

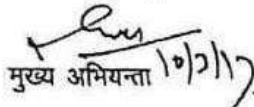


PROJECT SPECIFICATION

Name of Project :- Development of plots at Kotdwar Road Yojna Najibabad
Distt. Bijnor.

1- Roads:- 7.50m, 9.00m, 12.00m & 18.00m wide Roads are being constructed as per
Approved specification.

 IS 15700:2005 शेखर इन्फो	उत्तर प्रदेश आवास एवं विकास परिषद (अभियन्त्रण अनुभाग) 104, महात्मा गाँधी मार्ग, लखनऊ	 भारतीय मानक ब्यूरो IS 15700
पत्र सं०-	/ एम-4 / 2017	दिनांक
कार्यालय आदेश		
<p>परिषद योजनाओं में सड़कों के निर्माण हेतु मुख्य अभियन्ता के कार्यालय आदेश सं०-296/सड़कों की विशिष्टियों/2015 दिनांक 21.01.2015 द्वारा सड़कों की विशिष्टियों निर्धारित की गयी थी, जिसके सम्बन्ध में विचार-विमर्श किये जाने हेतु अभियन्त्रण अनुभाग, मुख्यालय के पत्रांक-533/सड़कों की विशिष्टियों/2017 दिनांक 22.02.2017 के अनुपालन में दिनांक 01.03.2017 को एक बैठक आयोजित की गयी, जिसमें विचार-विमर्श के उपरान्त पूर्व निर्गत विशिष्टियों में संशोधन किये जाने हेतु मुख्य अभियन्ता (म०) के कार्यालय आदेश सं०-617/एम-4/2017 दिनांक 06.03.2017 द्वारा एक समिति गठित की गयी। समिति द्वारा प्रस्तुत सुझाव एवं संस्तुति के आधार पर परिषद योजनाओं में सड़कों के निर्माण हेतु पूर्व निर्गत विशिष्टियों में निम्नवत् संशोधन किया जाता है।</p>		
<p>1- परिषद योजनाओं में प्रस्तावित 12.00 मी०/9.00 मी०/7.50 मी० चौड़ी आन्तरिक सड़कों का निर्माण परिषद द्वारा पूर्व निर्गत विशिष्टियों के अनुसार आई०आर०सी० : 37-2013 के आधार पर 2 एम०एस०ए० ट्रैफिक लोड हेतु पेवमेन्ट की डिजाइन के अनुसार कराया जाय तथा बिटूमिनस कार्य के अन्तर्गत पूर्व निर्गत विशिष्टियों में प्राविधानित 25एम.एम. मिक्स सील सर्फसिंग के स्थान पर इन सड़कों को टिकाऊ बनाने हेतु प्रथम चरण में न्यूनतम 40एम.एम. बी०एम० एवं 25एम.एम.एस०डी०बी०सी० का प्राविधान किया जाय तथा द्वितीय चरण में 25एम.एम.एस०डी०बी०सी० की एक कोट सेवाओं के हस्तान्तरण के समय करायी जायेगी।</p>		
<p>2- परिषद योजनाओं में प्रस्तावित 12.00 मी० चौड़ी सड़क की केरिज-वे की चौड़ाई 3.50 मी० के स्थान पर 4.50 मी० रखी जायेगी तथा 12.00 मी० चौड़ी सड़क में केरिज-वे के दोनों ओर सोल्डर पेवमेन्ट के अन्तर्गत रबर मोल्डेड इण्टरलाकिंग टाइल्स की चौड़ाई 0.30 मी० पूर्व की भाँति ही रखी जायेगी।</p>		
<p>3- शेष सड़कों के कार्य की विशिष्टियाँ पूर्ववत् रहेंगी। उक्त आदेश तत्काल प्रभाव से लागू होंगे।</p>		
<p>(म० सलीम अहमद) मुख्य अभियन्ता</p>		
पृ० सं०	685 / उक्त /	दिनांक 10.3.2017
प्रतिलिपि-निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।		
1- निजी सचिव, आवास आयुक्त/अपर आयुक्त एवं सचिव/वित्त नियंत्रक महोदय को उनके अवलोकनार्थ।		
2- समस्त अधीक्षण अभियन्ता/निदेशक (ग्लोबल सेल)/निदेशक (गुण नियंत्रक एवं परिकल्पना), उ० प्र० आवास एवं विकास परिषद।		
2- समस्त अधिशासी अभियन्ता/परियोजना प्रबन्धक, उ० प्र० आवास एवं विकास परिषद।		
<p> मुख्य अभियन्ता 10/3/17</p>		

**U.P. AVAS EVAM VIKAS PARISHAD
SPECIFICATION OF ROADS**

Particulars	45Mtr. Wide Road	30Mtr. Wide Road	24Mtr. Wide Road	18/15Mtr. Wide Road	12/9/7.50Mtr. Wide Road	6.00Mtr. Wide Road
1	2	3	4	5	6	7
Carriageway	Two No. Carriageway of 7.0 M each on either side of central green verge which shall be widened upto 10.50 M in future as per requirement	Two No. Carriageway of 5.50M width each on either side of central median.	In first phase 7.0 M out of 10.50 M carriageway shall be constructed and balance 3.50 M (1.75M in each side) shall be constructed in future as per requirement	7.0M (for 18.00M wide road) or 5.50 M (for 15.00M wide Road)	3.50M wide carriageway	3.00M wide carriageway
Service Lane	As per cross section, painted width will be 3M.	As per cross section, painted width will be 3M.				
Central Verge/ Median	5.00M wide & 30 cm. high	50.00cm wide & 30 cm. high				
Drain						
A- Main Drain						
Trapezoidal/ Rectangular	Between footpath & service lane	Between footpath & service lane	Along edge of road	Along edge of road		
B- Secondary Drain						
Trapezoidal/ Rectangular	Along property side of service lane	Along property side of service lane		Along Property side of road.	Along Property side of road	Along Property side of road
Road Crust Structure						
Soling coal	45-90mm stone ballast 12cm loose compacted to 9.0 cm.	45-90mm stone ballast 12cm loose compacted to 9.0 cm.	45-90mm stone ballast 12cm loose compacted to 9.0 cm.	45-90mm stone ballast 12cm loose compacted to 9.0 cm.	45-90mm stone ballast 10cm loose compacted to 7.5 cm.	45-63mm stone ballast 8cm loose compacted to 6.0 cm.
Inter Coat	45-63mm stone ballast 10cm loose compacted to 7.5 cm.	45-63mm stone ballast 10cm loose compacted to 7.5 cm.	45-63mm stone ballast 10cm loose compacted to 7.5 cm.	45-63mm stone ballast 10cm loose compacted to 7.5 cm.	45-63mm stone ballast 10cm loose compacted to 7.5 cm.	

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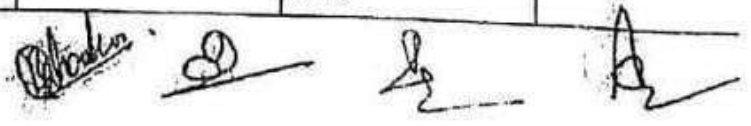
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Particulars	45Mtr. Wide Road	30Mtr. Wide Road	24Mtr. Wide Road	18/15Mtr. Wide Road	12/9/7.50Mtr. Wide Road	6.00Mtr. Wide Road
1	2	3	4	5	6	7
Top Coat	22.4 - 53 mm stone ballast 10cm loose compacted to 7.5 cm.	22.4 - 53 mm stone ballast 10cm loose compacted to 7.5 cm.	22.4 - 53 mm stone ballast 10cm loose compacted to 7.5 cm.	22.4 - 53 mm stone ballast 10cm loose compacted to 7.5 cm.	22.4 - 53 mm stone ballast 8cm loose compacted to 6.0 cm.	22.4 - 53 mm stone ballast 8cm loose compacted to 6.0 cm.
Screening Material	Local earth of appropriate P.I. in soling & inter coat and crushable type screening in top coat.	Local earth of appropriate P.I. in soling & inter coat and crushable type screening in top coat.	Local earth of appropriate P.I. in soling & inter coat and crushable type screening in top coat.	Local earth of appropriate P.I. in soling & inter coat and crushable type screening in top coat.	Local earth of appropriate P.I. in soling & inter coat and crushable type screening in top coat.	Local earth of appropriate P.I. in soling and crushable type screening in top coat.
Bituminous surface course	First Phase -50mm thick B.M. as per MORT & H specification + 25mm thick S.D.B.C. as per MORT & H specification Second Phase -25mm thick S.D.B.C. as per MORT & H specification at the time of handing over (resurfacing)	First Phase -50mm thick B.M. as per MORT & H specification + 25mm thick S.D.B.C. as per MORT & H specification Second Phase -25mm thick S.D.B.C. as per MORT & H specification at the time of handing over (resurfacing)	First Phase -50mm thick B.M. as per MORT & H specification + 25mm thick S.D.B.C. as per MORT & H specification Second Phase -25mm thick S.D.B.C. as per MORT & H specification at the time of handing over (resurfacing)	First Phase -40mm thick B.M. as per MORT & H specification + 25mm thick S.D.B.C. as per MORT & H specification Second Phase -25mm thick S.D.B.C. as per MORT & H specification at the time of handing over (resurfacing)	First Phase -25 mm thick Mix Seal Surfacing with Paver as per MORT & H specification Second Phase -25mm thick Mix Seal Surfacing with Paver as per MORT & H specification at the time of handing over if required	First Phase -25 mm thick Mix Seal Surfacing with Paver as per MORT & H specification Second Phase -25mm thick Mix Seal Surface with Paver as per MORT & H specification at the time of handing over if required
Brick Pavement	0.53 M wide on side of each carriageway	0.30 M wide on side of each carriageway	0.30 M wide on side of each carriageway	0.30 M wide on side of each carriageway	Brick edging	Brick edging

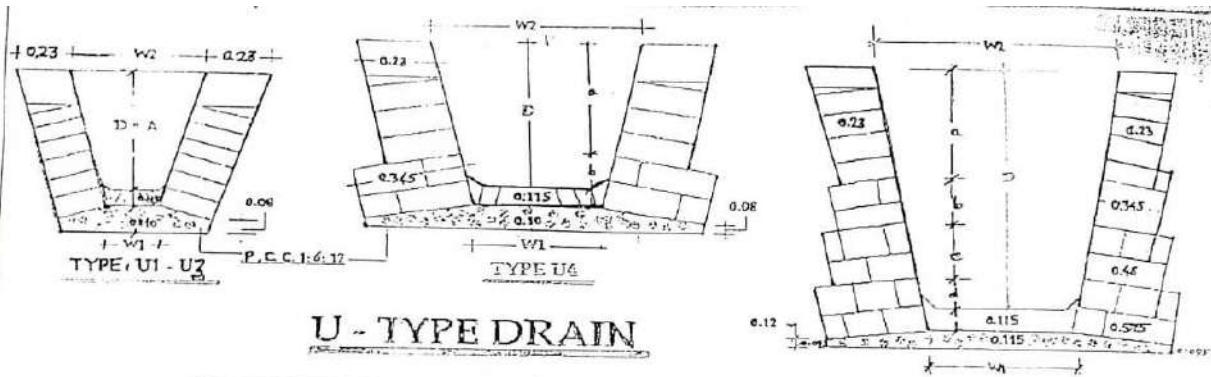
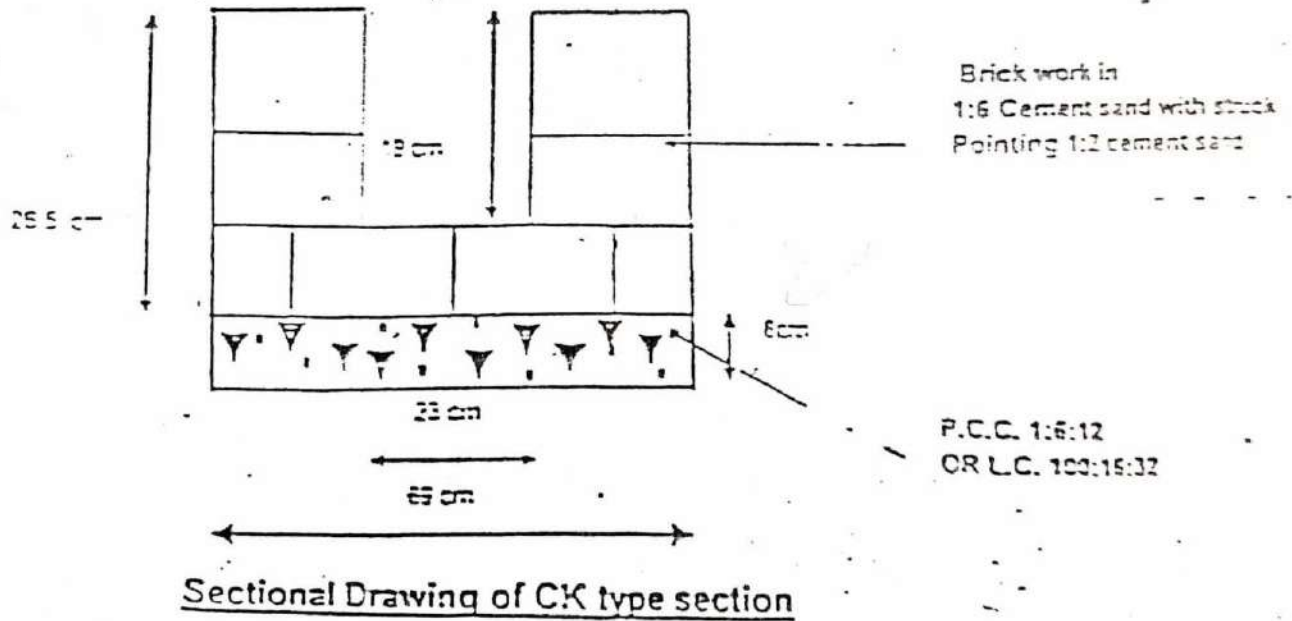
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U.P. AVAS. EVAM VIKAS PARISHAD
(SPECIFICATION OF ROADS)

Particulars	18/15 Mtr. Wide Road		12/9/7.50 Mtr. Wide Road	
	Approved Provisions	Proposed Revisions	Approved Provisions	Proposed Revisions
Carriageway	7.0 M (For 18.00M wide road) or 5.50 M (For 15.00M wide road)	Same	3.50M wide carriageway	Same
Service Lane		—do—		—do—
Central Verge/ Median		—do—		—do—
Drain		—do—		—do—
A-Main Drain		—do—		—do—
Trapezoidal/ Rectangular	Along edge of road	—do—		—do—
B-Secondary Drain		—do—		—do—
Trapezoidal/ Rectangular	Along property side of service lane	—do—	Along property side of service lane	—do—
Road Crust Structure		—do—		—do—
Soling coat	45-90mm stone ballast 12cm loose compacted to 9.0 cm.	To be provided as per design	45-90mm stone ballast 10cm loose compacted to 7.5 cm.	Flexible/Rigid paven as per design accor to final approval
Inter Coat	45-63mm stone ballast 10cm loose compacted to 7.5 cm.		45-63mm stone ballast 10cm loose compacted to 7.5 cm.	
Top Coat	22.4-53mm stone ballast 10cm loose compacted to 7.5 cm.		22.4-53mm stone ballast 8cm loose compacted to 6.0 cm.	



2- Drains:- Drain are being provided on both side of Roads as per approved design.



U - TYPE DRAIN

TYPE OF DRAIN	D	W1	W2	a	b	c	d
U1	0.6	0.6	0.8	0.6	-	-	-
U2	0.8	0.6	0.8	0.8	-	-	-
U3	0.8	0.7	1	0.8	-	-	-
U4	1	0.7	1	0.7	0.3	-	-
U5	1.2	0.7	1	0.7	0.3	0.2	-
U6	1.4	0.7	1	0.7	0.3	0.3	0.1
U7	1.6	0.7	1	0.7	0.3	0.3	0.3
U8	1.6	2	2.3	0.7	0.3	0.3	0.3

ALL DIMENSIONS ARE IN METRES

U1 R1	0.60	0.70	0.90	0.60	-	-	-
U1 R2	0.60	0.80	1.00	0.60	-	-	-
U1 R3	0.60	0.90	1.10	0.60	-	-	-
U2 R1	0.80	0.80	1.00	0.80	-	-	-
U2 R2	0.80	1.00	1.20	0.80	-	-	-
U4 R1	1.00	1.20	1.40	0.70	0.30	-	-
U5 R1	1.20	1.20	1.30	0.70	0.30	0.20	-
U1 R4	0.60	1.00	1.20	0.60	-	-	-

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3- Water Supply :- Water supply lines are being provided as per approved design & U.P. Jal Nigam Criteria.

<u>Design Population</u>	<u>Minimum size of Distribution Main</u>
Upto 5000	50mm
5001-50000	80mm
50001-500000	100mm
above 500000	125mm

In hills the minimum size shall be 25 mm

7 **Rate of Water Supply in LPCD :**
URBAN :-

<u>Design Population</u>	<u>Maximum day rate in lpcd</u>
upto 5000	100
5001-10000	125

1. Towns where water supply exists but sewerage facility does not exist. 50
2. Towns having population upto 5 lacs & water supply facility exists but sewerage facility either exists or is proposed. 80
3. Towns having population more than 5 lacs & water supply facility either exists or is proposed. 100
4. Rural Areas 50

7 **Rate of Water Supply in LPCD :**
7.1.1 Stands Amended as below -

URBAN AREA :-

<u>Classification of Town</u>	<u>Max. day in lpcd</u>
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1. Accelerated Rural Programme
 - a. General 70
 - b. Quality Problem Village (supply through stand post only) 40
2. General (Minimum needs programme) 70

Allowance for un-accounted for water in rural areas be made @ 15% over the rate of water supply stated in the above table while designing the water supply system

Rate of per capita water supply stated in the above table are changeable in pursuance to any directives issued by Government of India from time to time.

The table given under this para stands amended as below in accordance with Table 6.1 of manual of G.O.I.

<u>Conduits Materials</u>	<u>Recommended 'C' value</u>	
	<u>New Design</u>	<u>Pipe Purposes</u>

Unlined Metallic Pipes :-

Cast Iron, Ductile Iron	130	100
Mild Steel	140	100
Galvanized Iron above 50mm dia	120	100
Galvanized Iron 50mm dia and below used for house service connections	120	50

8. **Design Formula For Flow in Conduits & Coefficient of Roughness :**

Hazen & Williams formula for pressure conduits and mannings formula for free flow conduits are to be adopted. The values of coefficient 'C' in Hazen Williams formula are as follows :

<u>Conduits Materials</u>	<u>Recommended value</u>	
	<u>New Design</u>	<u>Pipe Purposes</u>
a. Cast Iron	130	100
b. Galvanised iron	120	100
c. steel pipes with revitted joints	110	95

10. Terminal Pressure :

The terminal pressures should be provided as listed in the following table -

Design population of the town	Building (Type)	Terminal pressure (in M)
upto 0.20	single storied	7
	double "	12
0.20 to 0.50	No consideration of the height of building	12
1.0 to 5.00		
5.0 to 10.00	No consideration of above the height of Building	15

11. Hydraulic Gradients :-

For designing the distribution mains such hydraulic gradients may be adopted for different type of pipe material as to provide an economic design. For this purpose the hydraulic gradient arrived at for an economic design of rising main should be adopted. Generally the hydraulic gradient for P.V.C. & A.C. pressure pipes should be 3 to 4 per thousand, and for cast iron and steel pipes 5 to 6 per thousand. However the gradient may vary according to the

capita rates adopted under clause 7.1.1 & 7.1.2 N.L. peak factor for industrial water supply shall be 1.00

10. Terminal Pressure stands amended as below

S.No.	Type of Building	Terminal Pressure in Metres
1.	Single Story	7
2.	Double Storied	12
3.	Triple Storied	17

11. The existing provisions shall stand amended to the extent that; irrespective of the type of pipe being used. Hydraulic gradient be kept in the range of 1 to 4 metres per thousand. All other provisions shall remain unchanged.

19. DEVELOPMENT OF WATER WORKS SITE.

Sd.
Superintending Engineer
Design Directorate

19. DEVELOPMENT OF WATER WORKS SITE :

The following provisions are added as an additional sub para 19.5

19.5 In every water works campus a sanitary toilet be provided to ensure healthy surrounding.

Sd.
Chief Engineer (PPRD)

4- Sewer Lines:- Sewer lines are being provided as per approved design & U.P. Jal Nigam criteria.

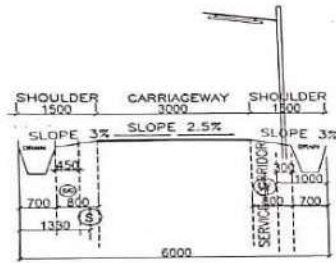
उपरोक्त आदेश एवं दिशानिर्देश द्वारा विकसित की जा रही आवासीय योजनाओं में जलसंचयन हेतु सीवरों की व्यवस्था की जाती है।
 सीवरों का डिजाइन परमन होत का प्राविधान उपरोक्त जल निगम के डिजाइन क्राइटेरिया 3001 / PPRD-DESIGN CRITERIA/30 dated 19.6.79 के अनुसार किया जाता है। उक्त डिजाइन क्राइटेरिया में उपरोक्त जल निगम में 331 / PPRD-DESIGN CRITERIA/2 dated 19.2.86 एवं पत्रांक 1242 / PPRD-DESIGN CRITERIA/31 dated 17.9.99 द्वारा आंशिक संशोधन किया गया है जिसके अनुसार सीवरों योजना में नन्होल की स्पेसिंग (दूरी) ड्राइंग एवं एपेसीफिकेशन भारत सरकार के दिसम्बर 1993 में प्रकाशित सीवरों एवं सीवेज ट्रीटमेंट मैनुअल के अनुसार ही प्राविधान किये जाने को निर्दिष्ट किया है। सीवरों एवं सीवेज ट्रीटमेंट मैनुअल के प्राविधान भारतीय मानक ब्यूरो द्वारा निर्गत कोड IS 4111(Part-1)-1986 के आधारित हैं जो निम्नवत् हैं-

क्र.सं.	विवरण	IS 4111(Part-1)-1986 के अनुसार प्राविधान	मैनुअल के अनुसार प्राविधान	परिचर की योजनाओं हेतु प्रस्ताव
SPACING OF MANHOLES				
1.1	Sewer Up to 900mm dia	Manholes should be built at every change of alignment, gradient or diameter, at the head of all sewers and branches, at every junction of two or more sewers. On sewers which are to be cleaned manually which cannot be entered for cleaning or inspection the maximum distance between manholes should be 30 m.	Same as in Code	कोड के प्राविधान के अनुसार
	above 900 mm dia to 1500 mm dia	90m - 150m on straight runs for sewer	Same as in Code	कोड के प्राविधान के अनुसार

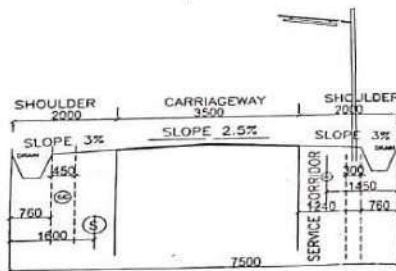
13/10/05 (114)

SIZE OF MANHOLES				
2.1	For Depth From 0.9 m Upto 2.5m	Rectangular type of internal size 1200x900 mm	Same as in code	कोड के प्राविधान के अनुसार
2.2	For Depth of 2.5m and above	Arch type manhole of internal size 1400x900mm	Same as in code	कोड के प्राविधान के अनुसार
CONSTRUCTION				
	Concrete	1:4:8(1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)	Same as in Code	कोड के प्राविधान के अनुसार
3.2	Thickness:	Thickness of bed concrete shall be 225 mm for manhole of depth less than 2.30 m and 300 mm for depth of 2.30 m and above. This may, however, be designed to carry safely the weight of walls, cover, the wheel loads, impact of traffic which are transmitted through cover and shaft walls and also for water pressure if any.	Thickness 150 mm and may be increased up to 300 mm when subsoil water is to be encountered.	225 mm for depth up to 2.3 m and 300 mm thick for depth more than 2.3 m. As per Provision in code. 13/10/05

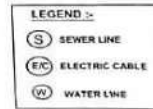
DRAWING OF SERVICES



TYPICAL CROSS SECTION ON 6.0 M. WD. ROAD



TYPICAL CROSS SECTION ON 7.5 M. WD. ROAD



NOTE:-
 1- ALL DIMENSIONS ARE IN MM.
 2- S & W SHOW SEWER AND WATER LINE RESP.
 3- SERVICE CORRIDORE IS FOR PROVISION OF ADDITIONAL SERVICES IN FUTURE.
 4- THICKNESS OF ROAD CRUST SHALL BE AS PER SPECIFICATION ISSUED BY C.E.
 5- SIZE OF DRAIN SHOWN ON THE PLAN SHALL BE AS PER APPROVED DESIGN BY COMPETENT AUTHORITY.



(I.S.O. 9001 - 2000)
 CERTIFIED ORG.

ROAD CRUST THICKNESS
 ROAD WIDTH - 6.00 M
 SOLING COAT - 45-63 MM LOOSE 100 MM COMP 75 MM
 TOP COAT - 22-43 MM LOOSE 80 MM COMP 60 MM

BITUMINOUS COURSE
 I PHASE
 25 MM THICK MIX SEAL SURFACING WITH PAVER
 II PHASE (AT THE TIME OF HANDING OVER, IF REQUIRED)
 25 MM THICK MIX SEAL SURFACING WITH PAVER
 BRICK ON EDGE

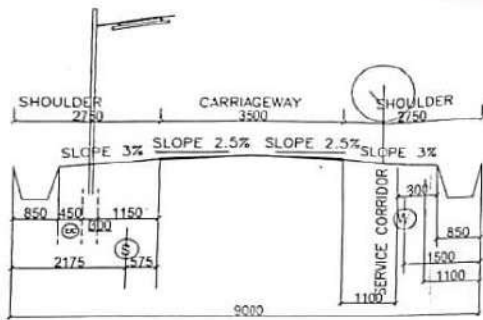
ROAD CRUST THICKNESS
 ROAD WIDTH - 7.50 M
 SOLING COAT - 45-63 MM LOOSE 100 MM COMP 75 MM
 INTER COAT - 45-63 MM LOOSE 100 MM COMP 75 MM
 TOP COAT - 22-43 MM LOOSE 80 MM COMP 60 MM

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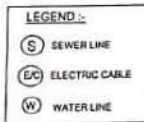
NOTE:-
 IN CASE OF HOUSES ON BOTH SIDES OF THE ROAD SERVICE CONNECTION CABLE SHALL BE CROSSED THROUGH R.C.C. DUCT PIPE FOR PROVIDING SERVICE CONNECTIONS.

ROAD CROSS SECTIONS OF U.P.H.D.B. LUCKNOW
 (6.00 M. & 7.50 M. WD. ROAD)

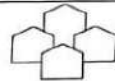
Handwritten signatures and dates:
 S.E.(VII) 11.01.2010
 S.E.(E) 11.01.10
 C.E.



TYPICAL CROSS SECTION ON 9.0 M. WD. ROAD



NOTE:-
 1- ALL DIMENSIONS ARE IN MM.
 2- S & W SHOW SEWER AND WATER LINE RESP.
 3- SERVICE CORRIDORE IS FOR PROVISION OF ADDITIONAL SERVICES IN FUTURE.
 4- THICKNESS OF ROAD CRUST SHALL BE AS PER SPECIFICATION ISSUED BY C.E.
 5- SIZE OF DRAIN SHOWN ON THE PLAN SHALL BE AS PER APPROVED DESIGN BY COMPETENT AUTHORITY.



(I.S.O. 9001 - 2000)
 CERTIFIED ORG.

ROAD CRUST THICKNESS
 ROAD WIDTH - 9.00 M
 SOLING COAT - 45-63 MM LOOSE 100 MM COMP 75 MM
 INTER COAT - 45-63 MM LOOSE 100 MM COMP 75 MM
 TOP COAT - 22-43 MM LOOSE 80 MM COMP 60 MM

BITUMINOUS COURSE
 I PHASE
 25 MM THICK MIX SEAL SURFACING WITH PAVER
 II PHASE (AT THE TIME OF HANDING OVER, IF REQUIRED)
 25 MM THICK MIX SEAL SURFACING WITH PAVER
 BRICK ON EDGE

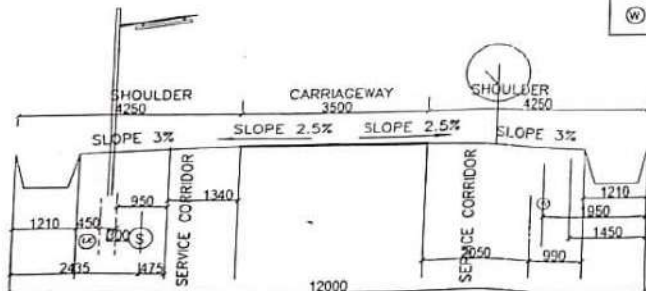
ROAD CRUST THICKNESS
 ROAD WIDTH - 12.00 M
 SOLING COAT - 45-63 MM LOOSE 100 MM COMP 75 MM
 INTER COAT - 45-63 MM LOOSE 100 MM COMP 75 MM
 TOP COAT - 22-43 MM LOOSE 80 MM COMP 60 MM

BITUMINOUS COURSE
 I PHASE
 25 MM THICK MIX SEAL SURFACING WITH PAVER
 II PHASE (AT THE TIME OF HANDING OVER, IF REQUIRED)
 25 MM THICK MIX SEAL SURFACING WITH PAVER
 BRICK ON EDGE

NOTE:-
 IN CASE OF HOUSES ON BOTH SIDES OF THE ROAD SERVICE CONNECTION CABLE SHALL BE CROSSED THROUGH R.C.C. DUCT PIPE FOR PROVIDING SERVICE CONNECTIONS.

ROAD CROSS SECTIONS OF U.P.H.D.B. LUCKNOW
 (9.00 M. & 12.00 M. WD. ROAD)

Handwritten signatures and dates:
 S.E.(VII) 11.01.2010
 S.E.(E) 11.01.10
 C.E.



TYPICAL CROSS SECTION ON 12.0 M. WD. ROAD

