

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(पोत परिवहन, सड़क परिवहन और राजमार्ग मंत्रालय)

National Highways Authority of India

(Ministry of Shipping, Road Transport and Highways)

G-5 & 6, Sector-10, Dwarka, New Delhi-110075

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No. 11041/21/2002-Admn.

20.05.05

POLICY MATTERS: TECHNICAL (52/2005)

Sub: Access Permission for approach road to new Retail outlets along National Highways


Please refer to our Policy Circular nos. 13/2003 dated 16.04.03 and 43/2004 dated 13.09.04 on the above subject. The Ministry of Shipping, Road Transport & Highways has observed vide their letter no. RW/NH-12017/3/2005/NH-4(GJ) dated 4th April, 2005 that while examining the NOC proposals for new retail outlets; the proposals could not be appreciated properly due to non-availability of some information.

2. In view of this the Ministry has desired that in addition to the existing "Norms for the Access for Fuel Stations, Service Stations and Rest Areas along National Highways", the following additional information should also be furnished along with the proposals to be forwarded to the Ministry:-

- (i) Index map of the State showing the location of proposed retail outlet on the concerned NH.
- (ii) In case of divided carriageway, the location of the median cut from the proposed outlet shall be furnished.
- (iii) All the drawing and documents should be forwarded to the Ministry duly signed by none other than a NHAI officer not below the rank of Project Director only.

3. A copy of the Ministry of Shipping, Road Transport & Highways Letter no. RW/NH-12017/3/2005/NH-4(GJ) dated 4th April, 2005 is forwarded herewith.

All concerned are requested to comply with the above instructions.


(G. P. Chaudhary)
General Manager (Admn.)

To:
All PIUs/CMUs

Copy to:
1. All Members/CGMs
2. All GMs
3. PS to Chairman

GOVERNMENT OF INDIA
MINISTRY OF SHIPPING, ROAD TRANSPORT & HIGHWAYS
(Department of Road Transport & Highways)
1, Parliament Street, Transport Bhawan,
New Delhi- 110 001

No.RW/NH-12017/3/2005/NH-4(GJ)

Dated: the 4th April, 2005

To

1. ✓ The Chairman,
National Highways Authority of India,
G-5&6, Sector-10,
Dwarka, New Delhi-110 045
2. The Chief Engineer & Addl. Secretary,
Roads & Building Department,
National Highways,
Government of Gujarat,
14/1, Sardar Bhavan,
Sachivalaya, Gandhi Nagar

J. Chaudhary
pl. circulate.
23/4/05
25.04.05
S.H./A

Subject: Access Permission for approach road to new Retail outlets along National Highways.

Sir,

Please refer to Ministry's letter No. RW/NH-33023/19/99-DO-III dated 17.10.2003 regarding guidelines for "Norms for the Access for Fuel Stations, Service Stations and Rest Areas along National Highways". During examination of the NOC proposals for new retail outlets it has been observed that in absence of some information the proposals could not be appreciated properly. Keeping in view of the existing Ministry's guidelines, the following additional information should also be furnished alongwith the proposals to be forwarded to the Ministry:

- (i) Index Map of the State showing the location of proposed retail outlet on the concerned NH.
- (ii) In case of divided carriageway, the location of the median cut from the proposed retail outlet shall be furnished.
- (iii) It has been observed that most of the NOC proposals' drawings & check list received from NHAI are being signed by the NHAI's consultants and their Project Directors. As per Ministry's guidelines, signature of Consultants is not required on the drawings & relevant documents. As per para 10.2 of the Ministry's guidelines, *the field units of NHAI would examine the drawings and documents to ensure that the location and layout conform to Ministry's norms.* It is, therefore, requested that all drawings & documents should be forwarded to the Ministry duly signed by a NHAI officer not below the rank of Project Director only.

The receipt of this letter may be acknowledged.


(Khushal Chand)

Executive Engineer
For Director General(RD) & Spl. Secretary

Copy to:

The Regional Officer, Ministry of Shipping, Road Transport & Highways, 14/4,
Sardar Bhavan, Sachivalaya, Gandhi Nagar.



(Khushal Chand)
Executive Engineer
For Director General(RD) & Spl. Secretary

Government of India
Ministry of Road Transport and Highways

TELEGRAM : "ROADIND"

Transport Bhavan
1, Parliament Street
New Delhi - 110 001.

No. RW/NH-33023/19/99-DO-III

Dated: 25.09.2003
17.10.2003

To

1. Chief Secretaries/ Secretaries (PWD/Roads) of all State Governments/ UTs dealing with National Highways and Centrally Sponsored Schemes.
2. Chief Engineers of States/UTs dealing with National Highways and Centrally Sponsored Schemes.
3. Director General (Border Roads)
Seema Sadak Bhavan,
Ring Road, New Delhi - 110010
4. Chairman,
National Highways Authority of India (NHAI)
Dwarka, New Delhi - 110045

Sub: Norms for the Access for Fuel Stations, Service Stations and Rest Areas along National Highways.

Sir,

Ministry had issued guidelines on "System Improvement of Installation of Petrol/Diesel/Gas-Retail outlets and Service Stations as well as access to Private Properties along National Highways" through its Circular No. RW/NH-33023/19/99-DO-III dated 31st August 2000. Improvement in the highway network show that there is greater need for road safety for its users. Stricter enforcement is also necessary.

2. Therefore the Ministry has now evolved the norms for access to fuel stations along the National Highways. This is modification of the earlier circulars / publication of the Ministry / IRC. These norms cover the most common situations. Any complex situation would have to be dealt with through traffic expert for an appropriate solution.
3. Generally speaking, the fuel stations should be a part of the Rest Area complex. Rest areas should have various other amenities for users e.g. place for parking, toilets, restaurant, rest rooms, kiosk for selling sundry items etc. This aspect should be incorporated while planning for improvement and up gradation of the National Highway Sections and / or planning for new fuel stations along National Highways. The rest area complex be planned subject to the commercial viability.

4. In case of service roads having been constructed, the access to the fuel station shall be from service roads and not from the main carriageway. This aspect has to be kept into consideration while planning for location of new fuel stations.

5. The Norms are enclosed at Appendix-I which shall be followed for seeking and granting permission for the access to the new fuel stations. It shall be the responsibility of the Oil Company / Owner to ensure that the proposed location and other features of fuel stations are in conformity with these Norms. Otherwise, the proposal would be rejected.

6. The cases for granting permission for access to new fuel stations, service stations and rest areas along National Highways shall, henceforth be dealt with in accordance with the Norms prescribed in Appendix I to this circular. The main features of the Norms are listed below.

6.1 For the siting of fuel stations along National Highways, its minimum distance from an intersection would be:

6.1.1 Non-Urban (Rural) Stretches.

1. Plain and Rolling Terrain

- | | |
|---|-------|
| (i) Intersection with NHs/SHs/MDRs | 1000m |
| (ii) Intersection with Rural Roads with carriageway width of 3.5m or more | 300m |
| (iii) Intersection with Rural Roads and all other earth tracks with carriageway width less than 3.5m. | 100m |

2. Hilly / Mountainous Terrain

- | | |
|---|------|
| (i) Intersection with NHs/SHs/MDRs | 300m |
| (ii) Intersection with all other roads and tracks | 100m |

6.1.2 Urban Stretches.

1. Plain and Rolling terrain

(a) Urban Area with population of more than 20,000 and less than one lakh.

- | | |
|---|------|
| (i) Intersection with any category of roads of carriageway width of 3.5m and above. | 300m |
| (ii) Intersection with roads of carriageway width of less than 3.5m | 100m |

(b) Urban Area with population of one lakh and above.

- | | |
|--|------|
| (i) Intersection with any category of road (irrespective of carriageway width) | 100m |
|--|------|

2. Hilly and Mountainous terrain.

- | | |
|--|------|
| (i) Intersection with any category of road (irrespective of carriageway width) | 100m |
|--|------|

6.2 The minimum distance between two fuel stations along the National Highway would be as given below:

6.2.1 Plain and Rolling Terrain in Non-urban (Rural) Areas

- | | |
|---|---|
| (i) Undivided carriageway (for both sides of carriageway). (including deceleration and acceleration lanes) | 300m |
| (ii) Divided carriageway (with no gap in median at this location and stretch) | 1000m (including deceleration and acceleration lanes). |

6.2.2 Hilly/Mountainous Terrain and Urban Stretches.

- | | |
|--|-----------------|
| (i) Undivided carriageway (for both sides of carriageway) | 300m (clear) |
| (ii) Divided carriageway (with no gap in median at this location and stretch) | 300m (clear) |

6.3 The distance from check barrier/toll plaza would be at least 1 km and no check barrier/toll plaza would be installed within 1 km of fuel station/rest area.

6.4 Minimum plot size of fuel station shall be:

- | | |
|---|---------------------|
| (i) On undivided carriageway in plain/rolling terrain | 35m x 35m |
| (ii) On divided carriageway in plain/rolling terrain | 35m(frontage) x 45m |
| (iii) In hills | 20m x 20m |
| (iv) In urban areas | 20m x 20m |

6.5 The entry to fuel station shall be through deceleration lane of minimum length of 70m and width of 5.5m, the exit through acceleration lane of minimum length of 100m and width of 5.5m.

6.6 The pavement composition of these acceleration/deceleration lanes and service road (if provided) would comprise Granular Sub Base (GSB) with minimum thickness of 150mm, three layers of Water Bound Macadam(WBM) of 75mm thick each, Bituminous Macadam (BM) of 50mm thickness and Semi Dense Bituminous Concrete (SDBC) of 25mm thickness.

6.7 The access lanes, service road and separator island in the layout would be accommodated within the available ROW of the highway but fuel pumps would be located beyond Building Line. The fuel station office building etc. shall be located at the safe distance as prescribed by the Fire Department or other authorities.

6.8 The acceleration, deceleration lane, service roads, drainage system, signs and markings shall be constructed and maintained by the Oil Company / owner of the fuel station at his cost and responsibility during the period of license deed.

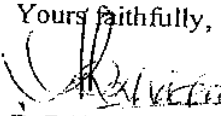
6.9 Permission would be granted within 30 days of the receipt of the application in the field office, if it meets all the requirements of the norms contained in the circular.

6.10 The Oil Company / owner shall have to enter into an Agreement for the license deed with the Government (Ministry of Road Transport and Highways –MORTH), for the use of NH land. There would be one time fee of Rs. 1 lakh in consideration of this Agreement. The validity of the Agreement would be for a period of 15 years.

6.11 The default or non-conformity of these norms for the fuel station, approaches, drainage, traffic control devices etc. would be identified and determined through joint inspection by the representatives of the concerned Oil Company and the field officer incharge of the NH section. If the deficiencies are not rectified within the specified time frame, the Oil Company would be asked to de-energize the fuel station and re-energizing would be done only on complete rectification and on the authorization by the field officer incharge of the NH section.

7. These Norms will be applicable to all new fuel stations from the date of the issue of this circular. Its content may be brought to the notice of all the concerned officers of your Departments/Organizations.

Yours faithfully,



(A.P. BAHADUR)
Chief Engineer

For Director General (Road Development) & Special Secretary

Encl.: As above.

Copy forwarded for information and necessary action to: -

1. All technical officers of Roads Wing at Head Quarters,
2. All Project Chief Engineers of Ministry of Road Transport & Highways at Headquarters. They may sign the Licence deeds received in Ministry through National Highways Authority of India/Ministry's Regional Officers (ROs) after the approval of the Minister.
3. Ministry of Petroleum & Natural Gas, Government of India, with the request to issue suitable instructions to all Oil Companies to adhere to these norms, while planning, installation and operation of fuel stations along National Highways.
4. All Regional Officers and Engineering Liaison Officers of the Ministry: They are requested to undertake detailed examination of the proposals received from State Public Works Department (PWD)/Border Road Organisation (BRO) fully in accordance with the norms of this circular and get necessary changes done in the proposal as per site conditions if required, before forwarding the proposals along with prescribed documents and checklist, to the Ministry.
5. National Institute for Training of Highway Engineers (NITHE), NOIDA-201301 (U.P.)
6. Central Road Research Institute, Delhi-Mathura Road, New Delhi- 110020.
7. Secretary, Indian Roads Congress, Jamnagar House, Shahjahan Road, New Delhi- 110011.
8. S&R Section (20 spare copies)



(A.P. BAHADUR)
Chief Engineer

For Director General (Road Development) & Special Secretary

Encl: As above

{Enclosure to Ministry of Road Transport & Highways letter No RW/NH-33023/19/99-DOIII dated 25.09.2003}

NORMS FOR LOCATION, LAYOUT AND ACCESS TO FUEL STATIONS ALONG NATIONAL HIGHWAYS

1. These norms have been finalized in substantial modification of IRC: 12-1983, 'Recommended Practice for Location and Layout of Road Side Motor, Fuel, Filling-cum-Service Station' and the Ministry's Circular No. RW/NH-33023 / 19/99-DOIII dated 31st August 2000 on 'Systems Improvement for Installation of Petrol/Diesel/Gas-Retail outlets and Service Stations as well as access to Private Properties along National Highways'. These norms shall be applicable to all new fuel stations with effect from the date of issue of this circular.
2. Petrol / Diesel retail outlets and service stations with or without Rest Area Amenities etc. are hereinafter referred to as Fuel Stations.
3. These norms are applicable to all Fuel Stations with or without other user facilities of rest areas, along un-divided carriageway and divided carriageway sections of National Highways in plain, rolling and hilly terrain. and passing through urban stretches. For this purpose hilly or mountainous terrain would be, when the cross slope of the country is more than 25%. The urban stretches would be, where National Highway passes through a town of population of 20,000 and more (Census 2001 will apply).
4. **General Conditions of Siting**
 - 4.1 The fuel stations would be located where the highway alignment and profile are favourable i.e. where the grounds are practically level, there are no sharp curves (having radius of less than 230m in plains and 60m in hilly terrain) or steep grades (more than 5%) and where the sight distances would be adequate for safe traffic operations. The location would not interfere with placement and proper functioning of highway signs, signals, lighting or other devices that affect traffic operation.
 - 4.2 While considering the proposal for new fuel stations, it would be ensured that the fuel stations on a corridor are well distributed on both sides of the highways so that vehicles normally do not have to cut across the traffic to reach them. The fuel stations would be serving only the traffic moving on the adjacent lane. For the vehicles traveling in the lanes in opposite direction, separate fuel stations need to be planned for which permission would be considered keeping also in view of its location and distance norms.
 - 4.3 In order to provide safe length for weaving of traffic, fuel station along National Highways shall be located at the minimum distance from an intersection (gap in the central median be treated as intersection), as given below. For single carriageway section, these minimum distances would be applicable for both sides.

4.3.1 Non-Urban (Rural) Stretches.

1. Plain and Rolling Terrain

- | | | |
|-------|---|-------|
| (i) | Intersection with NHs/SHs/MDRs | 1000m |
| (ii) | Intersection with Rural Roads with carriageway width of 3.5m or more | 300m |
| (iii) | Intersection with Rural Roads and all other earth tracks with carriageway width less than 3.5m. | 100m |

2. Hilly / Mountainous Terrain

- | | | |
|------|--|------|
| (i) | Intersection with NHs/SHs/MDRs | 300m |
| (ii) | Intersection with all other roads and tracks | 100m |

4.3.2 Urban Stretches.

1. Plain and Rolling terrain

- | | | |
|------|---|------|
| (a) | Urban Area with population of more than 20,000 and less than one lakh. | |
| (i) | Intersection with any category of roads of carriageway width of 3.5m and above. | 300m |
| (ii) | Intersection with roads of carriageway width of less than 3.5m | 100m |
| (b) | Urban Area with population of one lakh and above. | |
| (i) | Intersection with any category of road (irrespective of carriageway width) | 100m |

2. Hilly and Mountainous terrain.

- | | | |
|-----|--|------|
| (i) | Intersection with any category of road (irrespective of carriageway width) | 100m |
|-----|--|------|

4.4 The minimum distance between two fuel stations along the National Highway would be as given below:

4.4.1 Plain and Rolling Terrain in Non-urban (Rural) Areas

- | | | |
|------|--|---|
| (i) | Undivided carriageway (for both sides of carriageway). | 300m (including deceleration and acceleration lanes). |
| (ii) | Divided carriageway (with no gap in median at this location and stretch) | 1000m (including deceleration and acceleration lanes). |

4.4.2 Hilly/Mountainous Terrain and Urban Stretches.

- | | | |
|-----|---|-----------------|
| (i) | Undivided carriageway (for both sides of carriageway) | 300m (clear) |
|-----|---|-----------------|

- | | | |
|------|---|-----------------|
| (ii) | Divided carriageway (with no gap in median at this location and stretch) | 300m (clear) |
|------|---|-----------------|

4.4.3 If two or more fuel stations are to be sited in close proximity for some reasons, these would be grouped together to have a common access through a service road of 7.0 m width and connected to the highway through acceleration, deceleration lanes. From these considerations, the permission for the new fuel stations would be considered only if it is either in proximity to the existing one so that the common access can be provided or the new one located at the distance of more than 1000m.

4.4.4 For installation of new fuel station within the 1000m distance of existing fuel station in plain/rolling terrain and 300m in hilly/mountains terrain and urban stretch, new entrant would be responsible for construction and maintenance of the common service road, deceleration & acceleration lanes, drainage and traffic control devices. In case of hilly / mountainous terrain, common service roads at all such locations may not be possible as per the site conditions and therefore common access through service roads would not be a pre-condition.

4.5 The fuel station would not be located within the distance of 1000m from any barrier including that of toll plaza. No check barrier/toll plaza should be located within 1000m of a fuel station.

5. Plot size for Fuel Station

5.1 The size and shape of the plot for the fuel station would need to be such that it suitably accommodates fuel pumps, offices, stores, compressor room, air pump and kiosks without causing any hindrance to the movement of vehicles of expected maximum dimensions, within fuel stations and in the access area. Sufficient space would need to be available to accommodate the number of fuel pumps to cater to the expected number of vehicles in peak time at this location so that the vehicles do not spill on to the access area. The air pump and kiosks for pollution control measurements be installed at some distance from the fuel pumps so that the vehicles requiring these services do not cause hindrance to the free movement of vehicles entering or exiting for refueling.

5.2 From these considerations, the minimum size of the plot for fuel station along National Highways shall be as follows:

- | | | |
|-------|---|----------------------|
| (i) | On undivided carriageway in plain and rolling terrain | 35m x 35m |
| (ii) | On divided carriageway in plain / rolling terrain | 35m (frontage) x 45m |
| (iii) | In hilly and mountainous terrain | 20m x 20m |
| (iv) | In urban stretches | 20m x 20m |

5.3 For fuel station being part of the rest area complex, the area required for other facilities such as parking, restaurant, rest rooms, toilets and shops etc. would be extra but there would be a single access.

6. Access Layout

6.1 Access for New Fuel Stations along Un-divided Carriageway Sections

- 6.1.1 The access to the fuel stations along un-divided carriageway sections of National Highway shall be through deceleration and acceleration lanes.
- 6.1.2 The deceleration lane would take off from the edge of the paved shoulder and taken up to the edge of the Right of Way (ROW) of National Highway, beyond which, the boundary of fuel station shall start. Its minimum length would be 70m measured along the traveled direction of highway. Its width would be minimum 5.5m. The shoulder of 2.25m would be provided for this deceleration lane.
- 6.1.3 The acceleration lane would take off from the edge of the fuel station on exit side having minimum length of 100m with parallel type layout. Its starting stretch of 70m length would be with a curvature of minimum radius of 650m and the remaining 30m length would be tapered so as to facilitate vehicles coming out of fuel station, merging with fast moving through traffic on main carriageway, in a safe and efficient manner.
- 6.1.4 A separator island would be provided in front of the fuel station so that no right turning takes place. The length of this separator island would be determined on the basis of the intersecting points of the edge line of the separator island with the line drawn along the edge of chevron markings as indicated in Figures 1 and 2 of these norms. Its shape for isolated fuel station would be as shown in Figure 1, , and that for the cluster of fuel stations with common service roads, as shown in Figure 2. It would have minimum width of 3m. The width of approaches connecting deceleration and acceleration lanes, along the separator island should be 5.5m.
- 6.1.5 There would be buffer strip from the edge of the ROW and would extend minimum 3m inside the fuel station plot. Its minimum length would be 12m. No structure or hoarding except the approved standard identification sign on pole would be permitted, which may be provided outside the ROW. The buffer strip as well as the separator island would be provided with kerb of minimum 275mm height to prevent vehicles from crossing it or using it for parking purposes.
- The buffer strip in the approach zone should be suitably shaped to cover extra area in the approach zone after provision of acceleration, deceleration lane and connecting approaches and should be properly turfed for aesthetic landscaping.
- 6.1.6 The radius for turning curve would be 13m and that for non-turning curve be from 1.5 to 3m so as to check over speeding while entering or exiting the fuel station,
- 6.1.7 The pavement of the access roads including deceleration, acceleration lanes and connecting approaches would have sufficient designed strength for the

expected traffic. It would have minimum pavement composition of 150 mm thick Granular Sub Base (GSB) overlaid by three layers of Water Bound Macadam (WBM), each of 75 mm thickness topped by 50 mm thick Bituminous Macadam (BM) and 25 mm thick Semi Dense Bituminous Carpet (SDBC).

- 6.1.8 A typical access layout for the new fuel station with relevant details for deceleration and acceleration lanes, connecting approaches, separator island, buffer strip, drainage, signs and markings on un-divided carriageway section of National Highway would be as shown in Fig.1 of these Norms.
- 6.1.9 The typical access layout for cluster of fuel stations, with details for deceleration lane, service road and acceleration lane etc. would be as shown in Fig.2. of these Norms.

6.2 *Access for New Fuel Stations on Divided Carriageway Sections*

- 6.2.1 The access to the fuel station on divided carriageway sections of National Highways shall be through deceleration and acceleration lanes.
- 6.2.2 The deceleration lane would take off from the edge of the paved shoulder and taken upto the edge of ROW, where from the boundary of fuel station would start.. Its length would be 70m, measured along the travel direction on the highway. The acceleration lane would be of 100m length. Its starting stretch of 70m length would be with a curvature of minimum radius of 650m and the remaining 30m tapered so as to facilitate vehicles coming out of fuel stations, merging with fast moving through traffic on main carriageway in a safe manner. The width of deceleration and acceleration lane shall be 5.5m with shoulders of 2.25m.
- 6.2.3 A separator island would be provided in front of the fuel station. The length of this separator island would be determined on the basis of the intersecting points of the edge line of the separator island with the line drawn along the edge of chevron markings as indicated in Figures 3 and 4. Its shape for isolated fuel station would be as shown in Figure 3, and that for the cluster of fuel stations with common service roads, as shown in Figure 4. It would have minimum width of 3m. The width of approaches connecting deceleration and acceleration lanes along separator island should be 5.5m.
- 6.2.4 There would be buffer strip from the edge of the ROW and would extend minimum 3m inside the fuel station plot. Its minimum length would be 12m. No structure or hoarding except the approved standard identification sign on pole, would be permitted which may be provided outside the ROW. The buffer strip as well as the separator island should be provided with kerb of minimum 275mm height to prevent vehicles from crossing it or using it for parking purposes.

The buffer strip in the approach zone should be suitably shaped to cover extra area in the approach zone after provision of acceleration, deceleration lane and connecting approaches and should be properly turfed for aesthetic landscaping.

- 6.2.5 The radius for turning curves should be 13m and that for non-turning curves should be from 1.5 to 3m, so as to check over speeding while entering or exiting the fuel station.
- 6.2.6 The pavement of the access roads including deceleration, acceleration lanes and connecting approaches would have sufficient designed strength for the expected traffic. It would have minimum pavement composition of 150 mm thick GSB overlaid by three layers of WBM, each of 75 mm thickness, topped by 50 mm thick BM and 25 mm thick SDBC
- 6.2.7 The typical access layout for the new fuel station with relevant details for deceleration/acceleration lanes connecting approaches, separator island buffer strip, drainage, signs and marking on divided carriageway sections of National Highway would be as shown in Fig.3 of these Norms.
- 6.2.8 The access for cluster of Fuel Stations situated in close proximity shall be through deceleration lane, service road and acceleration lane as shown in Fig.4 of these norms.
- 6.3 The typical layout for fuel station and signs & marking along National Highways in hilly / mountains terrain and in urban stretches is given in Fig. 5.

7. **Drainage**

There shall be adequate drainage system on the access to the fuel station and inside its area so as to ensure that surface water does not flow over the highway or any water logging takes place. For this purpose, the fuel station and access area would be at least 150 mm below the level at the edge of the highway. The surface water from fuel station and access road would need to be collected in a suitable underground drainage system and led away to a natural course through culvert. Preferably slab culvert with iron grating of adequate strength may be constructed in the approaches so that surface water is drained through the holes in the grating. If pipe culvert is used, then it would be ensured that the inner diameter of the pipe is not less than 1m for proper cleaning and necessary shallow drains are constructed along the access road and at the edge of the fuel station so that the surface water is led to the open drain. The drainage arrangement would be either by the method mentioned above or as per the satisfaction of the Highway Authorities/ Ministry.

8. **Enforcement of Right of Way and Building Line**

The widths of Right of Way (ROW) has been prescribed as 40m to 60m, whereas that for Building Lines as 80m in plain and rolling terrain, in IRC:73-1980, 'Geometric Design Standards for Rural (Non - Urban) Highways'. In hilly / mountainous terrain and urban stretches, the width of Building Line has been prescribed as 70m. While planning the layout for various facilities inside the fuel stations, it has to be ensured that fuel pumps are located beyond Building Lines and Fuel Station office building etc. at a safe distance as prescribed by Fire Department or other authorities. The buffer strip would extend minimum 3m inside the Fuel Station plot, beyond ROW.

9. **System for Signs and Markings**

- 9.1 An adequate system for signs and markings would be provided at the locations of fuel stations for the guidance of the highway users. The pavement markings would be in form of chevron at entry and exit locations, give way for the exit from the Fuel Station. Informatory sign for fuel station would be provided at 1km ahead, 500m ahead and at the entry point.
- 9.2 On undivided carriageway, additional signs for the regulation of entry and exit of the vehicular traffic should be provided on the separator island. Also, an informatory sign should be installed showing the distance of the nearest Fuel Station located in the direction of travel in order to avoid any need for right turnings for accessing the Fuel Station located on the opposite side. This sign should be installed at the location of about 200 m ahead of the opposite side Fuel Station.
- 9.3 The pavement markings would conform to IRC:35-1997, 'Code of Practice for Road Markings', and road signs to IRC: 67-2001, 'Code of Practice for Road Signs' and IRC:SP:55-2001, 'Guidelines on Safety in Road Construction Zones'.
- 9.4 These should be as per Sections 801 and 803 of Ministry's Specifications for Road and Bridge Works, 2001 as updated from time to time.
- 9.5 The system for signs and markings with their type and locations would be as shown in Figures 1, 2, 3 and 4 for the chosen access layout.

10 **Implementation Procedure**

- 10.1 Ministry of Petroleum & Natural Gas/Oil Companies while entertaining any application for the installation of Fuel Station, would supply a copy of these norms to the applicant so that he may assess his position to fulfill the requirements of these norms. Ministry of Petroleum & Natural Gas/Oil Companies would ensure that the plot identified by the applicant conforms to the requirement of these norms in terms of its location, access layout and signs and markings. It shall also be the responsibility of the applicant / owner of Fuel Station to provide the prescribed layout for access as given in Figs. 1/2/3/4/5, as the case may be, while preparing the layout.
- 10.2 For the Fuel Stations along the National Highways vested with NHAI, the field units of NHAI would examine the drawings and documents to ensure that the location and layout conform to these norms. Thereafter these would be forwarded to the Headquarter of NHAI who in turn would forward the case to concerned Chief Engineer of the Ministry with definite recommendations and the documents as per Annex I and the Checklist at Annex II of this Circular.
- 10.3 For Fuel Stations along the National Highways other than those with the NHAI, the concerned Executive Engineer of State PWD/BRO would examine the drawings and documents to ensure that the location and layout conform to these norms. Thereafter the documents as listed in Annex I and the Checklist at Annex II of this Circular would be forwarded, through Chief Engineer of the State PWD/BRO, to the Regional Officer (RO) of Ministry of Road Transport and Highways. The RO after ensuring the fulfillment of the requirements of this circular and norms would then forward the

proposal along with prescribed documents and checklist, to the Ministry and approval given by the Project Chief Engineer (dealing with the State), on the merit of the case.

- 10.4 A License Deed would be required to be signed between the Oil Company wanting to install the Fuel Station (Licensee), and Government of India through their designated officers. The specimen copy of the licence deed is enclosed at Annex-III.
- 10.5 The licence deed would be drawn on a non-judicial stamp paper and all expenses in this regard be borne by the licensee. A one time fee of Rs.1,00,000/- (Rupees one lakh only) would be payable by the licensee to the Government in consideration of this Agreement for the land for which the license is issued. The license deed is not required to be registered. This fee amount would be paid through a Demand Draft in favour of the concerned Pay & Accounts Officer of the Ministry of Road Transport and Highways and would be debitible to the Major Head 1054 (Revenue Receipt Head).
- 10.6 The 'No Objection Certificate' by the Licensing Authority, through their field units, would be issued and construction permitted only after the necessary approval has been given by Ministry and license deed duly signed and delivered.
- 10.7 The approval for setting up of fuel stations would be given within 30 days from the date of receipt of the application if it conforms to all the stipulations of the norms. In case of any query, the date when the resubmitted application is received would be treated as the date of receipt. All the queries would be raised at one time only. The construction would commence only on the receipt of the approval.
- 10.8 The Licence Deed shall also be signed, within 30 days of the submission of the application in the field office if it fulfils all the requirements as mentioned above, between MORTH and Oil Company only, irrespective of the dealership type.
- 10.9 Oil Companies / owner shall be responsible for the construction and maintenance of deceleration / acceleration lanes, service roads, channelisers, drainage arrangement, signs and markings in accordance with the approved layout and specifications conforming to these norms, at his own cost. On completion of the construction in accordance with checklist and conforming to the approvals, a Completion Certificate would be issued by the field unit of NHAI/PWD//BRO/ or any other agency (as the case may be). The concerned Oil Company would be allowed to energize the fuel station only after the issue of such a certificate.
- 10.10 The validity of the Licence Deed for the use of National Highway land for access to fuel station would be for a period of fifteen years after which the same would be required to be renewed which could be for a similar period. During this validity period, the owner shall maintain in good condition the deceleration / acceleration lanes, service roads (free from any potholes/patches), drainage arrangement (clean conditions to allow full discharge of storm water), signs and markings (existing at identified locations with clear required visibility).
- 10.11 Non conformity or any default in respect of the norms and as indicated in Para 1 to 9, Para 10.9 and Para 10.10 above would make the fuel station liable to be de-energized. In cases of clustered fuel stations, responsibility for default or non-conformity to

attract such penalty would be determined through a joint inspection. In such cases, the procedure prescribed in Para 10.12 below would be adopted.

- 10.12 In cases of default(s) found by Highway Authority, joint inspection by the representative of the concerned Oil Company and the Field officer incharge of that NH section would be undertaken to identify each deficiency and time frame for its rectification which in no case should exceed 60 days from the date of joint inspection. The failure to rectify the identified deficiencies within the prescribed time would lead to de-energizing the petrol pump by the concerned Oil Company. The re-energizing would be done only on complete rectification and on the authorization by Field Officer, incharge of NH section.

{Enclosure to Ministry of Road Transport and Highways letter No RW/NH-33023/19/99-DO-III dated 25.09.2003}

List of documents to be submitted for getting approval for installation of new Fuel Station along National Highways

1. Signed copy of license deed. The draft is at Annex III.
2. Certified copy of location plan of the Fuel Station along the National Highway showing details of Right of Way (ROW) of National Highway, access roads to private properties, existing public roads and other developments falling within a reach of 1.5 km in each side of the Fuel Station and carriageway.
3. Certified copy of plan of the proposed Fuel Station showing details of deceleration, acceleration lanes, service road (if provided), buffer strip, fuel pump, office, kiosk, lubritorium, air and water supply, drainage details, signs and markings conforming to applicable figures enclosed with these Norms.
4. Certified copy of sectional view showing elevation of Fuel Station with respect to National Highway and slopes to be provided for adequate drainage and preventing water logging on National Highway.
5. Drainage plan of the Fuel Station.
6. Details of the material for pavement composition for deceleration lane, service road and acceleration lane.
7. Inspection report of the officer inspecting the site of proposed Fuel Station and certificate that all standard conditions have been specified.
8. Detailed explanation for reasons for recommending the exemption from stipulated norms (if required).
9. Undertaking from the oil company/owner that the oil company/owner would pay necessary fee for the use of the National Highway land whenever the fee is asked by the Highway Authorities in future.
10. Undertaking from Oil Company that necessary alteration including complete removal/shifting of the approach roads at its own cost if so required by Ministry, for the development of National Highway or in the interest of safety in this section.
11. Undertaking from Oil Company that they shall take all the action as prescribed in Appendix I to ensure conformity of these Norms.

CHECKLIST

{Enclosure to Ministry of Road Transport & Highways letter No RW/NH-33023/19/99-
DOI/ dated 25.09.2003}

Check list for getting approval for installation of new Fuel Stations along National
Highways

1. General Information
- 1.1 National Highway Number : _____
- 1.2 State : _____
- 1.3 Location : _____
- 1.3.1 (Chainage in km) : _____
- 1.3.2 [Side of NH (Left or right side
of NH towards increasing
chainage/km direction)] : _____
- 1.4 Name of Highway Authority : _____
(NHA/PWD/BRO)
- 1.5 Executive Engineer (or Equivalent) address:
: _____
: _____
- 1.6 Name of Oil Company : _____
(as applicable)
- 1.7 Name and address of Owner of Fuel station:
: _____
: _____

2. Stipulated Norms for Fuel Outlets

| Sl. No. | Item | Measurement at site | MORTH Norms | Whether complying with MORTH Norms** |
|---------|---|---------------------|--|---|
| 1 | <p>Distance from intersection:</p> <p>1.1 Non-Urban (Rural) Stretch.</p> <p>1.1.1 Plain and Rolling Terrain</p> <p>(i) Intersection with NHs/SHs/MDRs.</p> <p>(ii) Intersection with Rural Roads with carriageway width of 3.5m or more</p> <p>(iii) Intersection with Rural Roads and other earth tracks with carriageway width less than 3.5m</p> <p>1.1.2 Hilly/Mountainous Terrain</p> <p>(i) Intersection with NHs/SHs/MDRs</p> <p>(ii) Intersection with all other roads and tracks</p> <p>1.2 Urban Stretches</p> <p>1.2.1 Plain and Rolling Terrain</p> <p>(a) Urban Area with population of more than 20,000 and less than one lakh.</p> <p>(i) Intersection with any category of roads of carriageway width of 3.5m and above.</p> <p>(ii) Intersection with roads of carriageway width of less than 3.5m.</p> <p>(b) Urban Area with population of one lakh and above</p> <p>(i) Intersection with any category of road (irrespective of carriageway width).</p> <p>1.2.2 Hilly and Mountainous Terrain</p> <p>(i) Intersection with any category of road(irrespective of carriageway width)</p> | | <p>1000m</p> <p>300m</p> <p>100m</p> <p>300m</p> <p>100m</p> <p>300m</p> <p>100m</p> <p>100m</p> <p>100m</p> | <p>Yes/No</p> <p>Yes/No</p> <p>Yes/No</p> <p>Yes/No</p> <p>Yes/No</p> <p>Yes/No</p> <p>Yes/No</p> <p>Yes/No</p> <p>Yes/No</p> |
| 2 | Is it a part of Rest Area complex? | | | Yes/No |
| 3 | <p>Distance from nearest Fuel Station</p> <p>(a) Plain and rolling terrain in non-urban areas.</p> <p>(i) Undivided carriageway</p> <p>(ii) Divided carriageway</p> | | <p>Minimum 300 m.</p> <p>Minimum 1000 m</p> | <p>Yes/No</p> <p>Yes/No</p> |

| (b) Hilly terrain and urban stretches | | Minimum 300m. | Yes/No |
|---------------------------------------|---|---|---------|
| 4 | Distance from Check barrier/Toll Plaza | Minimum 1000 m | Yes/No |
| 5 | Provision of 7.0 m / 5.5 m wide service / connecting road | Necessary at clustering of Fuel Station | Yes/No |
| 6 | Gradient of Highway section | Maximum 5% | Yes/No |
| 7 | Slope of Fuel Station Premises/ Services Area for drainage purpose | Minimum 2% | Yes/No. |
| 8 | Width of Frontage | Minimum 35 m /20 m | Yes/No. |
| 9 | Length of Buffer Strip | Minimum 12 m | Yes/No. |
| 10 | Width of Buffer Strip extending inside ROW. | Minimum 3 m | Yes/No. |
| 11 | Is there only one structure of approved standard identification sign on pole with existing on buffer strip? | No structure or hoarding except approved standard identification sign on pole is allowed on buffer strip. | Yes/No. |
| 12 | Height of kerb for buffer strip | Minimum 275 mm | Yes/No. |
| 13 | Is the space from outer edge of buffer strip to the edge of road turfed and raised with provision of 275 mm kerbs, with no other structure? | No structure or hoarding or parking space is allowed in the space in front of buffer strip. | Yes/No. |
| 14 | Radius of Turning Curve | Minimum 13 m | Yes/No. |
| 15 | Radius of Non-turning curve | Minimum 1.5 m Maximum 3 m | Yes/No. |
| 16 | Minimum downward slope of access roads towards the fuel station. | Minimum 2% | Yes/No. |
| 17 | Difference in elevation from edge of road and edge of buffer strip | Minimum 15 cm | Yes/No. |
| 18 | Provision of Culvert, designed for drainage according to IRC:SP-13 | Minimum 1m dia (pipe culvert) Minimum 1m span (slab culvert) | Yes/No. |
| 19 | Provision of proper drainage arrangement for fuel station premises | Drawing showing drainage arrangement as per satisfaction of highway authorities to be submitted | Yes/No. |
| 20 | Provision of adequate signs and markings as per the drawings. | Minimum requirement as shown in the Drawing. | Yes/No. |

** If norms are not satisfied, detailed explanation needs to be given, otherwise the application will not be considered. In all cases supporting documents as per Annex. I have to be submitted, otherwise the case will be summarily rejected.

LICENSE FOR THE USE OF NATIONAL HIGHWAY LAND

AGREEMENT TO construct an approach / access road with necessary provision for drainage, signage and markings, to _____ abutting on the _____ boundary of _____ in Kilometer _____ in survey no. _____ of the village _____ in the Taluka of _____ of the _____ District.

AN AGREEMENT made this _____ day of _____ Year Two thousand _____ between the President of India (hereinafter called the Government which expression shall, unless excluded by or repugnant to the context, include his successors in Office and assigns) of the one part and (name and address of Oil Company) hereinafter called "the Licensee"/"the Licensees" (which expression shall, unless excluded by or repugnant to the context, include the said licensee's successor/Licensees successors, heirs, executors, administrators and assigns) of the other part.

2. WHEREAS THE Licensee has/licenses have applied to the Government for permission to construct on the Government land an approach road with necessary provision for drainage, signs and markings to his / their property abutting on the boundary of _____ in Kilometer _____ in the _____ Taluka of the _____ District more particularly described in the Schedule annexed hereto and shown in the drawing attached hereto (hereinafter referred to as "the said premises").
3. AND WHEREAS THE GOVERNMENT have agreed to grant such permission on the terms and conditions hereinafter mentioned.
4. Now, this Agreement witnesseth that, in consideration of the terms and conditions hereinafter contained and on the part of the licensee/licenses to be observed and performed, the Government hereby grants to be licensee/licenses permission to construct an access / approach road with necessary drainage works, signs and markings to the said premises as per approved drawings attached subject to the following terms and conditions, namely :-
 - i. That the licensee/licenses shall within three months from date of receipt of the permission, but without interfering in anyway with the highway traffic, complete the construction of the approach road (including deceleration/acceleration lanes) and shall make provision for drainage, signs and markings at his own cost and to the full satisfaction of the Executive Engineer/Divisional Engineer in-charge/Project Director in-charge of the National Highway according to the approved drawings and specifications. The said approach road shall not be brought into use after its completion until the Executive Engineer/Divisional Engineer/Project Director, Government/NHAI gives a completion certificate after satisfying himself that it has been completed as per the sanctioned drawings and specifications. The Fuel Station would be

energized by the concerned oil company only after completion certificate has been issued by the Highway Authority.

- ii. That on the completion of the said work, that part of the approach road, which lies within the limits of Government road land together with any culvert or drain therein constructed shall become the absolute property of the Government subject to the rights of the licensee/licensees to use the same for ingress and egress.
- iii. The licensee/licensees shall at his/their own cost keep the said approach road, and any culvert or drain therein, in proper repair and condition to the satisfaction of the Executive Engineer/Divisional Engineer, Government / Project Director, NHAI. The approach roads would be considered in proper conditions when they are free from potholes and patches. The culverts and drains would be kept in clean conditions to allow full discharge of the storm water, signs and markings to be kept at their respective locations and in clean condition for visibility at all times.
- iv. That within Six months of a notice duly given to the licensee/licensees in this behalf, the licensee/licensees shall at his/their own cost remove the said approach road or any drainage work constructed in connection therewith and restore the land to its original condition when required to do so by the Government or by any person duly authorised on its behalf. The Licensee/licensees shall not be entitled to any compensation on account of such removal and restoration.
- v. That the approach road shall not be used for any purpose other than that of access to and egress from the premises of the licensee/licensees on to the Government road.
- vi. That the licensee/licensees shall not, without the prior permission in writing of the Executive Engineer/Divisional Engineer, (Government) / Project Director (NHAI) in any way extend or alter the said approach road or any culvert or drainage therein.
- vii. That the licensee/licensees shall at all times permit any duly authorized officer or servant of the Government/NHAI to inspect the said approach road including any culvert or drainage therein. He shall keep the said approach road clear and shall not be entitled to close any right of way over or in respect of the same against Government, or any member of the public.
- viii. That the licensee/licensees shall be liable for any loss or damage caused to the Government by drain obstruction or any other like cause due to the said approach road or the drainage work.
- ix. That the permission granted by this license shall not in any way be deemed to convey to the licensee/licensees any right into or over, or any interest in Government land other than that herein expressly granted.

- x. That in case the said approach road is destroyed, this license shall determine and the license/ licensees shall not be entitled to claim any right to construct another approach road in lieu of that so destroyed.
 - xi. That during the subsistence of this license, the said approach road including the road drainage shall be deemed to have been constructed only by the consent and permission of the Government so that the right of the licensee/licensees to use the same shall not become absolute and indefeasible by lapse of time.
 - xii. That, if the licensee fails/licensees fail to execute any work which he has/they have agreed under this agreement to the full satisfaction of the Executive Engineer/Divisional Engineer, Government/Project Director, NHAI, the work shall be executed by the Executive Engineer/Divisional Engineer/GM/DGM at the cost of licensee/licensees; and the expenditure incurred shall be recoverable from the licensee as an arrear of land revenue without prejudice to any other remedies which may be open to Government in this behalf.
 - xiii. That the licensee/licensees shall not sell, transfer or otherwise dispose of the premises without obtaining from the transferee a duly executed agreement with the Government embodying the terms and conditions herein before.
 - xiv. A one time fee of Rs.1,00,000/- (Rupees one lakh only) shall be payable to execute this Agreement for the land for which the license is issued.
 - xv. That if and when parallel service roads are constructed the access to fuel station shall be from the service road alone as determined by the Executive Engineer/Divisional Engineer / GM/DGM and no claim/ compensation shall be entertained on that account.
 - xvi. That this Agreement shall remain in force for fifteen years from the date of execution in the first instance and be terminable by a notice of 6 months and the permission may or may not be renewed after expiry of the said period.
 - xvii. That the licence hereby granted shall not be transferable.
 - xviii. That the licensee/licensees shall bear the cost of Stamp and attestation of this Agreement.
5. Situations given below would be treated as violations of the license deed agreement and the Government would be within its right to ask the concerned Oil Company to de-energize the Fuel Station;
- i. Non-maintenance of deceleration lane, acceleration lane service road, drainage system, channelisers, markings, signs and other traffic control devices in good operating conditions (as specified in Para 4 (iii)), during the period of license deed and not rectifying the short comings within the specified period as pointed out by Executive Engineer / Divisional Engineer/ PD, NHAI, incharge of the National Highway Section.

- ii. Non-compliance for revising the layout of access as directed by Executive Engineer / Divisional Engineer incharge / Field Unit (NHAI) of the National Highway Section in writing within specified period.
6. Notwithstanding anything contained in clause 4, this licence can be cancelled at any time by the licensor through the Executive Engineer/Divisional Engineer for breach of any of the terms and conditions of license and the licensee/licensees shall not be entitled to any compensation for loss caused to him/them by such cancellation nor shall be absolved from any liability already incurred by him/them under this Agreement. The licensee/licensees shall at his/their own cost remove approach road lying within the boundary of the Government land and restore the Government land to its original condition. In the event of licensee/licensees refusing to do so, the restoration of the Government to its original condition shall be done by the Executive Engineer/Divisional Engineer, at the cost of licensee/licensees and the expenditure incurred shall be recoverable from the licensee/licensees as an arrear without prejudice to any other remedies which may be fixed by Government in this behalf.
7. This Agreement may be executed in two counterparts, each of which when executed and delivered shall constitute an original of this Agreement.

IN WITNESS WHEREOF this agreement is executed in two parts by the parties hereto on the date first above mentioned.

Signed by Shri (Name in full) the license / licensees

Signed by Shri (Name in Full) for and on behalf of the President of India

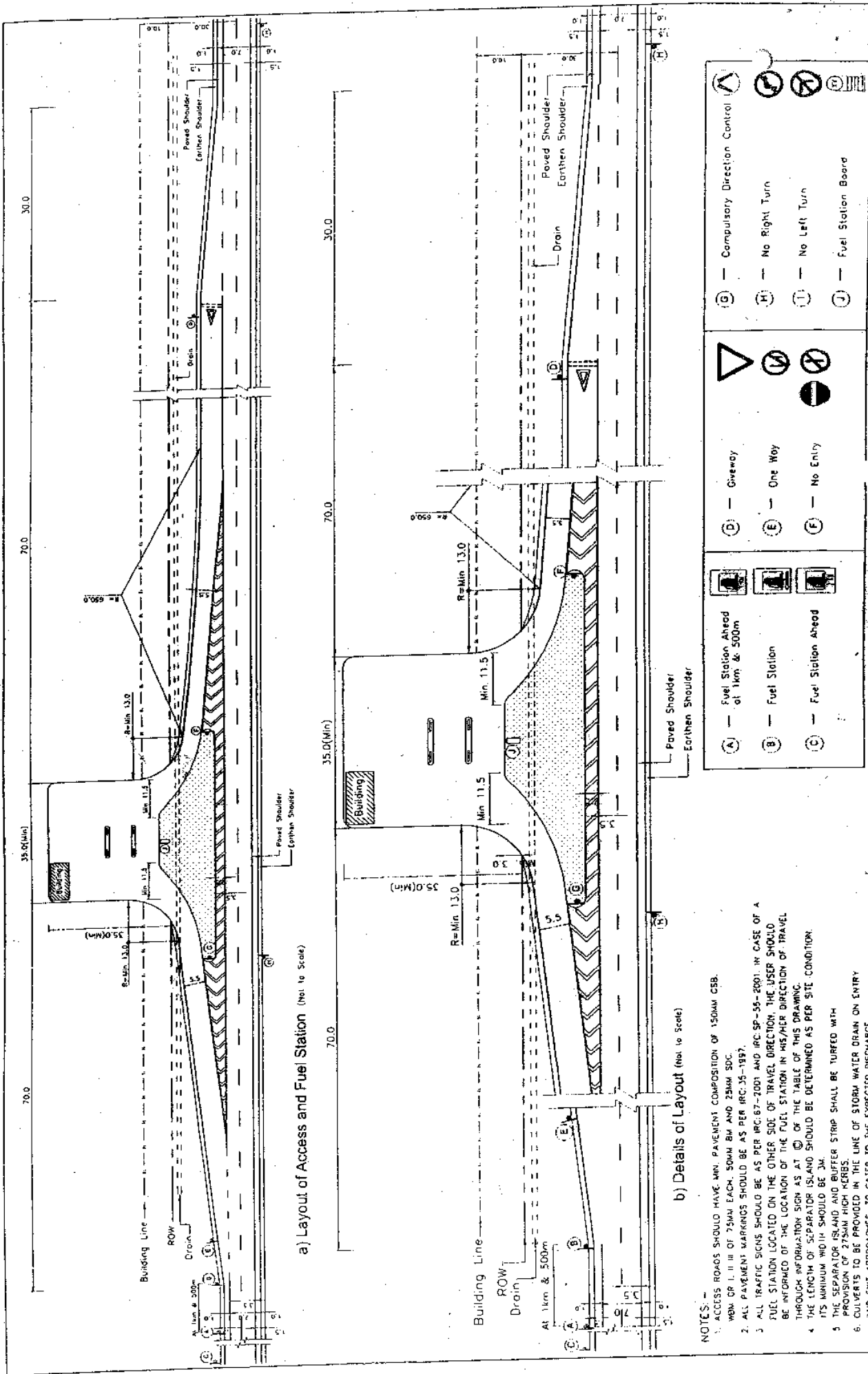
In the presence of

- | | |
|--|--|
| 1. Name in full (signature) with designation | 1. Name in full (signature) with designation |
| 2. Name in full (signature) with designation | 2. Name in full (signature) with designation |

N.B. Wherever alternatives such as his/their Licensee/Licensees has/have etc. are given, only applicable portions should be typed in the fair license deed.

SCHEDULE

(here type the schedule referred to in clause 2)

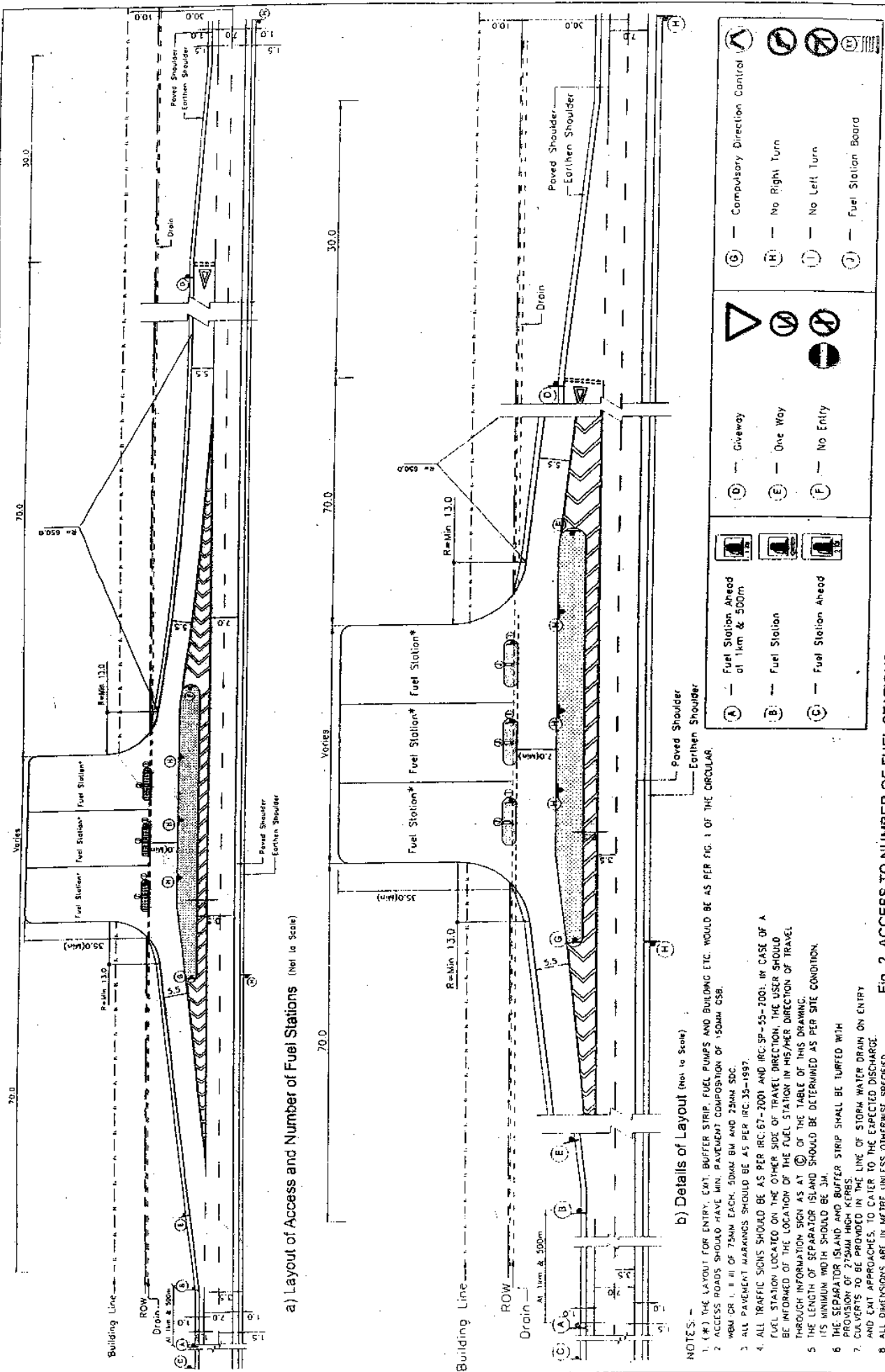


a) Layout of Access and Fuel Station (Not to Scale)

b) Details of Layout (Not to Scale)

- NOTES: -
- ACCESS ROADS SHOULD HAVE MIN. PAVEMENT COMPOSITION OF 150MM C.B. W.B. OR 1:1:11 OF 75MM EACH, 50MM B.M. AND 25MM S.D.C.
 - ALL PAVEMENT MARKINGS SHOULD BE AS PER IRC:35-1957.
 - ALL TRAFFIC SIGNS SHOULD BE AS PER IRC:67-2001 AND IRC:SP-55-2001. IN CASE OF A FUEL STATION LOCATED ON THE OTHER SIDE OF TRAVEL DIRECTION, THE USER SHOULD BE INFORMED OF THE LOCATION OF THE FUEL STATION IN HIS/HER DIRECTION OF TRAVEL THROUGH INFORMATION SIGN AS AT (C) OF THE TABLE OF THIS DRAWING.
 - THE LENGTH OF SEPARATOR ISLAND SHOULD BE DETERMINED AS PER SITE CONDITION. ITS MINIMUM WIDTH SHOULD BE 3M.
 - THE SEPARATOR ISLAND AND BUFFER STRIP SHALL BE TURFED WITH PROVISION OF STORM WATER DRAIN ON ENTRY AND EXIT APPROACHES TO CATER TO THE EXPECTED DISCHARGE.
 - CULVERTS TO BE PROVIDED IN THE LINE OF STORM WATER DRAIN ON ENTRY AND EXIT APPROACHES TO CATER TO THE EXPECTED DISCHARGE.
 - ALL DIMENSIONS ARE IN METRE UNLESS OTHERWISE SPECIFIED.

Fig. 1 ACCESS TO FUEL STATION ON UNDIVIDED CARRIAGEWAY SECTION OF NATIONAL HIGHWAY

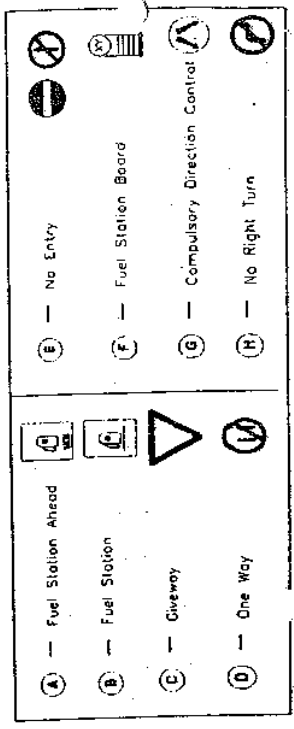
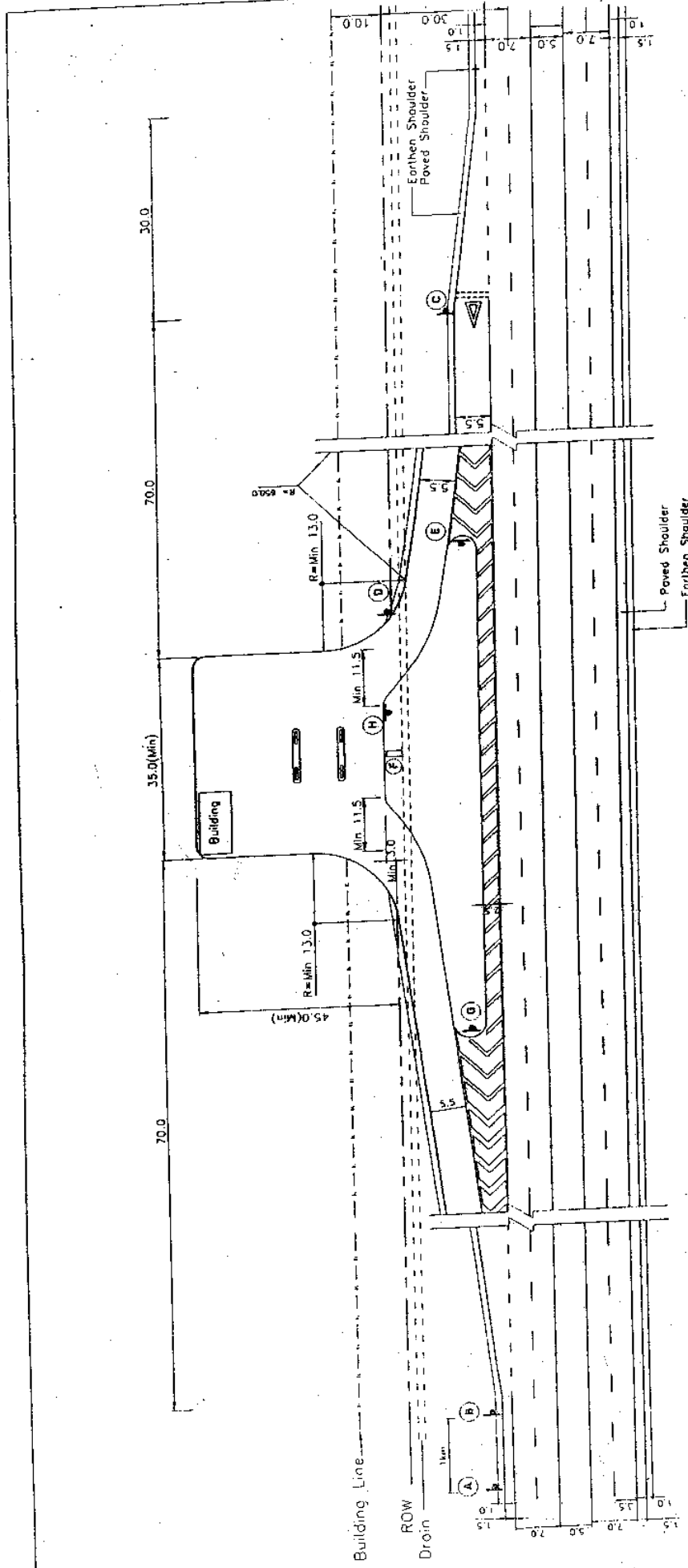


a) Layout of Access and Number of Fuel Stations (Not to Scale)

b) Details of Layout (Not to Scale)

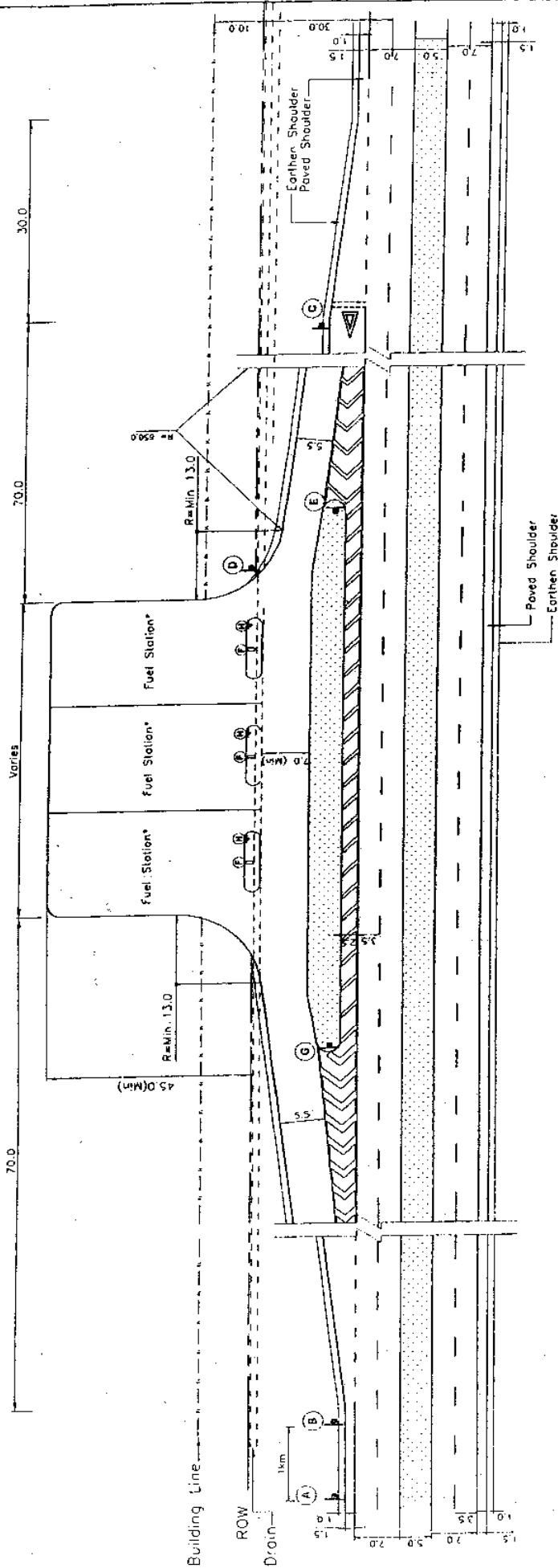
- NOTES:—
1. (A) THE LAYOUT FOR ENTRY, EXIT, BUFFER STRIP, FUEL PUMPS AND BUILDING ETC. WOULD BE AS PER FIG. 1 OF THE CIRCULAR.
 2. ACCESS ROADS SHOULD HAVE MIN. PAVEMENT COMPOSITION OF 150MM C5B, WBM OR 1 II OF 75MM EACH, 50MM BM AND 25MM SDC.
 3. ALL PAVEMENT MARKINGS SHOULD BE AS PER IRC.35-1997.
 4. ALL TRAFFIC SIGNS SHOULD BE AS PER IRC.67-2001 AND IRC.SP-55-2001. IN CASE OF A FUEL STATION LOCATED ON THE OTHER SIDE OF TRAVEL DIRECTION, THE USER SHOULD BE INFORMED OF THE LOCATION OF THE FUEL STATION IN HIS/HER DIRECTION OF TRAVEL THROUGH INFORMATION SIGN AS AT (C) OF THE TABLE OF THIS DRAWING.
 5. THE LENGTH OF SEPARATOR ISLAND SHOULD BE DETERMINED AS PER SITE CONDITION. ITS MINIMUM WIDTH SHOULD BE 3M.
 6. THE SEPARATOR ISLAND AND BUFFER STRIP SHALL BE TURFED WITH PROVISION OF 250MM HGS IN THE LINE OF STORM WATER DRAIN ON ENTRY.
 7. CURBS TO BE PROVIDED TO CARRIER TO THE EXPECTED DISCHARGE.
 8. ALL DIMENSIONS ARE IN METRE UNLESS OTHERWISE SPECIFIED.

Fig. 2 ACCESS TO NUMBER OF FUEL STATIONS ON UNDIVIDED CARRIAGEWAY SECTION OF NATIONAL HIGHWAY

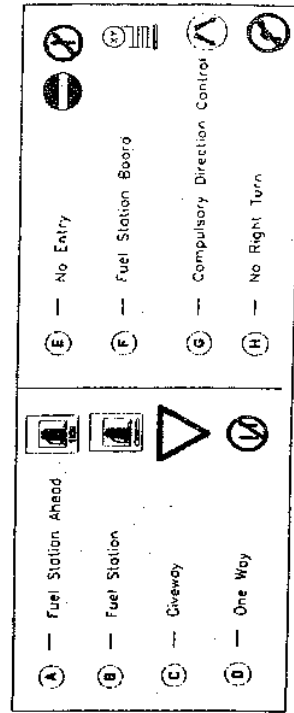


- NOTES: -
1. ACCESS ROADS SHOULD HAVE MIN. PAVEMENT COMPOSITION OF 150MM CSR, 75MM EACH, 50MM BM AND 25MM SDC.
 2. ALL PAVEMENT MARKINGS SHOULD BE AS PER IRC:35-1997.
 3. ALL TRAFFIC SIGNS SHOULD BE AS PER IRC:67-2001 AND IRC:SP-55-2001.
 4. THE LENGTH OF SEPARATOR ISLAND SHOULD BE DETERMINED AS PER SITE CONDITION. ITS MINIMUM WIDTH SHOULD BE 3M.
 5. THE SEPARATOR ISLAND AND BUFFER STRIP SHALL BE TURFED WITH PROVISION OF 275MM HIGH KERBS.
 6. CULVERTS TO BE PROVIDED IN THE LINE OF STORM WATER DRAIN ON ENTRY AND EXIT APPROACHES, TO CATER TO THE EXPECTED DISCHARGE.
 7. ALL DIMENSIONS ARE IN METRE UNLESS OTHERWISE SPECIFIED.

Fig. 3 ACCESS TO FUEL STATION ON DIVIDED CARRIAGEWAY SECTION OF NATIONAL HIGHWAY

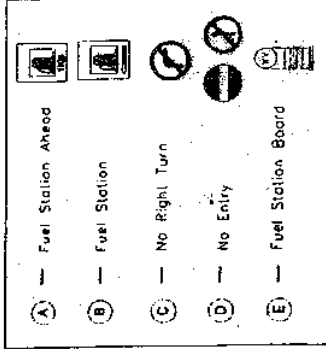
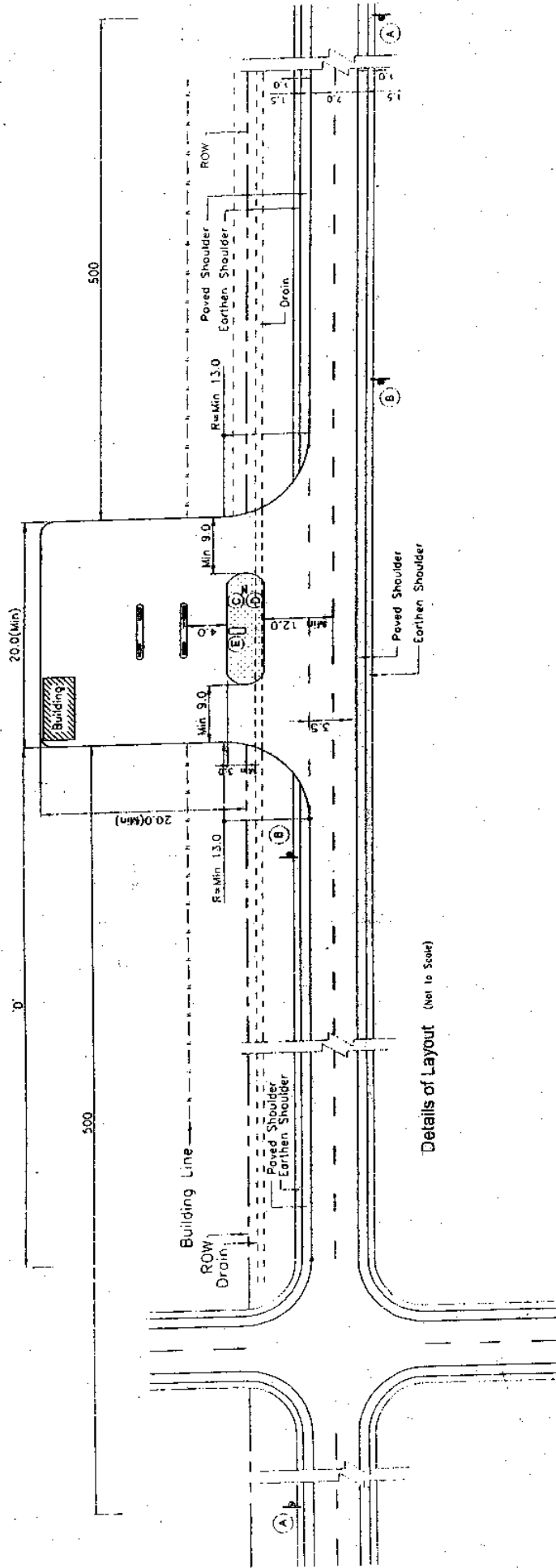


(Not to Scale)



- NOTES -
- (*) THE LAYOUT FOR ENTRY, EXIT, BUFFER STRIP, FUEL PUMPS AND BUILDING ETC WOULD BE AS PER FIG.3 OF THE CIRCULAR.
 - ACCESS ROADS SHOULD HAVE MIN. PAVEMENT COMPOSITION OF 150MM GSB, WBM OR 1111 OF 75MM EACH, 50MM BM AND 25MM SDC.
 - ALL PAVEMENT MARKINGS SHOULD BE AS PER IRC.35-1957.
 - ALL TRAFFIC SIGNS SHOULD BE AS PER IRC.67-2001 AND IRC.SP-55-2001.
 - THE LENGTH OF SEPARATOR ISLAND SHOULD BE DETERMINED AS PER SITE CONDITION. ITS MINIMUM WIDTH SHOULD BE 3M.
 - THE SEPARATOR ISLAND AND BUFFER STRIP SHALL BE TURFED WITH PROVISION OF 2750MM HIGH KERBS.
 - CULVERTS TO BE PROVIDED IN THE LINE OF STORM WATER DRAIN ON ENTRY AND EXIT APPROACHES, TO CATER TO THE EXPECTED DISCHARGE.
 - ALL DIMENSIONS ARE IN METRE UNLESS OTHERWISE SPECIFIED.

Fig. 4 ACCESS TO FUEL STATION ON DIVIDED CARRIAGEWAY SECTION OF NATIONAL HIGHWAY



- NOTES:-
1. 'D' IS MINIMUM 300m WHEN INTERSECTING ROAD IS NH/SH/MSR AND 15 MINIMUM 100m FOR OTHER ROADS.
 2. APPROACHES SHOULD HAVE MIN. PAVEMENT COMPOSITION OF 150MM CSB, WBM GR 1, II OR 75MM EACH, 50MM BM AND 25MM SDC
 3. ALL PAVEMENT MARKINGS SHOULD BE AS PER IRC:35-1997.
 4. ALL TRAFFIC SIGNS SHOULD BE AS PER IRC:67-2001 AND IRC:SP-55-2001.
 5. THE LENGTH OF SEPARATOR ISLAND SHOULD BE DETERMINED AS PER SITE CONDITION. ITS MINIMUM WIDTH SHOULD BE 3M
 6. THE BUFFER STRIP SHALL BE TYPED WITH PROVISION OF 275MM HIGH KERBS
 7. CULVERTS TO BE PROVIDED IN THE LINE OF STORM WATER DRAIN ON ENTRY AND EXIT APPROACHES, TO CATER TO THE EXPECTED DISCHARGE.
 8. ALL DIMENSIONS ARE IN METRE UNLESS OTHERWISE SPECIFIED.

Fig. 5 ACCESS TO FUEL STATION ON NATIONAL HIGHWAY IN MOUNTAINOUS TERRAIN AND URBAN STRETCHES