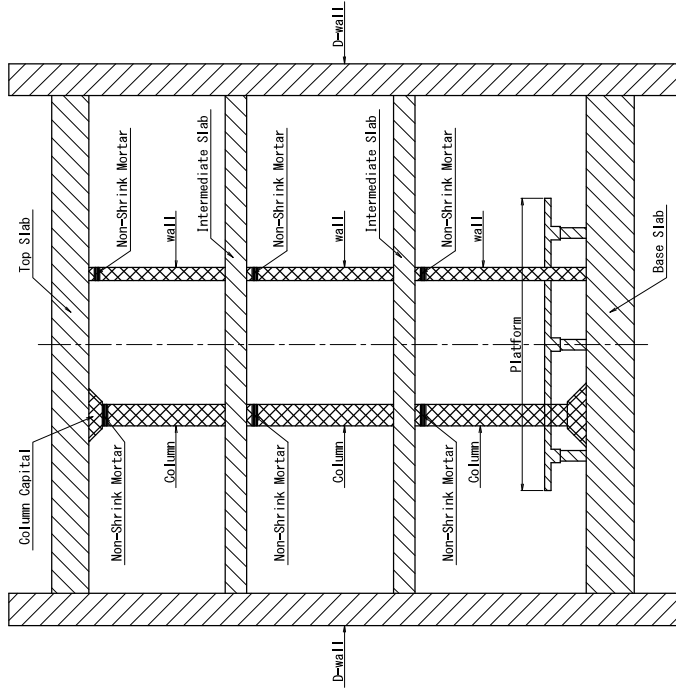


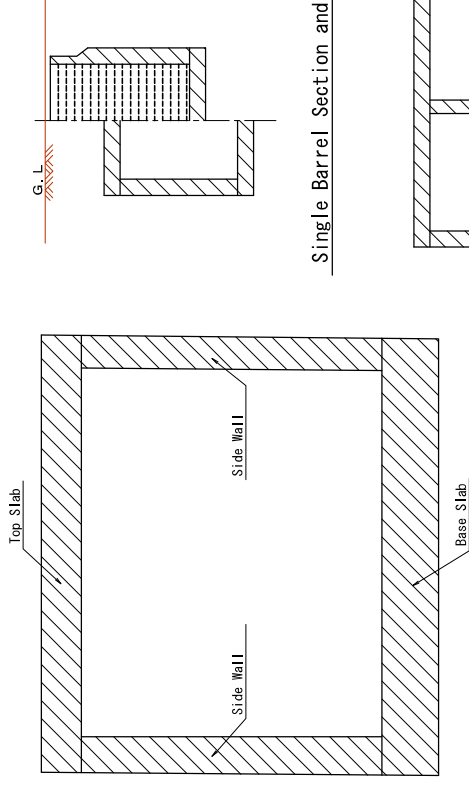
Concrete Strength Criteria



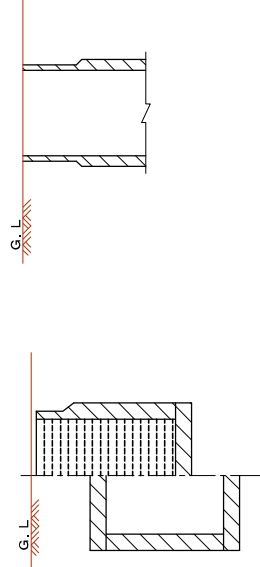
Station



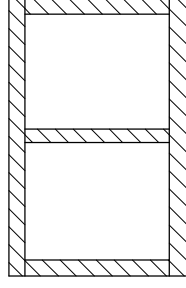
Open Cut Tunnel and Entrance



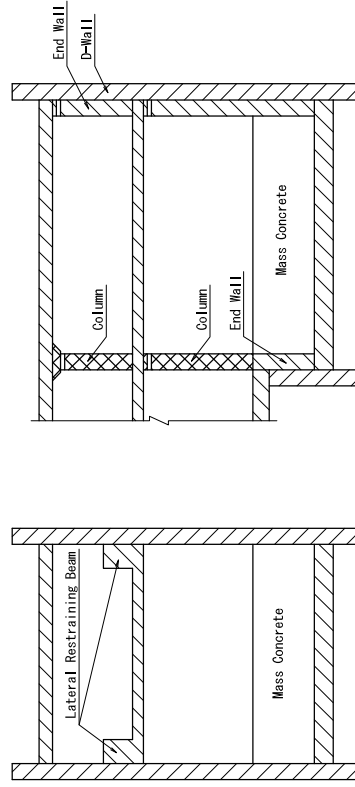
Ventilation



Single Barrel Section and Stair



Double Barrel Section

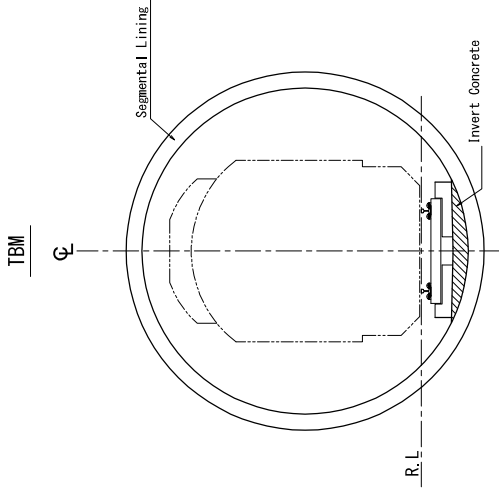


Vertical Shaft

- 40 N/mm² D-wall
- 24 N/mm² Top Slab, Intermediate Slab, Base Slab, Side wall, Lateral Restraining Beam, End Wall, Platform, Ventilation Shaft
- 45 N/mm² Column, Wall, Column Capital
- 18 N/mm² Protection Concrete, Lean Concrete, Mass Concrete

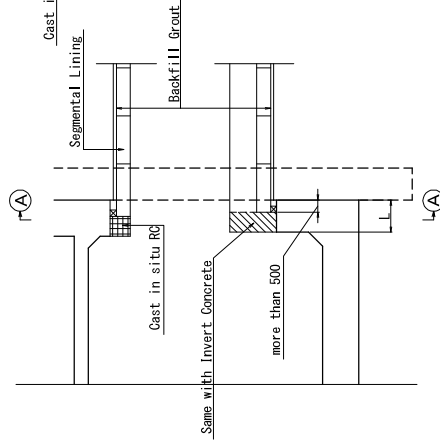
VERSIONS	DATE	DESCRIPTION	CONSULTANT				METRO MANILA SUBWAY PROJECT PHASE I			DATE	
2	13 Mar 2020	Issue for Bidding Documents	JICA DESIGN TEAM ORIENTAL CONSULTANTS GLOBAL CO., LTD. 			TITLE DESIGNER CHECK TEAM LEADER PR. MANAGER			November 2020 As Shown 3 GN-CE-CD-0001 REV 3		
3	30 Nov 2020	Revised notes/notation	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) DEPARTMENT OF TRANSPORTATION (DOTT)			JT M. KANEKO H. TOMIYAMA H. OKAWA S. NAKAMURA			PACKAGE CP 104 CONCRETE STRENGTH CRITERIA		

Concrete Strength Criteria for TBM Tunnel

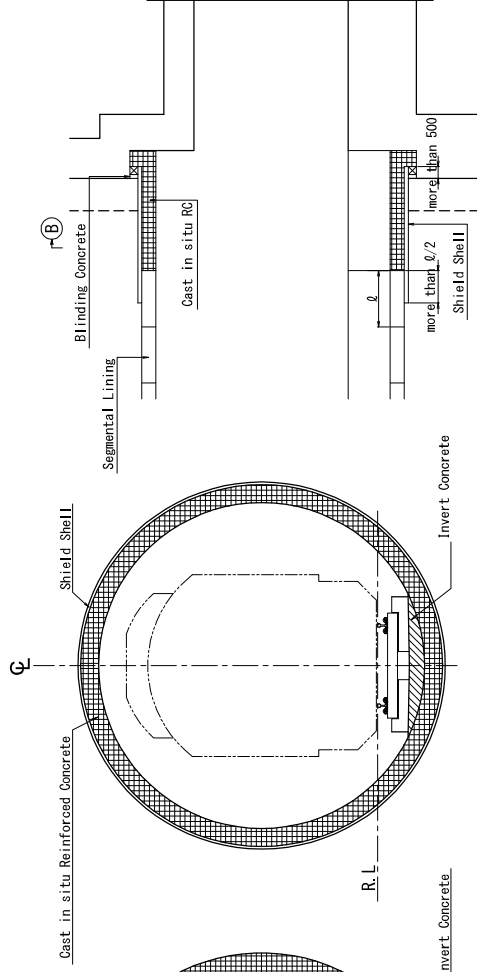


- 18 N/mm² Invert Concrete
- 24 N/mm² Cast in situ Reinforced Concrete

TBM Launching Section



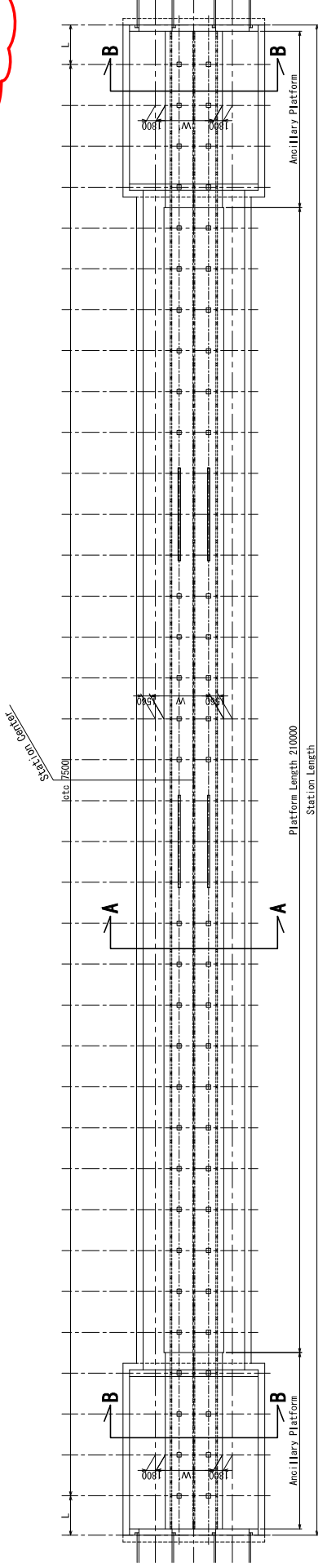
TBM Arrival Section



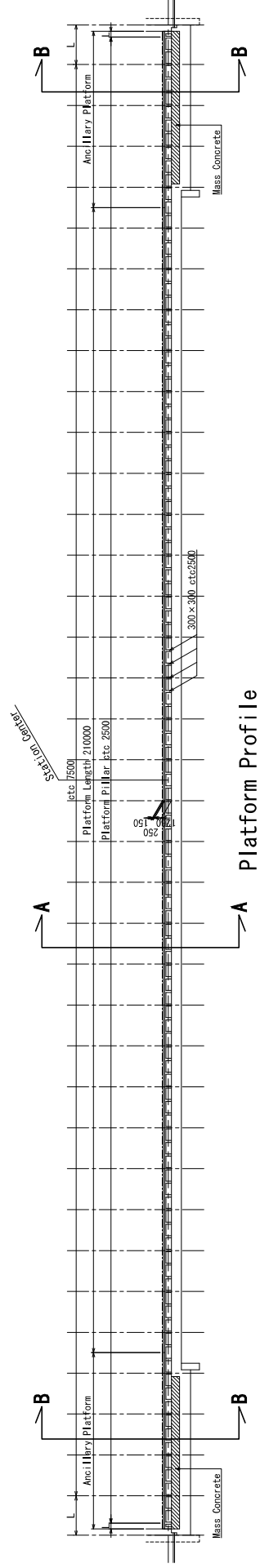
Note
If water flow from TBM, construct side drainage at the MATM section.

VERSIONS	DATE	DESCRIPTION	CONSULTANT				CONCRETE STRENGTH CRITERIA FOR TBM TUNNEL					
2	13 Mar 2020	Issue for Bidding Documents	JICA DESIGN TEAM 				CONCRETE STRENGTH CRITERIA FOR TBM TUNNEL					
3	30 Nov 2020	Revised notes/notation	DESIGNER	JDT	CFK	DESIGNER	M. KANEKO	K. FUNAYAMA	SCALE	S=NTS	DATE	November 2020
			CHECK	H. TOMIYAMA	Y. SAKON	CHECK	H. TOMIYAMA	Y. SAKON	SHEET No.	4	DRG No.	GN-CE-CD-0002
			TEAM LEADER	H. OKAWA	T. SAKATA	TEAM LEADER	H. OKAWA	T. SAKATA	DRG S.		REV	3
			PR. MANAGER	S. NAKAMURA	K. MURIOYA	PR. MANAGER	S. NAKAMURA	K. MURIOYA				

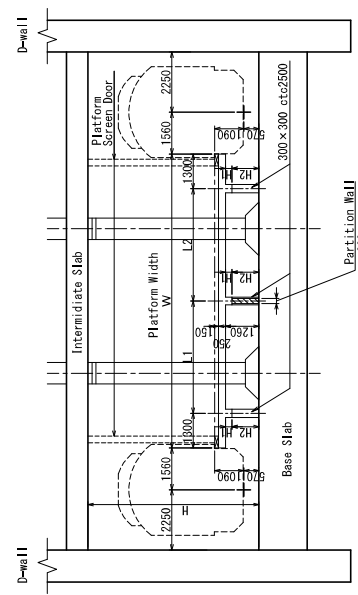
Platform General Drawing



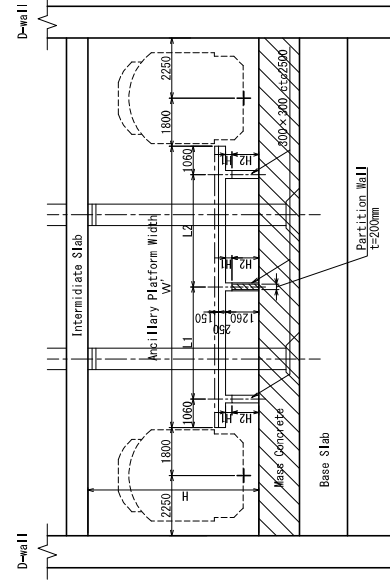
Platform Plan
A1:1/400
(A3:1/800)



Platform Profile
A1:1/400
(A3:1/800)



Section A-A
A1:1/100
(A3:1/200)



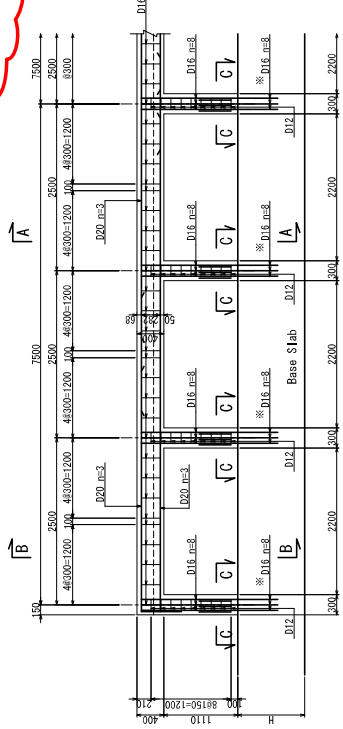
Section B-B
A1:1/100
(A3:1/200)

Dimension Table

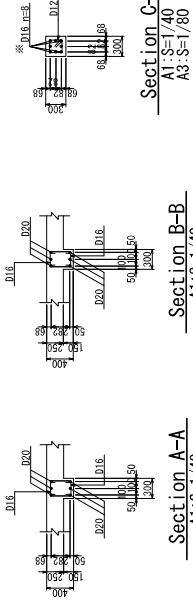
	W	H	H2
~11000	11000	1100	12600
150	150	250	
1110	1110	1010	

VERSIONS	DATE	DESCRIPTION	CONSULTANT				JICA DESIGN TEAM			
2	13 Mar 2020	Issue for Bidding Documents	DEPARTMENT OF TRANSPORTATION (DOT)				ORIENTAL CONSULTANTS GLOBAL CO., LTD.			
3	30 Nov 2020	Revised notes/notation	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)				KATAHIRA & ENGINEERS INTERNATIONAL			
							PACIFIC CONSULTANTS CO., LTD.			
							TONUCHI ENGINEERING CONSULTANTS, INC.			
							PR. MANAGER S. NAKAMURA			
							TEAM LEADER H. OKAWA			
							CHECK H. TOMIYAMA			
							DESIGNER M. KANEKO			
							TITLE			
							JDT			
							CFK			
							METRO MANILA SUBWAY PROJECT PHASE1			
							PACKAGE CP 104			
							SHEET No. 5			
							AS SHOWN			
							November 2020			
							DATE			
							DRG No. GN-CE-CD-0003			
							DRG S.			
							REV 3			

Reinforcement Detail - Platform 1/2



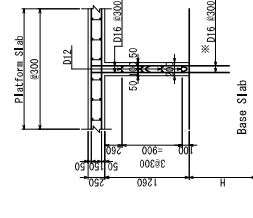
Typical Beam Reinforcement Details
 A1: S=1/40
 A3: S=1/80



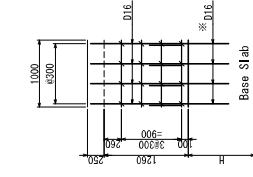
Section A-A
 A1: S=1/40
 A3: S=1/80

Section B-B
 A1: S=1/40
 A3: S=1/80

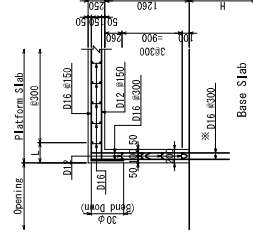
Section C-C
 A1: S=1/40
 A3: S=1/80



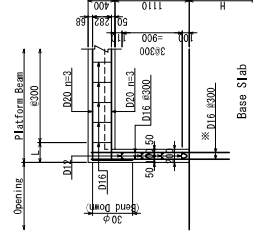
Platform Wall Section
 A1: S=1/40
 A3: S=1/80



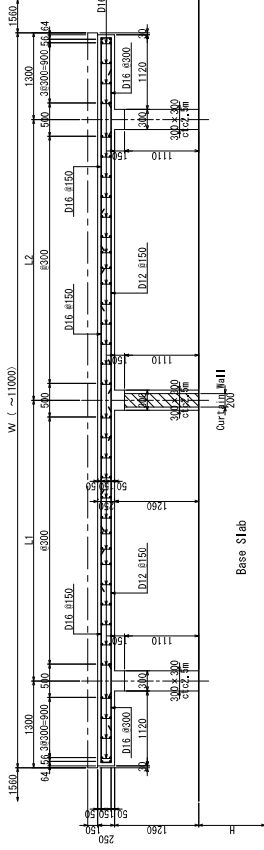
Platform Wall
 A1: S=1/40
 A3: S=1/80



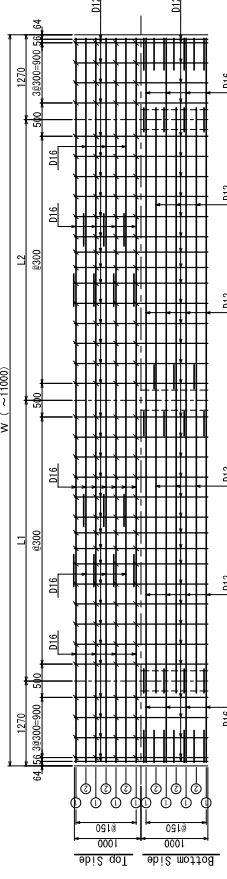
Opening Details
 A1: S=1/40
 A3: S=1/80



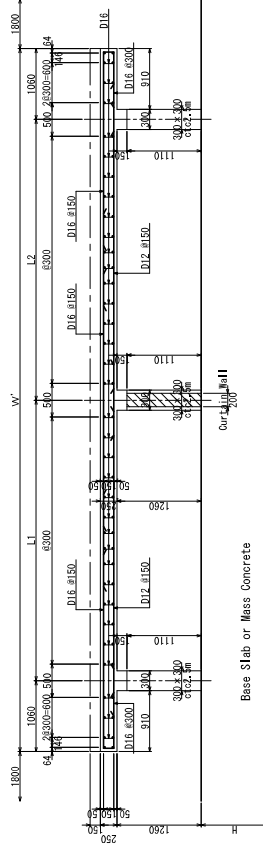
Platform Slab
Platform Beam



Platform Section ($W \leq 11m$)
 A1: S=1/40
 A3: S=1/80



Platform Slab ($W \leq 11m$)
 A1: S=1/40
 A3: S=1/80



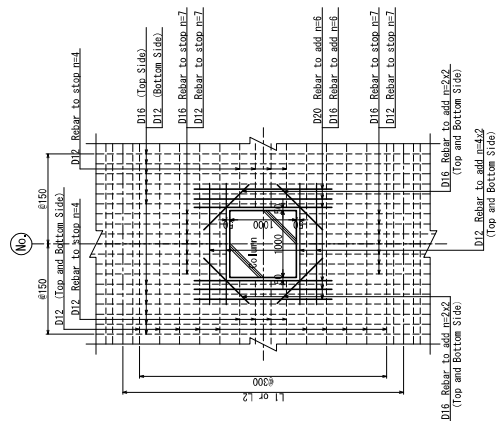
Typical Auxiliary Platform
 A1: S=1/40
 A3: S=1/80

Note

1. Install Starter bar $\otimes D16$, for Platform Beam & Column in Base slab.
2. Acute angled hook of column hoop shall be in staggered arrangement.

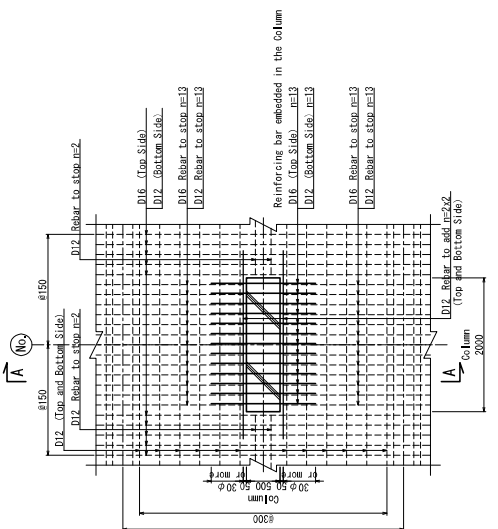
VERSIONS	DATE	DESCRIPTION	CONSULTANT
2	13 Mar 2020	Issue for Bidding Documents	JICA DESIGN TEAM KATAHIRA & ENGINEERS INTERNATIONAL PACIFIC CONSULTANTS CO. LTD. JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
3	30 Nov 2020	Revised notes/notation	
		DEPARTMENT OF TRANSPORTATION (DOTr)	JICA DESIGN TEAM KATAHIRA & ENGINEERS INTERNATIONAL PACIFIC CONSULTANTS CO. LTD. JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
		JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	JICA DESIGN TEAM KATAHIRA & ENGINEERS INTERNATIONAL PACIFIC CONSULTANTS CO. LTD. JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
		METRO MANILA SUBWAY PROJECT PHASE 1 PACKAGE CP 104	CONSULTANT TITLE DESIGNER CHECK TEAM LEADER PR. MANAGER
		REINFORCEMENT DETAIL - PLATFORM - SHEET 1/2	TITLE DESIGNER CHECK TEAM LEADER PR. MANAGER
		SHEET No. 6	TITLE DESIGNER CHECK TEAM LEADER PR. MANAGER
		DRG No. GN-CE-CD-0004	TITLE DESIGNER CHECK TEAM LEADER PR. MANAGER
		DRG S.	TITLE DESIGNER CHECK TEAM LEADER PR. MANAGER
		SCALE AS SHOWN	TITLE DESIGNER CHECK TEAM LEADER PR. MANAGER
		DATE November 2020	TITLE DESIGNER CHECK TEAM LEADER PR. MANAGER

Reinforcement Detail - Platform 2/2



Length details
A1: S=1/40
A3: S=1/80

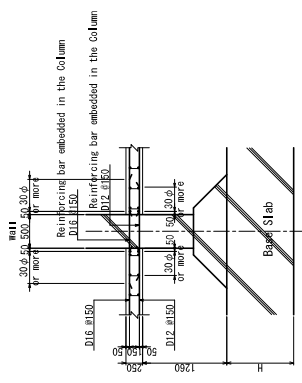
Column 1000 x 1000



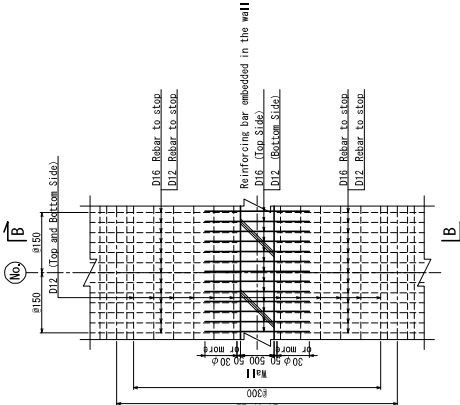
Column 500 x 2000

Column Opening Details

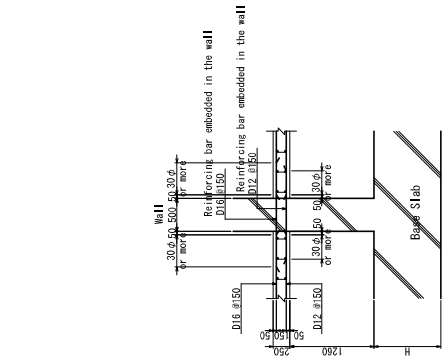
A1: S=1/40
A3: S=1/80



Section A-A
A1: S=1/40
A3: S=1/80



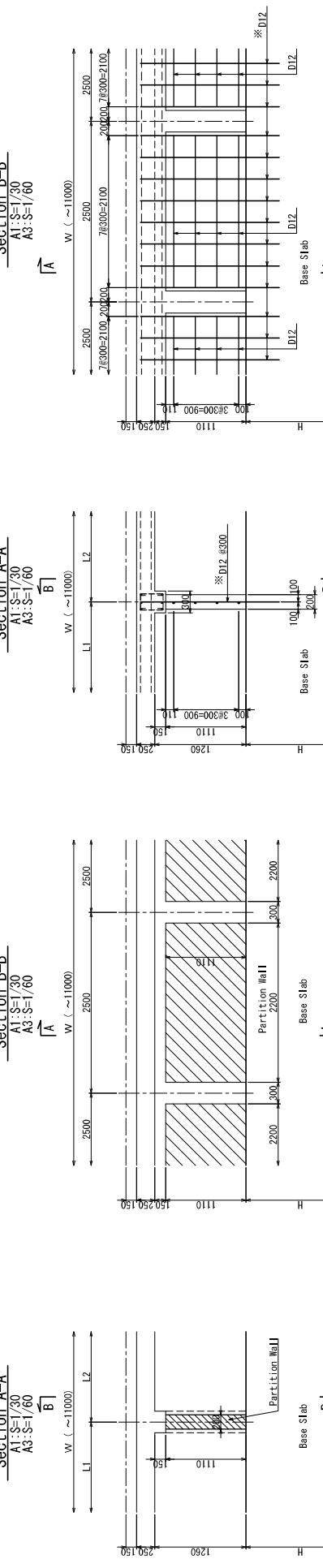
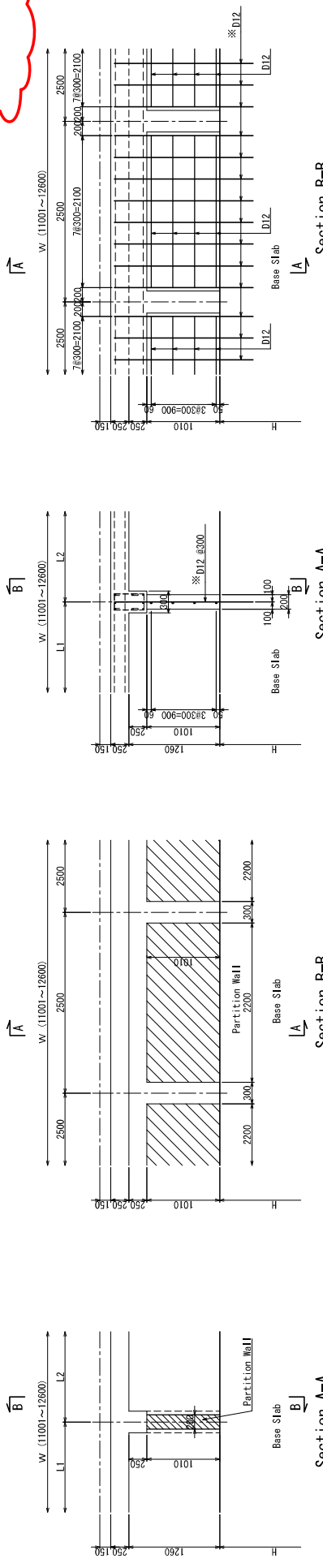
Section B-B
A1: S=1/40
A3: S=1/80



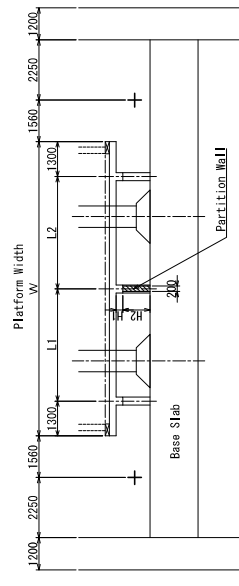
Wall Details
A1: S=1/40
A3: S=1/80

VERSIONS	DATE	DESCRIPTION	CONSULTANT				CONTRACT										
2	13 Mar 2020	Issue for Bidding Documents	JICA DESIGN TEAM				METRO MANILA SUBWAY PROJECT										
3	30 Nov 2020	Revised notes/notation	ORBITAL CONSULTANTS INTERNATIONAL CO., LTD. KATAHIRA & ENGINEERS INTERNATIONAL PACIFIC CONSULTANTS CO., LTD. JAPAN INTERNATIONAL TRANSPORTATION CO., LTD. TONICHIKI ENGINEERING CONSULTANTS, INC. ALMEC CORPORATION				PHASE 1 PACKAGE CP 104 REINFORCEMENT DETAIL - PLATFORM - SHEET 2/2										
			TITLE	JDT	CFK	DESIGNER	M. KANEKO	K. FUNAYAMA	CHECK	H. TOMIYAMA	Y. SAKON	TEAM LEADER	H. OKAWA	T. SAKATA	PR. MANAGER	S. NAKAMURA	K. MURIOYA
			DATE: November 2020 SCALE: AS SHOWN SHEET No: 7 DRG No: GN-CE-CD-0005 DRG S.														

Reinforcement Details - Under Platform Infill Wall



Beam Section Details

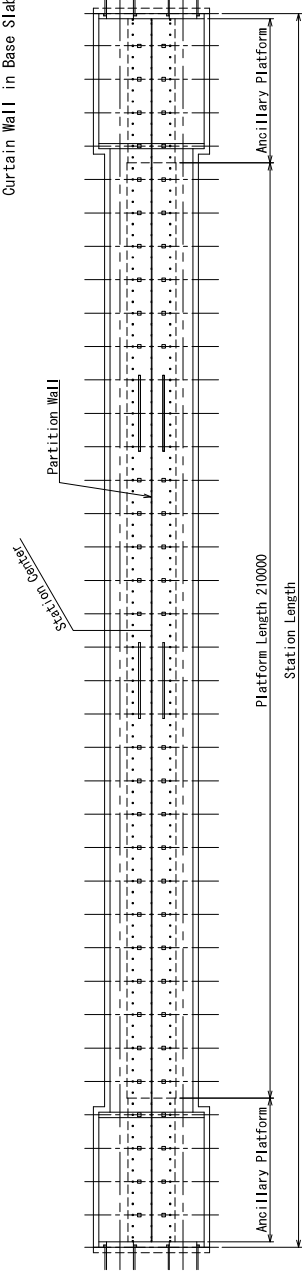


Dimension Table

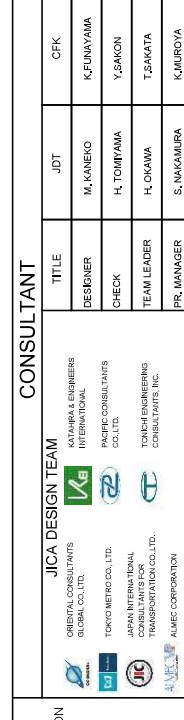
	W
~11000	11001~12600
H1	150
H2	1110
	1010

Beam Reinforcement Details

Note
 Install starter bar \times D12 for
 Curtain Wall in Base Slab.

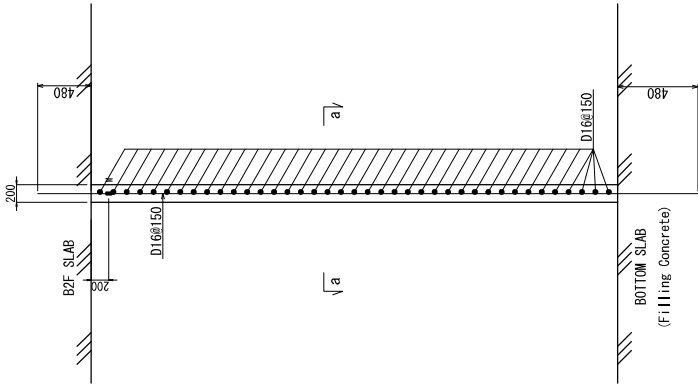


Platform Plan

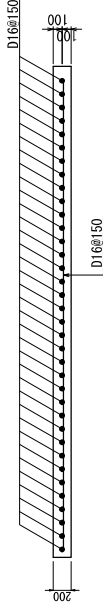


VERSIONS	DATE	DESCRIPTION	CONSULTANT			METRO MANILA SUBWAY PROJECT PHASE1			DATE
			TITLE	JDT	CFK	SCALE	SHEET No.	AS SHOWN	November 2020
2	13 Mar 2020	Issue for Bidding Documents	DESIGNER	M. KANEKO	K. FUNAYAMA	PACKAGE CP 104	8		
3	30 Nov 2020	Revised notes/notation	CHECK	H. TOMIYAMA	Y. SANON				
			TEAM LEADER	H. OKAWA	T. SAKATA				
			PR. MANAGER	S. NAKAMURA	K. MURUYA				
			JICA DESIGN TEAM			REINFORCEMENT DETAILS			DRG No.
			ORIENTAL CONSULTANTS GLOBAL CO., LTD.			- UNDER PLATFORM INFILL WALL			GN-CE-CD-0006
			JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						DRG S.
			DEPARTMENT OF TRANSPORTATION (DOT)						REV
			JICA						3

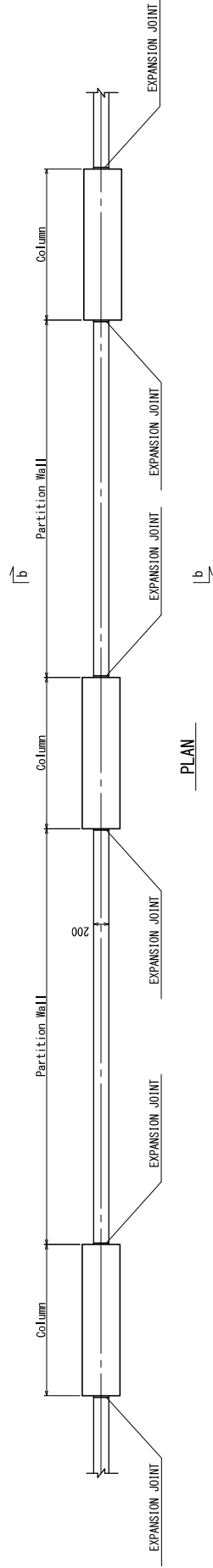
Partition Wall General Drawing



Section a-a
A1: S=1/30
A3: S=1/60



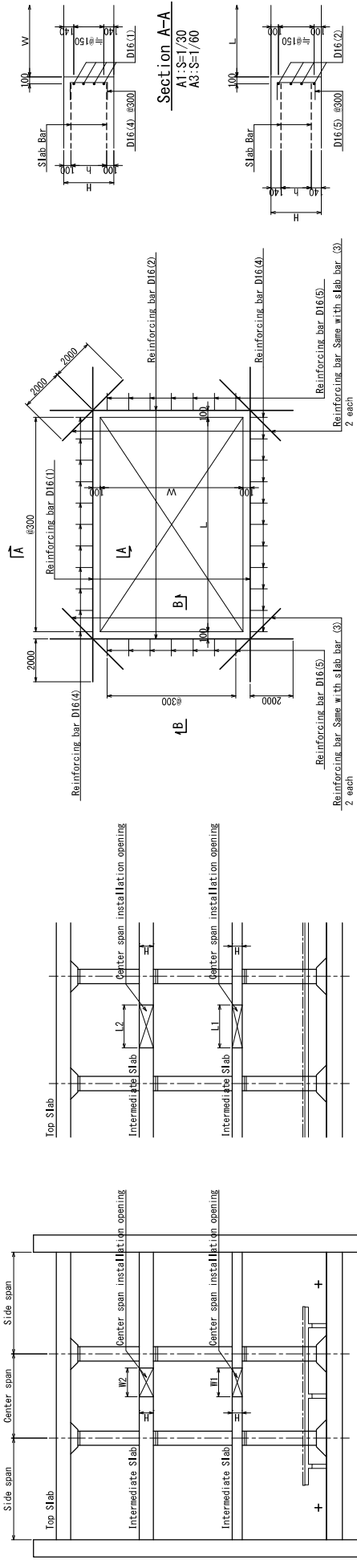
Section b-b
A1: S=1/30
A3: S=1/60



PLAN

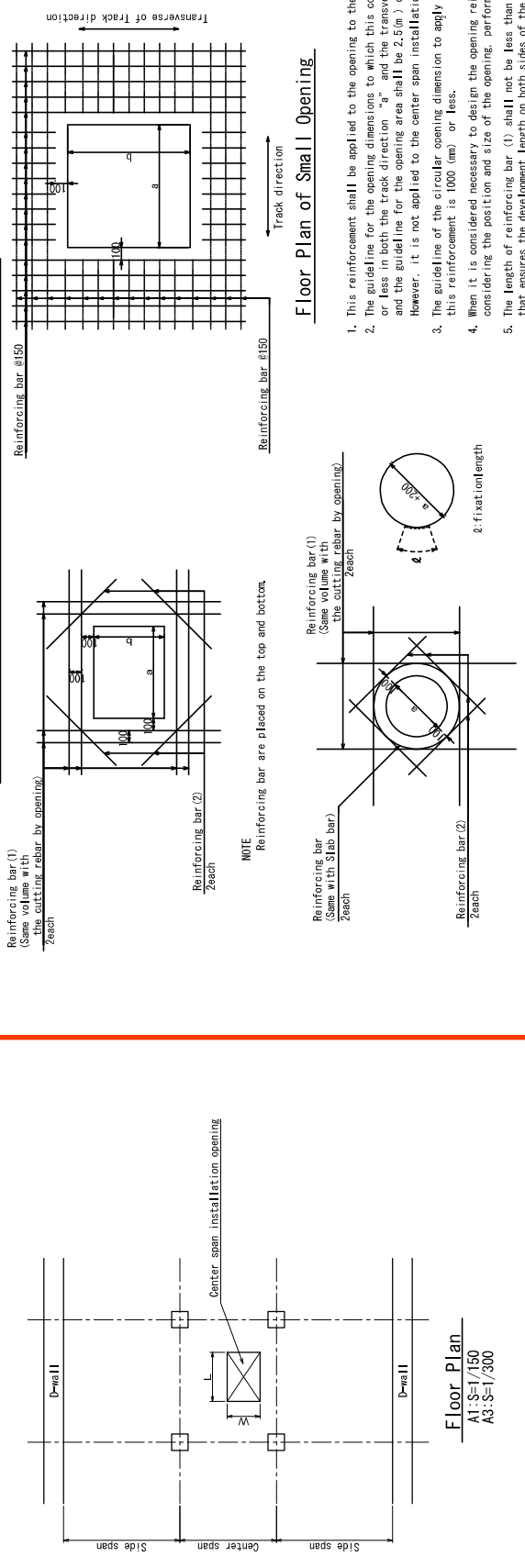
VERSIONS	DATE	DESCRIPTION	CONSULTANT				METRO MANILA SUBWAY PROJECT PHASE I			DATE
2	13 Mar 2020	Issue for Bidding Documents				TITLE DESIGNER CHECK TEAM LEADER PR. MANAGER			November 2020 S=1:30 9	November 2020 S=1:30 9
3	30 Nov 2020	Revised notes/notation				DESIGNER: M. KANEKO CHECK: H. TOMIYAMA TEAM LEADER: H. OKAWA PR. MANAGER: S. NAKAMURA			November 2020 S=1:30 9	November 2020 S=1:30 9
						TITLE: PARTITION WALL GENERAL DRAWING			November 2020 S=1:30 9	November 2020 S=1:30 9
						TITLE: PARTITION WALL GENERAL DRAWING			November 2020 S=1:30 9	November 2020 S=1:30 9

Reinforcement Details – Opening Beam



Reinforcing Bar Layout

Reinforcement Details – Small Opening Beam

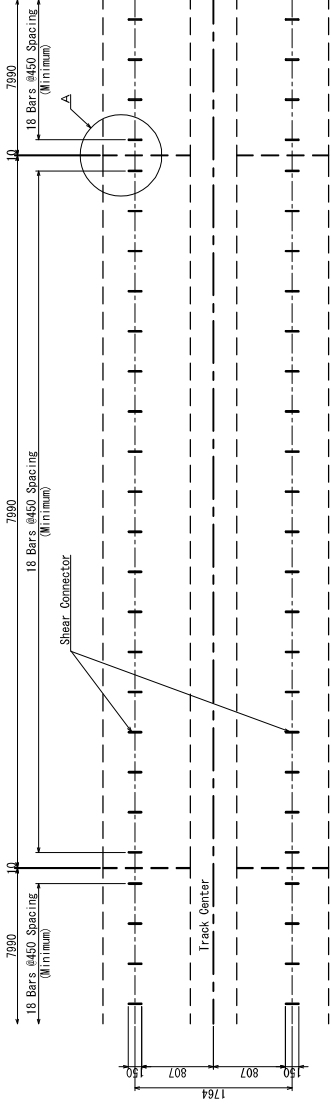


Floor Plan of Small Opening

- This reinforcement shall be applied to the opening to the intermediate slab.
- The guideline for the opening dimensions to which this concept is applied shall be 2500 (mm) or less in both the track direction "a" and the transverse of track direction "b". However, it is not applied to the opening area shall be 2.5 (m) or less.
- The guideline of the circular opening dimension to apply this reinforcement is 1000 (mm) or less.
- When it is considered necessary to design the opening reinforcement, considering the position and size of the opening, perform the design.
- The length of reinforcing bar (1) shall not be less than the length that ensures the development length on both sides of the opening. The length of reinforcing bar (2) shall be at least twice the development length.
- In reinforcing bar (1), the quantity of reinforcement more than the main reinforcement of the floor slab cut by the opening shall be arranged. The number of bars may be 1 to 3 per side depending on the size of the opening.

VERSIONS	DATE	DESCRIPTION	CONSULTANT				JICA DESIGN TEAM				DEPARTMENT OF TRANSPORTATION (DOT)				JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)			
2	13 Mar 2020	Issue for Bidding Documents																
3	12 Mar 2021	Added the Reinforcement Details																
			METRO MANILA SUBWAY PROJECT PHASE1				PACKAGE CP 104				REINFORCEMENT DETAILS - OPENING BEAM				DATE: March 2020 SCALE: AS SHOWN SHEET No.: 10 DRG No.: GN-CE-CD-0008 DRG S.: Rev 3			

Trackbed General Drawing (TBM)

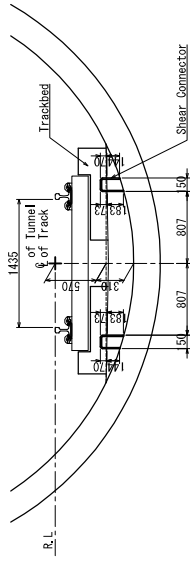


Spot Detail - A

A1: S=1/10
A3: S=1/20

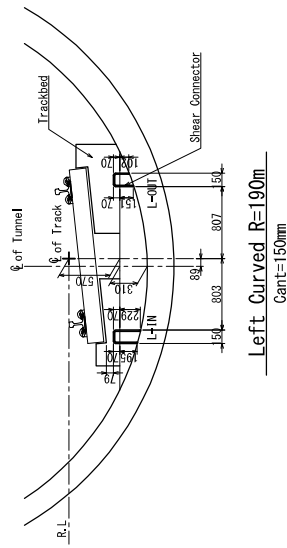
Typical Shear Connector Arrangement on Tunnel Section

A1: S=1/20
A3: S=1/60



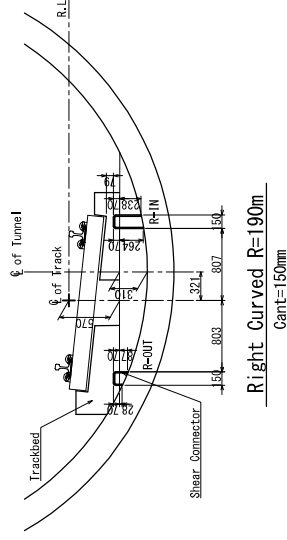
Tangent Track Section

A1: S=1/20
A3: S=1/60



Left Curved R=190m

A1: S=1/30
A3: S=1/60

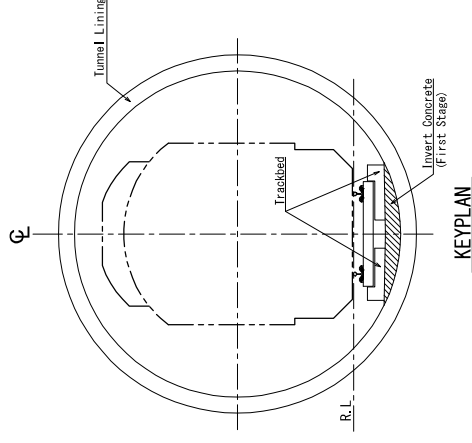


Right Curved R=190m

A1: S=1/30
A3: S=1/60

Curved Track Section

A1: S=1/30
A3: S=1/60



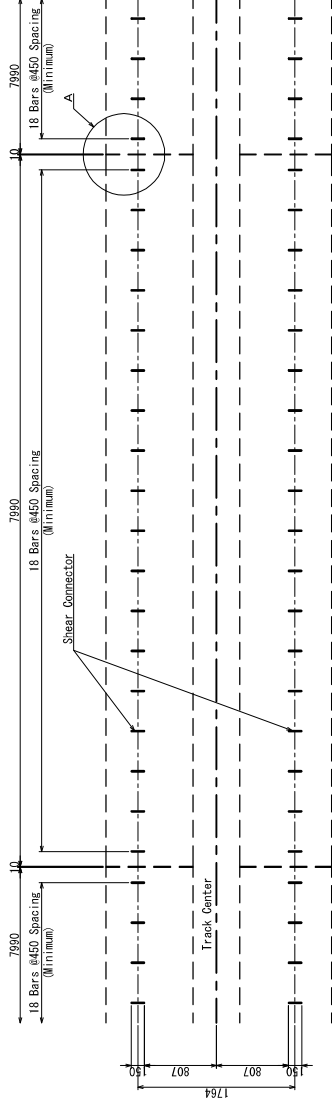
KEYPLAN

Note
Shear connector to be properly fabricated corresponding to the curve.

VERSIONS	DATE	DESCRIPTION	CONSULTANT					
2	13 Mar 2020	Issue for Bidding Documents	<p>JICA DESIGN TEAM KATAHIRA & ENGINEERS INTERNATIONAL PACIFIC CONSULTANTS CO. LTD. TONIC ENGINEERING CONSULTANTS, INC.</p>	TITLE	JDT	CFK	DATE	
3	30 Nov 2020	Revised notes/notation		DESIGNER	M. KANEKO	K. FUNAYAMA	SCALE	AS SHOWN
				CHECK	H. TOMIYAMA	Y. SAKON	SHEET No.	11
			TEAM LEADER	H. OKAWA	T. SAKATA	DRG No.	GN-CE-CD-0009	
			PR. MANAGER	S. NAKAMURA	K. KUROYA	DRG S.	REV 3	

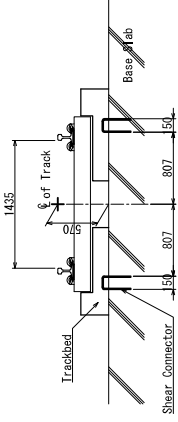
METRO MANILA SUBWAY PROJECT		November 2020
PACKAGE CP 104		AS SHOWN
TRACKBED GENERAL DRAWING (TBM)		11
		GN-CE-CD-0009
		REV 3

Trackbed General Drawing (Station)



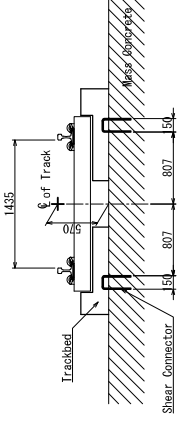
Typical Shear Connector Arrangement on Station Section

A1: S=1/20
A3: S=1/60



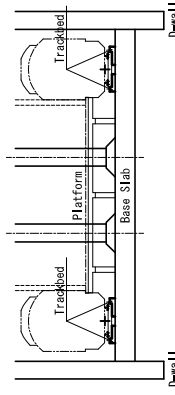
Base Slab Section

A1: S=1/30
A3: S=1/60

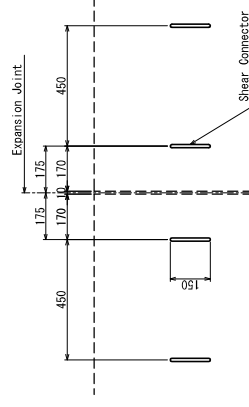
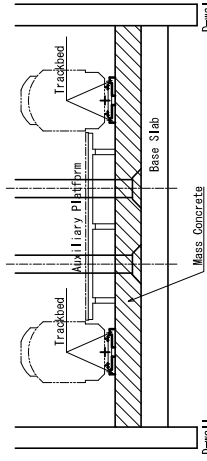


Mass Concrete Section

A1: S=1/30
A3: S=1/60

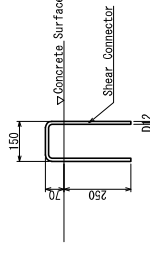


KEYPLAN



Spot Detail - A

A1: S=1/10
A3: S=1/20



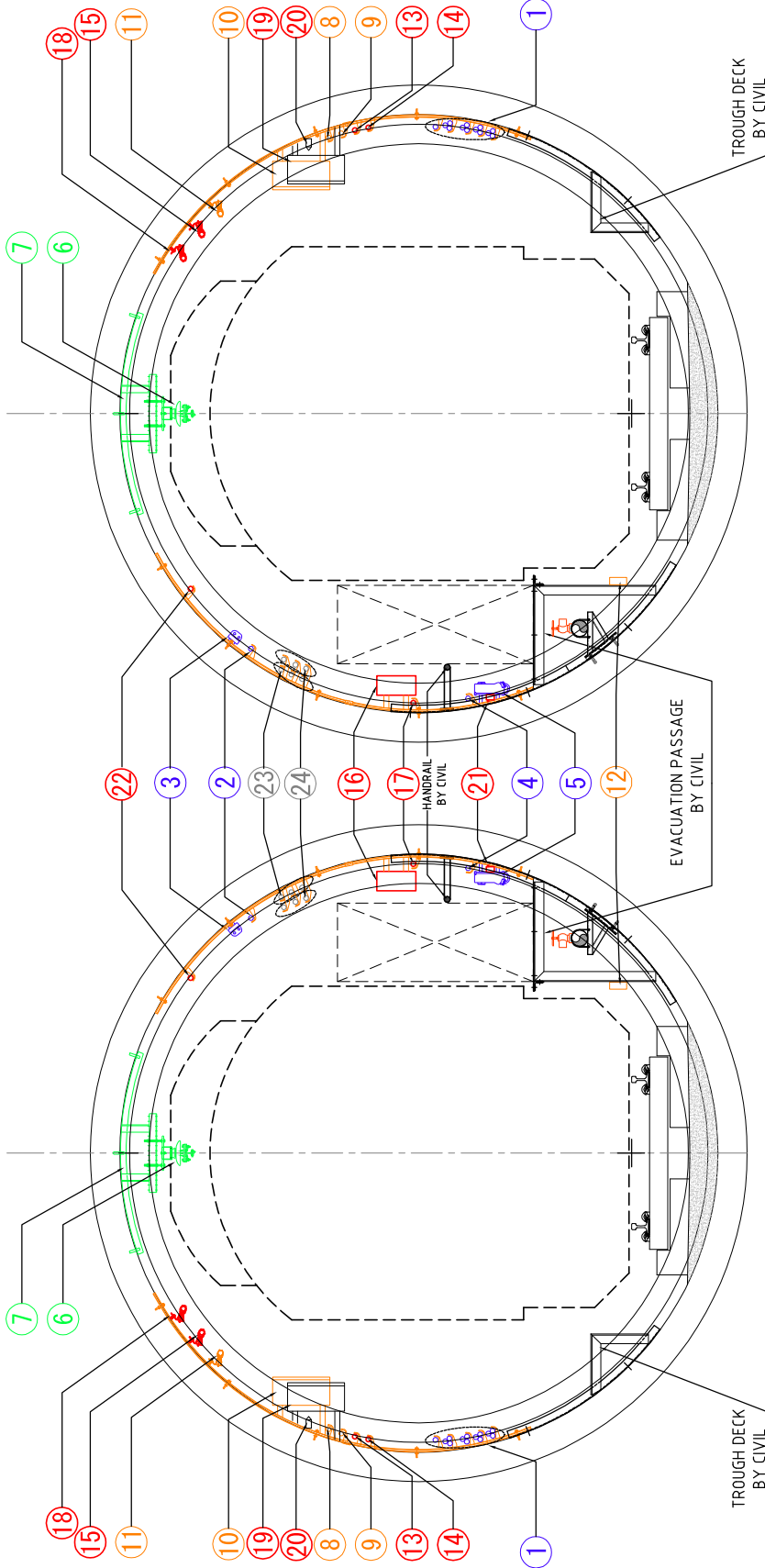
Detail - Invert and Trackbed
(Between Invert and Trackbed)

A1: S=1/10
A3: S=1/20

VERSIONS	DATE	DESCRIPTION	CONSULTANT			
2	13 Mar 2020	Issue for Bidding Documents	JICA DESIGN TEAM ORBITAL CONSULTANTS GLOBAL CO., LTD. (OGGI) NATSUKI & ENGINEERS INTERNATIONAL (NATE) PACIFIC CONSULTANTS CO., LTD. (PACIC) TONY CONSULTING CONSULTANTS INC. (TONY)			
3	30 Nov 2020	Revised notes/notation				
			DEPARTMENT OF TRANSPORTATION (DOT) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)			
			TITLE DESIGNER CHECK TEAM LEADER PR. MANAGER			
			JDT M. KANEKO H. TOMIYAMA H. OKAWA S. NAKAMURA			
			CFK K. FUNAYAMA Y. SAKON T. SAKATA K. KUROYA			
			METRO MANILA SUBWAY PROJECT PHASE I PACKAGE CP 104			
			TRACKBED GENERAL DRAWING (STATION)			
			DATE: November 2020 SCALE: As Shown SHEET No.: 12 DRG No.: GN-CE-CD-0010 DRG S.: REV 3			

Facilities General Drawing

LEGEND:	
①	HIGH VOLTAGE CABLE AND EARTH WIRE
②	TUNNEL ILLUMINATION CABLE (LV)
③	TUNNEL ILLUMINATION
④	OUTLET CABLE (LV)
⑤	OUTLET BOX
⑥	RIGID SUSPENSION SYSTEM (RISS)
⑦	SUPPORTING STRUCTURE FOR RISS
⑧	SIGNAL CBTC (CONTROL CABLE)
⑨	SIGNAL CBTC (POWER CABLE)
⑩	SIGNAL BOX FOR ANTENNA
⑪	SIGNAL CBTC ANTENNA OR LCX CABLE
⑫	Disconnection Box for Signaling
⑬	MOBILE LCX CABLE
⑭	OFC CABLE (TELECOMMUNICATION)
⑮	TELECOMMUNICATION LCX CABLE
⑯	TELEPHONE ALONG THE RAILWAY
⑰	TELECOMMUNICATION CABLE (COPPER CABLE)
⑱	Millimeter Wave Transmitter Antenna(Future Provision)
⑲	Communication Remote Cabinet (Future Provision)
⑳	CCTV Camera (Future Provision)
㉑	Cellular Phone Repeater Cabinet (Future Provision)
㉒	Linear Heat Detector
㉓	OUTLET CABLE FOR TELECOMMUNICATION COMPANY USE
㉔	General Telecom Cable Replacement MMS* (Communication Power and Data Cable (Reserved))



North Bound

South Bound

NOTE:

LIGHTING - INSTALL EVERY 20M AND SUPPLY POWER: (WATERPROOF AND DUSTPROOF TYPE)
 OUTLETBOX - HEIGHT POSITION OF 300MM AND INSTALL EVERY 100M.

The location and dimension of CP106 equipment is for reference only since it is a interface issue and shall be finalized by the Contractors.

This drawing is to show the general arrangement of civil facilities. The contractor shall refer to CP106 for other facilities.

VERSIONS		DESCRIPTION	
2	13 Mar 2020	Issue for Bidding Documents	
3	30 Nov 2020	Revised notes/notation	

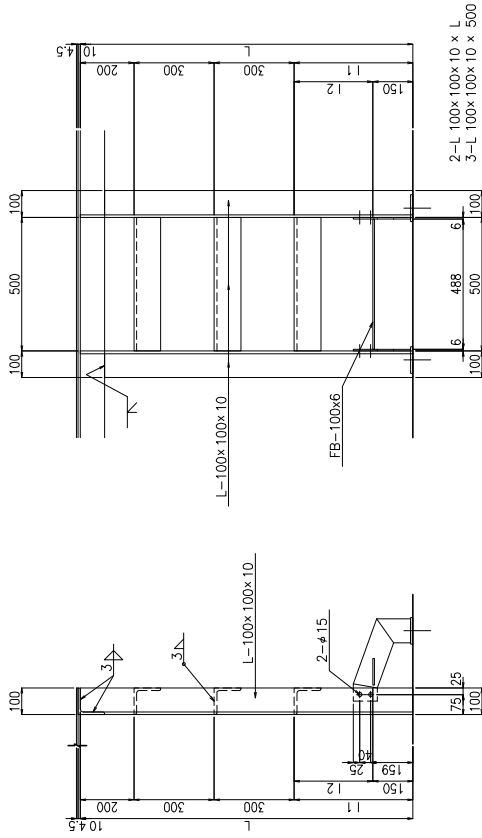
CONSULTANT			
JICA DESIGN TEAM	TITLE	JDT	CFK
NATSUMURA & ENGINEERS INTERNATIONAL	DESIGNER	M. KANEKO	K.FUJIMAYAMA
PACIFIC CONSULTANTS CO. LTD.	CHECK	H. TOMIYAMA	Y. SAKON
TOSHITAKA ENGINEERING CONSULTANTS INC.	TEAM LEADER	H. OKAWA	T. SAKATA
	PR. MANAGER	S. NAKAMURA	K. KUROYA

METRO MANILA SUBWAY PROJECT PHASE1	
DATE	November 2020
SCALE	S=NTS
SHEET No.	15
DRG No.	GN-CE-CD-0013
DRG S.	REV 3

FACILITIES GENERAL DRAWING	
PACKAGE CP 104	

Evacuation Passage Ladder Detail Arrangement

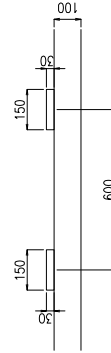
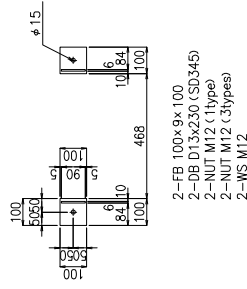
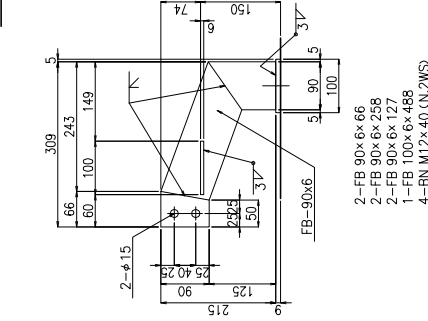
Dimensional drawing of Companion stairway and companion ladder



Design section	L	I	I	I	I	I	I	I	I
STRAIGHT	1245	445	445	285					

Detail of stairway

SCALE S=1:10



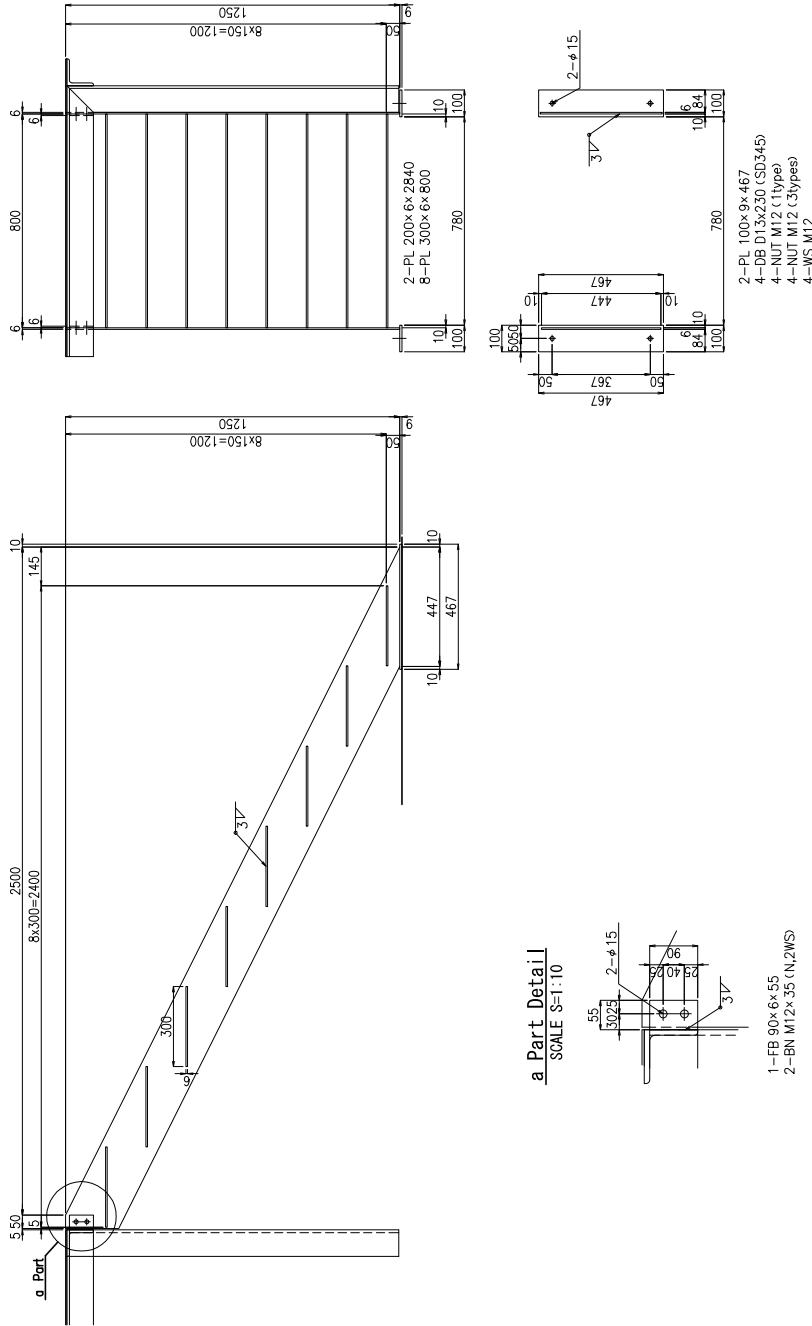
* All materials without special mention are SS400.
 All steel materials are processed hot-dip galvanizing.
 Deposition amount of steel materials: MTB and others are HDZ55-45,
 and that of Bolts and Nuts are HDZ35.

VERSIONS	DATE	DESCRIPTION	CONSULTANT				CONTRACTOR			
2	13 Mar 2020	Issue for Bidding Documents					METRO MANILA SUBWAY PROJECT PHASE1 PACKAGE CP 104			
3	30 Nov 2020	Revised notes/notation					EVACUATION PASSAGE LADDER DETAIL ARRANGEMENT			
							DATE: November 2020 SCALE: AS SHOWN SHEET No.: 17 DRG No.: GN-CE-CD-0015 DRG S.:			
							PR. MANAGER: S. NAKAMURA TEAM LEADER: H. OKAWA CHECK: H. TOMIYAMA DESIGNER: M. KANEKO CFK: K.FUJIMAYA Y.SAKON T.SAKATA K.MUROYA			



Evacuation Passage Staircase Detail Arrangement

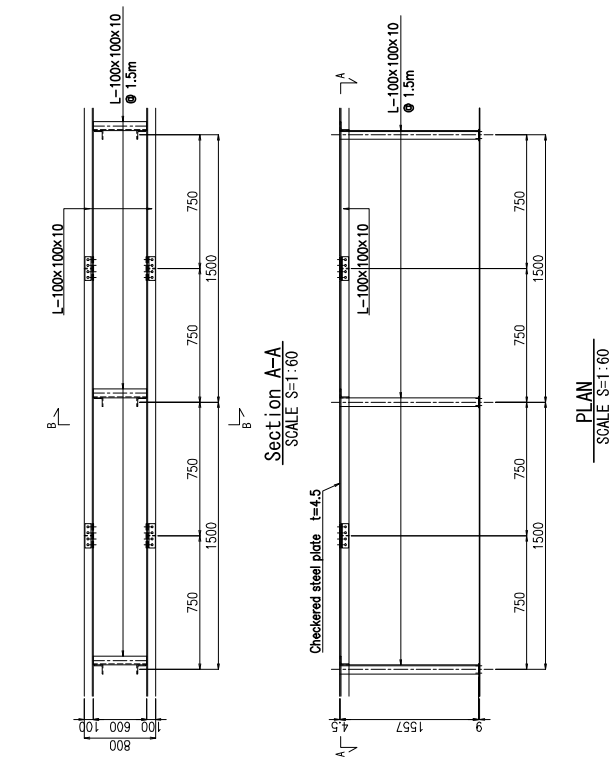
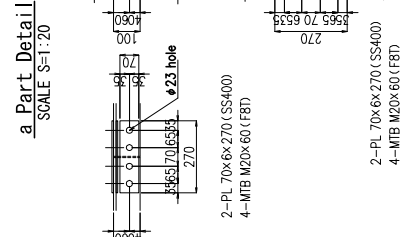
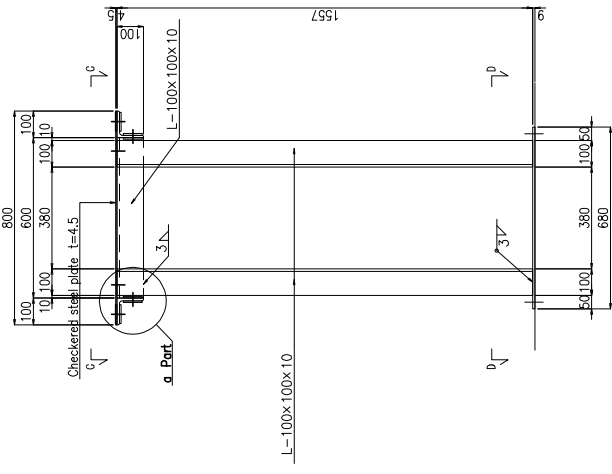
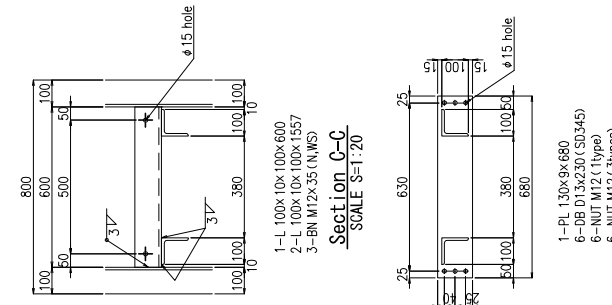
Detail of stairway in end part



■ All materials without special mention are SS400.
 All steel materials are processed hot-dip galvanizing.
 Deposition amount of steel materials: MTB and others are HDZ55-45,
 and that of Bolts and Nuts are HDZ35.

VERSIONS	DATE	DESCRIPTION	CONSULTANT				JICA DESIGN TEAM			
2	13 Mar. 2020	Issue for Bidding Documents	METRO MANILA SUBWAY PROJECT PHASE1							
3	30 Nov. 2020	Revised notes/notation	PACKAGE CP_104							
			EVACUATION PASSAGE STAIRCASE DETAIL ARRANGEMENT							
			DATE: November 2020				TITLE: METRO MANILA SUBWAY PROJECT PHASE1			
			SCALE: AS SHOWN				DESIGNER: M. KANEKO			
			SHEET No.: 18				CHECK: H. TOMIYAMA			
			DRG No.: GN-CE-CD-0016				TEAM LEADER: H. OKAWA			
			DRG S.:				PR. MANAGER: S. NAKAMURA			
			REV: 3				K. MURIOYA			

Evacuation Passage Staircase Detail Arrangement - NATM



* All materials without special mention are SS400.
All steel materials are processed hot-dip galvanizing.
Deposition amount of steel materials-MTB and others are HDZ55-45,
and that of Bolts and Nuts are HDZ35.

VERSIONS	DATE	DESCRIPTION
2	13 Mar 2020	Issue for Bidding Documents
3	30 Nov 2020	Revised notes/notation

CONSULTANT		
TITLE	JDT	CFK
DESIGNER	M. KANEKO	K.FUJIMAYA
CHECK	H. TOMIYAMA	Y.SAKONO
TEAM LEADER	H. OKAWA	T.SAKATA
PR. MANAGER	S. NAKAMURA	K.MUROYA

JICA DESIGN TEAM	
ORBITAL CONSULTANTS GLOBAL CO., LTD.	NATAMURA & ENGINEERS INTERNATIONAL
TOYO METRO CO., LTD.	PACIFIC CONSULTANTS CO., LTD.
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	TOKAI ENGINEERING CONSULTANTS, INC.

DEPARTMENT OF TRANSPORTATION (DOT)	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	

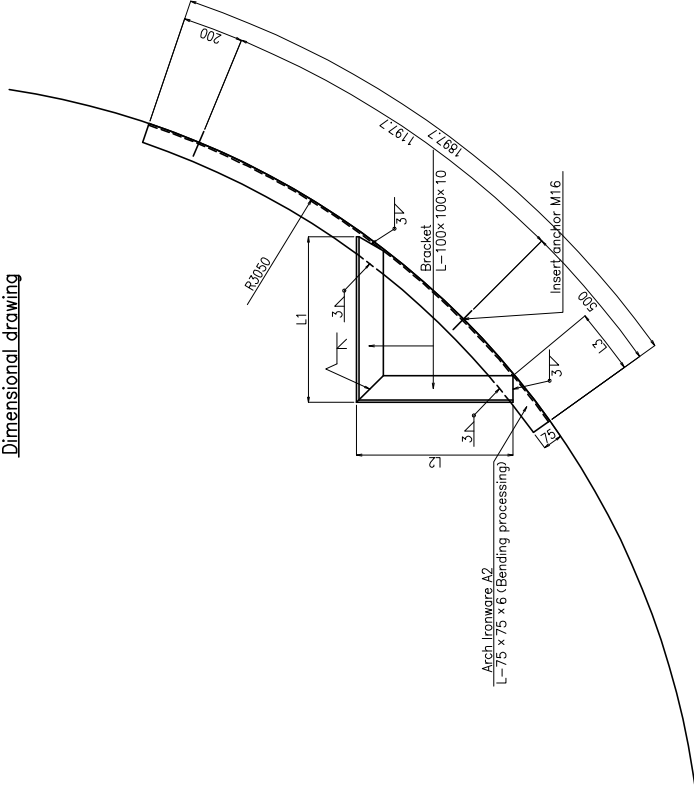
DATE	SCALE	PHASE I
November 2020	AS SHOWN	

DATE	SCALE	PHASE I
November 2020	AS SHOWN	

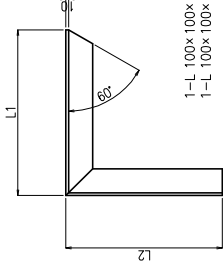
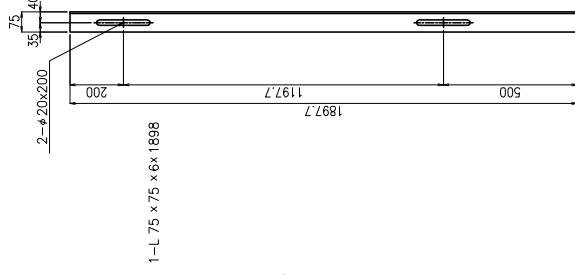
DATE	SCALE	PHASE I
November 2020	AS SHOWN	

DATE	SCALE	PHASE I
November 2020	AS SHOWN	

Dimensional drawing



Detail of arch ironware A2



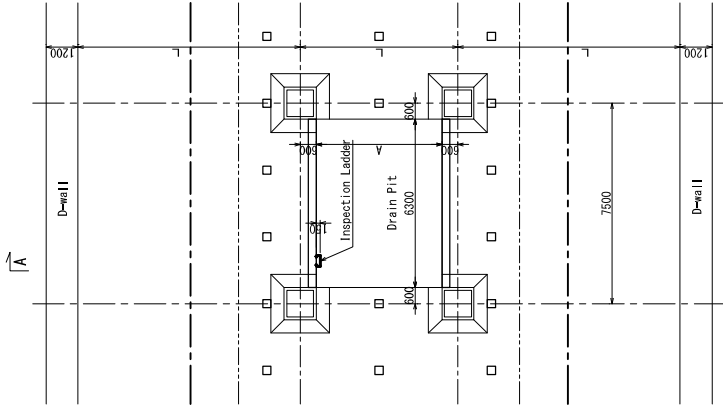
1-L 100x 100x 10 x L1
1-L 100x 100x 10 x L2

Design section	(mm)		
	L1	L2	L3
STRAIGHT	620	586	218

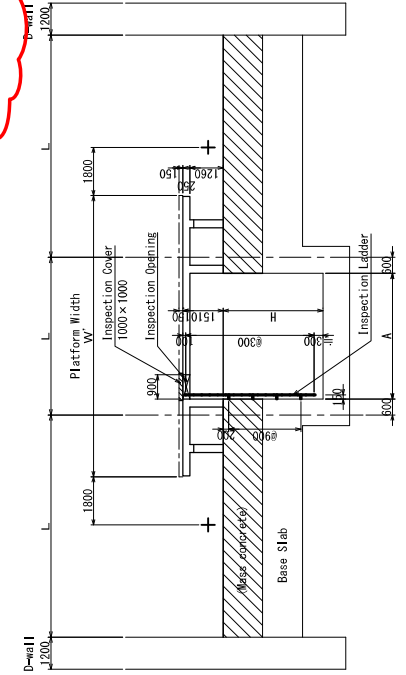
■ All materials without special mention are SS400.
All steel materials are processed hot-dip galvanizing.
Deposition amount of steel materials: MTB and others are HDZ55·45,
and that of Bolts and Nuts are HDZ35.

VERSIONS	DATE	DESCRIPTION	CONSULTANT			METRO MANILA SUBWAY PROJECT		
2	13 Mar 2020	Issue for Bidding Documents	JICA DESIGN TEAM			PHASE I		
3	30 Nov 2020	Revised notes/notation				As Shown		
						PACKAGE CP 104		
						TBM TROUGH DECK		
						GENERAL DRAWINGS		
						DATE: November 2020 SCALE: As Shown SHEET No: 20 DRG No: GN-CE-CD-0018 DRG S. REV: 3		

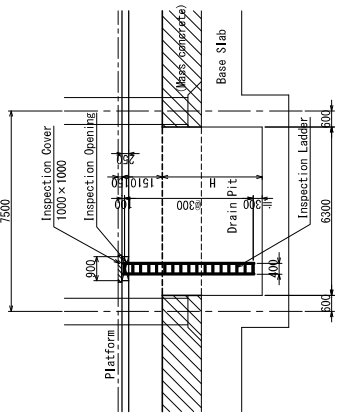
Sump Pit Component Detail Arrangement



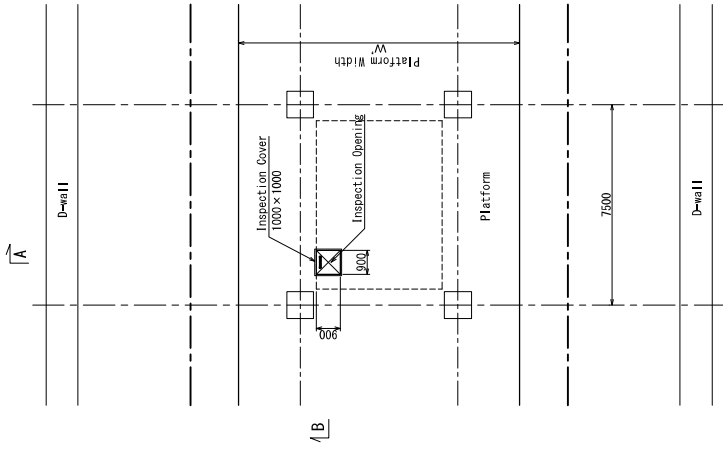
PLATFORM LEVEL
A1: S=1/100
A3: S=1/200



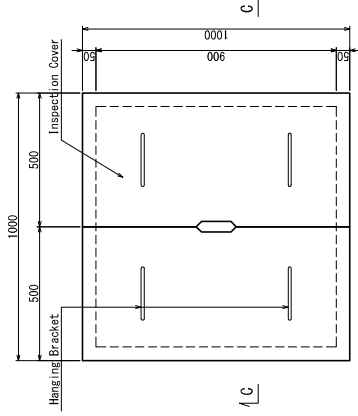
Section A-A
A1: S=1/100
A3: S=1/200



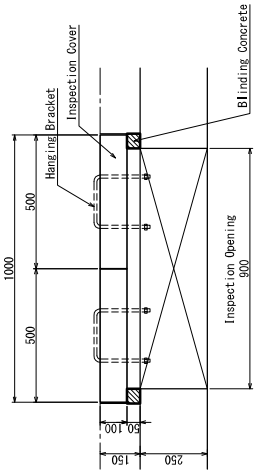
Section B-B
A1: S=1/100
A3: S=1/200



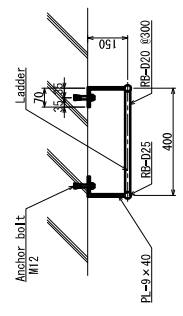
UNDER PLATFORM
A1: S=1/100
A3: S=1/200



Detailed Inspection Cover
A1: S=1/10
A3: S=1/20



Section C-C
A1: S=1/10
A3: S=1/20



Details of mounting part
A1: S=1/10
A3: S=1/20

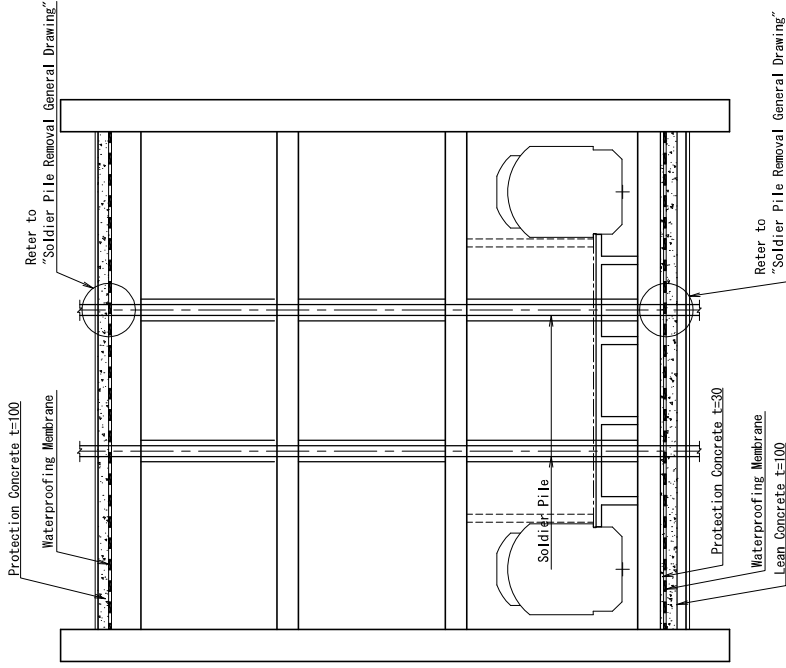
Note
Regarding to the Drain Pits location, size and detail, the Contractor shall submit the Shop drawing for the Engineer's review.

VERSIONS	DATE	DESCRIPTION	CONSULTANT				METRO MANILA SUBWAY PROJECT PHASE 1							
2	13 Mar 2020	Issue for Bidding Documents	JICA DESIGN TEAM ORBITAL CONSULTANTS GLOBAL CO., LTD. KATAHIRA & ENGINEERS INTERNATIONAL M. KANEKO JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) PACIFIC CONSULTANTS CO., LTD. H. TOMIYAMA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) TONYUKI ENGINEERING CONSULTANTS, INC. H. OKAWA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) ALMICO CORPORATION S. NAKAMURA				November 2020 AS SHOWN SHEET No. 21 DRG No. GN-CE-CD-0019 DRG S.							
3	30 Nov 2020	Revised notes/notation	DEPARTMENT OF TRANSPORTATION (DOT) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)				PACKAGE CP 104 SUMP PIT COMPONENT DETAIL ARRANGEMENT							
			JDT	CFK	DESIGNER	Y. SAKON	PR. MANAGER	K. KUROYA	CHECK	T. SAKATA	TEAM LEADER	H. OKAWA	PR. MANAGER	S. NAKAMURA

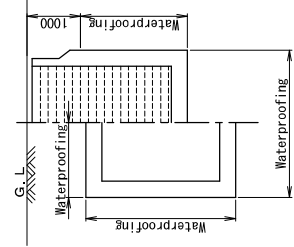
Waterproofing General Drawing : Sheet 1/3



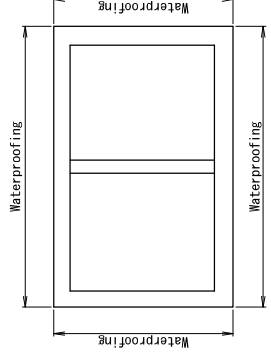
Typical Waterproofing of Station



Typical Waterproofing of Open Cut Tunnel and Entrance

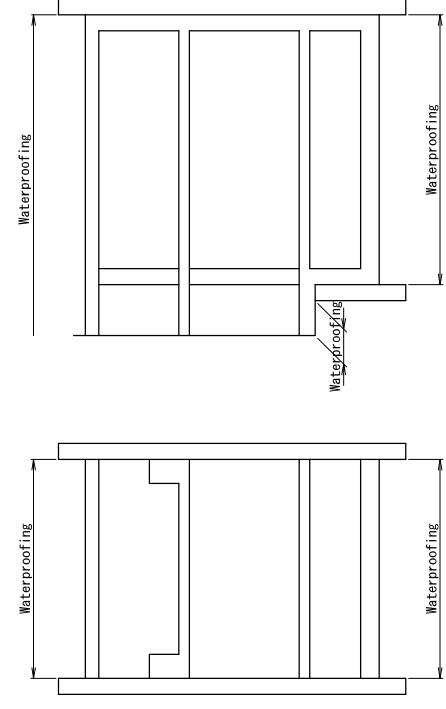


Single Barrel Section and Stair

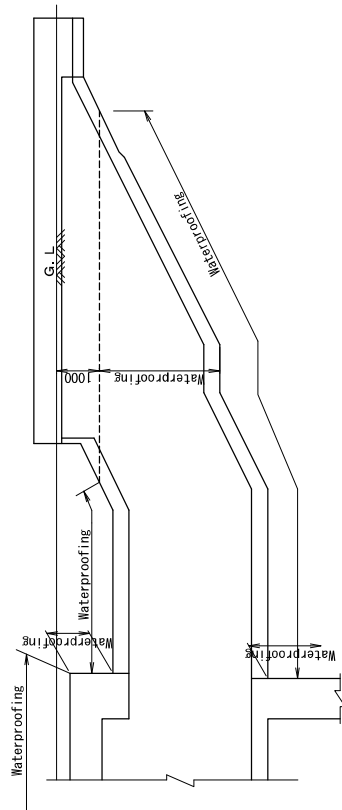


Double Barrel Section

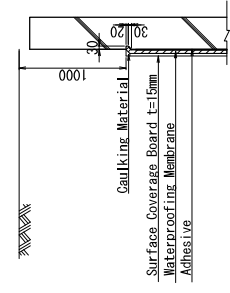
Typical Waterproofing of Vertical Shaft Section



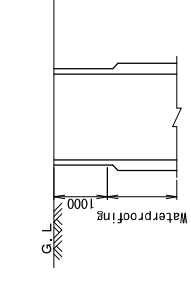
Typical Waterproofing for Stair



Typical Waterproofing of Opening Section



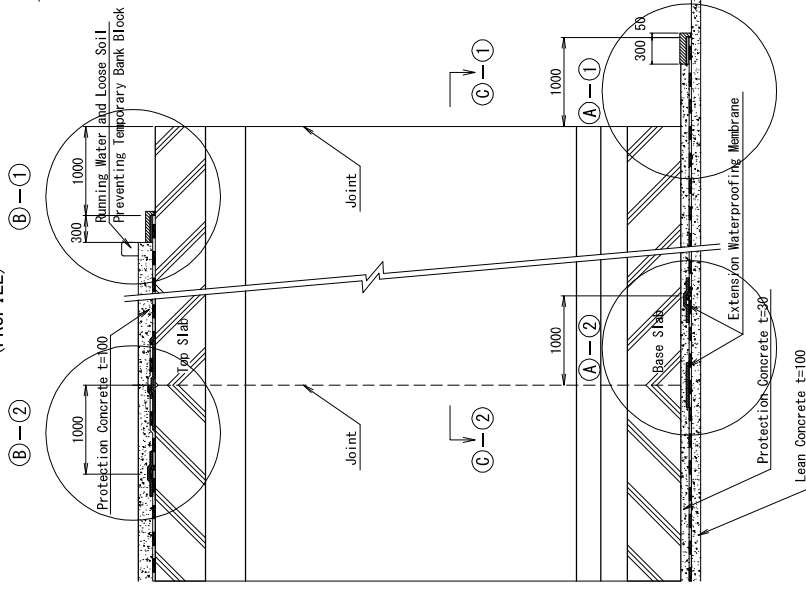
Ventilation



VERSIONS	DATE	DESCRIPTION	CONSULTANT			METRO MANILA SUBWAY PROJECT PHASE1			DATE
2	13 Mar 2020	Issue for Bidding Documents	JICA DESIGN TEAM	JDT	CFK	November 2020			
3	30 Nov 2020	Revised notes/notation	ORBITAL CONSULTANTS GLOBAL CO., LTD.	M. KANEKO	K. FUNAYAMA	As Shown			
			TOKYO METRO CO., LTD.	H. TOMIYAMA	Y. SANON	PACKAGE CP 104			
			JAPAN INTERNATIONAL CONSULTANTS CO., LTD.	H. OKAWA	T. SAKATA	SHEET No. 22			
			TRANSPAC ENGINEERING CONSULTANTS INC.	S. NAKAMURA	K. UROYA	DRG No. GN-CE-CD-0020			
						DRG S. 3			
			DEPARTMENT OF TRANSPORTATION (DOT)			WATERPROOFING GENERAL DRAWING : SHEET 1/3			
			JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						

Construction Joint Waterproofing for Standard Drawing

(PROFILE)

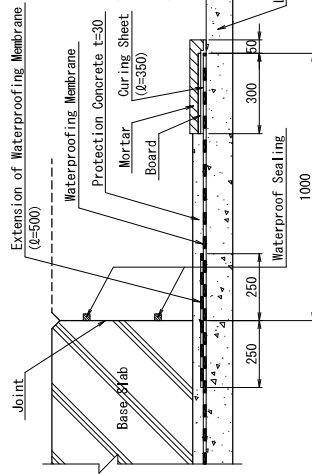


Construction Joint Waterproofing for Standard Drawing

(Details)

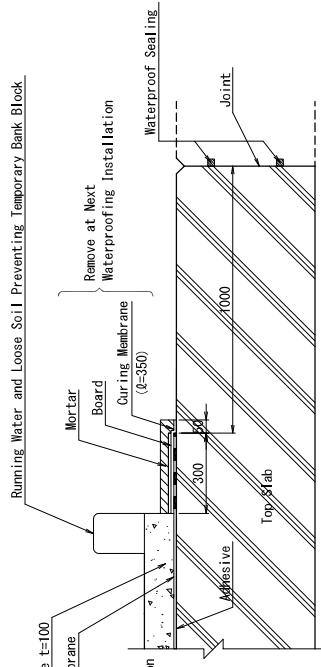
A Base Floor Construction Joint Waterproofing Standard Drawing

A-1

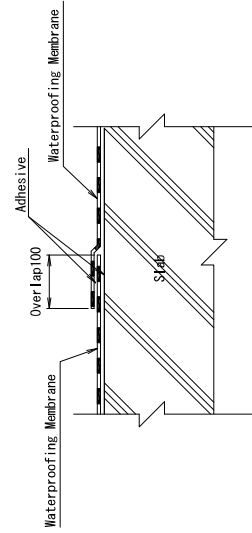


B Upper Floor Construction Joint Waterproofing Standard Drawing

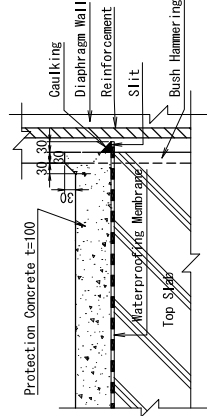
B-1



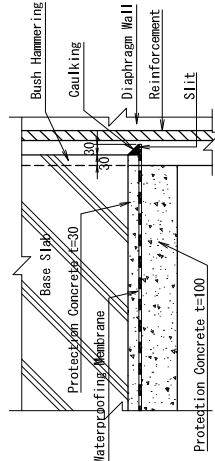
Over Lap of Waterproofing Membrane



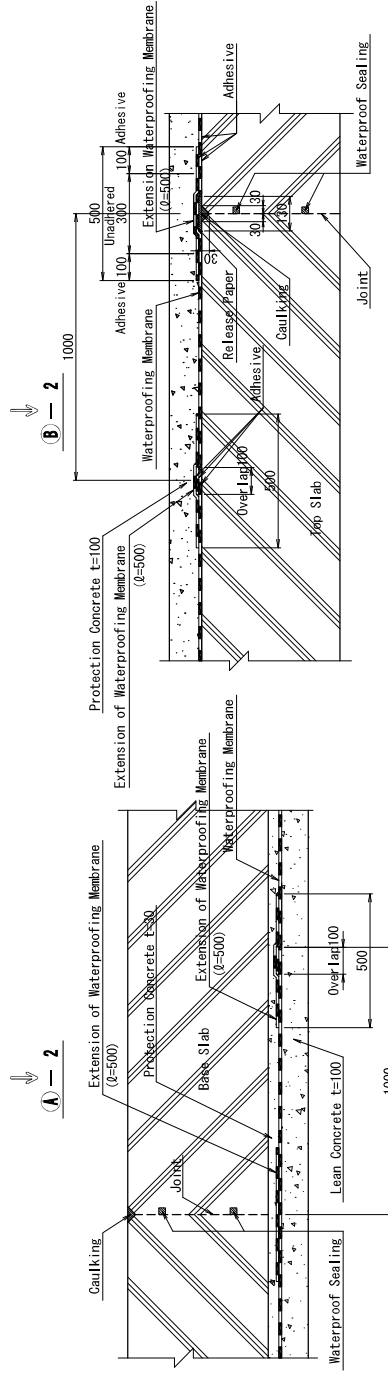
Waterproofing at Joint with Top Slab



Waterproofing Joint with Base Slab



Diaphragm Wall Section

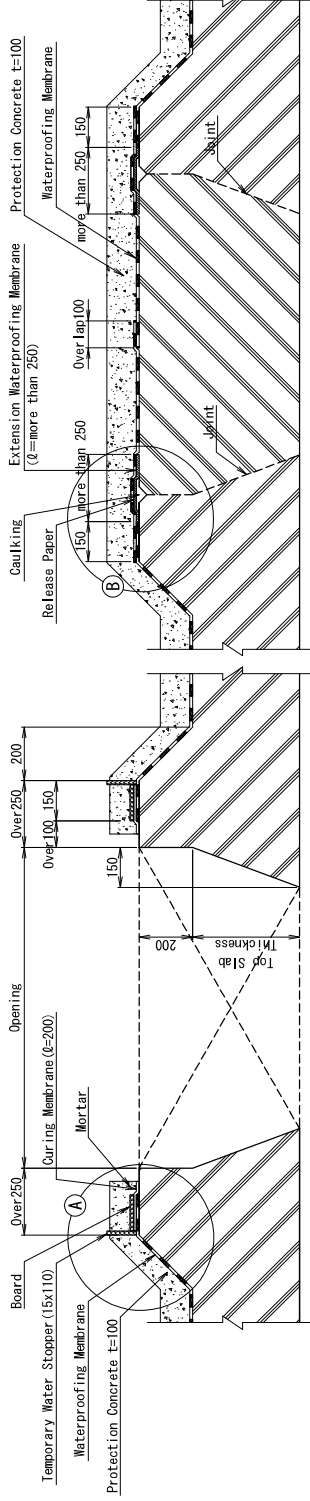


(Note)
Obtain approval from the Engineer regarding waterproofing membrane and caulking material.

VERSIONS	DATE	DESCRIPTION	CONSULTANT			METRO MANILA SUBWAY PROJECT PHASE1			DATE	
2	13 Mar 2020	Issue for Bidding Documents	JICA DESIGN TEAM ORIENTAL CONSULTANTS GLOBAL CO., LTD. KAWAHARA & ENGINEERS INTERNATIONAL PACIFIC CONSULTANTS CO., LTD. JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) DEPARTMENT OF TRANSPORTATION (DOTT)			PACKAGE CP 104			November 2020	
3	30 Nov 2020	Revised notes/notation				TITLE DESIGNER CHECK TEAM LEADER PR. MANAGER			CFK K.FUNIYAMA Y.SAKON T.SAKATA S. NAKAMURA K.MUROTA	
			JICA DESIGN TEAM ORIENTAL CONSULTANTS GLOBAL CO., LTD. KAWAHARA & ENGINEERS INTERNATIONAL PACIFIC CONSULTANTS CO., LTD. JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) DEPARTMENT OF TRANSPORTATION (DOTT)			WATERPROOFING GENERAL DRAWING : SHEET 2/3			SHEET No. 23 DRG No. GN-CE-CD-0021 DRG S.	

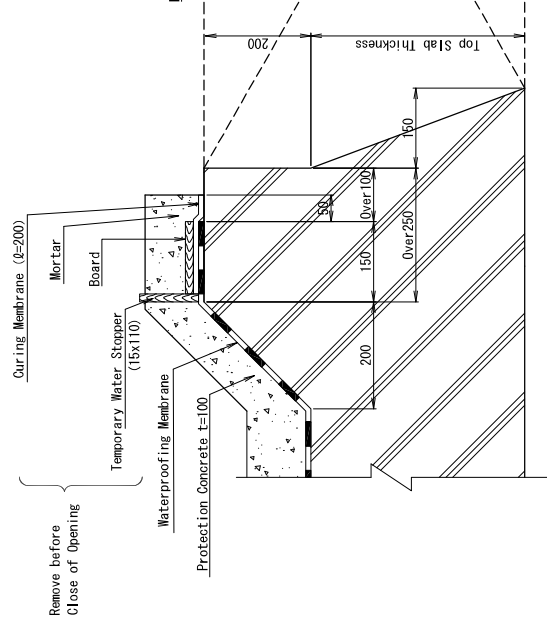
Opening Standard Drawing

Opening Cross Section

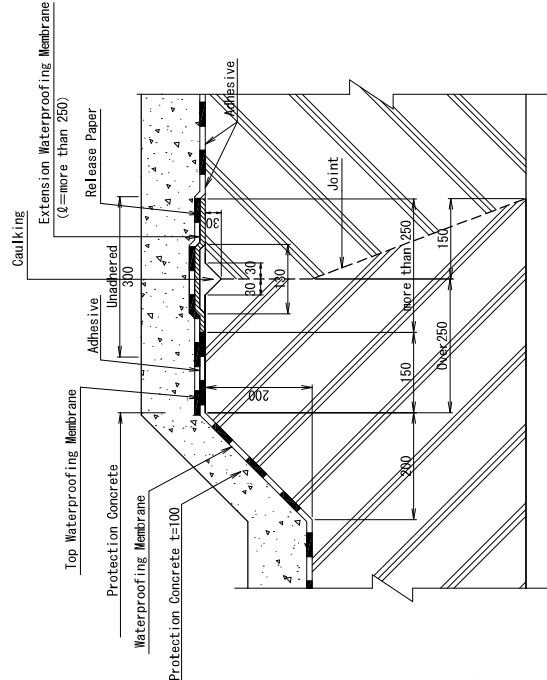


Close of Opening Cross Section

Detail (A)

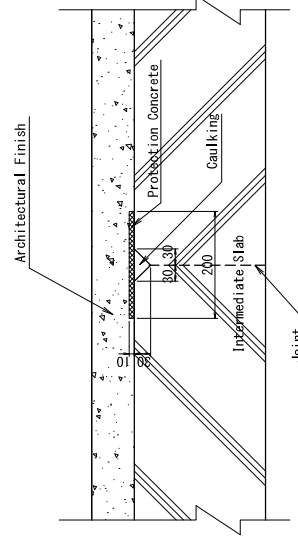


Detail (B)



Intermediate Floor Construction Joint

Cross Section Plan



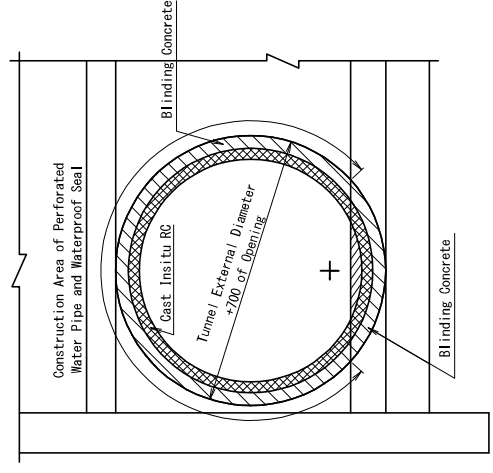
VERSIONS	DATE	DESCRIPTION	CONSULTANT				METRO MANILA SUBWAY PROJECT PHASE1				DATE			
2	13 Mar 2020	Issue for Bidding Documents	JICA DESIGN TEAM ORIENTAL CONSULTANTS GLOBAL CO., LTD. KATAMURA & ENGINEERS INTERNATIONAL PACIFIC CONSULTANTS CO., LTD. TONYO METRO CO., LTD. JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) TRANSPORTATION CO., LTD. TOSHIGAKI ENGINEERING CONSULTANTS INC. A.M.C.C. ALMCC CORPORATION				PACKAGE CP 104				SCALE	November 2020		
3	30 Nov 2020	Revised notes/notation					DESIGNER				S=NTS			
							CHECK				SHEET No.			
			TEAM LEADER				PR. MANAGER				DRG No.	24		
			PR. MANAGER				WATERPROOFING GENERAL DRAWING : SHEET 3/3				DRG No.	GN-CE-CD-0022		
			PR. MANAGER				PR. MANAGER				DRG S.	REV		
			PR. MANAGER				PR. MANAGER					3		

Shaft Construction and Waterproofing General Drawings

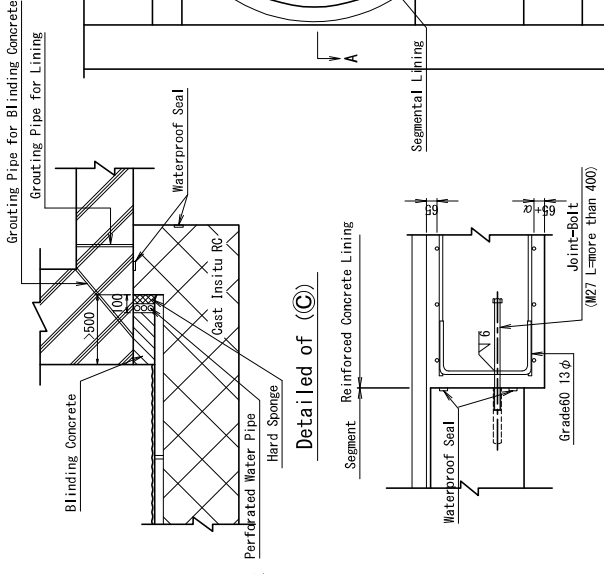


Arrival Shaft

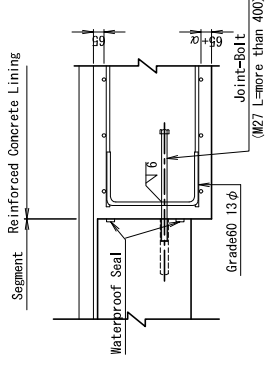
Cross-Section



Detailed of (A)

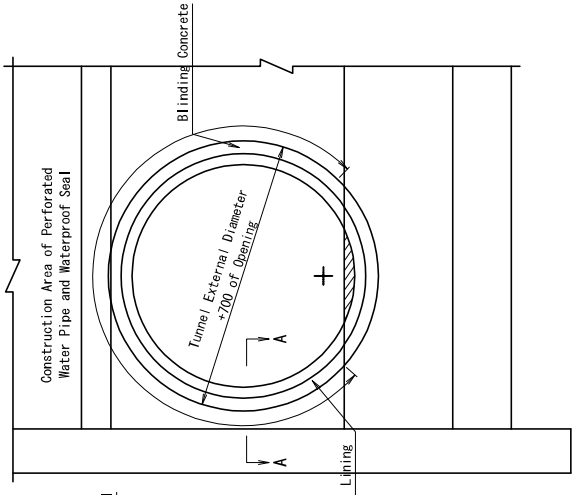


Detailed of (C)

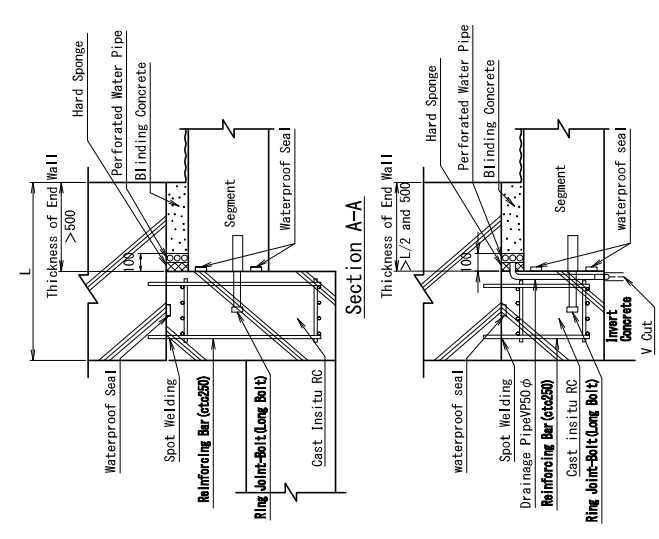


Launching Shaft

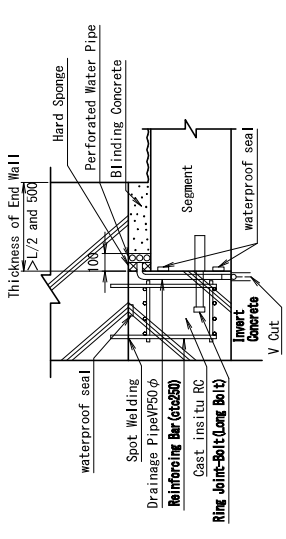
Cross-Section



Detailed of (B)

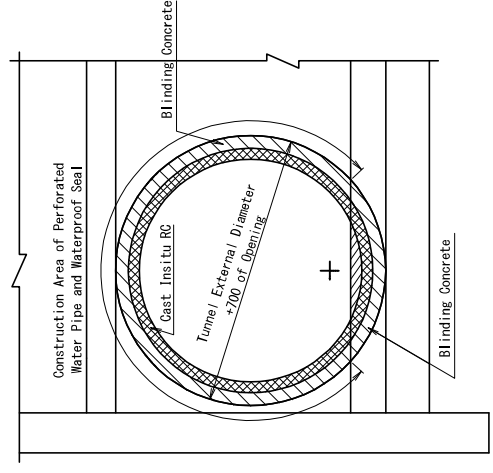


Section A-A

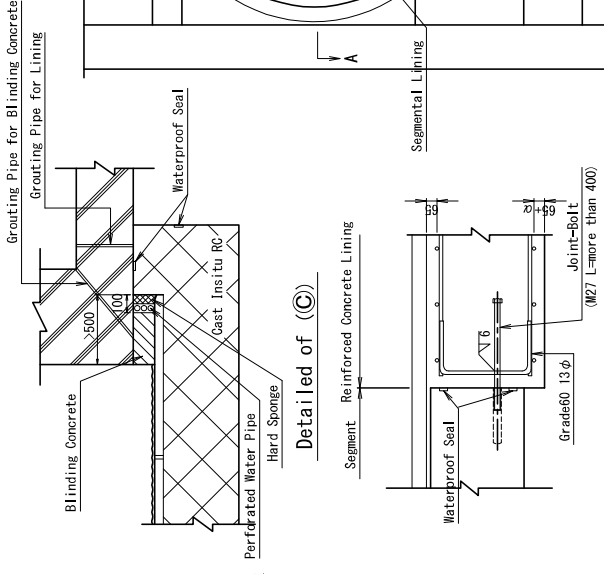


Arrival Shaft

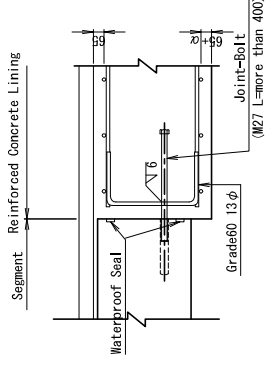
Cross-Section



Detailed of (A)

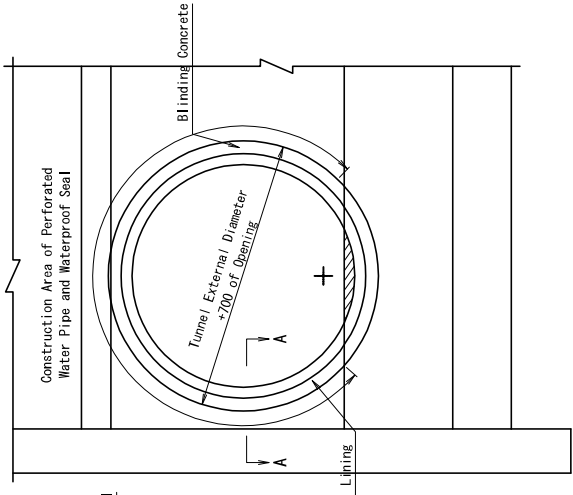


Detailed of (C)

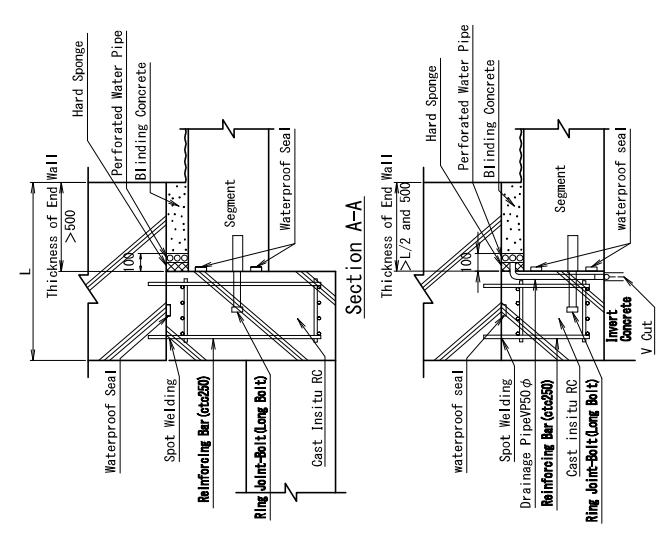


Launching Shaft

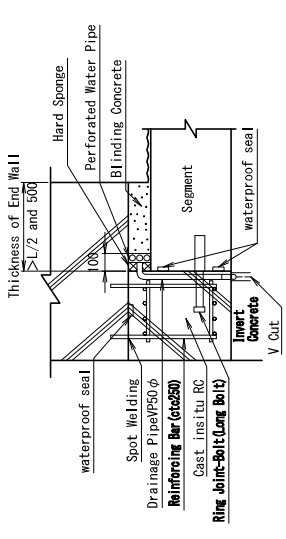
Cross-Section



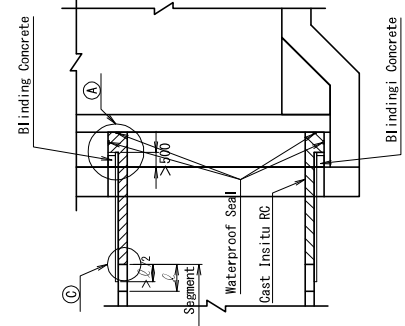
Detailed of (B)



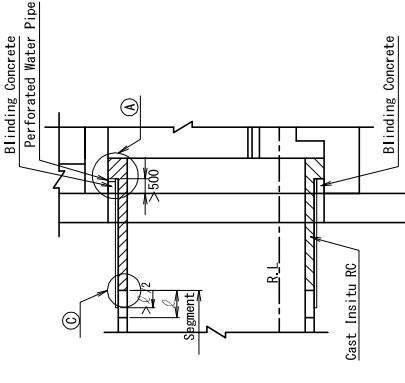
Section A-A



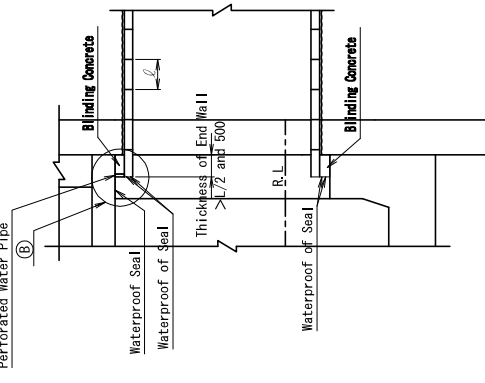
Plan View



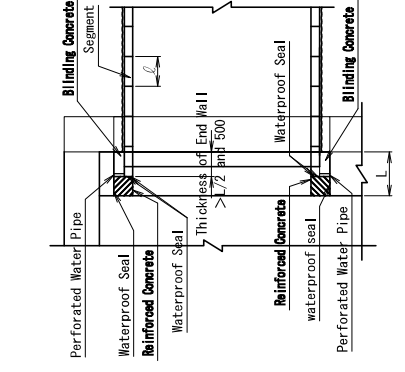
Profile



Profile



Plan View



Note

- The shield shell shall be double coated with lead chromium-free paint.
- Waterproof seals shall be equal to or better quality than those used for segment joint.
- Shield shall not allow concrete to enter the water gutter when casting concrete.

VERSIONS		DESCRIPTION		CONSULTANT		METRO MANILA SUBWAY PROJECT PHASE 1		DATE
2	13 Mar 2020	Issue for Bidding Documents		KATAHIRA & ENGINEERS INTERNATIONAL		JDT	CFK	November 2020
3	30 Nov 2020	Revised notes/notation		PACIFIC CONSULTANTS CO., LTD.		M. KANEKO	K. FUJIMAYA	SCALE S=NTS
				TOKYO METRO CO., LTD.		H. TOMIYAMA	Y. SANON	SHEET No. 25
				JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		H. OKAWA	T. SAKATA	DRG No. GN-CE-CD-0023
				JICA DESIGN TEAM		S. NAKAMURA	K. MURIOYA	DRG S. REV 3