

The Government of the People's Republic of Bangladesh Roads and Highways Department (RHD)

Checklist for Geometric & Pavement Structural Design Approval

For

Road ID & Name:

Checklist Authorized by

Road Design & Standard Division and Road Safety Division
Road Design & Safety Circle
Technical Services Wing
Sarak Bhavan, Tejgaon, Dhaka

Checklist Filled by

Road Division : Road Circle : Road Zone : Date :

FORMAT-P1 (Data & Information sheet for Pavement Structural Design) Road ID & Name: Road Circle: **Road Division:** ACE Office Memo. No.: Date: Zone: Chainage & Length for Design Required **Existing Pavement Data & Information Proposed Pavement Information** Sub grade CBR Chainage Representing Width of Existing Existing Pavement Layer Thickness (mm) Width of Proposed Pavement Type (Existing) (4 days Soaked) No. Formation Level (F.L.) (Bottom of SB to HFL) (m) Comments on Special requirement Comments on LA Requirement of Chainage (m) Representing Length (meter) Total Width of Crest Under Pavement Data s on Physic Total collecting Carriage way (L+R) Inner Hard Shoulder RoW Lab (Disturbed) Hard Shoulder In Situ (undisturb) Carriage way point Hard Shoulde CC RCC Comments of Condi Median Drain Other Verge Drain HBB/ Sub Asphalt ISG WBM ABT-II ABT-I soling Base Layer 3 10 14 22 23 24 25 28 30 31 0.00 2 0 0.00 0 0.00 3 0 0.00 0 0.00 5 6 0 0.00 0 0.00 0 0.00 8 9 0 0.00 0.00 10 0 * All data and information must be signed / countersigned by concerned Field Officials. * Formation level (FL) is the Difference of Height Between Bottom of Sub-Base to HFL (HFL R.L. (Avg. of 30 Years Return Period for Regional & Zila Road, 50 Years for National Highways) based on competent authority)) * L= Left; R= Right; RoW= Right of Way; HFL= Highest Flood Level; ISG= Improved Sub Grade, ES= Earthen Shoulder, V= Verge, CW= Carriageway, FL= Formation level *Please attached logitudinal profile information in Excel format of at least 100 m interval if formation level height of any section of road is below 1.0 m *Use additional page(s) for more data Name & Sign. Name & Sign. Name & Sign. Name & Sing. Sub-Assistant Engineer-1, RHD Sub-Assistant Engineer-2, RHD Sub-Assistant Engineer-3, RHD Sub-Divisional Engineer, RHD Executive Engineer, RHD Road Sub-Division, Road Division, Road Sub-Division, Road Sub-Division, Road Sub-Division,

| | | TRAFF | IC D | ATA I | NFOF | RMAT | ION (| FORI | MAT- | C1) | | | | | |
|--------|--|-------------------|----------------|----------------|--------------|--------------|--|-----------------|----------|------------------|----------------|--------------|-------------------|-----------|---------------|
| Roa | nd ID & Name : | 0 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| Roa | ad Division : | | | - | Road (| Circle : | | | | - | Zone : | | | | - |
| | | | | | | RAFFI | | | | | | | | | |
| , | If traffic data is missing in RHD RMMS I inage of Data collecting Point : | Data Base , the | n source | from Io | cal Road | Divisio | n's traffi | c survey | ' | | Location | Nama | | | |
| SI. | Survey Date | Heavy Truck | Medi. | Small | Large | Medi. | Micro | Utility | Car | Auto | Motor | Bi- | Cycle | Cart | Total |
| No. | ourvey bate | neavy muon | Truck | Truck | Bus | Bus | Bus | Jeep | Jui | Rickshaw | Cycle | Cycle | Rickshaw | Ourt | AADT |
| 1 | | | | | | | <u>. </u> | | <u>.</u> | | | | | | 0 |
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| 7 | | | | : ! |] | | : | | : 9 | Ī | | <u> </u> |] | | 0 |
| Ė | Average Traffic = | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #### | #DIV/0! |
| | | | | | | | | | | | | | | | |
| i.b) | If having Traffic Data in RHD RMMS Datab | ase: | | | | | | | | | | | | | |
| RMI | MS Link No. of the Road: | Heavy Truck | Medi. | Small | Large | Medi. | Micro | Utility | Car | Auto | Motor | Bi- | Cycle | Cart | Total |
| | | | Truck | Truck | Bus | Bus | Bus | Jeep | | Rickshaw | Cycle | Cycle | Rickshaw | | AADT |
| | | | | | | | | | | | | | | ļ | 0 |
| | | | | TRAF | FIC FC | RECA | STING | : | | | | | | | |
| ii.a) | Diverted Traffic-1 (adding data in this table | e one diversion | n comes | towards | this roa | ıd) | | | | | | | | | |
| | Link ID & Name from where diverted : | | | | | | | | | | | | | | |
| | | Heavy Truck | Medi. | Small | Large | Medi. | Micro | Utility | Car | Auto | Motor | Bi- | Cycle | Cart | Total |
| | Vehicle Type | | Truck | Truck | Bus | Bus | Bus | Jeep | | Rickshaw | Cycle | Cycle | Rickshaw | | AADT |
| | Link Traffic | | | | | | | | | | | | | | 0 |
| | Probable % of traffic to be Diverted-1 | | | | | | | | | | | | | | |
| | Diverted Traffic -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ii.b) | Diverted Traffic-2 (adding more data in th | is table, if more | e than or | ne divers | ion com | es towa | rds this I | road) | | | | | | | |
| | Link ID & Name from where diverted : | | | | | | | | | | | | | | |
| | Vehicle Type | Heavy Truck | Medi. Truck | Small Truck | Large Bus | Medi. Bus | Micro Bus | Utility Jeep | Car | Auto Rickshaw | Motor Cycle | Bi- Cycle | Cycle Rickshaw | Cart | Total AADT |
| | Link Traffic | | | | | | | | | | | | | | 0 |
| | Probable % of traffic to be Diverted-1 | | | | | | | | | | | | | | |
| | Diverted Traffic -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ii.c) | Diverted Traffic-3 (adding more data in the | | | | | | ds this r | | | | | | | | |
| -, | Link ID & Name from where diverted : | | | | | | | , | | | | | | | |
| | | Heavy Truck | Medi. | Small | Large | Medi. | Micro | Utility | Car | Auto | Motor | Bi- | Cycle | Cart | Total |
| | Vehicle Type | | Truck | Truck | Bus | Bus | Bus | Jeep | | Rickshaw | Cycle | Cycle | Rickshaw | | AADT |
| | Link Traffic | | | | ļ | ļ | ļ | | ļ | | | ļ | | ļ | 0 |
| | Probable % of traffic to be Diverted-1 | | | | | | | | | | | | | | |
| | Diverted Traffic -3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| iii) (| : Generated Traffic based on Base Traffic in | RMMS Databa | se or Su | rveyed: | (Taken s | some % | of Base | Traffic) | | | | | | | |
| , | | Heavy Truck | Medi. | Small | Large | Medi. | Micro | Utility | Car | Auto | Motor | Bi- | Cycle | Cart | Total |
| | Vehicle Type | | Truck | Truck | Bus | Bus | Bus | Jeep | | Rickshaw | Cycle | Cycle | Rickshaw | | AADT |
| | Considered Traffic | #DIV/0! | <u> </u> | #DIV/0! | <u> </u> | <u> </u> | ģ | <u> </u> | ġ | <u> </u> | | #DIV/0! | <u> </u> | #### | #DIV/0! |
| | Probable % of traffic to be generated | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | |
| | Generated Traffic on Base Traffic | #DIV/0! | ##### | ###### | ##### | ##### | ##### | ##### | ##### | #DIV/0! | ###### | ###### | #DIV/0! | #### | #DIV/0! |
| | TRAFFIC CONS | SIDERED FOR | GEOM | ETRIC 8 | <u>PAVE</u> | MENT L | AYER 1 | HICKN | ESS DE | SIGN AT | BASE Y | EAR: | | | |
| | Vehicle Type | Heavy Truck | Medi. Truck | Small | Large | Medi. | Micro | Utility | Car | Auto | Motor | Bi- | Cycle Rickshaw | Cart | Total |
| Doo | •• | #DIV/0! | | Truck | Bus | Bus | Bus | Jeep | #01///01 | Rickshaw | Cycle | Cycle | | шшш | AADT |
| | e Traffic (i.a) or (i.b) erted Traffic -1 | #DIV/0! | #UIV/U! | #DIV/0! | #UIV/0! | #UIV/U! | #UIV/U! | #UIV/U! | #UIV/U! | #DIV/0! 0 | #DIV/0! | #DIV/0! 0 | § | #### 0 | #DIV/0! 0 |
| | rted Traffic -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | rted Traffic -3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | erated Traffic based on RMMS traffic or | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #### | #DIV/0! |
| surv | Total Traffic in Base Year = | #DIV/0! | ##### | ##### | | Ē | | ##### | | #DIV/0! | ##### | ##### | #DIV/0! | #### | #DIV/0! |
| ΔSS | SUMED NEWLY GENERATED TRAFFIC CO | | | | | | | | | | | | | | |
| AUG | | Heavy Truck | Medi. | Small | Large | Medi. | Micro | Utility | Car | Auto | Motor | Bi- | Cycle | Cart | Total |
| L | Vehicle Type | | Truck | Truck | Bus | Bus | Bus | Jeep | | Rickshaw | Cycle | Cycle | Rickshaw | | AADT |
| | sidered Newly Generated Traffic after | | | | | | | | | | | | | | 0 |
| com | pletion of the pavement work | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| Nam | ne & Sign. : | - | Name & | Sign · | | | | | • | Name & S | ian · | | | | |
| 14011 | Sub-Assistant Engineer, RHD | | , will 0 | | ivisional | Engineer | r. RHD | | | | • | cutive Fr | ngineer, RH | ID | |
| | Road Sub-Division | | | | l Sub-Div | • | | | | | | nad Divis | • | | |

*Use additional page(s) for more data

LONG SECTION INFORMATION OF THE ROAD FOR PAVEMENT DESIGN (FORMAT-C2)

| Name & ID of the Road : | | 0 | | | | | | |
|-------------------------|------|---|----|----------|---|----------|--------|---|
| Road Divisio | on : | | - | Circle : | | - | Zone : | - |
| Source of Data : | | | | | | | | |
| Location Chainage : | | | То | | = | 0.000 Km | | |
| HFL R.L. = | | | | | | BMRL = | | |

| Road | Pavement | | | Thickr | ness of Pav | vement Laye | rs | | | R.L. of bottom | Up/Do | wn From HFL |
|----------|----------|-----------|------------|------------|-------------|-------------|------|--------|-------------|----------------|---------|--------------|
| Chainage | Top R.L. | Bituminus | Aggr. Base | Aggr. Base | WBM | Sub-Base | ISG | Others | Total Layer | level of | | means Up, |
| ö | (m) | Surfacing | Type-I | Type-II | (mm) | (mm) | (mm) | (mm) | Thickness | Pavement | "-" n | neans Down) |
| | (, | (mm) | (mm) | (mm) | (, | (, | (, | (, | (mm) | (sub-base) | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 000+000 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 000+100 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 000+200 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 000+300 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 000+400 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 000+500 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 000+600 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 000+700 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 000+800 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 000+900 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 001+000 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 001+100 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 001+200 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 001+300 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 001+400 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 001+500 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 001+600 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 001+700 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 001+800 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 001+900 | | | | | | | | | 0 mm | 0.000 m | | Raising Req. |
| 002+000 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 002+100 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 002+200 | | | | | | | | | 0 mm | 0.000 m | | Raising Req. |
| 002+300 | | | | | | | | | 0 mm | 0.000 m | | Raising Req. |
| 002+400 | | | | | | | | | 0 mm | 0.000 m | | Raising Req. |
| 002+500 | | | | | | | | | 0 mm | 0.000 m | | Raising Req. |
| 002+600 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 002+700 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 002+800 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 002+900 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 003+000 | | | | | | | | | 0 mm | 0.000 m | | Raising Req. |
| 003+100 | | | | | | | | | 0 mm | 0.000 m | | Raising Req. |
| 003+200 | | | | | | | | | 0 mm | 0.000 m | | Raising Req. |
| 003+300 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 003+400 | | | | | | | | | 0 mm | 0.000 m | | Raising Req. |
| 003+500 | | | | | | | | | 0 mm | 0.000 m | | Raising Req. |
| 003+600 | | | | | | | | | 0 mm | 0.000 m | | Raising Req. |
| 003+700 | | | | | | | | | 0 mm | 0.000 m | | Raising Req. |
| 003+800 | | | | | | | | | 0 mm | 0.000 m | | Raising Req. |
| 003+900 | | | | | | | | | 0 mm | 0.000 m | | Raising Req. |
| 004+000 | | | | | | | | | 0 mm | 0.000 m | 0.000 m | Raising Req. |
| 004+100 | | | | | | | | | 0 mm | 0.000 m | | Raising Req. |
| 004+200 | | | | | | | | | 0 mm | 0.000 m | | Raising Req. |
| 004+300 | | | | | | | | | 0 mm | 0.000 m | | Raising Req. |
| 004+400 | | | | | | | | | 0 mm | 0.000 m | | Raising Req. |

| Name & Sign. | Name & Sign. | Name & Sign. | Name & Sign. |
|---------------|-----------------------------|------------------------------|-------------------------|
| Surveyor | Sub-Assistant Engineer, RHD | Sub-Divisional Engineer, RHD | Executive Engineer, RHD |
| Road Division | Road Sub-Division | Road Sub-Division | Road Division |

Note: HFL R.L. [as per GDSM(Revised)2005, clause-4.10, to be calculated for a 30 Years Return Period based on hydrological data and cross-checked with the recorded HFL in the locality can be obtained from RHD Operational Divisions and respective offices of Water Development Board.], and the bottom level of the pavement(sub-base) will have a freeboard of 1.0m from HFL.

BMRL is the Permanent marks on an outer wall of the Division Offices or Other Govt. building within the division etc.

FORMAT-G1 (Data & Information sheet for Road Geometry Design) Road ID & Name: **Road Division:** Road Circle: Zone: ACE Office Memo. No.: Date: 1/0/1900 Location Chainage: 000+000 To 000+000 0.000 Km Horizontal Alignment & Bus Bay Design Informations A) Description **Existing Proposed** Remarks No. 1 Number of horizontal curvature in the alignment Radius of horizontal curvature (Please use separate table for each horizontal curvature) at chainage Radius at chainage Radius : at chainage Radius at chainage Radius Radius at chainage Is there any safety concern along the curve? [Pick □Yes / □No from drop down] If Yes, please provide reason. 4 5 Number of pedestrian crossings 6 Number of bus stops/bus bays 7 Distance of intersections (signalized/unsignalized) from the Area available at the proposed location 8 [Pick □Yes / □No from drop down] 9 Justification of selecting such location Number of parking/rest area facilities B) Vertical Alignment / Gradient Informations SI. Description **Existing** Proposed Remarks No. Number of vertical curve 1 Gradient details (Please use separate table for where gradient changes) gradient % at chainage gradient % at chainage gradient % at chainage at chainage gradient % gradient % at chainage 3 Number of Bridges 4 Number of Culverts 5 Number of Overpasses Number of Railway Overpasses 7 Is there any safety concern on these structures or vertical curves? [Pick □Yes / □No from drop down] 8 If Yes, please provide reason. 1) Attach AutoCAD file of detailed topography drawing of existing alignment (Mandatory field) 1. Please ensure that detailed drawing (layout) of topographic map showing well demarcated existing alignment and proposed alignment in single map is attached with the design request in pdf and .dwg (AutoCAD) format. 2. Please ensure that locations of curves/bus bays/pedestrian crossings/parking facilities/rest areas are shown in the layout plan

Name & Sign. :

Sub-Divisional Engineer, RHD

Road Sub-Division,

Name & Sign. :

Executive Engineer, RHD

Road Division,

Name & Sign. :

Sub-Assistant Engineer, RHD

Road Sub-Division,

| Date of Format update 28th | Feb.2023 |
|----------------------------|----------|
| | |

FORMAT-G1 (Data & Information sheet for Road Geometry Design) C) Informations for Intersection / Junction Design SI. Description Existing Proposed Remarks Number of existing intersections/junctions (Please use separate table for each intersection/junction) Type of road forming the intersection/junction (mention the number in information column) ☐ National to National ☐ National to Regional ☐ National to Zila ☐ Regional to Regional ☐ Regional to Zila ☐ Zila to Zila Type of intersection/junction ☐ Round About \square Crossroad ☐T-junction ☐ Y-junction Please provide the following required information/documents/maps-1. Attach softcopy (.dwg file) of AutoCAD drawing (to the scale) of the intersection up to 500 meters of the road on all sides from the proposed intersection. 2. Please ensure that detailed Topographic Survey is shown in the drawing. 3. Please ensure that approved Right of Way (ROW) is illustrated in the drawing. 4. Cross-section of the approved pavement design. 5. Names and numbers of the side roads (along with the name of the controlling organization) 6. AADT data of all the roads connected to the intersection 7. Still photographs of the intersection (2 photographs of each leg of the intersection) 8. Other information such as, future expansion, adjacent schools, hospitals, growth centers, mosques, bus stops, accident data etc. [1] [Mandatory information]

| Name & Sign. : | Name & Sign. : | Name & Sign. : |
|-----------------------------|------------------------------|-------------------------|
| Sub-Assistant Engineer, RHD | Sub-Divisional Engineer, RHD | Executive Engineer, RHD |
| Road Sub-Division, | Road Sub-Division, | Road Division, |

*Use additional page(s) for more data