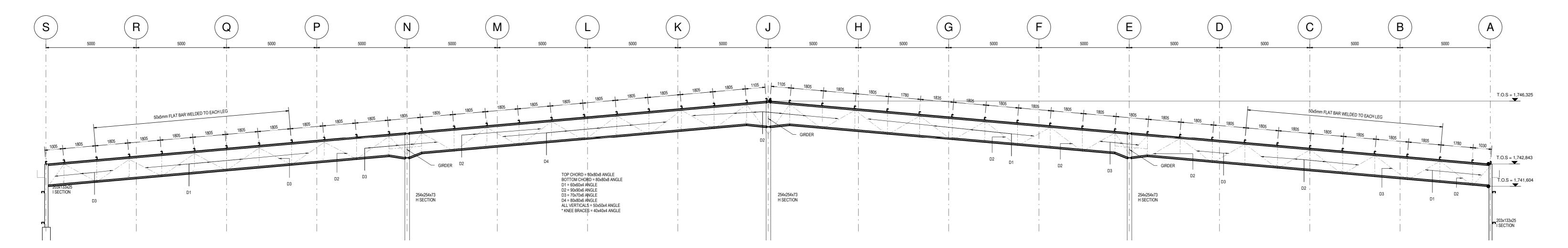
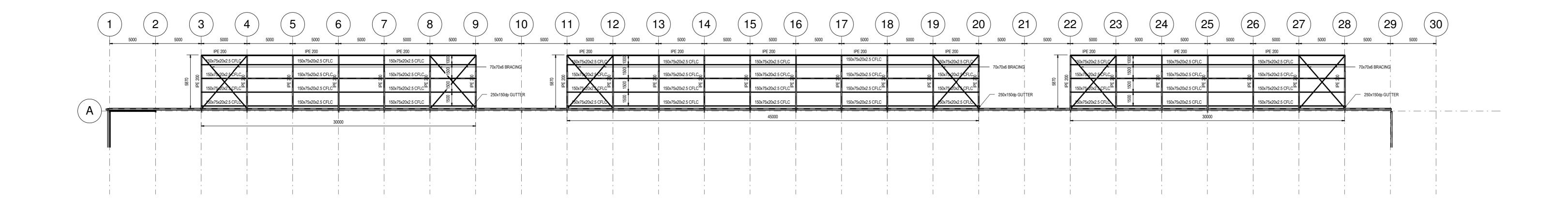


## TYPICAL GIRDER ELEVATION





## **CANOPY LAYOUT**

\_\_ 250x150dp GUTTER 150x75x20x2.5 CFLC 150x75x20x2.5 CFLC 150x75x20x2.5 CFLC CANOPY SECTION - S1

STRUCTURAL STEEL NOTES: 6.1 ALL STRUCTURAL STEELWORK SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH SANS 10162., AND SANS 2001- CS1 AND SANS 1921-3 6.2 (I) WELDS SHALL CONFORM TO SABS 0167 - 1984 AND 044 SPECIFICATIONS. (II) WHERE NO WELD SIZES ARE SHOWN, THE MINIMUM WELD SIZE SHALL THAT OF THE THICKEST PLATE OF THE CONNECTING
PLATES/ELEMENTS.UNLESS OTHERWISE SHOWN THE INTENTION OF
CONNECTIONS IS TO TRANSFER THE FULL FORCE THAT CAN BE
DEVELOPED IN CONNECTING MEMBERS THROUGH THE CONNECTION. (III) WHEN USING ELECTRIC ARC WELDING, ALL ELECTRODES SHALL BE E7018. FOR ANY OTHER WELDING PROCESS TO BE USED. THE CONTRACTOR SHALL APPLY, IN WRITING, FOR THE APPROVAL FROM THE ENGINEER FOR THE ELECTRODES TO BE USED. (IV) ALL BUTT WELDS SHALL DEVELOP THE FULL STRENGTH OF THE ELEMENTS JOINED. (V) ALL SPLICES SHALL DEVELOP THE FULL STRENGTH OF THE ELEMENTS (VI) WELDING SHALL ONLY BE PERFORMED BY CODED WELDERS. (VII) SUITABLY QUALIFIED AND EXPERIENCED WELDERS USING PROPER EQUIPMENT IN A GOOD CONDITION SHALL BE ALLOWED TO DO ALL (VIII) THE CONTRACTOR SHALL DESIGN ALL WELDS AND, WHERE NECESSARY, GUSSETS OF SUFFICIENT STRENGTH SHALL BE TO OBTAIN THE REQUIRED WELD LENGTH TO ENSURE THE FULL STRENGTH OF THE CONNECTION. 6.3 ALL DIMENSIONS AND LEVELS SHALL BE CHECKED ON SITE BEFORE SHOP DRAWINGS COMMENCE. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

6.4 SHOP DRAWINGS WILL ONLY BE CHECKED FOR COMPLIANCE WITH DESIGN INTENT. NO DIMENSIONAL CHECKS WILL BE DONE. 6.5 A COMPLETE SET OF SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER, ARCHITECT AND SHEETING SPECIALIST SUB-CONTRACTOR (TO ENSURE STEELWORK PROVIDES SUFFICIENT SUPPORT FOR CLADDING) FOR APPROVAL BEFORE FABRICATION COMMENCES. SHOP DWG'S TO SHEETING REQUIREMENTS INTO ACCOUNT. NO HAND DRAWINGS WILL BE ACCEPTED. TEKLA OR SIMILAR 3D DRAWING PACKAGE TO BE USED BY DRAUGHTSMEN WITHOUT COMPROMISING SHOP DRAWING PROGRAM. 6.6 ALL COLD ROLLED STEEL MEMBERS TO BE PRE-GALVANISED. REMAINING

INTERNAL STEEL WORK TO RECEIVE 1 COAT OF PRIMER (40 MICRON RED OXIDE OR SIMILAR APPROVED) AND 2 FINAL COATS (POLYURETHANE ENAMEL) TO ARCHITECTS SPECIFICATIONS (40 MICRON PER COAT). . ALL EXTERNAL STEELWORK TO BE HOT DIP GALVANISED 6.7 ALL HOT ROLLED AND CHS STRUCTURAL STEELWORK SHALL BE GRADE S355JR, EXCEPT COLD-FORMED OPEN STEEL SECTIONS, WHICH SHALL HAVE A MINIMUM YIELD STRESS OF 200 MPa. TENSILE STRENGTH TESTING RESULTS MUST BE PROVIDED FOR EACH BATCH OF STEEL FROM WHICH COLD-FORMED SECTIONS ARE SOURCED.

6.8 A CERTIFICATE FROM THE STEEL MANUFACTURER IN WHICH THE GRADE THE STRUCTURAL STEEL IS VERIFIED SHALL BE HANDED TO THE ENGINEER FOR APPROVAL. 6.9 ALL STRUCTURAL BOLTS SHALL BE GRADE 8.8 UNLESS OTHERWISE

NOTED.
GALVANIZED BOLTS TO BE USED (GRADE 4.8 MAY BE USED TO CONNECT PURLINS AND GIRTS).

6.10 WHERE TEMPORARY BRACING OR PROPPING IS REQUIRED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, ERECTION, MAINTENANCE AND REMOVAL (WHERE NECESSARY) OF SUCH SUPPORTS. IF SPLICES IN TRUSSES ARE REQUIRED DUE TO TRANSPORT, OF THIS SHALL BE SUBMITTED TO THE ENGINEER AT AN EARLY STAGE

WRITTEN APPROVAL. 6.11 FABRICATOR TO ENSURE THAT CENTERS OF GRAVITY OF MEMBERS INTERSECT AT NODE POINTS, EXCEPT WHERE ECCENTRICITIES ARE SPECIFIED ON ENGINEER'S DRAWINGS.

6.12 ALL STRUCTURAL STEEL DRAWINGS TO BE READ IN CONJUNCTION WITH THE RELEVANT ARCHITECTURAL, CONCRETE DRAWINGS AS WELL AS THE BILL OF QUANTITIES AND ANY DISCREPANCY TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER. 6.13 QUALITY CONTROL ON WELDING SHALL BE AS FOLLOWS:

6.13.1 ALL WELDS SHALL BE INSPECTED USING VISUAL AIDS 6.13.2 ALL BUTT WELDS: 100% ULTRASONIC NDT 6.13.3 ALL FILLET WELDS: 20% MPI 6.13.4 CRANE / CRAWL BEAMS : 100% ULTRASONIC NT 6.14 WHERE APPLICABLE, CEMENTITIOUS NON-SHRINK GROUT SHALL BE

PROVIDED UNDER BASE PLATES BEFORE ANY PRIMARY LOADS ARE APPLIED TO THE STRUCTURE.

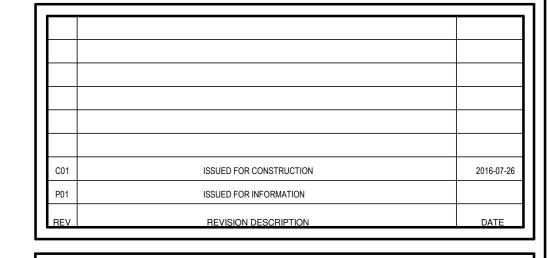
6.15 WHERE HSFG BOLTS ARE SPECIFIED, THE FOLLOWING SHALL APPLY: 6.15.1 ALL CONTACT SURFACES AT HSFG BOLT SPLICES SHALL BE FREE FROM OIL, GREASE, RUST, SCALE, PAINT OR ANY OTHER IMPURITIES AT THE TIME OF BOLTING

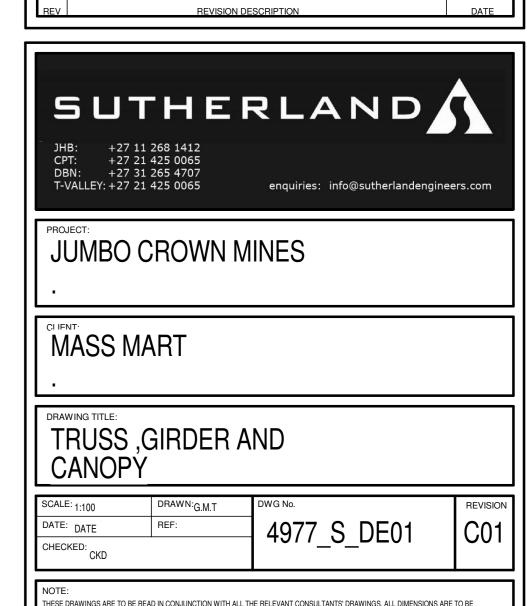
6.15.2 THE TIGHTENING OF HIGH STRENGTH FRICTION-GRIP BOLTS SHALL BE DONE ACCORDING TO THE TURN-OF-THE-NUT METHOD AS SPECIFIED IN CLAUSE 5.3.1(A) OF SABS 094-1982. OR WHERE HSFG BOLTS HAVE BEEN SPECIFIED, THE CONTRACTOR SHALL USE "CORONET"-TYPE LOAD INDICATING WASHERS IN CONJUNCTION WITH SUCH BOLTS. 6.16 THE CONTRACTOR SHALL, AT THE COMMENCEMENT OF THE PROJECT,

ACQUAINT HIMSELF WITH THE AVAILABILITY AND DELIVERY TIME OF THE PRODUCTS AND STEEL PROFILES SPECIFIED ON THE DRAWINGS SO THAT SUCH MATERIAL CAN BE ORDERED AHEAD OF TIME. 6.17 WHERE SLOTTED HOLES FOR BOLTS OCCUR, THE NUT SHALL BE HAND TIGHTENED AND A LOCK-NUT BE PROVIDED

UNLESS NOTED OTHERWISE. 6.18 ALL TRUSSES TO BE CONTINUOUS OVER GIRDERS. 6.19 ALL PURLINS & GIRTS TO BE CONTINUOUS OVER 2 SPANS WITH STAGGERED SPLICE POSITIONS. "METSEC" PURLINS & GIRTS TO BE SLEEVED "C" PROFILE.

6.19 GIRDERS TO BE CONTINUOUS OVER SUPPORT COLUMNS.





HESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL THE RELEVANT CONSULTANTS' DRAWINGS. ALL DIMENSIONS ARE TO BE READ AND NOT SCALED.ANY DISCREPANCIES ARE TO BE REPORTED TO THE PRINCIPAL AGENT IMMEDIATELY.

THESE DRAWINGS ENJOY A COPYRIGHT WHICH VESTS IN SUTHERLAND ASSOCIATES UNLESS OTHERWISE AGREED IN WRITING. THESE DRAWINGS MAY NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WHATSOEVER TO ANY PERSON WITHOUT THE