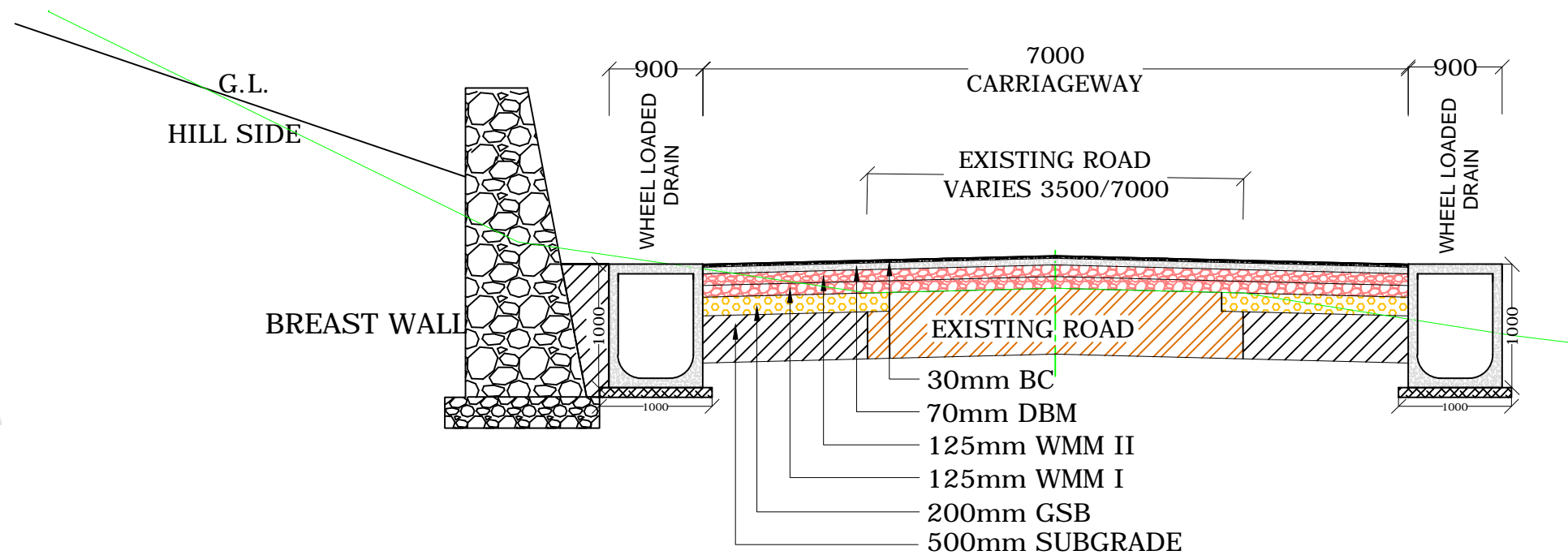


**TYPICAL CROSS SECTION**

**2.6 (MODIFIED) OF MANUAL(2-LANE), RECTANULAR DRAIN**

**TCS-1: STRENGTHENING OF EXISTING ROAD TO 2-LANE C/W IN BUILT UP AREA**

ALL DIMENSIONS ARE IN mm, UNLESS OTHERWISE MENTIONED.




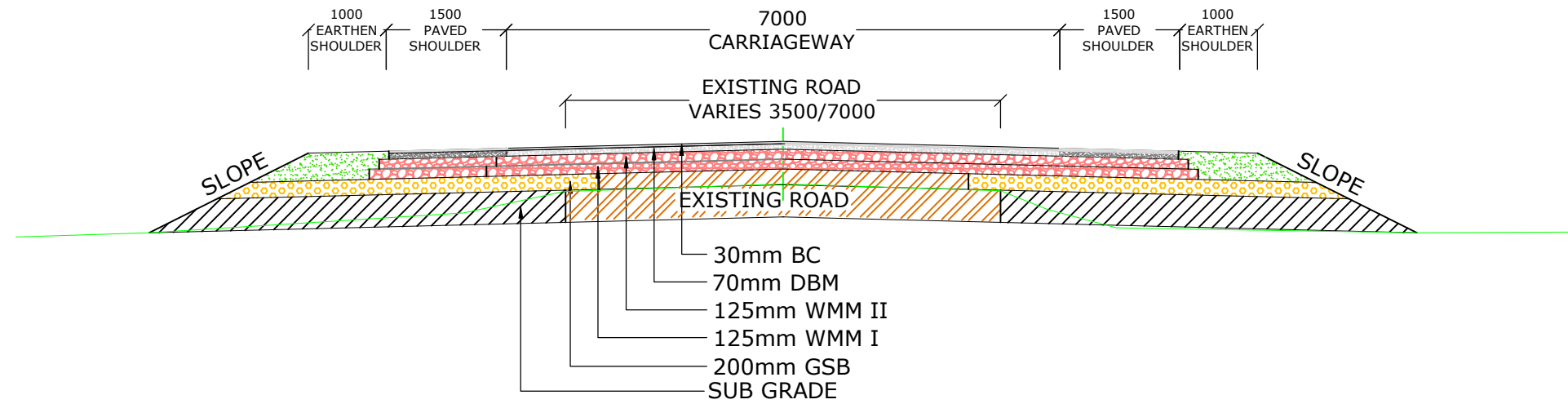
**TYPICAL CROSS SECTION**

**2.6 (MODIFIED) OF MANUAL(2-LANE), RECTANULAR DRAIN L/S HILL WITH BREAST WALL**

**TCS-2 : STRENGTHENING & WIDENING OF EXISTING ROAD TO 2-LANE C/W IN BUILT-UP AREA**

**NOTES:-** ALL DIMENSIONS ARE IN mm, UNLESS OTHERWISE MENTIONED.

<p>CLIENT :-</p>  <p>Ministry of Road Transport And Highway(MORTH) Government of India New Delhi</p>	<p>PROJECT SECTION</p> <p>Package-3 of Kotdwar - Dugadda section of NH-119 (New-NH-534) from Km 175.00 to km 200.00 Road section in the State of Uttarakhand.</p>	<p>PROJECT TITLE :-</p> <p>Consultancy Services for Preparation of Detailed Project Report for Rehabilitation and Upgrading to 2-lanes/2 lane with paved shoulders configuration and strengthening of Kotdwara-Satpuli-Jwalpa-Srinagar section (from km 139.00 to km 276.00) of NH-119 in the state of Uttarakhand (Package no: SP/A/3)</p>	<p>CONSULTANTS :-</p> <p><b>LION ENGINEERING CONSULTANTS</b></p> <p>Plot No. 97, Elegant Estate Near Mother Teresa School Kolar Road, Bhopal (M.P.) Ph: 0755 - 3246521, 3246437 Fax: 0755 - 2879499 E-mail:- <a href="mailto:gec@lionengineers.com">gec@lionengineers.com</a></p>	<p>DRAWING TYPE :-</p> <p>TYPICAL CROSS SECTIONS</p> <p>Package-3</p>	<p>DRAWING NO :- LEC/MORTH/ TCS</p> <p>SCALE :- NTS</p> <p>DATE :- MAY- 2021</p>
			<p>DRAWN BY</p> <p>CHECKED BY</p> <p>APPROVED BY</p>		

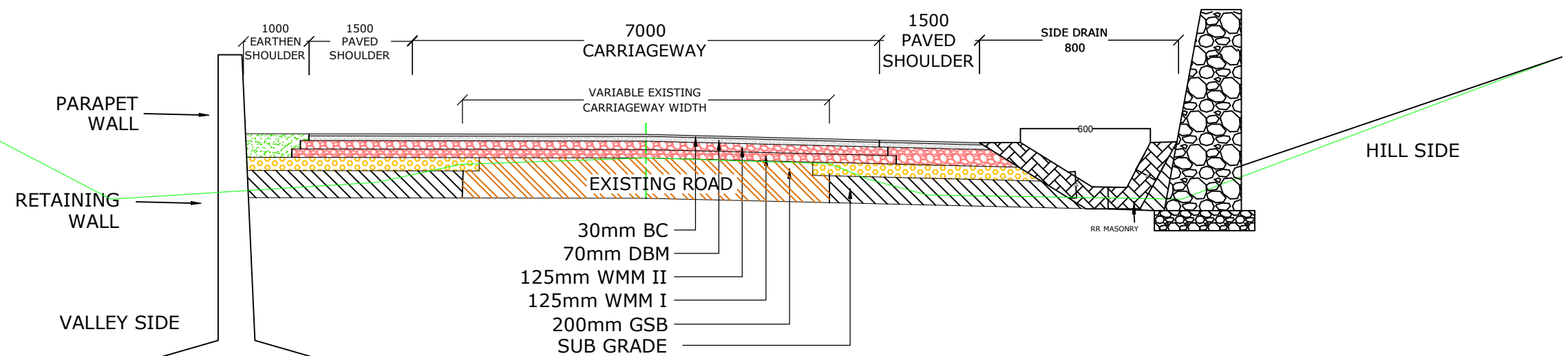


### TYPICAL CROSS SECTION

#### 2.2 (MODIFIED) OF MANUAL(2-LANE),WITH EARTHEN SHOULDER

#### TCS - 3 : STRENGTHENING & WIDENING OF EXISTING ROAD TO 2-LANE C/W IN OPEN COUNTRY/ROLLING TERRAIN

**NOTES:-** ALL DIMENSIONS ARE IN mm, UNLESS OTHERWISE MENTIONED.



### TYPICAL CROSS SECTION

#### 2.8 (MODIFIED) OF MANUAL(2-LANE),R/s HILL,WITH BREAST WALL & RETAINING WALL

#### TCS-4 : STRENGTHENING & WIDENING OF EXISTING ROAD TO 2-LANE C/W IN OPEN COUNTRY/MOUNTAINOUS TERRAIN

**NOTES:-** ALL DIMENSIONS ARE IN mm, UNLESS OTHERWISE MENTIONED.

CLIENT :-



Ministry of Road Transport And Highway(MORTH)  
Government of India  
New Delhi

PROJECT SECTION

Package-3 of Kotdwar - Dugadda section of NH-119  
(New-NH-534) from Km 175.00 to km 200.00 Road  
section in the State of Uttarakhand.

PROJECT TITLE :-

Consultancy Services for Preparation of Detailed Project Report for Rehabilitation  
and Upgrading to 2-lanes/2 lane with paved shoulders configuration and  
strengthening of Kotdwara-Satpuli-Jwalpa-Srinagar section (from km 139.00 to km  
276.00) of NH-119 in the state of Uttarakhand (Package no: SP/A/3)

CONSULTANTS :-



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Fax : 0755 - 2879489  
E-mail : [lionengr@gmail.com](mailto:lionengr@gmail.com)

DRAWING TYPE :-

TYPICAL CROSS SECTIONS

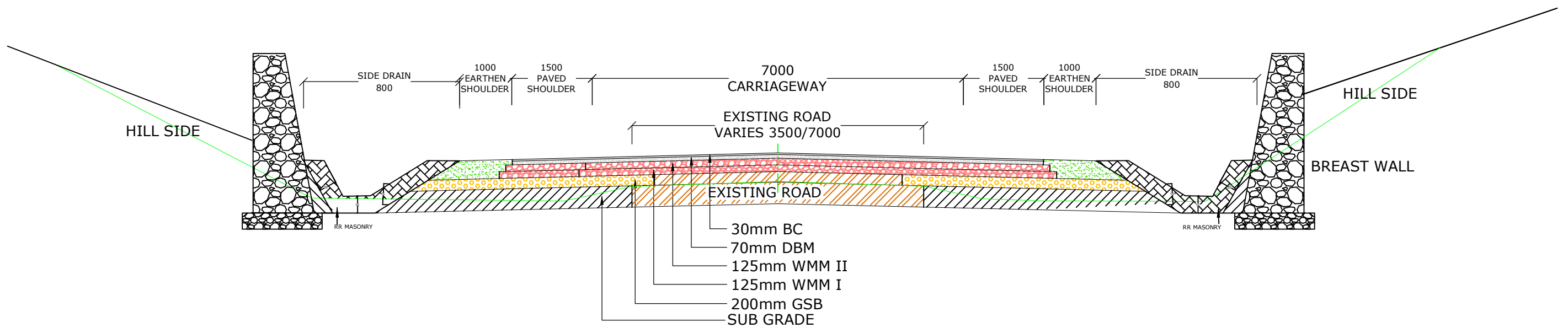
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DRAWING NO :- LEC/MORTH/ TCS

SCALE :- NTS

DATE :- MAY-2021

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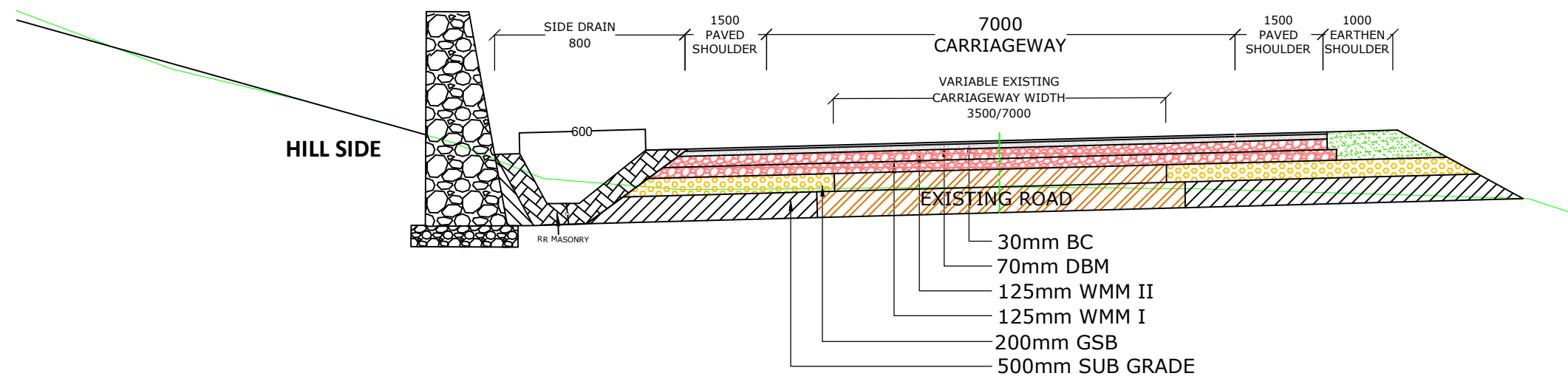


TYPICAL CROSS SECTION

2.9 (MODIFIED) OF MANUAL(2-LANE),BOTH SIDE HILL,WITH BREAST WALL

TCS-5: STRENGTHENING & WIDENING OF EXISTING ROAD TO 2-LANE C/W IN OPEN COUNTRY/MOUNTAINOUS TERRAIN

NOTES:- ALL DIMENSIONS ARE IN mm, UNLESS OTHERWISE MENTIONED.



TYPICAL CROSS SECTION

2.9 (MODIFIED) OF MANUAL(2-LANE),L/S HILL,WITH BREAST WALL

TCS-6: STRENGTHENING & WIDENING OF EXISTING ROAD TO 2-LANE C/W IN OPEN COUNTRY/MOUNTAINOUS TERRAIN

NOTES:- ALL DIMENSIONS ARE IN mm, UNLESS OTHERWISE MENTIONED.

CLIENT :-



Ministry of Road Transport And Highway(MORTH)  
Government of India  
New Delhi

PROJECT SECTION

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PROJECT TITLE :-

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strengthening of Koldwara-Satpuli-Jwalpa-Srinagar section (from km 139.00 to km  
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CONSULTANTS :-



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Ph: 0755 - 3246521, 3246437  
Fax: 0755 - 2879489  
E-mail: [spcs@rediffmail.com](mailto:spcs@rediffmail.com)

DRAWING TYPE :-

TYPICAL CROSS SECTIONS

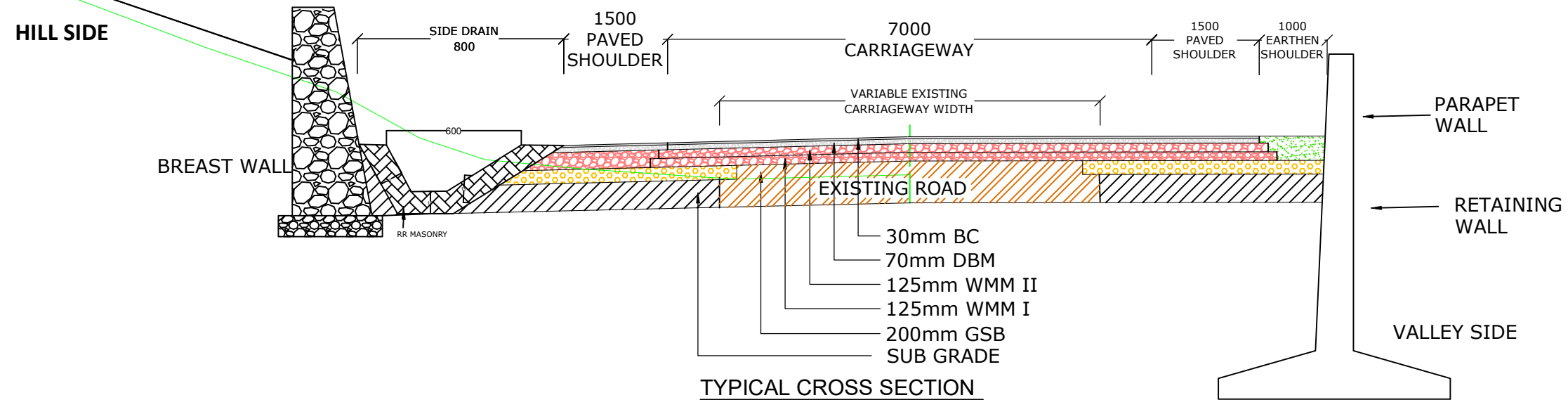
Package-3

DRAWING NO :- LEC/MORTH/ TCS

SCALE :- NTS

DATE :- MAY- 2021

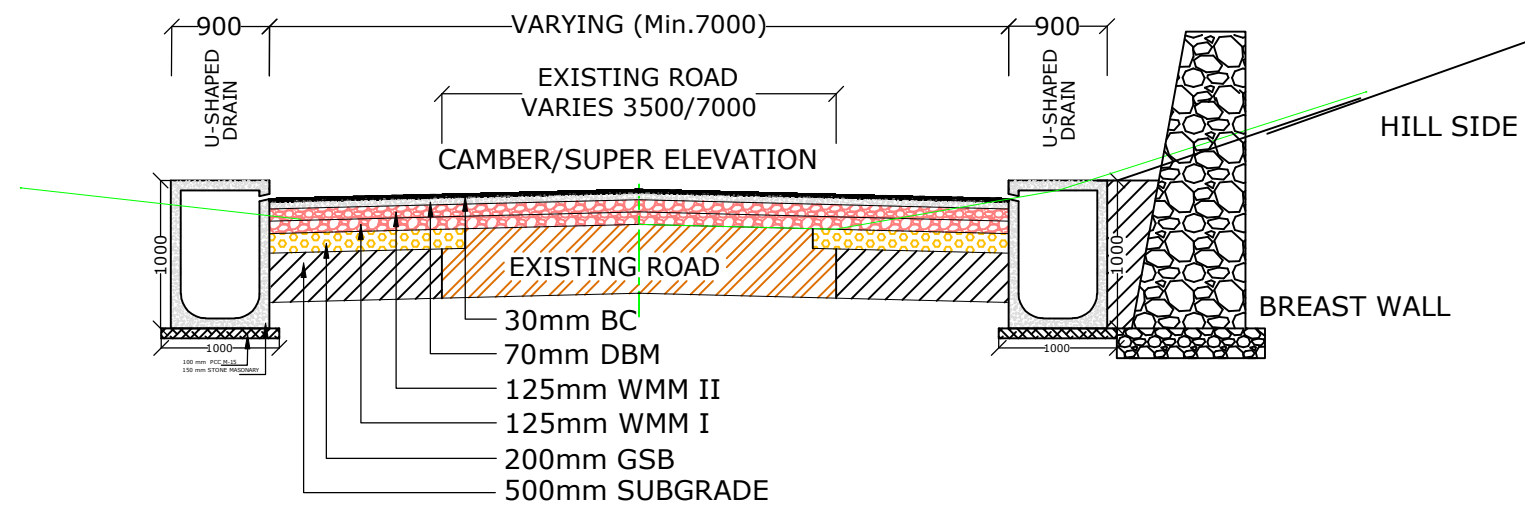
DRAWN BY CHECKED BY APPROVED BY



2.8 (MODIFIED) OF MANUAL(2-LANE),L/s HILL,WITH BREAST WALL & RETAINING WALL

TCS-7: STRENGTHENING & WIDENING OF EXISTING ROAD TO 2-LANE C/W IN OPEN COUNTRY/MOUNTAINOUS TERRAIN


**NOTES:-** ALL DIMENSIONS ARE IN mm, UNLESS OTHERWISE MENTIONED.



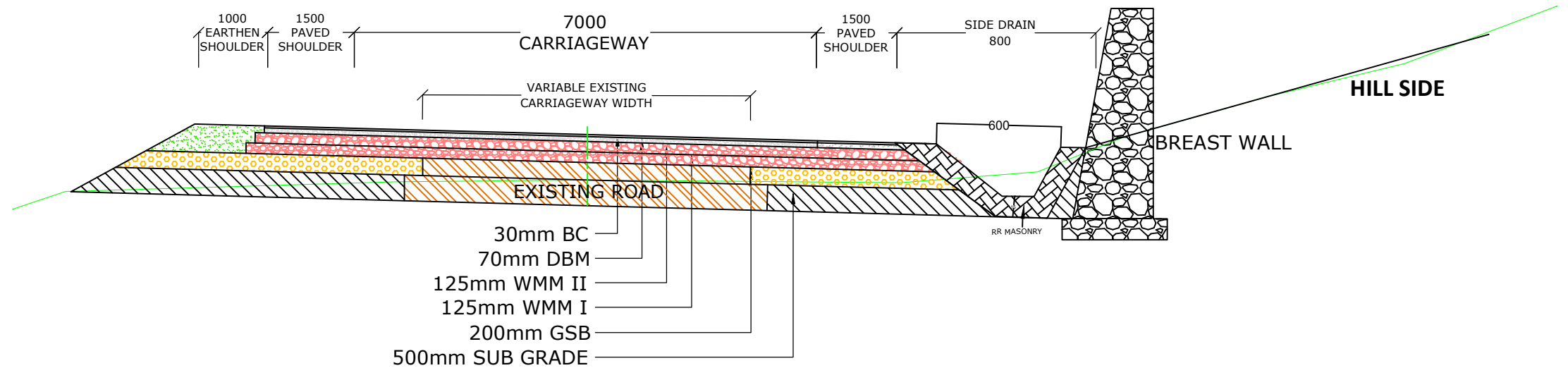
2.6 (MODIFIED) OF MANUAL(2-LANE), RECTANULAR DRAIN R/S HILL WITHOUT RETAINING WALL

TCS-8 : STRENGTHENING & WIDENING OF EXISTING ROAD TO 2-LANE C/W IN BUILT-UP AREA

**NOTES:-** ALL DIMENSIONS ARE IN mm, UNLESS OTHERWISE MENTIONED.

<p>CLIENT :-</p>  <p>Ministry of Road Transport And Highway(MORTH) Government of India New Delhi</p>	<p>PROJECT SECTION</p> <p>Package-3 of Kotdwar - Dugadda section of NH-119 (New-NH-534) from Km 175.00 to km 200.00 Road section in the State of Uttarakhand.</p>	<p>PROJECT TITLE :-</p> <p>Consultancy Services for Preparation of Detailed Project Report for Rehabilitation and Upgrading to 2-lanes/2 lane with paved shoulders configuration and strengthening of Koldwara-Satpuli-Jwalpa-Srinagar section (from km 139.00 to km 276.00) of NH-119 in the state of Uttarakhand (Package no: SP/A/3)</p>	<p>CONSULTANTS :-</p> <p><b>LION ENGINEERING CONSULTANTS</b></p> <p>Plot No. 97, Elegant Estate Near Mother Teresa School Kolar Road, (Bhopal M.P.) Ph: 0755 - 3246521, 3246437 Fax: 0755 - 2879489 E-mail: <a href="mailto:lion-engineering@rediffmail.com">lion-engineering@rediffmail.com</a></p>	<p>DRAWING TYPE :-</p> <p>TYPICAL CROSS SECTIONS</p> <p>Package-3</p>	<p>DRAWING NO :- LEC/MORTH/ TCS</p> <p>SCALE :- NTS</p> <p>DATE :- MAY- 2021</p>
			<p>DRAWN BY</p> <p>CHECKED BY</p> <p>APPROVED BY</p>		



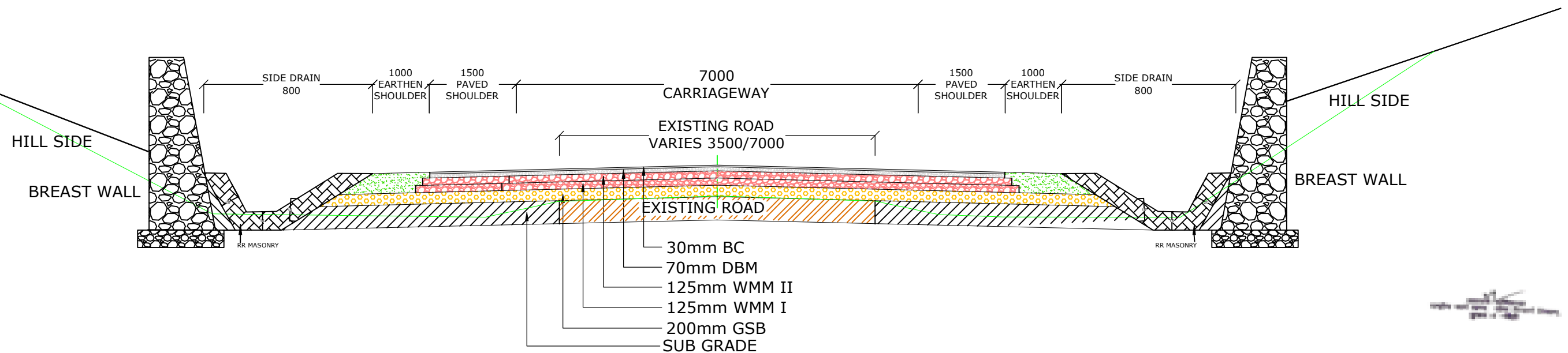


**TYPICAL CROSS SECTION**

**2.9 (MODIFIED) OF MANUAL(2-LANE),R/S HILL,WITH BREAST WALL & WITHOUT RETAINING WALL**

**TCS-9 : STRENGTHENING & WIDENING OF EXISTING ROAD TO 2-LANE C/W IN OPEN COUNTRY/MOUNTAINOUS TERRAIN**

ALL DIMENSIONS ARE IN mm, UNLESS OTHERWISE MENTIONED.




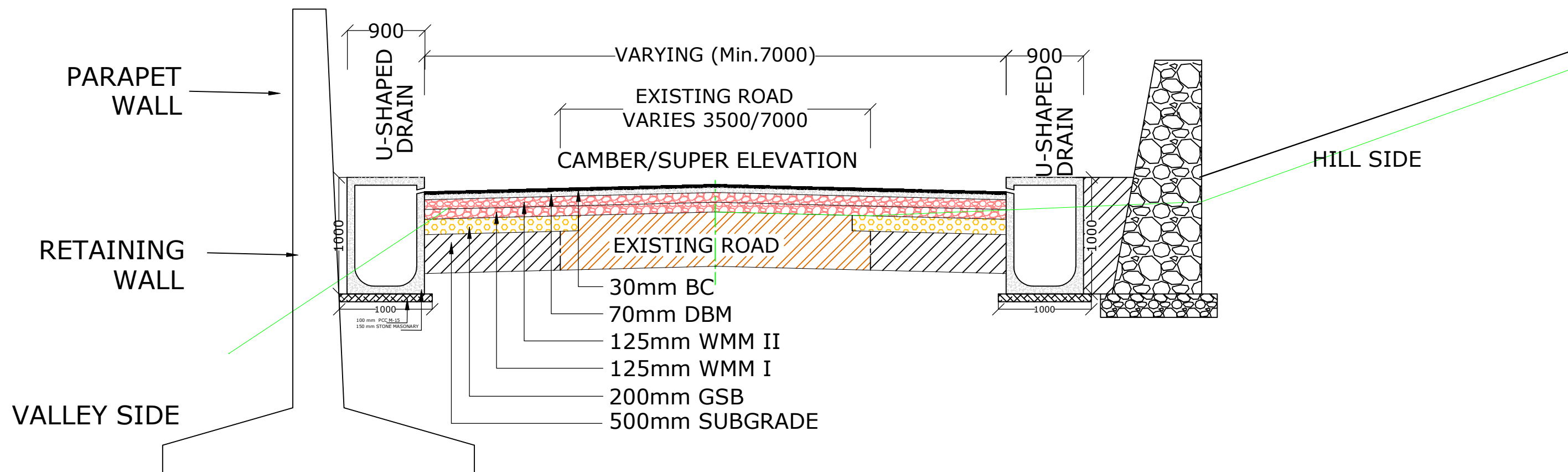
**TYPICAL CROSS SECTION**

**2.9 (MODIFIED) OF MANUAL(2-LANE),BOTH SIDE HILL,WITH BREAST WALL**

**TCS-10: RECONSTRUCTION OF EXISTING ROAD TO 2-LANE C/W IN OPEN COUNTRY/MOUNTAINOUS TERRAIN**

**NOTES:-** ALL DIMENSIONS ARE IN mm, UNLESS OTHERWISE MENTIONED.

<p>CLIENT :-</p> 	<p>Ministry of Road Transport And Highway(MORTH) Government of India New Delhi</p>	<p>PROJECT SECTION</p> <p>Package-3 of Kotdwar - Dugadda section of NH-119 (New-NH-534) from Km 175.00 to km 200.00 Road section in the State of Uttarakhand.</p>	<p>PROJECT TITLE :-</p> <p>Consultancy Services for Preparation of Detailed Project Report for Rehabilitation and Upgrading to 2-lanes/2 lane with paved shoulders configuration and strengthening of Koldwara-Satpuli-Jwalpa-Srinagar section (from km 139.00 to km 276.00) of NH-119 in the state of Uttarakhand (Package no: SP/A/3)</p>	<p>CONSULTANTS :-</p> <p><b>LION ENGINEERING CONSULTANTS</b></p> <p>Plot No. 97, Elegant Estate Near Mother Teresa School Kolar Road, (Bhopal M.P.) Ph. 0755 - 3246521, 3246437 Fax : 0755 - 2879489 E-mail: <a href="mailto:spc@lioneng.com">spc@lioneng.com</a></p>	<p>DRAWING TYPE :-</p> <p>TYPICAL CROSS SECTIONS</p> <p>Package-3</p>	<p>DRAWING NO :- LEC/MORTH/ TCS</p> <p>SCALE :- NTS</p> <p>DATE :- MAY-2021</p>
				<p>DRAWN BY</p> <p>CHECKED BY</p> <p>APPROVED BY</p>		



TYPICAL CROSS SECTION

2.6 (MODIFIED) OF MANUAL(2-LANE),R/S HILL RECTANULAR DRAIN WITH RETAINING WALL & BREAST WALL  
TCS-11 : STRENGTHENING & WIDENING OF EXISTING ROAD TO 2-LANE C/W IN BUILT-UP AREA

**NOTES:-** ALL DIMENSIONS ARE IN mm, UNLESS OTHERWISE MENTIONED.

CLIENT :-



Ministry of Road Transport And Highway(MORTH)  
Government of India  
New Delhi

PROJECT SECTION

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CONSULTANTS :-



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DRAWING TYPE :-

TYPICAL CROSS SECTIONS

Package-3

DRAWING NO :- LEC/MORTH/ TCS

SCALE :- NTS

DATE :- MAY- 2021

