

# Site Technical Query - Form

SN1809-0000/XE.FRM/0001 Rev 4 03/02/2021

TQ Number:		Project:	
<b>CW2148472 -A010- 0041</b>		<b>Oyu Tolgoi Underground Project</b>	
A. To be completed by or on behalf of the Contractor			
Contractor/Sub-Contractor Name:	MCS International	Date Response Required: (dd/mm/yyyy)	06/09/2022
Contract Title:	Haulage Truck Workshop /C-004D/	Plant Area & No:	1883
Contract No.	CW2148472	Contractor TQ Number:	TWS-0415-TQ-0041
Discipline Codes (Mandatory) <b>D1</b> (CSA) - <input type="checkbox"/> <b>D2</b> (MP) - <input checked="" type="checkbox"/> <b>D3</b> (E&I) - <input type="checkbox"/> <b>D4</b> (Other) - <input type="checkbox"/>			
Description of Technical Query (List affected drawings and specifications): <b>Subject: Pipe support design proposal for Road train bay 1.</b>			
<p>According to the 1883-50-T1-1109_1, the designed pipe support of SD-121 is marked for 1883-OLL-2166-S4B-001"-NI, 1883-OLL-2159-S4B-001"-NI, 1883-OLL-2134-S4B-001"-NI, 1883-OLL-2140-S4B-001"-NI, 1883-OLL-2146-S4B-001"-NI, 1883-OLL-2152-S4B-001"-NI, 1883-OLL-2210-S4B-001"-NI, 1883-OH-2204-S4B-001"-NI, and 1883-FW-2628-G2F-004"-NI. The designed pipeline is approximately 1.15m from the shotcrete wall, indicating that the designed support is not suitable for marked pipelines.</p>			
<input type="checkbox"/> Routine <input checked="" type="checkbox"/> Urgent Refer Technical Query instructions			
Proposed Action (List all attachments)			
<p>1. Contractor proposes to install the SD-101 for 1883-OLL-2166-S4B-001"-NI, 1883-OLL-2159-S4B-001"-NI, 1883-OLL-2134-S4B-001"-NI, 1883-OLL-2140-S4B-001"-NI, 1883-OLL-2146-S4B-001"-NI, 1883-OLL-2152-S4B-001"-NI, 1883-OLL-2210-S4B-001"-NI, and 1883-OH-2204-S4B-001"-NI pipelines, refer to attachment 3 and 5. In addition, SD-106 pipe support for the 1883-FW-2628-G2F-004"-NI pipeline will be installed, refer to attachment 3 and 6.</p>			
Attachments:			
<p>1. 1883-50-T1-1109_1 2. Proposed pipe support design 3. Proposed pipe support design (Section A-A) 4. 0000-50-N1-1115_2 5. 0000-50-N1-1110_1 6. 0000-50-N1-1112_1</p>			
Effect on cost (USD):	NO		
Effect on schedule (Days):	NO		
Effect on quality:	NO		
Requested by (Name):	Zoljargal N.	Position:	MP Field engineer
Signature:	Zoljargal Narankhishig <small>Digitally signed by Zoljargal Narankhishig DN: OU=MCSI, G=TWS, CN=Zoljargal Narankhishig, E=zoljargal.narankhishig@mcsi.mn Reason: I am the author of this document. Location: your signing location here Date: 2022.06.06 13:30:32 Foxit PhantomPDF Version: 10.0.1</small>	Date: (dd/mm/yyyy)	06/06/2022

## Comments/recommendations by Engineering

Proposed action is acceptable.

Note: Latest revision of drawing should be used for construction 0000-50-N1-1115 Rev.3.

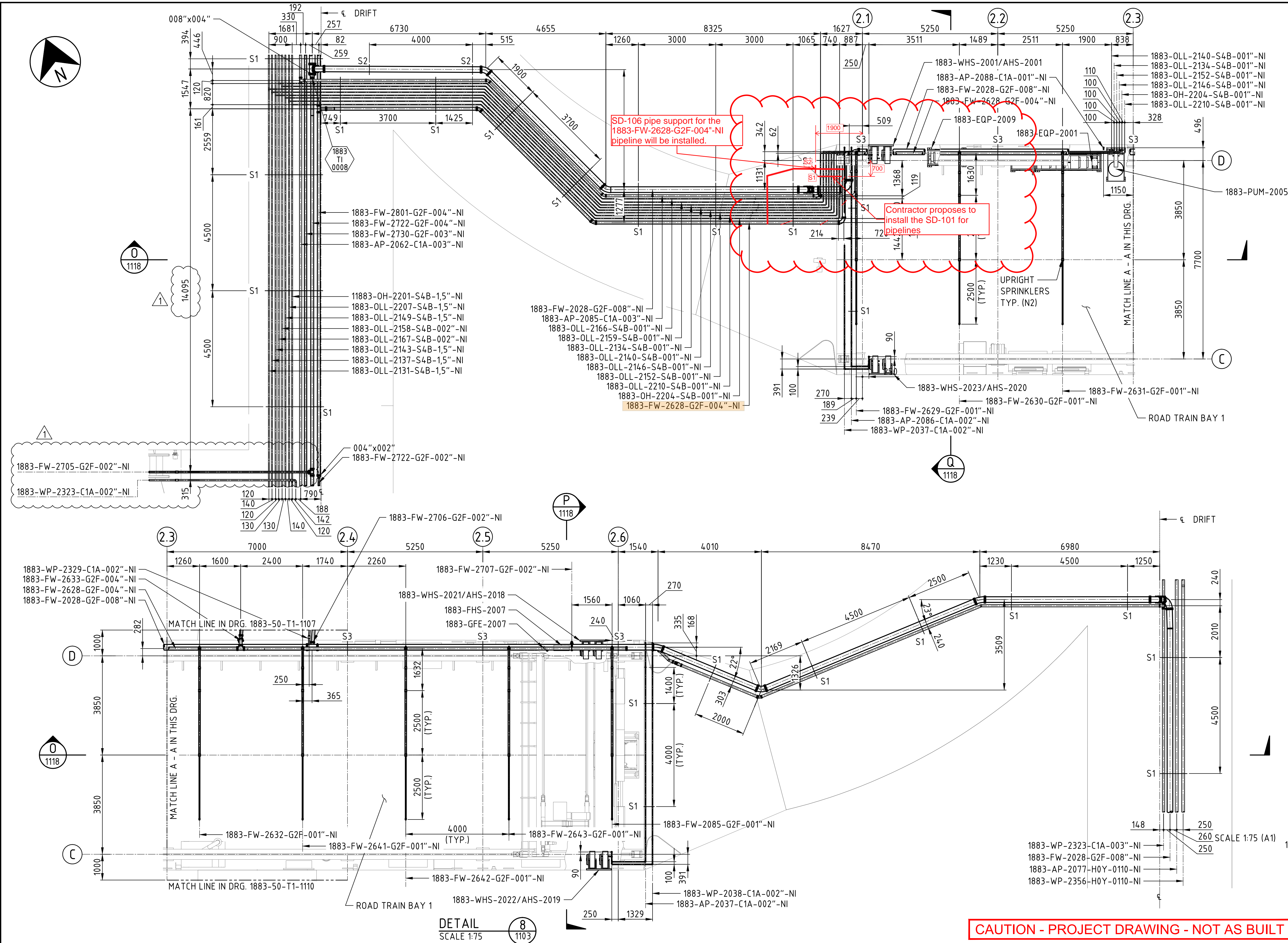
*Disclaimer:*

*Acceptance or rejection of this TQ is only related with technical aspects.*

*If Cost or Schedule Impact are associated with this TQ, it must be discussed separately with Jacobs Contract team.*

C. Engineering Decision		D. Information		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accept with comments	Reject	<b>Design Change</b> Distribute to: Design Author DA	<b>Cost Impact</b> Distribute to: Contracts, Proj. Controls & Construction Manager	<b>Schedule Impact</b> Distribute to: Proj. Controls & Construction Manager

REVIEWER		APPROVER		CONSTRUCTION MANAGER	
Field Engineer OR Lead Engineer		Lead Engineer OR Chief of Engineering		(If <b>Cost</b> and/or <b>Schedule</b> Impact)	
Date: (dd/mm/yyyy)		Date: (dd/mm/yyyy)		Date: (dd/mm/yyyy)	



NOTES

- FOR GENERAL NOTES REFER TO DRAWING N° 1883-50-T1-1103.
- FOR SPRINKLER HEAD TYPE REFER TO DRG. 1883-40-B1-1103.

LEGEND:

- NX : DENOTES NOTE NUMBER X  
S1 : SUPPORT SD-101  
S2 : SUPPORT SD-106  
S3 : SUPPORT SD-132  
S4 : SUPPORT SD-121

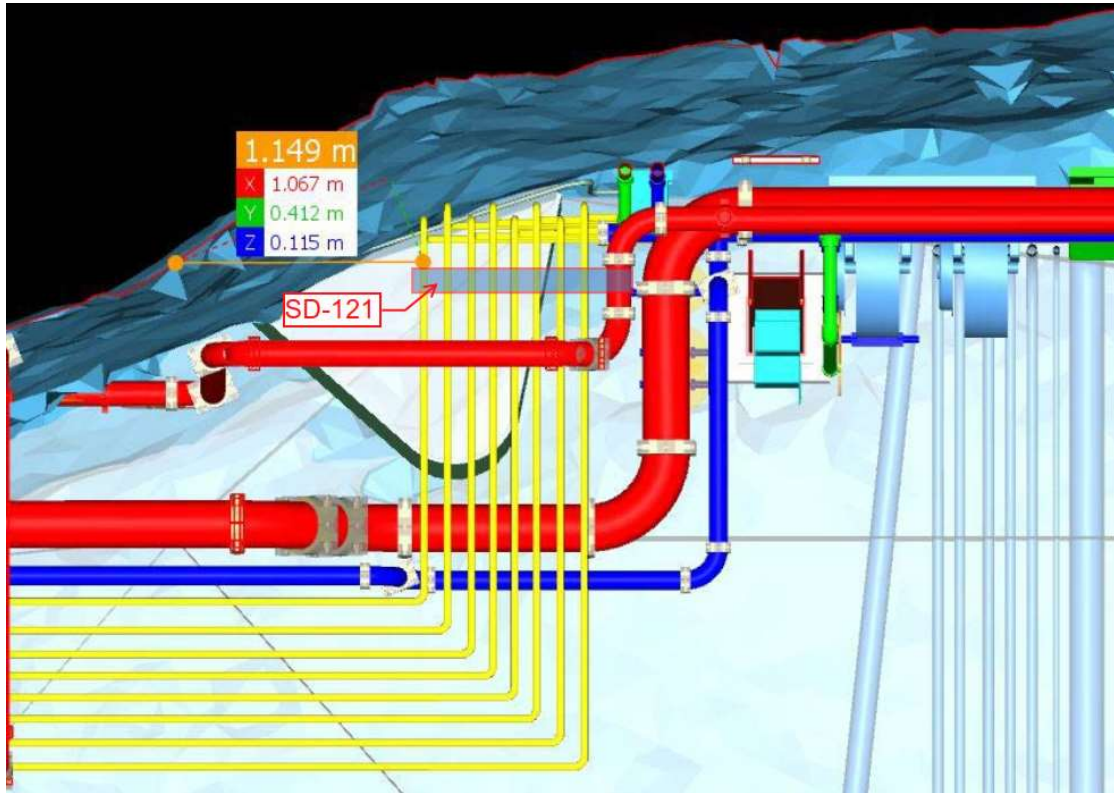
CONSTRUCTION ISSUE

CAUTION - PROJECT DRAWING - NOT AS BUILT

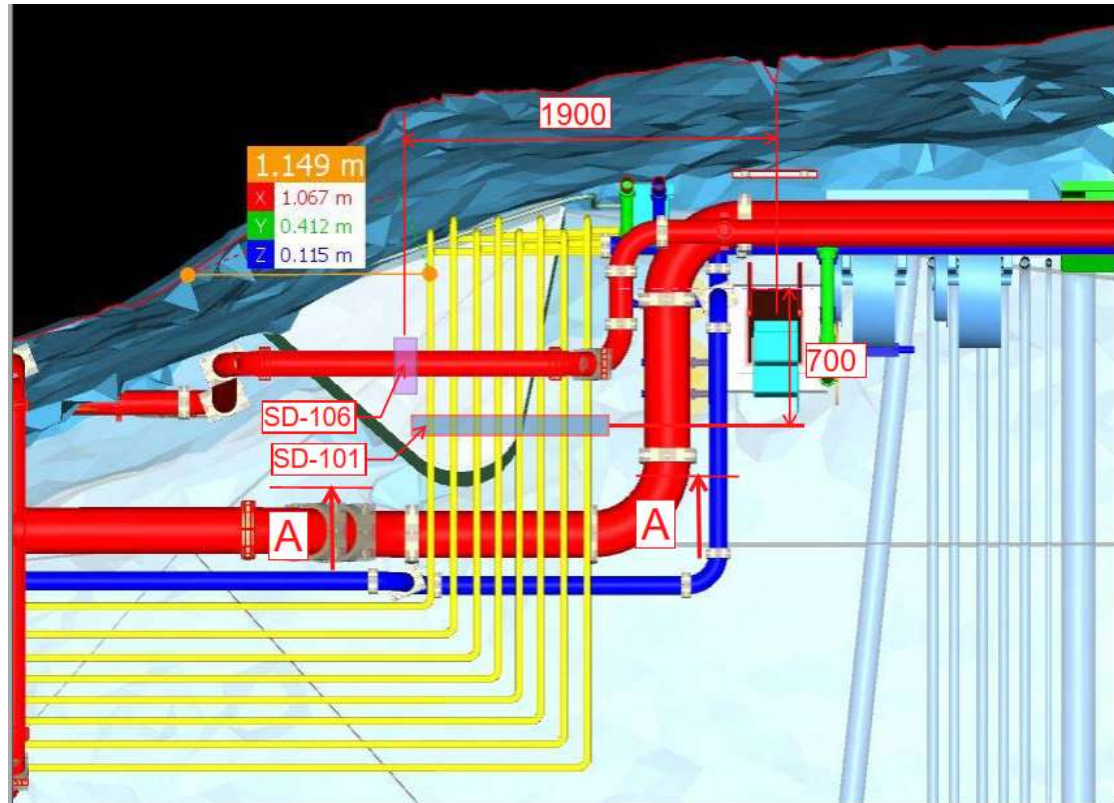
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0	09.08.18	ISSUED FOR CONSTRUCTION	CL	CC						1883-50-T1-1103	GENERAL ARRANGEMENT - PLAN	Oyu Tolgoi LLC	C. LOPEZ	C. LOPEZ	SN1809	B. MAUREIRA	B. MAUREIRA		C. CID	09.07.18	A1	E. MARIN		09.07.18	1883-50-T1-1109 DWG			1:75	1883-50-T1-1109	1
1	15.09.20	ISSUED FOR CONSTRUCTION	MB	BM						1883-50-T1-1118	ROAD TRAIN BAY 1 - SECTIONS																			
			AK	SM						1883-40-B1-1102	SPRINKLERS SYSTEM LAYOUT																			
										1883-50-T1-1110	WORKSHOPS TRUCK SHOP H. LEVEL TOOL CRIB & W HOUSE/DETAIL																			
										1883-50-T1-1107	WORKSHOPS TRUCK SHOP H. LEVEL LUNCH ROOM/ OFFICES DETAIL																			



DESIGNED PIPE SUPPORT – ROAD TRAIN BAY 1

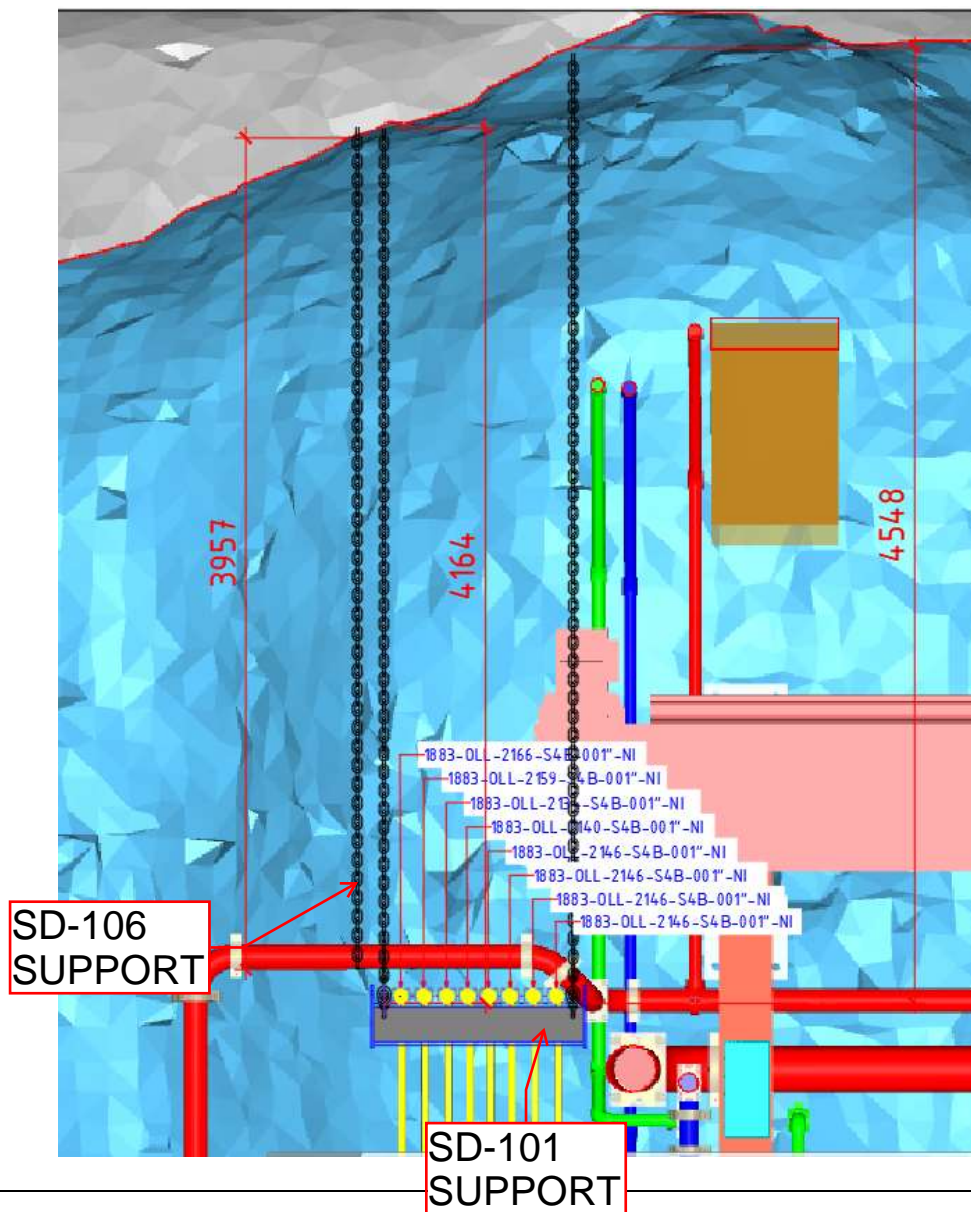


PROPOSED PIPE SUPPORT DESIGN – ROAD TRAIN BAY 1

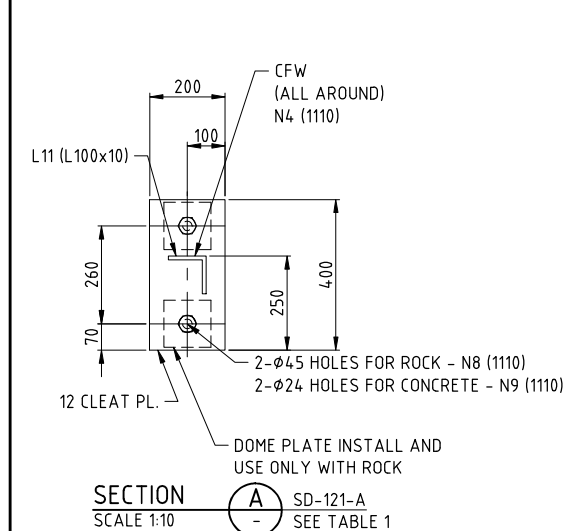
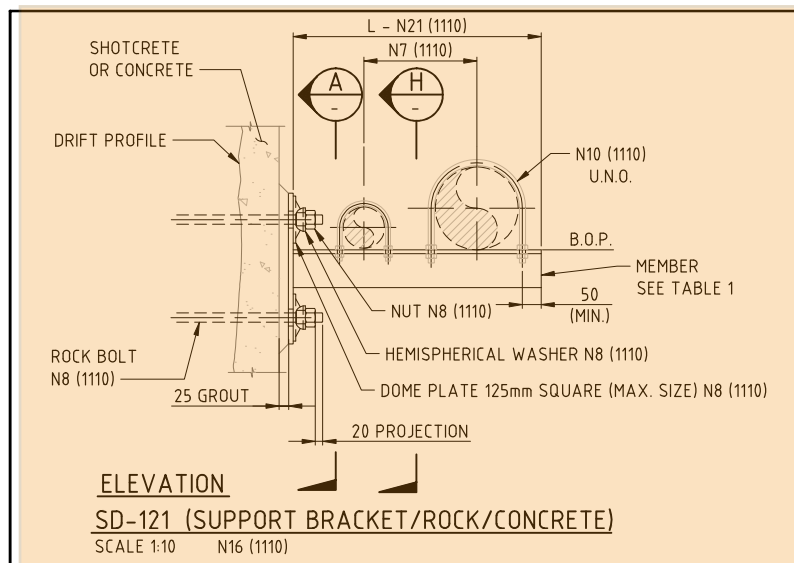


Section A-A

PROPOSED PIPE SUPPORT DESIGN – ROAD TRAIN BAY 1



**ATTACHMENT 4.**



TYPE	MEMBER N3 (1110)	MAX. LENGHT L	MAX LOAD (Kgs.)
A	L11	1200	225
B	TFC07	1200	500

SUPPORT IDENTIFICATION : SD-121 - A  
(NAME - TYPE)

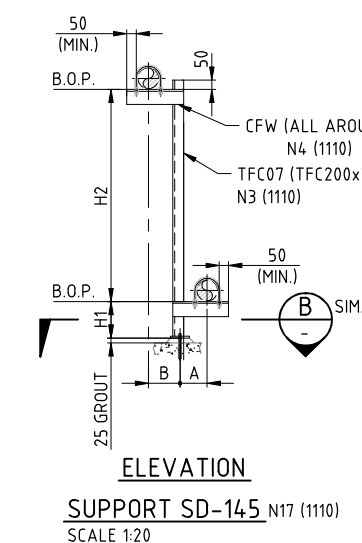
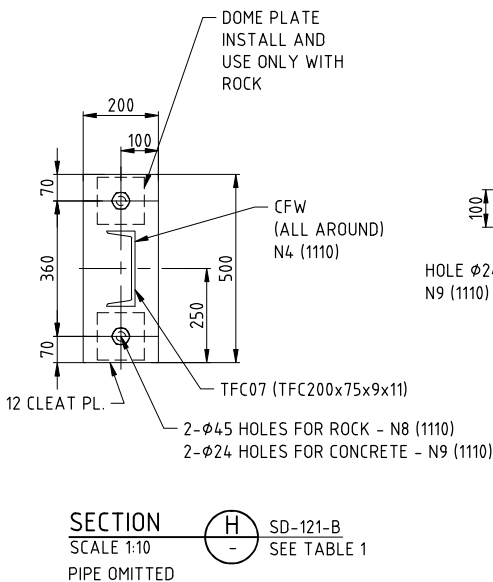


TABLE 2				
TYPE	MEMBER N3 (1110)	MAX LOAD (Kgs.)		
		01 (L=600)	02 (L=900)	03 (L=1200)
A	L02	70	45	40
B	L08	205	135	115
C	L11	455	300	225
D	TFC07	1000	680	500
E	HM02	3500	2400	1200

SUPPORT IDENTIFICATION : SD-164 - A - 01  
(NAME - TYPE - MAX. LOAD)

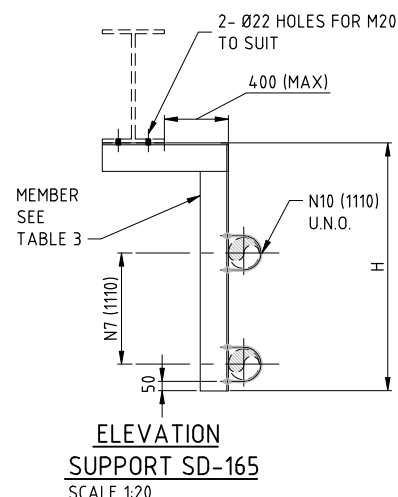
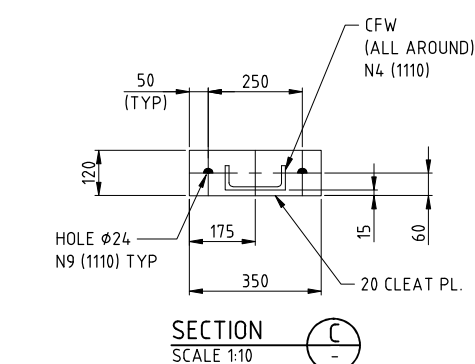
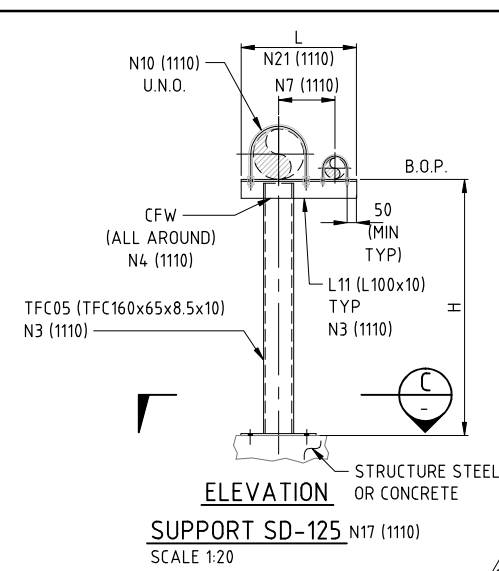
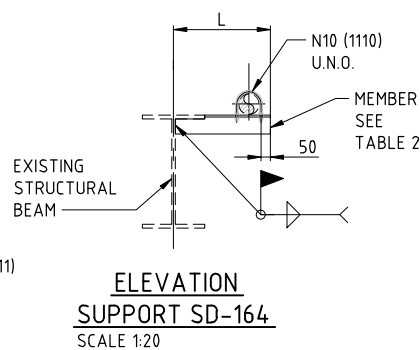
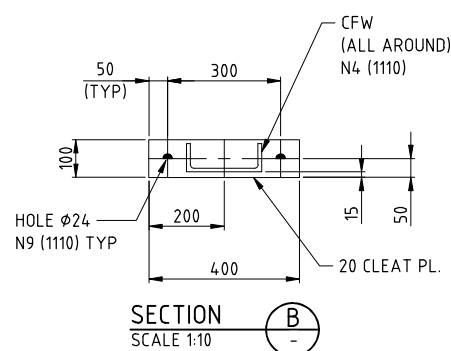
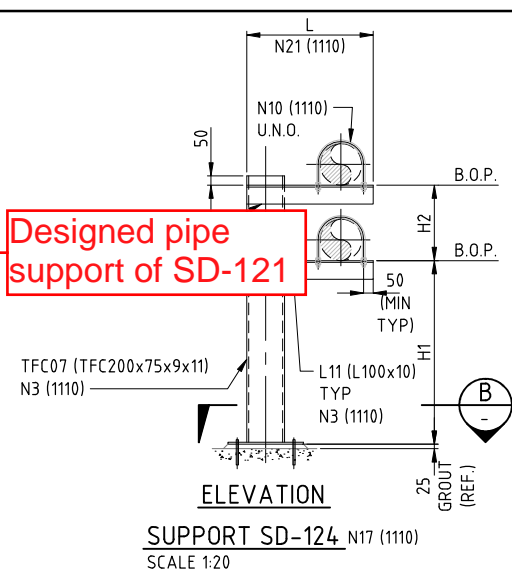
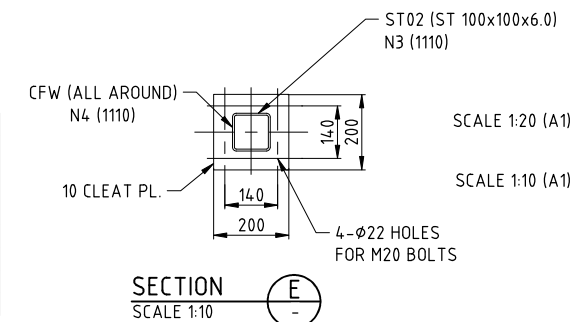
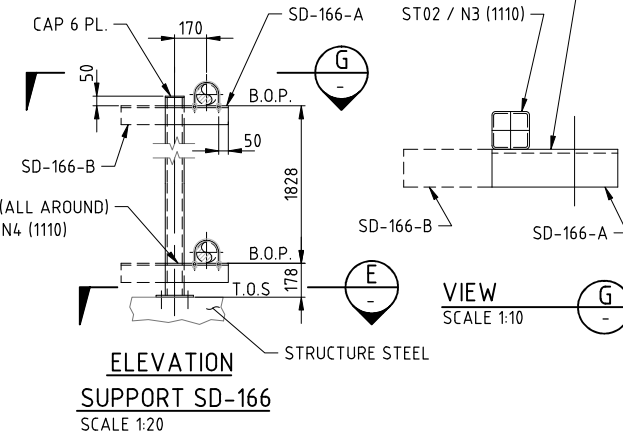
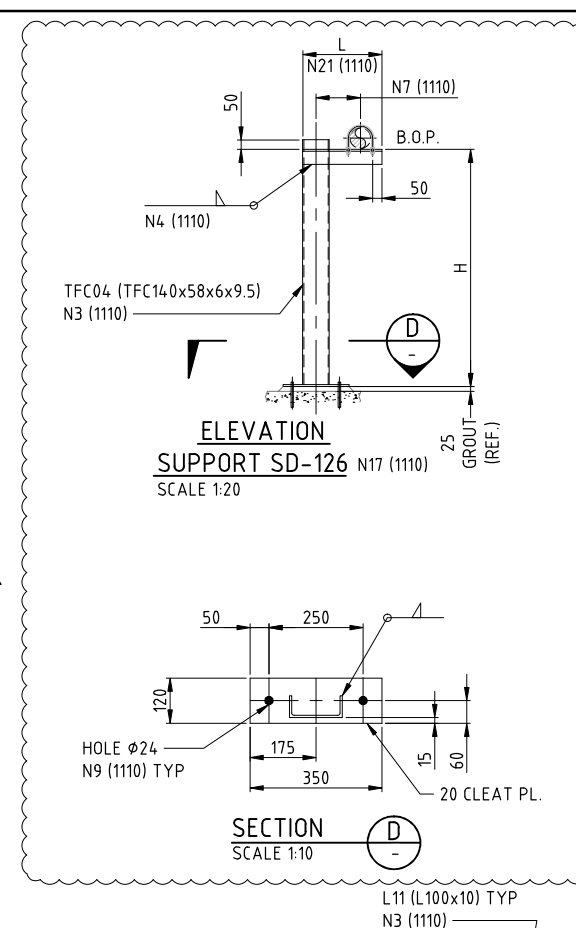


TABLE 3			
TYPE	MEMBER N3 (1110)	MAX. HEIGHT H	MAX LOAD (Kgs.)
A	L08	500	100
B	L11	600	120
C	TFC07	800	200
D	TFC09	2000	250

SUPPORT IDENTIFICATION : SD-165 - A  
(NAME - TYPE)



**NOTES:**  
1. FOR GENERAL NOTES REFER TO DRG 0000-50-N1-1110.

**LEGEND:**

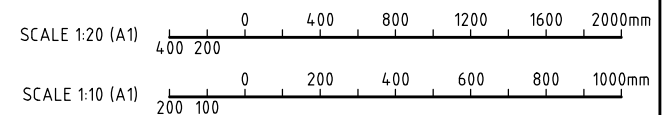
NX : DENOTES NOTE NUMBER X

NY (ZZZZ): DENOTES NOTE NUMBER Y REFER TO DRG ZZZZ

B.O.P. : BOTTOM OF PIPE

(MIN.) : MINIMUM

SIM. : SIMILAR



## CONSTRUCTION ISSUE

	JACOBS ENGINEERING SINGAPORE PTE LTD (Registration number 199803266M), a company incorporated in Singapore and having its registered office at 50 Raffles Place #32-01 Singapore Land Tower, Singapore, 048623 (the offshore Contractor)
	Jacobs Document No. SN1809-0000/PP.DRG/1115
	Web: <a href="http://www.jacobs.com">www.jacobs.com</a>

OYU TOLGOI UNDERGROUND PROJECT  
 SITE WIDE  
 SPECIAL PIPE SUPPORTS  
 DETAILS

SCALE 1:10	DRAWING NUMBER 0000-50-N1-1115	REV. 2
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CAUTION - PROJECT DRAWING - NOT AS BUILT



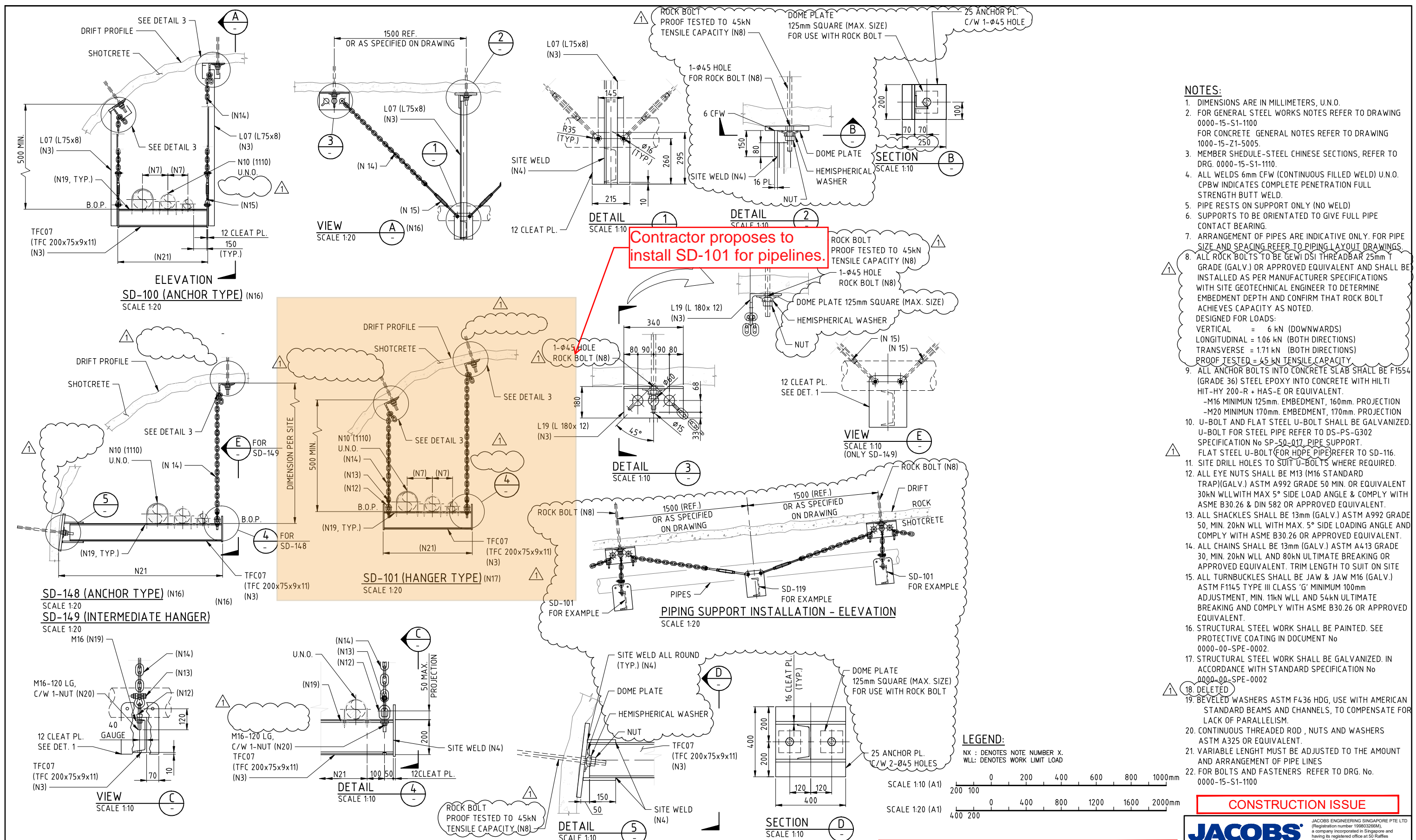
**OYU TOLGOI LLC**  
ОЮУ ТОЛГОЙ ХХК

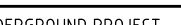
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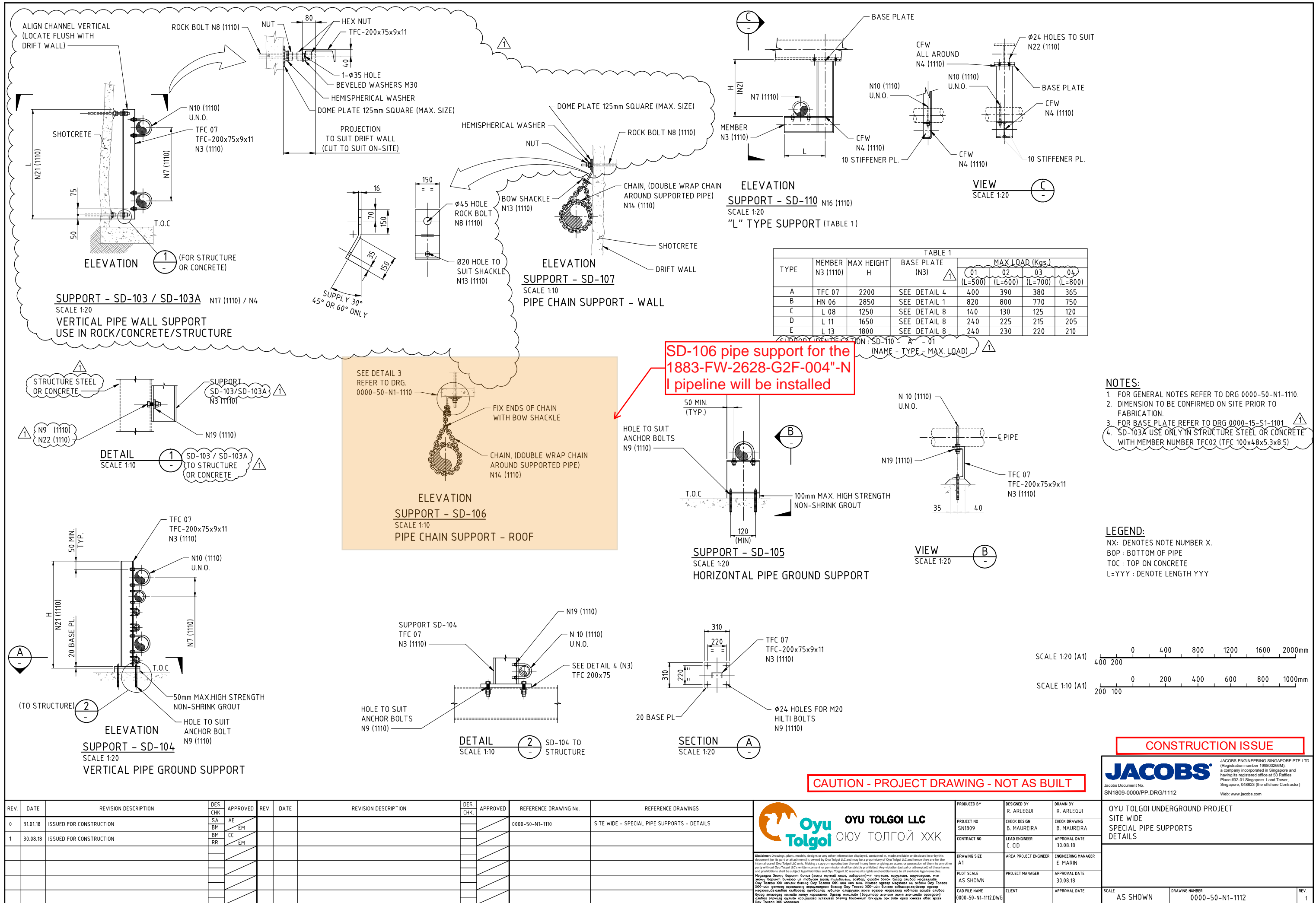
PRODUCED BY	DESIGNED BY J. RODRIGUEZ	DRAWN BY M. LOPEZ
PROJECT NO SN1809	CHECK DESIGN B. MAUREIRA	CHECK DRAWING B. MAUREIRA
CONTRACT NO	LEAD ENGINEER C. CID	APPROVAL DATE 30.08.18
DRAWING SIZE A1	AREA PROJECT ENGINEER	ENGINEERING MANAGER E. MARIN
PLOT SCALE 1:10	PROJECT MANAGER	APPROVAL DATE 30.08.18
CAD FILE NAME	CLIENT	APPROVAL DATE

REV.	DATE	REVISION DESCRIPTION	DES. CHK.	APPROVED	REV.	DATE	REVISION DESCRIPTION	DES. CHK.	APPROVED	REFERENCE DRAWING No.	REFERENCE DRAWINGS
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1	30.08.18	ISSUED FOR CONSTRUCTION	BM RR	CC EM							
2	07.09.19	ISSUED FOR CONSTRUCTION	BB GD	JM LG							
				/					/		
				/					/		
				/					/		
				/					/		






REV.	DATE	REVISION DESCRIPTION	DES. CHK.	APPROVED	REV.	DATE	REVISION DESCRIPTION	DES. CHK.	APPROVED	REFERENCE DRAWING No.	REFERENCE DRAWINGS	 <div>OYU TOLGOI LLC ОЮУ ТӨЛГӨЙ ХХК</div>	PRODUCED BY	DESIGNED BY	DRAWN BY	OYU TOLGOI UNDERGROUND PROJECT				
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1	30.08.18	ISSUED FOR CONSTRUCTION	CP BM	CC EM						0000-15-S1-1110	STRUCTURAL STD./MEMBER SCHEDULE-STEEL CHINESE SECTIONS		CONTRACT NO	LEAD ENGINEER C. CID	APPROVAL DATE 30.08.18					
										0000-15-S1-1100	STRUCTURAL STANDARDS GENERAL STEELWORKS NOTES		DRAWING SIZE A1				AREA PROJECT ENGINEER	ENGINEERING MANAGER E. MARIN		
													PLOT SCALE AS SHOWN				PROJECT MANAGER	APPROVAL DATE 30.08.18		
											Disclaimer: Drawings, plans, models, designs or any other information displayed, contained in, made available or disclosed in or by this document (or its parts or attachments) is owned by Oyu Tolgoi LLC and may be the proprietary of Oyu Tolgoi LLC and hence they are for the internal use of Oyu Tolgoi LLC only. Making a copy or reproduction thereof in any form or giving an access or possession of them to any other party without Oyu Tolgoi LLC's written consent or permission shall be strictly prohibited. Any violation (actual or attempted) of these terms and provisions shall be subject to legal liabilities and Oyu Tolgoi LLC reserves its rights and remedies to all available legal remedies.  Нарынгаа Эмнэлэ бичлэг бичлэг (хуульчилсан хуульчилсан) нь үүсгэх, хуульчилсан, хуульчилсан, хуульчилсан бичлэг б									





REV.	DATE	REVISION DESCRIPTION	DES. CHK.	APPROVED	REV.	DATE	REVISION DESCRIPTION	DES. CHK.	APPROVED	REFERENCE DRAWING No.	REFERENCE DRAWINGS	<div><div><div>OYU TOLGOI LLC</div><div>ОЮУ ТӨЛГӨЙ ХХК</div></div></div>	PRODUCED BY	DESIGNED BY	DRAWN BY	OYU TOLGOI UNDERGROUND PROJECT							
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2	07.09.19	ISSUED FOR CONSTRUCTION	RR	EM									DRAWING SIZE A1	AREA PROJECT ENGINEER	ENGINEERING MANAGER E. MARIN								
3	14.12.20	ISSUED FOR CONSTRUCTION	BB	JM									PLOT SCALE 1:10	PROJECT MANAGER	APPROVAL DATE 30.08.18								
			GB	LG								CAD FILE NAME 0000-50-N1-1115.DWG	CLIENT	APPROVAL DATE	SCALE 1:10	DRAWING NUMBER 0000-50-N1-1115	REV.						