Quality care is only fair...

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PROCEDURES FOR SELECTION OF APPLICABLE DESIGNS FOR ROADS INTERSECTIONS

1 GENERAL

For highway design, intersections are the primary element. Recognising the need to provide properly designed intersections on the Road System, type designs have evolved for a wide variety of intersection types, road widths and traffic flows. The designs are illustrative and can be fitted into most situations with minor modifications. Complicated intersections would, however, need to be specially designed and such cases must be tackled separately. The designs presented are essential for rural situations: however, these could also be applied to a semi-urban situation.

2 SCOPE OF TYPE DESIGNS

2.1 AT-GRADE INTERSECTION

The designs presented cover at-grade intersections of 4-lane/ 2-lane/Intermediate Lane /single lane roads with 4-1ane/2-lane/Intermediate Lane/ single lane Roads , intersecting roads which could be of the category of National Highway (NH), State Highway (SH), Major District Road (MDR), Other District Road (ODR) or Village Road (VFR).

2.2 CHOICE OF APPROPRIATE STANDARD DESIGN

The choice of intersection design is governed essentially by traffic volume and the number of lanes on each of the intersecting roads and the angles of crossing.

2.2.1 TRAFFIC

Traffic figures wherever indicated are the average daily traffic (ADT) volume in PCUs at the end of the design period (generally 10 years). Peak hour traffic has been assumed as 8 per cent of ADT.

2.2.2 DESIGN VEHICLE

Designs developed are suitable for plying of single-unit truck/bus chassis and for semi-trailers up to a wheelbase of 12 m.

2.2.3 DESIGN SPEED

The design speed adopted for the design of auxiliary lanes is 60 per cent of the highway speed in open areas. However, turning speed for right-angle turns at intersections is restricted to 20 kmph and left turns to a maximum of 30 kmph.

2.2.4 TURNING RADIUS

A minimum turning radius of 15 m has been adopted for right turns which will permit a turning speed of 20 kmph. The maximum radius for left turns is 30 m which will permit a turning speed of 30 kmph. However, for the lower category of roads like Village Roads, a turning radius of 15 m has been adopted, which will also hold good for any permitted access connections to adjacent properties.

2.2.5 LANE WIDTH AND NUMBER OF LANES

Minimum lane width of 3.5 m has been provided. The number of lanes to be provided at the intersection will be governed by peak hour traffic volume in each direction of travel. For single-lane movements, minimum width of 5.5 m is adopted to enable vehicles to move past a stalled car. For two-lane roads between kerbs, a minimum 7.5 m width is provided. The maximum capacity of a lane is assumed to be 1200 PCU/HR. Widening of the carriageway is achieved by a taper of not less than 1 in 15.

2.2.6 LENGTH OF AUXILIARY LANES

Three types of auxiliary lanes are provided at intersections. These are right turn storage lanes, acceleration lanes and deceleration lanes. The length of these lanes is based on the estimated volume of traffic entering or leaving the main road and the speed of travel on the main road and side road.

2.2.7 WIDTH OF THE MEDIAN ISLAND

Minimum width of 1.5 m has been adopted where these are introduced in the absence of a continuous median. The minimum length of Median Island is kept as 6 m. The maximum length will be determined by site requirements.

2.2.8 CHANNELISING ISLANDS

Channelizing islands have been provided depending on the volume of turning traffic and the importance of the road. The minimum size of Directional Island provided is 4.5 sq. m. The island is offset from the normal vehicle path by 0.3 to 0.6 m. Where an island is provided, the intersection area is reduced by the use of compound curves.

2.2.9 KERBS

All kerbs at central and directional islands are of semi-barrier type.

2.2.10 TRAFFIC CONTROL DEVICES

Road signs are provided as per IRC: 67and markings as per IRC: 35.

3 INTERSECTION TYPE AND SELECTED GEOMETRY

3.1 MAJOR-INTERSECTIONS

In this type of intersection, treatment is given to prevent highspeed crossing movements by limiting the crossing speed and by requiring the minor road traffic to give way and allowing major road traffic to proceed through the intersection unimpeded. Different treatments for Intersection areas have been developed to take care of the likely crossing road situations in rural areas. Situations covered vary from single lane road carrying traffic less than 5000 PCUs/day and crossing Village Roads carrying traffic of only 1000 PCUs/day to 4 lanes divided road intersecting another NH or SH of equal importance. Choice of intersection type will depend on the layout of the particular site, traffic pattern, traffic volumes, the land available for improvement, topography, pedestrian movements and planned ultimate development of the road.

3.2 T-INTERSECTIONS AND Y-INTERSECTIONS

In this type of intersection, normally preference is assigned to the through road while traffic on the terminating road must give way. The angle of intersection, as far as possible, is kept as 90 degrees but angles up to 60 degrees are permissible. At more acute crossings priority to traffic is not obvious; driver's visibility is restricted and undesirably high speeds turning are possible. Such intersecting arm is turned around to bring it to meet at an angle of 60 to 90 degrees. Flaring and treatment at intersections depend on the importance of terminating the road and the volume of traffic on it. An appropriate design can be selected on this basis.

4 TRAFFIC CONTROL DEVICES AND ROAD SAFETY WORKS

The highways being built under different road development programmes are adopting the geometric standards specifications, signage, road markings etc. as per the requirements enclosed in the codes of practice and the standards of the Indian Roads Congress supported by the Ministry's specifications. For various highways to ensure long-term road safety, the following suitable engineering measure is considered necessary for an implementation to help in improving road safety:

Traffic Control Devices, Road Safety Devices and Road Side Furniture shall comprise road signs, road markings, object markers, hazard markers, studs, delineators, attenuators, safety barriers, pedestrian guard rails, boundary stones, km stones, etc.

5 BASIC DESIGN PRINCIPLES (As per IRC 41-1994)

5.1 UNIFORMITY AND SIMPLICITY

Intersections must be designed and operated for simplicity and uniformity. The design must keep the capabilities and limitations of drivers, pedestrians and vehicles using the intersection. It should be based on a knowledge of what a driver will do rather than what he should do.

A complex design which requires complicated decision-making by drivers should be avoided. There should be no confusion and the path to be taken by the drivers should be obvious. Undesirable shortcuts should be blocked. On an average trip route, all the intersections should have uniform design standards so that even a newcomer to the area anticipates what to expect at an intersection. Some of the major design elements in which uniformity is required are design speed, intersection curves, vehicle turning paths, super elevations, level shoulder width, speed change lane lengths, channelization, types of curves and type of signs and markings.

5.2 MINIMISE CONFLICT POINTS

This can be done by:

(i) Space separation: by access control islands through channelizing.

(ii) Time separation: by traffic signals on waiting lanes.

5.3 SAFETY

Prioritisation of intersection improvements can be done using the relationship of accident frequency with traffic volumes. A simple equation developed in the U.K. is in the form

$$C = \frac{A}{\sqrt{Q}q}$$

Where A is the number of accidents in a year, Q and q are traffic volumes on the main and side roads in thousands of vehicles per day. Intersections with higher C values are considered for priority treatment.

5.4 DESIGN DATA REQUIRED

i. An index/location plan on the scale of about 1: 10,000 to 1:20,000 shows the intersection under consideration and the road/rail/river network in the area.

ii. A base plan of the intersection site on the scale of 1:500. Where two or three intersections are located close together, an additional base plan on a scale of 1: 1,000 should be prepared showing all the intersections affected. It is important to maintain this scale which is being adopted as a measure of uniformity and also to ensure that sufficient length of roads

and a fairly detailed account of existing features are shown in a drawing sheet of manageable size. The existing roads and salient features like road land boundary, location of structures trees, service lanes etc., should be shown for a length of about 200 m for each road merging at the intersections. If the terrain is not plain and/or there is too much variation of ground level at the site, contours at 0.5-metre intervals should also be marked on the base plan and additional longitudinal sections given along the centre line of intersecting roads.

iii. The peak hour design traffic data: - The peak hour design traffic data should give its compositional and directional break-up. A sample proforma is to be used to report the compositional and directional break up and compute the volume in PCUs for one leg of a four-legged intersection.

6 DESIGN SPEED

i. Open highway or "approach" speeds.

ii. Design speed for various intersection elements. This is generally 40 per cent of approach speed in built-up areas and 60 per cent in open areas.

iii. Transition speeds for the design of speed change elements i.c. changing from entry/exit speed at the intersection to merging/diverging speed.

7 RADIUS OF CURVE AT INTERSECTION

The radii of intersections curves depend on the turning characteristics of design vehicles their numbers and the speed at which vehicles enter or exit the intersection area.

8 DESIGN SPEED AND MINIMUM RADII

Design Speed Km/Hr	Minimum Inner Radii
18.5	18
15	23
20	27
30	32
40	37
50	41
75	50
100	57
125	62
150	64
Straight	----

9 DESIGN VEHICLE

IRC: 3-1983 recognises three types of road design vehicles namely single unit truck, semi-trailer and truck trailer combination. Passenger cars are not considered as designed vehicles in rural areas as savings in construction using this vehicle cannot be justified economic basis. As such, nearly all intersection curves in rural areas should be designed for either single unit trucks/buses of 11/12 m length, or semi-trailer combination of 16 m length or a truck-trailer combination of 18m length. On most rural highways semi-trailer combination would be used for design.

10 RURAL SECTION

10.1 CURVE DESIGN

Design for single unit truck is preferred for intersection with local minor roads. Semi-trailer design is preferred for major road intersections where large paved areas result, channelization also becomes essential.

10.2 WIDTH OF LENGTH AT INTERSECTION

Inner Radius	Design Speed Km/Hr	Single Lane Width (m)	Single Lane Width Space to pass stationary vehicles	Two-lane width for one- or two-way traffic
10.5	18	5.50	10.53	11.5
15	23	5.50	9.50	10.5
20	27	5.00	9.00	10.0
30	32	4.50	8.00	9.0
40	37	4.50	7.5	9.0
50	41	4.50	7.00	8.0
75	50	4.50	7.00	8.0
100	57	4.50	7.00	8.0
125	62	4.50	6.50	8.0
150	64	4.50	6.50	8.0
---	---	4.50	6.00	7.0

10.3 LENGTH OF RIGHT TURNING LANE

Design speed (Km/Hr)	Length of storage lane including 30-45m taper
120	200
100	160
80	130
60	110
50	90

10.4 ACCELERATION LANES

An acceleration lane should be designed so that vehicles turning left from the minor road may join the traffic flow on the major road at approximately the same speed as that of the nearside lane of traffic on the major road. Acceleration lanes also improve capacity by enabling the use of short traffic gaps and by providing storage space for traffic waiting to merge when large traffic gaps occur. Acceleration lanes are recommended where the future traffic on the acceleration lane is accepted to be more than 1,000 PCUs per day.

10.5 MINIMUM ACCELERATION LANE LENGTH

Highway		Acceleration Length (m) for entrance curve design speed (kmph)								
Design speed kmph	Speed Reached Kmph	Stop Conditions	25	30	40	50	60	65	75	80
		and initial speed(km/hr)								
		0	20	30	35	40	50	60	65	70
50	40	60	-	-	-	-	-	-	-	-
65	50	120	100	75	70	40	-	-	-	-
80	60	230	210	190	180	150	100	50	-	-
100	75	360	340	330	300	280	240	160	120	50
110	85	490	470	460	430	400	380	310	250	180

10.6 MINIMUM DECELERATION LANE LENGTH

Highway		Deceleration Length (m) for entrance curve design speed (kmph)								
Design speed kmph	Speed Reached Kmph	Stop Conditions	25	30	40	50	60	65	75	80
		For the average running speed of the exit curve								
		0	20	30	35	40	50	60	65	70
50	45	70	60	50	40	-	-	-	-	-
65	60	90	90	80	70	60	50	-	-	-
80	70	130	120	120	110	100	90	70	50	-
100	85	160	150	150	140	130	125	100	90	70
105	90	175	160	160	150	150	130	120	100	85
110	95	190	180	175	170	160	150	130	120	100

10.7 DECELERATION LANE

Deceleration lanes are of greater value than acceleration lanes because the driver of a vehicle leaving the highway has no choice but to slow down any following vehicles on the through lane if a deceleration lane is not provided. Deceleration lanes are needed on the near side for left-turning traffic and on the right-turn lane where provision is made for right-turning traffic.

The length of near side deceleration lanes should be sufficient for vehicles to slow down from the average speed of traffic in the near side lane to the speed necessary for negotiating the curve at the end of it; to make deceleration lanes effective, the curve radius must permit a speed of at least 30-40 kmph (not less than 30 m). Near side, deceleration lanes are recommended for intersections on roads where the future traffic on the deceleration lane is expected to be more than 750 p.c.u's/day.

Where the number of traffic lanes on a road is reduced immediately beyond a slip road, to avoid entrapping through vehicles in the slip road the carriageway should be constructed to full width to the exit nose and a taper length of 180 m provided beyond it.

Right-turn deceleration lanes in the central reserve should be provided at all gaps for right-turning traffic on dual-carriageway roads. On three-lane roads, the centre lane should be marked for right-turning traffic where the product of estimated future cutting flows in p.c.u's/per day is more than one million. The widening of two-lane single-carriageway roads to provide right-turn deceleration lanes in the centre of the road should be considered at the same levels of flow as for three-lane roads. These provisions may be made for lesser flows where accident records warrant them, or on two-lane roads where they can readily be incorporated in realignment or another scheme. On overloaded three-lane roads or where the road junction is on a crest, it is usually desirable to construct short lengths of dual carriageways and provide right-turn deceleration lanes for right-turning traffic.

The lengths of right-turn deceleration lanes should be sufficient for vehicles to slow down to a stop from the average speed of vehicles in the off-side lane omission of these lanes will usually result in numerous head-to-tail collisions. These lanes should not be less than 3 m wide and parallel-sided with entry and return radii of 180 m giving a taper of 30-45 m.

Even if it is not practicable to provide the full length of the deceleration lane (right-turn or nearside) sub-standard lengths are still of great benefit but they should not be less than half the recommended lengths.

Where deceleration lanes are on an up-gradient their length may be reduced to that obtained by multiplying the recommended length by 10.03G whereas G is the gradient expressed as a percentage. For deceleration lanes on a down gradient, their length may be increased obtained by multiplying the recommended length by 1+0.06G.

TYPE DESIGNS FOR INTERSECTION

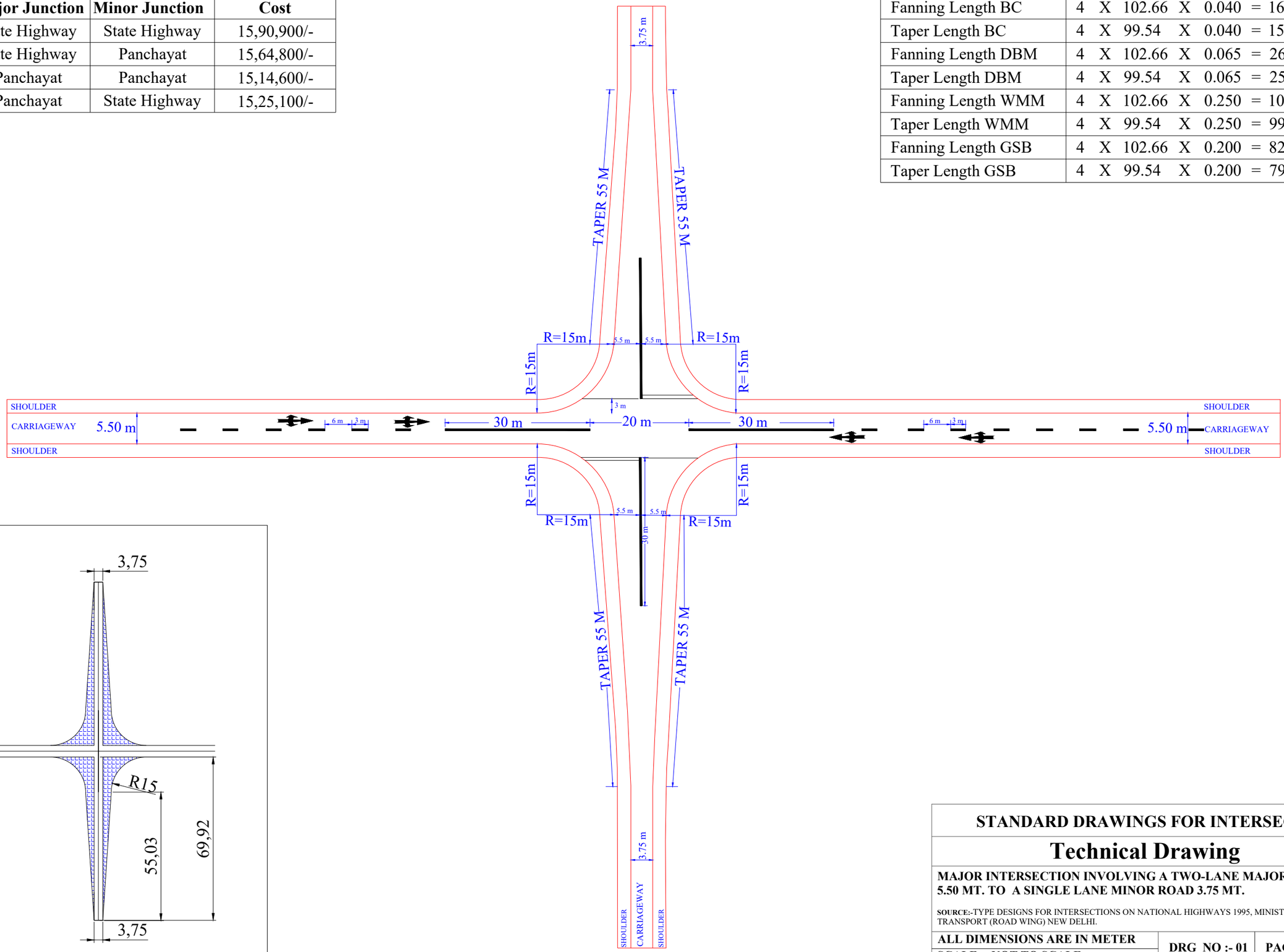
NOTE: The Cost Analysis is carried out by considering Vadodara SOR for all the Junction and Lead for aggregate is taken 58 km, Bulk Asphalt if from 55 km, Quarry Spall from 23 km and Sand is taken 27 km.

Estimated Cost

Sr. No.	Major Junction	Minor Junction	Cost
01	State Highway	State Highway	15,90,900/-
02	State Highway	Panchayat	15,64,800/-
03	Panchayat	Panchayat	15,14,600/-
04	Panchayat	State Highway	15,25,100/-

Quantity

Fanning Length BC	4	X	102.66	X	0.040	= 16.43 cu. mt.
Taper Length BC	4	X	99.54	X	0.040	= 15.93 cu. mt.
Fanning Length DBM	4	X	102.66	X	0.065	= 26.69 cu. mt.
Taper Length DBM	4	X	99.54	X	0.065	= 25.88 cu. mt.
Fanning Length WMM	4	X	102.66	X	0.250	= 102.66 cu. mt.
Taper Length WMM	4	X	99.54	X	0.250	= 99.54 cu. mt.
Fanning Length GSB	4	X	102.66	X	0.200	= 82.13 cu. mt.
Taper Length GSB	4	X	99.54	X	0.200	= 79.63 cu. mt.



STANDARD DRAWINGS FOR INTERSECTIONS

Technical Drawing

MAJOR INTERSECTION INVOLVING A TWO-LANE MAJOR ROAD 5.50 MT. TO A SINGLE LANE MINOR ROAD 3.75 MT.

SOURCE:-TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS 1995, MINISTRY OF SURFACE TRANSPORT (ROAD WING) NEW DELHI.

ALL DIMENSIONS ARE IN METER

SCALE :- NOT TO SCALE

DRG NO :- 01

PAGE NO :- 01

Distance Between Rumble strips

Approach Speed	Bar marking	Distance of (d1,d2,d3)
Up to 50 km/h	1 set	d1=50
51 to 65 km/h	2 set	d1=50 , d2=80
66 to 80 km/h	3 set	d1=50, d2=80, d3=120

Sign Board Quantity

Item	Item Name	Total	Item	Item Name	Total
	Major Road Ahead	04		Pedestrian Crossing	04
	Speed Limit	02		Reassurance Sign	02
	Rumble Strip	04		Stack Type Advance Direction Sign	04
	Restriction End	02		Cat Eyes	320
				Stop Sign	02

NOTES

01. All Road Sign Should be Erected as per IRC: 67-2022
02. Pavement Marking (Arrow) Should be provided and Careful maintained Guidance in this Respect Could also be has from IRC: 35-2015 clause-8.1.1 Annexure B.
03. Rummble Strip marking Should be Provided and Careful maintained Guidance in this respect Could also be has from IRC: 99-2018 clause no. 2.3.3.3
04. Dimensions not given scaled off from this drawing for Actual setting out.
05. In Accoedance with IRC: SP:73-2018

STANDARD DRAWINGS FOR INTERSECTIONS

Road Safety Drawing

Major Road Intersection Involving a Two lane Major Road 5.50 MT. to Minor road 3.75 MT.

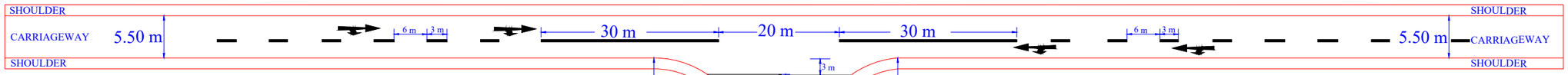
ALL DIMENSIONS ARE IN METER Scale:- Not to Scale	DRG NO :- 02	PAGE NO :- 02

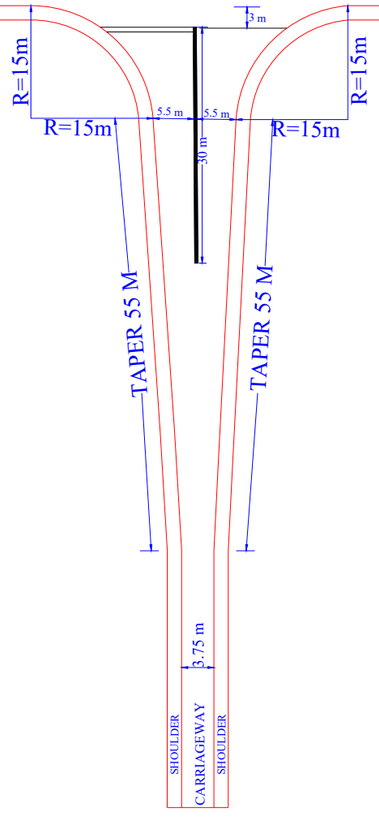
Estimated Cost

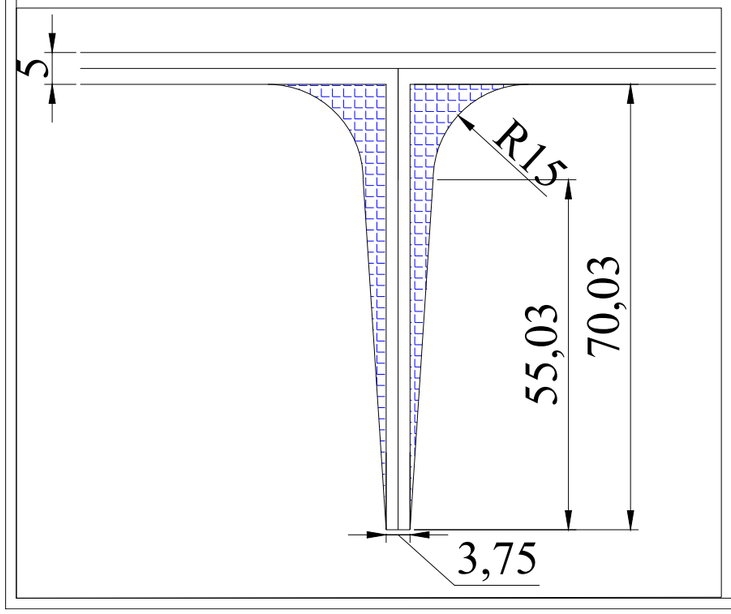
Sr. No.	Major Junction	Minor Junction	Cost
01	State Highway	State Highway	12,94,900/-
02	State Highway	Panchayat	12,61,000/-
03	Panchayat	Panchayat	12,25,600/-
04	Panchayat	State Highway	12,59,500/-

Quantity

Fanning Length BC	2	X	102.66	X	0.040	= 8.21 cu. mt.
Taper Length BC	2	X	99.54	X	0.040	= 7.96 cu. mt.
Fanning Length DBM	2	X	102.66	X	0.065	= 13.35 cu. mt.
Taper Length DBM	2	X	99.54	X	0.065	= 12.94 cu. mt.
Fanning Length WMM	2	X	102.66	X	0.250	= 51.33 cu. mt.
Taper Length WMM	2	X	99.54	X	0.250	= 49.77 cu. mt.
Fanning Length GSB	2	X	102.66	X	0.200	= 41.06 cu. mt.
Taper Length GSB	2	X	99.54	X	0.200	= 39.82 cu. mt.







STANDARD DRAWINGS FOR INTERSECTIONS

Technical Drawing

T- INTERSECTION INVOLVING A TWO-LANE MAJOR ROAD5.50 MT. TO A SINGLE LANE MINOR ROAD 3.75 MT.

SOURCE:-TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS 1995, MINISTRY OF SURFACE TRANSPORT (ROAD WING) NEW DELHI.

ALL DIMENSIONS ARE IN METER
SCALE :- NOT TO SCALE

DRG NO :- 03

PAGE NO :- 03

Distance Between Rumble strips

Approach Speed	Bar marking	Distance of (d1,d2,d3)
Up to 50 km/h	1 set	d1=50
51 to 65 km/h	2 set	d1=50 , d2=80
66 to 80 km/h	3 set	d1=50, d2=80, d3=120

Sign Board Quantity

Item	Item Name	Total	Item	Item Name	Total
	Side Road Right	01		T-Intersection Major Road Ahead	01
	Side Road Left	01		Reassurance Sign	02
	Rumble Strip	03		Stack Type Advance Direction Sign	03
	Pedestrian Crossing	03		Speed Limit	02
	Stop	01		Flag Type Direction Sign	01
	Restriction End	02		Cat Eyes	230

N O T E S

01. All Road Sign Should be Erected as per IRC:-67-2022
02. Pavement Marking (Arrow) Should be provided and Careful maintained Guidance in this Respect Could also be has from IRC:-35 clause-8.1.1 Annexure B.
03. Rummble Strip marking Should be Provided and Careful maintained Guidance in this respect Could also be has from IRC-99-2018 clause no. 2.3.3.3
04. Dimensions not given scaled off from this drawing for Actual setting out.
05. In Accoedance with IRC:SP:73-2018

STANDARD DRAWINGS FOR INTERSECTIONS

Road Safety Drawing

T - Intersection Involving a Two lane Major Road 5.50 MT. to Minor road 3.75 MT.

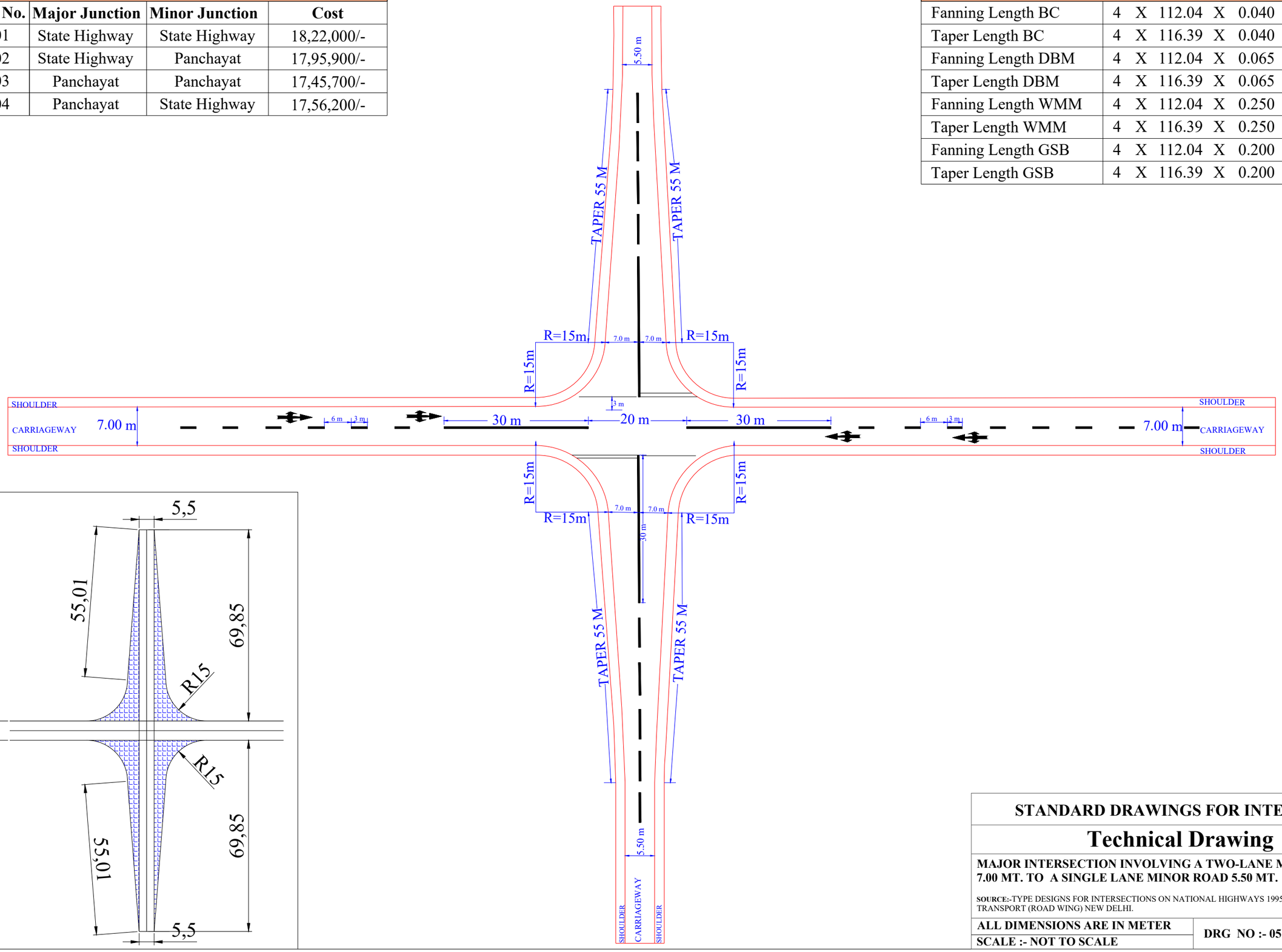
ALL DIMENSIONS ARE IN METER Scale:- Not to Scale	DRG NO :- 04	PAGE NO :- 04

Estimated Cost

Sr. No.	Major Junction	Minor Junction	Cost
01	State Highway	State Highway	18,22,000/-
02	State Highway	Panchayat	17,95,900/-
03	Panchayat	Panchayat	17,45,700/-
04	Panchayat	State Highway	17,56,200/-

Quantity

Fanning Length BC	4	X	112.04	X	0.040	= 17.93 cu. mt.
Taper Length BC	4	X	116.39	X	0.040	= 18.62 cu. mt.
Fanning Length DBM	4	X	112.04	X	0.065	= 29.13 cu. mt.
Taper Length DBM	4	X	116.39	X	0.065	= 30.26 cu. mt.
Fanning Length WMM	4	X	112.04	X	0.250	= 112.04 cu. mt.
Taper Length WMM	4	X	116.39	X	0.250	= 116.39 cu. mt.
Fanning Length GSB	4	X	112.04	X	0.200	= 89.63 cu. mt.
Taper Length GSB	4	X	116.39	X	0.200	= 93.11 cu. mt.



STANDARD DRAWINGS FOR INTERSECTIONS

Technical Drawing

MAJOR INTERSECTION INVOLVING A TWO-LANE MAJOR ROAD 7.00 MT. TO A SINGLE LANE MINOR ROAD 5.50 MT.

SOURCE:-TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS 1995, MINISTRY OF SURFACE TRANSPORT (ROAD WING) NEW DELHI.

ALL DIMENSIONS ARE IN METER

SCALE :- NOT TO SCALE

DRG NO :- 05

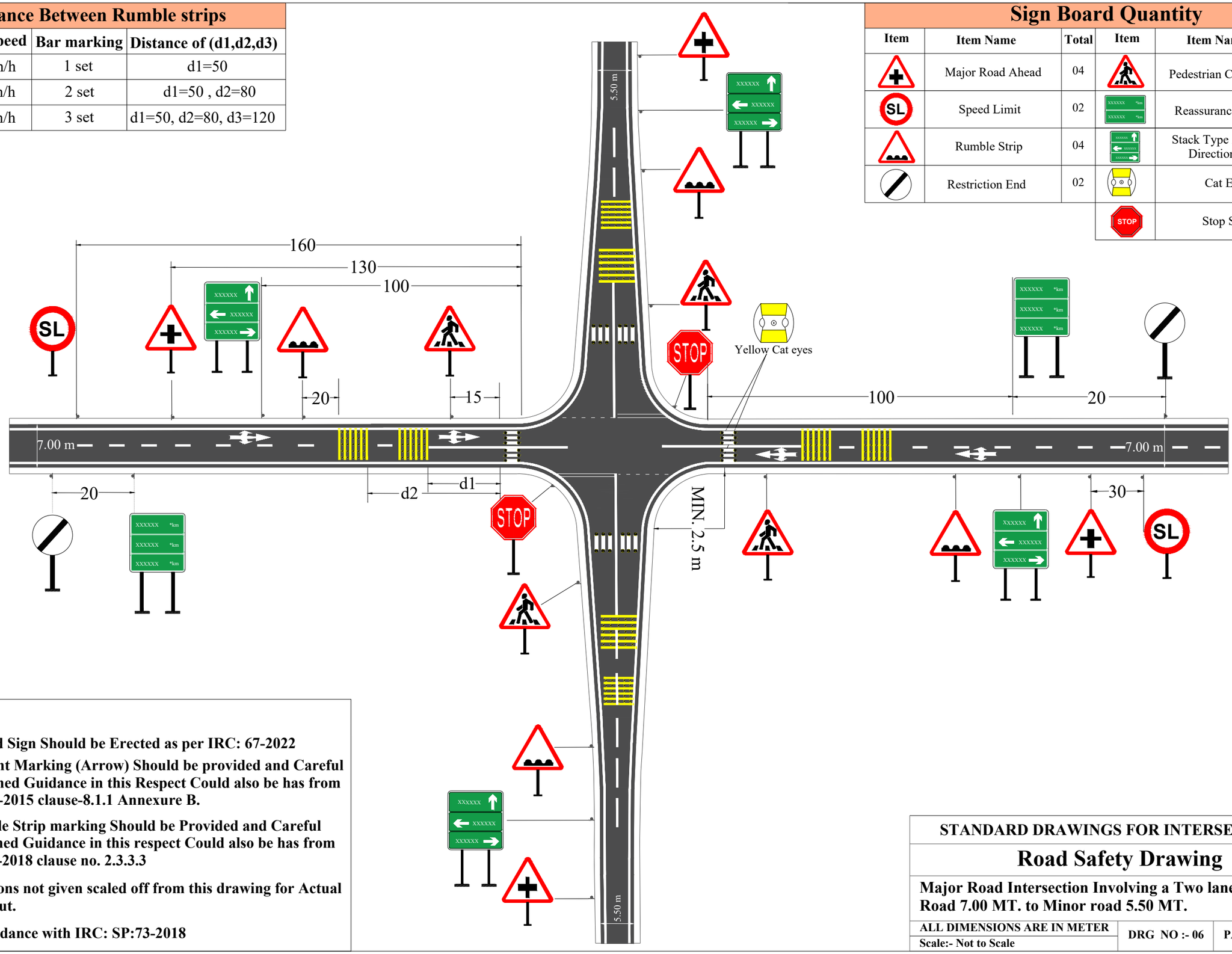
PAGE NO :- 05

Distance Between Rumble strips

Approach Speed	Bar marking	Distance of (d1,d2,d3)
Up to 50 km/h	1 set	d1=50
51 to 65 km/h	2 set	d1=50 , d2=80
66 to 80 km/h	3 set	d1=50, d2=80, d3=120

Sign Board Quantity

Item	Item Name	Total	Item	Item Name	Total
	Major Road Ahead	04		Pedestrian Crossing	04
SL	Speed Limit	02		Reassurance Sign	02
	Rumble Strip	04		Stack Type Advance Direction Sign	04
	Restriction End	02		Cat Eyes	368
			STOP	Stop Sign	02



NOTES

01. All Road Sign Should be Erected as per IRC: 67-2022
02. Pavement Marking (Arrow) Should be provided and Careful maintained Guidance in this Respect Could also be has from IRC: 35-2015 clause-8.1.1 Annexure B.
03. Rummble Strip marking Should be Provided and Careful maintained Guidance in this respect Could also be has from IRC: 99-2018 clause no. 2.3.3.3
04. Dimensions not given scaled off from this drawing for Actual setting out.
05. In Accoedance with IRC: SP:73-2018

STANDARD DRAWINGS FOR INTERSECTIONS

Road Safety Drawing

Major Road Intersection Involving a Two lane Major Road 7.00 MT. to Minor road 5.50 MT.

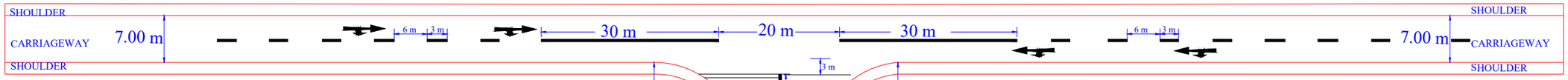
ALL DIMENSIONS ARE IN METER Scale:- Not to Scale	DRG NO :- 06	PAGE NO :- 06

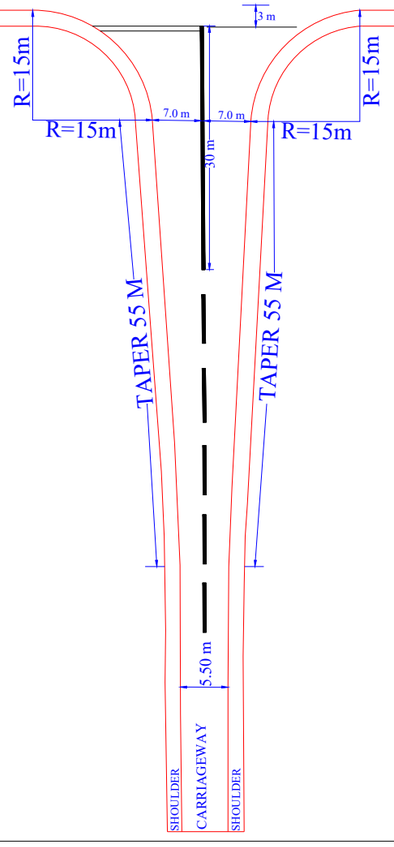
Estimated Cost

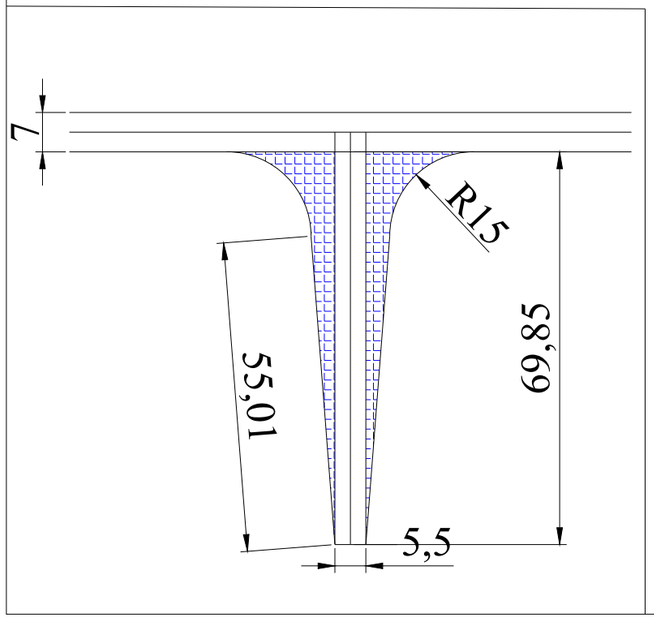
Sr. No.	Major Junction	Minor Junction	Cost
01	State Highway	State Highway	14,89,900/-
02	State Highway	Panchayat	14,56,000/-
03	Panchayat	Panchayat	14,20,600/-
04	Panchayat	State Highway	14,54,500/-

Quantity

Fanning Length BC	2	X	112.04	X	0.040	= 8.96 cu. mt.
Taper Length BC	2	X	116.39	X	0.040	= 9.31 cu. mt.
Fanning Length DBM	2	X	112.04	X	0.065	= 14.57 cu. mt.
Taper Length DBM	2	X	116.39	X	0.065	= 15.13 cu. mt.
Fanning Length WMM	2	X	112.04	X	0.250	= 56.02 cu. mt.
Taper Length WMM	2	X	116.39	X	0.250	= 58.19 cu. mt.
Fanning Length GSB	2	X	112.04	X	0.200	= 44.82 cu. mt.
Taper Length GSB	2	X	116.39	X	0.200	= 46.57 cu. mt.







STANDARD DRAWINGS FOR INTERSECTIONS

Technical Drawing

T- INTERSECTION INVOLVING A TWO-LANE MAJOR ROAD 7.00 MT. TO A SINGLE LANE MINOR ROAD 5.50 MT.

SOURCE:-TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS 1995, MINISTRY OF SURFACE TRANSPORT (ROAD WING) NEW DELHI.

ALL DIMENSIONS ARE IN METER

SCALE :- NOT TO SCALE

DRG NO :- 07

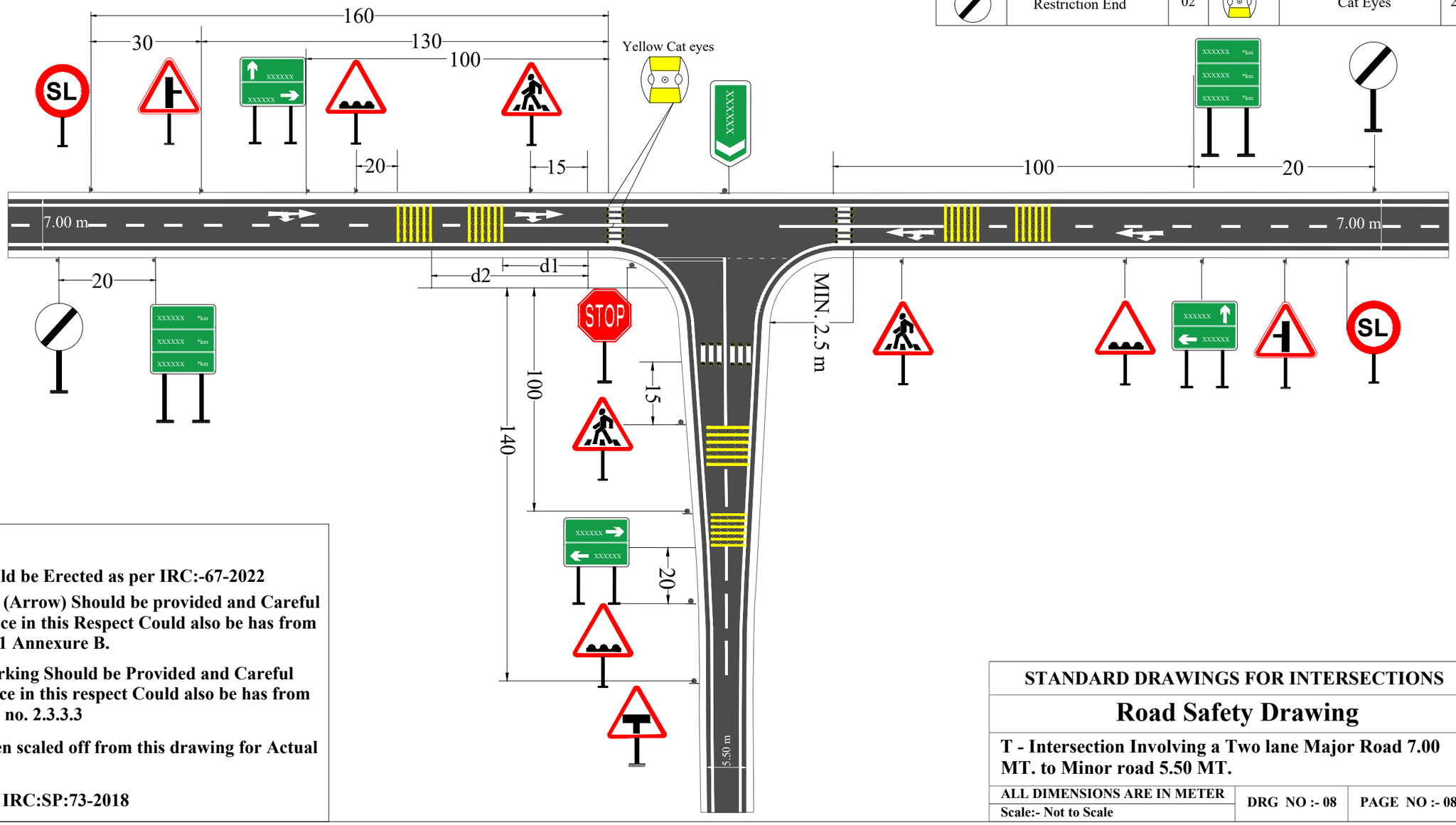
PAGE NO :- 07

Distance Between Rumble strips

Approach Speed	Bar marking	Distance of (d1,d2,d3)
Up to 50 km/h	1 set	d1=50
51 to 65 km/h	2 set	d1=50 , d2=80
66 to 80 km/h	3 set	d1=50, d2=80, d3=120

Sign Board Quantity

Item	Item Name	Total	Item	Item Name	Total
	Side Road Right	01		T-Intersection Major Road Ahead	01
	Side Road Left	01		Reassurance Sign	02
	Rumble Strip	03		Stack Type Advance Direction Sign	03
	Pedestrian Crossing	03		Speed Limit	02
	Stop	01		Flag Type Direction Sign	01
	Restriction End	02		Cat Eyes	262



NOTES

01. All Road Sign Should be Erected as per IRC:-67-2022
02. Pavement Marking (Arrow) Should be provided and Careful maintained Guidance in this Respect Could also be has from IRC:-35 clause-8.1.1 Annexure B.
03. Rummble Strip marking Should be Provided and Careful maintained Guidance in this respect Could also be has from IRC-99-2018 clause no. 2.3.3.3
04. Dimensions not given scaled off from this drawing for Actual setting out.
05. In Accoedance with IRC:SP:73-2018

STANDARD DRAWINGS FOR INTERSECTIONS

Road Safety Drawing

T - Intersection Involving a Two lane Major Road 7.00 MT. to Minor road 5.50 MT.

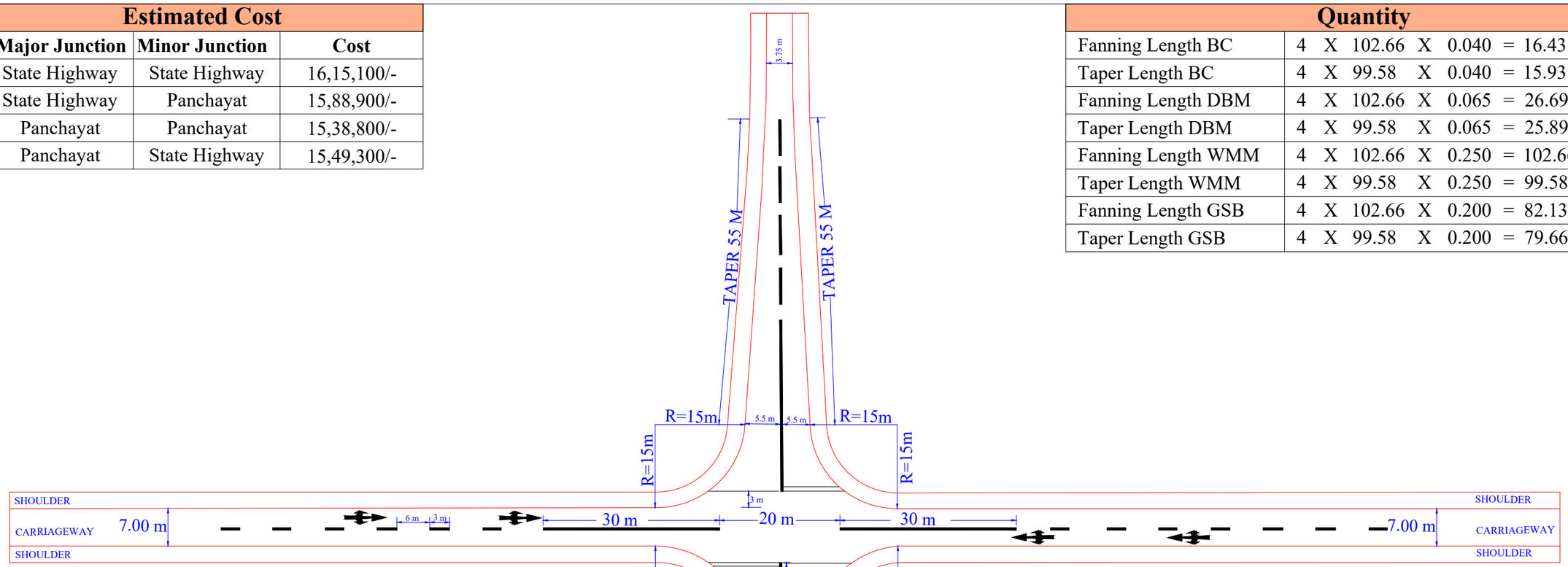
ALL DIMENSIONS ARE IN METER Scale:- Not to Scale	DRG NO :- 08	PAGE NO :- 08

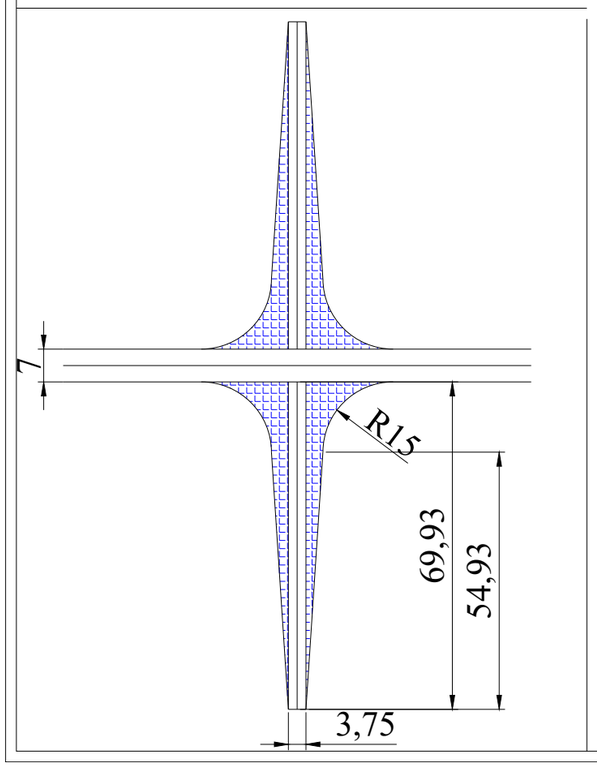
Estimated Cost

Sr. No.	Major Junction	Minor Junction	Cost
01	State Highway	State Highway	16,15,100/-
02	State Highway	Panchayat	15,88,900/-
03	Panchayat	Panchayat	15,38,800/-
04	Panchayat	State Highway	15,49,300/-

Quantity

Fanning Length BC	4	X	102.66	X	0.040	= 16.43 cu. mt.
Taper Length BC	4	X	99.58	X	0.040	= 15.93 cu. mt.
Fanning Length DBM	4	X	102.66	X	0.065	= 26.69 cu. mt.
Taper Length DBM	4	X	99.58	X	0.065	= 25.89 cu. mt.
Fanning Length WMM	4	X	102.66	X	0.250	= 102.66 cu. mt.
Taper Length WMM	4	X	99.58	X	0.250	= 99.58 cu. mt.
Fanning Length GSB	4	X	102.66	X	0.200	= 82.13 cu. mt.
Taper Length GSB	4	X	99.58	X	0.200	= 79.66 cu. mt.





STANDARD DRAWINGS FOR INTERSECTIONS

Technical Drawing

MAJOR INTERSECTION INVOLVING A TWO-LANE MAJOR ROAD 7.00 MT. TO A SINGLE LANE MINOR ROAD 3.75 MT.

SOURCE:-TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS 1995, MINISTRY OF SURFACE TRANSPORT (ROAD WING) NEW DELHI.

ALL DIMENSIONS ARE IN METER

SCALE :- NOT TO SCALE

DRG NO :- 09

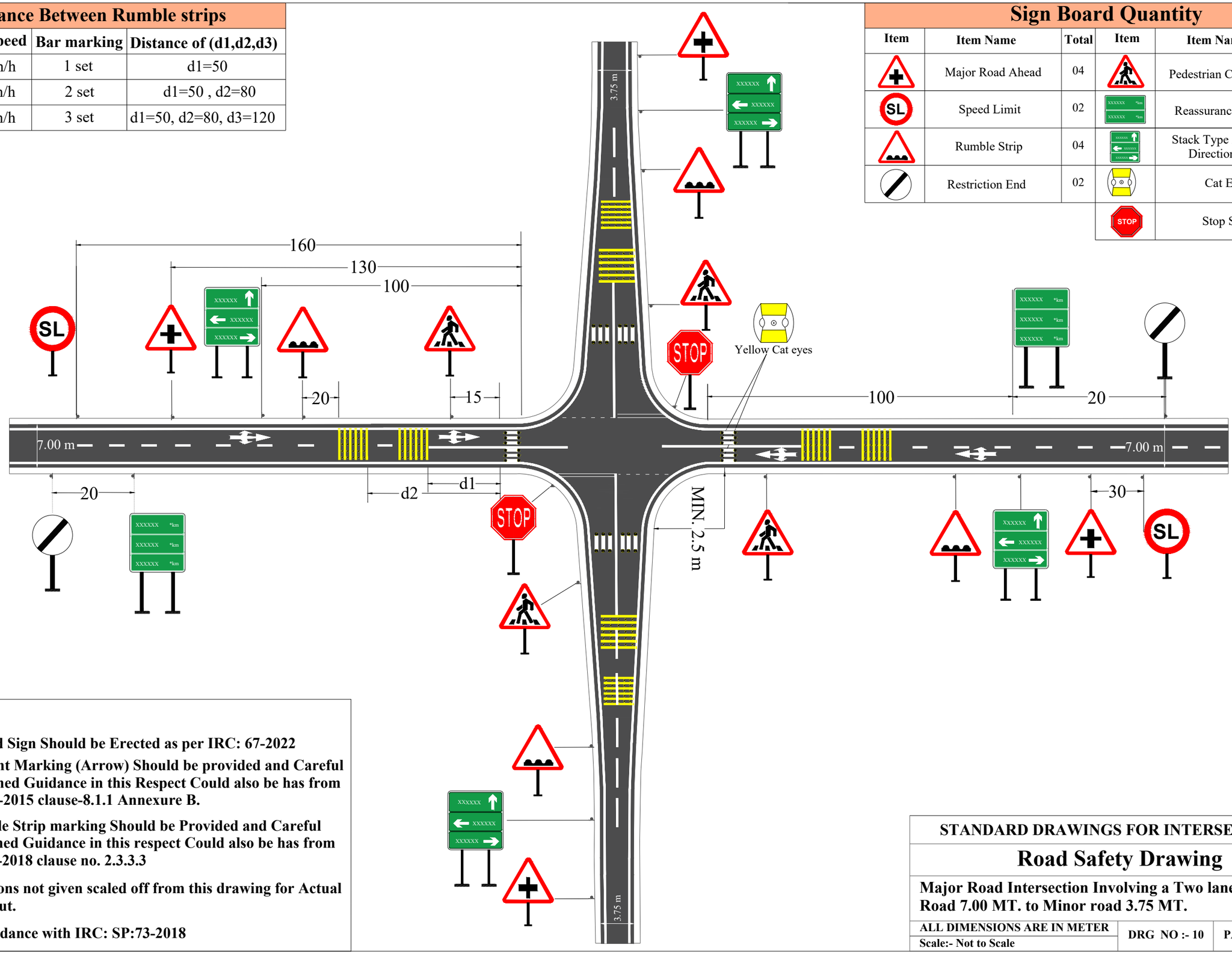
PAGE NO :- 09

Distance Between Rumble strips

Approach Speed	Bar marking	Distance of (d1,d2,d3)
Up to 50 km/h	1 set	d1=50
51 to 65 km/h	2 set	d1=50 , d2=80
66 to 80 km/h	3 set	d1=50, d2=80, d3=120

Sign Board Quantity

Item	Item Name	Total	Item	Item Name	Total
	Major Road Ahead	04		Pedestrian Crossing	04
SL	Speed Limit	02		Reassurance Sign	02
	Rumble Strip	04		Stack Type Advance Direction Sign	04
	Restriction End	02		Cat Eyes	336
			STOP	Stop Sign	02



N O T E S

01. All Road Sign Should be Erected as per IRC: 67-2022
02. Pavement Marking (Arrow) Should be provided and Careful maintained Guidance in this Respect Could also be has from IRC: 35-2015 clause-8.1.1 Annexure B.
03. Rummble Strip marking Should be Provided and Careful maintained Guidance in this respect Could also be has from IRC: 99-2018 clause no. 2.3.3.3
04. Dimensions not given scaled off from this drawing for Actual setting out.
05. In Accoedance with IRC: SP:73-2018

STANDARD DRAWINGS FOR INTERSECTIONS

Road Safety Drawing

Major Road Intersection Involving a Two lane Major Road 7.00 MT. to Minor road 3.75 MT.

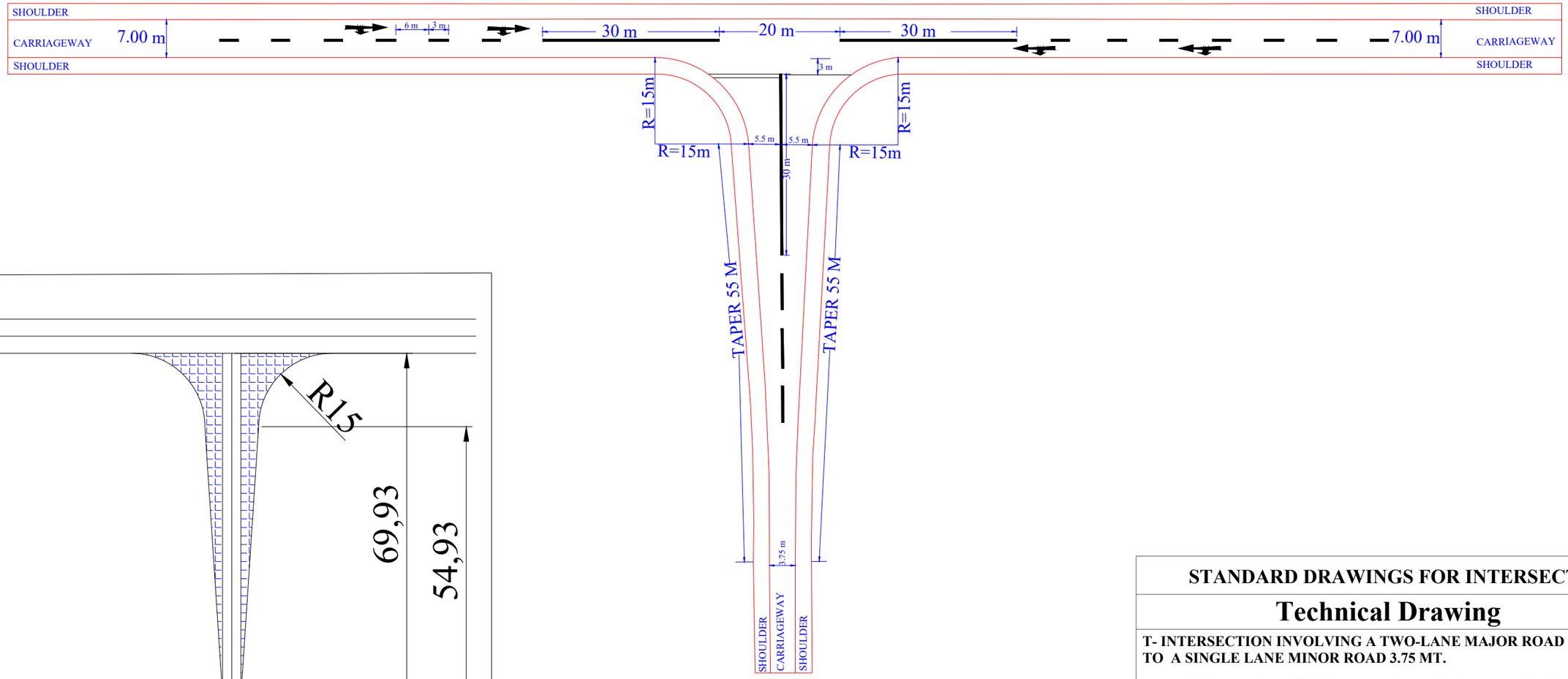
ALL DIMENSIONS ARE IN METER Scale:- Not to Scale	DRG NO :- 10	PAGE NO :- 10

Estimated Cost

Sr. No.	Major Junction	Minor Junction	Cost
01	State Highway	State Highway	13,25,000/-
02	State Highway	Panchayat	12,91,100/-
03	Panchayat	Panchayat	12,55,700/-
04	Panchayat	State Highway	12,89,600/-

Quantity

Fanning Length BC	2	X	102.66	X	0.040	= 8.21 cu. mt.
Taper Length BC	2	X	99.58	X	0.040	= 7.97 cu. mt.
Fanning Length DBM	2	X	102.66	X	0.065	= 13.35 cu. mt.
Taper Length DBM	2	X	99.58	X	0.065	= 12.95 cu. mt.
Fanning Length WMM	2	X	102.66	X	0.250	= 51.33 cu. mt.
Taper Length WMM	2	X	99.58	X	0.250	= 49.79 cu. mt.
Fanning Length GSB	2	X	102.66	X	0.200	= 41.06 cu. mt.
Taper Length GSB	2	X	99.58	X	0.200	= 39.83 cu. mt.



STANDARD DRAWINGS FOR INTERSECTIONS

Technical Drawing

T- INTERSECTION INVOLVING A TWO-LANE MAJOR ROAD 7.00 MT. TO A SINGLE LANE MINOR ROAD 3.75 MT.

SOURCE:-TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS 1995, MINISTRY OF SURFACE TRANSPORT (ROAD WING) NEW DELHI.

ALL DIMENSIONS ARE IN METER

SCALE :- NOT TO SCALE

DRG NO :- 11

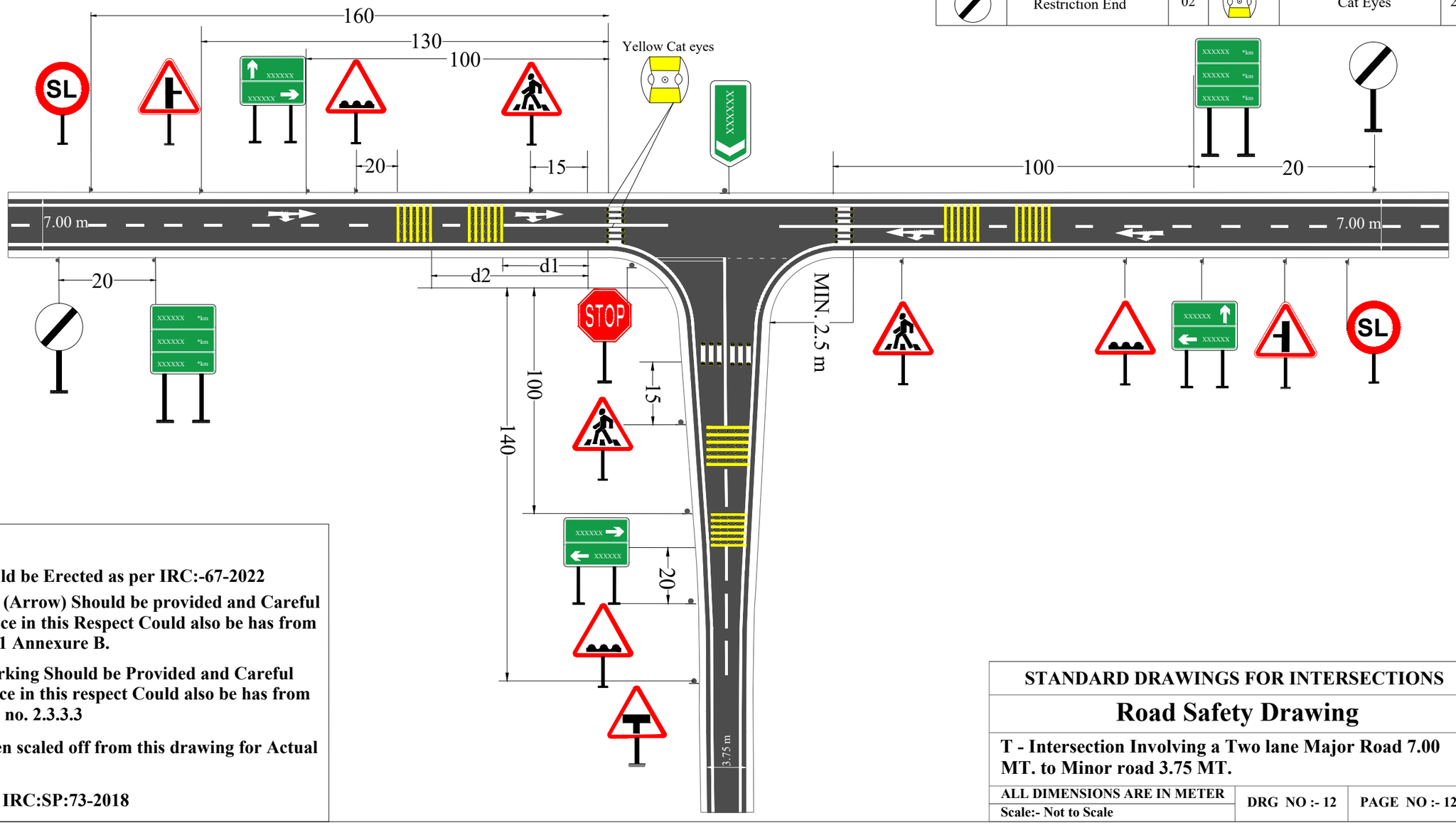
PAGE NO :- 11

Distance Between Rumble strips

Approach Speed	Bar marking	Distance of (d1,d2,d3)
Up to 50 km/h	1 set	d1=50
51 to 65 km/h	2 set	d1=50 , d2=80
66 to 80 km/h	3 set	d1=50, d2=80, d3=120

Sign Board Quantity

Item	Item Name	Total	Item	Item Name	Total
	Side Road Right	01		T-Intersection Major Road Ahead	01
	Side Road Left	01		Reassurance Sign	02
	Rumble Strip	03		Stack Type Advance Direction Sign	03
	Pedestrian Crossing	03		Speed Limit	02
	Stop	01		Flag Type Direction Sign	01
	Restriction End	02		Cat Eyes	246



NOTES

01. All Road Sign Should be Erected as per IRC:-67-2022
02. Pavement Marking (Arrow) Should be provided and Careful maintained Guidance in this Respect Could also be has from IRC:-35 clause-8.1.1 Annexure B.
03. Rummble Strip marking Should be Provided and Careful maintained Guidance in this respect Could also be has from IRC-99-2018 clause no. 2.3.3.3
04. Dimensions not given scaled off from this drawing for Actual setting out.
05. In Accoedance with IRC:SP:73-2018

STANDARD DRAWINGS FOR INTERSECTIONS

Road Safety Drawing

T - Intersection Involving a Two lane Major Road 7.00 MT. to Minor road 3.75 MT.

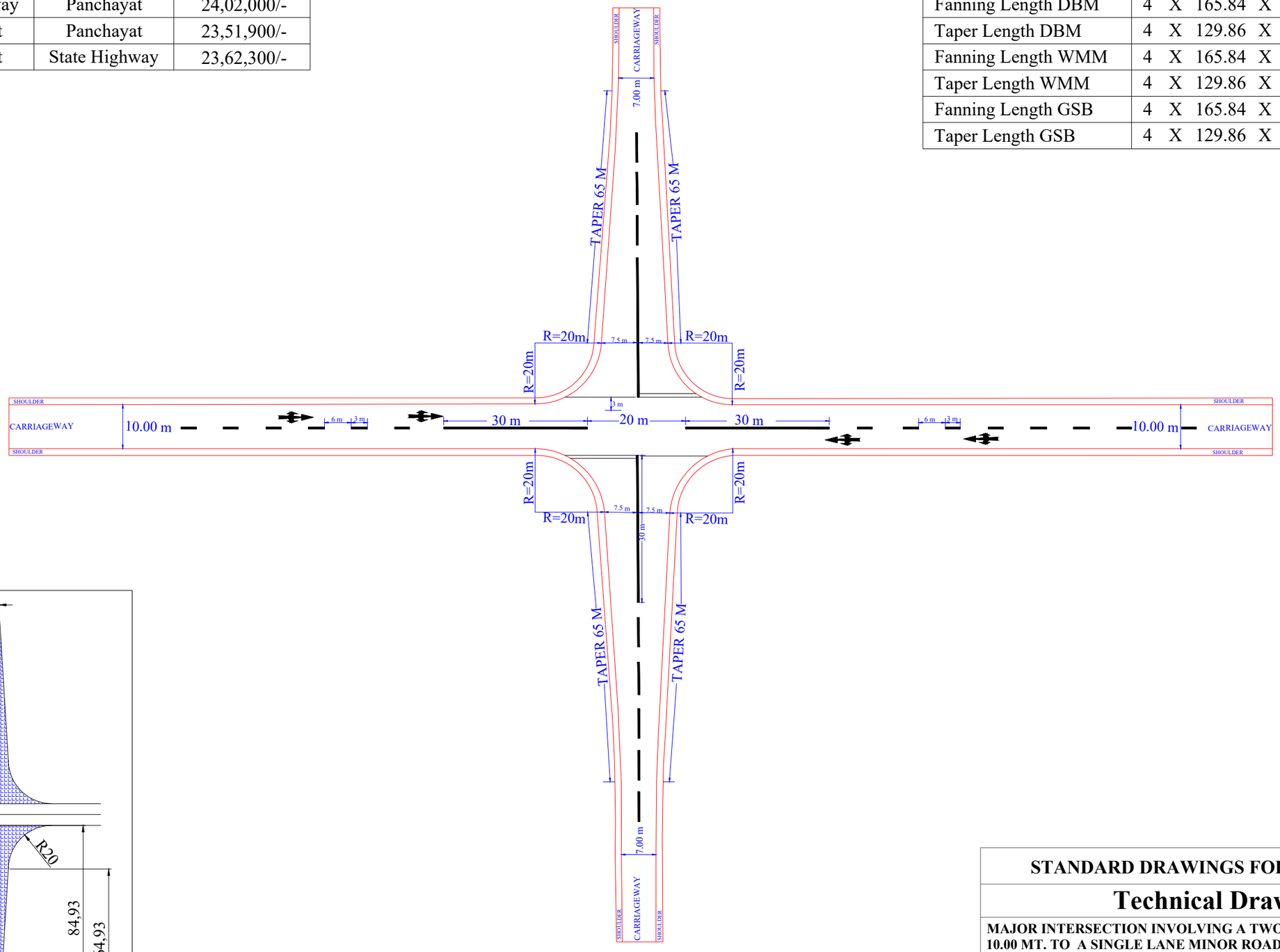
ALL DIMENSIONS ARE IN METER Scale:- Not to Scale	DRG NO :- 12	PAGE NO :- 12

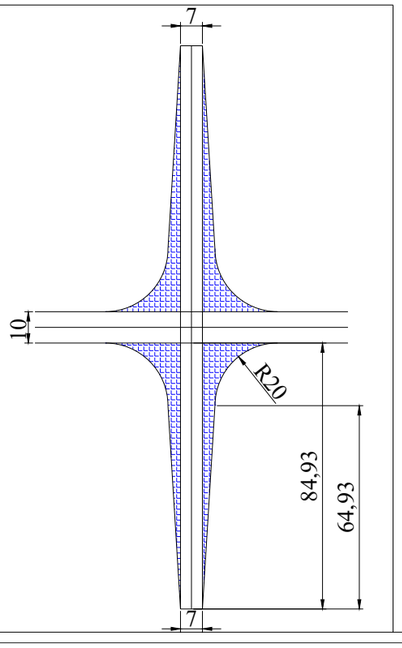
Estimated Cost

Sr. No.	Major Junction	Minor Junction	Cost
01	State Highway	State Highway	24,28,200/-
02	State Highway	Panchayat	24,02,000/-
03	Panchayat	Panchayat	23,51,900/-
04	Panchayat	State Highway	23,62,300/-

Quantity

Fanning Length BC	4	X	165.84	X	0.040	= 26.53 cu. mt.
Taper Length BC	4	X	129.86	X	0.040	= 20.78 cu. mt.
Fanning Length DBM	4	X	165.84	X	0.065	= 43.19 cu. mt.
Taper Length DBM	4	X	129.86	X	0.065	= 33.76 cu. mt.
Fanning Length WMM	4	X	165.84	X	0.250	= 165.84 cu. mt.
Taper Length WMM	4	X	129.86	X	0.250	= 129.86 cu. mt.
Fanning Length GSB	4	X	165.84	X	0.200	= 132.67 cu. mt.
Taper Length GSB	4	X	129.86	X	0.200	= 103.89 cu. mt.





STANDARD DRAWINGS FOR INTERSECTIONS

Technical Drawing

MAJOR INTERSECTION INVOLVING A TWO-LANE MAJOR ROAD 10.00 MT. TO A SINGLE LANE MINOR ROAD 7.00 MT.

SOURCE:-TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS 1995, MINISTRY OF SURFACE TRANSPORT (ROAD WING) NEW DELHI.

ALL DIMENSIONS ARE IN METER

SCALE :- NOT TO SCALE

DRG NO :- 13

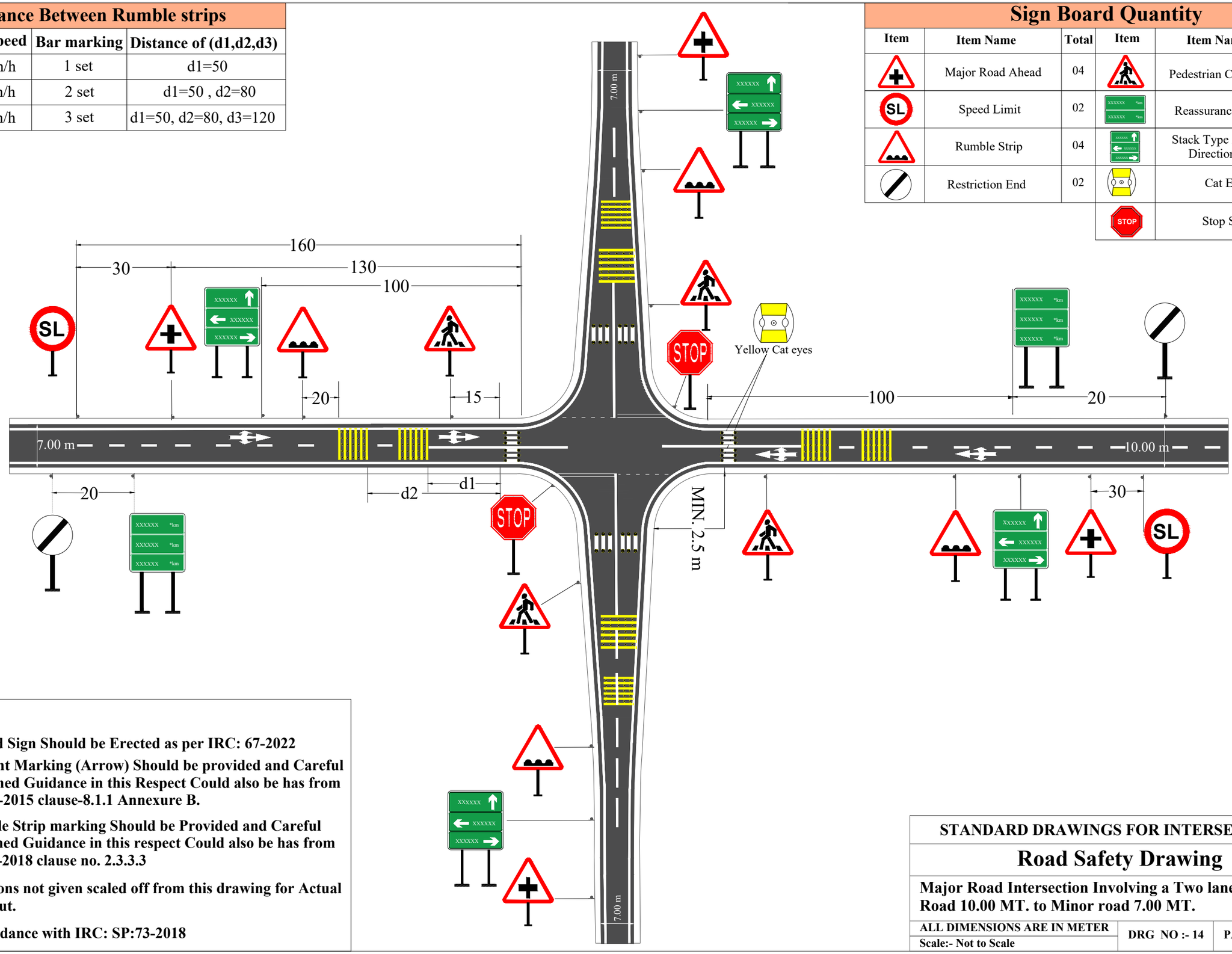
PAGE NO :- 13

Distance Between Rumble strips

Approach Speed	Bar marking	Distance of (d1,d2,d3)
Up to 50 km/h	1 set	d1=50
51 to 65 km/h	2 set	d1=50 , d2=80
66 to 80 km/h	3 set	d1=50, d2=80, d3=120

Sign Board Quantity

Item	Item Name	Total	Item	Item Name	Total
	Major Road Ahead	04		Pedestrian Crossing	04
SL	Speed Limit	02		Reassurance Sign	02
	Rumble Strip	04		Stack Type Advance Direction Sign	04
	Restriction End	02		Cat Eyes	392
			STOP	Stop Sign	02



NOTES

01. All Road Sign Should be Erected as per IRC: 67-2022
02. Pavement Marking (Arrow) Should be provided and Careful maintained Guidance in this Respect Could also be has from IRC: 35-2015 clause-8.1.1 Annexure B.
03. Rummble Strip marking Should be Provided and Careful maintained Guidance in this respect Could also be has from IRC: 99-2018 clause no. 2.3.3.3
04. Dimensions not given scaled off from this drawing for Actual setting out.
05. In Accoedance with IRC: SP:73-2018

STANDARD DRAWINGS FOR INTERSECTIONS

Road Safety Drawing

Major Road Intersection Involving a Two lane Major Road 10.00 MT. to Minor road 7.00 MT.

ALL DIMENSIONS ARE IN METER
Scale:- Not to Scale

DRG NO :- 14

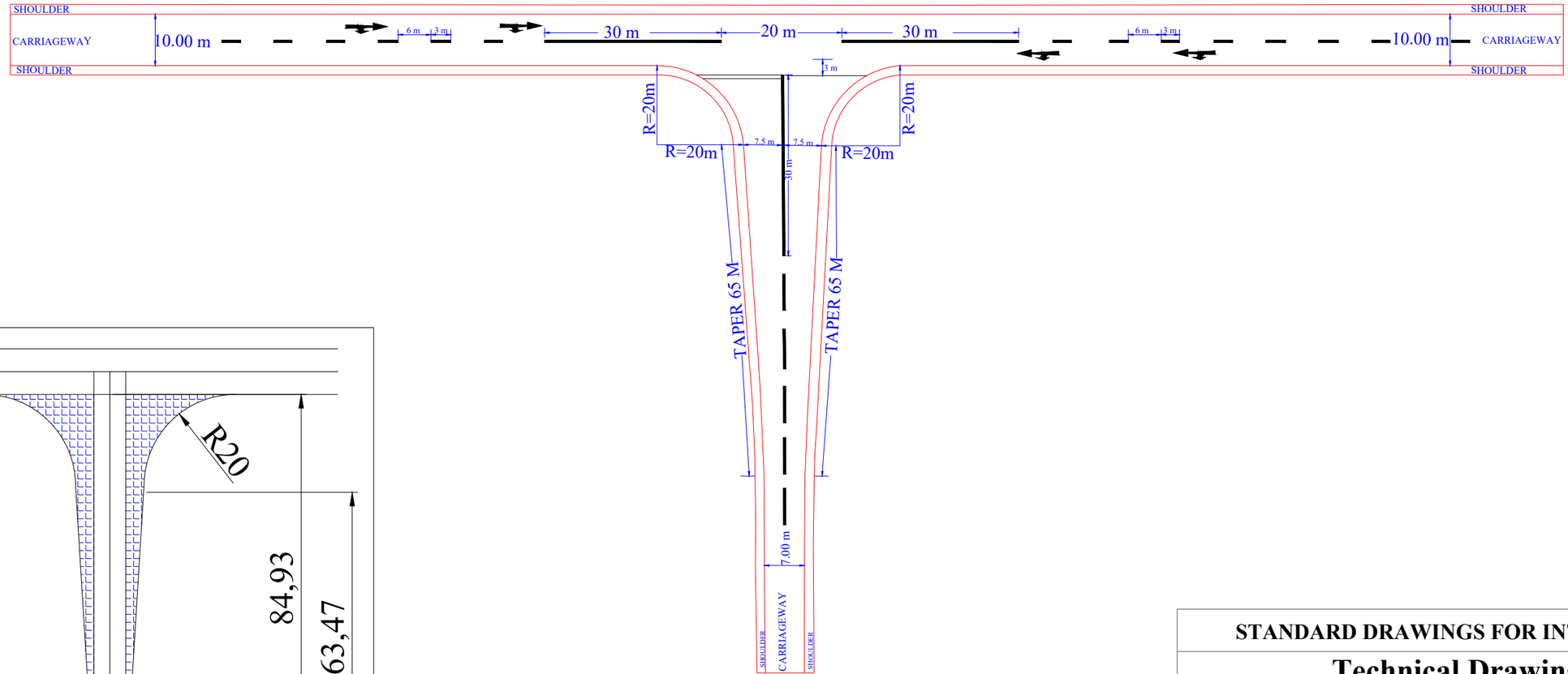
PAGE NO :- 14

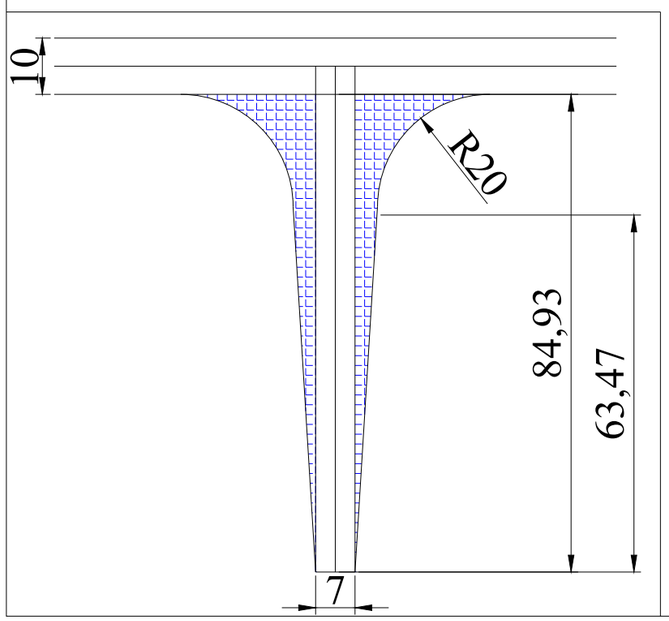
Estimated Cost

Sr. No.	Major Junction	Minor Junction	Cost
01	State Highway	State Highway	19,81,300/-
02	State Highway	Panchayat	19,47,400/-
03	Panchayat	Panchayat	19,12,000/-
04	Panchayat	State Highway	19,45,900/-

Quantity

Fanning Length BC	2	X	165.84	X	0.040	= 13.27 cu. mt.
Taper Length BC	2	X	129.86	X	0.040	= 10.39 cu. mt.
Fanning Length DBM	2	X	165.84	X	0.065	= 21.56 cu. mt.
Taper Length DBM	2	X	129.86	X	0.065	= 16.88 cu. mt.
Fanning Length WMM	2	X	165.84	X	0.250	= 82.92 cu. mt.
Taper Length WMM	2	X	129.86	X	0.250	= 64.93 cu. mt.
Fanning Length GSB	2	X	165.84	X	0.200	= 66.34 cu. mt.
Taper Length GSB	2	X	129.86	X	0.200	= 51.94 cu. mt.





STANDARD DRAWINGS FOR INTERSECTIONS

Technical Drawing

T- INTERSECTION INVOLVING A TWO-LANE MAJOR ROAD 10.00 MT. TO A SINGLE LANE MINOR ROAD 7.00 MT.

SOURCE:-TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS 1995, MINISTRY OF SURFACE TRANSPORT (ROAD WING) NEW DELHI.

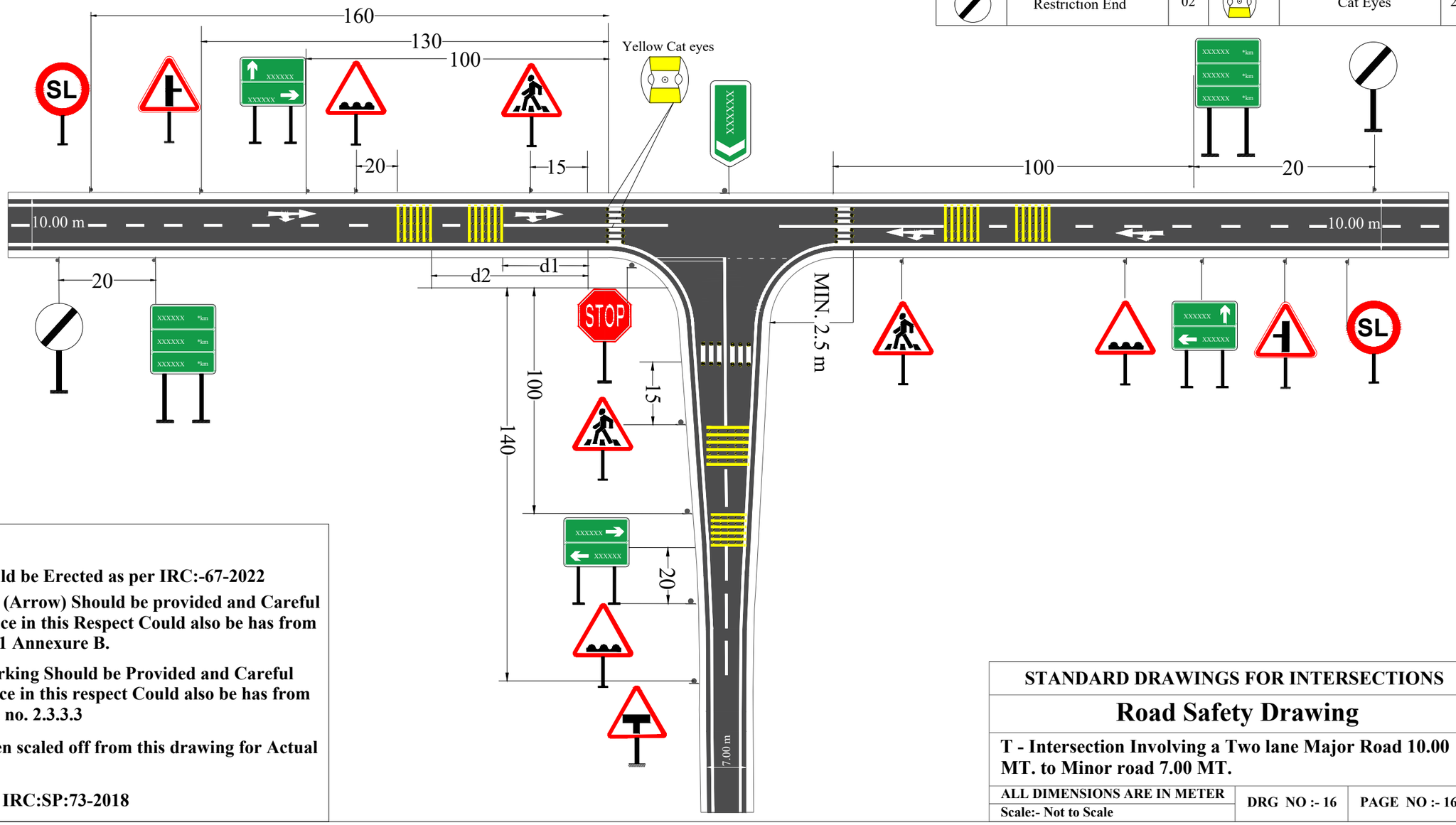
ALL DIMENSIONS ARE IN METER	**DRG NO :- 15**	**PAGE NO :- 15**
SCALE :- NOT TO SCALE		

Distance Between Rumble strips

Approach Speed	Bar marking	Distance of (d1,d2,d3)
Up to 50 km/h	1 set	d1=50
51 to 65 km/h	2 set	d1=50 , d2=80
66 to 80 km/h	3 set	d1=50, d2=80, d3=120

Sign Board Quantity

Item	Item Name	Total	Item	Item Name	Total
	Side Road Right	01		T-Intersection Major Road Ahead	01
	Side Road Left	01		Reassurance Sign	02
	Rumble Strip	03		Stack Type Advance Direction Sign	03
	Pedestrian Crossing	03		Speed Limit	02
	Stop	01		Flag Type Direction Sign	01
	Restriction End	02		Cat Eyes	286



NOTES

01. All Road Sign Should be Erected as per IRC:-67-2022
02. Pavement Marking (Arrow) Should be provided and Careful maintained Guidance in this Respect Could also be has from IRC:-35 clause-8.1.1 Annexure B.
03. Rummble Strip marking Should be Provided and Careful maintained Guidance in this respect Could also be has from IRC-99-2018 clause no. 2.3.3.3
04. Dimensions not given scaled off from this drawing for Actual setting out.
05. In Accoedance with IRC:SP:73-2018

STANDARD DRAWINGS FOR INTERSECTIONS

Road Safety Drawing

T - Intersection Involving a Two lane Major Road 10.00 MT. to Minor road 7.00 MT.

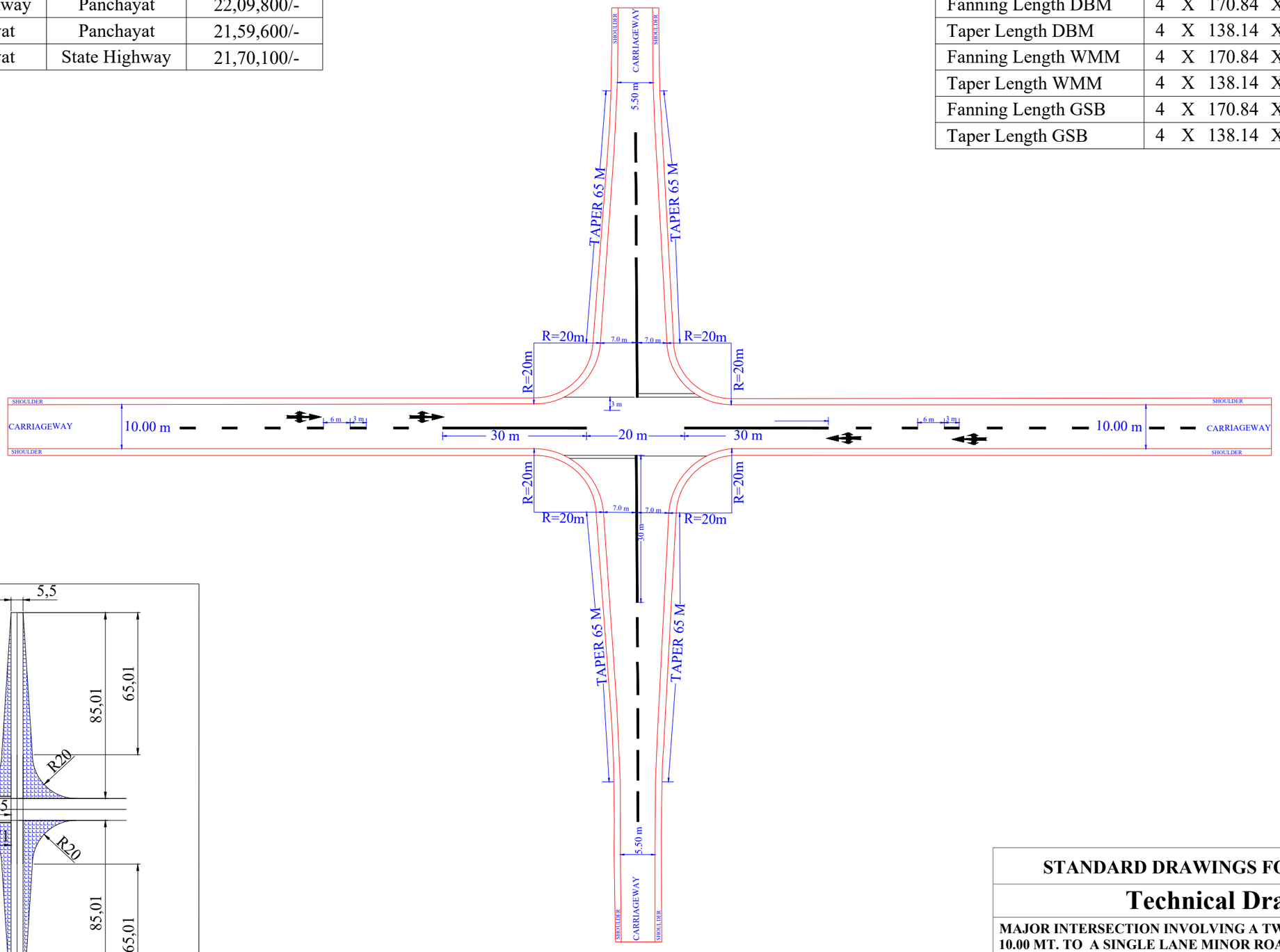
ALL DIMENSIONS ARE IN METER Scale:- Not to Scale	DRG NO :- 16	PAGE NO :- 16

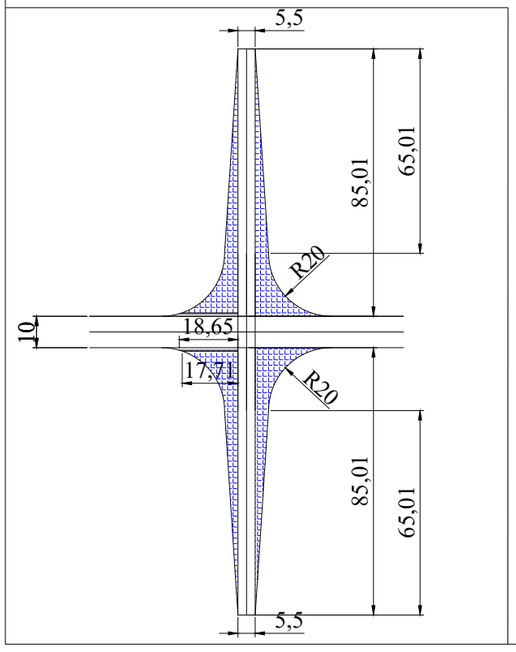
Estimated Cost

Sr. No.	Major Junction	Minor Junction	Cost
01	State Highway	State Highway	23,35,900/-
02	State Highway	Panchayat	22,09,800/-
03	Panchayat	Panchayat	21,59,600/-
04	Panchayat	State Highway	21,70,100/-

Quantity

Fanning Length BC	4	X	170.84	X	0.040	= 27.33 cu. mt.
Taper Length BC	4	X	138.14	X	0.040	= 22.10 cu. mt.
Fanning Length DBM	4	X	170.84	X	0.065	= 44.42 cu. mt.
Taper Length DBM	4	X	138.14	X	0.065	= 35.92 cu. mt.
Fanning Length WMM	4	X	170.84	X	0.250	= 170.84 cu. mt.
Taper Length WMM	4	X	138.14	X	0.250	= 138.14 cu. mt.
Fanning Length GSB	4	X	170.84	X	0.200	= 136.67 cu. mt.
Taper Length GSB	4	X	138.14	X	0.200	= 100.51 cu. mt.





STANDARD DRAWINGS FOR INTERSECTIONS

Technical Drawing

MAJOR INTERSECTION INVOLVING A TWO-LANE MAJOR ROAD 10.00 MT. TO A SINGLE LANE MINOR ROAD 5.50 MT.

SOURCE:- TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS 1995, MINISTRY OF SURFACE TRANSPORT (ROAD WING) NEW DELHI.

ALL DIMENSIONS ARE IN METER

SCALE :- NOT TO SCALE

DRG NO :- 17

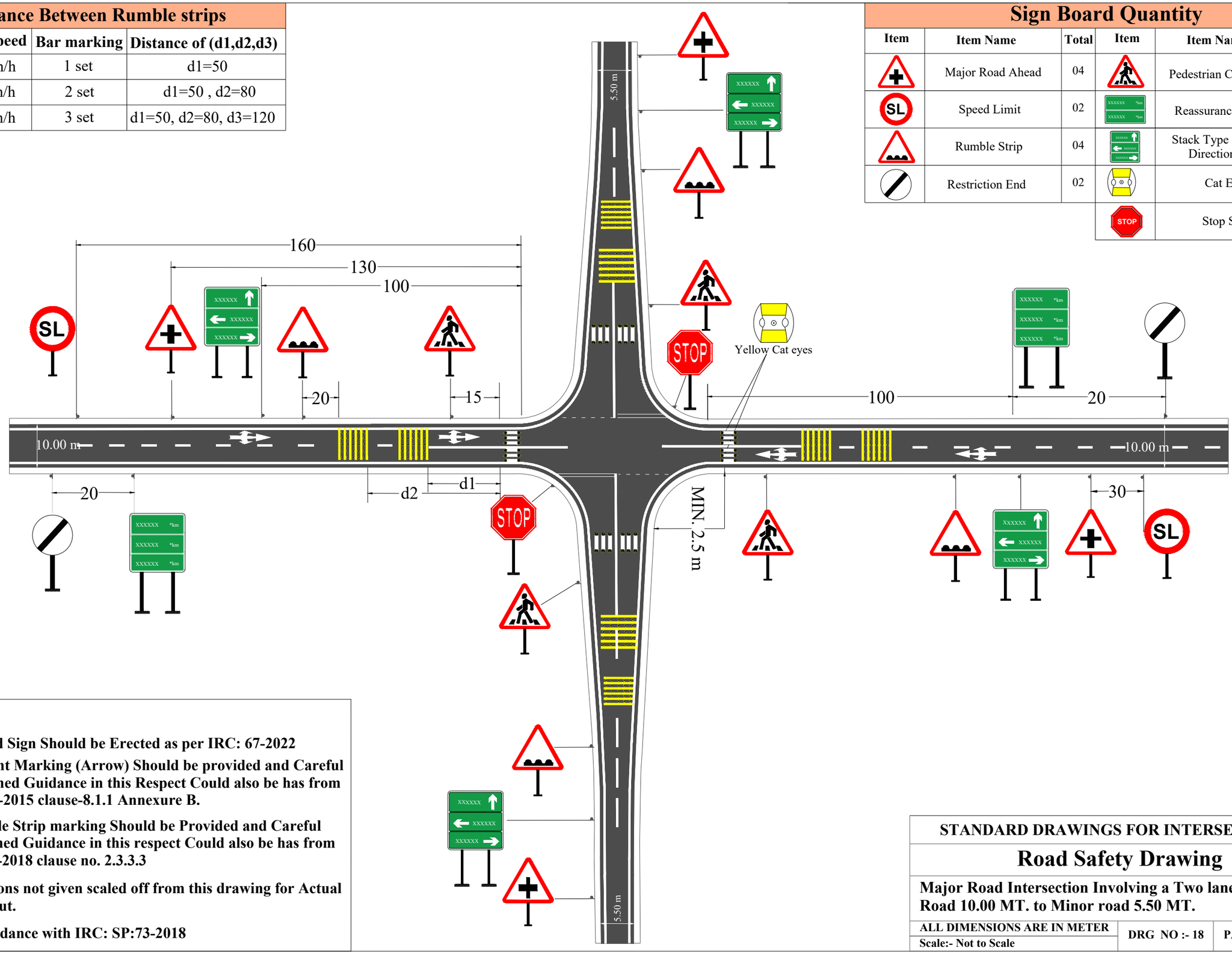
PAGE NO :- 17

Distance Between Rumble strips

Approach Speed	Bar marking	Distance of (d1,d2,d3)
Up to 50 km/h	1 set	d1=50
51 to 65 km/h	2 set	d1=50 , d2=80
66 to 80 km/h	3 set	d1=50, d2=80, d3=120

Sign Board Quantity

Item	Item Name	Total	Item	Item Name	Total
	Major Road Ahead	04		Pedestrian Crossing	04
SL	Speed Limit	02		Reassurance Sign	02
	Rumble Strip	04		Stack Type Advance Direction Sign	04
	Restriction End	02		Cat Eyes	392
			STOP	Stop Sign	02



NOTES

01. All Road Sign Should be Erected as per IRC: 67-2022
02. Pavement Marking (Arrow) Should be provided and Careful maintained Guidance in this Respect Could also be has from IRC: 35-2015 clause-8.1.1 Annexure B.
03. Rummble Strip marking Should be Provided and Careful maintained Guidance in this respect Could also be has from IRC: 99-2018 clause no. 2.3.3.3
04. Dimensions not given scaled off from this drawing for Actual setting out.
05. In Accoedance with IRC: SP:73-2018

STANDARD DRAWINGS FOR INTERSECTIONS

Road Safety Drawing

Major Road Intersection Involving a Two lane Major Road 10.00 MT. to Minor road 5.50 MT.

ALL DIMENSIONS ARE IN METER
Scale:- Not to Scale

DRG NO :- 18

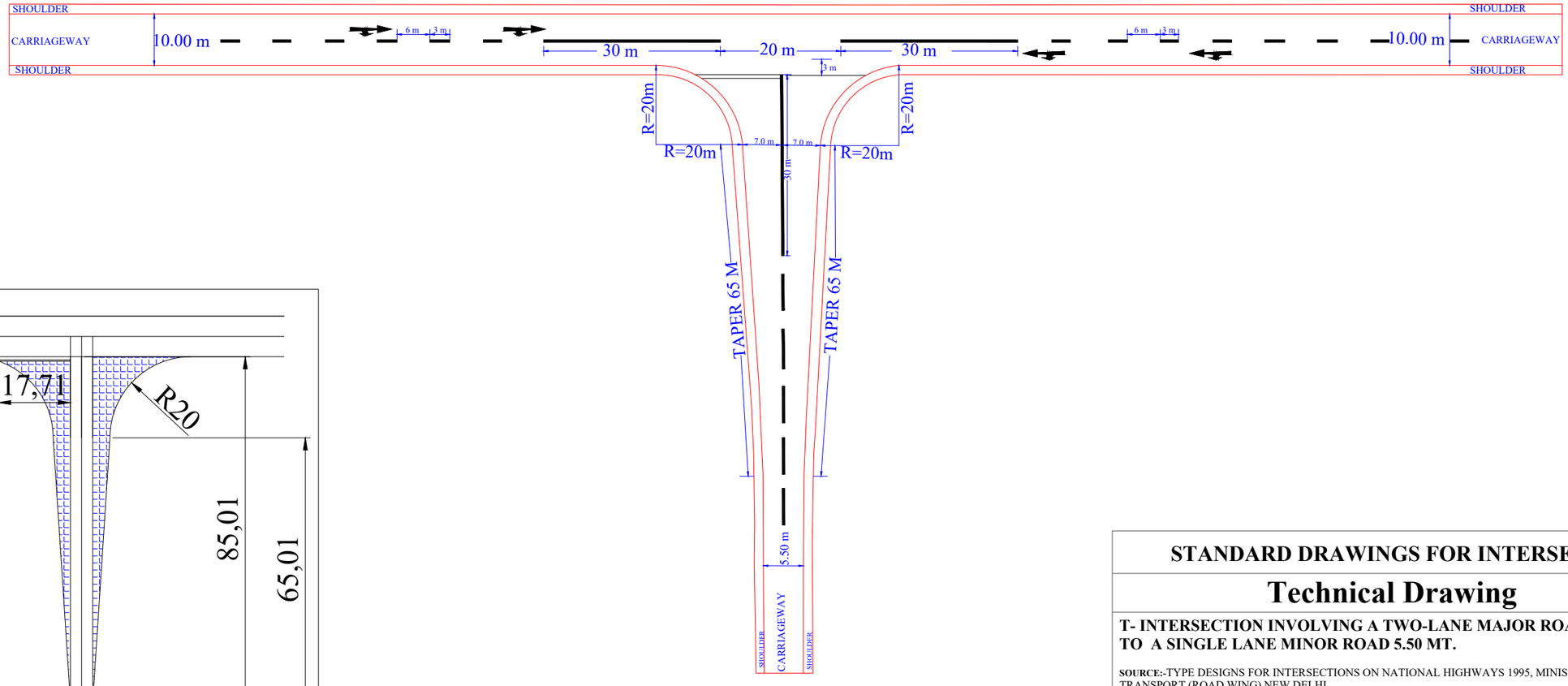
PAGE NO :- 18

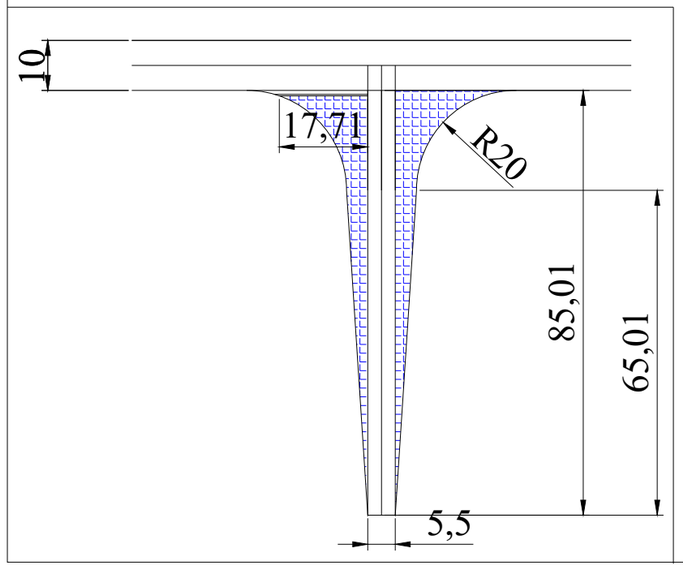
Estimated Cost

Sr. No.	Major Junction	Minor Junction	Cost
01	State Highway	State Highway	18,28,100/-
02	State Highway	Panchayat	17,94,200/-
03	Panchayat	Panchayat	17,58,800/-
04	Panchayat	State Highway	17,92,700/-

Quantity

Fanning Length BC	2	X	170.84	X	0.040	= 13.67 cu. mt.
Taper Length BC	2	X	138.14	X	0.040	= 11.05 cu. mt.
Fanning Length DBM	2	X	170.84	X	0.065	= 22.21 cu. mt.
Taper Length DBM	2	X	138.14	X	0.065	= 17.96 cu. mt.
Fanning Length WMM	2	X	170.84	X	0.250	= 85.42 cu. mt.
Taper Length WMM	2	X	138.14	X	0.250	= 69.07 cu. mt.
Fanning Length GSB	2	X	170.84	X	0.200	= 68.34 cu. mt.
Taper Length GSB	2	X	138.14	X	0.200	= 55.26 cu. mt.





STANDARD DRAWINGS FOR INTERSECTIONS

Technical Drawing

T- INTERSECTION INVOLVING A TWO-LANE MAJOR ROAD 10.00 MT. TO A SINGLE LANE MINOR ROAD 5.50 MT.

SOURCE:-TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS 1995, MINISTRY OF SURFACE TRANSPORT (ROAD WING) NEW DELHI.

ALL DIMENSIONS ARE IN METER

SCALE :- NOT TO SCALE

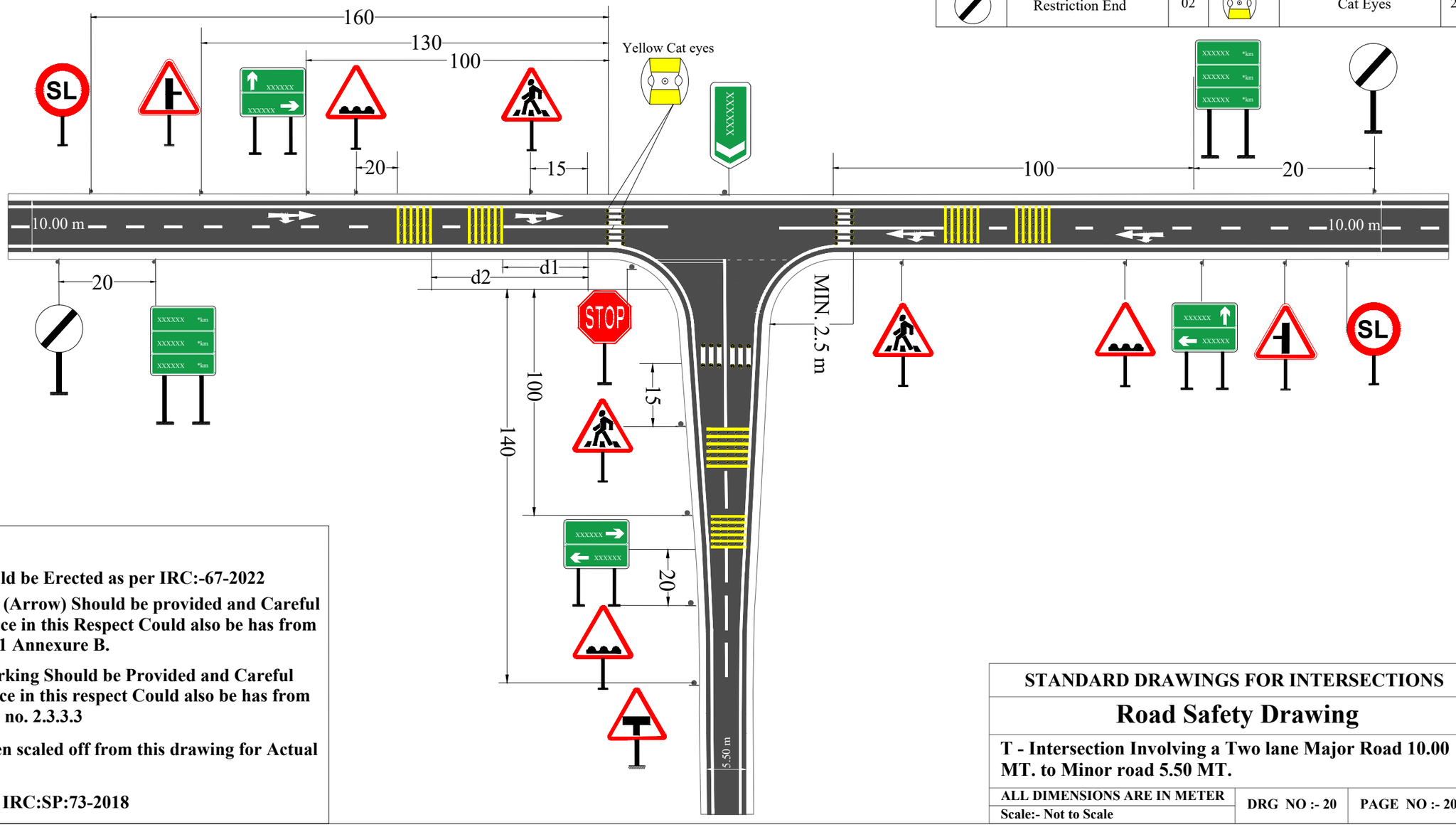
DRG NO :- 19

PAGE NO :- 19

Distance Between Rumble strips		
Approach Speed	**Bar marking**	**Distance of (d1,d2,d3)**
Up to 50 km/h	1 set	d1=50
51 to 65 km/h	2 set	d1=50 , d2=80
66 to 80 km/h	3 set	d1=50, d2=80, d3=120

Sign Board Quantity

Item	Item Name	Total	Item	Item Name	Total
	Side Road Right	01		T-Intersection Major Road Ahead	01
	Side Road Left	01		Reassurance Sign	02
	Rumble Strip	03		Stack Type Advance Direction Sign	03
	Pedestrian Crossing	03		Speed Limit	02
	Stop	01		Flag Type Direction Sign	01
	Restriction End	02		Cat Eyes	246



NOTES

01. **All Road Sign Should be Erected as per IRC:-67-2022**
02. **Pavement Marking (Arrow) Should be provided and Careful maintained Guidance in this Respect Could also be has from IRC:-35 clause-8.1.1 Annexure B.**
03. **Rummble Strip marking Should be Provided and Careful maintained Guidance in this respect Could also be has from IRC-99-2018 clause no. 2.3.3.3**
04. **Dimensions not given scaled off from this drawing for Actual setting out.**
05. **In Accoedance with IRC:SP:73-2018**

STANDARD DRAWINGS FOR INTERSECTIONS

Road Safety Drawing

T - Intersection Involving a Two lane Major Road 10.00 MT. to Minor road 5.50 MT.

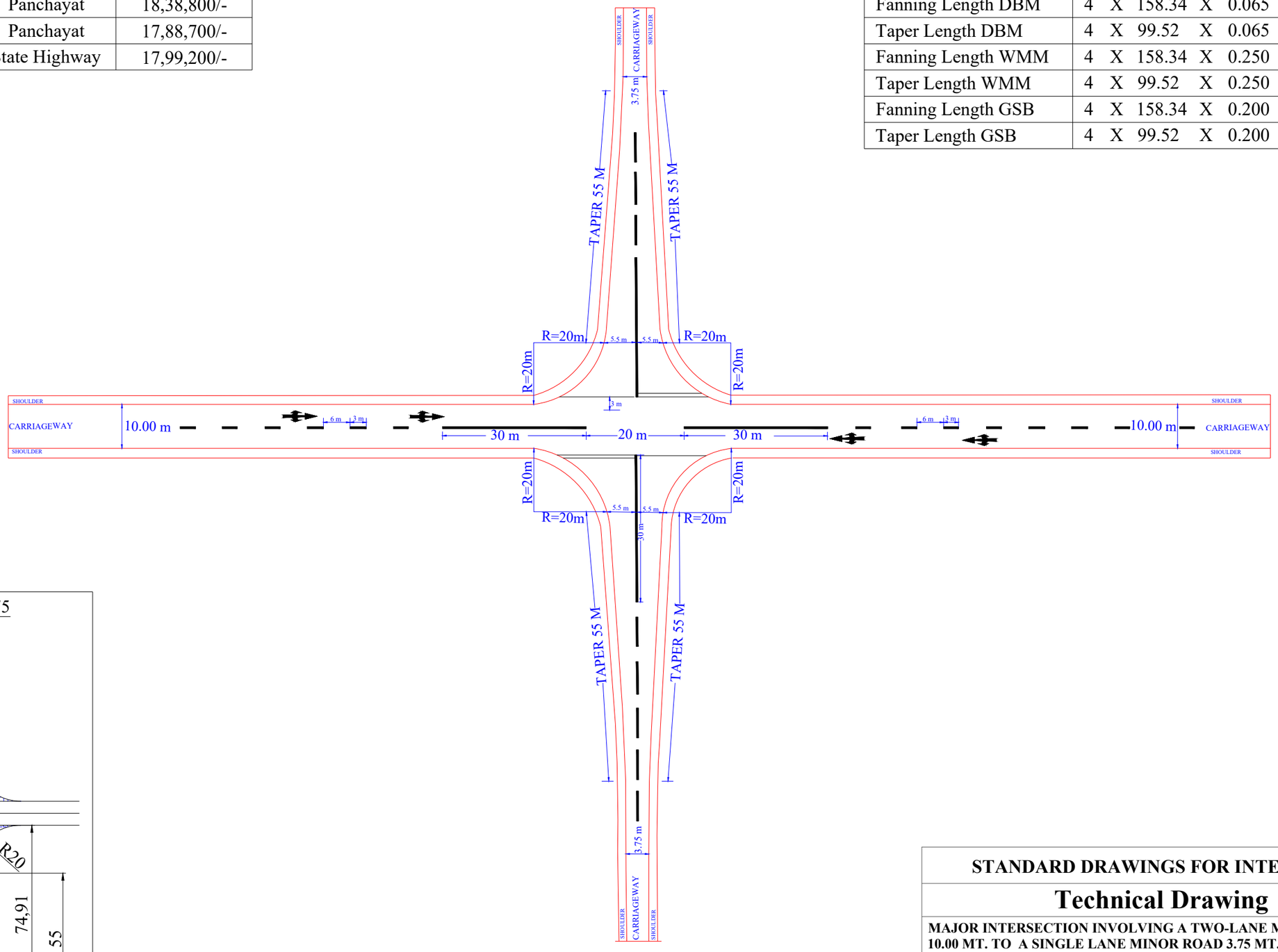
ALL DIMENSIONS ARE IN METER Scale:- Not to Scale	DRG NO :- 20	PAGE NO :- 20

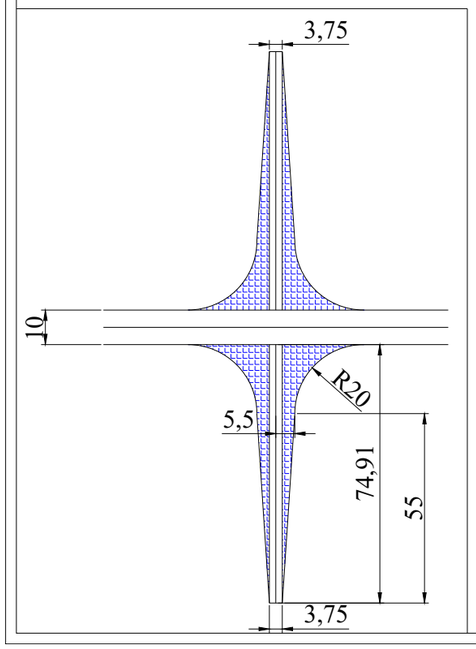
Estimated Cost

Sr. No.	Major Junction	Minor Junction	Cost
01	State Highway	State Highway	18,65,000/-
02	State Highway	Panchayat	18,38,800/-
03	Panchayat	Panchayat	17,88,700/-
04	Panchayat	State Highway	17,99,200/-

Quantity

Fanning Length BC	4	X	158.34	X	0.040	= 25.33 cu. mt.
Taper Length BC	4	X	99.52	X	0.040	= 15.92 cu. mt.
Fanning Length DBM	4	X	158.34	X	0.065	= 41.17 cu. mt.
Taper Length DBM	4	X	99.52	X	0.065	= 25.88 cu. mt.
Fanning Length WMM	4	X	158.34	X	0.250	= 158.34 cu. mt.
Taper Length WMM	4	X	99.52	X	0.250	= 99.52 cu. mt.
Fanning Length GSB	4	X	158.34	X	0.200	= 126.67 cu. mt.
Taper Length GSB	4	X	99.52	X	0.200	= 79.62 cu. mt.





STANDARD DRAWINGS FOR INTERSECTIONS

Technical Drawing

MAJOR INTERSECTION INVOLVING A TWO-LANE MAJOR ROAD 10.00 MT. TO A SINGLE LANE MINOR ROAD 3.75 MT.

SOURCE:-TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS 1995, MINISTRY OF SURFACE TRANSPORT (ROAD WING) NEW DELHI.

ALL DIMENSIONS ARE IN METER

SCALE :- NOT TO SCALE

DRG NO :- 21

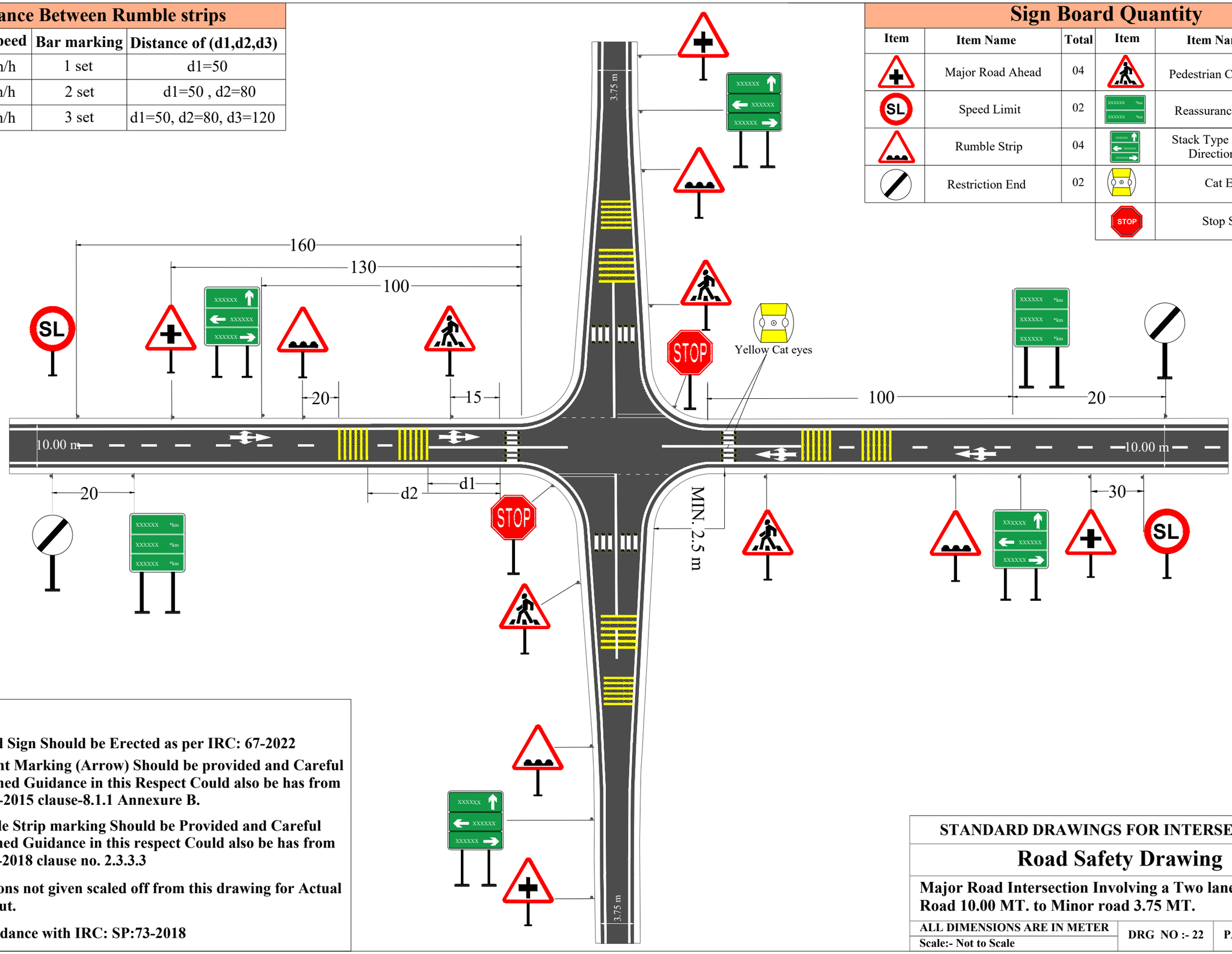
PAGE NO :- 21

Distance Between Rumble strips

Approach Speed	Bar marking	Distance of (d1,d2,d3)
Up to 50 km/h	1 set	d1=50
51 to 65 km/h	2 set	d1=50 , d2=80
66 to 80 km/h	3 set	d1=50, d2=80, d3=120

Sign Board Quantity

Item	Item Name	Total	Item	Item Name	Total
	Major Road Ahead	04		Pedestrian Crossing	04
SL	Speed Limit	02		Reassurance Sign	02
	Rumble Strip	04		Stack Type Advance Direction Sign	04
	Restriction End	02		Cat Eyes	360
			STOP	Stop Sign	02



N O T E S

01. All Road Sign Should be Erected as per IRC: 67-2022
02. Pavement Marking (Arrow) Should be provided and Careful maintained Guidance in this Respect Could also be has from IRC: 35-2015 clause-8.1.1 Annexure B.
03. Rummble Strip marking Should be Provided and Careful maintained Guidance in this respect Could also be has from IRC: 99-2018 clause no. 2.3.3.3
04. Dimensions not given scaled off from this drawing for Actual setting out.
05. In Accoedance with IRC: SP:73-2018

STANDARD DRAWINGS FOR INTERSECTIONS

Road Safety Drawing

Major Road Intersection Involving a Two lane Major Road 10.00 MT. to Minor road 3.75 MT.

ALL DIMENSIONS ARE IN METER
Scale:- Not to Scale

DRG NO :- 22

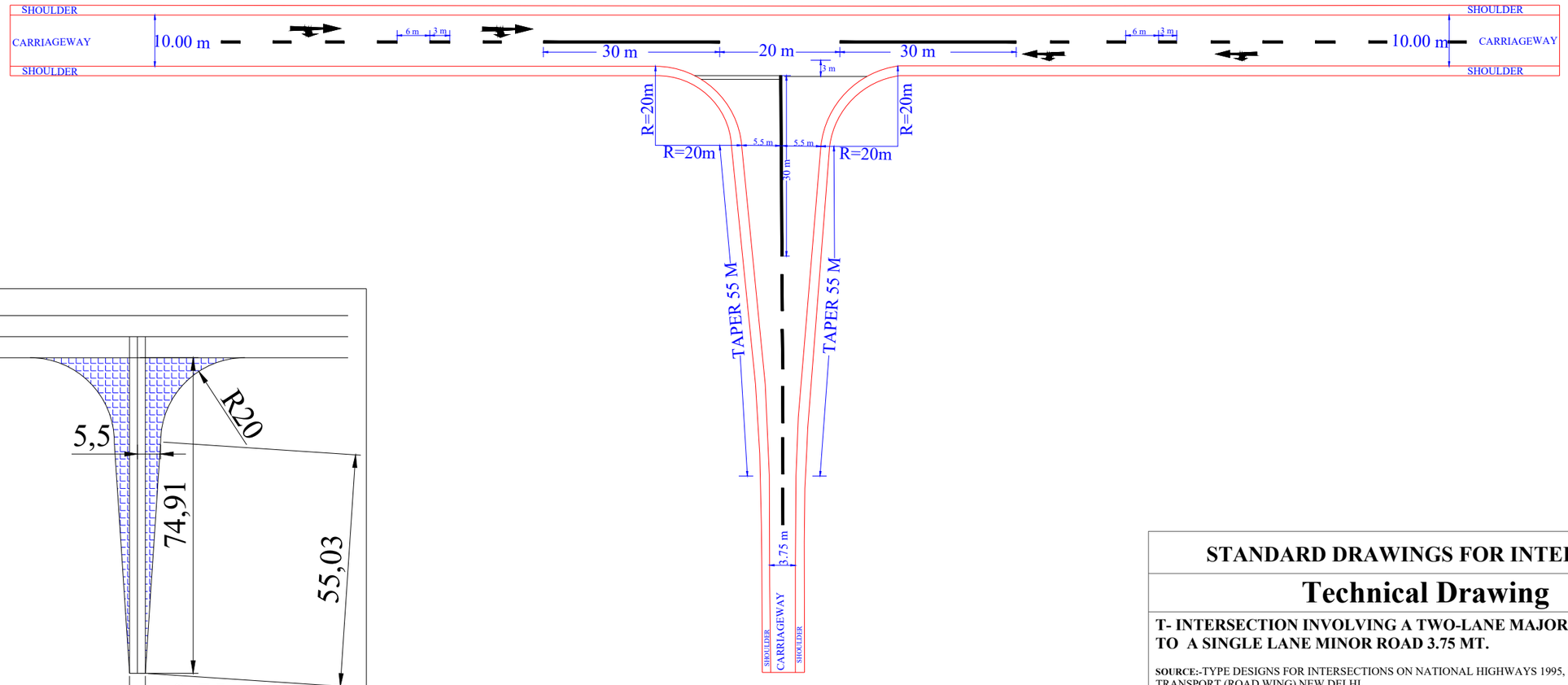
PAGE NO :- 22

Estimated Cost

Sr. No.	Major Junction	Minor Junction	Cost
01	State Highway	State Highway	15,37,300/-
02	State Highway	Panchayat	15,03,300/-
03	Panchayat	Panchayat	14,67,900/-
04	Panchayat	State Highway	15,01,900/-

Quantity

Fanning Length BC	2	X	158.34	X	0.040	= 12.67 cu. mt.
Taper Length BC	2	X	99.52	X	0.040	= 7.96 cu. mt.
Fanning Length DBM	2	X	158.34	X	0.065	= 20.58 cu. mt.
Taper Length DBM	2	X	99.52	X	0.065	= 12.94 cu. mt.
Fanning Length WMM	2	X	158.34	X	0.250	= 79.17 cu. mt.
Taper Length WMM	2	X	99.52	X	0.250	= 49.76 cu. mt.
Fanning Length GSB	2	X	158.34	X	0.200	= 63.34 cu. mt.
Taper Length GSB	2	X	99.52	X	0.200	= 39.81 cu. mt.



STANDARD DRAWINGS FOR INTERSECTIONS

Technical Drawing

T- INTERSECTION INVOLVING A TWO-LANE MAJOR ROAD 10.00 MT. TO A SINGLE LANE MINOR ROAD 3.75 MT.

SOURCE:-TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS 1995, MINISTRY OF SURFACE TRANSPORT (ROAD WING) NEW DELHI.

ALL DIMENSIONS ARE IN METER	**DRG NO :- 23**	**PAGE NO :- 23**
SCALE :- NOT TO SCALE		

Distance Between Rumble strips

Approach Speed	Bar marking	Distance of (d1,d2,d3)
Up to 50 km/h	1 set	d1=50
51 to 65 km/h	2 set	d1=50 , d2=80
66 to 80 km/h	3 set	d1=50, d2=80, d3=120

Sign Board Quantity

Item	Item Name	Total	Item	Item Name	Total
	Side Road Right	01		T-Intersection Major Road Ahead	01
	Side Road Left	01		Reassurance Sign	02
	Rumble Strip	03		Stack Type Advance Direction Sign	03
	Pedestrian Crossing	03		Speed Limit	02
	Stop	01		Flag Type Direction Sign	01
	Restriction End	02		Cat Eyes	270

STANDARD DRAWINGS FOR INTERSECTIONS

Road Safety Drawing

T - Intersection Involving a Two lane Major Road 10.00 MT. to Minor road 3.75 MT.

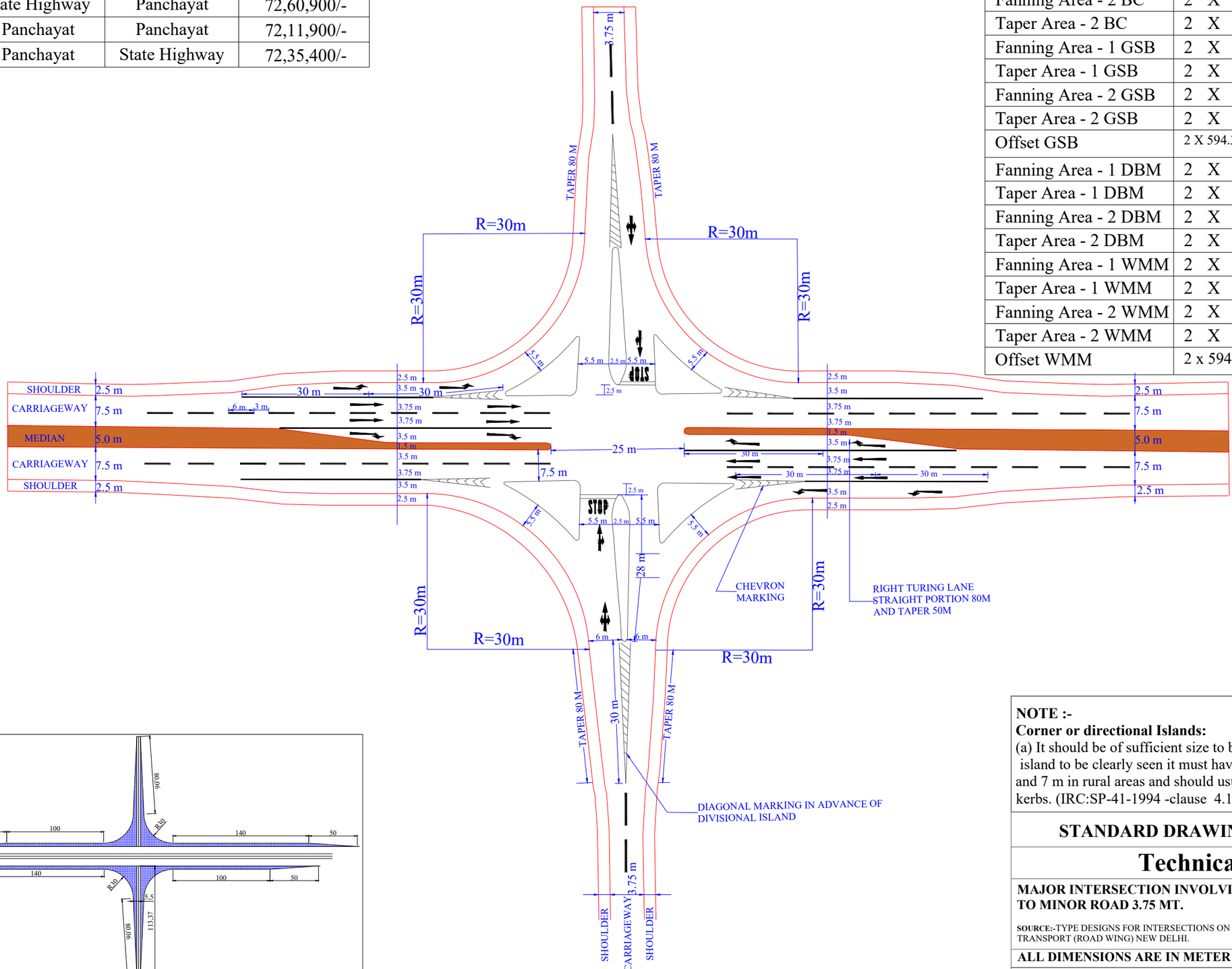
ALL DIMENSIONS ARE IN METER Scale:- Not to Scale	DRG NO :- 24	PAGE NO :- 24

Estimated Cost

Sr. No.	Major Junction	Minor Junction	Cost
01	State Highway	State Highway	72,93,000/-
02	State Highway	Panchayat	72,60,900/-
03	Panchayat	Panchayat	72,11,900/-
04	Panchayat	State Highway	72,35,400/-

Quantity

Fanning Area - 1 BC	2 X 997.08 X 0.040 = 79.77 cu. mt.
Taper Area - 1 BC	2 X 144.76 X 0.040 = 11.58 cu. mt.
Fanning Area - 2 BC	2 X 857.08 X 0.040 = 68.57cu. mt.
Taper Area - 2 BC	2 X 144.76 X 0.040 = 11.58 cu. mt.
Fanning Area - 1 GSB	2 X 997.08 X 0.200 = 398.83 cu. mt.
Taper Area - 1 GSB	2 X 144.76 X 0.200 = 57.90 cu. mt.
Fanning Area - 2 GSB	2 X 857.08 X 0.200 = 342.83 cu. mt.
Taper Area - 2 GSB	2 X 144.76 X 0.200 = 57.90 cu. mt.
Offset GSB	$2 \times 594.38 \times \frac{(2.1+1.7)}{2} \times 0.200$ = 451.73 cu. mt.
Fanning Area - 1 DBM	2 X 997.08 X 0.065 = 129.62 cu. mt.
Taper Area - 1 DBM	2 X 144.76 X 0.065 = 18.81 cu. mt.
Fanning Area - 2 DBM	2 X 857.08 X 0.065 = 111.42 cu. mt.
Taper Area - 2 DBM	2 X 144.76 X 0.065 = 18.81 cu. mt.
Fanning Area - 1 WMM	2 X 997.08 X 0.250 = 498.54 cu. mt.
Taper Area - 1 WMM	2 X 144.76 X 0.250 = 72.38 cu. mt.
Fanning Area - 2 WMM	2 X 857.08 X 0.250 = 428.54 cu. mt.
Taper Area - 2 WMM	2 X 144.76 X 0.250 = 72.38 cu. mt.
Offset WMM	2 x 594.38 x 0.150 x 0.250 = 44.58 cu. mt.



NOTE :-

Corner or directional Islands:

(a) It should be of sufficient size to be readily identified and visible.For an island to be clearly seen it must have an area of at least 4.5 m in urban areas and 7 m in rural areas and should usually be bordered with painted raised kerbs. (IRC:SP-41-1994 -clause 4.11.2 (a)

STANDARD DRAWINGS FOR INTERSECTIONS

Technical Drawing

MAJOR INTERSECTION INVOLVING A FOUR-LANE STATE HIGHWAY TO MINOR ROAD 3.75 MT.

SOURCE:-TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS 1995, MINISTRY OF SURFACE TRANSPORT (ROAD WING) NEW DELHI.

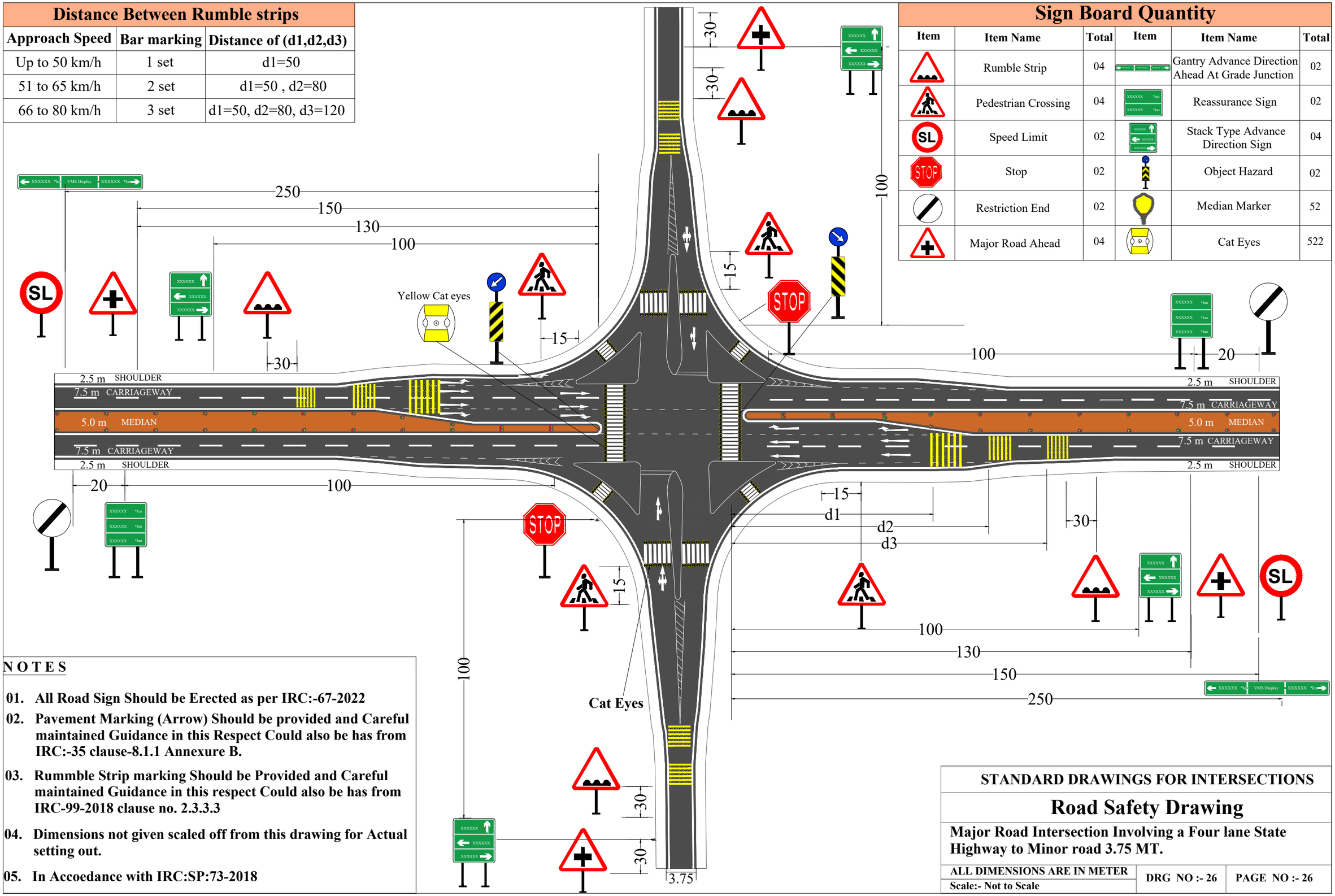
ALL DIMENSIONS ARE IN METER	DRG NO :- 25	PAGE NO :- 25
SCALE :- NOT TO SCALE		

Distance Between Rumble strips

Approach Speed	Bar marking	Distance of (d1,d2,d3)
Up to 50 km/h	1 set	d1=50
51 to 65 km/h	2 set	d1=50 , d2=80
66 to 80 km/h	3 set	d1=50, d2=80, d3=120

Sign Board Quantity

Item	Item Name	Total	Item	Item Name	Total
	Rumble Strip	04		Gantry Advance Direction Ahead At Grade Junction	02
	Pedestrian Crossing	04		Reassurance Sign	02
SL	Speed Limit	02		Stack Type Advance Direction Sign	04
STOP	Stop	02		Object Hazard	02
	Restriction End	02		Median Marker	52
	Major Road Ahead	04		Cat Eyes	522



NOTES

01. All Road Sign Should be Erected as per IRC:-67-2022
02. Pavement Marking (Arrow) Should be provided and Careful maintained Guidance in this Respect Could also be has from IRC:-35 clause-8.1.1 Annexure B.
03. Rummble Strip marking Should be Provided and Careful maintained Guidance in this respect Could also be has from IRC-99-2018 clause no. 2.3.3.3
04. Dimensions not given scaled off from this drawing for Actual setting out.
05. In Accoedance with IRC:SP:73-2018

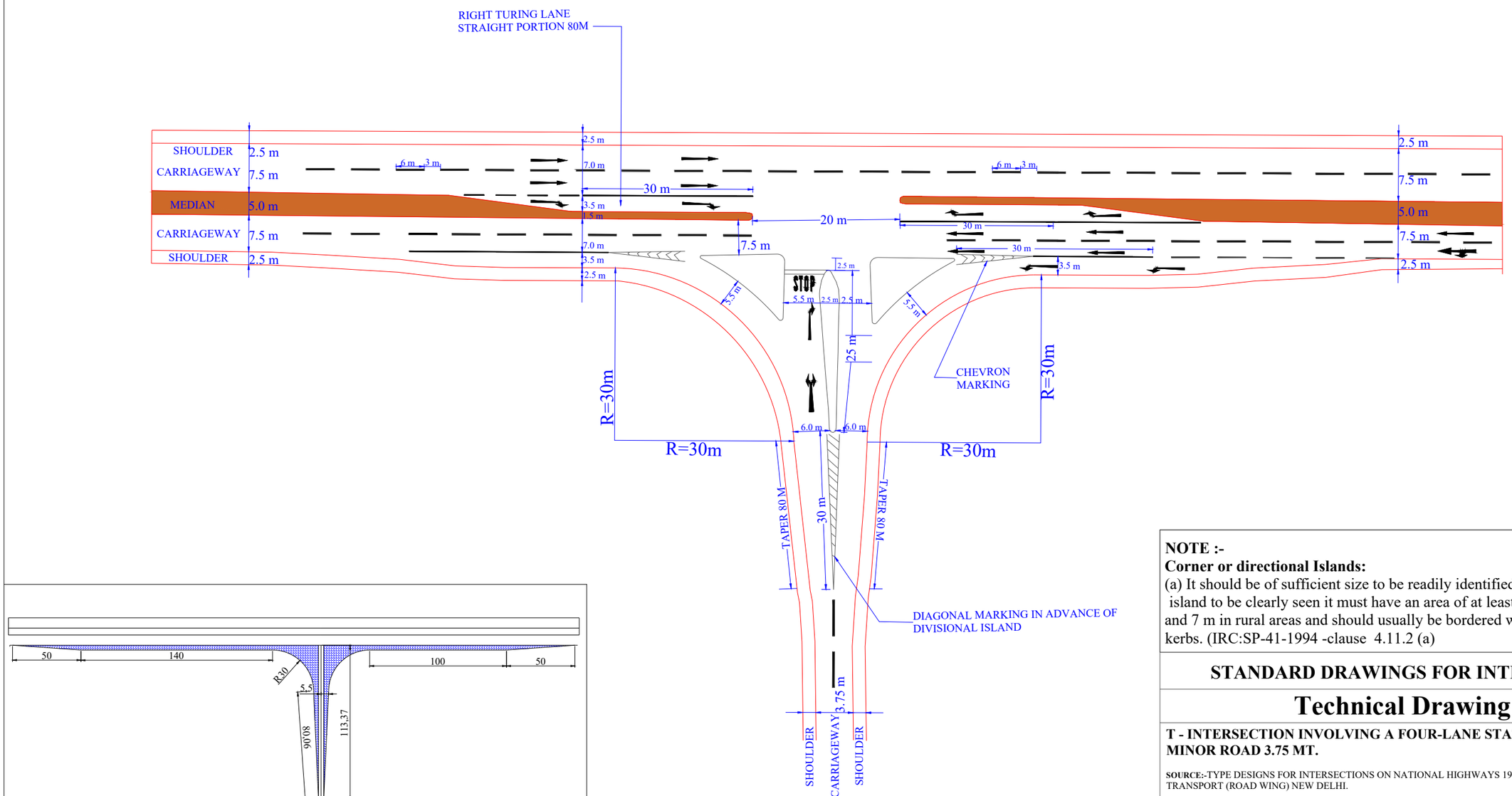
STANDARD DRAWINGS FOR INTERSECTIONS

Road Safety Drawing

Major Road Intersection Involving a Four lane State Highway to Minor road 3.75 MT.

ALL DIMENSIONS ARE IN METER Scale:- Not to Scale	DRG NO :- 26	PAGE NO :- 26

Estimated Cost				Quantity			Quantity	
Sr. No.	**Major Junction**	**Minor Junction**	**Cost**	Fanning Area - 1 DBM	1 X 997.08 X 0.065 = 64.81 cu. mt.		Fanning Area - 1 BC	1 X 997.08 X 0.040 = 39.88 cu. mt.
01	State Highway	State Highway	41,55,100/-	Taper Area - 1 DBM	1 X 144.76 X 0.065 = 9.41 cu. mt.		Taper Area - 1 BC	1 X 144.76 X 0.040 = 5.79 cu. mt.
				Fanning Area - 2 DBM	1 X 857.08 X 0.065 = 55.71 cu. mt.		Fanning Area - 2 BC	1 X 857.08 X 0.040 = 34.28 cu. mt.
02	State Highway	Panchayat	41,20,000/-	Taper Area - 2 DBM	1 X 144.76 X 0.065 = 9.41 cu. mt.		Taper Area - 2 BC	1 X 144.76 X 0.040 = 5.79 cu. mt.
				Fanning Area - 1 WMM	1 X 997.08 X 0.250 = 249.27 cu. mt.		Fanning Area - 1 GSB	1 X 997.08 X 0.200 = 199.42 cu. mt.
03	Panchayat	Panchayat	40,75,600/-	Taper Area - 1 WMM	1 X 144.76 X 0.250 = 36.19 cu. mt.		Taper Area - 1 GSB	1 X 144.76 X 0.200 = 28.95 cu. mt.
				Fanning Area - 2 WMM	1 X 857.08 X 0.250 = 214.27 cu. mt.		Fanning Area - 2 GSB	1 X 857.08 X 0.200 = 171.42 cu. mt.
04	Panchayat	State Highway	41,10,600/-	Taper Area - 2 WMM	1 X 144.76 X 0.250 = 36.19 cu. mt.		Taper Area - 2 GSB	1 X 144.76 X 0.200 = 28.95 cu. mt.
				Offset WMM	1 x 594.38 x 0.150 x 0.250 = 22.29 cu. mt.		Offset GSB	1 X 594.38 X $\frac{(2.1+1.7)}{2}$ X 0.200 = 225.86 cu. mt.



NOTE :-
Corner or directional Islands:
(a) It should be of sufficient size to be readily identified and visible.For an island to be clearly seen it must have an area of at least 4.5 m in urban areas and 7 m in rural areas and should usually be bordered with painted raised kerbs. (IRC:SP-41-1994 -clause 4.11.2 (a)

STANDARD DRAWINGS FOR INTERSECTIONS

Technical Drawing

T - INTERSECTION INVOLVING A FOUR-LANE STATE HIGHWAY TO MINOR ROAD 3.75 MT.

SOURCE:-TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS 1995, MINISTRY OF SURFACE TRANSPORT (ROAD WING) NEW DELHI.

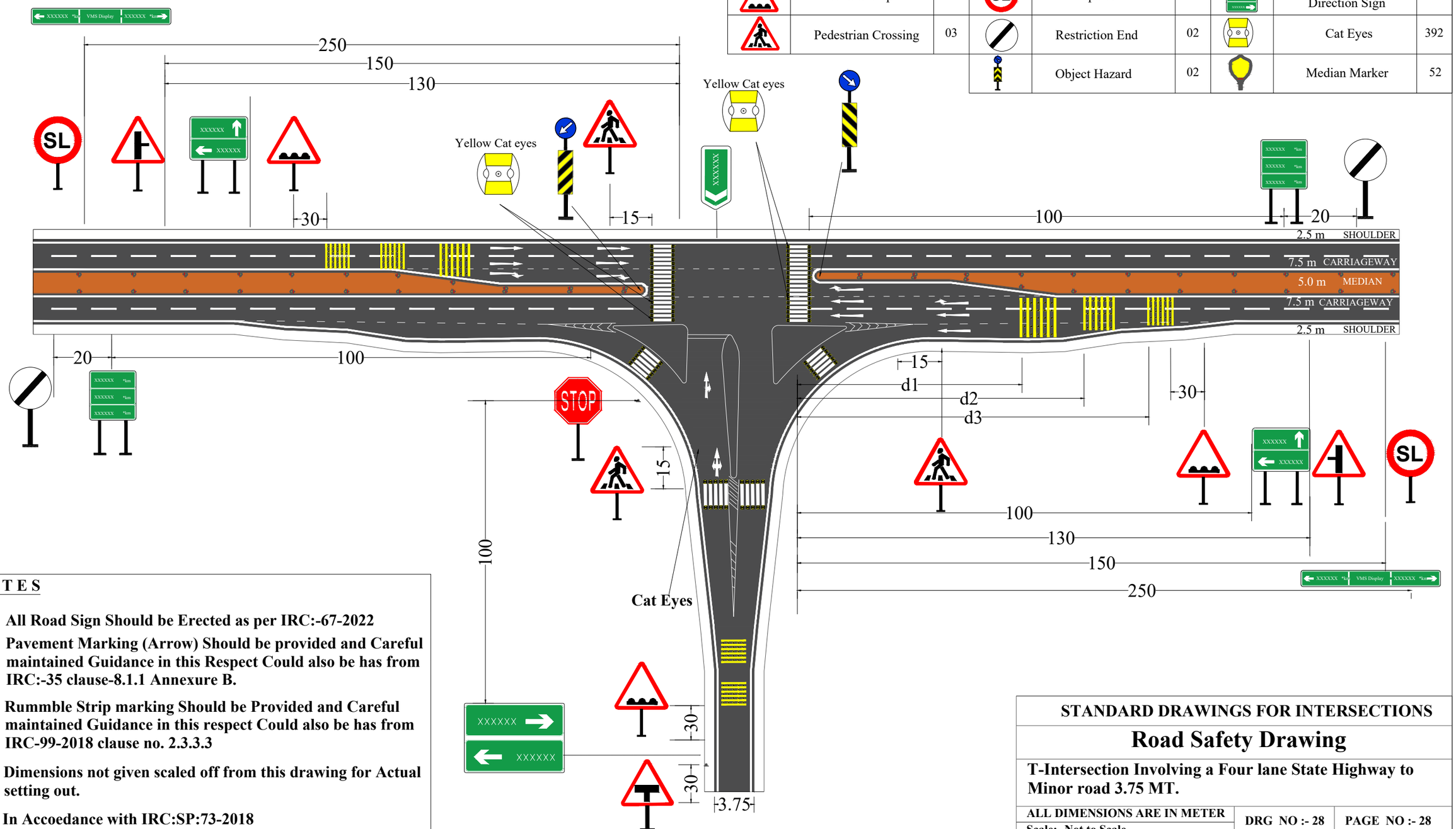
ALL DIMENSIONS ARE IN METER	**DRG NO :- 27**	**PAGE NO :- 27**
SCALE :- NOT TO SCALE		

Distance Between Rumble strips

Approach Speed	Bar marking	Distance of (d1,d2,d3)
Up to 50 km/h	1 set	d1=50
51 to 65 km/h	2 set	d1=50 , d2=80
66 to 80 km/h	3 set	d1=50, d2=80, d3=120

Sign Board Quantity

Item	Item Name	Total	Item	Item Name	Total	Item	Item Name	Total
	Side Road Right	01		T-Intersection Major Road Ahead	01		Flag Type Direction Sign	01
	Side Road Left	01	STOP	Stop	01		Reassurance Sign	02
	Rumble Strip	03	SL	Speed Limit	02		Stack Type Advance Direction Sign	03
	Pedestrian Crossing	03		Restriction End	02		Cat Eyes	392
				Object Hazard	02		Median Marker	52



NOTES

01. All Road Sign Should be Erected as per IRC:-67-2022
02. Pavement Marking (Arrow) Should be provided and Careful maintained Guidance in this Respect Could also be has from IRC:-35 clause-8.1.1 Annexure B.
03. Rummble Strip marking Should be Provided and Careful maintained Guidance in this respect Could also be has from IRC-99-2018 clause no. 2.3.3.3
04. Dimensions not given scaled off from this drawing for Actual setting out.
05. In Accoedance with IRC:SP:73-2018

STANDARD DRAWINGS FOR INTERSECTIONS

Road Safety Drawing

T-Intersection Involving a Four lane State Highway to Minor road 3.75 MT.

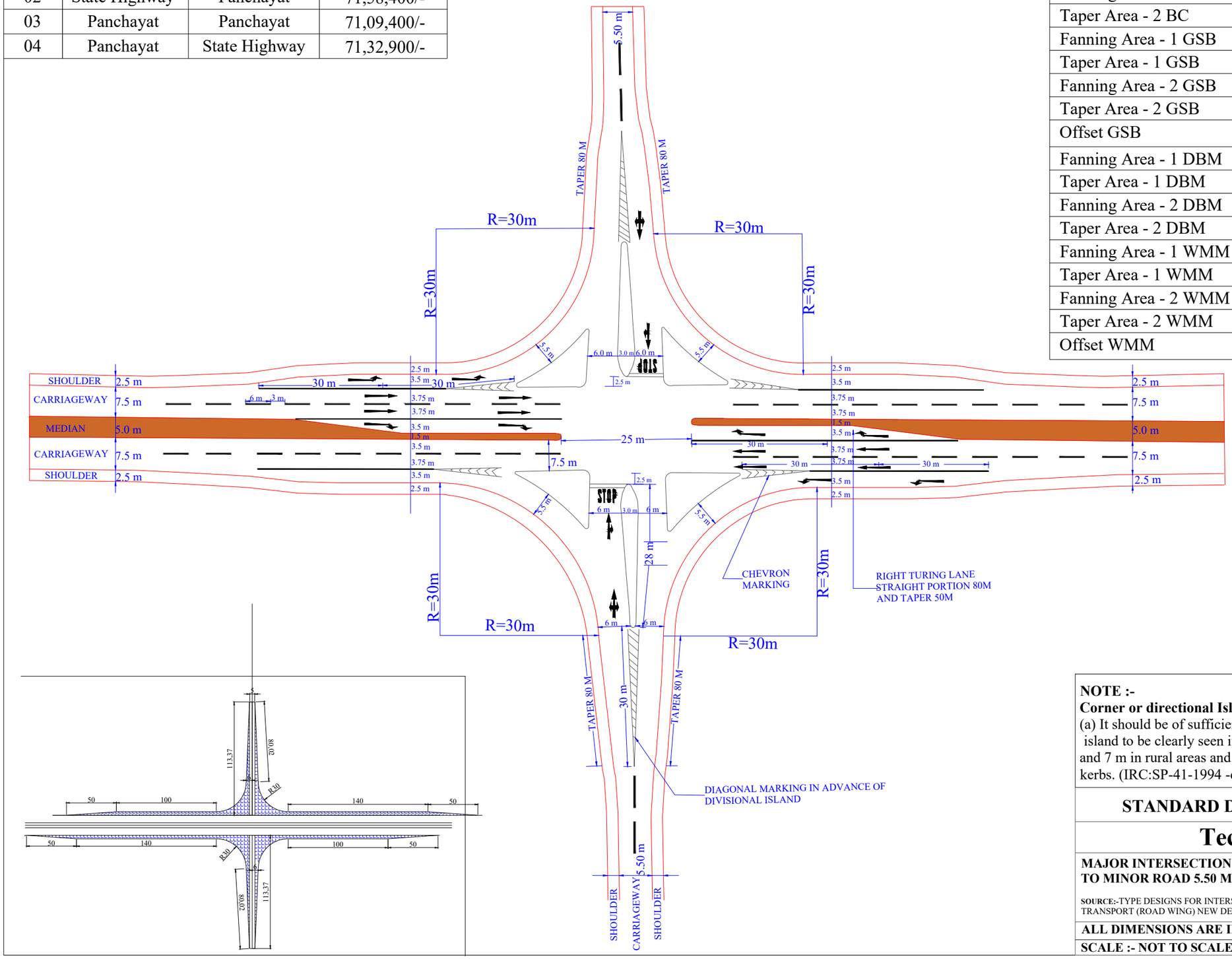
ALL DIMENSIONS ARE IN METER Scale:- Not to Scale	DRG NO :- 28	PAGE NO :- 28

Estimated Cost

Sr. No.	Major Junction	Minor Junction	Cost
01	State Highway	State Highway	71,90,500/-
02	State Highway	Panchayat	71,58,400/-
03	Panchayat	Panchayat	71,09,400/-
04	Panchayat	State Highway	71,32,900/-

Quantity

Fanning Area - 1 BC	2 X 984.52 X 0.040 = 78.76 cu. mt.
Taper Area - 1 BC	2 X 129.78 X 0.040 = 10.38 cu. mt.
Fanning Area - 2 BC	2 X 844.52 X 0.040 = 67.56 cu. mt.
Taper Area - 2 BC	2 X 129.78 X 0.040 = 10.38 cu. mt.
Fanning Area - 1 GSB	2 X 984.52 X 0.200 = 393.81cu. mt.
Taper Area - 1 GSB	2 X 129.78 X 0.200 = 51.91 cu. mt.
Fanning Area - 2 GSB	2 X 844.52 X 0.200 = 337.81 cu. mt.
Taper Area - 2 GSB	2 X 129.78 X 0.200 = 51.91 cu. mt.
Offset GSB	$2 \times 594.38 \times \frac{(2.1+1.7)}{2} \times 0.200$ = 451.73 cu. mt.
Fanning Area - 1 DBM	2 X 984.52 X 0.065 = 127.99 cu. mt.
Taper Area - 1 DBM	2 X 129.78 X 0.065 = 16.87 cu. mt.
Fanning Area - 2 DBM	2 X 844.52 X 0.065 = 109.79 cu. mt.
Taper Area - 2 DBM	2 X 129.78 X 0.065 = 16.87 cu. mt.
Fanning Area - 1 WMM	2 X 984.52 X 0.250 = 492.26 cu. mt.
Taper Area - 1 WMM	2 X 129.78 X 0.250 = 64.89 cu. mt.
Fanning Area - 2 WMM	2 X 844.52 X 0.250 = 422.26 cu. mt.
Taper Area - 2 WMM	2 X 129.78 X 0.250 = 64.89 cu. mt.
Offset WMM	2 x 594.38 x 0.150 x 0.250 = 44.58 cu. mt.



NOTE :-
Corner or directional Islands:
(a) It should be of sufficient size to be readily identified and visible.For an island to be clearly seen it must have an area of at least 4.5 m in urban areas and 7 m in rural areas and should usually be bordered with painted raised kerbs. (IRC:SP-41-1994 -clause 4.11.2 (a)

STANDARD DRAWINGS FOR INTERSECTIONS

Technical Drawing

MAJOR INTERSECTION INVOLVING A FOUR-LANE STATE HIGHWAY TO MINOR ROAD 5.50 MT.

SOURCE:-TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS 1995, MINISTRY OF SURFACE TRANSPORT (ROAD WING) NEW DELHI.

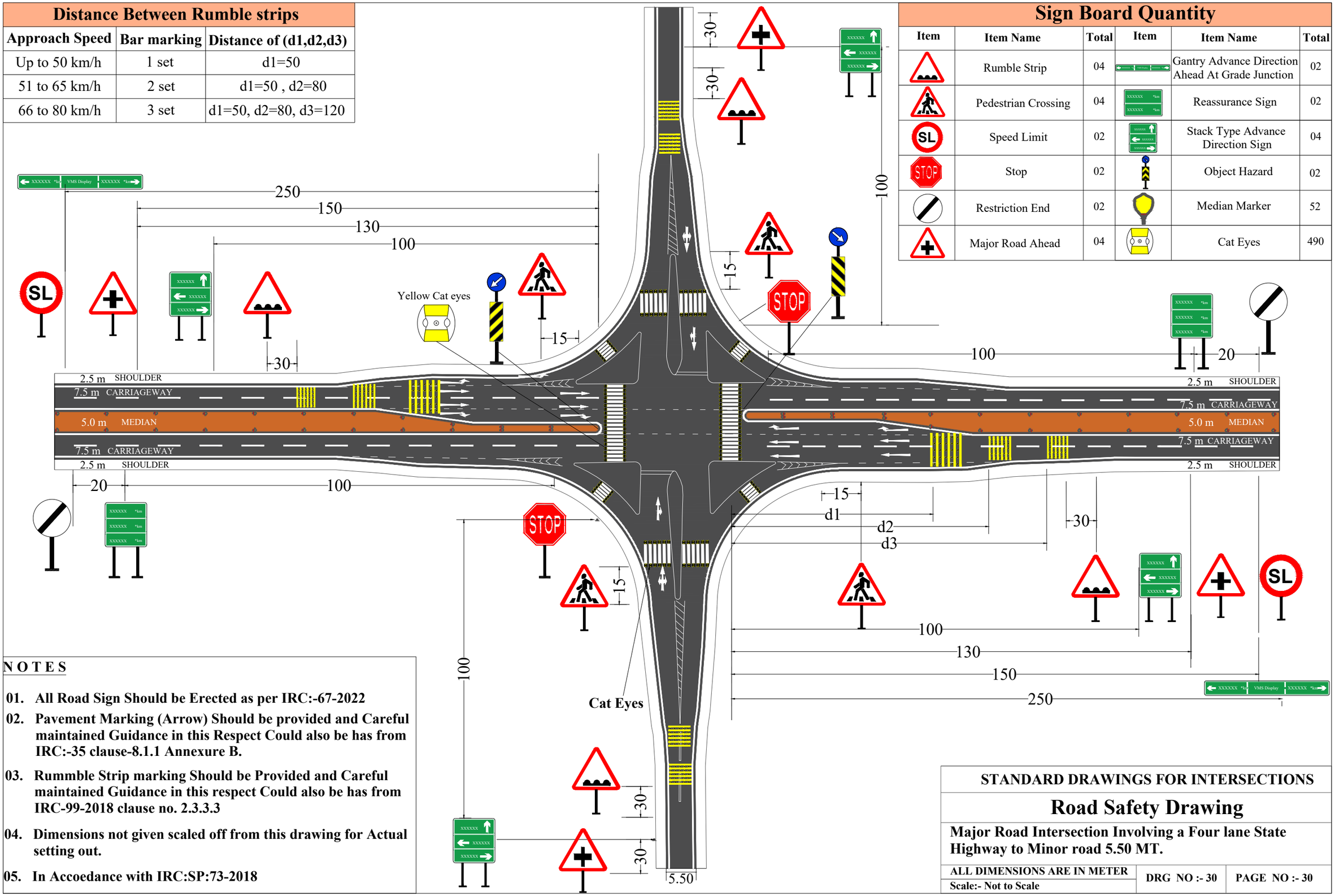
ALL DIMENSIONS ARE IN METER	**DRG NO :- 29**	**PAGE NO :- 29**
SCALE :- NOT TO SCALE		

Distance Between Rumble strips

Approach Speed	Bar marking	Distance of (d1,d2,d3)
Up to 50 km/h	1 set	d1=50
51 to 65 km/h	2 set	d1=50 , d2=80
66 to 80 km/h	3 set	d1=50, d2=80, d3=120

Sign Board Quantity

Item	Item Name	Total	Item	Item Name	Total
	Rumble Strip	04		Gantry Advance Direction Ahead At Grade Junction	02
	Pedestrian Crossing	04		Reassurance Sign	02
SL	Speed Limit	02		Stack Type Advance Direction Sign	04
STOP	Stop	02		Object Hazard	02
	Restriction End	02		Median Marker	52
	Major Road Ahead	04		Cat Eyes	490



NOTES

01. All Road Sign Should be Erected as per IRC:-67-2022
02. Pavement Marking (Arrow) Should be provided and Careful maintained Guidance in this Respect Could also be has from IRC:-35 clause-8.1.1 Annexure B.
03. Rummble Strip marking Should be Provided and Careful maintained Guidance in this respect Could also be has from IRC-99-2018 clause no. 2.3.3.3
04. Dimensions not given scaled off from this drawing for Actual setting out.
05. In Accoedance with IRC:SP:73-2018

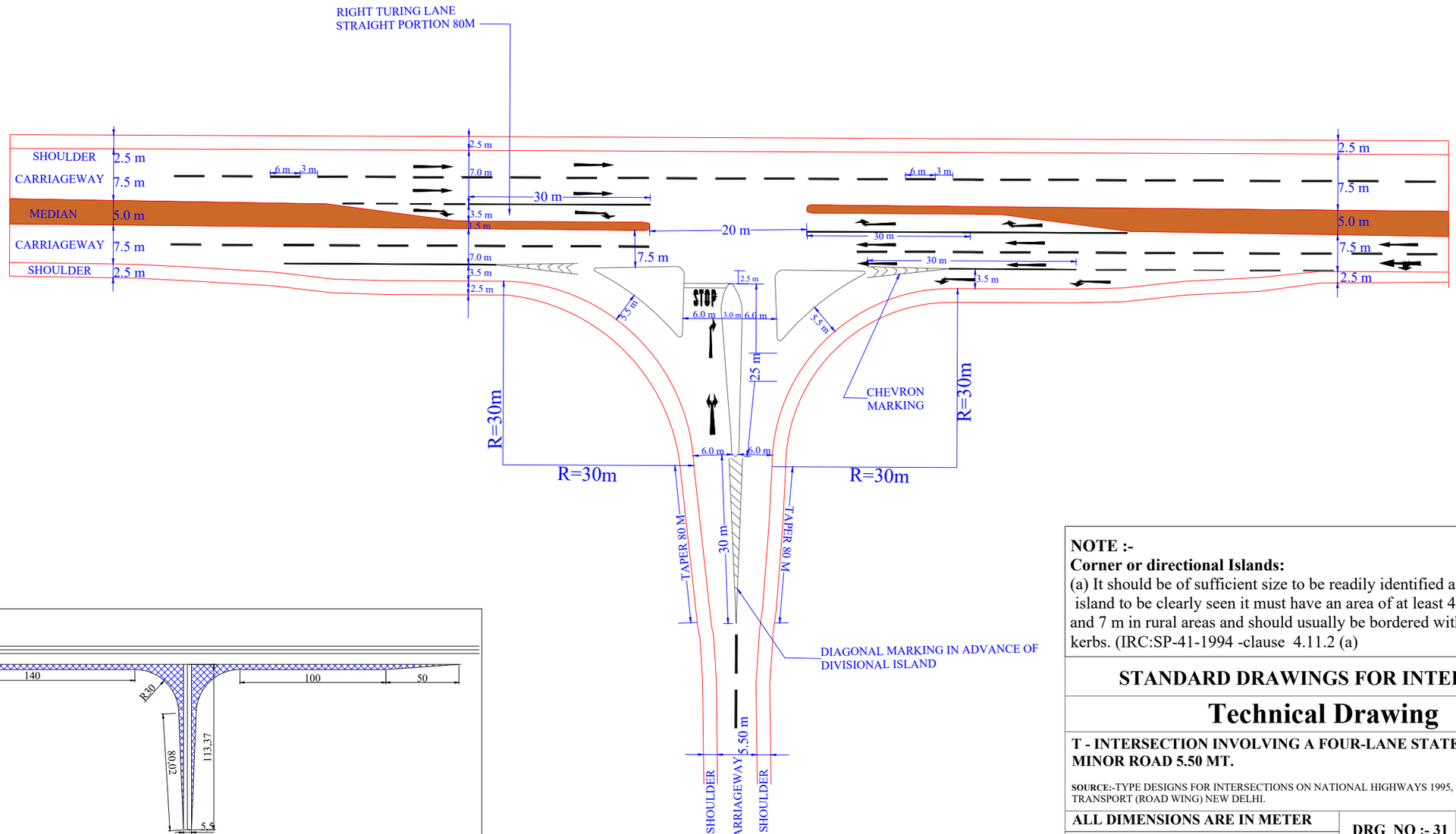
STANDARD DRAWINGS FOR INTERSECTIONS

Road Safety Drawing

Major Road Intersection Involving a Four lane State Highway to Minor road 5.50 MT.

ALL DIMENSIONS ARE IN METER Scale:- Not to Scale	DRG NO :- 30	PAGE NO :- 30

Estimated Cost				Quantity			Quantity	
Sr. No.	**Major Junction**	**Minor Junction**	**Cost**	Fanning Area - 1 DBM	1 X 984.52 X 0.065 = 63.99 cu. mt.		Fanning Area - 1 BC	1 X 984.52 X 0.040 = 39.38 cu. mt.
01	State Highway	State Highway	40,94,400/-	Taper Area - 1 DBM	1 X 129.78 X 0.065 = 8.44 cu. mt.		Taper Area - 1 BC	1 X 129.78 X 0.040 = 5.19 cu. mt.
				Fanning Area - 2 DBM	1 X 844.52 X 0.065 = 54.89 cu. mt.		Fanning Area - 2 BC	1 X 844.52 X 0.040 = 33.78 cu. mt.
02	State Highway	Panchayat	40,59,300/-	Taper Area - 2 DBM	1 X 129.78 X 0.065 = 8.44 cu. mt.		Taper Area - 2 BC	1 X 129.78 X 0.040 = 5.19 cu. mt.
				Fanning Area - 1 WMM	1 X 984.52 X 0.250 = 246.13 cu. mt.		Fanning Area - 1 GSB	1 X 984.52 X 0.200 = 196.90 cu. mt.
03	Panchayat	Panchayat	40,14,900/-	Taper Area - 1 WMM	1 X 129.78 X 0.250 = 32.45 cu. mt.		Taper Area - 1 GSB	1 X 129.78 X 0.200 = 25.96 cu. mt.
				Fanning Area - 2 WMM	1 X 844.52 X 0.250 = 211.13 cu. mt.		Fanning Area - 2 GSB	1 X 844.52 X 0.200 = 168.90 cu. mt.
04	Panchayat	State Highway	40,49,900/-	Taper Area - 2 WMM	1 X 129.78 X 0.250 = 32.45 cu. mt.		Taper Area - 2 GSB	1 X 129.78 X 0.200 = 25.96 cu. mt.
				Offset WMM	1 x 594.38 x 0.150 x 0.250 = 22.29 cu. mt.		Offset GSB	1 X 594.38 X $\frac{(2.1+1.7)}{2}$ X 0.200 = 225.86 cu. mt.



NOTE :-
Corner or directional Islands:
(a) It should be of sufficient size to be readily identified and visible.For an island to be clearly seen it must have an area of at least 4.5 m in urban areas and 7 m in rural areas and should usually be bordered with painted raised kerbs. (IRC:SP-41-1994 -clause 4.11.2 (a)

STANDARD DRAWINGS FOR INTERSECTIONS

Technical Drawing

T - INTERSECTION INVOLVING A FOUR-LANE STATE HIGHWAY TO MINOR ROAD 5.50 MT.

SOURCE:-TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS 1995, MINISTRY OF SURFACE TRANSPORT (ROAD WING) NEW DELHI.

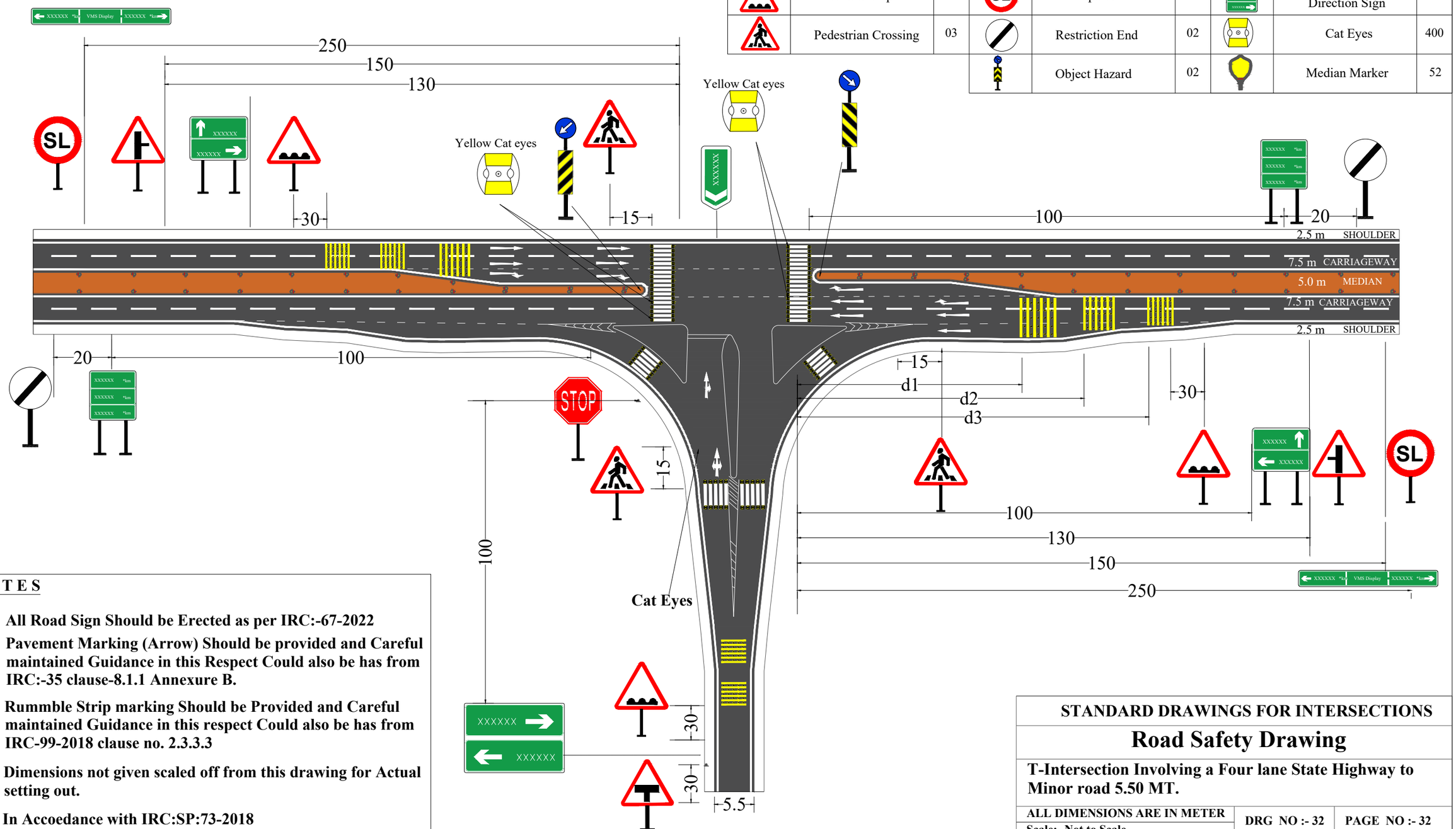
ALL DIMENSIONS ARE IN METER	**DRG NO :- 31**	**PAGE NO :- 31**
SCALE :- NOT TO SCALE		

Distance Between Rumble strips

Approach Speed	Bar marking	Distance of (d1,d2,d3)
Up to 50 km/h	1 set	d1=50
51 to 65 km/h	2 set	d1=50 , d2=80
66 to 80 km/h	3 set	d1=50, d2=80, d3=120

Sign Board Quantity

Item	Item Name	Total	Item	Item Name	Total	Item	Item Name	Total
	Side Road Right	01		T-Intersection Major Road Ahead	01		Flag Type Direction Sign	01
	Side Road Left	01	STOP	Stop	01		Reassurance Sign	02
	Rumble Strip	03	SL	Speed Limit	02		Stack Type Advance Direction Sign	03
	Pedestrian Crossing	03		Restriction End	02		Cat Eyes	400
				Object Hazard	02		Median Marker	52



NOTES

01. All Road Sign Should be Erected as per IRC:-67-2022
02. Pavement Marking (Arrow) Should be provided and Careful maintained Guidance in this Respect Could also be has from IRC:-35 clause-8.1.1 Annexure B.
03. Rummble Strip marking Should be Provided and Careful maintained Guidance in this respect Could also be has from IRC-99-2018 clause no. 2.3.3.3
04. Dimensions not given scaled off from this drawing for Actual setting out.
05. In Accoedance with IRC:SP:73-2018

STANDARD DRAWINGS FOR INTERSECTIONS

Road Safety Drawing

T-Intersection Involving a Four lane State Highway to Minor road 5.50 MT.

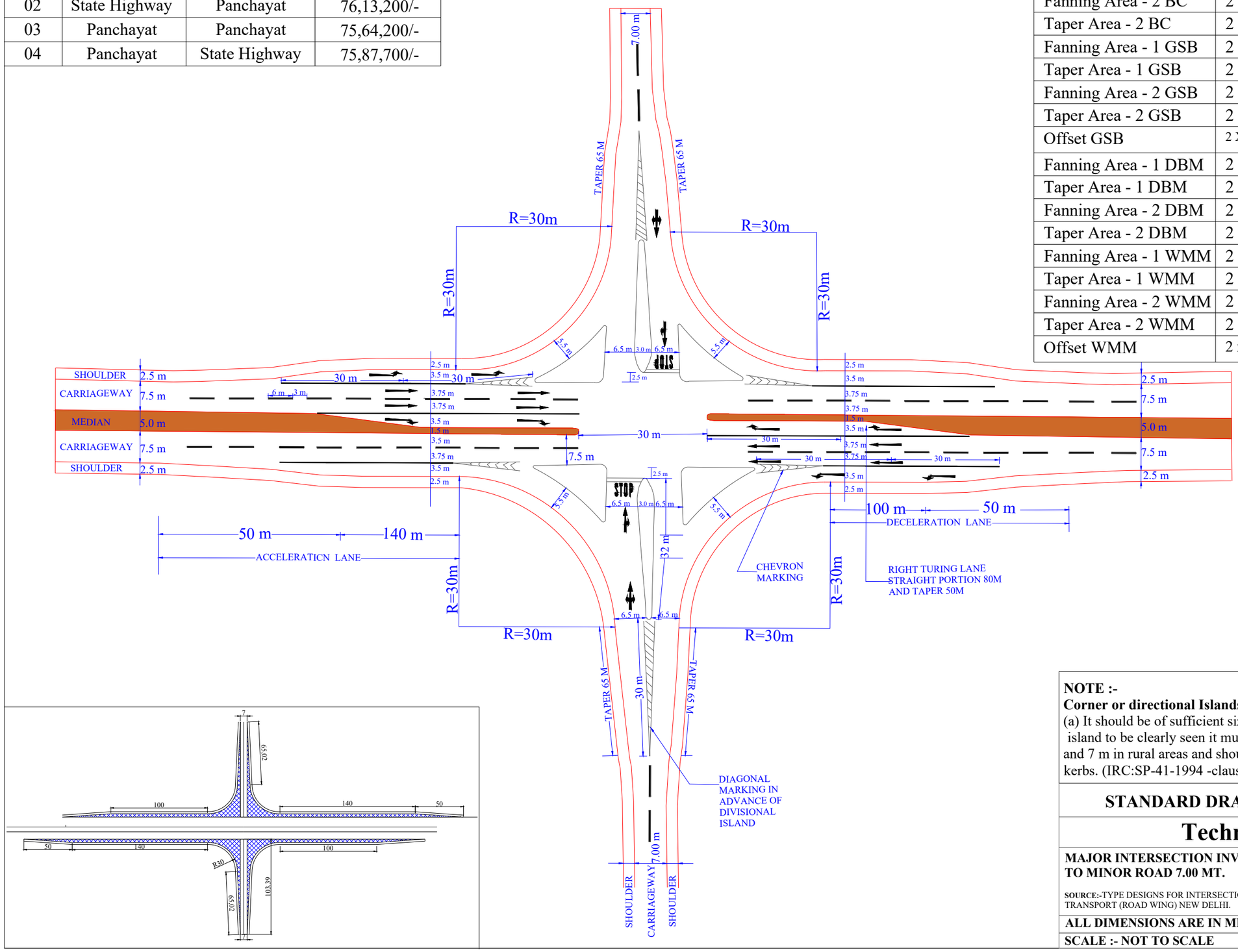
ALL DIMENSIONS ARE IN METER Scale:- Not to Scale	DRG NO :- 32	PAGE NO :- 32

Estimated Cost

Sr. No.	Major Junction	Minor Junction	Cost
01	State Highway	State Highway	76,45,300/-
02	State Highway	Panchayat	76,13,200/-
03	Panchayat	Panchayat	75,64,200/-
04	Panchayat	State Highway	75,87,700/-

Quantity

Fanning Area - 1 BC	2 X 980.38 X 0.040 = 78.43 cu. mt.
Taper Area - 1 BC	2 X 97.43 X 0.040 = 7.79 cu. mt.
Fanning Area - 2 BC	2 X 840.56 X 0.040 = 67.24 cu. mt.
Taper Area - 2 BC	2 X 97.43 X 0.040 = 7.79 cu. mt.
Fanning Area - 1 GSB	2 X 980.38 X 0.200 = 392.15 cu. mt.
Taper Area - 1 GSB	2 X 97.43 X 0.200 = 38.97 cu. mt.
Fanning Area - 2 GSB	2 X 840.56 X 0.200 = 336.22 cu. mt.
Taper Area - 2 GSB	2 X 97.43 X 0.200 = 38.97 cu. mt.
Offset GSB	$2 \times 566.22 \times \frac{(2.1+1.7)}{2} \times 0.200$ = 430.33 cu. mt.
Fanning Area - 1 DBM	2 X 980.38 X 0.065 = 127.45 cu. mt.
Taper Area - 1 DBM	2 X 97.43 X 0.065 = 12.67 cu. mt.
Fanning Area - 2 DBM	2 X 840.56 X 0.065 = 109.27 cu. mt.
Taper Area - 2 DBM	2 X 97.43 X 0.065 = 12.67 cu. mt.
Fanning Area - 1 WMM	2 X 980.38 X 0.250 = 490.19 cu. mt.
Taper Area - 1 WMM	2 X 97.43 X 0.250 = 48.72 cu. mt.
Fanning Area - 2 WMM	2 X 840.56 X 0.250 = 420.28 cu. mt.
Taper Area - 2 WMM	2 X 97.43 X 0.250 = 48.72 cu. mt.
Offset WMM	2 x 566.22 x 0.150 x 0.250 = 42.47 cu. mt.



NOTE :-

Corner or directional Islands:

(a) It should be of sufficient size to be readily identified and visible.For an island to be clearly seen it must have an area of at least 4.5 m in urban areas and 7 m in rural areas and should usually be bordered with painted raised kerbs. (IRC:SP-41-1994 -clause 4.11.2 (a)

STANDARD DRAWINGS FOR INTERSECTIONS

Technical Drawing

MAJOR INTERSECTION INVOLVING A FOUR-LANE STATE HIGHWAY TO MINOR ROAD 7.00 MT.

SOURCE:-TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS 1995, MINISTRY OF SURFACE TRANSPORT (ROAD WING) NEW DELHI.

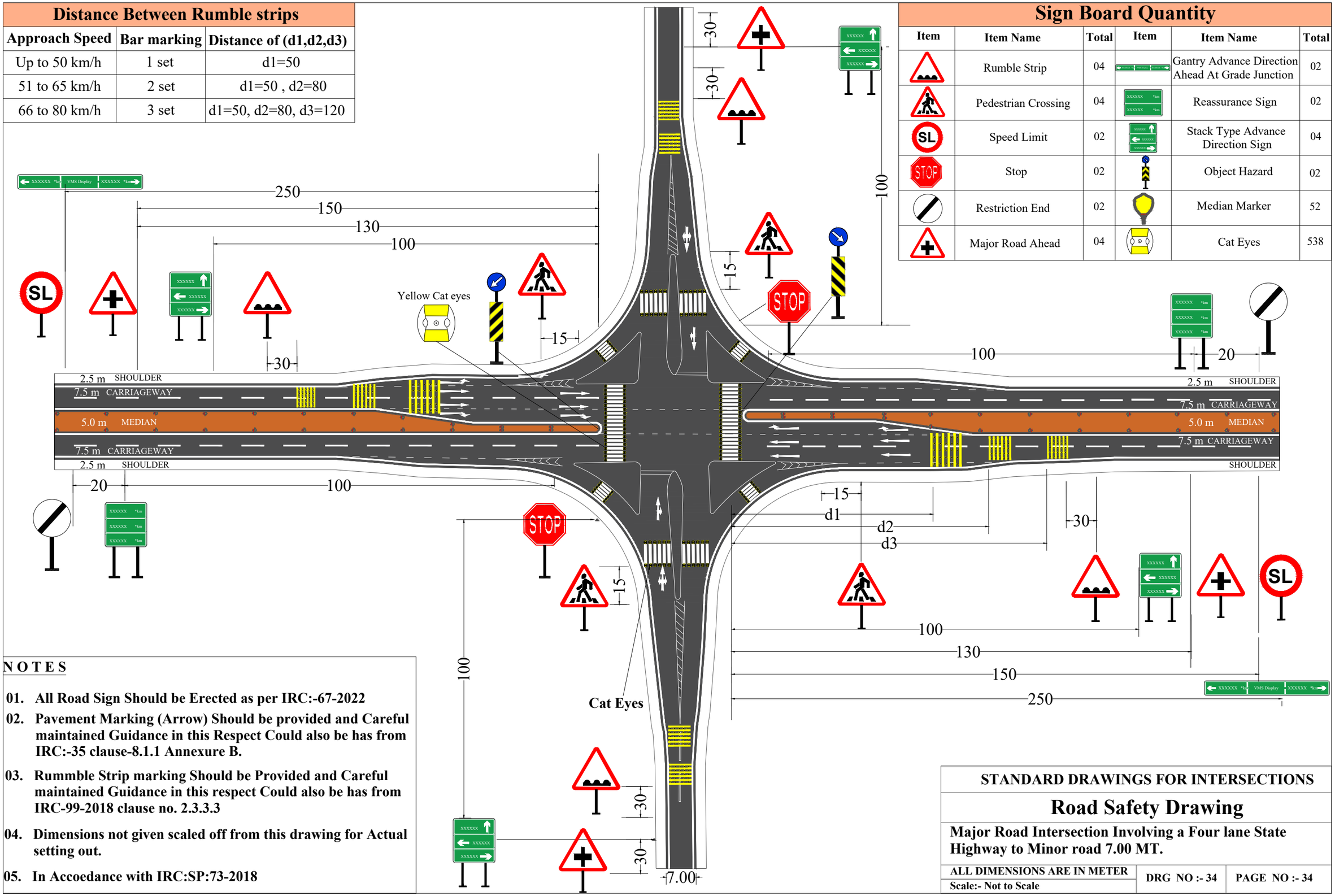
ALL DIMENSIONS ARE IN METER	DRG NO :- 33	PAGE NO :- 33
SCALE :- NOT TO SCALE		

Distance Between Rumble strips

Approach Speed	Bar marking	Distance of (d1,d2,d3)
Up to 50 km/h	1 set	d1=50
51 to 65 km/h	2 set	d1=50 , d2=80
66 to 80 km/h	3 set	d1=50, d2=80, d3=120

Sign Board Quantity

Item	Item Name	Total	Item	Item Name	Total
	Rumble Strip	04		Gantry Advance Direction Ahead At Grade Junction	02
	Pedestrian Crossing	04		Reassurance Sign	02
SL	Speed Limit	02		Stack Type Advance Direction Sign	04
STOP	Stop	02		Object Hazard	02
	Restriction End	02		Median Marker	52
	Major Road Ahead	04		Cat Eyes	538



NOTES

01. All Road Sign Should be Erected as per IRC:-67-2022
02. Pavement Marking (Arrow) Should be provided and Careful maintained Guidance in this Respect Could also be has from IRC:-35 clause-8.1.1 Annexure B.
03. Rummble Strip marking Should be Provided and Careful maintained Guidance in this respect Could also be has from IRC-99-2018 clause no. 2.3.3.3
04. Dimensions not given scaled off from this drawing for Actual setting out.
05. In Accoedance with IRC:SP:73-2018

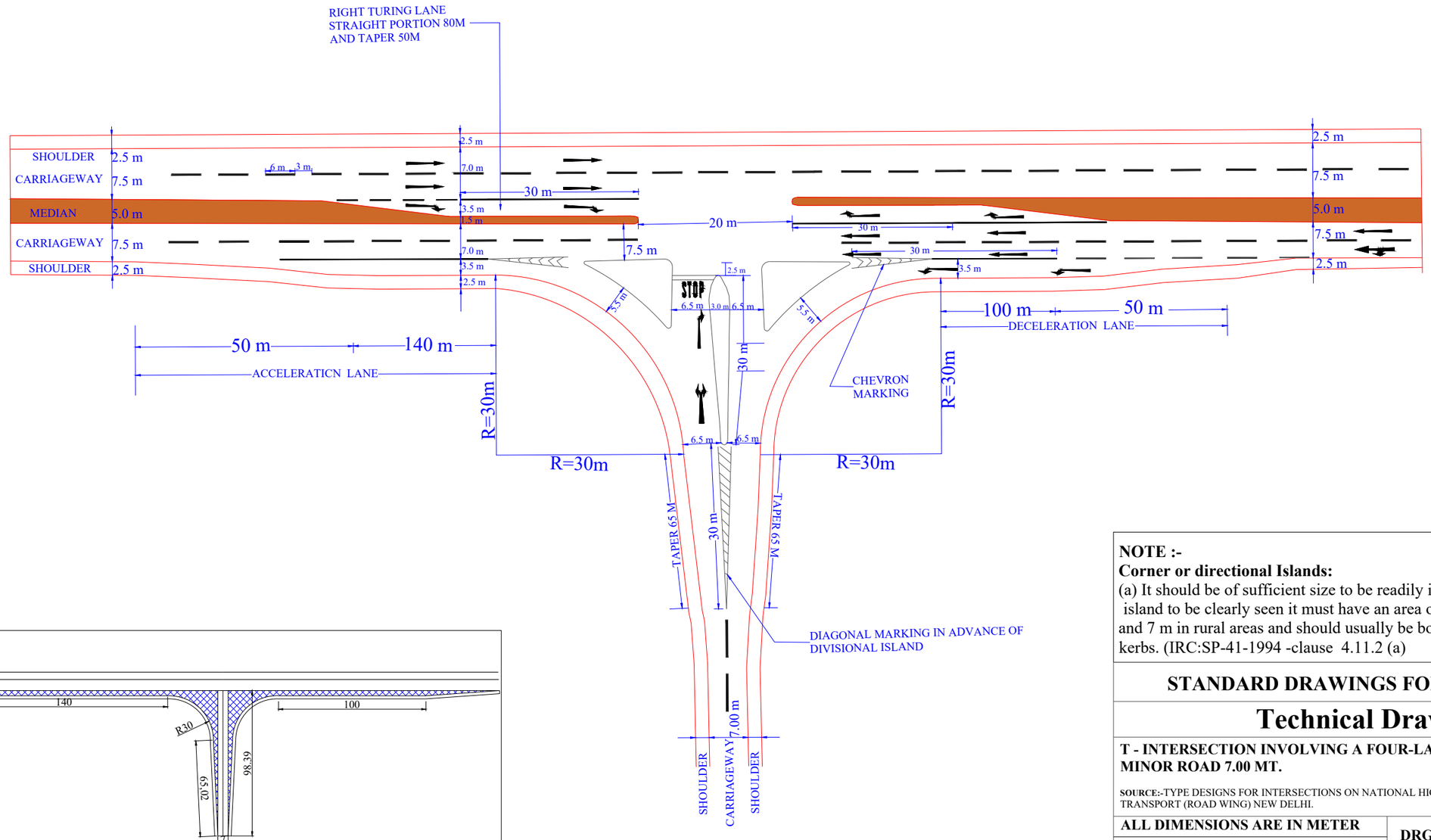
STANDARD DRAWINGS FOR INTERSECTIONS

Road Safety Drawing

Major Road Intersection Involving a Four lane State Highway to Minor road 7.00 MT.

ALL DIMENSIONS ARE IN METER Scale:- Not to Scale	DRG NO :- 34	PAGE NO :- 34

Estimated Cost				Quantity		Quantity	
Sr. No.	**Major Junction**	**Minor Junction**	**Cost**	Fanning Area - 1 DBM	1 X 980.38 X 0.065 = 63.72 cu. mt.	Fanning Area - 1 BC	1 X 980.38 X 0.040 = 39.22 cu. mt.
01	State Highway	State Highway	40,46,900/-	Taper Area - 1 DBM	1 X 97.43 X 0.065 = 6.33 cu. mt.	Taper Area - 1 BC	1 X 97.43 X 0.040 = 3.90 cu. mt.
				Fanning Area - 2 DBM	1 X 840.56 X 0.065 = 54.63 cu. mt.	Fanning Area - 2 BC	1 X 840.56 X 0.040 = 33.62 cu. mt.
02	State Highway	Panchayat	40,11,900/-	Taper Area - 2 DBM	1 X 97.43 X 0.065 = 6.33 cu. mt.	Taper Area - 2 BC	1 X 97.43 X 0.040 = 3.90 cu. mt.
				Fanning Area - 1 WMM	1 X 980.38 X 0.250 = 245.09 cu. mt.	Fanning Area - 1 GSB	1 X 980.38 X 0.200 = 196.08 cu. mt.
03	Panchayat	Panchayat	39,67,400/-	Taper Area - 1 WMM	1 X 97.43 X 0.250 = 24.36 cu. mt.	Taper Area - 1 GSB	1 X 97.43 X 0.200 = 19.49 cu. mt.
				Fanning Area - 2 WMM	1 X 840.56 X 0.250 = 210.14 cu. mt.	Fanning Area - 2 GSB	1 X 840.56 X 0.200 = 168.11 cu. mt.
04	Panchayat	State Highway	40,02,400/-	Taper Area - 2 WMM	1 X 97.43 X 0.250 = 24.36 cu. mt.	Taper Area - 2 GSB	1 X 97.43 X 0.200 = 19.49 cu. mt.
				Offset WMM	1 x 564.52 x 0.150 x 0.250 = 21.17 cu. mt.	Offset GSB	$1 \times 564.52 \times \frac{(2.1+1.7)}{2} \times 0.200 = 214.52$ cu. mt.



NOTE :-
Corner or directional Islands:
(a) It should be of sufficient size to be readily identified and visible.For an island to be clearly seen it must have an area of at least 4.5 m in urban areas and 7 m in rural areas and should usually be bordered with painted raised kerbs. (IRC:SP-41-1994 -clause 4.11.2 (a)

STANDARD DRAWINGS FOR INTERSECTIONS

Technical Drawing

T - INTERSECTION INVOLVING A FOUR-LANE STATE HIGHWAY TO MINOR ROAD 7.00 MT.

SOURCE:-TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS 1995, MINISTRY OF SURFACE TRANSPORT (ROAD WING) NEW DELHI.

ALL DIMENSIONS ARE IN METER	**DRG NO :- 35**	**PAGE NO :- 35**
SCALE :- NOT TO SCALE		

Distance Between Rumble strips

Approach Speed	Bar marking	Distance of (d1,d2,d3)
Up to 50 km/h	1 set	d1=50
51 to 65 km/h	2 set	d1=50 , d2=80
66 to 80 km/h	3 set	d1=50, d2=80, d3=120

Sign Board Quantity

Item	Item Name	Total	Item	Item Name	Total	Item	Item Name	Total
	Side Road Right	01		T-Intersection Major Road Ahead	01		Flag Type Direction Sign	01
	Side Road Left	01		Stop	01		Reassurance Sign	02
	Rumble Strip	03		Speed Limit	02		Stack Type Advance Direction Sign	03
	Pedestrian Crossing	03		Restriction End	02		Cat Eyes	400
				Object Hazard	02		Median Marker	52

N O T E S

01. **All Road Sign Should be Erected as per IRC:-67-2022**
02. **Pavement Marking (Arrow) Should be provided and Careful maintained Guidance in this Respect Could also be has from IRC:-35 clause-8.1.1 Annexure B.**
03. **Rummble Strip marking Should be Provided and Careful maintained Guidance in this respect Could also be has from IRC-99-2018 clause no. 2.3.3.3**
04. **Dimensions not given scaled off from this drawing for Actual setting out.**
05. **In Accoedance with IRC:SP:73-2018**

STANDARD DRAWINGS FOR INTERSECTIONS

Road Safety Drawing

T-Intersection Involving a Four lane State Highway to Minor road 7.00 MT.

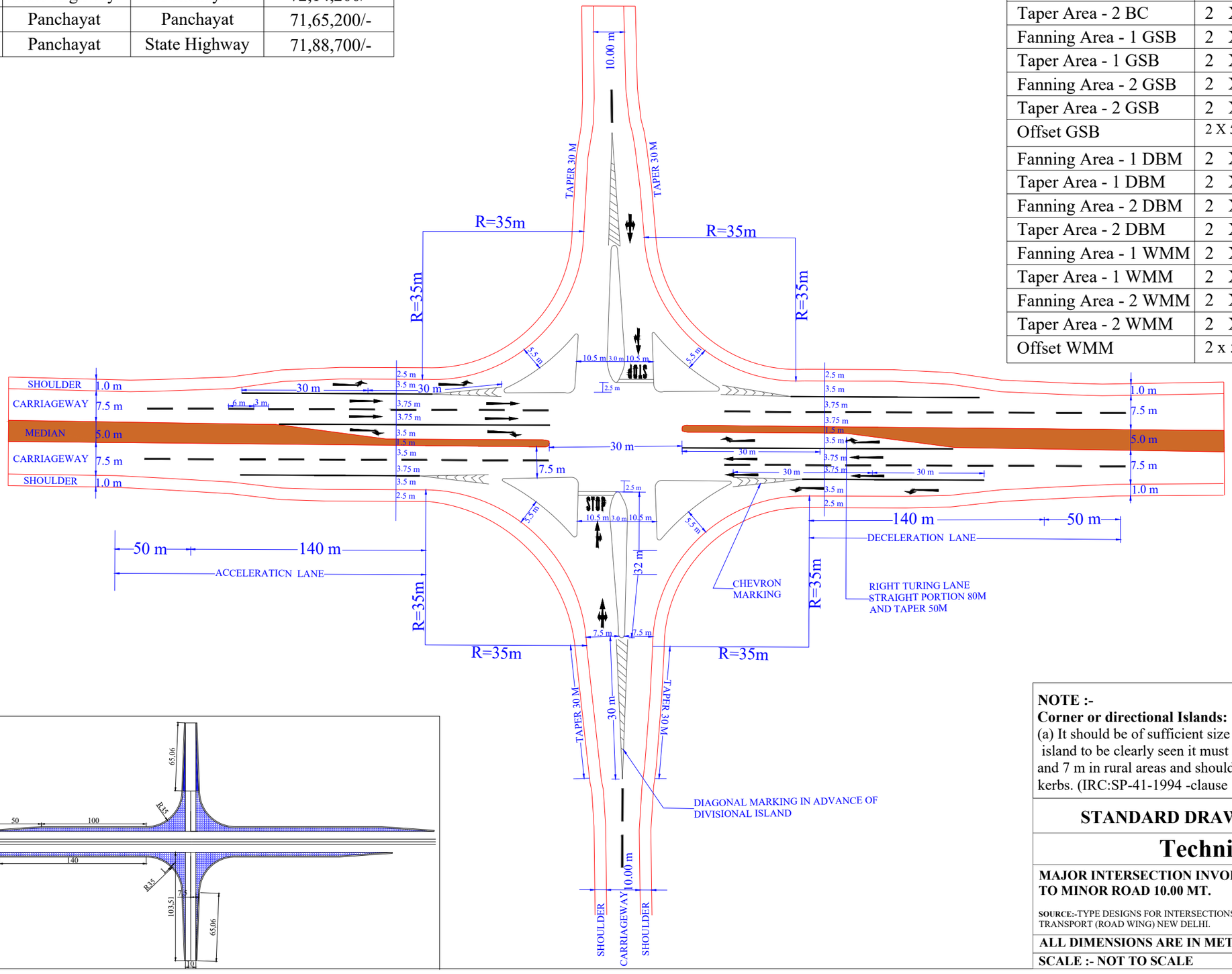
ALL DIMENSIONS ARE IN METER Scale:- Not to Scale	DRG NO :- 36	PAGE NO :- 36

Estimated Cost

Sr. No.	Major Junction	Minor Junction	Cost
01	State Highway	State Highway	72,46,400/-
02	State Highway	Panchayat	72,14,200/-
03	Panchayat	Panchayat	71,65,200/-
04	Panchayat	State Highway	71,88,700/-

Quantity

Fanning Area - 1 BC	2 X 1059.18 X 0.040 = 84.73 cu. mt.
Taper Area - 1 BC	2 X 81.21 X 0.040 = 6.50 cu. mt.
Fanning Area - 2 BC	2 X 919.18 X 0.040 = 73.53 cu. mt.
Taper Area - 2 BC	2 X 81.21 X 0.040 = 6.50 cu. mt.
Fanning Area - 1 GSB	2 X 1059.18 X 0.200 = 423.67 cu. mt.
Taper Area - 1 GSB	2 X 81.21 X 0.200 = 32.48 cu. mt.
Fanning Area - 2 GSB	2 X 919.18 X 0.200 = 367.67 cu. mt.
Taper Area - 2 GSB	2 X 81.21 X 0.200 = 32.48 cu. mt.
Offset GSB	$2 \times 579.2 \times \frac{(2.1+1.7)}{2} \times 0.200 =$ 440.19 cu. mt.
Fanning Area - 1 DBM	2 X 1059.18 X 0.065 = 137.69 cu. mt.
Taper Area - 1 DBM	2 X 81.21 X 0.065 = 10.56 cu. mt.
Fanning Area - 2 DBM	2 X 919.18 X 0.065 = 119.49 cu. mt.
Taper Area - 2 DBM	2 X 81.21 X 0.065 = 10.56 cu. mt.
Fanning Area - 1 WMM	2 X 1059.18 X 0.250 = 529.59 cu. mt.
Taper Area - 1 WMM	2 X 81.21 X 0.250 = 40.60 cu. mt.
Fanning Area - 2 WMM	2 X 919.18 X 0.250 = 459.59 cu. mt.
Taper Area - 2 WMM	2 X 81.21 X 0.250 = 40.60 cu. mt.
Offset WMM	2 x 579.2 x 0.150 x 0.250 = 43.44 cu. mt.



NOTE :-

Corner or directional Islands:

(a) It should be of sufficient size to be readily identified and visible.For an island to be clearly seen it must have an area of at least 4.5 m in urban areas and 7 m in rural areas and should usually be bordered with painted raised kerbs. (IRC:SP-41-1994 -clause 4.11.2 (a)

STANDARD DRAWINGS FOR INTERSECTIONS

Technical Drawing

MAJOR INTERSECTION INVOLVING A FOUR-LANE STATE HIGHWAY TO MINOR ROAD 10.00 MT.

SOURCE:-TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS 1995, MINISTRY OF SURFACE TRANSPORT (ROAD WING) NEW DELHI.

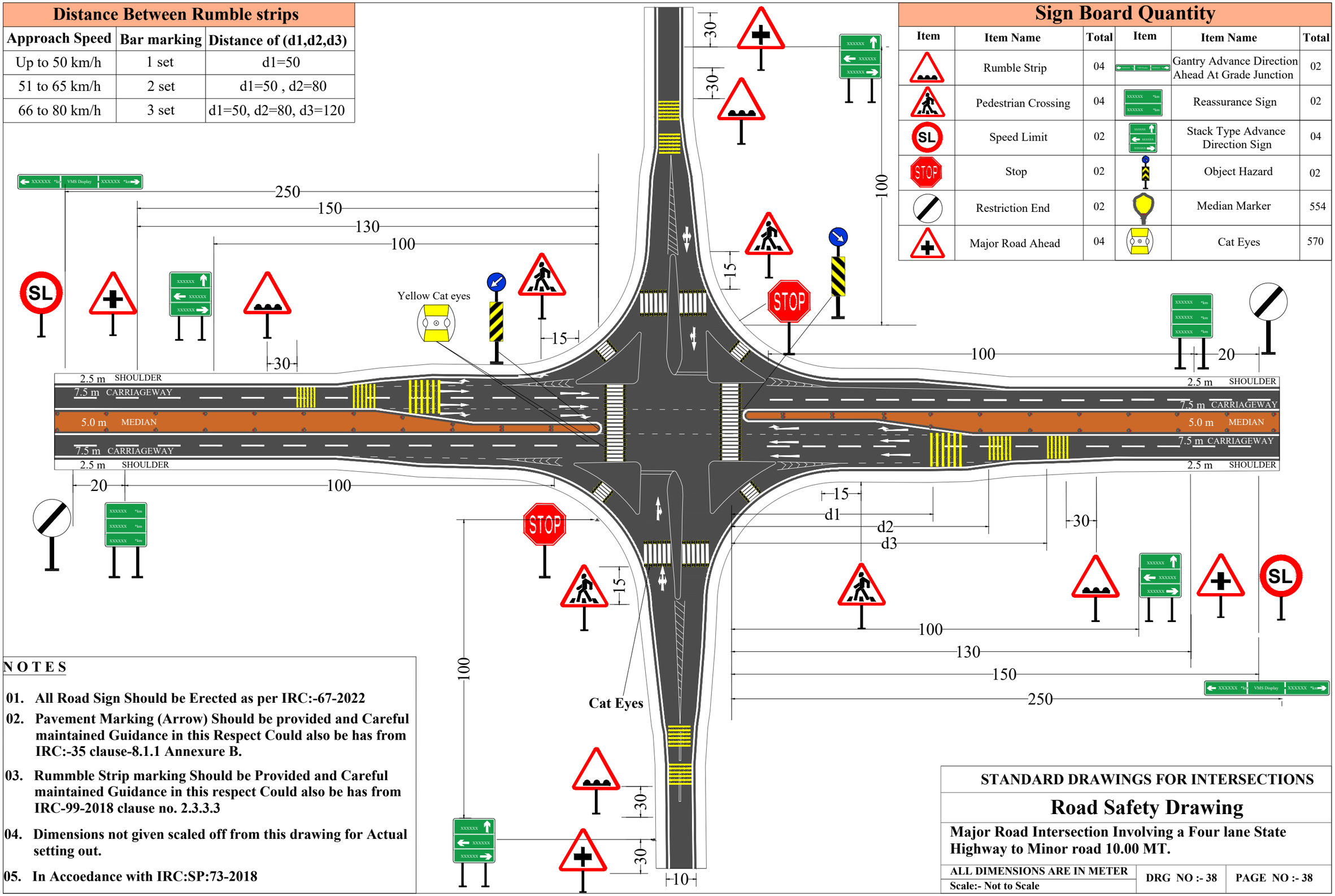
ALL DIMENSIONS ARE IN METER	**DRG NO :- 37**	**PAGE NO :- 37**
SCALE :- NOT TO SCALE		

Distance Between Rumble strips

Approach Speed	Bar marking	Distance of (d1,d2,d3)
Up to 50 km/h	1 set	d1=50
51 to 65 km/h	2 set	d1=50 , d2=80
66 to 80 km/h	3 set	d1=50, d2=80, d3=120

Sign Board Quantity

Item	Item Name	Total	Item	Item Name	Total
	Rumble Strip	04		Gantry Advance Direction Ahead At Grade Junction	02
	Pedestrian Crossing	04		Reassurance Sign	02
SL	Speed Limit	02		Stack Type Advance Direction Sign	04
STOP	Stop	02		Object Hazard	02
	Restriction End	02		Median Marker	554
	Major Road Ahead	04		Cat Eyes	570



NOTES

01. All Road Sign Should be Erected as per IRC:-67-2022
02. Pavement Marking (Arrow) Should be provided and Careful maintained Guidance in this Respect Could also be has from IRC:-35 clause-8.1.1 Annexure B.
03. Rummble Strip marking Should be Provided and Careful maintained Guidance in this respect Could also be has from IRC-99-2018 clause no. 2.3.3.3
04. Dimensions not given scaled off from this drawing for Actual setting out.
05. In Accoedance with IRC:SP:73-2018

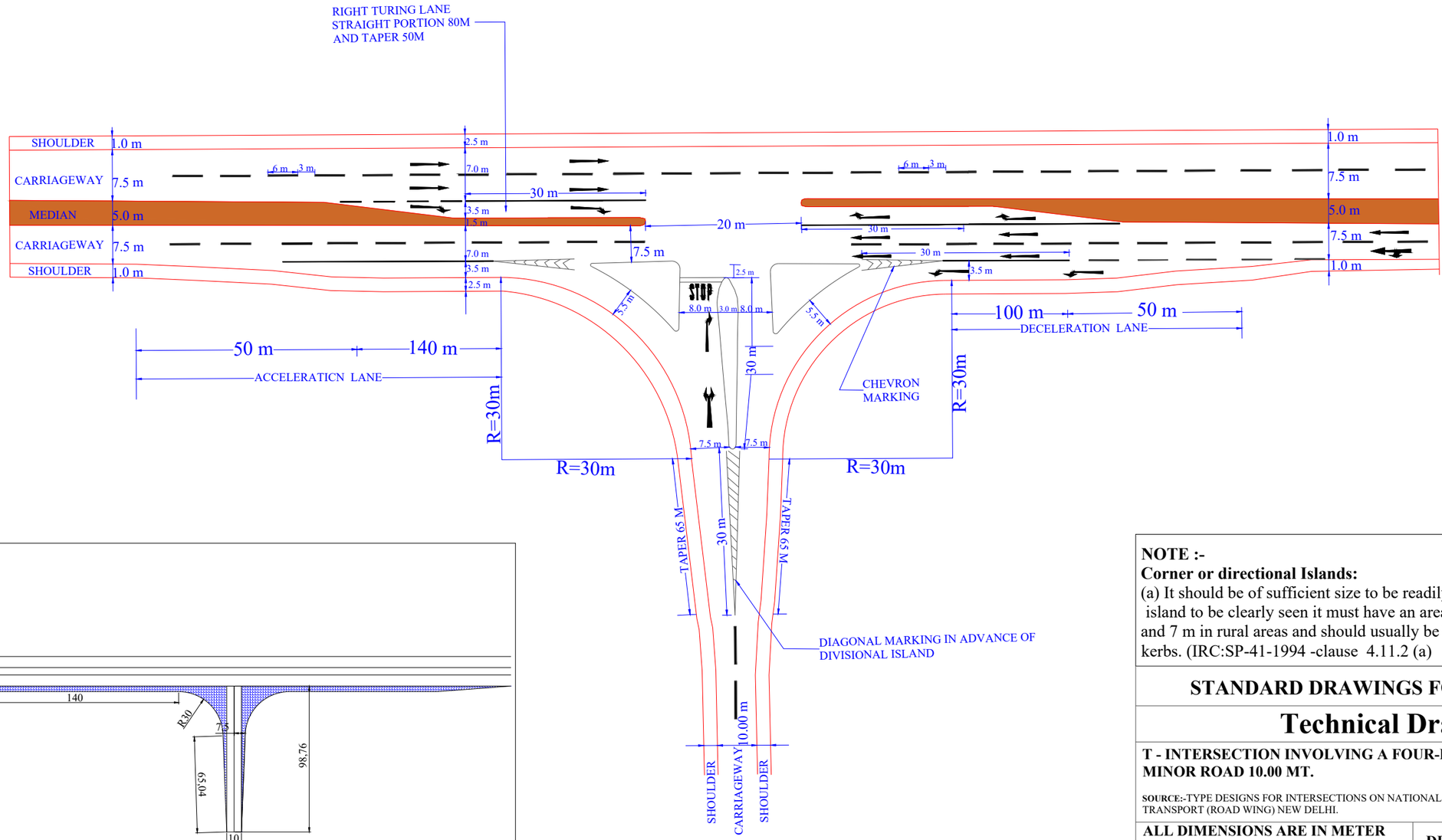
STANDARD DRAWINGS FOR INTERSECTIONS

Road Safety Drawing

Major Road Intersection Involving a Four lane State Highway to Minor road 10.00 MT.

ALL DIMENSIONS ARE IN METER Scale:- Not to Scale	DRG NO :- 38	PAGE NO :- 38

Estimated Cost				Quantity		Quantity	
Sr. No.	**Major Junction**	**Minor Junction**	**Cost**	Fanning Area - 1 DBM	1 X 1008.77 X 0.065 = 65.57 cu. mt.	Fanning Area - 1 BC	1 X 1008.77 X 0.040 = 40.35 cu. mt.
01	State Highway	State Highway	39,62,100/-	Taper Area - 1 DBM	1 X 81.26 X 0.065 = 5.28 cu. mt.	Taper Area - 1 BC	1 X 81.26 X 0.040 = 3.25 cu. mt.
				Fanning Area - 2 DBM	1 X 858.77 X 0.065 = 55.82 cu. mt.	Fanning Area - 2 BC	1 X 858.77 X 0.040 = 34.35 cu. mt.
02	State Highway	Panchayat	39,27,100/-	Taper Area - 2 DBM	1 X 81.26 X 0.065 = 5.28 cu. mt.	Taper Area - 2 BC	1 X 81.26 X 0.040 = 3.25 cu. mt.
				Fanning Area - 1 WMM	1 X 1008.77 X 0.250 = 252.19 cu. mt.	Fanning Area - 1 GSB	1 X 1008.77 X 0.200 = 201.75 cu. mt.
03	Panchayat	Panchayat	38,82,600/-	Taper Area - 1 WMM	1 X 81.26 X 0.250 = 20.31 cu. mt.	Taper Area - 1 GSB	1 X 81.26 X 0.200 = 16.25 cu. mt.
				Fanning Area - 2 WMM	1 X 858.77 X 0.250 = 214.69 cu. mt.	Fanning Area - 2 GSB	1 X 858.77 X 0.200 = 171.75 cu. mt.
04	Panchayat	State Highway	39,17,700/-	Taper Area - 2 WMM	1 X 81.26 X 0.250 = 20.31 cu. mt.	Taper Area - 2 GSB	1 X 81.26 X 0.200 = 16.25 cu. mt.
				Offset WMM	1 x 564.52 x 0.150 x 0.250 = 21.17 cu. mt.	Offset GSB	1 X 564.52 X $\frac{(2.1+1.7)}{2}$ X 0.200 = 214.52 cu. mt.



NOTE :-
Corner or directional Islands:
(a) It should be of sufficient size to be readily identified and visible.For an island to be clearly seen it must have an area of at least 4.5 m in urban areas and 7 m in rural areas and should usually be bordered with painted raised kerbs. (IRC:SP-41-1994 -clause 4.11.2 (a)

STANDARD DRAWINGS FOR INTERSECTIONS

Technical Drawing

T - INTERSECTION INVOLVING A FOUR-LANE STATE HIGHWAY TO MINOR ROAD 10.00 MT.

SOURCE:-TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS 1995, MINISTRY OF SURFACE TRANSPORT (ROAD WING) NEW DELHI.

ALL DIMENSIONS ARE IN METER	**DRG NO :- 39**	**PAGE NO :- 39**
SCALE :- NOT TO SCALE		

Distance Between Rumble strips

Approach Speed	Bar marking	Distance of (d1,d2,d3)
Up to 50 km/h	1 set	d1=50
51 to 65 km/h	2 set	d1=50 , d2=80
66 to 80 km/h	3 set	d1=50, d2=80, d3=120

Sign Board Quantity

Item	Item Name	Total	Item	Item Name	Total	Item	Item Name	Total
	Side Road Right	01		T-Intersection Major Road Ahead	01		Flag Type Direction Sign	01
	Side Road Left	01		Stop	01		Reassurance Sign	02
	Rumble Strip	03		Speed Limit	02		Stack Type Advance Direction Sign	03
	Pedestrian Crossing	03		Restriction End	02		Cat Eyes	408
				Object Hazard	02		Median Marker	52

N O T E S

01. **All Road Sign Should be Erected as per IRC:-67-2022**
02. **Pavement Marking (Arrow) Should be provided and Careful maintained Guidance in this Respect Could also be has from IRC:-35 clause-8.1.1 Annexure B.**
03. **Rummble Strip marking Should be Provided and Careful maintained Guidance in this respect Could also be has from IRC-99-2018 clause no. 2.3.3.3**
04. **Dimensions not given scaled off from this drawing for Actual setting out.**
05. **In Accoedance with IRC:SP:73-2018**

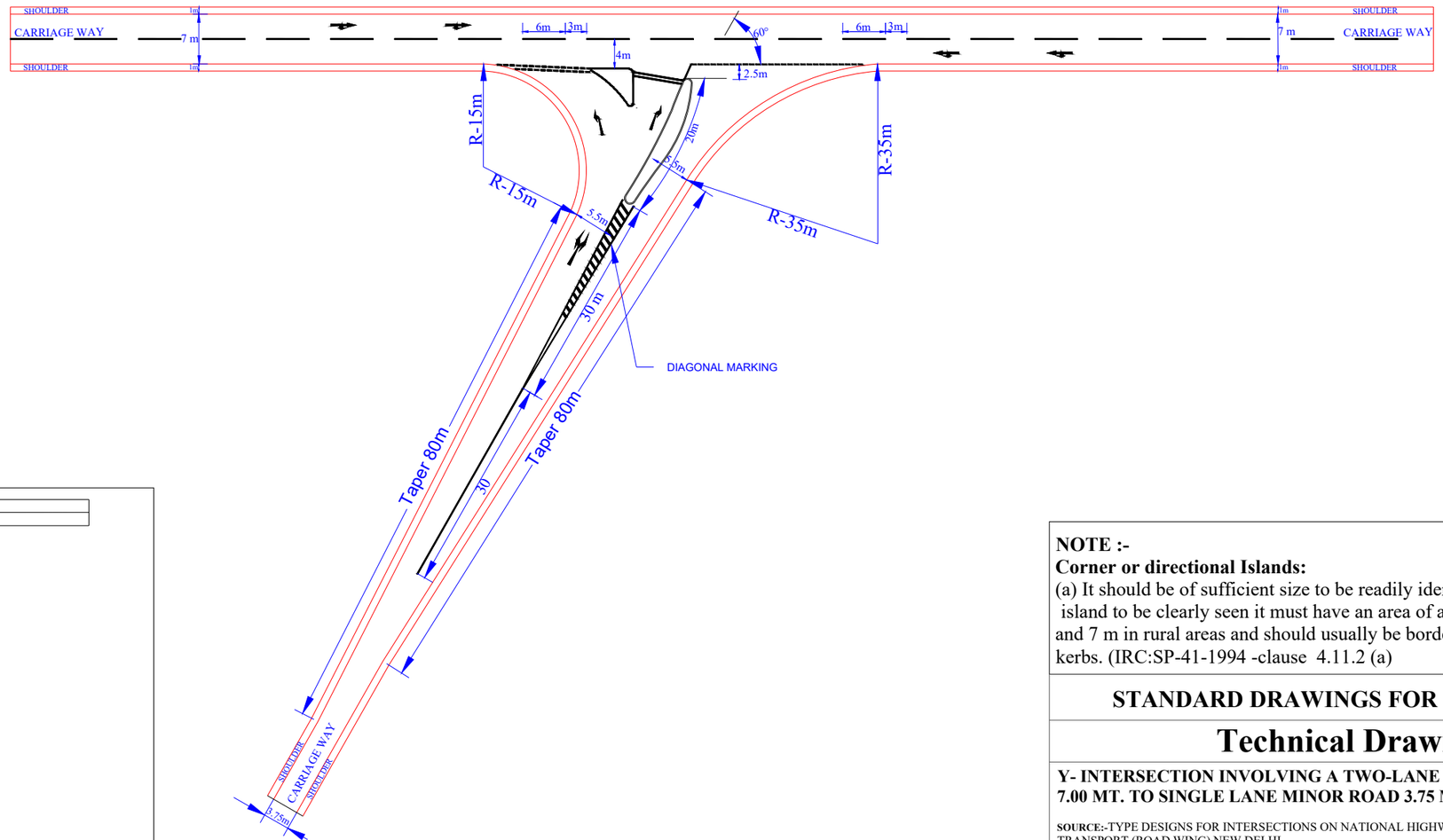
STANDARD DRAWINGS FOR INTERSECTIONS

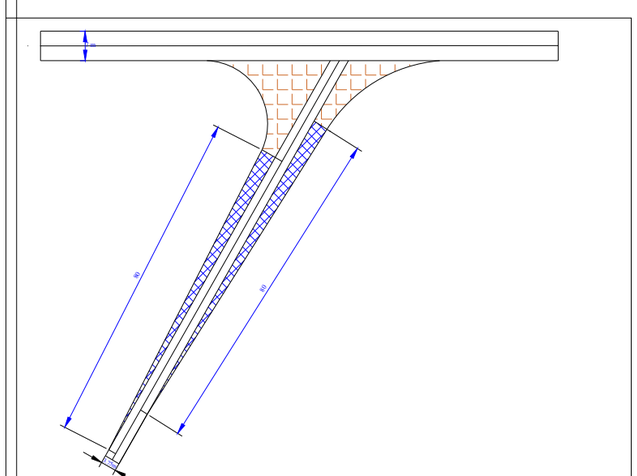
Road Safety Drawing

T-Intersection Involving a Four lane State Highway to Minor road 10.00 MT.

ALL DIMENSIONS ARE IN METER Scale:- Not to Scale	DRG NO :- 40	PAGE NO :- 40

Estimated Cost				Quantity			Quantity	
Sr. No.	**Major Junction**	**Minor Junction**	**Cost**	Fanning Area - 1 DBM	1 X 206.36 X 0.065 = 13.41 cu. mt.		Fanning Area - 1 BC	1 X 206.36 X 0.040 = 8.25 cu. mt.
01	State Highway	State Highway	20,12,200/-	Taper Area - 1 DBM	1 X 144.85 X 0.065 = 9.41 cu. mt.		Taper Area - 1 BC	1 X 144.85 X 0.040 = 5.79 cu. mt.
				Fanning Area - 2 DBM	1 X 161.65 X 0.065 = 10.51 cu. mt.		Fanning Area - 2 BC	1 X 161.65 X 0.040 = 6.47 cu. mt.
02	State Highway	Panchayat	19,78,400/-	Taper Area - 2 DBM	1 X 144.85 X 0.065 = 9.41 cu. mt.		Taper Area - 2 BC	1 X 144.85 X 0.040 = 5.79 cu. mt.
				Fanning Area - 1 WMM	1 X 206.36 X 0.250 = 51.59 cu. mt.		Fanning Area - 1 GSB	1 X 206.36 X 0.200 = 41.27 cu. mt.
03	Panchayat	Panchayat	19,32,700/-	Taper Area - 1 WMM	1 X 144.85 X 0.250 = 36.21 cu. mt.		Taper Area - 1 GSB	1 X 144.85 X 0.200 = 28.97 cu. mt.
				Fanning Area - 2 WMM	1 X 161.65 X 0.250 = 40.41cu. mt.		Fanning Area - 2 GSB	1 X 161.65 X 0.200 = 32.33 cu. mt.
04	Panchayat	State Highway	19,83,800/-	Taper Area - 2 WMM	1 X 144.85 X 0.250 = 36.21 cu. mt.		Taper Area - 2 GSB	1 X 144.85 X 0.200 = 28.97 cu. mt.
				Offset - 1 WMM	1 x 105.30 x 0.150 x 0.250 = 3.95 cu. mt.		Offset - 1 GSB	1 X 105.30 X $\frac{(2.1+1.7)}{2}$ X 0.200 = 40.01 cu. mt.
				Offset - 2 WMM	1 x 122.29 x 0.150 x 0.250 = 4.58 cu. mt.		Offset - 2 GSB	1 X 122.29 X $\frac{(2.1+1.7)}{2}$ X 0.200 = 46.47 cu. mt.





NOTE :-
Corner or directional Islands:
(a) It should be of sufficient size to be readily identified and visible.For an island to be clearly seen it must have an area of at least 4.5 m in urban areas and 7 m in rural areas and should usually be bordered with painted raised kerbs. (IRC:SP-41-1994 -clause 4.11.2 (a)

STANDARD DRAWINGS FOR INTERSECTIONS

Technical Drawing

Y- INTERSECTION INVOLVING A TWO-LANE MAJOR A ROAD 7.00 MT. TO SINGLE LANE MINOR ROAD 3.75 MT.(Angle:-60°)

SOURCE:-TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS 1995, MINISTRY OF SURFACE TRANSPORT (ROAD WING) NEW DELHI.

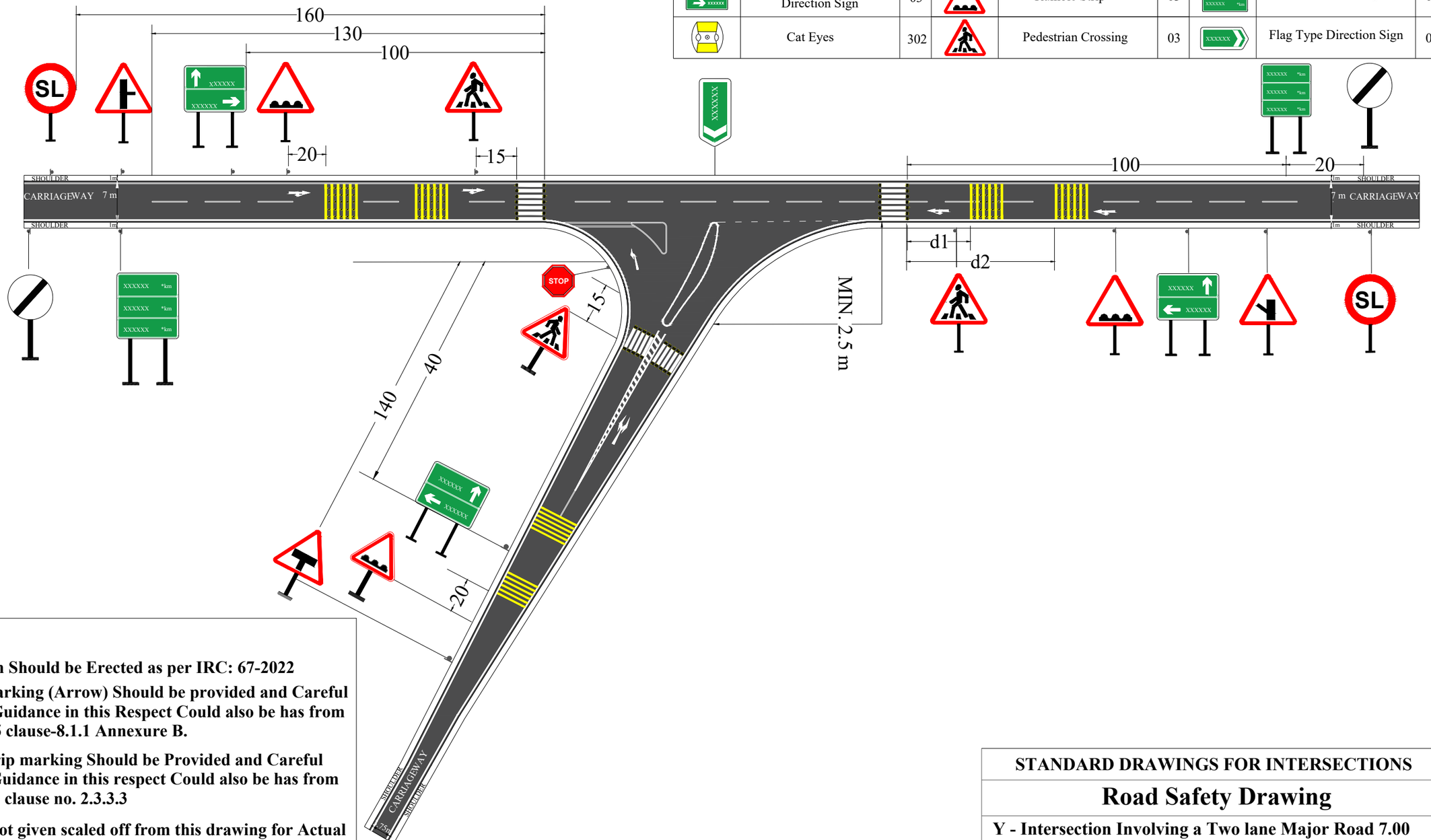
ALL DIMENSIONS ARE IN METER	**DRG NO :- 41**	**PAGE NO :- 41**
SCALE :- NOT TO SCALE		

Distance Between Rumble strips

Approach Speed	Bar marking	Distance of (d1,d2,d3)
Up to 50 km/h	1 set	d1=50
51 to 65 km/h	2 set	d1=50 , d2=80
66 to 80 km/h	3 set	d1=50, d2=80, d3=120

Sign Board Quantity

Item	Item Name	Total	Item	Item Name	Total	Item	Item Name	Total
STOP	Stop Sign	01		Side Road Right	01		T-Intersection Major Road Ahead	01
	Restriction End	02		Y- Intersection	01	SL	Speed Limit	02
xxxxx xxxxx	Stack Type Advance Direction Sign	03		Rumble Strip	03	xxxxxx xxxxxx	Reassurance Sign	02
	Cat Eyes	302		Pedestrian Crossing	03	xxxxxx	Flag Type Direction Sign	01



NOTES

01. All Road Sign Should be Erected as per IRC: 67-2022
02. Pavement Marking (Arrow) Should be provided and Careful maintained Guidance in this Respect Could also be has from IRC: 35-2015 clause-8.1.1 Annexure B.
03. Rummble Strip marking Should be Provided and Careful maintained Guidance in this respect Could also be has from IRC: 99-2018 clause no. 2.3.3.3
04. Dimensions not given scaled off from this drawing for Actual setting out.
05. In Accoedance with IRC: SP:73-2018

STANDARD DRAWINGS FOR INTERSECTIONS

Road Safety Drawing

Y - Intersection Involving a Two lane Major Road 7.00 MT. to Minor road 3.75 MT. (Angle:-60°)

ALL DIMENSIONS ARE IN METER Scale:- Not to Scale	DRG NO :- 42	PAGE NO :- 42

Annexure - A TYPE DESIGNS FOR ‘Y’ JUNCTION (Area Quantity)

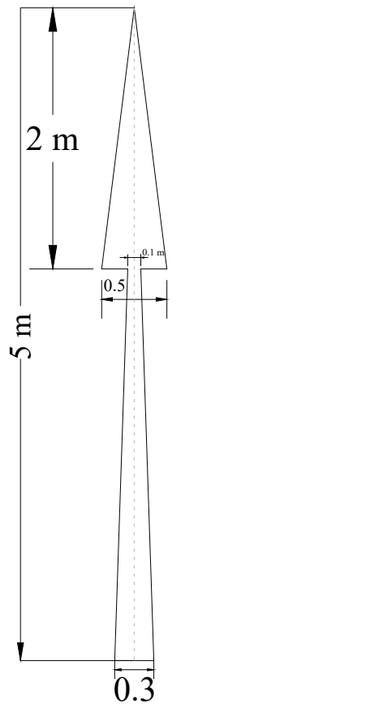
Sr. No	Type of Junction	Main Road Width	Side Road Width	Angle	Radius 1	Radius 2	Tapper	Area 1	Area 2	Shoulder Area 1	Shoulder Area 2	Length of Road	Arc Length 1	Arc Length 2	Cautionary	Mandatory	Direction	Stop	Informatory sign
1	Y	3.75, 5.5, 7.0, 10.0	3.75	15	0	180	80	177.1	340.3	79.69	151.06	102.5	80.7	151.2	9	4	4	1	2
2	Y	3.75, 5.5, 7.0, 10.0	3.75	30	3.75	90	80	236.0	309.0	87.65	135.37	102.5	89.0	135.6	9	4	4	1	2
3	Y	3.75, 5.5, 7.0, 10.0	3.75	45	7.5	52.5	80	281.5	307.2	95.47	127.45	102.5	96.6	127.8	9	4	4	1	2
4	Y	3.75, 5.5, 7.0, 10.0	3.75	60	15	35	80	387.2	273.1	104.27	121.79	109.8	105.3	122.3	9	4	4	1	2
5	Y	3.75, 5.5, 7.0, 10.0	3.75	75	22.5	30	80	384.5	333.1	112.25	119.93	102.5	113.2	120.6	9	4	4	1	2
6	Y	3.75, 5.5, 7.0, 10.0	5.5	15	0	275	80	203.5	477.4	78.45	173.26	106.0	80.0	173.4	9	4	4	1	2
7	Y	3.75, 5.5, 7.0, 10.0	5.5	30	4	97	80	255.4	371.8	86.02	136.62	102.4	87.3	136.9	9	4	4	1	2
8	Y	3.75, 5.5, 7.0, 10.0	5.5	45	8	60	80	333.2	369.5	95.98	130.55	105.0	97.1	130.9	9	4	4	1	2
9	Y	3.75, 5.5, 7.0, 10.0	5.5	60	15	50	80	375.0	410.2	103.5	129.9	102.4	104.6	130.4	9	4	4	1	2
10	Y	3.75, 5.5, 7.0, 10.0	5.5	75	20	50	80	402.7	495.0	110.21	129.85	102.8	111.1	130.5	9	4	4	1	2
11	Y	3.75, 5.5, 7.0, 10.0	7.0	15	0	150	75	365.3	704.4	76.13	174.89	118.1	76.9	175.0	9	4	4	1	2
12	Y	3.75, 5.5, 7.0, 10.0	7.0	30	2.5	105	80	336.5	592.0	80.28	143	102.3	83.7	144.1	9	4	4	1	2
13	Y	3.75, 5.5, 7.0, 10.0	7.0	45	8	75	80	452.2	593.9	94.19	135.61	105.0	95.3	135.9	9	4	4	1	2
14	Y	3.75, 5.5, 7.0, 10.0	7.0	60	15	55	80	488.7	590.0	102.04	133.52	102.3	103.1	134.1	9	4	4	1	2
15	Y	3.75, 5.5, 7.0, 10.0	7.0	75	20	55	80	527.1	663.1	108.2	129.22	102.3	109.0	129.8	9	4	4	1	2
16	Y	3.75, 5.5, 7.0, 10.0	10.0	15	0	150	75	271.0	561.8	76.45	175.28	118.6	77.5	175.4	9	4	4	1	2
17	Y	3.75, 5.5, 7.0, 10.0	10.0	30	2.5	110	80	254.5	468.0	82.39	145.27	102.4	83.7	145.5	9	4	4	1	2
18	Y	3.75, 5.5, 7.0, 10.0	10.0	45	8	75	80	326.7	470.0	92.35	139	102.3	93.5	140.3	9	4	4	1	2
19	Y	3.75, 5.5, 7.0, 10.0	10.0	60	15	60	80	399.2	515.9	102	137	102.3	103.1	147.5	9	4	4	1	2
20	Y	3.75, 5.5, 7.0, 10.0	10.0	75	20	55	80	432.0	567.9	106.78	129.15	102.3	107.5	129.7	9	4	4	1	2

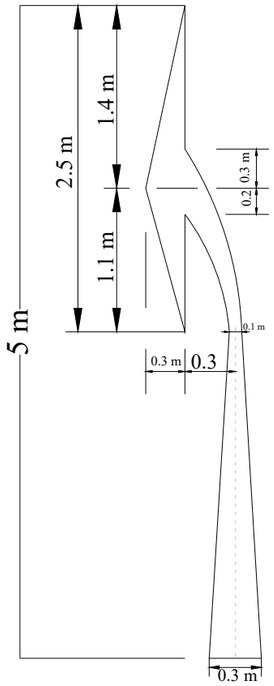
Annexure – A TYPE DESIGNS FOR 'Y' JUNCTION (Thermoplast Quantity)

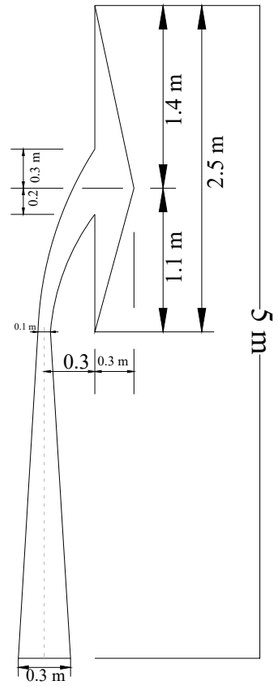
Sr. No	Side Road Width	Angle	Edge line (Area)	Ghost Island 1 (Area)	Ghost Island 2 (Area)	Diagonal Marking (Area)	Pedestrian Marking (No.)	Pedestrian Marking (Area)	Rumble Strip Marking (Area)	Continue Line - 30 m (Area)	Center Lines (Area)	Stop Line (Area)	Give Way Line (Area)	Both Side Curve Arrow (Area)	Single Side Curve Arrow (Area)	Right & Left Side Arrow (Area)	Straight Arrow (Area)
1	3.75	15	137.36	6.11	--	17.99	24	36	59.64	9	14.4	6.46	3.51	0.86	1.06	4.6	2.2
2	3.75	30	136.51	6.11	1.21	17.99	24	36	59.64	9	14.4	4.64	2.79	0.86	1.06	4.6	2.2
3	3.75	45	134.03	6.11	2.07	17.99	24	36	65.52	9	14.4	4.57	2.25	0.86	1.06	4.6	2.2
4	3.75	60	137.45	6.11	3.93	17.99	24	36	63.12	9	14.4	5.54	2.34	0.86	1.06	4.6	2.2
5	3.75	75	136.15	6.11	4.49	17.99	24	36	63.24	9	14.4	5.21	2.52	0.86	1.06	4.6	2.2
6	5.5	15	134.06	6.11	--	17.99	28	42	72.24	9	14.4	8.24	5.13	0.86	1.06	4.6	2.2
7	5.5	30	136.36	6.11	2.4	17.99	28	42	65.88	9	14.4	3.04	3.24	0.86	1.06	4.6	2.2
8	5.5	45	136.44	6.11	3.36	17.99	28	42	66.96	9	14.4	4.68	2.79	0.86	1.06	4.6	2.2
9	5.5	60	136.23	6.11	4.9	17.99	28	42	67.68	9	14.4	4.9	2.97	0.86	1.06	4.6	2.2
10	5.5	75	135.67	6.11	4.11	17.99	28	42	63.24	9	14.4	5.21	2.52	0.86	1.06	4.6	2.2
11	7.0	15	139.69	6.11	--	17.99	34	51	77.64	9	14.4	3.5	4.5	0.86	1.06	4.6	2.2
12	7.0	30	133.22	6.11	3.04	17.99	34	51	79.8	9	14.4	4.73	4.14	0.86	1.06	4.6	2.2
13	7.0	45	134.86	6.11	5.95	17.99	34	51	83.52	9	14.4	4.57	3.69	0.86	1.06	4.6	2.2
14	7.0	60	135.43	6.11	6.69	17.99	34	51	81.36	9	14.4	4.93	3.6	0.86	1.06	4.6	2.2
15	7.0	75	134.53	6.11	6.23	17.99	34	51	83.52	9	14.4	5.02	4.5	0.86	1.06	4.6	2.2
16	10.0	15	138.28	6.11	--	17.99	34	51	86.04	9	14.4	12.79	4.5	0.86	1.06	4.6	2.2
17	10.0	30	136.4	6.11	3.17	17.99	34	51	88.68	9	14.4	4.7	4.14	0.86	1.06	4.6	2.2
18	10.0	45	138.48	6.11	5.25	17.99	34	51	87.72	9	14.4	4.69	3.87	0.86	1.06	4.6	2.2
19	10.0	60	137.19	6.11	6.78	17.99	34	51	88.2	9	14.4	4.94	3.96	0.86	1.06	4.6	2.2
20	10.0	75	135.71	6.11	6.23	17.99	34	51	89.4	9	14.4	5.02	4.59	0.86	1.06	4.6	2.2

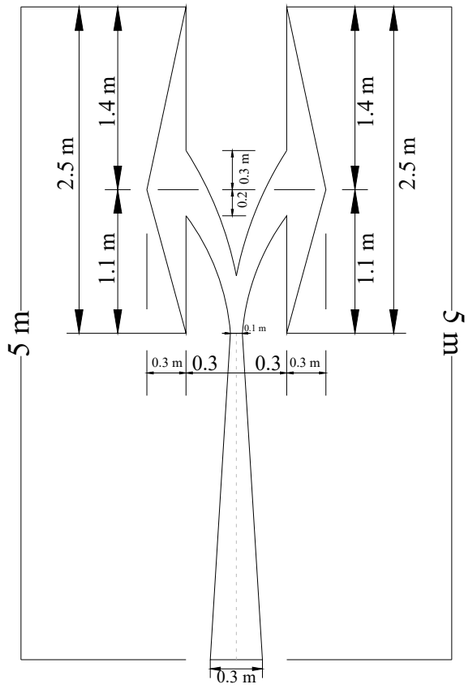
Note: All Dimension of Area in Square Meter

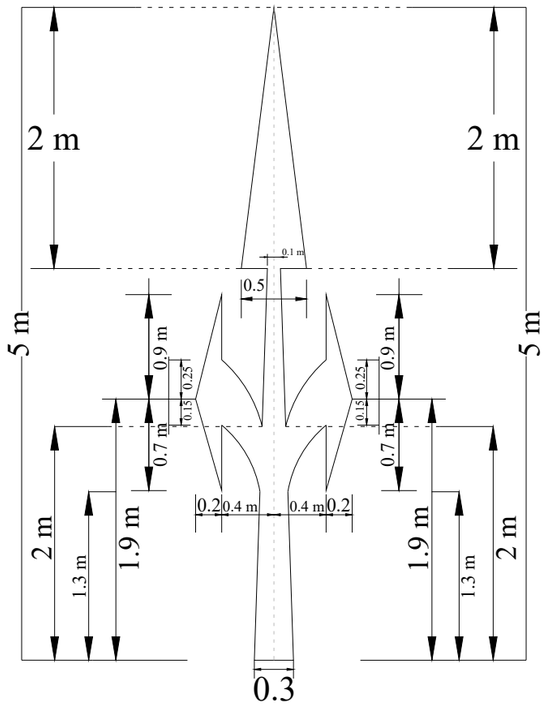
ARROW MARKING FOR ROUTE DIRECTION FOR DESIGN SPEED > 50 KM / HOUR

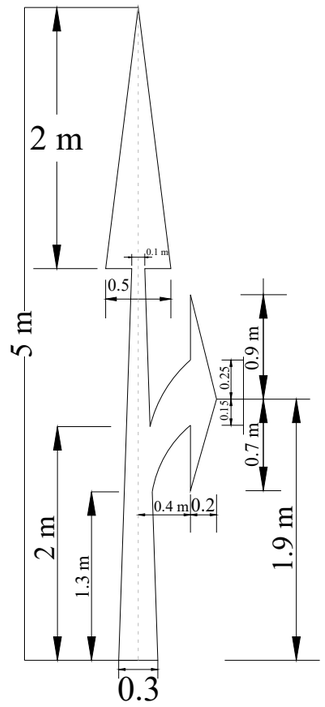


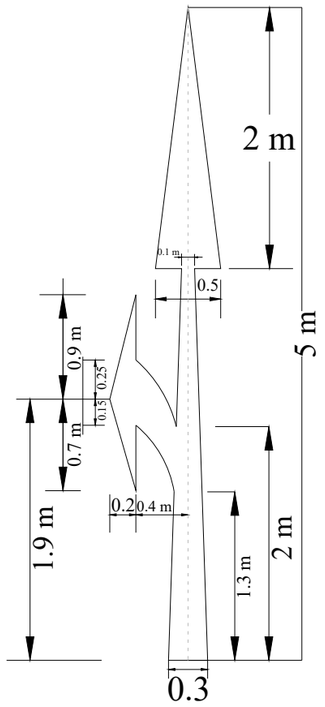












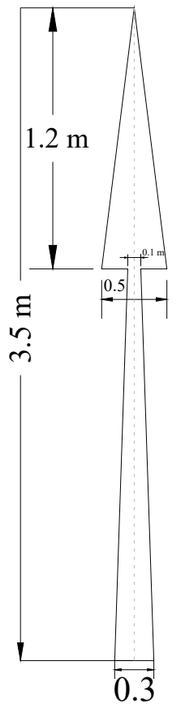
STANDARD DRAWINGS FOR INTERSECTIONS

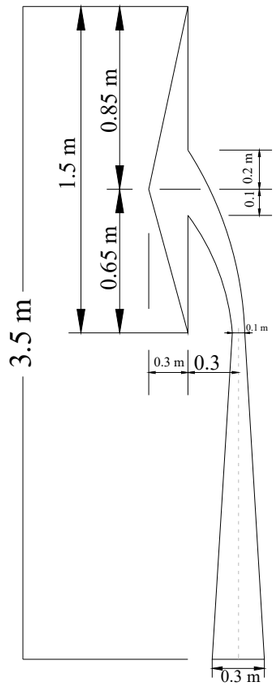
ANNEXURE-B

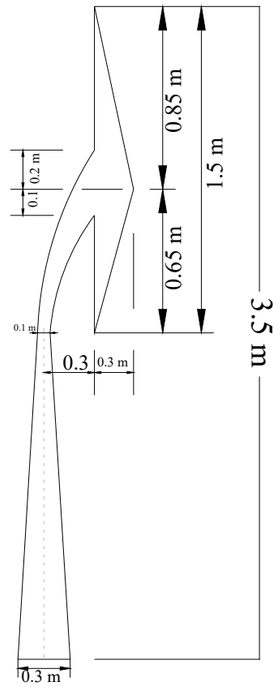
DRAWING SHOWING PAVEMENT MARKINGS FOR INTERSECTION

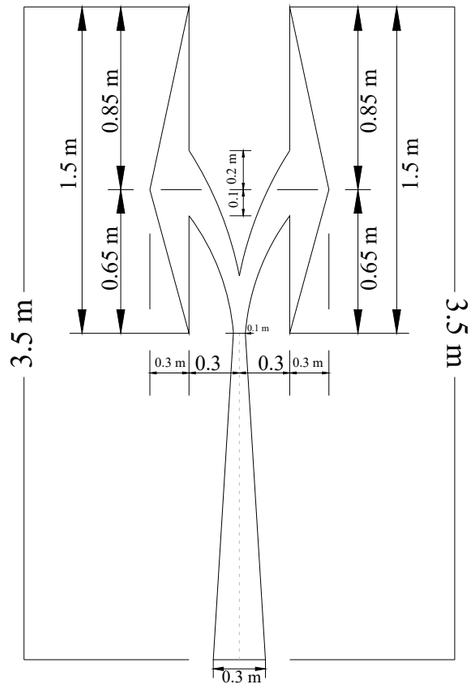
SCALE :- NOT TO SCALE	DRG NO :- 45	PAGE NO :- 45

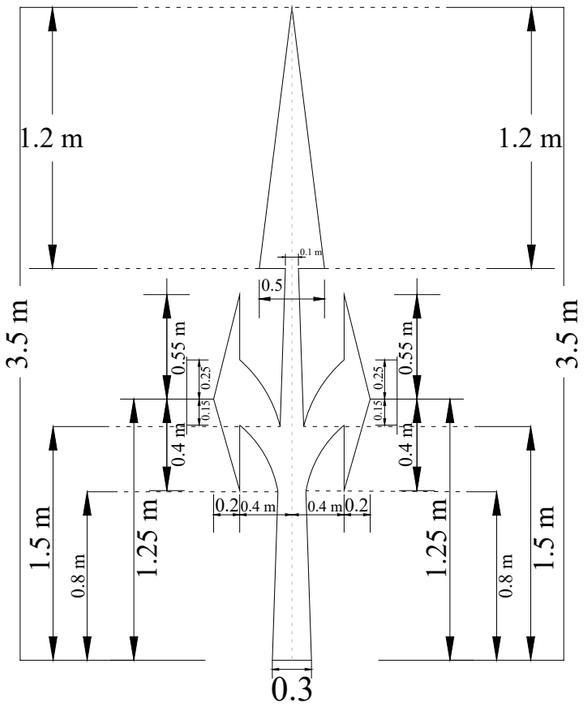
ARROW MARKING FOR ROUTE DIRECTION FOR DESIGN SPEED < 50 KM / HOUR

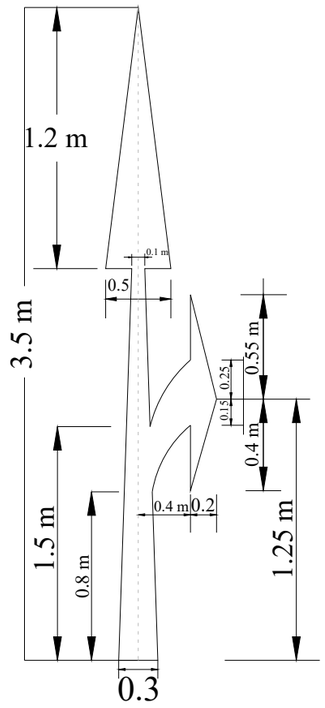


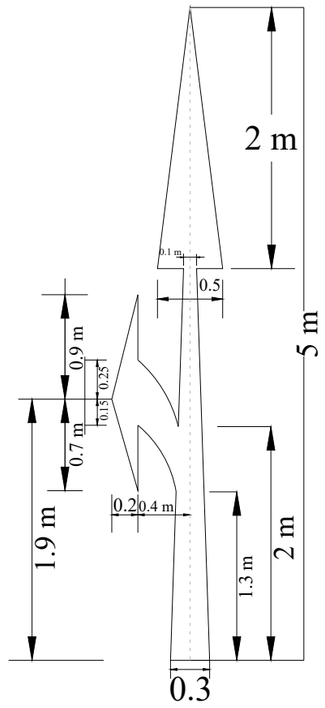










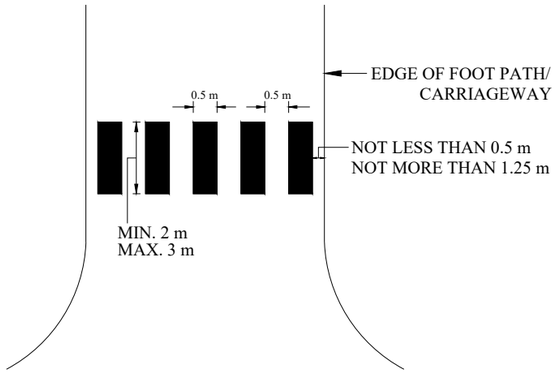


STANDARD DRAWINGS FOR INTERSECTIONS

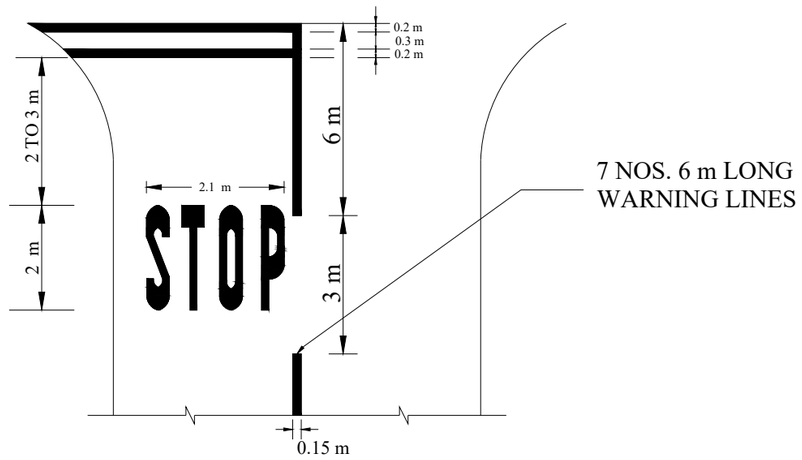
ANNEXURE-B

DRAWING SHOWING PAVEMENT MARKINGS FOR INTERSECTION

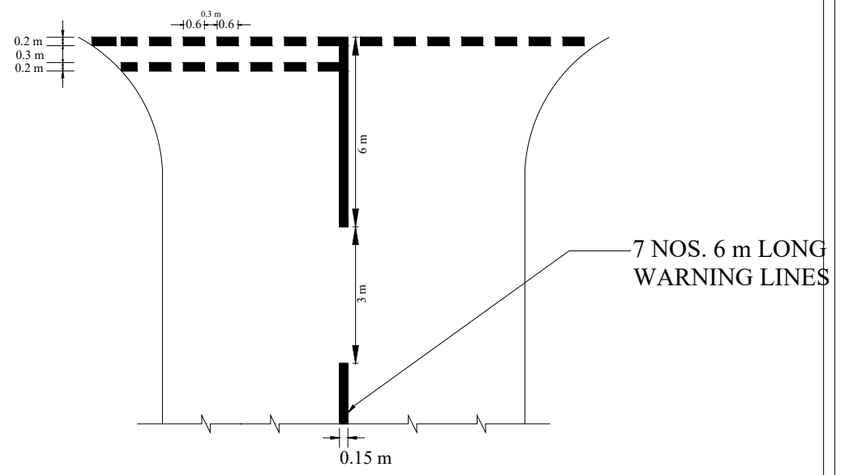
SCALE :- NOT TO SCALE	DRG NO :- 46	PAGE NO :- 46



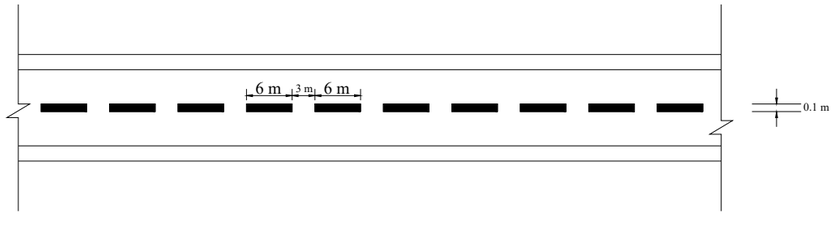
DETAILS OF PEDESTRIAN CROSSING MARKING



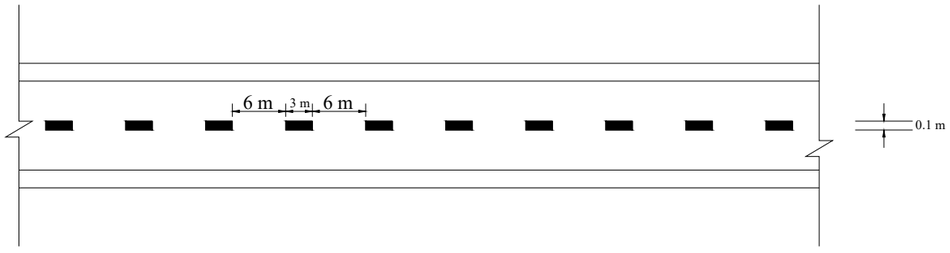
STOP LINES



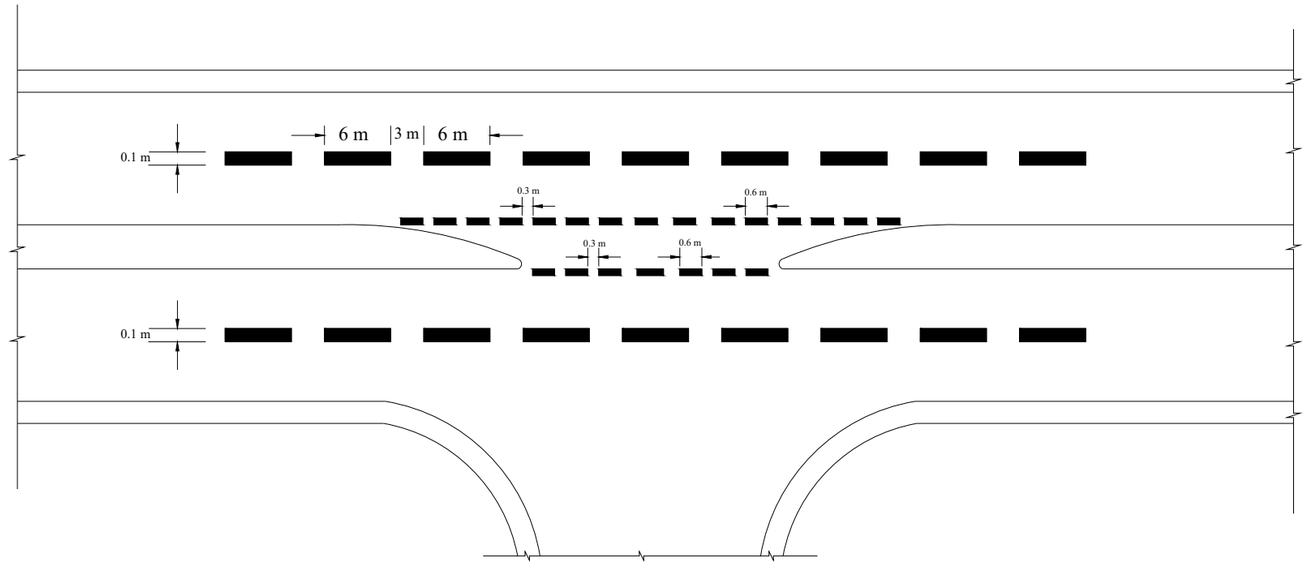
GIVEWAY LINES



CENTER LINE MARKING FOR TWO LANE ROAD
(AT INTERSECTIONS)



CENTER LINE MARKING FOR TWO LANE ROAD
(BEYOND INTERSECTIONS)



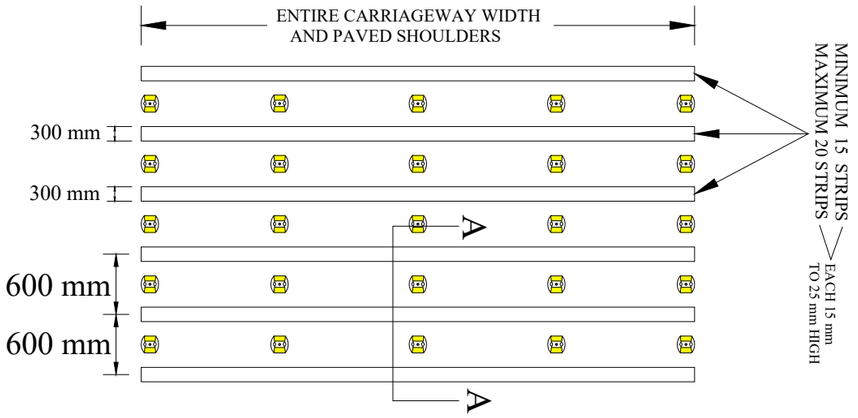
WARNING LINES

STANDARD DRAWINGS FOR INTERSECTIONS

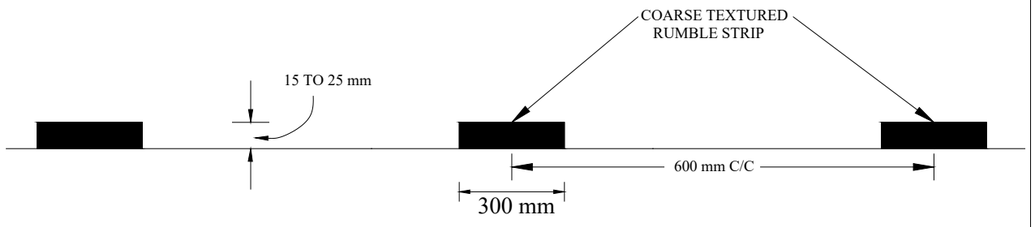
ANNEXURE-C

DRAWING SHOWING PAVEMENT MARKINGS FOR INTERSECTION

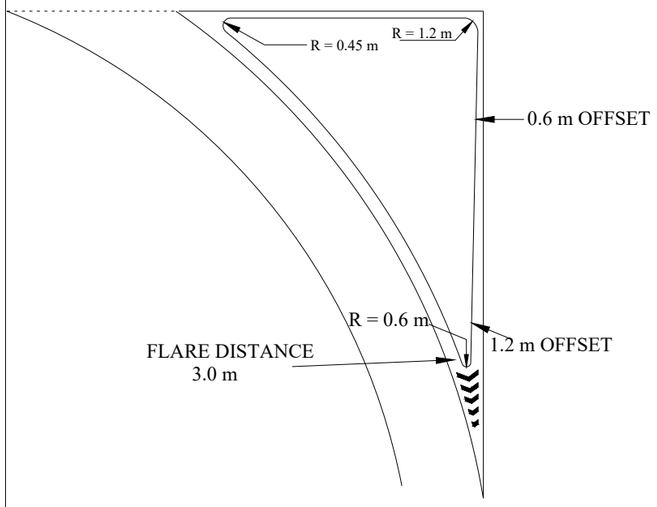
SCALE :- NOT TO SCALE	DRG NO :- 47	PAGE NO :- 47



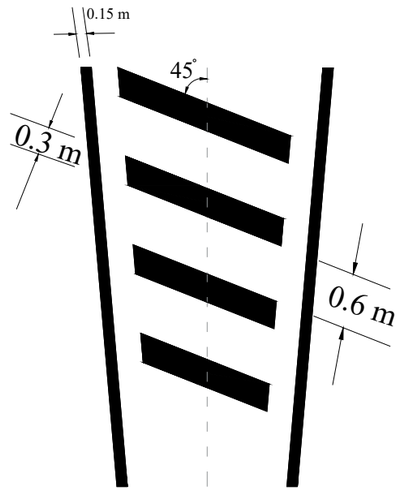
RUMBLE STRIP PLAN



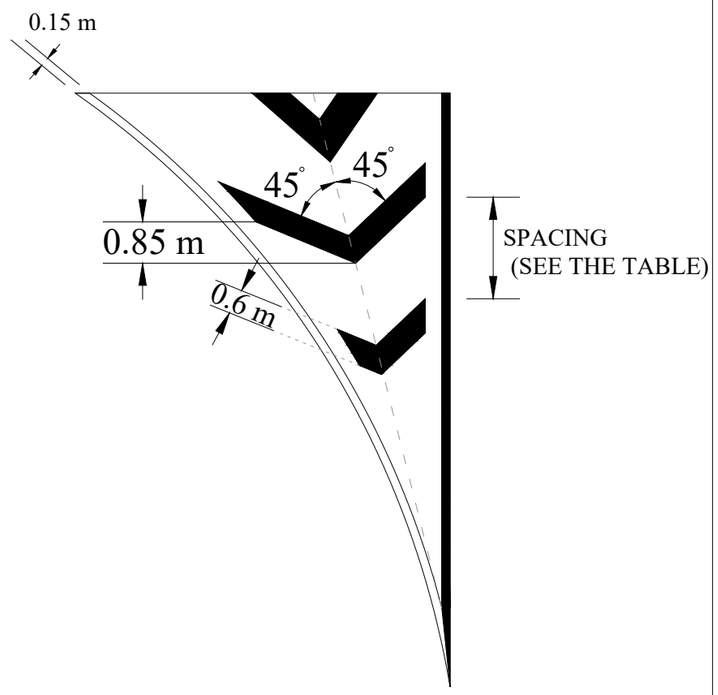
RUMBLE STRIPS CROSS SECTION AT "AA"



LARGE SIZE ISLAND



DETAILS OF DIAGONAL MARKING



DETAILS OF CHEVRON MARKING

TOTAL LENGTH OF MARKING (M)	SPACING BETWEEN BARS OR CHEVRONS (MM)	
	Low speed (75 km/h)	High speed (75 km/h)
< 5.7	2100	-
5.7 to 22.5	3500	-
> 22.5	5000	-
<10.5	-	4000
>10.5	-	6000

N O T E :

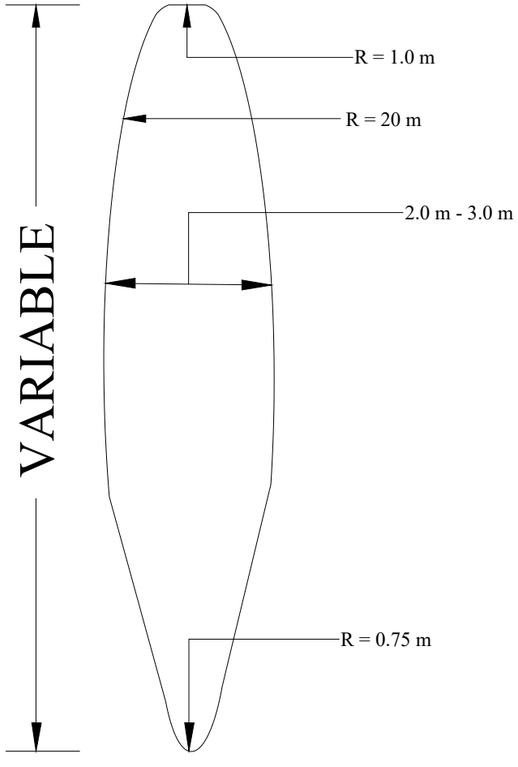
1. **ALL LENGTHS AND SPACINGS IN THE TABLE ARE MEASURED PARALLEL TO ROAD CENTER LINE.**

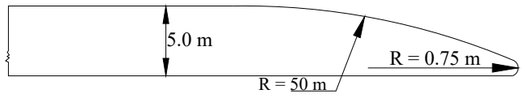
STANDARD DRAWINGS FOR INTERSECTIONS

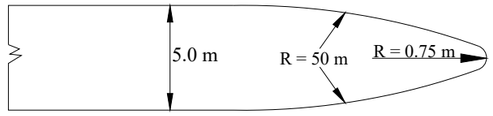
ANNEXURE-C

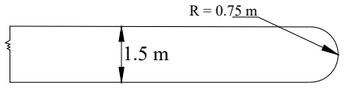
DRAWING SHOWING PAVEMENT MARKINGS FOR INTERSECTION

SCALE :- NOT TO SCALE	DRG NO :- 48	PAGE NO :- 48

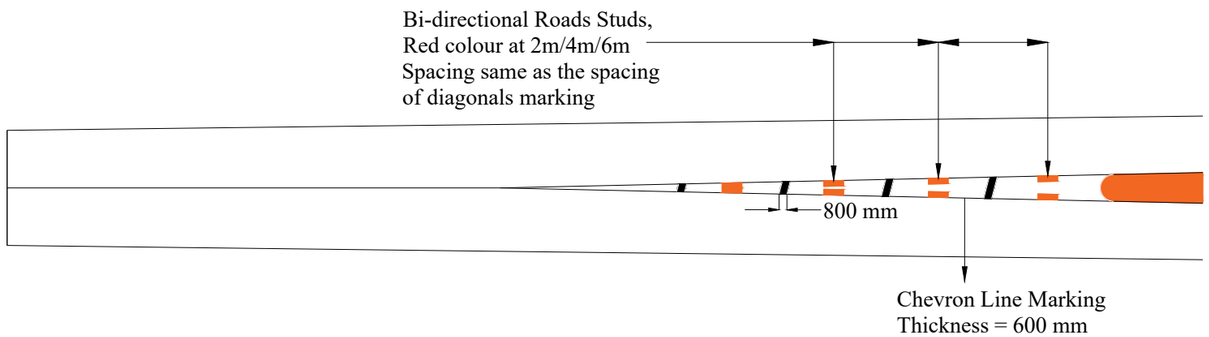




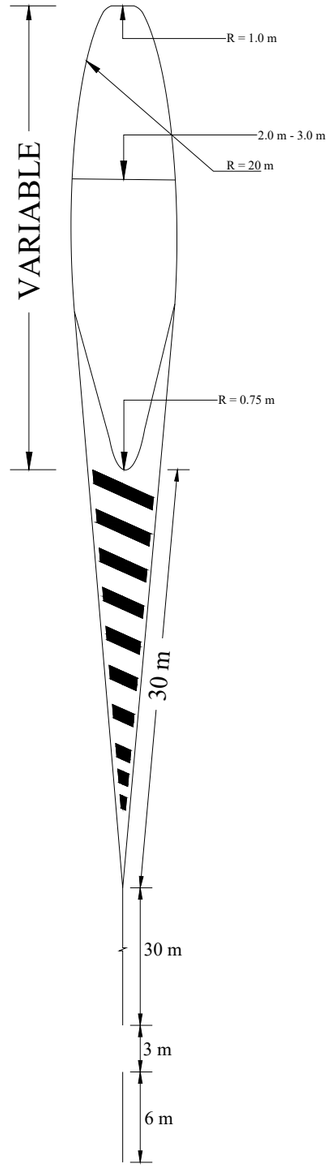




TYPICAL ISLAND DETAILS



Diagonal Marking



DIAGONAL MARKING IN ADVANCE OF DIRECTIONAL ISLAND

STANDARD DRAWINGS FOR INTERSECTIONS		
ANNEXURE-C		
DRAWING SHOWING PAVEMENT MARKINGS FOR INTERSECTION		
SCALE :- NOT TO SCALE	DRG NO :- 49	PAGE NO :- 49