

# Heritage Management Plan & Project Development Proposal, Jodhpur

Volume 1B: Toolkit



April 2018

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This report was prepared as a part of Heritage Management Plan for the city of Jodhpur. This report should be read in conjunction with other documents prepared during the course of the assignment. The entire list of documents prepared includes the following

Volume 1A	Heritage Management Plan
Volume 1B	Toolkit
Volume 2A-I	Tangible Assets
Volume 2A-II	Tangible Assets
Volume 2A-III	Tangible Assets
Volume 2B	Intangible Assets
Volume 3	Local Economic Development of Sardar Market- Girdikot

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Volume 1B: Toolkit

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## Disclaimer

This document presents the Heritage Management Plan for Jodhpur based on the primary survey conducted by our team, information collected during our site visits and secondary information provided by the stakeholders and relevant organisations. During the course of the study and report preparation, we were provided with both written and verbal information. We also supplemented the study with photos and digital maps. Nothing has come to our attention to cause us to believe that the data or maps provided by various sources are not true or not correct. We believe this information to be authentic and therefore have not conducted an independent audit of the same. No investigation of the title of tangible and intangible assets has been made and matters of a legal nature relating to the title of the assets have not been considered.

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## Acronyms and abbreviations

DoLSG	Department of Local Self Government
GoR	Government of Rajasthan
HMP	Heritage Management Plan
JNN	Jodhpur Nagar Nigam
NIUA	National Institute of Urban Affairs
RSHP	Rajasthan State Heritage Program
UMC	Urban Management Consulting Pvt. Ltd.

## Table of contents

1	Introduction to the toolkit .....	1
2	Urban design and streetscape guidelines .....	2
2.1	Design Catalogue .....	3
2.2	Toolkit Elements .....	11
2.2.1	<i>Shades</i> .....	11
2.2.2	<i>Vending platform/kiosk</i> .....	12
2.2.3	<i>Bollards</i> .....	15
2.2.4	<i>Public conveniences (Toilet and water vending machine)</i> .....	16
2.2.5	<i>Garbage bins</i> .....	21
2.2.6	<i>Information panels and signage's</i> .....	24
2.2.7	<i>Manhole cover</i> .....	42
2.2.8	<i>Security cabin/ information centre</i> .....	45
2.2.9	<i>Street light</i> .....	48
2.2.10	<i>Benches/ seating</i> .....	51
2.3	Conservation guidelines, including adaptive reuse .....	54
3	Building design guidelines .....	56



## List of figures

Figure 1 Section of shading element .....	11
Figure 2 Plan of shading element .....	11
Figure 3 Elevation of shading element.....	12
Figure 4 Plan of vending kiosk.....	12
Figure 5 Section of vending kiosk .....	12
Figure 6 Elevation of pitched roof vending kiosk .....	13
Figure 7 Elevation of flat roof vending kiosk .....	13
Figure 8 Plan of vending kiosk.....	13
Figure 9 Section of vending kiosk .....	14
Figure 10 Elevation of pitched roof vending kiosk .....	14
Figure 11 Elevation of flat roof vending kiosk .....	14
Figure 12 Round top bollard (Left), Flat ornamental bollard (Right) .....	16
Figure 13 Existing toilet at fort.....	18
Figure 14 Existing semi-open urinal at garden (Left), Toilet at market (Right) .....	18
Figure 15 Existing water dispenser outside market (Left), Water dispenser inside market (Right) .....	19
Figure 16 Elevation of toilet with barrier free design.....	19
Figure 17 Plan, section and elevation of water vending machine .....	20
Figure 18 Existing FRP garbage bin at Mandore (Left), Existing Metal garbage bin at Mandore (Right) .....	22
Figure 19 Dump yard at Sardar market (Left), Scrap shop at Sardar market (Right) .....	22
Figure 20 Dumping place at Sardar market (Left), Existing FRP garbage bins at Sardar market (Right) .....	22
Figure 21 Pivot type garbage bin .....	23
Figure 22 Fixed garbage bin .....	23
Figure 23 Existing signage and info panel at fort (Left), Existing info panel at garden (Right).....	25
Figure 24 Existing info panel at garden (Left), Existing info panel at Sardar market (Right).....	26
Figure 25 Existing info panel at water body (Left), Hoardings at Brahmapuri (Right) .....	26
Figure 26 Banners at Brahmapuri (Left), Non-highlighted sign boards (Right) .....	27
Figure 27 Information panel with pedestal base (with advertising space) .....	27
Figure 28 Information panel with pedestal base (without advertising space) .....	28
Figure 29 Wall mounted information panel .....	28
Figure 30 Pole mounted info panel (Left), Pole mounted signage (Right).....	29
Figure 31 Bracket mounted signage .....	30
Figure 32 Bracket mounted signage .....	31
Figure 33 Heritage façade hidden behind signages .....	32
Figure 34 Visibility of architectural elements in the heritage building is hidden due to large banners .	33
Figure 35 Inconsistency in size, colour and positioning of signages .....	34
Figure 36 Proposed signage scheme – The case of Sardar market .....	35
Figure 37 Proposed signage: Bracket mounted (1 & 2), Rolling shutter (3) - The case of Sardar market .....	35
Figure 38 Before and after scenario of signages; post the policy implementation .....	36
Figure 39 Existing signages in residential area .....	37
Figure 40 Typical elevation of a residence – Depicting the proposed signage guidelines .....	38
Figure 41 Best practice for residential signages - Pal Haveli (left), Raas Haveli (right) .....	39
Figure 42 Existing road signages.....	40
Figure 43 Existing directional signages for public utilities.....	40
Figure 44 Existing manhole cover at Sardar market (Left), Existing Surface drain near market (Right) .....	43
Figure 45 Existing manhole cover at Brahmapuri (Left), Manhole in the streets of Jodhpur (Right) ....	43
Figure 46 Fully closed manhole cover (Left), Perforated catch pit cover (Right).....	44
Figure 47 Fully closed manhole cover designed exclusively for Sardar market - Girdikot .....	44
Figure 48 Existing security cabin at fort (Left), Existing tourist assistance cabin at market (Right) .....	45
Figure 49 Plan of Security cabin/ information centre with drinking water .....	46
Figure 50 Elevation of Security cabin/ information centre with drinking water .....	47
Figure 51 Existing light pole at Mandore (Left), Existing light pole at Mandore (Right).....	49
Figure 52 Existing light pole at Mandore fort and water bodies (Left), Exposed electrical cables (Right) .....	50

Figure 53 Street light.....	50
Figure 54 Non-contextual cement benches (Left), Compound walls used as seaters (Right) .....	51
Figure 55 Seating's on Ghantaghar first floor .....	52
Figure 56 Traditional bench design with back rest .....	52
Figure 57 Contemporary seating design without back rest.....	52
Figure 58 Stone bench with back rest.....	53





# Introduction



# 1 Introduction to the toolkit

The World Bank, Cities Alliance and the Government of Rajasthan (GoR) have initiated the Rajasthan State Heritage Program (RSHP) for 40 towns in the state and Jodhpur has been taken up as the pilot city. National Institute of Urban Affairs (NIUA) is providing the technical support to the Department of Local Self Government (DoLSG), GoR for implementing the RSHP.

NIUA has appointed Urban Management Consulting Pvt. Ltd. (UMC) to prepare a Heritage Management Plan (HMP), a pilot project development proposal and a heritage toolkit for urban street furniture. This toolkit forms the part of this technical assistance provided by UMC to the RSHP.

The toolkit offers a design catalogue of urban streetscape/ elements with multiple options suitable for the local architectural and urban context. The designs in the catalogue are visual aids for the Jodhpur Nagar Nigam (JNN) and other local, state, para-statal and private organisations executing public works in the city. The designs of the elements may be used as a guidance for procurement, manufacture and/ or fabrication of the element based on availability of materials and site suitability. There are several design and regulatory guidelines prescribed to maintain the built heritage and character of the city. Conservation guidelines also form a major component of the toolkit. The toolkit would also sensitise the municipal functionaries, practicing architects, engineers, urban designers and citizens at large while development/ re-development of their buildings and public areas.



# Urban Design & Streetscape Guidelines







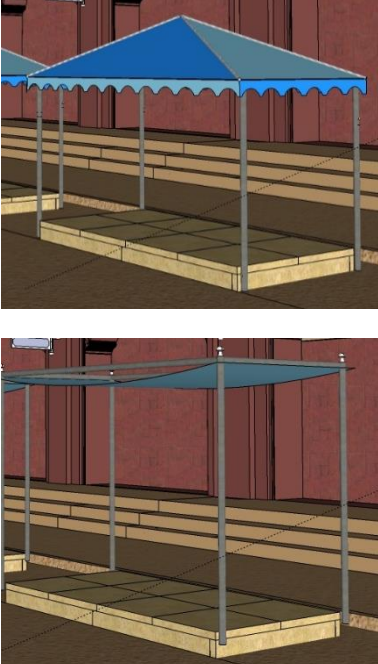
## 2 Urban design and streetscape guidelines

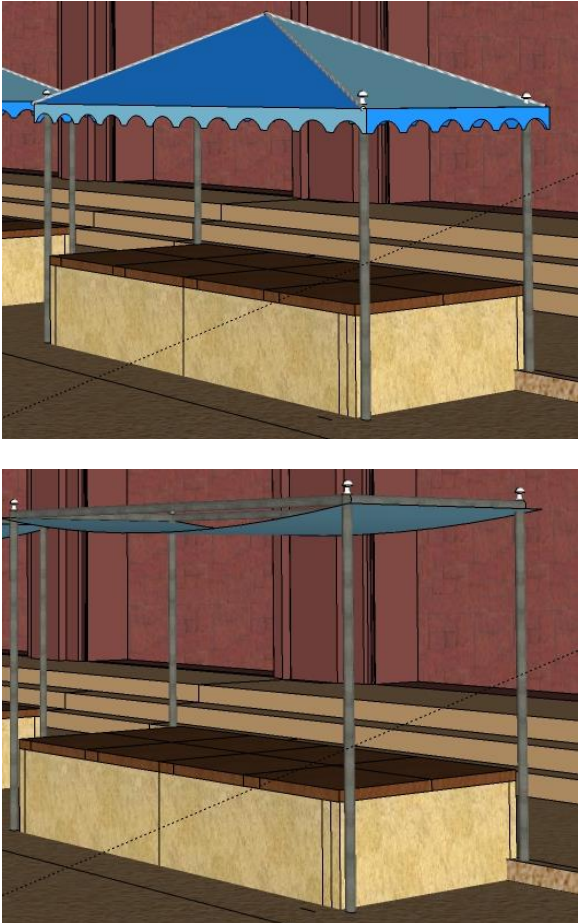

The toolkit offers design guidelines for 10 elements listed below suitable in different urban settings. The urban settings have been defined as

1. Area A: Monuments such as forts, palaces, mausoleums, cenotaphs, places of worship, etc.
2. Area B: Parks and gardens
3. Area C: Commercial areas/ streets
4. Area D: Lakes and stepwells
5. Area E: Residential areas




S. No.	Element	No. of options	Area A (Monuments)	Area B (Gardens)	Area C (Markets)	Area D (Lakes/stepwells)	Area E (Residential)
1	Shades (2)	2	Type 1	-	Type 2	-	-
2	Vending kiosks (2)	2	Type 1 & 2				
3	Bollards (2)	2	All types common for all areas				
4	Public toilets (1), drinking water stations (2)	PT (1) Water stations (2)	All types common for all areas				
5	Garbage bins (2)	2	All types common for all areas				
6	Information panel (3) and Signage (4)	Panel (3) Signage (4)	All types common for all areas				
7	Manhole cover (3)	3	All types common for all areas (Type 3 only for Sardar Market)				
8	Security cabin/ Information centre (1)	1	Common for all areas				
9	Street light casing and bracket (1)	1	Common for all areas				
10	Benches/ seating (4)	4	Common for all areas (Type 4 suitable for Area B)				

## 2.1 Design Catalogue

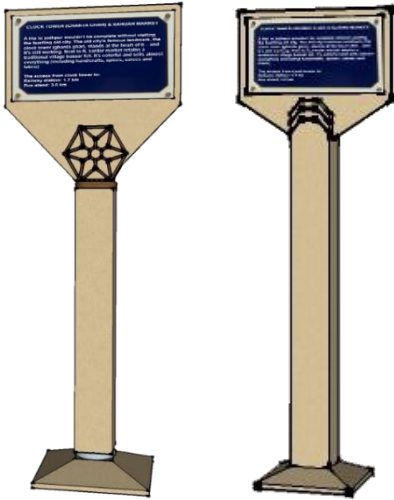
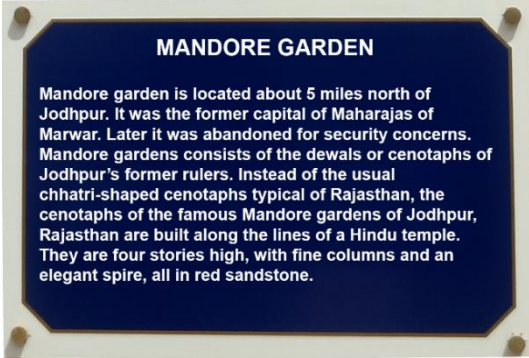

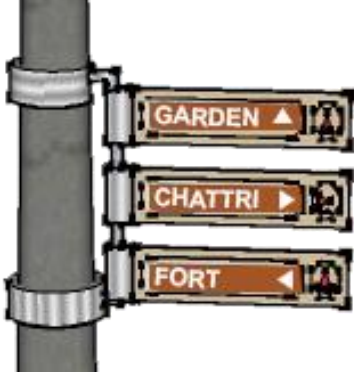
No.	Elements and types	Design as per tool kit	Material and specifications
<b>1 Shades</b>			
Type 1.1	Canopy for use as a shading device over ticket windows, security cabins and other similar conditions		<p>Canopy - membrane sheet with edge finish</p> <p>Hook – wrought iron</p> <p>Handrail (optional) – galvanized iron with bottle green paint</p>
Type 1.2	Canopy for shading pedestrian walking areas in Sardarmarket		<p>Canopy – PVC membrane (composite tensile fabric) with block print pattern (optional) with edge finish</p> <p>Hook – wrought iron</p> <p>Rope – cotton twisted 18 mm diameter</p>
<b>2 Vending platform/ kiosk</b>			
Type 2.1	Raised vending platform of 150 mm without storage and electrical point		<p>Top finish – Raised platform with 125 mm P.C.C and 25 mm Jodhpur stone</p> <p>Post - Mild Steel</p> <p>Cover - Canvas or membrane sheet</p>




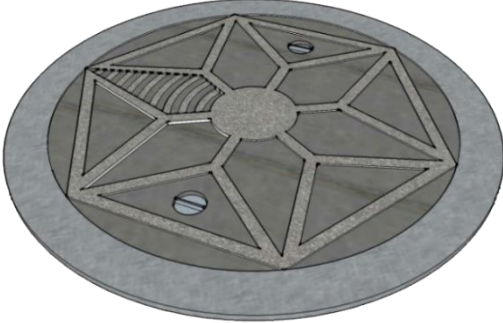
No.	Elements and types	Design as per tool kit	Material and specifications
Type 2.2	Raised vending platform of 600 mm with storage and electrical point		<p>Top finish – Raised platform with 75 mm P.C.C and 500 mm high stretcher bond along the plinth at 115 mm thickness with 30 mm Jodhpur stone finish; and an openable stone top of 25 mm with accessible storage</p> <p>Post - Mild Steel</p> <p>Cover - Canvas or membrane sheet</p>
<b>3 Bollards</b>			
Type 3.1	Round top bollards		<p>Reinforced Cement Concrete (RCC) or cast iron.</p> <p>Jodhpur stone is also a good option</p>

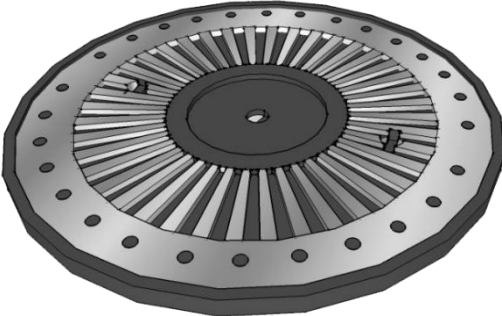
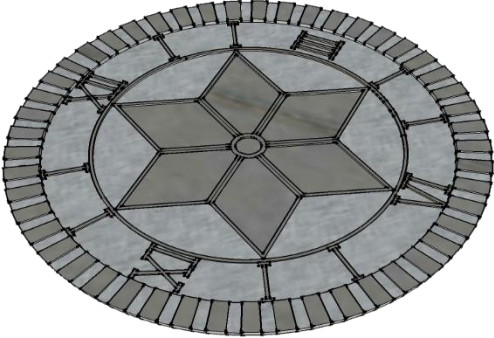
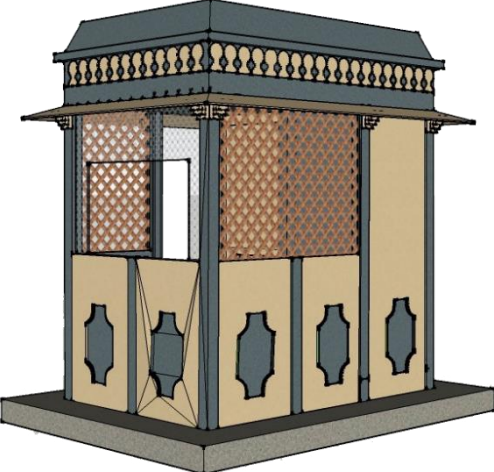
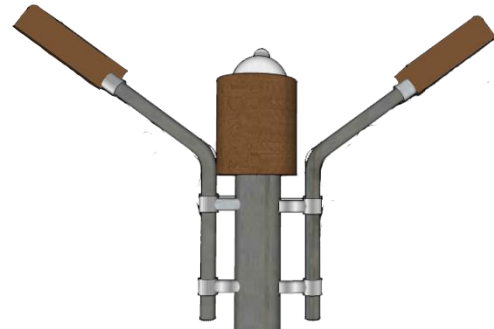


No.	Elements and types	Design as per tool kit	Material and specifications
Type 3.2	Flat ornamental bollards		<p>Reinforced Cement Concrete (RCC) or cast iron.</p> <p>Jodhpur stone is also a good option</p>
<b>4 Public conveniences (Drinking water and Toilets)</b>			
Type 4.1.1	Toilet with barrier free design		<p>Façade - Stone finish</p> <p>Parapet design as per Sardar market design</p> <p>Ventilator - Cement/ stone jali</p> <p>Door frame - Stone with FRP door panels</p> <p>Railing – SS or painted in Jodhpur stone colour</p>
Type 4.2.1	Water vending machine		<p>Terracotta stone panels cased in a steel frame</p>

No.	Elements and types	Design as per tool kit	Material and specifications
Type 4.2.2	Water vending machine		External vinyl stickers in Jodhpur stone colour or Jodhpur blue colour with only a 1x2 feet branding space
<b>5</b>		<b>Garbage bins</b>	
Type 5.1	Pivot type garbage bins		MS frame attached with MS bin or trash bag
Type 5.2	Fixed garbage bins		MS frame attached with 2 bins made of MS or Fibre Reinforced Plastic (FRP)

No.	Elements and types	Design as per tool kit	Material and specifications
<b>6 Information panels and signages</b>			
Type 6.1.1	Information panel with pedestal base		<p>Jodhpur stone pillar with composite stone panel.</p> <p>White text on blue background maybe painted on steel plate/ FRP or vinyl stickers can be used</p>
Type 6.1.2	Wall mounted information panel		<p>White text on blue background maybe painted on steel plate/ FRP or vinyl stickers can be used</p>
Type 6.1.3	Pole mounted information panel		<p>White text on blue background maybe painted on steel plate/ FRP or vinyl stickers can be used</p>
Type 6.2.1	Pole mounted signage for roads and shops		<p>White text and directional arrows on brown background maybe painted on steel plate/ FRP or vinyl stickers can be used</p>

No.	Elements and types	Design as per tool kit	Material and specifications
Type 6.2.2	Bracket mounted signage for roads and shops		White text and directional arrows on brown background maybe painted on steel plate/ FRP or vinyl stickers can be used
Type 6.2.3	Bracket mounted signage for roads and shops		White text and shop number on blue background maybe painted on steel plate/ FRP or vinyl stickers can be used
Type 6.2.4	Signage for rolling shutter		Painted signage with Jodhpur stone colour or Jodhpur blue colour
<b>7</b>	<b>Manhole cover</b>		
Type 7.1	Fully closed manhole cover for sewerage		Wrought iron

No.	Elements and types	Design as per tool kit	Material and specifications
Type 7.2	Perforated catch pit cover for storm water drains		Wrought iron
Type 7.3	Fully closed manhole cover for sewerage; with clock design, exclusively applicable for Sardarmarket-Girdikot		Wrought iron
<b>8 Security cabin/ information center</b>			
Type 8.1	Security cabin and information center		Stainless steel frame with cement/ stone jali and stone/ FRP panel
<b>9 Street light casing and bracket</b>			
Type 9.1	Articulation of existing light posts		Post - Existing wrought iron  Light - LED  Casing - M.S or F.R.P  Bracket - M.S or F.R.P

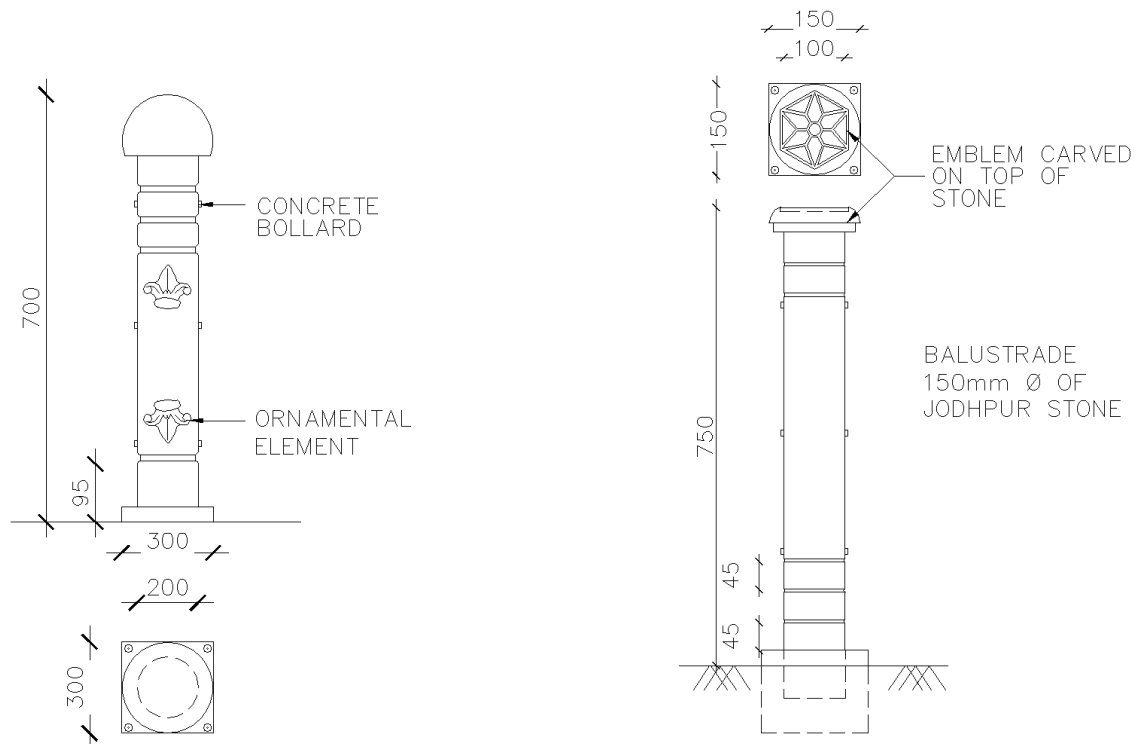


No.	Elements and types	Design as per tool kit	Material and specifications
<b>10 Benches/ seating</b>			
Type 10.1	Traditional bench design with back rest		Wrought iron frame with wooden planks
Type 10.2	Contemporary seating design without back rest		Steel frame with Jodhpur stone
Type 10.3	Stone bench with backrest		Mild Steel (MS) or Fiber Reinforced Plastic (FRP)
Type 10.4	Seating as low as the height of parapet		Masonry structure

### 2.2.3 Bollards

No.	Parameters	Guidelines
<p><b>Type</b> 3.1 &amp; 3.2</p>	<p><b>Bollards</b></p>	<p><i>General Guidelines</i> Bollards are controlling equipment's and have to be installed for regulating movement.</p> <ul style="list-style-type: none"> <li>• The bollards have to available at the time of need, hence the stacking has to be easily accessible</li> <li>• The fixed bollards should be as far as possible vandalism proof</li> <li>• The height of the bollard should not be beyond 1500 maximum</li> </ul>
		<p><b>Area A</b> <i>Design Guidelines</i></p> <ul style="list-style-type: none"> <li>• Bollards should be designed with contextual material to control traffic at the time of film shootings, festivals and VIP visits.</li> <li>• The material for fixed bollards will be stone and the flexible ones should be matching with the colour and shape of the stone or it may be wood.</li> </ul> <p><i>Regulatory Guidelines</i></p> <ul style="list-style-type: none"> <li>• Removable bollards could be installed to enable the access for special vehicles like battery operated cars with security advise</li> <li>• Proper bollards storage should be planned when not being used</li> </ul> <p><i>Cultural Values</i></p> <ul style="list-style-type: none"> <li>• Aesthetically coherent with the area it is being used.</li> </ul>
		<p><b>Area B</b> <i>Design Guidelines</i></p> <ul style="list-style-type: none"> <li>• Bollards design should be contextual and material can be MS or concrete.</li> </ul> <p><i>Regulatory Guidelines</i></p> <ul style="list-style-type: none"> <li>• Removable bollards to be designed in case access is provided for special vehicles like battery operated cars.</li> </ul>
		<p><b>Area C</b> <i>Design Guidelines</i></p> <ul style="list-style-type: none"> <li>• Permanent bollards can be designed in stone with design elements from Ghantaghar</li> </ul> <p><i>Regulatory Guidelines</i></p> <ul style="list-style-type: none"> <li>• Removable bollards could be installed to enable the access for special vehicles like battery operated cars.</li> </ul>
		<p><b>Area D</b> <i>Design Guidelines</i></p> <ul style="list-style-type: none"> <li>• Fixed bollards should be designed in concrete to control animal movement and human movement.</li> </ul> <p><i>Regulatory Guidelines</i></p> <ul style="list-style-type: none"> <li>• Removable bollards could be installed to enable the access for special vehicles like battery operated cars.</li> </ul>

Figure 12 Round top bollard (Left), Flat ornamental bollard (Right)



#### 2.2.4 Public conveniences (Toilet and water vending machine)

S. No.	Parameters	Guidelines
<b>Type 4.1.1 and 4.2.1</b>	<b>Public conveniences (Toilet with barrier free design and Water vending machine)</b>	<p><i>General Guidelines</i></p> <p>Toilet facility and purified drinking water facility should be provided at every location where there is visitation</p> <ul style="list-style-type: none"> <li>• There has to be separate male, female and handicapped toilet as per the visitation numbers, these should have water and should be functional</li> <li>• The size of the toilet should be 1200x 1000 minimum and 1800x1000 for handicapped or as per standard norms</li> <li>• The maintenance of the toilets is a joint responsibility of the municipality and the people/ organisation who built it</li> <li>• The drinking water facility needs to have certified purification system</li> </ul>



S. No.	Parameters	Guidelines
		<p><b>Area A</b></p> <p><i>Design Guidelines</i></p> <ul style="list-style-type: none"> <li>• A prominent signage should be installed for the toilet.</li> <li>• Adequate number of drinking water fountains with dispenser (of contextual Colour) should be installed, with paper glasses and dust bin for visitors and staff.</li> <li>• Public toilets should be away from electric substations for safety reasons. They should be located at various accessible points and in proportional quantity.</li> <li>• Toilet around the heritage sites should be placed strategically so that it does not affect the experience of visitors</li> <li>• There has to be ramps to the toilets.</li> </ul> <p><i>Regulatory Guidelines</i></p> <ul style="list-style-type: none"> <li>• This can be a sponsored or maintained by partners or friends of the Mehrangarh foundation.</li> </ul> <p><i>Cultural Values</i></p> <ul style="list-style-type: none"> <li>• Toilet and the way it is designed adds to the aesthetic and functional quality of the location.</li> </ul> <hr/> <p><b>Area B</b></p> <p><i>Design Guidelines</i></p> <ul style="list-style-type: none"> <li>• Drinking water fountains and public toilets should be in corners and at various accessible points and in proportional quantity.</li> </ul> <p><i>Regulatory Guidelines</i></p> <ul style="list-style-type: none"> <li>• Pay and use toilets maintained by locality by tender</li> </ul> <p><i>Cultural Values</i></p> <ul style="list-style-type: none"> <li>• Drinking water fountains could be installed as sculpture elements</li> </ul> <hr/> <p><b>Area C</b></p> <p><i>Design Guidelines</i></p> <ul style="list-style-type: none"> <li>• Drinking water fountains need to be designed as per the context and with the least maintenance.</li> <li>• Public toilets should be away from electric substations for safety reasons. They should be located at various accessible points and in proportional quantity.</li> <li>• Toilets around the heritage sites should be placed strategically so that it does not affect the experience of visitors</li> </ul> <p><i>Regulatory Guidelines</i></p> <ul style="list-style-type: none"> <li>• These facilities could be sponsored or maintained by private organisation. Pay and use toilets could also be maintained by tender or the stakeholders association.</li> </ul>

### 2.2.5 Garbage bins

S. No.	Parameters	Guidelines
<b>Type 5.1 and 5.2</b>	<b>Garbage bins (Pivot type and fixed)</b>	<p><i>General Guidelines</i></p> <p>Garbage bins should be provided at every entry, exit points, ticketing areas, at least three numbers in walk ways and parking areas. They could be sponsored and tied up with recycling company.</p>
		<p><b>Area C</b></p> <p><i>Design Guidelines</i></p> <ul style="list-style-type: none"> <li>Multi-size bins should be installed in market area for the ease of collection.</li> </ul> <p><i>Regulatory Guidelines</i></p> <ul style="list-style-type: none"> <li>Shopkeepers could be made responsible for the cleanliness of 50 mts of their vicinity.</li> <li>Dumping wastes in open areas could be prevented by regulating the waste disposal schedules.</li> </ul> <p><i>Cultural Values</i></p> <ul style="list-style-type: none"> <li>The culture of community living and shared ownership can be brought back.</li> </ul>
		<p><b>Area D</b></p> <p><i>Design Guidelines</i></p> <ul style="list-style-type: none"> <li>Separate bins could be designed for flowers and other bio-degradable material &amp; non-degradable material</li> </ul> <p><i>Regulatory Guidelines</i></p> <ul style="list-style-type: none"> <li>Garbage collection system for each of these bins with a local youth group to monitor could be set up.</li> </ul> <p><i>Cultural Values</i></p> <ul style="list-style-type: none"> <li>Water bodies are sacred and needs to be kept clean. There was a culture of respect towards water bodies, the garbage collection can revive that respect</li> </ul>
		<p><b>Area E</b></p> <p><i>Design Guidelines</i></p> <ul style="list-style-type: none"> <li>Material and colour of garbage bins should be contextual to residential area.</li> <li>Design of the bins should be such that they are low maintenance, have longer life and easy to collect the garbage out of it.</li> </ul> <p><i>Regulatory Guidelines</i></p> <ul style="list-style-type: none"> <li>Current system of garbage collection using donkeys because of narrow lanes should be monitored well to avoid dumping of waste in common open areas.</li> </ul>

## 2.2.6 Information panels and signage's

S. No.	Parameters	Guidelines
<b>Type</b> 6.1.1 6.1.2 6.1.3 and 6.2.1 6.2.2 6.2.3	<b>Information panels (with pedestal, wall mounted, pole mounted) and signages (pole mounted, bracket mounted, rolling shutter)</b>	<p><i>General Guidelines</i></p> <p>There has to be a signage to convey the location information in every location and directional location for the convenience of the visitor.</p> <ul style="list-style-type: none"> <li>• They have to be adhere to the norms of signage</li> <li>• Readability should be of prime importance</li> <li>• They should not obstruct the road and access</li> </ul> <hr/> <p><b>Area A</b></p> <p><i>Design Guidelines</i></p> <ul style="list-style-type: none"> <li>• Signage's and information panels should be of contextual design, colour and material. They should be placed at necessary places with LED lighting to light up the written wordings</li> <li>• Vectors should be easily interpreted and should be kept at necessary places</li> <li>• Information of prominent places at strategic locations and directions to them carved on flooring can help tourist easy access</li> <li>• The ticket rooms need clarity in signage and direction</li> </ul> <p><i>Regulatory Guidelines</i></p> <ul style="list-style-type: none"> <li>• Their size, shape and height should be as per location and the standards.</li> <li>• The emblem can become iconic</li> </ul> <hr/> <p><b>Area B</b></p> <p><i>Design Guidelines</i></p> <ul style="list-style-type: none"> <li>• Signage should be designed along with the corner lamppost and individual in MS and stone or stone agglomerate</li> <li>• Panels should be designed to give information and a suggestion mechanism, path markers, etc. for easy access to the tourists.</li> </ul> <p><i>Regulatory Guidelines</i></p> <ul style="list-style-type: none"> <li>• Signage and information panels can be sponsored and tied up with advertisement</li> </ul> <hr/> <p><b>Area C</b></p> <p><i>Design Guidelines</i></p> <ul style="list-style-type: none"> <li>• Signage should be done as per the design prescribed in stone and wrought iron.</li> <li>• Direction to a land mark or the prominent places can be interpreted on the floors.</li> <li>• Size, material and fonts should be as per the recommendations suggested in toolkit. Anything other than this should not be recommended.</li> </ul>

Figure 24 Existing info panel at garden (Left), Existing info panel at Sardar market (Right)



Figure 25 Existing info panel at water body (Left), Hoardings at Brahmapuri (Right)





Figure 34 Visibility of architectural elements in the heritage building is hidden due to large banners



The façade in Figure 33, is located near Nai Sadak junction. These signages have covered the brackets, jaali, cornices and fenestration of the building. More than half of the area (~ 40% to 70%) on the façades seen in Figure 34 are hidden by signages. Due to the large banners positioned in the façade, the visibility of architectural elements of the heritage building is covered.

Figure 35 Inconsistency in size, colour and positioning of signages



## Signage policy for shops

### 1. Size

- The size of the signage shouldn't be more than 1800 mm x 600 mm
- In case of space constraint and hindrance to architectural features, the signage shall be supported by a S.S angle as seen in *Figure 37*, whose projection should be 250 mm from the wall surface
- Height of the signage should be 2100 mm from ground level and text should be 75 mm or the total area covered by the signage should be <25%; whichever is lesser should be considered.
- The dimension of the signage should be 650 mm x 200 mm

### 2. Colour

- White text on blue background should be followed

### 3. Positioning

- The signage should be positioned only at the roof slab level of the building; for each floor
- Fenestration and entire elevation should not be covered by any type of signage

### 4. Type

- Material is left to the choice of the user
- Material of the projected signage should be S.S plate/FRP; with the shop name engraved/painted in it
- Signage on rolling shutters should be painted in Jodhpur stone Colour or Jodhpur blue Colour, with white text

### 5. Exceptions

- Signs integrated into the roof or top of buildings that incorporate illumination; such as backlit/halo effect lighting shall be allowed subject to not causing blinding appearance to the neighbouring buildings, i.e., < 300 lux level.



## 5. Exceptions

- As a best practice, the signages present in Pal haveli and Raas haveli (depicted in *Figure 41*) could also be adopted for all the residential areas

*Figure 41 Best practice for residential signages - Pal Haveli (left), Raas Haveli (right)*



- These discrete signages would be a better option for heritage areas
- The design of these signages are simple, yet contemporary

## 2. Road and directional signage:

Road signages currently installed are as per Indian Road Congress (IRC) guidelines. For various categories of road in India, following guidelines are recommended by the congress.

*IRC road signage standards*

Road Type	Background	Arrow/ Border/ Letters
Expressway	Blue	White
National Highway (NH)	Green	White
State Highway (SH)	Green	White
Major District Road (MDR)	Green	White
Village Road (ODR & VR)	White	Black
Urban/City Road	Blue	White

Since the IRC guidelines are standard and cannot be deviated; the directional signages for heritage zones/structures and public utilities shall only adhere to the proposed signage policy. The existing road signages and directional signage for public utilities is depicted below.

*Figure 42 Existing road signages*



*Figure 43 Existing directional signages for public utilities*



In order to enhance the visual quality of the heritage infrastructure, this policy suggests to utilize the existing street lamp poles, as seen in Figure 30 for directional signages addressing the public utilities. A pole mounted and a bracket mounted signage is proposed



as per the signage policy. Considering the heritage context of Jodhpur; white text and directional arrows on brown background is proposed, as seen in Figure 31.

### **Signage policy for directional signages**

#### **1. Size**

##### **a. Pole mounted signage:**

- Length can range from 500 mm to 700 mm
- Width can range from 150 mm to 200 mm
- Height of the signage should be 2100 mm from ground level
- Height of the text should be 75 mm

##### **b. Bracket mounted signage:**

- Length should be 700 mm
- Width can range from 150 mm to 200 mm
- Height of the signage should be 1900 mm from ground level
- Height of the text should be 75 mm

#### **2. Colour**

- White text and arrows on brown background

#### **3. Type**

- Material of the signage should be 18 mm stone agglomerate

### 2.2.7 Manhole cover

No.	Parameters	Guidelines
<p><b>Type</b> 7.1 7.2 and 7.3</p>	<p><b>Manhole cover (Fully closed, Perforated catch pit and Fully closed cover designed exclusively for Sardar market – Girdikot)</b></p>	<p><i>General Guidelines</i> The manhole shall be lined with masonry of brick or stone and covered with a cast-in-situ RCC slab so as to prevent damage to the manhole. The manhole cover shall be made of similar to material of pedestrian footpath and shall be heavy enough so as to prevent theft or vandalism.</p> <p><b>In case it is on carriageway:</b> The manhole shall be as per the standard procedure carried by the municipality.</p> <ul style="list-style-type: none"> <li>• Trenches to take the cable lines and pipelines underground with regular manholes for access. Colour coding should be done for the same.</li> <li>• There has to be jali as a cleaning mechanism to control the garbage and solid waste to go into the water.</li> <li>• They have to be strong</li> </ul> <hr/> <p><b>Area A</b> <i>Design Guidelines</i></p> <ul style="list-style-type: none"> <li>• Manholes at the fort should be designed with stone with prominent element to match the grandeur of the fort.</li> </ul> <p><i>Regulatory Guidelines</i></p> <ul style="list-style-type: none"> <li>• The size and position of manhole should be according to the standard practice.</li> </ul> <p><i>Cultural Values</i></p> <ul style="list-style-type: none"> <li>• This being a basic yet visible parameter there needs to be a design intervention to convey a sense of importance to all stakeholders. This is very important addition to the drainage system of this century.</li> </ul> <hr/> <p><b>Area C</b> <i>Design Guidelines</i></p> <ul style="list-style-type: none"> <li>• Manhole cover needs to be designed in cast iron and stone with prominent element or plan or the culture of the city interpreted on it.</li> </ul> <p><i>Regulatory Guidelines</i></p> <ul style="list-style-type: none"> <li>• Trenches to take the cable lines and pipelines underground with regular manholes for access. Colour coding should be done for the same.</li> </ul> <p><i>Cultural Values</i></p> <ul style="list-style-type: none"> <li>• The manhole covers can be made significant by using it as path markers and all stakeholders will have a sense of pride take care of its upkeep</li> </ul>

Figure 44 Existing manhole cover at Sardar market (Left), Existing Surface drain near market (Right)



Figure 45 Existing manhole cover at Brahmapuri (Left), Manhole in the streets of Jodhpur (Right)



### 2.2.8 Security cabin/ information centre

No.	Parameters	Guidelines
Type 8.1	Security cabin/ information centre	<p><i>General Guidelines</i></p> <ul style="list-style-type: none"> <li>Design of the booth should be contextual but distinguishable. It has to be friendly for both the gender.</li> <li>There shouldn't be any advertisements on the cabin.</li> </ul>
		<p><b>Area C</b></p> <p><i>Design Guidelines</i></p> <ul style="list-style-type: none"> <li>The security police cabin should be contextual but distinguishable in design.</li> </ul> <p><i>Regulatory Guidelines</i></p> <ul style="list-style-type: none"> <li>The tourist enquiry booth should relocate to clock tower.</li> <li>The police surveillance should be relocated to first floor of clock tower.</li> </ul>

Figure 48 Existing security cabin at fort (Left), Existing tourist assistance cabin at market (Right)



## 2.2.9 Street light

No.	Parameters	Guidelines
<p><b>Type 9.1</b></p>	<p><b>Articulation of existing light posts</b></p>	<p><i>General Guidelines</i> There should be illumination in the areas where there are people and visitation. These has to be functional.</p>
		<p><b>Area A</b> <i>Design Guidelines</i></p> <ul style="list-style-type: none"> <li>• Certain areas where access is allowed after dark and dusk, foot lights should be used to create glow and ornamental light fittings in plazas with concealed electrical lines.</li> </ul> <p><i>Recommended Guidelines</i></p> <ul style="list-style-type: none"> <li>• Timer based and solar lights should be used with maintenance contract.</li> </ul>
		<p><b>Area B</b> <i>Design Guidelines</i></p> <ul style="list-style-type: none"> <li>• Light/electrical poles to be designed with contextual details and materials and with concealed electrical lines</li> </ul> <p><i>Regulatory Guidelines</i></p> <ul style="list-style-type: none"> <li>• All the electric poles to be audited by the RSEB for safety and at appropriate location.</li> </ul> <p><i>Cultural Values</i></p> <ul style="list-style-type: none"> <li>• The existing light poles have a strong character and they can be used with value addition, this will help in retaining the heritage.</li> </ul>
		<p><b>Area C</b> <i>Design Guidelines</i></p> <ul style="list-style-type: none"> <li>• Light poles, just as at some spots in the city, should be designed with stone and with concealed electrical lines</li> </ul>
		<p><b>Area D</b> <i>Design Guidelines</i></p> <ul style="list-style-type: none"> <li>• Good lighting with separate control for festival lights and regular lights should be designed.</li> <li>• Poles should be designed with detailed ornamentation, concealed electrical lines.</li> </ul> <p><i>Regulatory Guidelines</i></p> <ul style="list-style-type: none"> <li>• Timer and solar lights should be used with maintenance contract.</li> </ul> <p><i>Cultural Values</i></p> <ul style="list-style-type: none"> <li>• Recreating an ambience that will bring back the glory of the location</li> </ul>
<p><b>Area E</b> <i>Design Guidelines</i></p> <ul style="list-style-type: none"> <li>• Lighting poles to only lit the lane area should be designed with detailed ornamentation and concealed electrical lines</li> </ul> <p><i>Regulatory Guidelines</i></p> <ul style="list-style-type: none"> <li>• The light control should be season-wise as per visibility data</li> </ul>		



*Figure 51 Existing light pole at Mandore (Left), Existing light pole at Mandore (Right)*



## 2.3 Conservation guidelines, including adaptive reuse

No.	Do's	Don'ts
1	Use lime mortar as binding material & for plaster during the repairing of structure made with the same material	Don't use cement in the repairing of structure made with lime mortar it will deface the heritage structure more over it will not fix with original material hence fall within short period also don't use tiles or other material for decoration
2	We have to clean community well regularly to get clean water & have to check TDS when we use water for drinking	Don't fill ancient community well with earth & stones. It will create problem of water seepage
3	During the renovation of Heritage structure, re use carved or artistic elements of old structure parts as much as possible	Don't destroy carved or artistic elements of old structure. Due to removing carved or artistic elements of original structure, it will lose its Heritage or historic value
4	Preserve façade of ancient monuments and structures during the course of internal changes	Change in façade will devaluate history and heritage value of structures
5	Maintain cleaning within the compound or campus of Heritage building and grow ornamental flower plants for beautification	Don't grow big trees nearby or within the compound, it will disturb visibility of monument, more over their roots will damage the monument
6	For cleanliness of the compound or campus of Heritage building, make proper planning or provision for collection and disposal of garbage	During the visit of Historical or archaeological place, don't through or dispose garbage or foods anywhere but use dust bin or dispose at proper place away from monument and don't use the walls or parts of monument as writing pad or canvas
7	Don't use nail or other pointed object for fixing of lights or other decorative objects, especially on religious monuments (Temple Mosque, Dargah etc.) during the celebration of festival	Be careful during the decoration or illumination of monument, so that not disturbing the visibility of carved or ornamental parts of monument and also not damage monument
8	Be careful for the cleaning of water structures used by community, especially for the cleaning of inlet for water	Don't throw or dispose the material use for worship, like coconut, Garlands, flowers, eatables etc. in the water structures, which are polluted the water and also filled up inlets
9	Displayed signage and /or History plate on the entrance and nearby place of ancient monument or places of tourist interest for the information of tourist or visitors	Don't paint the name or other information on the walls or other parts of monument
10	Displayed the boards or signage pertaining to the name and other information regarding the ancient building or trust, institutional property on specific space and of size	Don't fix or hang the signage board anywhere on building which damage ornamental parts as well disturb visibility
11	Look out during the electrical wiring and fixtures, inside and outside the monument, they should fix on proper place	Don't fix the electrical or other wiring or fixtures, objects, instruments in or on the monuments that's damage walls or ornate parts of ancient structures or monument and disturbed visibility

<b>No.</b>	<b>Do's</b>	<b>Don'ts</b>
12	Make provision for cleaning, preservation, restoration and conservation of ancient public properties or monuments, especially for step wells, Kund, Jhalara etc. which are useful as resting place and to be handover to the next generation	Don't throw rubbish or garbage or fallen structural material in ancient owner less monuments or heritage structures
13	We should have to preserve wall paintings, frescos etc. which are displayed on various parts of monuments or heritage structures because they reflect the art style and pattern of the then period	Don't paint Colours over wall painting or frescos during repainting of monument or heritage structures





**Building Design Guidelines**

### 3 Building design guidelines

No.	Parameter/ Elements	Rule as per Unified Building Bye-laws (Notification: 24 <sup>th</sup> October 2017, Rajasthan Gazette)	Expansion / Repair/ renovation of existing building	Rationale
1	Balconies, overhangs, <i>chajjas</i>	<b>Clause 9.10</b> Whether shed up to 1.2 m or 1/3 <sup>rd</sup> of the setback whichever is lower for setback up to 4.5 m and 1.5 m for setback of more than 4.5 m.	As per unified building bye-laws	Many of the heritage structures are being restored ignoring the original look of the building. It is necessary to maintain the original pattern which included balconies, overhangs and <i>chajjas</i> with supporting brackets carved in traditional style.
2	Basement/ cellar	<b>Clause 9.6</b> Basement is allowed only when the building has setbacks as per the norms. Plots below 15 sq. m. are not eligible for basement.	As per unified building bye-laws	Due to lack of space for parking and other utilities, it recommended to have basement in large plots.
3	Bathroom/ toilet	<b>Clause 12.3 (5)</b> Minimum size of the door should be 900 mm.	As per unified building bye-laws	Basic services such as water, sanitation, electricity, etc. should be provided in a manner which is sensitive to heritage structure.
4	Building colour	No mention	Preferably Blue (since blue city) or the original colour of the building from the history of the building.	For buildings and structures of heritage importance (notification to be done by ULB) original colours as documented in historic/ archeological documents or colours of natural material used in original construction such as stone, mud lime and other types shall be allowed.
5	Building material (walls)	No mention	Stone, lime	Aluminum claddings, glass, metal & similar finishing on the exterior of the building in the recent past is destroying the original character of the heritage structures. Traditional materials used in the past shall be retained.
6	Ground Coverage	<b>Clause 8.9</b> Uncovered built structures like swimming pool, well and garden will be exempted if it's height is less than 2.1m.	As per unified building bye-laws	

No.	Parameter/ Elements	Rule as per Unified Building Bye-laws (Notification: 24 <sup>th</sup> October 2017, Rajasthan Gazette)	Expansion / Repair/ renovation of existing building	Rationale
7	Chimney (kitchen)	No mention	Blend with building facade	Many restaurants/ eateries are coming up in the study area including the use of coal and wood leading to smoke and possible damage to the monument. Chimneys need to be provided in a sensitive manner so as not to disturb the neighboring structures and roads nearby.
8	Compound wall, gate and railing	<b>Clause 9.3</b> Compound wall shall not exceed 0.75 m in height in case of corner plot. <b>Junction of street:</b> It is necessary to use curved wall to avoid corners on the road.	Opaque compound wall allowed up to .75 m from ground	
9	Fenestration design (Window)	No mention	It should continue the original design or follow the same architecture style to maintain the harmony	
10	Built Area Ratio (BAR)	<b>Clause 8.9</b> 2.0 for residential building which can be exceed in case of TDR or if the building is within provided height restriction.	Shall be frozen at 2 or already consumed BAR at the time of notification of these bye-laws	
11	Garage (Private)	<b>Clause 9.8</b> Garage shall be permitted in rear marginal space with minimum 3 m setback. Maximum permissible area of construction shall be 20 sq m.	As per unified building bye-laws	If visible from the road then use the same colour and texture as the building to maintain the harmony.
12	Height of building	<b>Clause 8.10</b> Maximum building height allowed is 1.5 times the road width+ front setback, or 15 m as specified in the clause.	As per unified building bye-laws	High rise not permitted to retain visual quality of the monuments
13	Parapet wall	No mention	To be built with same material retaining the architectural style of the structure.	It re required for the safety purpose of residents or other users. It should be painted with the same colour as rest of the building and does not look like a separate element.

No.	Parameter/ Elements	Rule as per Unified Building Bye-laws (Notification: 24 <sup>th</sup> October 2017, Rajasthan Gazette)	Expansion / Repair/ renovation of existing building	Rationale
14	Parking	<b>Chapter 10.1</b> In the case of residential use 1 ECU parking per 115 sqm is mandatory. In addition, 25% visitor parking is also required.	As per unified building bye-laws	Parking is one of the common issue in most parts of the city. It is necessary to provide parking spaces within plot area to avoid the congestion over roads.
15	Plinth	<b>Clause 17.4.</b> Habitable rooms shall have minimum plinth height of 0.45m from ground level.	As per unified building bye-laws	
16	Projections in margins/ setbacks	<b>Clause 9.11</b> Following allowed in set back: Whether shed up to 0.6 m at a height of 2.1 m.	As per unified building bye-laws	
17	Rain water harvesting (tank, pits, etc.)	No mention		Allowed for delivering basic services such as water, sanitation, electricity, etc. and to encourage rain water harvesting.
18	Ramp	<b>Clause 10.2</b> A ramp shall have slope of not more than 1:8, it shall be of non-slippery material.	As per unified building bye-laws	Mandatory compliance with 'Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995'.
19	Front/Side/Rear margin/ setback	<b>Clause 8.7</b> Front setback can vary from 3-9 m as per the road width. Other setbacks will depend on the height of the building.	As per unified building bye-laws	Some of the roads in the city are too narrow specially in case of walled city, it is recommended to have setbacks for facilities and vehicular movement in case of disasters or emergency.
20	Roof projections (water tanks)	No mention	To be painted with the same colour as rest of the building.	Allowed for delivering basic services such as water, sanitation, electricity, etc. but in a manner, which is sensitive to the structure.
21	Roof projections (staircase well/ munties)	No mention	Should not be exposed. Else, should be built and finished in the same material as the structure.	Access to terraces shall be allowed.
22	Roof projections (lift machine room)	No mention	To be constructed with the same material as rest of the structure and/ or painted with the same colour too.	To enable lift provisions, lift-machine rooms shall be allowed.



No.	Parameter/ Elements	Rule as per Unified Building Bye-laws (Notification: 24 <sup>th</sup> October 2017, Rajasthan Gazette)	Expansion / Repair/ renovation of existing building	Rationale
23	Septic Tank/ Soak-away pit	<b>Clause 9.12</b> Follow NBCC guidelines for construction of septic tank/ soak pit only if sewerage system is not in place.	Allowed within property	Allowed for delivering basic services such as water, sanitation, electricity, etc.
24	Lift/ Escalator/ Mechanical car	<b>Clause 9.5</b> Follow NBCC guidelines for installation.	As per unified building bye- laws	Since these elements are part of modern technology, these installations should be installed inside the building to protect the facades, else the shafts can be covered with matching material/ paint to blend into the existing structure and surrounding.

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