

DRAWING INDEX

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7061520-CUL-105-1005	DOUBLE CELL RCC BOX CULVERT GENERAL ARRANGEMENT TYPE 1	A

50 mm DIN ORIGINAL (A2)

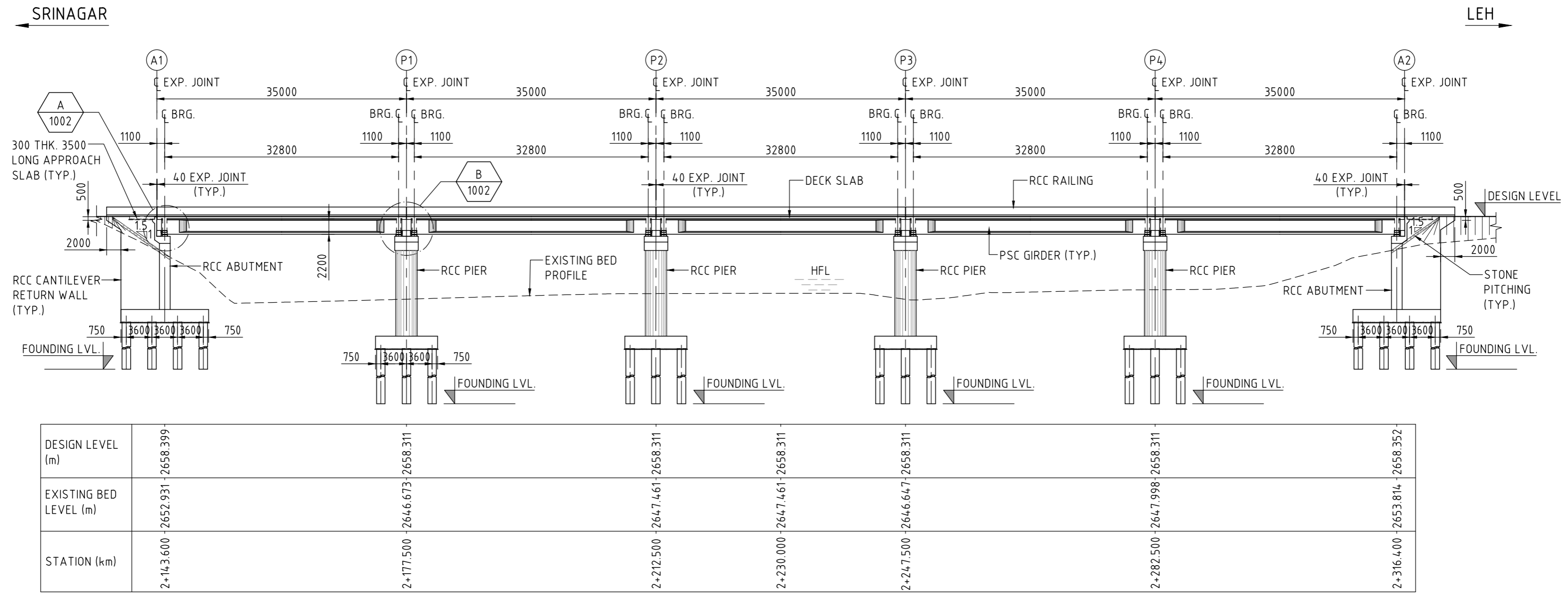
ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	

CLIENT APPROVED	DATE	CONSULTANT SIGNATURE

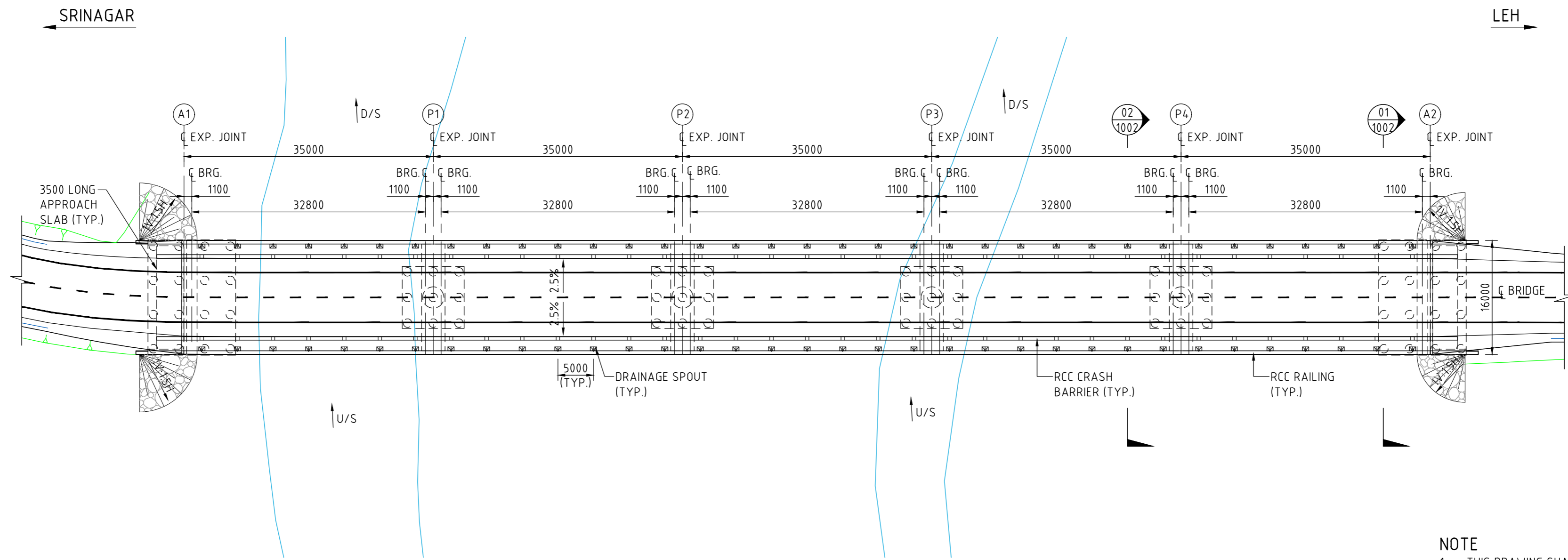
 SMEC <small>Member of the Surbana Jurong Group</small> SMEC (India) Pvt Ltd. 1st Floor, Novus Tower, West Wing, Plot Number-18, Sector - 18, Gurgaon - 122015, Haryana	 NHAI <small>NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. P11 BUILDING, 4 PARLIAMENT STREET, SANSAD MARG AREA, NEW DELHI - 110001</small>
DESIGNER: MS DESIGNER: QN CHECKED: AP APPROVED: NA	CLIENT APPROVED: _____ DATE: _____

CONSTRUCTION OF SONAMARG BYPASS
FROM DESIGN CH. 0+000 (EXISTING KM 82.00 ON NH-1)
TO CH. 6+320 ON SRINAGAR-LEH ROAD (NH-1)
IN THE UT OF JAMMU & KASHMIR

PROJECT TITLE	DRAWING INDEX
DRAWING STATUS	PROJECT / DRAWING No.
TENDER	7061520-INDEX-105-1001
ISSUE	A



SECTIONAL ELEVATION
(SCALE 1:500)



PLAN
(SCALE 1:500)

NOTE
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. 7061520-MJBR-105-1002.

50 mm DIN ORIGINAL (A2)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	

SCALE 1:500



CLIENT APPROVED	DATE	CONSULTANT SIGNATURE
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DESIGNER
SMEC
Member of the Saurashtra Jansang Group
SMEC (India) Pvt Ltd. 1st Floor,
Novus Tower, West Wing, Plot Number-18,
Sector - 18, Gurgaon - 122015, Haryana

CLIENT
MAIDCL
NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. P11 BUILDING, 4 PARLIAMENT STREET, SANSAD MARG AREA, NEW DELHI-110001

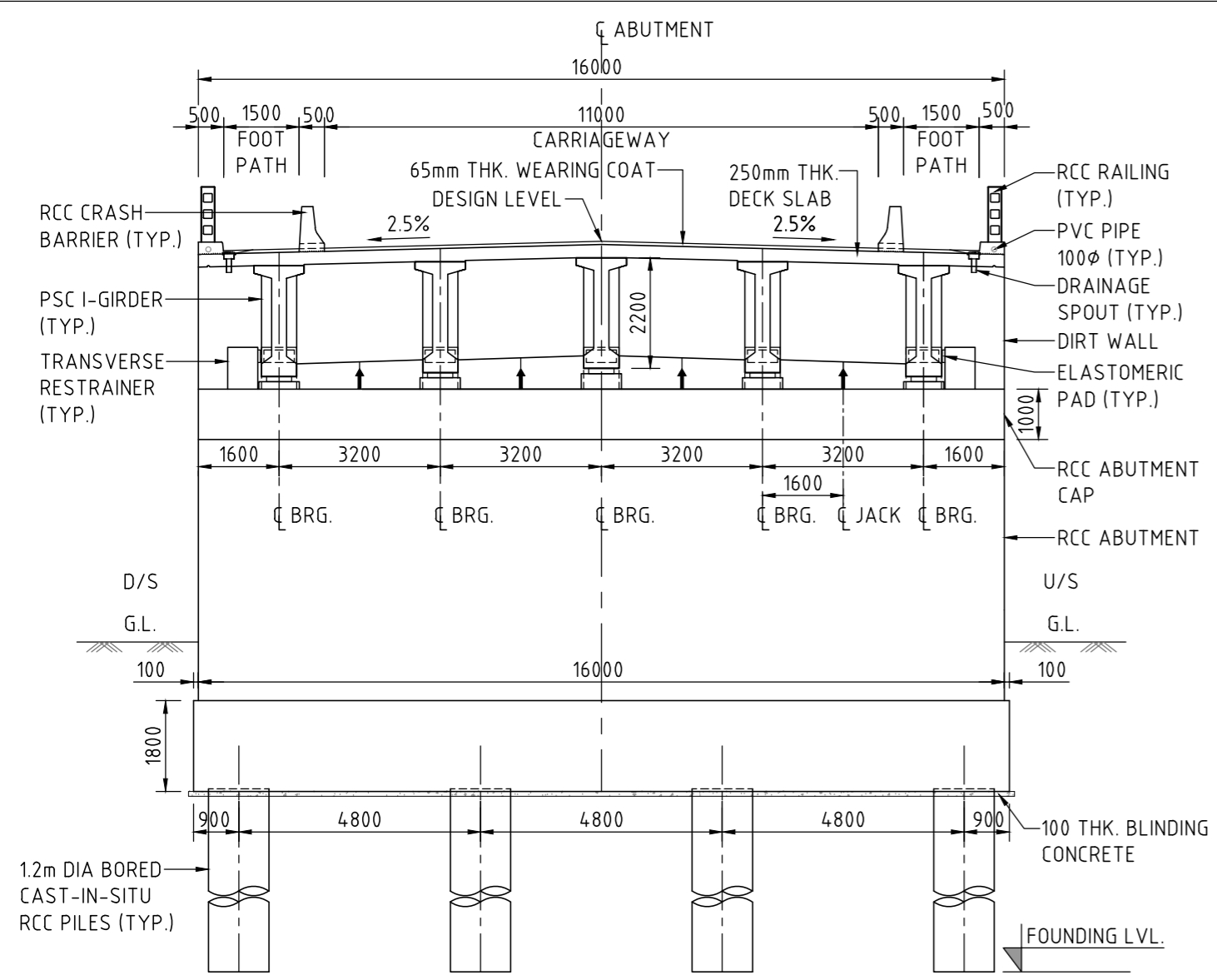
PROJECT
CONSTRUCTION OF SONAMARG BYPASS FROM DESIGN CH. 0+000 (EXISTING KM 82.00 ON NH-1) TO CH. 6+320 ON SRINAGAR-LEH ROAD (NH-1) IN THE UT OF JAMMU & KASHMIR

PROJECT TITLE
MAJOR BRIDGE AT STN. 2+230 GENERAL ARRANGEMENT SHEET 1

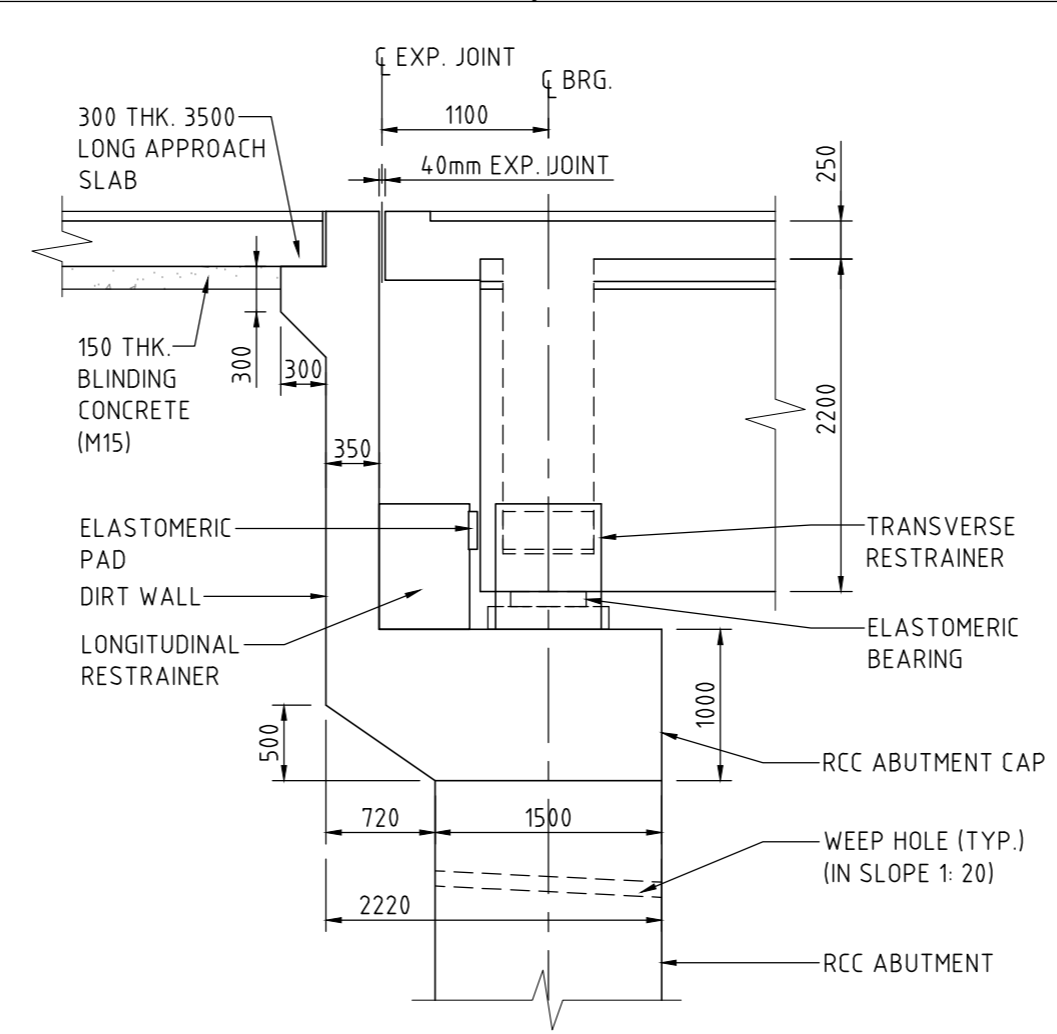
DRAWING STATUS
TENDER

PROJECT / DRAWING NO.
7061520-MJBR-105-1001

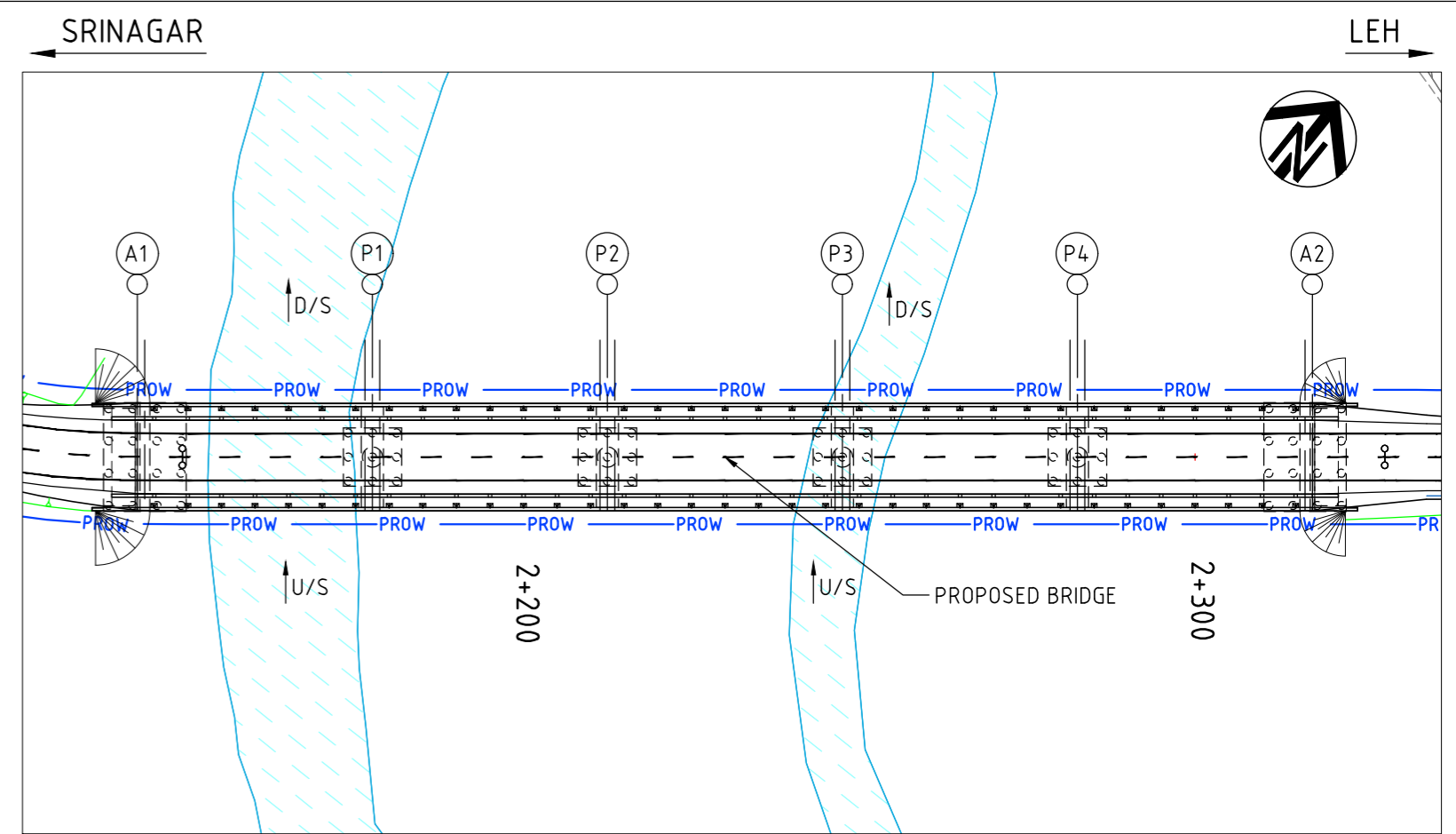
ISSUE
A



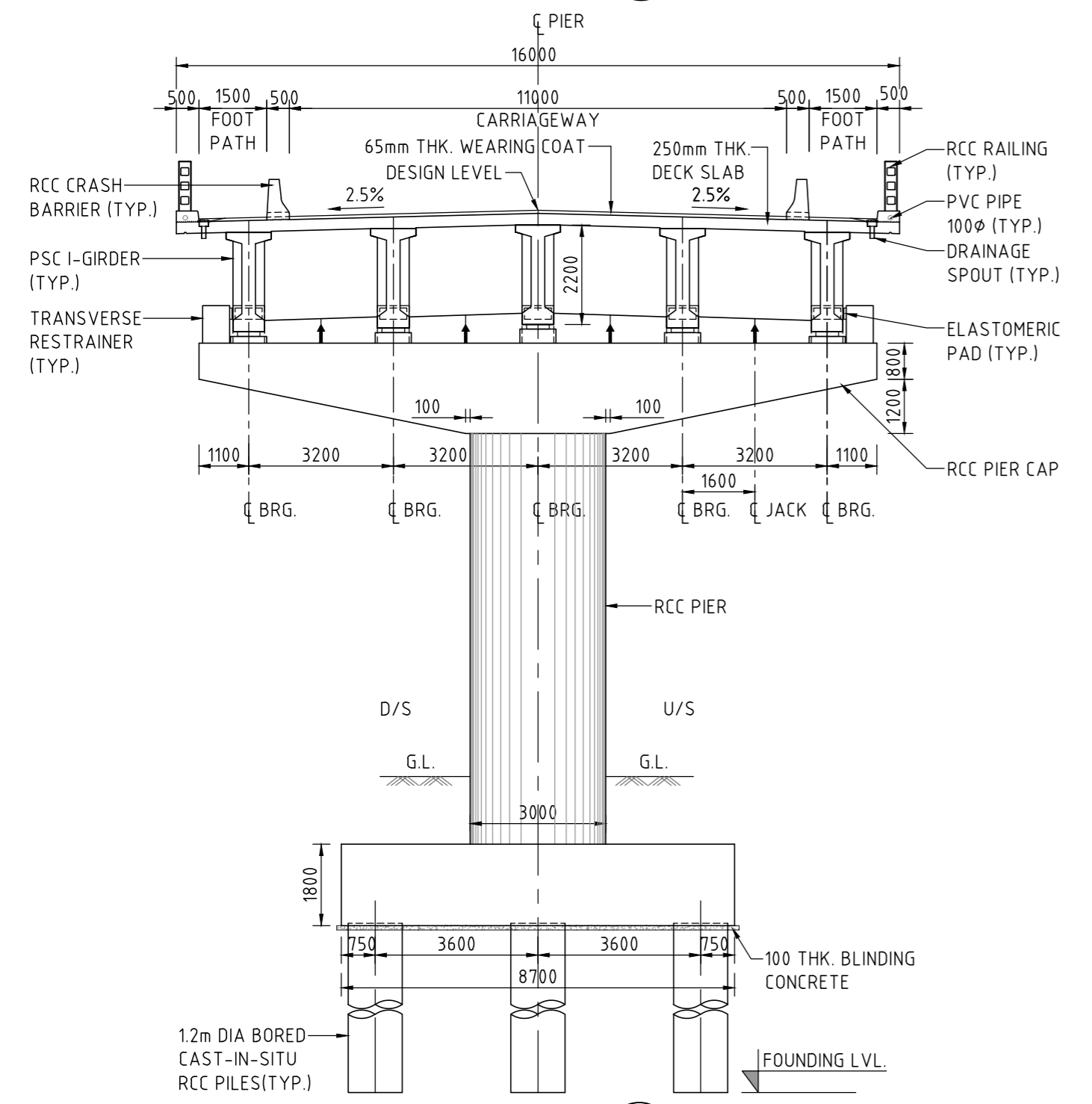
SECTION 01
SCALE 1: 125



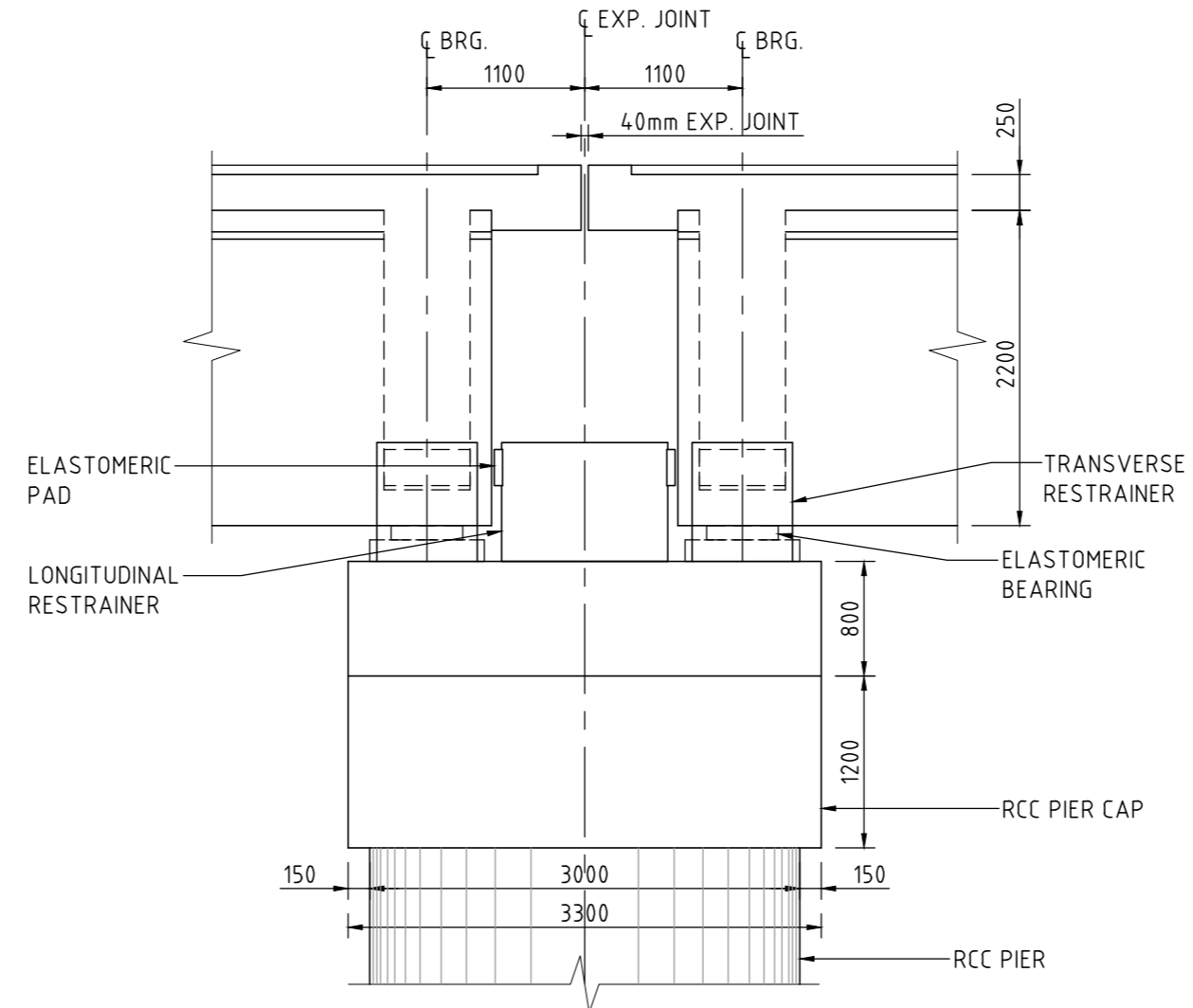
DETAIL A
SCALE 1: 50



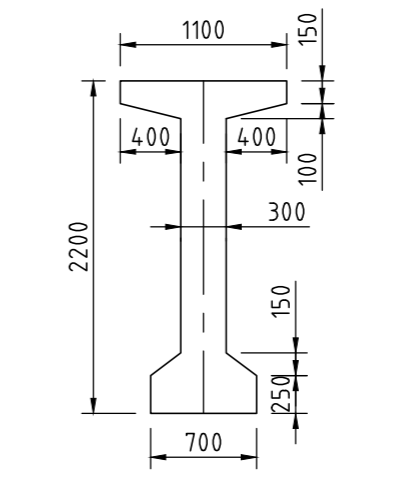
SITE PLAN
SCALE 1:1000



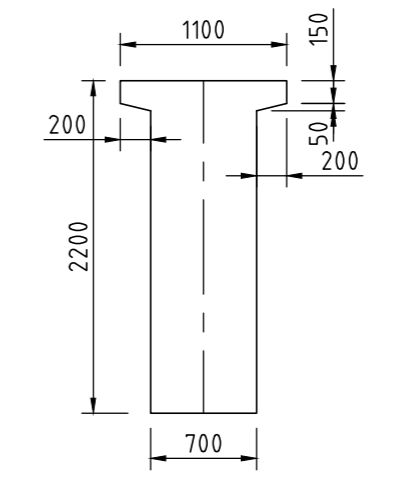
SECTION 02
SCALE 1: 125



DETAIL B
SCALE 1: 50



MID SECTION OF GIRDER
SCALE 1:50



SUPPORT SECTION OF GIRDER
SCALE 1:50

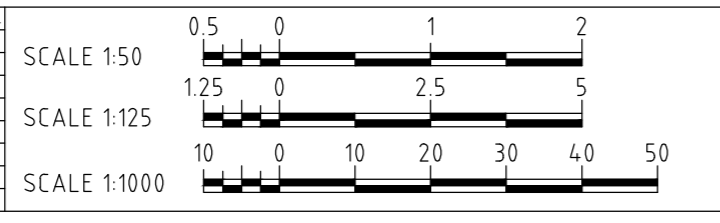
LEGEND

- U/S DENOTES UP STREAM
- D/S DENOTES DOWN STREAM
- HFL DENOTES HIGH FLOOD LEVEL
- ↑ JACK LOCATION

NOTES

1. ALL DIMENSIONS ARE IN MM AND REDUCED LEVELS ARE IN METRES, UNLESS NOTED OTHERWISE. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED. NO DIMENSION SHALL BE SCALED.
2. THE FOLLOWING LIVE LOAD HAS BEEN CONSIDERED IN THE DESIGN AS PER IRC : 6.
 - (i) 4 LANE CLASS A
 - (ii) 2 LANE OF 70R
 - (iii) 2 LANE CLASS A + 1 LANE 70R
3. THE CONCRETE SHALL BE DESIGN MIX AND MINIMUM 28 DAYS CHARACTERISTIC COMPRESSIVE CUBE STRENGTH FOR VARIOUS COMPONENTS SHALL BE AS UNDER:
 - (a) DECK SLAB - M40
 - (b) PSC GIRDER - M45
 - (c) SUB STRUCTURE - M40
 - (d) PILE & PILE CAP - M40
 - (e) RCC RAILING - M40
 - (f) RCC CRASH BARRIER - M40
 - (g) BLINDING CONCRETE - M15
 - (h) APPROACH SLAB - M35
 - (i) PEDESTAL - M40
4. WEEP HOLES OF DIA 100mm, SPACED AT 1000 C/C BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN ABUTMENTS AND RETURN WALLS FROM 150 mm ABOVE GROUND LEVEL TO WALL TOP LEVEL.
5. THE SELECTED EARTH FILL USED FOR BACK FILLING BEHIND ABUTMENTS WALL AND RETAINING WALL SHALL HAVE THE FOLLOWING PROPERTIES: $C=0$ $\phi=35^\circ$ $\gamma=18kN$.
6. STRIP SEAL EXPANSION JOINTS SHALL BE PROVIDED.
7. SEISMIC ZONE = IV CONFIRMING TO IS:1893-2002 HAS BEEN CONSIDERED IN THE DESIGN.
8. WEARING COAT SHALL COMPRISE OF 40mm BITUMINOUS CONCRETE OVER 25mm THK. BITUMEN MASTIC LAYER.
9. GRADE OF STEEL Fe 500D CONFORMING TO IS:1786.
10. ELASTOMERIC BEARING HAVE BEEN PROVIDED UNDER THE SUPERSTRUCTURE.
11. THE EXPOSURE CONDITION AT BRIDGE SITE IS VERY SEVERE.

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	



CLIENT APPROVED	DATE	CONSULTANT SIGNATURE
-----------------	------	----------------------

DESIGNER: **SMC** (Member of the Surbana Jurong Group)
 SMC (India) Pvt Ltd, 1st Floor, Novus Tower, West Wing, Plot Number -18, Sector - 18, Gurgaon - 122015, Haryana

CLIENT: **NADCL**
 NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. P11 BUILDING, 4 PARLIAMENT STREET, SANSAD MARG AREA, NEW DELHI - 110001

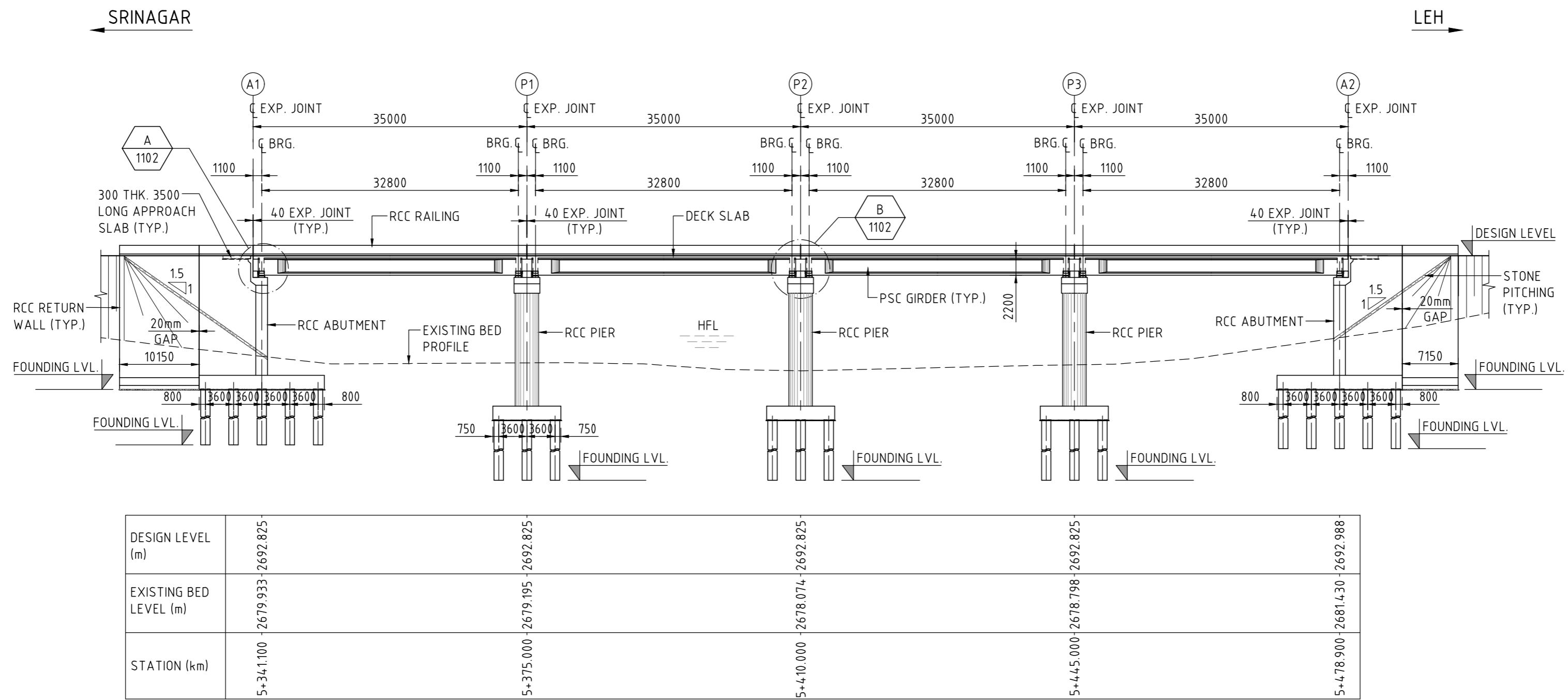
PROJECT: CONSTRUCTION OF SONAMARG BYPASS FROM DESIGN CH. 0+000 (EXISTING KM 82.00 ON NH-1) TO CH. 6+320 ON SRINAGAR-LEH ROAD (NH-1) IN THE UT OF JAMMU & KASHMIR

PROJECT TITLE: MAJOR BRIDGE AT STN. 2+230 GENERAL ARRANGEMENT SHEET2

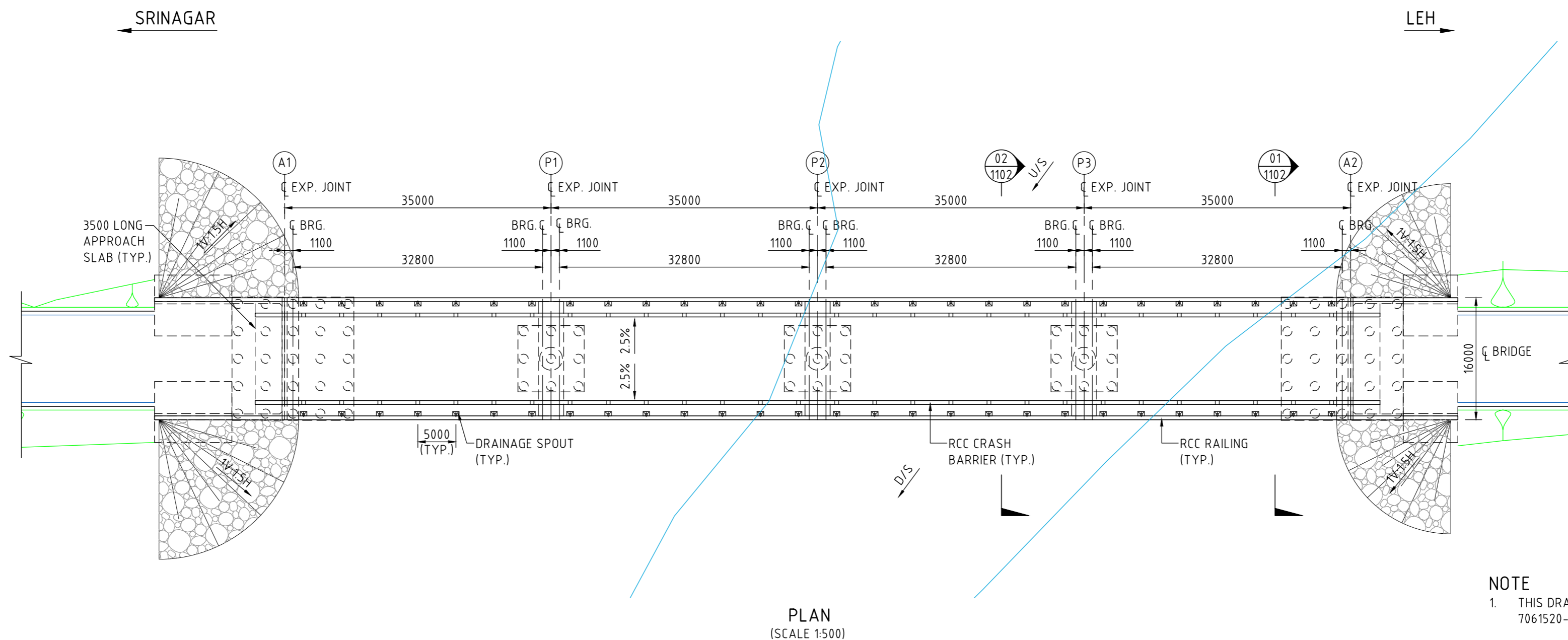
DRAWING STATUS: TENDER

PROJECT / DRAWING NO.: 7061520-MJBR-105-1002

ISSUE: A



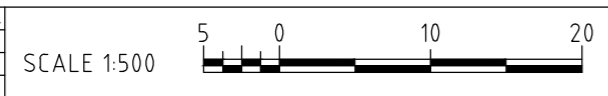
SECTIONAL ELEVATION
(SCALE 1:500)



PLAN
(SCALE 1:500)

50 mm DIN ORIGINAL (A2)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	

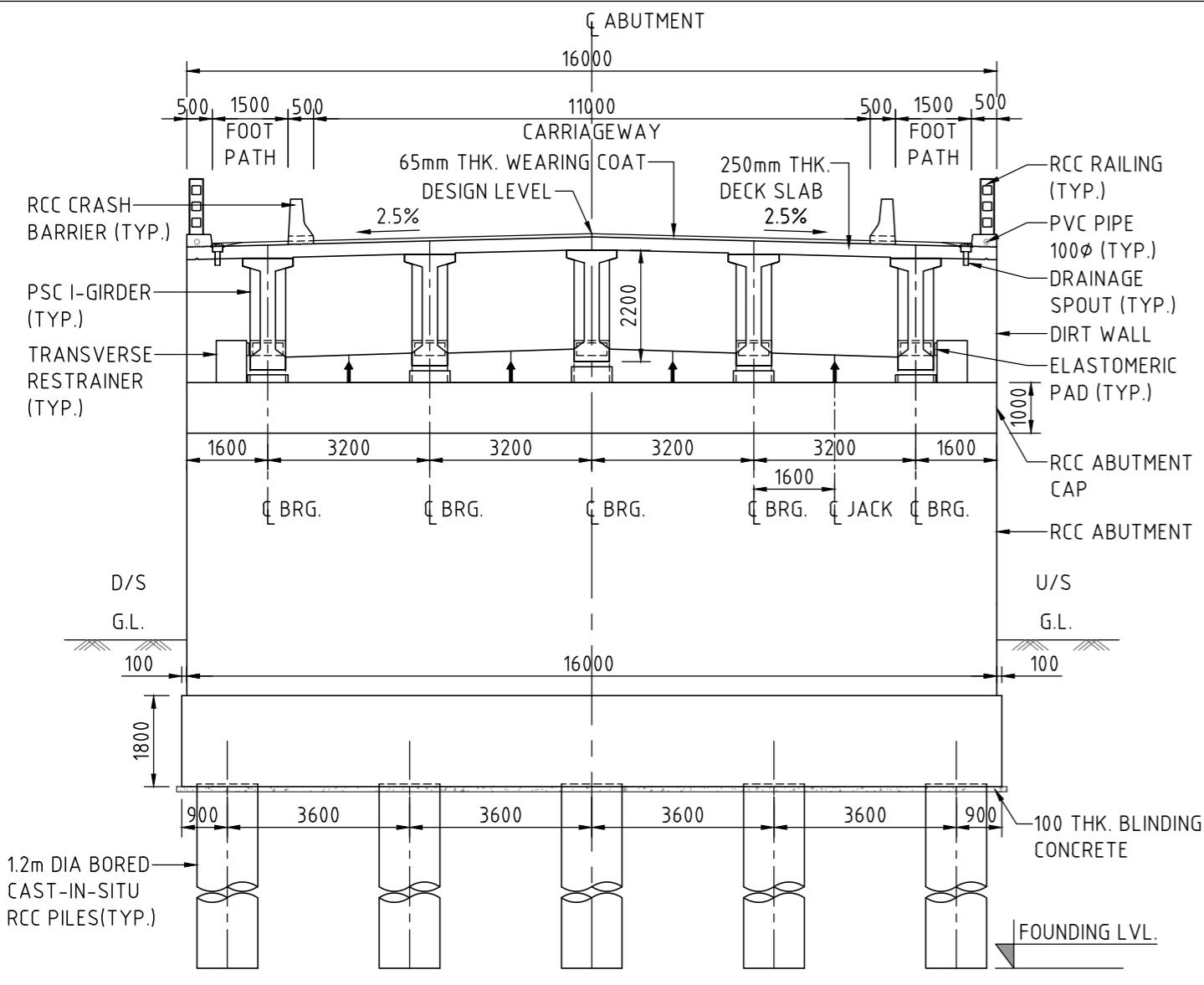


CLIENT APPROVED	DATE	CONSULTANT SIGNATURE
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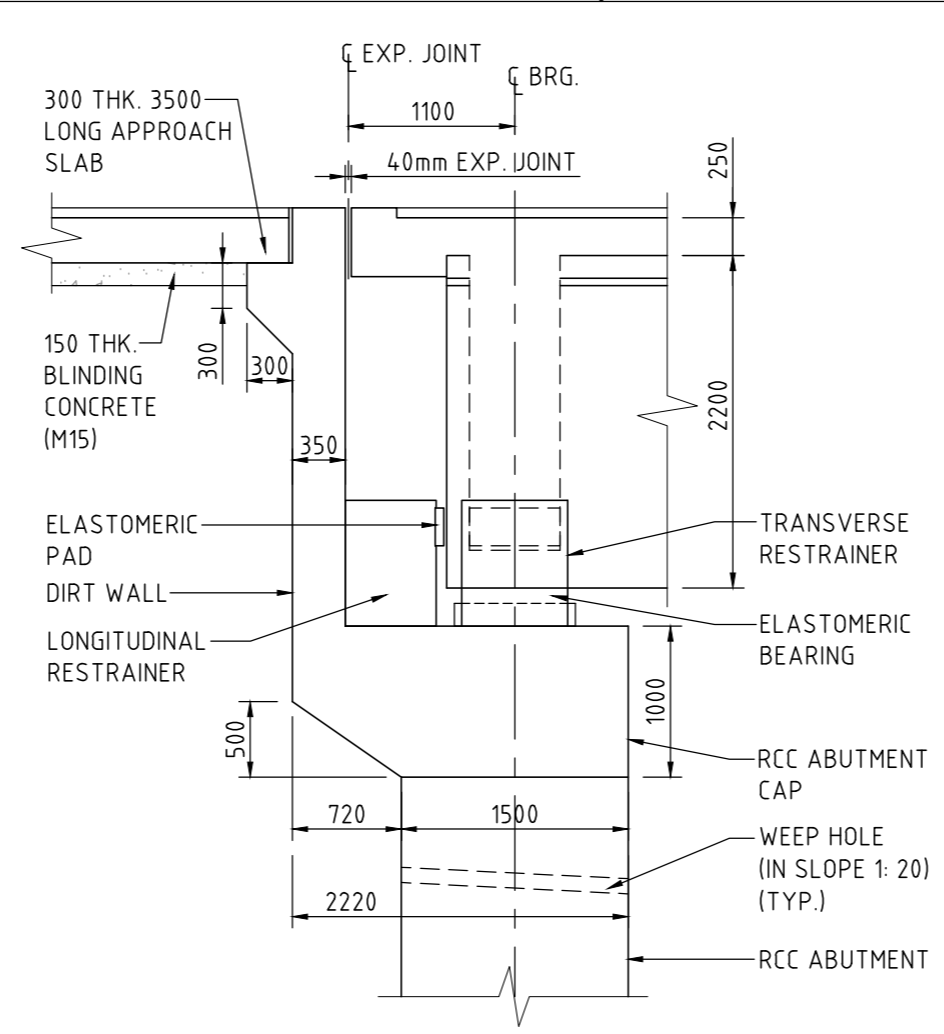
<p>SMC (India) Pvt Ltd. 1st Floor, Novus Tower, West Wing, Plot Number -18, Sector - 18, Gurgaon - 122015, Haryana</p>	<p>NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. P11 BUILDING, 4 PARLIAMENT STREET, SANSAD MARG AREA, NEW DELHI - 110001</p>
DESIGNER: MS DESIGNER: QN CHECKED: AP APPROVED: NA	CLIENT APPROVED: _____ DATE: _____

PROJECT TITLE
CONSTRUCTION OF SONAMARG BYPASS
FROM DESIGN CH. 0+000 (EXISTING KM 82.00 ON NH-1)
TO CH. 6+320 ON SRINAGAR-LEH ROAD (NH-1)
IN THE UT OF JAMMU & KASHMIR

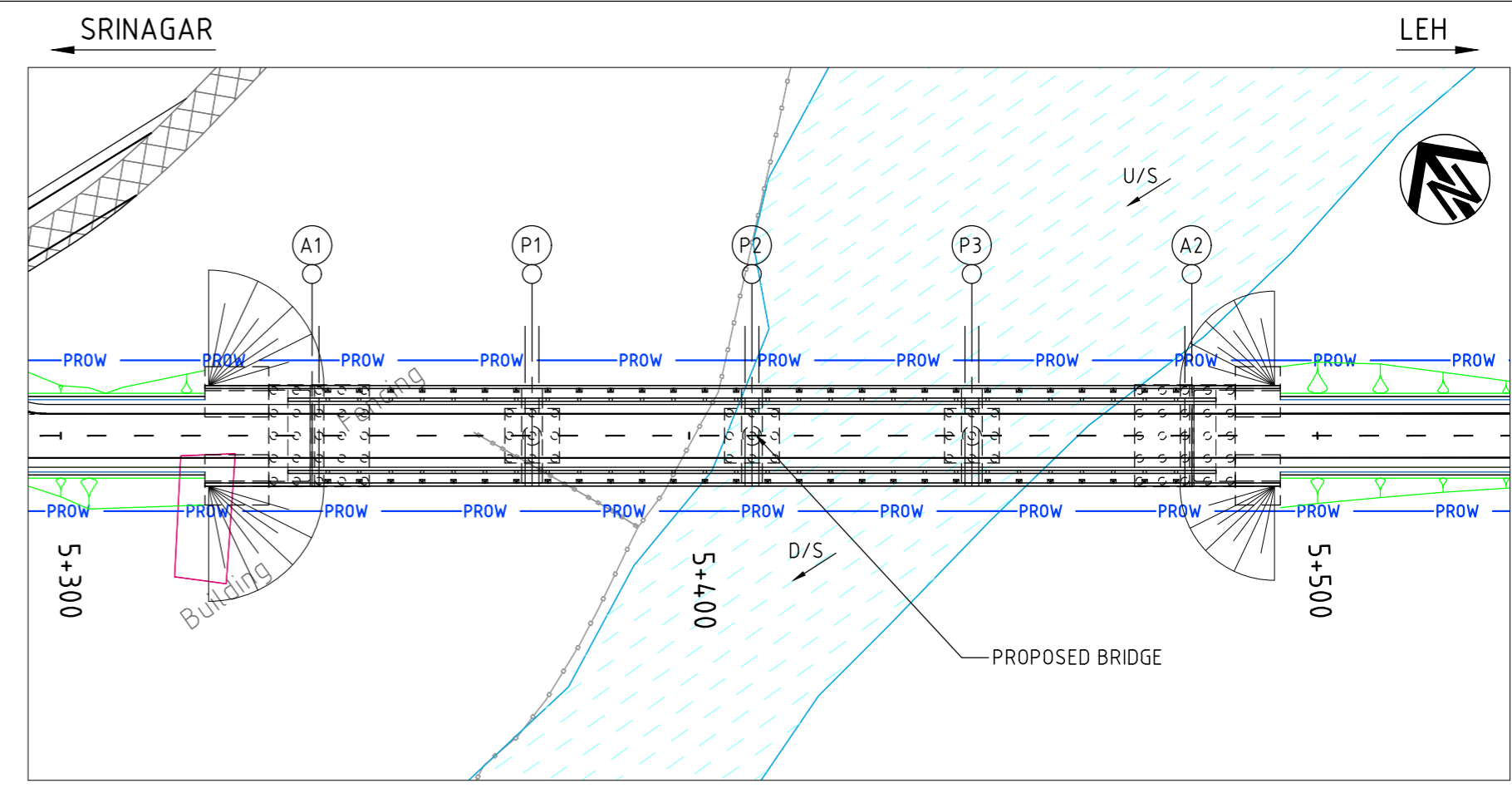
PROJECT TITLE	MAJOR BRIDGE AT STN. 5+410 GENERAL ARRANGEMENT SHEET 1
DRAWING STATUS	TENDER
PROJECT / DRAWING NO.	7061520-MJBR-105-1101
ISSUE	A



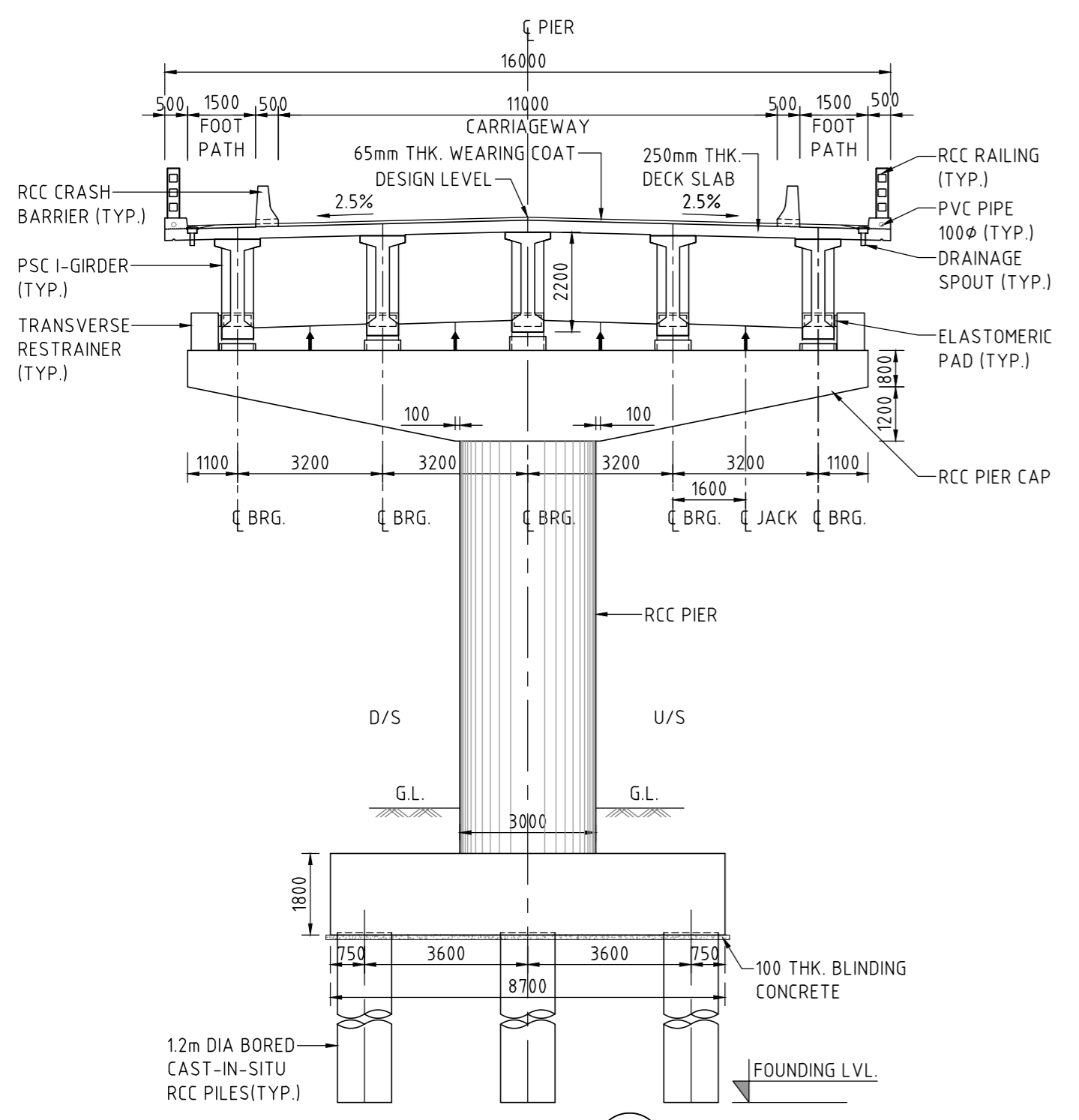
SECTION 01
SCALE 1: 125



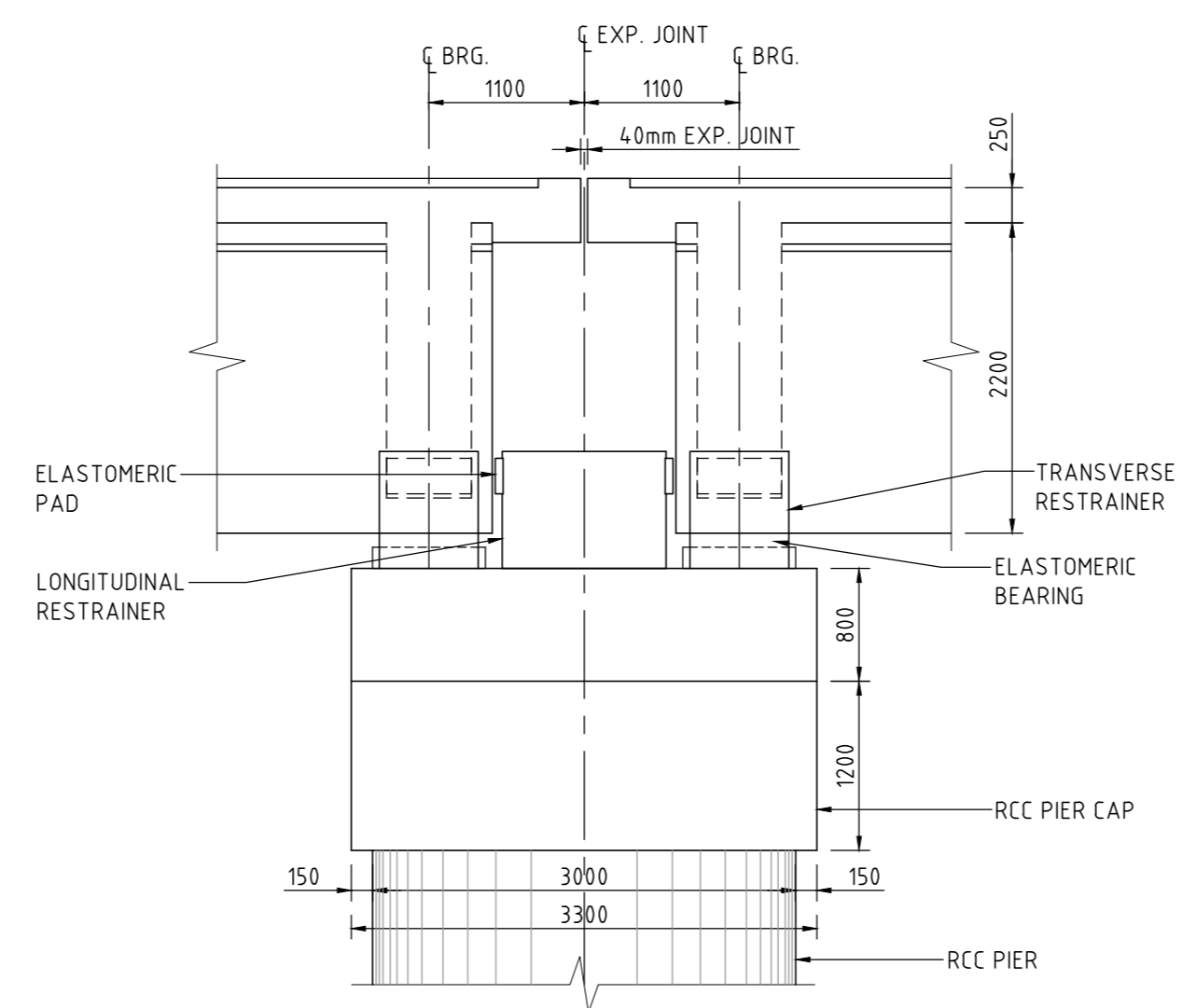
DETAIL A
SCALE 1: 50



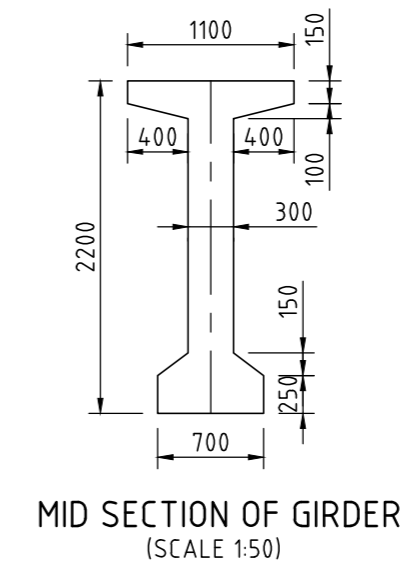
SITE PLAN
SCALE 1:1000



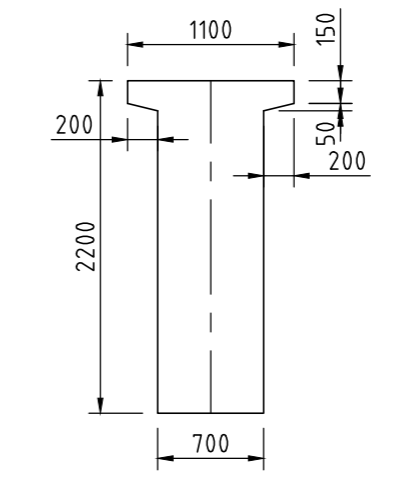
SECTION 02
SCALE 1: 125



DETAIL B
SCALE 1: 50



MID SECTION OF GIRDER
SCALE 1:50



SUPPORT SECTION OF GIRDER
SCALE 1:50

LEGEND

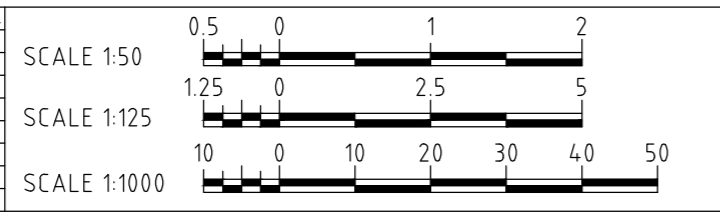
- U/S DENOTES UP STREAM
- D/S DENOTES DOWN STREAM
- HFL DENOTES HIGH FLOOD LEVEL
- ↑ JACK LOCATION

NOTES

1. ALL DIMENSIONS ARE IN MM AND REDUCED LEVELS ARE IN METRES, UNLESS NOTED OTHERWISE. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED. NO DIMENSION SHALL BE SCALED.
2. THE FOLLOWING LIVE LOAD HAS BEEN CONSIDERED IN THE DESIGN AS PER IRC : 6.
 - (i) 4 LANE CLASS A
 - (ii) 2 LANE OF 70R
 - (iii) 2 LANE CLASS A + 1 LANE 70R
3. THE CONCRETE SHALL BE DESIGN MIX AND MINIMUM 28 DAYS CHARACTERISTIC COMPRESSIVE CUBE STRENGTH FOR VARIOUS COMPONENTS SHALL BE AS UNDER:
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 - (b) PSC GIRDER - M45
 - (c) SUB STRUCTURE - M40
 - (d) PILE & PILE CAP - M40
 - (e) RCC RAILING - M40
 - (f) RCC CRASH BARRIER - M40
 - (g) BLINDING CONCRETE - M15
 - (h) APPROACH SLAB - M35
 - (i) PEDESTAL - M40
4. WEEP HOLES OF DIA 100mm, SPACED AT 1000 C/C BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN ABUTMENTS AND RETURN WALLS FROM 150 mm ABOVE GROUND LEVEL TO WALL TOP LEVEL.
5. THE SELECTED EARTH FILL USED FOR BACK FILLING BEHIND ABUTMENTS WALL AND RETAINING WALL SHALL HAVE THE FOLLOWING PROPERTIES: C=0 φ=35° γ=18kN.
6. STRIP SEAL EXPANSION JOINTS SHALL BE PROVIDED.
7. SEISMIC ZONE = IV CONFIRMING TO IS:1893-2002 HAS BEEN CONSIDERED IN THE DESIGN.
8. WEARING COAT SHALL COMPRISE OF 40mm BITUMINOUS CONCRETE OVER 25mm THK. BITUMEN MASTIC LAYER.
9. GRADE OF STEEL Fe 500D CONFORMING TO IS:1786.
10. ELASTOMERIC BEARING HAVE BEEN PROVIDED UNDER THE SUPERSTRUCTURE.
11. THE EXPOSURE CONDITION AT BRIDGE SITE IS VERY SEVERE.

50 mm DIN ORIGINAL (A2)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	



CLIENT APPROVED	DATE	CONSULTANT SIGNATURE
-----------------	------	----------------------

DESIGNER: **SMC** (Member of the Surbana Jurong Group)
 SMC (India) Pvt Ltd, 1st Floor, Novus Tower, West Wing, Plot Number -18, Sector - 18, Gurgaon - 122015, Haryana

CLIENT: **NDCL** (National Highways & Infrastructure Development Corporation Ltd.)
 P11 BUILDING, 4 PARLIAMENT STREET, SANSAD MARG AREA, NEW DELHI - 110001

PROJECT: CONSTRUCTION OF SONAMARG BYPASS FROM DESIGN CH. 0+000 (EXISTING KM 82.00 ON NH-1) TO CH. 6+320 ON SRINAGAR-LEH ROAD (NH-1) IN THE UT OF JAMMU & KASHMIR

PROJECT TITLE: MAJOR BRIDGE AT STN. 5+410 GENERAL ARRANGEMENT SHEET 2

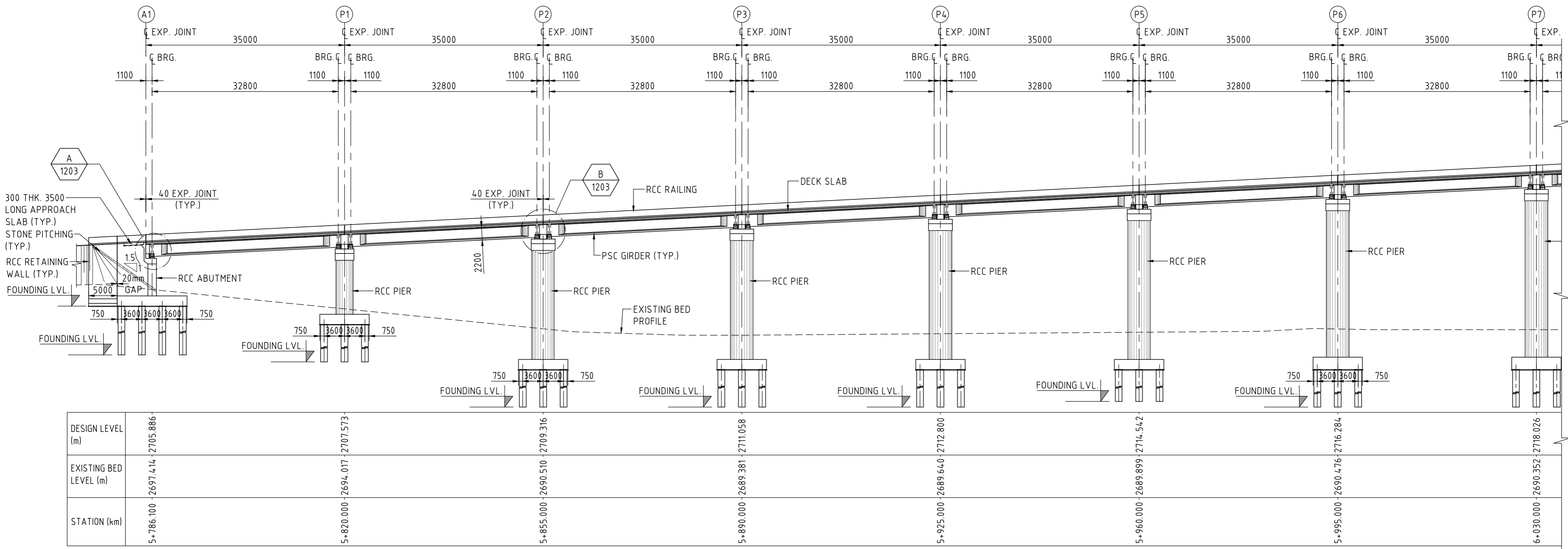
DRAWING STATUS: TENDER

PROJECT / DRAWING NO.: 7061520-MJBR-105-1102

ISSUE: A

SRINAGAR

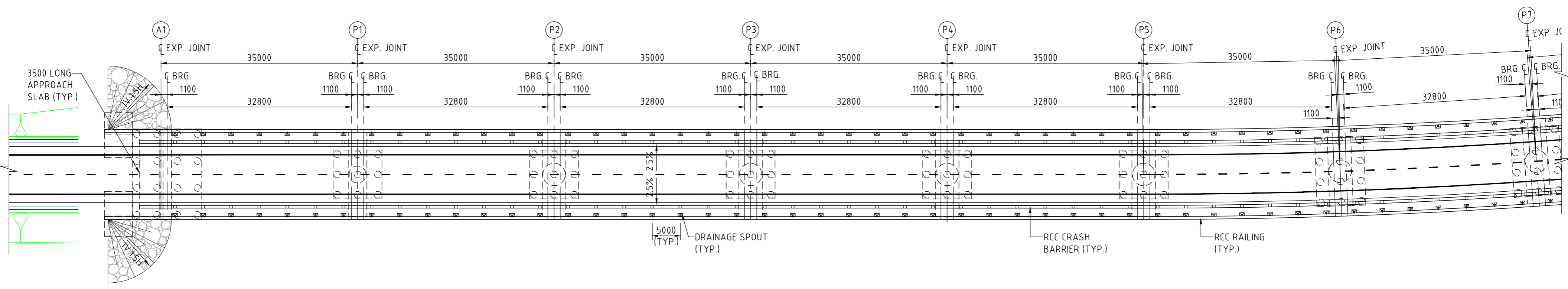
LEH



SECTIONAL ELEVATION (SCALE 1:500)

SRINAGAR

LEH



PLAN (SCALE 1:500)

NOTE
 1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. 7061520-MJBR-105-1202,1203 & 1204.

50 mm DIN ORIGINAL (A2)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	



CLIENT APPROVED	DATE	CONSULTANT SIGNATURE
-----------------	------	----------------------

<p>SMEC Member of the Surbana Jursang Group SMEC (India) Pvt Ltd. 1st Floor, Novus Tower, West Wing, Plot Number -18, Sector - 18, Gurgaon - 122015, Haryana</p>	<p>MIDCL NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. PFI BUILDING, 4 PARLIAMENT STREET, SANSAD MARG AREA, NEW DELHI - 110001</p>
DESIGNER: MS CHECKER: QN APPROVED: AP APPROVED: NA	CLIENT APPROVED: [Signature] DATE: [Date]

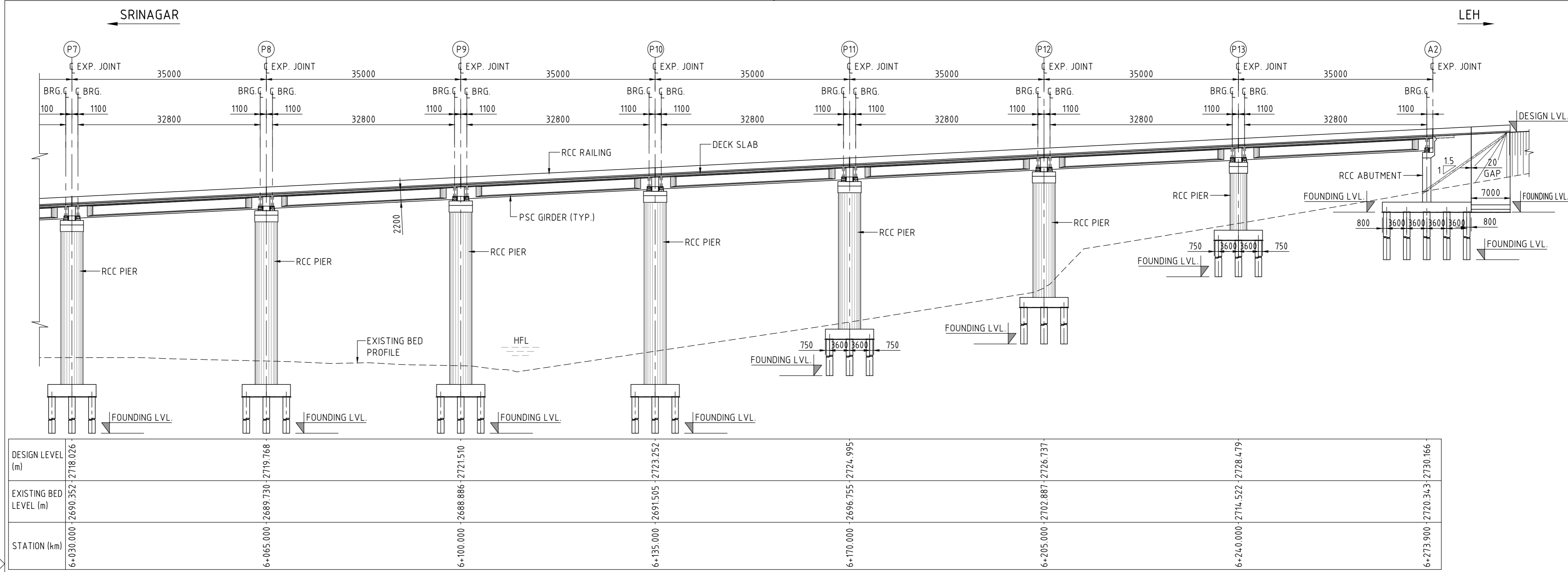
PROJECT
 CONSTRUCTION OF SONAMARG BYPASS
 FROM DESIGN CH. 0+000 (EXISTING KM 82.00 ON NH-1)
 TO CH. 6+320 ON SRINAGAR-LEH ROAD (NH-1)
 IN THE UT OF JAMMU & KASHMIR

PROJECT TITLE
 MAJOR BRIDGE AT STN. 6+030
 GENERAL ARRANGEMENT
 SHEET 1

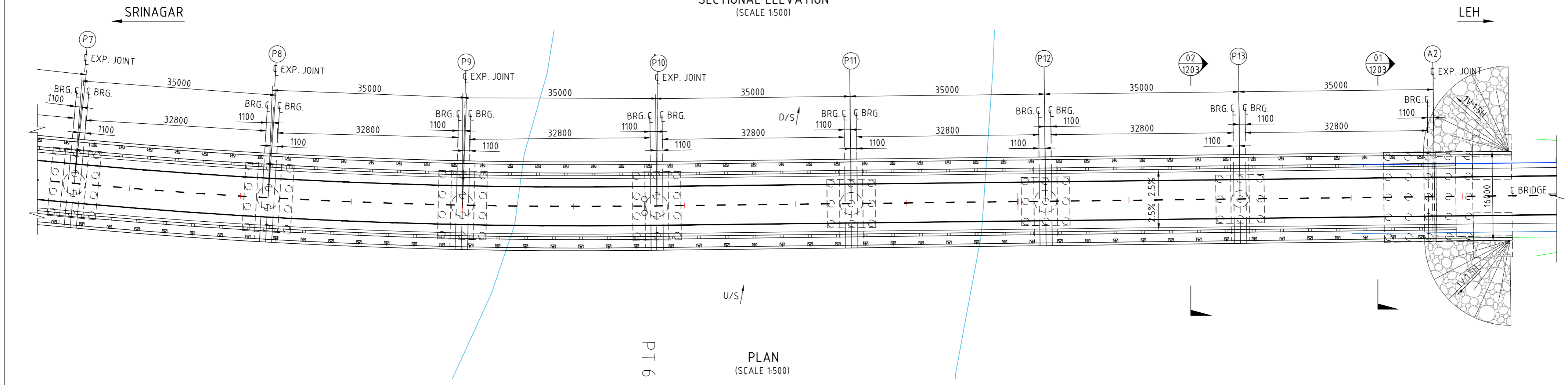
DRAWING STATUS
 TENDER

PROJECT / DRAWING NO.
 7061520-MJBR-105-1201

ISSUE
 A



SECTIONAL ELEVATION
(SCALE 1:500)

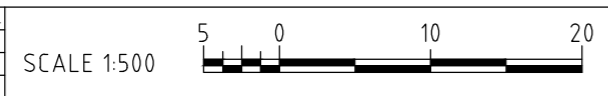


PLAN
(SCALE 1:500)

NOTE
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. 7061520-MJBR-105-1201, 1203 & 1204.

50 mm DIN ORIGINAL (A2)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	



DESIGNER	MS	CHECKED	QN	APPROVED	AP
DATE		CONSULTANT SIGNATURE			

DESIGNER
SMC
Member of the Surbana Jurong Group
SMC (India) Pvt Ltd. 1st Floor,
Novus Tower, West Wing, Plot Number -18,
Sector - 18, Gurgaon - 122015, Haryana

CLIENT
NDCL
NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. P11 BUILDING, 4 PARLIAMENT STREET, SANSAD MARG AREA, NEW DELHI - 110001

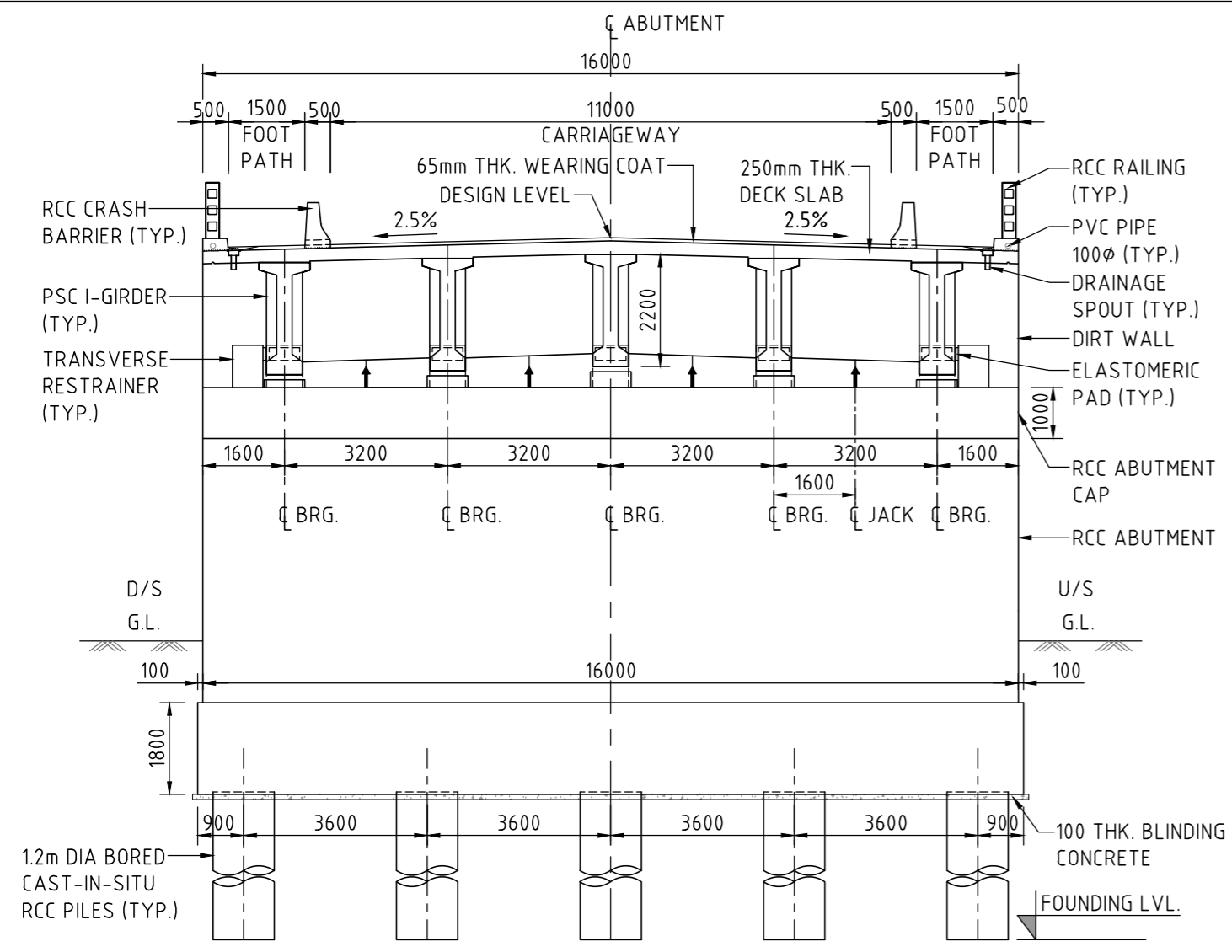
PROJECT
CONSTRUCTION OF SONAMARG BYPASS FROM DESIGN CH. 0+000 (EXISTING KM 82.00 ON NH-1) TO CH. 6+320 ON SRINAGAR-LEH ROAD (NH-1) IN THE UT OF JAMMU & KASHMIR

PROJECT TITLE
MAJOR BRIDGE AT STN. 6+030 GENERAL ARRANGEMENT SHEET 2

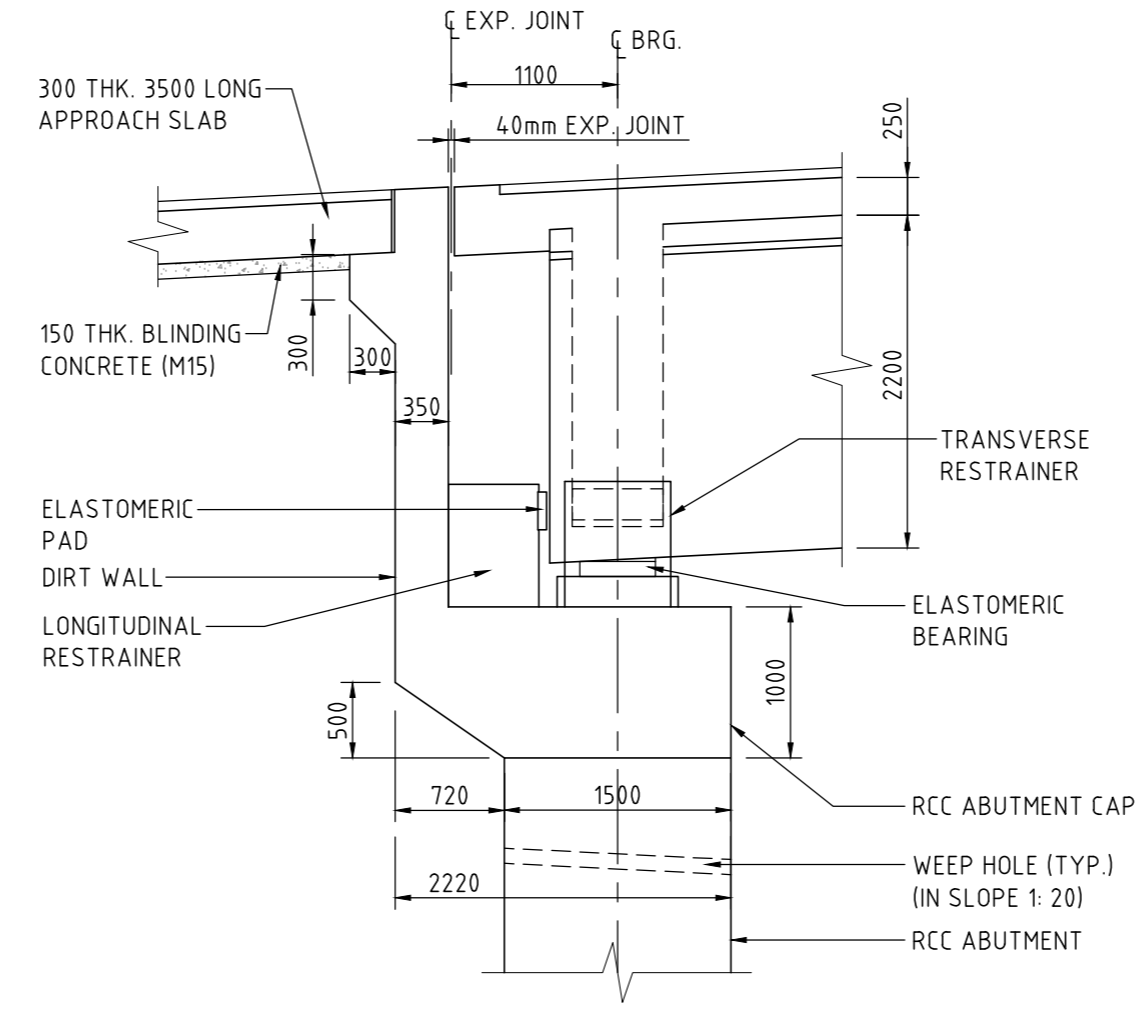
DRAWING STATUS
TENDER

PROJECT / DRAWING NO.
7061520-MJBR-105-1202

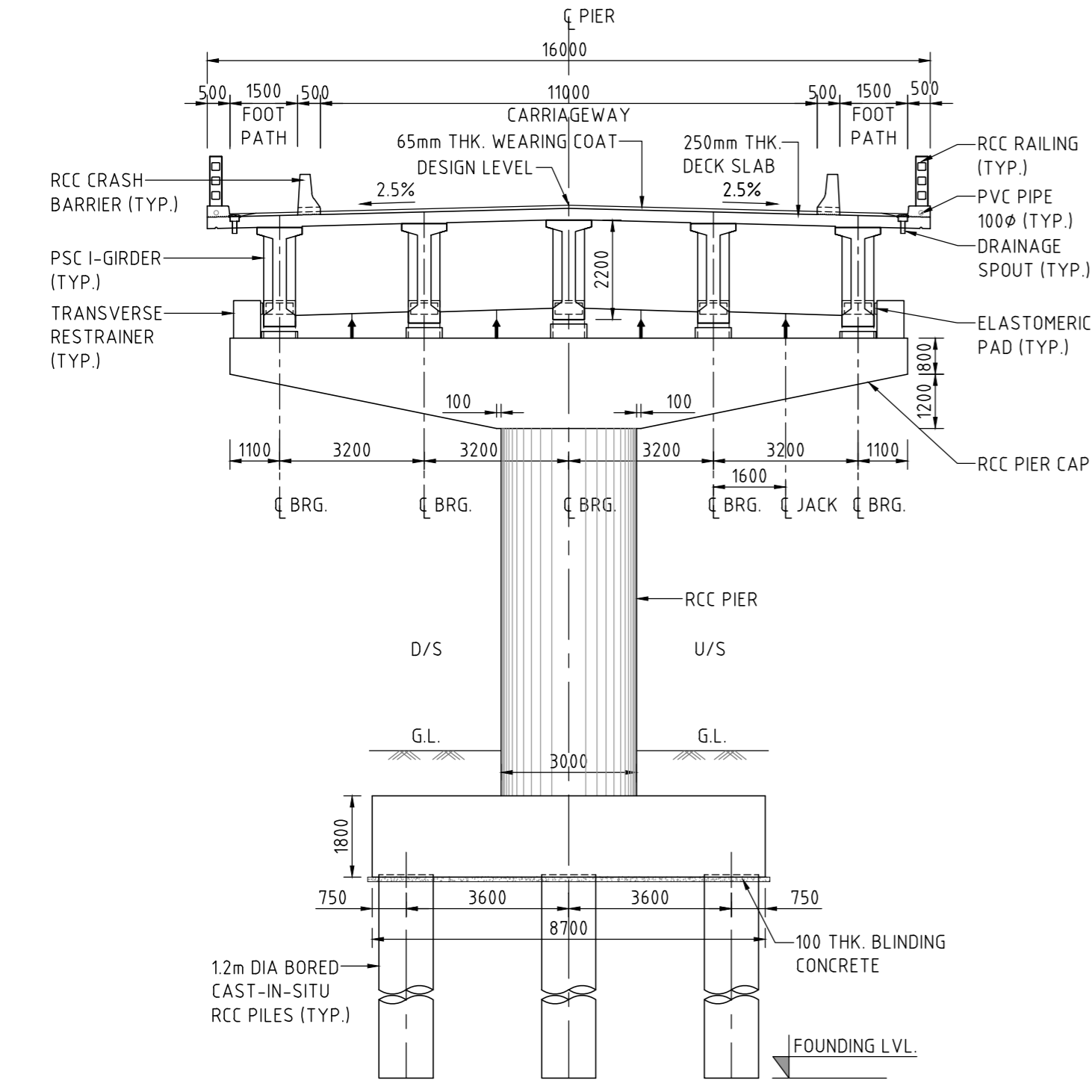
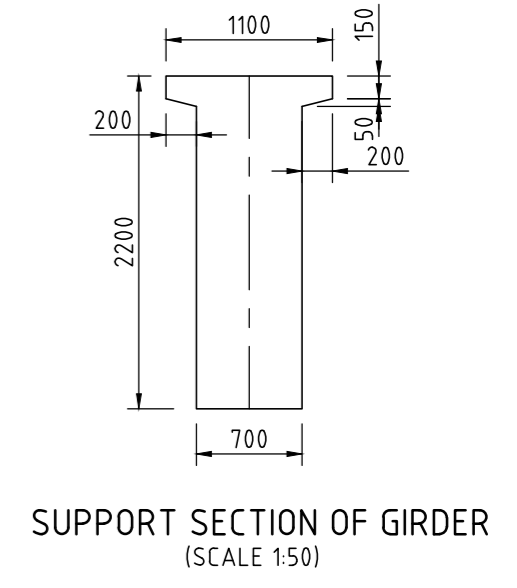
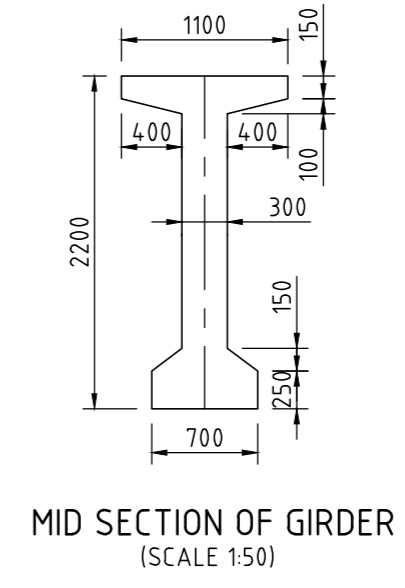
ISSUE
A



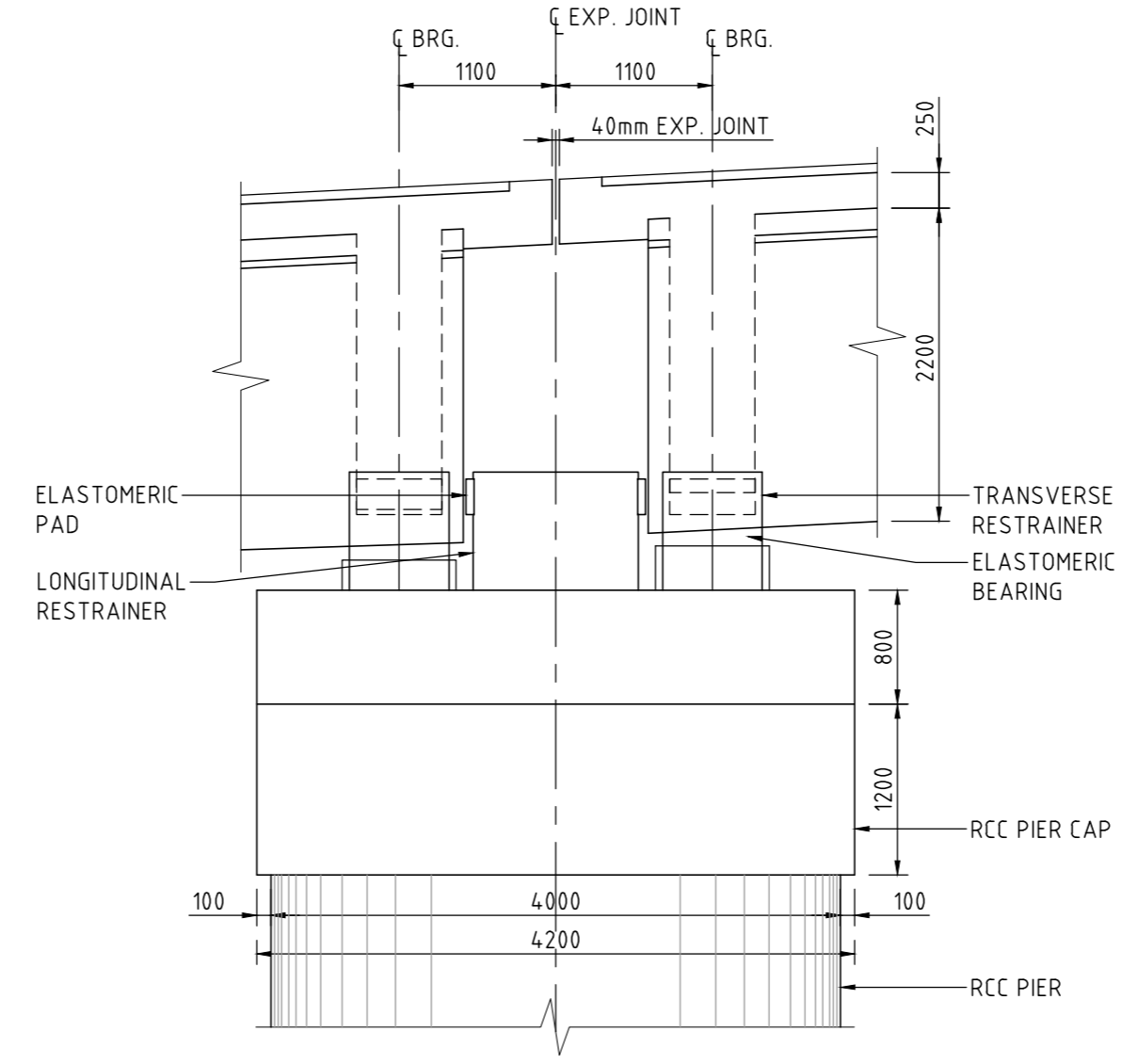
SECTION 01
SCALE 1: 125



DETAIL A
SCALE 1: 50



SECTION 02
SCALE 1: 125

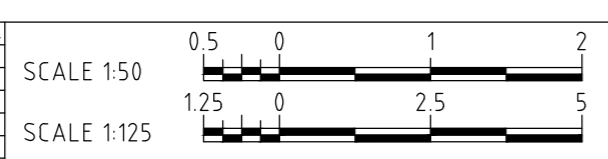


DETAIL B
SCALE 1: 50

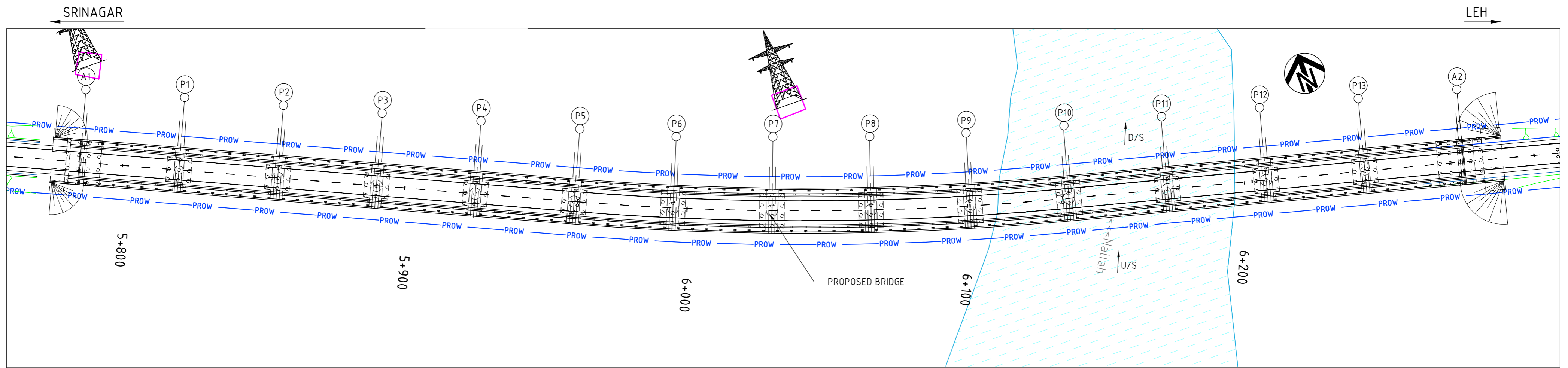
NOTE
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. 7061520-MJBR-105-1201,1202 & 1204.

50 mm DIN ORIGINAL (A3)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	



DESIGNER	MS	DESIGN	QN	CHECKED	AP	APPROVED	NA
CLIENT	NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. P11 BUILDING, 4 PARLIAMENT STREET, SANSAD MARG AREA, NEW DELHI-110001.						
PROJECT	CONSTRUCTION OF SONAMARG BYPASS FROM DESIGN CH. 0+000 (EXISTING KM 82.00 ON NH-1) TO CH. 6+320 ON SRINAGAR-LEH ROAD (NH-1) IN THE UT OF JAMMU & KASHMIR						
PROJECT TITLE	MAJOR BRIDGE AT STN. 6+030 GENERAL ARRANGEMENT SHEET 3						
DRAWING STATUS	TENDER						
PROJECT / DRAWING NO.	7061520-MJBR-105-1203						
ISSUE	A						



SITE PLAN
(SCALE 1:1000)

LEGEND

- U/S DENOTES UP STREAM
- D/S DENOTES DOWN STREAM
- HFL DENOTES HIGH FLOOD LEVEL
- ↑ JACK LOCATION

NOTES

1. ALL DIMENSIONS ARE IN MM AND REDUCED LEVELS ARE IN METRES, UNLESS NOTED OTHERWISE. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED. NO DIMENSION SHALL BE SCALED.
2. THE FOLLOWING LIVE LOAD HAS BEEN CONSIDERED IN THE DESIGN AS PER IRC : 6.
 - (i) 4 LANE CLASS A
 - (ii) 2 LANE OF 70R
 - (iii) 2 LANE CLASS A + 1 LANE 70R
3. THE CONCRETE SHALL BE DESIGN MIX AND MINIMUM 28 DAYS CHARACTERISTIC COMPRESSIVE CUBE STRENGTH FOR VARIOUS COMPONENTS SHALL BE AS UNDER:
 - (a) DECK SLAB - M40
 - (b) PSC GIRDER - M45
 - (c) SUB STRUCTURE - M40
 - (d) PILE & PILE CAP - M40
 - (e) RCC RAILING - M40
 - (f) RCC CRASH BARRIER - M40
 - (g) BLINDING CONCRETE - M15
 - (h) APPROACH SLAB - M35
 - (i) PEDESTAL - M40
4. WEEP HOLES OF DIA 100mm, SPACED AT 1000 C/C BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN ABUTMENTS AND RETURN WALLS FROM 150 mm ABOVE GROUND LEVEL TO WALL TOP LEVEL.
5. THE SELECTED EARTH FILL USED FOR BACK FILLING BEHIND ABUTMENTS WALL AND RETAINING WALL SHALL HAVE THE FOLLOWING PROPERTIES: $C=0$ $\phi=35^\circ$ $\gamma=18kN$.
6. STRIP SEAL EXPANSION JOINTS SHALL BE PROVIDED.
7. SEISMIC ZONE = IV CONFIRMING TO IS:1893-2002 HAS BEEN CONSIDERED IN THE DESIGN.
8. WEARING COAT SHALL COMPRISE OF 40mm BITUMINOUS CONCRETE OVER 25mm THK. BITUMEN MASTIC LAYER.
9. GRADE OF STEEL Fe 500D CONFORMING TO IS:1786.
10. ELASTOMERIC BEARING HAVE BEEN PROVIDED UNDER THE SUPERSTRUCTURE.
11. THE EXPOSURE CONDITION AT BRIDGE SITE IS VERY SEVERE.

50 mm DIN ORIGINAL (A2)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	

SCALE 1:1000



CLIENT APPROVED	DATE	CONSULTANT SIGNATURE

DESIGNER
SMEC
Member of the Saurashtra Jansang Group
SMEC (India) Pvt Ltd. 1st Floor,
Novus Tower, West Wing, Plot Number-18,
Sector - 18, Gurgaon - 122015, Haryana

CLIENT
NDCL
NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. P11 BUILDING, 4 PARLIAMENT STREET, SANSAD MARG AREA, NEW DELHI-110001

PROJECT
CONSTRUCTION OF SONAMARG BYPASS
FROM DESIGN CH. 0+000 (EXISTING KM 82.00 ON NH-1)
TO CH. 6+320 ON SRINAGAR-LEH ROAD (NH-1)
IN THE UT OF JAMMU & KASHMIR

PROJECT TITLE
MAJOR BRIDGE AT STN. 6+030
GENERAL ARRANGEMENT
SHEET 4

DRAWING STATUS
TENDER

PROJECT / DRAWING NO.
7061520-MJBR-105-1204

ISSUE
A

SCHEDULE OF BOX CULVERT


S.No	Design Ch. (KM)	Proposed Structure type	Proposed Arrangement				Proposed Box detail			Invert Level (U/S)	Cross slope (%)	Proposed FRL	Height of Fill	Proposed Treatment	Drawing Reference
			No. of cell	Clear span (s), m	Clear height (h), m	Skew	Top slab (mm)	Bottom slab (mm)	Wall (Outer/Inner) (mm)						General Arrangement Drawing
1	0+010	Box	1	2	2		300	300	250	2648.53	2.5	2651.095	0.0	New Construction	7061520-CUL-105-1004
2	0+210	Box	1	2	2		300	300	250	2657.541	2.5	2660.099	0.0	Reconstruction	7061520-CUL-105-1004
3	0+376	Box	1	2	2		300	300	250	2660.668	2.5	2663.229	0.0	Reconstruction	7061520-CUL-105-1001
4	0+481	Box	1	2	2		300	300	250	2661.662	2.5	2664.242	0.0	Reconstruction	7061520-CUL-105-1001
5	0+574	Box	1	2	2		300	300	250	2661.975	2.5	2664.499	0.0	Reconstruction	7061520-CUL-105-1001
6	0+627	Box	1	2	2		300	300	250	2662.119	2.5	2664.612	0.0	Reconstruction	7061520-CUL-105-1001
7	0+820	Box	1	2	2		300	300	250	2662.288	2.5	2664.853	0.0	New Construction	7061520-CUL-105-1001
8	0+940	Box	1	2	2		300	300	250	2660.444	2.5	2663.009	0.0	New Construction	7061520-CUL-105-1001
9	1+054	Box	1	2	2		300	300	250	2656.705	2.5	2659.193	0.0	Reconstruction	7061520-CUL-105-1001
10	1+389	Box	1	3	2		300	300	250	2653.668	2.5	2656.208	0.0	Reconstruction	7061520-CUL-105-1001
11	1+618	Box	1	3	2		300	300	250	2653.964	2.5	2656.534	0.0	Reconstruction	7061520-CUL-105-1001
12	1+826	Box	1	2	2		300	300	250	2654.565	2.5	2657.13	0.0	New Construction	7061520-CUL-105-1001
13	2+552	Box	2	3	3		300	300	300	2661.068	2.5	2664.588	0.0	Reconstruction	7061520-CUL-105-1005
14	2+840	Box	1	2	2		300	300	250	2669.773	2.5	2672.338	0.0	New Construction	7061520-CUL-105-1003
15	4+320	Box	1	2	2		300	300	250	2678.65	2.5	2681.215	0.0	New Construction	7061520-CUL-105-1003
16	4+520	Box	1	2	2		300	300	250	2682.502	2.5	2685.067	0.0	New Construction	7061520-CUL-105-1003
17	4+700	Box	1	2	3		300	300	300	2685.751	2.5	2689.316	0.0	New Construction	7061520-CUL-105-1003
18	4+915	Box	1	3	3		300	300	300	2689.698	2.5	2693.195	0.0	Reconstruction	7061520-CUL-105-1003

50 mm DIN ORIGINAL (A2)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	

CLIENT APPROVED	DATE	CONSULTANT SIGNATURE

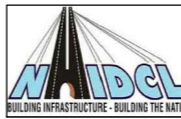
DESIGNER



SMC (India) Pvt Ltd. 1st Floor,
Novus Tower, West Wing, Plot Number -18,
Sector - 18, Gurgaon - 122015, Haryana

DESIGN: AM
CHECKED: AP
APPROVED: NA

CLIENT

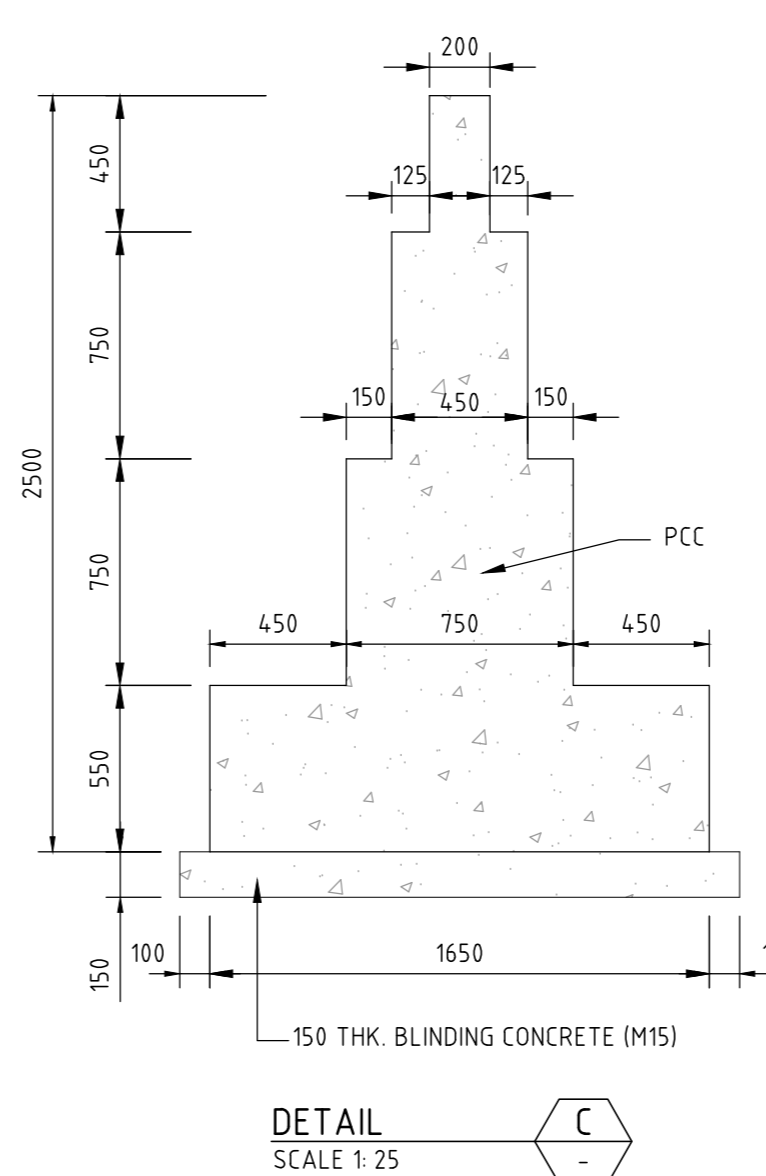
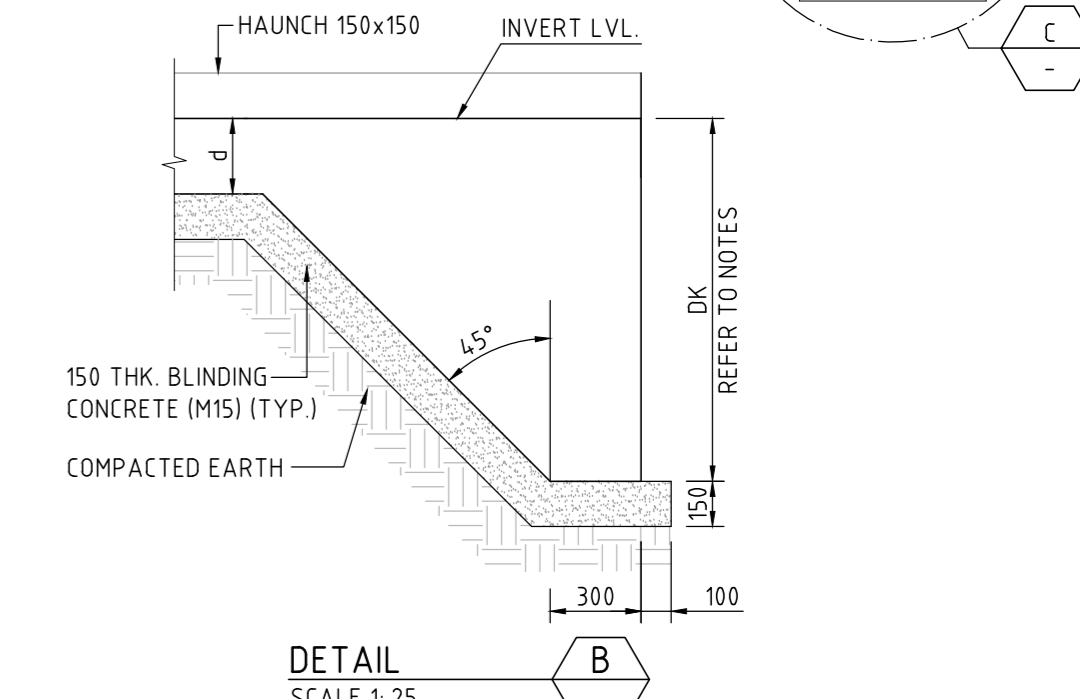
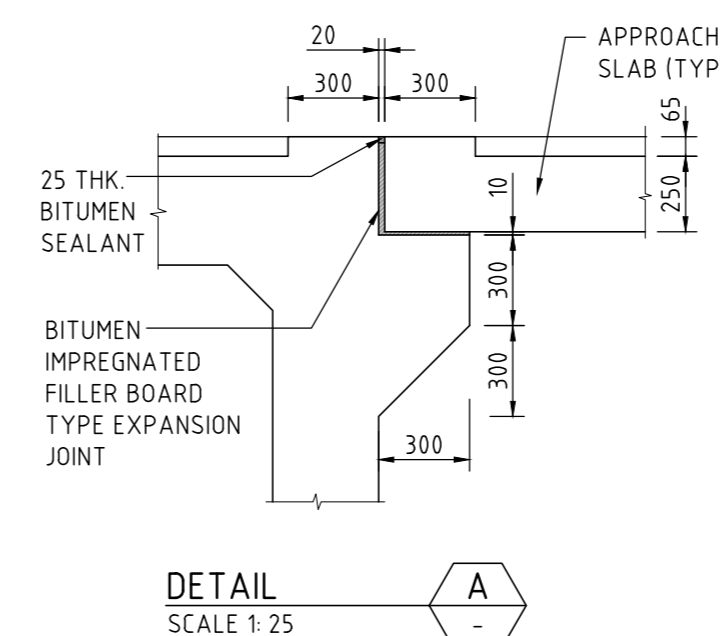
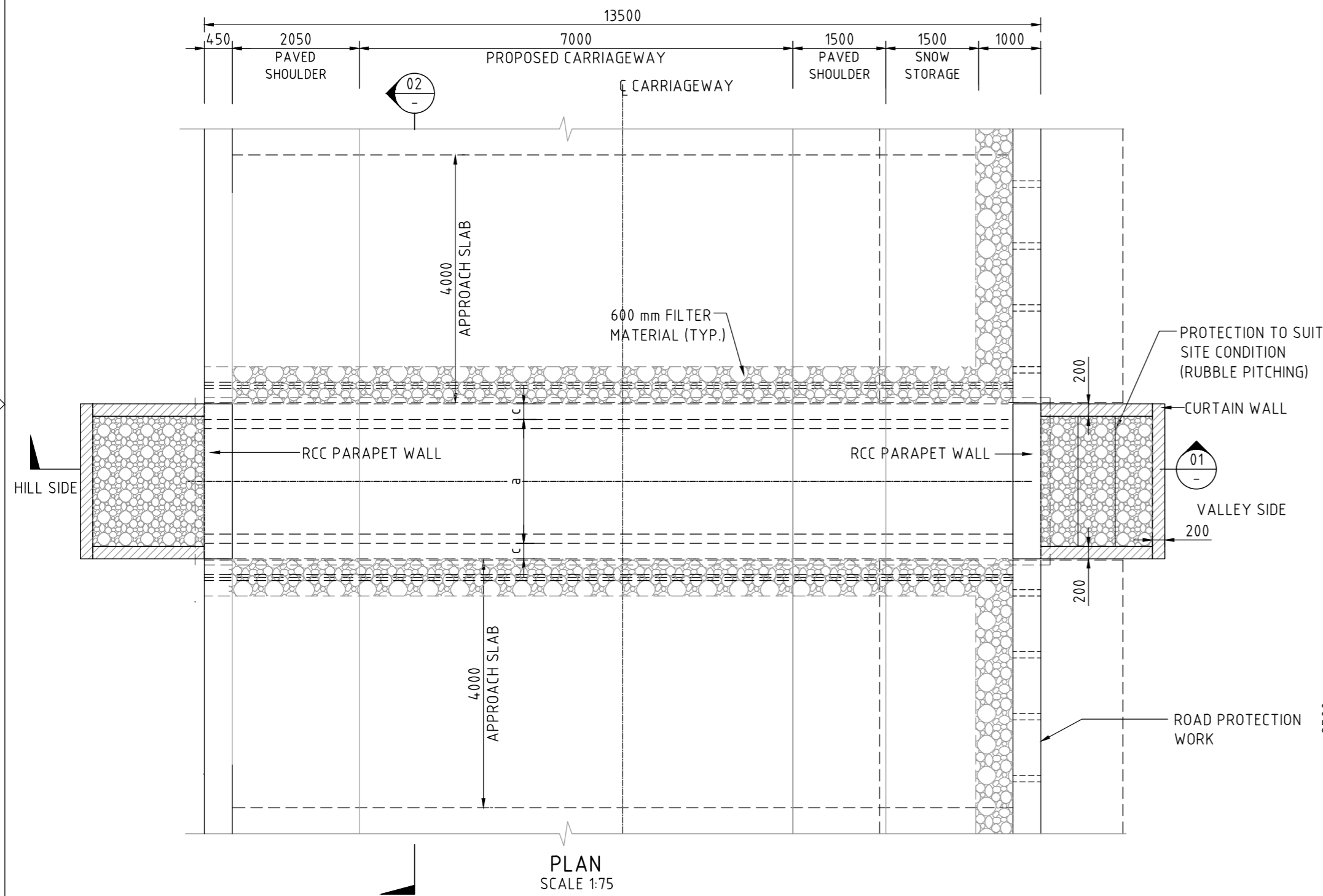
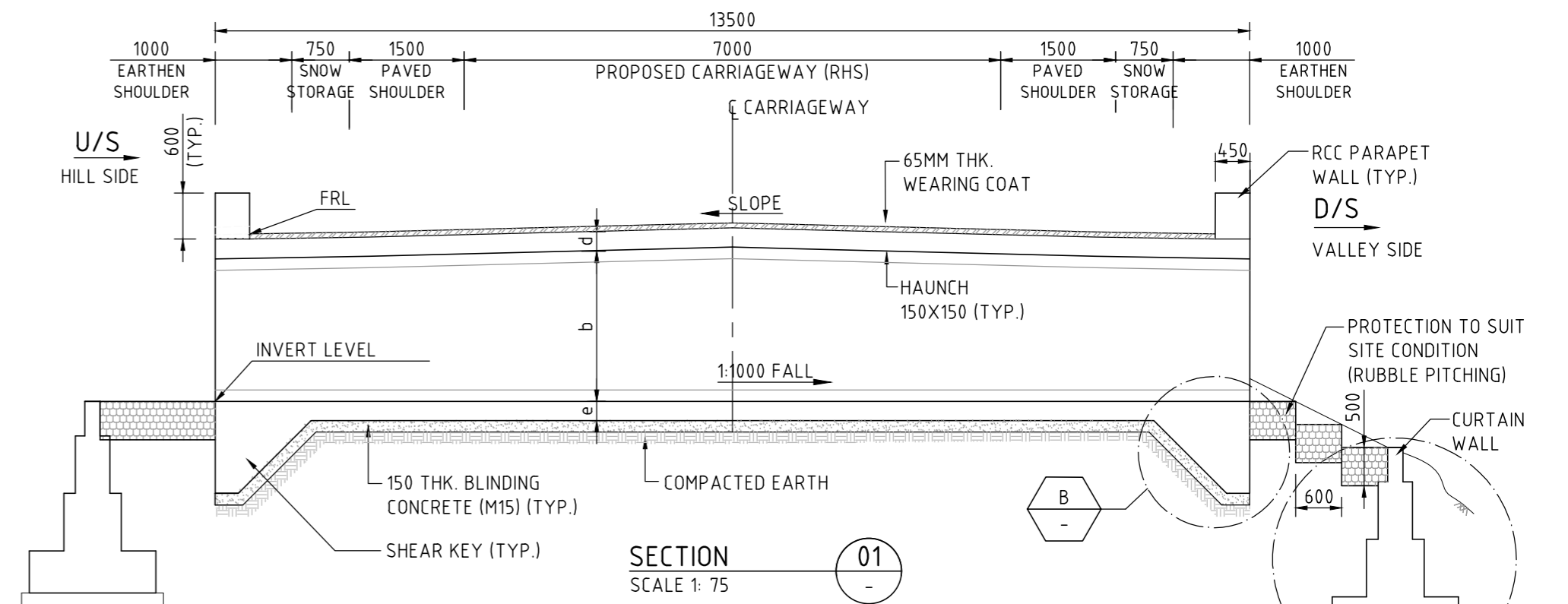
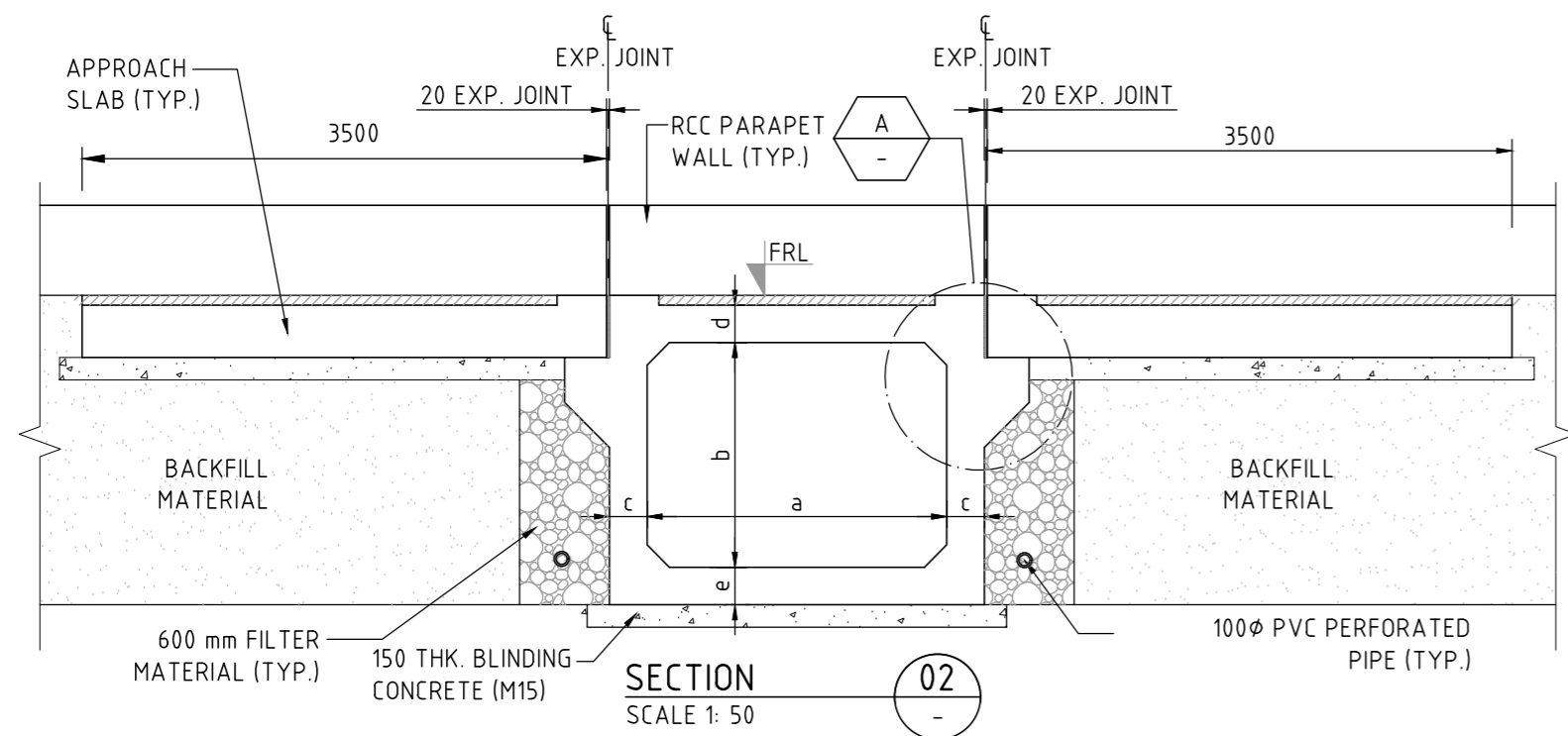


NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. PTI BUILDING, 4 PARLIAMENT STREET, SANSAD MARG AREA, NEW DELHI- 110001

APPROVED: DATE

PROJECT
CONSTRUCTION OF SONAMARG BYPASS
FROM DESIGN CH. 0+000 (EXISTING KM 82.00 ON NH-1)
TO CH. 6+320 ON SRINAGAR-LEH ROAD (NH-1)
IN THE UT OF JAMMU & KASHMIR

PROJECT TITLE	SCHEDULE FOR CULVERTS
DRAWING STATUS	TENDER
PROJECT / DRAWING NO.	7061520-CUL-105-1000
ISSUE	A



*** NOTE:-**

FOR NORMAL CROSS SLOPE 'n'

FOR SUPER ELEVATION 'e'

FOR 'n' AND 'e' REFER LATEST SCHEDULED/P&P DRAWING

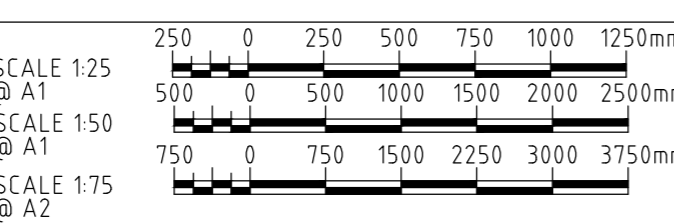
- * FOR SIDE DRAIN REFER TO DRAINAGE DETAIL DRAWING.**
- NOTES**
- ALL DIMENSIONS ARE IN MM AND REDUCED LEVELS ARE IN METRE, UNLESS NOTED OTHERWISE. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED. NO DIMENSION SHALL BE SCALED.
 - THE CONCRETE SHALL BE DESIGN MIX AND GRADE, EXPOSURE CONDITION, CHARACTERISTIC STRENGTH (28 DAYS) FOR VARIOUS COMPONENTS SHALL BE AS UNDER:

	GRADE (MPa)	EXPOSURE CONDITION
a. BOX STRUCTURE	M30	MODERATE
b. RCC PARAPET WALL	M30	MODERATE
c. BLINDING CONCRETE	M15	SEVERE
 - ANY LOOSE POCKETS/VOIDS AT FOUNDING LEVEL WILL BE REMOVED, COMPACTED AND FILLED WITH GRANULAR MATERIAL/PCC M15 AS DIRECTED BY THE ENGINEER IN CHARGE.
 - WEARING COAT SHALL COMPRISE OF 40MM BITUMINOUS CONCRETE OVER 25MM THICK BITUMEN MASTIC LAYER.
 - 'DK' IS DEPTH OF KEY AT BASE SLAB

FOR BASE SLAB THICKNESS	VALUE OF 'DK'
UPTO 900mm	1200mm
GREATER THAN 900mm	d+300mm
 - REINFORCEMENT GRADE SHALL BE Fe 500D.
 - MINIMUM CONCRETE COVER TO REINFORCEMENT NEAREST TO THE EARTH SURFACE SHALL BE 75mm IN BASE SLAB, TOP SLAB AND OUTER FACE OF WALLS AND 40mm IN INNER SIDE OF BASE SLAB, TOP SLAB AND INNER FACE OF WALLS.
 - MINIMUM VALUE OF SAFE BEARING CAPACITY (SBC) 150 kN/Sq m, SHALL BE ENSURED BEFORE EXECUTION IN CONSULTATION WITH ENGINEER IN CHARGE.
 - THE FILTER MATERIAL BEHIND BARREL LENGTH SHALL NOT BE LESS THAN 600mm AS PER IRC SP:13.
 - BACK FILLING BEHIND SIDE WALL OF BOX SHALL CONSIST OF SELECTED EARTH CONFORMING TO FOLLOWING PROPERTIES $c=0$, $\phi=30^\circ$, & $\gamma = 20 \text{ KN/m}^3$
 - WEEP HOLES, SPACED AT 1000 c/c BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN RETURN WALLS/ROAD PROTECTION WORK.
 - FOR RCC RETURN WALL REFER DRAWING NO. -----
 - THE RETURN WALL SHALL BE PROVIDED AS PER THE ROAD PROTECTION WORK, IN CASE NOT AVAILABLE AT SPECIFIC LOCATION, THEN RR MASONRY WALL TO BE PROVIDED FOR AT LEAST A WIDTH OF 1.5xHEIGHT FROM BASE OF CULVERT.

50 mm DN ORIGINAL (A2)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	



CLIENT APPROVED	DATE	CONSULTANT SIGNATURE

DESIGNER
SMC
 Member of the Surbana Jurong Group
 SMC (India) Pvt Ltd. 1st Floor,
 Novus Tower, West Wing, Plot Number - 18,
 Sector - 18, Gurgaon - 122015, Haryana

CLIENT
NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. P11 BUILDING, 4 PARLIAMENT STREET, SANSAD MARG AREA, NEW DELHI - 110003

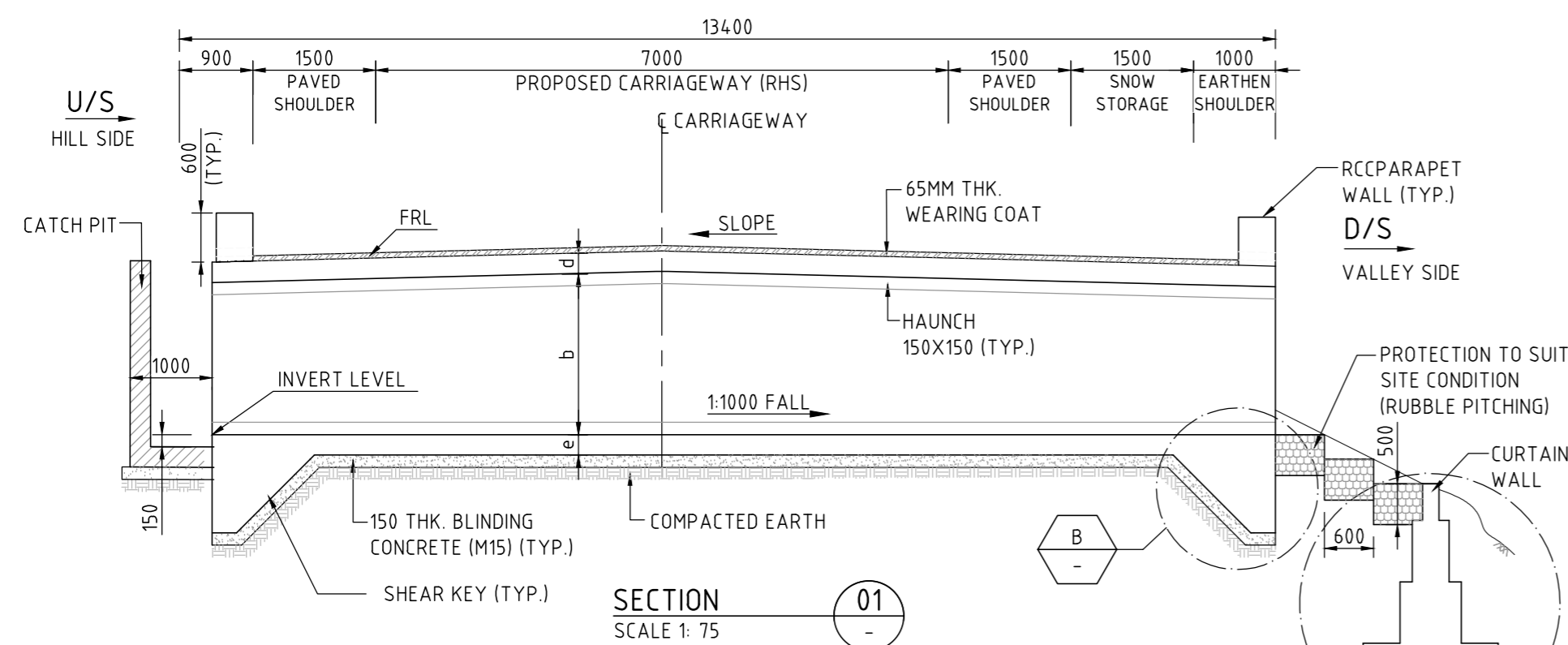
PROJECT
 CONSTRUCTION OF SONAMARG BYPASS FROM DESIGN CH. 0+000 (EXISTING KM 82.00 ON NH-1) TO CH. 6+320 ON SRINAGAR-LEH ROAD (NH-1) IN THE UT OF JAMMU & KASHMIR

PROJECT TITLE
 SINGLE CELL RCC BOX CULVERT GENERAL ARRANGEMENT TYPE 1

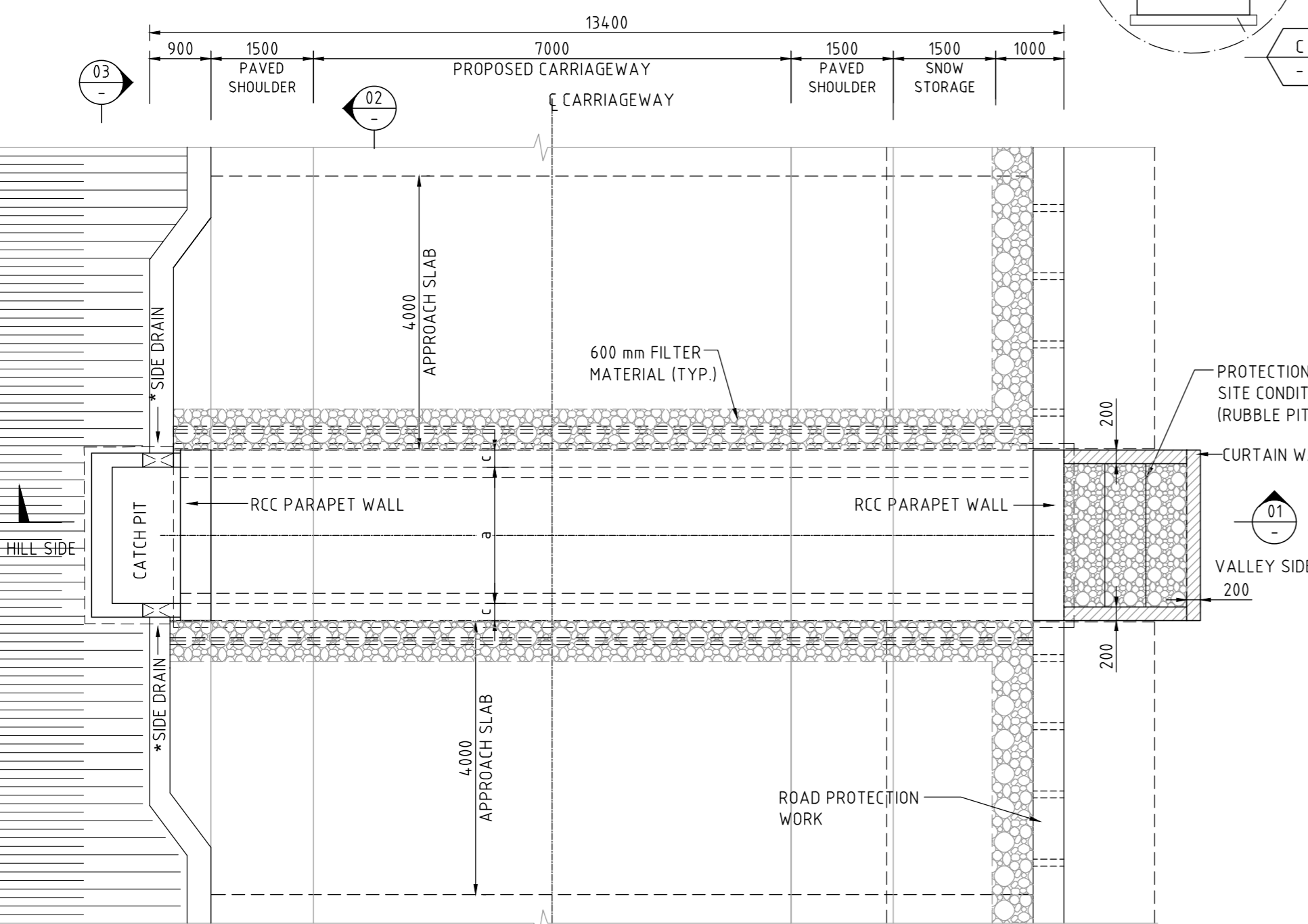
DRAWING STATUS
 TENDER

PROJECT / DRAWING NO.
 7061520-CUL-105-1001

ISSUE
 A



SECTION 01
SCALE 1:75

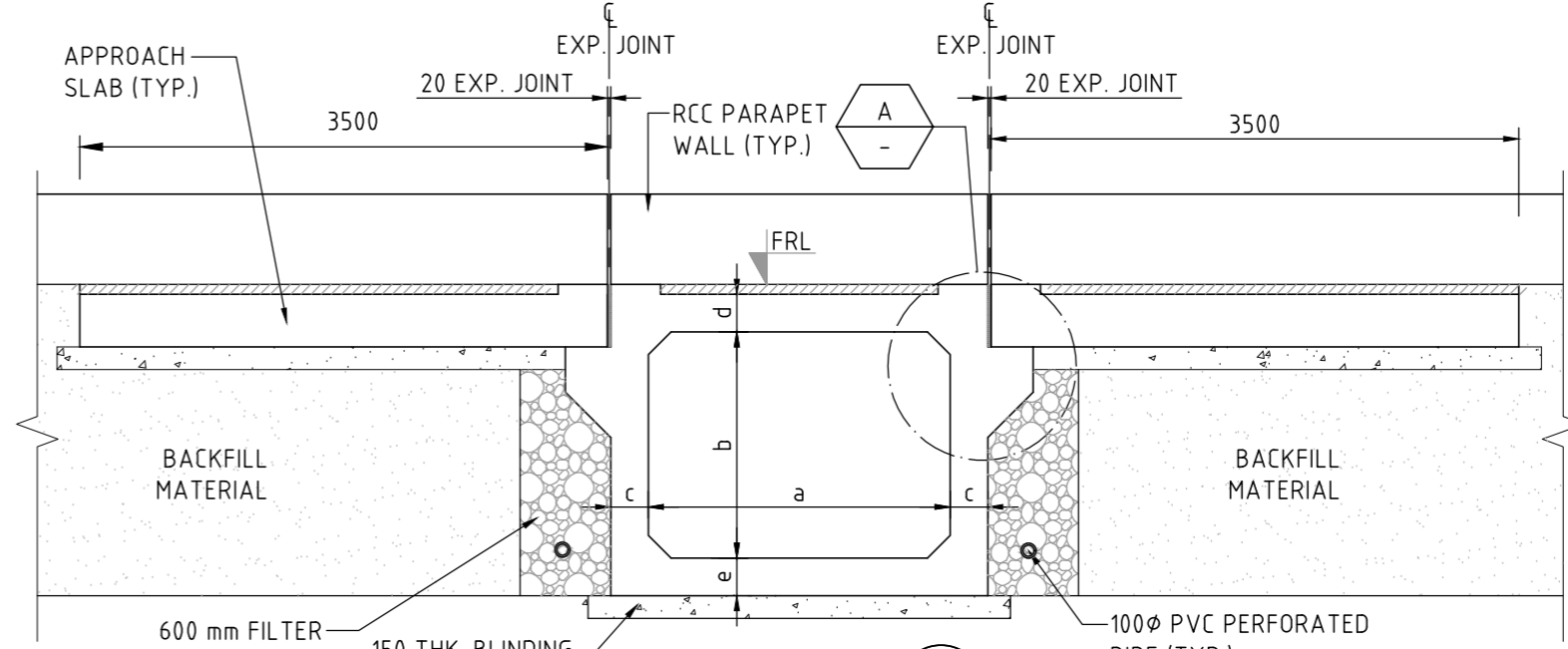


PLAN SCALE 1:75

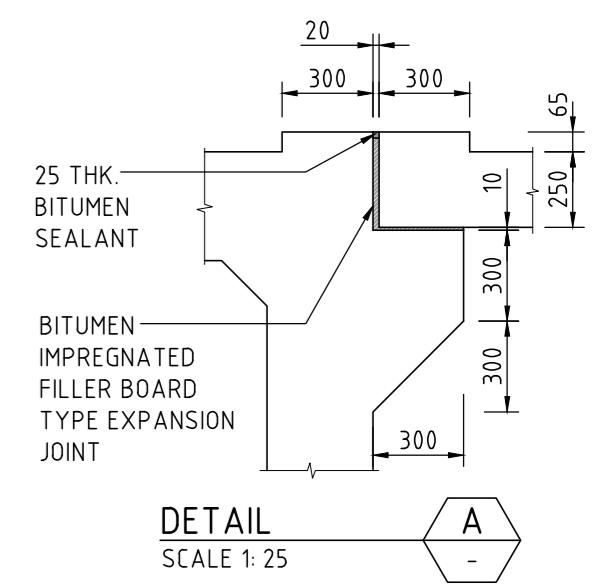
*** NOTE:-**

FOR NORMAL CROSS SLOPE 'n'	$n\%$ SLOPE	$n\%$ SLOPE
FOR SUPER ELEVATION 'e'	$e\%$ SUPER ELEVATION	

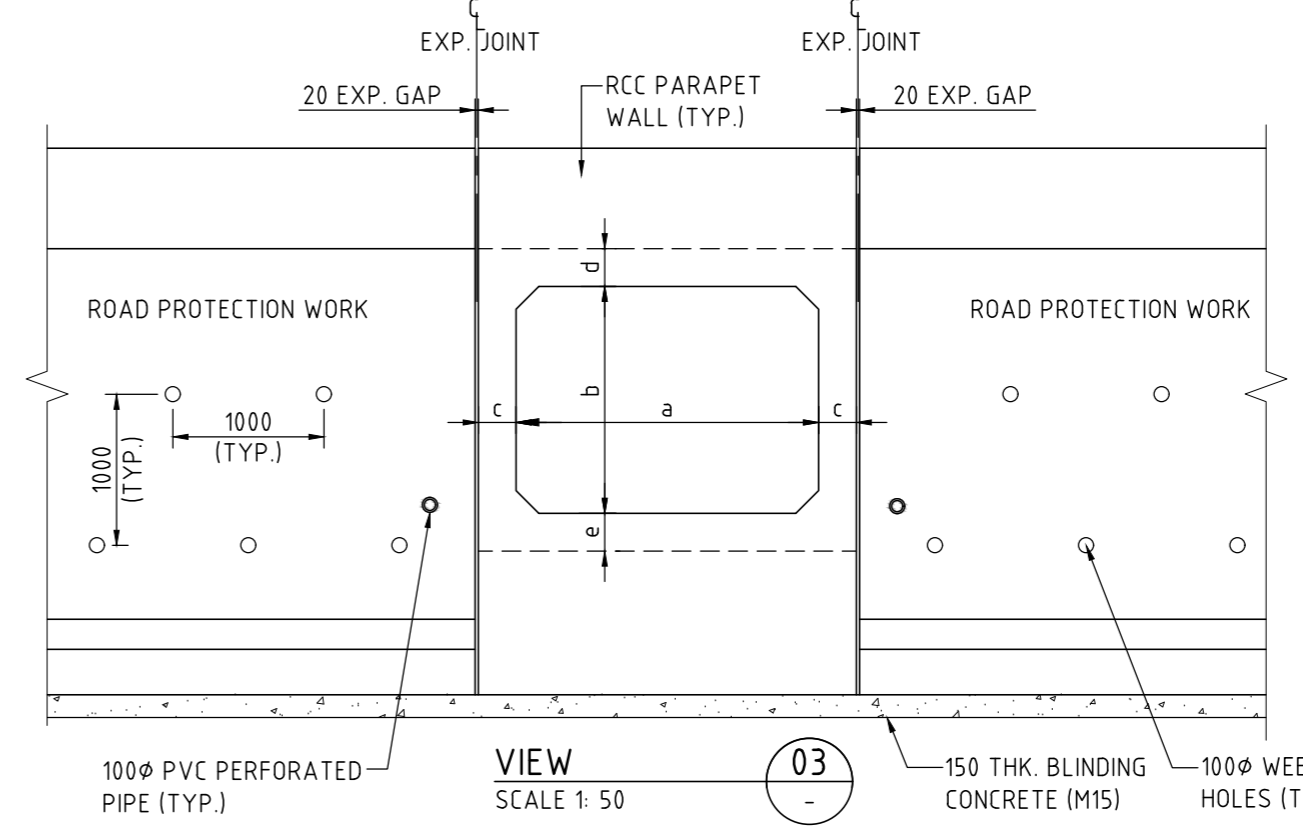
FOR 'n' AND 'e' REFER LATEST SCHEDULED/P&P DRAWING



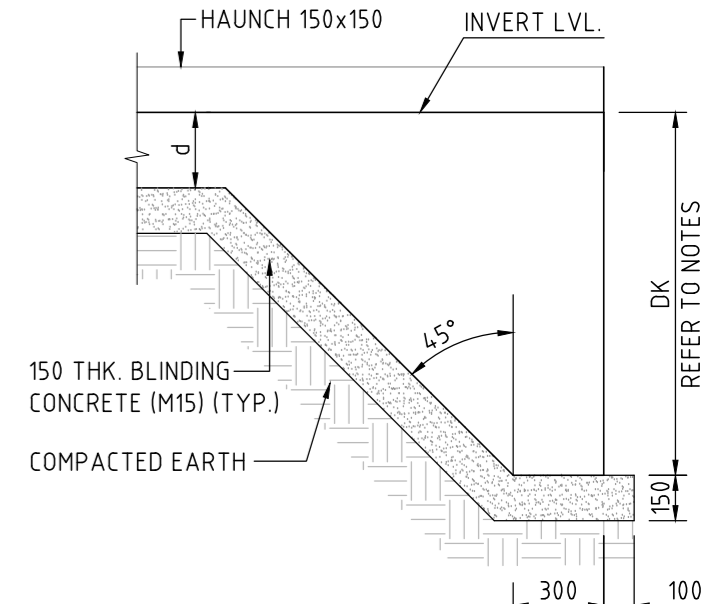
SECTION 02
SCALE 1:50



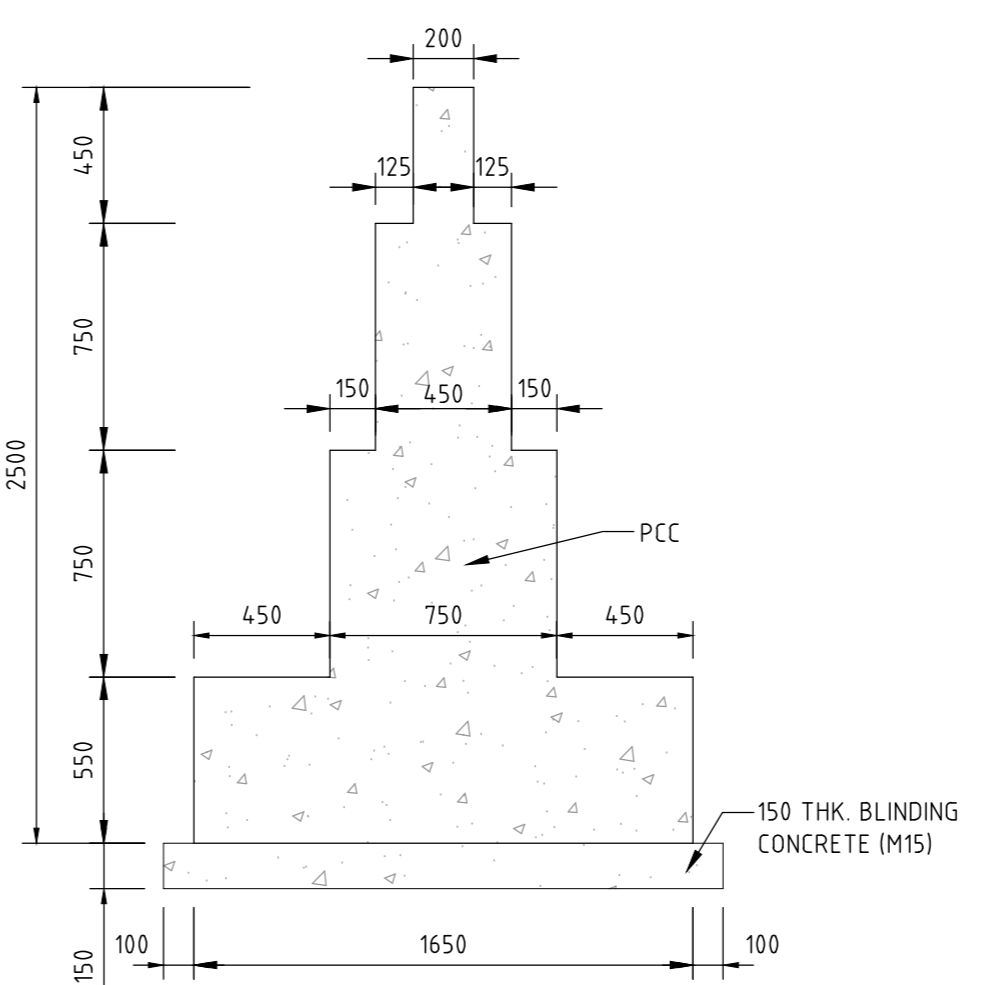
DETAIL A
SCALE 1:25



VIEW 03
SCALE 1:50



DETAIL B
SCALE 1:25



DETAIL C
SCALE 1:25

* FOR SIDE DRAIN REFER TO DRAINAGE DETAIL DRAWING.

NOTES

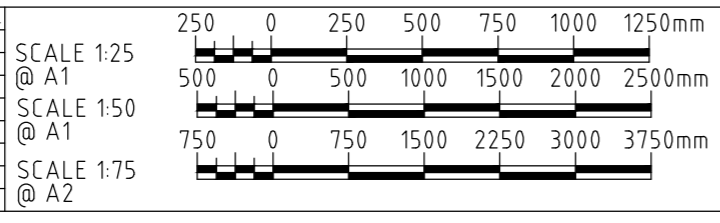
- ALL DIMENSIONS ARE IN MM AND REDUCED LEVELS ARE IN METRE, UNLESS NOTED OTHERWISE. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED. NO DIMENSION SHALL BE SCALED.
- THE CONCRETE SHALL BE DESIGN MIX AND GRADE, EXPOSURE CONDITION, CHARACTERISTIC STRENGTH (28 DAYS) FOR VARIOUS COMPONENTS SHALL BE AS UNDER:

	GRADE (MPa)	EXPOSURE CONDITION
a. BOX STRUCTURE	M30	MODERATE
b. RCC PARAPET WALL	M30	MODERATE
c. BLINDING CONCRETE	M15	SEVERE
- ANY LOOSE POCKETS/VOIDS AT FOUNDING LEVEL WILL BE REMOVED, COMPACTED AND FILLED WITH GRANULAR MATERIAL/PCC M15 AS DIRECTED BY THE ENGINEER IN CHARGE.
- WEARING COAT SHALL COMPRISE OF 40MM BITUMINOUS CONCRETE OVER 25MM THICK BITUMEN MASTIC LAYER.
- 'DK' IS DEPTH OF KEY AT BASE SLAB FOR BASE SLAB THICKNESS

BASE SLAB THICKNESS	VALUE OF 'DK'
UPTO 900mm	1200mm
GREATER THAN 900mm	d+300mm
- REINFORCEMENT GRADE SHALL BE Fe 500D.
- MINIMUM CONCRETE COVER TO REINFORCEMENT NEAREST TO THE EARTH SURFACE SHALL BE 75mm IN BASE SLAB, TOP SLAB AND OUTER FACE OF WALLS AND 40mm IN INNER SIDE OF BASE SLAB, TOP SLAB, AND INNER FACE OF WALLS.
- MINIMUM VALUE OF SAFE BEARING CAPACITY (SBC) 150 kN/Sq m, SHALL BE ENSURED BEFORE EXECUTION IN CONSULTATION WITH ENGINEER IN CHARGE.
- THE FILTER MATERIAL BEHIND BARREL LENGTH SHALL NOT BE LESS THAN 600mm AS PER IRC SP-13.
- BACK FILLING BEHIND SIDE WALL OF BOX SHALL CONSIST OF SELECTED EARTH CONFORMING TO FOLLOWING PROPERTIES $C=0$, $\phi=30^\circ$, & $\gamma = 20 \text{ KN/m}^3$
- WEEP HOLES, SPACED AT 1000 c/c BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN RETURN WALLS/ROAD PROTECTION WORK.
- FOR RCC RETURN WALL REFER DRAWING NO. -----
- THE RETURN WALL SHALL BE PROVIDED AS PER THE ROAD PROTECTION WORK, IN CASE NOT AVAILABLE AT SPECIFIC LOCATION, THEN RR MASONRY WALL TO BE PROVIDED FOR AT LEAST A WIDTH OF 1.5xHEIGHT FROM BASE OF CULVERT.

50 mm ON ORIGINAL (A2)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	

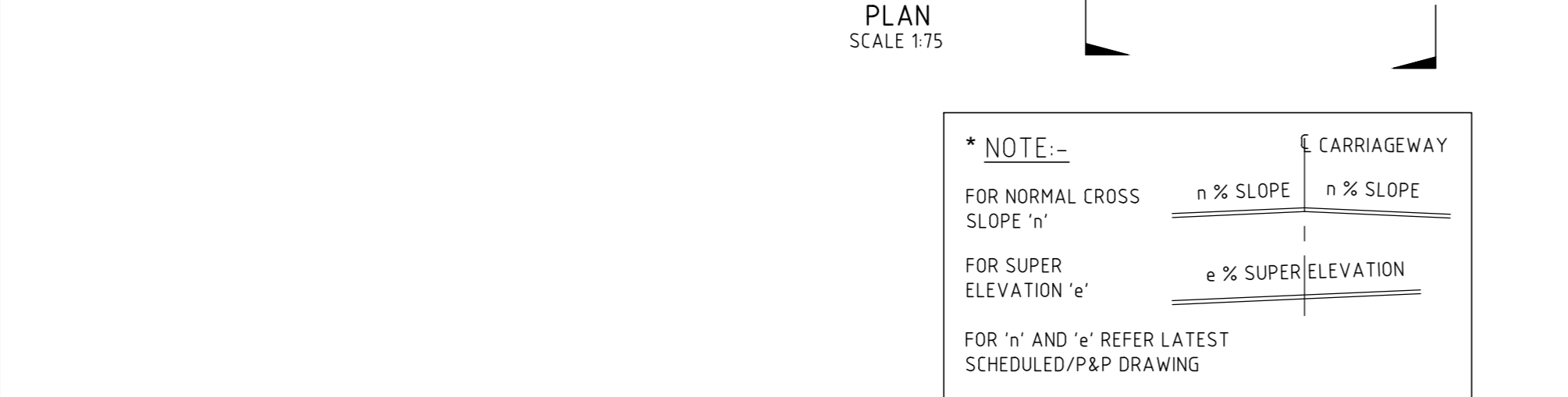
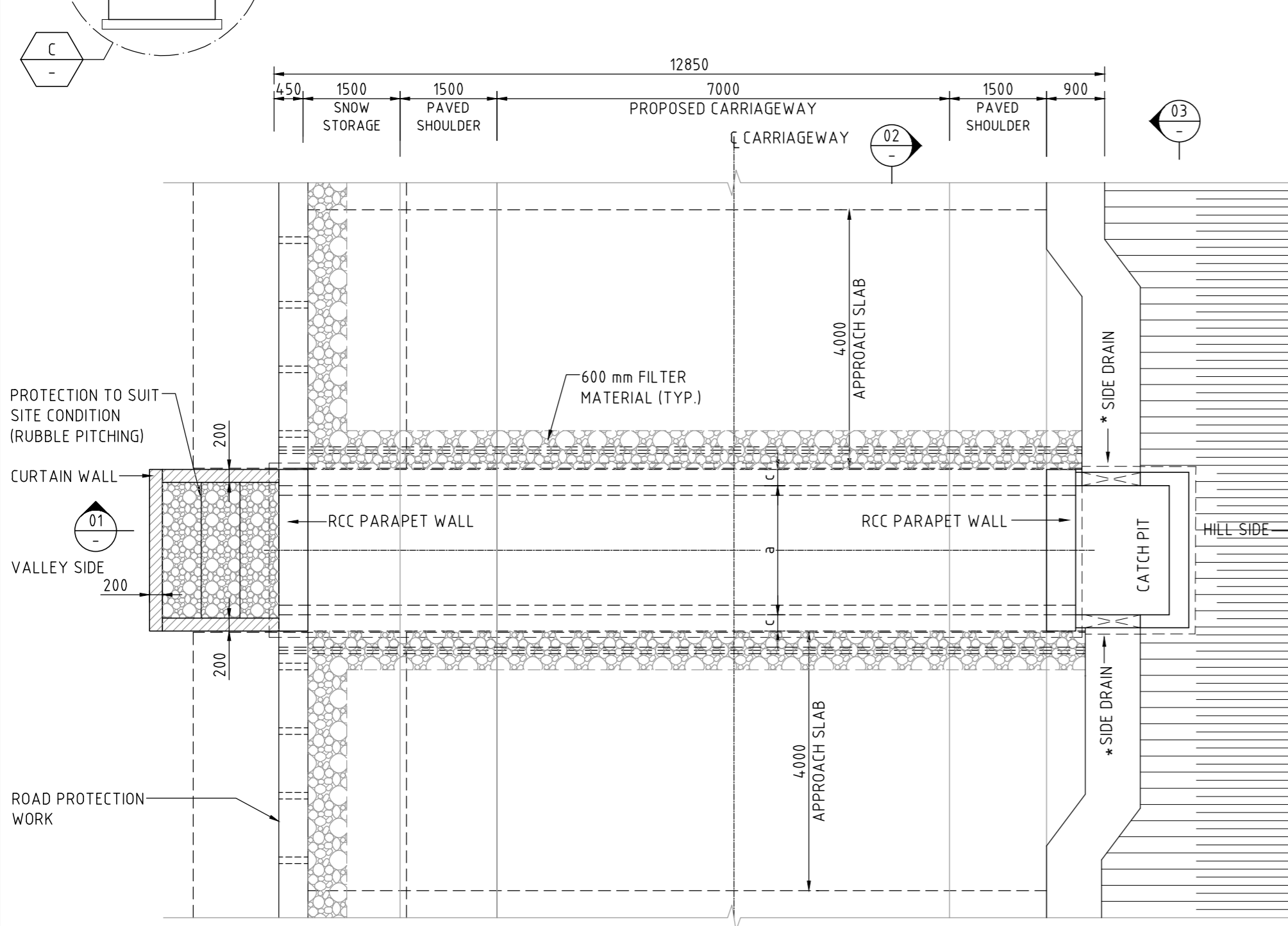
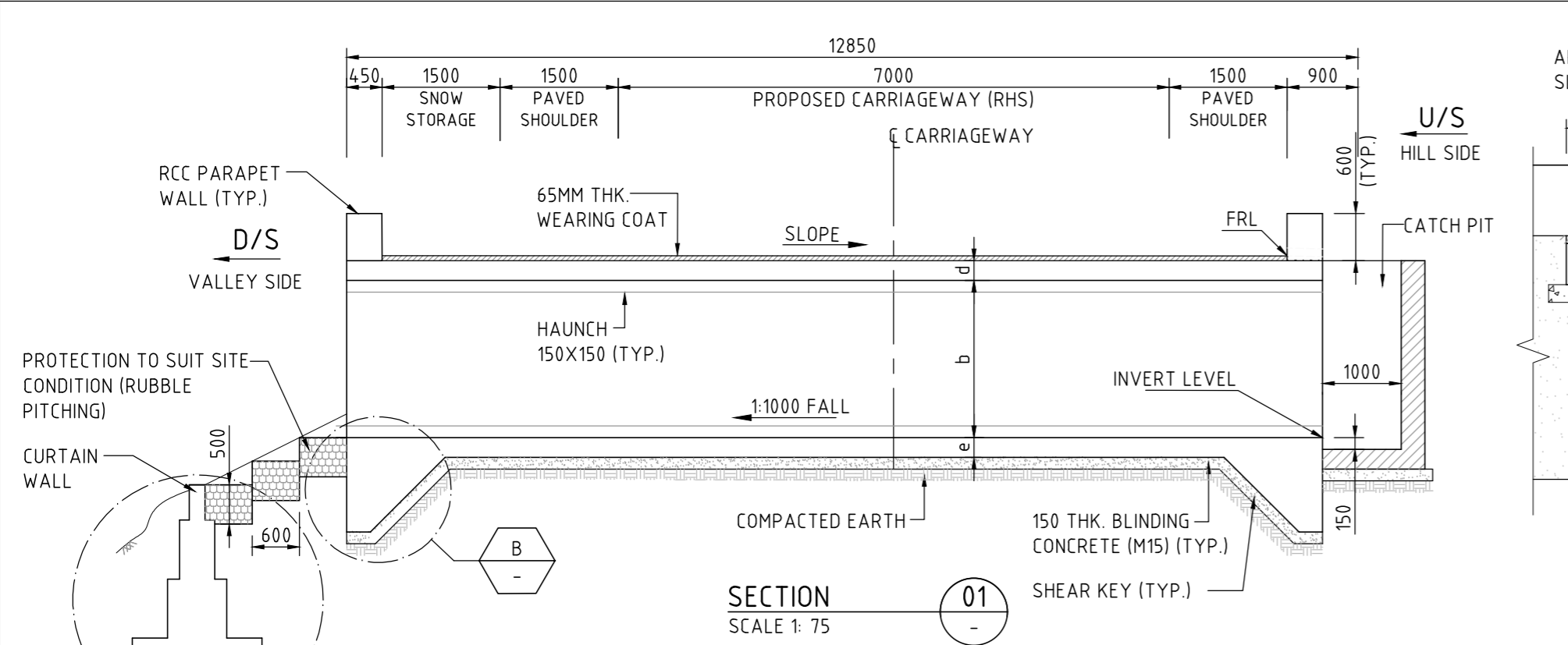


CLIENT APPROVED	DATE	CONSULTANT SIGNATURE
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<p>SMC (India) Pvt Ltd. 1st Floor, Novus Tower, West Wing, Plot Number -18, Sector - 18, Gurgaon - 122015, Haryana</p>	<p>NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. PFI BUILDING, 4 PARLIAMENT STREET, SANSAD MARG AREA, NEW DELHI - 110003</p>
DESIGNER: SK DESIGNER: AM CHECKER: AP APPROVER: NA	PROJECT TITLE: CONSTRUCTION OF SONAMARG BYPASS FROM DESIGN CH. 0+000 (EXISTING KM 82.00 ON NH-1) TO CH. 6+320 ON SRINAGAR-LEH ROAD (NH-1) IN THE UT OF JAMMU & KASHMIR

PROJECT TITLE: CONSTRUCTION OF SONAMARG BYPASS FROM DESIGN CH. 0+000 (EXISTING KM 82.00 ON NH-1) TO CH. 6+320 ON SRINAGAR-LEH ROAD (NH-1) IN THE UT OF JAMMU & KASHMIR

PROJECT TITLE: SINGLE CELL RCC BOX CULVERT GENERAL ARRANGEMENT TYPE 3	ISSUE: A
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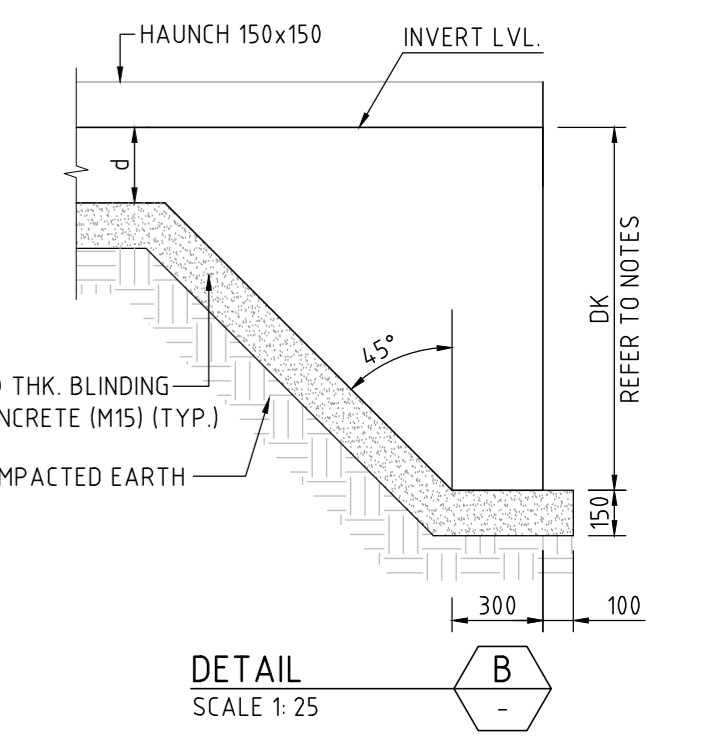
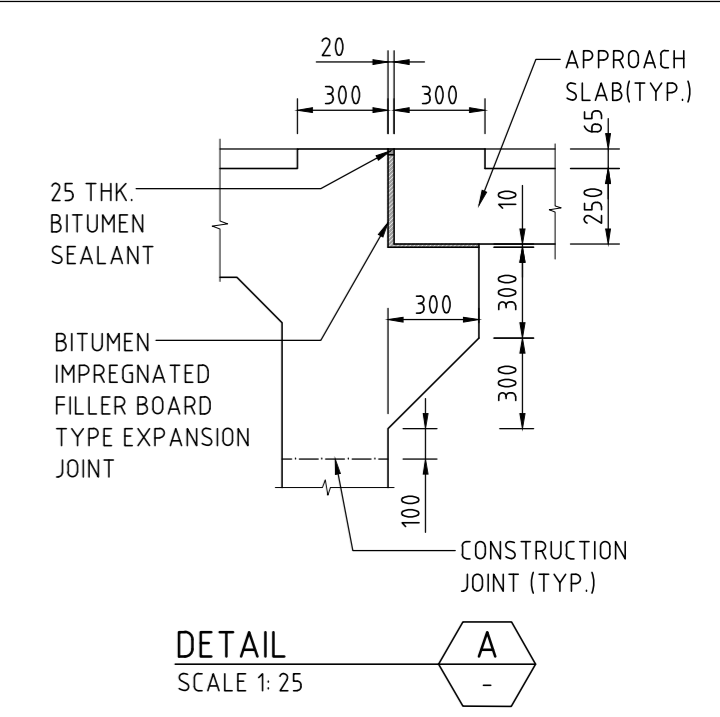
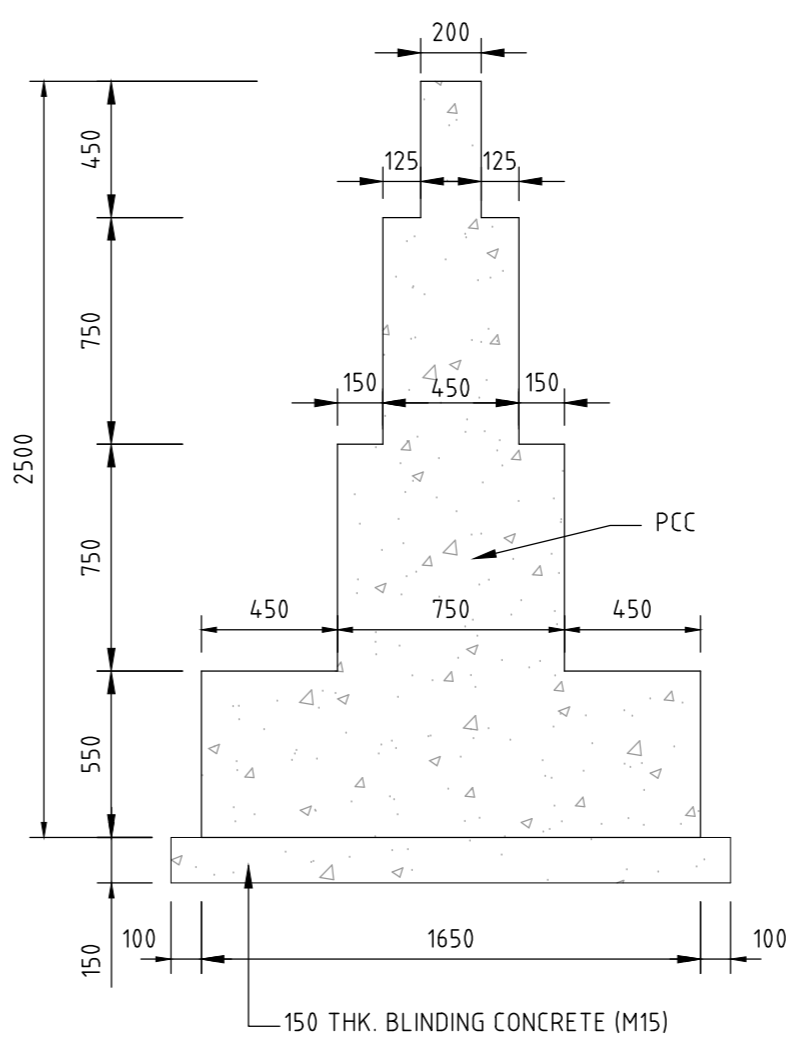
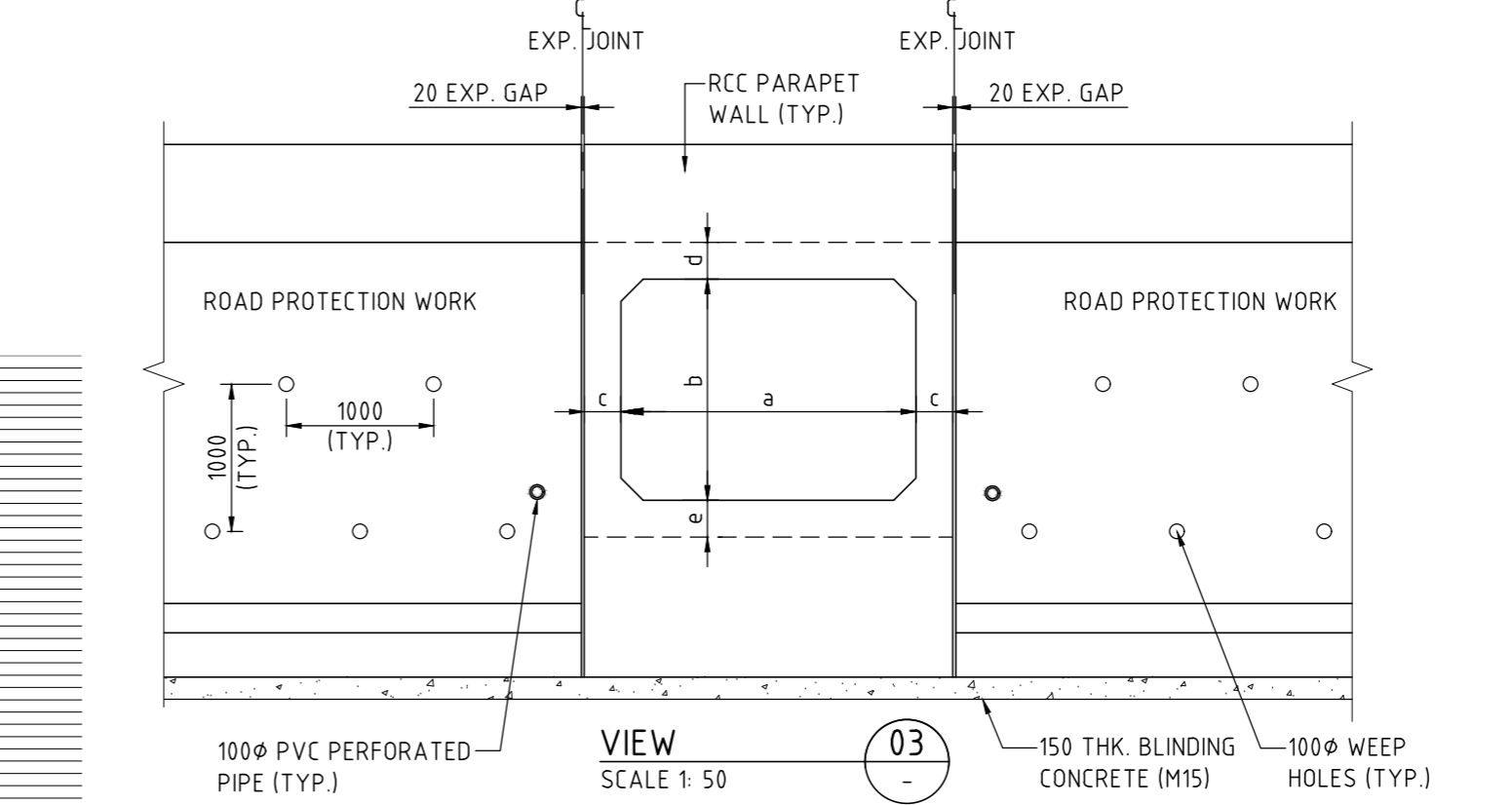
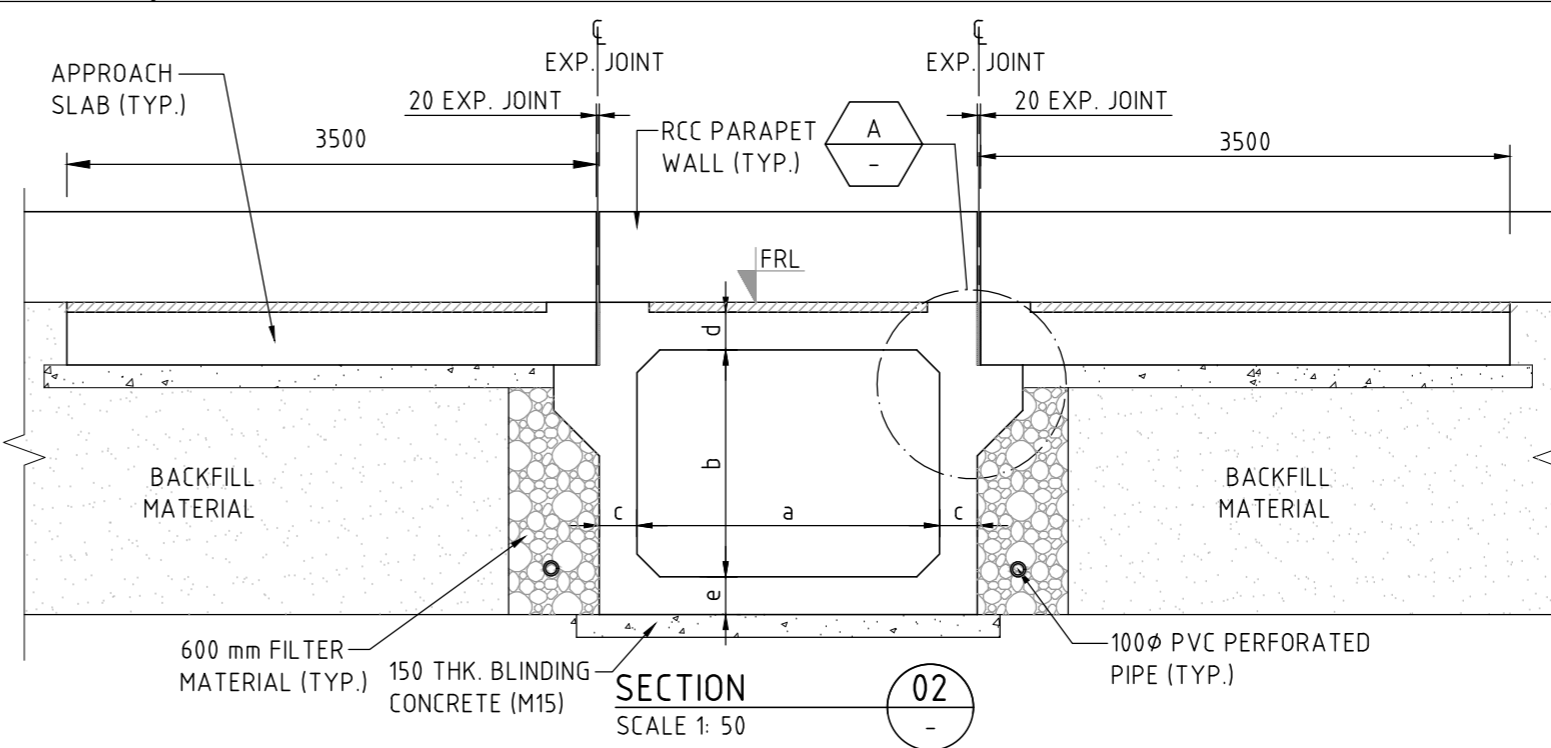


*** NOTE:-**

FOR NORMAL CROSS SLOPE 'n'

FOR SUPER ELEVATION 'e'

FOR 'n' AND 'e' REFER LATEST SCHEDULED/P&P DRAWING



- * FOR SIDE DRAIN REFER TO DRAINAGE DETAIL DRAWING.**
- NOTES**
- ALL DIMENSIONS ARE IN MM AND REDUCED LEVELS ARE IN METRE, UNLESS NOTED OTHERWISE. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED. NO DIMENSION SHALL BE SCALED.
 - THE CONCRETE SHALL BE DESIGN MIX AND GRADE, EXPOSURE CONDITION, CHARACTERISTIC STRENGTH (28 DAYS) FOR VARIOUS COMPONENTS SHALL BE AS UNDER:

	GRADE (MPa)	EXPOSURE CONDITION
a. BOX STRUCTURE	M30	MODERATE
b. RCC PARAPET WALL	M30	MODERATE
c. BLINDING CONCRETE	M15	SEVERE
 - ANY LOOSE POCKETS/VOIDS AT FOUNDING LEVEL WILL BE REMOVED, COMPACTED AND FILLED WITH GRANULAR MATERIAL/PCC M15 AS DIRECTED BY THE ENGINEER IN CHARGE.
 - WEARING COAT SHALL COMPRISE OF 40MM BITUMINOUS CONCRETE OVER 25MM THICK BITUMEN MASTIC LAYER.
 - 'DK' IS DEPTH OF KEY AT BASE SLAB FOR BASE SLAB THICKNESS

UPTO 900mm	VALUE OF 'DK'
GREATER THAN 900mm	1200mm
	d+300mm
 - REINFORCEMENT GRADE SHALL BE Fe 500D.
 - MINIMUM CONCRETE COVER TO REINFORCEMENT NEAREST TO THE EARTH SURFACE SHALL BE 75mm IN BASE SLAB, TOP SLAB AND OUTER FACE OF WALLS AND 40mm IN INNER SIDE OF BASE SLAB, TOP SLAB, AND INNER FACE OF WALLS.
 - MINIMUM VALUE OF SAFE BEARING CAPACITY (SBC) 150 kN/Sq m, SHALL BE ENSURED BEFORE EXECUTION IN CONSULTATION WITH ENGINEER IN CHARGE.
 - THE FILTER MATERIAL BEHIND BARREL LENGTH SHALL NOT BE LESS THAN 600mm AS PER IRC SP:13.
 - BACK FILLING BEHIND SIDE WALL OF BOX SHALL CONSIST OF SELECTED EARTH CONFORMING TO FOLLOWING PROPERTIES $C=0$, $\phi >= 30^\circ$, & $\gamma = 20 \text{ KN/m}^3$
 - WEEP HOLES, SPACED AT 1000 c/c BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN RETURN WALLS/ROAD PROTECTION WORK.
 - FOR RCC RETURN WALL REFER DRAWING NO. -----
 - THE RETURN WALL SHALL BE PROVIDED AS PER THE ROAD PROTECTION WORK, IN CASE NOT AVAILABLE AT SPECIFIC LOCATION, THEN RR MASONRY WALL TO BE PROVIDED FOR AT LEAST A WIDTH OF 1.5xHEIGHT FROM BASE OF CULVERT.

50 mm ON ORIGINAL (A2)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	

SCALE 1:25 @ A1	250 0 250 500 750 1000 1250mm
SCALE 1:50 @ A1	500 0 500 1000 1500 2000 2500mm
SCALE 1:75 @ A2	750 0 750 1500 2250 3000 3750mm

CLIENT APPROVED	DATE	CONSULTANT SIGNATURE
-----------------	------	----------------------

DESIGNER	DESIGN	CHECKED	APPROVED
SK	AM	AP	NA

CLIENT	PROJECT
NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. P11 BUILDING, 4 PARLIAMENT STREET, SANSAD MARG AREA, NEW DELHI-110003	CONSTRUCTION OF SONAMARG BYPASS FROM DESIGN CH. 0+000 (EXISTING KM 82.00 ON NH-1) TO CH. 6+320 ON SRINAGAR-LEH ROAD (NH-1) IN THE UT OF JAMMU & KASHMIR

PROJECT TITLE	ISSUE
SINGLE CELL RCC BOX CULVERT GENERAL ARRANGEMENT TYPE 4	TENDER
PROJECT / DRAWING NO.	7061520-CUL-105-1004

