IGBC Green Townships

IGBC Green Townships

(For Townships and Large Developments)

Rating System

Pilot Version

Abridged Reference Guide
November 2010

Confederation of Indian Industry
CII-Sohrabji Godrej Green Business Centre

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- Mr Ravindra Deodhar, Associate Vice President (Operations), Godrej Properties Limited, Mumbai
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DBHMS	Manjeera Group of Constructions
Ecoboard Industries Ltd	Marg Group
Ela Green Buildings & Infrastructure Consultants Pvt. Ltd	Milestone Ecofirst Advisory Services PLtd
Environmental Design Solutions (EDS)	Nano - Infra
Ernst & Young Pvt Ltd	Owens Corning Enterprise India Pvt Ltd
Everest Industries Ltd	Ramky Integrated Township Ltd
Fountain Head II	RSP Design Consultants (India) Pvt Ltd
FreeSpanz Design Build Pvt Ltd	Saint Gobain Glass India
Global Innovsource Solutions Pvt Ltd	Spectral Innovation
Godrej & Boyce	Splendid Aparna Projects Pvt Ltd
Golden Gate Properties Ltd	Sri Talasila Infrastructures (India) Pvt Ltd
Green Ark Enersol	Surmount Energy
Green Footprints	Taiba Engineering Consultants
Green Ply Industries Limited	Team One India Pvt Ltd
Green Ply Industries Limited	The Grid
GreenTek Indika	Trac India Pvt Ltd
Hyderabad Industries Limited	United Engg Corpn
i Precast Builders Pvt Ltd	VK:e environmental
IIIT, Hyderabad	Wave INC (The Chadha Group)
JLL	Wipro Eco Energy
JSW Serverfield Structures Limited	York University, Toronto, Canada

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Foreword from the IGBC

India is witnessing tremendous growth in infrastructure and construction sector. The construction industry in India is one of the largest economic activities and is growing at an average rate of 9.5% as compared to the global average of 5%. As the sector is growing rapidly, preserving the environment poses a host of challenges. To enable the construction industry to be environmentally sensitive, CII-Sohrabji Godrej Green Business Centre has established the Indian Green Building Council (IGBC). IGBC is a consensus driven not-for-profit council representing the building industry, consisting of more than 1,000 committed members. The council encourages builders, developers and owners to build green to enhance the economic and environmental performance of buildings.

The Green Building Movement in India has been spearheaded by IGBC since 2001, by creating national awareness. The council's activities have enabled a market transformation with regard to green building concepts, materials and technologies.

IGBC continuously works to provide tools that facilitate the adoption of green building practices in India. The development of IGBC Green Townships Rating System is another important step in this direction.

IGBC Membership

IGBC draws its strength from its members who have been partners in facilitating the Green Building Movement in India. The local chapters led by individual champions and committed members have been instrumental in reaching out the vision of the IGBC at the regional levels. IGBC today is seen as a leader in spearheading the Indian green building movement. The council is member driven and consensus based.

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Introduction

Cities are the engines for social and economic growth of a country. The urban sector contributes nearly 50-60% to the nation's GDP[1]. Cities have been pivotal in the creation of employment and the economic growth in the country.

Creation of job opportunities coupled with higher incomes and standards of living has led to an influx of rural population into urban areas. As a result, India has witnessed an unprecedented growth in the urban population. As per 2001 census, 28% of India's total population resides in urban areas. It is estimated that by the year 2030, the urban population would rise to 42% of the total population of the country[2].

Urbanisation, however, is coming at a price. Rapid growth in urbanisation has placed immense strain on land and other natural resources. The shortage of housing has led to creation of slums & unauthorised settlements. Rising pollution levels, traffic congestions and inadequate waste management have resulted in a deteriorated quality of life and environment in the urban areas.

It is estimated that nearly 70 new cities with a population of greater than 500,000 would be added to the country's landscape by 2020[3]. This augurs well for the country and presents a wonderful opportunity to design these developments as green from day one.

Against this background, Indian Green Building Council (IGBC) has launched 'IGBC Green Townships Rating System'. The rating system is a tool which enables the designer to apply green concepts and criteria, so as to reduce environmental impacts that are measurable. **The rating system is designed to address large developments and it is mandatory to include residential development as part of the township.** Some typical examples of large scale developments are integrated townships, satellite cities, gated communities, campuses with multiple buildings etc. However, it is to be noted that the rating system is not applicable for individual buildings and land parcels.

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1. http://www.urbanindia.nic.in/urbanscene/urbanreforms/urbanreform.htm

2. Roberts, B., Kanaley T., (2006). Urbanization and Sustainability in Asia. Philippines. Cities Alliance

3. Census of India, Goldman Sachs Economic Research, 2010

Township Defined:

A township is a combination of several communities; a community in turn is a combination of several sectors. Several townships form a city. A city typically has an administrative, legal, or historical status based on local law. A township, however, may not fall under the purview of the local government. Township ranges in sizes and land uses. Townships are typically mixed-use in character.

However, Townships can be predominantly commercial, industrial or retail but should necessarily comprise of a residential component. **Atleast 25% of the total built-up area (in sq. m.) within the township should be earmarked for residential use, for it to qualify for certification.**

Sector can be defined as the basic module of a city. Walkabiltiy, interconnectivity, compactness, diversity are quintessential of a sector. The size of a sector can be defined in terms of comfortable walking distances from the centre to its periphery. **Typically, 400 to 800 m is considered as a comfortable walking distance.**

A sector should consist of a mix of land uses ranging from commercial to residential. Within the sector, the basic amenities as well as transit stops should be located within comfortable walking distances from various land uses. Sectors promote walking through a complementary relationship between transportation, land use and urban design character of the place. Compact and mixed-use environment of urban buildings, public spaces and landscapes support walking directly through the built environment and indirectly through human and economic activities associated with adjacent and surrounding land uses.

However, it should be noted that the above definition of the sector predominantly characterises the residential sector within the township development.

The 'IGBC Green Townships Rating System' is designed to address the issues of sprawl, automobile dependency, social and environmental disconnect. Developments are evaluated on the following broad aspects:

- Environmental planning
- Land Use planning
- Resources management
- Community development

It is to be noted that the above aspects should be addressed at each sector level.

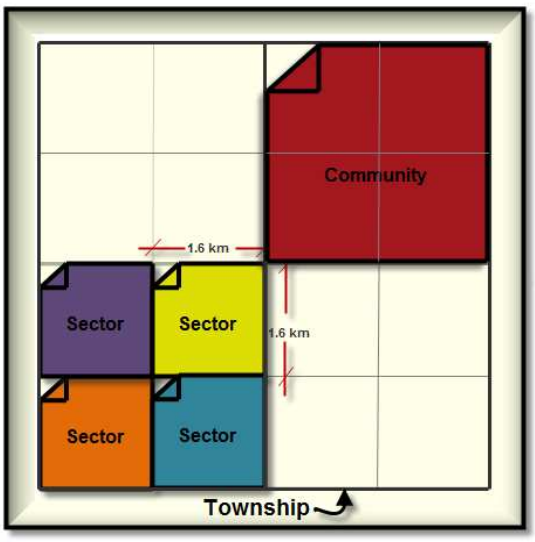

Figure 1

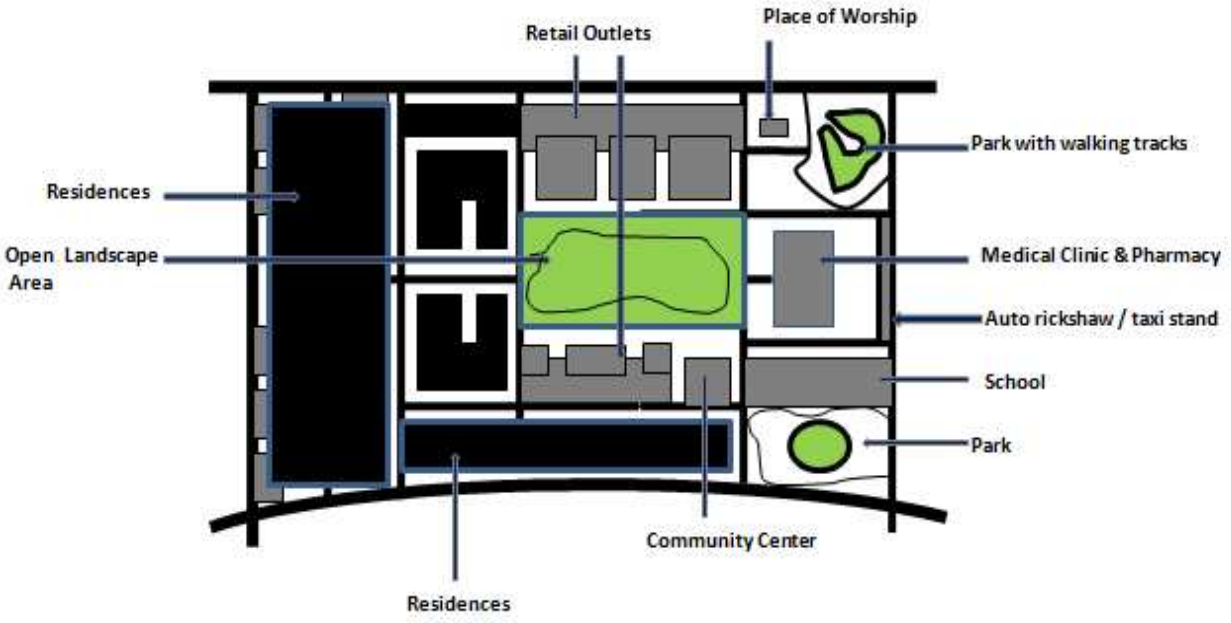

Figure 2

Figure 1: *Schematic diagram showing the relationship between sectors, community and a township*

Figure 2: *Schematic diagram showing mixed-use development with basic amenities within a sector*

Note: These figures are indicative only and should not be construed as recommendations

Benefits of Green Township

Application of IGBC Green Township rating system in large developments would address national priorities leading to benefits, such as efficient land use, habitat preservation and restoration, effective transport management, efficient use of resource and enhanced quality of life for the occupants.

- **Efficient Land Use:**

  In today's scenario, development has become synonymous with physical expansion or growth. There is a need for significant changes in the pattern of land use and construction that will provide communities with better quality of life and at the same time conserve natural resources. Green Township rating system addresses the impacts of urban sprawl by encouraging compact, mixed-use developments and promotes higher urban densities without affecting the quality of life.

- **Habitat Preservation & Restoration:**

  Conventional development is generally insensitive to natural environment. Such developments may scar the landscape, take prime agricultural land out of production or destroy biodiversity and natural habitats.

  The Green Townships rating system is designed to facilitate restoration and preservation of the natural environment by encouraging strategies that aid interface between the built environment and natural environment. This approach will not only enhance the fabric of the planned development but also provide environments conducive for living and working.

- **Efficient Transportation Management:**

  Traffic congestion, long distance commuting, rising levels of air and noise pollution are pressing issues in today's cities. Efforts to relieve congestion such as, constructing flyovers, road widening etc., are good initiatives but may not address issues such as fossil fuel consumption and associated emissions.

  'Green Townships' rating system addresses these issues by encouraging effective and efficient transportation management strategies. Such strategies include increasing opportunities for bicycling, encouraging pedestrian friendly network; reduction in the number of automobile trips, promoting public transportation and use of alternative vehicles.

- **Efficient Use of Resources:**

  Perhaps the most challenging problem facing our cities today is to meet the ever- rising demand for power, water supply and waste management. Meeting this demand requires enormous amount of investments infrastructure. Efficient and effective use of resources is thus vital in augmenting the existing infrastructure.

Adopting the IGBC Green Townships rating systems will reap the following benefits:

- **Water Efficiency:** Most of the Asian countries are water stressed, and in countries like India, the water table has reduced drastically over the last decade. Green townships encourage use of water in a self - sustainable manner through reducing, recycling and reusing strategies and can save potable water to an extent of 30 - 50%.

- **Energy Efficiency:** Green townships can reduce energy consumption of infrastructural equipment through energy efficient street lighting, motors, pumps etc. The energy savings that can be realised by adopting this rating programme in infrastructural equipment can be to the tune of 20 - 30%. Further, on-site power generation using various renewable energy technologies and other clean fuels can significantly reduce the load on grid power supply.

- **Waste Management:** Green townships encourage effective waste management strategies by facilitating the segregating of waste at source and promoting the reuse / co-processing of products and materials.

❖ **Enhanced Quality Of Life:**

The place that we live in has profound effect on our lives. People have a natural predisposition to feel better and perform better in livable & safe environments. The IGBC Green Township rating system promotes the creation of diverse, connected, affordable, safe and healthy communities that enhance social interaction and ownership.

Green township developments are beneficial to the individual and community. Mixed land use and compact planning are the characteristic of a green development, which reduces dependency on automobiles and associated green house emissions. The outdoor air quality is enhanced by providing landscaped areas, encouraging the use of clean fuels for vehicles. Noise levels are reduced by provision of vegetative buffer. Green buildings and energy efficient infrastructure further aid in reducing the green house gas emissions. Public landscaped areas, walkable streets, bicycling lanes, community gardens and public spaces encourage physical activity and help in improving public health.

Benefits to Developers

There is wide spread perception that environmentally responsive developments are time consuming and financially less rewarding. However, in reality well-executed green developments perform extremely well financially, as they require lower operating costs, increase health and productivity of the citizens and have higher marketability. The immediate benefits include reduction in water and energy demand right from the initial stages of operation. The energy savings range from 20-30% and water savings around 30 - 50%.

Other benefits include:

- Reduced maintenance costs
- Reduced resource consumption
- Reduced waste generation
- Higher marketability
- Speedy approvals

IGBC Green Townships Rating Levels

The guidelines detailed under each credit enable the design and construction of green townships. IGBC Green Townships addresses green features under the following categories:

- Site Selection and Planning
- Land Use Planning
- Transportation Planning
- Infrastructure Resource Management
- Innovation in Design & Technology

Every green township should meet certain mandatory requirements, these are non-negotiable. Different levels of green township certification are awarded based on the total credits earned. The credit on 'Innovation in design and technology' is to recognise innovative ideas that are not addressed under the rating system or the project demonstrates exemplary performance in any of the credits. Achievements under this credit should be measurable and demonstrate significant environmental benefits.

The threshold criteria for certification levels are as under:

Certification Levels	Points for Green Townships	Recognition
Certified	**100 – 119**	Best Practices
Silver	**120 – 139**	Outstanding Performance
Gold	**140 – 159**	National Excellence
Platinum	**160 – 200**	Global Leadership

When to use IGBC Green Townships

IGBC Green Township rating system is designed primarily for large scale developments. Residential dwellings should be an integral part of the development. The project teams should first evaluate if the mandatory requirements of the rating system are met and able to achieve the minimum points required for certification.

IGBC Green Townships Registration

Project teams interested in IGBC Green Townships Certification for their project must first register with IGBC. Projects can be registered on IGBC website (www.igbc.in) under 'IGBC Green Townships'. The website includes information on registration fee for IGBC member companies as well as non-members. Registration is the initial step, which helps establish contact with IGBC and provides access to the required documents, templates, important communications and other necessary information. Visit the website for more information on IGBC Green Townships, registration as well as the certification review process, schedule and fee.

Certification

Green Townships are typically characterised by long periods of construction, which take place in phases. The Certification of IGBC Green Township is divided into three stages depending upon the percentage of development completed.

Stage I – 50 % of total project infrastructure development is constructed

Stage II – 75 % of infrastructure and 25 % of residential development of the total project area is constructed and in operation

Stage III – Township completed in all aspects; 100% infrastructure & residential development

Note:

Infrastructure includes, but not limited to roads and streets, footpaths and pathways, public bus stops, power cables, street lighting, traffic lights, drinking water and sewage distribution systems, water storage tanks, sewage treatment plants, storm water drains, rain water harvesting facilities, etc.,

Scope of Developer

The areas & facilities that could generally be covered under scope of the developer:

- Roads & streets
- Bus stops/ MRT
- Fuel recharging stations
- Footpaths & pathways
- Street lighting, traffic lights
- Motors & pumps in public areas
- Common waste water treatment and distribution system for reuse
- Rain water harvesting system in public areas
- Common growing spaces for vegetables & fruits
- Public landscaping areas, parks, open spaces
- Public common areas such as community halls, club houses, auditoriums, sports club & facilities etc.,

Note:

The list is only illustrative, not exhaustive

Documentation

The project team is expected to provide general information of project including master plan, area statement, project brief stating project type, land use, etc., and supporting documents at each stage of submission for all the mandatory requirements and the credits attempted. Supporting documents are those which provide specific proof of meeting the required performance level such as, filled- in master template (in excel format); narratives, drawings (in PDF format only), calculations (in excel sheets), declarations/ contract documents, manufacturer cut sheets/ letters/ material test reports, etc., for each prerequisite/ credit, as applicable. These details are mentioned in this rating system, under each credit / mandatory requirement.

Documentation for certification has to be submitted in three stages – two design submittals and one construction submittal:

- The stage I & stage II submissions involve those credits which can be evaluated at the design stage. Each design submission will be assessed by third party assessors and review comments would be provided within 50 working days.

  Notes:

  1. *The rating system provides the list of design and/ or construction phase credits.*
  2. *For mandatory requirements and credits indicated as 'Design & construction submittal', the project should provide supporting documents during stage I & II submissions also.*
  3. *The design submission for stage II should include clarifications to design and/ or construction queries sought under stage I review.*

- The stage III involves submission of clarifications to design and/ or construction queries sought under stage II review. The construction document is submitted on completion of the project. This review will also be provided within 50 working days, after which the rating is awarded.

- It is important to note that the credits earned at each stage are only considered as anticipated and are not awarded until the township is completed in all respects. If there are changes during stages I & II for any design/ construction credit anticipated, these changes need to be documented and re-submitted during the final stage of certification.

IGBC will recognise townships that achieve one of the rating levels with a formal letter of certification and a mountable plaque.

Pre-certification

Pre-certification is an option provided for projects aspiring to get pre-certified at the design stage. The documentation submitted for pre-certification must detail the project design features, which will be implemented. The rating awarded under pre-certification is based on the project's design details that comply with the requirements of the rating system.

It is important to note that the pre-certification rating awarded need not neccesarily correspond to the final certification. Pre-certified projects are required to provide the status of the project to IGBC, in relation to the rating, once in every six months until the award of the final rating. Pre-certification gives the owner/ developer a unique advantage to market the project to potential buyers.

Those projects which seek pre-certification need to submit the following documentation:

- General information of project including master plan, area statement, project brief stating project type, land use, etc., and supporting documents at each stage of submission for all the mandatory requirements and the attempted credits.

- Supporting documents are those which provide specific proof of meeting the required performance level such as, filled-in master template (in excel format); narratives, drawings (in PDF format only), calculations (in excel sheets), declarations/ contract documents, manufacturer cut sheets/ letters/ material test reports, etc., for each prerequisite/ credit, as applicable. These details are mentioned in this rating system, under each credit / mandatory requirement.

IGBC would take 50 working days to review the first set of pre-certification documents. On receiving the clarifications posed in the first review, IGBC would take another 50 working days to award the pre-certification level. A certificate and a letter are provided to projects on pre-certification.

Credit Interpretation Ruling (CIR)

In some instances, the design team can face certain challenges in applying or interpreting a mandatory requirement or a credit. It can also happen in cases where the project can opt to achieve the same goal through a different compliance route. To resolve this, IGBC uses the process of 'Credit Interpretation Ruling' (CIR) to ensure that rulings are consistent and applicable to other projects as well.

The following are the steps to be followed in case the project team faces a problem:

- Consult the Reference Guide for description of the credit goal, compliance options and calculations
- Review the goal of the credit or mandatory requirement and self-evaluate whether the project satisfies the goal
- Review the Credit Interpretation web page for previous CIR on the relevant credit or mandatory requirement. All projects registered under IGBC Green Townships will have access to this page
- If a similar CIR has not been addressed or does not answer the question sufficiently, submit a credit interpretation request. Only registered projects are eligible to post CIRs. Two CIRs are answered without levying any fee and for any CIR beyond the first two CIRs, fee is levied.

Appeal

Generally, credits get denied due to misinterpretation of the goal. On receipt of the final review, the project team has the option to appeal to IGBC for reassessment of denied credits or mandatory requirements. The documentation for the mandatory requirements or credits seeking appeal may be resubmitted to IGBC along with necessary fee. IGBC will take 30 working days to review such documentation. These submissions would be reviewed by an assessor not involved in the earlier assessments. Documentation for appeals should include the following:

i. Documentation submitted for design submission
ii. Documentation submitted for construction submission
iii. Clarifications along with necessary drawings and calculations

Fee

Certification fee details can be found on IGBC website.

Updates and Addenda

The final draft of the rating system would be called as "IGBC Green Townships Rating System". As the rating system continues to improve and evolve, updates and addenda to the reference guide will be made available through the website. These additions will be incorporated in the next version of the rating system.

Checklist for IGBC Green Townships Rating System		
		Points Awarded
Site Selection & Planning		
SSP MR 1	**Local Regulations**	**Required**
SSP MR 2	**Avoid Development of Inappropriate Sites**	**Required**
SSP MR 3	**Soil Erosion Control Plan**	**Required**
SSP Credit 1	Preserve Existing Trees & Water Bodies	6
SSP Credit 2	Retain Natural Topography	6
SSP Credit 3	Public Landscape Areas	6
SSP Credit 4	Redevelopment of Contaminated Areas	6
SSP Credit 5	Local Fruits & Vegetable Produce	8
SSP Credit 6	Urban Heat Island Effect	8
		40
Land Use Planning		
LP MR 1	**Land Use Optimisation**	**Required**
LP MR 2	**Basic Facilities for Construction Workforce**	**Required**
LP MR 3	**Basic Amenities within the Community**	**Required**
LP Credit 1	Mixed Use Development	10
LP Credit 2	Housing Typologies	8
LP Credit 3	Green Buildings	12
LP Credit 4	Employment Opportunities (Post-occupancy)	8
LP Credit 5	Social & Cultural Initiatives	6
		44
Transportation Planning		
TP MR 1	**Long Term Transportation Plan**	**Required**
TP MR 2	**Design for Differently Abled**	**Required**
TP Credit 1.1	Public transportation Facilities	6
TP Credit 1.2	Eco-Friendly Transportation Services	6
TP Credit 2	Road & Street Network	6
TP Credit 3	Bicycle Lane Network	6
TP Credit 4	Pedestrian Network	6
		30

Infrastructure Resource Management		
IRM MR 1	**Rainwater Harvesting, 50%**	**Required**
IRM MR 2	**Segregation of Waste (Post- occupancy)**	**Required**
IRM Credit 1	Rainwater Harvesting, 75%, 95%	6
IRM Credit 2	Waste Water Treatment, 100%	6
IRM Credit 3	Waste Water Reuse, 75%, 95%	6
IRM Credit 4	Energy Efficiency in Infrastructural Equipment	8
IRM Credit 5	On- site Renewable Energy	16
IRM Credit 6	Off- site Green Power	12
IRM Credit 7	Construction Waste Reduction (Civil Works)	6
IRM Credit 8	Recycled Content (Civil Works)	8
IRM Credit 9	Measurement & Verification Plan (Post-occupancy)	2
		70
Innovation in Design & Technology		
IDT Credit 1.1	Innovation in Design & Technology	3
IDT Credit 1.2	Innovation in Design & Technology	3
IDT Credit 1.3	Innovation in Design & Technology	3
IDT Credit 1.4	Innovation in Design & Technology	3
IDT Credit 2	IGBC Accredited Professional	4
		16
	TOTAL POINTS	**200**

Site Selection and Planning

Local Regulations

Design Submittal

SSP Mandatory Requirement 1

Intent:

Ensure that project comply with the required statutory and regulatory codes so as to support the local government in implementing such requirements

Compliance Options:

The following measures need to be ensured:

- Approval of the plan from the government authority
- Approvals for all statutory requirements relating to development of the project

Documentation Required

- Provide an approved plan from the local government authority
- Provide a declaration that local government authority has given clearance for construction

Avoid Development of Inappropriate Sites

Design Submittal

SSP Mandatory Requirement 2

Intent:

Avoid developments in ecologically sensitive areas and negate the associated environmental impacts

Compliance Options:

Option 1:

- Do not develop buildings, roads or parking areas on portions of sites that meet any one of the following criteria:
  - Land which is specifically identified as habitat for any species on the threatened or endangered list of Wildlife Institute of India
  - Within 150 m of any wetland or restrict development from wetlands as per regulations laid by state / central authority, whichever is more stringent
  - Land whose elevation is lower than the maximum observed flood levels or 100 year flood level, whichever is higher

Documentation Required:

- A site vicinity map of the township indicating all the inappropriate areas
- Provide a copy of the approval plan for development and clearance certificate from the competent authority
- In case part of the site contains any of the inappropriate areas, provide a declaration that the development has not been planned in such areas

Soil Erosion Control Plan

Design & Construction Submittal

SSP Mandatory Requirement 3

Intent:

Control soil erosion to preserve the top soil, avoid contamination of air and natural water bodies

Compliance Options:

- Adopt measures listed below to control erosion, during construction and post- occupancy:
  - Implement soil erosion control measures conforming to best management practices highlighted in National Building Code (NBC) of India
  - For area where the top soil is fertile, remove, stack & protect the top soil from the development areas and reuse for landscaping. For areas where the top soil is not available, provide a detailed narrative justifying the site condition

Documentation Required:

- Provide topography/ contour maps indicating gradients, aspects and altitude
- Submit a narrative on the measures implemented during construction. Submit a post- occupancy erosion control plan
- Provide a detailed description of the strategies implemented to stabilise the slopes and maintain such areas through the life of the project
- Project sites where the top soil is not available, provide a soil analysis report from a competent authority conforming the same

Preserve Existing Trees & Water Bodies

Design & Construction Submittal

SSP Credit 1 **Points: 6**

Intent:

Preserve existing trees and water bodies to minimise site disturbance, thereby protecting the habitat

Compliance Options: (2 points for each measure)

- Preserve atleast 25% of the existing trees within the project. Wherever preservation is practically not possible, consider transplantation of the trees within the site
- For every tree that is uprooted, plant atleast ten new saplings
- In sites having water bodies, protect and restore 100% of the existing water bodies

Documentation Required:

- Provide a landscape plan showing existing trees, water bodies, water ways, nallahs, spring lines, stream lines passing through the project
- Provide a description of the strategies implemented on site for preservation/ transplantation of existing trees
- Submit details of new saplings provided for the trees uprooted, if any
- Submit measures taken to protect & restore 100% of the existing water bodies
- A written commitment from the developer that the water bodies would be maintained for the life of the project

Retain Natural Topography

Design Submittal

SSP Credit 2 **Points: 6**

Intent:

Conserve natural topography by restricting development footprint, thereby minimising site disturbances and the associated environmental impacts

Compliance Options:

- Retain atleast 25% of the total site area with natural topography. Points for natural topography retained are awarded as follows:

Percentage of Natural Topography Retained	Points
25%	4
35%	6

Documentation Required:

- Provide landscape layout showing the topography and contours of the site
- Submit calculations to show the percentage of the site's natural topography retained

Public Landscape Areas

Design Submittal

SSP Credit 3 **Points: 6**

Intent:

Promote public health and encourage community interaction by providing landscaped areas

Compliance Options:

- Provide public landscaped area to an extent of atleast 25% of the total area of each residential sector (OR) in accordance with the local bye- laws, whichever is stringent. Points for public landscape areas are awarded as follows:

Percentage of Public Landscape Areas	Points
25 %	4
35 %	6

Note:

- *Potted plants cannot be considered as landscaped areas*

Documentation Required:

- Provide a copy of local bye- laws highlighting the public landscaped area requirement within the residential area
- Provide landscape plan of the township highlighting public landscaped areas in each residential sector
- Provide a narrative describing the design of public landscaped areas
- Submit calculations showing percentage of public landscape areas provided

Redevelopment of Contaminated Areas

Design & Construction Submittal

SSP Credit 4 **Points: 6**

Intent:

Restore and reuse contaminated sites for development to reduce demand for virgin land

Compliance Options:

- Develop the project on a contaminated site after taking appropriate remediation measures. Points for contaminated areas restored are awarded as follows:

Percentage of Contaminated Areas Restored	Points
20 % 30 %	4 6

Documentation Required:

- Provide a letter from a competent authority that the site is contaminated
- Site plan highlighting the contaminated areas within the project
- Copy of the site assessment report and a narrative describing remediation methods adopted to clean up the site
- Calculations showing percentages of contaminated areas restored

Local Fruits & Vegetable Produce

Design & Construction Submittal

SSP Credit 5 **Points: 8**

Intent:

Encourage local food production and minimise environmental damage from long distance transportation of food

Compliance Options:

- Create Growing Spaces for fruit and vegetable requirements to cater to the community needs. Points are awarded as follows:

Growing Area (sq. m. per dwelling unit)	Points
15	4
25	6
35	8

Documentation Required:

- Provide a site plan indicating the location of growing spaces
- Provide description of food produce from such lands and calculations meeting the credit requirement
- A declaration from the developer that these spaces would be maintained and managed by an authorised entity and no developments will be planned in such areas

Urban Heat Island Effect

Design & Construction Submittal

SSP Credit 6 **Points: 8**

Intent:

Reduce heat island effect to minimise impacts on urban climate

Compliance Options:

- For footpaths, pathways, roads, surface parking and other non- impervious areas within the township, provide tree cover (within 5 years) or use light colored/ high albedo materials (reflectance of atleast 0.3) or open grid pavements. Points for areas under tree cover/ high reflectance material / open grid pavement are awarded as follows:

Percentage of Areas under Tree Cover/ High Reflectance Material/ Open Grid Pavement	Points
50 %	4
75 %	6
95 %	8

Documentation Required:

- Submit a narrative describing the strategies used to mitigate the heat island effect for all non-roof impervious areas within the township
- Provide the details of tree cover (within 5 years) or use light colored/ high albedo materials (reflectance of atleast 0.3) or open grid pavements
- Provide drawings and calculations of all non- roof impervious surfaces to show the percentage of areas under tree cover / high reflectance material / open grid pavement

Land Use Planning

Land Use Optimisation

Design Submittal

LP Mandatory Requirement 1

Intent:

Conserve land by encouraging higher development densities, thereby reducing urban sprawl

Compliance Options:

- Design residential & non- residential developments to meet the FSI/ FAR prescribed by the existing local bye-laws. Wherever permissible under the law, explore opportunities to exceed the required FSI/ FAR
- Earmark atleast 25% of the total built-up area within the township as residential areas

Documentation Required:

- Submit an approval copy of the sanctioned master plan of the project from local authority or municipal corporation
- Submit documents to show the requirements of the local bye- laws
- Submit calculations to show that FAR/ FSI meets the requirements of the local bye- laws

Basic Facilities for Construction Workforce

Construction Submittal

LP Mandatory Requirement 2

Intent:

Promote the welfare of construction workforce by providing safe and healthy work conditions

Compliance Options:

- Provide the following on- site basic facilities such as:
  - Adequate housing for workforce during construction
  - Sanitary measures to meet or exceed the local bye- law requirement
  - Sewage treatment and disposal arrangements
  - Medical and emergency facilities
  - Adequate drinking water facilities
  - Provision of personal protective equipment
  - Dust suppression measures
  - Adequate illumination levels in work areas
- Ensure that provisions for such facilities are included in the construction contract agreement

Documentation Required:

- Provide a copy of the construction contract document highlighting the inclusion of facilities required under this credit
- A brief description and photographs of the measures implemented
- Submit layout plan highlighting the measures implemented

Basic Amenities within the Community

Design Submittal

LP Mandatory Requirement 3

Intent:

Locate basic amenities within walkable distances to reduce dependency on automobiles

Compliance Options:

- For residential areas, provide minimum **ten** basic amenities as listed under category 1, within 800 meters from the centre of the residential sector:

Category 1:

- Grocery Shop/ Super Market
- ATM
- Pharmacy
- Medical Clinic
- Laundry
- Electricity/ Water/ Telephone Bills Payment Centers
- Stationery Shop
- Parks with Walking Tracks
- Crèche/ Day Care,
- Sports Club/ Fitness Centre
- Coffee Shop
- Internet Centre
- Beauty Salon
- Hardware Shop
- Restaurant

Note:

Proximity is determined by drawing an 800 meter radius circle from the centre of the sector and counting the services within that radius

(AND)

- Provide minimum **four** basic amenities as listed in category 2, within 2km from the boundary of the sector:

Category 2:

- Bank
- Post Office/ Courier Service
- Fire/ Emergency Response Station
- Police Station
- Library
- School
- Community Center

Documentation Required:

- Submit a brief narrative of the basic amenities provided within the sector
- Provide a site map (to scale) indicating the location and distances of the ten basic amenities listed in Category- 1 within 800 m radius from the centre of the residential sector to meet the requirement under this compliance
- Provide four basic amenities listed in Category 2 within 2 km from the boundary of the sector to meet the requirement under this compliance

Mixed Use Development

Design Submittal

LP Credit 1 **Points: 10**

Intent:

Provide mutually compatible urban developments within the project to create sustainable habitats

Compliance Options:

- Earmark atleast 35% of the total built-up area within the township as residential areas **(2 points)**

(AND)

- The mixed use development should include a combination of atleast **four** developments as specified below within the township **(8 points):**
  - Offices
  - Retail
  - Institutional
  - Hospitals
  - Industrial
  - Recreational & Cultural

Documentation Required:

- Provide land use mapping of the township
- Site plan indicating the location of the specified number of diverse land- uses within the project
- Provide a narrative describing the mixed use development proposed within the township
- Calculation of the area percentage of residential development within the project
- List of the mixed use developments provided within the project

Housing Typologies

Design Submittal

LP Credit 2 **Points: 8**

Intent:

Provide a range of housing types to encourage social and economic mix within the society

Compliance Options:

- Provide atleast two of the following housing typologies within each sector **(4 points):**
  - Ø High Income Group (HIG)
  - Ø Middle Income Group (MIG)
  - Ø Low Income Group (LIG)

(AND)

- Earmark residential units for Economically Weaker Sections (EWS). Points for providing EWS housing are awarded as follows:

EWS Housing as a Percentage of Total Residential Units	Points
15 % 20 %	2 4

Documentation Required:

- Provide the site plan showing the location of residential areas within the project
- Provide a narrative describing the mix of proposed housing typologies and submit a copy of typical design details
- Submit calculations of EWS housing proposed in residential area

Green Buildings

Design & Construction Submittal

LP Credit 3 **Points: 12**

Intent:

Encourage design and construction of eco- friendly buildings to minimise negative environmental impacts associated with the development

Compliance Options:

- Design green buildings within the project with appropriate green building rating systems, such as IGBC and LEED India (e.g., factories, homes, commercial buildings, etc.,). Points for percentage of green buildings are awarded as follows:

Green Buildings as a Percentage of Total number of Buildings	Points Awarded	
	Registered	Certified*
20 %	2	4
30 %	4	8

Note:

** The buildings should be individually certified at the time of township certification*

Documentation Required:

- Provide documents to show that the buildings are registered/ certified, as applicable
- Submit calculations to show the required percentage of areas being constructed as green buildings
- Provide a summary of sustainable design features incorporated in the green building projects and include a copy of certification awarded

Employment Opportunities *(Post-occupancy)*

Design Submittal

LP Credit 4 **Points: 8**

Intent:

Provide opportunities of employment within the township to reduce long distance travel

Compliance Options:

- Provide full time employment opportunities for a minimum of 10% of the township population
- Ensure diverse employment opportunities catering to all sections of the society. Points for employment opportunities are awarded as follows:

Employment as a Percentage of Total Population	Points
10 % 15 % 20 %	4 6 8

Documentation Required:

- Provide a brief description of the employment opportunities created in terms of numbers and diversity
- Provide calculations to indicate the percentages of employment opportunities created within the project

Social and Cultural Initiatives

Design Submittal

LP Credit 5 **Points: 6**

Intent:

Encourage the project to take up social initiatives, within or outside the project boundary, to create a harmonious relationship with the local community

Compliance Options:

- Build vibrant and inclusive communities by adopting any **six** of the following initiatives **(6 points):**
  - Building of schools for local population
  - Provisions for clinic, dispensaries, banks etc.,
  - Training to local farmers on best agricultural practices and latest trends
  - Vocational training institutes for men and women
  - Local craft and cottage industry
  - Conserve or restore buildings of historical importance
  - Adequate public drinking water facilities
  - Any other social initiatives which would have a positive impact on the local community

Documentation Required:

- Submit Social Impact Assessment Report due to development of the project
- Submit Community Engagement Report highlighting measures adopted
- Provide drawings of schools and a brief description of the facilities in terms of :
  - Population addressed
  - Educational attainment levels– primary , secondary, higher education
  - Alternative forms of education- vocational training for school drop- out, workshop
- Provide a brief description and total area allocated for facilities such as dispensaries, clinics, banks, local craft & cottage industry
- Provide a brief description about the training offered to local farmers
- Provide a brief description of the conservation or restoration strategies adopted for buildings of historical importance

Transportation Planning

Long Term Transportation Plan

Design Submittal

TP Mandatory Requirement 1

Intent:

Encourage long term planning for cohesive transportation system to reduce adverse environmental impacts emanating from future traffic volumes

Compliance Options:

- Develop and implement a long term transportation plan that includes the following:
  - Future expectations of traffic volumes to be generated in next 5, 10 & 15 years
  - Planning measures to control future traffic volumes
  - Measures to mitigate the impacts due to vehicular emissions
  - Strategies to incorporate public transportation facilities such as MRT, bus services etc.,

Documentation Required:

- A narrative describing the short and long term measures to be implemented to manage traffic and to reduce congestion
- Provide a transportation master plan of the project consisting of roadways, railroads, highways, bicycle lanes, sidewalks and their adjacent land uses
- Provide documentation/ declaration to show that public buses would comply with the norms specified in the latest edition of Bharat Standard for Vehicular Emissions

Design for Differently Abled

Design Submittal

TP Mandatory Requirement 2

Intent:

Ensure that public needs of differently abled people are adequately addressed

Compliance Options:

- Incorporate the following provisions for differently abled people in all public spaces, as applicable:
  - Safe, comfortable and easy access
  - Uniformity in flooring level/ ramps
  - Preferred car parking spaces
  - Restrooms designed for differently abled

Documentation Required:

- Provide drawings showing design provisions for differently abled people

Public Transportation Facilities

Design & Construction Submittal

TP Credit 1.1 **Points: 6**

Intent:

Encourage the use of public transportation to reduce fossil fuel consumption & vehicular emissions, which inturn would minimise health impacts

Compliance Options: (2 points for each measure)

- Provide bus stops and/ or metro rail station within a distance of 1.0 km from the centre of the sector
- All bus stop facilities should be sheltered with adequate seating capacity, illumination and display of bus routes & timetables
- Provide restrooms (toilets) at every alternate bus stop and at each metro transit station

Documentation Required:

- Provide site vicinity plan indicating distances from the centre of the township to the railway station and bus stops
- Provide a narrative describing the strategies employed to design and implement safe and convenient access to public transportation
- Submit typical drawings of a bus stop facility and toilet details

Eco- friendly Transportation Services

Design & Construction Submittal

TP Credit 1.2 **Points: 6**

Intent:

Encourage the use of public transportation to reduce fossil fuel consumption & vehicular emissions, which inturn would minimise health impacts

Compliance Options:

- Provide 100% intra- city eco- friendly public bus shuttle services **(2 points)**

(AND)

- Provide eco- friendly refueling facilities (CNG, bio- fuels etc.,) within the township to meet the following criteria:

Percentage of Eco- friendly Refueling Stations	Points
50%	2
75%	4

Note:

- *For a petrol pump station to be considered as eco- friendly, atleast one filling pump should have eco- friendly fuel (CNG, bio- fuels etc.,) within that premises*

Documentation Required:

- Narrative describing the eco- friendly modes of transportation
- Submit site plan indicating the locations of all eco- friendly refueling facilities provided within the township
- Provide calculations demonstrating eco- friendly refueling facilities meet the required criteria

Road and Street Network

Design Submittal

TP Credit 2 **Points: 6**

Intent:

Provide interconnected road and street network to facilitate transport efficiency and easy connectivity

Compliance Options: (2 points for each measure)

- Meet road and street widths as specified in local bye- laws
- All road and streets to facilitate interconnectivity within the township. Design interconnected street network such that roads & streets intersect at intervals as specified in local bye-laws or atleast 150 m intervals, whichever is smaller, within and along the boundary of each sector
- Develop and maintain streetscape elements such as street plantations, intersection layouts, roundabouts, on- street parking, etc., within the township

Documentation Required:

- Submit a document highlighting road and street width requirements, intersection intervals as specified in the local bye- laws
- Provide a road and street network plan highlighting the interconnectivity within the township
- Provide the road and street cross sections
- Submit drawings highlighting intersection intervals provided within the sector and along the boundary of the sector
- Submit a list of the various types of streetscape elements provided along the periphery of roads and streets
- Submit a declaration that the road and streets are accessible by the general public for the life of the project

Bicycle Lane Network

Design Submittal

TP Credit 3 **Points: 6**

Intent:

Reduce automobile dependency for short distance commuting to minimise fuel consumption & vehicular emissions, thereby promoting physical activity and public health

Compliance Options: (2 points for each measure)

- Encourage the use of bicycle as an environment friendly transportation choice.
  - Design bicycle lane network to connect to all basic amenities and transit facilities
  - Provide bicycle parking and ensure proper illumination for bicycle lanes
  - Develop strategies and measures to ensure that lanes are not encroached by vehicular traffic or pedestrians

Documentation Required:

- Submit a typical bicycle network plan highlighting the connectivity between basic amenities and transit facilities
- Provide drawings to show bicycle parking in public areas
- Provide a plan or a declaration to ensure that bicycle lanes and bicycle parking spaces are used for that purpose only.

Pedestrian Network

Design Submittal

TP Credit 4 **Points: 6**

Intent:

Encourage safe and comfortable walking experience by providing well designed interconnected pedestrian network

Compliance Options: (2 points for each measure)

- Design pedestrian network between local transit facilities, residential, commercial and other developments
- Provide shades for footpaths and pathways through tree cover for comfortable pedestrian access. This should be achieved within 5 years of plantation
- Provide adequate street lighting to achieve appropriate lux levels for the entire pedestrian network within the township

Documentation Required:

- Provide a narrative describing the strategies employed in designing safe and comfortable pedestrian network within the township
- Provide site plan showing the footpath/ pathway network within the township and its connectivity with the surrounding vicinities
- Submit design details of shades and street lighting for pedestrian pathways
- Submit a declaration by the developer/ owner that the pedestrian pathways and footpaths would be maintained for the life of the project

Infrastructure Resource Management

Rainwater Harvesting, *50%*

Design & Construction Submittal

IRM Mandatory Requirement 1

Intent:

Harvest rainwater to enhance groundwater table and reduce municipal water demand

Compliance Options:

- Provide rainwater harvesting or storage system to capture atleast 50% run- off from the roof & non- roof impervious areas considering two year average one day rainfall.

Note:

- *The project should consider roof & non-roof impervious areas which are under developer's scope*
- *Two year average one day rainfall may be computed by dividing the total annual rainfall with total number of rainy days for the past two years*

Documentation Required:

- Provide rainfall data for the past two years
- Provide details on the rainwater harvesting system specifying storage capacity and volume of water captured
- Provide calculations to show that designed rainwater harvesting system captures 50% of the two year average one day rainfall
- Provide a site plan highlighting the areas under scope of the developer
- Storm water management plan highlighting location of all rainwater harvesting pits/ storage systems within the township

Segregation of Waste *(Post- occupancy)*

Design Submittal

IRM Mandatory Requirement 2

Intent:

Reduce disposal of waste in landfills by proper segregation of waste at source, post-occupancy

Compliance Options:

- Develop a waste management plan for the project and identify methods to segregate and efficiently dispose waste
- Place colour coded waste bins in all public areas to collect recyclable waste such as organic waste, paper, glass, plastic, cardboard, metal, e-waste, etc., at source of generation
- Insist on segregation of waste in residential and commercial buildings for proper collection and disposal

Documentation Required:

- Provide detailed description of waste management plan (for proper segregation, handling and disposal) adopted within the township

Rainwater Harvesting, *75 %, 95 %*

Design & Construction Submittal

IRM Credit 1 **Points: 6**

Intent:

Harvest rainwater to enhance the groundwater table and reduce municipal water demand

Compliance Options:

- Provide rainwater harvesting or storage system to capture atleast 75% run- off from the roof & non- roof areas considering two year average one day rainfall. Points for rainwater harvesting are awarded as follows:

Rainwater Harvesting System to Capture/ Recharge	Points
75 % runoff	4
95 % runoff	6

Note:

- *The project should consider roof & non-roof areas which are under developer's scope*
- *Two year average one day rainfall may be computed by dividing the total annual rainfall with total number of rainy days for the past two years*

Documentation Required:

- Provide rainfall data for the past two years
- Provide details on the rainwater harvesting system specifying storage capacity and volume of water captured
- Provide calculations to show that designed rainwater harvesting system captures 75% of two year average one day rainfall
- Provide a site plan highlighting the areas under scope of the developer and location of all rainwater harvesting pits and storage systems within the township

Waste Water Treatment, *100 %*

Design & Construction Submittal

IRM Credit 2 **Points: 6**

Intent:

Encourage on- site treatment of wastewater to avoid pollution of natural water streams

Compliance Options:

- Provide wastewater treatment infrastructure to treat 100% of the waste water generated within the project. The treatment facility can be centralised or at a sector level, as necessary.
- Ensure that the treated wastewater conforms to the quality standards required for respective application

Documentation Required:

- Provide a detailed description of design and treatment process of installed on- site wastewater treatment system
- Provide water balance calculations indicating the water requirements for potable use, domestic use, landscaping and all other non- potable uses within the township
- Calculations indicating the percentage of wastewater treated by wastewater treatment system

Waste Water Reuse, *75 %, 95 %*

Construction Submittal

IRM Credit 3 **Points: 6**

Intent:

Encourage use of recycled water to reduce demand for municipal water

Compliance Options:

- Provide wastewater distribution infrastructure so as to convey atleast 75% of the treated wastewater to large turf areas (parks and golf courses, landscaped public areas etc.,), horticulture/ irrigation, construction sites and other areas of non- potable uses within or outside the boundary of the project. Points for wastewater reuse are awarded as follows:

Percentage of Treated Waste Water Reused	Points
75 % 95 %	4 6

Documentation Required:

- Provide water balance calculations indicating the water requirements for potable use, domestic use, landscaping and all other non-potable uses in the township
- Provide calculations to demonstrate the percentage of wastewater reused on- site
- In case the treated wastewater is used for construction purpose, provide documentation to show that the treated wastewater conforms to the required quality standards
- In case the treated wastewater is conveyed outside the boundary, provide calculations to show the percentage of wastewater conveyed and a brief description of the usage along with the distribution system
- Provide a drawing and a brief description of the infrastructure provided to convey the wastewater to landscaped areas and other non- potable uses

Energy Efficiency in Infrastructural Equipment

Design Submittal

IRM Credit 4 **Points: 8**

Intent:

Maximise energy efficiency, thereby reducing the environmental impacts resulting from energy use

Compliance Options:

- For all equipment/ systems within the township, achieve energy efficiency for the following systems:

  - Lighting systems:
    - For roads and streets less than 3 m wide, maintain installed LPD of 3.3 watt per linear metre AND for roads and streets wider than 3 m, maintain installed LPD of 2.2 watt/ sq.m (1 point)
    - For public parks and landscape areas, maintain LPD of 1.6 watt / sq. m (1 point)
    - On / off automatic controls for street lighting (1 point)
    - LED for all traffic lights (1 point)
    - LED for all public signages and hoardings (2 points)
  - Potable water pumps, waste water pumps and motors:
    - Select pumps with efficiency of atleast 85% (1 point)
    - Select motors (> 10 HP) with efficiency of atleast 85% (1 point)

Documentation Required:

- List of all infrastructural equipment/ systems within the township
- Plan indicating the lighting layout in all public areas
- LPD calculations for areas such as roads, streets, public parks, landscape areas, as applicable
- Details of on / off automatic controls designed for street lighting
- Energy efficiency details for all potable water pumps, waste water pumps and motors

On- site Renewable Energy

Construction Submittal

IRM Credit 5 **Points: 16**

Intent:

Promote the use of on- site renewable energy technologies to reduce the load on grid power

Compliance Options:

- Install on- site renewable energy systems such as solar, wind, bio- mass, bio- gas, bio- diesel or any other forms of renewable energy in township. Design and implement the renewable energy measures in areas under the developer's scope. Points for on- site renewable energy are awarded as follows:

Percentage of Renewable Energy to Total Annual Energy Consumption (Developer's Scope)	Points
10 %	4
20 %	8
30 %	12
40%	16

Documentation required:

- List of areas / utilities under the scope of developer and their estimated annual energy consumption
- Details of various renewable energy systems installed within the project
- Calculations demonstrating the percentage of total annual energy consumption (by utilities under scope of the developer) catered by on- site renewable energy systems

Off- site Green Power

Construction Submittal

IRM Credit 6 **Points: 12**

Intent:

Encourage the utilities to buy renewable energy so as to reduce the environmental impacts associated with the energy produced from fossil fuels

Compliance Options:

- Demonstrate that the project has wheeled off- site green power to cater to areas under the developer's scope, for atleast three years, post-occupancy. Points for off- site renewable energy investment are awarded as follows:

Percentage of Off- site Renewable Energy to Total Annual Energy Consumption (Developer's Scope)	Points
25 %	4
50 %	8
75 %	12

Documentation Required:

- Contract agreement between third party renewable energy supplier, utility and the developer of the proposed township highlighting the contract period and installed capacity
- Calculations demonstrating the percentage of total annual energy consumption (by utilities under scope of the developer) catered by off- site green power

Construction Waste Reduction *(Civil Works)*

Construction Submittal

IRM Credit 7 **Points: 6**

Intent:

Avoid construction waste and debris from being sent to landfills and ensure that the recyclable waste is redirected to manufacturing units or reused in appropriates sites

Compliance Options:

- Segregate waste generated during construction for subsequent diversion for recycling or reuse
- Avoid atleast 50% of the waste generated during construction from being sent to landfills and incinerators
- Calculate percentage either by weight or volume. Points for waste reduction during construction are awarded as follows:

Percentage of Waste Diverted	Points
50 %	4
75 %	6

Note:

- *This credit is applicable for all civil works which are under scope of the developer*

Documentation Required:

- Develop and implement waste management plan
- Submit records and calculations tabulating the total quantity of waste generated, waste diverted from landfills along with means of diversion

Recycled Content *(Civil Works)*

Construction Submittal

IRM Credit 8 **Points: 8**

Intent:

Encourage the use of recycled content in construction materials to reduce environmental impacts associated with the use of virgin materials

Compliance Options:

- Select recycled materials for buildings and/ or civil works such that the total recycled content constitutes atleast 10% (by cost) of total materials. Points for recycled content are awarded as follows:

Percentage of Recycled Content	Points
10 %	4
20 %	6
30 %	8

Note:

- *This credit is applicable for all civil works which are under scope of the developer*

Documentation Required:

- Provide a list of materials used, the recycled content in each material and the material cost
- Submit letters from manufacturers specifying the recycled content of the materials used in the construction

Measurement & Verification Plan *(Post-occupancy)*

Design Submittal

IRM Credit 9 **Points: 2**

Intent:

Ensure ongoing accountability in energy consumption of infrastructural equipment

Compliance Options:

- Develop and implement a measurement and verification (M&V) plan to evaluate energy system performance for infrastructural equipment
- The infrastructural equipment includes those equipment listed under IRM Credit 4

Documentation Required:

- Provide a copy of the measurement and verification plan. The plan should include detailed methodologies for establishing baselines, measurement, frequencies for measurement, data storage & analysis, reporting schedules etc.,
- Provide a list of necessary metering equipment installed to measure energy use

Innovation in Design & Technology

Innovation in Design & Technology

Design / Construction Submittal

IDT Credit 1.1 - 1.4 **Points: 12**

Intent:

Provide design teams and projects, the opportunity to be awarded points for exceptional performance set by the IGBC Green Townships Rating System and / or innovative performance in Green design that are not specifically addressed by the IGBC Green Townships Rating System.

Compliance Options: (3 points for each credit)

Credit 1.1: Innovation in Design & Technology

Identify the intent of the proposed innovation credit, the proposed requirement for compliance and the proposed documentation to demonstrate compliance, and the design approach used to meet the required elements.

Credit 1.2: Innovation in Design & technology

Same as credit 1.1

Credit 1.3: Innovation in Design & Technology

Same as credit 1.1

Credit 1.4: Innovation in Design & Technology

Same as credit 1.1

Documentation Required:

Provide narrative, design specifications, drawings, calculations and photographs, whichever applicable.

IGBC Accredited Professional

Design Submittal

IDT Credit 2 **Point: 4**

Intent:

Support and encourage the involvement of IGBC AP accredited professionals in the Green Township projects.

Compliance Options:

- Atleast one principal participant of the project team shall be an IGBC Accredited Professional (IGBC AP)

Documentation Required:

- Submit IGBC AP certificate of principal participant.

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