

	A	B	C	D	E	F	G	H					
	STRUCTURAL ABBREVIATIONS:	GENERAL NOTES											
6	ACI AMERICAN CONCRETE INSTITUTE AISC AMERICAN INSTITUTE OF STEEL CONSTRUCTION ALT ALTERNATE ASTM AMERICAN SOCIETY FOR TESTING AND MATERIALS AWS AMERICAN WELDING SOCIETY ARCH ARCHITECTURAL B BOTTOM BLDG BUILDING BOTT BOTTOM ? CENTER LINE CFMF COLD FORM METAL FRAME CFS COLD FORMED STEEL CIP CAST IN PLACE CIPL CAST-IN-PLACE LINTEL CJ CONTROL JOINT CLG CEILING CLR CLEAR CMU CONCRETE MASONRY UNIT COEFF COEFFICIENT COL COLUMN CONC CONCRETE CONT CONTINUOUS COORD COORDINATE CSJ CONSTRUCTION JOINT CTJ CONTROL JOINT DIA DIAMETER DIAG DIAGONAL DIM DIMENSION DWG DRAWING DWL DOWEL EA EACH ELEC ELECTRICAL ELEV ELEVATION EMBED EMBEDMENT EQUIV EQUIVALENT ETC ET CETERA E.W EACH WAY EXT EXTERIOR FTG FOOTING GA GAUGE HORIZ HORIZONTAL HRS HOURS IBC INTERNATIONAL BUILDING CODE INT INTERIOR Kg KILOGRAM KIP KIPS (1 KIP = 1,000 POUNDS) KN KILONEWTON kPa KILOPASCAL L# ANGLE (# INDICATES SIZE) LLV LONG LEG VERTICAL M METER MAX MAXIMUM MBM METAL BUILDING MANUFACTURER MBMA METAL BUILDING MANUFACTURERS ASSOCIATION MECH MECHANICAL MFG MANUFACTURER MID MIDDLE MIN MINIMUM MISC MISCELLANEOUS MM MILLIMETER MPa MEGAPASCAL MTL METAL MWFMS MAIN WIND FORCE RESISTING SYSTEM N NEWTON N NORTH N/A NOT APPLICABLE # NUMBER SYMBOL FOR REBAR SIZE NTS NOT TO SCALE O.C. ON CENTER OPNG OPENING ? or PL PLATE PRE-ENG PRE-ENGINEERED REINF REINFORCED REQ'D REQUIRED SIM SIMILAR SPECS SPECIFICATIONS STD STANDARD STRUCT STRUCTURAL T TOP T/ TOP OF T/ELEV TOP ELEVATION T&B TOP AND BOTTOM THK THICK TM TRADE MARK TYP TYPICAL UFC UNIFIED FACILITIES CRITERIA UON UNLESS OTHERWISE NOTED VERT VERTICAL W WIDTH W/ WITH	1.0 THIS PROJECT HAS BEEN DESIGNED FOR THE WEIGHTS AND MATERIALS INDICATED ON THE SHEETS AND FOR THE LIVE LOADS INDICATED IN THE DESIGN CRITERIA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALLOWABLE CONSTRUCTION LOADS AND TO PROVIDE PROPER DESIGN AND CONSTRUCTION OF FALSEWORK, FORMWORK, STAGING, BRACING, SHEETING AND SHORING, ETC. 1.1 COORDINATE THESE SHEETS WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND CIVIL SHEETS. ALL DIMENSIONS SHOWN ON THE SHEETS ARE MILLIMETERS UNLESS NOTED OTHERWISE. 1.2 THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL FLOOR AND ROOF OPENING SIZES AND LOCATIONS, EQUIPMENT PAD SIZES AND LOCATIONS, ANCHOR BOLT LAYOUTS, ETC WITH EQUIPMENT SELECTED. THE CONTRACTOR SHALL MAKE ANY REQUIRED MODIFICATIONS AT NO ADDITIONAL COST. 1.3 THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING SHEETS FOR SLEEVES, CURBS, INSERTS OR OPENINGS, ETC. NOT HEREIN INDICATED. 1.4 SLAB OPENINGS SMALLER THAN 250mm DIA TO BE CORE DRILLED IN FIELD UON. SEE MECHANICAL, ELECTRICAL AND PLUMBING SHEETS FOR LOCATIONS OF THESE OPENINGS. 1.5 WORK NOT INCLUDED ON THE SHEETS BUT IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES ELSEWHERE ON THE SHEETS SHALL BE REPEATED. 1.6 IN CASE OF CONFLICT BETWEEN THE NOTES, DETAILS AND SPECIFICATIONS THE MOST RIGID REQUIREMENTS SHALL GOVERN. 1.7 SEE ARCHITECTURAL SHEETS FOR LOCATIONS OF MASONRY AND DRYWALL NON-LOAD BEARING PARTITIONS. PROVIDE COMPRESSIBLE FIRESAFING AT TOP OF WALL AS REQUIRED BY ARCHITECTURAL SHEETS. 1.8 COORDINATE FINISHED FLOOR DATUM ELEVATION 0.0m WITH THE CIVIL SHEETS. 1.9 DESIGN PRE-ENGINEERED METAL BUILDINGS IN ACCORDANCE W/ MBMA LATEST EDITION PER DESIGN CRITERIA ON SHEET S2. 2.0 FOUNDATION NOTES 2.1 THE GEOTECHNICAL ANALYSIS FOR THIS PROJECT IS THE RESPONSIBILITY OF THE CONTRACTOR AWARDED THE WORK. DESIGN VALUES USED IN THE STRUCTURAL ANALYSIS OF THE BUILDINGS HEREIN INDICATED HAVE BEEN ASSUMED AND SHALL BE CONFIRMED AND VERIFIED AS PART OF THE GEOTECHNICAL INVESTIGATION. VALUES WHICH DO NOT MEET THE REQUIREMENTS INDICATED ON SHEET S2 SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER FOR CONSIDERATION AND DETERMINATION ON THE NEXT APPROPRIATE COURSE OF ACTION. 2.2 SEE THE SPECIFICATION FOR ADDITIONAL REQUIREMENTS TO THOSE OUTLINED IN THE GEOTECHNICAL INVESTIGATION FOR EXCAVATION AND PREPARATION OF THE FOUNDATION AND THE SLAB ON GRADE SUBGRADE INCLUDING COMPACTION PROCEDURES. 2.3 EXCAVATIONS FOR FOOTINGS SHALL HAVE THE SIDES AND BOTTOMS TEMPORARILY LINED WITH 0.25mm POLYETHYLENE IF PLACEMENT OF CONCRETE DOES NOT OCCUR WITHIN 24 HRS OF THE EXCAVATION OF THE FOOTING. 2.4 FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION WHICH DIFFER FROM THOSE DESCRIBED IN THE GEOTECHNICAL REPORT SHALL BE REPORTED TO THE GENERAL CONTRACTOR BEFORE FURTHER CONSTRUCTION IS ATTEMPTED. SEE PROJECT SPECIFICATIONS. 2.5 NO FOOTINGS OR SLABS SHALL BE POURED INTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST, ICE OR LOOSE MATERIAL. FROST DEPTH ASSUMED TO BE 800MM 2.6 ALL SLAB-ON-GRADE, TRENCH BOTTOMS AND OTHER ON-GRADE INTERIOR HORIZONTAL SURFACES SHALL BE PLACED OVER A 0.25mm VAPOR RETARDER OVER A 100mm #57 STONE WATER BARRIER PLACED ON SUBGRADE PROPERLY PREPARED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. (UON) 2.7 SEE PLUMBING, ELECTRICAL & CIVIL SHEETS FOR REQUIRED UNDERSLAB UTILITIES. 2.8 SEE ARCHITECTURAL SHEETS FOR ALL WATERPROOFING DETAILS AND MATERIALS. 2.9 IF UNDERMINING OF FOOTINGS OCCURS, FILL VOIDS WITH 15MPa CONCRETE. DO NOT ATTEMPT TO REPLACE AND RECOMPACT SOIL. 3.0 CONCRETE 3.1 CONCRETE SHALL HAVE THE UNIT WEIGHT AND THE MINIMUM COMPRESSIVE STRENGTHS (f'c) AT 28 DAYS AS SHOWN IN THE CONCRETE MATERIALS SCHEDULE ON SHEET S3. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. ENTRAIN AIR TO PRODUCE TOTAL AIR CONTENT ACCORDING TO THE SPECIFICATIONS FOR CONCRETE EXPOSED TO FREEZING TEMPERATURES (EXTERIOR FOOTINGS, SLAB TURNDOWNS, EXTERIOR SLABS AND SLABS-ON-GRADE, EXTERIOR RETAINING WALLS, AND EXTERIOR GRADE BEAMS.) 3.2 GROUT FOR BASE PLATES SHALL BE NON-SHRINKABLE GROUT AND SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH AT 28 DAYS OF 35MPa, UNLESS NOTED OTHERWISE. 3.3 NO CALCIUM CHLORIDE SHALL BE USED IN ANY CONCRETE. 3.4 MIXING, TRANSPORTING AND PLACING OF CONCRETE SHALL CONFORM TO ACI 301M-05	3.5 ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN CONCRETE INSTITUTE (ACI) 318M MANUAL (metric), "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", AND REQUIREMENTS OUTLINED IN THE CONTRACT SPECIFICATIONS. WHEN THERE IS A CONFLICT BETWEEN ACI AND THE SPECIFICATIONS, THE MORE STRINGENT SHALL GOVERN. 3.6 CHAMFER ALL EXPOSED EXTERNAL CORNERS OF CONCRETE WITH 20mm x45 DEGREE CHAMFER UON. 3.7 CONCRETE REINFORCEMENT BARS SHALL CONFORM TO ASTM A615M-96a, GRADE 420 MPa. REINFORCING BARS SHALL NOT BE TACK WELDED, WELDED, HEATED OR CUT, UNLESS INDICATED ON THE CONTRACT DOCUMENTS. ALL LAP SPLICES SHALL BE CLASS "B" UON. 3.8 HORIZONTAL FOOTING AND HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS AND SHALL HAVE 90 DEGREE BENDS AND EXTENSIONS, OR CORNER BARS OF EQUIVALENT SIZE LAPPED WITH A CLASS B TENSION SPLICE AT CORNERS AND INTERSECTIONS. TOP BAR CRITERIA SHALL APPLY IF 300mm OR MORE OF FRESH CONCRETE IS PLACED BELOW BAR. 3.9 SLABS-ON-GRADE SHALL HAVE CONSTRUCTION JOINTS OR CRACK CONTROL JOINTS AS SHOWN ON THE SHEETS. CONSTRUCTION JOINTS CAN BE USED AT CONTROL JOINT LOCATIONS AT CONTRACTOR'S OPTION. SEE SLAB PLANS & JOINT DETAILS FOR ADDITIONAL INFORMATION. FOR AREAS NOT SHOWN ON SHEETS, THE MAXIMUM SPACING OF CONSTRUCTION/ CRACK CONTROL JOINTS SHALL BE 4800mm 3.10 SEE SPECIFICATIONS FOR ALL WATERPROOFING/DAMPPOOFING REQUIREMENTS. 3.11 ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED, AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318M, AND THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315M, LATEST EDITION. 3.12 SHOP DRAWINGS SHOWING REINFORCING DETAILS, INCLUDING STEEL SIZES, SPACING AND PLACEMENT, SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION. 3.13 ALL DOWELS SHALL MATCH SIZE AND NUMBER OF MAIN REINFORCING, UNLESS NOTED OTHERWISE ON SHEETS. 3.14 ADDITIONAL BARS SHALL BE PROVIDED AROUND ALL FLOOR AND WALL OPENINGS AS SHOWN ON THE SHEETS. 3.15 SEE ARCHITECTURAL SHEETS FOR TYPE AND LOCATION OF ALL FLOOR FINISHES. 3.16 THE CONTRACTOR SHALL COORDINATE ADDITIONAL WALL/SLAB OPENINGS NOT SHOWN ON STRUCTURAL SHEETS. SEE MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL SHEETS. 3.17 UNLESS NOTED OTHERWISE, ALL CURBS SHALL BE REINFORCED WITH AT LEAST (1)-#13 CONTINUOUS AND #13 AT 300mm O.C. DOWELS TO STRUCTURE BELOW. 3.18 THE SUB-CONTRACTOR SHALL VERIFY ALL OPENINGS, PAD SIZES, AND ANCHOR BOLTS WITH EQUIPMENT SELECTED. 3.19 FOR ALL WALLS & PIERS, PROVIDE DOWELS INTO FOOTING AT EACH VERT REINF BAR, UON DOWEL SIZE SHALL BE SAME AS VERT REINF. 3.20 ALL DEFORMED BAR ANCHORS SHALL BE TRS NELSON DIVISION OR EQUAL 15mm DIA (UON) CONFORMING TO ASTM A-496M WITH A MINIMUM TENSILE STRENGTH OF 550 MPa. ANCHOR DIMENSIONS SHALL BE IN ACCORDANCE WITH ASTM D-19. INSTALL ANCHORS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS BY AUTOMATIC END WELDING AS INDICATED ON THE DRAWINGS. NO UNAUTHORIZED OR FIELD WELDING SHALL BE MADE WITHOUT AUTHORIZATION FROM THE MANUFACTURER. 3.21 ALL REINFORCING INDICATED TO BE WELDED SHALL BE IN ACCORDANCE WITH ASTM A706M. "LOW ALLOY STEEL DEFORMED BARS FOR CONCRETE REINFORCEMENT". ANY INSTALLATIONS USING MANUFACTURER'S EQUIPMENT SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. 3.22 PROVIDE CONCRETE POUR STOPS OR FORMS AS REQUIRED FOR INSTALLATION OF ALL CONCRETE WORK. 3.23 PROVIDE ADDITIONAL (2)-#13 x 600mm REINFORCING BARS IN SLAB-ON-GRADE AT ALL RE-ENTRANT CORNERS. PLACE BARS AT MID-DEPTH OF SLAB WITH A CLEARANCE OF 50mm FROM CORNER UON.	4.4 FOR MINIMUM WALL REINFORCING, SEE MIN CMU WALL REINFORCING DETAILS ON SHEET S10. 4.5 CMU CELLS THAT REQUIRE VERTICAL REINFORCING BARS AS INDICATED ON THE CONTRACT DRAWINGS AND/OR SPECS SHALL HAVE REINF BAR PLACED IN CENTERS OF CMU CELLS AND CONTINUOUSLY GROUTED UON. 4.6 PROVIDE LADDER TYPE JOINT REINFORCEMENT AT 200mm FOR EXTERIOR & 400mm FOR INTERIOR ON CENTER MAXIMUM, UON MINIMUM ROD SIZE USED SHALL BE 9 GA. DEFORMED WIRE AND CONFORM TO ASTM A82M, UON. 4.7 PROVIDE CONTROL JOINTS AS INDICATED ON THE ARCHITECTURAL SHEETS. 4.8 GROUT FOR MASONRY SHALL BE NORMAL WEIGHT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 25 MPa AT 28 DAYS. GROUT SHALL CONFORM TO ASTM C476M. GROUT LIFTS SHALL NOT EXCEED 1400mm. 4.9 USE MORTAR TYPE S CONFORMING TO ASTM C270M, SEE SPECIFICATIONS. 4.10 CONCRETE MASONRY UNITS SHALL BE NORMAL WEIGHT AND CONFORM TO ASTM C90M. 4.11 ALL CMU CELLS, OPEN CAVITIES, AND AIR SPACES SHALL BE GROUTED. TO STOP FRAGMENTS FROM MORTAR BLAST 4.12 BOND BEAM REINFORCING SHALL BE DISCONTINUOUS AT CONTROL JOINTS (UON). MAXIMUM CONTROL JOINT SPACING SHALL BE AS INDICATED ON THE ARCHITECTURAL SHEETS. 4.13 CONTRACTOR SHALL COORDINATE LOCATION OF ALL OPENINGS SEE ARCH, MECH, ELEC, AND PLUMBING SHEETS. FOR SIZE AND LOCATION OF OPENINGS. 4.14 MASONRY WALLS SHALL NOT BE BACK FILLED PRIOR TO THE MORTAR AND GROUT ATTAINING THEIR RESPECTIVE MAXIMUM DESIGN STRENGTHS PER SPECIFICATIONS. 5.0 STEEL DECK 5.1 STEEL DECK SHALL BE ASTM A611M, GRADES C & D OR A653M STRUCTURAL QUALITY HAVING A MINIMUM YIELD STRENGTH OF 345 MPa AS PER THE STEEL DECK INSTITUTE (SDI) DESIGN MANUAL. 5.2 STEEL DECK SHALL BE ERECTED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND ERECTION LAYOUTS AND CONNECTED TO SUPPORTING MEMBERS AS INDICATED. 5.3 COMPOSITE FLOOR DECK 5.3.1 STEEL FLOOR DECK SHALL BE 51mm RIB HEIGHT, 18 GA HOT-DIP GALVANIZED (SDI TYPE 2VL1-18) UON. 5.3.2 FLOOR DECK SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: <table border="1" style="margin-left: 20px;"> <tr> <td>MOMENT OF INERTIA, I_p</td> <td>18 GAUGE</td> </tr> <tr> <td>SECTION MODULUS (TOP OF DECK), S_n</td> <td>760mm⁴/mm WIDTH</td> </tr> <tr> <td>SECTION MODULUS (BOTT OF DECK), S_p</td> <td>27.5mm³/mm WIDTH</td> </tr> <tr> <td></td> <td>27.8mm³/mm WIDTH</td> </tr> </table> 5.3.3 FLOOR DECK SHALL BE FASTENED TO THE SUPPORTS AS INDICATED IN THE BOTTOM OF THE FLUTES USING A SDI 36/7 PATTERN. DECK SIDELAPS SHALL BE ATTACHED USING #10 SELF-TAPPING TEK SCREWS WITH A MINIMUM 3-SIDE LAP CONNECTIONS PER SPAN. 5.3.4 SUSPENDED CEILINGS, LIGHT FIXTURES, DUCTS, CONDUITS, PIPING OR OTHER UTILITIES SHALL NOT BE SUPPORTED BY THE STEEL FLOOR DECK. 5.3.5 IN ADDITION TO MEETING THE MINIMUM REQUIREMENTS ABOVE, THE DECK MANUFACTURER SHALL DESIGN THE FLOOR DECK AND ATTACHMENTS TO STEEL FOR A MAXIMUM DEFLECTION DUE TO WET CONCRETE & 1 KPa CONSTANT LOAD OF L/240. FLOOR DECK SHALL NOT REQUIRE SHORING DURING CONCRETE PLACEMENT. 6.0 STRUCTURAL STEEL 6.1 STRUCTURAL STEEL ROLLED SHAPES AND PLATES SHALL CONFORM TO THE MATERIAL INFORMATION SCHEDULE. DIMENSIONS AND PROPERTIES SHALL BE IN ACCORDANCE TO ASTM A36M. 6.2 ANCHOR BOLTS SHALL CONFORM TO ASTM A36M HEAVY HEX UNLESS NOTED OTHERWISE. 6.3 CONNECTION BOLTS FOR STRUCTURAL STEEL MEMBERS SHALL BE 20 DIA ASTM A325M-N, UON; NUTS SHALL CONFORM TO ASTM A563M; WASHERS SHALL CONFORM TO ASTM F436M. CONNECTION BOLTS SHALL HAVE A HARDENED WASHER PLACED UNDER THE ELEMENT TO BE TIGHTENED. 6.4 DETAILING OF STRUCTURAL STEEL CONNECTIONS MUST BE CONSISTENT WITH RECOGNIZED, PUBLISHED METHODS SUCH AS IN THE AISC "STEEL CONSTRUCTION MANUAL", THIRTEENTH EDITION; "ENGINEERING FOR STEEL CONSTRUCTION", OR "VOLUME II CONNECTIONS MANUAL OF STEEL CONSTRUCTION". 6.4.1 THE CODE OF STANDARD PRACTICE OF AISC THIRTEENTH EDITION IS AMENDED SUCH THAT THE FABRICATOR/DETAILER IS RESPONSIBLE FOR THE DESIGN AND DETAILING OF ALL CONNECTIONS. 6.5 STANDARD FRAMING CONNECTIONS SHALL BE DETAILED BY THE FABRICATOR IN ACCORDANCE WITH THE AISC "STEEL CONSTRUCTION MANUAL", THIRTEENTH EDITION. CONNECTIONS SHALL BE DESIGNED TO DEVELOP A MINIMUM END REACTION OF 54kN.	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FAILURE TO SUBMIT SUCH CALCULATIONS FOR REVIEW CONCURRENT WITH SHOP DRAWING ERECTION PLANS AND DETAILS WILL BE CAUSE FOR REJECTION OF THAT SUBMITTAL. 6.8.1 ALL SHEAR TAB CONNECTIONS SUBMITTED AS AN ALTERNATE FOR APPROVAL SHALL BE DESIGNED USING A FLEXIBLE SUPPORT CONDITION. BEAM AND GIRDER CONNECTIONS SHALL BE DESIGNED SUCH THAT ALL ADDITIONAL STRESSES DUE TO CONNECTION ECCENTRICITY SHALL BE DEVELOPED BY THE CONNECTION AND NOT INDUCE ANY ADDITIONAL STRESSES INTO SUPPORTING MEMBERS. 6.8.2 STRUCTURAL STEEL DETAILING, FABRICATION AND ERECTION SHALL CONFORM TO THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS - ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN" AND THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" - LATEST EDITIONS. 6.10 WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE AWS D1.1. ELECTRODES FOR SHOP AND FIELD WELDS SHALL BE CLASS E70XX. ALL WELDING SHALL BE DONE BY QUALIFIED, CERTIFIED WELDERS PER THE ABOVE STANDARD. 6.11 SHOP AND FIELD TESTING OF WELDS AND BOLTS SHALL BE AS OUTLINED IN THE SPECIFICATIONS. 6.12 ALL FILLET WELDS SHALL BE A MINIMUM OF 5mm UNLESS NOTED OTHERWISE 6.13 THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT PRIOR APPROVAL OF THE CONTRACTING OFFICER. 6.14 FOR FLOOR AND ROOF OPENINGS, THE FABRICATOR SHALL VERIFY OPENING LOCATIONS WITH EQUIPMENT SELECTED AND MAKE ANY NECESSARY MODIFICATIONS AT NO ADDITIONAL COST. THE CONTRACTOR SHALL COORDINATE MECHANICAL UNITS AND OPENINGS & ARCHITECTURAL ITEMS REQUIRED FOR COMPLETE INSTALLATION OF WORK. IT IS THE RESPONSIBILITY OF FABRICATOR TO RECEIVE ALL NECESSARY INFORMATION PRIOR TO FABRICATION OF THE STEEL. 6.15 ALL STRUCTURAL STEEL SHALL BE PRIMED AS PER THE SPECIFICATIONS. 6.16 ALL PLATES NOT INDICATED SHALL BE 13mm MIN THICKNESS. ALL ANGLES NOT INDICATED SHALL BE 76x76x7.9 MIN. ALL WELDS NOT INDICATED SHALL BE 6mm MIN ALL AROUND UON. 6.17 SEE MECHANICAL, ELECTRICAL, AND PLUMBING SHEETS FOR ADDITIONAL OPENINGS NOT SHOWN. ALL OPENINGS SHALL BE FRAMED 4 SIDES WITH C200x17'S UON.
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ANY INSTALLATIONS USING MANUFACTURER'S EQUIPMENT SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. 3.22 PROVIDE CONCRETE POUR STOPS OR FORMS AS REQUIRED FOR INSTALLATION OF ALL CONCRETE WORK. 3.23 PROVIDE ADDITIONAL (2)-#13 x 600mm REINFORCING BARS IN SLAB-ON-GRADE AT ALL RE-ENTRANT CORNERS. PLACE BARS AT MID-DEPTH OF SLAB WITH A CLEARANCE OF 50mm FROM CORNER UON. 4.0 CONCRETE MASONRY 4.1 MASONRY CONSTRUCTION AND MATERIALS SHALL CONFORM TO ALL REQUIREMENTS OF THESE CONTRACT DOCUMENTS AND THE PROJECT SPECIFICATIONS. 4.2 THE SPECIFIED ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE MASONRY (f'm) ON THE NET AREA IS A MINIMUM OF 10.4 MPa. 4.3 PROVIDE TWO #16 BARS CONTINUOUS IN ALL CMU AND CAST-IN-PLACE BOND BEAMS UON ON THE SHEETS. INTERMEDIATE BOND BEAMS SHALL BE CONTINUOUS AND SPACED AT A MAXIMUM OF 1200mm OC VERTICALLY. ALL BOND BEAMS SHALL BE A MINIMUM OF 200mm IN DEPTH WITH REINFORCING BEING CONTINUOUS AND HAVING STANDARD ACI HOOKS AT EACH END. PROVIDE STANDARD BAR SPLICES AS SPECIFIED.	4.4 FOR MINIMUM WALL REINFORCING, SEE MIN CMU WALL REINFORCING DETAILS ON SHEET S10. 4.5 CMU CELLS THAT REQUIRE VERTICAL REINFORCING BARS AS INDICATED ON THE CONTRACT DRAWINGS AND/OR SPECS SHALL HAVE REINF BAR PLACED IN CENTERS OF CMU CELLS AND CONTINUOUSLY GROUTED UON. 4.6 PROVIDE LADDER TYPE JOINT REINFORCEMENT AT 200mm FOR EXTERIOR & 400mm FOR INTERIOR ON CENTER MAXIMUM, UON MINIMUM ROD SIZE USED SHALL BE 9 GA. DEFORMED WIRE AND CONFORM TO ASTM A82M, UON. 4.7 PROVIDE CONTROL JOINTS AS INDICATED ON THE ARCHITECTURAL SHEETS. 4.8 GROUT FOR MASONRY SHALL BE NORMAL WEIGHT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 25 MPa AT 28 DAYS. GROUT SHALL CONFORM TO ASTM C476M. GROUT LIFTS SHALL NOT EXCEED 1400mm. 4.9 USE MORTAR TYPE S CONFORMING TO ASTM C270M, SEE SPECIFICATIONS. 4.10 CONCRETE MASONRY UNITS SHALL BE NORMAL WEIGHT AND CONFORM TO ASTM C90M. 4.11 ALL CMU CELLS, OPEN CAVITIES, AND AIR SPACES SHALL BE GROUTED. TO STOP FRAGMENTS FROM MORTAR BLAST 4.12 BOND BEAM REINFORCING SHALL BE DISCONTINUOUS AT CONTROL JOINTS (UON). MAXIMUM CONTROL JOINT SPACING SHALL BE AS INDICATED ON THE ARCHITECTURAL SHEETS. 4.13 CONTRACTOR SHALL COORDINATE LOCATION OF ALL OPENINGS SEE ARCH, MECH, ELEC, AND PLUMBING SHEETS. FOR SIZE AND LOCATION OF OPENINGS. 4.14 MASONRY WALLS SHALL NOT BE BACK FILLED PRIOR TO THE MORTAR AND GROUT ATTAINING THEIR RESPECTIVE MAXIMUM DESIGN STRENGTHS PER SPECIFICATIONS. 5.0 STEEL DECK 5.1 STEEL DECK SHALL BE ASTM A611M, GRADES C & D OR A653M STRUCTURAL QUALITY HAVING A MINIMUM YIELD STRENGTH OF 345 MPa AS PER THE STEEL DECK INSTITUTE (SDI) DESIGN MANUAL. 5.2 STEEL DECK SHALL BE ERECTED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND ERECTION LAYOUTS AND CONNECTED TO SUPPORTING MEMBERS AS INDICATED. 5.3 COMPOSITE FLOOR DECK 5.3.1 STEEL FLOOR DECK SHALL BE 51mm RIB HEIGHT, 18 GA HOT-DIP GALVANIZED (SDI TYPE 2VL1-18) UON. 5.3.2 FLOOR DECK SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: <table border="1" style="margin-left: 20px;"> <tr> <td>MOMENT OF INERTIA, I_p</td> <td>18 GAUGE</td> </tr> <tr> <td>SECTION MODULUS (TOP OF DECK), S_n</td> <td>760mm⁴/mm WIDTH</td> </tr> <tr> <td>SECTION MODULUS (BOTT OF DECK), S_p</td> <td>27.5mm³/mm WIDTH</td> </tr> <tr> <td></td> <td>27.8mm³/mm WIDTH</td> </tr> </table> 5.3.3 FLOOR DECK SHALL BE FASTENED TO THE SUPPORTS AS INDICATED IN THE BOTTOM OF THE FLUTES USING A SDI 36/7 PATTERN. DECK SIDELAPS SHALL BE ATTACHED USING #10 SELF-TAPPING TEK SCREWS WITH A MINIMUM 3-SIDE LAP CONNECTIONS PER SPAN. 5.3.4 SUSPENDED CEILINGS, LIGHT FIXTURES, DUCTS, CONDUITS, PIPING OR OTHER UTILITIES SHALL NOT BE SUPPORTED BY THE STEEL FLOOR DECK. 5.3.5 IN ADDITION TO MEETING THE MINIMUM REQUIREMENTS ABOVE, THE DECK MANUFACTURER SHALL DESIGN THE FLOOR DECK AND ATTACHMENTS TO STEEL FOR A MAXIMUM DEFLECTION DUE TO WET CONCRETE & 1 KPa CONSTANT LOAD OF L/240. FLOOR DECK SHALL NOT REQUIRE SHORING DURING CONCRETE PLACEMENT. 6.0 STRUCTURAL STEEL 6.1 STRUCTURAL STEEL ROLLED SHAPES AND PLATES SHALL CONFORM TO THE MATERIAL INFORMATION SCHEDULE. DIMENSIONS AND PROPERTIES SHALL BE IN ACCORDANCE TO ASTM A36M. 6.2 ANCHOR BOLTS SHALL CONFORM TO ASTM A36M HEAVY HEX UNLESS NOTED OTHERWISE. 6.3 CONNECTION BOLTS FOR STRUCTURAL STEEL MEMBERS SHALL BE 20 DIA ASTM A325M-N, UON; NUTS SHALL CONFORM TO ASTM A563M; WASHERS SHALL CONFORM TO ASTM F436M. CONNECTION BOLTS SHALL HAVE A HARDENED WASHER PLACED UNDER THE ELEMENT TO BE TIGHTENED. 6.4 DETAILING OF STRUCTURAL STEEL CONNECTIONS MUST BE CONSISTENT WITH RECOGNIZED, PUBLISHED METHODS SUCH AS IN THE AISC "STEEL CONSTRUCTION MANUAL", THIRTEENTH EDITION; "ENGINEERING FOR STEEL CONSTRUCTION", OR "VOLUME II CONNECTIONS MANUAL OF STEEL CONSTRUCTION". 6.4.1 THE CODE OF STANDARD PRACTICE OF AISC THIRTEENTH EDITION IS AMENDED SUCH THAT THE FABRICATOR/DETAILER IS RESPONSIBLE FOR THE DESIGN AND DETAILING OF ALL CONNECTIONS. 6.5 STANDARD FRAMING CONNECTIONS SHALL BE DETAILED BY THE FABRICATOR IN ACCORDANCE WITH THE AISC "STEEL CONSTRUCTION MANUAL", THIRTEENTH EDITION. CONNECTIONS SHALL BE DESIGNED TO DEVELOP A MINIMUM END REACTION OF 54kN.	MOMENT OF INERTIA, I _p	18 GAUGE	SECTION MODULUS (TOP OF DECK), S _n	760mm ⁴ /mm WIDTH	SECTION MODULUS (BOTT OF DECK), S _p	27.5mm ³ /mm WIDTH		27.8mm ³ /mm WIDTH	
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4	CFMF COLD FORM METAL FRAME CFS COLD FORMED STEEL CIP CAST IN PLACE CIPL CAST-IN-PLACE LINTEL CJ CONTROL JOINT CLG CEILING CLR CLEAR CMU CONCRETE MASONRY UNIT COEFF COEFFICIENT COL COLUMN CONC CONCRETE CONT CONTINUOUS COORD COORDINATE CSJ CONSTRUCTION JOINT CTJ CONTROL JOINT DIA DIAMETER DIAG DIAGONAL DIM DIMENSION DWG DRAWING DWL DOWEL EA EACH ELEC ELECTRICAL ELEV ELEVATION EMBED EMBEDMENT EQUIV EQUIVALENT ETC ET CETERA E.W EACH WAY EXT EXTERIOR FTG FOOTING GA GAUGE HORIZ HORIZONTAL HRS HOURS IBC INTERNATIONAL BUILDING CODE INT INTERIOR Kg KILOGRAM KIP KIPS (1 KIP = 1,000 POUNDS) KN KILONEWTON kPa KILOPASCAL L# ANGLE (# INDICATES SIZE) LLV LONG LEG VERTICAL M METER MAX MAXIMUM MBM METAL BUILDING MANUFACTURER MBMA METAL BUILDING MANUFACTURERS ASSOCIATION MECH MECHANICAL MFG MANUFACTURER MID MIDDLE MIN MINIMUM MISC MISCELLANEOUS MM MILLIMETER MPa MEGAPASCAL MTL METAL MWFMS MAIN WIND FORCE RESISTING SYSTEM N NEWTON N NORTH N/A NOT APPLICABLE # NUMBER SYMBOL FOR REBAR SIZE NTS NOT TO SCALE O.C. ON CENTER OPNG OPENING ? or PL PLATE PRE-ENG PRE-ENGINEERED REINF REINFORCED REQ'D REQUIRED SIM SIMILAR SPECS SPECIFICATIONS STD STANDARD STRUCT STRUCTURAL T TOP T/ TOP OF T/ELEV TOP ELEVATION T&B TOP AND BOTTOM THK THICK TM TRADE MARK TYP TYPICAL UFC UNIFIED FACILITIES CRITERIA UON UNLESS OTHERWISE NOTED VERT VERTICAL W WIDTH W/ WITH	2.0 FOUNDATION NOTES 2.1 THE GEOTECHNICAL ANALYSIS FOR THIS PROJECT IS THE RESPONSIBILITY OF THE CONTRACTOR AWARDED THE WORK. DESIGN VALUES USED IN THE STRUCTURAL ANALYSIS OF THE BUILDINGS HEREIN INDICATED HAVE BEEN ASSUMED AND SHALL BE CONFIRMED AND VERIFIED AS PART OF THE GEOTECHNICAL INVESTIGATION. VALUES WHICH DO NOT MEET THE REQUIREMENTS INDICATED ON SHEET S2 SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER FOR CONSIDERATION AND DETERMINATION ON THE NEXT APPROPRIATE COURSE OF ACTION. 2.2 SEE THE SPECIFICATION FOR ADDITIONAL REQUIREMENTS TO THOSE OUTLINED IN THE GEOTECHNICAL INVESTIGATION FOR EXCAVATION AND PREPARATION OF THE FOUNDATION AND THE SLAB ON GRADE SUBGRADE INCLUDING COMPACTION PROCEDURES. 2.3 EXCAVATIONS FOR FOOTINGS SHALL HAVE THE SIDES AND BOTTOMS TEMPORARILY LINED WITH 0.25mm POLYETHYLENE IF PLACEMENT OF CONCRETE DOES NOT OCCUR WITHIN 24 HRS OF THE EXCAVATION OF THE FOOTING. 2.4 FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION WHICH DIFFER FROM THOSE DESCRIBED IN THE GEOTECHNICAL REPORT SHALL BE REPORTED TO THE GENERAL CONTRACTOR BEFORE FURTHER CONSTRUCTION IS ATTEMPTED. SEE PROJECT SPECIFICATIONS. 2.5 NO FOOTINGS OR SLABS SHALL BE POURED INTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST, ICE OR LOOSE MATERIAL. FROST DEPTH ASSUMED TO BE 800MM 2.6 ALL SLAB-ON-GRADE, TRENCH BOTTOMS AND OTHER ON-GRADE INTERIOR HORIZONTAL SURFACES SHALL BE PLACED OVER A 0.25mm VAPOR RETARDER OVER A 100mm #57 STONE WATER BARRIER PLACED ON SUBGRADE PROPERLY PREPARED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. (UON) 2.7 SEE PLUMBING, ELECTRICAL & CIVIL SHEETS FOR REQUIRED UNDERSLAB UTILITIES. 2.8 SEE ARCHITECTURAL SHEETS FOR ALL WATERPROOFING DETAILS AND MATERIALS. 2.9 IF UNDERMINING OF FOOTINGS OCCURS, FILL VOIDS WITH 15MPa CONCRETE. DO NOT ATTEMPT TO REPLACE AND RECOMPACT SOIL. 3.0 CONCRETE 3.1 CONCRETE SHALL HAVE THE UNIT WEIGHT AND THE MINIMUM COMPRESSIVE STRENGTHS (f'c) AT 28 DAYS AS SHOWN IN THE CONCRETE MATERIALS SCHEDULE ON SHEET S3. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. 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- POWER**
- DISTRIBUTION PANELBOARD
 - NEW PANELBOARD - SURFACE
 - NEW PANELBOARD - RECESSED
 - EXISTING PANELBOARD
 - GENERATOR
 - TRANSIENT VOLTAGE SURGE SUPPRESSOR
 - TRANSFORMER (DRAWN TO SIZE)
 - POWER SUPPLY
 - CONTROL PANEL
 - TIME CLOCK
 - ASTRONOMICAL TIME CLOCK - "SEE SPEC."
 - RELAY WITH RATING AND NUMBER OF POLES AS NOTED ON DRAWINGS - "SEE SPEC."
 - JUNCTION BOX
 - JUNCTION BOX - CEILING
 - PULL BOX
 - BUS DUCT HORIZONTAL
 - BUS DUCT VERTICAL
 - EMERGENCY POWER OFF PUSH BUTTON
 - NON-FUSIBLE SAFETY SWITCH
 - FUSIBLE SAFETY SWITCH
 - MOTOR
 - MOTOR STARTING SWITCH - 20A RATED
 - KEY SWITCH - 20A RATED
 - FAN COIL - FURNISHED BY MECHANICAL CONTRACTOR, ELECTRICAL CONTRACTOR SHALL INSTALL AND PROVIDE POWER CONNECTION
 - UNIT HEATER - FURNISHED BY MECHANICAL CONTRACTOR, ELECTRICAL CONTRACTOR SHALL INSTALL AND PROVIDE POWER CONNECTION
 - JUNCTION BOX FOR CONNECTION TO GARBAGE DISPOSAL
 - LIGHT/HEATER/FAN - FURNISHED BY MECHANICAL CONTRACTOR, ELECTRICAL CONTRACTOR SHALL INSTALL AND PROVIDE POWER CONNECTION
 - ELECTRIC WATER HEATER
 - WEATHERPROOF / EXPLOSION PROOF EMERGENCY POWER OFF PUSH-BUTTON TO BE INTERCONNECTED WITH GENERATOR SHUT DOWN CONTROL
 - CEILING FAN - REFER TO SPECIFICATION SECTION 26 20 00
- RECEPTACLES**
- DUPLEX 20A BRITISH STANDARD UNSWITCHED SOCKETS
 - DUPLEX 20A BRITISH STANDARD UNSWITCHED SOCKETS - 10mA GROUND FAULT INTERRUPTER TYPE
 - DUPLEX 20A BRITISH STANDARD UNSWITCHED SOCKETS - 10mA GROUND FAULT INTERRUPTER TYPE WITH WEATHERPROOF COVER
 - DUPLEX 20A BRITISH STANDARD UNSWITCHED SOCKETS - EXPLOSION PROOF
 - INDICATES MOUNT DEVICE ABOVE COUNTER TOP

- LIGHTING PROTECTION**
- AIR TERMINAL 20mm O.D. X 4m SOLID COPPER, NICKEL PLATED ON ADHESIVE BASE.
 - EQUIPMENT AIR TERMINAL
 - TEST WELL WITH GROUND ROD(S)
 - GROUND ROD
 - GROUND PLATE
 - MAIN GROUND CONDUCTOR CONCEALED WITHIN CONSTRUCTION
 - MAIN GROUND CONDUCTOR EXPOSED ON EXPOSED ON BUILDING EXTERIOR SURFACE
 - GROUND CONDUCTOR CAD WELDED TO GROUND CABLE OR EQUIPMENT
 - GROUND CONDUCTOR CAD WELDED TO BUILDING STEEL COLUMN
 - GROUND ROD TRIPOD, SPACED 10 FEET APART.
 - LEVEL TO LEVEL CABLE
- LIGHTING**
- LIGHTING FIXTURE - SEE FIXTURE SCHEDULE FOR MORE INFORMATION
 - LIGHTING FIXTURE - SEE FIXTURE SCHEDULE FOR MORE INFORMATION
 - DOWNLIGHT
 - LIGHTING FIXTURE ON NORMAL/EMERGENCY
 - WALL MOUNTED LIGHT FIXTURE
 - EXIT SIGN - DIRECTIONAL ARROWS AS INDICATED ON DRAWINGS
 - BATTERY PACK WITH HEADS AS INDICATED ON DRAWINGS
 - REMOTE HEAD FOR BATTERY PACK
 - SINGLE POLE SWITCH - 20A RATED
 - 3-WAY SWITCH - 20A RATED
 - 4-WAY SWITCH - 20A RATED
 - PHOTOCELL VOLTAGE TO MATCH CIRCUITRY
 - LIGHTING CONTACTOR
 - POLE MOUNTED SITE LIGHTING FIXTURE - NUMBER OF FIXTURES PER POLE AS INDICATED ON DRAWINGS
 - EXTERIOR DIRECTIONAL LIGHTING FIXTURE
 - SMALL CASE LETTERS REPRESENTS LAMP(S) / SWITCHES. WHEN USED WITH AN OCCUPANCY SENSOR THIS INDICATES SENSOR WITH MANUAL OVERRIDE SWITCH
- TELECOMMUNICATIONS**
- TELEPHONE OUTLET(S) @ 18" AFF. U.N.O. WITH 3/4" RACEWAY TERMINATED ABOVE NEAREST ACCESSIBLE CEILING OR TO TELEPHONE TERMINAL BOARD IF NO ACCESSIBLE CEILING AVAILABLE. SEE TELE/DATA RISER DIAGRAM FOR OUTLET AND CABLE DESCRIPTION
 - DATA OUTLET(S) @ 18" AFF. U.N.O. WITH 3/4" RACEWAY TERMINATED ABOVE NEAREST ACCESSIBLE CEILING OR TO DATA EQUIPMENT RACK IF NO ACCESSIBLE CEILING AVAILABLE. SEE TELE/DATA RISER DIAGRAM FOR OUTLET AND CABLE DESCRIPTION

- TELECOMMUNICATIONS (CONTINUED)**
- COMBINATION TELEPHONE/DATA OUTLET(S) @ 18" AFF. U.N.O. WITH 1" RACEWAY TERMINATED ABOVE NEAREST ACCESSIBLE CEILING OR TO TELE/DATA TERMINAL AREA IF NO ACCESSIBLE CEILING AVAILABLE. SEE TELE/DATA RISER DIAGRAM FOR OUTLET AND CABLE DESCRIPTION
 - WALL MTD. TELEPHONE OUTLET WITH 3/4" RACEWAY TERMINATED ABOVE NEAREST ACCESSIBLE CEILING OR TO TELEPHONE TERMINAL BOARD IF NO ACCESSIBLE CEILING AVAILABLE. SEE TELE/DATA RISER DIAGRAM FOR OUTLET AND CABLE DESCRIPTION
 - INDICATES NUMBER OF TELEPHONE OUTLET(S) AND ASSOCIATED CABLING
 - INDICATES NUMBER OF DATA OUTLET(S) AND ASSOCIATED CABLING
 - INDICATES NUMBER OF TELEPHONE OUTLETS AND ASSOCIATED CABLING WITH 1 OUTLET AND CABLE DEDICATED FOR FAX
- SINGLE LINE SYMBOLS**
- SWITCH
 - BREAKER
 - FUSE
 - TRANSFORMER
 - CAPACITOR
 - GROUND
 - CONTACT (NORMALLY OPEN)
 - CONTACT (NORMALLY CLOSED)
 - AUTOMATIC TRANSFER SWITCH
 - MANUAL DOUBLE THROW SWITCH
 - CURRENT TRANSFORMER
 - INDICATES NEW ELECTRICAL EQUIPMENT
 - INDICATES NEW CONTROL WIRING AND CONDUIT
 - EQUIPMENT OUTLINE
- MISCELLANEOUS**
- BRANCH CIRCUIT WIRING CONCEALED ABOVE CEILINGS, SURFACE MOUNTED ON WALLS
 - BRANCH CIRCUIT WIRING - /10 ANG
 - BRANCH CIRCUIT WIRING - UNDER FLOOR
 - HOME RUN BACK TO PANEL
 - CONDUIT TURNED DOWN
 - CONDUIT TURNED UP
 - LOW VOLTAGE WIRING AND CONDUIT
 - CABLE TRAY ("X" DENOTES WIDTH)
 - INDICATES CONTINUATION OF LINE
- FIRE ALARM**
- FIRE ALARM CONTROL PANEL WITH BATTERY BACKUP
 - FIRE ALARM PULL STATION

- FIRE ALARM (CONTINUED)**
- FIRE ALARM STROBE - WALL MOUNTED
 - FIRE ALARM AUDIBLE/STROBE - WM
 - FIRE ALARM HORN/STROBE - WM
 - SMOKE DETECTOR
 - HEAT DETECTOR CEILING MOUNTED
 - DUCT DETECTOR - PROVIDED BY EC, INSTALLED BY MC AND CONNECTED BY EC
- NOTATIONS & ABBREVIATIONS**
- AFF ABOVE FINISHED FLOOR
 - C CEILING MOUNTED
 - E EMERGENCY
 - EC ELECTRICAL CONTRACTOR
 - EPO EMERGENCY POWER OFF
 - EXP EXPLOSION PROOF
 - F FIRE ALARM
 - FF FLUSH FLOOR MOUNTED
 - FL FLUORESCENT
 - FO FIBER OPTIC
 - FSS FUSED SAFETY SWITCH
 - G GROUND FAULT INTERRUPTER
 - GC GENERAL CONTRACTOR
 - HOA HAND-OFF AUTO
 - I INFRARED
 - ICD INCANDESCENT
 - IG ISOLATED GROUND
 - K KEY
 - LV LOW VOLTAGE
 - M MOTOR
 - MC MECHANICAL CONTRACTOR
 - NE NORMAL/EMERGENCY
 - NFSS NON-FUSED SAFETY SWITCH
 - PA PAGING SYSTEM
 - PLC PLUMBING CONTRACTOR
 - REL RELOCATE
 - RED RELOCATED
 - SL SINGLE LINE
 - SS SURGE SUPPRESSION
 - T TELEPHONE
 - TL TIGHT LOCK

- NOTATIONS & ABBREVIATIONS (CON'L)**
- TP TAMPER PROOF
 - UE UNDERGROUND ELECTRIC
 - UF UNDERGROUND FIBER
 - UT UNDERGROUND TELEPHONE
 - W WALL MOUNTED
 - WG WIRE GUARD
 - WP WEATHERPROOF
 - WPG WEATHERPROOF/GROUND FAULT INTERRUPTER
 - WT WATER TIGHT
- GENERAL PROJECT NOTES:**
- G1. UNLESS OTHERWISE NOTED, PROVIDE ALL EQUIPMENT SHOWN ON THE PLANS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL SYMBOLS SHOWN ON THE PLANS WITH THE SYMBOL LIST. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE INTENT OF ANY SYMBOL THAT IS SHOWN ON THE PLANS AND NOT INDICATED ON THE SYMBOL LIST WITH THE ENGINEER PRIOR TO BID.
- G2. COORDINATE THE FINAL LOCATIONS OF ALL LIGHT FIXTURES WITH THE ARCHITECT'S REFLECTED CEILING PLANS. REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO INSTALLATION.
- G3. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES WITHIN THE CONSTRUCTION AREA THREE (3) WORKING DAYS NOTICE BEFORE COMMENCE DIGGING. NOTIFY THE LOCAL OR STATE AUTHORITY HAVING JURISDICTION AND WAIT THE REQUIRED TIME BEFORE COMMENCING TO DIG.
- G4. THE CONTRACTOR SHALL COORDINATE CONDUIT RUNS, CABLE TRAY, LIGHTING FIXTURES AND OTHER EQUIPMENT LOCATIONS WITH THE OTHER TRADE CONTRACTORS TO AVOID CONFLICTS.
- G5. WHERE VOLTAGES AND FREQUENCIES ON THE DRAWINGS AND IN THE SPECIFICATIONS DIFFER FROM THE LOCAL ONES, ALL WORK SHALL BE PERFORMED USING THE LOCAL VOLTAGES AND FREQUENCIES.
- G6. THE MINIMUM WIRE SIZE ON THE PROJECT SHALL BE 4mm². THE MINIMUM CONDUIT SIZE SHALL BE 20mm. THE MINIMUM BREAKER SIZE SHALL BE 20 AMPS.
- G7. THE CONTRACTOR SHALL PUT A MAXIMUM OF 6 DUPLEX SOCKETS ON A 20A SINGLE POLE CIRCUIT.
- G8. WHERE THE 1010 SCOPE REVISION, 1015 TECHNICAL REVISION, DRAWINGS, AND SPECIFICATIONS DIFFER FROM AMERICAN CODES OR STANDARDS THE 1010, 1015, DRAWINGS, AND SPECIFICATIONS SHALL RULE.
- G9. WORK FOR THE AMMUNITION SUPPLY POINT SHALL BE DONE IN ACCORDANCE WITH DEPARTMENT OF DEFENSE STANDARD DOD 6035.9-S1D.
- G10. ALL CONDUIT AND DEVICES SHALL BE SURFACE MOUNTED UNLESS OTHERWISE INDICATED.



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AFGHAN NATIONAL POLICE	STANDARD DESIGN	POL BUILDING
ELECTRICAL SYMBOLS AND ABBREVIATIONS		

SHEET REFERENCE NUMBER:	E0
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