"x7'-0"	1'-2"	7-#7 EACH WAY BOTTOM
F6	8'-0"x8'-0"	1'-4"	8-#7 EACH WAY BOTTOM
F7	9'-0"x9'-0"	1'-6"	11-#7 EACH WAY TOP AND BOTTOM
F8	7'-0"x7'-0"	1'-2"	7-#7 EACH WAY TOP AND BOTTOM
F9	8'-0"x8'-0"	1'-4"	8-#7 EACH WAY TOP AND BOTTOM
F1G	3'-0"x3'-0"	2'-0"	4-#4 EACH WAY BOTTOM
F2G	4'-0"x4'-0"	2'-0"	5-#4 EACH WAY BOTTOM
F3G	5'-0"x5'-0"	2'-0"	6-#5 EACH WAY BOTTOM
F4G	6'-0"x6'-0"	2'-0"	7-#6 EACH WAY BOTTOM
F5G	7'-0"x7'-0"	2'-0"	7-#7 EACH WAY BOTTOM
F6G	8'-0"x8'-0"	2'-0"	8-#7 EACH WAY BOTTOM
F7G	9'-0"x9'-0"	2'-0"	11-#7 EACH WAY TOP AND BOTTOM
F8G	7'-0"x7'-0"	2'-0"	7-#7 EACH WAY TOP AND BOTTOM
F9G	8'-0"x8'-0"	2'-0"	8-#7 EACH WAY TOP AND BOTTOM

ENGINEER OF RECORD AS FOOTING WILL HAVE TO BE REDESIGNED WITH 3000 PSF BEARING PRESSURE.

WA	WALL FOOTING SCHEDULE					
MARK	WIDTH	THICK	REINFORCEMENT	LOAD		
WF1	2'-6" CONTINUOUS	2'-0"	3-#5 CONTINUOUS TOP AND BOTTOM	12 K/FT		
WF2	2'-6" CONTINUOUS	1'-0"	3-#5 CONTINUOUS BOTTOM			
WF3	2'-0" CONTINUOUS	2'-0"	2-#5 CONTINUOUS TOP AND BOTTOM	10 K/FT		
WF4	2'-0" CONTINUOUS	1'-0"	2-#5 CONTINUOUS BOTTOM			
WF5	3'-6" CONTINUOUS	1'-0"	4-#5 CONTINUOUS BOTTOM			
WF6	4'-0" CONTINUOUS	2'-0"	4-#5 CONTINUOUS TOP AND BOTTOM	18 K/FT		
WF7	3'-6" CONTINUOUS	2'-0"	4-#5 CONTINUOUS TOP AND BOTTOM	18 K/FT		



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SECOND FLOOR AND LOW ROOF FRAMING PLAN - AREA A

<u>SECOND FLOOR AND GREEN ROOF FRAMING NOTES:</u> 1. SECOND FLOOR AND GREEN ROOF AND STAIR LANDING SLAB SHALL BE 3" THICK NORMAL WEIGHT CONCRETE (fc=4000 PSI) REINFORCED WITH 6"x6", W2.1 x W2.1 W.W.F. OVER 2VL1, 20 GAGE COMPOSITE METAL DECK BY VULCRAFT OR APPROVED

- EQUIVALENT (3 SPAN MINIMUM). 2. TOP OF FLOOR SLAB ELEVATION SHALL BE 14'-8" ABOVE DATUM ELEVATION UNLESS NOTED OTHERWISE. TOP OF STEEL
- ELEVATION SHALL BE 5" BELOW TOP OF SLAB ELEVATION UNLESS NOTED OTHERWISE THUS:(.....). 3. [No.] DENOTES NUMBER OF 3/4" DIAMETER x 4" LONG HEADED STUDS WELDED TO THE STEEL BEAM. SPACE UNIFORMILY
- ALONG BEAM LENGTH UNLESS NOTED OTHERWISE. 4. STAIRS SHALL BE DESIGNED FOR A UNIFORM LIVE LOAD OF 100 PSF PLUS CONCENTRATED LOAD PER IBC 2012. SHOP
- DRAWINGS AND COMPUTATIONS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE
- OF MARYLAND. 5. PROVIDE 2-#5 BARS AT MID-DEPTH OF SLAB AROUND OPENINGS 1'-0"x1'-0" OR SMALLER. PROVIDE C6x8.2 CHANNEL FRAMES AROUND OPENINGS LARGER THAN 1'-0"x1'-0".

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- <u>LOW ROOF FRAMING NOTES:</u> 1. ROOF DECK SHALL BE 1 1/2", 20 GAGE, TYPE 'B', GALVANIZED METAL DECK (3 SPAN MINIMUM) BY VULCRAFT OR APPROVED EQUIVALENT. ATTACH TO SUPPORTING ROOF MEMBERS WITH 5/8" DIAMETER PUDDLE WELDS ON A 36/4 PATTERN AND No.10 SIDE LAP SCREWS AT 36"o.c. UNLESS NOTED OTHERWISE.
- 2. TOP OF STEEL ELEVATION (TOP OF BEAM/GIRDER) SHALL BE 14'-8" ABOVE DATUM ELEVATION UNLESS NOTED OTHERWISE
- THUS: (.....). BEAMS PARALLEL TO JOISTS SHALL BE 3 1/2" ABOVE TOP OF STEEL UNLESS NOTED OTHERWISE. 3. PROVIDE 4"x3"x5/16" ANGLE FRAME AROUND ALL ROOF OPENINGS LARGER THAN 1'-0"x1'-0", SEE TYPICAL DETAIL.
- 4. JOISTS SHALL BE DESIGNED FOR A NET UPLIFT OF 15 PSF UNLESS NOTED OTHERWISE. 5. PROVIDE 3 1/2" JOIST SEAT FOR ALL JOISTS UNLESS NOTED OTHERWISE.
- 6. PROVIDE 6"x4"x5/16" ANGLE FRAME BELOW MECHANICAL EQUIPMENT. MECHANICAL EQUIPMENT WEIGHTS SHOWN ARE MAXIMUM.

LINT	EL SCHEDULE		
MARK	SIZE	BEARING PLATE	REMARKS
L1	W8x21 WITH 3/8" BOTTOM PLATE	6"x7"x5/8" EACH END	
L2	W8x24 WITH 3/8" BOTTOM PLATE	6"x7"x5/8" EACH END	
L3	W8x28 WITH 3/8" BOTTOM PLATE	6"x7 1/2"x5/8" EACH END	
L4	W12x35 WITH 3/8" BOTTOM PLATE	6"x8"x3/4" EACH END	
L5	W12x45 WITH 3/8" BOTTOM PLATE	6"x9"x3/4" EACH END	
L6	W16x50 WITH 3/8" BOTTOM PLATE	6"x9"x3/4" EACH END	
L7	8"x10" PRECAST HEADER WITH 5"x5"x3/8" BRCK ANGLE	2-#5 BARS AT BOTTOM	NO BRICK ANGLE FOR WALLS WITHOUT BRICK
L8	16"x8" PRECAST LINTEL	2-#5 BARS AT BOTTOM	
NOTES: 1. SEE G 2. PROV MASC 3. FIRST 4. PROV UNLE 5. PROV 6. UNLE • SINGI • GROU • CAVIT • CAVIT 7. ALL P CRET TOC/	SENERAL NOTES ON S-0.1 FOR LINTELS NOT 'IDE LINTELS PER GENERAL NOTE ON S-0.01 NRY WALLS. ' COURSE OF CMU ABOVE STEEL BEAM SH/ 'IDE BEARING PLATES AT ALL STEEL BEAM SS NOTED OTHERWISE. 'IDE BOTTOM PLATE/HUNG BOTTOM PLATE SS NOTED OTHERWISE, STEEL LINTELS SH LE WYTH WALL CENTERLINE OF WALL JTED DOUBLE WYTH WALL CENTERLINE IY WALL WITH 8" CMU 4" FROM INSIDE (TY WALL WITH 12" CMU 7" FROM INSIDE (TY WALL WITH 12" CMU	F DENOTED ON PLANS. I OVER ALL MECHANICAL D ALL BE SOLID LINTELS AS NOTED. FIRST PER DETAILS K/S-3.3, L/S3. ALL BE LOCATED AS FOLL(E OF WALL OF WALL OF WALL FRESSED CONCRETE MANI RETE STRENGTH AND REIN	UCT OPENINGS THROUGH DIMENSION IS PARALLEL TO LINTEL 3 AND Q/S-3.3. DWS: UFACTURED BY "CAST- FORCEMENT SHALLONFORM



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- C.4 - C.2						
B						



6	







- PROVIDED THE FOLLOWING REQUIREMENTS ARE MET: ALL CONNECTIONS SHALL BE DESIGNED FOR THE ECCENTRICITY BETWEEN THE CENTROID OF THE BOLT GROUP OR WELD AND THE SUPPORTING MEMBER. THE ECCENTRICITY SHALL BE FULLY RESISTED BY THE BOLTS OR WELD, AND NO MOMENT
- OR TORSION SHALL BE INTRODUCED INTO THE SUPPORTING MEMBER. GENERIC DETAILS INDICATING ANGLE/PLATE SIZE, BOLT SIZE AND LOCATION, STANDARD OR SHORT SLOTTED HOLES, EDGE DISTANCES AND WELD SIZE SHALL BE SUBMITTED FOR REVIEW AND ACCEPTANCE PRIOR TO THE DEVELOPMENT OF THE STEEL SHOP DRAWINGS.
- ALLOWABLE CONNECTION CAPACITY TABLES, ALONG WITH SUPPORTING CALCULATIONS, SHALL BE DEVELOPED AND SUBMITTED WITH THE GENERIC DETAILS. THE TABLES AND CALCULATIONS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE LOCAL JURISDICTION.
- . STEEL SHOP DRAWINGS THAT HAVE CONNECTIONS WHICH DO NOT CONFORM TO THE CONNECTIONS SHOWN IN THIS DETAIL OR PREVIOUSLY REVIEWED ALTERNATE CONNECTION DETAILS WILL BE REJECTED.

ALLOWABLE CONNECTION NUMBER 3/4" DIAMETER 7/8" DIAMETER A325-N 11.8 24.8 23.5 38.9 37.7 52.3 52.3 65.4 66.7 77.8 81.2 89.5 95.4 101 109 112

1. FOR 3/4" DIAMETER A325-N BOLTS AND BEAM WEB LESS THAN 0.25", REDUCE ABOVE CAPACITY BY Tweb/0.25. 2. FOR 7/8" DIAMETER A325-N BOLTS AND BEAM WEB LESS THAN 0.33", REDUCE ABOVE CAPACITY BY Tweb/0.33. 3. IF BEAMS FRAME TO SUPPORTING MEMBER FROM BOTH SIDES AND THE CONNECTION ANGLES ARE LOCATED BACK TO BACK. REDUCE THE WELD CAPACITY BY Tweb/0.38 FOR SUPPORTING MEMBER WEBS LESS THAN 0.38".

- 4. STANDARD OR SHORT SLOTTED HOLES SHALL BE USED 5. 4"x3"x3/8" ANGLE CAN BE USED FOR 3/4" DIAMETER BOLTS PROVIDED MINIMUM REQUIRED DIMENSIONS ARE
 - SINGLE ANGLE CONNECTION

- 1 1/2"x16 GA. COLD ROLLED CHANNEL AT 4'-0"o.c. -- #4 x 4'-0" LONG AT 12"o.c. UNLESS - 1 1/2"x1 1/2"x14 GA.x5 1/4" LONG NOTED OTHERWISE BRIDGE CLIP. ATTACH TO STUD AND BRIDGING WITH (2) No.10 TEK SCREWS EACH LÈG NOTE: CONTRACTOR IS ALSO PERMITTED TO WELD BRIDGING TO STUDS. SLAB OPENING AND SLAB PERIMETER STUD BRIDGING DETAIL **TYPICAL DETAIL** NOT TO SCALE S-3.2 - 4"x4"x1/2"x6" LONG ANGLE - 4"x3"x5/16"ANGLE (LLV) FRAME AROUND ROOF OPENING TYPICAL ROOF BEAM OR JOIST <u>SECTION</u>

- 8"CMU GROUTED SOLID AT 48"o.c. FOR MOW STRIP SUPPORT NOTE: - 8" CMU GROUT CMU WALL SOLID BELOW SLAB ON GRADE. ⊿ ____ — #5 AT 40" O.C. TOP AND BOTTOM REINFORCEMENT -**4**-----• 4 _;• M SECTION S-4.1 SCALE: 1" = 1'-0"

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	S
S-5.1	S

11	10	9	8

G SECTION

S-5.6 NOT TO SCALE

