

Development of Economic Corridors, Inter Corridors, Feeder Routes and Coastal Roads to improve the efficiency of freight movement in India under Bharatmala Pariyojna (Lot-3) Odisha & Jharkhand/Pkg.2

| Sl. No. | Condition | Compliance |
|---------|--|--|
| 1 | Endorsement/recommendation and Verification of the proposed alignment from the Project Elephant of the MoEFCC to ascertain if the proposed alignment will be passing through the elephant movement corridor and if yes, will it cause major fragmentation of the elephant corridor in the region. Submit the mitigation measures if advised by the Project Elephant and duly endorsed by the Chief Wildlife Warden of respective states. | PCCF recommendation letter is enclosed in Annexure-1 |
| 2 | Justification for considering the proposed ROW from 30 to 45 m in the forest area. | <p>While conducting detailed project design based on traffic, safety and other engineering considerations it transpired that a six lane highway would need to be constructed. ROW in National Highways in general is kept as 60m in Plain/rolling terrain and accordingly ROW of 60m has been kept for this Highway (Raipur-Vishakapatnam) passing through states of Andhra Pradesh(100 km). However, keeping in view the restrictions in forest area it is proposed to adopt 45m ROW in plain/rolling terrain as 6 lane highway in 30m ROW is not possible for following reasons:</p> <p>a. Refer Enclosed TCS wherein top road formation width(road top width) has been kept 30m in reserve forest and contiguous revenue forest (in non forest section it is 33 m), however, to accommodate slopes for height difference(difference between ground level and road top level) which varies from 2.5 to 8m (2.5m in general and about 8m at locations of crossing structures including animal underpasses), requires additional land width for accommodating slopes, drains, etc beyond road formation width. For 3-4m ht difference, 45m ROW is sufficient. However in cases where the</p> |

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| | | <p>ht difference is more than 4m, there is requirement of ROW beyond 45m and in such cases NHAI would restrict the ROW to 45m only, by providing retaining /Toe walls.</p> <p>b. In Hilly terrain the ROW width varies as per the cutting and filling envelope as terrain is continuously changing. In hilly terrain ROW is proposed to be kept as 45m in general and limiting to cutting and filling envelope.</p> |
| 3 | The kml file submitted by the project proponent is corrupted and cannot be opened. Project proponent will need to submit fresh kml file with chainage clearly marking elephant crossovers areas if any. | Revised KML File has been attached |

**GOVERNMENT OF ANDHRA PRADESH
FOREST DEPARTMENT**

From Sri. N.Prateep Kumar, I.F.S.,
Prl. Chief Conservator of Forests &
HoFF,
Prl. Chief Conservator of Forests
(WL) & Chief Wildlife Warden (FAC),
Andhra Pradesh,
Aranya Bhavan, Guntur – 522004.

To The Inspector General of Forests, Project
Elephant Division,
Government of India,
Ministry of Environment, Forest and Climate
Change
Agni Wing, 5th Floor,
Indira Paryavaran Bhavan,
Jor Bagh Road, New Delhi,
Email.Brijendra.swaroop@gov.in

Rc.no. EFS02-21024/4/2021-WILD LIFE SEC-PCCF /WL-2,
Date: 30/01/2021

Sub:Andhra Pradesh Forest Department – Wildlife –NHAI – PIU, Visakhapatnam
-- Preparation of DPR for Development of Economic Corridors, Inter
Corridors, Feeder routes and Coastal roads to improve efficiency of freight
movement in India under Bharatmala Pariyojana Odisha & Jharkhand /Pak-
2 – Wildlife Conservation Plan submitted by DFO, Vizianagaram – Approved
- Regarding.

Ref:Conservator of Forests, Visakhapatnam Circle, Rc no 80/2021/TO Dt
-12/01/2021

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In the reference cited, the Conservator of Forests, Visakhapatnam has submitted the report of PD, NHAI Visakhapatnam and DFO Vizianagaram along Wildlife Conservation plan.

The General Manager (T), PD, NHAI Visakhapatnam has informed that the project alignment is passing approximately 35 Km. away from the Elephant Movement areas and as per the suggestions of the Divisional Forest Officer, Vizianagaram three elephant movement underpasses have been proposed across the alignment, to facilitate the free movement of Elephants. Divisional Forest Officer, Vizianagaram has submitted revised proposal and site specific Wildlife Conservation plan for the project with updated mitigation measures for the State Chief Wildlife Warden's endorsement.

The DFO, Vizianagaram has prepared Management strategies within the project area with a financial forecast estimated as Rs. 36.00 lakh and Management strategies within the Zone of influence of the project with a financial forecast estimated as Rs. 988.032 lakh for (10) years. Hence, the plan is hereby endorsed.

Further, it is to inform that, there are other Schedule I faunal species mentioned in the list of Fauna in the proposed project area, particularly Rock Python, Sloth Bear, Peafowl, Spot billed Pelican for which no conservation measures have been suggested.

Hence, the User Agency has been requested to suggest conservation measures in consultation with DFO, Vizianagaram and CF, Visakhapatnam for the Schedule I faunal species mentioned in the list of Fauna in the proposed project area, subject to the ToR conditions and it is also requested that design and alignment of underpasses have to be ensured as per the guidelines issued by the Wildlife Institute of India and it has to be certified by PD NHAI, CF Visakhapatnam and DFO Vizianagaram before completion of the DPR.

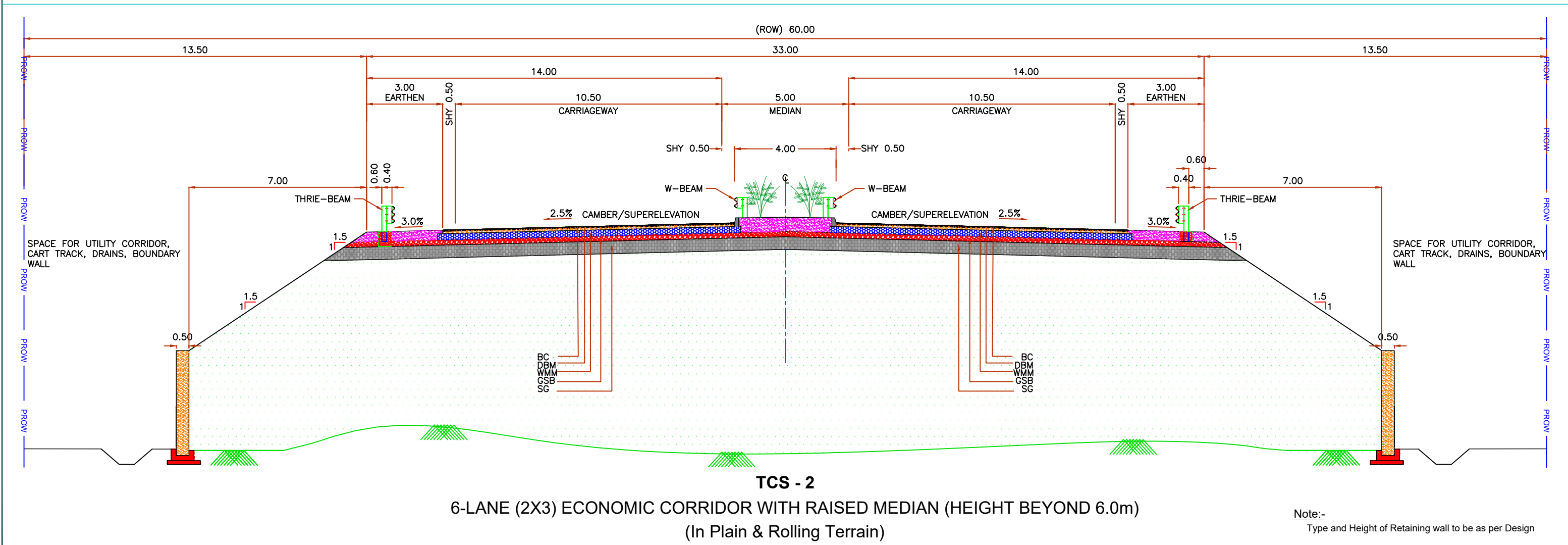
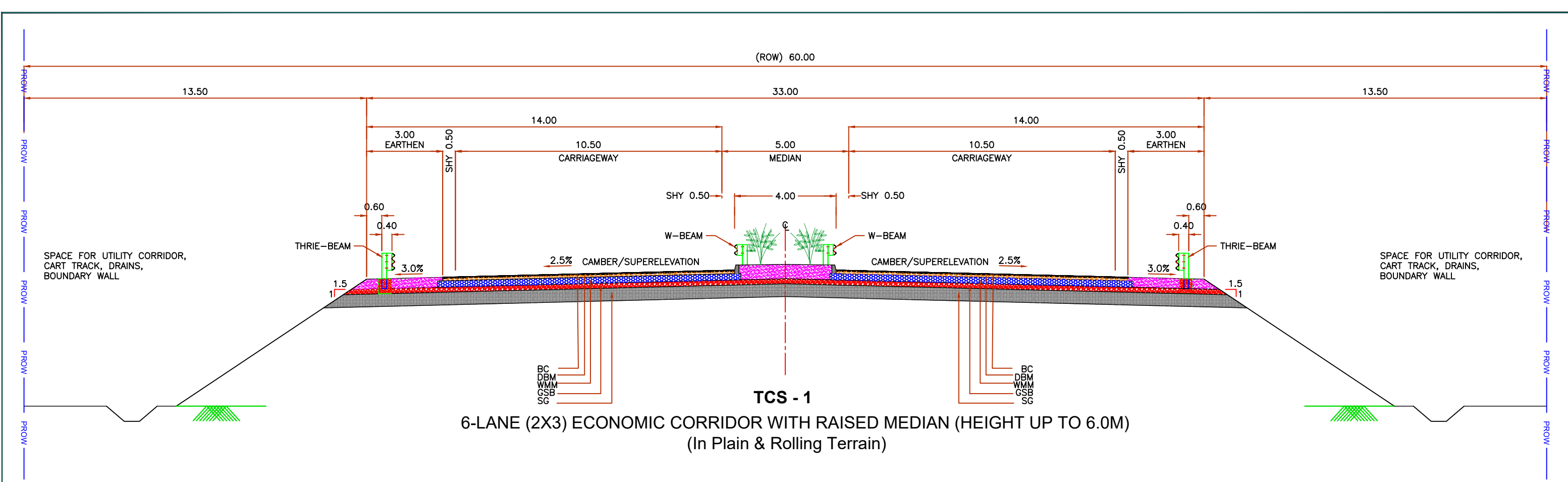
N Prateep Kumar

Principal Chief Conservator of Forests & HoFF,
Principal Chief Conservator of Forests (WL),
Chief Wildlife Warden (FAC).

Copy to the General Manager (T) & Project Director, Project Implementation Unit, Hanumanthavaka, Visakhapatnam 530040 (Email. vis@nhai.org) for information and necessary action. User agency is requested to suggest conservation measures in consultation with concerned Conservator of forests and Divisional forest Officer for the schedule I faunal species mentioned in the list.

Copy to the Conservator of Forests, Visakhapatnam for information and necessary action.

Copy to the Divisional Forest Officer, Vizianagaram for information and necessary action.



Note:-
Type and Height of Retaining wall to be as per Design

| REV. | DATE | DESCRIPTION | Engr. | D/M |
|------|------------|----------------------------------|-------|------|
| RO | 18.12.2019 | Forest Area ROW Change final 45m | Rohit | Amar |

NOTE:-

CLIENT:-
National Highways Authority of India
(Ministry of Road Transport & Highways, Government of India)
G - 5 & 6, Sector - 10, Dwarka, New Delhi - 110075

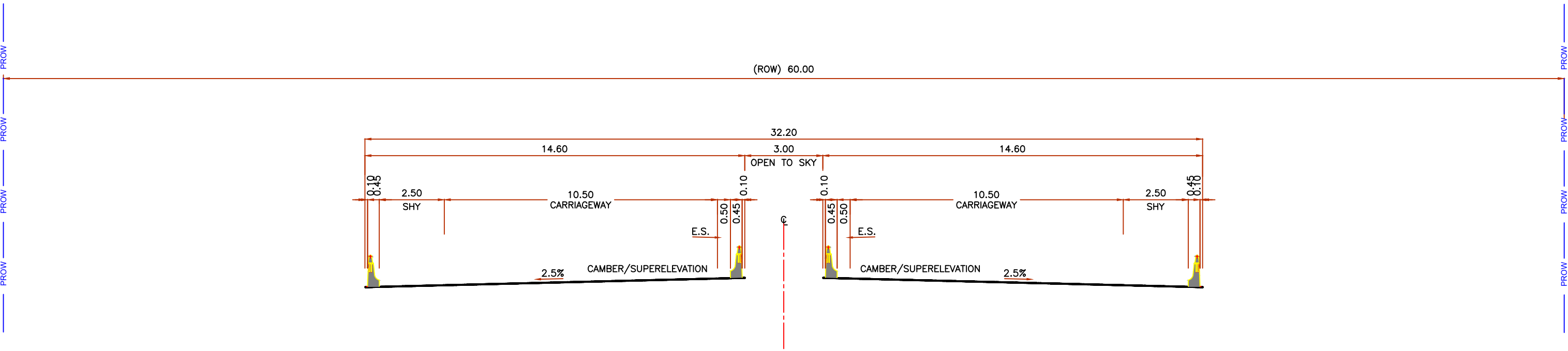
Consultant:-
YONGMA Engineering Co., Ltd. JV With Arkitechno Consultants(I) Pvt.Ltd.
301-302 Times Centre, Golf Course Road, Sector-54, Gurgaon Haryana Phone:0124-4746202, Fax: 0124-4742955, Mob: 9818186242, email: anilverma@ymengin, email.business@arkitechno.com
Web: www.ymengin, www.arkitechno.com

Project:-
Consultancy Services for preparation of DPR for development of Economic Corridors, Inter Corridors, Feeder Routes and Coastal Roads to improve the efficiency of freight movement in India (Lot-3/Odisha & Jharkhand / Package-2), Length-463.391Km

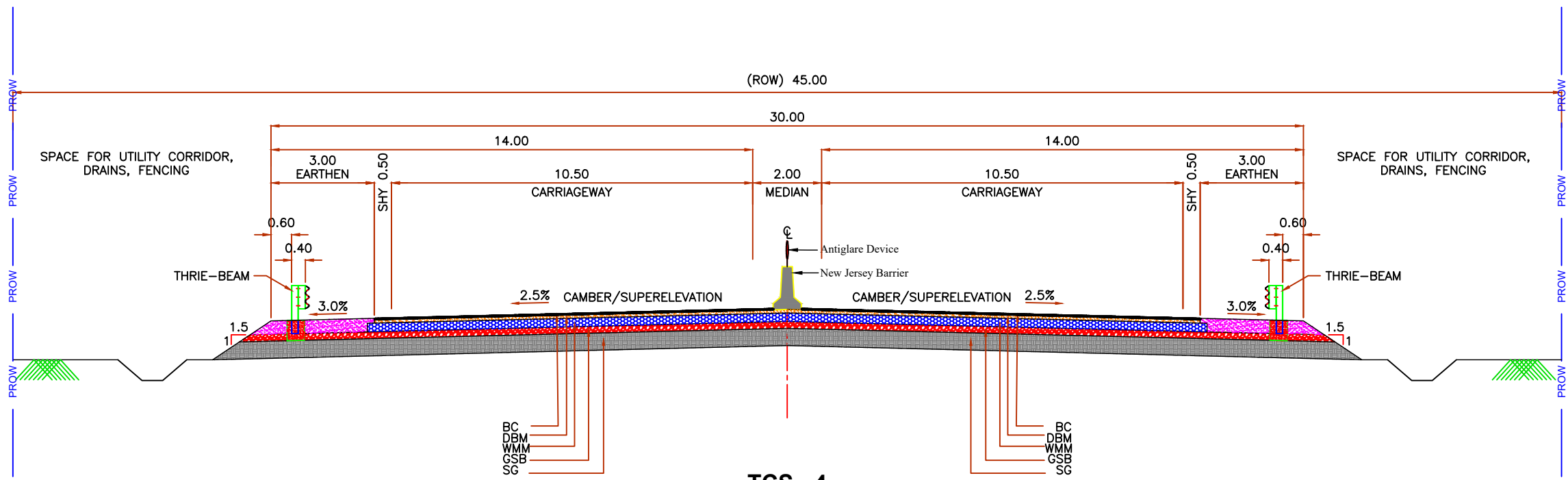
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|----------|--------|------|
| PREPARED | A.P. | Amar |
| DESIGNED | N.S. | |
| CHECKED | R.R. | |
| APPROVED | C.K.B. | |

Title: **TYPICAL CROSS SECTION**
TCS - 1 AND TCS - 2
Scale: AS SHOWN
Size: A3
Drg. No: YEC/ARKI/DPR/LOT-3/PKG-2/HW/TCS
Sheet: 01 OF 06

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| Date: | DEC, 2019 |
| Rev: | RO R1 |



TCS - 3
6-LANE (2X3) BRIDGE & GRADE SEPARATED STRUCTURES (SVUP/ LVUP/ VUP)
 (In Plain & Rolling Terrain)



TCS - 4
6-LANE (2X3) ECONOMIC CORRIDOR IN FILL (HEIGHT UP TO 3.0 M)
FOREST AREA WITH NEW JERSEY TYPE MEDIAN
 (In Plain & Rolling Terrain)

| REV. | DATE | DESCRIPTION | Engr. | D/M |
|------|------------|----------------------------------|-------|------|
| R0 | 18.12.2019 | Forest Area ROW Change final 45m | Rohit | Amar |

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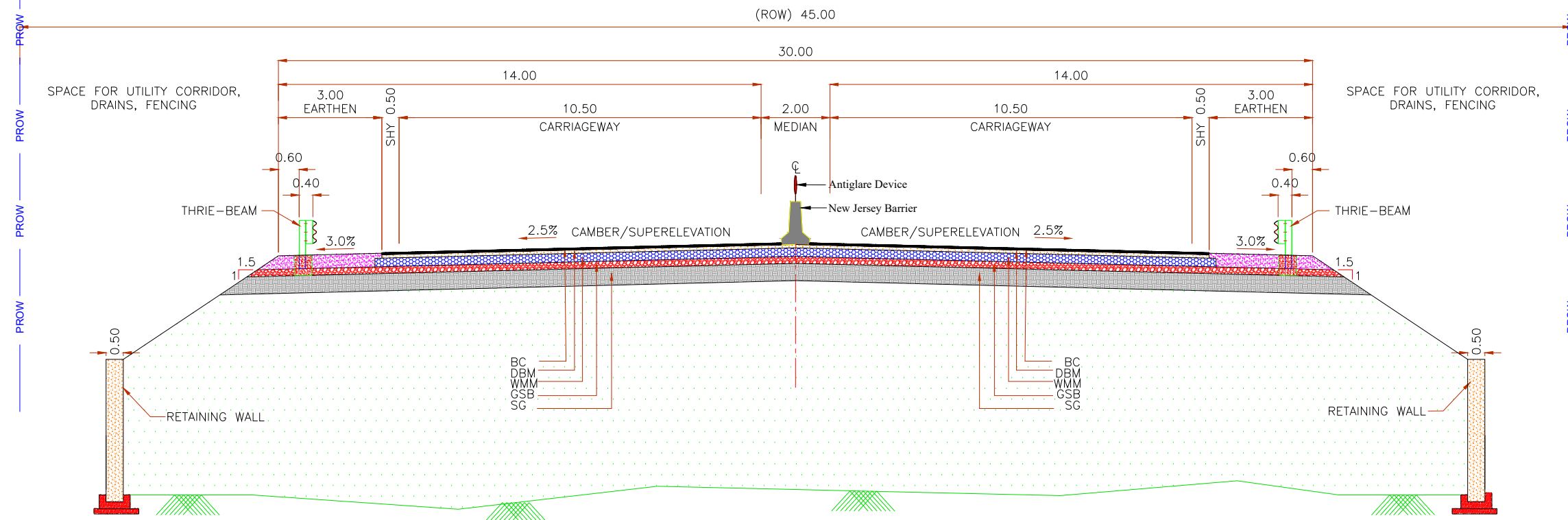
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| PREPARED | A.P. | <i>Amar</i> |
| DESIGNED | N.S. | <i>Rohit</i> |
| CHECKED | R.R. | <i>Rohit</i> |
| APPROVED | C.K.B. | <i>Chakraborty</i> |

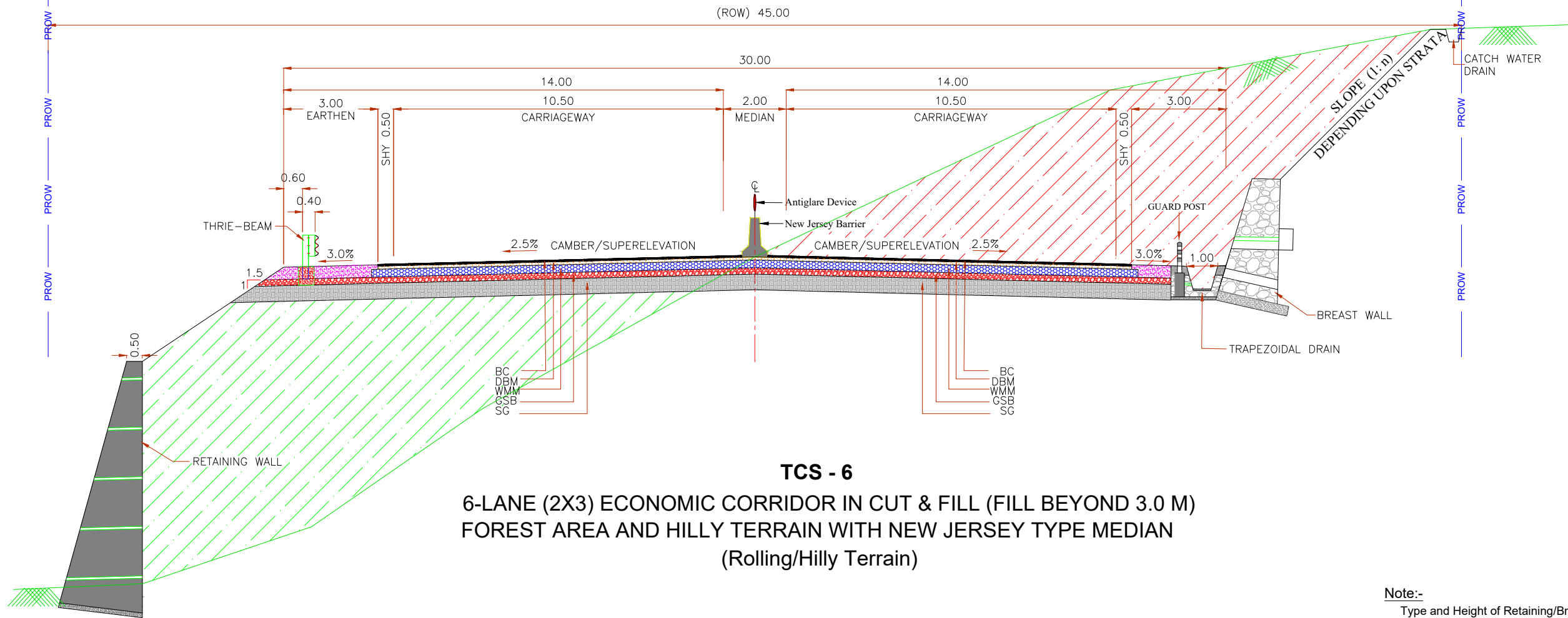
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 Sheet: 02 OF 06
 Rev: R0 R1

Date: DEC, 2019



TCS - 5
6-LANE (2X3) ECONOMIC CORRIDOR IN FILL (HEIGHT BEYOND 3.0 M)
IN FOREST AREA AND HILLY TERRAIN WITH RAISED MEDIAN
(In Plain & Rolling/Hilly Terrain)

Note:-
 Type and Height of Retaining/Breast wall to be as per Design



TCS - 6
6-LANE (2X3) ECONOMIC CORRIDOR IN CUT & FILL (FILL BEYOND 3.0 M)
FOREST AREA AND HILLY TERRAIN WITH NEW JERSEY TYPE MEDIAN
(Rolling/Hilly Terrain)

Note:-
 Type and Height of Retaining/Breast wall to be as per Design

| REV. | DATE | DESCRIPTION | Engr. | D/M |
|------|------------|----------------------------------|-------|------|
| R0 | 18.12.2019 | Forest Area ROW Change final 45m | Rohit | Amar |

NOTE:-

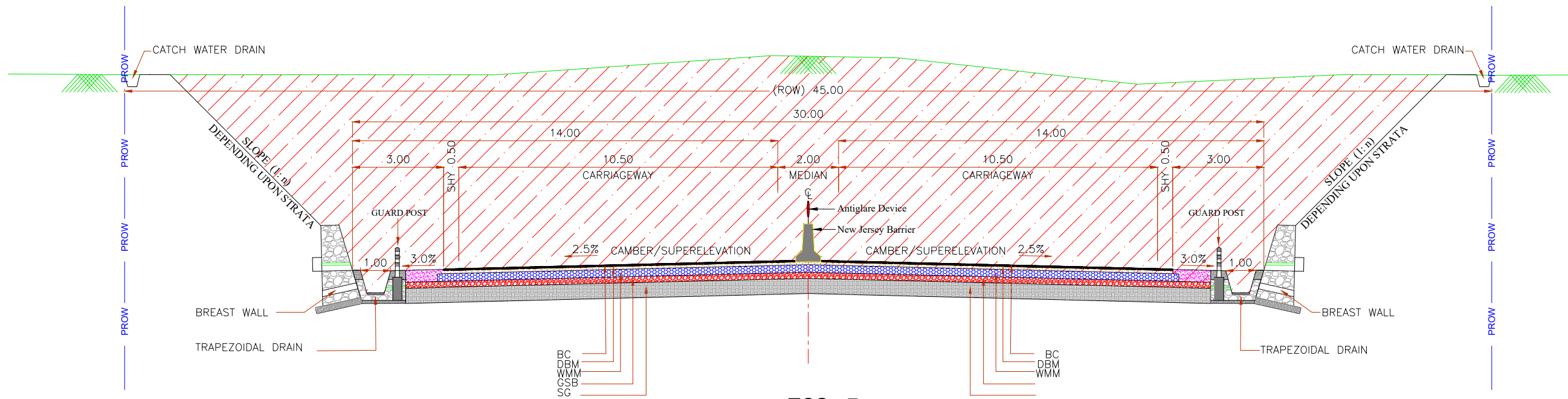
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| PREPARED | A.P. | <i>Amar</i> |
| DESIGNED | N.S. | <i>N.S.</i> |
| CHECKED | R.R. | <i>R.R.</i> |
| APPROVED | C.K.B. | <i>C.K.B.</i> |

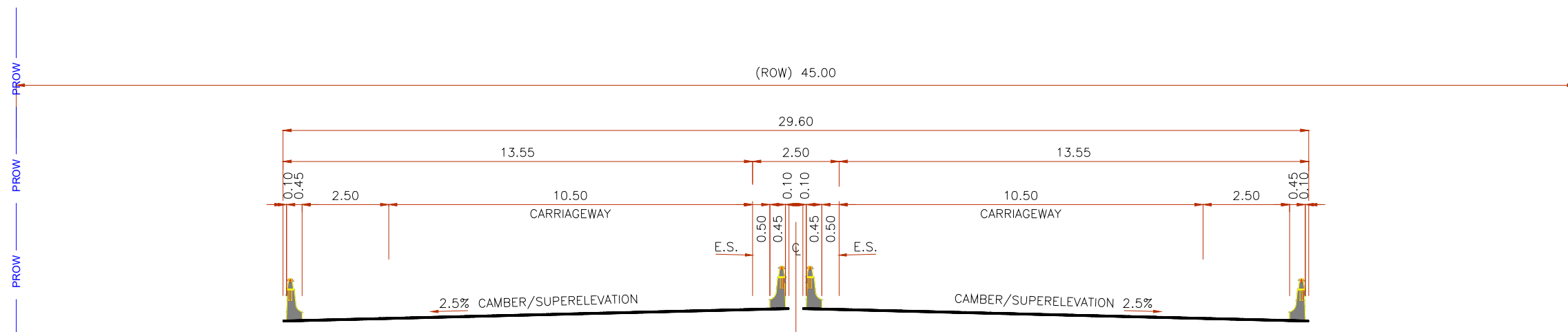
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TCS - 7

**6-LANE (2X3) ECONOMIC CORRIDOR IN CUT WITH BOTH SIDE BREAST WALL
IN FOREST AREA AND HILLY TERRAIN WITH NEW JERSEY TYPE MEDIAN
(Rolling/Hilly Terrain)**

Note:-
Type and Height of Retaining/Breast wall to be as per Design



TCS - 8

**6-LANE (2X3) BRIDGE & GRADE SEPARATED STRUCTURES (SVUP/ LVUP/ VUP)
IN FOREST & HILL AREA
(Rolling/Hilly Terrain)**

| REV. | DATE | DESCRIPTION | Engr. | D/M |
|------|------------|----------------------------------|-------|------|
| R0 | 18.12.2019 | Forest Area ROW Change final 45m | Rohit | Amar |

NOTE:-

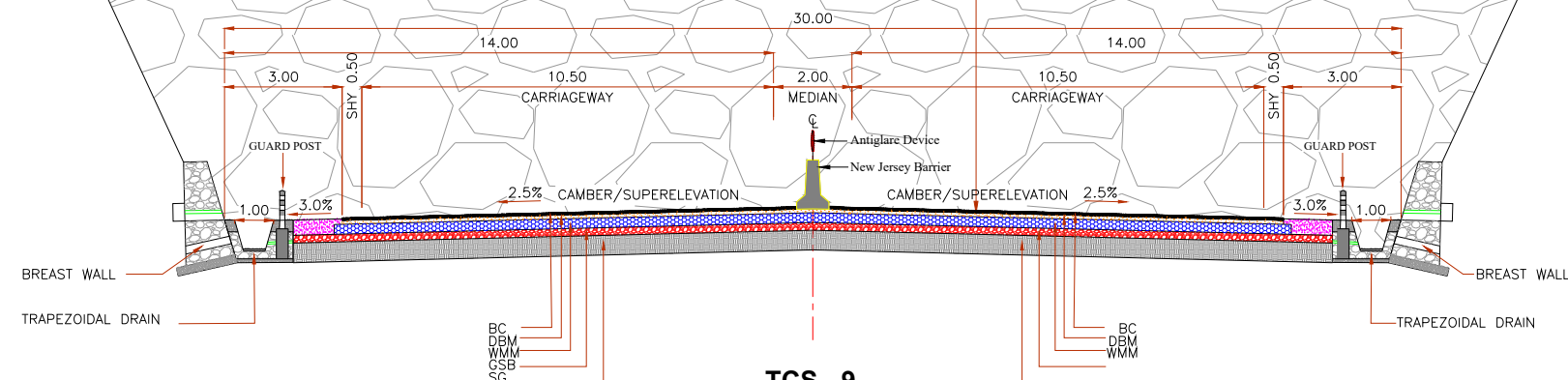
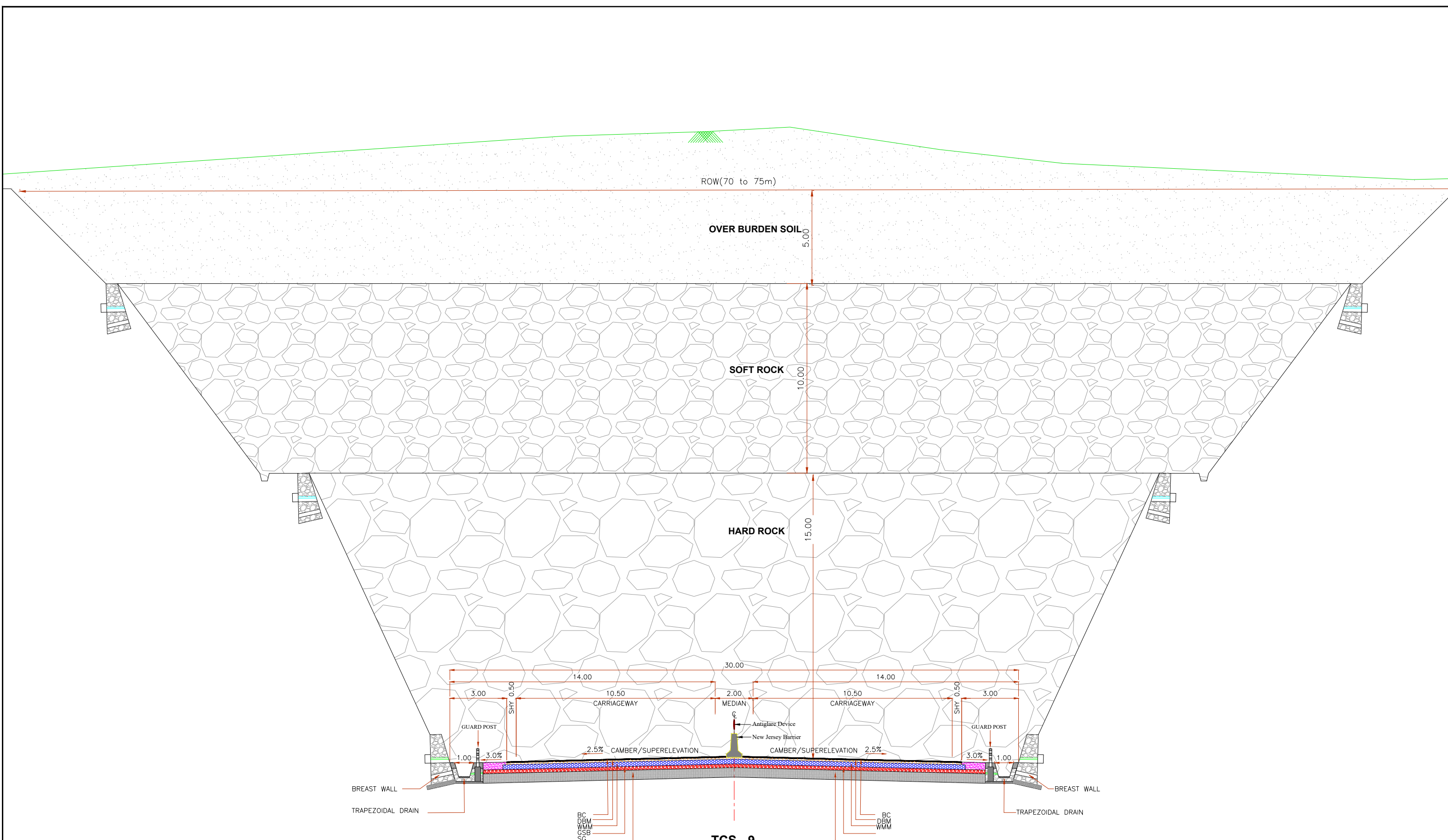
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| PREPARED | A.P. | <i>Amar</i> |
| DESIGNED | N.S. | <i>Rohit</i> |
| CHECKED | R.R. | <i>Rohit</i> |
| APPROVED | C.K.B. | <i>C.K.B.</i> |

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| Title: | TYPICAL CROSS SECTION TCS - 7 AND TCS - 8 | | Date: | DEC, 2019 | |
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| Size: | A3 | Rev: | R0 | RO | |




TCS - 9
6-LANE (2X3) ECONOMIC CORRIDOR IN CUT UP TO 30.0M
IN HILL AREA WITH NEW JERSEY TYPE MEDIAN
(In Hilly Terrain)

Note:-
 Type and Height of Retaining/Breast wall to be as per Design

| REV. | DATE | DESCRIPTION | Engr. | D/M |
|------|------------|----------------------------------|-------|------|
| R0 | 18.12.2019 | Forest Area ROW Change final 45m | Rohit | Amar |





NOTE:-

CLIENT:-

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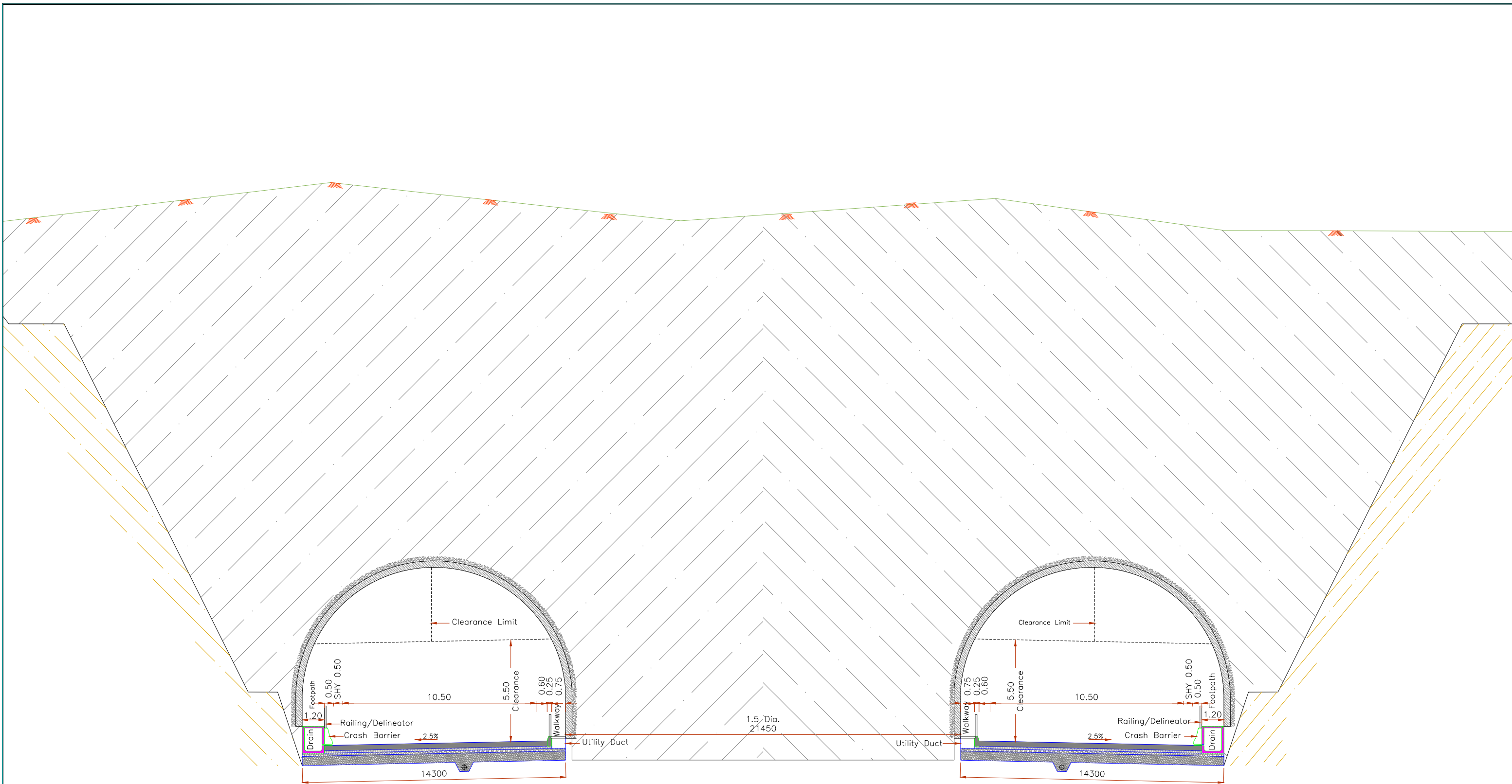
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| PREPARED | A.P |  |
| DESIGNED | N.S |  |
| CHECKED | R.R |  |
| APPROVED | C.K.B |  |


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| Title: | TYPICAL CROSS SECTION | | Date: | DEC, 2019 | |
| | TCS - 9 | | | | |
| Scale: | AS SHOWN | Drg. No: | YEC/ARKI/DPR/LOT-3/PKG-2/HW/TCS | Sheet: | 05 OF 06 |
| Size: | A3 | Rev: | R0 | R1 | |



TCS- 10
6-LANE (2X3) TWIN TUBE TUNNEL

| REV. | DATE | DESCRIPTION | Engr. | D/M |
|------|------------|----------------------------------|-------|------|
| R0 | 18.12.2019 | Forest Area ROW Change final 45m | Rohit | Amar |





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| DESIGNED | N.S. |  |
| CHECKED | R.R. |  |
| APPROVED | C.K.B. |  |

Title: **TYPICAL CROSS SECTION**
TCS - 10

Date: DEC, 2019

Scale: AS SHOWN
Size: A3

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Sheet: 06 OF 06
Rev: R0 RT