Living at Worksites:
Policy and Governance for Migrant Worker Housing in Ahmedabad's Construction Sector

Dr. Renu Desai

May 2020

Study sponsored by: Prayas Centre for Labour Research and Action
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Acknowledgments

A significant part of this study examines the modes and nature of provisioning for labour accommodation and other facilities for construction workers who live at worksites. My thanks to the developers and construction companies who allowed me to visit their construction sites and labour colonies and conduct a questionnaire with their staff during these visits. Some of them also gave their valuable time to meet me for a discussion. I also want to express my appreciation to their staff as well as some of their contractors who gave their time in the midst of a hectic work day, and responded to my questions with patience. The purpose of this part of the study is to contribute towards an understanding of the existing modes and nature of provisioning by the employers of construction workers, identify some of the good practices as well as the shortcomings so as to chart out future directions and inform collective discussions for improvements. I therefore hope that this study is of interest to developers and contractors, and encourages them to pay greater attention to the site-based housing and other services for their workers as well as partake in collective discussions for improvements in the sector as a whole.

Getting access to construction sites for research purposes, or even just developers and construction companies for a discussion, is a huge challenge. My thanks to architect friends and acquaintances for the efforts they made in connecting me to some developers and construction companies with whom they had good relationships. This study would not have been possible without this. Thanks also to SAATH Charitable Trust for arranging visits to the creches they run at a number of construction sites, discussing their experiences in running these creches, and for arranging a meeting with the developer's staff at one construction site.

A fieldvisit was made to Kerala in November 2019 to understand the Apna Ghar project by the Kerala State government. Thanks to Dr. Ravi Raman, member of the Kerala State Planning Board; Mr. Anand, CEO, Bhavanam Foundation; Mr. Krishnan, the warden at the Apna Ghar in Palakkad; and Dr. Benoy Peter, Centre for Migration and Inclusive Development (CMID), Perumbavoor, for making this trip productive.

This particular study has not involved much interaction with the migrant construction workers, however, the previous studies that I have coordinated for PCLRA were based on surveys, focus group discussions and interviews with workers who go to the labour nakas. The understandings gained through these interactions feed into this report as well, and I thank the workers who gave their valuable time for these interactions. I hope that this report contributes to the efforts being made by workers and their unions; PCLRA and other NGOs working with them; and government, employers and other stakeholders to shape policies and practices that have dignity and the rights of migrant workers at their core.

Contents

1. Introduction

The construction sector is a large contributor to the national economy. It is also the third largest employer outside agriculture (after manufacturing and trade; hotels and restaurants), and is estimated to employ a workforce of 46 million across India (Roy et al 2017).[1] There are an estimated 12 lakh construction workers in Gujarat (CAG 2014). A 2009 study estimated that there were 1 lakh construction workers in Ahmedabad (BSC 2009). The majority of this construction workforce consists of migrant workers. In a survey with 1000 workers, the 2009 study found that almost 70 per cent of the construction workforce were migrants. This included 8.6 per cent long term migrants (defined as working since more than 10 years in the city but still shuttling between Ahmedabad and native place, with majority of their work being in the city) and 60.1 per cent seasonal migrants (defined as those who migrate for stipulated periods during the year, excluding the monsoon) (BSC 2009).

The migrant construction workers are often recruited through a hierarchical and largely invisible recruitment chain (Aajeevika Bureau 2007), which results in a great distance between the labour and those who initiate a project (a private developer/promoter, public authority/institution, private institution, or an individual owner) and the registered contractors who are hired to do the construction work. These registered contractors may recruit labour directly, but often do so through labour contractors. Sometimes the registered contractor contracts out some work to a sub-contractor who recruits labour directly or through a labour contractor. Whosoever recruits the labour functions as the labour contractor, although there may be other intermediaries between the labour contractor and the worker such as a *mukaddam* (labour chief/broker). In Ahmedabad, previous studies (Aajeevika Bureau 2007; BSC 2009; Desai et al 2014; Desai 2018) reveal that workers are employed through two main systems of recruitment, which are also linked to whether they live at worksites or in their own arrangements. Throughout this report, living at worksites refers to all instances in which workers live in temporary accommodation provided for a specific construction site, regardless of whether this is provided on the site itself or some distance away. The two main systems of recruitment are described below, along with the characteristics of the workers in terms of migration status and housing arrangements:

1. The labour contractor assembles labour gangs by recruiting workers directly in their villages. This may involve intermediaries like a *mukaddam*. The labour contractor pays for the labour gang's travel to/fro the city and places them to work on a specific construction project for a certain duration of regular work. They live at the worksite for this duration, and employers (developers and contractors) play a role in providing them with temporary accommodation and other facilities. After the work at this site is over, members of the labour gang either return to their village or are placed at another construction site by the same labour contractor. These workers are circular migrants, and are often called "floating" construction workers since they do not have a fixed place to live in the city, but move from one construction site to another to live in the accommodation provided at the worksite. The labour contractor pays them a weekly amount (*kharchi*) in the city for expenses like food and pays the rest of their wages at the end of the work that they were recruited for. Many of them take advances from the labour contractor when they are recruited in the village, and this advance amount is deducted from their final wage payment.
2. The labour contractor goes to an informal labour market in the city, a naka, and hires daily wage workers from the pool of labourers who congregate there in the mornings in search of work. There are approximately 70 labour nakas in Ahmedabad.[2] The naka workers include locals, settled migrants and circular migrants. The circular migrants migrate to the city through their

[1] As per NSSO 68th Round (2011-12), construction is the Usual Principal activity status for 46 million and the Usual Subsidiary activity for another 27 million (Roy et al 2017). Data on the percentage of workers employed in urban areas, and the percentage of migrants among them is not clear and therefore not presented here.
[2] The *nakas* within the city's municipal limits have been listed and mapped in Desai & Sanghvi 2018, however, there are likely to be new *nakas* in the urban periphery.

village and kinship networks and make their own housing arrangements in the city, often through these networks. These arrangements include vulnerable shelters in unrecognized informal settlements on government and private lands; living in the open or in vulnerable shelters in public spaces such as the roadside or under a flyover; and rentals (Desai 2018). Some also live in the homeless shelters that have been built in Ahmedabad over the last decade. Although some of these circular migrants move to new locations and arrangements through the networks they form in the city, especially with labour contractors and other workers, they continue to remain largely confined to the typology of arrangements mentioned above. By contrast, many of the naka workers who are locals and settled migrants live in their own house in the city, although this is often in recognized informal settlements and not in formal housing. Many of them also live in rentals. However, there are also settled migrants belonging to marginalized social groups who live in vulnerable shelters in the same unrecognized informal settlements that the circular migrants live in. The repair and renovation construction sector mainly hires naka workers, although these workers may also be hired on new construction projects for short periods of time. Naka workers generally work at more than one construction site in a week, which means that there is no steady employer (developer / contractor) for any length of time. Work from the naka is also irregular and they get work for 5 to 25 days in the month, depending on the season, their skill, their contacts with contractors who come to the naka and their negotiating abilities.

Here, it is important to take note of two other groups of workers found during the current study:

1. On most construction projects, not all the workers were recruited as labour gangs from the village and brought in to live at the worksite; neither were they recruited from the naka. In many instances, the workers engaged in flooring, painting and plumbing lived “off site” and came to work on the project through a contractor they were more or less attached to. These workers were locals, settled migrants and/or circular migrants. In case of the circular migrants and settled migrants, many seemed to have migrated to the city through contacts with (even kinship with) the contractor they were attached to, and who provided them with relatively regular work across his different sites. The circular migrants seemed to be mostly single male migrants, both skilled and unskilled, and lived in shared rentals in the city. In most cases, they paid their own rents, but in one instance, a large plumbing contractor had arranged for rental rooms and paid the rents.
2. On some construction projects, the developer / main contractor employed some workers for miscellaneous works that did not fall under the purview of any of the contractors employed on the project. Known as “Depart workers,” they ranged from a few workers to over 50 workers. They were circular migrant families, lived at the worksite, and were paid a monthly salary based on a daily wage rate. They were generally employed directly by the developer / main contractor (although they may have been recruited through an intermediary).

In previous studies for PCLRA on circular migrant construction workers’ housing, the focus was mainly on naka workers although some aspects of the regulatory framework for workers living at the worksites were also examined (Desai et al 2014; Desai 2017, Desai and Sanghvi 2019). The present research study, which should be seen in conjunction with the report prepared in 2019, has the following two objectives:

1. To study the provision of housing and other facilities for the workers who live “on-site”; explore the regulatory framework for this provisioning; as well as try to develop an understanding on how developers / contractors view their workers’ housing question and how it can be improved.
2. Based on the above study and the understanding developed on the housing of migrant naka workers and the relevant urban policy and governance framework through previous studies for PCLRA, articulate ideas for improving construction workers’ housing. For this purpose, also review interventions for migrant workers’ housing in other Indian cities / states and other countries that could inform these ideas.

2. Research Methods

Fieldvisits and questionnaire at construction sites

Access to construction sites was hugely challenging and most of the construction sites that were visited were an outcome not of careful selection but of how access was gained. After numerous attempts to contact 10-12 developers independently, only two developers responded positively and arranged for me to visit 1-2 of their construction sites. Following this poor response, access to sites was subsequently gained through networks I could leverage: an architect friend's reference to a developer or construction company, a supportive developer's reference to another developer or construction company, and references by a NGO that runs creches at some construction sites.

Fieldvisits were made to 14 construction sites to document the housing and basic services provision to construction workers (see Table 1). The names of all the construction sites visited as well as their developers / contractors are kept confidential in this report. The 14 sites cover various kinds of projects (residential, commercial, a hotel, a university building and a road development project), different scales of projects (a single building to a township project) and different locations (within the city and on the city periphery). This includes 11 real-estate projects undertaken by 10 different developers-promoters. The 14 sites include 5 projects in which different medium and small-scale contractors were hired for almost each of the construction activities, such as excavation, RCC, masonry-plastering, flooring, painting, waterproofing, aluminum windows, grill fabrication, plumbing, electricals, etc. In cases where there were multiple buildings in a project, often more than one contractor was hired for each of the activities. The remaining 9 projects were constructed by 5 different large construction companies – the large construction company had been hired for the civil work (excavation, RCC and masonry-plastering) and in most cases, for few of the other construction activities as well.

Along with the fieldvisit, a questionnaire was filled at each of these sites to document details of the construction project; the construction workers employed for various construction activities; who among them lived at the worksite; and the mode of provision (i.e. who provides) with respect to the accommodation and other facilities for the construction labour living at the worksite and the nature of this provision. The questionnaire is included in Annexure 1. With regard to the mode of provision and nature of provision, the following aspects were documented:

1. provision of land for the labour colony
2. the building of labour accommodation
3. provision of water for drinking and other uses by building / organising necessary water-related infrastructure (such as bore-well, water pipeline, water tankers, water storage tank, water filtration/RO plant etc)
4. the building of sanitation infrastructure, which includes toilets, bathing spaces, spaces for washing clothes and utensils, sewage disposal and drainage
5. maintenance of the water and sanitation infrastructures and provision for solid waste management (this aspect could not be documented in detail)
6. provision of electricity (this aspect could not be documented in detail)
7. the building and running of a creche for the children of the workers
8. provision of health services for the workers and their children (while health services provided at the worksite were documented, tie-ups with medical clinics or hospitals were not noted in detail)

The questionnaire was filled through a combination of personal observation and detailed discussion with available and relevant on-site staff of the developer / contractor (e.g. project manager, safety officer, admin manager, admin in-charge, etc) (see Annexure 2). At many sites, the questionnaire could not be filled comprehensively due to various reasons (see Annexure 3). Nonetheless,

substantial data could be collected. The housing and basic services provision were also documented through photographs. It should be noted that discussions were not carried out with construction workers during the fieldvisits. There were several reasons for this. Most workers were busy at work at the time. Furthermore, the developer / contractor's staff accompanied me around the labour accommodation, making it difficult to have frank conversations with the workers who were there. Moreover, the focus of this study – given the timeframe – was on the mode and nature of provisioning, and not on the workers' experiences and perceptions. However, it should be noted that workers' experiences would have thrown light on important aspects of provisioning such as maintenance of toilets, the quality of electricity provision in the labour colony, etc.

Table 1. Construction sites covered in the study

Sites	Project undertaken by	Contractor	Nature and location of construction project
Construction sites where fieldvisits were carried out and questionnaire filled			
1	Developer A	Numerous contractors	Residential; part of large project over long duration; central city area
2	Developer A	Numerous contractors	Residential; central city area
3	Developer B	Large construction company + other medium/small contractors	Residential; part of township project; city periphery
4	Developer C	Numerous contractors	Residential-Commercial; city periphery
5	Developer D	Large construction company + other medium/small contractors	Commercial; central city area
6	Developer E	Large construction company + other medium/small contractors	Residential; central city area
7	Developer F	Large construction company + other medium/small contractors	Commercial; central city area
8	Developer G	Large construction company + other medium/small contractors	Commercial; central city area
9	Developer H	Large construction company	Residential-Commercial; central city area
10	Developer I	Numerous contractors	Commercial; central city area
11	Developer: J	Numerous contractors	Residential; part of large project over phases; city periphery
12	Hospitality company: K	Large construction company + other medium/small contractors	Hotel; central city area
13	Private University: L	Large construction company + other medium/small contractors	Institutional building; central city area
14	Public Authority (AMC): M	Large construction company	Road development project; central city area
Construction site where fieldvisit was not satisfactory and questionnaire could not be filled			
15	Developer: N	Numerous contractors	Commercial; central city area
Developer interviewed but no permission to visit any of their construction sites			
No site visit	Developer: O	Numerous contractors	-
No site visit	Developer: P	-	-

A fieldvisit to one additional construction site was made, however, the visit was hurried and a questionnaire could not be filled at the site, nor could photographs be taken due to the reluctance of the developer. The questionnaire, referred to earlier, had also intended to capture the nature of living arrangements for those workers who were not living at the worksite but were migrant workers – however, this aspect could not be captured at most sites as only individual contractors knew about these details and organizing meetings with them would have required more time. Discussions were possible on this aspect with only 4 contractors across 2 sites (2 flooring contractors, 1 painting contractor, and 1 plumbing contractor) (see Annexure 2). A discussion was also carried out with 1 masonry-plastering contractor at one of these sites even though his workers always lived on the worksite.

Semi-structured interviews with developers and contractors

Interviews with developers and large contractors like construction companies were to be an important part of this study, in order to understand how they view their workers' housing question and how this housing can be improved. However, obtaining a personal audience with developers and the managing director / CEO / general manager of construction companies turned out to be very difficult, even where I managed to access their construction site and fill a questionnaire by meeting their relevant staff. Only 6 developers could be interviewed, of which two of them did not give permission to visit any of their construction sites (see Table 1). Moreover, only 3 of the 6 developers actively engaged with the questions about how they thought construction workers' housing could be improved. In other words, this study has not been adequately successful in understanding how developers / contractors view their workers' housing question and how improvements can be made.

Primary research on the regulatory framework for housing and basic services provision for workers at construction sites

In the 2017 study done for PCLRA, the existing regulatory framework was studied to understand the mandated responsibilities of developers and contractors with respect to housing and basic services provision for migrant construction workers (see Desai 2017). This included labour legislation, and follow-ups were done in the present study to understand the implementation of the BOCW Act's provisions for registering construction sites and regulating housing and basic services provision for workers living on the construction sites. The 2017 study had also noted that the development permission (DP) has a provision for regulating housing and basic services provision for these workers, though it is ambiguous. The present study explores this aspect further by examining the framework for regulating urban development – particularly planning and building regulations as well as processes like the DP which are intended to ensure compliance to these regulations – in terms of its relevance for regulating housing and basic services provision for construction workers living at worksites. The Real Estate (Regulation and Development) Act 2016 – which is part of the regulatory framework for real-estate construction projects and requires registration of these projects before project launch – was also briefly examined to see if it could play any role in regulating housing and basic services provision for these workers. These regulatory frameworks were studied through discussions with government officials as well as relevant documents/data obtained using Right to Information (RTI). The data obtained was also used to estimate the number of construction sites in Ahmedabad in recent years.

The 2017 study had also noted that since the state undertakes numerous public projects where the construction is contracted out to large contractors, it would be important to examine these contracts with respect to their mandated provisions on housing and other facilities for the construction workers. It examined the Central Public Works Department's (CPWD) "General Conditions of Contract," however, a review of project-specific contractual documents had been outside its scope.

The present study follows up on this gap. Since these documents are not easily available for research purposes, they were obtained from the Ahmedabad Municipal Corporation through RTI. A similar RTI exercise would have to be undertaken with other public authorities such as Ahmedabad Urban Development Authority, Gujarat Housing Board etc. It is worth noting that it would be useful to also examine construction contracts in the private-sector, such as when a private institution or a private developer engages a contractor on a project.

Primary research on worker registration, cess collection and utilization, and housing and social services related schemes by the Gujarat Building and Other Construction Workers Welfare Board (GBOCWWB)

The 2017 study done for PCLRA had examined the registration of construction workers and welfare schemes by the GBOCWWB. The present study examines more current data on worker registrations and the coverage and present status of the housing, anganwadi and health mobile van schemes. It also examines the status of cess collection and cess utilization for the various welfare schemes. This involved obtaining data through the GBOCWWB's website, RTI and discussions with a State Project Manager. It also involved obtaining data through RTI from the AMC and AUDA about cess collection in its jurisdictions.

Secondary research and exploratory fieldvisits outside Ahmedabad

Secondary research was done to review recent initiatives that address migrant workers' housing in India and in few other countries like China, Singapore and South Africa.[3] Exploratory fieldvisits were also undertaken to examine two of the initiatives. One fieldvisit was done in June 2019 to examine two homeless shelters by the Surat Municipal Corporation (SMC). One of these shelters housed migrant construction workers while the other was built by the SMC as a "model shelter." In 2017, SMC had prepared special designs for homeless shelters to accommodate both single men/women as well as families, and a meeting at the SMC was also arranged to follow up on these proposals. The other fieldvisit was to Kerala in November 2019 to understand one of the few state-led interventions in India that focus specifically on migrant labour, the Apna Ghar scheme, which is a migrant worker hostel programme. This involved discussions with relevant government officials, a visit to the Apna Ghar built in the city of Palakkad, discussions with migrant workers living there, and a discussion at a non-profit organization, Centre for Migration and Inclusive Development (CMID), on labour migration and workers' housing in the Kerala context.

[3] This research was initiated in 2018 by Shachi Sanghvi for our previous study for PCLRA (Desai and Sanghvi 2019), however, the material was not used in the report at the time.

3. Scenario of Construction Worksites in Ahmedabad

What is the scale of construction activity in Ahmedabad? How many construction sites are there in Ahmedabad and its peri-urban area? There is no reliable data to answer these questions, and estimating the number of construction sites is also difficult. In this context, I draw upon three data-sets to try to provide a picture of the number of construction sites in Ahmedabad.

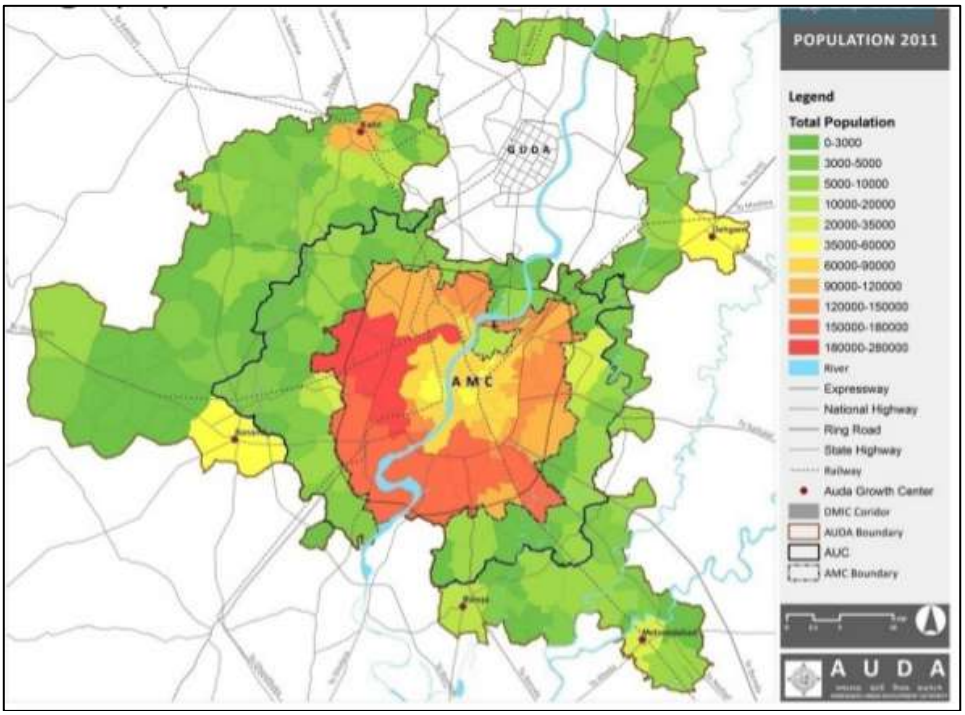
First data-set is of construction sites registered in Ahmedabad district under the BOCW Act 1996 (see Table 2). Construction sites which employ ten or more building workers in any building or other construction work and where the total cost of construction is more than Rs.10 lakh are required to be registered under the BOCW Act. However, as discussed later (section 4.1.1), there is a large gap between the number of construction projects being undertaken and the number of construction projects registered. Also, note that the registrations under the BOCW Act are done district-wise and the data is not available for the city area, therefore, the data is presented for Ahmedabad district, which covers an area of 8107 sq.km.

Table 2. Construction sites registered in Ahmedabad district under the BOCW Act 1996
(Source: data obtained by RTI in July 2019)

Year	No. of registered sites in Ahmedabad district	No. of sites by the no. of workers declared during registration*		
		upto 100 workers	101-500 workers	more than 500 workers
2017 (Jan-Mar)	45	34	10	1
2017-18	237	192	43	2
2018-19	485	392	84	9
2019-20 (3.5 months; April to mid-July)	152	113	34	5

* It is possible that the number of workers is often under-reported at the time of registration

Map 1. AMC and AUDA areas (Source: AUDA)



Second data-set is of projects granted Development Permission (DP) and Building Use (BU) permission by the Ahmedabad Municipal Corporation (covering an area of 460 sq.km) and the Ahmedabad Urban Development Authority (covering an additional 1400 sq.km area besides the AMC area: Map 1) (see Table 3 & 4). Three points have to be kept in mind while using this data-set in estimating the number of ongoing construction projects in Ahmedabad in a year. The first point is that not all projects which are granted DP actually begin construction soon after. Some may start construction even more than one year after obtained DP. In fact, the research for the current study revealed that it would be more accurate to look at data of the projects that have submitted a "Notice of Commencement of Construction" to the AMC/AUDA (which is part of the procedures that follow the granting of a DP), however, it was not possible to try to obtain this data due to time constraints. The second point is that the BU data for a particular year gives us the number of projects where construction was completed recently, that is, where construction was ongoing until recently, but does not give us data on construction projects which are in the midst of construction, still some time away from completion. The third point is that this data-set does not include construction projects that do not require DP and BU permissions such as road/bridge projects and drainage/sewerage and water projects. For example, over the two years of 2018 and 2019, the AMC's central office for road/bridge projects undertook around 25 road projects through tenders awarded to 13 contractors, with the AMC's zonal offices undertaking additional road projects.[4] During these two years, the AMC also undertook around 15 bridge (flyover) projects as well as more than 45 drainage/sewerage projects through tenders awarded to more than 25 different contractors. Such projects would also be undertaken by AUDA. Therefore, the number of projects where construction is ongoing in a given year would be less than the number of projects granted DP, but more than the number of projects that have obtained or applied for BU permission.

Third data-set is of the real-estate projects registered with the Gujarat Real Estate Regulatory Authority (RERA) under the Real Estate (Regulation and Development) Act 2016 in Ahmedabad (see Table 5). This Act "aims at protecting the rights and interests of consumers and promotion of uniformity and standardization of business practices and transactions in the real estate sector." Under the Act, real-estate projects are to be registered with RERA before the project is launched.[5] Three points have to be kept in mind while using this data-set to estimate number of ongoing construction projects in Ahmedabad in a year. First is the RERA data only captures construction projects in the real-estate sector where a plot or built space is to be allotted or sold,[6] and thus leaves out various other kinds of construction projects (for e.g. houses built for one's own use, flyovers, buildings for public utilities, institutional buildings, etc). Nonetheless, the data is still useful because it is likely to capture a large proportion of construction in the real-estate sector since the government has been relatively strict about their registration under the Act (unlike government apathy towards enforcing registration of construction sites under labour legislation like the BOCW Act). Second is that it is unclear whether the RERA data on Ahmedabad includes projects only in the AMC area or the larger AUDA area. Third is that the RERA data is only about projects launched in a year, whereas in any given year, construction would be ongoing in many projects launched in the previous year and also projects not yet launched. Therefore, the actual number of ongoing construction projects in the real-estate sector where a plot or built space is to be sold would be higher than the number of projects registered with RERA in a year.

[4] Data obtained through RTIs filed in the Road/Bridge department and Drainage department of AMC.
[5] Project launch includes advertising, marketing, booking, sale, and offering for sale.
[6] All real-estate projects must be registered with RERA except where the area of land proposed to be developed does not exceed 500 sq.m. or the number of apartments proposed to be developed does not exceed eight, inclusive of all phases. (https://gujrera.gujarat.gov.in/resources/staticpage/RERA_FAQs.pdf, accessed 31.12.2019)

Table 3. Number of projects for which AMC granted DP and received BU permission applications[7]
(Source: DP data obtained from AMC by RTI on January 23, 2020; BU data from AMC website)

Year	Number of projects granted DP	BU permission applications received	
2015-16	n.a.	1149[1]	data for 10 months (till 27.1.16)
2016-17	2455	1140[2]	data for entire year
2017-18	2171	1376[3]	data for entire year
2018-19	2066	1036[4]	data for 10 months (till 29.1.19)
2019-20 (4 months; till 30.6.19)	645	n.a	- -

[1] Source: 2015-16 Proactive Disclosure under RTI by TDO Central office, AMC (https://ahmedabadcity.gov.in/portal/jsp/Static_pages/pi_rti.jsp, accessed 11.1.2020).
[2] Source: 2016-17 Proactive Disclosure under RTI by TDO Central office, AMC (https://ahmedabadcity.gov.in/portal/jsp/Static_pages/pi_rti.jsp, accessed 11.1.2020).
[3] Source: 2018-19 Proactive Disclosure under RTI by TDO Central office, AMC (https://ahmedabadcity.gov.in/portal/jsp/Static_pages/pi_rti.jsp, accessed 11.1.2020).
[4] Source: 2019-20 Proactive Disclosure under RTI by TDO Central office, AMC (https://ahmedabadcity.gov.in/portal/jsp/Static_pages/pi_rti.jsp, accessed 11.1.2020).

Table 4. Number of projects for which AUDA granted DP and BU permission
(Source: data obtained by RTI on February 2, 2020)

Year	Number of projects	
	DP granted	BU permission granted
2016-17	281	319
2017-18	310	198
2018-19	295	220
2019-20 (8 months; till 30.11.19)	303	120

Table 5. Real-estate projects registered in Ahmedabad under the RERA Act 2016
(Source: Gujarat RERA website[8])

Year	Number of projects
2017-18	1030
2018-19	702
2019-20 (3.5 months; till mid-July 2019)	174

[7] In response to a RTI filed in the AMC to obtain data on BU permissions, the AMC responded that the data is available on its website as proactive disclosures under the RTI Act. On examining these documents, it was found that the data on BU permissions was incomplete – BU permissions are given by the TDO department at the zonal level, and the proactive disclosure documents from each zone's TDO departments were uneven. Data on BU permissions was available for New West Zone, incomplete for West Zone, and not available for the remaining zones. However, almost complete data on applications for BU permission was found in the proactive disclosures of the Central Office of the Estate and TDO department. Therefore, these applications are used as a proxy for BU permissions. Although some BU applications may be rejected by AMC, the construction is complete and therefore the data is relevant.
[8] https://gujrera.gujarat.gov.in/registeredProjectCountList (accessed on 9.1.2020).

Looking across the three data-sets, it is clear that the first data-set (Table 2) is unhelpful in giving a picture of construction activity in the city. Instead of capturing the maximum number of projects since it should include almost all construction projects across Ahmedabad district, it captures the smallest number of projects due to poor enforcement of registration under BOCW Act. The second and third data-sets (Table 3, 4 & 5) are more helpful. Based on these data-sets and the points raised above regarding their interpretation, my estimate is that in a given year, there would be minimum 1500 ongoing construction sites in the AMC area and immediate surrounding areas that fall under AUDA's jurisdiction, with at least 1200 of these being real-estate projects undertaken by developers for sale.

4. Housing for Construction Workers at Worksites: Regulatory Framework and Current Practices

4.1. Regulatory Framework

This section examines the relevant labour legislations as well as two other relevant regulatory mechanisms: first, the Development Permission (DP) and subsequent procedures during construction till the Building Use (BU) permission, which are regulated by the ULBs, and second, the tender documents that are part of the contracts between public authorities and contractors hired to construct public projects. It looks at how these regulatory mechanisms shape provisions by employers for housing and other facilities for workers at construction sites.

4.1.1. Labour Legislation and Governance

Based on a previous study on the entitlements of migrant construction workers (Desai 2017), and follow-up research on the implementation of the BOCW Act, this section outlines three aspects which shape how labour legislation and its implementation impact provisions by employers for housing and other facilities for workers at construction sites.

Multiple labour laws with varying provisions apply to construction sites

While the Building and Other Construction Workers Act 1996 (BOCW Act) applies specifically to construction sites, the Contract Labour Act 1970 (CL Act) and the Inter-State Migrant Workers Act 1979 (ISMW Act) would also be applicable to many construction sites. See Diagram 1 for the establishments required to be registered under each of the three laws. Besides the question as to whether or not a construction site is registered under the multiple labour laws that are applicable to it, the provisions vis-à-vis housing and other facilities to be provided by the employers for workers vary across these laws as shown in Diagram 1. While the ISMW Act and related Central rules have some of the strongest and least ambiguous provisions on housing and other facilities, the enforcement of this law in general is weak due to various reasons.[9] Enforcement of the BOCW Act and related Central and Gujarat State rules is also deficient but better than the ISMW Act, but it has ambiguous provisions for housing and other facilities for workers (as elaborated below).

Different regulatory actors to enforce the different labour laws applicable to construction sites

The CL Act and the ISMW Act are to be implemented by the Labour Commissioner wing of the Labour and Employment department of Gujarat government, while the BOCW Act is to be implemented by the Directorate for Industrial Safety and Health (DISH) wing of the department. The BOC inspectors, who were recruited in 2017 under DISH to enforce the BOCW Act do not know, and are not responsible for enforcing, the provisions in the CL Act and ISMW Act at the construction sites they visit.[10] It is unclear if inspectors from the Labour Commissioner wing ever visit any construction sites to enforce the CL Act and ISMW Act. During discussions on construction sites in the Labour Commissioner's office for a previous study, the officials often declared that they did not have much to do with construction sites and we should go to the DISH wing since the BOCW Act was under their purview (Desai 2017).

[9] These reasons include, but are not limited to, lack of political will (see Desai 2017 for a brief discussion).

[10] For more than a decade after the Gujarat BOCW Rules were formulated, the DISH did not have adequate human resources and the inspectors for the Factory Act were given the additional responsibility of enforcing the BOCW Act (Desai 2017). They were also not aware of, or responsible for enforcing, the provisions in the CL Act and ISMW Act at the construction sites. In 2017, BOC inspectors were recruited to enforce the BOCW Act. As of May 2019, there were 14 BOCW inspectors across Gujarat (with more recruitments expected), of which 3 inspectors were for the Ahmedabad district (Patel 2019).

BOCW Act: Poor institutional mechanisms to ensure compliance; Ambiguous provisions for housing and other facilities for workers

Construction sites are to be registered with the Labour department under the BOCW Act 1996. However, many construction sites continue to be unregistered. This is revealed by the low number of registered sites in Ahmedabad district in Table 2 compared to the number of projects that applied for BU permission in AMC area in Table 3. A primary reason for this low registration is the lack of strong political and administrative will to enforce labour legislation and protect labour rights and advance labour welfare. This contrasts sharply with the political and administrative will exhibited to protect consumers of real-estate as per the more recent Real Estate Act 2016, resulting in a large section of the real-estate sector registering their projects with the Gujarat Real Estate Regulatory Authority (RERA). Thus, the number of construction sites registered under the BOCW Act 1996 is far less than the number of real-estate projects registered under the Real Estate Act 2016 (compare Table 2 and 3 with Table 5 for Ahmedabad; see Table 6 for Gujarat).

Table 6. Construction sites/projects registered in Gujarat under BOCW Act and Real Estate Act
(Source: BOCW data from Patel 2019; Real Estate Act data from RERA website)

Year	No. of registered sites under BOCW Act 1996	Year	No. of registered projects under Real Estate Act 2016
2015	288	-	-
2016	382	-	-
2017	837	2017-18	2204
2018	1947	2018-19	2957

In fact, due to the poor political will on labour rights and welfare, the Gujarat government did not invest in human resources to ensure enforcement of the BOCW Act for more than a decade after the Gujarat BOCW Rules were formulated (Desai 2017). Dedicated inspectors for construction sites were recruited only in 2017. Although registrations of construction sites have increased since then (Table 6), many sites still do not register. Furthermore, registration of sites is not sufficient to ensure compliance to the various provisions of the law, however, the regime for inspections at registered sites remains weak with inspectors not required to inspect every registered construction site.

Furthermore, since the BOCW Act and the Central and Gujarat BOCW rules do not specify any norms for the temporary accommodation and other facilities (water, sanitation etc) to be provided, the nature of these provisions is entirely open to interpretation, by both employers and the inspectors. One BOC inspector argued that they are unable to enforce these provisions as it is unclear what exactly should be provided. Another BOC inspector explained that a developer may have built rooms from metal sheets or given the workers plastic sheets to erect temporary tent-like structures, and the inspector cannot book the developer for breach of the Act as both could be interpreted as temporary accommodation.[11] He further argued that even if norms were introduced, the institutional mechanism to enforce the law is weak – if an inspector books a developer for breaching the Act, the case would go to the Labour Court and by the time the case is attended to, the construction may be over. Even if the Labour Court gives a quick ruling against the developer, the fine for breaching the provisions vis-à-vis housing is very low (Rs.2000), which does not encourage compliance. The inspector argued that the penalty has to be a substantial amount so that even if they verbally bring up a breach of the law, the fear of paying a high fine would make the developer act quickly to comply with the law. Since the amounts for the fines are outlined in the Central Act, modifying them is a long process.

[11] Discussions with BOC inspector, May 13 and June 3, 2019.

Diagram 1. Labour law provisions for housing and other facilities for construction sites

Contract Labour Act, 1970 and Contract Labour Central Rules, 1971

Registration of establishments that employ 20 or more workers through a contractor

Licensing of contractors employing / supplying 20 or more contract labour

Sufficiently lighted & ventilated restrooms for labour to stay at night; separate restrooms for women; room size to be based on norm of 1.1 sq.m/person. The rooms should give adequate protection against heat, wind, rain and have smooth, hard and impervious floor surface.

Sufficient supply of wholesome drinking water

Latrines and urinals to be conveniently situated and accessible, adequately lit and maintained. Norms are:
- 1 latrine for 25 women / 25 men
- 1 urinal for 50 women / 50 men

Norms change for establishments with more than 100 women / men. Separate washing facilities to be provided and maintained for men and women.

Crèche where employment is for 3 months or more and where 20 or more workers are employed. Crèche to have adequate supply of drinking water; afford adequate protection against heat, damp, wind, rain; and have smooth, hard and impervious floor surface.

Inter-State Migrant Workers Act, 1979 and ISMW Central Rules, 1980

Registration of establishments that employ 5 or more inter-state migrant workers through a contractor. Inter-state migrant worker is one who is recruited in one State & brought to another State for employment

Licensing of contractors supplying 5 or more inter-state migrant workers

Residential accommodation:
- Worker with family: minimum 10 sq.m. room, verandah and covered cooking space. One common sanitary latrine and bathroom for every three such quarters.
- Worker without family: Barrack with maximum 10 workers, with minimum 6.5 sq.m/person. One common sanitary latrine and one common bathroom for 10 workers.

Accommodation to have ventilation & lighting; afford adequate protection against heat, wind, rain; have smooth, hard & impervious floor surface; and adequate supply of wholesome drinking water.

Latrines & urinals on site to be conveniently situated & accessible, adequately lit & maintained.
- 1 latrine for 25 women / 25 men
- 1 urinal for 50 women / 50 men

Norms change for establishments with more than 190 women / men. Separate washing facilities for men and women.

Building and Other Construction Workers Act, 1996; BOCW Central Rules 1998 and Gujarat BOCW Rules 2003

Registration of establishments that employ 10 or more workers in any building or other construction work. (does not apply to establishments where an individual undertakes construction work in relation to his own residence and where the total construction cost is not more than Rs.10 lakh are exempted from the BOCW Act)

Free temporary accommodation to be provided on or near the site to workers. The accommodation to have separate cooking place, bathing, washing and lavatory facilities (No norms specified)

Drinking water to be provided on construction site and should not be located within 6 metres of a toilet or washing place.

Sufficient latrines and urinals to be provided on site. Should be separate for men and women, provided at accessible and convenient locations with water and disposal facility, adequate lighting and maintenance. (No norms specified)

Crèche with trained childcare help for children under six years age where more than 50 female workers are employed.

Finally, the Government of India has initiated labour reforms that will overhaul the existing Central government labour laws and codify them into four codes – the Code on Wages; the Code on Occupational Safety, Health and Working Conditions; the Code on Social Security; and the Industrial Relations Code. While the labour codes have been critiqued for diluting the provisions of labour laws in favour of employers (Sundar 2019), the Parliament has already approved the Code of Wages while the others are currently with the Parliamentary Standing Committee on Labour (ET 2019). Sections 23 and 24 of the Code on Occupational Safety, Health and Working Conditions mention temporary living accommodation within or near worksites, facilities for washing, bathing places, water, creche, etc. However, the nature of these provisions will become clear only after the Rules are made following the approval of the code by Parliament.

4.1.2. Framework for Regulating Urban Development

Urban growth and development in Ahmedabad is regulated through a framework that includes numerous planning instruments, key among them being the Development Plan prepared by AUDA, Town Planning Schemes (TPS) prepared by both AUDA and AMC, and the Comprehensive General Development Control Regulations (GDCR) prepared by the Gujarat Government's Urban Development and Urban Housing Department.[12] The GDCR, which lays out the building and planning bylaws, also outlines the procedures to be followed during development such as obtaining development permission (DP) from urban local bodies like AMC and AUDA.[13] After the DP is obtained, a series of procedures have to be followed as the construction starts and progresses through different stages. On completion of construction, building use (BU) permission has to be obtained before occupying the constructed building(s). The purpose of the DP and subsequent procedures is to ensure that development is in compliance with the city's building and planning regulations.[14] This framework for regulating urban development is relevant for the housing and services for migrant construction workers living at worksites in several ways.

First, while construction sites are regulated through the above framework, there is very little in the framework that regulates the building of temporary accommodation and services provision undertaken at worksites for the workers. Within Ahmedabad's municipal limits the DP is granted in the form of a "Commencement Letter" – also called *Rajachitthi* – by the Building Plan Scrutiny Protocol (BPSP), Town Development Department, AMC. This commencement letter lists numerous conditions, one of which is concerned with temporary accommodation and services for workers. It reads thus:

> "This development permission is given on the condition that owner/applicants have to provide temporary residential accommodation for skilled/unskilled construction labours in their premises with proper sanitation facility. Public space/road will not be encroached for

[12] Plans for industrial estates by the Gujarat Industrial Development Corporation (GIDC) within the city area would also be part of the framework for regulating urban development. Ahmedabad has GIDC estates in Naroda, Vatwa, Odhav, etc.

[13] According to the Gujarat Town Planning and Urban Development Act 1976 and various other legislations, no person can undertake any building or development activity on any land without obtaining a DP from the appropriate government authority prior to the commencement of building or development activity (GOG 2017). Other relevant legislations include the Gujarat Industrial Development Act 1962.

[14] Section 2.3 of the GDCR 2017 states that "Grant of a Development Permission by the Competent Authority shall mean an acceptance by the Competent Authority that the development requirements of the proposed building, for which Development Permission has been granted, conforms to these Development Regulations, and that the person holding the Development Permission may undertake proposed development or construction of the proposed building within the limits of the Development Area in conformity with the Development Plan Proposals or with the proposal of GIDC…" (GOG 2017: 39).

the same in any case as per owner/applicants submit the noterised [*sic*] undertaking on the same on dt.xx/xx/xxxx."[15]

This means that if this condition is not met, the AMC can revoke the DP. However, like the BOCW Act, there are no norms about the kind of temporary residential accommodation to be provided by employers or even what constitutes "proper sanitation facility" for workers living at worksites. Therefore, it seems as if the only aspect that the AMC is really interested in ensuring is that public space/road is not "encroached" by workers and they do not use it for sanitation purposes.

Second, the bylaws in the current GDCR are inappropriate for the development of temporary labour colonies by developers / contractors. As a result, these colonies do not conform to the bylaws, which means that developers / contractors create temporary informal housing each time they accommodate workers at the worksite. This informal housing is off the map for the AMC and AUDA which do not identify / map their locations and play almost no role for facilitating / ensuring adequate and safe water and sanitation, anganwadis and public health outreach services in these spaces. This is unlike the role that the AMC plays in the recognized slums of the city (even though services may still not be adequate in all slums).

Third – and related to the above point – according to the current GDCR, applications to the ULB for water and drainage connections and other services and utilities can be made only after BU permission is obtained. This is another reason for poor water and sanitation provisions at many worksites. As discussed in Section 4.2.5, it seems that the AMC sometimes gives water / sewerage connection before BU permission, however, there are various difficulties in securing a connection that is adequate for a labour colony. Discussions with AMC officials would be required to understand this further.

Fourth, the GDCR prohibits the occupation and use of buildings until the BU permission is obtained, however, construction workers are accommodated at many sites in under-construction buildings, in deplorable conditions on ground/upper floors and even the basements. The AMC and AUDA willfully turn a blind eye to such violations of the GDCR, which also allows the state to neglect addressing the question of its role in planning for land for construction labour colonies or housing in another form for these migrant construction workers. As discussed later in the report, although employers have a key role to play in temporarily housing these construction workers, the role of the state in planning for land cannot be ignored.

Fifth, as already noted above, the AMC and AUDA do not identify / map the temporary labour colonies in the city. In fact, these ULBs do not even maintain a database of ongoing construction sites in their jurisdictions. The first step in regulating the housing and services for migrant construction workers living at worksites would therefore be to create and maintain a database of the ongoing construction projects. This can be done based on the DP and subsequent procedures during construction. Before further explanation, relevant aspects of these procedures should be noted:

1. After DP is granted, it is valid for a year. This means that construction must be commenced at any time within one year.
2. The owner / architect has to notify the ULB of their intention to start construction by filing a "Notice of Commencement of Construction" at least 7 working days prior to beginning construction.[16] This also alerts the ULB to begin periodic inspections at the construction site so as to ensure that the construction is as per the approved plans.

[15] Numerous commencement letters were downloaded from the RERA Gujarat website to see the conditions listed in them.

[16] Section 5.5.1 of the GDCR 2017 states: "The Owner and the Architect on Record for the building shall notify the Competent Authority their intention to commence construction at least 7 working days prior to commencing construction by filing a Notice of Commencement of Construction, in the format prescribed in

3. The owner / architect has to notify the ULB about the progress of construction through submission of a "Notice of Progress of Construction" as and when the following specific stages of construction are completed: lower basement slab level, plinth level, ground floor, middle storey (in case of buildings above 15 mt in height), and last storey (when the last structural roof has been completed).[17]
4. The DP lapses if construction does not start within one year of the date of granting the DP.[18] The DP can be revalidated, for which an application has to be made either before the DP lapses or, if a penalty charge is paid, within a period of 6 months of the lapse of the DP. If the ULB approves this application, it issues a revalidated DP. The revalidated DP is again valid for one year, that is, construction has to be started within one year otherwise the revalidated DP will also lapse. A DP can be revalidated for a maximum of three times. Whenever construction is expected to start, a "Notice of Commencement of Construction" has to be submitted to the ULB as mentioned earlier.

The best way of maintaining a database of the ongoing construction sites would be to create and maintain a database about projects that have submitted a "Notice of Commencement of Construction" to the ULB but have still not obtained BU permission. However, from discussions in the AMC, it appears that a list of projects granted DP in a particular time period cannot be easily generated, let alone generating a list of projects for which "Notice of Commencement of Construction" has been submitted in that time period. According to AMC officials, this is because none of this data is computerised and only exists in individual project files, and once the DP is granted by the BPSP in the TDO department, these project files are sent to the zonal offices from where further procedures take place.[19] An online portal for DP applications and approvals as well as for the subsequent procedures during construction could help to streamline processes and also make it possible to create and maintain a database of ongoing construction sites. This database would have to include details such as address, TP no and FP no, so that their locations can be clearly identified / mapped. Although not all the ongoing construction sites have labour accommodation on the site itself, and many do accommodate their workers on a plot of land located at some distance, a database of ongoing construction sites would be a necessary first step to then identify / map the locations of their labour colonies.

The sharing of such a database by AMC / AUDA with the Labour department would also help the latter identify construction sites that have failed to register under the BOCW Act and monitor them for compliance with labour legislation. The only caveat is that since certain kind of construction projects such as roads, flyovers, bridges, water and drainage/sewerage lines do not have to obtain DP, they would not be in such a database based on the DP and subsequent procedures. Authorities undertaking such projects would have to be required to inform the department in the AMC / AUDA in charge of maintaining such a database, about these projects when their appointed contractor commences construction.

Finally, although the Real Estate Act 2016 is aimed at consumer protection, it should also be viewed as part of the broad framework that regulates urban development activity. Real-estate projects have

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Form No. 10. Failure to notify the Competent Authority before commencing construction may result in lapse of the Development Permission." (GOG 2017: 65)

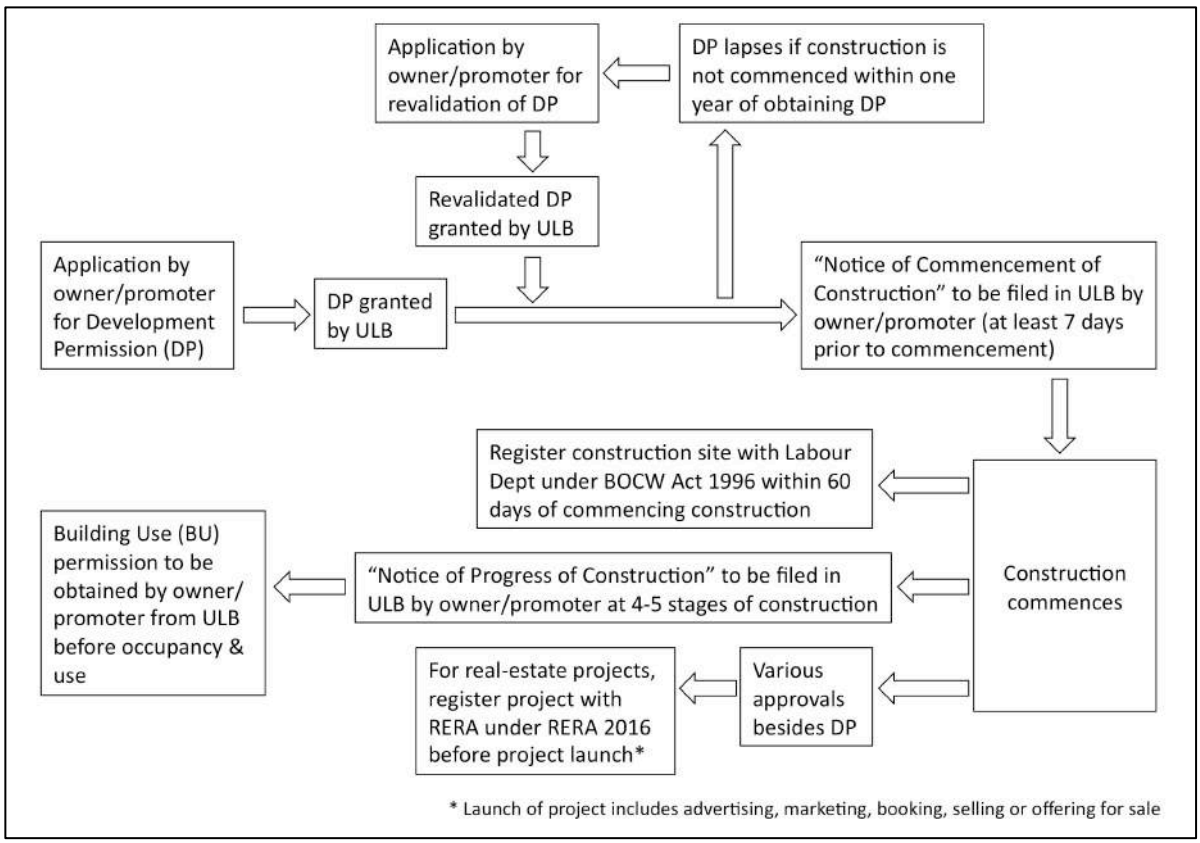
[17] As per Section 5.3.3. and Schedule 13 of the GDCR 2017.

[18] Many projects who are granted DP do not start construction within a year due to various reasons, leading to lapse of the DP. For example, a developer may not be able to raise the necessary finances, which can lead to delays that can run into more than a year. Discussion with Mr. Rajesh Patel, Town Development Officer, AMC, on July 8, 2019.

[19] Discussion with Rajesh Patel, Town Development Officer, AMC, on July 8, 2019; and brief discussion with an Assistant Town Development Officer in June 2019.

to be registered under this Act with RERA before a project is launched, and this registration requires DP and certain other approvals. There is a possibility of making BCOW registration mandatory for registration with RERA (see Diagram 2). There is also a possibility of making BOCW registration mandatory at the time of submitting the first "Notice of Progress of Construction." Diagram 2 shows these procedures, which are outlined in the GDCR 2017, alongside other procedures such as registration under the BOCW Act and the Real Estate Act. Creating linkages between AMC / AUDA, the Labour department and RERA can contribute to creating mechanisms to ensure decent accommodation and services for construction workers living at worksites.

Diagram 2. Timeline for relevant regulatory procedures for a construction project



4.1.3. Construction Contracts for Public Projects

A large number of construction projects are undertaken in the city by various public authorities. The regulatory framework for these projects includes the tender documents, which become part of the contract signed between the public authority and the contractor awarded the project. These documents set out the contractual conditions, including those relating to the provision of housing and other facilities for construction workers employed on the project. Tender documents of the following four municipal projects were scrutinized for their contractual conditions regarding these provisions:

1. Sewage network project, tendered in June 2018
2. Sewage pumping station and sewage treatment plant (SPS/STP) project, tendered in June 2019
3. EWS housing project, tendered in 2019
4. Building project for the Sabarmati Riverfront Development Corporation Ltd (SRFDCL), a company floated by AMC to develop the city's riverfront project, from 2015/2016

Eight points from this scrutiny, which also involved a comparison across the documents, are discussed below.[20]

First, a document titled "Model Rules for the Protection of Health and Sanitary Arrangements for Workers Employed by AMC or its Contractors" was found in the EWS housing tender document (see Annexure 6).[21] These rules "apply to all buildings and construction works in charge of AMC in which twenty or more workers are ordinarily employed or are proposed to be employed in any day during the period during which the contract work is in progress" and the rules "form an integral part of the contracts." What are the provisions in these rules? The most important point is that the rules do not mention whether and what kind of accommodation should be provided to the workers (although there is reference to "the labour camp" in the context of water provision). While water is to be provided at both the worksite and the labour camp, and there are provisions to ensure that this is potable water (such as monthly testing of samples from the drinking water source), there are no norms for the quantity of water to be supplied per person per day. Toilet facilities and washing spaces for the "worksite" are elaborated at length with norms and specifications. These are similar to the norms in labour legislation like the CL Act and ISMW Act. It is, however, unclear if these rules are to be applied for toilet facilities and washing spaces in cases where the labour camp is not located on the worksite. The rules require the contractor to build a creche at the worksite for children under the age of 6 years, but the conception of this facility is confined to keeping the children away from the construction site in a secure environment where they can rest and play. There is no attempt to think about how these creches could be spaces for child development, for example, by linking them to the Integrated Child Development Scheme (ICDS). Construction sites often also have older children, and there is no attempt to address their educational needs.

Second, each of the AMC departments seems to follow its own practices with respect to drafting out of the contractual conditions for projects undertaken by them. Thus, the contractual conditions regarding provision of accommodation, water, toilets, bathing/washing facilities and drainage for the construction workers were almost the same in the tender documents for the two sewage projects, while there were few variations in the contractual conditions for the EWS housing project, and major variations in these conditions for the SRFDCL project.

Third, the tender documents show that the AMC does not undertake any responsibility to provide land to the contractors for the labour camp.

- The tender documents for the SPS/STP project mentioned that the contractor would have to find his own land for the labour camp and that if he wants municipal land for this purpose, he "should apply for it and pay assessment for it."
- Tender documents for the sewage network project and EWS housing project were ambiguous on the land question, only stating that the contractor would have to build the labour camp on a "suitable plot of land."
- The tender document for the SRFDCL building project clearly said that no labour accommodation would be allowed at the project site and the contractor would have to make his own arrangements.

[20] The relevant contractual conditions for the sewage network project are outlined in Annexure 5; for the EWS housing project in Annexure 6, and for the SRFDCL building in Annexure 7. The contractual conditions for the sewage pumping station and sewage treatment plant project are identical to those for the sewage network project, except that there is one additional clause of relevance which states that if the contractor wants municipal land for the labour camp then he should apply for it and pay assessment for it.

[21] These rules are not included in the other three tender documents, and it is unclear if this is because the rules were formulated very recently.

Fourth, where the tender documents give some specifications for the labour accommodation, they refer to this accommodation as "huts," and mention the following specifications:

- The tender documents for the two sewage projects mentioned that the huts could be built from grass and bamboo.
- The tender document for the EWS housing project mentioned sun-dried or burnt bricks laid in mud mortar or "other suitable local materials approved by the Engineer-in-charge [from the AMC]."
- Some specifications were also given in these three tender documents regarding the spacing between the rows of huts (10 metres in two documents, 6-7.2 metres in one document) and the floor space to be provided per person (2.7-2.8 sq.m per person) (i.e. approx. 115 sq.ft for a room for 4 persons). The EWS housing tender document also included some other specifications such as an additional cooking space for each hut (with minimum area of 1.8 metre x 1.5 metre), height of the hut (2.1 metre), roof to be made from thatch or other material and to be watertight, and huts to have proper ventilation and secure doors and windows.
- The tender document for the SRFDCL building had no specifications for the huts, and only mentioned the following: "No residential accommodation is allowed at the site of work. The labour huts shall not be erected on the site of work and contractor shall make his own arrangements to provide such accommodation as per the rules of the local bodies… Housing accommodation on hire is likely to be available in this area around the site. The contractor has to make his own arrangements for the housing of labourers." While "rules of the local bodies" are mentioned here, the Model Rules discussed earlier makes no reference to labour accommodation and it is not clear if there are any other rules.

Fifth, the norms and specifications for water supply varied across the tender documents.

- The tender documents for the two sewage projects mentioned that at least 45 litre of chlorinated pure drinking water was to be provided per person. It mentioned that the water should be provided for latrines and urinals nearby.
- The tender document for the EWS housing project mentioned that 2 gallons (9 litres) of pure and wholesome water and 3 gallons (13.6 litres) of clean water for bathing and washing was to be provided per person (i.e. total of 22.7 litres per person). It mentioned that standposts were to be provided in case of piped water, and metal/masonry storage tanks if water was from river or wells. It also mentioned that the contractor had to make arrangements for testing of water samples at regular intervals.

All these documents mentioned that the contractor had to make their own arrangements for water provision. There was no mention of the role and responsibility of the AMC with regard to providing a water connection for the labour camp. One of these documents mentioned that the contractor had the option of obtaining water for construction purpose from the municipal pipeline for which the contractor had to install a water meter and pay Rs.12 for 1000 litres of water. It is noteworthy that this document did not mention any option of municipal water for the labour camp.

- The tender document for the SRFDCL building project had no norms or specifications, and only stated that "Water Supply for drinking purposes and construction purpose at the site shall also have to be arranged by the contractor at his own cost as may be required. The water can be available by drilling bore hole."

Sixth, three of the tender documents had similar norms for providing toilet facilities for the workers. These were largely as per norms in labour legislation like the CL Act and ISMW Act. The documents, however, made no mention of the role and responsibility of the AMC with regard to providing a sewerage connection.

- One latrine was to be provided for 25 men and one latrine for 25 women. The latrines were to have proper doors and fastenings; water provision inside/nearby; and adequate lighting and maintenance. The EWS housing tender document included additional specifications in terms of

the materials to be used to build the latrines. These three tender documents included provisions for separate bathing and washing places for men and women, along with similar norms for this (1 bathing space for 20 or 25 persons; 1 washing space for 25 or 30 persons). One urinal was to be provided for 25 men/women (in one document) or 50 men/women (in two documents).
- The documents also mentioned provision of proper drainage.
- The tender document for the SRFDCL building project did not mention toilets, urinals, bathing/washing spaces or drainage at all.

Seventh, three of the tender documents required the contractor to make certain arrangements in the labour camp for cleanliness, but made no mention of the role and responsibility of the AMC with regard to solid waste collection from the labour camp.
- The two tender documents for the sewage projects mentioned that the contractor should engage 1 sweeper for every 200 workers to keep the labour camp clean.
- The EWS housing tender document mentioned "arrangements for conservancy and sanitation in the labour camp to be made according to the rules of local public health and medical authorities," but the Model rules discussed earlier do not specify these arrangements and it is unclear if there are any other rules.
- The tender document for the SRFDCL building made no mention of any SWM arrangements.

Eighth, the tender documents for the two sewage projects stated that "The Health Officer of the Municipal Corporation of Health Services shall be consulted before opening a labour camp and his instructions on matters, such as the water supply, sanitary convenience, the camp-site, accommodation and food supply shall be followed by the Contractor." The tender document for the EWS housing project mentioned that the Engineer-in-charge from the AMC had the powers to issue a notice to the contractor if huts and sanitary arrangements were not provided as per approved standards, and if the contractor did not make these arrangements in response, the Engineer-in-charge could also make the arrangements at the contractor's cost. Some of the documents also gave a role to the Engineer-in-charge with respect to instructing the contractor to test water samples for drinking water for the workers. Thus, AMC officials like the Health Officer and Engineer-in-charge can play a role in ensuring decent facilities for workers, and one would have to explore their attitudes towards these matters and the roles they play in practice.

4.2. Current Practices of Providing Housing and Services for Workers Living at Worksites

There is surprisingly little systematic information about the current practices in the construction sector vis-à-vis the provisions made for labour accommodation and other facilities for workers at construction sites. In fact, one developer, when asked a question about these practices across Ahmedabad, reflected on the lack of information about these aspects within the developer community itself:

> "We never discuss it. We discuss FSI when we meet with other developers or in public forums or in conferences. Nobody – not one topic, not even 15 minutes is spent on labour, and what one should do for them. Which is really a reflection on some people [pause]… actually it is a reflection on us, that we don't think of these things. That we don't consider them worthy of discussion. We don't ask each other what are you doing at your site; who is providing housing to the labour. We may be doing something for labour at our site, but we don't discuss this when we meet other developers. We don't give this importance enough for it to figure in the conversation."
>
> - Pavan Bakeri, Bakeri Group, discussion in 2018

14 projects were studied to understand the mode of provision (i.e. who provides) and the nature of provision with respect to the accommodation and other facilities for the construction labour living at

worksites. As explained in the Introduction, throughout this report, living at the worksite refers to all instances in which workers live in temporary accommodation provided for a specific construction project, regardless of whether this is provided on the site itself or some distance away. As listed in the Methods chapter, the following aspects were documented for these 14 projects:

1. provision of land for the labour colony
2. the building of labour accommodation
3. provision of water for drinking and other uses by building / organising the necessary water-related infrastructure (such as bore-well, water pipeline, water tankers, water storage tank, water filtration/RO plant etc)
4. the building of sanitation infrastructure, which includes toilets, bathing spaces, spaces for washing clothes and utensils, sewage disposal and drainage
5. maintenance of the water and sanitation infrastructures and provision for solid waste management (this aspect could not be documented in detail)
6. provision of electricity (this aspect could not be documented in detail)
7. the building and running of a creche for the children of the workers
8. provision of health services for the workers and their children (while health services provided at the worksite were documented, tie-ups with medical clinics or hospitals were not noted in detail)

Plates 1-14 present this documentation project-wise, while this section synthesizes the findings across the 14 projects and discusses them with a focus on six aspects: land for labour colony, building of the labour accommodation, water and sanitation, electricity, creche and health services. However, before turning to this synthesis, two questions are discussed. First, in section 4.2.1, I briefly outline the findings from these 14 projects with respect to which workers lived at the worksites. During the fieldwork, it was found that not all workers hired on a project on a regular basis for a reasonable duration actually live at the worksite and therefore it became important to understand who lives at the worksite and who does not since it shapes the context for provisioning. Since contractors are hired to provide labour for one or more specific construction activity (excavation, RCC, masonry-plastering, flooring, painting, plumbing, etc), and they play a role in the provisioning of housing and services for this labour, methodologically, it was deemed best to explore "which workers live at the worksite" by each construction-activity. Second, in section 4.2.2, I cast a cursory glance at "who are the contractors" on each of these 14 projects. This is an important question because, as mentioned above, contractors play a role in the provisioning of housing and services for their workers, and as the fieldwork unfolded, it increasingly seemed that to understand the mode and nature of provision for workers in a particular project, it was important to pay attention to the scale of the contractors hired on that project for the different construction activities. This question is discussed cursorily and not in much depth because except in few cases access to the contractors and data about them was limited, which was also partly because of the time constraints of this study.

4.2.1. Which Workers live at the Worksite – and how does this shape the context for provisioning?

Data from the 14 projects covered in this study as well as broader discussions with some developers and contractors gave insights into "which workers live at the worksite" (also see Table 7[22]):

RCC and masonry-plastering workers

These workers make up the majority of workers employed on any construction project. In all the projects, most of these workers lived at the worksite. They were migrants and generally a mix of families and single males; skilled and unskilled workers. Migrant families were usually employed in masonry-plastering and pouring concrete or *bharai* while single male migrants were usually employed in shuttering/centering and bar-bending or *saliya-kaam*, although in some of the projects

[22] Refer to Annexure 4 for project-wise data on which workers lived at the worksite. It also outlines why this data should be taken as suggestive and not necessarily accurate.

the *bharai* workers were also single male migrants. Some projects also employed some RCC and masonry-plastering workers who did not live at the worksite – they included workers who were locals or settled migrants (generally skilled workers but also unskilled workers in some cases) and additional workers brought in from a naka for several days of work when required.

Here, it is illuminating to draw upon a detailed discussion with one masonry-plastering contractor. He has been working as a contractor for 8 years.[23] His family is originally from Jamnagar but settled in Ahmedabad since long. At the time of the discussion he was working on four construction projects in Ahmedabad, each of a different developer. All four projects consisted of a single multi-storey building. These projects were in different stages of construction and he had 125-150 workers working across the projects. He explained that while the masonry-plastering work at each of these projects would last for a duration of around 1.5 years, the number of workers employed at each site would vary over this duration. He had only 8-10 workers working on the site where we met since the construction was almost over. His total workforce of 125-150 workers consisted of migrants from the Dungarpur and Banswara districts of Rajasthan, both families and single males. 45 of the workers were skilled and are attached to him since quite a few years. When he does not have enough work to hire all of them, he tries to retain them by setting them up with another contractor. Some also go back to their village but return to the city when he calls them with work. Many of the 80-100 unskilled workers that he employs are frequently changing. In the four projects he is currently working on, all his workers have been living at the worksite in the basement of the under-construction building. The developers had provided materials like corrugated metal sheets to him, and his workers had used these to erect enclosures in the basement. He also mentioned that he had recently worked on a project on the city periphery for a large developer who had made a labour colony using corrugated metal sheets and had also set up a creche for the children. It was the only time in his 8 years of work that there had been a creche for the workers' children. Across the four projects he is currently working on, he estimated that there must be about 20-25 children with his workforce of 125-150 workers.

In a group discussion with 3 RCC contractors and 2 masonry-plastering contractors at another project (Site 2), they mentioned that they often work for the developer of this project. Some of them have been working as a contractor since around 20 years. Most of their workers live at the worksite, and few – about 10% - are locals or settled migrants who live in their own housing arrangements off-site. At this developer's sites, while workers' accommodation is either in a labour colony built on the land of the project or in the basement of the under-construction building, they have never had to provide materials for this accommodation or build it through their workers. The developer has always engaged his depart workers to build this accommodation.

Flooring workers

Some variation was found with respect to whether flooring workers lived at the worksite. In 4 projects all the flooring workers were reported as living at the worksite (all were migrants) (Sites 3, 4, 7, 14), while in 1 project none of the flooring workers lived at the worksite (unclear if they were migrants or not) (Site 9).

Furthermore, in 5 projects, some of the flooring workers lived at the worksite while other lived in their own arrangements. In 3 of these projects the unskilled flooring workers – who were mainly migrant families – lived at the worksite, while the skilled flooring workers – who were mainly single male migrants – lived in shared rental rooms in the city (Sites 2, 8, 10). In one of these projects, the locals / settled migrants did not live at the worksite, while the circular migrants who were all single male lived at the worksite (Site 13). In the final one of these 5 projects, the locals / settled migrants

[23] He was working on a project whose developer did not permit me to do a proper fieldvisit and fill a questionnaire, but did allow me to meet a few of his contractors.

did not live at the worksite; some of the circular migrants (mainly single males) also did not live at thr worksite and lived in rental rooms; while some of the circular migrants (families and some single males) lived at the worksite (Site 1).

Here, it is illuminating to draw upon a discussion with two flooring contractors. One has been working as a flooring contractor for 15-20 years.[24] His family is originally from Saurashtra but settled in Ahmedabad since long. He takes up work mainly for two developers in Ahmedabad, and at the time of the discussion employed 60-65 workers across 6 projects. This included two bungalow schemes and four multi-storey residential/commercial projects, each of which comprised of a single multi-storey tower. His workforce of 60-65 workers consisted of 25 skilled workers – some were his relatives who are migrants from Saurashtra settled in Ahmedabad, while others were migrants from Rajasthan. The remaining 40 workers were unskilled, and a mix of single male migrants and migrant families from Rajasthan. The settled migrants do not live at the worksite and many have their own houses in the city; while most of the other workers – skilled and unskilled – generally live at the worksite with only a few of them living in rental rooms. For the 45-50 workers living at the worksite across the 6 projects he is currently working on, in most cases, the developer has provided him with corrugated metal sheets and other materials and his workers have erected the rooms, either on land provided by the developer on the project site or in the basement of the under-construction building. Sometimes, however, a developer will build the rooms and allot them to his workers. Sometimes, another contractor (e.g. a RCC contractor) has built rooms, some of which are vacant, and the developer will negotiate with that contractor to let his flooring workers stay in them.

The other flooring contractor has been working as a contractor for 20 years. He is originally from Rajasthan and settled in Ahmedabad since long. He explained that he was doing flooring at a number of sites for different developers. He had a flooring contract at Site 1 where he had employed 55 workers and anticipated that he would have up to 80 workers as the work increases. Among the 55 workers, 27 workers were skilled and 28 were unskilled. 40 of the 55 workers were living at the worksite; they were skilled and unskilled workers from Rajasthan and Dahod-Godhra, mostly families, and had been brought in directly from their village. The remaining 15 workers were living off-site, mainly in rental rooms; they were skilled and unskilled workers from Rajasthan, UP and Bihar, and some were also unskilled workers from Ahmedabad; the migrants from UP and Bihar were single male migrants. The contractor said that on projects undertaken by the developer of Site 1, he has never had to get his workers to erect rooms since the developer gets his depart workers to make the rooms.

Painting workers

A good deal of variation was also found with respect to whether painting workers lived at the worksite. In 3 projects all the painting workers were single male migrants and lived at the worksite (Sites 2, 8, 13). In 2 projects none of the painting workers lived at the worksite: in one of these projects the workers were single male migrants who lived in shared rental rooms, while for the other project housing details were unavailable for these workers (Sites 4 & 9). In 1 project, only 10% of the painting workers lived at the worksite (no details were available for the workers not living at the worksite). In the remaining projects, some workers were living at the worksite while others were living in their own arrangements.

Here, it is illuminating to draw upon a discussion with a painting contractor who was given a contract at Site 1. He has been working as a contractor for 12-15 years. He is originally from a village in Madhya Pradesh's Bhind district and all his workers are from within 100 km of his village. He had employed 32 workers on Site 1, of which 18 were single male migrants, mostly unskilled, and living at

[24] He was doing flooring on a project whose developer did not permit me to do a proper fieldvisit and fill a questionnaire, but did allow me to meet a few of his contractors.

the worksite. The remaining 14 workers were family migrants, mostly skilled (only the men were involved in painting), who did not live at the worksite, with most of them living in rental rooms.

Table 7. Which workers live at the worksite?

Workers	Migrant and migrant household status	Where do they live?
RCC – centering & *saliya kaam*	Single male migrants	Worksite
RCC - *bharai*	Mostly migrant families	Worksite
Masonry-plastering	Local / settled migrants	Off-site
	Mostly migrant families but also single males (women work as unskilled helpers)	Worksite
Flooring	Local / settled migrants	Off-site
	Single male migrants	Worksite or Off-site (shared rental rooms where workers pay the rent)
	Migrant families (women work as unskilled flooring workers)	Generally Worksite
Painting	Single male migrants (majority of the painting workers)	Worksite or Off-site (shared rental rooms where workers pay the rent)
	Migrant families (women do not working in painting)	Worksite (rental rooms where workers pay the rent)
Plumbing	Local / settled migrants	Worksite
	Single male migrants	Worksite or Off-site (rental rooms where either the contractor or the workers pay the rent)
	Migrant families (women sometimes work in plumbing as unskilled workers)	Worksite or Off-site (rental rooms where workers pay the rent)
Waterproofing / China mosaic	Local / settled migrants	Off-site
	Migrant families (women work as unskilled workers)	Worksite
Electrical work	Local / settled migrants	Off-site
	Single male migrants	Worksite
Depart workers	Often migrant families	Worksite

Plumbing workers

There was also variation with respect to whether plumbing workers lived at the worksite. In 2 projects all of them lived at the worksite – in one case, they were all single male migrants and in the other case they were mainly migrant families (Sites 12 & 13). In 4 projects none of them lived at the worksite – in three cases the workers were reported to be locals / settled migrants while in one case they were reported to be migrants from Orissa (Sites 1, 2, 3, 4).

Here, it is illuminating to draw upon a discussion with a plumbing contractor. This contractor is Odiya, and he and his brother started a plumbing agency several years ago. They take up work for almost 25 developers in Ahmedabad. At the time of the discussion they employed 75-80 workers across 8-10 projects. 70% of the workers hired by them are brought in from Orissa and are an almost equal mix of skilled and unskilled workers, while the remaining 30% are from 4-5 other states. About 50% of the total workers they employ are single male migrants, both skilled and unskilled, who live in tenements (consisting of 2 rooms and a kitchen) rented by the company. 15-20% of the total workers

are migrant families who rent rooms on their own. The workers live at the worksite in projects where rooms in a proper labour colony are provided to the agency. He defined "proper labour colony" as consisting of "PCC flooring in the rooms, water, toilets, and electricity." The agency never gets involved in building rooms at the worksite for its workers. The agency also employs waterproofing workers from Dahod and Godhra, who almost always live at the worksite.

Waterproofing and China mosaic workers
There was also variation with respect to whether workers engaged in waterproofing and china mosaic work lived on the worksite. In 3 projects the workers lived on the worksite – they were mainly migrant families (Sites 1, 2, 13). In 1 project the workers were locals / settled migrants and did not live on the worksite (Site 8).

Electrical workers
There was also variation with respect to whether workers engaged in electrical work lived on the worksite. In 2 projects all of these workers seemed to be living on the worksite – in both these cases, they were single male migrants (Sites 9 & 13). In 3 projects none of them lived on the worksite – in all three cases the workers were all locals / settled migrants (Sites 1, 2, 3).

Depart workers
Depart workers refer to workers directly employed by the developer/contractor, and given miscellaneous work like cleaning, loading/unloading, etc which are not including in the scope of any of the contractors/sub-contractors' works. But they may also be employed through a sub-contractor, in which case the developer/contractor asks the sub-contractor to provide a specific number of workers and pays them a daily wage rate as opposed to giving the sub-contractor a rate contract which allows him to decide how many workers to hire. Some developers employ a few depart workers, others may employ as many as 50 depart workers. Mostly they seemed to be migrant families and lived on the worksite.

To summarize: The RCC and masonry-plastering workers, who are the largest proportion of the workforce on any project, predominantly lived at the worksite in all the 14 projects covered in the study. These workers were circular migrants. On a few projects, there were also a few RCC and masonry-plastering workers who were locals or settled migrants and lived off-site; while some of them were naka workers brought in intermittently, some were also attached to the contractor on a regular basis. With respect to the workers engaged in other construction activities on the 14 projects, there were variations across projects in terms of whether and how many workers engaged in each activity lived on the worksite and off-site in their own arrangements. This seems to depend on a combination of factors such as the migrant and migrant household status of the workers engaged in that construction activity (see Table 2), the duration of work for that activity, the scale of the project and what kind of accommodation and services are provided for them at the worksite, whether their contractor provides them accommodation off-site (seems to be very rare) and workers' preferences.[25]

4.2.2. Who are the Contractors – and how does this shape the context for provisioning?

In large number of construction projects undertaken by developers, multiple contractor agencies are engaged across the different construction activities (excavation, RCC, masonry-plastering, flooring, painting, waterproofing, plumbing, aluminum windows, grill fabrication, plumbing, electricals, etc)

[25] There seem to be many single male workers in activities like flooring, painting, plumbing, electrical work, who live in shared rental rooms in the city rather than living at the worksite – thus paying rents instead of living at the worksite without incurring this expense. This may have to do with their preferences, shaped by their duration in the city, housing preferences, and networks through which to find such housing.

(see Table 8). This results in multiple contractor agencies often playing a greater or lesser role in the provisioning of housing and services for construction workers hired on a single project.

Table 8. Who are the Contractors?

Sites	Contractors
Projects undertaken by developers	
1	Different medium and small-scale contractors for each of the different construction activities (this included 3 masonry-plastering contractors who were each given the contract for a few buildings; and 2 flooring contractors who were each given the contract for few buildings)
2	Different medium and small-scale contractors for each of the different construction activities (almost 50 different contractors: this included 3-4 RCC contractors, 2-3 masonry-plastering contractors and 2-3 plumbing contractors, who were each given the contract for a few towers)
3	Large construction company hired for excavation, RCC, masonry-plastering, waterproofing and partial flooring (material + labour contract) + Medium and small-scale contractors for each of the other construction activities
4	3 contractors who were given a RCC-masonry-plastering contract for one tower each; Different medium and small-scale contractors for each of the other construction activities
5	Large construction company hired for excavation, RCC, masonry-plastering (and maybe few other activities) + Medium and small-scale contractors for other construction activities
6	Large construction company hired for excavation, RCC, masonry-plastering (and maybe few other activities) + Medium and small-scale contractors for other construction activities
7	Large construction company hired for excavation, RCC, masonry-plastering + Medium and small-scale contractors for each of the other construction activities
8	Large construction company hired for excavation, RCC, masonry-plastering, flooring and painting + Medium and small-scale contractors for each of the other construction activities
9	Large construction company hired for all works except excavation
10	Medium and small-scale contractors for the different construction activities
11	Medium and small-scale contractors for the different construction activities
Projects undertaken by other private entities	
12	Large construction company hired for excavation, RCC, masonry-plastering, plumbing + Medium and small-scale contractors for each of the other construction activities
13	Large construction company hired for all works except external glazing, carpentry + Large contractor for carpentry and a contractor for external glazing
Projects undertaken by public authorities	
14	Large construction company hired for all works

Moreover, contractor agencies vary in scale, ranging from small contractors to large construction companies. While the former do not have the ability to contribute to decent provisioning, the latter do have this ability. The ability of medium-scale contractors to contribute to decent provisioning might vary. Furthermore, the number and scale of agencies hired vary across projects – some projects hire a large construction company for several activities and a few medium/small agencies for the remaining few activities (e.g. Site 8); some hire a large construction company for few activities and numerous medium/small agencies for the other activities (e.g. Sites 3, 7); and some hire only

numerous medium/small agencies (e.g. Sites 1, 2, 4, 11). Whenever medium/small agencies are hired on a project, there may even be multiple contractors for the same activity. For example, a project consisting of 8 towers may hire 3 flooring contractors, giving 2-3 towers to each one. Some projects also hire a large construction company for all (or almost all) the works (e.g. Site 9). Who the contractors are on any given project, along with whether and which of their workers live at the worksite, thus shapes the context of provisioning for that project.

This would also be the case for projects undertaken by other private entities (like private institutions and hospitality companies) and public authorities. In the former kind of projects, it seems that generally there is large construction company hired for some activities and some other agencies hired for the remaining works (Sites 12, 13). In projects undertaken by public authorities, this study examined only one road development project, wherein a large construction company was hired for almost all the works (Site 14). More public projects would have to be studied to see if there are many instances wherein numerous multiple contractors are hired across the different construction activities.

Finally, it would be important to keep in mind that the present discussion is limited to the contractors hired by the public/private entity undertaking the project, and does not consider the sub-contractors who may be hired by these contractors. Although there are likely to be sub-contractors involved in many of the projects, they were identified in only one project (Site 9) because they were involved in building the labour accommodation. The case of this one project (Site 9) suggests that sub-contractors also play a role in the provisioning in certain projects.

4.2.3. Mode and Nature of Provisioning: Synthesis of Findings

In 3 of the projects involving two different developers, whatever provisions were there were made almost entirely by the developer. The nature of the provisioning varied across the projects. In one of these projects (Site 1), some provisions like the creche and health clinic were good, the labour accommodation was above average, the toilets were average, and the bathing/washing facilities were non-existent. In the second project (Site 2), which was by the same developer, the creche and health clinic were good while the labour accommodation and sanitation were poor. In the third project (Site 11), all the provisions were good.

In the remaining 8 projects by developers and 2 projects by other private entities, certain provisions were made by the developer/other private entity, while other provisions were made by the contractors. There are “rate contracts” with most of the contractors, which means that they are paid a certain rate per square foot. The cost of labour, temporary materials required for construction (like scaffolding, shuttering plates, lift to carry cement, etc) as well as facilities for the labour are factored into this rate. However, how much is actually factored into the rate for facilities for the labour is not clear.[26] In one project, some provisions were also made by a sub-contractor. The nature of the provisions varied across the projects, although there was standardization across some projects that involved large construction companies. Who does provisioning for which aspects seems to depend on the scale of the project; the scale, orientation and preference of the developer / other private

[26] The costs incurred by few developers and large construction companies are discussed in section 4.2.4. A more thorough study of these costs (both absolute costs and as a percentage of the rate negotiated between the contractor and developer) as well as how they are factored into the rates, would require discussions with contractors engaged in different activities (RCC, masonry-plastering, flooring, painting etc) as well as contractors of different scales. The questions that would be of particular interest are (i) whether and how the costs factored into the negotiated rates vary across contractors; and (ii) whether the absolute costs of providing exactly the same kind of labour accommodation for X number of workers would be different for contractors of different scales (i.e. large construction companies, medium-scale contractors, small contractors).

entity; and the construction activity, scale, orientation and preference of the contractors and sub-contractors.

Only one project undertaken by a public authority was studied. This was a road development project for which the contract was given by the AMC to a large construction company. Whatever provisions were there for the workers were made by this company.

With respect to the mode of provision and nature of provision, the discussion below outlines the key findings for six aspects of provision: land, labour accommodation, water and sanitation, electricity, creche and health services. It also considers the relationship between the mode of provision and the nature of provision, and the role of government authorities in making certain provisions possible.

One important aspect to be kept in mind with regard to these findings is that the majority of construction sites and labour colonies in Ahmedabad are likely to have very poor facilities, and more sites with very poor facilities are not part of the 14 sites studied because it is more difficult to gain access to such sites for systematic research.

Land for the labour colony

<u>11 Projects undertaken by Private Developers</u>

Land for the labour colony was generally provided by the developer. This land was provided on the project site if there was available land. Where land was provided elsewhere, it was either owned by the developer or leased from a public landowner (such as AMC and AUDA) or private landowner. In cases where a large construction company has been hired on the project and land is not available on the project site, this company may also arrange for land elsewhere for a labour colony for its workers. In many projects, especially in the more developed parts of the city, no land is provided on the site or elsewhere, with the workers accommodated inside the building under construction, on the ground floor/upper floor and even the basement.

- In 4 projects, land for the labour colony was provided on the project site since it had adequate land.
  - In 3 cases (Sites 1, 3, 11), the land area for the project was quite large (more than 90,000 sq.m. / 22 acres) and since the project was being developed in phases over many years, this allowed for the labour colony to be built on the site.
  - In 1 case (Site 4), the land area for the project was not very large (10,380 sq.m.) but it comprised of number of buildings which were to be constructed in phases, which allowed for the labour colony to be built on part of the site. It is not clear where the workers will be moved once all the project land is required for construction.
- In 5 projects, building a labour colony on the site was not feasible, generally because the project comprised of 1-2 buildings which left inadequate land for a labour colony. The land area of the project was also less (5,000-13,000 sq.m.). In these 5 projects, land for labour colony was provided within 1 km of the site so that workers could walk to site. (Sites 5, 6, 7, 8, 9).
  - In 4 of these projects, the developer provided the land. In one project, the developer owned this land; in a second project, the developer leased land from a private landowner; and in a third project, the developer leased land from the AMC. In the fourth project, the land was most probably owned by the developer but this could not be confirmed.
  - In 1 of these projects, both the developer as well as one of the contractors (a large construction company) leased land from the AMC with both of them building labour accommodation for different sets of workers. As the contractor's work on this developer's project began to reduce and thus its workers on this project decreased, workers engaged on

another of its nearby construction sites – belonging to another developer – were accommodated in this colony. The construction company passed on this land cost to the developer whose workers were accommodated in the colony.

- In 2 projects, the workers were accommodated in an under-construction building on the worksite.
  - In one of these projects (Site 2), the land area of around 17,000 sq.m. was put under construction in phases. Therefore, initially, a labour colony consisting of 30 rooms was built on a part of the land, and when this land came under construction, the colony was dismantled and the workers moved to the basement of one of the under-construction buildings.
  - The other project (Site 10), comprising of a land area of 4800 sq.m, consisted of a single building. Some workers initially lived in shacks on one edge of the land, but workers were accommodated in the basement as soon as it was constructed. As the upper floors got built, workers were also accommodated on the second floor of the under-construction building.

2 Projects undertaken by Other Private Entitles

In the case of the hospitality company's project, land for the labour colony was provided by the contractor agency, a large construction company, hired to do the excavation, RCC, masonry-plastering and plumbing (Site 12). The project site did not have adequate land for a labour colony or even for storing most of the construction materials, and the construction company leased some nearby land from the AMC for these purposes. It remains unclear in what way the rent paid for this land is accounted for in the contract between the hospitality company and the construction company. It is also unclear who will provide land for the labour colony when the hospitality company hires contractors for the remaining construction activities and if these contractors recruit workers who have to live at the worksite.

In the case of the private university's project, land for the labour colony was provided by the university (Site 13). This was possible since the university had adequate land near the project site.

1 Project undertaken by a Public Authority

In the case of the project by the Ahmedabad Municipal Corporation, land for the labour colony was provided by the contractor agency, a large construction company, hired to do almost all the work (Site 14). Since this is a road development project, the project site itself has no land for a labour colony or even for storing most of the construction materials. Despite this being an AMC project, the AMC did not provide free land for these purposes to the construction company, which leased some land from the AMC itself. The scrutiny of contracts for public projects in section 4.1.3 also showed that the AMC does not provide free land, and contractors have to make their own arrangements for this purpose, and some may lease land from the AMC itself. Further investigation would be required across different public projects to understand how contractors arrange for land if they are not able to lease it from the AMC.

The question of access to land for building a temporary labour colony is a challenging issue for many private developers, other private entities undertaking construction projects and contractors, particularly for projects which are not large-scale and therefore do not have land available on the project site for a labour colony. For such projects, the cheapest option is to accommodate the workers on the edge of the site until the construction reaches a stage where the workers can be shifted into the under-construction building. This results in deplorable living conditions. This way of accommodating workers on the worksite is widespread in the more developed areas of the city where projects are often smaller in scale. The other option is to lease a plot of land from a private or public landowner to build the labour colony. However, even if a developer / contractor is willing to spend on leasing land, finding vacant land to lease within walking distance of the project site is not

easy, particularly in the more developed areas of the city. It should be noted that developers / contractors want workers to live on the site or within walking distance in order to avoid incurring costs for their daily transportation. On the city periphery it is easier to find vacant land nearby that can be leased for a labour colony.

Although, among the projects studied here, there were 4 projects where the developer / contractor had leased a plot from the AMC for a labour colony and 1 project where a developer leased a plot from a private landowner, leasing land from a private landowner rather than the AMC was reported to be preferable for reasons of lower cost and convenience. According to a construction company that leases land from both AMC and private landowners for its labour colonies, when one leases AMC land, besides the rent amount, there are other charges including 28% GST, property tax for the lease period, and a deposit.[27] If the land is leased for 12 months, the deposit is the rent amount for 12 months. Moreover, the rent for the entire 12 months, the deposit, GST and property tax has to be paid upfront. With private land, there is no GST or no property tax, and the rent can usually be paid on a monthly basis. The rent per sq.m. is also usually higher for AMC land than private land.[28] One developer also explained his preference for leasing land from a private landowner: "Most of our projects are on the city periphery and so there is generally some vacant land nearby that is no longer being farmed, and the farmer is glad to give it for some months and earn some money out of this. There are no written rent contracts, just an informal understanding. We do not rent land from the government for the labour colony because government processes are long… Also the government would have some fixed minimum rate at which it would rent out its land… We often rent land from a private landowner near the construction site and then our contractors will build the labour colony."[29]

Building of labour accommodation

<u>11 Projects undertaken by Private Developers</u>

The labour accommodation for all workers living at the worksite was built by the developer in 3 projects (Sites 1, 2, 11) (Table 9).[30] The nature of accommodation varied across the projects. At Site 1, rooms with verandahs and walls made from pre-cast concrete panels were built by a contractor specifically hired for making these rooms (Plate 1). Additional rooms, made during peak construction time when the above rooms were inadequate for the number of workers, were built from corrugated metal sheets – it was unclear if these were built by the developer's depart workers or the RCC contractor's workers. At Site 2, room-like enclosures were built with corrugated metal sheets by the developer's depart workers in the basement of an under-construction building (Plate 2). At Site 11, the developer hired a contractor to specifically build the labour colony which was intended as a "model colony"; here, the rooms were arranged around communal verandahs and were made from a combination of materials like corrugated metal sheets, PVC plastic sheets and agronets for ventilation (Plate 11).

[27] Discussion with the Admin manager of a construction company, August 21, 2019.
[28] In response to a RTI about the AMC giving its land on lease for labour colonies, the AMC provided a copy of Estate Circular 16, 2015-16 (dated 11/09/2015), which lists the different purposes for which AMC rents out its plots and the rental and other charges (taxes etc) for different purposes, as well as a list of conditions governing the rental use of these plots. According to the Estate Circular, the AMC will rent out its land for the purpose of storing construction materials and making a labour camp for AMC's construction projects, charging an annual rent equivalent to 1% of the current Jantri rate for that plot. The list does not give an option to rent out AMC land for private construction projects. It is therefore still unclear how developers / contractors can lease land for private projects and how much rent they are required to pay.
[29] Discussion with developer, July 3, 2019.
[30] At Site 11, for various reasons, some of the contractors / workers refused to live in these rooms and built their own rooms nearby. See Plate 11.

In the remaining 8 projects, the contractors were involved in building some or all of the labour accommodation (see Table 9). What this means is that the contractor(s) got their workers to erect the accommodation and they also provided materials for the accommodation, although developers had also provided some materials at some sites. In some of these projects, the developer also built some labour accommodation. As explained later, the nature of accommodation built by the contractors varies, with large construction companies often building relatively better rooms than the medium/small-scale contractors. Furthermore, a contractor will generally build rooms only for his own workers. Therefore, in a project with multiple contractors, often more than one entity builds rooms for the workers, leading to variations in the labour accommodation built for a single project. Thus, in 5 projects involving multiple contractors, one or more contractors built rooms, each for their own workers; whereas the developer built rooms for its depart workers and the workers of the remaining contractors (Sites 3, 4, 6, 7, 8: see corresponding Plates 3, 4, 6, 7, 8).[31] The nature of accommodation built by the developers also varies across projects, and sometimes even within a single project with relatively better rooms built for the developer's old depart workers than for the workers of their contractors (Site 3). In one of these projects, besides a large construction company, a RCC contractor and the developer building rooms, the Gujarat Building and Other Construction Workers Welfare Board (GBOCWWB) had also built some rooms under its temporary housing scheme (Site 3).[32]

In 1 project involving multiple medium and small-scale contractors, the workers were living in the under-construction building. Each of the contractors had provided materials to their workers, in some cases corrugated metal sheets, in other cases plastic sheets, in still other cases concrete blocks from the site itself, to make enclosed, semi-enclosed or unenclosed living spaces (Site 10).

There was only one project involving multiple contractors where all the rooms in the labour colony were built by a single entity, a large construction company given the contract for several works (Site 5). The developer had no depart worker family living at the worksite. However, the construction was still in the RCC stage and it was not certain whether rooms would be built at the worksite for workers of other contractors who were yet to start work, and who – developer or contractor – would build them.

There was only one developer's project which had a single contractor, a large construction company (Site 9). But even here, multiple entities were involved in building labour accommodation. The company had not built rooms for all the workers – at the time of the fieldvisit, it had built rooms mainly for the RCC workers while rooms for the masonry-plastering workers were built by the sub-contractor to whom the company had sub-contracted this activity. The developer also had a family whose members worked as depart workers and they had erected their own shack at the worksite.

When the contractors build labour accommodation, they mostly build it as per their inclination. Therefore, when a number of contractors are building labour accommodation for a particular project, each for their own workers, then the labour colony could have rooms built in various ways by the different contractors. The developer does not seem to specify the design (e.g. room size, windows, etc), materials or structural system. At one project, the developer's Safety Officer stated that they gave some specifications to their contractors such as spacing between the rows of rooms, toilet ratios, etc. However, since it was not possible to obtain the written contracts between the

[31] At Site 8, where construction was still at the RCC and masonry-plastering stage at the time of the fieldvisit, a large construction company (hired for excavation, RCC, masonry-plastering, flooring and painting) had built rooms for its workers while the developer had built several rooms for his depart workers. It was not certain whether workers of other contractors who would be hired for the remaining construction activities would live at the worksite and if so, who – developer or contractor – would build the rooms for them.

[32] Refer to section 6.3 for details about the temporary housing scheme.

developer and contractor, these specifications could not be examined to check if they were adequate and whether and how they were enforced by the developer.

2 Projects undertaken by Other Private Entitles

The labour accommodation for the university building project was made by the large construction company hired for almost all the works and the contractor hired for the carpentry work (Site 13). The labour accommodation for the hotel project was built by the large construction company hired for many of the works, and it was likely that when other contractors (such as for painting and flooring) started work they would provide accommodation for their workers if they had to be accommodated at the worksite (Site 12).

1 Project undertaken by a Public Authority:

The labour accommodation for the road development project was built by the large construction company contracted for the project (Site 14).

Table 9. Who built the labour accommodation?

Site	Entity undertaking the project (Developer / other private entity / public authority)	Contractors[1]		GCBWWB
		Large construction company	Other contractors or sub-contractors	
	Developer			
1	√	(not applicable)	X	X
2	√	(not applicable)	X	X
3	√ (only for depart workers and workers of some contractors)	√	√ (one RCC contractor built accommodation for its workers)	√
4	√ (mainly for depart workers)	(not applicable)	√ (three RCC-masonry-plastering contractors, one flooring contractor & possibly some other contractors built accommodation for their workers)	X
5	X[2]	√	X[2]	X
6	√ (for depart workers and workers of some contractors)	√	√ (a few contractors seemed to have built accommodation for their workers)	X
7	? (unclear if developer or flooring contractor built the accommodation for flooring workers living on site – mostly probably flooring contractor)[2]	√	? (unclear if developer or flooring contractor had built the accommodation for flooring workers living on site – mostly probably flooring contractor)[2]	X
8	X (although has built for several depart workers)[2]	√	X[2]	X
9	X (although has built for one family hired as depart workers)	√ (for RCC workers)	√ (masonry-plastering sub-contractor built accommodation for its workers)	X
		Unclear whether construction company or sub-contractor had built the accommodation for electrical workers living on site.[3]		

10	X (workers built their living spaces in the under-construction building)[4]	(not applicable)	X (workers built living spaces in the under-construction building)[4]	X
11	√	(not applicable)	√ (despite developer having built a "model" labour colony, some contractors / workers refused to inhabit it and built accommodation adjacent to this colony)	X
	Other private entity			
12	X	√	X[5]	X
13	X	√	√ (carpentry contractor built accommodation for its workers)	X
	Public authority			
14	X	√		X

[1] Where large construction company built the accommodation, it provided both material and labour. Where "other contractors or sub-contractors" built the accommodation, this generally meant that these contractors / sub-contractors deployed the labour to build it (usually the workers themselves), but it remains unclear whether the developer paid the contractor the wages for this labour and also who (developer or contractor) provided the materials.
[2] Unclear whether accommodation will be built "on site" for workers of contractors yet to start work and who (developer or contractor) will build for them.
[3] Unclear whether accommodation will be built for workers of sub-contractors yet to start work and who (construction company or sub-contractor) will build for them.
[4] Unclear whether the developer or contractors provided the materials to the workers.
[5] Unclear whether the workers of contractors yet to start work will live on site, in which case the contractor will build accommodation for them.

Overall with regard to the mode and nature of provision, the fieldvisits and discussions across the 14 projects revealed that corrugated metal sheets were widely used to build the rooms – by large construction companies, most medium/small-scale contractors and developers – but there was a variation in the quality of the rooms. The large construction companies built relatively better rooms as elaborated later. Three of the large construction companies, who were involved across half of the projects, have each developed a more or less standardized model for building labour accommodation, with fixed room sizes, materials, structural system, and more or less better flooring. The labour accommodation made by many of the medium/small-scale contractors was poorly built with recycled materials that were in very poor shape and no proper flooring. However, some of these contractors had built better rooms using concrete blocks with relatively better flooring.

In general, rooms made from corrugated metal sheets created harsh spaces to live in during summers. There were no windows and the doors, leading to inadequate natural light and ventilation. The aspect of environmental comfort is rarely a consideration. So what is the rationale that shapes the nature of labour accommodation? The rationale of large construction companies for using an in-situ fabrication system for the structure is that this allows for quick erection, dismantling and re-erection. The rationale behind the wide use of corrugated metal sheets for the walls / roofing – whether they are roughly erected or erected through in-situ fabrication system – is its low cost. It is not only cheaper than using other materials like Aerocon panels or pre-cast concrete panels but also easy to handle, possible to re-use several times across different labour colonies, and furthermore fetches a price in the scrap market when finally discarded. Among all the different kinds of rooms built across the 14 sites, there were however a few cases where an attempt was made to address light and ventilation for the rooms and use more climatically appropriate materials and design. While there were still limitations in the materials / design / cluster-layout, it may be possible to learn from and build on these "better practices."

Rooms meant for a family or a group of 4-5 single males were generally 8 feet x 10 feet (7.5 sq.m) or 10 feet x 10 feet (9.3 sq.m). At some sites, bigger rooms were made to accommodate large groups of single male migrants. At one such site (Site 12), groups of 10 male workers were accommodated in rooms of 20x20 feet (37 sq.m). Compare this to the ISMW Act which mandates a norm of 10 sq.m. room for a family, and a norm of 6.5 sq.m. per person in barracks for 10 workers.

The nature of provision is discussed in further detail below. The labour accommodation at the 14 sites was built from the following materials:

- 5 sites: All the rooms were built from corrugated metal sheets (Sites 2, 5, 7, 13, 14). At one site, the developer had built all the accommodation. At two sites, a single construction company had built all the accommodation.[33] At 2 sites, two entities had built accommodation, each for their workers – in one case, the construction company and the flooring contractor, and in the other case, the construction company and the carpentry contractor (see Table 9).
- 6 sites: Some of the rooms were built from corrugated metal sheets while some used other materials for the walls, such as old metal shuttering plates (Site 9), pre-cast concrete panels (Sites 1, 3, 6), concrete blocks / bricks (Sites 4, 8), and Aerocon panels (Site 12). At all these sites, more than one entity that had built rooms (Table 9).
- 1 site: A "model" labour colony was built. Corrugated metal sheets were used for the roofing while the walls of the rooms were made from a combination of corrugated metal sheets, plastic PVC sheets and agronets for ventilation.
- 1 site: The workers were accommodated inside the building under-construction, in the basement and on one of the upper floors. Some workers were living in room-like enclosures made from

[33] As mentioned earlier, at Site 5, it was possible that other contractors would build accommodation for their workers once their work began on the project.

corrugated metal sheets, others were living in semi-enclosed spaces made from plastic sheets, and still others were living without any enclosed private space but had used concrete blocks to make furniture-like beds and shelves.

Below is a discussion of the different types of rooms based on materials used. It also touches upon size, design and layout of rooms to shed some light on their livability. Where possible, the rationale of developers / contractors behind constructing the rooms in this way is also explained.

Rooms built using in-situ fabrication system and corrugated metal sheets:

Where the accommodation was made by small/medium-scale contractors out of corrugated metal sheets, the rooms were usually roughly erected. Metal pipes or bamboo was used as structural elements; corrugated metal sheets, often in poor shape since they had been re-used many times, were used for the walls and roofing; and there was no flooring or poorly done flooring (Image 1). Other recycled and waste materials like plywood sheets, gunny sacks and old metal shuttering plates were also used sometimes. Plastic sheets were often added on the roofs during the rainy season since the rough erection and poor quality of materials often resulted in water leakages.

Image 1. Rooms roughly erected using corrugated metal sheets

Image 2 (left). Frame structure made by fabrication onto which corrugated metal sheets are bolted
Image 3 (right). One-storied structures made by fabrication system where there is limited land area

Where accommodation was built by a large construction company, it was usually found to be better made. A proper frame structure was generally constructed using in-situ fabrication, for which metal pipes were used (Image 2 & Image 3). Corrugated metal sheets – sometimes new, sometimes recycled – were then bolted onto this structure. One of the construction companies often built one-storied structures of this kind in order to accommodate more workers on limited land area (Image 3). At one site, the construction company had used old metal shuttering plates for the walls.

The rooms were generally built in one or two standardized sizes and had relatively better flooring. Rooms meant for a family or a group of 4-5 single males were generally 8 feet x 10 feet (7.5 sq.m) or 10 feet x 10 feet (9.3 sq.m). At some sites, bigger rooms were made to accommodate large groups of single male migrants. The company also made arrangements for regular sweeping in the open spaces of the colony, which ensured relatively better sanitary conditions around the rooms.

Developers also often built accommodation from the same materials for their depart workers and workers of some of their contractors. At some sites these rooms were roughly erected, while at other sites they were better made.

Where corrugated metal sheets are used – regardless of the better care given to the construction of the rooms, especially by large construction companies – they create harsh spaces to live in during the summers. There are no windows and the doors are also generally made from corrugated metal sheets, leading to inadequate natural light and ventilation. In the more roughly built rooms, there are sometimes no doors at all (Site 9). Discussions with relevant staff of the companies and developers revealed that the aspect of environmental comfort in the labour accommodation is not a consideration for them. The rationale of large construction companies for using an in-situ fabrication system for the structure is that this allows for quick erection, dismantling and re-erection. And the rationale behind the wide use of corrugated metal sheets for the walls / roofing is that it is low cost, cheaper than using other materials like Aerocon panels and possible to re-use several times across different labour colonies.

Rooms with precast concrete panels for walls and corrugated metal sheets for roof:

At 3 sites, precast concrete panels were used for the walls in a large number of the rooms (Sites 1, 3, 6). Structurally, the rooms were made from a combination of precast concrete columns and metal pipes to support the roofing. The rooms were 8 feet x 10 feet (7.5 sq.m) or 10 feet x 10 feet (9.3 sq.m). One developer explained that rooms made entirely from corrugated metal sheets are like a furnace in the summer, and therefore, wherever there is land available to build the colony, they build the walls from precast concrete panels. Earlier, they used to build the rooms from brick masonry, but moved to precast concrete panels so that they could build the rooms faster. Furthermore, where possible they also try to provide a large verandah space for each room for climatic reasons and to accommodate the lifestyle of the workers (Site 1). While the rooms had no windows, the doors were made from a combination of plywood sheet and metal grille, the latter making possible some natural light and ventilation even when the door is closed. However, in many rooms the workers had covered the grille with some cloth or plastic material for privacy. The other developer who had built rooms from precast concrete panels could not be interviewed, but the fieldvisit revealed that the rooms were built along narrow lanes of 5-6 metre width, with no windows and metal shuttered doors, creating conditions of poor natural light and ventilation (Site 6).[34] At the third site, these rooms were constructed by the GBOCWWB under its temporary housing scheme (see section 6.3). The GBOCWWB rooms had windows (with wooden or metal shutters) along the front wall (Site 3).

[34] There is a possibility that these rooms were constructed by the GBOCWWB, however, this is unlikely because the GBOCWWB design has windows.

The precast technology allows for quicker erection and dismantling compared to rooms built out of concrete blocks / bricks – but it takes more time to erect and dismantle these rooms than it does for rooms built using in-situ fabrication system. Building rooms from precast concrete panels is also more costly than building them using in-situ fabrication system and corrugated metal sheets, not only because the initial construction cost is a bit more but also because of the following reasons:[35]

- Only 70-80% of the precast concrete panels and columns can be re-used since some of them get damaged during dismantling. On the other hand, corrugated metal sheets and metal pipes do not get easily damaged during dismantling and can be re-used a number of times.
- Once the life-cycle of the corrugated metal sheets is over, one can get back 50% of their value by selling them as scrap, whereas precast concrete panels do not have any scrap value.
- Handling of precast concrete panels is not as easy as the corrugated metal sheets. If X number of workers can erect 8-10 rooms built of precast concrete panels in one week, then the same number of workers will be able to erect 8-10 rooms using in-situ fabrication system in half the time.

This might also explain why at one site, although 100 rooms were made from precast concrete panels, when these rooms were insufficient to accommodate all the workers during peak construction, and other rooms were required for a shorter duration, then the additional rooms were made using in-situ fabrication system and corrugated metal sheets. Bigger rooms to accommodate larger groups of single male migrants were also built using in-situ fabrication system and corrugated metal sheets, and not from precast concrete panels.[36]

Image 4. Rooms made from precast concrete panels

Rooms built using in-situ fabrication system and Aerocon panels:

In a labour colony built by one construction company, the rooms, which were ground-floor structures, were built using in-situ fabrication system with internal walls from corrugated metal

[35] These reasons were explained in a discussion with a Project Manager and his team at one of the visited sites, June 18, 2019. The initial cost of building a room from corrugated metal sheets versus precast concrete panels is discussed in section 4.2.4.

[36] Bigger rooms can be made using this precast technology. For example, at one site a large room for a creche was built using precast concrete panels.

sheets and external walls from Aerocon panels (Site 12).[37] Aerocon panels rather than corrugated metal sheets were used for external walls for climatic reasons. The rooms were of two sizes: 3-4 metre x 4 metre (12 sq.m) for families and 6 metre x 6 metre (36 sq.m) for groups of 8-12 single male migrants. The rooms were made with a proper plinth and flooring, and also provided with windows along the front wall, ensuring some natural light and ventilation.

However, as the construction progressed on this project and more workers came and more rooms were built, Aerocon panels were abandoned in favour of the cheaper corrugated metal sheets. Some of these additional rooms were also roughly assembled, and were made without a proper plinth and flooring.

Image 5. Rooms made from Aerocon panels

Rooms built from concrete blocks / brick masonry:

At a few sites, some rooms by a contractor and/or developer were made from concrete blocks or fired brick masonry (Sites 3, 4, 6, 8). Discussions with them were not possible and therefore their choice of these materials over others still needs to be understood.

Image 6. Rooms made from concrete blocks

[37] Aerocon sheets are cement sandwich panels, made of two fibre reinforced cement facing sheets on either side of a light-weight concrete core.

Flooring:

Proper flooring in the rooms is important since this results in less likelihood of dampness and water seeping into the rooms during the rainy season; it can prevent rodents from destroying the living space by burrowing into the earth; and it also allows for ease of cleaning. While the floor in many rooms was made with PCC (plain cement concrete) or brickbats laid in cement, in many other rooms, construction waste materials (like brick-bats, and old / damaged paver blocks and tiles) were laid directly over compacted earth. One project manager explained that since the labour colony is temporary, they do not use PCC since this would have to be broken at the time of dismantling. At some sites, there were also rooms which had no flooring at all.

Proper paving or proper levelling of the earth in the open spaces of the labour colony is also important to maintain sanitary conditions. But proper paving / levelling was done only where most of the labour accommodation was built by a single entity (the developer at Site 11 and the contractor at Site 5) or in part of the colony that was built by a large construction company (Sites 6, 7, 8). Elsewhere there were half-hearted attempts to level / pave open spaces in the colony when they became waterlogged or muddy during the monsoon.

Workers living in the under-construction building:

At 2 sites, the labour accommodation was in the under-construction building. In one case, the accommodation was in the basement and the developer had, more or less systematically, built room-like enclosures (which could be locked) from corrugated metal sheets (Site 2). In the other case, the accommodation was in the basement as well as the second floor (Site 10). As mentioned earlier, different contractors at this site had given the workers different materials, therefore some workers had made semi-enclosed spaces from plastic sheets, some had made room-like enclosures from corrugated metal sheets (Image 7), and still others were living without any enclosed private space but had used concrete blocks to make furniture-like beds and shelves (Image 8).

Image 7 (left). Workers living in the under-construction building
Image 8 (right). Workers living in the under-construction building

There are serious questions around health and safety where workers are living in under-construction buildings, regardless of the kind of enclosures made to afford some privacy and create some kind of living space. Where workers (often with children) are living on the upper floor of a building, in the absence of parapets and sharp construction items strewn about, there is always the possibility of injury or even a fatal accident. Where workers are living in the basement, health issues are a concern

because of the lack of natural light and proper ventilation. A project manager working since 10 years with a large developer explained that as per their company policy they do not allow workers to stay in an under-construction building for safety reasons, hygiene reasons, and because "workers will not get a good life," "the site and their life will become messy," and "the children will roam around on the site."

Water and Sanitation Infrastructure

The water source was organized by the developers at all the labour colonies for projects undertaken by them. In case of projects undertaken by other private entities, the water source was organized either by the contractor (Site 12) or by the private entity (Site 13). In the case of the single public project studied, this provision was made by the contractor (Site 14). Depending on where the labour colony was made – on the project site or on some nearby land, and landownership in case of the latter – this water source was either a bore-well made specifically for the colony, a piped connection to the bore-well made for the construction site, or water tankers.

None of the labour colonies had a municipal water connection. According to one developer, the AMC does not give water connection to construction sites because it fears that municipal water would be used for construction purposes, and as a result, the labour colonies also lack municipal water supply.[38] In fact, applications to AMC / AUDA for a water and drainage/sewerage connection and other services and utilities are supposed to be made only after construction is completed and BU permission is obtained from the concerned ULB. However, according to a senior administrator in a large construction company, one can apply to the AMC for a water and drainage/sewerage connection before the BU permission, but in such cases the AMC gives only a limited water connection (*addhha ni pipe*, translated: half pipe) which would provide a quantity sufficient for only 10-15 persons.[39] He added that this also involves a lot of paperwork as well as a Rs.2 lakh deposit, and therefore the company had never applied for a municipal water connection. He also pointed to a new government rule made in 2019 about the documents required to apply for a water and drainage connection prior to BU permission. This includes the 7/12 document (proof of landownership) from the landowner. The company often leases land from a private landowner to build the labour colony, and often this landowner is not willing to furnish the 7/12 document since it records a number of claimants to the land. Section 4.1.3 has already discussed that for AMC projects, the contractors are required to make their own arrangements for water for the labour camps. Although the question of providing basic services like water for workers living at the worksite is deemed to be the developer / contractor's responsibility, there is a need to think about the concomitant role and responsibility of the municipal authority in providing access to municipal services to these urban residents.

Since the labour colonies remain disconnected from municipal water, drinking water also has to be arranged through other means. At majority of the 11 sites of developers, filtered or RO water was provided either in the labour colony itself or at the nearby construction site. On one large project, the construction site was some distance from the labour colony, thus requiring workers to walk some distance to fill drinking water. At many of these sites, the provision of filtered / RO water was made by the developer, but where a large construction company was hired, the company often made this provision (see Table 5). These potable water provisions were done either by installing a water filtration / RO plant or calling for drinking water tankers. At few sites, while a separate drinking water storage facility was provided on the construction site or in the labour colony, the water supplied was directly from the bore-well and not purified in any way. There were also three sites where the drinking water had to be filled from the same taps as those used for washing / bathing.

[38] Discussion with developer, August 23, 2019.
[39] Discussion on August 21, 2019.

Table 10. Provision of Drinking Water

Projects	Provision of separate drinking water	Provided where?	Who provided what?
Projects undertaken by developers			
1	No	On construction site	Drinking water to be filled from the same taps as water for washing
2	No	On construction site	Drinking water to be filled from the same taps as water for bathing / washing
3	Yes	On construction site	Water filtration / RO plant. Not clear if this was provided by Developer or the Construction company
4	Yes	On construction site (at some distance from the colony)	Water filtration / RO plant by Developer
5	Yes	In labour colony	Water filtration / RO plant by Construction company
6	Yes	In company's labour colony	Water filtration / RO plant by Construction company
	Yes	In labour colony built by the developer	Drinking water storage tank by Developer, supplied with bore-well water
7	Yes	In labour colony	Drinking water tankers by Developer; drinking water storage tanks by Construction company
8	Yes	In labour colony	Water filtration / RO plant by Construction company
9	Yes	Next to construction site and labour colony	Water filtration / RO plant by Developer (although a large construction company was hired)
10	No	-	Drinking water to be filled from the same source as water for bathing / washing
11	Yes	In labour colony	Filtered water by Developer
Projects undertaken by other private entities			
12	Yes	In labour colony	Water tankers and Water filtration / RO plant by Construction company
13	Yes	In labour colony	The private entity supplies the drinking water from its bore-well, but it is unclear if this water is purified. Construction company has installed a storage facility for the drinking water
Projects undertaken by public authorities			
14	No	-	Drinking water to be filled from the same source as water for bathing / washing

In the labour colony of the hotel project undertaken by a hospitality company, filtered / RO water was provided by the construction company, by calling drinking water tankers. In the labour colony of the project undertaken by a private university, the construction company provided a separate drinking water storage facility while the university supplied the water from its bore-well, most likely without any purification. In the labour colony of the project undertaken by a public authority, drinking water had to be filled from the same taps as those used for washing / bathing.

It is likely that many construction sites and labour colonies in Ahmedabad are not provided with potable water, and more sites like this were not part of the 14 sites studied because it was more difficult to access sites with poorer facilities.

Based on observations during the visits, the amount of water provided seemed to be adequate at many of the sites. Some of the developer / contractor's staff pointed out that workers cannot be easily retained for a long time if adequate water is not provided. Discussions with workers would be required to be conclusive about water adequacy. Water tankers provided water at two labour colonies, and from the data collected it looks like about 80 litres per capita per day was provided in one colony and 200 litres per capita per day in the other.[40] Where water was provided from bore-wells, it was difficult to estimate the amount provided.

All the sites had toilets, generally built by the entities (developer and/or contractor) that built a significant number of rooms.[41] Thus, where more than one entity had built many rooms, each of them also usually built toilets. In such instances, the quality of toilets varied even within the site since one entity might build better toilets or maintain them better than the other. At the 2 sites where workers were living in the under-construction building, the developer had built the toilets (Site 2 and Site 10). The nature of provision varied, from toilets constructed from materials like bricks or corrugated metal sheets to large mobile toilets to portable prefabricated toilet cubicles. One developer had recently shifted from building toilets from precast concrete panels to a large mobile toilet for ease of maintenance. Toilet ratios varied across the 14 sites. At 11 sites where there were separate toilets for men and women, the toilet ratio for women varied from 1:5 to 1:30, while for men it varied from 1:10 to 1:60.[42] At 3 sites where the toilets provided were common for men and women, the toilet ratio varied from 1:25 to 1:50.[43] According to labour legislation such as the Inter-State Migrant Workers Act, toilet ratios should be 1:25 (that is, 1 toilet for 25 men and 1 toilet for 25 women) (see Diagram 1). The toilet ratios for men was thus inadequate at several of the 14 sites and inadequate for women at a few sites.

[40] At one colony inhabited by 250 workers at the time of the visit, 3-5 tankers of 5000-litre capacity were arranged on a daily basis to provide water. Considering 4 tankers of 5000-litres daily, this comes to 80 litres per capita. In another colony inhabited by 600 workers at the time of the visit, 20 tankers of 6000-litre capacity were arranged on a daily basis; this comes to 200 litres per capita.

[41] The GBOCWWB's temporary housing scheme was limited to building rooms and did not include water and sanitation infrastructures which were meant to be provided by the developer.

[42] At the 11 sites where there were separate toilets for men and women, toilet ratios have been calculated as follows: At sites where the number of male and female workers at the time of the fieldvisit is known, calculating toilet ratios was straightforward. However, at many sites, the number of male and female workers is not known. In some cases, the total number of workers living at the worksite at the time of the fieldvisit along with the number of rooms occupied by families versus single males is known, and the number of male and female workers has been estimated from this (assuming that families are couples) and then toilet ratios are calculated. In other cases, there is no information to help estimate the number of male and female workers – in such cases, an assumption has been made that 50% of the rooms are (or would be) occupied by families (couples) and 50% by groups of four single male migrants, and then toilet ratios are calculated. At 1 site (Site 6/E), the total number of rooms is also not known and here toilet ratios could not be calculated.

[43] At the 3 sites where there were common toilets for men and women, toilet ratio has been calculated as follows: At 1 site the total number of workers is known and calculating toilet ratio was straightforward. At 1 site there were three different labour colonies by three different contractors, and toilet ratio is calculated for one of the colonies by estimating the total number of workers living in it, assuming that 50% of the rooms are occupied by families (two adults) and 50% by groups of four single male migrants. At 1 site (Site 3/B), toilet ratio could not be calculated since construction was nearing completion and therefore rooms were being dismantled, some rooms were vacant and number of toilets had been reduced.

At a number of sites, open defecation was practiced, partly because there were vacant lands around and partly because of the poor cleaning and maintenance of the toilets. Although cleaning and maintenance of toilets, and provision of running water and electricity in them was not documented in detail, from observations during the fieldvisits, cleaning and maintenance of the toilets was found to be relatively good at few of the sites but it was very poor at several sites. At number of sites, toilets were provided with running water, while at others the workers were supposed to fill water for toilet use from the nearby bathing space. In the latter case, running water was purposefully not provided in the toilets. According to the developer / contractor's staff at some of the sites, this was to reduce water wastage as well as repair and maintenance costs because workers frequently damaged the toilet fixtures. Many toilets did not have electricity or had no light bulbs.

The bathing facilities were built by the entities (developer and/or contractor) that built a significant number of rooms for the workers. At 4 sites the bathing facility was simply unfeasible for women workers to use since it was an unenclosed or barely enclosed space with a row of taps (Image 9) or an open water tank from which water could be drawn for bathing (Sites 3, 4, 10, 12) (Image 10). At one of these sites, the labour colony was sprawled, with three different entities having made rooms – for one cluster of rooms there was an open water tank next to which the construction company had built an enclosed space from corrugated metal sheets for women to bathe in, but there was no drainage or electricity provided in this space (Image 10).

Image 9 (left). Unenclosed bathing space
Image 10 (right). Open water tank – the enclosed bathing space for women seen on the tank's left

At 1 site there was no bathing facility; according to the developer's staff, they used to build bathing facilities earlier but discontinued to do so because the workers did not use them (Site 1). At another site the bathing facility for the men was an unenclosed space with a row of taps while the women were expected to bathe in the corridor of the women's toilet (Site 2). At these 2 sites as well as 3 of the sites where there was no feasible bathing space for women, many workers had made makeshift bathing enclosures near their rooms, using corrugated metal sheets, plastic sheets and cloth (Image 11 & Image 12). At 2 of the sites, the workers were living in the under-construction building, and the women seemed to be bathing in such enclosures made in the basement or simply in dark corners of the basement.

Bathing facilities comprised of individual bathrooms at only 1 site (Site 11). At the remaining 7 sites, the facilities consisted of enclosed communal spaces, separate for men and women, with a row of taps or a water tank from which water could be drawn for bathing (Sites 5, 6, 7, 8, 9, 13, 14). These enclosed spaces were open-to-sky at some sites (Image 13), or large room-like enclosures at some sites (Image 14).

Image 11 (left). Makeshift bathing enclosure seen to the left of the room, below the plastic sheet
Image 12 (right). Makeshift bathing enclosure made from cloth


Image 13 (left). Enclosed, open-to-sky bathing spaces, separate for men and women
Image 14 (right). Room-like bathing enclosures, separate for men and women


As mentioned earlier, there are obstacles to getting a sewerage connection from AMC for the labour colony. Therefore, the toilet and bathing facilities are built with a soakpit. One developer mentioned that the soakpit had to be emptied regularly which was a large cost and therefore he was illegally draining it into the municipal sewer line by using a pump. Another developer, who did not allow me to visit any of his sites, revealed that for a project on the city periphery, he had laid a long pipeline from his labour colony to the municipal sewer line, and illegally connected to this. He pointed out that AMC officials knew about this. A senior administrator in a construction company explained that the soakpit works well at some of their labour colonies, but at some places the soil is not adequately absorbent and therefore the soakpit has to be emptied frequently. In one case (Site 7), they were emptying the soakpit daily, resulting in a monthly cost of Rs.35,000.

According to the developers and construction companies with whom discussions were carried out, in most cases the AMC also does not provide solid waste management services from construction sites and their labour colonies. Therefore, while some developers and construction companies employ sanitation workers to sweep the colony and clean the toilet/bathing facilities, there is no municipal service to take away the garbage. Therefore, many of them informally connect to the drivers of the municipal garbage trucks to get them to come inside the construction site / labour colony and pick up the garbage.

Further discussions would have to be carried out with AMC to investigate their rationales and procedures for the provision of water connection, sewerage connection and solid waste management services to construction sites and their labour colonies.[44]

Electricity

The provision of electricity in the labour colony was not documented in detail and is therefore still not well-understood, in terms of both mode of provision (who provides) and quality of provision. From cursory discussions, it seems that in projects undertaken by a private developer, while the arrangement for electricity for the labour colony might be made by either the developer or a large construction company in cases where such a company is engaged, the cost of the electricity is generally borne by the developer. In the case of projects undertaken by other private entities (like a private institution or hospitality company), it is unclear whether this entity or the contractor bears these costs. In the case of public projects, the contractor is expected to make the arrangements for electricity and incur the costs for electricity use in construction, and therefore in the labour colony as well.[45]

Image 15 (left). Hanging electrical wires to make arrangements for a bulb, extension board and fan
Image 16 (right). Room-like bathing enclosures, separate for men and women

The quality of electricity provision in the labour colonies was not examined in detail, however, few observations can be made. In many cases, a small switchboard with 1-2 plug points and sometimes a switch was provided in the room, but in the absence of proper electrical wiring and a bulb and fan point, workers had to string electrical wires across the room to hang a bulb and arrange for a fan, often using an extension board (Image 15). Rooms provided with a switchboard and proper electrical wiring were seen in only couple of places where rooms were built from concrete blocks or precast concrete panels (Image 16). Wherever ceiling or table fans were seen in the rooms, in all cases the workers said that they had arranged for the fans themselves.

[44] These discussions, which were to be carried out in AMC towards the end of March 2020, could not be done because of the Covid-19 situation.
[45] The four contracts for AMC projects that were discussed in section 4.1.3 made no mention of electricity for the labour camp, but did mention electricity required for the construction.

Creche

Daycare facilities for the children of construction workers were being run at 6 of the 14 sites at the time of the fieldvisits. Since sites with poorer facilities were more difficult to include in this study, it is important that one does not conclude from this number that such facilities are provided at a large proportion of construction sites in the city.

At 5 sites the developer had engaged SAATH, a NGO, to run a creche (Sites 1, 2, 3, 4, 11). At 1 site, a large construction company had engaged a teacher to run a creche in a room of the labour colony (Site 12). At one other site (Site 8), a large construction company was planning on engaging Maya Foundation, a NGO, to run a creche and had already done so at one of its other projects. At still another site, a large construction company had set up a creche which was closed down when the number of women workers reduced (Site 12). A senior administrator from the company stated that they could not re-start the creche when the women workers increased again because the land that they had leased nearby for the labour colony and storage of materials had to be used to fabricate some of the larger construction elements, leading to a space crunch.[46]

SAATH runs its creches based on a holistic approach which includes the development of the child, security of the children and teachers, health, and food and nutrition.[47] Therefore when a developer engages SAATH, the NGO asks the developer to provide a certain level of physical infrastructure for the creche: 1-2 rooms, a kitchen space, toilets, washing space, potable water and electricity. However, all the developers who have engaged SAATH have not been equally responsive to these requirements. Thus, at one site the cooking space was incompletely built and there were no toilets or washing space even one year after the creche had started (Site 4).

Where developers engage SAATH to run a creche, the costs are generally shared between the developer and SAATH. The developer usually bears the costs of providing the physical infrastructure mentioned earlier, with some also providing other items such as cradles, toys, TV and fridge. At one site, where a separate structure for the creche had to be built, the developer had spent Rs.7 lakh on these provisions; while at another site, where a room was made on the ground-floor of the under-construction building for the creche, the same developer spent Rs.4-5 lakh on these provisions. The remaining costs of teacher salaries, study materials and food are usually borne by SAATH through various funding sources. A large part of SAATH's funding has come from Mobile Creches, a NGO which has been working in this field in India since 1969. At one site, however, the developer covered all the costs as part of its "model labour colony" initiative (Site 11); thus, besides building the physical infrastructure for the creche and equipping it with various items like cradles, toys, etc, the developer also incurred the costs for the teacher salaries, study materials and food. An annual expenditure of Rs.14-15 lakh was spent by the developer for running the creche and a bi-weekly health clinic.

The creches run by SAATH aim to address the development needs of children of different ages. The children are thus divided into three age-groups. A part of the creche space is provided with cradles for the children till 3 years. The developers have told their contractors to allow their women workers to come to the creche every 2 hours so that they can breast-feed their young children. Children from 3-5 years are part of the *balwadi*. The third group, comprising of children of 5-15 years, are placed in the "bridging class" which provides informal schooling, and which can also make possible their reintegration into mainstream education. SAATH engages adequate staff at each creche for this set-up. There were 5-6 teachers at two of the largest sites, which had 100-120 children at peak-times of

[46] Discussion with Admin in-charge for the project, August 29, 2019.

[47] The below description of the creches run by SAATH at 5 of the sites is based on fieldvisits and discussions with the staff at each creche as well as a discussion with Chinmayi Desai, Urban Programme Director, SAATH, July 9 2019.

construction and 50-60 children at the time of the fieldvisit. At most of these sites, SAATH runs the creche from 9 am to 5 pm since the teachers, whose salaries are covered through external funding, are employed on the basis of a 8-hour work-day. The creche stays open till 6 pm where the developer either has been willing to pay the salaries of the teachers, that too for longer hours, or has been ready to employ a helper to stay with the younger children till 6 pm.

SAATH also provides nutritious food for the children at the creche. It also conducts a monthly health check-up of the children. Those with malnutrition are given a special diet. At a number of sites, SAATH has also been able to create a linkage with the nearest urban health centre (UHC) of the AMC. In such cases, the UHCs have included the construction site as part of their planning for Mamta Divas, and someone comes from the UHC to the creche on a monthly basis for vaccination.

SAATH's teachers at the creches pointed out that an important part of their work is to motivate the workers to send their children to the creche instead of taking them to the construction site or leaving them in their room in the labour colony. This is also their main challenge because this is not a one-time activity, and has to be done with every new group of workers that are brought to the site. Thus, while they persuade many of the workers to send their children to the creche, every several months many of these workers leave and a new group of workers are brought to the site, which requires them to again motivate the workers.

At the one site where a construction company was running a creche itself, this lacked SAATH's framework of holistic child development. The creche was housed in one of the rooms of the labour colony. The teacher engaged by the construction company was paid a salary of Rs.8000 per month. She generally left after 1 pm, just after the children were given food, even though the creche was supposed to be open from 10 am to 3-4 pm. She had no previous experience caring for or teaching children from this socio-economic background. While she stated that she spent the first two hours of the morning teaching the children, at the time of the fieldvisit at 11 am, she was showing a religious video to the children on her smartphone which was propped up on a table. Except for a few pre-school educational posters on the walls and a pile of wooden slates and chalks stacked on a table, there were no study materials and no toys in the creche. She also made no attempt to meet the workers and talk to them about sending their children to the creche.

It is a challenge to expand the number of sites provided with creches based on a holistic approach like SAATH's. The Urban Programme Director of SAATH explained that even 10 years after they started working on this issue, they find it difficult to convince developers to invest resources towards this kind of a creche. Running a creche for 40-50 children as per SAATH's model costs Rs.15 lakh per year. Although some developers have engaged SAATH, sometimes through their CSR initiatives, and have borne all or part of the costs, most developers do not want to incur any costs. Since they are paying construction cess, their view is that they should not have to incur any more costs for their workers' welfare. Even where developers are willing to bear part of the costs, SAATH funds it challenging to raise adequate funds to cover the remaining costs. Much of their external funding for the creches has come from CSR funds, but these funders often insist on delivering long-term impacts, which is difficult to do for such a vulnerable and mobile group. Setting up creches at sites where there are few children is also a big challenge since CSR funders want the creches to have more than 40 children. SAATH has tried to reach out to CREDAI and the GBOCWWB, but has not received a positive response so far.

Health Services

The question of health services provided for construction workers at the construction site and by their employers is a broad topic that requires research in its own right. During the fieldvisits to the 14

sites, this question was examined in a narrow frame by looking at only three aspects: whether there was a regular health clinic at the construction site, whether the GBOCWWB's Dhanvantari Aarogya Rath Yojana served the site, and whether there was any tie-up with a nearby urban health centre (UHC). This study did not note the details about other forms of providing healthcare such as health camps organized by the developer / contractor for the construction workers (at some sites, such camps were organized by the developer or large construction company one or more times in the year); and through tie-ups of the contractor with a private or public hospital or a nearby private clinic (at some sites, the large construction company mentioned having such tie-ups).

At 3 of the sites, the developer had engaged Aajeevika Bureau, a NGO, to run a health clinic on the site (Sites 1, 2 and 11). The developer had provided a space for the clinic, which was open in the mornings once or twice a week. The clinic provided primary healthcare services, health awareness and linkages to the public health system through referrals. Primary healthcare services included addressing all ailments of workers and their children in the creches, such as seasonal and other infectious diseases, nutritional deficiencies, injuries, skin conditions, non-communicable diseases and pediatric illnesses. It also included preventive health check-ups for the children and antenatal care to pregnant women at the site through monitoring weight, blood pressure and hemoglobin level; physical examination and counselling on diet and safe institutional delivery. In case of major illnesses that required secondary or tertiary care, Aajeevika Bureau had a system of referral. Linkages with the public health system also involve efforts to liaise with the nearby UHC for immunization and antenatal care services, although the process to convince the UHCs for the same is tedious and intensive (Aajeevika Bureau 2019). Aajeevika Bureau's health clinics are funded through PNB Housing Finance Limited

Under the GBOCWWB's Dhanvantari Aarogya Rath Yojana, described in section 6.3, a mobile health came once or twice a week to 2 sites (Sites 3 and 8). It also stopped on the roadside near a cluster of construction sites, 2 of which were covered in this study (Sites 6 and 12), however, it is not clear how many of the workers from these sites availed of the health van's services since there did not seem to be any communication between the health van and the developer or contractors of these sites. The remaining 9 sites, which were located in both central areas of the city and the periphery, were unserved by the mobile heath van.

There was a tie-up with the nearby UHC at 4 sites. These sites where the locations where SAATH was running a creche, and as explained earlier, the NGO had managed to create a linkage with the nearby urban health centre after many efforts. Following this, the nearby UHC had included these construction sites in their planned visits for "Mamta Divas," a Gujarat government initiative to reduce infant mortality and malnutrition among children through delivery of health and nutrition services. There was, however, no tie-up with the UHC for other healthcare services. However, at one site, the construction company mentioned that they had good relations with the Medical Officer of the East Zone and had therefore managed to get AMC health workers to come to their construction site to look at the workers.

4.2.4. The Economics of Provision

The economics of building the labour accommodation and providing other facilities was explored in some of the projects through discussions with the relevant staff of developers and construction companies.[48] The below discussion presents the estimated costs, some of which have been mentioned earlier.

[48] Refer to the Methods section which outlines why estimating these costs was challenging.

Cost of rooms built using in-situ fabrication system and corrugated metal sheets (10 feet x 10 feet in size)

Corrugated metal sheets and metal structural supports are re-used several times across different labour colonies over several years, but each time the labour colony is dismantled and re-erected at another site, some materials have to be replaced due to damage and wear-and-tear. Therefore, two estimates are presented below based on discussions at Site 8 – the first estimate is for building rooms using all new materials and the second for building rooms based on the practice of using a mix of old, re-usable materials and new materials.

1. Estimated cost of building approx. 170 rooms in a G+1 structure using new material = Rs.50 lakh (includes Rs.10 lakh for labour for erecting the rooms and dismantling them and Rs.40 lakh for materials) – approx. Rs.29,000 per room.
2. Estimated average cost of building approx. 170 rooms in a G+1 structure using a mix of old, re-usable materials and new materials = Rs.22-24 lakh (Rs.10 lakh for labour for erecting the rooms and dismantling them and Rs.12-14 lakh for new materials) – Rs.13,000-14,000 per room

Estimates given at three other sites were as follows, and were roughly similar to the above:

- At Site 5, estimated cost of building 120 rooms in a G+1 structure = Rs.15-16 lakh (Rs.12,500-13,000 per room).
- At Site 13, estimated cost of building one room using new materials = Rs.28,000 (Rs.25,000 for materials, Rs.1000-1500 for labour, Rs.1500-2000 for the PCC plinth).
- At Site 14, estimated cost of building 40 rooms using new materials = Rs.11-12 lakhs (Rs.27,500-30,000 per room).

Cost of rooms built with precast concrete panels for walls and corrugated metal sheets for the roof (size: 8 feet x 10 feet / 10 feet x 10 feet)

- At Site 1, estimated cost of building 100 rooms = Rs.25 lakh (Rs.25,000 per room).
- An independent contractor who works with these materials estimated the cost to be Rs.30,000-35,000 per room.

Cost of providing water and toilet/bathing facilities

- Cost of installing a RO plant of 5000-litre capacity = Rs.2.5 lakh
- At Site 1, the cost of installing a 10-cubicle mobile toilet = Rs.5-5.5 lakh. Anticipated annual maintenance cost was Rs.10000 (painting, repairs etc). Toilet expected to last for 10 years.
- At Site 5, the estimated cost of building 10 toilets (walls from brick masonry and PVC / corrugated metal sheet doors) and bathing/washing facilities which comprised of two enclosed spaces with drainage (one for men, the other for women) connected to a well-like water storage structure around which workers can bathe and wash clothes/utensils = Rs.3-3.5 lakh
- At Site 8, the estimated cost of building 14 toilets (similar to Site 5) (Rs.15,000 per toilet cubicle) and soak-pit and bathing/washing facilities (similar to Site 5) (Rs.2 lakh) = Rs.4-4.5 lakh
- At Site 14, the estimated cost of building 12 toilets (walls from Aerocon sheets) (Rs.25,000 per toilet cubicle) = Rs.3 lakh
- Cost of building a soak pit for 6 toilets: Rs.65,000. Costs of maintenance of the soak-pit can vary widely. At one labour colony, the soil was not adequately absorbent and the construction company had to get the soak pit emptied daily, for which Rs.30,000-35,000/month was spent. At other labour colonies by the same construction company, the soak-pit was emptied once a month and in some cases, once in several months.

Cost of building and running a creche and health clinic

At one site, a creche for up to 100 children was built at an expenditure of approx. Rs.7 lakh (Site 1). The creche building was made using precast concrete panels for the walls, corrugated metal sheets for the roof and proper flooring. The creche included a store-room, cooking space and toilets. The developer also provided few items like fridge, cradles, etc.

At another site, a creche was made at an expenditure of Rs.4-5 lakh (Site 2). This was not a separate creche structure but was a large room made on the ground floor of one of the under-construction towers. It also provided space for the weekly health clinic. Toilets were also made inside this space. The developer also provided few items like fridge, cradles, etc.

At a third site, data on the cost of building the creche was not available, however, the developer covered all the running costs of the creche and a biweekly health clinic, both of which were run by NGOs (Site 11). The developer incurred an annual expenditure of Rs.14-15 lakh for this.

SAATH which runs creches at all the above sites estimated that annual costs for running a creche for 40-50 children, which includes teacher and helper salaries, study materials, and food/nutrition would be approximately Rs.15 lakh. Usually a developer covers part of these cost while SAATH covers the remaining from other funding sources like CSR.

Total costs for building a labour colony

What are the costs incurred for building a labour colony? Based on the above estimates and given the most common materials and technologies presently used by larger developers and construction companies for the labour colony, the total cost incurred to make a labour colony for 300-350 workers, with adequate water, sanitation and a creche, would be approximately Rs.40 lakh. This is based on the following calculations:

- 100 rooms[49] of 10 feet x 10 feet, using mainly new materials @ Rs.25,000 per room = Rs.25 lakh
- Water-sanitation (20 toilets from brick masonry, bathing facility, soakpit, etc, but not including bore-well) = Rs.5-6 lakh
- 5000-litre RO plant = Rs.2.5 lakh
- Creche = Rs.5-6 lakh (not including running costs)
- Miscellaneous costs = Rs.1-2 lakh
- Running costs like electricity and maintenance are not included, although it would be important to try and estimate them

For majority of construction sites, the costs incurred are much lower since the provisions are not upto even this level.

What percentage of the total construction cost is spent by different developers / contractors on these facilities for the workers?

- Site 10: The developer did not share the total construction cost or the amount spent on accommodating the workers. However, the project management consultant for the project estimated that less than 1 per cent of the construction cost would be spent on labour accommodation and other facilities for the workers. This estimate was put forward in the context of this site where the workers were living in the under-construction building, there were inadequate toilets and bathing facilities, and there was no creche.

[49] A colony of 100 rooms is considered for 300-350 workers on the assumption that around 50% of the rooms would be inhabited by couples / couples with children and the remaining 50% of the rooms would be inhabited by groups of four single males.

- Site 13: The total construction cost for this private institutional project was Rs.40 crore, and approximately Rs.55 lakh was spent on building the labour colony of 190 rooms with toilets and semi-enclosed, open-to-sky bathing spaces (the creche at this site was very basic as described earlier).[50] This means that 1.4 per cent of the total construction cost was spent on building the labour colony. Land for the labour colony as well as water was provided by the private institution. Electricity and maintenance were additional running costs. Costs for running the creche were also additional but were likely to be quite less since there was only one teacher and some cooked food given to children once a day.
- Site 14: The total construction cost for this public project was Rs.33 crore, and approximately Rs.15 lakh was spent on building the labour colony of 40 rooms with toilets and semi-enclosed, open-to-sky bathing spaces (there was no creche).[51] This means that 0.45 per cent of the total construction cost was spent on building the labour colony. If one were to add the cost of Rs.60,000 per month for 4-5 daily water tankers of 4000-litre capacity, then this would be an additional Rs.7.2 lakh per year (the project was meant to be constructed in one year). Along with water costs, 0.68 per cent of the total construction cost was spent on building the labour colony. Land rent to the AMC, electricity, and maintenance were additional costs.
- One developer said that they generally spend 1-2 per cent of the project construction cost for labour accommodation and other facilities for the workers. This developer does not lease land for the labour colony, and either accommodates the workers on part of the land of the project site or in the under-construction building. Usually they have had a creche on the site and sometimes also a weekly health clinic.
- A project manager from a large construction company estimated that they spend approximately 1.5 per cent of the tender cost on the labour colony and its maintenance. The company sometimes leases public/private land for the labour colony. It remains unclear if having to rent land would drive up the tender cost or if tender cost would remain the same and the percentage incurred by the company on the labour colony would go up.

At one site, the developer spent a total of Rs.70 lakh to build a "model labour colony" (Site 11). The cost breakup was not available, however, this included the following:

- 40 rooms of 3 m x 3 m + 16 rooms of 3 m x 6 m (equivalent to 72 rooms of 10 feet x 10 feet, which would accommodate approximately 200-250 workers) (using combination of materials for more climatically comfortable spaces)
- Bore-well and infrastructure for filtered drinking water
- 12 toilets and 12 bathrooms, with toilets connected to bio-digester technology.
- Washing space
- Creche and toilets for the creche (using combination of materials for more climatically comfortable spaces)

4.2.5. Perspectives of Developers and Construction Companies

From the discussions with developers and construction companies who participated in this study, it is clear that currently whatever kind of labour accommodation and other facilities that they provide to their workers has little do so with any regulatory framework. One developer explained:

> "There is nothing that forces us to provide housing. If such a clause exists, it is probably not enforced. We have interacted with government officials on safety, but not on housing or creche. Checking happens from AMC for the construction, not for the labour. AMC has

[50] This amount of Rs.55 lakh is estimated based on the discussion with the project managers at this site and another site of the same construction company. Discussion on June 12, 2019.
[51] The project manager estimated this amount of Rs.15 lakh. Discussion on June 10 and June 19, 2019.

> enough to check – bigger stuff for which they will be blamed if the developer deviates from its norms."[52]

At one of the visited sites, the project manager from the construction company mentioned that AMC health officials came on monthly visits and had recently taken blood samples from several workers to test for dengue as it was the monsoon season. However, the officials did not give much attention to the water and sanitation provisions in the labour colony.[53]

The discussions with 6 developers for this study provide some insights into why some developers try to ensure certain facilities for the workers (either directly or through their contractors), and their views about improving accommodation and other facilities for the workers, for example, through stronger regulatory frameworks or building of rental labour colonies by the state or other kinds of initiatives / interventions.

One developer explained that there is a labour shortage in the construction sector, and while workers will go wherever they get higher wages, some developers and contractors provide better facilities because they think it will help to retain workers for a longer period. Some also provide better facilities from a humanitarian perspective. However, he also thought that better state regulation could also improve the facilities for workers. He explained:

> "Regulation can help. Just now it is such a personal thing. Each developer would take his or her own decision as to whether [certain facilities] are needed to get the contractor to finish the work on time and to not run around facing labour shortage. And secondly, that even for humanitarian reasons this has to be done. In the CREDAI… GIHED code of conduct, released after the earthquake in 2003, we had put in a clause that said that if the project land area is more than 5000 sq.m… something like that… it should have worker housing. But again it is a code of conduct. It is not a law. And then there were some arguments against that. And I remember telling some of the other developers that look we are doing this for poor people, just be a little more generous. One had to appeal to their heart-strings, we had to tug at their emotions."[54]

The importance of state regulation versus a code of conduct adopted in the real-estate and construction industry is also underscored by the fact that the current national level CREDAI code of conduct does not mention worker housing at all, though it does include a few facilities/services. This Code of Conduct has a section on "Labour Welfare" which states that:

> "The developer shall endeavor to establish creches and educational facilities for the children of the labour, along with other possible labour welfare activities, such as periodical medical check-up, insurance etc in sites which are more than 4000 sq.m."[55]

Another developer also felt that stronger state regulation would be desirable if one was to improve the accommodation and other facilities for workers. Since decent provisions may be unfeasible for smaller projects and smaller developers, he also pointed out that stronger state regulation could be made for sites larger than a certain land / built-up area.

Two other developers, whose contractors always provided the labour accommodation, did not think that state regulation was desirable. Both of them expressed the view that state regulation would

[52] Discussion with developer, 2018 (date not recorded).
[53] Discussion with project manager of a construction company, July 29, 2019.
[54] Discussion with developer, 2018 (date not recorded).
[55] https://credai.org/code-conduct (accessed on June 24, 2019).

only open up more doors for corruption and harassment of developers by the state.[56] One of them stated:

> "If one wants to improve then some law and rules would have to be made, and then an enforcement team would have to be put in place. But the labour will not end up benefitting, because this system will open up a space for corruption in the government."[57]

The same developer stated that they did not try to get a municipal water or sewerage connection for the labour colony made by their contractors not only because this was a time-consuming process but also because "the AMC may then want to look into the labour colony being built, and we may be asked to get [development] permission for building a labour colony."[58] Although so far the AMC has never required development permission for a labour colony for construction workers, even where it has given a municipal water / sewerage connection for the colony, the developer's statement revealed his unwillingness to be regulated by the state when it came to provisions for the construction workers on his sites.

The other developer also expressed the view that state regulation would only open up more space for corruption. He felt that in order to improve facilities for the workers, the developers should be provided better information.[59] He explained that some years ago he had wanted to set up a creche at one of his large construction sites, however, he was unable to figure out how to do this. He had had to spend time searching on the internet, and finally found some information about an NGO that worked in this sector. He had contacted the NGO, but things did not work for reasons that he did not share. However, he felt that if the AMC gave information to developers about such organizations and government schemes (like GBOCWWB's mobile health van, which I informed him about) in a concise pamphlet form at the time that development permission was granted, then developers who are interested in providing better facilities could do so easily.

Yet another developer who was interviewed for the study seemed unconcerned about the extremely poor level of facilities provided by his contractors for the workers on the site I visited. In fact, he permitted me to roam the site freely and take photographs because he felt that the government should do something to improve the conditions for the workers. However, it was difficult to get any responses from him on what should be done to improve these conditions and whether he would be willing to incur any costs for this.

The final developer who was interviewed for this study put forward another perspective on improving facilities for the workers.[60] He explained that whether the developer makes the provisions for workers directly or the contractors do this, the cost of this provisioning is ultimately borne by the developer. He outlined some of the ways in which developers have protected their profit margins over the years when certain regulations threatened to cut into them, and pointed out that since developers are unlikely to reduce their profit margins, they would pass on the costs of any improvements for worker facilities to the consumer. The discussion also suggested that while buyers of the higher-end real-estate projects may be able to take on the higher cost of real-estate, middle-class and lower-middle-class buyers would potentially find this difficult, and therefore the government would have to subsidize the improvement costs on projects targetted at the latter consumer group.

[56] Both these develoeprs did not give me access to any of their construction sites.
[57] Discussion with developer, July 3, 2019.
[58] Discussion with developer, July 3, 2019.
[59] Discussion with developer, June 10, 2019.
[60] Discussion with developer, August 23, 2019.

Since land is not always available, on the project site or nearby, to make a labour colony, and even if it is, the colonies are generally of poor quality, an attempt was also made to explore what developers thought about the idea of rental labour colonies built by the government, and whether they would be willing to pay rent for rooms in such colonies for their workers (either directly or through their contractors). There was a mixed reponse. One developer whose construction projects are on the urban periphery explained why his real-estate company would not rent out rooms in such colonies:

> "Land is available only on the periphery so if the government builds rental labour colonies, this is where they will do so. But there is anyway vacant land on the periphery which developers like us can rent through informal understanding, so why would the developer / contractor rent out rooms in these labour colonies?"[61]

He had no concern about the quality of facilities provided to the workers on his sites.

Another developer saw value in the idea where there was no space to build a labour colony, but pointed to the challenges in doing so:

> "Developers who don't have that kind of space – they would not mind their contractors paying to rent rooms. But then what happens if a contractor pays for say 100 rooms, and then a labourer begins to work somewhere else? What do you do? How do you enforce this? They can go and work somewhere else whenever they want – they are not bonded labour. How do you enter into an agreement with the labourer? I don't know how it can be done practically – how can it be operationalised?"[62]

One developer expressed doubt that developers / contractors would be ready to incur costs on transporting workers from rental labour colonies on the periphery to construction sites in central areas of the city. The project manager of one of the large construction companies also stated that when a client (such as a developer) engages them, if there is not sufficient land on the construction site to build a labour colony, they ask the client to provide land for the colony within 1.5 km distance of the site so that workers can walk to and fro, because it is not feasible to provide transport for the workers since they also go back to their labour colony for lunch. However, there are instances where a contractor – a large construction company – leased land on the urban periphery and transported the workers to the construction site in the central city area.[63] The large construction companies that are hired to build the Ahmedabad metro project also transport workers between the construction site and the labour colonies that they have built on some lands in the city.

[61] Discussion with developer, July 3, 2019.
[62] Discussion with developer, 2018 (date not recorded).
[63] Discussion with a BOC inspector, May 13, 2019.

Plate 1

Site/Developer

1/A

Contractors:
Different medium and small-scale contractors hired for the different works (RCC, masonry-plastering, flooring, painting, plumbing, electrical, etc)

Workers living in the labour colony:
Excavation, RCC, masonry-plastering, painting, stone polishing workers. Also the seasonal migrants and the unskilled among the flooring, waterproofing & china mosaic workers.

Approx. 300 men and 80 women during fieldvisit.

Project details:
3 Residential projects (14 towers); Land area: 23,250 sq.m.
Super built-up: 1 lakh sq.m.
Part of a larger project on 5.4 lakh sq.m land, built in phases since 1995.

Land for labour colony provided by the Developer adjacent to the project site. The land is part of the developer's larger project.

Water: Bore-well by Developer. Water points where workers can wash up and fill water for drinking provided on nearby construction site.

Sanitation:
Mobile toilet provided by Developer.
5 toilets for men + 5 toilets for women
Toilet ratio: Men 1:60; Women 1:16 (based on number of workers during fieldvisit)

Many workers practice open defecation on nearby open lands.

Figure: Mobile toilet

No provision of bathing or washing facilities (developer's staff reported that workers did not use the bathing facilities whose provision was therefore discontinued).

Washing was done near the rooms. Workers had built semi-enclosed bath spaces from bricks or metal sheets.

Accommodation built by Developer

Figure: Rooms with verandahs

Number of rooms: 100 rooms
Size: 10 feet x 10 feet, with verandah
Construction materials / technology:

- Walls: Pre-cast concrete panels
- Roofing: Corrugated metal sheets
- Flooring: Brick bats, old paver blocks or tiles on compacted earth or cement
- Structure: Pre-cast concrete columns & metal pipes / box sections

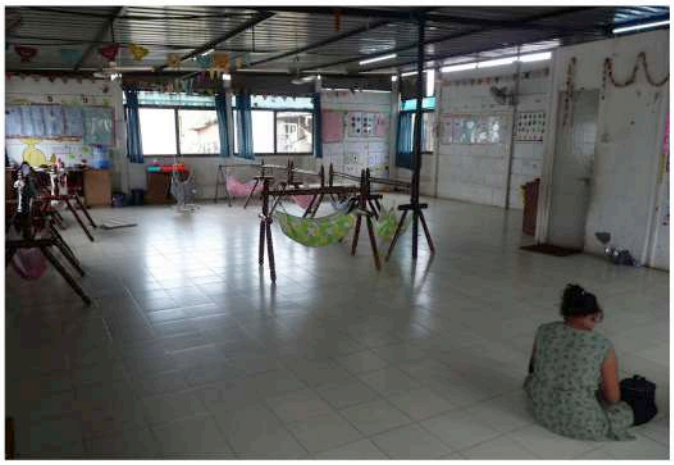
Accommodation built by Developer/Contractor

Figure: Additional rooms

Built to accommodate additional workers
Number of rooms: 30-40 rooms
Size: varying sizes
Construction materials / technology:

- Walls and Roofing: Corrugated metal sheets
- Structure: Fabricated using metal pipes / angles / box sections and some timber / bamboo vertical supports

Creche: by Developer & NGO



No. of children: 100-120 during peak construction; 50-60 during fieldvisit.

Developer constructed the creche with toilets, storeroom, water, electricity, fridge, TV and cradles, at a cost of approx. Rs.7 lakh. Also paid salary for one helper. Salary of 5 teachers, study materials and food covered through NGO's external funding.

Creche timings: 9 am to 6 pm.
Children divided into 3 age-groups: *ghodiya ghar* upto 3 years, *balwadi* for 3-5 years, bridging class for 5-15 years.

Health Services: by Developer & NGO

NGO ran a health clinic once a week
Timings: 10 am to 1 pm

NGO running the creche conducted monthly health checkup of the children; gave a special diet to malnutritioned children; and created a linkage with AMC's Urban Health Centre (UHC) for Mamta Divas and monthly vaccination visits

Plate 2

Site/Developer

2/A

Project details:

Residential project on 16,450 sq.m. land area. 7 towers.
Super built-up = 76,645 sq.m; Project duration: 4 years

Contractors:

Different medium and small-scale contractors hired for the different works (RCC, masonry-plastering, flooring, painting, plumbing, electrical, etc)

Workers living in the labour colony:

RCC, masonry-plastering, unskilled flooring workers, some depart workers.

Approx. 350 men & 100 women during fieldvisit.

Land for a small labour colony provided by the developer on the project site. As construction progressed, this colony (of 30 rooms) was dismantled to develop the land, and the labour accommodation was shifted to the basement of one of the under-construction towers on site.

Figure: Men's toilet block built from corrugated metal sheets

Water: Bore-well by Developer. Drinking water to be filled from the bathing spaces.

Sanitation: Toilets made by Developer.

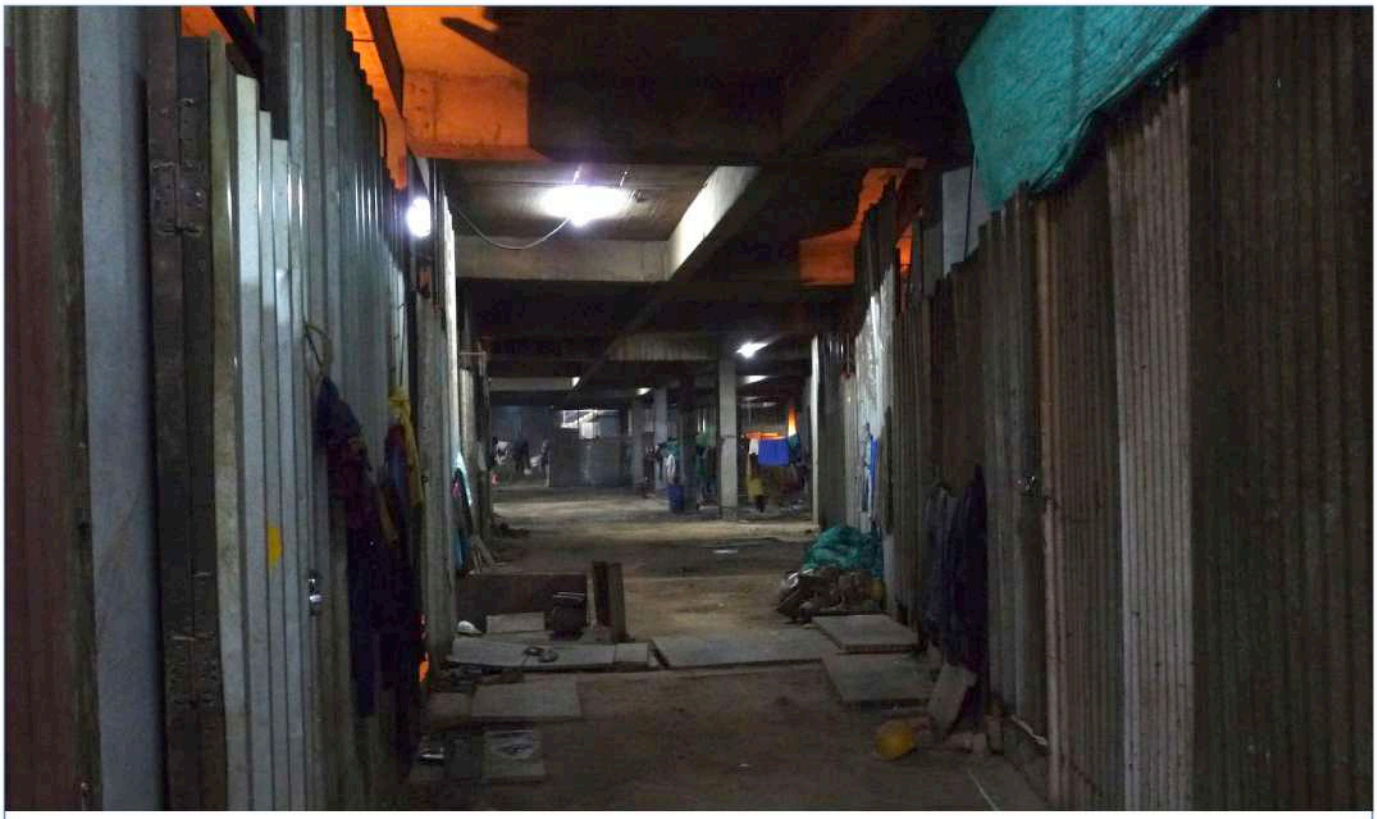
5 toilets for men + 5 toilets for women made on the ground floor of an under-construction tower. Later, a men's toilet block with 6 cubicles built from corrugated metal sheets. Toilet ratio: Men 1:30; Women 1:20 (based on number of workers during fieldvisit)

Open bathing spaces made for men. No bathing space for women, who bathed in the women's toilet corridor or in dark / semi-enclosed spaces in the basement.

Figure: An open bathing space for men

No separate facilities for washing clothes and utensils.

Figure: Women's toilet (this toilet corridor is also used for bathing by women)



Accommodation built by Developer in basement

Number of room-like enclosures: 70-80
Size: 10 feet x 18 feet

Construction materials:

- Walls: Corrugated metal sheets
- Structure: Metal pipes / box sections

Workers suddenly brought in to speed up the construction were given plastic sheets to erect enclosures until the developer built room-like enclosures.

Creche: by Developer & NGO

No. of children: 40-45 during fieldvisit

Developer constructed the creche with toilets, storeroom, water, electricity, TV, fridge and cradles at a cost of approx. Rs.4-5 lakh. Salary of teachers, study materials and food covered through NGO's external funding.

Creche timings: 9 am to 5 pm.
Children divided into 3 age-groups: *ghodiya ghar* upto 3 years, *balwadi* for 3-5 years, and bridging class for 5-15 years. Monthly health checkup of the children; special diet for malnutritioned children; and linkage created with AMC's Urban Health Centre (UHC) for Mamta Divas and monthly vaccination visits.

Health Services: by Developer & NGO

NGO ran a health clinic once a week
Timings: 10 am to 1 pm

Plate 3

Site/Developer

3/B

Project details:

Residential township, built in phases over 2012-2027. Land area: 2 lakh sq.m. Three phases, consisting of total 1530 flats, ongoing during fieldvisit.

Land for labour colony provided by developer on the site. Accommodation built by four entities: developer, two large contractors and GBCWWB.

Contractors:

For two phases, a large Construction company hired for excavation, RCC, masonry-plastering, waterproofing and partial flooring. Medium and small-scale contractors hired for other works, and also for all works of third phase.

Accommodation built by the Developer/Contractors – used to house the depart workers and workers of the medium and small-scale contractors.

Number of rooms: Not known
Room Size: Varying sizes
Construction materials:

- Walls: Concrete blocks or Corrugated metal sheets
- Roofing: Corrugated metal sheets
- Flooring: Cement / PCC

20-25 rooms also made with brick walls, verandahs and individual toilet-baths for old-time depart workers.

Workers living in the labour colony:

Most of the Construction company's workers; the developer's depart workers; some workers of the medium and small-scale contractors. At peak construction, approx. 700 workers (families & single males) lived in the colony. Fewer workers during fieldvisit.

Water: Bore-well by Developer. Workers could fetch drinking water from the RO plant at the construction site.

Sanitation:

Developer built toilets, common for men and women. Toilet numbers varied over time as number of workers varied over the construction period: 5 toilets during fieldvisit.

Developer made an open bathing/washing space with taps (common for men and women). Some workers made makeshift bathing enclosures near their rooms.

Figure: Portable toilets installed by construction company

Construction company installed portable toilets, common for men and women. Toilet numbers varied over time as number of workers varied: 4 toilets during fieldvisit.

Construction company built an open water tank for bathing / washing, and a walled, open-to-sky bathing space nearby for women using corrugated metal sheets, but without water and drainage.

Figure: Open water tank for bathing/washing by construction company

Accommodation built by the Construction company for its workers

Figure: On the right are some rooms being dismantled by the construction company as its work reduces and number of its workers reduce.

Number of rooms: 150-200 rooms
Size: 10 feet x 10 feet
Construction materials / technology:

- Walls: Corrugated metal sheets
- Roofing: Corrugated metal sheets
- Flooring: PCC
- Structure: Fabricated from metal pipes

Accommodation built by GBCWWB, used to house workers of the medium / small contractors, the construction company, and the developer's depart workers.

Number of rooms: 60 rooms
Size: 8 feet x 10 feet
Construction materials / technology:

- Walls: Pre-cast concrete panels
- Roofing: Corrugated metal sheets
- Structure: Pre-cast concrete columns and metal pipes to support the roofing

Creche: by Developer & NGO

Figure: Creche subdivided for three age-groups

Number of children: 120-130 at peak construction. 50-60 during fieldvisit.

Developer constructed the creche with water, electricity, toilets and a washing space. For the first year a teacher was employed to run the creche, after which a NGO was engaged. Salary of 5-6 teachers, study materials and food covered through NGO's external funding.

Creche timings: 9 am to 5 pm.
Children divided into 3 age-groups: *ghodiya ghar* upto 3 years, *balwadi* for 3-5 years, and bridging class for 5-15 years. Creche was too small when there were 100 children. Monthly health checkup of the children; malnutritioned children given a special diet; linkage created with AMC's Urban Health Centre (UHC) for Mamta Divas and vaccination.

Health Services: GBCWWB's mobile health van; weekly 11 am to 1 pm.
The construction company had a tie-up with a nearby private hospital to treat its workers. Developer contributed towards the medical expenses in case of serious illness (TB and cancer).

Plate 4

Site/Developer

4/C

Project details:

Commercial project on 10,380 sq.m. land area. 5 blocks. Super built-up = 64,900 sq.m; Project duration: 3 years.

Land for labour colony provided by the developer on the project site. Each of the three RCC-masonry-plastering contractors made accommodation for their own workers. Developer made rooms for its depart workers. Flooring contractors were expected to make few rooms for their workers.

Contractors:

Construction began with 3 blocks. Three different contractors hired for RCC and masonry-plastering, one for each block.

Other contractors hired for other works (painting, flooring, plumbing, etc).

Accommodation built by one of the RCC-masonry-plastering contractors

No. of rooms and sizes: Approx. 50 rooms; varying sizes

Construction materials / technology:

- Walls and Roofing: Corrugated metal sheets, metal shuttering plates
- Flooring: No flooring or cement
- Structure: Roughly made from timber & metal pipes

Workers living in the labour colony:

RCC and masonry-plastering workers and the developer's depart workers at the time of fieldvisit. Workers of other contractors (e.g. flooring) were expected.

200-250 workers (families & single males) lived in the labour colony during the fieldvisit.

Water: Bore-well by Developer. Workers could fetch drinking water from the RO plant on the construction site

Sanitation: Each of the RCC-masonry-plastering contractors built toilets and an open bathing/washing space.

One contractor, who had built about 50 rooms, had built 6 toilets, common for men and women, from bricks and metal sheet roofing.
Toilet ratio: 1:25 (assuming 50% of rooms had couples and 50% had groups of 4 single males)

Open defecation due to poor toilet maintenance. Some workers had made semi-enclosed bathing spaces near their rooms, since the open bathing space did not give privacy for women.

Developer made toilets for his depart workers – could be used by other workers also. Toilet numbers unknown.

Figure: Toilets and open bathing space built by one of the RCC-masonry-plastering contractors for his labour colony.

Accommodation built by another RCC-masonry-plastering contractor

Number of rooms: Approx. 30 rooms
Size: 10 feet x 10 feet
Construction materials / technology:

- Walls: Concrete blocks (provided by the developer)
- Roofing: Corrugated metal sheets
- Flooring: Cement with brick bats
- Structure: Load-bearing

Creche: by Developer & NGO

No. of children: 40-45 during fieldvisit.

Developer constructed the creche and provided electricity. Had not completed building the kitchen. Had also not built toilets and a washing space although the creche was operating since one year and the NGO had asked them to.

Salary of teachers, study materials and food covered through NGO's external funding.

Creche timings: 9 am to 5 pm.
Children divided into 3 age-groups: *ghodiya ghar* upto 3 years, *balwadi* for 3-5 years, and bridging class for 5-15 years.

Monthly health checkup of the children; malnutritioned children given a special diet; linkage created with AMC's Urban Health Centre (UHC) for Mamta Divas and monthly vaccination.

Health Services: GBCWWB's weekly mobile health van

Plate 5

Site/Developer

5/D

Contractors:

A large Construction company hired for excavation, RCC and masonry-plastering. Project in early stages. Not known if the construction company or various medium/small contractors hired for other works (painting, flooring, plumbing, etc)

Workers living in the labour colony:

The Construction company's workers. Approx. 200 workers (families & single males) lived in the labour colony during the fieldvisit. More were expected.

Project details:

Commercial project (single tower); Land area: 7,600 sq.m.
Super built-up = Unknown; Project duration: 2-3 years

Land: No land available on the project site. Land for labour colony provided by the developer 0.5 km away. Unknown if this land was owned or leased by the developer.

Accommodation built by the Construction company for its workers

Workers' accommodation consists of combination of ground floor and ground floor + first floor structures
Number of rooms: 120 rooms
Size: 10 feet x 8 feet
Construction materials / technology:

- Walls and Roofing: Corrugated metal sheets
- Flooring: PCC for the ground floor rooms and Cement sheets for the first floor rooms
- Structure: Fabricated from metal pipes / box sections

Container room for highly skilled, permanent workers:
The construction company has several highly skilled, permanent, single male workers operating mechanical equipment (crane, etc). They are housed in a single container room consisting of bunk-beds and in-built storage units.
The container room is also provided with a cooler.

Water:

Bore-well by Developer. Water filtration plant by the Construction company to provide drinking water in the labour colony.

Sanitation:

Toilets built by construction company
Men: 5 toilets
Women: 5 toilets
Toilet ratio (assuming 50% of rooms occupied by couples and 50% rooms by groups of 4 single male workers):
Men 1:50; Women 1:6
No running water in toilets but water can be filled from an adjacent well-like water storage structure.

Bathing/washing space comprises of an enclosed space with a well-like water storage structure around which workers can bathe, and wash clothes and utensils. Drainage provided. Separate bathing/washing spaces made for men and women.

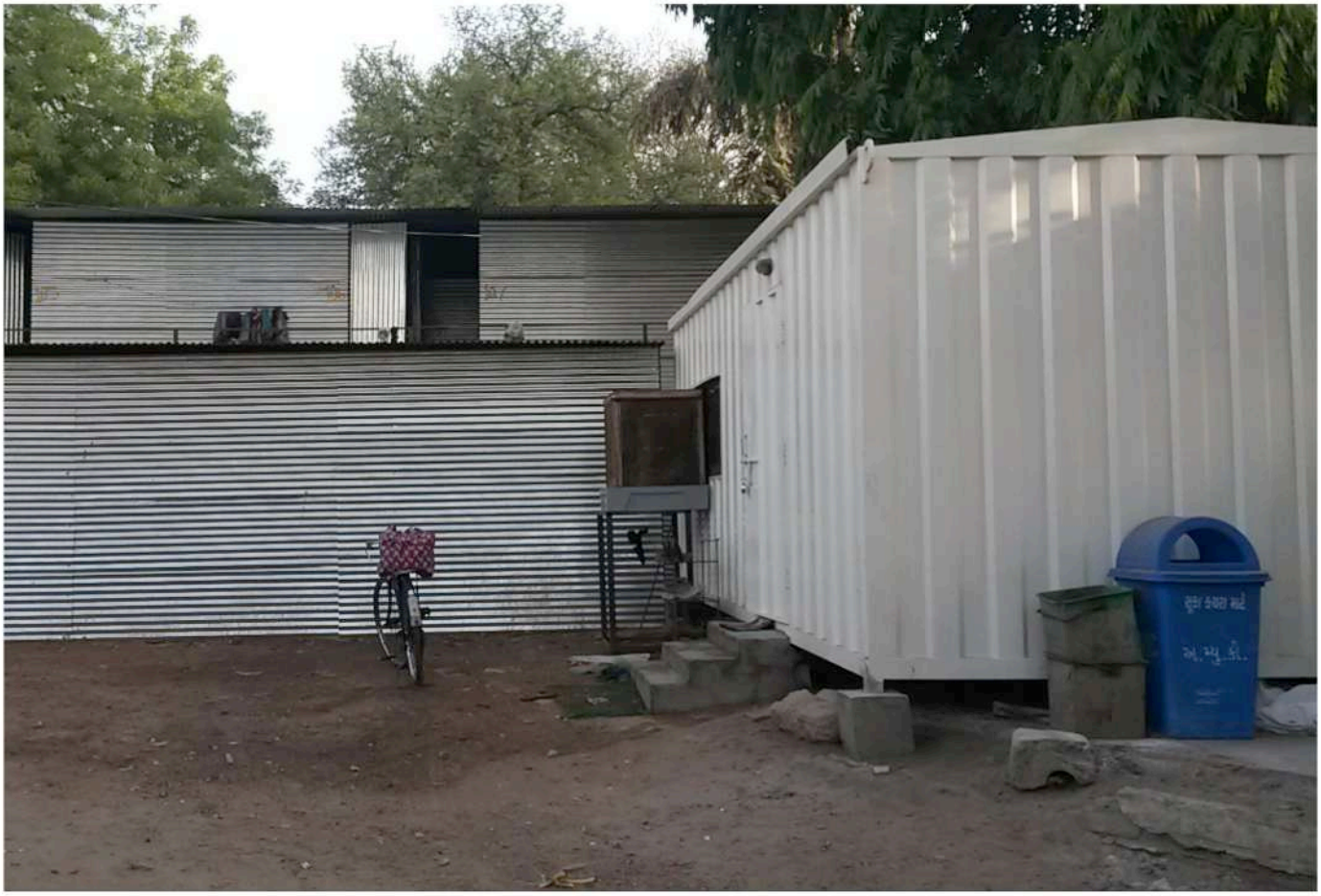


Figure: Container Room seen on the right, used to accommodate the highly skilled, permanent workers operating the mechanical equipment on the construction site.

No Creche

No. of children: 12-15 during fieldvisit

Children are strictly banned from the construction site. They have to remain in the labour colony, although there is no creche. The construction company has hired two women housekeeping staff who keep an eye on the children.

Health Services:

No regular health services.

Plate 6

Site/Developer

6/E

Contractors:

A large Construction company hired for excavation, RCC and masonry-plastering (unclear if also hired for some other works). Medium and small-scale contractors hired for waterproofing etc.

Workers living in the labour colony:

The Construction company's workers; workers of the medium/ small-scale contractors; and the developer's depart workers lived across two labour colonies. At peak construction, approx. 700 workers (families and single males) lived in the two colonies.

Project details:

Residential project (one tower); Land area: 7160 sq.m.
Super built-up = 46,140 sq.m; Project duration: 2.5-3 years

Land: No land available on the project site. Developer had leased municipal land opposite the project site, where a labour colony for workers of medium/ small contractors and depart workers was built.
The large construction company had also leased municipal land opposite the project site where it built a labour colony for its workers. As this project began to get over, its workers began to work on another developer's commercial project nearby. Thus, the company did not dismantle the labour colony but used it to house workers engaged on another nearby project.

Water: Developer provided piped water from the bore-well of the construction site. Drinking water was stored separately in both the developer and the construction company's labour colonies, but only the construction company had installed a water filtration plant in its colony.

Figure: Mobile toilets (the right side is for men and the left side for women

Sanitation: The construction company installed two mobile toilets in its labour colony.
Men: 6 toilets; Women: 6 toilets
The construction company made separate bathing/ washing spaces for men and women, consisting of a well-like water tank around which they can bathe and wash.

Figure: Drinking water provision in the company's colony

The women's bathing/washing space was enclosed and covered, but poorly lit after dark, with drainage inadequate when many women were using it.
There were separate toilets and bathing spaces in the labour colony made for the workers of the other contractors and the developer's depart workers. These were in a poor condition.

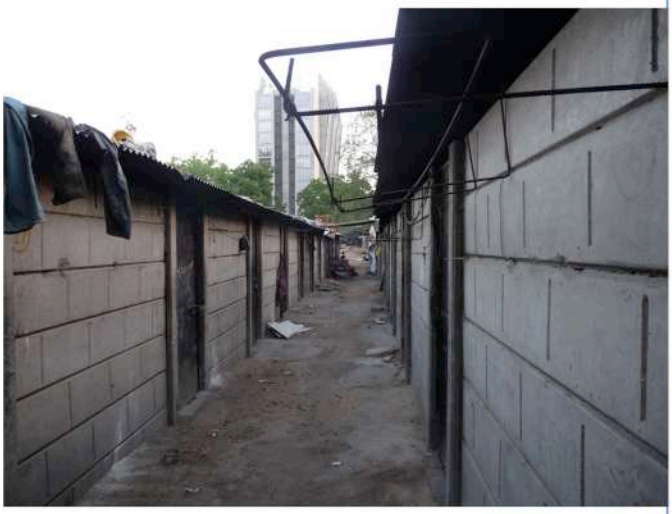
Figure: Women's bathing/washing space in the company's colony

Accommodation built by the Construction company for its workers (this was later used for housing workers who were sent to work on another of the company's nearby construction sites)

Number of rooms: Unknown
Size: 10 feet x 8 feet
Construction materials / technology:

- Walls and Roofing: Corrugated metal sheets
- Flooring: PCC for ground floor and cement sheets for first floor
- Structure: Fabricated from metal pipes / angles / box sections

Accommodation built to house workers of the medium / small contractors and the developer's depart workers. Unclear whether the colony was built by the developer or the medium/small contractors.



Number of rooms: Unknown
Size: 8 feet x 10 feet
Construction materials / technology:

- Walls: Pre-cast concrete panels
- Roofing: Corrugated metal sheets
- Structure: Pre-cast concrete columns and metal pipes to support the roofing

Figure: Toilets by construction company for its permanent, highly skilled workers who live in the container rooms

Several highly skilled male workers who operated the mechanical equipment (crane, etc) were permanent staff in the construction company. They were housed in two container rooms comprising of bunk-beds with in-built storage units.

No Creche

No. of children: Unknown

Health Services:

GCWWB mobile health van came once or twice a week to a nearby road. The construction company had a tie-up with a nearby doctor's clinic.

Plate 7

Site/Developer

7/F

Contractors:

A Construction company hired for excavation, RCC and masonry-plastering. Medium and small-scale contractors hired for other works (painting, flooring, plumbing, etc)

Workers living in the labour colony:

The Construction company's workers and several flooring workers.

Approx. 250 workers (55-60 families and remaining single males) lived in the labour colony during the fieldvisit. More workers expected.

Sanitation:

The construction company built the toilets from corrugated metal sheets.

Men: 4 toilets
Women: 4 toilets
Toilet ratio:
Men 1:45; Women 1:15
(based on number of workers during fieldvisit)

The construction company made separate bathing/ washing spaces for men and women, each consisting of an enclosed, covered space with a well-like water tank around which workers can bathe and wash clothes/utensils.

There were no separate facilities for the workers of the flooring contractor.

Project details:

Residential project (one tower); Land area: 5770 sq.m.
Super built-up = 45,970 sq.m; Project duration: 2.5 years

Land: No land available on the project site. Private land leased by the developer 1 km away for the labour colony. Accommodation built by the large construction company for its workers, and by medium/small contractors for their workers.

Figure: Men's bathing/washing space

Figure: Toilets made by the construction company were in poor condition

Water:

Water tankers arranged by the Developer. Separate drinking water tankers were called and the drinking water was stored separately.

Accommodation built by the Construction company for its workers

A combination of ground floor structures and ground floor + first floor structures.
Number of rooms: 124 rooms
Size: 10 feet x 8 feet
Construction materials / technology:

- Walls and Roofing: Corrugated metal sheets
- Flooring: PCC for ground floor and cement sheets for first floor
- Structure: Fabricated from metal pipes / angles / box sections

Figure: One labour gang was accompanied by a cook who was given a large shack for cooking and storing firewood

Accommodation by the developer or flooring contractor

The flooring workers had been given materials to build their own shacks. Not known if the materials were given by the developer or the flooring contractor.

Number: 5-6 shacks
Size: Varying sizes
Construction materials / technology:

- Walls and Roofing: Corrugated metal sheets
- Structure: Roughly assembled with timber supports and metal pipes

No Creche

Number of children: Unknown

Health Services:

Construction company had a tie-up with a nearby doctor's clinic.

Plate 8

Site/Developer

8/G

Project details:

Commercial project; Land area: 5,440 sq.m.
Super built-up = 26,700 sq.m.; Project duration: 3-4 years

Land for labour colony provided by the developer 0.7 km away. The developer owned this land.

Contractors:

A large Construction company hired for excavation, RCC, masonry-plastering, flooring and painting. Medium and small contractors hired for other works (plumbing, electricals etc).

Figure: Fabrication of the structure using metal box sections

Workers living in the labour colony:

Construction company's workers (except skilled flooring workers); and several of developer's depart workers.

150 workers (families & single males) lived in the labour colony during the fieldvisit. Expected to have maximum 350-400 workers.

Water:

Bore-well by Developer. 5000 litre capacity water filtration plant by the large construction company to provide drinking water in the labour colony.

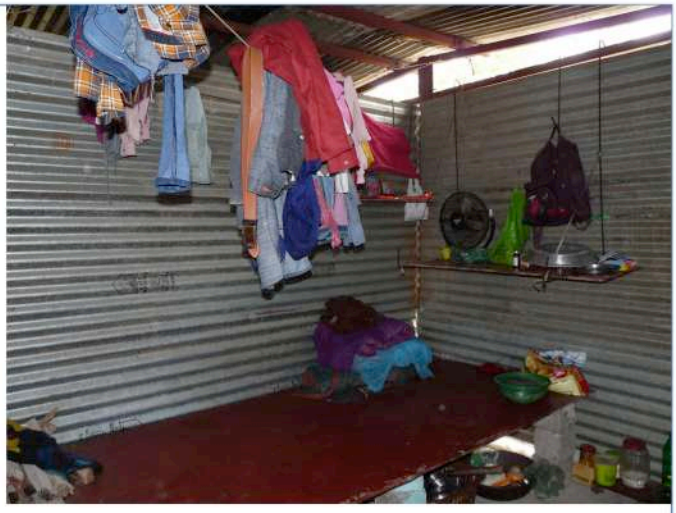
Sanitaton:

Toilets built by construction company.
Men: 10 toilets; Women: 4 toilets
Toilet ratio: Men 1:27 and Women 1:15 (assuming 50% of rooms occupied by couples and 50% of rooms occupied by groups of 4 single males)

Bathing/washing space comprised of an enclosed, covered space with a well-like water storage structure around which workers can bathe, wash clothes and utensils. Drainage provided. Separate bathing/washing spaces made for men and women.

Figure: Water filtration plant for drinking water

Figure: Women's toilet & bathing/washing space



Accommodation built by the Construction company for its workers

Consists of ground floor + first floor structure.
No. of rooms: 112 rooms. 56 rooms to be added.
Size: 10 feet x 8 feet
Construction materials / technology:

- Walls and Roofing: Corrugated metal sheets
- Flooring: PCC for ground floor and cement sheets for first floor
- Structure: Fabricated from metal pipes / angles / box sections

Several highly skilled male workers who operated the mechanical equipment (crane, etc) were permanent staff in the construction company. They were housed in a container room comprising of bunk-beds with in-built storage units. The room was provided with a cooler. There were separate toilets and bathrooms for them.

Figures (above, left and right): Container room with bunk-beds for the highly skilled, single male, permanent workers

No Creche

No. of children: 20
The children were brought to the site daily and the construction company had appointed one of the women workers to look after them. The construction company stated that it intended to start a creche soon.

Health Services:

GCWWB's mobile health van came to the construction site once or twice a week.

Figure: GBCWWB's Mobile health van

Plate 9

Site/Developer

9/H

Contractors:
A large Construction company hired for all works except excavation.

Workers living in the labour colony:
The Construction company's RCC and masonry-plastering workers. Flooring work had started but these workers were not living in the colony. Other workers may be accommodated in the colony if and when required.

Approx.120 workers (30 families & remaining single males) lived in the colony during the fieldvisit.

Project details:
Residential-Commercial project (7 towers + Bungalows). Land area: 12,750 sq.m
Super built-up: Unknown: Project duration: 4-5 years

Land: No land available on the project site for the labour colony. Developer had leased an adjacent parcel of municipal land for the colony.

Figure: Accommodation built by the construction company for its RCC workers

Water: Bore-well by Developer. Water filtration system installed and maintained by developer to provide drinking water on the construction site and in the labour colony.

Sanitation:
Toilets built by construction company from brick masonry and corrugated metal sheets.

Men: 10 toilets; Women: 4 toilets
Toilet ratio: Men 1:10; Women 1:8 (based on number of workers during fieldvisit)

Enclosed, open-to-sky bathing/washing spaces with a row of taps, separate for men and women.

Figure: Men's toilets

Figure: Men's bathing/washing space

Accommodation built by the Construction company for its RCC workers

Number of rooms and size:

- 50 rooms of 10 feet x 10 feet
- 10 rooms of 10 feet x 15 feet

Construction materials / technology:

- Walls: Old metal shuttering plates and corrugated metal sheets
- Roofing: Corrugated metal sheets
- Flooring: PCC
- Structure: Fabricated from metal pipes and box sections

Accommodation built by the construction company's masonry-plastering sub-contractor for its workers

Number of rooms: 6-7 rooms
Size: Varying sizes
Construction materials / technology:

- Walls and Roofing: Corrugated metal sheets and tarpaulin
- Flooring: Cement
- Structure: Bamboo

Figure: The two water storage tanks covered with jute bags are for drinking water. The jute bags are for keeping the water cool in the summer.

Figure: Filtration system installed for drinking water

No Creche

No. of children: 35-40 children

Health Services:

None (unknown if the construction company has an arrangement with a nearby clinic)

Plate 10

Site/Developer

10/I

Contractors:

Different medium and small-scale contractors hired for the different works (RCC, masonry-plastering, flooring, painting, plumbing, electrical, etc)

Workers living in the labour colony:

The RCC and masonry-plastering workers. Other workers may be accommodated in the future if required.

Approx. 250 workers (families & single males) lived on site during the fieldvisit.

Project details:

Commercial project (one tower); Land area: 4800 sq.m.
Super built-up = 19,300 sq.m; Project duration: 3 years

Land: No land available on the project site for a labour colony. No alternate arrangements made for building a labour colony, and the workers were living on the second floor and in the basement of the under-construction tower.

Figure: Enclosures made in the basement from plastic sheets and bamboo supports

Sanitation:

Developer had built 5 toilets out of corrugated metal sheets. The toilets were common for men and women.
Toilet ratio: 1:50 (based on number of workers during fieldvisit)

Bathing/washing space comprised of a semi-enclosed, open-to-sky space with several taps. It was common for men and women. Unclear how the women workers coped with the lack of privacy. Some women seemed to be bathing in the basement in dark corners or temporary enclosures made from cloth.

Figure: Toilets

Water:

Bore-well by Developer. No separate provision made for drinking water.

Figure: Workers had tapped into electricity on the construction site to install bulbs near their living spaces in the under-construction building

Accommodation built by the workers using materials provided by their contractors and materials lying about on the construction site

Some workers had made room-like enclosures in the basement and semi-enclosed spaces on the second floor using corrugated metal sheets and bamboo supports provided by their contractors.

Figure (above): Room-like enclosure made by workers using bamboo and corrugated metal sheets

Most of the workers living in the basement had made enclosures from plastic sheets and bamboo supports provided by their contractors.

Figure (above): Semi-enclosed spaces made by workers on the upper floors using corrugated metal sheets

Figure (below): Many workers living on the second floor had used concrete blocks from the construction site to make a living space

No Creche

No. of children: Unknown

No Health Services

Plate 11

Site/Developer

11/J

Project details:

Affordable housing project; Land area: 93,000 sq.m.
Phase 1: Super built-up : 42,600 sq.m. Duration: 4 years.

Land for labour colony provided by the developer on the project site.

Contractors:

Different medium and small-scale contractors hired for the different works (excavation, RCC, masonry and lastering, flooring, painting, waterproofing, plumbing, electrical, etc)

Workers living in the labour colony:

Workers of the different contractors.

400-500 workers (families & single males) lived in the labour colony during the fieldvisit.

The developer engaged a CSR consultancy firm to identify social projects and implementing partners.
A creche and then monthly medical camps were started.
A decision was then taken to build a model labour colony that could set a benchmark for improving living conditions and social provisions for construction workers. The architects, Hannah Broatch and Mason Rattray of Hatch Workshop, contextually adapted their masters thesis design for construction worker housing.
Construction cost for labour colony: Approx. Rs.70 lakh

Figure: Older children studying in the creche

(Source: Booklet by Nebula: "Building the Future of Those Who Build Our Future Homes")

Water:

Bore-well by developer. Filtered bore-well water was stored in a separate tank in the labour colony from which workers could fill water for drinking and cooking purposes.

Cooking gas:

Workers were not permitted to cook on chullahs in the labour colony, and had to use gas stoves.
The developer provided gas stoves and LPG cylinders. Workers had to pay Rs.400 per cylinder.

Sanitation:

Toilets with bio-digester technology.
Men: 6 toilets; Women: 6 toilets
Toilet ratio: Men 1:30 and Women 1:6 (assuming the smaller rooms are occupied by couples and each of the larger rooms are occupied by 10 men)

Men: 6 bathrooms; Women: 6 bathrooms
Separate open washing spaces also provided for men and women.

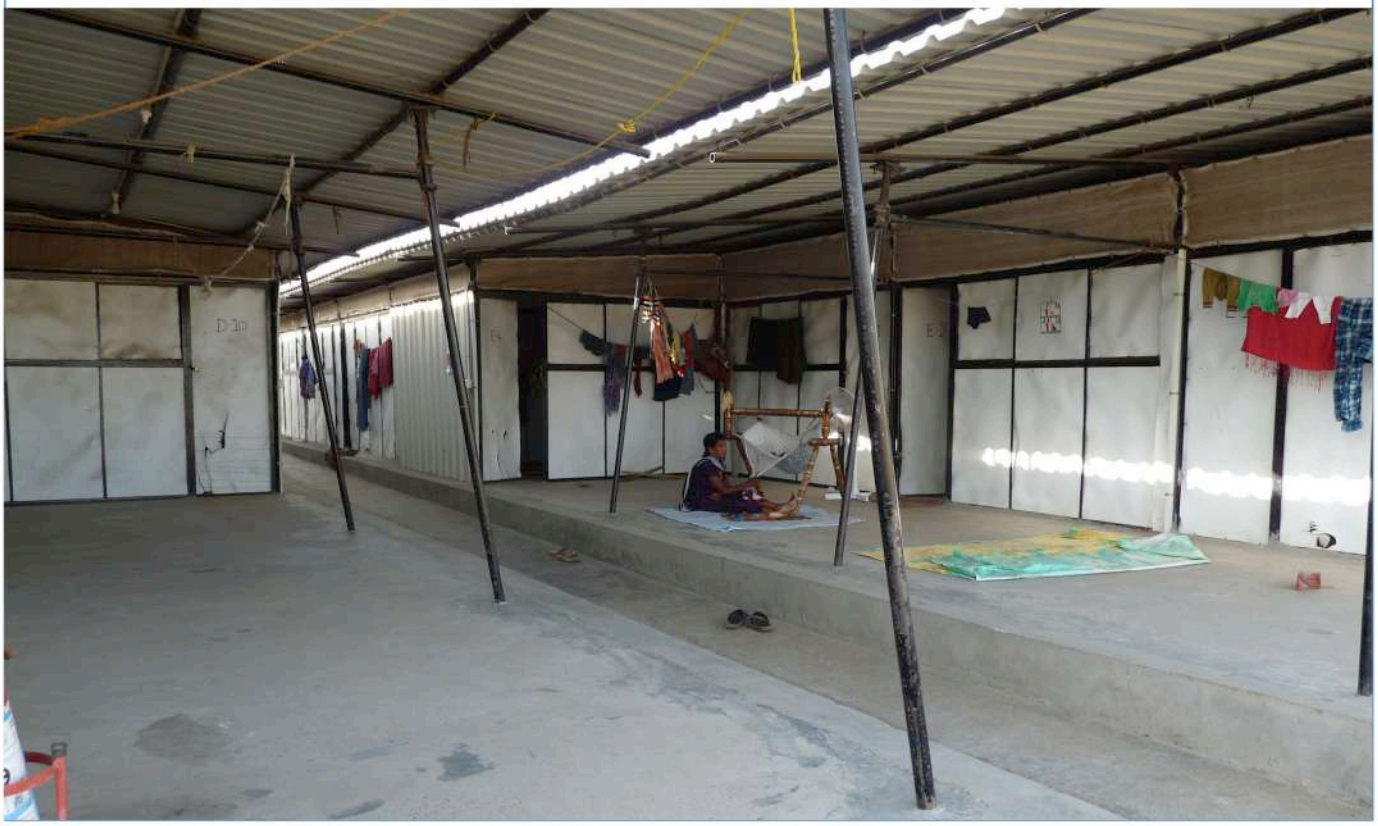
Drainage system to prevent waterlogging

Accommodation built by the Developer

No. of rooms and size: 40 rooms, 3 x 3 metre - meant to house families / 4-6 persons
16 rooms, 3 x 6 metre - meant to house single men / 10-12 persons

Construction materials / technology:

- Walls: Corrugated metal sheets, Plastic PVC sheets (as infill panels), and agronets (for ventilation) for the rooms; Bison board and Plastic PVC sheets (as infill panels in the windows and doors) for the creche
- Roofing: Corrugated metal sheets
- Flooring: PCC
- Structure: Fabricated from metal pipes and angles



Creche: by Developer & NGO

Developer constructed the creche with kitchen space, toilets, playground, water, and electricity. Provided cradles, toys and study materials; and covered teachers' salaries and food costs.

No. of children: 50 children at peak time
Creche timings: 9 am to 6 pm.
Children divided into 3 age-groups: *ghodiya ghar* upto 3 years, *balwadi* for 3-5 years, and bridging class for 5-15 years. NGO provided supplementary nutrition which included a special diet for malnutritioned children. Conducted monthly health checkups of the children.

Health Services: by Developer & NGO.
NGO ran a health clinic twice a week.

Developer incurred all the running costs of the creche and health clinic, which was approximately Rs.14.5 lakh annually.

A cluster of rooms built from old corrugated metal sheets came up nearby, reportedly because some workers did not want to live in the model labour colony since it did not permit them to cook on chullahs and had other rules. Their reasons for not living there were being investigated by the developer's CSR team at the time of the fieldvisit.

Plate 12

Site/Client

12/K

Project details:

Five-star hotel project by a hospitality company. Land area: 8888 sq.m. Total built-up area = 59125 sq.m.; Project duration: 3-4 years

Land: No land available on the project site. Construction company leased a plot of municipal land 0.5 km away.

Contractors:

A large Mumbai-based Construction company hired for excavation, RCC, masonry-plastering and plumbing. Medium and small contractors would be hired for other works (painting, electricals etc).

Workers living in the labour colony:

The Construction company's workers.

Approx. 600 workers (including 35-40 women) lived in the labour colony during the fieldvisit.

Figure: The construction company had built two types of rooms – one from corrugated metal sheets (left), and the other using Aerocon sheets for the external walls (right).

Water: Water tankers arranged by the construction company. Water filtration system and separate water storage tanks installed by the Construction company to provide drinking water.

Sanitation:

Toilets provided by the construction company.
Men: 26 toilets; Women: 2 toilets
Toilet ratio: Men 1:22; Women 1:20 (based on the number of workers during the fieldvisit)

An open water storage tank was built with taps. Workers – both men and women – were to bathe, and wash clothes and utensils around the tank. No separate bathing space for women.

Figure: Women's toilets

Figure: Bathing and washing to be done around an open water storage tank

Accommodation: Two types of rooms built by the Construction company

"Bachelor rooms" – mainly for RCC workers from West Bengal, Orissa, Jharkand, Bihar
Number of rooms: 55 rooms
Size: 20 feet x 20 feet
Construction materials / technology:

- External Walls: Aerocon sheets
- Internal Walls and Roofing: Corrugated metal sheets
- Flooring: PCC
- Structure: Fabricated from metal pipes / angles

"Family rooms" – mainly for masonry-plastering workers from nearby tribal belt
Number of rooms: 70 rooms
Size: 12 feet x 12 feet
Construction materials / technology:

- Walls and Roofing: Corrugated metal sheets
- Flooring: PCC in some rooms; no flooring in some rooms
- Structure: Fabricated from metal pipes / angles / box sections

Figure (left): A bachelor room (cots were provided in only some rooms)

Figure: Drinking water

No Creche at present:

No. of children: 10-15 children
The construction company had engaged a NGO to run a creche when there were many women workers. The NGO had provided food and a teacher to take care of the children. When the women workers left, the creche was closed. Later, some women workers with children again came to the labour colony, but the creche was not restarted.

Health Services:

The construction company called a doctor daily to attend to minor injuries and ailments. The company van traveled daily between the site and its guest house in Sola, and took workers that needed more medical attention to Sola Civil Hospital where they could see a doctor and get medicine for Rs.5.

GCWWB's mobile health van also came to a nearby road once or twice a week, but it was not clear if any workers from this site went to avail its services.

Plate 13

Site/Client

13/L

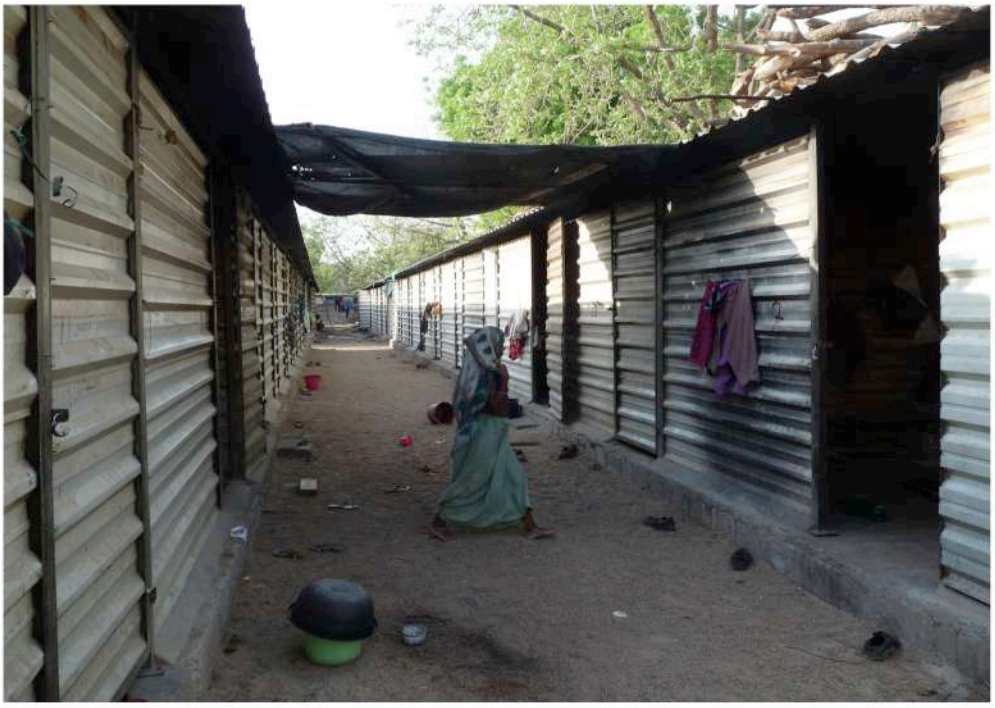
Contractors:
A large Construction company hired for all works except external glazing and carpentry.

Workers living in the labour colony:
The Construction company's workers. The construction company was also hired by an adjacent private university, and the workers on that project were also living in the same labour colony.

Approx. 400 workers (families & single males) lived in the labour colony during the fieldvisit.

Project details:
Institutional project of a private university. Super built-up = 18,600 sq.m.
Project duration: 2 years. Project cost: Rs.40 crore

Land: Labour colony built on the land of the private university, less than 0.5 km away from the project site.



Water: Water provided from the bore-well of an adjacent private university whose workers were also living in the same colony. Bore-well water was not filtered or treated for drinking purposes but it was stored separately in a tanker.

Sanitation:

Toilets built by Construction company – walls from Aerocon sheets and doors and roof from corrugated metal sheets.

Men: 20 toilets; Women: 8 toilets
Toilet ratio: Men 1:30; Women 1:30 (assuming 50% of rooms are occupied by couples & 50% of rooms by groups of 4 single males)

Figure: Toilet block by construction company

Figure: Bore-well water stored separately in a tanker for drinking purposes

Enclosed, open-to-sky bathing/ washing spaces were made with a row of taps, separate for men and women.

Accommodation built by the Construction company

Number of rooms: 230 rooms (40 rooms allotted for the workers engaged in construction at the adjacent private university)
Size: 10 feet x 10 feet
Construction materials / technology:

- Walls and Roofing: Corrugated metal sheets
- Flooring: PCC
- Structure: Fabricated from metal pipes / angles / box sections

Accommodation built by the Carpentry contractor

Number of rooms: 1 large room
Size: Unknown
Construction materials / technology:

- Walls and Roofing: Corrugated metal sheets
- Flooring: PCC
- Structure: Fabricated from metal pipes / angles / box sections

Figure (above): Large room for the single-male migrant workers of the carpentry contractor

Figure (left): Toilets for the single-male migrant workers of the carpentry contractor. Bathing space was in the open.

Creche: by Construction company

No. of children: 15-20 children
The construction company allocated one of the rooms in the labour colony for a creche, engaged a a teacher on a monthly salary of Rs.8000, and provided some learning materials. A snack was given to the children at 1 pm.
Creche timings: 9-10 am to 2-3 pm

Health Services:

Construction company organized a health camp twice a month (weekly during the monsoon).

Plate 14

Site/Client

14/M

Contractors:
A large Construction company hired for the project

Workers living in the labour colony:
The Construction company's workers.

Approx. 100 workers (10-20% families and remaining single males) lived in the labour colony during the fieldvisit. More workers expected to arrive soon.

Project details:
2.6 km Road development project by Ahmedabad Municipal Corporation. Project duration: 1 year. Project cost: Rs.33 crore

Land: Municipal land leased for the labour colony, site-office and storage of construction materials by the construction company, approximately 1 km from the construction site.

Water: 4-5 water tankers of 4000 litres each were arranged on a daily basis by the construction company at a cost of Rs.2000/day. Drinking water to be filled from the bathing spaces.

Sanitation:

Toilets built by construction company – walls from Aerocon sheets and doors and roof from corrugated metal sheets.

Men: 8 toilets; Women: 4 toilets
Toilet ratio: Men 1:12; Women 1:5 (assuming 50% of rooms occupied by couples and 50% of rooms occupied by groups of 4 single males)

The construction company made enclosed, open-to-sky bathing/washing spaces with a row of taps, separate for men and women.

Two housekeeping staff were employed by the construction company to clean the toilets and bathing spaces on a daily basis.

Figure: Women's bathing/washing space

Figure: Women's toilets

Accommodation built by the Construction company

Number of rooms: 40 rooms
Size: 10 feet x 8 feet
Construction materials / technology:

- Walls and Roofing: Corrugated metal sheets
- Flooring: PCC for ground floor
- Structure: Fabricated from metal pipes / angles / box sections

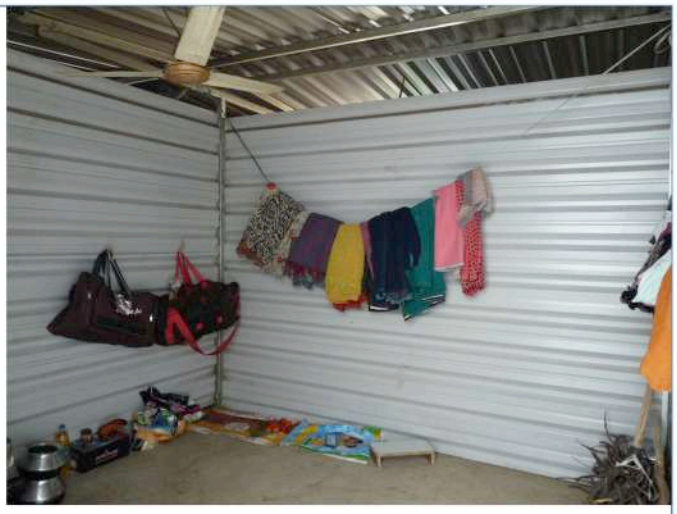


Figure (above): Fans are bought by the workers

Figure (below): One of the labour contractors had brought a cook for his labour gang from West Bengal. A kitchen space was made between two rows of rooms for the cook's use, and the contractor provided the kitchen with firewood

No Creche
No. of children: Unknown

No Health Services

5. Initiatives for Migrant Workers' Housing

In recent years, we have seen some initiatives that address the housing of migrant workers in their urban work destinations. This includes interventions and proposals for homeless shelters, some under the national-level Shelter for the Urban Homeless (SUH) scheme, in Ahmedabad, Surat and Bhuj; the Apna Ghar projects by the Kerala State government; migrant hostels in few cities by the NGO Pratham under its Project RISE programme; and the Garima initiative in Kozhikode, Kerala. This section outlines these initiatives, and discusses the possibilities and challenges they raise for improving housing in Ahmedabad and other cities for migrant construction workers – those who live at worksites as well as those who go to labour nakas and arrange for their own housing. It also discusses interventions on migrant workers' housing in countries like China, South Africa and Singapore.

5.1. Homeless Shelters

Night shelters or *ren baseras* have been set up in many Indian cities in response to Supreme Court orders in 2010. There have been many problems in the location, design and/or management of these shelters, but we have also seen some improvements over time in some cities due to pressures from the Supreme Court and civil society organizations. Some of these shelters have provided better housing to migrant workers who would otherwise be homeless or living in highly inadequate conditions. Many improvements have also been made possible by the national-level Shelter for the Urban Homeless (SUH) scheme, which was launched in 2014 and whose guidelines envisage these as 24-hour shelters, as spaces with an array of services and ultimately as a space that can link the homeless with various entitlements.[64] But despite the SUH guidelines, an improvement that has not received attention is the creation of family-friendly homeless shelters. As a result, we see that most shelters continue to be designed with only dormitory spaces for men and women. However, in cities with substantial number of homeless families, including migrant families, a dialogue with civil society has led the urban local bodies to experiment with family-friendly shelters. Some of these efforts and their outcomes are discussed below. One question that remains a concern is whether and how homeless shelters can become spaces of building entitlements to the city if these spaces are conceived as temporary places of residence that do not permit their residents to incrementally carve out a home in the city – when there are no other policies / programmes to support their mobility into other forms of housing.

Surat

In Surat, a dialogue between PCLRA and the SMC resulted in the setting up of a family-friendly homeless shelter in mid-2018 near Sahara Circle. The SMC already had a night shelter above a pay-and-use toilet at Sahara Circle but homeless migrant families had refused to stay at the shelter, partly because it consisted of only male/female dorms and partly because of its poor management by a NGO. The SMC encountered a similar lack of response from homeless families at its other shelters. After repeated interactions with PCLRA on this matter, the SMC identified a vacant hospital building near Sahara Circle which had 28 small rooms, 1 large room and 1 hall space, and after few repairs, gave it to PCLRA to manage as a homeless shelter (Image 17). Although the SMC was paying the NGOs who were managing the night shelters, PCLRA decided to take up the shelter's management without any remuneration, seeing this as an extension of its advocacy work for the migrant construction workers they worked with. Thus, PCLRA provided the staff at the shelter at its own cost, while the SMC was to be responsible for cleaning, repairs and any other maintenance.

[64] A previous study for PCLRA examined the Supreme Court orders for night shelters for the homeless, the inadequate response to these orders by State governments, and the potential of the SUH scheme to bring on vast improvements to homeless shelters (Desai 2017).

There were 135 migrants living at the shelter at the time of the fieldvisit in May 2019. They were seasonal migrants from Rajasthan (Banswara district, mainly Kushalgarh taluka, with some also from Pratapgarh district), MP (districts of Jhabua, Khandwa, Ratlam and Alirajpur) and Dahod district of Gujarat. The 28 small rooms were used as "family rooms" and were all occupied by families (couples, couples with children and families with more than two adults) (Image 18). 10-12 single male migrants were living in the large room. Two migrant families were also living in the hall space since there were no vacant family rooms; each had strung up large cloth sheets to create an enclosed space in the hall. They would be moved to family rooms when there was vacancy.

A discussion with the PCLRA staff at the shelter revealed that the migrant construction workers who moved to the shelter had earlier lived on footpaths and in open spaces near four nakas (Udhana naka, Chowk naka, Kapodra naka and Parvat Patiya naka).[65] These nakas were located within 2-3 km of the shelter. On moving to the shelter, they were either walking to the naka or taking a shuttle rickshaw that cost them Rs.5 one-way. PCLRA could not persuade migrants living in the open near a naka located about 4 km away (Ichanath naka) to move to the shelter because of the distance. This suggests that incurring a higher cost on transport to reach the naka is not acceptable to migrants even when the shelter is family-friendly and provides a protected and secure space, water, toilets and bathrooms. Some of the migrant construction workers living at the shelter were also new migrants to the city, and had come to live at the shelter directly through relatives / friends who were already living at the shelter. Amongst the 135 migrants living at the shelter at the time of the fieldvisit, only 10-15 of the families were "regulars," that is, these families lived at the shelter for most of the time, returning to their village only intermittently for few days. The remaining migrants had other migration patterns, spending more time in the village or moving away to live on construction sites at times.

Image 17 (left): Surat shelter managed by PCLRA (photo credit: Jitu Baraiya)
Image 18 (right): Family room in Surat shelter managed by PCLRA (photo credit: Jitu Baraiya)

[65] This paragraph is based on a discussion with Shantilalbhai, PCLRA, May 27, 2019, as well as a group interaction with the migrant workers living at the shelter.

The discussion with the PCLRA staff at the shelter also revealed some of the challenges they continued to face one year into managing the shelter. One was the water problem at the shelter. The SMC released water into the shelter's underground and overhead water tanks once a day in the morning. However, since these two tanks were not large enough, they often ran out of water by the end of the day. A second problem faced by PCLRA was that since PCLRA was not being remunerated for managing the shelter, it had to call the SMC to deal with repairs and maintenance, but the SMC did not always respond quickly. Earlier PCLRA also had to make the migrants contribute to cleaning the shelter, however, recently the SMC had started sending a cleaner. Overall, although some repairs had been done to the old hospital building, it was in a decrepit condition and the SMC was not willing to invest more in renovating the building to make it into a long-term homeless shelter. In fact, the PCLRA staff at the shelter explained that the SMC officials kept asking them to rehabilitate the migrant workers because the shelter was not meant to become a permanent home for them. It is noteworthy that the homeless shelter is conceived as a temporary space for these migrants although there are no policies or programmes to address their housing needs in any other way.

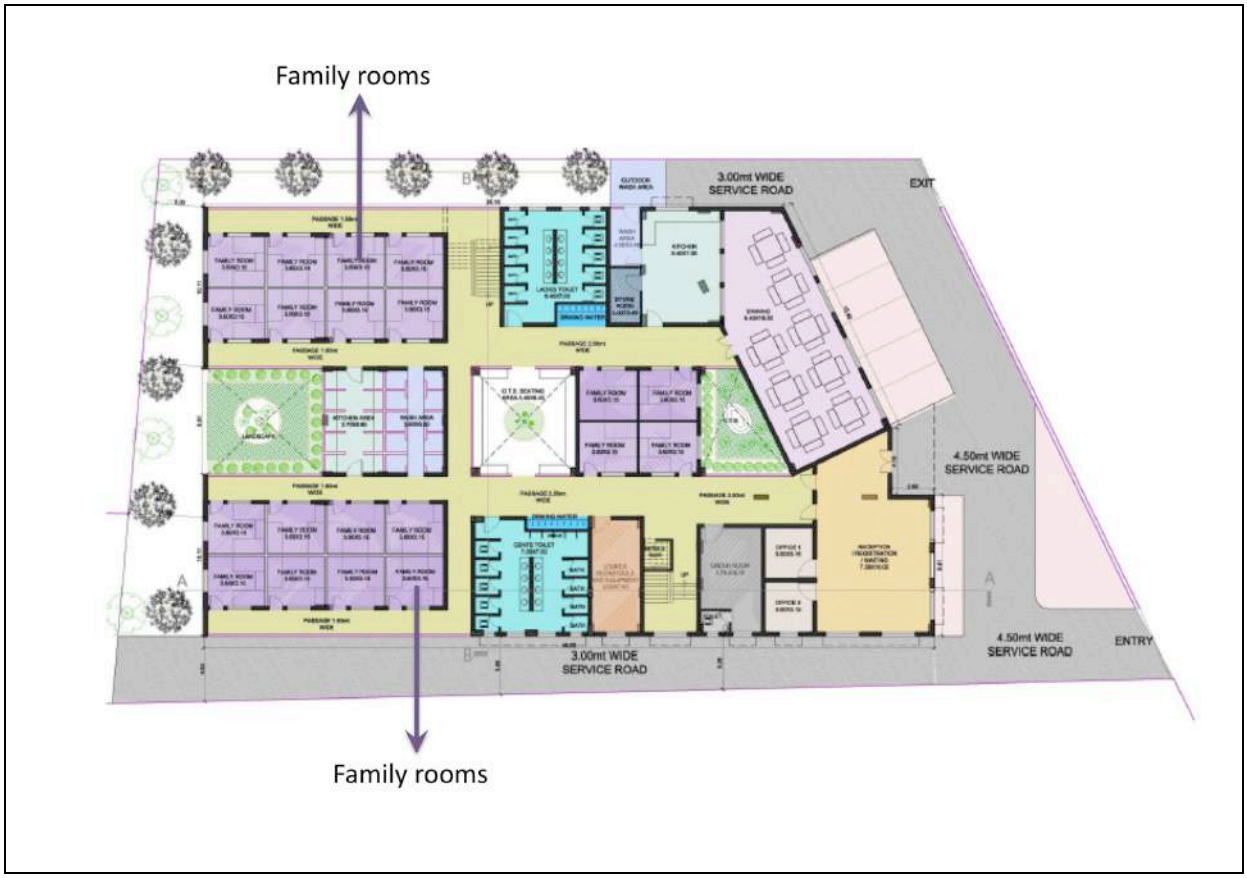
Meanwhile, the SMC was investing in building new homeless shelters, and intended to shut down its earlier night shelters built on top of pay-and-use toilets.[66] One of the new shelters, built on the grounds of the SMC's SMIMER hospital, was conceived as a "model shelter" and opened towards the end of 2018 / early-2019 with support from the Tata Trust.[67] The shelter has a capacity of 158 persons. The staff includes a manager, one male caretaker in the daytime and two male caretakers at night, two women caretakers in the daytime, two watchmen in two shifts, and two cleaners. The space comprises of two small dormitory halls on the ground floor for handicapped persons and senior citizens, and two dormitory halls on its upper floors. There are bunk-beds in all the dormitories. While the upper-floor dormitory halls were meant to be separate for men and women, the SMC tried to adapt the dormitories for family use because many families came to live at the shelter. In one dormitory the SMC allowed the families to tie cloth across the bunk-beds to create semi-enclosed "family spaces." In the other dormitory wall-to-ceiling curtains were hung by the SMC to create semi-enclosed "family spaces" consisting of a few bunk-beds. While the SMC's effort to adapt the space for families can be appreciated, this is certainly not a long-term solution to addressing the needs of homeless and migrant families. According to the shelter's caretaker these adaptations were also difficult to maintain and the curtain fittings were already getting damaged. The shelter also has a kitchen and dining hall with RO water and a water cooler. The NGO given the contract for managing the shelter provided a subsidized breakfast. A semi-open space was also provided with a kitchen platform and washing space for the residents who wished to cook, but this was still not being used and the residents had set up their own cooking chullahs in the shelter's compound in the open. Despite these limitations, the shelter was well run and maintained, however, the caretaker explained that the monthly expenses to manage it had turned out to be higher than the amount the NGO had quoted in its tender.[68]

The family shelter managed by PCLRA as well as the adaptations by the SMC at the new "model shelter" could be seen as steps towards a greater recognition by the SMC of the need for family-friendly homeless shelters. In fact, in 2017, the SMC had already prepared designs for homeless shelters under the SUH scheme in order to shelter both single men/women as well as families (SMC 2017) (Image 19). In mid-2019, two new shelters were under construction based on modified designs

[66] Discussion with Gayatri Jariwala, Assistant Commissioner, Urban Community Development department, SMC, May 28, 2019.
[67] http://www.horizons.tatatrusts.org/2019/may/tata-trusts-surat-night-shelters.html (accessed May 30, 2019).
[68] The NGO, Jyoti Samajik Sewa Sanstha, was spending Rs. 80,000-90,000 per month as against the Rs.70,000 they quoted in their tender. Discussion with caretaker, May 27, 2019.

and were expected to open in several months. The shelters were located in Surat's industrial areas, and according to the SMC's Assistant Commissioner in charge of the shelter projects, would serve many Odiya migrant workers who worked on 12-hour shifts in factories and lived on the roadsides or factory terraces.[69] The shelter being built in Bhestan would have a capacity of 536 persons and had 20 family rooms, and the one being built in the Althan Bhatar area would have a capacity of 330 persons and had 5-7 family rooms. Another 15 shelters, each with a capacity of 80-100 persons, were in the pipeline, however, none of these would have any family rooms, the reason being that building family rooms reduced the capacity of the shelters. While the two shelters in Bhestan and Althan Bhatar areas with family rooms is a welcome step forward to addressing the housing needs of migrant families, the fact that the 15 shelters that were in the pipeline were going to be built under flyovers reveals the inability and/or unwillingness of the SMC to find land to build bigger shelters so that family rooms can be included in shelters across the city.

Image 19: Ground-Floor Plan for Proposed Shelter in Surat (source: SMC 2017)



An additional point of importance is that the SMC is currently planning homeless shelters for the city as per the homeless survey done under SUH in 2018-19. This survey identified about 10,900 homeless persons in Surat. However, this could be an under-estimation since 36,144 homeless persons were counted in Surat in the 2011 Census.

[69] Discussion with Gayatri Jariwala, Assistant Commissioner, Urban Community Development department, SMC, May 28, 2019.

Ahmedabad

The AMC has been even more resistant to building family-friendly shelters than the SMC, despite recurring evidence that a majority of the homeless in Ahmedabad are families. A previous study for PCLRA documented the ways in which some of the shelters, despite not designed for families, have accommodated migrant families (Desai ad Sanghvi 2018). The study also pointed out that this was seen in shelters where majority of the families were part of a larger kinship group and therefore able to adapt the space for use by families without conflict. In order for shelters to work for families who may not be part of the same community as well as better meet the needs of families, it is important that the shelters are designed with family rooms.

In Ahmedabad, the AMC finally opened one family shelter towards the end of 2019. An EWS housing site which had been lying vacant for some years was repaired and converted into a family homeless shelter (Image 20). It consisted of 36 four-storey buildings (about 1150 flats) (Image 21). The AMC has begun allotting these flats to homeless families who had been shifted to one of the other homeless shelters in the city and had lived there for several months or more. The families who have shifted to this family shelter have been verbally told by AMC that they will have to pay Rs.500 as monthly rent, however, there has so far not been any rent collection even from families living here since 2-4 months. It is unclear how the shelter is being managed. While the shelter has a sign-board of the Chamanpura Residents Welfare Association, no one at the shelter knew anything about this association, including the male caretaker who lives in one of the flats and who claimed he is a AMC employee.

Image 20 (left) and Image 21 (right): EWS site converted into Family shelter in Ahmedabad

Bhuj

According to a 2017 study by a collective of NGOs in Bhuj, the city has 22 migrant communities comprising of 1098 families and 300 single male migrants living in temporary settlements without any basic services (Urban SETU 2017). Most of them are seasonal migrants and spend 2-6 months of the year in their villages. Following this, a proposal for a migrant hostel was prepared by Hunnarshala. The hostel was to be located near a labour naka and was designed to have family units with common dining spaces and kitchens where they could cook their own food, a men's hostel with

common kitchen/dining spaces, a girls' hostel and an old age home. The design also included an anganwadi. The migrant hostel was proposed to be run by a women's collective. The hostel was conceived to link the migrants with access to various entitlements like social security, pension, PDS, ICDS, identity, financial services and education.

This proposal was the basis of a Detailed Project Report (DPR) submitted by the Bhuj Municipality to the Government of Gujarat for sanction under the SUH scheme. However, the DPR did not get sanctioned, and instead, a new proposal was made for a homeless shelter by a private consultant and this was sanctioned by the State government. It has not been possible to obtain access to this proposal; what is known is that this homeless shelter is not located near a naka and does include family-friendly spaces (SETU 2020). Had the Hunnarshala proposal been sanctioned and implemented, it would have been an important step forward in creating migrant hostels.

5.2. Apna Ghar project: Migrant Hostels by Kerala Government

Kerala has witnessed an influx of inter-state migrant workers over the last few decades, particularly from the northern and eastern states. Many of these workers have been living in unhygienic accommodation without adequate water and sanitation facilities. In 2014, Kerala State Government floated a public-sector non-profit company, the Bhavanam Foundation Kerala (BFK), under the Department of Labour and Skills, to address the housing issue among labour through direct state provision. BFK's stated objective is "to provide, promote, develop and establish residential accommodation, education, healthcare, other associated infrastructure and services to laborers, workers and low-waged employees in Kerala."[70]

Through BFK, the Kerala State Government has undertaken four initiatives so far:

- Bhavanam projects under which subsidized ownership housing is being provided to plantation workers within or near plantations
- Janani projects under which subsidized ownership housing is being provided to landless unorganized sector and low-paid workers in towns / cities
- Apna Ghar projects to provide safe and hygienic hostel accommodation to inter-state migrant workers on affordable rental basis (elaborated below)
- Studio apartment projects for working women on rental basis: These projects are being developed in industrial clusters which have a concentration of single women migrant workers. The first studio apartment project is being built at the KINFRA International Apparel Park (IAP), Menamkulam, Trivandrum District, on land leased from KINFRA IAP. Women who have children below the age of 10 years would also be permitted to live with their children in the studio apartments, and the project is proposed to include a creche for these children.

The Apna Ghar projects

<u>Location and Land for the projects:</u>

The Apna Ghar projects are being developed in industrial clusters with a concentration of migrant workers. The first Apna Ghar has been built at the KINFRA Integrated Industrial and Textile Park (IITP), Kanjikode, Palakkad, on land leased by BFK from KINFRA IITP for 30 years. It was inaugurated in February 2019. Two more Apna Ghars are currently under construction, one at the KSIDC Industrial Growth Center (IGC), Kinalur, Kozhikode and another at the KINFRA Hi-Tech Park (HTP), Kalamassery, Ernakulam, on lands leased from KSIDC IGC and KINFRA HTP, respectively. Although the land in the industrial parks is not supposed to be used for residential use, an exemption was made for labour

[70] BFK website: https://bfk.kerala.gov.in/about-us/ (accessed December 28, 2019)

accommodation so that BFK could construct the Apna Ghars. Currently, BFK plans to build an Apna Ghar in each district of Kerala, in or near industrial parks/clusters, and while land has been leased for the first three Apna Ghars, BFK is looking into purchasing some land – especially in Tier II cities or on the city periphery where land costs would not be prohibitive – for some of the future Apna Ghars.

The Apna Ghar at Kanjikode, Palakkad

5000-6000 inter-state migrant workers are employed in Kanjikode in the KINFRA IITP and surrounding area in industries such as metal works, ice-cream manufacturing, manufacturing packing material, mattress-making, aluminum works, lamination, etc. Majority of them are from Orissa, West Bengal, Assam, Chattisgarh, Jharkhand, Bihar, Uttar Pradesh and Madhya Pradesh.

The capacity of the Apna Ghar is 620 workers. The facilities consist of the following:

- Four-storied building comprising of 64 rooms: 62 rooms are used to accommodate workers, 1 room used by the hostel warden and 1 room used as an office
- 62 rooms: Each room is for 10 workers, and has 5 bunk-beds and 10 lockable storage units
- 32 community kitchens and 8 dining halls: These are provided in the form of 8 kitchen-dining blocks, with each block consisting of
  - 4 kitchens, each provided with one gas stove with two burners and a LPG connection. Each kitchen is to be shared between 2 rooms / 20 persons (one burner per room / 10 persons).
  - 1 dining hall provided with a TV, filtered drinking water and wash basins. Each dining hall is shared between the 4 kitchens (i.e. 8 rooms / 80 persons).
- 96 toilets (toilet ratio 1:6.5), urinals, washbasins, bathing spaces, clothes washing & drying areas
- Communal seating areas, a lawn and a volleyball court

The financial model and the mode of renting at the Apna Ghar is as follows:

- The capital cost is borne by BFK through funds from the Kerala State government. Media reports state that the Apna Ghar in Palakkad cost Rs.8.5 crore.
- The rent is Rs.1000 per month per bed. This includes the cost of all the services and amenities such as water, electricity, LPG cooking facilities, etc. When the Apna Ghar first opened the rent was Rs.800 per month but some months later was increased to Rs.1000 per month to meet the costs of running the hostel.
- The recurring costs are to be covered through the rents. The Rs.6.2 lakh collected per month from rents is fully spent on recurring costs such as staff salaries (a 24-hour warden, office assistant, 4 day-time housekeeping staff, 6 security guards on shifts) (Rs.3 lakh per month), electricity (Rs. 1.5 lakh per month), water sourced from KINFRA IITP (Rs.60,000 per month), LPG (Rs. 70,000 per month), regular maintenance of the on-site sewage treatment plant, and other regular repairs and maintenance.
- From official descriptions of the Apna Ghar projects before any of them were opened, it seemed that these hostels would be accessible to any migrant worker ready to pay rent to live in the hostel. However, currently, beds in the Apna Ghar at Palakkad are rented out to industrial companies for their workers. Thus, all the workers living in the Apna Ghar are sponsored by their employers. In November 2019, 24 companies had booked rooms in the hostel.

Image 22: Apna Ghar, Palakkad

Image 23: Dormitory room in Apna Ghar, Palakkad

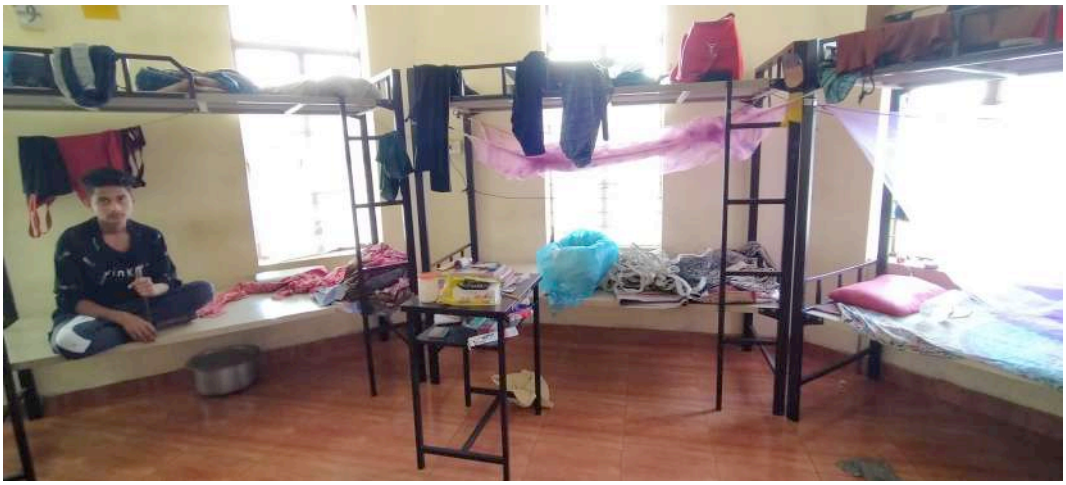


Image 24: Storage spaces in the dormitory rooms in Apna Ghar, Palakkad

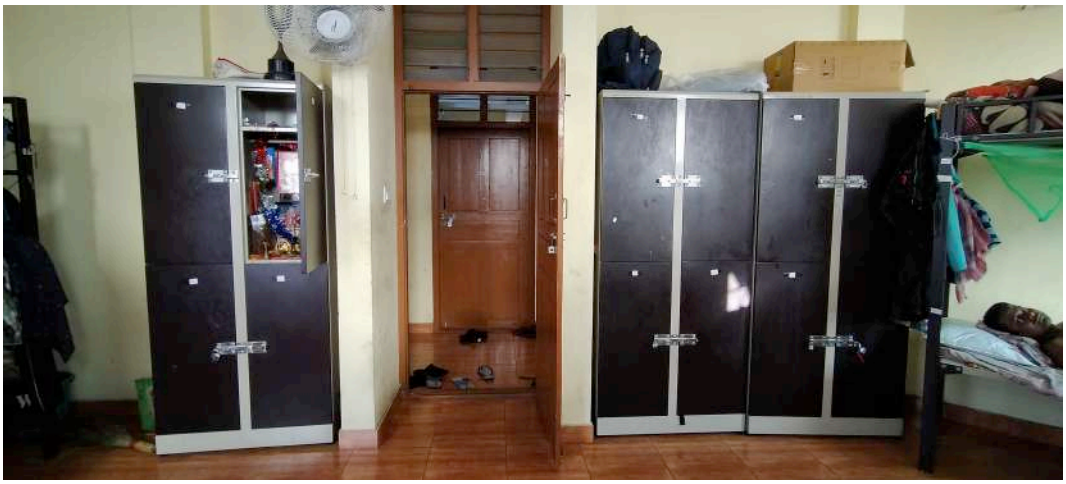


Image 25: Clothes washing-drying space in Apna Ghar, Palakkad

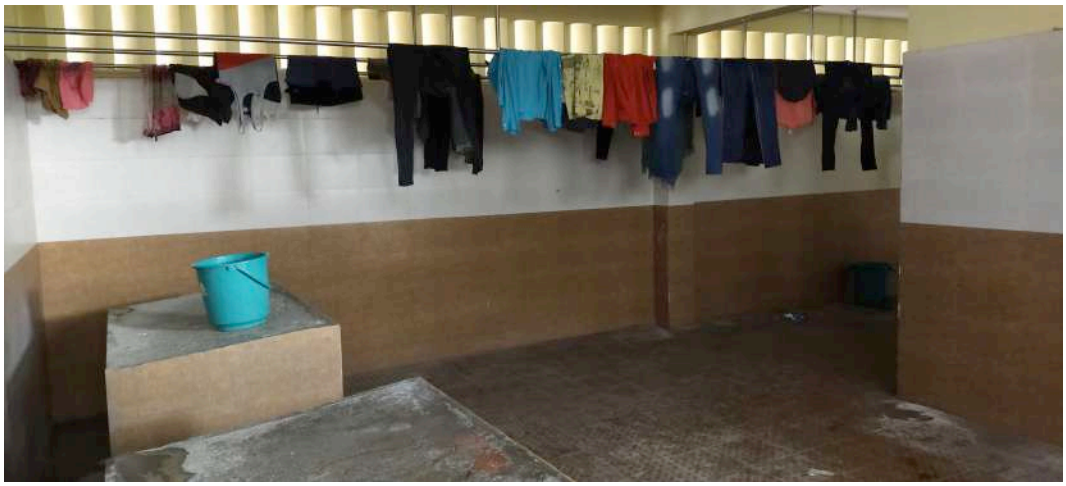


Image 26: Dining space in Apna Ghar, Palakkad

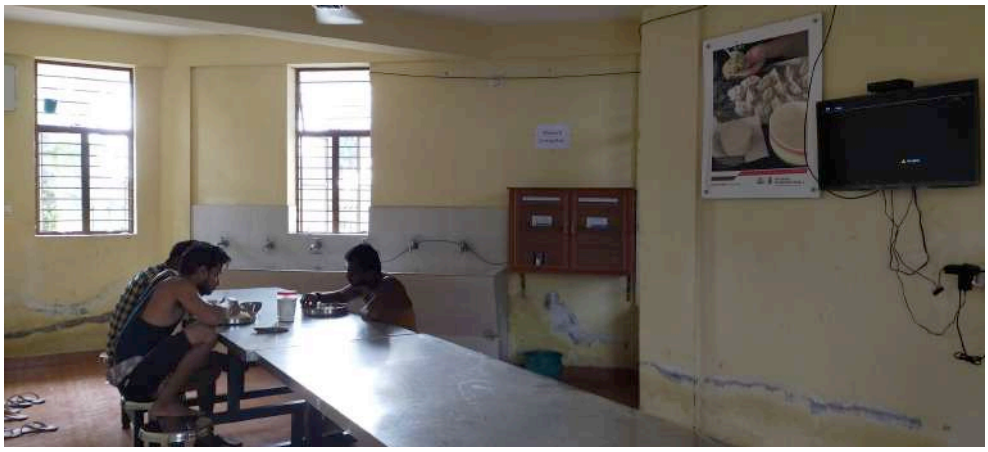


Image 27: Kitchen shared by two rooms (20 persons) in Apna Ghar, Palakkad

Discussions were done with two groups of workers, a total of 15-16 workers employed across 4-5 companies, to understand their views about the hostel. The workers expressed satisfaction at the facilities provided at the Apna Ghar and their maintenance. Some pointed out that in their previous accommodation, provided at the company premises or in rental housing built by private landlords, they did not have access to potable water for drinking. Others pointed to having earlier lived in congested rooms compared to the spacious rooms with natural light and ventilation in the Apna Ghar. Some workers felt that the environment at the Apna Ghar was peaceful because there was good security and fights among workers were not tolerated. Still others mentioned that there is a bazaar nearby which they like to visit, whereas the company premises that they lived in earlier was in the midst of many factories and was far from any such bazaar. Some of them appreciated the lawn space and volleyball court, and the TV in the dining hall for which they did not have to spend any money (in their earlier accommodation, while their employer paid their electricity bill, if they wanted a TV, they had to buy it themselves). Some pointed out that many companies provide food at the worksite, but many workers prefer to cook themselves and while some companies give a food allowance in such cases, the workers had to arrange for a cooking stove and fuel themselves in their earlier accommodation, which no longer have to do.

Questions that the current Apna Ghar approach raises for migrant workers' housing in Indian cities:

While the Apna Ghar in Palakkad is a well-built and maintained facility, and has had some important positive impacts for the workers who are currently living there, the current Apna Ghar approach raises several questions that need to be carefully considered in charting a way forward for improving migrant workers' housing, including creating hostels / rental housing for migrant workers.

1. Mode of renting and the question of "full occupancy" in the hostel: The beds are rented out to companies for their workers. The companies are renting all the beds in a room so that their workers do not have to share the room with workers employed by another company. This means that although all the 620 beds in the Apna Ghar are rented out and this is considered "full occupancy," not all of them are actually occupied all the time. Sometimes an entire room is unoccupied but the company is paying the rent and therefore the room is considered to be "occupied." It is important to recognize that ensuring access to maximum number of workers in such hostels / rental housing is not the same as ensuring that all the beds/rooms are booked by employers assuring continuous rent revenue. It will be important to prioritize the former.
2. Exclusions due to mode of renting, and location and design of Apna Ghars: The mode of renting beds / rooms to companies means that casual daily-wage workers are currently excluded from the Apna Ghar. Even if the first three Apna Ghars (Palakkad, Kozhikode, Ernakulam) are opened up to workers who can "walk-in" to rent a bed rather than be sponsored by an employer, it is not clear how many will walk in because the majority of workers in the locations where the Apna Ghars are built are employed in companies on a somewhat regular basis and are not casual daily-wage workers. To reach casual daily-wage workers, migrant hostels would have to be built at other locations, close to their informal labour addas and workplaces. Accommodating daily-wage workers will also likely require design modifications, especially for the community kitchens since greater number of workers would cook in each kitchen (currently, the small kitchens work well because the cooking for all the workers living in a single room / employed by a single company is done by only 1-2 workers). While the predominant migrant workforce in Kerala comprises of single males, there are migrant families also – however, they are excluded since the Apna Ghars are designed as dormitory-style hostels. The larger and significant question in any given context (Kerala and other States) is which migrant groups should such migrant hostels be built for as opposed to better regulation of employer-provided housing and better regulation of the private rental housing market? The appropriate planning, design, financial and governance approach for such hostels / rental housing need consideration in this context.

3. The Apna Ghar approach is currently subsidizing the companies – what might be the alternative? In Kerala, the companies are either building accommodation on the company premises or renting rooms in the vicinity for their workers. However, the conditions in such accommodation is not as good as in the Apna Ghar. If decent accommodation, such as provided in the Apna Ghar, had to be built by companies or rented from landlords in the private market, the companies would have to incur higher expenses than the rents charged in the Apna Ghar. Should the state be subsidizing companies in this way? What might be the other alternatives – Should the state no longer allow the companies to rent rooms in the migrant hostels? Should the state instead regulate employer-provided housing so that its standard improves? Should the state continue to allow companies to rent rooms in the migrant hostels, but charge higher rents that could be used to cross-subsidize rental rooms for casual, daily-wage workers who would have to pay the rent themselves in the absence of a regular employer?
4. Scaling up: The first three Apna Ghars (Palakkad, Kozhikode, Ernakulam) have a total capacity of 2500 workers. This is a very small proportion of the estimated 2.5 million inter-state migrant workers in Kerala. Scaling up direct provision by the State to reach even 5% of these migrant workers (1.25 lakh) would be a huge challenge. In this context, how does one view the Apna Ghar projects – A huge challenge to be taken on through direct State provision? As "setting a good example" through few projects in terms of the quality of housing that employers should build for their workers or rent from the private rental market? As an approach that needs to be appropriately modified to predominantly target the most vulnerable groups like casual daily-wage workers who do not have a regular employer? As an approach that needs to evolve to include PPPs so that it can be scaled up (but who are the private / non-profit actors who may be interested in entering this sector of hostels / rental housing for migrant workers)? This set of questions are of relevance not only for Kerala but also for any State that might adopt a hostel / rental housing approach for migrant workers.
5. Linking housing with other services and amenities: It will be important to think about how hostels / rental housing for migrant workers can become spaces that link the workers to other services and amenities, such as healthcare, subsidized ration, etc.

5.3. Project RISE: Migrant Hostels by Pratham Educational Foundation

Pratham Educational Foundation, a NGO working in the education sector, provides vocational training to youth in rural India.[71] Between April 2014 and April 2015, Pratham tracked 2,300 vocational training students after they got jobs in different cities, and discovered that nine per cent of the students went back to their villages directly after training. Of those who did start on their jobs, only about half (48 per cent) of the students were still at work three months later. A year later, only about a fourth (23 per cent) were still employed. Pratham found that one of the reasons for this was that most of the youth could not afford clean and hygienic places to stay and started having health issues due to poor quality food. In address this situation, Pratham launched Project RISE, an initiative to provide hostel facilities to migrant youth in the city. The first hostel, with a capacity of 100 persons, was opened in December 2016 in Navi Mumbai, with the support of CITI Foundation. Since then, several more migrant hostels have been opened, in Mumbai and few other cities like Delhi, Hyderabad and Pune. Pratham rents good-quality properties from landlords who would generally be reluctant to renting to migrant workers, and has set up the migrant hostels in these properties.

Some of the hostels are for first-generation migrant men and some for first-generation migrant women in the age group of 18-30 years. The hostels provide shared rooms / dormitories with bunk beds, water and sanitation including hot water and safe drinking water, kitchens with stoves and cooking utensils. The hostels offer accommodation for 30-90 days in the range of Rs.1500-2500 per

[71] These hostels are described based on the following sources: Hakim 2016, Rosario 2017, Nair 2017, and Pratham 2018.

month. One can also choose to rent on a daily basis at Rs.50 per day. The hostels are thus conceived as transition homes for these migrant youth, giving them a foothold in their first few weeks/months in the city, so that they can find a more permanent place to stay. Where possible, Pratham also provides assistance in finding permanent accommodation. Besides accommodation, the hostels also provide assistance to the migrant youth in setting up bank accounts, getting identity cards, and getting familiar with public transport and other services in the city.

These hostels have filled an important gap in migrant workers' housing in cities. However, the issue of financial feasibility comes up with regard to providing hostels for poorer migrant workers who would not be able to afford even these rents. The hostels are also financially feasible because they are shared / dormitory type of accommodation, and reaching migrant families is a challenge for NGOs since they have to find financially self-sustaining models of provision.

5.4. Garima project in Kozhikode, Kerala: State Regulation of Migrant Rental Housing

In 2017, following a cholera outbreak in an area of Kozhikode district which revealed the pathetic condition of rental housing provided to migrant workers by private landlords, the district administration launched an initiative to regulate this rental housing (TOI 2017). The Kozhikode municipal corporation's health inspectors were brought on board to carry out inspections of this rental housing. The inspection includes checking the facilities available to migrants and rating it based on eight factors: location of the rental house or migrant workers' camp, condition of bedrooms, available bed facility as the norm prescribes that 2.5 sq.m carpet area per person, toilet facilities, bathroom facilities, kitchen and dining facilities, solid waste management, availability of drinking water and general hygiene.

Unfortunately, there is little more than the above information about this initiative and primary research would be required to look into how the initiative unfolded and its outcomes. The initiative is mentioned here because it marks a rare instance of an effort by the state to regulate the quality of rental housing privately provided to migrant workers.

5.5. Initiatives in Other Countries: China, South Africa, Singapore

This section discusses some of the initiatives for migrant workers' housing in other countries with large number of migrant workers. It takes a broader approach to understanding these initiatives, describing the regime of labour migration, its link to migrant workers' housing and the conditions of this housing in these contexts.

China

During the Maoist era (1949-1978) there was draconian control of mobility from rural to urban areas, partly enforced through the hukou system, a household registration system which divided the population into those with rural hukou and those with urban hukou. Regulations also made it difficult for citizens to change their hukou status from rural to urban. This began to change with reforms from 1978 onwards, which relaxed restrictions on movement from rural areas to smaller cities as domestic rural-urban migrant labour became an important component of China's growth. Today there are approximately 280-290 million rural-urban migrant workers in China, many employed in factories and construction. While rural migrants can now apply for urban hukou status, the vast majority of rural-urban migrants, particularly those working as manual laborers but also many educated / highly skilled migrants, are still excluded from getting urban hukou due to the strict requirements as well as high costs in some cities to change their status (Asia Society 2017, Bork-Hüffer et al 2016, Suda 2016, Tyner and Ren 2016). Social benefits and access to public services in the cities, including subsidized

housing, were restricted to those with urban hukou, and while reforms on this front have taken place introducing possibilities to access social benefits and public services regardless of hukou status, the fact is that large numbers of rural migrants in the cities, especially those who are less educated and less skilled, are still excluded from or have limited access to these benefits and services (Asia Society 2017, Chen and Fan 2016; Suda 2016). Many rural-urban migrants are also not interested in getting urban hukou for various reasons, preferring to circulate between rural and urban areas (Lin and Zhou 2010; Chen and Fan 2016).

In the context of the above migration regime, large numbers of rural-urban labour migrants circulate between their village and cities. Many are single men / women but there are also families. Many are forced to live on rent in urban villages, former 'rural' communities that have been encircled by urban sprawl (Bork-Hüffer et al 2016). In recent years, the state has embarked on a massive drive to redevelop the urban villages in major cities, a transformation that "mostly entails the demolition of current structures without the provision of alternative residential space for their rural-to-urban migrant residents, which pushes this group further to the fringes of the city" (Bork-Hüffer et al 2016). Grasnow (2012) writes about these urban villages as "spaces of arrival for millions of migrants-in-the-city – spaces which are not only providing affordable housing but are also delicate ecosystems of informal economies and services" and argues that "these informal spaces, inhabited by migrants-in-the-city, require a careful upgrading of their existing infrastructure rather than a thoughtless pushing out of their inhabitants to even more marginal spaces in the city."

Many rural-urban labour migrants working in factories live in employer-provided dormitories, with the nature of facilities varying. Rent is deducted from the worker's pay. One of the many dormitories provided by a company making IPhones for Apple was a four-storey building – a converted factory complex – with rooms containing 12 bunk-beds and metal lockers, with hardly any space for anything else. This flouted Apple's norms of not more than 8 workers to a room. 600 people lived on each floor, but there were only 30 toilets, large shower rooms with 30 showers and 50 wash basins on each floor, with about half of the toilets out of order at any given time, leaving just one toilet for every 40 workers. There were workers' cafés, food stalls and a grocery shop on the ground floor. The dormitory was patrolled by teams of security guards and strictly off-limits to outsiders. Some workers had moved out of the dorms to share flats nearby, but the rents were almost three times higher and one-third of their basic pay (one-sixth of their pay if they worked overtime everyday), and thus a burden on them (Knowles 2016). There has been media attention on inadequate living conditions in dormitories provided by other large companies focused on export-oriented manufacturing (Martina 2012). Such media attention along with pressure by Apple on the companies that manufactures its products has led these companies to build more modern dormitories, with a maximum of eight employees per room, which is equipped with fire-control facilities, air conditioning, 24-hour hot water, security services, free Wi-fi and cleaning services six days per week (Knowles 2016).

Lin and Zhou (2010) have written about the need for polices that set up housing standards for migrant dormitories and housing for migrants by employers, as well as the importance of the state because of the limits of employers, especially small enterprises, to take on the main responsibility for housing given that the cost they can bear for accommodating employees would result in only a limited improvement in migrant housing conditions.

Wang, Li and Zhang (2015) mention the poor accommodation and inferior conditions of living quarters, especially in the construction sector, describing them as crowded, lacking privacy and public health management, which makes workers prone to poor physical and mental health. However, it should be noted that the detailed descriptions and photographs reveal that this accommodation is still of better quality than what is provided in the Indian context. They write:

> "Traditional migrant construction workers' quarters are usually made of polystyrene board,

> color steel board, wood board, and a steel frame… The applicable area of the quarters is approximately 12–30 m^2, containing three to eight bunk beds. Anywhere from 4 to 15 workers reside in one room, without separation, even between male and female workers... There are only shared toilets, and these bathrooms are situated outside of the quarters. To control costs, the quarters contain only minimal furnishings and appliances, such as chests, tables, chairs, televisions, refrigerators, etc. Only a few quarters are equipped with air conditioners in regions with hot summer temperatures." (Wang, Li and Zhang 2015)

These kind of worker quarters are constructed by the general contractor. The developer or investor pays a temporary facilities fee, which is generally 1-2.2% of the direct project cost, to the general contractor, whose logistics department is responsible for the accommodation as well as catering services for the workers. The accommodation is free for the workers of the general contractor and its subcontractors. The subcontractors who are hired directly by the developer or investor pay a rent to the general contractor for the accommodation for their workers. But the workers of subcontractors involved in "project preparation and earthwork" live in "simple shacks and bear extremely primitive living conditions."

Wang, Li and Zhang (2015) also present an integrated prefab accommodation system that they have developed for construction workers living on the worksite. It uses modular construction technology and was piloted at one of China's top developer's projects in Xuzhou. This accommodation, which is made of colored steel plates, thus complying with China's national standards of fire-protection performance, consists of rooms of 8.4 m^2, to be shared by two persons, either two men/women or a husband and wife couple. Each room has a private toilet, a private bathroom with water heater, and an air conditioner. The doors of the quarters are equipped with smart-card locks to ensure security. At the site in Xuzhou, 200 rooms for 400 workers were thus provided. There was also a store room, dining room, kitchen, convenience store, and recreation and training room. The mode of management proposed was that this accommodation and supporting services be provided by a professional management agency. The developer or investor is supposed to collect the requirements in terms of number of rooms from the various contractors and subcontractors on their project, and then buy the accommodation, catering and field management services from a professional management agency. Thus, the 1–2.2% of direct expense for the project in the traditional mode for temporary facilities would now be paid to the professional agency. Since the cost of this provision is higher (1639 Yuan per worker per year instead of 1165 Yuan), the increased cost component (474 Yuan) would be covered by charging the migrant workers a fee. The workers would also have to pay for the additional costs of electricity and water. They calculate that given migrant workers' average daily income of 200 Yuan, the fee they would pay for this better accommodation would be 1-1.5% of their daily wage. If the developer or investor was to cover the increased cost component (474 Yuan), it would add less than 1% to the direct expense of the project.

From around 2008, the national government in China began to expand the provision of public rental housing and relax the hukou-related distribution system in public rental housing so that migrants can access it. According to Zhou (2018), the turning point was the "New Urbanization Plan" (2014-2020) whose reforms began to gradually ensure that migrants gain more benefits in the destination urban areas.[72] Zhou's research focuses on the public rental housing programme in the city of Chongqing. Although this programme was established prior to the New Urbanization Plan, "it created a palpable example of the national governments' ideas for developing public rental housing and improving housing conditions for migrants" (Zhou 2018). By 2011, the public rental housing being constructed in Chongqing was equivalent to 10 per cent of the total output of public rental housing in the whole country and by 2013 it had constructed 670,000 rental units (Zhou 2018). This public rental housing

[72] Zhou (2018) also argues that the reforms have also increased the benefits of those with rural hukou in their rural hometown, making it more complicated for migrants to make a decision on where they would want to finally settle, in their rural hometown or the city.

programme was also meant to ultimately be ownership-oriented, since after five-years of renting, eligible sitting tenants could buy their units.

While about 50% of the public rental housing occupants in Chongqing were migrants, the criteria for applying for this housing suggests that not all migrants could access it. While the hukou barrier was removed as a criteria to apply, the migrant applicants needed to hold stable employment and have participated in the pension system for over six months. Zhou (2018) mentions that scholars divide migrants in China into four categories: manual migrants (doing manual work such as factory workers, restaurant servers, etc), intellectual migrants (who hold at least a university degree or a college education), entrepreneurial migrants (who have accumulated some financial assets to open small businesses and private companies) and policy migrants (whose move to the city was facilitated by government policy interventions in land and housing). From the existing literature, it does not seem that manual migrants – which would also include construction workers – have been able to access this public rental housing in large numbers.

South Africa

Migrant hostels in South Africa are associated with the country's legacy of racial discrimination and economic exploitation since they were established as single-sex institutions during the colonial era, especially the apartheid years (1948-1994) to accommodate African migrant labour for the duration of their stay in white urban areas (Thurman 1997). Colonialism in South Africa included "influx controls," which were extreme restrictions over the movement of blacks to urban areas as well as controls where they could live, both of which were intertwined with the colonial exploitation and control of black labour. In this context, the hostels were meant for the containment of labour and not for providing human comfort (Penderis and Merwe 1994). Murray and Witz (2013) write that the migrant labour hostel was one of the sites of "the ordinariness of oppression" and a typical example of "control through colonial and apartheid planning." Thus, while as we examine hostels in South Africa as an intervention for migrant workers' housing, the torturous history of colonialism and apartheid that gave rise to the hostels cannot be ignored. The discussion below therefore attempts to understand the history of these hostels during the colonial era, their worsening conditions over time, and the efforts made by the state to improve housing for the hostel dwellers. This discussion is based on the limited literature available, with many articles dating to the apartheid era and several years post-apartheid.

Around 1997, there were 604,000 hostel beds in South Africa, many of which accommodated whole families, resulting in the hostels housing some 1 million people (Thurman 1997). Thurman (1997) refers to three different types of hostels: hostels built by employers for their employees in private compounds attached to specific places of work; public hostels owned by provincial or local authorities which offered accommodation to workers from a range of industries; and "grey sector" hostels, wherein the structure is owned by private companies and the land by the local authority. Public sector and "grey sector" hostels were usually located in the segregated black townships on the city periphery, although over time with urban growth, many townships came to be in central areas. Pirie and da Silva (1987) write that public hostels include those that were originally built by industrial / commercial companies and later placed under government jurisdiction. They also point to hostels operated on a small scale by charitable and church organizations.

The available literature focuses almost exclusively on the public hostels. According to articles written in the 1980s-90s, most hostels were badly designed, poorly built and suffered from years of neglect, resulting in appalling, overcrowded conditions; with many becoming sites of violence and repression (Penderis and Merwe 1994; Thurman 1997). Pirie and da Silva, in a 1987 article, discuss the history, physical condition and lived experiences of the hostels in Greater Johannesburg which at the time

housed 50,000 dwellers (Pirie and da Silva 1987). Many of these hostels comprised of single-storey barrack-style blocks housing dormitories, toilets, showers and places to wash clothes and utensils. The sleeping configurations in the dormitories ranged from more expensive single bed rooms to less expensive multiple bed (4, 6, 8 or 16) arrangements. Cooking took place in the dormitory rooms. At a few hostels, there were communal and leisure facilities like a community hall and a garden. Some of the newer hostels were 3-5 storied structures, consisting of rooms shared between 4 or 8 persons, toilets and kitchens. Some of the hostels were heavily policed, and as far back as the 1970s some had electronically operated steel doors that could be shut to seal off certain sections, pointing to the emphasis placed on controlling the workers. The article also describes the lived world of the male hostels, which points to their dehumanizing character and the social claustrophobia they created due to their distorted adult demography and little interaction with residents/families living in surrounding areas.

Penderis and Merwe, in a 1994 article, discuss the history, condition and lived experiences of hostels in the segregated black township of Kaya Mandi located on the outskirts of the university town of Stellenbosch (Penderis and Merwe 1994). The Kaya Mandi township originated in the 1950s as part of urban apartheid policies and a section of the township was demarcated for hostels. In 1966, a consortium of nine of the largest employers of black labour in the area built some of the first hostels and handed them over to the municipality for administration. Employers deducted the rental for each bed-space from the hostel dwellers' wages and transferred this to the municipality. In 1992, the township had 69 hostel structures and approximately 56% of the township residents (7,900 persons) were hostel dwellers. The 69 hostel structures included 34 prefabricated temporary hostels (with 2180 beds) built by the Kaya Mandi Town Council, 34 brick hostels (with 288 beds) built by the Kaya Mandi Town Council, and 17 employer-owned brick hostels (with 238 beds). In the early 1990s, only the employer-provided hostels were in a decent condition with well-equipped communal kitchen areas, and were highly regarded amongst workers. The first two types of hostels were in a state of severe disrepair. The 34 prefabricated hostels had no water connections, inadequate sewerage removal system, overflowing toilets with broken doors, no stoves in the kitchen, inadequate electricity, poor garbage removal services, and poor drainage in the surroundings. The poor thermal performance of these hostels contributed to respiratory problems amongst the residents. There was severe overcrowding in the hostels, with 116 persons living in a 12 metre x 6 metre shed with 40 beds. As reforms of the apartheid system were undertaken, extreme restrictions on the movement of blacks relaxed, and women and children joined the men in these hostels. The space was thus inhabited by families who had partitioned it into cubicles using cardboard and curtains. A cubicle with about four bunk beds was shared by upto four families or eight persons.

Thurman, in a 1997 article, describes some of the public sector and "grey sector" hostels in the Cape Town metropolitan area which had an estimated 85,000 people living in them (Thurman 1997). Built during 1940-1970, the hostels were one to four stories, with shared rooms, kitchens, toilets and showers. They were in poor condition because of poor maintenance. Some of the ground floor rooms were permanently flooded due to leakages in the toilets and broken pipes. Overcrowding was severe, with a 1995 survey finding that on average 3.5 persons occupied one bed-space. This was, as mentioned earlier, because families were inhabiting bed-spaces in what were meant to be single-sex institutions. There were also squatter shacks built around the hostels, often housing family members of the hostel dwellers.

An important aspect to keep in mind is that the dehumanizing lived experience of the hostels described in the literature from the 1980s and 1990s was shaped not only by their physical conditions – which were very poor in many cases and relatively decent in some cases – but also by the political-economic context of apartheid which forced large number of blacks to migrate to cities as labour without their families and live in hostels. The hostels thus sought to consolidate the migrant labour system under the apartheid state (Thurman 1997). Pirie and da Silva (1987) show how

the hostels in Greater Johannesburg were established because of concerns about workers living in poor slum-like conditions as well as to serve the interests of capital as employers wished "to minimize the inconvenience and cost of having their employees reside far from workplaces." They argue that the interests of capital could have been served even by providing family units for migrant labour close to workplaces, however, instead [single-sex] hostels were built because they offered additional financial and regulatory advantages to both state and capital.[73] Despite these motivations behind the hostels, families did come to inhabit the hostels, at first resisting state policy and despite raids to keep them out of the hostels; and later as state controls on the movement of blacks relaxed. However, while families may have been reunited, it lead to unimaginable overcrowding and pressure on services in many hostels, which were often being neglected in any case.

In the early 1990s, faced with mounting criticisms of the worsening conditions in many hostels as well as increasing conflicts between hostel residents and surrounding residents in black townships, the apartheid state began to acknowledge that the hostels needed significant upgrading (Thurman 1997). Thurman (1997) writes that there were conflicting views with regard to the future of the hostels. For many people they represented a constant and bitter reminder of the colonial past, but since many hostels are relatively close to urban centres and job opportunities and offer affordable rentals, many others including large number of hostel residents saw hostel redevelopment as an opportunity at a time of desperate housing needs. This explains why trade union activities had begun to focus on the poor living conditions in the hostels, leading to the formation in 1983 of the Western Cape Hostel Dwellers' Association (WCHDA) with the objectives of campaigning for the rights of the hostel dwellers and their families and promoting the development of the hostels through upgrading and conversion into family accommodation. Although WCHDA did not get very far in the 1980s in meeting its objectives, in 1990, it formed the Umzamo Development Project, a community based organisation registered as a non-profit company with the mandate to promote and facilitate hostel conversion to family units in the Western Cape. This kind of community advocacy was likely to have been a contributor to the launch of the National Hostels Redevelopment Programme in the early 1990s. Its objectives included creating humane living conditions for hostel residents and including them in decision-making processes around hostel redevelopment. The programme saw a number of revisions over the years, and included efforts to redevelop the hostels into family rental units as well as ownership units. In 2006, the programme was replaced by the Community Residential Units (CRU) Programme, an ongoing programme whose objective is to "facilitate the provision of secure, stable rental tenure for lower-income individuals. The programme targets low-income individuals and households earning between R800 and R3500 a month, who are unable to enter the formal private rental and social housing market."[74] CRU includes but is not limited to hostel redevelopment, which it seeks to redevelop into family units.

Unfortunately, there is little available literature to shed light on the extent to which National Hostel Redevelopment Programme was implemented and its outcomes. Thurman (1997) refers to the hostels redevelopment project undertaken in the Western Cape to convert public hostels into family accommodation through tripartite arrangements between Umzamo which represented the hostel residents, the local authority which owned the land and was the developer for the project, and the

[73] Pirie and da Silva (1987) mention that among the advantages which hosteling held for the apartheid state was the fact that it harmonized well with other state policies such as the influx control policy. The single-sex hostels could, in fact, be used as a disguised form of influx control to limit the number of Africans taking up a permanent presence in "white" urban areas. Hostels could also be used to distance Africans and Whites geographically at night and during daytime leisure hours. They also point out that hostels were a cheaper form of shelter to construct than family housing. This was more so because they were single-sex establishments. Furthermore, employers benefitted in that the wages could be made lower by the assumption that workers could be paid as individuals rather than as family breadwinners to whom pension, welfare and insurance support was also due.

[74] https://www.gov.za/about-government/community-residential-unit-cru-programme (accessible 23.1.2020).

provincial government that channelized funding through the national programme. Mothotoana (2011) studied two hostel redevelopment projects in the Johannesbug metropolitan area, one of which was undertaken by Johannesburg Social Housing Company, a social housing company owned by The City of Johannesburg Metropolitan Municipality. The two projects, implemented by 2008, involved redevelopment of hostels into rental family and bachelor units with significant improvements in living conditions. Such improvements were also seen in another hostel redevelopment project (Murray and Witz 2013). Some of these projects have been articulated as "Hostels to Homes" projects. However, Mothotoana (2011) points out that the redevelopment did not provide accommodation to all the hostel dwellers who lived in these hostels earlier, and also no mechanisms had been introduced to ensure sustainability for the rentals. Concerns about managing these rental units in a manner that makes them sustainable in the long-term, through proper rent collection and by looking into whether the rental units can be maintained through the rent revenue and making alternate funding arrangements if this is not possible, is raised elsewhere as well (Thurman 1997). The current conditions of these rental units and the mechanisms and experiences of managing them is not known. It is also unclear whether the tenants in these rental units are long-term city residents or also cater to circular migrants, either single men/women workers or families.

One final point that should be mentioned is that there are large number of domestic rural-urban migrants as well as migrants from other African countries to South African cities, majority of who live as tenants in urban informal settlements. It is difficult to gauge how urban policies vis-à-vis informal settlements have affected these migrant tenants, and understanding this would need further secondary research into the South African housing literature.

Singapore[75]

There are more than 1.3 million transnational migrant workers, also called foreign workers, in Singapore, which includes 5.5 lakh domestic workers and construction workers. The majority are from Malaysia, China, Bangladesh, India, and other Asian countries. Singapore's temporary contract labour migration regime ensures that foreign workers remain as transient workers. It also means that these workers do not have the freedom to switch jobs easily, gives them little say in where they live, how much they are paid, and how much they have to pay in recruitment fees or kickbacks (Seow 2016, Yeoh 2017).

Employers are legally responsible for housing their foreign workers. Not many employers house their workers in Singapore's well-known public housing estates because Singaporeans do not want migrant workers living too close to them. Majority of foreign workers therefore live in dormitories, which may be in old factories or other converted industrial spaces, or in walkup apartments, shophouses, or construction sites. Kirk (2015) mentions that many of these dormitories are built in partnership with the government, but the nature of this partnership is not clear from the available literature. Employers are also known to accommodate workers illegally in unregistered spaces. Singapore's Ministry of Manpower oversees housing for foreign workers and has instituted rules regarding their living conditions, such as fire safety, minimum living space, and hygiene. Dormitory inspectors check worker accommodations regularly, and can fine or jail employers who break the rules. Despite such inspections, poor conditions continue in many cases. Official, registered dorms in converted factories, walkup apartments, and shophouses are often cramped and overcrowded, without proper ventilation. At construction sites, housing is either a temporary, standalone structure, or the workers may actually inhabit the building they are constructing. While the latter is convenient and cheaper for employers, and is also considered acceptable by the government if the site is "structurally safe," the Humanitarian Organization for Migrant Economics (HOME) advocates against this type of housing since it does not offer decent living spaces to rest and access good

[75] This section is based on Tan (2014), Kirk (2015), Glennie (2015), Seou (2016), Lee (2017) and Yeoh (2017).

facilities of sanitation.

Many foreign workers also live in purpose-built dormitories (PBDs) which are spacious and hygienic, a far cry from the often dismal conditions in other kinds of dormitory accommodation. Increasingly, these are built as mega-dormitories. The largest is Tuas View, hailed as an ideal housing model for migrant workers. It a massive complex of 20 four-storey buildings housing with beds for around 16,800 men.[76] It is owned by Active System Engineering Pte. Ltd. and managed by the TS Group, both private companies. The complex is located in an industrial area and accommodates workers employed in the marine, manufacturing, processing and construction industries. Employers pay the cost, $220 per month according to one article (Glennie 2015) and $300 per month according to another (Tan 2014), to house a worker at Tuas View. The complex has rooms with 6 bunk beds, common toilets, designated cooking and food preparation areas, common dining areas, laundry areas, indoor gym and and outdoor game courts, a canteen, medical clinic and supermarket, and even banking and remittance services. However, while the workers can come and go from the complex as they please, they are required to give their fingerprints when they arrive back at the complex, and almost 250 CCTV cameras monitor their movements. This makes it possible for employers to also get information about their workers' movements. As of 2015, the PBDs had a capacity of 200,000 beds with more PBDs being built as the government felt that it was better to house workers in such self-contained facilities. These kind of dormitories, which host foreign workers and have more than 1000 beds, are regulated by the Foreign Employee Dormitories Act 2015, passed by the Parliament of Singapore.[77]

While workers are happy with the living conditions in such PBDs, worker advocacy groups like HOME and Transient Workers Count Too (TWC2) argue that while they want the government to improve housing for migrant workers, they have reservations about how it is being done because these PBDs are creating an isolation and separation from mainstream Singaporean society which looks like a type of apartheid (Glennie 2015). Commentators have argued that PBDs assumed greater importance with the Singaporean state wanting to exert more control over the workers ever since a riot involving migrant workers broke out in 2013. Brenda Yeoh, a professor at the National University of Singapore, argues that these mega-dormitories are part of the state's containment strategy, which is predicated not just on control but also on care. Therefore, "while these facilities are generally appreciated by the residents, they also have the effect of immobilizing workers within sequestered spaces away from co-ethnic enclaves and Singapore society more generally, particularly when compounded by long working hours during weekdays and the option of lucrative overtime pay during weekends" (Yeoh 2017). She also points out that foreign worker dormitories are in peripheral areas, and refers to the protests against the construction of a foreign worker dormitory in a middle-class neighbourhood.

Even though the government has been pushing employers to house their foreign workers in the PBDs and regulate the accommodation through inspections, many employers are continuing to place workers in cheaper and often dismal accommodation (Lee 2017). More generally, the fact that employers have to provide housing for their foreign workers means that they can exploit them more easily. Workers who suffer injuries, for instance, may be coerced into working despite requiring the rest (Seow 2016).

[76] http://tuasviewdormitory.com.sg/ (accessed 23.1.2020).
[77] The Act along with the Foreign Employee Dormitory Regulations can be accessed here: https://sso.agc.gov.sg/Act/FEDA2015 (accessed 23.1.2020).

6. Gujarat Building and Other Construction Workers Welfare Board

The Gujarat Building and Other Construction Workers Welfare Board (GBOCWWB) registers construction workers and issues them identity cards as per the Building and Other Construction Workers (BOCW) Act; and designs and implements various welfare schemes from the construction cess funds collected under the Building and Other Construction Workers Welfare Cess Act 1996 (BOCWWC Act). This section discusses these aspects, however, it should be noted that since the Central government has begun to overhaul the labour legislation and amalgamate them into four labour codes, there is great uncertainty about the future of the Board, continuing collection of this cess, and even the use of the unutilized cess.

6.1. Registration of workers

Registration of workers gives them an identity, which is particularly important at their work destinations. It is also a pre-condition for workers to avail of many of the Board's welfare schemes, and for certain schemes, in fact, workers must have been registered for a certain duration before they can be eligible for the scheme.

An earlier study for PCLRA (Desai 2017) traced the changes to the registration process in 2015 that allowed for workers to register more easily, thus leading to greater number of workers getting registered with the Board. 532,895 worker registrations have been done by the Board across Gujarat between 2007-08 and 2016-17 (Table 11).[78] This included 56,084 worker registrations in Ahmedabad district (Desai 2017). However, this is still less than 50% of the estimated 12-15 lakh workers in Gujarat and 1.5-2 lakh workers in Ahmedabad. Two other points need to be kept in mind when looking at these numbers. First is that for registration to remain valid, till 2015 it had to be renewed every year whereas from 2015 it had to be renewed every 3 years. However, it is likely that many workers have not renewed their registrations, therefore it is not clear how many of the 532,895 workers registered till 2016-17 are still valid. Second is that these numbers include both permanent and temporary registrations, the former requiring workers to furnish four documents (Aadhar card, Election card, Ration card and Bank account passbook) while the latter requiring them to show only one document (generally Aadhar card). Permanent registration is important since it is required to avail of many of the Board's welfare schemes such as the housing subsidy scheme (2014-present). On the other hand, workers who are not registered at all have also benefitted from welfare schemes such as the temporary housing scheme (2016-2019), the anganwadi scheme (2016-2019), and the mobile health van scheme (2015-present). These schemes are discussed in section 6.3.

Desai (2017) also identified some of the challenges around worker registration. One concern, which continues to be relevant is that it is unclear how many circular migrant workers are registered and how many of these registrations are permanent. It is important that the Board makes a systematic effort to understand the characteristics of the registered workers, which would include the aspect of circular migration among others, and take steps to expand registration among circular migrants, both intra-state and inter-state. Related to the above is a second challenge, which is that most developers have continued to be reluctant in supporting worker registration. It is imperative that these employers of construction workers are involved in registration of the workers at their construction sites, even though permanent registrations are likely to be a challenge since many migrant workers do not carry all their documents from the village to their work destinations.

[78] Website of GBOCWWB: https://bocwwb.gujarat.gov.in/achievement.htm (accessed 6.4.2020). The Board's website has not updated the number of workers registered in recent years, and therefore the extent of worker registrations since 2017 is unknown.

Table 11. Number of workers registered, 2007-2017
(Source: Gujarat data obtained from GBOCWWB website; Ahmedabad district data obtained from GBOCWWB Ahmedabad district office)

Year	Number of workers registered in Gujarat[1]	Number of workers registered in Ahmedabad district[2]
2007-08	251	-
2008-09	23159	-
2009-10	19929	-
2010-11	12640	-
2011-12	9303	-
2012-13	4940	-
2013-14	953	-
2014-15	17324	-
2015-16	198320	-
2016-17	252429	-
Total	**532895**	**56084**

[1] Source: Website of GBOCWWB: https://bocwwb.gujarat.gov.in/achievement.htm (accessed 6.4.2020)
[2] Source: Ahmedabad district data obtained from GBOCWWB Ahmedabad district office in May 2017

6.2. Collection, allocation and utilization of construction cess

According to the Board's website, construction cess collected in Gujarat between 2006-07 to 2018-19 was Rs.2505 crore, of which Rs.1848 crore was allocated by the State government to the Board over these years (Table 12).[79] The website does not give data on the total amount utilized over this period, however, according to one source, as of March 2019, Gujarat had collected Rs.2097.62 crores and utilized only 197.17 crore, that is, 9.4% of the total cess collected (New Indian Express 2019). Although this is an increase from the cess utilization of 6.9% as of December 31, 2017 (LSS 2018), it is still a miserable figure and Gujarat continues to have one of the lowest utilizations of the construction cess funds.

Large budgets are, in fact, allocated for specific schemes of the Board, however, a small amount of this is actually utilized. For example, in 2015-16, Rs.1000 lakh was allocated for the anganwadi scheme and there would have been allocations in the subsequent years as well, however, only Rs.307.5 lakh was utilized till 2018-19 (Table 14). Similarly, between 2015-16 and 2018-19, Rs.4500 lakh was allocated for the mobile health van scheme, however, only 798.52 lakh was spent over these years (Table 16).

It is also useful to look at the data for cess collected from construction projects in Ahmedabad in order to give due consideration to the amount that could justifiably be used for housing and other services in and around the city. For construction projects being undertaken within the municipal area of Ahmedabad, the cess is deposited with the AMC, which then transfers these funds to the State government. Table 12 shows that an amount of Rs.124.35 crores of construction cess has been collected by AMC and Rs.27.79 crores by AUDA over the past 3 years and 8 months. Calculating from the figures in Table 12, it appears that approximately 10% of the total cess collected across Gujarat over this period has come from the AMC and AUDA area.

[79] Website of GBOCWWB: https://bocwwb.gujarat.gov.in/achievement.htm (accessed 6.4.2020).

It is important to note that although the BOCWWC Act has provisions to enforce proper cess collection, it is in fact unclear whether and how cess collection is being enforced in practice. In case of projects undertaken by the AMC, it withholds 1% of the cost from the contractors' fees and deposits this as cess in its Accounts department.[80] However, BOCW inspectors have raised the question that since the AMC does not know the project cost incurred by other entities such as developers or private institutions undertaking construction, how can it ensure that the cess being deposited is actually 1% and not lower.[81] Developers have to declare their project cost under the Real Estate Act 2016 to the Gujarat Real Estate Regulatory Authority (RERA), and this information could help to determine if the developer is actually paying the mandated cess amount. However, there does not seem to be any systematic data sharing between these different authorities that could ensure proper enforcement of the construction cess collection.

Table 12. Construction cess collected in Gujarat (2006-19) and Ahmedabad (2016-20)
(Source: data for Gujarat obtained from GBOCWWB website;
Data for AMC and AUDA areas obtained from AMC and AUDA by RTI)

Year	Cess collected (in crores)		
	Gujarat[1]	AMC area[2]	AUDA area[3] (excluding municipal area)
2006-07	17.68	n.a	n.a
2007-08	24.59	n.a	n.a
2008-09	44.87	n.a	n.a
2009-10	77.98	n.a	n.a
2010-11	104.99	n.a	n.a
2011-12	115.54	n.a	n.a
2012-13	155.04	n.a	n.a
2013-14	210.82	n.a	n.a
2014-15	249.51	n.a	n.a
2015-16	323.31	n.a	n.a
2016-17	287.65	21.08	3.77
2017-18	375.99	26.26	7.11
2018-19	518.02	43.78	6.54
2019-20 (8 months; till November 30, 2019)	-	33.23	10.37
Total	2505.99	-	-

[1] Source: Website of GBOCWWB: https://bocwwb.gujarat.gov.in/achievement.htm (accessed 6.4.2020)
[2] Source: Data obtained from AMC by RTI on January 3, 2020
[3] Source: Data obtained from AUDA by RTI on January 30, 2020

6.3. Welfare schemes for housing and basic services

The Board implements over a dozen welfare schemes in Gujarat. The housing schemes, the anganwadi scheme and the mobile health van scheme are discussed below.

Housing Schemes

The Board launched the Shri Nanaji Deshmukh Awas Yojana, a housing subsidy scheme, in 2014, and the Pandit Deendayal Hungami Awas Yojana, a temporary housing scheme, in 2016. The latter

[80] This is mentioned in the tender documents for various AMC projects.
[81] Discussions with BOC inspector, May 13 and June 3, 2019.

scheme was discontinued in 2019. Both schemes are discussed below, followed by a brief discussion of the housing component of the Draft Model Welfare Scheme formulated by the Ministry of Labour and Employment, Government of India in 2018 as per the directions of the Supreme Court.

Shri Nanaji Deshmukh Awas Yojana (Housing subsidy scheme)

This scheme, launched in September 2014, provides financial aid to construction workers who have been allotted a house in a government EWS/LIG housing scheme. The aid amount is Rs.1.6 lakh for male construction workers and Rs.1.7 lakh for female construction workers. A worker must have been registered with the Board for 2 years to be eligible for the scheme. As of May 2017, 47 construction workers had availed of this subsidy (Desai 2017). This had gone up to 70 construction workers by February 2018, with a total amount of Rs.1.1 crore spent on giving this subsidy (GBOCWWB 2018). 31 of these beneficiaries were in Ahmedabad (ibid).

The current EWS housing scheme in Ahmedabad, which has merged the Gujarat government's Mukhya Mantri Gruh Yojana (MMGY) with PMAY and is implemented by the AMC, requires beneficiaries to pay a total of Rs.3 lakh in order to get possession of the house. This is not a small amount for a EWS household, and to make this possible they can potentially avail of a loan at subsidized interest rates under PMAY once they have paid a down-payment of Rs.52,500 to the AMC over the first three months after allotment of the EWS house (for more details, see Desai and Sanghvi 2019: 69). The GBOCWWB's housing subsidy scheme can support workers in accessing this EWS housing scheme by reducing their total contribution of Rs.3 lakh to Rs.1.3-1.4 lakh, which would also help them make the down-payment in case they still require a loan to pay the reduced amount.

However, as noted in the previous study for PCLRA (Desai 2017), circular migrant construction workers and even many vulnerable settled migrants who are in construction work cannot avail of this scheme because they do not have documents with an Ahmedabad residential address which makes them ineligible for government EWS housing schemes in Ahmedabad. Even for those who have these documents, it is important to recall that these workers must have been registered with the Board for 2 years to be eligible for this scheme. Moreover, the fact that the demand for these EWS units is very high as compared to the EWS housing stock being produced means that not many of the applicants are successful in getting allotted an EWS unit, which would explain why only 70 construction workers have availed of the GBOCWWB's housing subsidy scheme over its 2.5 years.

Pandit Deendayal Hungami Awas Yojana (Temporary housing scheme)

This scheme, which was launched in 2016 and discontinued in February 2019, provided temporary housing to construction workers living at worksites. The temporary housing consisted of giving rooms of 10 feet x 8 feet carpet area (7.5 sq.m), and 9 feet height. Each room was to accommodate 4 persons. The rooms were made with the following materials and specifications:

- Walls from precast concrete panels (50 mm thickness, 7 feet length)
- Precast concrete columns (6 inch x 6 inch, 11 feet height) with grooves to sit the precast slabs
- Roofing from MS sheets, which were later changed to cement sheets for climatic reasons
- PCC flooring
- Windows along one wall, with precast concrete door and window frames, steel window grill and steel/wooden shutters
- Electrical wiring inside the room with 4 electrical points (2 light switches and 2 plug points) and one regulator for a fan (the employer was meant to provide the power supply and a fan)

For climatic reasons, precast concrete panels were used for the walls instead of corrugated metal sheets although the latter can be erected, dismantled and re-erected more easily. 2179 rooms were

built under the scheme between December 2016 and December 2018.[82] Data could not be obtained from the GBOCWWB about the sites for which the rooms were built, however, they included both public and private construction sites in at least Ahmedabad and Surat. In Ahmedabad, many rooms were erected for the workers employed by the construction companies hired to construct the Metro project.

Each room was to be used by up to 4 persons. Considering that the rooms were allocated to a mix of families and groups of 4 single male migrants, these rooms would have accommodated 6000-7000 workers at a given time. It is safe to assume that more workers would have been accommodated in these rooms over the years they were provided at each site since different groups of workers would have come and gone to work and live at the site.

Reportedly, the Board cannot acquire large assets, therefore these temporary rooms were not owned by the Board and instead the scheme was structured such that the Board rented the rooms from the contractor who was awarded a tender to build the rooms. The rent paid was Rs.2500/month (plus GST) for each room, and the contractor was to be responsible for the room for a period of 6 years.[83] This meant that during the period of 6 years, the contractor was to erect the rooms at a site, dismantle them, shift them to another site and re-erect them at this other site, as per the Board's instructions. The cost of any replacement of materials required during these 6 years was the contractor's responsibility and was factored into the monthly rent, however, the Board did pay the contractor an additional Rs.20,000 for each instance of dismantling, shifting and re-erection.

As mentioned in the previous study for PCLRA (Desai 2017), three aspects should be noted about the scheme. First, by targeting the scheme at workers living at worksites the Board effectively absolved the employers of their responsibility even though the employer still had to provide land, water, sanitation and electricity for the labour colony. Moreover, while the Board built these rooms, it did not even ensure that adequate water, sanitation and electricity were actually provided by the employers at these sites. From discussions at GBOCWWB, it seems that the scheme was in fact discontinued because of a controversy that the Board was taking on the employer's responsibility. Second is that since the employers had to provide land for the rooms, the scheme ended up benefitting only larger sites, and therefore larger developers/contractors. Thus, the scheme excluded smaller developers who may in fact need support with respect to providing worker accommodation, especially since access to land for the accommodation would itself be a key challenge for them. Third, the Board has made no effort to design a temporary housing scheme that could specifically address the vulnerable housing conditions of migrant naka workers who do not have a regular employer for a reasonable duration of time, and who are not in the city all year round. The second and third aspects are taken up in the recommendations outlined in chapter 7 of the report. An additional point is that the 7.5 sq.m. room for 4 persons violates the norms of the ISMW Act which mandates a 10 sq.m. room for a family of 4 persons.

Data could also not be obtained about the budgets allocated and utilized for this scheme. However, I estimate that roughly Rs.15 crores was spent on the scheme for providing 2179 rooms for an average of two years.[84] With Rs.1.1 crore utilized for the housing subsidy scheme (benefitting 70 workers and

[82] The source for this data is confidential. The contractor was to build a total of 4200 rooms, however, the Board discontinued the scheme after 2179 rooms were built.

[83] The source for these details about the scheme is confidential.

[84] This estimate is roughly calculated as follows: While 2179 rooms were built in total, different numbers were built at different times between December 2016 and December 2018. However, for ease of calculation, assume that all 2179 rooms were built in July 2017, and rent was paid to the contractor for these rooms till June 2019 (one developer at whose site these rooms were built got a notice from the Board in August 2019, informing them that the rooms would be dismantled since the scheme had been discontinued; interview with developer's

their families) and Rs.15 crore on the temporary housing scheme, these two housing schemes together have used only 0.64% of the construction cess collected in Gujarat till 2018-19.

Housing under the Draft Model Welfare Scheme

The National Campaign Committee for Central Legislation on Construction Labour (NCC-CL) approached the Supreme Court through a Public Interest Litigation (PIL) in 2006, to ask for directives for immediate and full implementation of the 1996 BOCW Acts across the country. A 2018 court judgment led to the Draft Model Welfare Scheme for Building and Other Construction Workers that gives directives for spending the cess funds (GOI 2018). This Draft Model Welfare Scheme covers six aspects: life and disability cover, health and maternity cover, education, housing, skill development and pension. The housing component states that construction workers "are predominantly migratory who move from one place to other in search of work. During the period of transit or until they find work, they face great hardship due to lack of basic facilities like transit shelters, toilets etc." It thus advises States to "take proactive steps to facilitate transit accommodation / labour shed cum night shelter, mobile toilets and mobile creches" for construction workers in and around the areas where they concentrate in the city to obtain work. It also states that the land for providing accommodation should belong to the government / local body, it should be at a central location, the building must be maintained properly and all amenities provided for the users, a rent / user-fee should be charged and a record maintained about this. Priority is to be given to Tier I and II cities, and the cost of this provision (of transit accommodation, mobile toilets and mobile creches as well as any other financial aid given to workers for housing) should not exceed 10 per cent of the total expenses incurred during a particular financial year. It also cautions that these facilities "are not used in lieu of accommodations and other provisions to be facilitated by the employer." Thus, the Draft Model Welfare Scheme specifically targets the use of the cess funds for housing of migrant naka workers, which is the group that has so far been excluded from the housing schemes of the Board in Gujarat.

From the official data available, it is safe to estimate that currently there is more than Rs.2500 crore of unutilized cess with the Board and State government in Gujarat. If Rs.1000 crore was spent across the Board's different welfare schemes in the next financial year (2020-21), then 10% of that, which is Rs.100 crore, could be spent on building transit accommodation across several cities in Gujarat. Of course, this means that the Board must increase its overall utilization of the collected cess, which it has been extremely poor at doing.

Anganwadi scheme

This scheme, launched in 2016, provided for setting up anganwadis in municipal corporation areas at construction sites or construction workers' colonies. These anganwadis could be set up at sites where duration of construction work was expected to be for at least 3 years, more than 100 workers were to be employed, and there would be more than 30 children in the 3-6 years age-group.[85]

Although initially the Board had proposed to run these anganwadis through the Women and Child Development department of the Gujarat government along the lines of the ICDS, this could not be done due to the norms for the anganwadis under the ICDS guidelines.[86] Therefore, the Board directly

project manager, August 21, 2019). The total rent paid is thus 2179 rooms x Rs.2500 rent per month x 24 months = Rs.13.07 crores. Given that some of the rooms have been dismantled, shifted and re-erected at other sites (involving an additional cost of Rs.20,000 per shifting of rooms) and GST, the total amount spent on the scheme would be roughly Rs.15 crores.

[85] GBOCWWB website: https://bocwwb.gujarat.gov.in/schemes.htm (accessed on 10.1.2017 and again on 9.1.2020).

[86] Discussion with Dr. Harshad Solanki, State Project Manager, GBOCWWB, August 19, 2019.

empaneled 20 NGOs in Gujarat under the scheme. Each NGO was to do a survey of construction sites in a given area, convince developers about the anganwadi scheme, and get a written letter from the developer expressing his interest in the Board's anganwadi scheme for his site. This letter was to be submitted to the Board which would then approve the anganwadi for that site. Only 5-6 of the empaneled NGOs were able to persuade developers to express an interest in the scheme since not many developers were willing to provide the physical infrastructure for the anganwadi: a room, water, toilets and electricity.

Between 2016 and May 2019, which is when the scheme was discontinued, 173 anganwadis were set up in Gujarat (Table 13) in which 19,894 children were enrolled for varying durations (Table 14). According to the Board, these anganwadis were run along the ICDS pattern although this could not be confirmed because the anganwadis were already shut down at the time of the research for this study. According to one NGO working with migrant construction workers, the anganwadis did not run along the ICDS pattern. The timings of the anganwadis were 9 am to 3 pm. According to the Board, these timings are adequate because women workers finish work by 3 pm, however, NGOs working with migrant construction workers point out that women also work long hours at construction sites, and one NGO observed that many of the anganwadis were often shut earlier than 3 pm. The Board sought to do health checkups of the children enrolled in the anganwadis through its mobile health van scheme, while the anganwadi helper was to arrange a linkage with the nearest urban health centre for vaccination. 91 of the 173 anganwadis were set up in Ahmedabad district, with more than 50% of the anganwadis located at sites with 25-30 children; 22% at sites with 31-40 children; and the remaining at sites with more than 40 children (Table 13). Thus, the Board relaxed the scheme which was supposed to be implemented only where there were more than 30 children.

Table 13. Anganwadis set up by GBOCWWB
(Source: data obtained by RTI)

District	Number of anganwadis	Number of anganwadis by Number of children[1]					
		25-30 children	31-40 children	41-50 children	51-60 children	More than 60 children	NA
Ahmedabad	91	48	20	14	5	2	2
Surat	39	11	12	10	5	-	1
Gandhinagar	21	8	5	5	1	-	2
Rajkot	15	5	10	-	-	-	-
Aravalli	2	-	2	-	-	-	-
Banaskantha	2	-	-	2	-	-	-
Sabarkantha	2	-	2	-	-	-	-
Anand	1	1	-	-	-	-	-
Total	173	73	51	31	11	2	5

[1] This data is indicative of the size of the anganwadis. Note that there were fluctuations in the number of children in an anganwadi over time, and the actual children also changed over time as some groups of workers left the site and other ones came to work on the site.

Most anganwadis set up in Ahmedabad were for construction sites, both of public and private projects. Although anganwadis were not opened at sites where there were less than 25 children as this was considered financially unfeasible, in one instance, the Board tried to reach 5-6 sites with fewer children by setting up a single anganwadi since the sites were located in close proximity. The developer of one of the sites provided the space for the anganwadi. At the other sites, many workers were reluctant to allow their children to leave the site unaccompanied; in response, one of the developers hired a rickshaw to take the children from his site to the anganwadi and also paid one of

the parents to remain with the children at the anganwadi.[87] Only a few anganwadis were set up in the settlements of the construction workers who go to nakas. Interestingly, the 6 anganwadis set up in Aravalli, Banaskantha and Sabarkantha districts were in villages with high population of construction workers who commuted to nearby towns for work.

Table 14. Budget Allocation and Utilization and Children enrolled in Anganwadi scheme, 2015-19
(Source: Website of GBOCWWB and Discussion at GBOCWWB, August 19, 2019)

Year	Budget allocation (in lakhs)[1]	Amount disbursed to the NGOs (in lakhs)[2]	No. of children enrolled in anganwadis[3]
2015-16	1000	5.5	645
2016-17	n.a	61.0	1507
2017-18	n.a	159.0	5447
2018-19	n.a	82.0	12295
2019-20 (scheme discontinued in May 2019)	n.a	n.a	n.a
Total	-	307.5	19894

[1] Source: GBOCWWB webite: https://bocwwb.gujarat.gov.in/schemes.htm (accessed 9.1.2020)
[2] Source: Discussion with Dr. Harshad Solanki, State Project Manager, GBOCWWB, August 19, 2019. The Board was yet to disburse payments to the NGOs for work done under the scheme from June 2018 till May 2019. This amount to be disbursed is not known, and the data for 2018-19 should be read accordingly.
[3] Source: Discussion with Dr. Harshad Solanki, State Project Manager, GBOCWWB, August 19, 2019. Children at the anganwadis changed over time as some groups of workers left the site and other ones came to work on the site. The number of children includes each child that was enrolled at the anganwadis, for however long.

Table 15. Budget for an anganwadi with 30 children under the Anganwadi scheme
(Source: Discussion with Dr. Harshad Solanki, State Project Manager, GBOCWWB, August 19, 2019)

Budget head[1]	Amount
One-time expenses	
Toys	2500
Floor mats, etc	2500
Hygiene kit per child (hair oil, comb, mirror, napkin, soap etc); Education kit per child (some books, pen, pencil, etc); and School-bag to carry the two kits (Rs.400 per child)[2]	12000
Total	17000
Monthly expenses	
Salary of one anganwadi worker	6000
Salary of one helper	4200
Food to be prepared by anganwadi worker (Rs.10 per child per day)	9000
Transport of food to anganwadi	3000
Contingency	500
Total	22700

[1] The NGO running the anganwadi was also paid a 5% service charge.
[2] Children at the anganwadis changed over time as some groups of workers left the site and other ones came to work on the site. Thus, although this table shows the budget for an anganwadi with 30 children, the amount spent on the kits would have depended on the actual number of children who were enrolled in the anganwadi over time.

[87] Discussion with Dr. Harshad Solanki, State Project Manager, GBOCWWB, August 19, 2019.

The Board intends to re-start the scheme. Three aspects should be noted about the scheme's implementation. First, as per the BOCW Act, employers are required to have a creche on construction sites with more than 50 women workers. Although the Board seems to have set up creches mainly at such sites under the anganwadi scheme, the employer was still required to provide the physical infrastructure for the anganwadi. The scheme should therefore be seen as providing some of the soft infrastructure and services necessary to make the creche a space for integrated child development – however, it is unclear if the scheme actually had an integrated child development approach. The anganwadi timings were also not a problem. Since the anganwadis were already shut at the time of the research for this study, it was also not possible to ascertain the adequacy of the physical infrastructure provided by the employer. Second is that there was only one effort to reach a cluster of sites with fewer children. Third, there were very few cases of setting up anganwadis in the settlements of the construction workers who go to nakas.

Dhanvantari Aarogya Rath Yojana (Mobile health van scheme)

The scheme, which was launched in December 2015, provides free medical treatment to construction workers through one or more mobile health vans at the district level. The scheme is implemented by GVK EMRI (Emergency Management and Research Institute), a not-for-proft organisation operating in PPP mode. In 2015-16, the scheme was operational in 8 cities across 8 districts.[88] In 2018-19, the scheme's coverage was 22 cities across 16 districts.[89] Despite high budget allocations for the scheme, the utilization has been less than 30% of the allocation (Table 16). In 2019-20, the budget allocated was the largest so far, and it remains to be seen how much of this is utilized.

Table 16. Budget Allocation and Utilization for Dhanvantari Aarogya Rath Yojana, 2015-2020
(Source: data obtained by RTI)

Year	Gujarat			Ahmedabad
	Budget allocation (in lakhs)	Utilized amount (in lakhs)	Budget utilization (% of allocation)	Utilized amount (in lakhs)
2015-16	1000	46.37	4.60	14.13
2016-17	1000	224.59	22.46	45.33
2017-18	2000	373.01	18.65	43.77
2018-19	500	154.55	30.91	22.68
2019-20	3500	-	-	-

Currently, there are five mobile heath vans for Ahmedabad district, with GVK EMRI deciding the routes for the vans. Each van has a doctor with a BHMS degree (Bachelor of Homeopathic Medicine and Surgery), a paramedic, a pharmacist, a lab technician and a driver. A study of the adequacy of health services provided through the health van is beyond the scope of this study, and would require investigation by a researcher with health expertise. At a workshop on occupational health among construction workers in May 2019, a number of participants pointed to the lack of occupational healthcare expertise among the medical staff of the mobile health van scheme.[90]

[88] The 8 cities were Ahmedabad, Bhavnagar, Gandhinagar, Jamnagar, Junagarh, Rajkot, Surat and Vadodara. Data obtained by RTI from GBOCWWB on 2.8.2019.
[89] Data obtained by RTI from GBOCWWB on 2.8.2019.
[90] Workshop on Occupational Health of Construction Workers, organized at National Institute of Occupational Health, Ahmedabad, May 10, 2019. An important point made at the workshop was also the profoundly inadequate numbers of medical professionals trained in occupational healthcare in India.

7. Way Forward

Improving housing and other facilities for migrant construction workers will have to adopt a multi-pronged approach. While the research in this report is focused on the housing and other facilities for construction workers living at the worksites, the ideas for intervention outlined in this chapter are for both these workers as well as for the migrant workers who go to the labour nakas and arrange for their own housing in the city. This migrant naka worker group was also the focus of the earlier research report for PCLRA and this chapter builds upon the recommendations outlined in that report (Desai and Sanghvi 2019). Clearly, a necessary prerequisite for realizing many of recommendations below is political and administrative will to improve housing and other facilities for migrant workers in the cities. Therefore, advocacy and political mobilization of migrant workers is likely to be a crucial for moving forward.

1. <u>In-situ upgrading of informal settlements, including settlements of migrant construction workers:</u>

Many migrant naka workers in Ahmedabad squat on AMC, State government and private lands. These squatter settlements are inhabited entirely by circular migrants or a combination of circular and settled migrants. Currently, most of these settlements are not included in the AMC's list of identified slums and lack adequate basic services; some have also been evicted or threatened with eviction. It is imperative that these settlements are recognized by the state and are provided with basic services like water, sanitation and electricity.

In-situ upgrading as an approach to addressing the housing question for the urban poor has been increasingly sidelined in favour of formal housing interventions such as building formal public housing, in-situ slum redevelopment through PPP and affordable housing through PPP. There are various problems and limitations to these formal housing approaches, central among them being that increasingly the manner in which these formal housing programmes are designed means that this housing is not affordable to the urban poor, let alone circular migrants. The formal housing stock thus built is also miniscule in comparison to the scale of the housing needs among the urban poor. In-situ upgrading of the existing informal settlements must therefore be an integral part of any housing policy and programme that aims to provide adequate, secure and affordable housing to the urban poor. Ahmedabad had an in-situ upgrading programme, the Slum Networking Project (1996-2009), which gave a package of basic services like individual water connections, individual toilets and drainage lines, street lights and paving of internal roads along with a 10-year no-eviction guarantee. Instead of scaling this up, it was shut down in 2009. In-situ upgrading programmes must be revived through initiatives at all levels of government: Centre, State and ULB. While in-situ upgrading has also had its limitations, especially in very dense informal settlements, much can be achieved through greater or lesser settlement reconfiguration which refers to "interventions in, or changes to, the layout and buildings of the settlement along with upgrades in tenure and/or infrastructure, largely in order to enable these provisions in an unsuitable physical environment" (Harish 2017: 191). Furthermore, many of the squatter settlements of migrant construction workers comprise of kutcha structures and are not very dense, and therefore there is a real potential for better layout and upgrading of services. In-situ upgrading can also play a role in improving the informal rental housing in which many migrant construction workers live, a point that is discussed later.

Until an in-situ upgrading programme can be launched to provide adequate water and sanitation infrastructures in the squatter settlements of the migrant construction workers, the AMC must provide municipal standposts complemented by water tankers, and set up adequate numbers of mobile toilets as stopgap measures. There are also pay-and-use toilets in the near vicinity of some of these settlements, however, they currently create exclusions vis-à-vis these migrants as a result of their charges and timings (Desai 2019). Stopgap arrangements are required to make these pay-and-

use toilets accessible to these migrants. This would include keeping them open 24x7 and allowing migrants to use them for toilet-use, bathing and washing clothes without paying any charges or nominal monthly charges. Monitoring of the agencies contracted to run these toilets also needs to be improved by the AMC so that the caretakers do not charge the migrants as they please, and the toilets are kept clean and maintained. This might also require the AMC to reconsider the financial model for some of these toilets so that running these toilets are viable for these agencies.

PCLRA and few other organisations have been engaged in advocacy with the AMC against evictions in these settlements and for water and sanitation. This advocacy will have to be stepped up, and also extended to the Gujarat Government which makes policy decisions that impact whether the ULBs recognize such migrant settlements. The Gujarat Government also has an important role to play since some of the migrant squatter settlements are on lands of the State government.

2. The struggle to improve the living conditions in the squatter settlements inhabited by migrant naka workers on the land of the Railway authority is part of a larger struggle faced by squatter bastis on Railway lands throughout India.

The PMAY guidelines state that Central Government land owning agencies (such as the Railways) should undertake In-Situ Slum Redevelopment on their lands occupied by slums or alternatively, if the slums on these lands need to be relocated, then the land for relocation should either be provided by the agency itself or the agency may collaborate with the State or city authorities for obtaining land (MHUPA 2016). However, there has been a deadlock with the Railways regarding the slums on their lands – although in some cities some progress seems to have been made on this front through local-level struggle and advocacy which has also involved going to the courts. However, in many cities including Ahmedabad, evictions which do not offer any viable housing alternatives continue on railway lands. PCLRA has been fighting against these evictions, on the ground as well as in the courts.

The desired step would be that the AMC and the State government first recognize that the dwellers living on the railway lands – be they locals, settled migrants or circular migrants – are residents of the city and therefore providing them with adequate services (especially water and sanitation) is their responsibility, whether or not the Railway authority supports this provision. The AMC and State government should then work towards finding a viable solution to addressing the housing claims and needs of those living on the Railway lands. It would be desirable that the AMC and the State government open a dialogue with the Railway authority, and along with the communities living on these lands, find appropriate interventions. Interventions should prioritize in-situ upgrading or in-situ redevelopment on part of the land they currently inhabit, however, if required resettlement could be considered as well, preferably at nearby locations and in ways where the dwellers are not burdened with the costs of resettlement. Eligibility requirements for obtaining a house in in-situ redevelopment projects as well as resettlement projects usually require residents to furnish documents with an Ahmedabad residential address. Such eligibility criteria would have to be removed as was the case for resettlement of urban poor communities displaced by the metro project in Ahmedabad. However, to re-iterate, the intervention to improve the housing conditions for migrants living on Railway lands must emerge from a dialogue that includes the communities living on these lands. For this to happen, civil-society organisations like PCLRA will have to play a stronger role by mobilizing the dwellers living on these lands, and targeting their advocacy at all levels of government, from AMC to State Government to Central Government.

3. Where migrant naka workers and other groups live in settlements in public spaces like roadsides / footpaths and under flyovers, often in the open without any shelter or in fragile structures made of materials like plastic sheets, the way forward is complex. The AMC and State government's view is that all those who live in such public spaces have no rights where they are living and should move

into homeless shelters. However, the homeless shelters in Ahmedabad are currently not adequate in number, location or design for these homeless communities. Originally 45-46 homeless shelters were built in Ahmedabad, of which some were shut down while others were renovated and put under operation as per the SUH guidelines. Currently about 30 homeless shelters are operational. The total capacity of these 30 shelters is for less than 1800 persons.[91] According to an official survey of the homeless in Ahmedabad undertaken under the SUH scheme in 2018-19, there are around 8000 homeless persons in the city (CISHAA, forthcoming 2020). This is expected to be an underestimation, however, even if one were to accept this number, it shows that the shelter capacity is not even one-fourth of what is required as per the homeless survey. Based on this, two interventions are required.

Advocacy must be stepped up to make adequate number of homeless shelters which are appropriate in terms of location, design and management (more on this in the next point). However, such shelters are unlikely to be realized anytime soon, and therefore parallel advocacy is required to pressure the AMC to recognize the homeless settlements in public spaces, many of which are of migrant construction workers while others are of other circular migrants and even settled migrants. This recognition must result in stopping all evictions/harassment and extending basic services like water and sanitation. Provision of water through tankers or even municipal standposts and mobile toilets are possibilities for these settlements. Where mobile toilets are provided, better monitoring by the AMC of the agencies contracted to manage these toilets is required. Many of the migrant homeless settlements are located adjacent to or within a kilometre of one or more pay-and-use toilets and use these toilets for some purposes. However, they are unable to use them for all their sanitation needs – toilet-use, bathing, washing clothes – because of the exclusions created by the daily charges and toilet timings (Desai 2019). Stop-gap measures need to be taken by the AMC to make these pay-and-use toilets accessible to the residents of these homeless settlements – these measures have been mentioned earlier in relation to pay-and-use toilets for the residents of squatter settlements on AMC, State government and private lands. In fact, all the pay-and-use toilets could also be fitted to provide filtered drinking water so that the homeless can access safe and adequate drinking water easily.

4. Homeless shelters:

As mentioned above, the total capacity of the 30 currently operational homeless shelters in Ahmedabad is not even one-fourth of what is required for the official figure of the homeless population. This official figure is also likely to be an under-estimation of the homeless in the city. The current shelters are also not designed for family needs and thus are not adequate for the migrant families even though some of them do live in these shelters (Desai and Sanghvi 2019; CISHAA forthcoming 2020). There are also instances where migrant families do not want to move to the shelters because they are not designed for families. AMC has made one positive step in this direction by converting a vacant EWS colony in Bodakedv into a family shelter, but many more shelters are required, at appropriate locations, with appropriate designs which include family shelters, and with linkages to various entitlements. It is possible to address these gaps under the SUH guidelines, and greater advocacy will be required on this front. A key issue is land to build the homeless shelters and this is discussed later as part of the broader question of land for migrant workers' housing. The question of funding for building new homeless shelters does not seem to be an obstacle given the funding for the National Urban Livelihood Mission which has the SUH scheme as one component, however, this should be looked into further. The key issue that will arise in the future is that according to the SUH guidelines, the Central government will provide a share of the funds for the operation and management of homeless shelters for only 5 years and the shelters must strive to become financially self-sustainable. Thus, while the SUH scheme offers possibilities for addressing the housing needs of some section of the migrant naka workers, there are challenges that need to be

[91] AMC document of list of 30 operational shelters, roughly from March 2020.

addressed in order to move forward. The Citizens for Shelter and Housing Alliance Ahmedabad, a network of several civil-society organisations and researchers, has recently completed a study on Ahmedabad's homeless shelters which charts a way forward in the city's context (CISHAA forthcoming 2020).[92]

One final point is that government authorities view the homeless shelters as spaces where the residents must not have any permanent claims, and even move out over time, however, there are no other policies / programmes to support the mobility of the homeless from shelters into other forms of housing. This is also where rental housing has an important role to play.

5. Rental housing:

The Draft National Urban Rental Housing Policy 2015, which came out of the 2013 report by MHUPA's Task Force on Rental Housing, sees rental housing as "a catalytic force to achieve the overall goal of Housing for All." It mentions a wide range of interventions such as encouraging PPPs, SPVs, Municipal Housing Companies and Residential Rental Management Companies to promote social/need-based rental housing on short/mid/long term basis for migrant labour among other groups; dovetailing of CSR and construction labour cess funds with earmarked budgets for rental housing; earmarking certain percentage of units in Central/State level housing schemes for social/need-based rental housing; providing subsidies to tenants in the form of rental housing vouchers; providing finance for private owners who provide low-income rental housing for improvement of existing low quality rental housing; adopting the Draft Model Tenancy Act 2015; and so forth. A National Urban Rental Housing Policy must be finalized and translated into a programme with guidelines, budgetary outlay and specific modalities for providing, managing and financing rental housing that is affordable to the migrant workers. The Gujarat Government could also take the initiative to develop a State-level Urban Rental Housing Policy and Programme through the Gujarat Housing Board.

There are several important issues with respect to creating / facilitating rental housing for migrant workers. The first is the question of land for building a formal rental housing stock, wherein location and affordable mobility from such locations would have to be addressed. The land question is discussed later as part of the broader question of land for migrant workers' housing. The second crucial issue for formal rental housing provision will be the institutional structure to manage it. One possibility is for the State Housing Board or even the ULB to float a non-profit or limited profit rental management company with the required technical, social, financial and tenure management capacities (IIHS 2015). In case of PPP to manage rental housing, presently it is unclear what kind of private-sector actors would be interested in entering this sector of low-income rentals, however, regulation of the private-sector actors would be important.

A third important aspect that rental housing policy and programme would have to address is the different migrant households in the cities, such as migrant families as well as single male/female migrants. It would be worth exploring building worker hostels for single male/female migrants. Such worker hostels could be made along the lines of the Kerala Apna Ghar model, which consists of dormitory rooms with bunk-beds and rents of Rs.1000 per month per bed. However, access should not be limited to or even prioritized for workers who are placed in the hostel through their employers. Rather, access to such hostels must prioritize migrant workers who do not have a stable employer such as daily-wagers and even the self-employed. There is also potential to explore the provision and management of worker hostels by non-profits. For example, Project RISE of the Pratham Educational Foundation offers an interesting model for migrant hostels for single male/female migrant youth. Pratham sets up migrant hostels in properties rented from landlords.

[92] The author of this report contributed to the CISHAA study.

These hostels comprise of shared rooms / dormitories with bunk-beds, water and sanitation, and kitchens with stoves and cooking utensils. One can rent a bed in the hostel for up to 90 days, with rent ranging from Rs.1500-2500 per month or Rs.50 per day. The hostels are thus conceived as transition homes for migrant youth, with Pratham also trying to provide assistance in finding permanent accommodation. These hostels are trying to fill an important gap in the housing needs of new migrants to cities, but these rents are not financially feasible for single male migrant construction workers and the hostels also cannot reach migrant families since the hostels have to be financially self-sustainable. However, the Project RISE model points to the importance of exploring the role that non-profits can play in the provision and management of migrant hostels and even rental housing for families. It would be worthwhile to explore if state support to such non-profits could help in making such hostels accessible to single male/female migrants with lesser affordability as well as help such non-profit actors provide and manage family hostels through a similar model.

A fourth point that needs to be kept in mind is the heterogeneity among the migrant workers in terms of affordability of rents. Even within the migrant construction workers, affordability varies between skilled and unskilled workers; and also between families and single male migrants since the latter often rent as a group of and can therefore afford a rental room/unit which is unaffordable to a family. The affordability issue for circular migrants will also have to be seen in the context of their multilocal lives, livelihoods and households, where the priority is to maximize remittances to their villages. The issue of affordability would also become particularly pertinent if PPPs are promoted to construct and manage rental housing, since it is unclear if for-profit private-sector actors would deliver rental housing that is affordable to migrant workers like construction workers. Rental housing vouchers could play a role in making rents affordable – not only in formal rentals but also in informal rentals (discussed below) – however, there are questions of appropriate targeting of such subsidies for tenants. A fifth point is the heterogeneity among the migrant workers in terms of requiring short-term, medium-term and long-term rentals. Our research shows that among the migrant construction workers in Ahmedabad, there are at least three different groups – some are in the city for almost 10-11 months of the years, others for several months and still others for only a few months. How their housing needs can be met through rental housing is a question that needs consideration.

Finally, a policy discussion on whether and how to regulate the informal rental housing sector is long overdue as this sector provides a large amount of rental housing already to these migrants, much of which is of questionable quality and basic services. The present lack of regulation leads to inadequate living conditions as well as ad-hoc rent increases faced by tenants, especially the more vulnerable migrant workers. Improvements in the informal rental housing sector could be achieved through a large-scale in-situ upgrading programme for informal settlements – not just settlements recognized as “slums” but also urban villages and various other kind of informal settlements with inadequate housing and basic services, many of which have a large numbers of rental rooms/units (see, for e.g. Desai et al 2016). In Ahmedabad, such a programme could evolve from its Slum Networking Project (1996-2009) – which gave a package of basic services like individual water connections, individual toilets and drainage lines, street lights and paving of internal roads – to proactively include the rental units as well. A ranking of the quality of rental units along the lines of the Garima initiative in Kerala can be built into such a programme, with specific interventions to support landlords and tenants in improving the rentals that fall below a certain standard in terms of light and ventilation, space requirements, and access to water, sanitation and electricity. Rents often increase with improvements, which is also why tenants are wary of improvements, but a linkage to rental housing vouchers could ensure that the existing tenants (or tenants of a similar affordability) do not get priced out of such rental units because of improvements. Formal rental agreements should also be introduced into the informal rental housing sector. The main obstacle to addressing the informal rental housing sector has been the unwillingness of the state to recognize the informal claims of landlords and tenants. This is also why slum resettlement and in-situ slum redevelopment

programmes do not recognize the informal rental stock in these settlements, leading to this stock being lost and the tenants being displaced.[93] However, a recognition of this informal rental housing sector and policy support to it is crucial in realistically meeting the large demand among migrants for rental housing.

6. Linking migrant naka workers to the government's ownership housing programmes:

Among the construction workers who are circular migrants, there are also those who spend almost the entire year in the city, returning to their village for only a week to a month during Diwali and Holi. There are also settled migrants from vulnerable groups who are naka workers and who live in the same inadequate settlements as the circular migrant naka workers. In my research, both these groups expressed an interest in applying for the ownership-based government housing programmes (Desai and Sanghvi 2019). However, there are various aspects that need to be considered in terms of linking them to these programmes:

- Questions of eligibility: Some of the settled migrants living in these inadequate settlements have documents with an Ahmedabad residential address but the circular migrants do not. This is a key stumbling block for the latter group. There is no an easy answer to this, and it is debatable whether it is viable to relax this eligibility criteria when the quantum of public housing stock built by the government in the city is far below the demand, resulting in huge number of applications but only a small percentage of them getting approved through the housing lottery system. However, as mentioned earlier, this eligibility criteria should be removed in cases where these migrants are faced with eviction and resettlement.
- Questions of affordability: In the current EWS housing programmes in Ahmedabad under Mukhya Mantri Gruh Awas Yojana which has been merged with Pradhan Mantri Awas Yojana, the total beneficiary contribution is Rs.3 lakh and the beneficiaries have to finish paying this entire amount to the AMC before getting possession of the house. This is to be made possible through housing loans from banks and microfinance institutions (MFIs), however, while PMAY subsidizes the interest rates, the down-payment of around Rs.50,000 and the EMI of around Rs.3000 is still quite high for circular migrants in the city. It is also unlikely that banks and even MFIs would lend to the circular migrants (for more details, see Desai and Sanghvi 2019). However, while these programmes are not affordable to most circular migrants, there is a potential to address the question of affordability for the migrant construction workers by linking them to the housing subsidy of Rs.1.6-1.7 lakh under the GBOCWWB's Shri Nanaji Deshmukh Awas Yojana. The fact that many of these workers are not registered with GBOCWWB would have to be addressed in this case since only registered workers are eligible for the housing subsidy.
- Questions of housing maintenance will have to be addressed as government housing projects often become vertical slums and in absence of proper maintenance can even develop structural problems which can have serious consequences for the residents. Currently, the AMC approaches maintenance issues at EWS housing sites in ad-hoc ways since it considers the residents as being responsible for the maintenance, but residents do not have the wherewithal to undertake certain kinds of necessary repairs.
- As mentioned earlier, where migrants are faced with eviction, they should be linked to the government's ownership housing and here, the eligibility criteria of having documents with an Ahmedabad residential address should be removed. As also mentioned earlier, the migrants should not be burdened with the costs of resettlement, and this can be achieved by tapping into the GBOCWWB's housing subsidy scheme for construction workers. Housing locations would have to be sensitively identified for resettlement through discussion with the migrants so that

[93] Many "owner" residents move out of the flat allotted to them under a slum resettlement or in-situ slum redevelopment project, and informally rent them out, however, this is not the same as building in a recognition of the informal rental stock into resettlement and in-situ redevelopment programmes.

their livelihoods are least impacted. Our research has found that migrant construction workers want to live near a naka, preferably the one they are already going to since they have cultivated contacts at these nakas to obtain work; their livelihoods would take a major hit if moved to locations far from their naka.

7. Recognizing the need for a continuum of housing solutions for migrants:

Urban housing policy has to provide for different kinds of housing – homeless shelters, rental housing of various types, and ownership housing, since these are all part of a continuum in which the urban poor and lower-income groups access housing depending on their economic capacities, preferences and priorities, and aspirations. Moreover, policy has to move away from the single-minded emphasis on formal housing such as in PMAY, and support the informal housing sector as an important means of providing housing. Advocacy is thus required for a continuum of housing solutions for migrants, including policies which are more supportive of the informal housing sector as well.

8. Land for migrant workers' housing:

Land is central for providing housing for migrant workers, both those who live at worksites as well as for migrant workers who arrange for their own housing in squatter settlements, public spaces or informal rentals. Here, the role of Master Plans – in Ahmedabad, this is the Development Plan prepared by AUDA – and Town Planning Schemes becomes important as they make land-use allocations. Advocacy on this front would be very important. There is also a need to explore how to use land more efficiently by combining social infrastructure with social housing. For example, many of the AMC's urban health centres are currently 1-2 storey structures, however, if the locations are viable for migrants' livelihoods, such municipal lands can be redeveloped into multistorey structures which combine homeless shelters / rental housing with urban health centres. Projects of in-situ slum redevelopment and affordable housing could be required to include ward-level social infrastructure or a homeless shelter.

9. Improving housing and other facilities for workers living at worksites – Role of Labour Legislation, Urban Planning, and Construction Contracts

For construction workers, living at the worksite comes along with greater control and exploitation of their labour. One can therefore debate the question of employer-provided housing from this perspective, and argue that while employers in the construction industry should play a role in providing their workers with temporary housing, this should not be located at work-sites and should also not be managed by the employers. This would require a major policy shift, and deserves discussion and debate. However, at the moment, this report considers the possibilities for improving housing and other facilities for workers living at the worksites. As explained earlier, living at the worksite includes situations where workers live on the construction site itself or on a plot of land where a temporary labour colony is built by a developer / contractor for a specific construction site.

Labour Legislation and Governance:

The BOCW Act and the Central and Gujarat BOCW Rules do not specify any norms for labour accommodation and other facilities for workers, and therefore the employers are not regulated in terms of the nature of this provision. Advocacy would be required to amend the Central and Gujarat BOCW Rules to include norms. However, such advocacy is unlikely to yield in any result since the Central Government has embarked on overhauling all the Central labour laws into four labour codes. The struggle of trade unions and other worker unions against these labour codes continues since they dilute the provisions for protecting workers' rights.

The Code on Occupational Safety, Health and Working Conditions (COSHWC) mentions provision of temporary living accommodation within or near worksites, facilities for washing, bathing places, water, creche, etc in sections 23 and 24. The COSHWC has not been approved by the Parliament yet, and we will have to see how the struggle against the four labour codes unfolds. The point to keep in mind in the current moment is that when the COSHWC is approved by the Parliament – either in its present form or in a modified, more worker-friendly form due to the struggle of the labour movement - Central Rules would then be drafted. At this time, advocacy will be required to ensure that adequate norms for these provisions of temporary living accommodation within or near worksites, facilities for washing, bathing places, water, creche, etc are laid down in these Rules. These norms should also be such that they create standards for decent provisions, but at the same time give flexibility to employers to meet these standards in ways that are appropriate for the specific context of their construction project (for example, the way in which standards are met in metropolitan cities, medium-sized towns, small towns, and rural areas may be different). The question of strong institutional mechanisms to ensure compliance to these provisions / norms will also have to be addressed.

The biggest hurdle in implementing any recommendation aimed at strengthening the design and enforcement of labour legislation is that the state is aligned with the interests of capital as opposed to advancing labour rights and social protection for workers.

Urban Planning:

Urban growth and development in Ahmedabad is regulated through a framework that includes numerous planning instruments, key among them being the Development Plan prepared by AUDA, Town Planning Schemes (TPS) prepared by both AUDA and AMC, and the Comprehensive General Development Control Regulations (GDCR) prepared by the Gujarat Government's Urban Development and Urban Housing Department. This framework has an important role to play in creating a more robust framework to ensure the health and safety of workers through improved housing and services at worksites, and advocacy would be required on this front.

The role of the Development Plan and Town Planning Schemes in allocating land for construction worker colonies has already been discussed earlier. Alongside this, regulations for the development of temporary worker colonies should be part of the GDCR. The current GDCR, which was prepared in 2017, lays down building and planning regulations, but it completely ignores the need for regulations for developing temporary housing and providing services like water and sanitation for the construction workers who make urban development possible through their blood and sweat. The GDCR requires construction projects to obtain Development Permission (DP) before commencing construction, and while one of the conditions for this DP is that the owner /applicants have to provide "temporary residential accommodation" for construction labourers in their premises with "proper sanitation facility," there are no norms and specifications about the kind of temporary accommodation to be provided or even what constitutes "proper sanitation facility." The GDCR currently states that applications to the ULB for water and drainage connections and other services and utilities can be made only after BU permission is obtained. This partly explains why water and sanitation access is often poor for the construction workers accommodated at worksites. The GDCR must address the fact that construction projects which house workers at the worksite would require these connections before BU permission in order that basic services for workers are adequate. Such connections should also be possible to obtain for temporary land colonies that are built on another plot of land because of the lack of available land on the construction site. It should be noted that discussions with few developers and large construction companies suggested that the AMC sometimes gives water / sewerage connection before BU permission, however, there are various

difficulties in securing a connection adequate for a labour colony. Discussions with AMC officials would be required to understand this further.

Moreover, although BU permission from the ULB is required to occupy and use a building after construction is completed, AMC/AUDA willfully turns a blind eye to the fact that construction workers are often accommodated in deplorable conditions on ground/upper floors and increasingly in the basements of under-construction buildings. This, in fact, allows the state to neglect addressing the question of its role in planning for land for construction worker colonies or housing in another form for these migrant construction workers. Although it might be possible to use under-construction buildings to accommodate construction workers at later stages of a project, the manner in which these buildings are currently used for this purpose while under construction completely ignores the health and safety of the workers. A discussion on this is required to see if the GDCR can outline regulations to govern the use of under-construction buildings for accommodating construction workers in ways that do not put the health and safety of workers at risk.

The AMC has prepared the "Model Rules for the Protection of Health and Sanitary Arrangements for Workers Employed by AMC or its Contractors" which are an integral part of the AMC's construction contracts. As discussed below, these rules are inadequate, however, such rules should be strengthened and could then be included in the GDCR.

Construction Contracts for Public Projects:

Construction contracts for public and private projects, between the entity undertaking a project and the contractors, can play a role in regulating contractors to ensure that they provide adequate accommodation and other facilities for the workers living at the worksite. This study examined the construction contracts of four public projects undertaken by the AMC. It was found that AMC has prepared "Model Rules for the Protection of Health and Sanitary Arrangements for Workers Employed by AMC or its Contractors." These rules form an integral part of the construction contracts for projects undertaken by AMC, and they apply to all buildings and construction works of AMC in which twenty or more workers are ordinarily employed or are proposed to be employed in any day during the period for which the contract work is in progress. However, a study of these rules reveal that they do not cover all the necessary provisions adequately. They make no mention of whether and what kind of accommodation should be provided by contractors to the workers (although there is reference to "the labour camp" in the context of water provision). While water is to be provided at both the worksite and the labour camp, and there are provisions to ensure that this is potable water (such as monthly testing of samples from the drinking water source), there are no norms for the quantity of water to be supplied per person per day. Toilet facilities and washing spaces for the "worksite" are elaborated at length with norms and specifications. These are similar to the norms in labour legislation like the CL Act and ISMW Act. It is, however, unclear if these rules are to be applied for toilet facilities and washing spaces in cases where the labour camp is not located on the site itself. The rules require the contractor to build a creche at the worksite for children under the age of 6 years, but the conception of this facility is confined to keeping the children away from the construction site in a secure environment where they can rest and play. There is no attempt to think about how these creches could be spaces for child development, for example, with the AMC linking them to the Integrated Child Development Scheme (ICDS).

Although the above-mentioned rules are supposed to be an integral part of the AMC's construction contracts, they were found in only one of the four contracts studied. From these contracts it also seems that different AMC departments follow their own practices with respect to drafting out of the contractual conditions for projects undertaken by them. This results in variations in the contractual conditions vis-à-vis accommodation, water, toilets, bathing/washing facilities and drainage for the

workers. The contracts also reveal that the AMC does not undertake any contractual role or responsibility to provide land (or facilitate access to land) to contractors for the labour camp, or provide a water and sewerage connection and SWM collection services to the labour camp.

There are references in some of the contract documents to the role of the AMC's Health Officer and Engineer-in-charge of the project in giving instructions to the contractors vis-à-vis arrangements for workers, or issuing a notice to the contractor if arrangements are not as per approved standards. However, much of this seems to be at the discretion of these officials, since there are no clear standards for all the arrangements to be made. Discussions with these officials could throw light on whether and how they intervene on the arrangements for workers made by contractors.

In summary, the AMC's construction contracts are found to be wanting, both in terms of what they require the contractors to provide for the workers as well as the role that the AMC should play in making it possible for contractors to make these provisions. Discussions on these aspects would be required with all the relevant actors – worker unions, AMC and other government agencies, contractors and planners – to examine the possibilities for making construction contracts which integrate the health and safety of construction workers from the perspective of housing and other facilities for them.

10. Regulating construction sites under BOCW – Potential role of linking to other regulatory frameworks applicable to construction sites

In the current context of the Central Government overhauling the labour laws, the future of the BOCW Act is uncertain. However, it is still a useful exercise to consider how the implementation of the BOCW Act could be linked to other regulatory frameworks applicable to construction sites.

The Development Permission (DP) can be made conditional on the registration of the site under BOCW Act when construction commences.[94] Compliance to this condition can be ensured by requiring that the BOCW registration number is included in the "Notice of Progress of Construction" which has to be submitted to the AMC at 4-5 different stages of the construction (see Diagram 1).[95]

Making BOCW registration mandatory for registration with RERA under the Real Estate Act 2016 is also worth exploring (see Diagram 1). Although the purpose of the Real Estate Act 2016 is consumer protection, it is part of the broad framework that regulates real-estate development activity. Before a project is launched, the project must be registered with RERA, which requires DP and certain other approvals. Even though RERA is applicable to only real-estate projects that are for sale, such a linkage will result in better registration under the BOCW Act.

In both the above suggestions, it should be kept in mind that BOCW registration itself will not ensure compliance to all provisions of the BOCW Act, which – as discussed earlier – are weak when it comes to specifying adequate accommodation and other facilities for construction workers living at worksites.

11. Role of Developers, Other Private Entities and Public Entities undertaking construction projects, and Contractors

Improvements to the housing and other facilities for construction workers living at the worksite can be achieved only when developers, other private entities and public entities undertaking

[94] This was also suggested by a BOCW inspector (Discussion with BOC inspector, May 13 and June 3, 2019).
[95] See footnote 19 for the details on the 4-5 stages of construction when "Notice of Progress of Construction" has to be submitted.

construction projects, and contractors change their current practices, as a result of state regulation or their own initiatives or both. Entities undertaking construction projects will have to bear the cost of such improvements, and ensure that these improvements are implemented, either by them directly or by their contractors.

The study revealed that when construction workers are living in under-construction buildings, usually less than 1% of the construction cost is spent on labour accommodation and other services. Where labour colonies are built on land, either on the project site or some distance away, usually 1-2% of the construction cost is spent on the accommodation and other facilities. Even where a relatively good creche is constructed and run by a NGO based on a holistic model of child development, not more than 2% of the construction cost is spent on the labour colony and facilities for workers. Where land has to be leased for the labour colony, the land rent would be an additional cost. Clear information about these land rents – which would depend on the location and landowner (with rent for public land being higher than for private land) – could not be obtained.

Where 1-2% of the construction cost is incurred on the labour colony, what is the nature of the accommodation and other facilities? The research reveals that presently, at sites of large developers and construction companies, rooms in labour colonies are generally made using in-situ fabrication system and corrugated metal sheets for walls and roofing. An in-situ fabrication system, which uses metal supports, is preferred by developers / contractors since these components can be re-used several times and it allows for quick erection, dismantling and re-erection. In one case, a construction company had made rooms using in-situ fabrication system, old metal shuttering plates for walls, and corrugated metal sheets for roofing. In one case, a construction company had made rooms using in-situ fabrication system, Aerocon sheets for external walls for climatic reasons, and corrugated metal sheets for internal walls and roofing. Medium and small-scale contractors and sub-contractors working on large developers' sites were also found to generally use in-situ fabrication and corrugated metal sheets, but they erected the structures roughly, often without proper flooring and sometimes even without any doors. One developer had used precast concrete panels for walls for climatic reasons which also allows for re-use as well as quick erection, dismantling and re-erection, while few contractors were found to use concrete blocks for walls. Roofing was always from corrugated metal sheets or in some cases cement sheets. Some sites had rooms with adequate flooring while others had no flooring to speak of. Water and sanitation facilities vary, but are rarely adequate. At all the sites, there were toilets, whose adequacy in terms of numbers and cleanliness varied. However, there were a few sites where toilets were adequate in number and relatively well-maintained, revealing that this can easily be achieved without incurring more than 2% of the construction cost on worker accommodation and facilities. At many sites bathing facilities were non-existent, while at many other sites there were semi-enclosed bathing spaces with a row of taps, separate for men and women. Water for bathing and washing seemed to be adequate, however, not all the sites provided filtered water for drinking. Paving and drainage in the labour colony was non-existent. A few of the sites also had a structure built specifically for a creche, and while the quality of the creche varied in terms of materials used, provision of water and toilets, space. None of these sites had all the required provisions – even the site with the best creche had no bathing facilities and inadequate toilets.

Substantial improvements would be possible if 3-4% of the construction cost is spent on worker accommodation and other facilities, at least by large developers and construction companies.
As already mentioned, the state has a central role to play in facilitating access to land for construction worker colonies where land is not available for building proper worker colonies. This could be land to lease for building worksite-specific temporary worker colonies, or land on which semi-permanent worker colonies can be built wherein developers and contractors can rent rooms for their workers. However, given the distribution of vacant land in our cities, such land is unlikely to be

in areas close to construction sites located in more central areas, many of which are seeing a lot of construction through redevelopment. Entities undertaking construction projects such as developers, other private entities and public authorities will have to be willing to build in the cost of transport to/fro worker colonies located at a distance from the project site into their total construction costs. It is worthwhile to note that one developer's view about such increased costs for worker accommodation and other facilities was that developers would not reduce their profits and therefore these costs would be passed on to the consumer, making real-estate even more expensive. It remains unclear to what extent this would increase the costs for consumers. Entities undertaking public projects must also build in these costs into their project budgets.

Research would be required with medium and small-scale developers – whose sites could not be visited for this study due to difficulty in accessing them for research – to understand the challenges and possibilities for making improvements in the housing and other facilities they provide to the workers living at the worksites.

Developer associations like CREDAI and contractor associations like the Gujarat Contractor Association should lead the way in initiating these discussions on the ways in which labour colonies can be improved, the implications for construction cost, and possible innovations that are financially more sustainable for the industry as well as can ensure the health and safety of the workers. These innovations could be for temporary colonies using modular-based systems, or could also explore possibilities of building semi-permanent labour colonies where rooms can be rented out by developers / contractors, instead of building and dismantling a temporary labour colony each time a construction project is initiated and completed. CSR funds of the construction industry should be used for researching, piloting, reviewing, modifying, and disseminating these innovations. Improving the housing conditions and other facilities for its construction workers who live at worksites should become a central agenda for the construction industry.

12. Role of GBOCWWB

A huge amount of unutilized construction labour cess, upwards of Rs.2500 crores, is lying unutilized with the GBOCWWB. As per the Draft Model Welfare Scheme, 10% of the amount of cess allocated/ utilized in a particular year can be spent on transit accommodation for workers. In section 6.2 of the report I have suggested that if Rs.1000 crore is allocated and utilized for the Board's different welfare schemes in the next financial year (2020-21), then 10% of that, which is Rs.100 crore, could be spent on building several projects for transit accommodation across several cities through collaboration with the ULBs and State government who could provide the land while GBOCWWB provides the finances. Rs.100 crore is not a large amount given the scale of the housing need among migrant construction workers across Gujarat, however, a start could be made and innovative ideas need to be explored to maximize decent housing for these workers from these funds.

GBOCWWB must re-start the anganwadi scheme but with an integrated child development approach, through consultations with NGOs like SAATH who are running creches at several construction sites based on a holistic approach which includes the development of the child, security of the children and teachers, health, and food and nutrition. The BOCW Act requires employers to provide a creche at construction sites with more than 50 women workers, and here the anganwadi scheme can play a supportive role, ensuring that employers provide decent physical infrastructure for the creche while the scheme provides the soft infrastructure and services necessary to make it into a space for integrated child development. Along with this, the anganwadi scheme must also be designed such that it reaches children at construction sites that have fewer women workers and children as well as settlements of the construction workers who go to nakas.

References

Aajeevika Bureau (2007). "Migrant Construction Workers in Ahmedabad: A Profile," Aajeevika Bureau, Ahmedabad.

Aajeevika Bureau (2019). "Enhancing well-being of construction workers through access to social services and basic services: Progress report by Aajeevika Bureau (July-September 2019)."

Asia Society (2017). "How Hukou Reform is Changing the Makeup of Factory Towns," *Asia Society*, August 3. https://asiasociety.org/blog/asia/how-hukou-reform-changing-makeup-chinese-factory-towns (accessed 23.1.2020).

Bork-Hüffer, T., B. Etzold, B. Gransow, L. Tomba, H. Sterly, K. Suda, F. Kraas and R. Flock (2016). "Agency and the Making of Transient Urban Spaces: Examples of Migrants in the City in the Pearl River Delta, China, and Dhaka, Bangladesh, " *Population, Space and Place* 22, pp. 128-145.

Bulkley, M. (2013)."Locating Neoliberalism in Dubai: Migrant Workers and Class Struggle in the Autocratic City," *Antipode* 45:2, pp. 256-274.

Chen, C. and C. Fan (2016). "China's Hukou Puzzle: Why Don't Rural Migrants Want Urban Hukou," *The China Review* 16:3, pp. 9-39.

CAG (2014). Report of the Comprtroller and Auditor General of India on General and Social Sector for the year ended March 2013 – Government of Gujarat Report No.2 of 2014. http://www.cag.gov.in/sites/default/files/audit_report_files/Gujarat_Report_2_2014.pdf (accessed 21.5.2017).

Desai, R. (2017). "Entitlements of Seasonal Migrant Construction Workers to Housing, Basic Services and Social Infrastructure in Gujarat's Cities: A Background Policy Paper." Working paper 35, Centre for Urban Equity, CEPT University, Ahmedabad.

Desai, R. (2019). "The Pay and Use Toilet: Houseless Migrants and Infrastructural Exclusions," *Marg*, special issue on Infrastructure as Space: Development and its (Dis)contents, September .

Desai, R., D. Mahadevia, S. Sanghvi, S. Vyas, R. Malek and M.S. Malek (2016). "Bombay Hotel: Urban Planning, Governance and Everyday Conflict and Violence in a Muslim Locality on the Peripheries of Ahmedabad," Working paper 31, Centre for Urban Equity, CEPT University, Ahmedabad.

Desai, R. and S. Sanghvi (2018). "Migrant Construction Naka Workers in Ahmedabad: A Study of Housing Conditions, Migrants' Perspectives, and Future Directions." Research report, Centre for Urban Equity, CEPT University, Ahmedabad.

ET 2019. "With Four Labour Codes, 2020 to be a 'Year of Reforms' : Santosh Gangwar," *The Economic Times*, December 30, 2019. https://economictimes.indiatimes.com/news/economy/policy/with-four-labour-codes-2020-to-be-a-year-of-reforms-santosh-gangwar/articleshow/73027335.cms (accessed on 4.1. 2020)

Glennie, C. (2015). "Singapore is keeping an eye on its migrant workers," BBC News, April 14, 2015. https://www.bbc.com/news/business-32297860 (accessed 21.1.2020).

Gransow, B. (2012). "Contested urbanization in China: Exploring informal spaces of migrants-in-the-city," *Harvard Asia Quarterly* 14:1/2, pp. 12-24.

GBOCWWB (2018). *Bandhkaam Shramik Saathi*, newsletter of the GBOCWWB, February.

GOG (2017). *Comprehensive General Development Control Regulations – 2017*, sanctioned by the Urban Development and Urban Housing Department, Government of Gujarat via notification No GH/V/269 of 2017 / EDP – 102016 – 3629 dated October 12, 2017.

GOI (2018). "Draft Model Welfare Scheme for Building and Other Construction Workers," July 13, 2018, Ministry of Labour and Employment, Government of India.

Hakim, S. (2016). "International Migrants Day: A Home for the Homeless," *Mumbai Mirror*, December 19, 2016. https://mumbaimirror.indiatimes.com/mumbai/other/international-migrants-day-a-home-for-the-homeless/articleshow/56060094.cms (accessed 18.8.2018).

Harish, S. (2017). "Urban Development, Housing and 'Slums'" *IIC Quarterly* 43:3-4, Special issue on The Contemporary Urban Conundrum, pp. 184-198.

Kirk, M. (2015). "The Peculiar Inequality of Singapore's Famed Public Housing," June 9. https://www.citylab.com/equity/2015/06/the-peculiar-inequality-of-singapores-famed-public-housing/395411/ (accessed 21.1.2020).

Knowles, G. (2016). "Live for China's Migrant Workers: Dorm that Looks like Prison," *Post Magazine*, South China Morning Post, May 27. https://www.scmp.com/magazines/post-magazine/article/1955023/life-chinas-migrant-workers-dorm-looks-prison (accessed 23.1.2020).

Lee, J. (2017). "Terrible Living Conditions of Migrant Workers in S'pore in 2017 Photographed," https://mothership.sg/2017/08/terrible-living-conditions-of-migrant-workers-in-spore-in-2017-photographed/ (accessed 21.1.2020).

Lin, L. and Y. Zhu (2010). "The Diverse Housing Needs of Rural to Urban Migrants and Policy Responses in China: Insights from a Survey in Fuzhou," *Institute of Development Studies Bulletin*, 41: 4, pp. 12-21.

Lok Sabha Secretariat (2018). Thirty-Eighth Report of the Standing Committee on Labour, Ministry of Labour and Employment, New Delhi, July. http://164.100.47.193/lsscommittee/Labour/16_Labour_38.pdf (accessed 10.1.2020).

MHUPA (2015). "Pradham Mantri Awas Yojana: Housing for All: Scheme Guidelines 2015," Ministry of Housing and Urban Poverty Alleviation, Government of India, New Delhi.

Margele, B. (2015). "No running water and toilets for Kayamandi hostel residents," April 15, 2015. https://www.groundup.org.za/article/no-running-water-and-toilets-kayamandi-hostel-residents_2838/ (accessed 21.1.2020).

Martina, M. (2012). "China's Dorm Room Discontent Emerges as New Labour Flashpoint," *Reuters*, September 28. https://www.reuters.com/article/us-china-foxconn/chinas-dorm-room-discontent-emerges-as-new-labor-flashpoint-idUSBRE88Q1QS20120927 (accessible 23.1.2020).

Mothotoana, M. (2011). "Implementation of Hostel Redevelopment Project within the City of Johannesburg Metropolitan Municipality," Masters thesis, University of South Africa, Pretoria.

Murray, N. and L. Witz (2013). "Camp Lwandle: Rehabilitating a migrant labour hostel at the seaside," *Social Dynamics: A Journal of African Studies* 39:1, pp. 51-74.

Nair, S. (2017). "This NGO provides dorms for poor migrant youth for as low as Rs 50 a day," https://yourstory.com/2017/03/pratham-foundation-dormitories (accessed 18.8.2018).

New Indian Express (2019). "Even after SC Rap, more than half of the construction cess underutilized in last five years," New Indian Express, June 25. https://www.newindianexpress.com/business/2019/jun/25/even-after-sc-rap-more-than-half-of-the-construction-cess-underutilised-in-last-five-years-1994926.html (accessed 7.1.2020)

Patel, H.S. (2019). Presentation by former DISH Deputy Director in-charge of BOCW Act, Workshop on Occupational Health of Construction Workers, organized at National Institute of Occupational Health, Ahmedabad, May 10, 2019.

Penderis, S. and I. Merwe (1994). "Kaya Mandi Hostels, Stellenbosch: Place, People and Policies," *South African Geographical Journal*, 76: 1, pp. 33-38.

Pirie, G.H., and M. da Silva (1987). "Hostels for African Migrants in Greater Johannesburg," *GeoJournal* 12:2, pp. 173-182.

Pratham (2018). Presentation by Medha Uniyal at the National Consultation Workshop "Migrant Workers and Housing in the City: Current Scenario and Future Directions," organized by PCLRA and Centre for Urban Equity, CEPT University, in Ahmedabad, November 27, 2018.

Rosario, K. (2017). "Invisible Women of Mumbai," *The Hindu*, March 14, 2017. https://www.thehindu.com/news/cities/mumbai/invisible-women/article17458493.ece (accessed 18.8.2018).

Roy, S.N., Manish and M. Naik (2017). "Migrants in Construction Work: Evaluating their Welfare Framework," policy brief, Centre for Policy Research, New Delhi, June.

Seow, J. (2016). "Working to improve living conditions," *The Strait Times*, December 18, 2016. https://www.straitstimes.com/singapore/manpower/working-to-improve-living-conditions (accessed on 21.1.2020).

Suda, K. (2016). "A Room of One's Own: Highly Educated Migrants' Strategies for Creating a *Home* in Guangzhou," *Population, Space and Place* 22, pp. 146-157.

Sundar, S. (2019). “Labour Codes: Suit-Boot ki Sarkar?” *Deccan Herald*, August 17. https://www.deccanherald.com/specials/sunday-spotlight/labour-codes-suit-boot-ki-sarkar-755087.html (January 13, 2020).

SETU (2020). “Migrants and Urban Governance: A Case Study of Bhuj Municipality, Kutch District, Gujarat,” research report, SETU Abhiyan, Bhuj.

SMC (2017). “Presentation on Proposed Shelter for Urban Homeless People in South Zone & South-West Zone Area,” presentation made by Gayatri Jariwala, Assistant Commissioner, Urban Community Development department, SMC, at the National Consultation Workshop “Beyond ‘Slums’: Housing issues of seasonal migrants in the city,” organized by PCLRA and Centre for Urban Equity, CEPT University, in Ahmedabad, September 22, 2017.

Tan, A. (2014). “A Day in the Life of Tuas View Dorm,” *The Straits Times*, November 24. https://www.straitstimes.com/singapore/a-day-in-the-life-of-tuas-view-dorm (accessed 23.1.2020).

Thurman, S. (1997). “Umzamo: Improving hostel dwellers’ accommodation in South Africa,” *Environment and Urbanization*, 9: 2, pp. 43-61.

Tyner, A. and Y. Ren (2016). “The Hukou System, Rural Institutions and Migrant Integration in China,” *Journal of East Asian Studies* 16, pp. 331-348.

TOI (2017). “Migrants to get proper housing under Garima,” *The Times of India*, August 18, 2017. https://timesofindia.indiatimes.com/city/kochi/migrants-to-get-proper-housing-under-garima/articleshow/60124179.cms (accessed 28.12.2019).

Urban SETU (2017). “The City Calls: Bhuj Vision 22 Towards Decentralization,” Published by Home in the City Programme, Bhuj.

Wang, T., Y. Li, L. Zhang and G. Li (2015). “Case Study of Integrated Prefab Accommodations System for Migrant On-Site Construction Workers in China,” *Journal of Professional Issues in Engineering Education and Practice*, 142: 4.

Yeoh, B. (2017). “Bangladeshi Construction Workers and the Politics of (Im)mobility in Singapore,” *City* 21:5, pp. 641-649.

Zhou, J. (2018). “Migrants and the New Stage of Public Housing Reform in China,” PhD thesis, University of Amsterdam. https://dare.uva.nl/search?identifier=8730a24f-ad71-48fa-9605-35284cead7cf (accessed 5.12.2019)

Annexures

Annexure 1.
Questionnaire for Construction Site Visits

Date of visit:

Name of Developer / Institution / Authority undertaking the project:

On-site staff interviewed:

I. Details of the project

Type (residential, commercial, institutional, industrial, etc)	Land area of project + Built-up area on ground + Super built-up area	Project construction cost (excluding land cost)	Duration of construction	No. of workers currently employed on the site + No. of workers employed at peak time + No. of workers employed over entire project duration	No. of workers currently living at the site's labour accommodation + No. of workers living at at peak time

II. How is the construction work being undertaken – Have numerous contractors been engaged for each of the different construction activities? Has a construction company been engaged, and for which construction activities? If possible, try to find out if there are sub-contractors.

III. Information about the workers / labour groups:

Construction activity	**State of Origin for the Labour groups doing this work** (mention districts if known, especially for labourers from Gujarat) (mention no. of workers if possible; mention breakup of skilled and unskilled workers, if possible)	**Does the developer / contractor have to provide these workers a place to live?**	**Are the workers single male migrants or family migrants? (**If both, mention breakup in terms of numbers if possible)
Excavation / Digging			
Masonry			
Plastering			
RCC – *saliya kaam* (bar-bending)			
RCC - centering			
RCC – *bharai* (pouring concrete)			
Painting			
Waterproofing			
Flooring (tiling work, stone work)			

Plumbing			
Other:			
Other:			
Other:			
Other:			

IV. Information about the temporary accommodation provided for the workers:

Where were the workers provided a place to live? (tick all that apply, and include relevant notes) (mention if their living place changed over the duration of construction; mention if there is more than one labour colony / room cluster, in case more than one entity has provided accommodation)

On the construction site	
Workers living in the open (without shelter)	
Labour colony of Ground-floor structures	
Labour colony of G+1 structures	
Basement of the building under construction	
Ground floor or upper floors of the building under construction	
At another location	
Labour colony of Ground-floor structures	

Labour colony of G+1 structures	
Rental rooms kept by developer	
Rental rooms kept by Contractor	
Other (describe)	

If labour colony comprises of Ground floor or G+1 accommodation:

No. of rooms and room size:

Materials used (tick all that apply, and include relevant notes):

Walls	
Plastic sheets / Tarpaulin sheets	
Corrugated metal sheets	
Brick masonry	
Concrete blocks	
Pre-cast concrete panels	
Other materials (describe):	
Roofing	
Plastic sheets / Tarpaulin sheets	
Corrugated metal sheets	
Other materials (describe):	
Flooring	
No flooring	
Plain cement concrete (PCC)	
Other materials (describe)	

Who made the accommodation? (developer / institution / authority, main contractor, subcontractor) (mention if different labour colonies / room clusters were made by more than one entity):

Discuss costing (per unit / or for a certain size of labour colony) (discuss life-cycle of the materials / structures):

If labour colony made at another location

How was this land arranged and by which entity (developer / institution / authority, main contractor, subcontractor) (mention if land was arranged by more than one entity) (tick all that apply, and include relevant notes):

Land owned by Developer / Institution / Authority	
Government provided land for free	
Leased land from government	
Leased land from a private landowner	
Other (describe)	

How far is the labour colony from the construction site (in km):

Mode of transport from labour colony to construction site:

V. Facilities

Basic Services (include notes on who has made these provisions and the nature of provision):

Water for bathing and washing:

Drinking water:

Provision of Toilets: Yes / No

Materials:

Costing (per unit; life-cycle):

Number of Toilets: Common for men & women:
Male toilets:
Female toilets:

Provision of Bathrooms: Yes / No

Materials:

Costing (per unit; life-cycle):

Number of Bathrooms: Common for men & women:
Male bathrooms:
Female bathrooms:

If no bathrooms are provided, but some other kind of bathing space has been provided, describe this:

Electricity:

Social infrastructure provided at the Labour Colony or Work-site:

Maximum number of women / children:

Current number of women / children:

Anganwadi (describe: who has built the anganwadi and with what facilities, who is running the anganwadi and how, expenses/funding involved in building and running the anganwadi)

Medical clinic (describe: who has built / provided space for a clinic, who is running the clinic and how, expenses/funding)

Cooking space / facilities for the workers:

VI. What would be the total cost of building and maintaining the colony and these facilities as a percentage of the total project construction cost?

Annexure 2.
Interviews / Discussions with Developers, Contractors and their Staff

Site	Interviews / Discussions with the entity undertaking the project	Discussions with Contractors working on the project / Other relevant actors involved in the project
Projects undertaken by developer		
1	Developer; Project Manager and two of his staff; Officer in-charge of safety, hygiene and labour colony for the developer's projects	Detailed individual discussions with: 1 Flooring contractor, 1 Painting contractor
2	Developer, Project Manager, Officer in-charge of safety, hygiene and labour colony for the developer's projects	Discussion with a group of 2 RCC contractors and 2 Masonry-plastering contractors; Brief individual discussion with 1 Plumbing contractor
3	Developer, Project Manager	-
4	Head Safety Officer for all the developer's projects	-
5	-	From Construction Company: Project Manager, Admin Manager for all the company's projects in Ahmedabad
6	-	From Construction Company: Admin Manager for all the company's projects in Ahmedabad
7	-	From Construction Company: Admin in-charge for the project, Admin Manager for all the company's projects in Ahmedabad
8	Developer (interviewed one partner, who is also a partner in Project 9/H)	From Construction Company: Project Manager, Senior Engineer, Admin Manager for all the company's projects in Ahmedabad
9	Developer (interviewed one partner, who is also a partner in Project 8/G), Project engineer	From Construction Company: Project Manager, Senior Supervisor
10	Developer	Project Management Consultant hired by the developer
11	CSR Officer	
Projects undertaken by other private entity		
12	-	From Construction Company: Admin in-charge for the project
13	-	From Construction Company: Project Manager
Projects undertaken by public authority		
14	-	From Construction Company: Project Manager
Projects undertaken by developer		
15 Unsatisfactory site visit	-	Detailed individual discussions with: 1 Masonry-plastering contractor, 1 Flooring contractor, 1 Plumbing contractor
16 No site visit	Developer	-
17 No site visit	Developer	-

Annexure 3.
Challenges faced in obtaining comprehensive data for the questionnaire

It was challenging to obtain details about the construction workers on the project (such as total workers currently employed and total workers currently living at the worksite; total workers expected to be employed at peak time and total workers expected to live at the worksite at peak time; breakup in terms of the different construction activities like RCC, masonry-plastering, painting, etc; their source areas; and families / single males). At most sites, the on-site staff (of the developer / construction company) genuinely could not give all these details since they had only partial knowledge. For instance, sites where construction companies were engaged, the on-site staff I met were from the construction company and they could only give me more or less data about the workers employed for the activities contracted to them, and not for the activities for which other contractors were engaged. Another instance is sites where numerous medium and small-scale contractors were engaged by the developer; here, the kind of and extent of data I could get about the workers depended on whether I could meet the developer's Project Manager or the Safety officer. Some of the on-site staff of the developer / construction company data also seemed reluctant to give too many details even where they had the knowledge. To obtain all the details I sought would have required talking to more actors involved on the construction site (including individual contractors in certain kind of projects) and perhaps also greater trust from the developer / construction company.

At some sites, the on-site staff did not share even basic data for the projects such as land area, built-up area in terms of ground coverage and super built-up area. Where possible this data was obtained from the project details on the Gujarat RERA website. Total project construction cost was shared for only a few projects.

At a few sites, where multiple entities had provided labour accommodation, data on the number of rooms made by each entity could not be obtained since the on-site staff did not have this knowledge. This would have required talking to each of the entities that had built the accommodation.

For at least half the sites, details about the costs involved in building the labour accommodation and providing basic services like water and sanitation could not be obtained from the on-site staff I met. Generally a Project Manager knew these costs or could give some cost estimates, while a Safety Officer or Admin in-charge could not. In the case of two projects, the on-site staff from the construction company explained that they did not know anything about the costs since their company's purchase department dealt with this. Details about the costs involved in building and running a creche or medical clinic were even more difficult to obtain from the on-site staff.

It was not possible for the on-site staff to answer the question about the total cost of building and maintaining the labour accommodation and other facilities as a percentage of the total project construction cost. This question would have to be discussed with the entity (developer / institution / authority) undertaking the project, but even in this case, they would give only a rough percentage since all the costs incurred for building and maintaining the labour accommodation and other facilities are not usually undertaken by a single entity, and these costs are built into the negotiated rates of the contractors. The total cost of building and maintaining the labour accommodation and other facilities could be obtained at only one site since all these provisions were funded through the developer's CSR.

Annexure 4.
Data on construction workers, construction activity-wise, for the 14 projects covered in this study

Note: Annexure 3 outlines the challenges faced in this data collection. The data should therefore be taken as suggestive and not necessarily accurate, since the staff of the developer/contractor with whom the questionnaire was done did not always know the details about the workers brought in by the different labour contractors. Where the questionnaire was filled with the staff of the contractor (and not developer), this contractor was hired for the civil work (RCC, masonry-plastering) and in some cases a few other construction activities, and did not know about the workers engaged in other construction activities on the project. In some cases, this contractor had also sub-contracted some of the work and did not know about much about these workers. Moreover, most of the data is about the status of workers hired on the project around the time of the fieldvisit – only in few instances, data was available for all the workers employed (or expected to be employed) on the project.

Project	Migration source	No. of workers	Single males / Families	Living on the worksite
Excavation				
1	Dahod, Panchmahal, Rajasthan	25	Families	Yes
2	Hardly any workers – use of machinery	-	-	-
3	-	-	-	Yes
4	Locals / settled migrants	-	-	No
5	(Across Excavation, Masonry-plastering and RCC: West Bengal, Jharkand, Orissa, Bihar, UP, MP)	-	-	Yes
6	-	-	-	-
7	-	-	-	-
8	-	-	-	-
9	-	-	-	-
10	-	-	-	Yes
11	-	-	-	-
12	-	-	-	-
13	Dahod, Panchmahal, MP	80	Families	Yes
14	-	-	-	-
Masonry-plastering				
1	Dahod, Panchmahal, Bihar	120	Families	Yes
2	Rajasthan, Uttar Pradesh, Bihar (both skilled and unskilled workers) + Few locals / settled migrants (skilled & unskilled, especially among the plastering workers)	Total 200	Families and single males Families	Yes No (mostly living in rentals)
3	Madhya Pradesh	-	-	Yes
4	Dahod, Panchmahal	-	Families	Yes
5	(Across Excavation, Masonry-plastering and RCC: West Bengal, Jharkand, Orissa, Bihar, UP, MP)	-	-	Yes

6	-	-	-	-
7	-	170	Families and single males	Yes
8	Dahod, Panchmahal, Rajasthan (Dungarpur)	-	Mostly families	Yes
9	Rajasthan + Few locals / settled migrants (skilled workers)	-	Mostly families	Yes No
10	Dahod, Panchmahal, Bihar	120	Mostly families	Yes
11	-	-	-	-
12	Dahod, Rajasthan, MP	-	Mostly families	Yes
13	Dahod, Panchmahal, Rajasthan, UP	150	Families	Yes
14	-	-	-	Yes
RCC – *Saliya Kaam* (reinforcement / bar-bending) and Centering				
1	Dahod, Panchmahal, UP	150 workers	Single males	Yes
2	90% workers are from Panchmahal, Rajasthan, UP, Jharkand, Bihar + 10% workera are locals / settled migrants	Total 200-250 workers (including RCC – *bharai* workers)	Single males and 10-12 families (the women are not workers) Families	Yes No
3	Chattisgarh, West Bengal (Malda district), Bihar, UP	-	-	Yes
4	Dahod, Panchmahal	-	Families and single males	Yes
5	(Across Excavation, Masonry-plastering and RCC: West Bengal, Jharkand, Orissa, Bihar, UP, MP)	-	-	Yes
6	-	-	-	-
7	-	-	Single males and few families	Yes
8	Orissa, Jharkand, Bihar	-	Single males	Yes
9	Dahod, UP	60	Single males	Yes
10	UP, Bihar, Rajasthan, MP + Some locals / settled migrants	Total 115	Single males	Yes No
11	-	-	-	-
12	Bihar, West Bengal, Orissa, Jharkand	-	Single males	Yes
13	UP, Bihar, Rajasthan, Dahod + Locals / settled migrants	Total 300	Single males	Yes No
14	Jharkand, Bihar	-	-	Yes

RCC – *Bharai* (pouring concrete)				
1	Dahod, Panchmahal, Rajasthan	-	Families	Yes
2	Panchmahal, Rajasthan, UP, Jharkand, Bihar (includes the centering & *saliya kaam* workers)	Total 200 (includes the centering & *saliya kaam* workers)	Single males and 10-12 families (the women are not workers) (includes the centering & *saliya kaam* workers)	Yes
3	Bihar, UP, Chattisgarh, Orissa	-	-	Yes
4	Dahod, Panchmahal	-	Single males and families	Yes
5	(Across Excavation, Masonry-plastering and RCC: West Bengal, Jharkand, Orissa, Bihar, UP, MP)	-	-	Yes
6	-	-	-	-
7	-	-	Single males and few families	Yes
8	MP, Panchmahal, Dahod	-	Families and few single males	Yes
9	Panchmahal	50-60	Families	Yes
10	Dahod, Panchmahal, Rajasthan	25	Families and some single males	Yes
11	-	-	-	-
12	-	-	-	-
13	Dahod, Panchmahal, MP	80	Families	Yes
14	No *bharai kaam* in the project			
Flooring (Tiling, Stone laying, Polishing)				
1	Rajasthan, Dahod, Godhra, Maharashtra, UP & Bihar (UP & Bihar migrants are single males) + Locals / settled migrants + Polishing: Rajasthan	Total 100	Families (Dahod, Godhra, Rajasthan) and single males (UP Bihar) - Single males	70-75% live on the worksite. Rest in rental rooms. No Yes
2	Rajasthan (skilled workers) + Karnataka (unskilled workers)	Total 75	- Families	No Yes

3	Rajasthan (Dungarpur), Panchmahal	-	-	Yes
4	Rajasthan	-	-	Yes
5	*Flooring not started*			
6	-	-	-	-
7	-	10-12	Families	Yes
8	Saurashtra, Surendranagar (skilled workers) + Dahod, Rajasthan (Dungarpur) (unskilled workers)	-	Single males Families and single males	No (living in shared rental rooms) Yes
9	-	-	-	No (living in shared rental rooms)
10	Saurashtra (skilled workers) + Panchmahal, Rajasthan (unskilled workers)	-	Single males -	No (living in shared rental rooms) Yes
11	-	-	-	-
12	*Flooring not started*			
13	UP, Rajasthan + Locals / settled migrants	Total 40-50	Mostly single males	Yes No
14	Dahod, Panchmahal – laying paver blocks on this road development project	-	-	Yes
Painting				
1	MP	40	50-60% Single males and remaining families	Single males live on the worksite. Families live in rental rooms but few also live in their own houses.
2	MP	15-20	Single males	No (living in shared rental rooms)
3	UP (unclear if some of them are settled migrants or not)	-	-	90% No; 10% Yes
4	-	10-12	-	No
5	*Painting not started*			
6	-	-	-	-
7	*Painting not started*			
8	Unclear if workers were from MP or UP & Bihar	-	Single males	Yes
9	*Painting not started*			
10	*Painting not started*			
11	-	-	-	-

12	*Painting not started*			
13	UP	40	Single males	Yes
14	*Painting not started (unclear if there is any painting work)*			
Plumbing				
	Locals / settled migrants	15	-	No
2	Locals / settled migrants	10-12	-	No
3	Orissa	-	-	No
4	-	10-12	-	No
5	*Plumbing not started*			
6	-	-	-	-
7	-	-	-	-
8	*Plumbing not started*			
9	*Plumbing not started*			
10	*Plumbing not started*			
11	-	-	-	-
12	Orissa	12-15	Single males	Yes
13	Dahod, Panchmahal, West Bengal (Malda district)	50	Single males and Families	Yes
14	*No plumbing work*			
Waterproofing / China Mosaic				
1	Dahod, Panchmahal	25	Families and single males	Yes, some of them (some brought from *naka* do not live at the worksite)
2	Locals / settled migrants	15	-	No
3	-	-	-	-
4	-	-	-	-
5	*Waterproofing not started*			
6	Dahod, Panchmahal	-	Families and single males	Yes
7	*Waterproofing not started*			
8	Dahod	-	Families	Yes
9	*Waterproofing not started*			
10	*Waterproofing not started*			
11	-	-	-	-
12	-	-	-	-
13	Dahod, Panchmahal	25	Families	Yes
14	*No waterproofing work*			
Electrical work				
1	Locals + UP, Bihar (might be settled migrants)	Total 50	-	No
2	Locals / settled migrants	30	-	No
3	"Daytime workers" (unlcear if these are locals / settled migrants or not)	-	-	No

4	-	-	-	-
5	*Electrical work not started*			
6	-	-	-	-
7	*Electrical work not started*			
8	*Electrical work not started*			
9	UP	4-5	Single males	Yes
10	*Electrical work not started*			
11	-	-	-	-
12	*Electrical work not started*	-	-	-
13	UP, Bihar	30-35	Single males	Yes
14	*Electrical work not started*			
Fabrication (Metal grilles) (data not collected for all projects)				
1	UP, Bihar (might be settled migrants)	20	-	No
2	Locals / settled migrants	7-8	-	No
False ceiling (*shera* board work) (data not collected for all projects)				
13	Bihar, UP + Locals	-	Single males	Yes No
Carpentary (data not collected for all projects)				
1	Locals / settled migrants	10	-	No
2	Locals / settled migrants	10	-	No
3	Rajasthan	20	Single males	Yes
13	Rajasthan	10-15	Single males	Yes
Depart workers (data not collected for all projects)				
1	-	-	-	-
2	-	-	-	-
3	Godhra	50	75% families; 25% single males	Yes
4	-	-	Families and single males	Yes
8	-	Several workers	Families	Yes
9	-	3	A single family	Yes
14*	West Bengal (Malda district) – they do the PCC work, loading / unloading, transporting sand/cement	-	Families and single males	Yes

Annexure 5.
Relevant Excerpts from "Tender Document for Providing and Laying Sewerage Network in TP-221 in New West Zone of AMC Area, June 2018"

Section B-2: General Conditions of Contract: Terms and Conditions of Contract

[……]

B.2.57 Clause 57:

(1) Huts: The Contractor shall build a sufficient number of huts on a suitable plot of land for the use of the labourers according to the following specificaitions:

(i) Huts of bamboos and grass may be constructed

(ii) A good site shall be selected, high ground removed from jungle but well provided with trees shall be chosen wherever it is available. The neighbourhood of rank jungle, grass or weeds should particularly be avoided; camps should not be established close to large cuttings of earth work.

(iii) The lines of huts shall have open spaces of atleast 10 m. between rows, When a good natural site can not be procured, particular attention should be given to the drainage.

(iv) There should be no over crowding. Floor spaces at the rate of 2.8 sq.m. per head shall be provided. Care should be taken to see that the huts are kept clean and in good order.

(2) Drinking Water: The Contractor shall, as far as possible, provide an adequate supply of chlorinated pure potable drinking water for the use of labourers. This provision shall be at the rate of not less than 45 litres per head, no provision need be made where there is a suitable nalla, river or well within 0.4 km. of the camp. However arrangement should, as far as possible, be made to chlorinate water by chlorine tablets before it is allowed for drinking purpose.

(3) The Contractor shall construct semi permanent latrines for the use of labourers on the following scale, namely:

a) Where females are employed, there shall be atleast one latrine for every 25 females.

b) Where males are employed, there shall be atleast one latrine for every 25 males. Provided that where the number of males or females exceed 100, it shall be sufficient if there is one latrine for every 25 males or females, as the case may be, upto the first 100 and one for every 50 thereafter.

(4) Privacy in latrines: Every latrine shall be under cover and so partitioned off as to secure privacy, and shall have a proper door and fastenings.

(5) Notice to be displayed outside latrines and urinals:

(1) Where workers of both sexes are employed, there shall be displated outside each block of latrine and urinal a notice in the language understood by the majority of the workers "For Men Only" or "For Women only", as the case may be.

(2) The notice shall also bear the figures of a man or of a woman, as the case may be.

(6) Urinals: There shall be atleast one urinal for male workers upto 50 and for female workers upto 50 employed at a time. Provided that where the number of male of female workemen,

as the case may be exceeds 500, it shall be sufficient if there is one urinal for every 50 males or females upto the first 500 and one for every 100 males or females or part thereof.

(7) Latrines and Urinals to be accessible:

(1) The latrines and urinals shall be conveniently situated and accessible to workers at all times at the establishment.

(2) (i) The latrines and urinals shall be adequately lighted and shall be maintained in a clean and sanitary condition at all time

(2) (ii) Latrines and urinals other than those connected with a flush sewage system shall comply with the requirements of the Public Health Authorities.

(8) Water for latrines and urinals: Water shall be provided by means of tap or otherwise, so also be conveniently accessible in or near the latrines and urinals

(9) Bathing and washing places:

(1) The Contractor shall construct a sufficient number of bathing places, every unit of 20 persons being provided with a separate bathing place.

(2) Washing places should also be provided for the purpose of washing clothes. Every unit of 30 persons shall have atleast one washing place.

(3) Such bathing and washing places should be suitably screened and separate places provided for male and female workers.

(4) Such facilities shall be conveniently accessible and shall be kept clean and hygienic.

(10) Drainage: The Contractor shall make sufficient arrangements for draining away the sewerage water as well as water from the bathing and washing places and shall dispose of this waste in such a way as not to cause nuisance. The Contractor should obtain a permission from the Gujarat Water Pollution Control Board, Gandhinagar, if water is to be drained in a river or near a well. The Contractor would put mineral oil once in a week in stagnant water round about the residence.

(11) Medical facilities: The Contractor shall engage a medical officer with a travelling dispensary for a camp having 500 or more persons if there is no Municipal Corporation or other private dispensary situated within 6 km. from the camp.

(12) Conservancy and cleanliness: The Contractor shall provide the necessary staff for effecting the satisfactory conservancy and cleanliness of the camp to the satisfaction of the Engineer in charge. Atleast one sweeper per 200 persons should be engaged. Conservancy staff shuld dump refuse in compost pit, away from the labour camp.

(13) Health Provisions: The Health Officer of the Municipal Corporation of Health Services shall be consulted before opening a labour camp and his instructions on matters, such as the water supply, sanitary convenience, the camp-site, accommodation abd food supply shall be followed by the Contractor.

(14 Precautions against epidemic:

[……]

Annexure 6.
Relevant Excerpts from "Tender for Construction of 1568 EWS Residential Flats + 27 Shops including Internal Infrastructure and Development Work within the plot at various locations in Ahmedabad (Phase VI, EWS Package 19)"

Part 2: General and Special Condition of Contract

[……]

16. Special Conditions of Contract

[……]

3.0. Condition for Water:

3.1. The contractor shall make his own arrangement for providing water for construction and drinking purpose. Contractor shall get the water tested from any approved laboratory of AMC as per direction of Engineer-in-Charge at regular interval. All expenses towards collection of samples, packing, transportation and testing charges etc. shall be borne by the contractors.
[……]

17. Clauses of Contract

[……]

Clause 19: Labour Laws to be complied by the Contractor: The Contractor shall obtain a valid license under the Contractor Labour (R&A) Act 1970, and the Contract Labour (Regulation and Abolition) Rules 1971, before the commencement of the work, and continue to have a valid licence until the completion of the work. The contractor shall also abide by the provisions of the Child Labour (Prohibition and Regulation) Act, 1986. The contractor shall also comply with the provisions of the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and Other Construction Workers Welfare Cess Act, 1996. The contractor shall ensure the registration of all eligible workers (inclusive of those of sub-contractors and petty contractors) with Construction Workers Welfare Board. Any failure to fulfill these requirements shall attract the penal provisions of this contract arising out of the resultant non-execution of the work.

Clause 19E: In respect of all labour directly or indirectly employed in the works for the performance of the contractor's part of this contract, the contractor shall comply with or cause of be compelled with all the rules framed by Govt. from time to time for the protection of health and sanitary arrangements for workers employed by the AMC and its contractors.

Clause 19F: [……]

Clause 19G: Contractor(s) is/are not properly observing and complying with the provisions of the Contract's Labour Regulations and Model Rules and the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and the Contract Labour (R&A) Central Rules 1971, for the protection of health and sanitary arrangements for works people employed by the contractor(s) (hereinafter referred as "the said Rules") the Engineer-in-Charge shall have the power to give notice in writing to the contractor(s) requiring that the said Rules be

complied with and the amenities prescribed therein be provided to the work peope within a reasonable time to be specified in the notice. If the contractor(s) shall fail within the period specified in the notice to comply with and/observe the said Ruls and to provide the amenities to the work people as forfeited, the Engineer-in-Charge shall have the power to provide the amenities hereinbefore mentioned at the cost of the contractor(s). The contractor(s) shall erect, make and maintain at his/their own expenses and to approved standards all necessary huts and sanitary arrangements required for his/their work people on the site in connection with the execution of the workers, and if the same shall not been created or constructed, according to the approved standards, the Engineer-in-Charge shall have the power to give notice in writing to the contractor(s) requiring that the said huts and sanitary arrangements be remodeled and/or reconstructed according to approved standards, and if the contractor(s) shall fail to remodel or reconstruct such huts and sanitary arrangements according to approved standards within the period specified in the notice, the Engineer-in-Charge shall have the power to remodel or reconstruct such huts and sanitary arrangements according to approved standards at the cost of the contractor(s).

Clause 19H: The contractor(s) shall at his/her own cost provide his/their labour with a sufficient number of huts (thereafter referred to as the camp) of the following specifications on a suitable plot of land to be approved by the Engineer-in-Charge

i. (a) The minimum height of each hut at the eaves level shall be 2.10 m (7 ft) and the floor area to be provided will be at the rate of 2.7 sq.m. (30 sq.ft.) for each member of the worker's family staying with the labourer.
   (b) The contractor(s) shall in addition construct suitable cooking places having a minimum area of 1.80m x 1.5m (6' x 5') adjacent to the hut for each family.
   (c) The contractor(s) shall also construct temporary latrines and urinals for the use of the labours each on the scale of not less than four per each one hundred of the total strength, separate latrines and urinals being provided for women.
   (d) The contractor(s) shall construct sufficient number of bathing and washing places, one unit for every 25 persons residing in the camp. These bathing and washing places shall be suitable screened.
ii. (a) All the huts shall have walls of sun-dried or burnt bricks laid in mud mortar or other suitable local materials as may be approved by the Engineer-in-Charge. In case of sun-dried bricks, the walls should be plastered with mud gobri on both sides. The floor may be kutcha but plastered with mud gobri and shall be at least 15 cm (6") above the surrounding ground. The roofs shall be laid with thatch or any other materials as may be approved by the Engineer-in-Charge. And the contractor shall ensure that throughout the period of their occupation the roof remain water-tight.
   (b) The contractor(s) shall provide each hut with proper ventilation and water tight tent. All doors, windows and ventilators shall be provided with suitable leaves for security purposes. There shall be kept an open space of at least 7.2m (8 yards) between the rows of huts which may be reduced to 6m (20 ft.) according to the availability of site with the approval of the Engineer-in-Charge. Back to back construction will be allowed.

iii. Water supply: The contractor(s) shall provide adequate supply of water for the use of labourers. The provisions shall not be less than two gallons of pure and wholesome water per head per day for drinking purpose and three gallons of clean water per head for bathing and washing purposes. Where piped water supply is available, supply shall be at standposts and where the supply is from wells or river, tanks which may be of metal or masonry, shall be provided. The contractor(s) shall also at his/their own cost make arrangements for laying pipelines for water supply to his/their labour camp from the existing mains wherever available, and shall pay all fees and charges thereof.

iv. The site selected for the camp shall be high ground, removed from jungle.

v. Disposal of Excreta: The contractor(s) shall make necessary arrangements for the disposal of excreta from the latrines by trenching or incineration which shall be according to the requirements laid down by the Local Health Authorities. If trenching or incineration is not allowed, the contractor(s) shall make arrangements for the removal of the excreta through the Municipal Committee/authority and inform it about the number of labourers employed so that arrangements may be made by such Committee/authority for the removal of the excreta. All charges on this account shall be borne by the contractor and paid direct by him to the Municipality/authority. The contractor shall provide one sweeper for every eight seats in case of dry system.
vi. Drainage: The contractor(s) shall provide efficient arrangements for draining away sludge water so as to keep the camp neat and tidy.
vii. The contractor(s) shall make necessary arrangements for keeping the camp area sufficiently lighted to avoid accidents to the workers.
viii. Sanitation: The contractor(s) shall make arrangements for conservancy and sanitation in the labour camp according to the rules of the Local Public Health and Medical Authorities.
[……]

Model Rules for the Protection of Health and Sanitary Arrangements for Workers Employed by AMC or its Contractors

1. Application

These rules apply to all buildings and construction works in charge of AMC in which twenty or more workers are ordinarily employed or are proposed to be employed in any day during the period during which the contract work is in progress.

2. Definition

Work place means a place where twenty or more workers are ordinarily employed in connection with construction work on any day during the period during which the contract work is in progress.

3. First-Aid Facilities

[……]

4. Drinking Water

i) In every work place, there shall be provided and maintained at suitable places, easily accessible to labour, a sufficient supply of cold water fit for drinking.
ii) Where drinking water is obtained from an intermittent public water supply, each work place shall be provided with storage where such drinking water shall be stored.
iii) Every water supply or storage shall be at a distance of not less than 50 feet from any latrine drain or other source of pollution. Where water has to be drawn from an existing well which is within such proximity of latrine, drain or any other source of pollution, the well shall be properly chlorinated before water is drawn from it for drinking. All such wells shall be entirely closed in and be provided with a trap door which shall be dust and waterproof.
iv) A reliable pump shall be fitted to each covered well, the trap door shall be kept locked and opened only for cleaning or inspection which shall be done at least once a month.

v) The contractor shall supply only potable water in the labour camp, sample of water shall be drawn from the source of water supply in the labour camps every month and got tested from the Municipal Corporation's lab by the contractor. Wherever drinking water is supplied to the labour camps through tankers samples shall be drawn from the tankers and got tested. Water storage tanks chlorine tablets shall be added from time to time as per requirement so that potability of water remains intact. No extra payment shall be made on this account.

5. Washing Facilities

(a) In every work place adequate and suitable facilities for washing shall be provided and maintained for the use of contract labour employed therein.
(b) Separate and adequate cleaning facilities shall be provided for the use of male and female workers.
(c) Such facilities shall be conveniently accessible and shall be kept in clean and hygienic condition.

6. Latrines and Urinals

Latrines shall be provided in every work place on the following scale namely:
6.1. Where female are employed there shall be at least one latrine for every 25 females.
6.2. Where males are employed there shall be at least one latrine for every 25 males.
6.3. Provided that where the number of males or females exceeds 100, it shall be sufficient if there is one latrine for 25 males or females as the case may be up to the first 100, and one for every 50 thereafter.
6.4. Every latrine shall be under cover and so partitioned off as to secure privacy, and shall have a proper door and fastenings.
6.5. Construction of latrines: The inside walls shall be constructed of masonry or some suitable heat-resisting nonabsorben materials and shall be cement washed inside and outside at least once a year. Latrines shall not be of a standard lower than borehole system.
6.6. Where workers of both sexes are employed, there shall be displayed outside each block of latrine and urinal, a notice in the language understood by the majority of the workers "For Men Only" or "For Women Only" as the case may be both in English and Gujarati.
6.7. The notice shall also bear the figure of a man or of a woman, as the case may be.
6.8. There shall be at least one urinal for male workers up to 50 and one for female workers up to fifty employed at a time, provided that where the number of male or female workmen, as the case may be exceeds 500, it shall be sufficient if there is one urinal for every 50 males or females up to the first 500 and one for every 100 or part thereafter.
6.9. The latrines and urinals shall be adequately lighted and shall be maintained in a clean and sanitary condition at all times.
6.10. Latrines and urinals other than those connected with a flush sewage system shall comply with the requirements of the Public Health Authorities.
6.11. Water shall be provided by means of tap or otherwsie so as to be conveniently accessible in or near the latrines and urinals.
6.12. Disposal of excreta: Unless otherwise arranged for by the local sanitary authority, arrangements for proper disposal of excreta by incineration at the work pace shall be made by means of a suitable incinerator. Alternately excreta may be disposed of by putting a layer of night soil at the bottom of a pucca tank prepared for the purpose and covering it with a 15 cm. layer of waste or refuse and then covering it with a layer of earth for a fortnight (when it will turn to manure).

6.13. The contractor shall at his own expense, carry out all instructions issued to him by the Engineer-in-Charge to effect proper disposal of night soil and other conservancy work in respect of the contractor's workmen or employees on the site. The contractor shall be responsible for payment of any charges which may be levied by Municipal or Cantonment Authority for execution of such on his behalf.

7. Provision of Shelter during Rest

At every place there shall be provided, free of cost, four suitable sheds, two for meals and the other two for rest separately for the use of men and women labour. The height of each shelter shall not be less than 3 meters (10 ft.) from the floor level to the lowest part of the roof. These shall be kept clean and the space provided shall be on the basis of 0.6 sq.m. (6 sft.) per head.

Provided that the Engineer-in-Charge may permit subject to his satisfaction, a portion of the building under construction or other alternative accommodation to be used for the purpose.

8. Creches

i) At every work place, at which 20 or more women worker are ordinarily employed, there shall be provided two rooms of reasonable dimensions for the use of their children under the age of six years. One room shall be used as a play room for the children and the other as their bedroom. The rooms shall be constructed with specifications as per clause 19H (ii) a, b & c.
ii) The rooms shall be provided with suitable and sufficient openings for light and ventilation. There shall be adequate provision of sweepers to keep the places clean.
iii) The contractor shall supply adequate number of toys and games in the play room and sufficient number of cots and beddings in the bedroom.
iv) The contractor shall provide one Ayah to look after the children in the creche when the number of women workers does not exceed 50 and two when the number of women workers exceeds 50.
v) The use of the rooms earmarked as creches shall be restricted to children, their attendents and mothers of the children.

9. Canteens

i) In every work place where the work regarding the employment of contract labour is likely to continue for six months and where in contract labour numbering one hundred or more is ordinarily employed, an adequate canteen shall be provided by the contractor for the use of such contract labour.
ii) The canteen shall be maintained by the contractor in an efficient manner.
iii) The canteen shall consist of at least a dining hall, kitchen, store room, pantry and washing places separately for workers and utensils.
iv) The canteen shall be sufficiently lighted at all times when any person has access to it.
v) The floor shall be made of smooth and impervious materials and inside walls shall be lime-washed or colour washed at least once in each year. Provided that the inside walls of the kitchen shall be lime-washed every four months.
vi) The premises of the canteen shall be maintained in a clean and sanitary condition.
vii) Waste water shall be carried away in suitable covered drains and shall not be allowed to accumulate so as to cause a nuisance.
viii) Suitable arrangements shall be made for the collection and disposal of garbage.

ix) The dining hall shall accommodate at a time 30 percent of the contractor labour working at a time.

x) The floor area of the dining hall, excluding the area occupied by the service counter and any furniture except tables and chairs shall not be less than one square meter (10 sft.) per diner to be accommodated as prescribed in sub-rule 9.

xi) (a) A portion of the dining hall and service counter shall be partitioned off and reserved for women workers in proportion to their number.
(b) Washing places for women shall be separate and screened to secure privacy.

xii) Sufficient tables, stools, chair or benches shall be available for the number of diners to be accommodated as prescribed in sub-rule 9.

xiii) AA(1) There shall be provided and maintained sufficient utensils, crockery, furniture and any other equipment necessary for the efficient running of the canteen.
(2) The furniture, utenils and other equipment shall be maintained in a clean and hygienic condition.
B(1) Suitable clean clothes for the employees serving in the canteen shall be provided and maintained.
B(2) A service counter, if provided, shall have top of smooth and impervious material/
B(3) Suitable facilities including an adequate supply of hot water shall be provided for the cleaning of utensils and equipments.

xiv) The food stuffs and other items to be served in the canteen shall be in conformity with the normal habits of the contract labour.

xv) The charges for food stuffs, beverages and any other items served in the canteen shall be based on “No profit, No losses and shall be conspicuously displayed in the canteen.

xvi) In arriving at the price of foodstuffs and other articles served in the canteen, the following items shall not be taken into consideration as expenditure namely:
a) The rent of land and building
b) The depreciation and maintenance charges for the building and equipments provided for the canteen
c) The cost of purchase, repairs and replacement of equipments including furniture, crockery, cutlery and utensils.
d) The water charges and other charges incurred for lighting and ventilation.
e) The interest and amounts spent on the provision and maintenance of equipments provided for the canteen.

xvii) The accounts pertaining to the canteen shall be audied once every 12 months by the registered accountants and auditors.

10. Dengu / Anti-Malarial Precautions

The contractor shall at his own expense, conform to all anti-malarial instructions given to him by the Engineer-in-Charge including the filling up of any borrow pits which may have been dug by him.

The above rules shall be incorporated in the contracts and in notices inviting tenders and shall form an integral part of the contracts.

Amendments: Government, may, from time to time, add to or amend these rules and issue directions it may consider necessary for the purpose of removing any difficulty which may arise in the administration thereof.

Annexure 7.
Relevant Excerpts from the Tender document for construction of SRFDCL House

Section 2: General Conditions of Contract

A. General

[……]

9.0. Personnel

[……]

9.3. No residential accommodation is allowed at the site of work. The labour huts shall not be erected on the site of work and contractor shall make his own arrangements to provide such accommodation as per the rules of the local bodies. He shall make his own arrangements for housing, stores, field office, etc. [……]

F. General Description and Scope of Work

[……]

65.0. Housing, Water Supply and Drainage etc.

Housing accommodation on hire is likely to be available in this area around the site. The contractor has to make his own arrangements for the housing of labourers. The land required for setting up batching plant, stacking of materials, site office will be provided by SRFDCL free of cost without any land development / improvement at his cost. The land shall be given to the contractor whereever it is available and under possession of the employer. Wherever land is not available, the contractor shall make his own arrangement. The entire land shall be returned to the employer in good condition after the completion of work. However the bidder will be given all assistance in the procurement of this requirement but no assurance can be given by SRFDCL.

Water Supply for drinking purposes and construction purpose at the site shall also have to be arranged by the contractor at his own cost as may be required. The water can be available by drilling bore hole.

[……]

68.0. Labour Employment

68.1. Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and their payment, housing feeding and transport.

68.2. Contractor shall furnish the Engineer every week during the progress of the workers, classified weekly returns of the number of the people employed on the work during the week. The report of skilled and unskilled labour shall be given in the prescribed form.

The contractor shall strictly observe all the requirements laid down in the Contract Labour (Regulation and Abolition) Act, 1979 and the Contract Labour (Regulation and Abolition) (Gujarat) Rules, 1972 and other acts as amended from time to time so far as applicable from time to time.

The contractors and subcontractors has to register all labours working for all construction activities to GUJARAT BUILDING AND OTHER CONSTRUCTION WORK as per Ahmedabad Municipl Corporation Circular.

The contractor, if directed by the Engineer shall increase or decrease the strength of the labour both skilled and unskilled required for the work. The contractor shall furnish the following returns.

(a) A Weekly medical report showing the health of the contractor's labour camp (skilled or unskilled) and the number and the nature of their illness;
(b) A report of any accident, which may have occurred, within 24 hours of its occurance.
(c) To maintain hygienic condition in labour camp and construction site as per the rules and regulation of authority and health department.
(d) Accident reports within 24 hours of occurance of each accident.
[……]