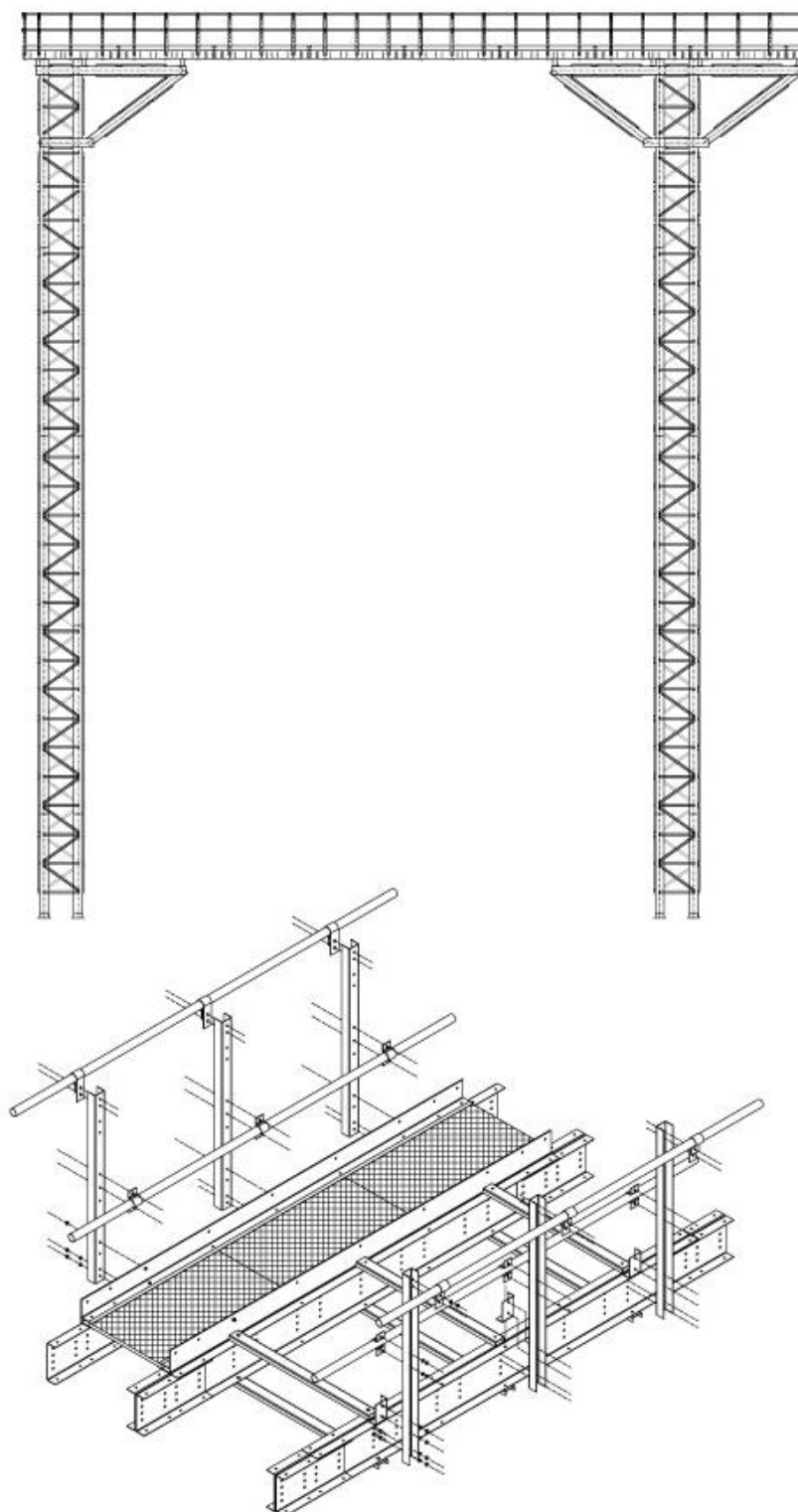


SUPPORTS & CATWALKS

11,45-18 MEPU 6832

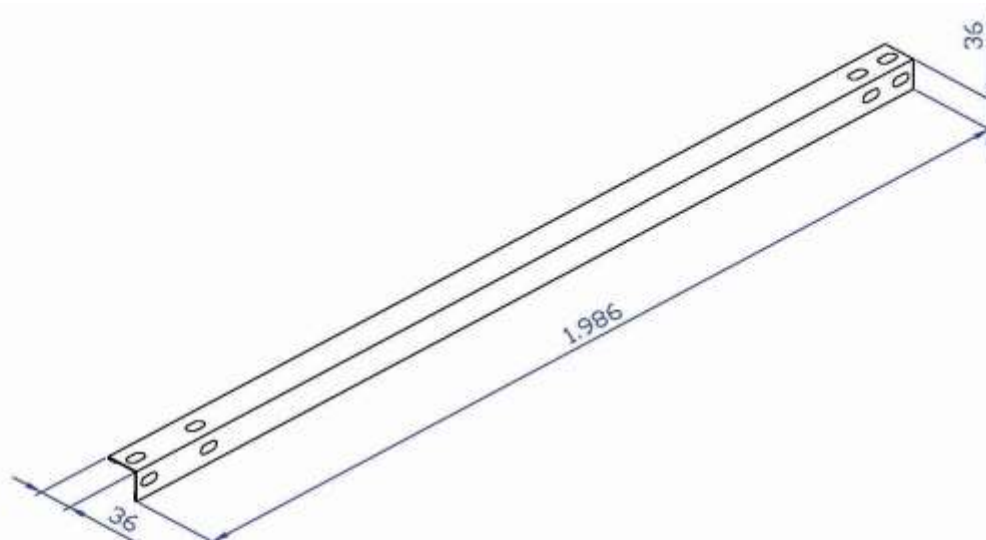


Assembly Instructions

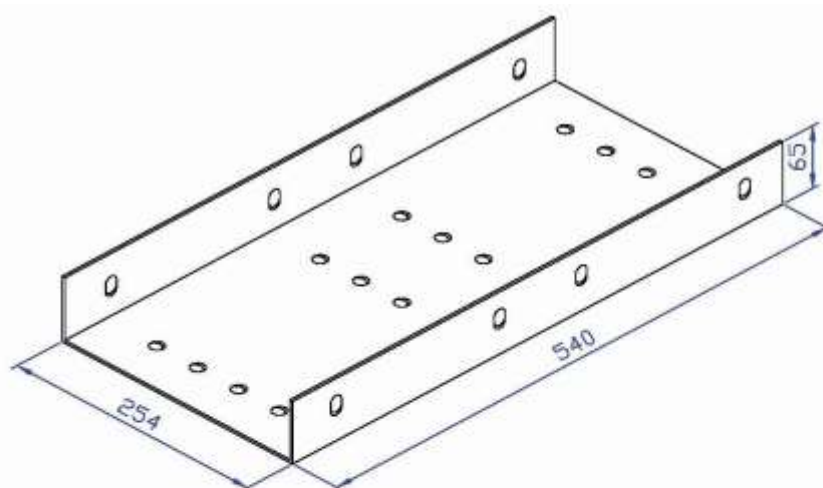
MARK	DESCRIPTION	THICKNESS	QUANTITY
WALL SUPPORT 2U			
120246	ROOF SUPPORT "U" 200x2600mm	3	2
120249	ROOF SUPPORT GUSSET	3	8
121571	REINFORCEMENT ROOF SUPPORT "U" 200x535mm	3	4
	BOLT 10 X 40 ISO 4017 GALVANISED C-8.8		50
	NUT M-10 ISO 4032 GALVANISED C-8.8		50
	FLAT WASHER M-10 DISO 7091 GALVANISED		50
117808	WALL SILO ANGLE L= 250mm 96°	3	2
117822	WALL SUPPORT "U" 263x5548mm	3	2
117840	HORIZONTAL BRACING "U" 60x50x1120mm	3	12
117841	BRACING "U" 60x50x1362mm	3	12
117848	OMEGA 273x210x2400mm	3	1
118367	WALL-SUPPORT BRACING. SPECIAL	3	2
	BOLT 10 X 25 ISO 4017 GALVANISED C-8.8		150
	NUT M-10 ISO 4032 GALVANISED C-8.8		150
	FLAT WASHER M-10 DISO 7091 GALVANISED		300
	WEATHERSEAL WASHER M-10 GALVANISED		60
	VOLADIZO		1
119201	UPPER LINTEL "U" 263x3724mm	3	2
115817	WALL SUPPORT "U" 263x988mm	3	2
118299	LOWER PILLAR "U" 263x1976mm	3	4
118471	CLIP REINFORCEMENT LINTEL 263mm	3	8
118511	CLIP "L" 80x80x8mm	3	4
118853	UNION COLUMN-CATWALK "C" 268x2400mm	3	2
118609A	INSIDE REINFORCEMENT "C" 268	3	10
117840	HORIZONTAL BRACING "U" 60x50x1120mm	3	8
120258	BRACING "U" 60x50x1280mm	3	6
117841	BRACING "U" 60x50x1362mm	3	4
115648	BRACING "U" 60x50x1422mm	3	4
	BOLT 10 X 30 ISO 4017 GALVANISED C-8.8		150
	BOLT 12 X 40 ISO 4017 GALVANISED C-8.8 SB		30
	NUT M-10 ISO 4032 GALVANISED C-8.8		150
	NUT M-12 ISO 4032 GALVANISED C-8.8 SB		30
	FLAT WASHER M-10 DISO 7091 GALVANISED		300
	FLAT WASHER M-12 ISO 7091 GALVANISED		30
CATWALK			
112825	STRINGER "U" 263x3000mm	3	16
112288	STRINGER "U" 263x2000mm	3	4
111616A	STRINGER SPLICE "U" 263	3	16
121479	GRILL 675x1000mm		14
121234	FOOT PROTECTION L= 3000mm	3	8
121235	FOOT PROTECTION L= 2000mm	3	2
122332	SPLICE FOOT PROTECTION/FLOOR	3	10
118010	TUBULAR HANDRAIL L= 3000mm		23
120340	CLIP FOR TUBULAR HANDRAIL	3	34
120341	CLIP FOR SAFETY TUBE	3	34
121632	STOPPER D48		20
120337	HANDRAIL BRACKET L= 1280mm	3	34
121147	UNION SUPPORT-CATWALK	3	12
113164	ANGLE FOR HANDRAIL BRACKET	3	16
120308	REINFORCEMENT "U" L= 692mm	3	16
120309	REINFORCEMENT "U" L= 1396mm	3	16
118054	CLOSE END L= 690mm	3	4
121237	BRACING STRIP L=1175mm	2	4
119714	LADDER'S RAIL L= 1326mm	1,5	2
119616	LADDER RUNG L= 460mm	1,5	5

MARK	DESCRIPTION	THICKNESS	QUANTITY
119611	LADDER SUPPORT	3	2
119610	PLASTIC COVER FOR LADDER'S RAIL		2
119619	ANGLE TO FLOOR	3	1
110027B	BANISTER L= 1986mm	2	4
120142	REDLER SUPPORT H= 0 WIDTH 700mm	5	6
120145	REDLER SUPPORT LINTEL WIDTH 700mm		6
120148	REDLER SUPPORT PILLAR H= 350mm		12
122207	LINTEL	3	3
122208	DOOR SIDE	3	2
122209	HINGE TIPE A		2
122203	SPLICE	3	1
	CLOSING DOOR SPRING		1
	BOLT 8 X 20 ISO 4017 GALVANISED C-8.8		8
	BOLT 10 X 20 ISO 4017 GALVANISED C-8.8		6
	NUT M-8 ISO 4032 GALVANISED C-8.8		8
	NUT M-10 ISO 4032 GALVANISED C-8.8		6
	FLAT WASHER M-8 ISO 7091 GALVANISED		8
	FLAT WASHER M-10 DISO 7091 GALVANISED		6
	SELF DRILLING BOLT 4,8 X 13 WITHOUT WASHER		10
	BOLT 8 X 20 ISO 4017 GALVANISED C-8.8		25
	BOLT 8 X 60 ISO 4017 GALVANISED C-8.8		25
	BOLT 10 X 25 ISO 4017 GALVANISED C-8.8		450
	BOLT 10 X 50 ISO 4017 GALVANISED C-8.8		125
	BOLT 12 X 30 ISO 4017 GALVANISED C-8.8 SB		325
	NUT M-8 ISO 4032 GALVANISED C-8.8		50
	NUT M-10 ISO 4032 GALVANISED C-8.8		575
	NUT M-12 ISO 4032 GALVANISED C-8.8 SB		325
	FLAT WASHER M-8 ISO 7091 GALVANISED		50
	FLAT WASHER M-10 DISO 7091 GALVANISED		575
	FLAT WASHER M-12 ISO 7091 GALVANISED		325
	SELF DRILLING BOLT 6,5 x 55 WITH WEATHERSEAL WASHER		60
	CLAMP FOR GRIP C-30		60
DOCUMENTATION			
	xxxxx ingles manual 1		1
	xxxxx ingles manual 2		1

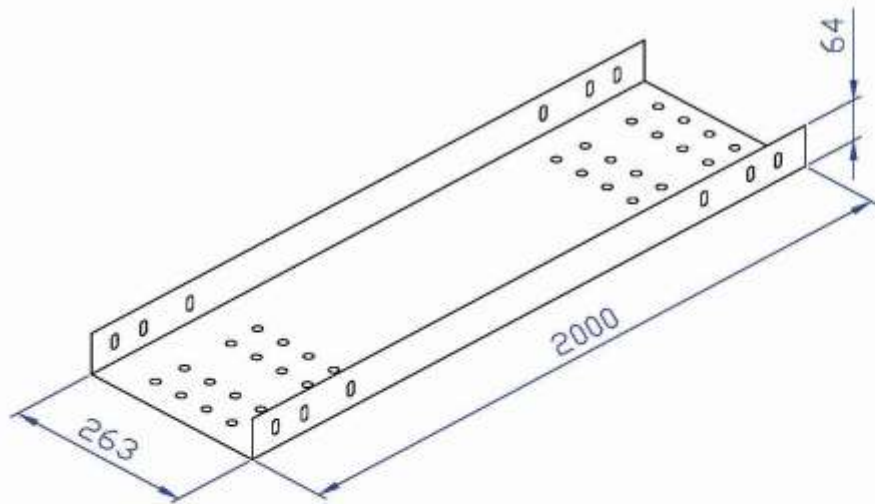
IDENTIFICATION OF MARKS



MARCA 110.027B ANGULAR BARANDILLA TECHO
 MARK 110.027B HAND RAIL
 MARQUE 110.027B ANGLE DE RAMBARDE

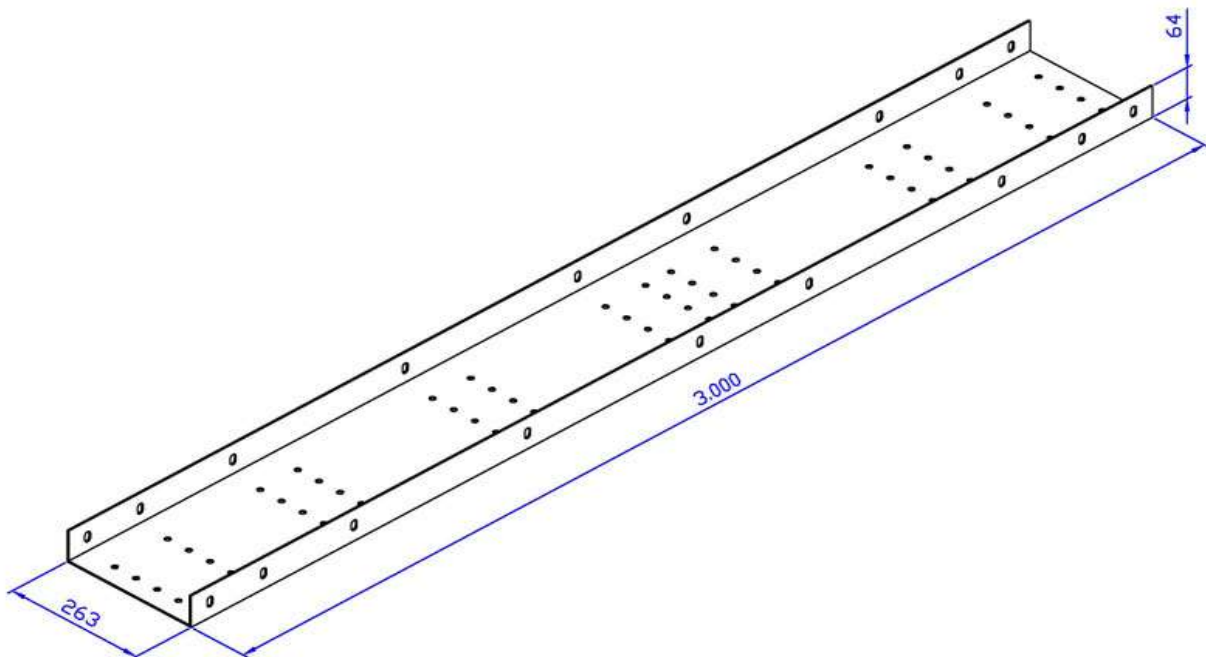


MARCA 111.616A EMPALME LARGUERO PASARELA
 MARK 111.616A SPLICE FOR "U" BEAM
 MARQUE 111.616A "U" RACORDEMENT



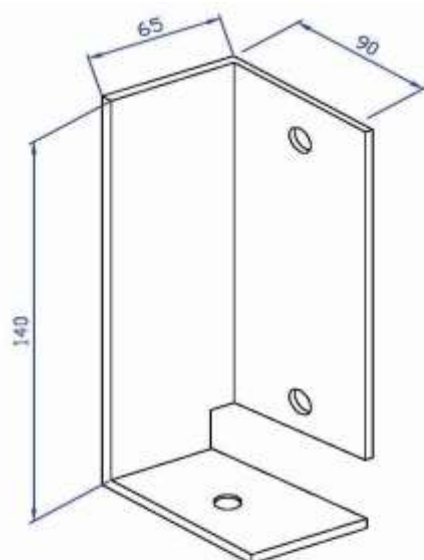
MARCA 112.288
MARK 112.288
MARQUE 112.288

LARGUERO PASARELA
 "U" BEAM FOR CATWALK
 POUTRE POUR PASSERELLE

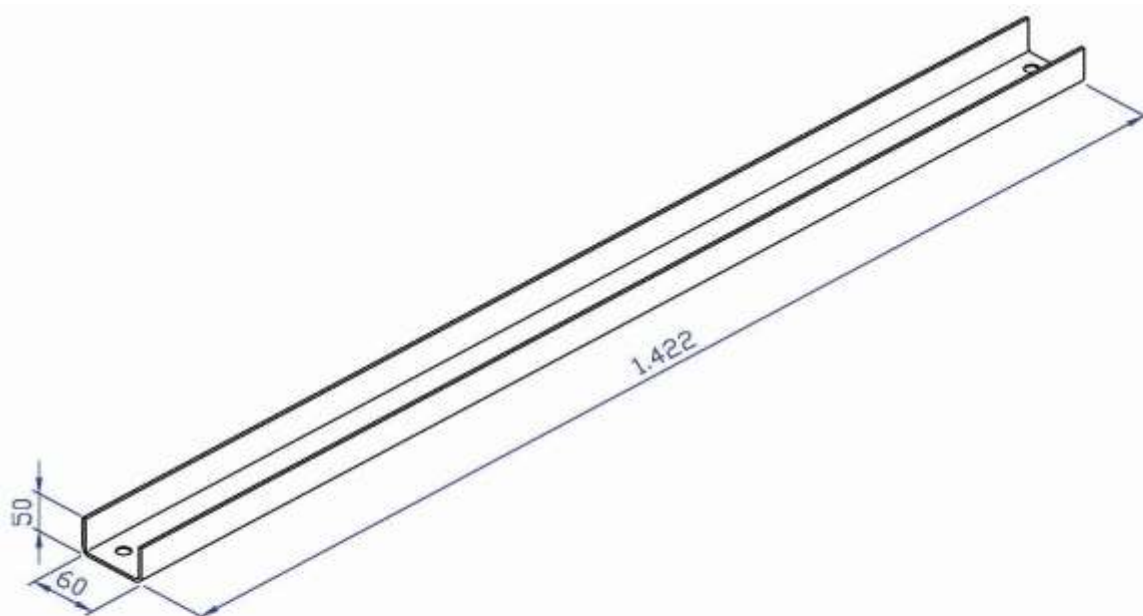


MARCA 112.825
MARK 112.825
MARQUE 112.825

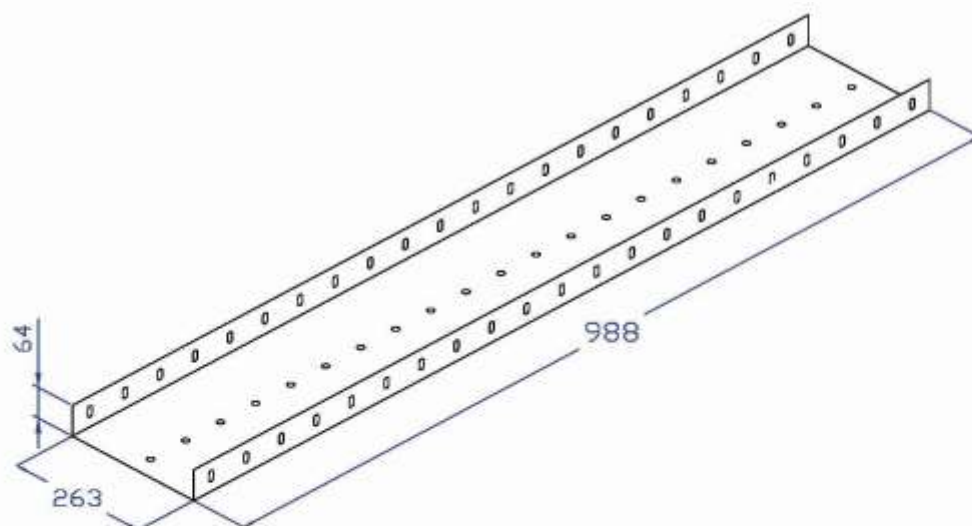
LARGUERO PASARELA
 "U" BEAM FOR CATWALK
 POUTRE POUR PASSERELLE



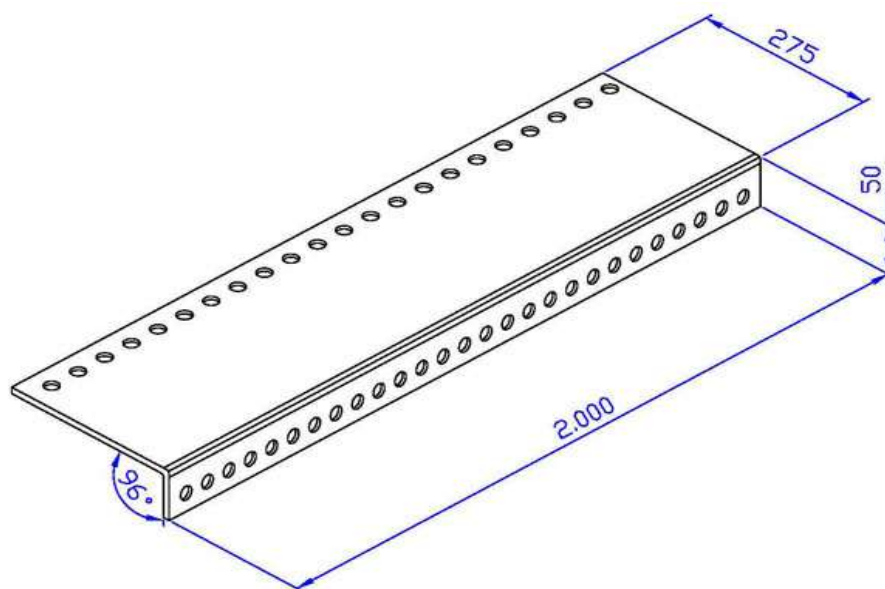
MARCA 113.164 ANGULO PARA POSTE
MARK 113.164 ANGLE FOR HANDRAIL BRACKET
MARQUE 113.164 CLIP POUR POTEAU



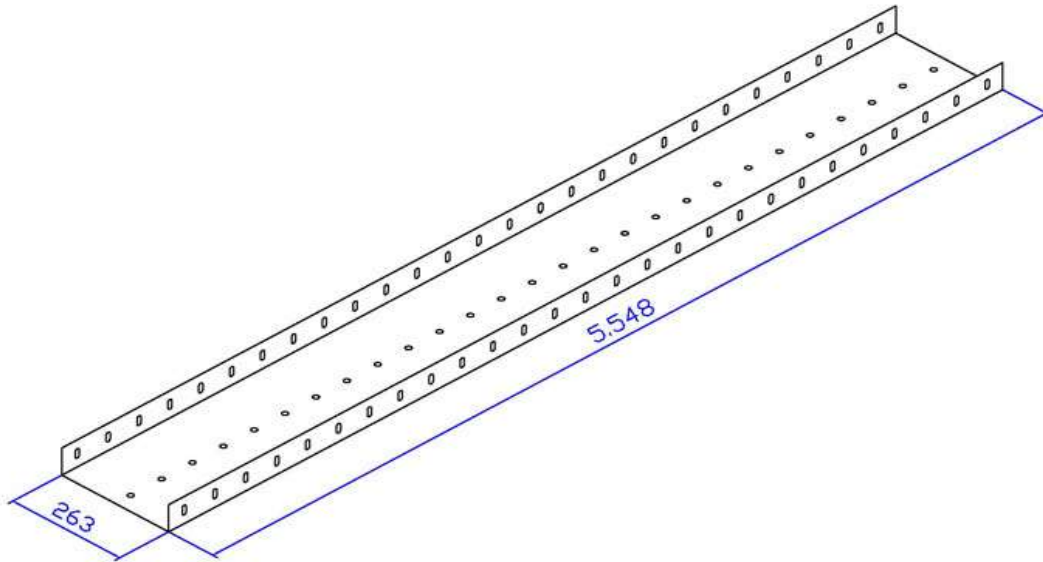
MARCA 115.648 "U" 60x50x1.422 mm.
MARK 115.648 "U" 60x50x1.422 mm.
MARQUE 115.648 "U" 60x50x1.422 mm.



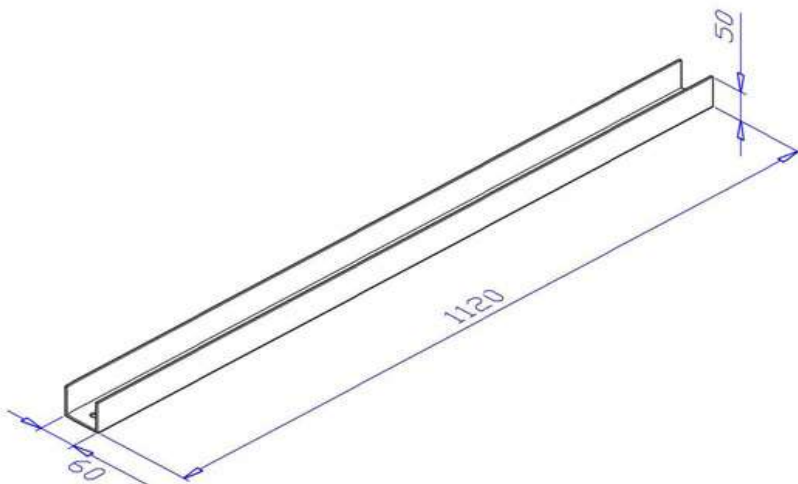
MARCA 115.817	"U" 263x988 mm.
MARK 115.817	"U" 263x988 mm.
MARQUE 115.817	"U" 263x988 mm.



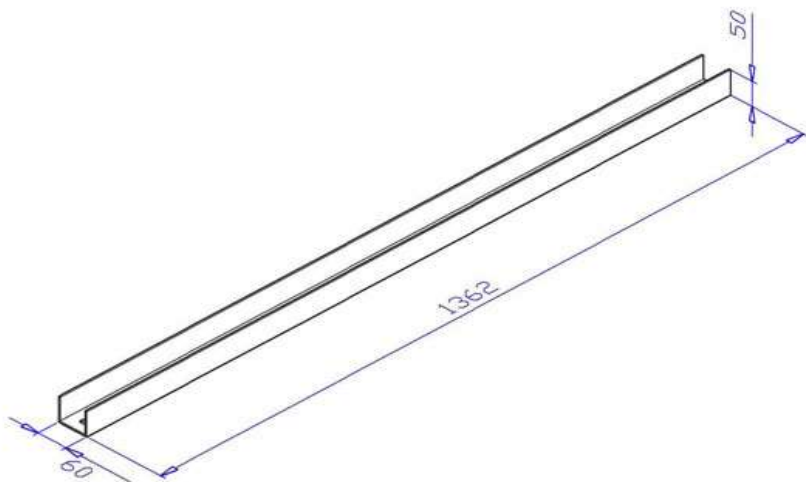
MARCA 117.808	ANGULO AMARRE A SILO.
MARK 117.808	WALL SILO ANGLE.
MARQUE 117.808	ANGLE ATTACHE AU PAROI.



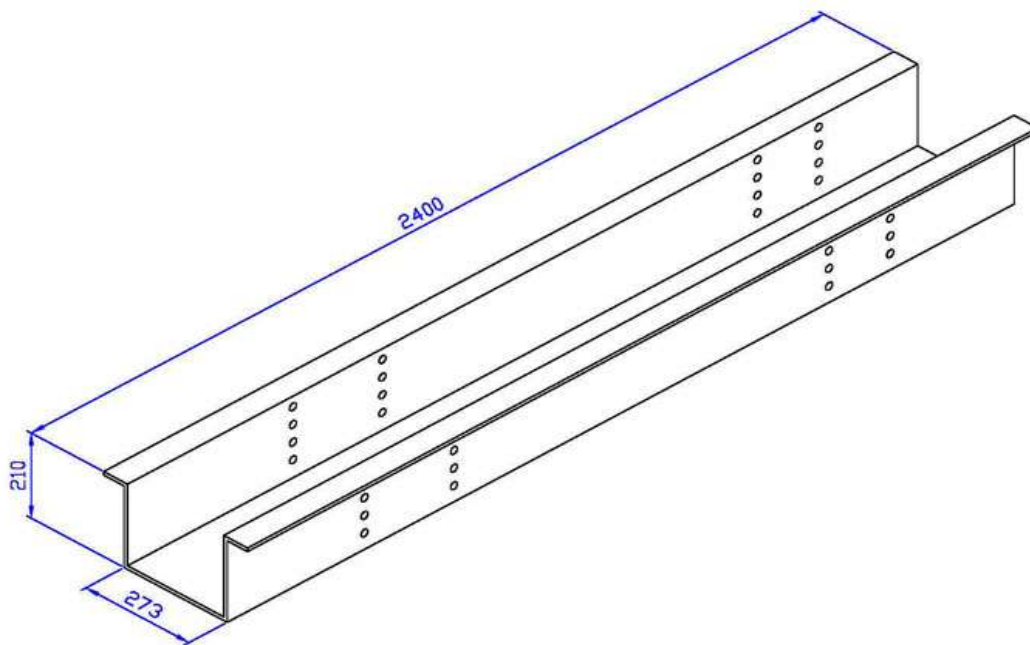
MARCA 117.822	"U" 263x5548
MARK 117.822	"U" 263x5548
MARQUE 117.822	"U" 263x5548



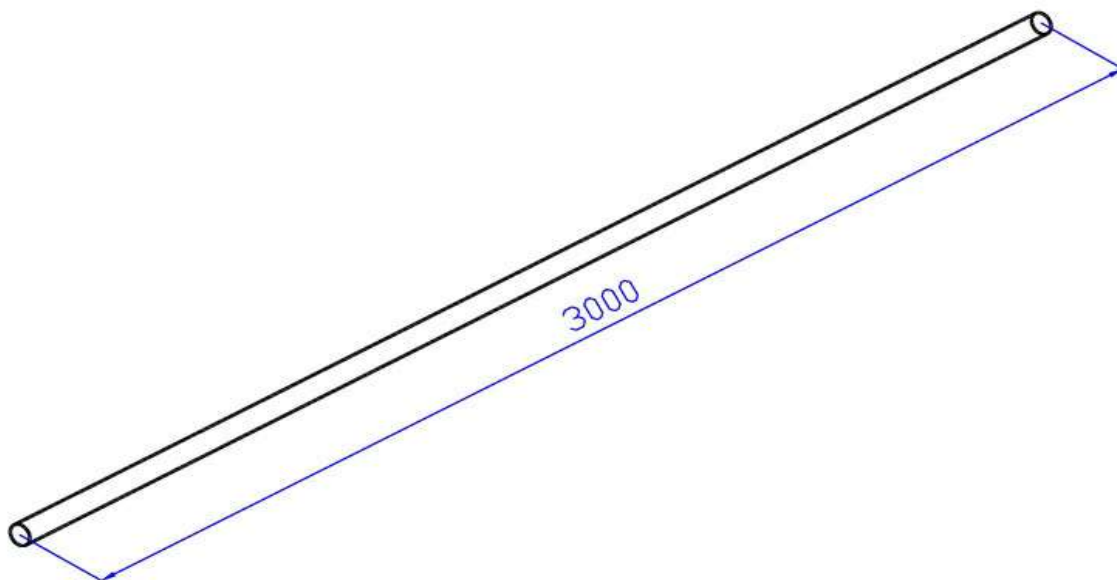
MARCA 117.840	"U" ARRIOSTRAMIENTO 60x50x1.120 mm.
MARK 117.840	"U" BRACING 60x50x1.120 mm.
MARQUE 117.840	"U" CONTREVENTEMENT 60x50x1.120 mm.



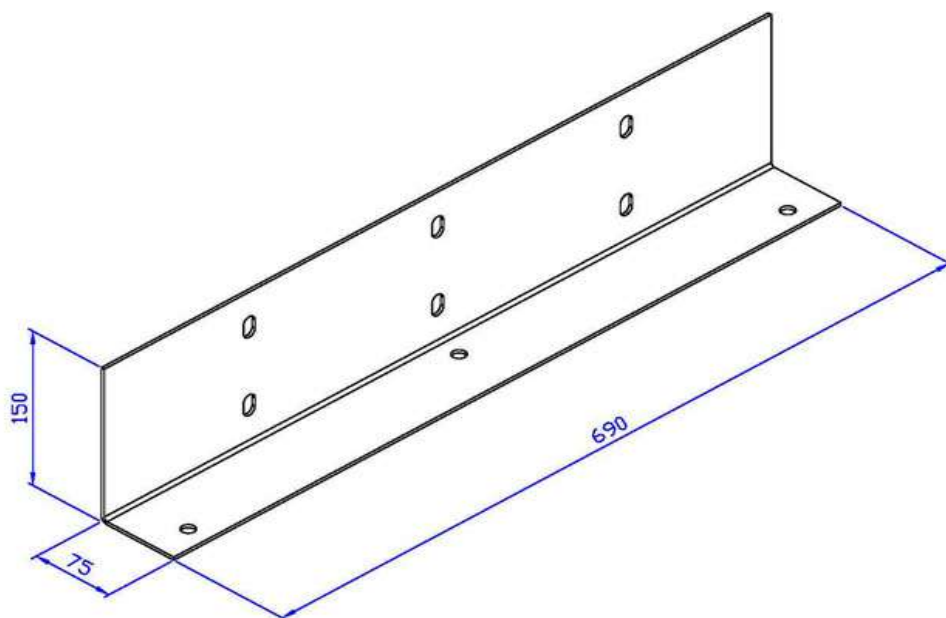
MARCA 117.841	"U" ARRIOSTRAMIENTO 60x50x1.362 mm.
MARK 117.841	"U" BRACING 60x50x1.362 mm.
MARQUE 117.841	"U" CONTREVENTEMENT 60x50x1.362 mm.



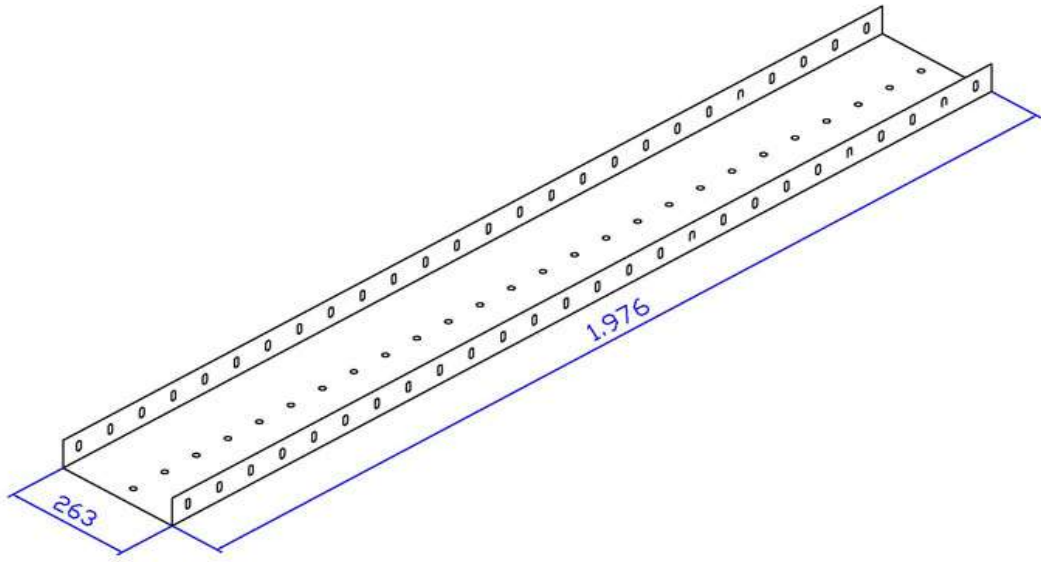
MARCA 117.848	OMEGA 273x210x2400 mm.
MARK 117.848	OMEGA 273x210x2400 mm.
MARQUE 117.848	OMEGA 273x210x2400 mm.



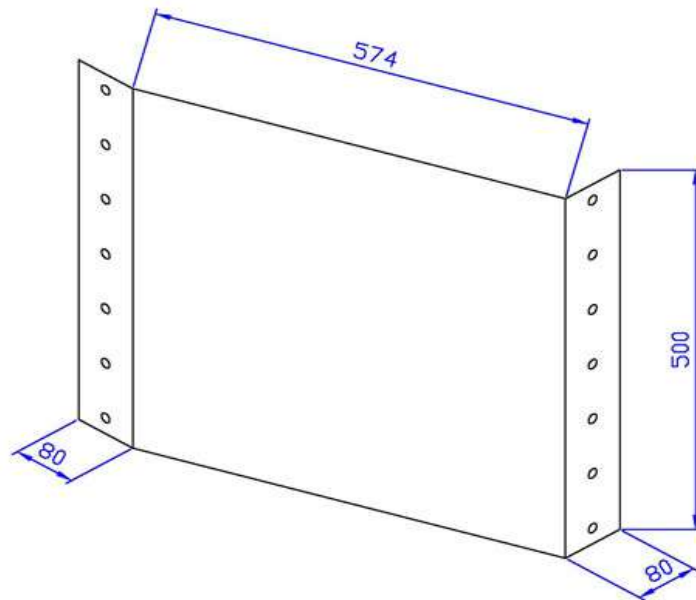
MARCA 118.010 PASAMANOS TUBULAR L=3000 mm.
 MARK 118.010 HANDRAIL TUBE L=3000 mm.
 MARQUE 118.010 RAMPE TUYAU L=3.000 mm.



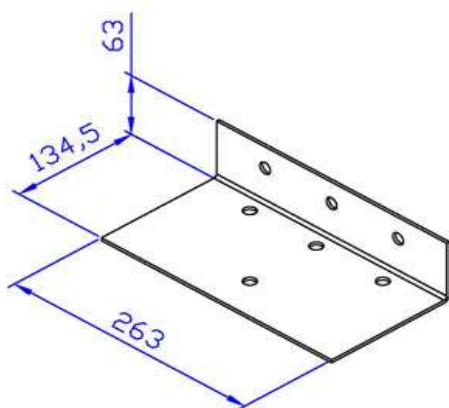
MARCA 118.054 CIERRE PASARELA L=690 mm.
 MARK 118.054 END FOOT PROTECTION L= 690 mm.
 MARQUE 118.054 ANGLE CLOTURE L=690 mm.



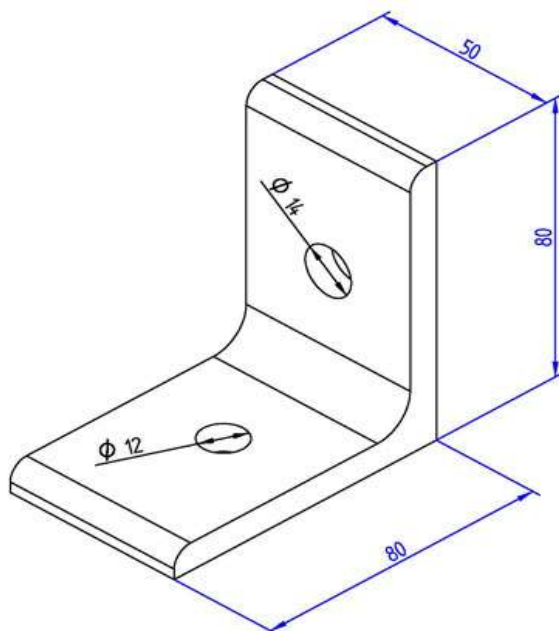
MARCA 118.299	"U" 263x1976
MARK 118.299	"U" 263x1976
MARQUE 118.299	"U" 263x1976



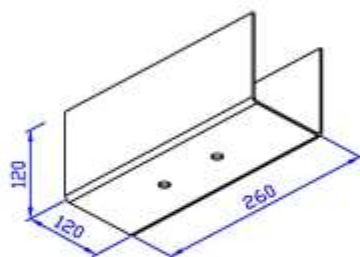
MARCA 118.367	ARRIOSTRAMIENTO ESPECIAL SILO-APOYO
MARK 118.367	SPECIAL BRACING SILO-SUPPORT
MARQUE 118.367	SPECIAL CONTREVENTMENT SILO-APPUI



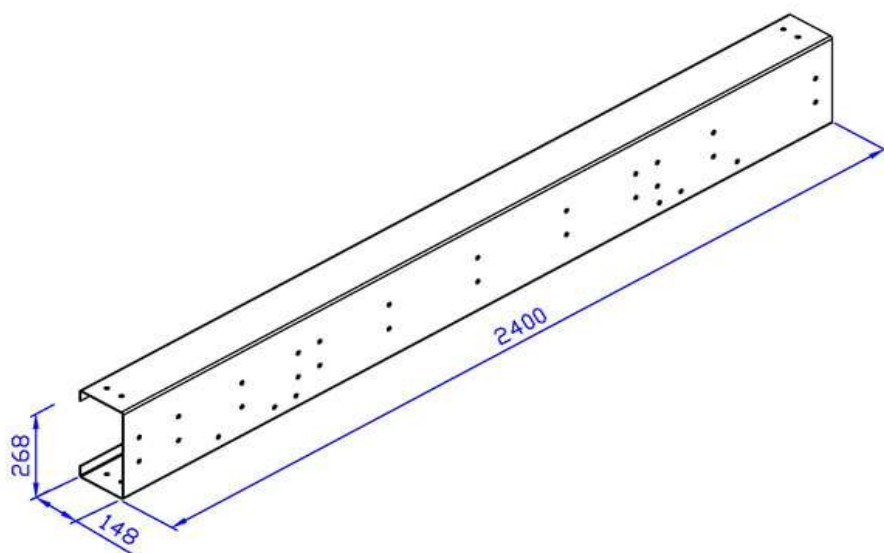
MARCA	118.471	CLIP REFUERZO
MARK	118.471	CLIP REINFORCEMENT
MARQUE	118.471	CLIP RENFORT



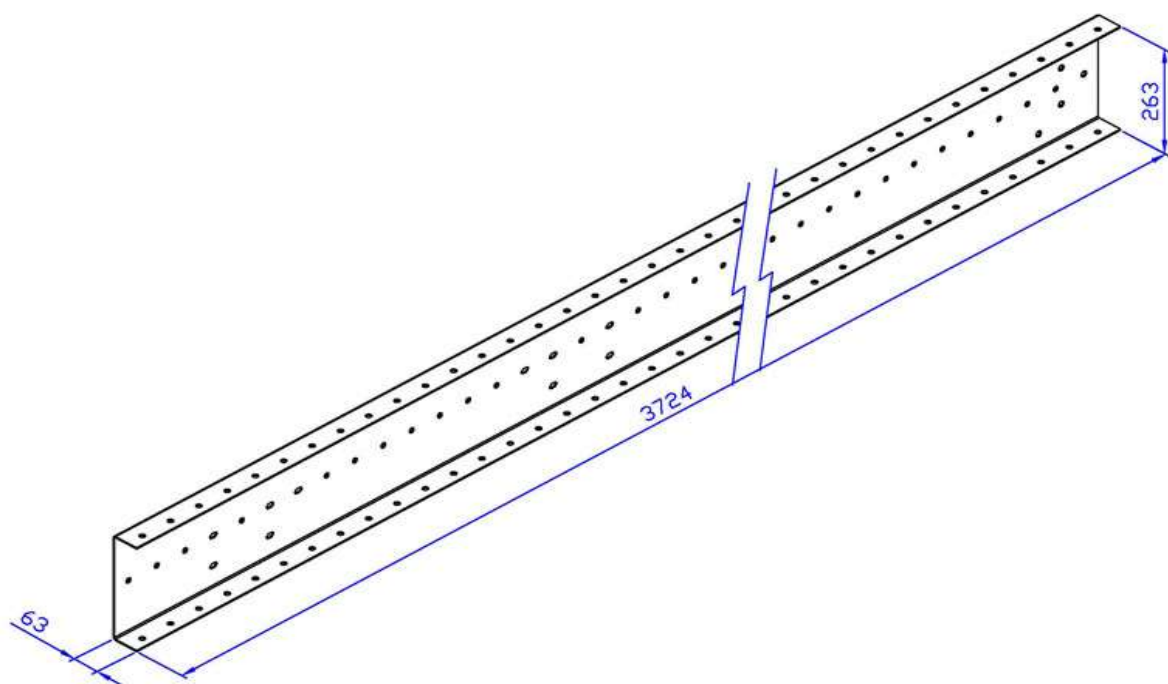
MARCA	118.511	CLIP "L" 80x80x8 mm.
MARK	118.511	CLIP "L" 80x80x8 mm.
MARQUE	118.511	CLIP "L" 80x80x8 mm.



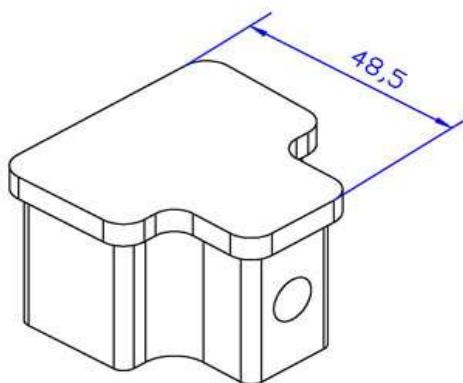
MARCA 118.609A REFUERZO INTERIOR "C" 120x120x260mm.
 MARK 118.609A INSIDE REINFORCEMENT "C" 120x120x260mm.
 MARQUE 118.609A RENFORT INTERIEUR "C" 120x120x260mm.



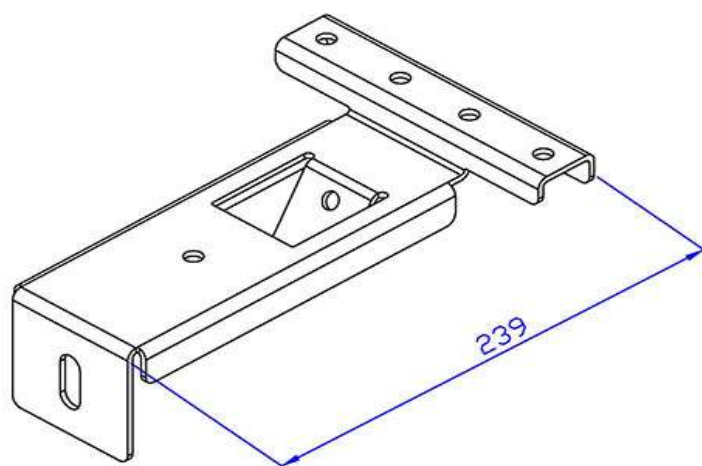
MARCA 118.853 UNION COLUMN PASARELA "C" 268x148x2400mm.
 MARK 118.853 UNION COLUMN CATWALK "C" 268x148x2400mm.
 MARQUE 118.853 UNION COLONNE PASSERELLE "C" 268x148x2400mm.



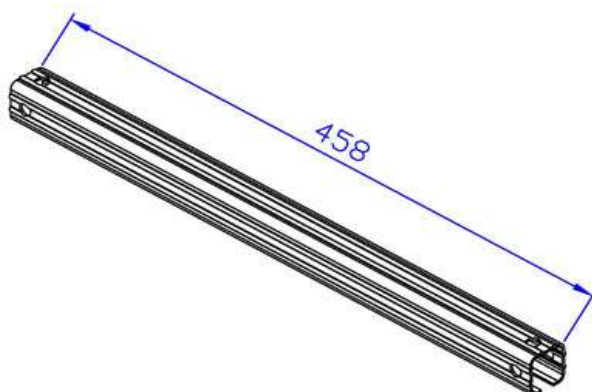
MARCA 119.201	"U" 263x63x3724 mm.
MARK 119.201	"U" 263x63x3724 mm.
MARQUE 119.201	"U" 263x63x3724 mm.



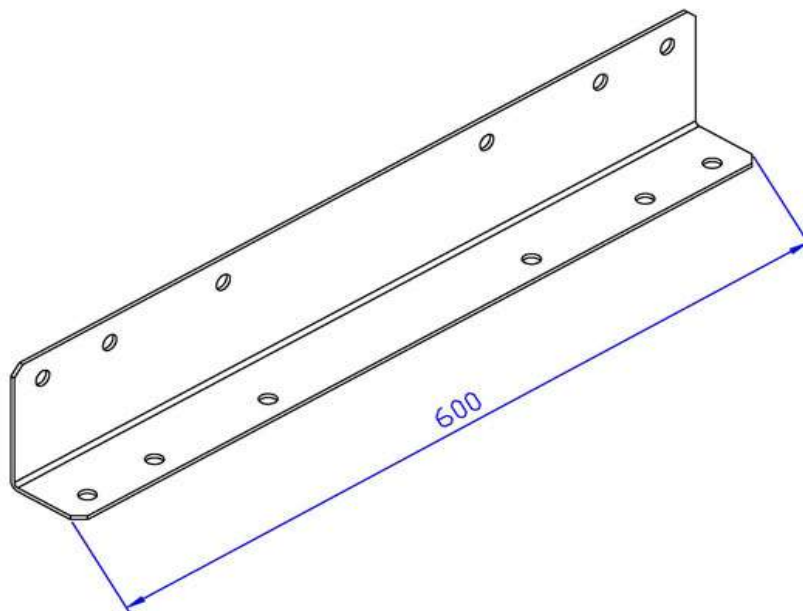
MARCA 119.610	TAPON PLASTICO RAIL ESCALERA
MARK 119.610	PLASTIC COVER FOR LADDER'S RAIL
MARQUE 119.610	COUVERTURE DU PLASTIQUE POUR L'ECHELLE



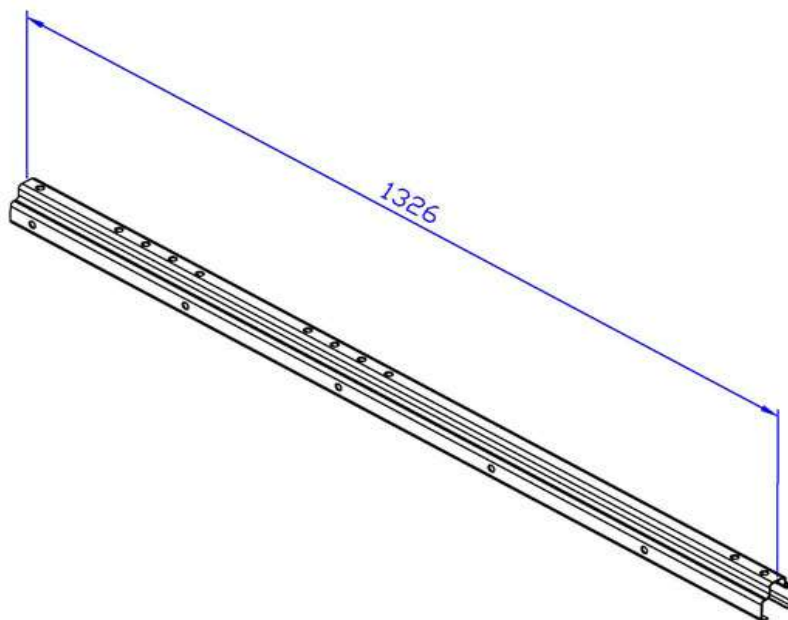
MARCA 119.611	SOPORTE DE RAIL
MARK 119.611	LADDER'S SUPPORT
MARQUE 119.611	SUPPORT D'ECHELLE



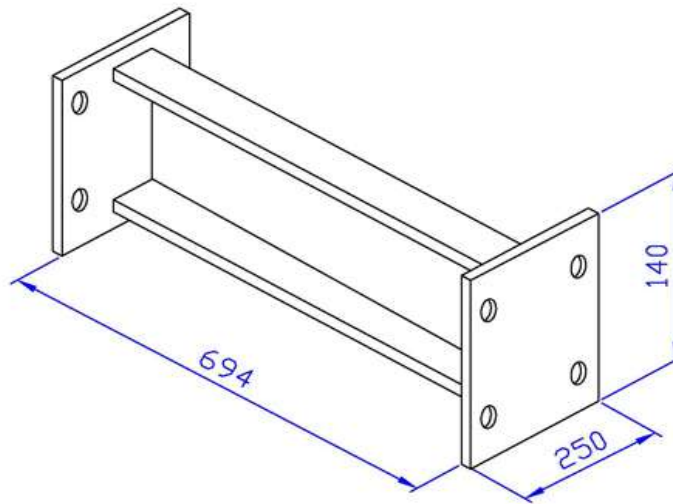
MARCA 119.616	PELDAÑO L= 460mm
MARK 119.616	LADDER RUNG L= 460mm
MARQUE 119.616	MARCHE POUR ECHELLE L= 460mm



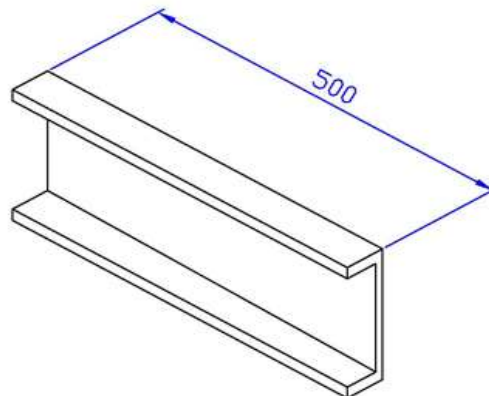
MARCA 119.619	ANGULO SUJECCION ESCALERA A SUELO
MARK 119.619	ANGLE TO FLOOR
MARQUE 119.619	ANGLE AU TERRE



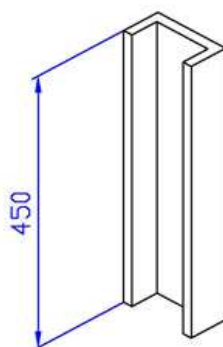
MARCA 119.714	RAIL ESCALERA TERMINAL L=1326 mm
MARK 119.714	LADDER'S TERMINAL RAIL L= 1326mm
MARQUE 119.714	RAIL D'ECHELLE TERMINAL L= 1326mm



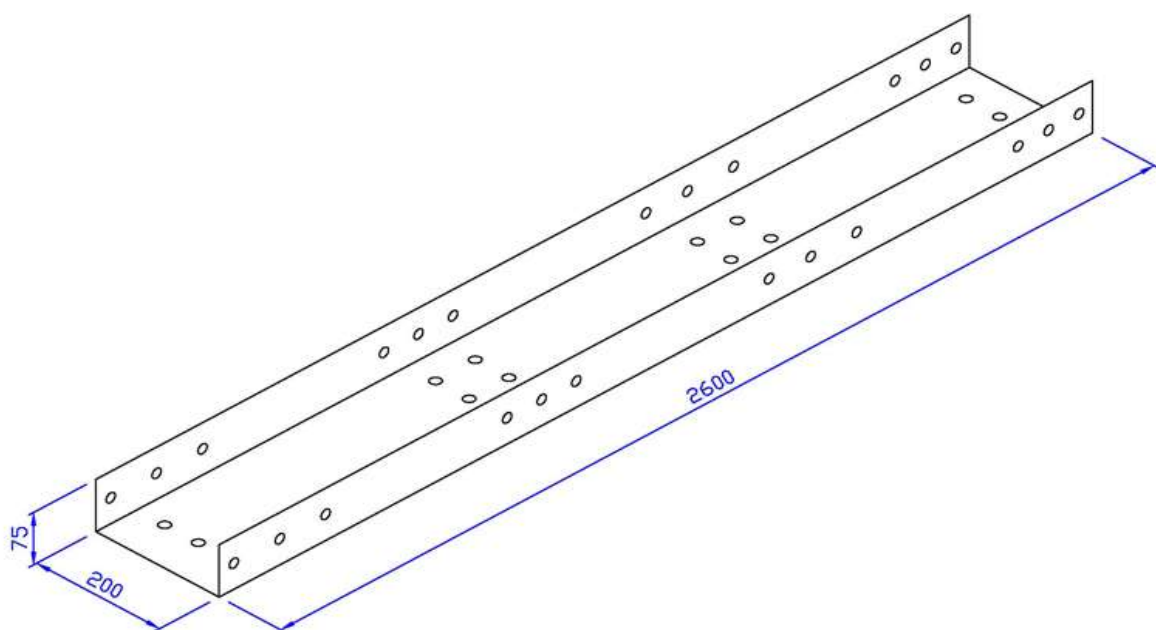
MARCA 120.142	APOYO TRANSPORTADOR EN PASARELA
MARK 120.142	REDLER SUPPORT ON CATWALK
MARQUE 120.142	SUPPORT POUR TRANSPORTEUR



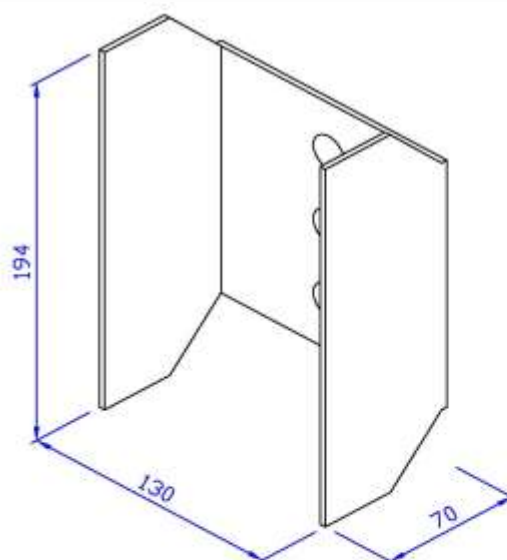
MARCA 120.145	DINTEL TRANSPORTADOR B=700 mm.
MARK 120.145	REDLER LINTEL B=700 mm.
MARQUE 120.145	LINTEAU POUR TRANSPORTEUR B=700 mm.



MARCA 120.148	APOYO VERTICAL H=350 mm.
MARK 120.148	REDLER VERTICAL SUPPORT H=350 mm.
MARQUE 120.148	SUPPORT POUR TRANSPORTEUR H=350 mm.

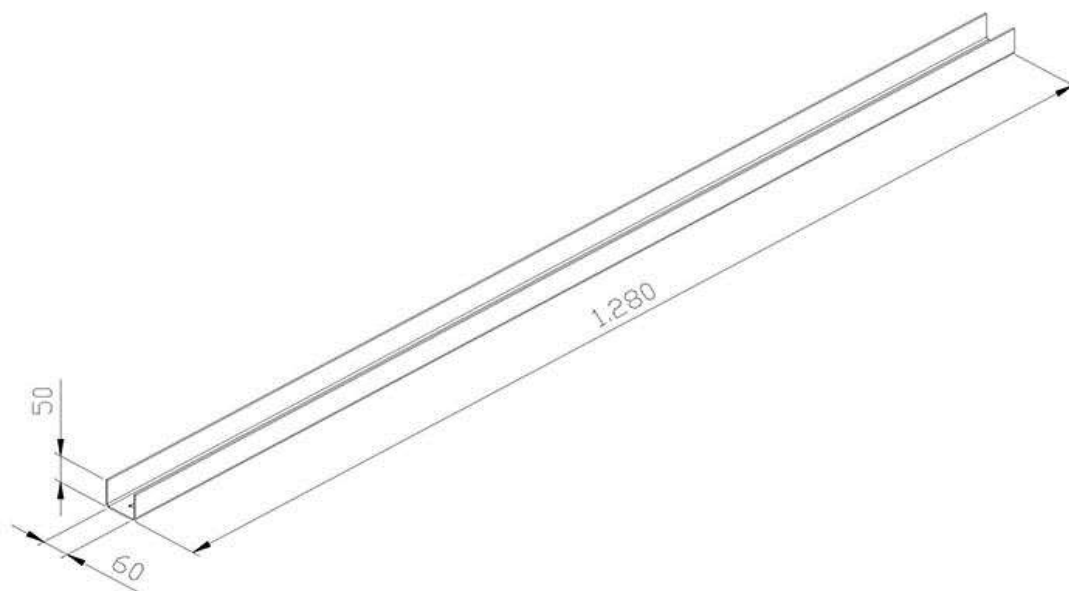


MARCA 120.246	U APOYO CUPULA 200x2600 mm.
MARK 120.246	SUPPORT 200x2600 mm.
MARQUE 120.246	APPUI SUR COUPULE 200x2600 mm.



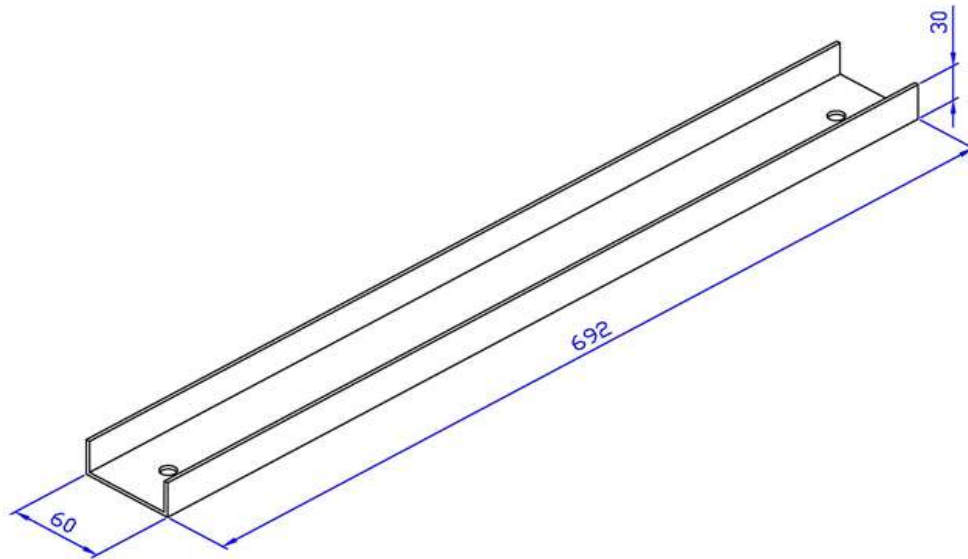
MARCA 120.249
MARK 120.249
MARQUE 120.249

CARTELA LARGUERO APOYO EN CUPULA
 ROOF SUPPORT GUSSET
 GOUSSET POUR APPUI SUR COUPULE

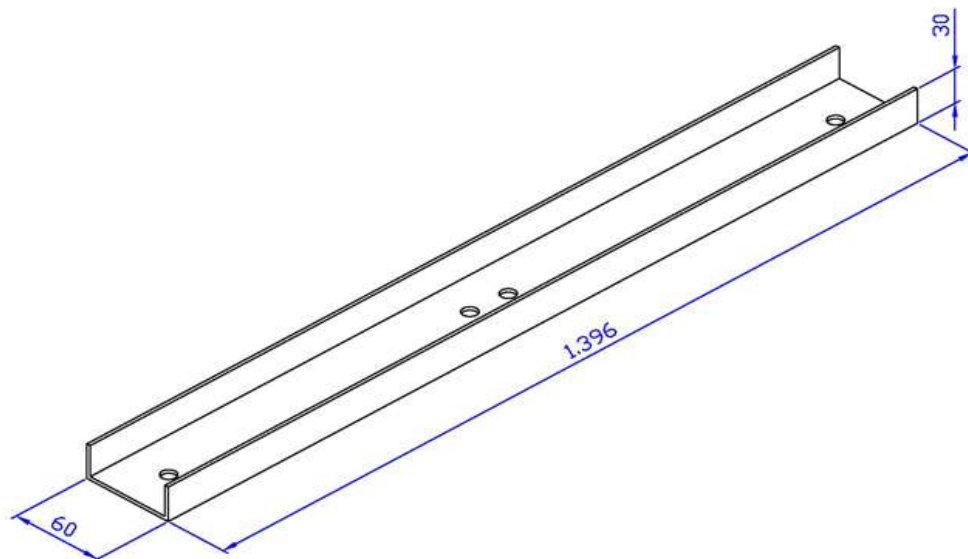


MARCA 120.258
MARK 120.258
MARQUE 120.258

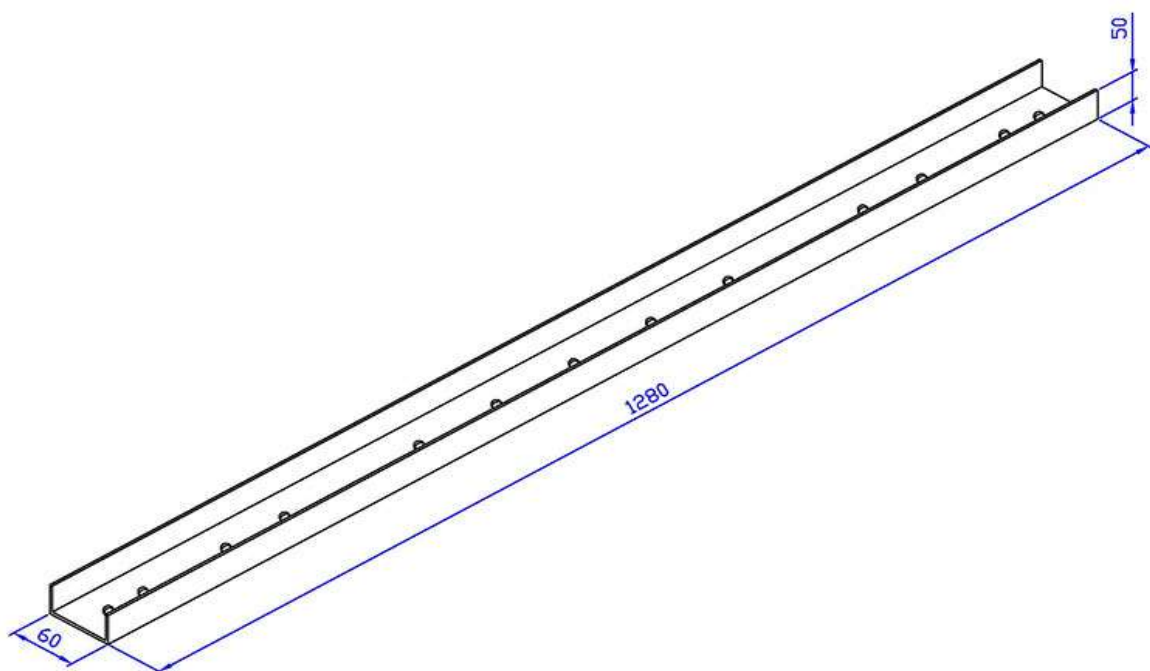
ARRIOSTRAMIENTO L=1.280 mm.
 BRACING L=1.280 mm.
 COTREVENTMENT L=1.280 mm.



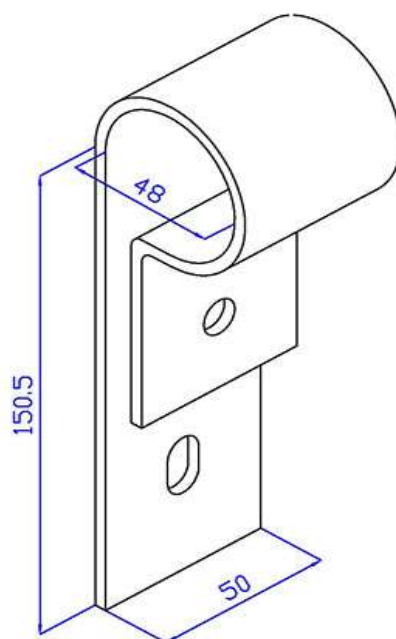
MARCA 120.308	"U" REFUERZO L= 692 mm.
MARK 120.308	"U" REINFORT L= 692 mm.
MARQUE 120.308	"U" REINFORT L= 692 mm.



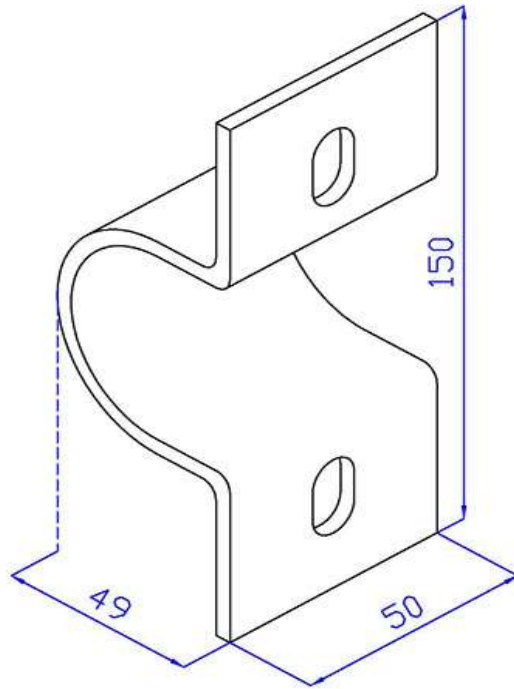
MARCA 120.309	"U" REFUERZO L= 1.396 mm.
MARK 120.309	"U" REINFORT L= 1.396 mm.
MARQUE 120.309	"U" REINFORT L= 1.396 mm.



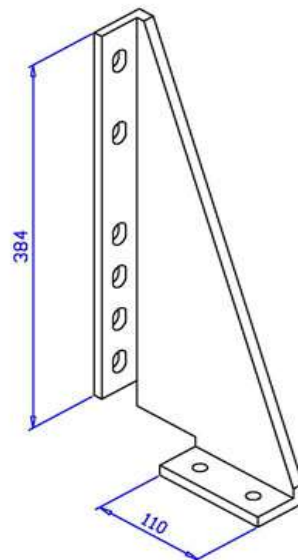
MARCA 120.337 POSTE BARANDILLA L= 1280mm
 MARK 120.337 HANDRAIL BRACKET L= 1280mm
 MARQUE 120.337 POTEAU RAMBARDE L= 1280mm



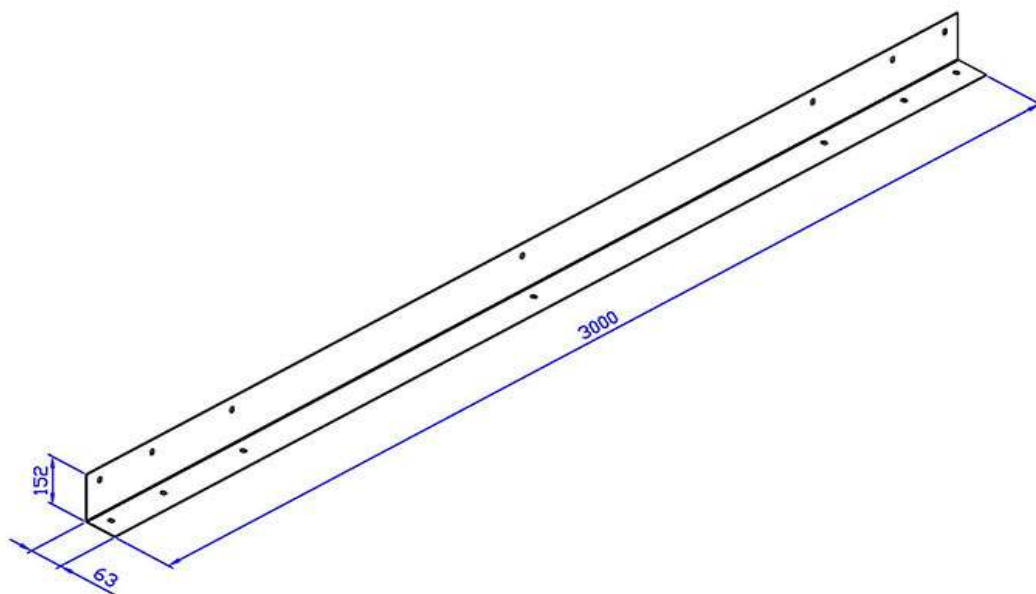
MARCA 120.340 CLIP PASAMANOS TUBULAR
 MARK 120.340 CLIP FOR HANDRAIL TUBE
 MARQUE 120.340 CLIP POUR TUBE DE MAIN



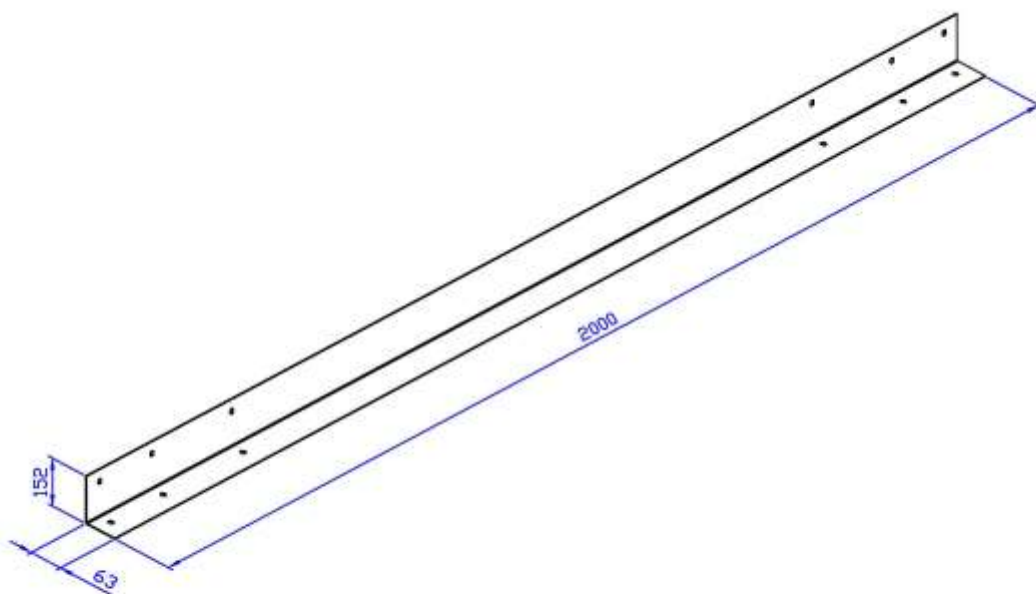
MARCA 120.341 CLIP TUBO SEGURIDAD
MARK 120.341 CLIP FOR SAFETY TUBE
MARQUE 120.341 CLIP TUBE DE SECURITE



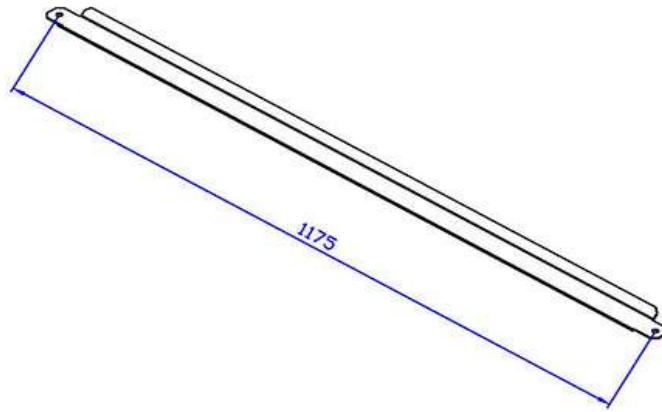
MARCA 121.147 CLIP APOYO-PASARELA
MARK 121.147 CLIP SUPPORT-CATWALK
MARQUE 121.147 CLIP SUPPORT-PASERELLE



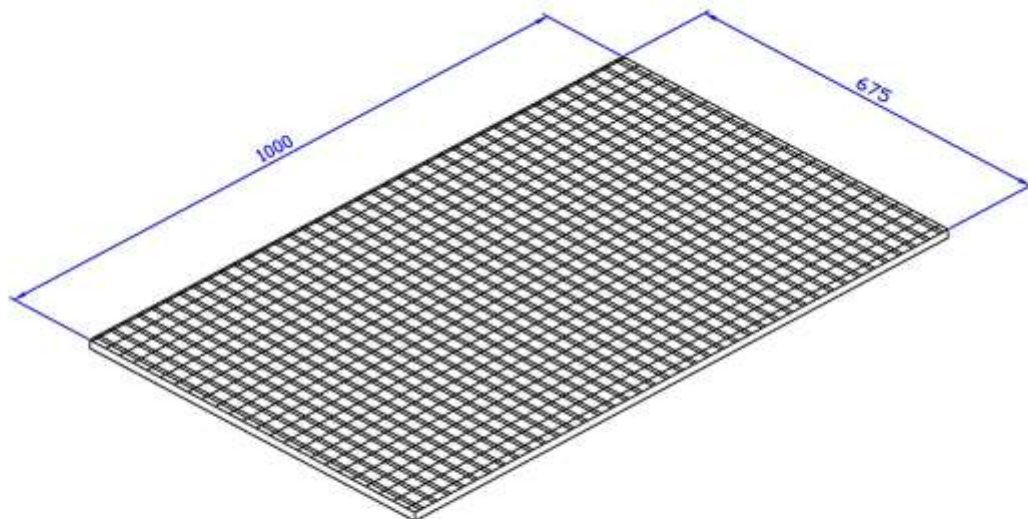
MARCA 121.234 RODAPIE L=3000 mm.
 MARK 121.234 FOOT ANGLE L=3000 mm.
 MARQUE 121.234 ANGLE DE RACORDEMENT L=3000 mm.



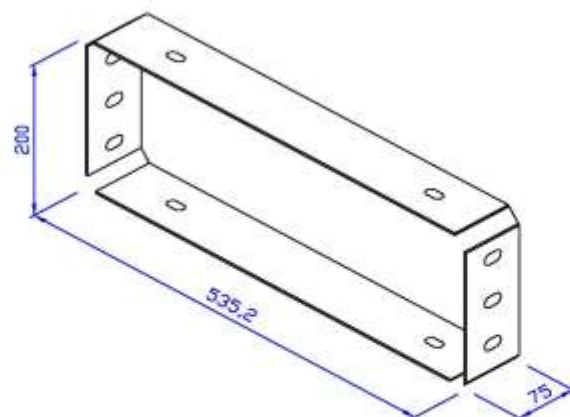
MARCA 121.235 RODAPIE L=2000 mm.
 MARK 121.235 FOOT ANGLE L=2000 mm.
 MARQUE 121.235 ANGLE DE RACORDEMENT L=2000 mm.



MARCA 121.237	PLETINA DE ARRIOSTRAMIENTO L=1175mm
MARK 121.237	BRACING STRIP L=1175mm
MARQUE 121.237	BANDE DE CONTREVENTEMENT L=1175mm



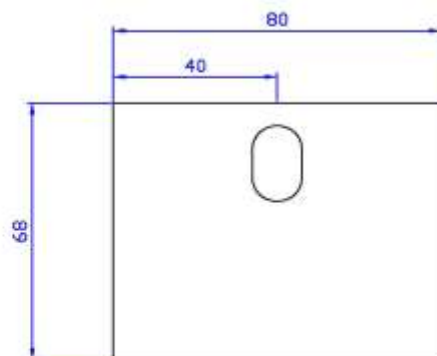
MARCA 121.479	REJILLA 30x30-25x2 L= 675x1.000 mm
MARK 121.479	GRILL 30x30-25x2 L= 675x1.000 mm
MARQUE 121.479	GRILLE 30x30-25x2 L= 675x1.000 mm



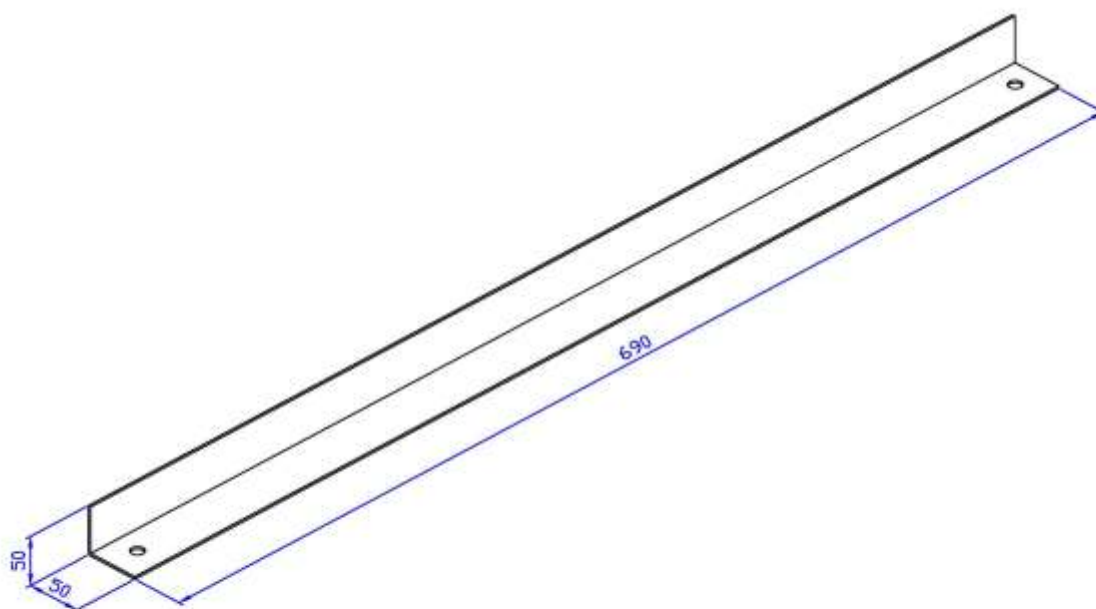
MARCA 121.571	REFUERZO APOYO CÚPULA ESTANDAR "U" 200x535 mm
MARK 121.571	REINFORCEMENT ROOF SUPPORT "U" 200x535mm
MARQUE 121.571	RENFORT APPUI SUR COUPULE "U" 200x535mm



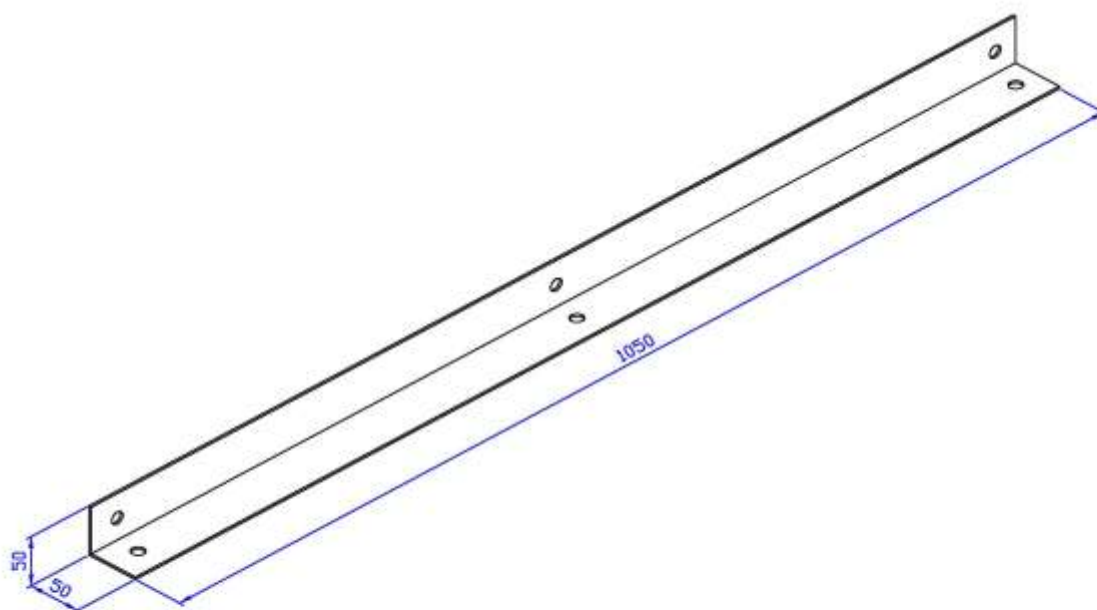
MARCA 121.632	TAPON TUBO D48
MARK 121.632	STOPPER D48
MARQUE 121.632	BOUCHON D48



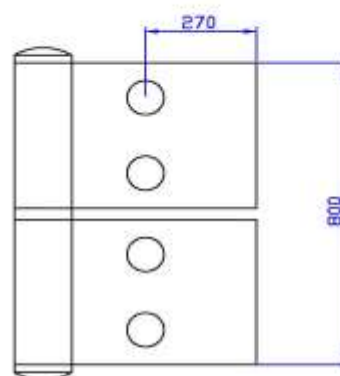
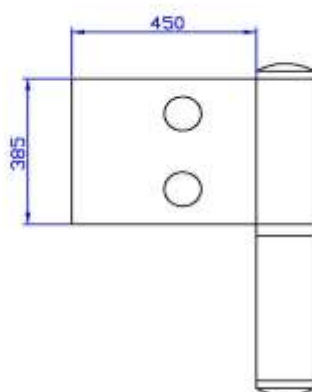
MARCA 122.203	CHAPA EMPALME ANGULO CIERRE
MARK 122.203	SPLICE
MARQUE 122.203	RACCORDEMENT



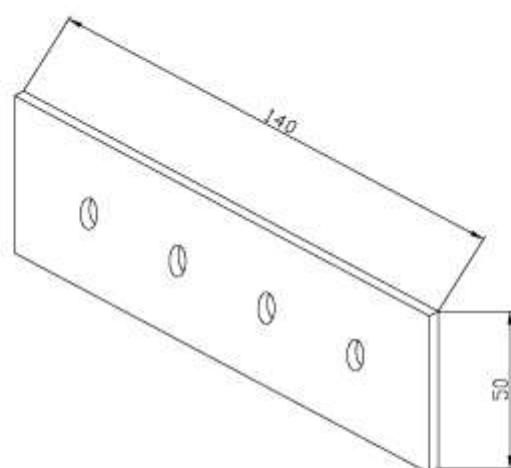
MARCA 122.207	DINTEL PORTILLA
MARK 122.207	LINTEL
MARQUE 122.207	LINTEAU



MARCA 122.208 LATERAL PORTILLA
 MARK 122.208 DOOR SIDE
 MARQUE 122.208 CÔTÉ POUR PORTE



MARCA 122.209 BISAGRA TIPO A
 MARK 122.209 HINGE TYPE A
 MARQUE 122.209 CHARNIERE TYPE A



MARCA 122.332	EMPALME RODAPIE/PISO
MARK 122.332	SPLICE FOOT PROTECTION
MARQUE 122.332	ECLISSE PLINTHE

GENERAL WARRANTY CONDITIONS OF SYMAGA, S.A.

JANUARY 2013

SYMAGA S.A. MANUFACTURES AND SUPPLIES SILOS FOR FREE FLOWING GRAIN STORAGE UNDER MOST MODERN DESIGNS. THE LOAD CALCULATION IN THE SILOS FOLLOWS INTERNATIONAL NORMS LIKE "ANSI-ASAE", "DIN" OR EUROCODE, ALWAYS ACCORDING TO THE SPECIFIC OFFER OR ORDER CONFIRMATION.

SYMAGA WARRANTS ALL PRODUCTS WHICH IT MANUFACTURES TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP UNDER NORMAL USAGE AND CONDITIONS FOR A PERIOD OF 24 MONTHS AFTER DELIVERY, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN WRITING BY SYMAGA PRIOR TO DELIVERY.

IF SYMAGA'S PRODUCTS FAIL TO CONFORM THE ABOVE WARRANTY, AND IF SYMAGA IS INFORMED IN WRITING PRIOR TO THE END OF THE WARRANTY PERIOD, SYMAGA'S ONLY OBLIGATION SHALL BE TO REPAIR OR REPLACE, AT ITS EXPENSE, PRODUCTS THAT, IN SYMAGA'S SOLE JUDGMENT, CONTAIN A MATERIAL DEFECT DUE TO MATERIALS OR WORKMANSHIP.

OFF-CENTER UNLOADING OF SILOS IS NOT APPROVED AND WILL BE STRUCTURALLY DETRIMENTAL TO A GRAIN SILO. ANY OFF-CENTER DISCHARGE OPENINGS SHOULD BE USED FOR THE SOLE PURPOSE OF CLEAN-OUT THE SILO AFTER CENTER DISCHARGE HAS BEEN COMPLETED TO THE GRAINS ANGLE OF REPOSE. THE USER IS RESPONSIBLE TO GUARANTEE THE PROPER USE OF ANY OFF-CENTER DISCHARGE OPENING. ANY DAMAGES OCCURRED DUE AN OFF-CENTER UNLOADING SHALL NOT BE COVERED BY SYMAGA'S STRUCTURAL WARRANTY.

ALL DELIVERY AND SHIPMENT CHARGES TO AND FROM SYMAGA'S FACTORY WILL BE PURCHASER'S RESPONSIBILITY. EXPENSES INCURRED BY OR ON BEHALF OF THE PURCHASER WITHOUT PRIOR WRITTEN AUTHORIZATION FROM SYMAGA SHALL BE THE SOLE RESPONSIBILITY OF THE PURCHASER.

COMPONENTS MANUFACTURED BY OTHERS, SUCH AS MOTORS, FANS, SWEEP AUGERS, CONTROL SYSTEMS, OR OTHER TRADE ACCESORIES ARE ONLY WARRANTED TO THE EXTENT WARRANTED BY THEIR RESPECTIVE MANUFACTURERS.

SYMAGA DOES NOT WARRANT AGAINST, OR SHALL NOT LIABLE FOR, LOSSES OR DAMAGES ARISING OUT OF CIRCUMSTANCES NOT SUBJECT TO ITS CONTROL, SUCH AS: OCCURENCES DURING SHIPMENT, HANDLING OR STORAGE; IMPROPER INSTALLATION, USE OR MAINTENANCE; ACTS OF THE OWNER; DESIGN, ENGINEERING OR INSTALLATION PROCEDURES NOT APPROVED BY SYMAGA IN WRITING .

SYMAGA SHALL NOT BE LIABLE FOR LOSS OR DAMAGE, INCLUDING WITHOUT LIMITATION DAMAGE TO THE CONTENTS OF A STRUCTURE, LOSS OF USE OF A PRODUCT, DAMAGE TO OTHER PROPERTY. ESPECIALLY SYMAGA SHALL NOT BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOSS OF ANTICIPATED PROFITS OR BENEFITS.

FURTHERMORE FOLLOWING CONDITIONS SHALL APPLY:

LIMITED MATERIAL WARRANTY GALVANIZED COATED SHEET STEEL PROTECTION, 600 GR/M² (Z-600)

GALVANISED COATED SHEET STEEL, PROTECTION Z 600 ACCORDING UNE- EN -36130 , SOLD FOR USE AS STEEL SILO COMPONENTS, WILL NOT RUPTURE, FAIL STRUCTURALLY OR PERFORATE WITHIN A PERIOD OF 18 MONTHS AFTER SHIPMENT FROM OUR FACTORY DUE TO NORMAL ATMOSPHERIC CORROSION. THIS WARRANTY ONLY COVERS THE MATERIAL AND NOT THE INSTALLATION.

THE MANUFACTURER WARRANTS ONLY THAT ITS PRODUCTS ARE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP ON THE DATE OF SHIPMENT FROM ITS PLANT.

THIS WARRANTY DOES NOT APPLY TO SHEETS EXPOSED AT ANY TIME TO CORROSIVE OR AGGRESSIVE ATMOSPHERIC CONDITIONS, INCLUDING BUT NOT LIMITED TO:

- A) AREAS SUBJECT TO CONSTANT SPRAYING OF EITHER SALT OR FRESH WATER.
- B) AREAS SUBJECT TO FALLOUT OR EXPOSURES TO CORROSIVE CHEMICALS, ASH, FUMES, CEMENT DUST OR ANIMAL WASTE.
- C) AREAS SUBJECT TO WATER RUN-OFF FROM LEAD OR COPPER FLASHING OR AREAS IN METALLIC CONTACT WITH LEAD OR COPPER.
- D) CONDITIONS OR CIRCUMSTANCES WHERE CORROSIVE FUMES OR CONDESATES ARE GENERATED OR RELEASED INSIDE OF SILOS.
- E) TECHNICALLY THE LIFE OF THE GALVANIZATION IS REGULATED BY THE EUROPEAN STANDARDS ISO 9223, 9224 AND 9225

ISO – 9223: CORROSION OF METALS AND ALLOYS – CORROSIVITY OF ATMOSPHERES – CLASSIFICATION

ISO – 9224: CORROSION OF METALS AND ALLOYS – CORROSIVITY OF ATMOSPHERES – GUIDING VALUES FOR THE CORROSIVITY CATEGORIES

ISO – 9225: CORROSION OF METALS AND ALLOYS – CORROSIVITY OF ATMOSPHERES – MEASUREMENT OF POLLUTION.

THIS WARRANTY DOES NOT APPLY IN THE EVENT OF:

- A) MECHANICAL, CHEMICAL OR OTHER DAMAGE SUSTAINED DURING THE SHIPMENT, STORAGE, ERECTION, OR AFTER ERECTION.
- B) DAMAGE CAUSED BY IMPROPER SCOURING OR CLEANING PROCEDURES.
- C) PRESENCE OF CORROSIVE DAMPS OR MATERIALS IN CONTACT WITH OR CLOSE PROXIMITY TO THE SHEETS.
- D) DETERIORATION OF SHEETS CAUSED DIRECTLY OR INDIRECTLY BY OVERDRIVING THE BOLTS.
- E) FLYING, BLOWN, OR FALLING OBJECTS, EXPLOSION, FIRE, ACTS OF GOD, OR OTHER SIMILAR EXTERNAL FORCES BEYOND SYMAGA REASONABLE CONTROL.
- F) IMPROPER ERECTION OR CONSTRUCTION METHODS.
- G) THE GALVANIZED MATERIALS LEAVE OUR PLANT IN PRIME CONDITION. DAMAGE CAUSED BY WET OR UNPROPER STORAGE IS NOT COVERED BY THE WARRANTY. STORE MATERIALS IN DRY HIGH GROUND UNDER COVERED AREA, ELEVATED ON WOOD BLOQUIING. DO NOT COVER WITH PLASTIC OR TARPULINS SO AS TO PREVENT FREE AIR CIRCULATION. INSPECT BUNDLES DAILY FOR MOISTURE. IF BUNDLES CONTAINS MOISTURE, IT SHALL BE IMMEDIATELY OPENED AND DRIED.

THIS WARRANTY SHALL BE SUBJECT TO THE STIPULATIONS, LIMITATIONS AND CONDITIONS HEREIN AFTER SET FORTH:



- A) SYMAGA'S LIABILITY FOR BREACH OF THIS WARRANTY SHALL BE LIMITED EXCLUSIVELY TO REPAIRING DEFECTIVE SHEETS OR AT SYMAGA'S SOLE OPTION, OF FURNISHING F.O.B. SYMAGA'S PLANT SUFFICIENT REPLACEMENT SHEETS FOR THE DEFECTIVE PIECES.
- B) SYMAGA SHALL NOT IN ANY EVENT BE LIABLE FOR THE COST OF LABOUR TO REPLACE AND DEFECTIVE SHEET OR FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES TO ANYONE BY REASON OF THE FACT THAT SUCH SHEETS SHALL HAVE BEEN DEFECTIVE.
- C) TITLE TO ANY REPLACED MATERIAL SHALL PASS TO SYMAGA.
- D) CLAIMS MUST BE PROMPTLY REPORTED IN WRITING TO SYMAGA, AND SYMAGA SHALL BE GIVEN A REASONABLE OPPORTUNITY TO INSPECT THE SHEETS CLAIMED TO BE DEFECTIVE. ADEQUATE IDENTIFICATION OF THE MATERIAL INVOLVED IN THE CLAIM, INCLUDING DATE OF INSTALLATION, INVOICE NUMBER AND DATE OF SHIPMENT MUST BE ESTABLISHED BY THE BUYER.
- E) SYMAGA DOES NOT WARRANT ANY PART, PRODUCT OR MATERIAL TO MEET LOCAL, MUNICIPAL OR STATE ORDINANCES, CODES LAWS OR REGULATIONS.
- F) THE BUYER SHALL EXERCISE DILIGENCE IN INSPECTION OF SHEETS AS RECEIVED FROM SYMAGA SO AS TO MITIGATE REPAIR OR REPLACEMENT.
- G) THIS WARRANTY SHALL EXTEND ONLY TO THE NAMED OWNER, SUCH NAMED OWNER WITHOUT THE WRITTEN CONSENT OF SYMAGA MAY NOT MAKE THIS WARRANTY SUBJECT TO ANY ASSIGNMENT OR TRANSFER.
- H) SYMAGA RESERVES THE RIGHT TO TERMINATE THIS WARRANTY AT ANY TIME, (EXCEPT AS TO ORDERS ALREADY ACCEPTED) UPON THE GIVING OF WRITING NOTICE THERE OF.
- I) WARRANTY DOES NOT COVER DAMAGE OR LOSS DURING SHIPMENT OF THE SYMAGA MATERIAL.
- J) THE OBLIGATION OF SYMAGA UNDER THIS WARRANTY SHALL NOT ARISE UNLESS SYMAGA IS NOTIFIED AND THE WARRANTY IS PRESENTED TOGETHER WITH A WRITING STATEMENT SPECIFYING THE CLAIM OR FAILURE WITHIN THIRTY (30) DAYS AFTER A FAILURE IS FIRST CALLED TO THE ATTENTION OF THE OWNER AND NOT LATER THAN THE EXPIRATION OF THE APPLICABLE WARRANTY PERIOD.
- K) SYMAGA'S LIABILITY FOR MISSING PARTS IS 15 DAYS. MATERIALS AND BUNDLES MUST BE CHECKED IMMEDIATELY ON ARRIVAL TO INSTALLATION SITE BY PURCHASER ALONG WITH THE PACKING LIST PROVIDED BY SYMAGA.

RUST DAMAGE DUE TO IMPROPER STORAGE ISN'T COVERED BY SYMAGA'S WARRANTY

PROPER STORAGE OF GRAIN SILOS

MATERIALS PRIOR TO CONSTRUCTION TO PREVENT WET STORAGE STAIN:

WET STORAGE STAIN (RUST) WILL DEVELOP WHEN CLOSELY PACKED BUNDLES OF GALVANIZED MATERIAL SUCH AS SIDEWALL, ROOF AND HOPPER SHEETS AND HOPPER SILO LEGS HAVE MOISTURE PRESENT FROM ANY SOURCE. ROOF AND SIDEWALL BUNDLES SHOULD BE INSPECTED ON ARRIVAL FOR THE PRESENCE OF MOISTURE. IF MOISTURE IS PRESENT, MOISTURE MUST NOT BE PERMITTED TO REMAIN BETWEEN THE SHEETS. IN THE CASE OF MOISTURE PRESENCE, SHEETS OR PANELS SHOULD BE SEPARATED IMMEDIATELY, WIPED DOWN, DRIED AND SPRAYED WITH A LIGHT OIL OR DIESEL FUEL.

WHERE POSSIBLE, SIDEWALL BUNDLES, ROOF SHEETS AND OTHER CLOSELY PACKED MATERIALS (E.G. HOPPER SHEETS AND HOPPER SILO LEGS) SHOULD BE STORED IN A DRY, CLIMATE CONTROLLED BUILDING. STORAGE INSIDE A DRY BUILDING SHOULD BE DONE IF AT ALL POSSIBLE. WHERE OUTDOOR STORAGE IS UNAVOIDABLE, THE MATERIALS SHOULD BE RAISED OUT OF CONTACT FROM THE GROUND OR VEGETATION. STACKING AND SPACING MATERIALS SHOULD NOT BE CORROSIVE OR WET. MATERIALS MUST BE PROTECTED FROM THE WEATHER. WEATHER PROTECTION THAT PERMITS MORE AIR MOVEMENT AROUND THE BUNDLES IS BEST.

THE STORAGE METHOD OF THE ROOF BUNDLES AND SIDEWALL SHEETS MAY ALSO HELP MINIMIZE MOISTURE PRESENCE. ROOF BUNDLES SHOULD BE STORED INCLINED. THE BUNDLES SHOULD BE STORED AND SECURED IN A SAFE & STABLE MANNER. TURNING THE BUNDLES OVER AND STORING WITH THE CENTER OF THE DOME "UP" LIKE AN ARCH IS AN OPTION. SIDEWALL BUNDLES MAY BE STORED ON EDGE, HOWEVER THESE BUNDLES SHOULD BE SECURED IN SUCH A WAY AS THEY CANNOT FALL OVER AND CAUSE INJURY.

SHOULD "WHITE RUST" OR "WET STORAGE STAIN" OCCUR, CONTACT THE MANUFACTURER IMMEDIATELY CONCERNING METHODS TO MINIMIZE THE ADVERSE EFFECT UPON THE GALVANIZED COATING.

PLASTILINE / SEALANT FOR SILO JOINTS HAS TO BE STORED UNDER DRY CONDITIONS BETWEEN + 5° AND +20 °C.



GENERAL SAFETY STATEMENT

Our principal concern is your safety and the safety of others associated with grain handling equipment. This manual is to help you understand safe operating procedures and some problems which may be encountered by the operator and other personnel.

As owner and/or operator, it is your responsibility to know what requirements, hazards and precautions exist and inform all personnel associated with the equipment or in the area. Safety precautions may be required from the personnel.

Avoid any alterations to the equipment. Such alterations may produce a very dangerous situation, where serious injury or death may occur.

You should consider the location of the bin site relative to power line locations or electrical transmission equipment. We recommend you contact your local power company to review your installation plan or for information concerning required equipment clearance.

Clearance of portable equipment that may be taken to the bin site should be reviewed and considered as well. Any electrical control equipment in contact with the bin should be properly grounded and installed in accordance with National Electric Code provisions and other local or national codes.

This product is intended for the use of grain storage only. Any other use is a misuse of the product!

This product has sharp edges! These sharp edges may cause serious injury. To avoid injury, handle sharp edges with caution and use proper protective clothing and equipment at all times.

Sidewall bundles or sheets must be stored in a safe manner. The safest method of storing sidewall bundles is laying horizontally with the arch of the sheet upward or over like a dome.

Sidewall sheets stored on edge must be secured in a way that they cannot fall over and cause injury. Care should be taken in the handling and movement of sidewall bundles.

Personnel operating or working around equipment should read this manual. This manual must be delivered with equipment to its owner. Failure to read this manual and its safety instructions is a misuse of the equipment.

To avoid anyone becoming caught or trapped by grain, do NOT empty the silo whenever there are people inside it.

Keep hands, feet and clothing away from moving parts.

Fall from grain bins at any height can and will cause injury. Make sure all needed safety measures are taken.

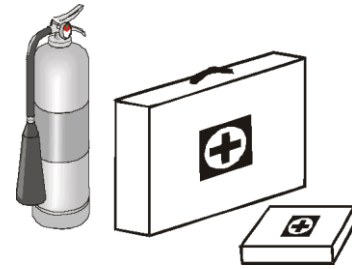
PROTECTION EQUIPMENT

PREPARE FOR EMERGENCIES

Be prepared if fire starts

Keep a first aid kit and fire extinguisher handy

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone



Keep emergency Equipment Quickly Accessible

WEAR PROTECTIVE CLOTHING

Wear close fitting clothing and safety equipment appropriate to the job.

Safety glasses should be worn at all times to protect eyes from debris.

Wear gloves to protect your hands from sharp edges on plastic or steel parts.

A respirator may be needed if a hog house has poor ventilation. Waste fumes can be toxic.

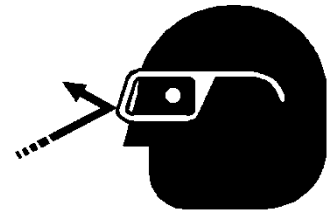
Wear hard hat and steel toe boots to help protect your head and toes from falling debris.

Remove all jewelry.

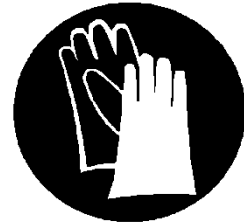
Tuck in any loose or dangling shoe strings.

Long hair should be tied up and back.

Eye protection



Gloves



Steel Toe Boots

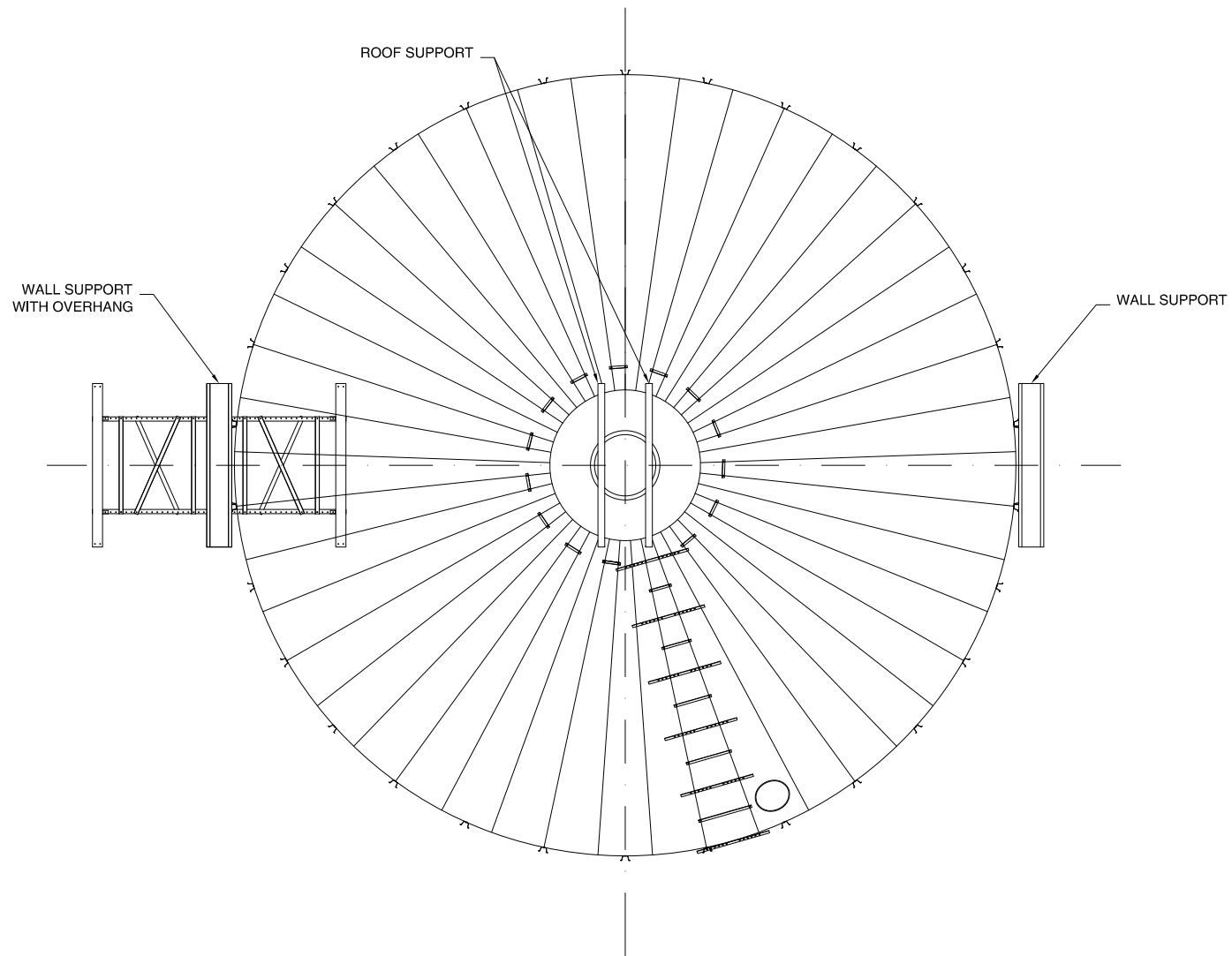


Respirator

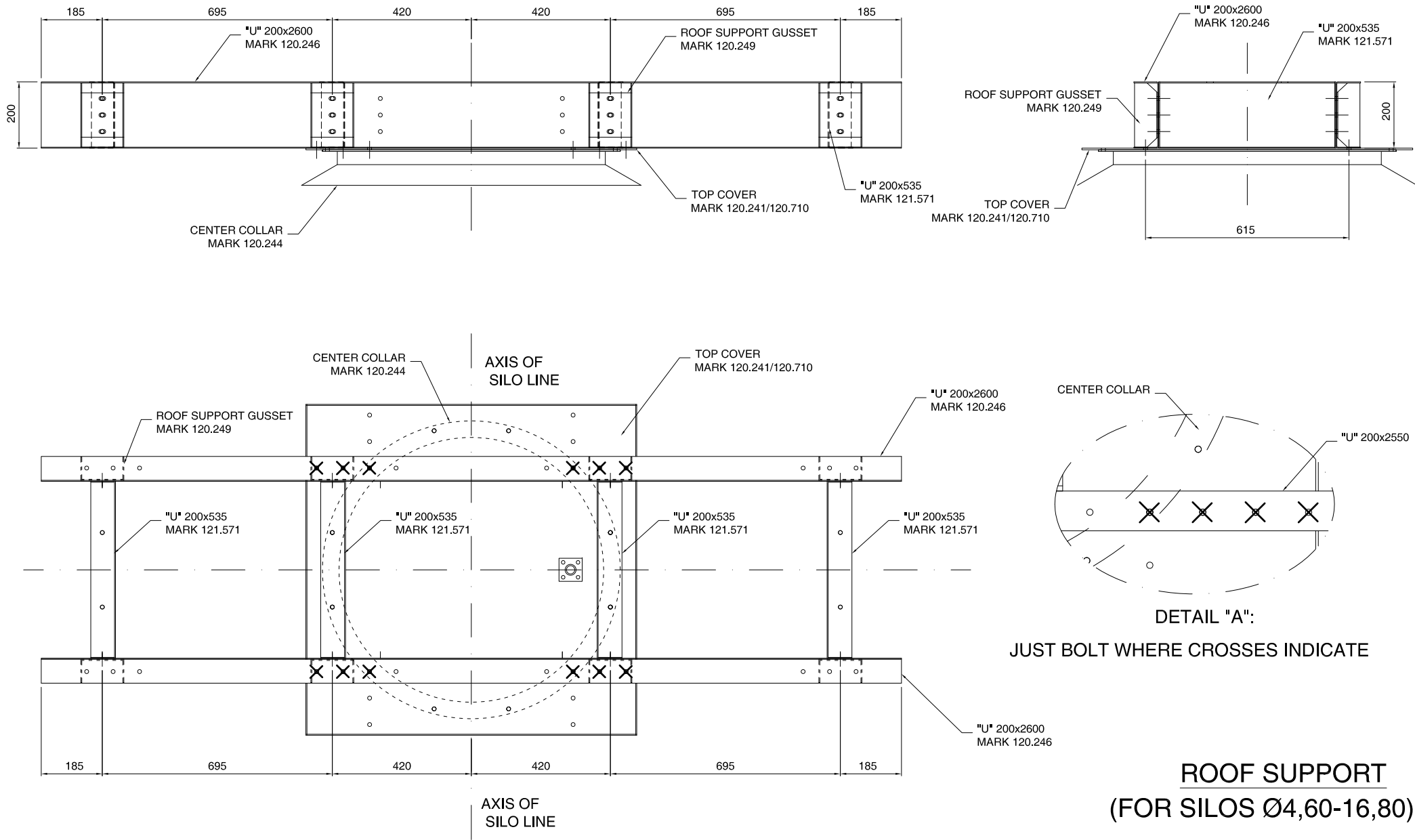


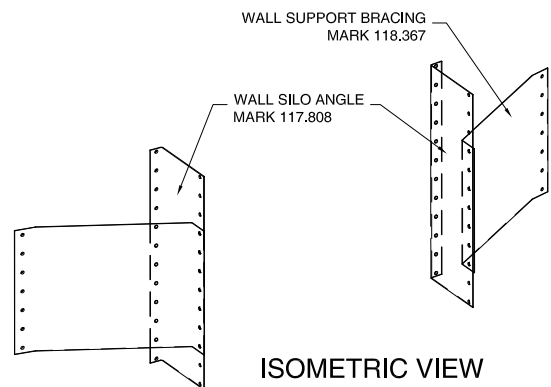
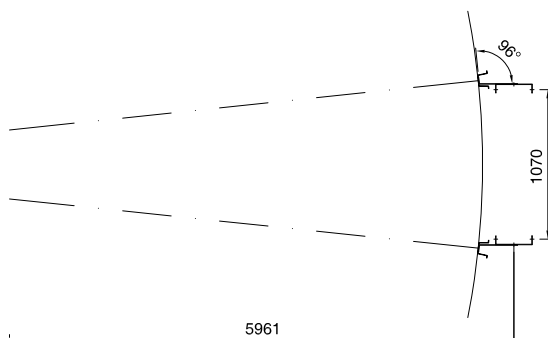
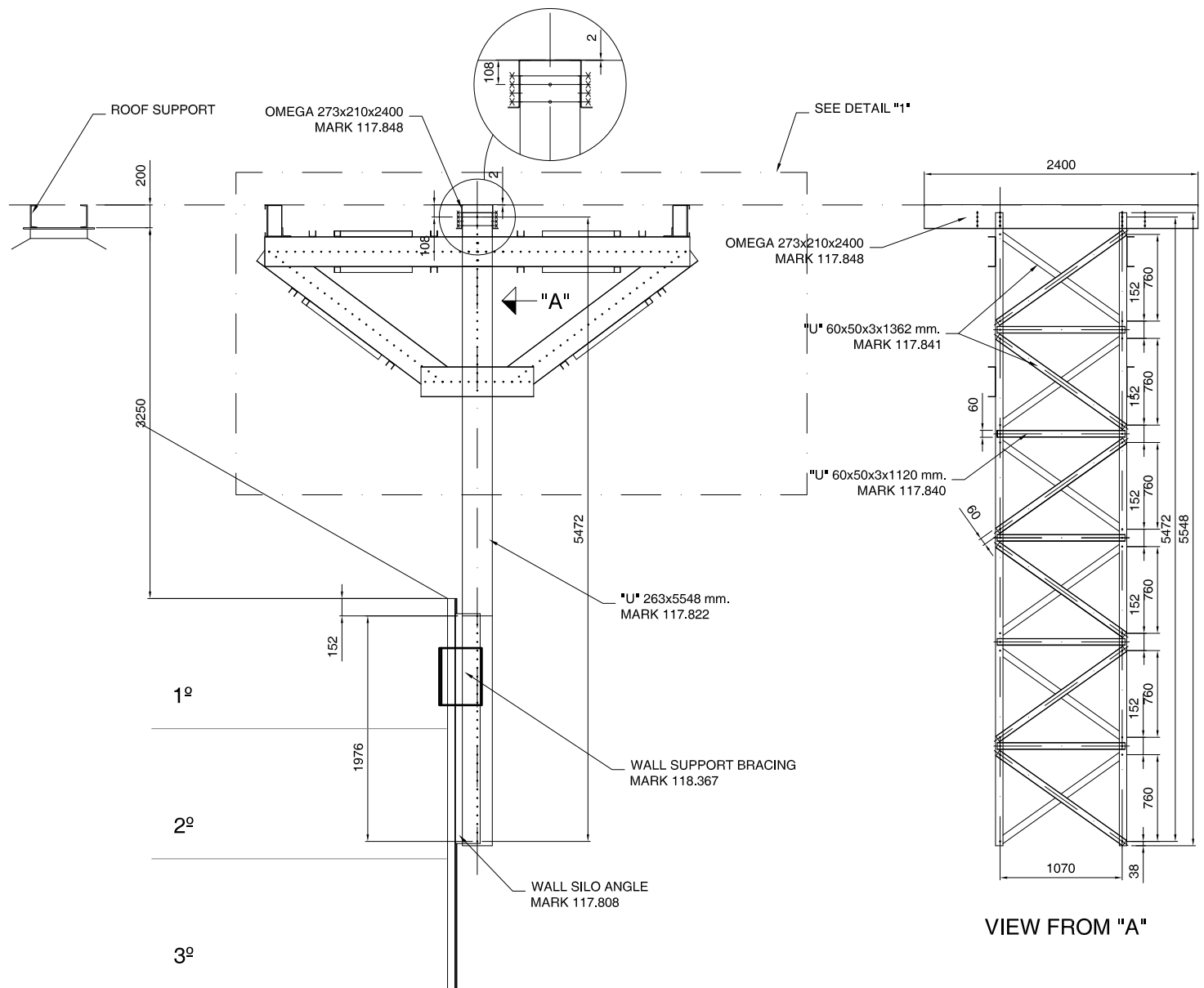
Hard hat





USE M10x40 (8.8) BOLT WITH FLAT WASHER AND NUT EXCEPT WHERE CROSSES INDICATE

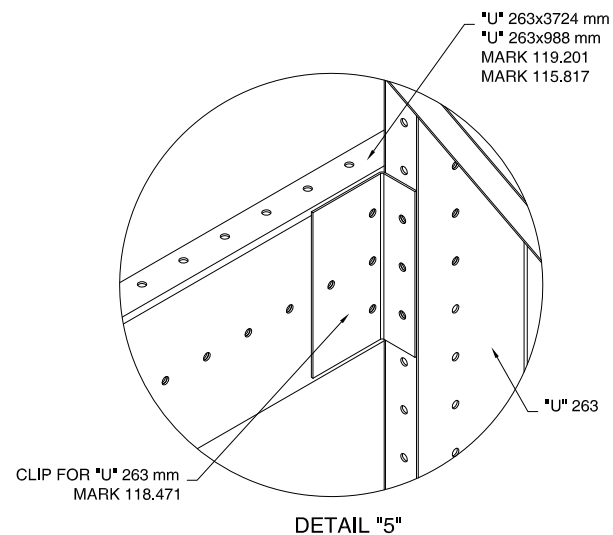
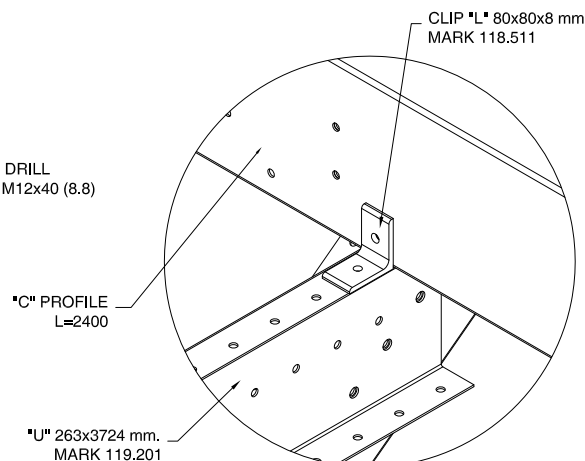
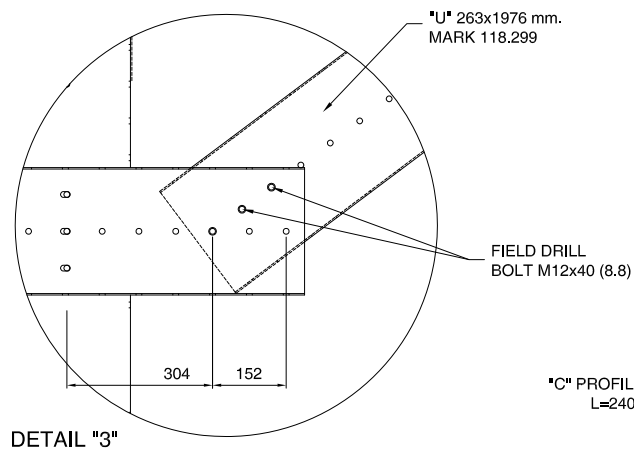
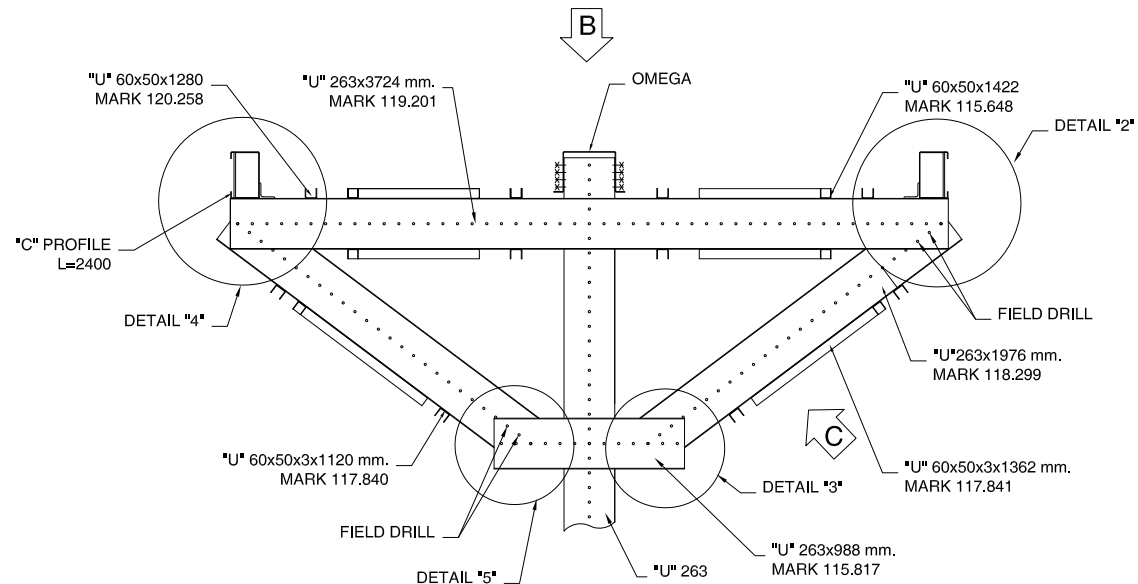
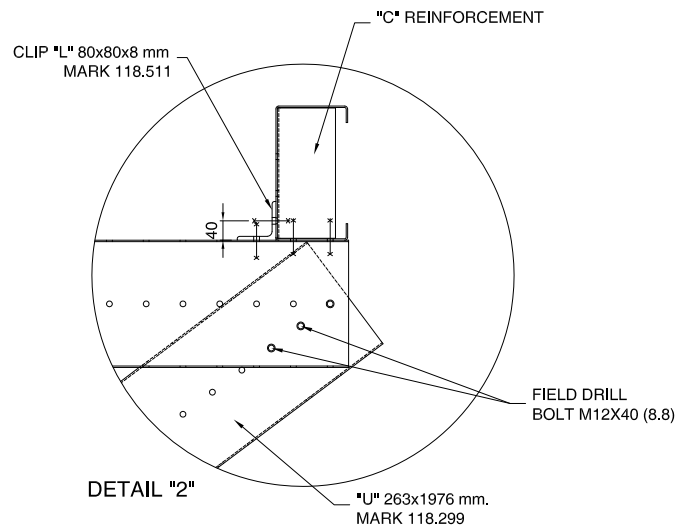




NOTES:

- USE M10x25 (8.8) BOLT WITH WEATHERSEAL WASHER, FLAT WASHER AND NUT FOR JOINING MARK 117.808 TO SILO.
- USE M10x25 (8.8) BOLT WITH FLAT WASHER AND NUT FOR JOINING OTHERS MARKS.

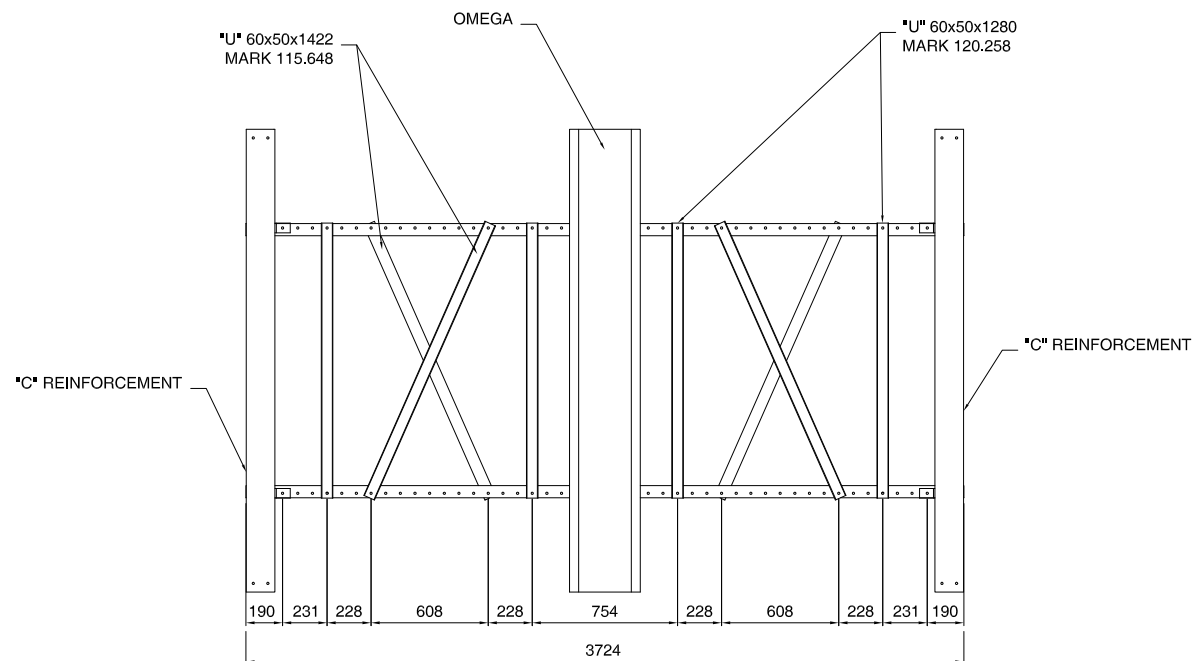
SUPPORT ON SILO WALL
WITH OVERHANG
SILO 11,45Ø



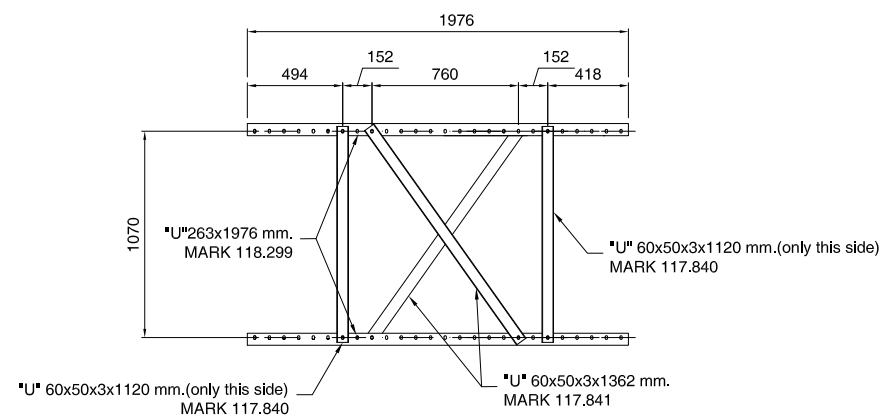
USE BOLTS M10x30 (8.8) FOR ALL CONECTIONS EXCEPT (indicated):

-MARKS 118.299 WITH 119.201 (see det.)	USE M12x40 (8.8)
-MARKS 118.299 WITH 115.817 (see det.)	USE M12x40 (8.8)

**WALL SUPPORT
WITH OVERHANG
(DETAIL "1")**

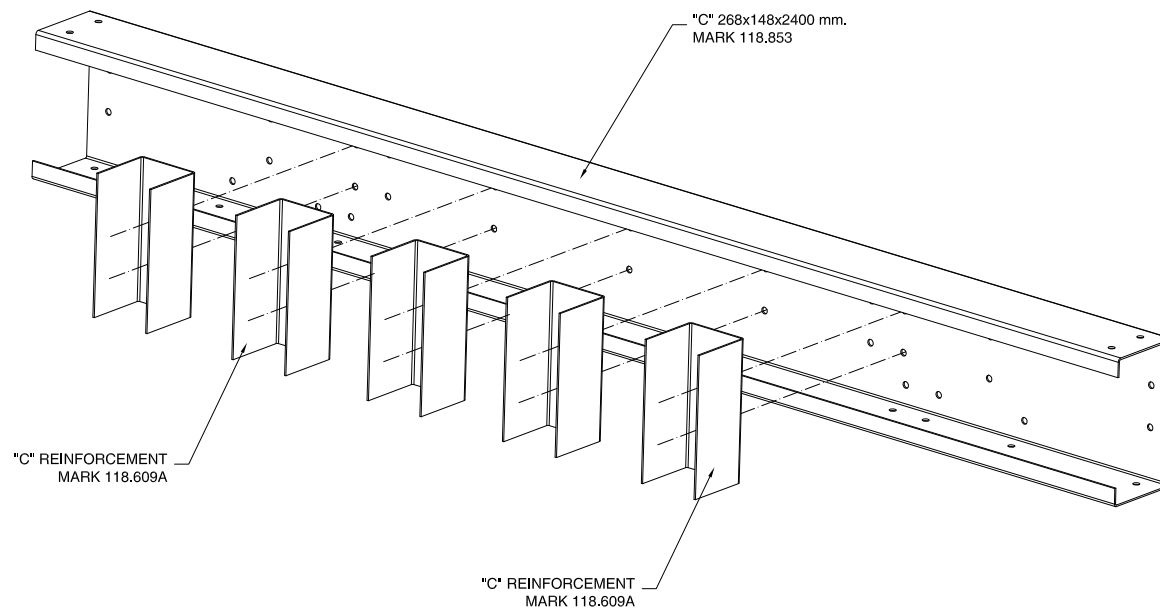


VIEW FROM "B"



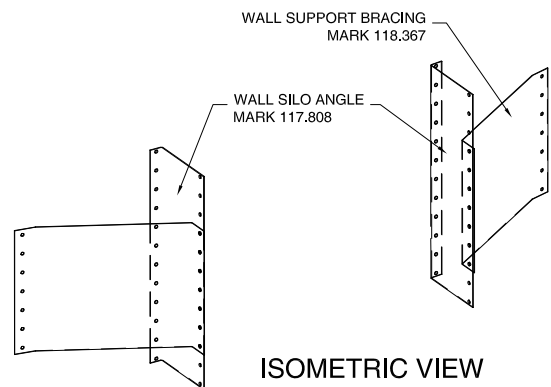
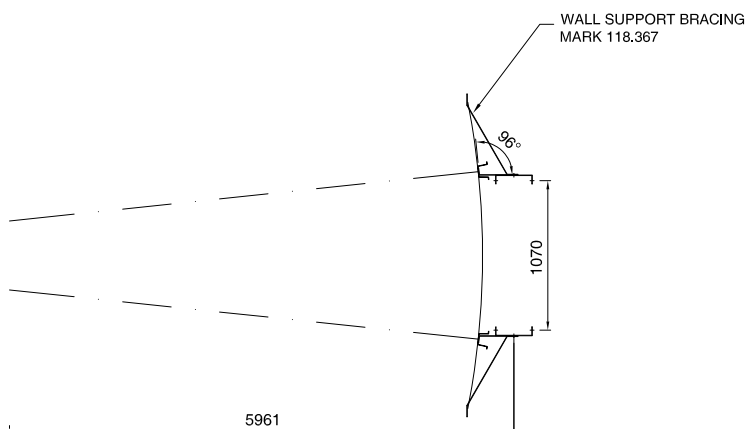
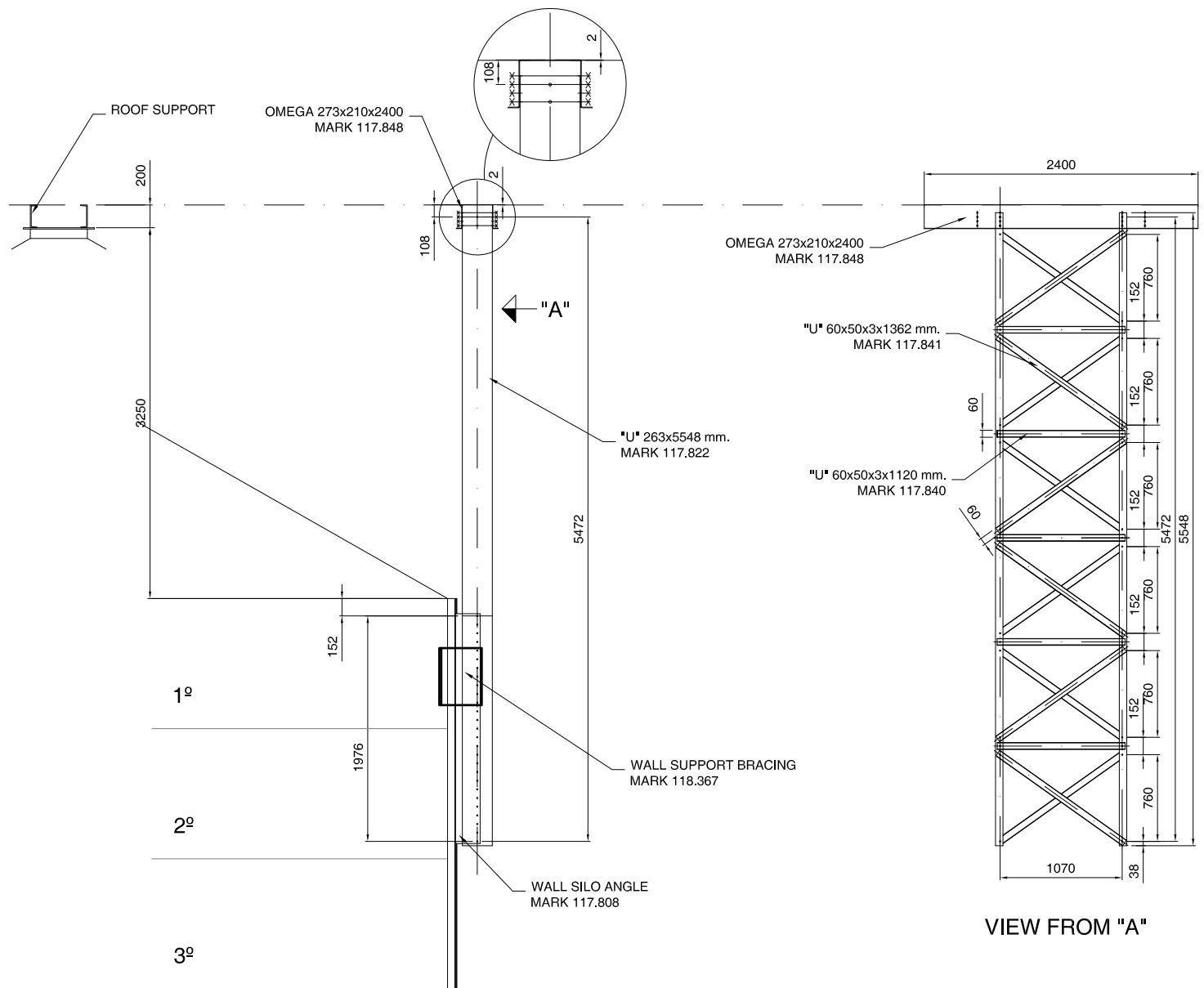
VIEW FROM "C"

WALL SUPPORT
WITH OVERHANG
(ELEVATION AND PLAN)



USE BOLTS M10x25 (8.8) FOR THIS DETAIL'S CONECTIONS

WALL SUPPORT
"C" UNION SUPPORT-CATWALK DETAIL

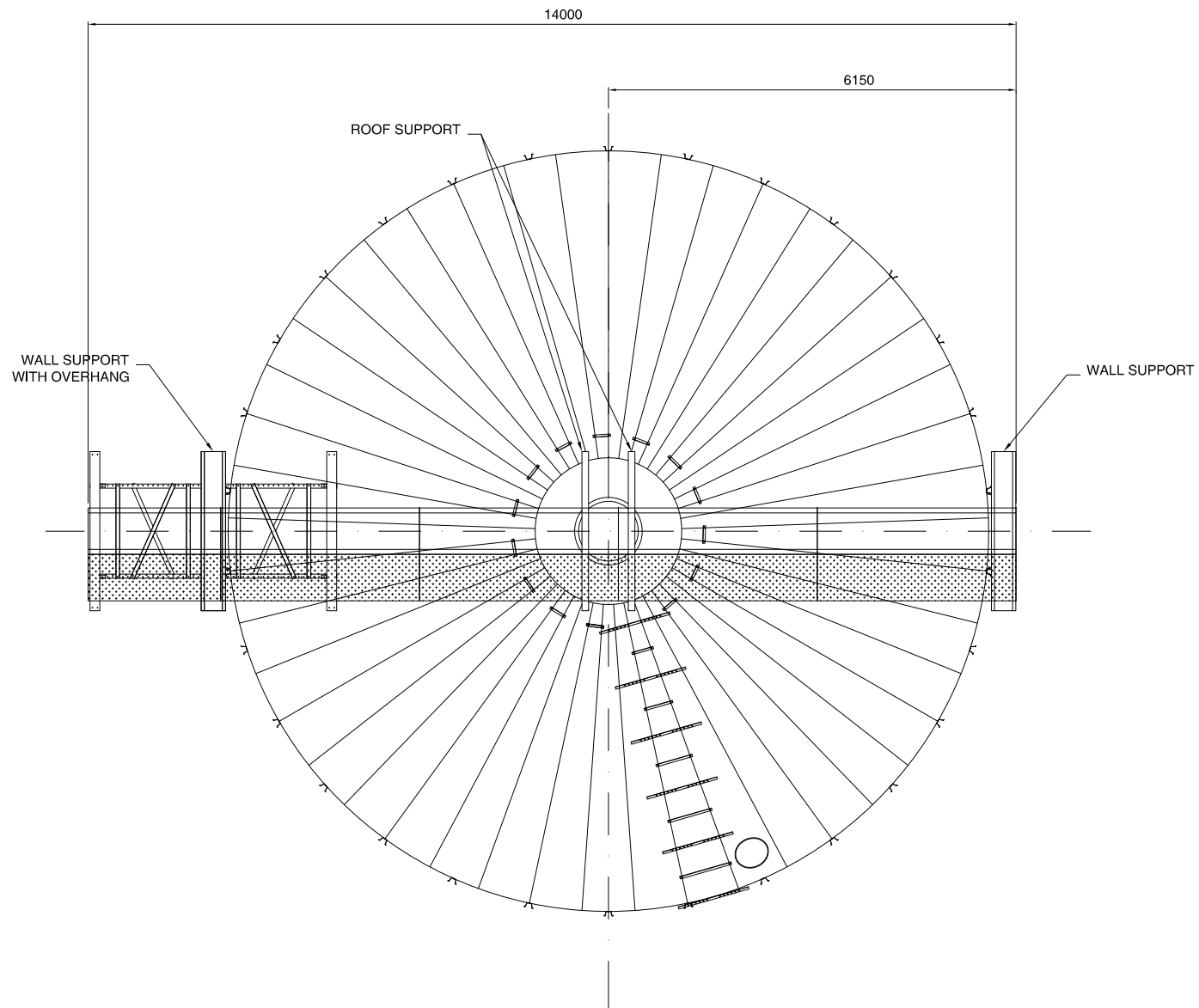


NOTES:

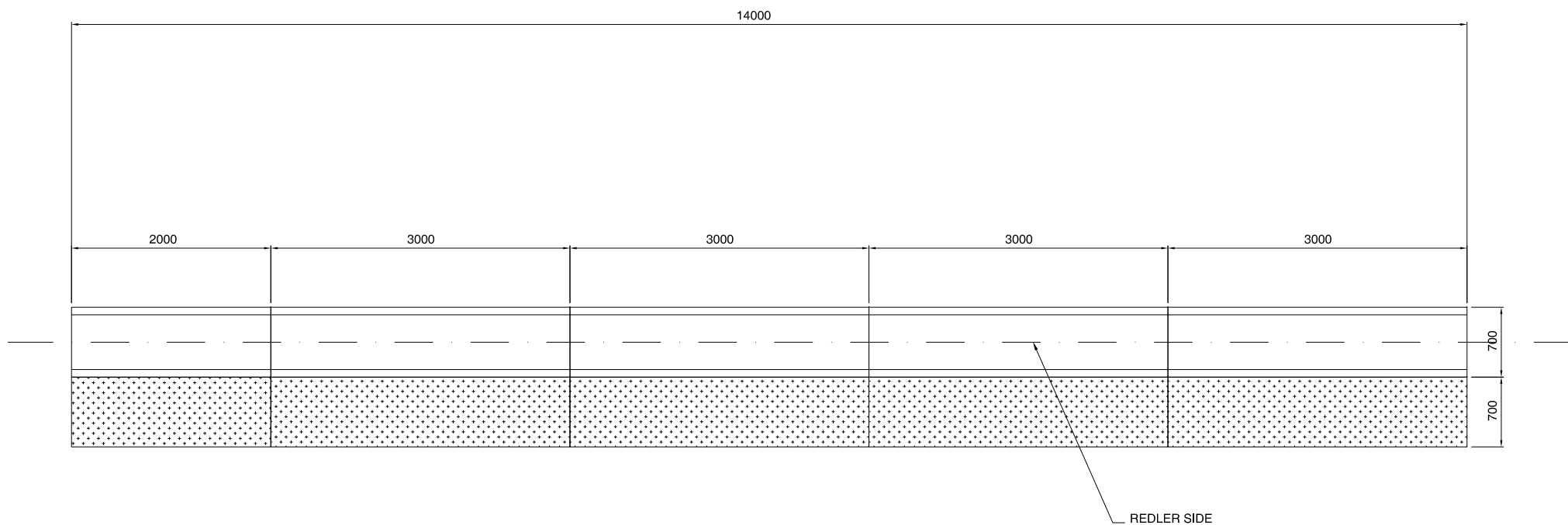
- USE M10x25 (8.8) BOLT WITH WEATHERSEAL WASHER, FLAT WASHER AND NUT FOR JOINING MARK 117.808 AND MARK 118.367 TO SILO.
- USE M10x25 (8.8) BOLT WITH FLAT WASHER AND NUT FOR JOINING OTHERS MARKS.

SUPPORT ON SILO WALL

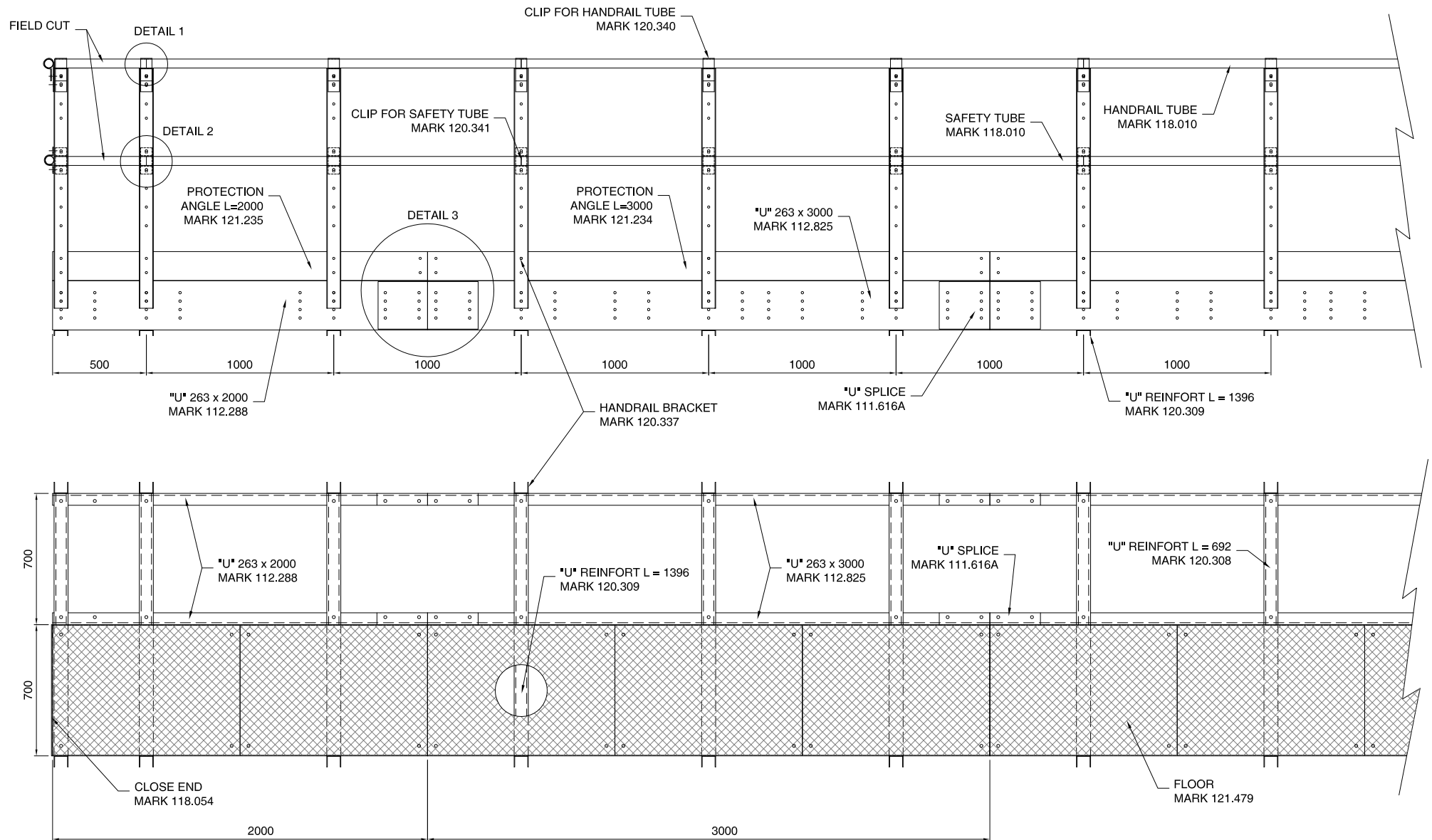
SILO 11,45Ø



CATWALK OVER SILO 11,45-18



MODULOS LONGITUDINALES



NOTE: USE BOLTS M10x25 (8.8) FOR ALL CONNECTIONS EXCEPT:

- "U" REINFORTS MARK 120.308, 120.309 TO THE UPPER PART OF "U" 263 (MARK 112.825, 112.288, 112.826) - BOLT M10x50 (8.8) (TWO NUTS).

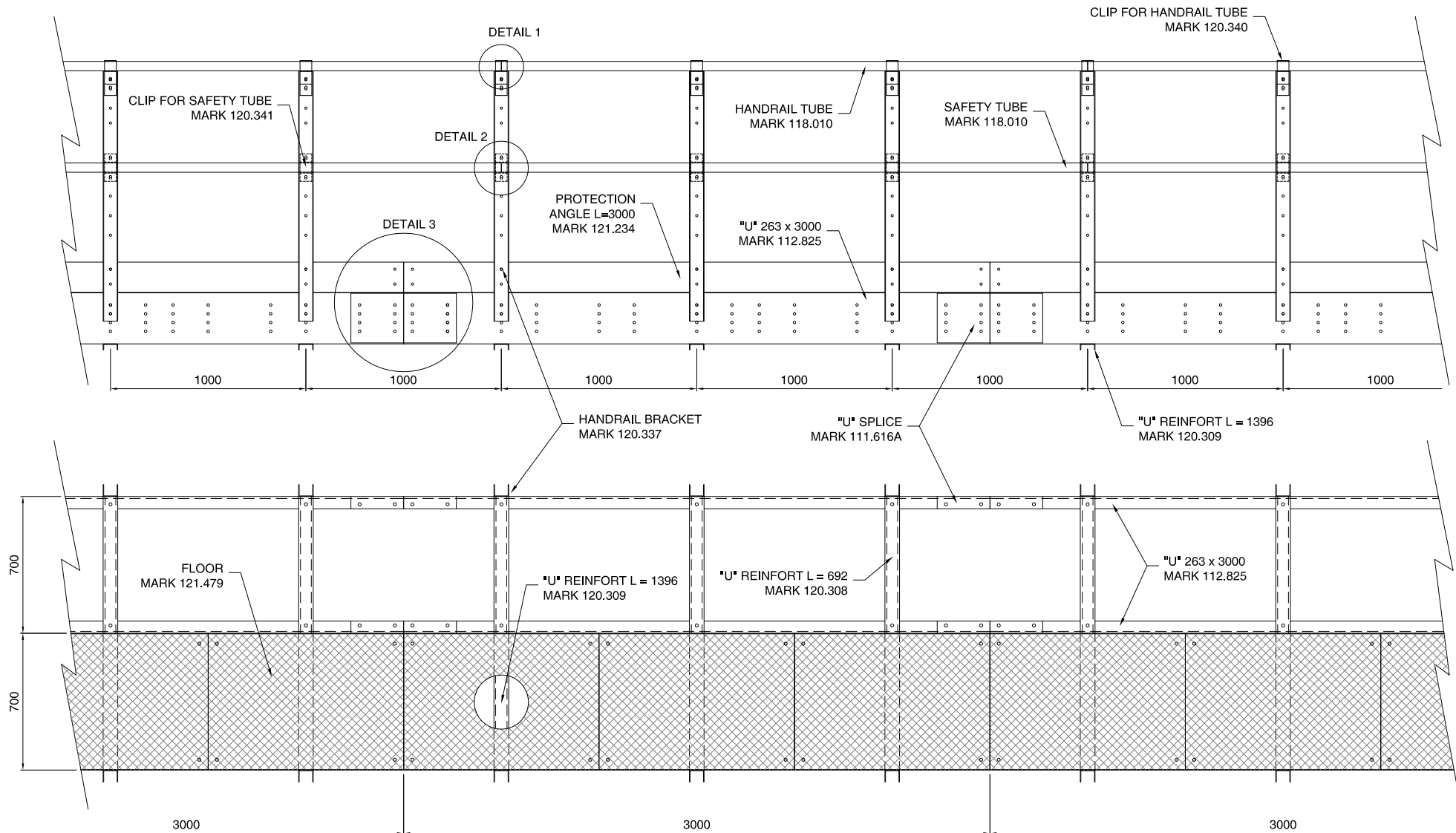
- FLOOR MARK 121.479 TO FOOT PROTECTION (MARK 121.234, 121.235 AND 121.236) AND "U" 263 (MARK 112.825, 112.288, 112.826) - SELFDRILLING BOLT AND STAPLE.

- REDLER SUPPORT TO "U" 263 (MARK 112.825, 112.288, 112.826) - BOLT M12x30 (8.8).

- "U" 263 (MARK 112.825, 112.288, 112.826) TO "U" SPLICE MARK 111.616A - BOLT M12x30 (8.8).

- CLIP FOR HANDRAIL TUBE MARK 120.340 TO HANDRAIL BRACKET MARK 120.337 - BOLT M10x50 (8.8)

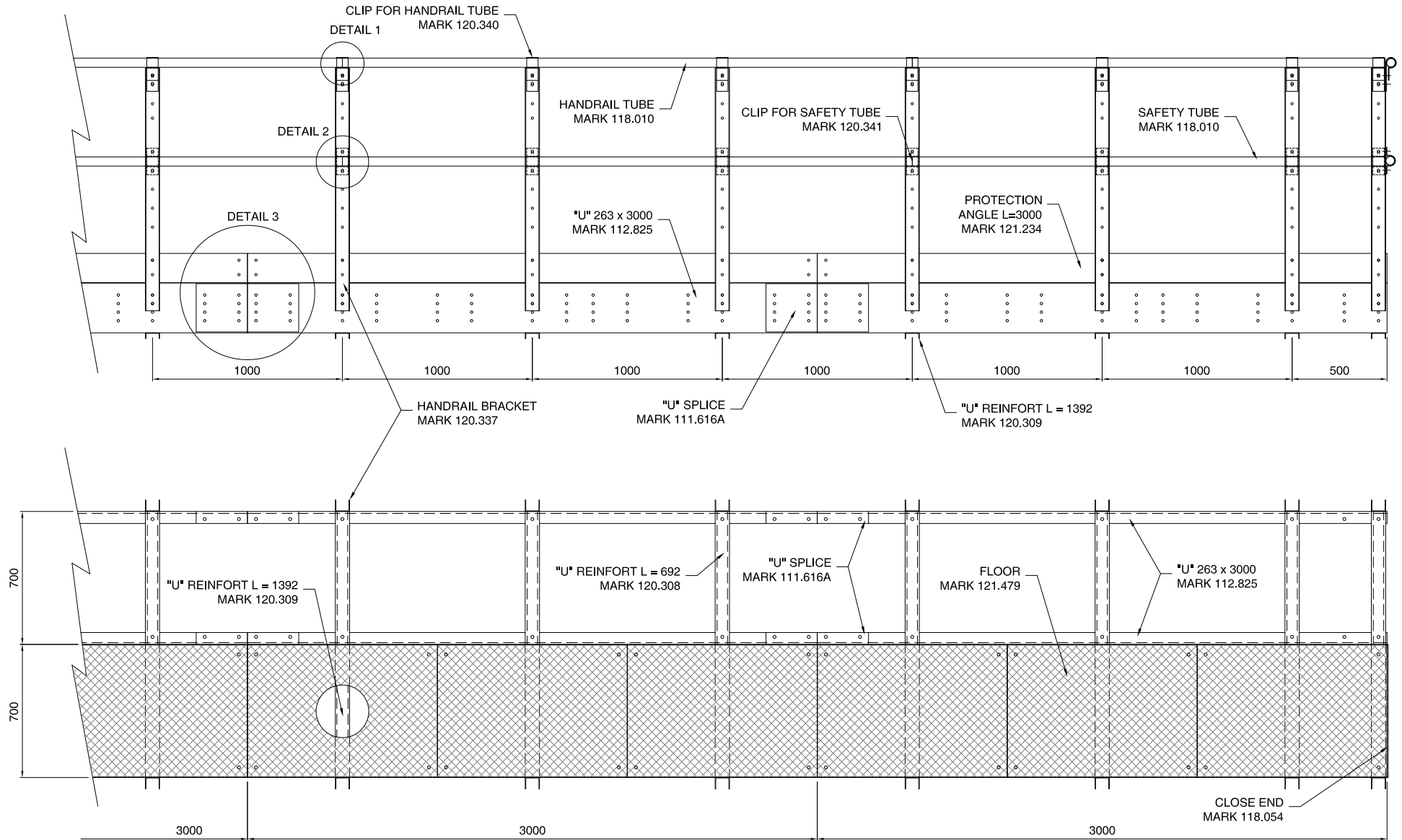
CATWALK - HEAD SECTION



NOTE: USE BOLTS M10x25 (8.8) FOR ALL CONNECTIONS EXCEPT:

- "U" REINFORTS MARK 120.308, 120.309 TO THE UPPER PART OF "U"263(MARK 112.825, 112.288, 112.826) - BOLT M10x50 (8.8) (TWO NUTS).
- FLOOR MARK 121.479 TO FOOT PROTECTION (MARK 121.234, 121.235 AND 121.236) AND "U"263(MARK 112.825, 112.288, 112.826)-SELFDRILLING BOLT AND STAPLE.
- REDLER SUPPORT TO "U"263(MARK 112.825, 112.288, 112.826)-BOLT M12x30 (8.8).
- "U"263(MARK 112.825, 112.288, 112.826) TO "U" SPLICE MARK 111.616A-BOLT M12x30 (8.8).
- CLIP FOR HANDRAIL TUBE MARK 120.340 TO HANDRAIL BRACKET MARK 120.337 - BOLT M10x50 (8.8)

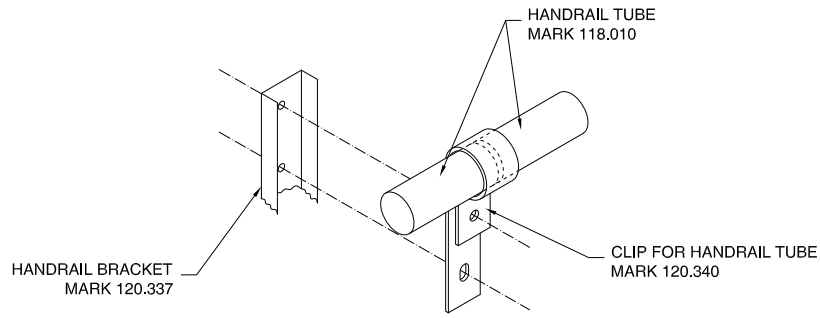
CATWALK - INTERMEDIATE SECTION



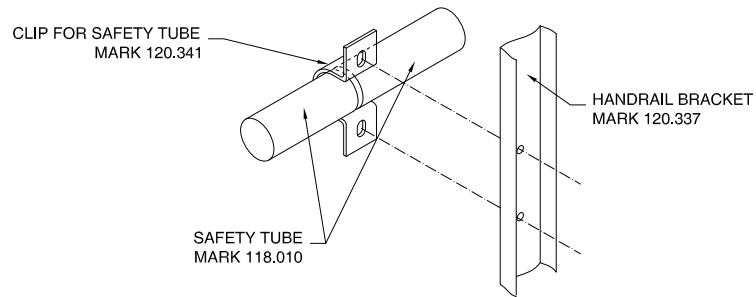
NOTE: USE BOLTS M10x25 (8.8) FOR ALL CONNECTIONS EXCEPT:

- "U" REINFORCERS MARK 120.308, 120.309 TO THE UPPER PART OF "U" 263(MARK 112.825, 112.288, 112.826) - BOLT M10x50 (8.8) (TWO NUTS).
- FLOOR MARK 121.479 TO FOOT PROTECTION (MARK 121.234, 121.235 AND 121.236) AND "U" 263(MARK 112.825, 112.288, 112.826)-
SELFDRILLING BOLT AND STAPLE.
- REDLER SUPPORT TO "U" 263(MARK 112.825, 112.288, 112.826)-BOLT M12x30 (8.8).
- "U" 263(MARK 112.825, 112.288, 112.826) TO "U" SPLICE MARK 111.616A-BOLT M12x30 (8.8).
- CLIP FOR HANDRAIL TUBE MARK 120.340 TO HANDRAIL BRACKET MARK 120.337 - BOLT M10x50 (8.8)

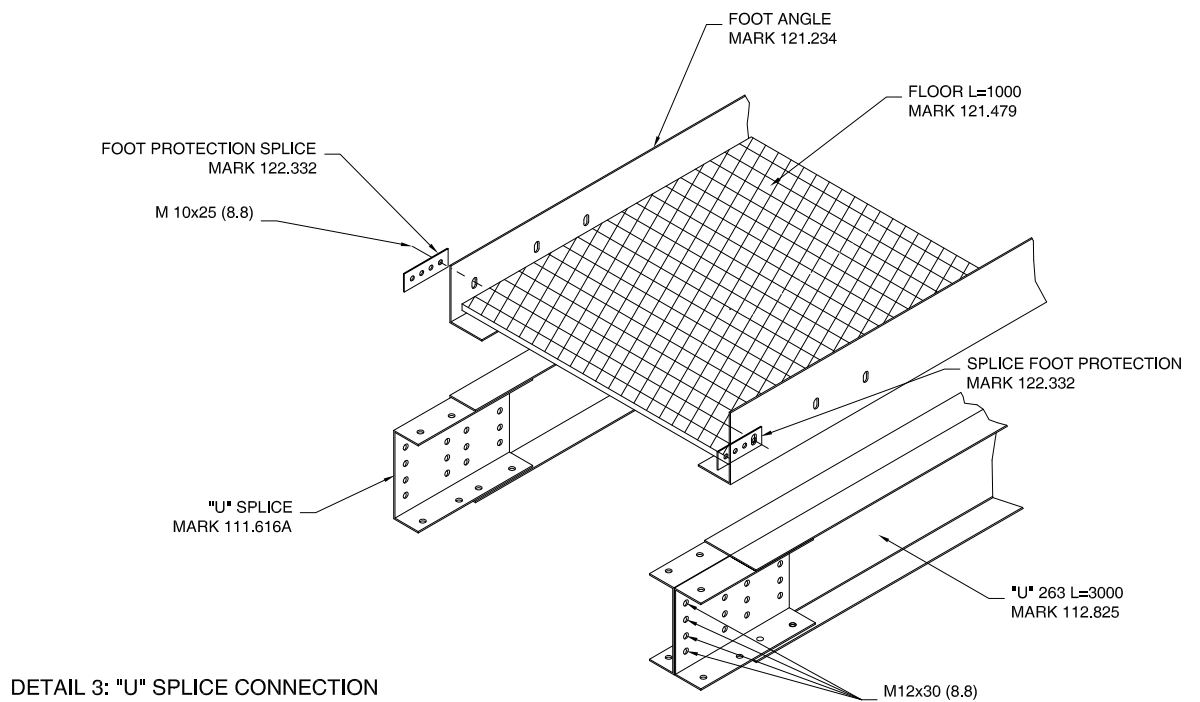
CATWALK -END SECTION



DETAIL 1: CONNECTION BETWEEN HANDRAIL TUBES



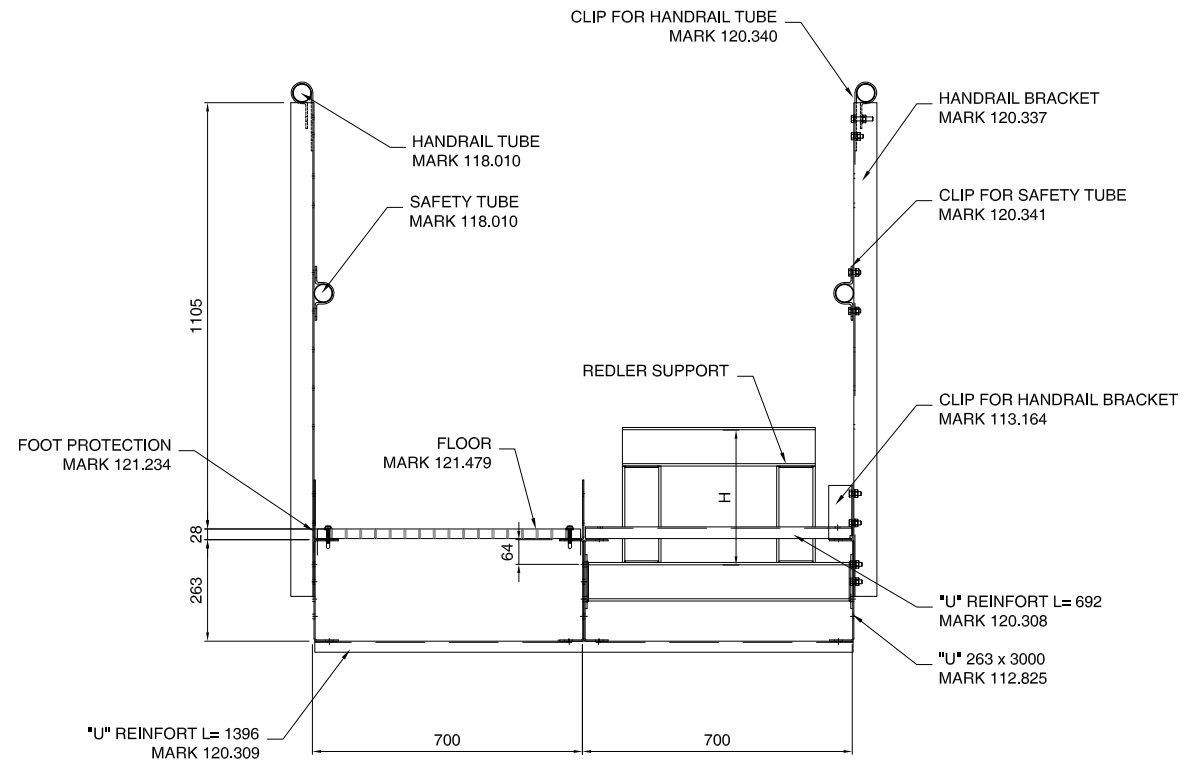
DETAIL 2: CONNECTION BETWEEN SAFETY TUBES



DETAIL 3: "U" SPLICE CONNECTION

NOTE:

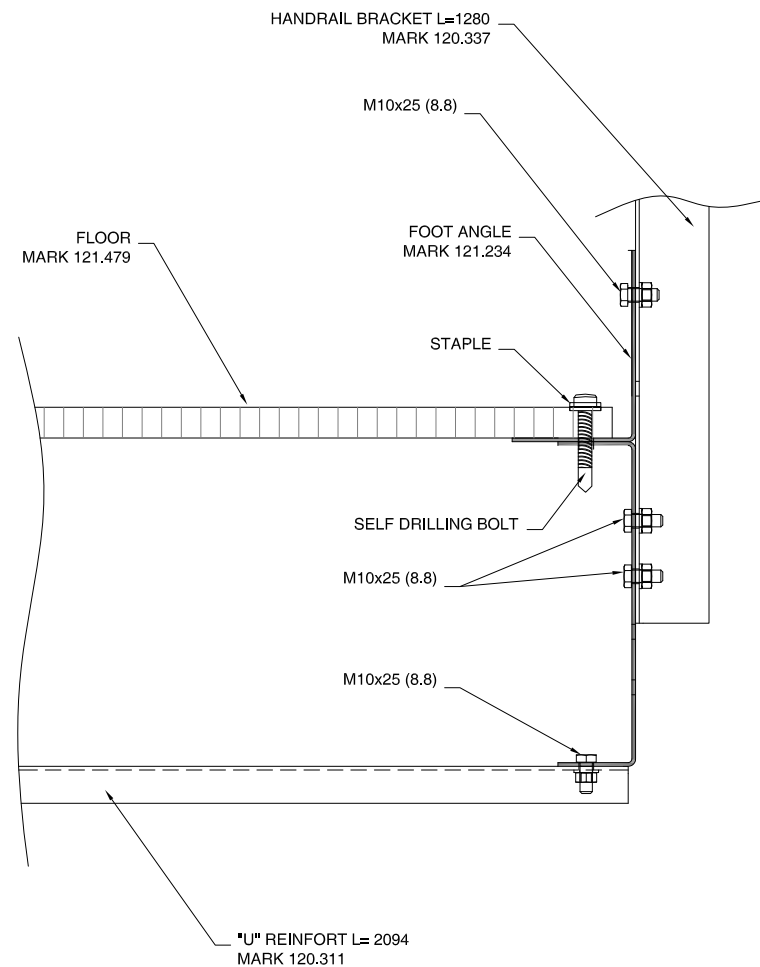
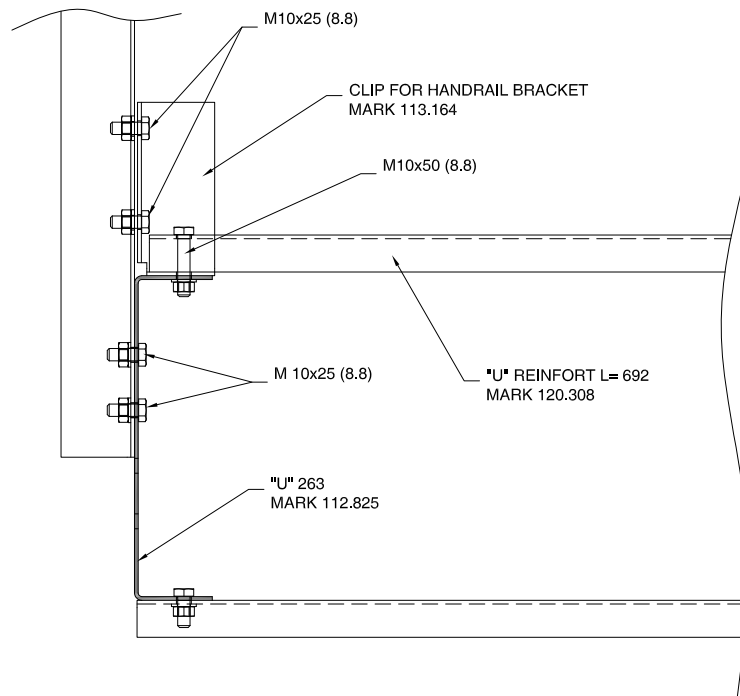
CHECK DRAWINGS OF LONGITUDINAL CATWALK
SECTIONS FOR BOLTING REQUIRED.



NOTE:

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SECTIONS FOR BOLTING REQUIRED.

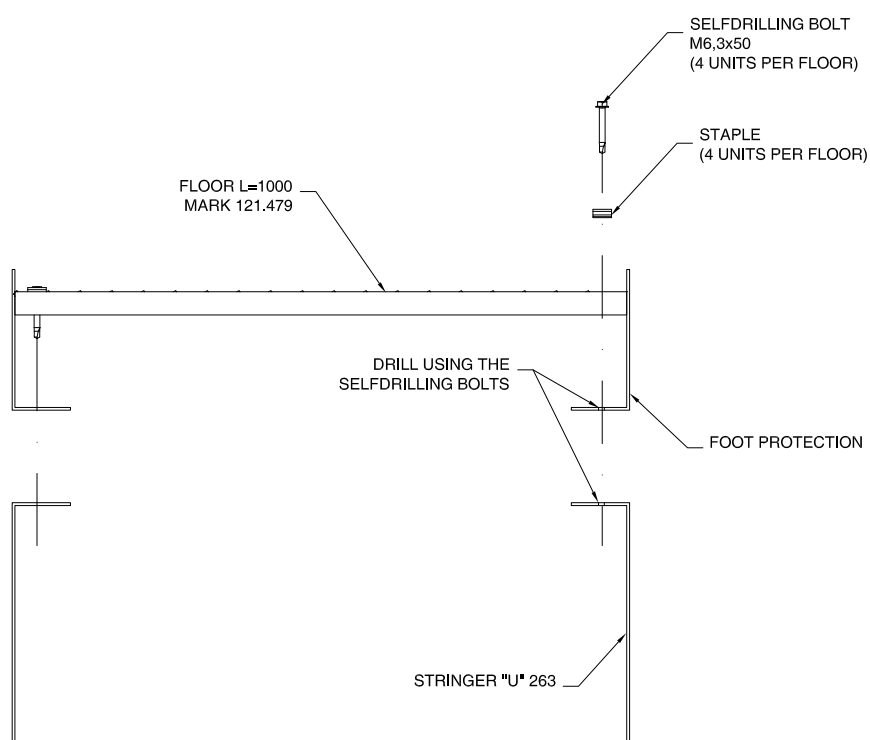
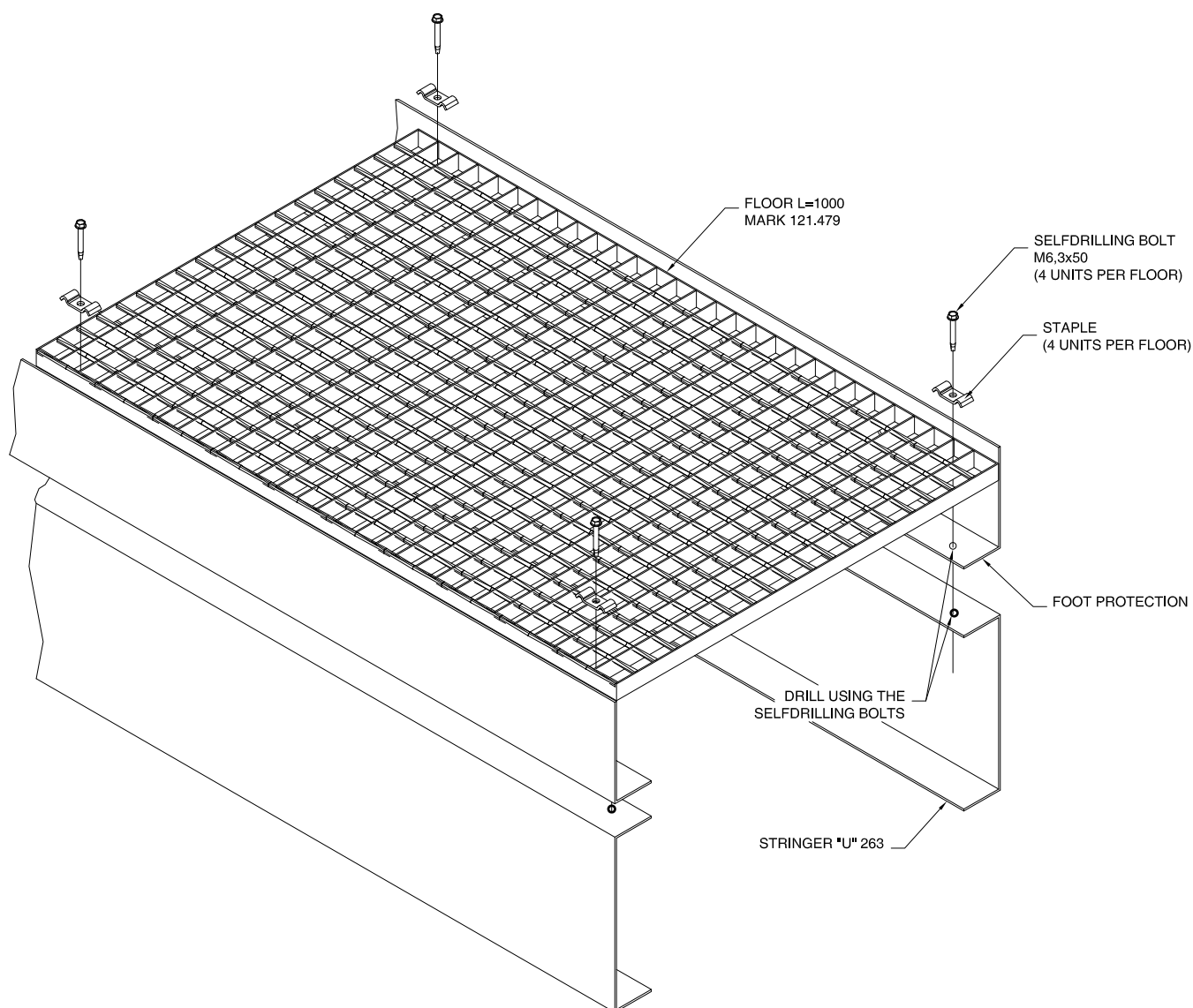
SECTION CATWALK



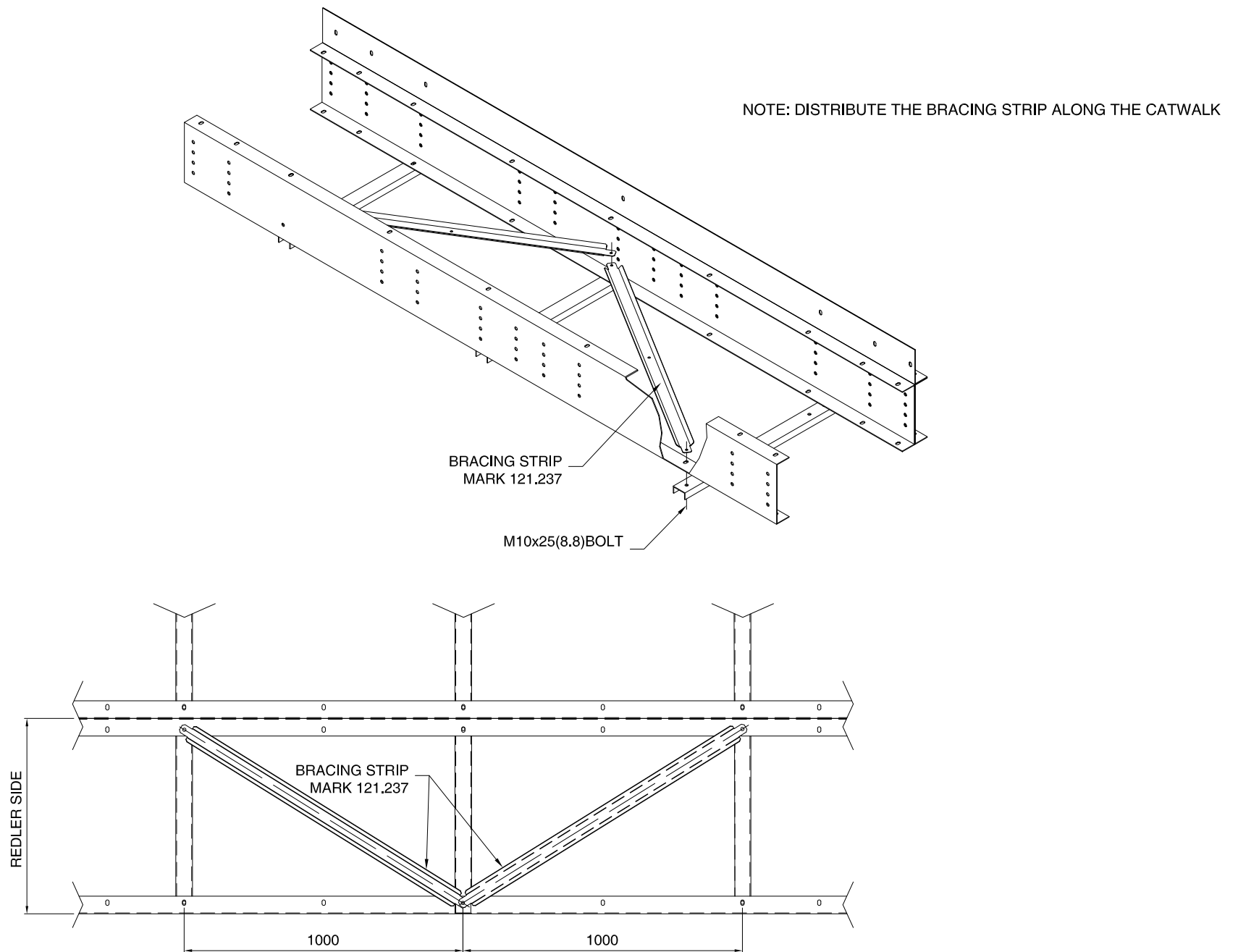
NOTE:

CHECK DRAWINGS OF LONGITUDINAL CATWALK
SECTIONS FOR BOLTING REQUIRED.

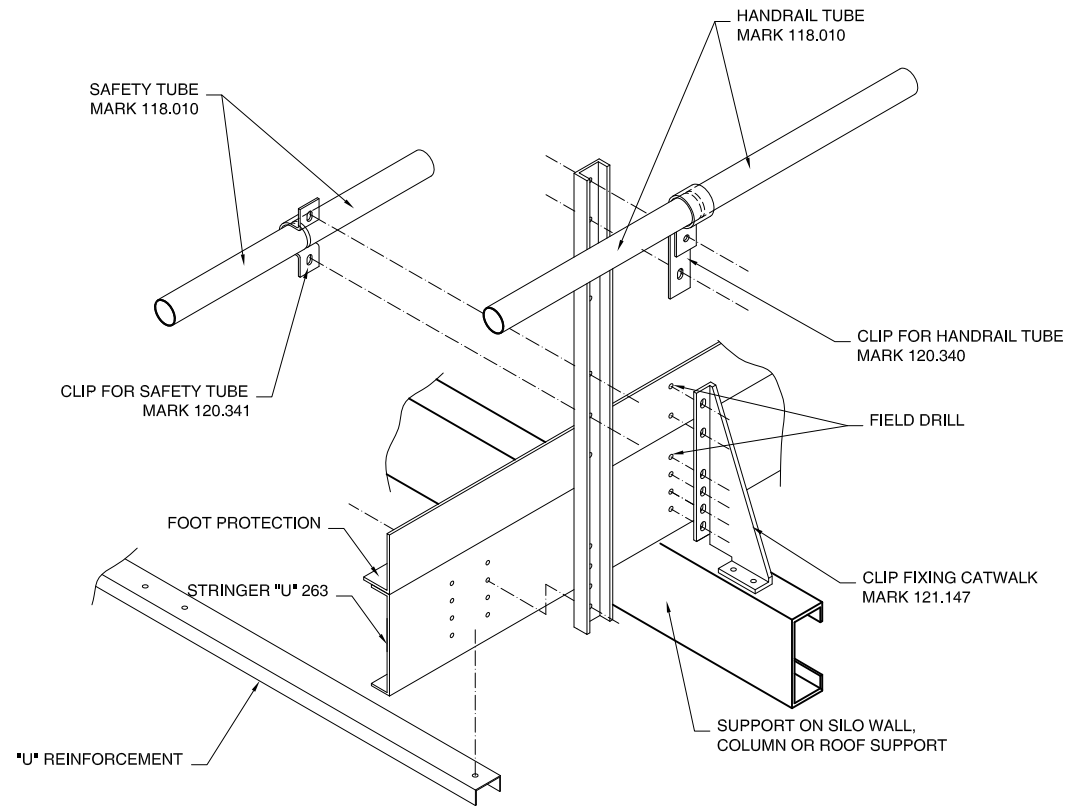
CONNECTION DETAILS



FIXING OF FLOOR



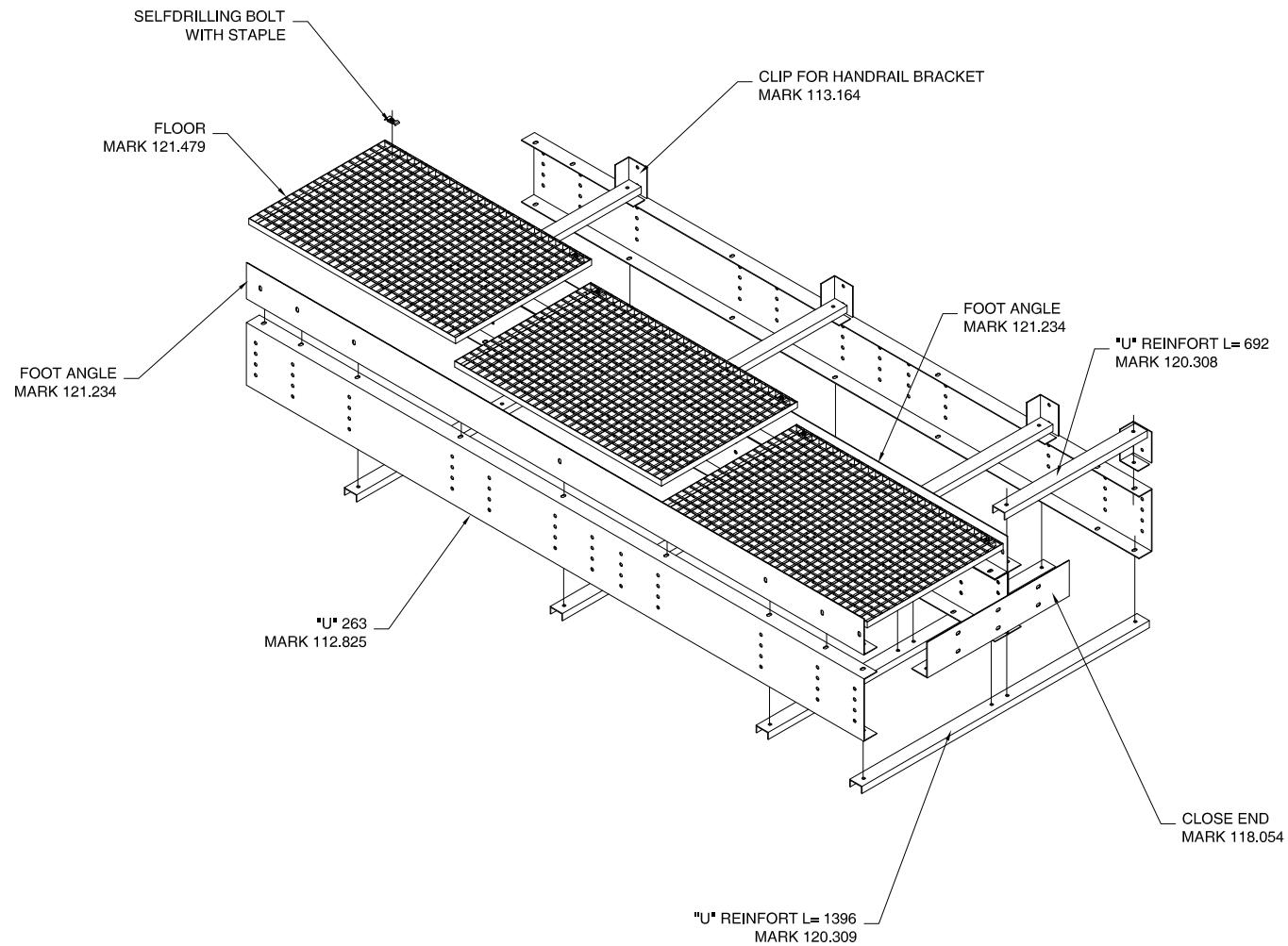
INSTALLATION OF BRACING STRIPS



NOTE:

CHECK DRAWINGS OF LONGITUDINAL CATWALK
SECTIONS FOR BOLTING REQUIRED.

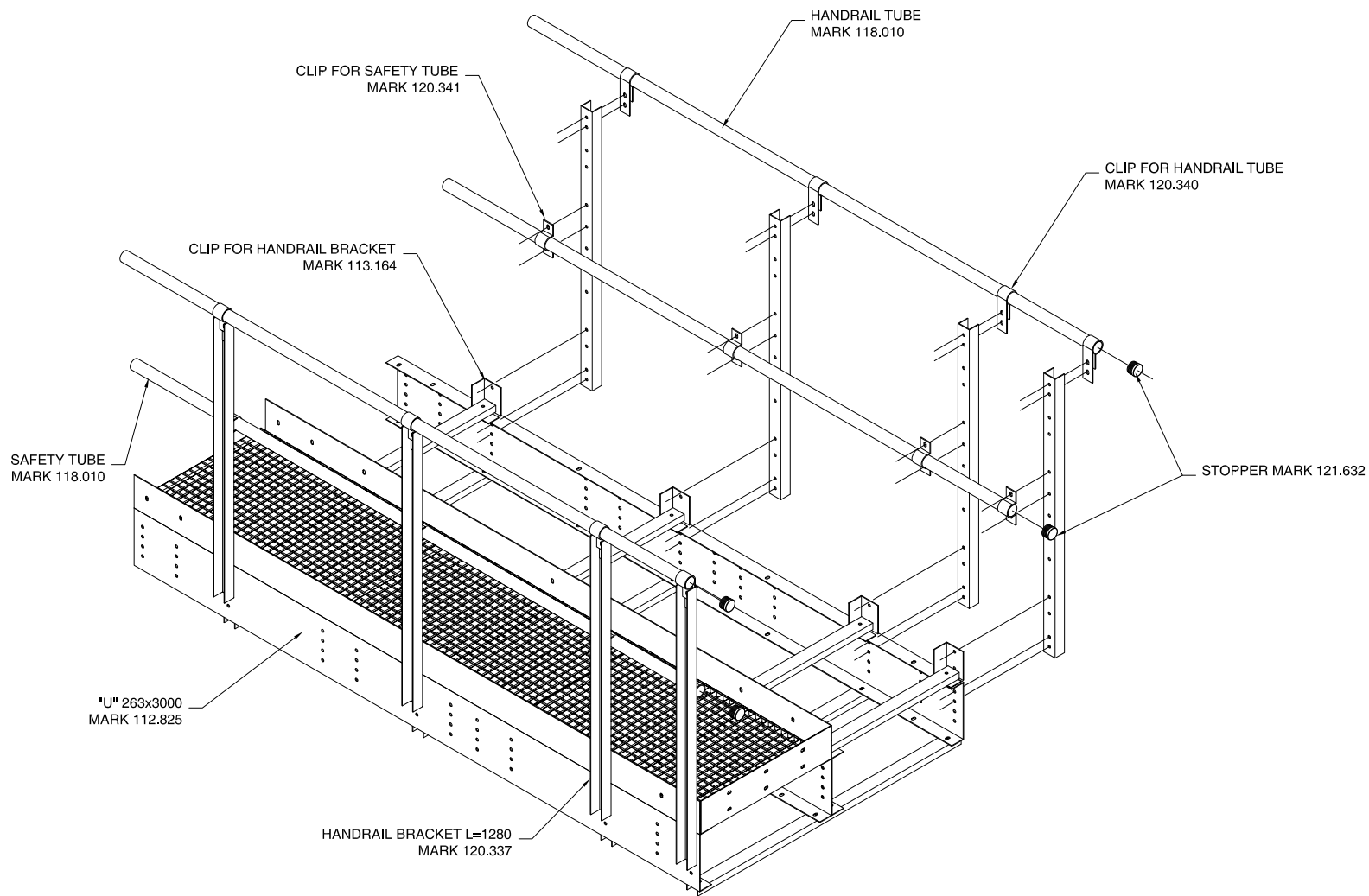
FIXING OF CATWALK TO SILO SUPPORTS



NOTE:

CHECK DRAWINGS OF LONGITUDINAL CATWALK
SECTIONS FOR BOLTING REQUIRED.

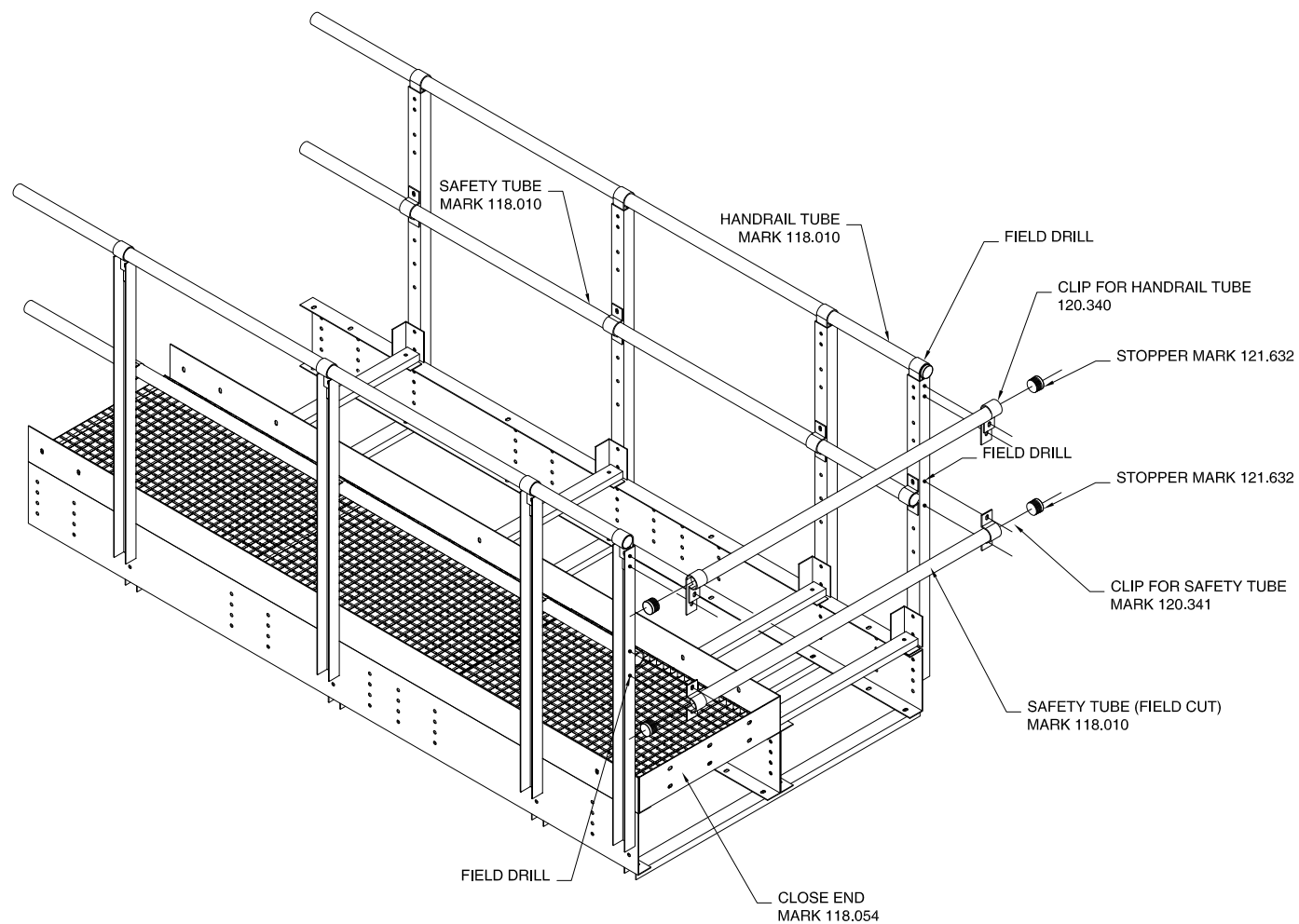
CATWALK ASSEMBLING



NOTE:

CHECK DRAWINGS OF LONGITUDINAL CATWALK
SECTIONS FOR BOLTING REQUIRED.

CATWALK ASSEMBLING -HANDRAIL DETAIL



NOTE:

CHECK DRAWINGS OF LONGITUDINAL CATWALK
SECTIONS FOR BOLTING REQUIRED.

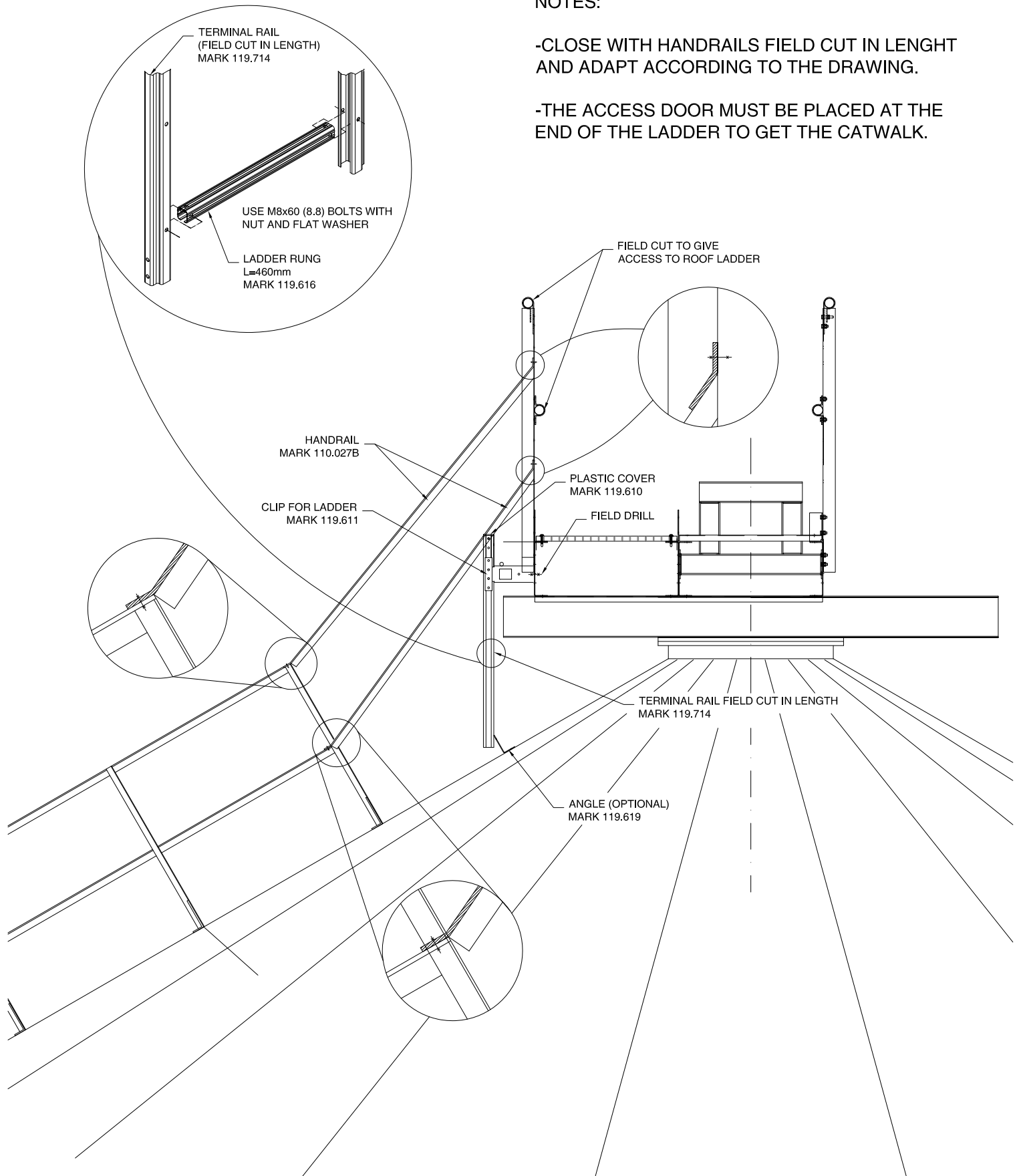
CATWALK ASSEMBLING - CLOSING HEAD/END SECTION

CONNECTION BETWEEN CATWALK 1,3 AND SILO ROOF

NOTES:

-CLOSE WITH HANDRAILS FIELD CUT IN LENGHT AND ADAPT ACCORDING TO THE DRAWING.

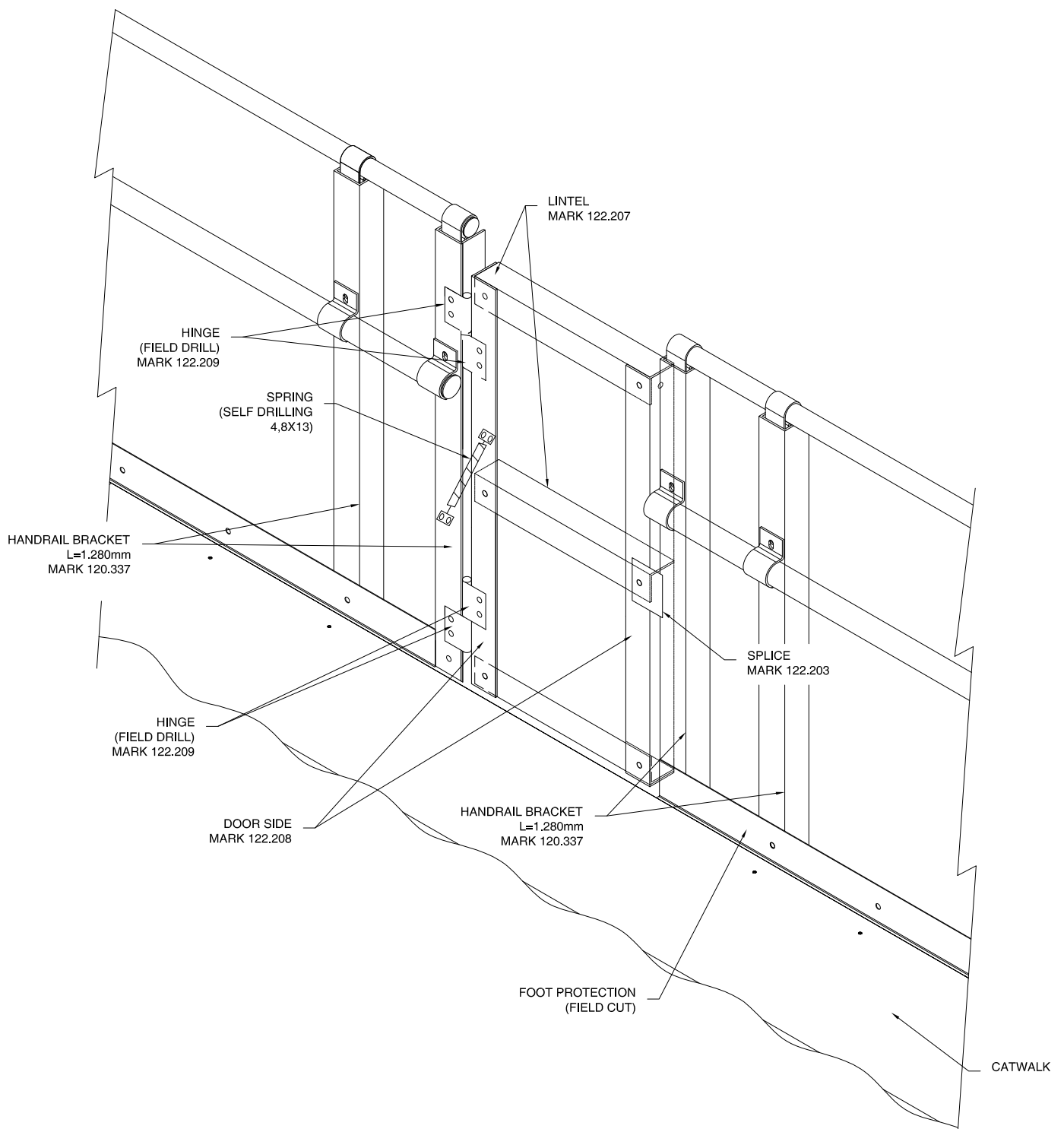
-THE ACCESS DOOR MUST BE PLACED AT THE END OF THE LADDER TO GET THE CATWALK.



USE M 10 x 25 (8.8) BOLTS.

NOTE:

- DRILL THE HINGE WITH ENOUGH DISTANCE BETWEEN THE HANDRAIL BRACKET AND DOOR SIDE TO ALLOW THAT THE DOOR IS OPENING CORRECTLY.
- THE SPRING MUST BE TENSE AFTER BOLTING IT ON THE HANDRAIL BRACKET AND DOOR SIDE.



USE M10X20(8.8)BOLTS WITH NUT EXCEPT FOR THE HINGE M8X20(8.8)BOLT

ACCESS DOOR TO CATWALK