

CIN: U70101KL2006FTC019125

SmartCity (Kochi) Infrastructure Pvt. Ltd.  
SmartCity Pavilion,  
Brahmapuram P.O., Kochi 682 303,  
Kerala, India

Telephone +91 484 308 0000

www.smartcity-kochi.in



SCK/P16-P 174 / 42 /2019  
5<sup>th</sup> February 2019

**Additional Principal Chief Conservator of Forests ( C )  
Ministry of Environment, Forest and Climate Change  
Regional Office (SZ), Kendriya Sadan, 4th floor,E&F Wings  
17<sup>th</sup> Main Road, 2<sup>nd</sup> Block, Koramangala II Block  
Bangalore- 560 034**

Dear Sir/Madam,

**Sub: Submission of half yearly Environmental Clearance Conditions Compliance Report**

Ref: Environmental Clearance no: 184/SEIAA/3792/2013 dated 01.10.2014

With reference to the above, Environmental Clearance, we are hereby submitting the Environmental Clearance Conditions Compliance Report for the period April'18-September'18 for our Master Plan Development of IT/ITeS, SEZ township construction project at Kakkanad and Puthencruz Village, Kanayannor Taluk, Ernakulum District by SmartCity Kochi Infrastructure Pvt Ltd.along with monitoring report as required.

Thanking You  
Yours Truly

A handwritten signature in blue ink, appearing to be "Manoj Nair", written over a horizontal line.

**Manoj Nair  
Chief Executive Officer**

SN2



Compliance Report: Period ending 31<sup>st</sup> September 2018

Specific Conditions:

SL NO		
1	Kadambrayar along with its puramboke land is to the left as such without any kind of encroachment. Native species is to be promoted in this area. This area is to be left for flood cushion.	Noted and being complied with.
2	As far as possible external earth should not be brought into the Smart City land. The material available from excavations must be used for filling. Buildings must be constructed with minimum changes to the existing topography. In case large quantity is required it must be done only with sufficient justification and concurrence of SEIAA.	Till date no external earth has been brought from outside. In case large quantity is required to be brought from outside, it will be done with concurrence of SEIAA.
3	One third of the area is to be maintained as green belt with greenery	Master Plan has considered the same during the planning.
4	RWH proposed in the conceptual plan must be provided.	Complied with own building and instructions were given to CO-Developers also for adherence.
5	Use of reflective surfaces on the walls of the buildings to be avoided to eliminate formation of heat islands.	Complied with own building.
6	Storm water drainage plans to be firmed up.	Noted.
7	Internal traffic needs planning and parking facilities not less than KMBR.	Being complied with.
8	Fencing and compound wall has to be provided, especially for the secure areas.	Complied with as per SEZ rules.
9	The 33 <sup>rd</sup> meeting of the SEIAA held on 24.09.2014 examined the application in detail in the light of the recommendations of SEAC, EIA report and undertaking given by project proponent. On being satisfied that the required procedural formalities have been duly met and adequate environmental safeguards have been envisaged as part of the project, including CSR, the SEIAA approved the project for issue of Environmental Clearance subject to all the specific conditions herein and general conditions Annexure 2, assured initiative measures as per chapter 8 of the EIA report (page 8.1 to 8.58, which shall be deemed to be part of this proceedings) and also subject to all the eight conditions referred to in para 5 above. The project proponent shall also abide by the undertakings given in his letter dated 15.05.2014 and sworn affidavit executed on 16.05.2014 on water quality, and preservation of endemic plants in the site. Also the project proponent shall provide Rs.15.00 crores (Rs. Fifteen crores only) towards Corporate Social Responsibility as committed, to be utilised for the general benefit of the people of the project areas.	Report showing the CSR already undertook by SCK is attached herewith.



10	E- wastes shall be stored in an earmarked and covered area and disposed of as per e- wastes (Management & Handling ) Rules, 2012	Noted
11	<p>Keeping in view, of the rainfall, storm water drainage system shall be developed to carry the runoff, which shall be then collected in rain water collection ponds and tanks. The surplus runoff shall be guided into the water bodies flowing along the periphery of the township.</p> <ul style="list-style-type: none"> <li>• Rain water collection tanks in individual plots (Non- flushing req.)(Storage capacity equivalent to 15 days of daily fresh water requirement). Total Capacity of rain water storage tanks would be 100ML.</li> <li>• Stored rain water on ponds (Non-flushing req.) (Non rainy days)(storage capacity equivalent to 15 days of daily fresh water requirement ) one pond each land parcel, total capacity of 100ML)</li> </ul>	<p>Complied</p> <p>Complied</p>
12	Solar power plants, Solar Water Heaters and solar operated street lights shall be provided and solar energy shall be utilised wherever possible.	Actions for implementing Solar Plant to the capacity of 475kW is under progress for SCK 01 building.
13	It is also clarified that dredging for clearing the channels for the proposed Jetty services will be permissible.	Noted
14	Environmental clearance under the EIA notification 2006 is hereby accorded for the proposed master plan Development project of M/S. Smart City Kochi Infrastructure Pvt. Ltd, Brahmapuram , Kochi – 682303 , to be established at the location more specifically described in the Annexure -1 , subject to all the specific conditions stipulated in pre paragraphs and general conditions in Annexure-2.	Noted
15	Validity of the E.C will be five years from 1.10.2014, provided that it will be reviewed at any time during the validity, in case violation or non-compliance of any of the conditions stipulated herein.	As per the latest amendment it may be noted that, validity is 7 years and hence our EC validity will be up to 30.09.2021
16	Violation of any of the above conditions in any manner would entail cancellation of this order.	Noted
17	<ol style="list-style-type: none"> <li>1. Compliance of the conditions herein will be monitored by the Directorate of Environment and Climate changes or its agencies and also by the Regional Office of the Ministry of Environment and Forests, Govt. of India, Bangalore.</li> <li>2. Necessary assistance for entry and inspection should be provided by the project proponent and those who are engaged or entrusted by him to the staff for inspection or monitoring.</li> <li>3. Instances of violation if any shall be reported to the District Collector, Ernakulum to take legal action under the Environment (Protection) Act 1986.</li> </ol>	<p>Noted</p> <p>Will be complied</p> <p>Noted</p>



ANNEXURE 11

GENERAL CONDITONS

1	Rain Water Harvesting capacity should be installed as per the prevailing provisions of KMBR/KPBR, unless otherwise specified elsewhere.	Noted
2	Environment monitoring cell as agreed under the affidavit filed by the proponent should be formed and made functional.	Already in place.
3	Suitable avenue trees should be planted along either side of the tarred road and open parking areas, if any, inclusive of approach road and internal roads.	Noted
4	The project shall incorporate devices for solar energy generation and utilization to the maximum possible extent with the possibility of contributing the same to the national grid in future.	Actions for implementing Solar Plant to the capacity of 475kW is under progress for SCK 01 building.
5	Safety measures should be implemented as per the Fire and Safety Regulations.	Noted
6	STP should be installed and made functional as per KSPCB guidelines including that for solid waste management.	STP has been installed and functional in completed building( SCK 01). STPs are also being installed by various Co-Developers as per Co-Developer guidelines.
7	The conditions specified in the Companies Act, 2013 should be observed for Corporate Social Responsibility.	Noted. Company has not reported profit as on date.
8	The proponent should plant trees at least 5 times of the loss that has been occurred while clearing the land for the project.	Noted
9	Consent from Kerala State Pollution Control Board under water and Air(s) should be obtained before initiating activity.	Complied
10	All other statutory clearance should be obtained, as applicable, by project proponents from the respective competent authorities including that for blasting and storage of explosives.	Noted
11	In the case of any change(s) in the scope of the project would require a fresh appraisal by this Authority.	Noted and already applied.
12	The authority reserve the right to add additional safeguard measures subsequently ,if found necessary and to take action including revoking of the environmental clearance under provision of the Environment (Protection) Act 1986 to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.	Noted
13	The stipulations by statutory under different Acts and notifications should be complied with, including the	Noted



	provisions of water ( prevention Acts and Notification )Act, 1974, the Air (Prevention and Control of pollution) act 1981, the Environment( protection ) Act, 1986, the public liability (Insurance) Act, 1991 and EIA Notification,2006.	
14	The project proponent should advertise in at least two local newspapers widely circulated in the region, one of which( both the advertisement and the newspaper) shall be in the vernacular language informing that the project has been accorded Environmental Clearances and copies of clearance letters are available with the Department of Environment and Climate Change, Govt. of Kerala and may also be seen on the website of the Authority at <a href="http://www.seiaakerala.org">www.seiaakerala.org</a> . The advertisement should be made within 10 days from the date of receipt of the clearance letter and a copy of the same signed in all pages should be forwarded to the office of this Authority as confirmation.	Complied and copies are attached.
15	A copy of the clearance letter shall be sent by the proponent to concerned Grama Panchayat / District Panchayat/ Municipality/ Corporation/ Urban Local Body and also to the Local NGO, if any, from whom suggestions/ representations, if any were received while processing the proposal. The Environmental Clearance shall also be put on the website of the company by the proponent.	Noted
16	The proponent shall submit half yearly reports on the status of compliance of the stipulated EC conditions including results of monitored data ( both in hard copies as well as by e-mail)and upload the status of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the respective Regional Office of MoEF, Govt. of India and also the Directorate of Environment and climate change, Govt. of Kerala.	Complied
17	The details of Environmental Clearance should be prominently displayed in a metallic board of 3ft *3ft with green background and yellow letters of Times New Roman font of size of not less than 40.	Noted
18	The proponent should provide notarized affidavit (indicating the number and date of Environmental Clearance proceedings) that all the conditions stipulated in the EC shall be Scrupulously followed.	submitted



### CSR Activities within the Project:

As per companies Act (Amendment) ,2013,it is mandatory for the Corporates to spent 2% of the average net profit in CSR activities and only companies reporting Rs 5 crore or more profits in the last 3 years have to expend the CSR.

In this regard we wish to inform that SCK is in various phases of construction phase and has not reported profits as on date. The validity of existing EIA clearance is upto 30<sup>th</sup> September 2021 and due to expansion of Master Plan, ,we may require another 7 years extension from the Ministry from the date of expiry of initial approval , ie upto 30<sup>th</sup> September 2028 as the construction activities will also get extended upto that period as per the current development planning.

However considering the developmental activities in progress, the following are the social activities where SCK has participated. In additon, at point # 3 below, SCK's active participation in the upcoming integrated multi modal (Water – Rail- Road) project being planned by Kochi Water Metro is explained.

1. An amount of Rs 1 lakh was contributed to District Collector towards cleaning the Kadambayar River and Edachira Canal (Edachira Thodu).
2. Land to the tune of around 5 cents that fall within the lease agreement is used for construction of an Anganavadi (Children Montessary) for the benefit of the children who are residing nearby the Project location.
3. Recently, in coordination with the Government of Kerala, the following is proposed to be implemented in the IT Hub at Kakkanad wherein SCK has a notable and active participation:

Board of Directors of SCK, Chaired by Hon'ble Chief Minister approved allotment of an extent of 3.3353 acres of three land parcels in SCK to Kochi water Metro (KWM) of Government of Kerala on lease basis for 30 years. These land parcels are meant for setting up three Jetty Terminals of KWM at Kadambayar and Edachira Thodu for facilitating seamless multi modal public transporation and connectivity between populous locations of Greater Cochin such as Varapuzha , Muluvukadu, Ernakulum , Mattancherry / Fort Kochi, Vytilla, Irumbaanam etc. and the IT hub in Kakkanad.

The Boat service will serve the local population in adjoining areas of SCK namely Puthencuriz, Pinarmunda, Bramhapuram, Karimugal, Edachira, Kakkanad, Padathikara etc. apart from the working and resident population of around 1,50,000 people in the IT Hub. KWM will also be given rights to construct access road with the first terminal in SCK land at Bramhapuram to the public road for facilitating boat riders reach hinder land by surface transportation. Towards this another 2.473 acres has been allotted free of lease rent to KWM. The net contribution by SCK in terms of land value to support this infrastructure that will enhance the living and logistical connectivity in and around the IT hub is estimated to be INR 29 Cr.

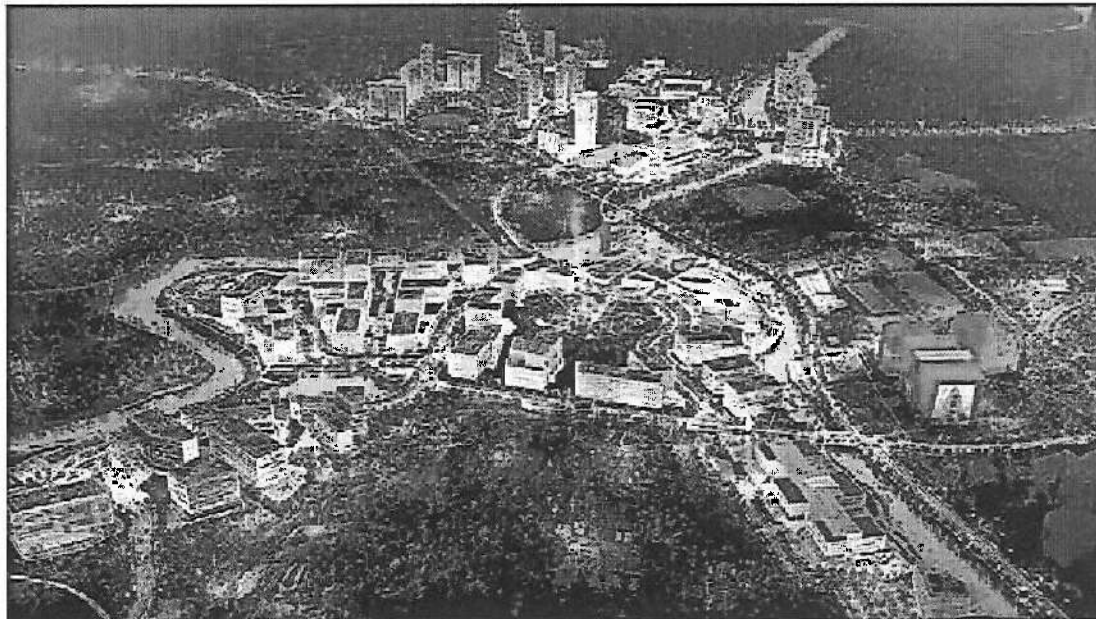
KWM has commenced survey and soil investigation studies at locations allocated for the purpose.





# സ്മാർട് പട്ടണം

നഗരത്തിന്റെ സുസ്ഥിരതയ്ക്കും സിറ്റിക്ക് പുറം പരിസ്ഥിതി അനുയോജ്യമാക്കി മാറ്റിയും നഗരത്തിന്റെ സുസ്ഥിരതയ്ക്കും സിറ്റിക്ക് പുറം പരിസ്ഥിതി അനുയോജ്യമാക്കി മാറ്റിയും നഗരത്തിന്റെ സുസ്ഥിരതയ്ക്കും സിറ്റിക്ക് പുറം പരിസ്ഥിതി അനുയോജ്യമാക്കി മാറ്റിയും



**ആദ്യ മന്ദിര**  
നിർമ്മാണം പുരോഗമിക്കുന്നു. 6.5 ലക്ഷം ചതുരശ്ര അടി നിർമ്മാണം പൂർത്തിയാക്കി. 2015-16 നു സജ്ജമാക്കുമെന്നും പരിസ്ഥിതി സൗഹൃദമായി രാജ്യത്തെ നഗരമായി മാറ്റും.

**സ്മാർട് സിറ്റി**  
കൊച്ചിയുടെ ഉപഗ്രഹമായി മാറുന്ന കോഴിക്കോട് നഗരത്തിന് പാതാപാതകളായ ഇൻഫ്രാസ്ട്രക്ചർ ആസ്ഥാനം കൂട്ടിച്ചേർക്കുന്നതിനായി തിന്നിപ്പാലം റൂറൽ ദുരം നെടുമ്പാശ്ശേരിയ്ക്ക് 22 കിലോമീറ്റർ ദൂരം സ്മാർട് സിറ്റി മാസ്റ്റർ പ്ലാനിൽ ഉൾക്കൊള്ളിച്ചിട്ടുണ്ട്.

## സ്മാർട് ഹരിത സിറ്റി

- സ്മാർട് സിറ്റി പദ്ധതി 246 ഏക്കറിൽ.
- മൊത്തം 88 ലക്ഷം ചതുരശ്ര അടി നിർമ്മാണം.
- പ്രത്യേക സാമ്പത്തിക മേഖല.
- വിഭാവനം ചെയ്യുന്നതു ഷോപ്പിംഗ്, താമസം, വിനോദ സൗകര്യങ്ങൾ എന്നിവയൊരുക്കുന്ന സമ്പൂർണ്ണ ടൗൺഷിപ്പ്.
- ടൗൺഷിപ്പ് പൂർണ്ണമായും കെട്ടിടങ്ങൾ കൊണ്ടു നിറയ്ക്കില്ല. പച്ചപ്പിന്തും തുറന്ന ഇടങ്ങൾക്കും ധാരാളം സ്ഥലം ലഭിക്കും.
- പ്രമുഖ കമ്പനികളെ ആകർഷിക്കുന്നതിനായി ആഗോളതലത്തിൽ വിപണനശ്രമങ്ങൾ നടത്തും.



- ഭാവിസമുഹങ്ങൾ
- റീടെയിൽ കടകൾ, റസ്റ്ററന്റുകൾ
- താമസസ്ഥലം
- അപാർട്ട്മെന്റുകൾ, ബിസിനസ് ഏരിയ, ഹോട്ടലുകൾ
- കളിസ്ഥലം, മറ്റു സൗകര്യങ്ങൾ

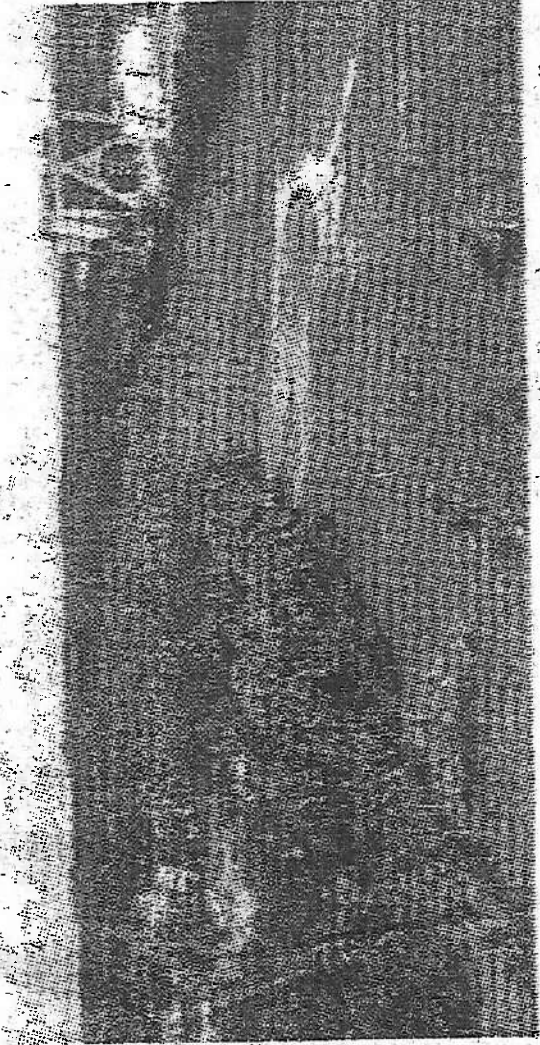


# ചരിന്ധിയിൽ കി അനുഭവത്തി കി പ്ലാർട്ടായി സ്മാർട്ടറി

5 6.5 ലക്ഷം  
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ണത്തോടു  
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പദ്ധതിക്കും  
മതി ലഭിച്ചു.  
ശ്ര അടിയോ  
യുന്ന നിർമി  
യാരു ഭാഗം  
മലങ്ങൾക്കും  
വച്ചുകൊണ്ടു  
ണ പദ്ധതി.  
, ഫിനാൻസ്,  
ഇന്നവേഷൻ  
ഇന്ത്യയിലും

ജോ ജോസഫ് പറഞ്ഞു.  
സ്റ്റേറ്റ് എക്സ്പെർട് അപ്രൈസ  
സൽ കമ്മിറ്റിയുടെ ശുപാർശയി  
മേൽ കേന്ദ്ര പരിസ്ഥിതി-വനം  
വകുപ്പിന്റെ കീഴിലുള്ള സ്റ്റേറ്റ്  
എൻവയോൺമെന്റ് അസസ  
മെന്റ് അതോറിറ്റിയുടെ യോഗ  
മാണ് സമ്പൂർണ പദ്ധതിക്കും  
പരിസ്ഥിതികാനുമതി നൽകിയി  
രിക്കുന്നത്. അപേക്ഷ പരിഗണി  
ച്ചവേളയിൽ വ്യക്തമായ മാസ്റ്റർ  
പ്ലാൻ അവതരിപ്പിക്കുന്നതിന് സ്മാർട്ടറി  
അധികൃതർ നടത്തി  
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മ്മിറ്റി അഭിനന്ദിച്ചു. മുഴുവൻ പ  
ദ്ധതിക്കും പരിസ്ഥിതികാനുമ  
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ടേയും അടിസ്ഥാനസൗകര്യ വി

കസനത്തിന്  
വേഗത്തിലാ  
പ്രതീക്ഷ.  
ഐടി, റി  
ഹോസ്പിറ്റ  
വലകളിലെ  
ളുമായാണ്  
കൾ നടപ്പാ  
ധാരണയില  
ലി, പാർപ്പി  
യ എല്ലാ ന  
ത്തു ലഭ്യമാ  
ലൊത്താണ  
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യുടേയും  
ണ്. ഏതാന  
ടൻ നിർമാ  
മെന്നും കേ  
ജോസഫ്.



ലഭിച്ചതിനെത്തുടർന്നാണ് സ  
മ്പൂർണ പദ്ധതിക്കുമുള്ള അനു  
മതിക്ക് അപേക്ഷിച്ചത്. ആ അ  
പേക്ഷയിലാണ് ഇപ്പോൾ അനു  
മതി ലഭിച്ചിരിക്കുന്നതെന്ന് സ്മാർട്ടറി  
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പുറത്തും നിന്നുള്ള സ്ഥാപന  
ങ്ങളാണ് ഇവിടെ പ്രവർത്തിക്കോ  
നെത്തുന്നത്.  
ആദ്യ ഐ.ടി ടവറായ എസ്  
.സി.കെ.റ്റിന് കഴിഞ്ഞവർഷം ജൂ  
ലൈയിൽ പരിസ്ഥിതികാനുമതി



സമ്പൂർണ്ണ പാരിസ്ഥിതികാനുമതി ലഭിച്ചു

# സ്മാർട്ട് സിറ്റി ഓർച്ചിൽ

കൊച്ചി: കൊച്ചി സ്മാർട്ട് സിറ്റി പദ്ധതി പ്രദേശത്തെ 246 ഏക്കറിനും സമ്പൂർണ്ണ പാരിസ്ഥിതികാനുമതി ലഭിച്ചു. പദ്ധതിയുടെ ഭാഗമായ 6.5 ലക്ഷം ചതുരശ്ര അടി വിസ്തീർണ്ണമുള്ള ആദ്യ ഐ. ടി ടവറിന്റെ നിർമ്മാണം പൂർത്തിയാകുന്നതിനടയാണ് നിർണായകമായ പാരിസ്ഥിതിക അനുമതി ലഭിച്ചത്. ആദ്യ ഐ. ടി ടവറിന്റെ ഉദ്ഘാടനം 2015 മാർച്ചിൽ നടത്താമെന്ന് പ്രതീക്ഷിക്കുന്നതായി സ്മാർട്ട് സിറ്റി കൊച്ചി സി. ഇ. ഒ ജിജോ ജോസഫ് പറഞ്ഞു.

ആദ്യ ഐ. ടി ടവറായ ഐ. സി. കെ. 01 ന് 2013 ജൂലായിൽ പാരിസ്ഥിതികാനുമതി ലഭിച്ചിരുന്നു. തുടർന്നാണ് മൂഴവൻ പദ്ധതിക്കുമുള്ള പാരിസ്ഥിതികാനുമതിക്ക് സ്മാർട്ട് സിറ്റി കമ്പനി അപേക്ഷിച്ചത്. ഈ അപേക്ഷയിലാണ് ഇപ്പോൾ അനുമതി കിട്ടിയതെന്ന് ജിജോ ജോസഫ് പറഞ്ഞു.

സ്റ്റേറ്റ് എക്സ്പ്രെസ്സ് ആ പ്രൈസൽ കമ്മിറ്റിയുടെ ശുപാർശയിൽ കേന്ദ്ര പരിസ്ഥിതി വകുപ്പിന്റെ കീഴിലെ



**രാജ്യത്തെ ഏറ്റവും വലിയ ഐ. ടി. മന്ദിരം**  
നിർമ്മാണം പൂർത്തിയാകുമ്പോൾ ലിഡ് സ്റ്റാറ്റിനം റേറ്റിംഗുള്ള രാജ്യത്തെ ഏറ്റവും വലിയ ഐ. ടി മന്ദിരങ്ങളിലൊന്നാകും 6.5 ലക്ഷം ചതുരശ്ര അടി വിസ്തീർണ്ണമുള്ള ഐ. സി. കെ. 01 എന്ന ആദ്യ മന്ദിരം. പൂർണമായും പരിസ്ഥിതി സൗഹൃദമാണ് ഈ കെട്ടിടം.

ടിസ്ഥാനസൗകര്യ വികസനത്തിന്റെയും നിർമ്മാണം വേഗത്തിലാവും. ഐ. ടി, റിയാൽറ്റി, വിദ്യാഭ്യാസം, ഹോസ്പിറ്റാലിറ്റി തുടങ്ങിയ മേഖലകളിലെ പ്രമുഖ സ്ഥാപനങ്ങളായാണ് സംയുക്ത പദ്ധതികൾ നടപ്പാക്കാൻ സ്റ്റാർട്ട് സിറ്റി ധാരണയിലെത്തിയിട്ടുള്ളത്. ജോലി, പാർപ്പിടം, വിനോദം തുടങ്ങിയ എല്ലാ സൗകര്യങ്ങളും ഒരിടത്തു ലഭ്യമാക്കുന്നതു കണക്കിലെടുത്താണ്.

**സ്റ്റാർട്ട് സിറ്റി പദ്ധതിയുടെ രൂപരേഖ**

ഇന്റഗ്രേറ്റഡ് റെസിഡൻ്റ് അസസ്മെന്റ് അതോറിറ്റിയാണ് സമ്പൂർണ്ണ പദ്ധതി നൽകിയത്. 88 ലക്ഷം ചതുരശ്ര അടിയോളം വിഭാവനം ചെയ്യുന്ന കെട്ടിടങ്ങൾക്കൊപ്പം വലിയൊരു ഭാഗം

ഭാഗങ്ങളിലായി ഇന്ത്യയിലും പുറത്തും നിന്നുള്ള സ്ഥാപനങ്ങളാണ് ഇവിടെ എത്തുക. മൂഴവൻ പദ്ധതിക്കും പാരിസ്ഥിതികാനുമതി ലഭിച്ചതോടെ സ്മാർട്ട് സിറ്റി നേരിട്ടും സംയുക്തമായും നടത്തുന്ന പദ്ധതികളുടെയും അ

## TEST REPORT

Test Report No: SEANN/1809/R846	Date: 05.10.2018	Page 1 of 1
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CUSTOMER DETAILS				
Customer Name & Address	M/s SmartCity (Kochi) Infrastructure Pvt. Ltd. Kochi, Ernakulam District			
Location of Site	Survey No	640/1, 640/2	Survey No	62/1, 62/2
	Village	Kakkanad	Village	Puthencruz
	Taluk	Kanayannur	Taluk	Kunnathunad
	District	Ernakulam	District	Ernakulam
	State	Kerala	State	Kerala
Customer Reference	---			
SAMPLE DETAILS				
Source of Sample	Ambient Air	Sample Code	SEANN/1809/S833	
Location of Monitoring	Butterfly Garden	Sampled By	Laboratory	
Date of Monitoring	28.09.2018	Test Started On	01.10.2018	
Sample Received On	29.09.2018	Test Completed On	03.10.2018	
Humidity	68 %	Sampling Procedure	IS 5182 Part V & XIV	

SL NO	TEST PARAMETER	TEST METHOD	UNIT	RESULT	NAAQ STANDARD
01	Particulate matter (PM <sub>10</sub> )	IS 5182 Part 23: 2006 RA 2014	µg/m <sup>3</sup>	29.2	100
02	Particulate matter (PM <sub>2.5</sub> )	EPA 40 CFR Part 50 Appendix - L	µg/m <sup>3</sup>	14.7	60.0
03	Sulphur dioxide (SO <sub>2</sub> )	IS 5182 Part 2: 2001 RA 2012	µg/m <sup>3</sup>	< 2.00	80.0
04	Nitrogen dioxide (NO <sub>2</sub> )	IS 5182 Part 6: 2006 RA 2012	µg/m <sup>3</sup>	< 2.00	80.0
05	Carbon monoxide (CO)	IS 5182 Part 10: 1999 RA 2014	mg/m <sup>3</sup>	< 1.15	4.0

\*\*\*End of Report\*\*\*

For and on behalf of  
Standard<sup>S</sup> Environmental & Analytical Laboratories

Lalji P. N.  
Laboratory Head

  
Authorized Signatory

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## TEST REPORT

Test Report No: SEANN/1809/R845	Date: 05.10.2018	Page 1 of 1
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CUSTOMER DETAILS				
Customer Name & Address	M/s SmartCity (Kochi) Infrastructure Pvt. Ltd. Kochi, Ernakulam District			
Location of Site	Survey No	640/1, 640/2	Survey No	62/1, 62/2
	Village	Kakkanad	Village	Puthencruz
	Taluk	Kanayannur	Taluk	Kunnathunad
	District	Ernakulam	District	Ernakulam
	State	Kerala	State	Kerala
Customer Reference	---			
SAMPLE DETAILS				
Source of Sample	Ambient Air	Sample Code	SEANN/1809/S832	
Location of Monitoring	Smartcity Land A Main Entrance	Sampled By	Laboratory	
Date of Monitoring	28.09.2018	Test Started On	01.10.2018	
Sample Received On	29.09.2018	Test Completed On	03.10.2018	
Humidity	68 %	Sampling Procedure	IS 5182 Part V & XIV	

SL NO	TEST PARAMETER	TEST METHOD	UNIT	RESULT	NAAQ STANDARD
01	Particulate matter (PM <sub>10</sub> )	IS 5182 Part 23: 2006 RA 2014	µg/m <sup>3</sup>	78.1	100
02	Particulate matter (PM <sub>2.5</sub> )	EPA 40 CFR Part 50 Appendix - L	µg/m <sup>3</sup>	41.4	60.0
03	Sulphur dioxide (SO <sub>2</sub> )	IS 5182 Part 2: 2001 RA 2012	µg/m <sup>3</sup>	3.60	80.0
04	Nitrogen dioxide (NO <sub>2</sub> )	IS 5182 Part 6: 2006 RA 2012	µg/m <sup>3</sup>	5.90	80.0
05	Carbon monoxide (CO)	IS 5182 Part 10: 1999 RA 2014	mg/m <sup>3</sup>	1.60	4.0

\*\*\*End of Report\*\*\*

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## TEST REPORT

Test Report No: SEANN/1809/R847	Date: 05.10.2018	Page 1 of 1
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CUSTOMER DETAILS				
Customer Name & Address	M/s SmartCity (Kochi) Infrastructure Pvt. Ltd. Kochi, Ernakulam District			
Location of Site	Survey No	640/1, 640/2	Survey No	62/1, 62/2
	Village	Kakkanad	Village	Puthencruz
	Taluk	Kanayannur	Taluk	Kunnathunad
	District	Ernakulam	District	Ernakulam
	State	Kerala	State	Kerala
Customer Reference	---			
SAMPLE DETAILS				
Source of Sample	Ambient Air	Sample Code	SEANN/1809/S834	
Location of Monitoring	Smartcity Pavilion Office	Sampled By	Laboratory	
Date of Monitoring	28.09.2018	Test Started On	01.10.2018	
Sample Received On	29.09.2018	Test Completed On	03.10.2018	
Humidity	68 %	Sampling Procedure	IS 5182 Part V & XIV	

SL NO	TEST PARAMETER	TEST METHOD	UNIT	RESULT	NAAQ STANDARD
01	Particulate matter (PM <sub>10</sub> )	IS 5182 Part 23: 2006 RA 2014	µg/m <sup>3</sup>	37.5	100
02	Particulate matter (PM <sub>2.5</sub> )	EPA 40 CFR Part 50 Appendix – L	µg/m <sup>3</sup>	18.2	60.0
03	Sulphur dioxide (SO <sub>2</sub> )	IS 5182 Part 2: 2001 RA 2012	µg/m <sup>3</sup>	< 2.00	80.0
04	Nitrogen dioxide (NO <sub>2</sub> )	IS 5182 Part 6: 2006 RA 2012	µg/m <sup>3</sup>	< 2.00	80.0
05	Carbon monoxide (CO)	IS 5182 Part 10: 1999 RA 2014	mg/m <sup>3</sup>	< 1.15	4.0

\*\*\*End of Report\*\*\*

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## TEST REPORT


Test Report No: SEANN/1809/R852	Date: 05.10.2018	Page 1 of 1
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CUSTOMER DETAILS				
Customer Name & Address	M/s SmartCity (Kochi) Infrastructure Pvt. Ltd. Kochi, Ernakulam District			
Location Of Site	Survey No	640/1, 640/2	Survey No	62/1, 62/2
	Village	Kakkanad	Village	Puthencruz
	Taluk	Kanayannur	Taluk	Kunnathunad
	District	Ernakulam	District	Ernakulam
	State	Kerala	State	Kerala
Customer Reference	---			
SAMPLE DETAILS				
Source of sample	Ambient Noise Level			
Location of Monitoring	Smartcity Land A Main Entrance			
Date of Monitoring	28.09.2018			

DAYTIME	RESULT	NIGHTTIME	RESULT
06.00 Hrs	37.1 dB (A)	23.00 Hrs	34.1 dB (A)
07.00 Hrs	38.6 dB (A)	00.00 Hrs	36.6 dB (A)
08.00 Hrs	42.7 dB (A)	01.00 Hrs	37.3 dB (A)
09.00 Hrs	46.0 dB (A)	02.00 Hrs	37.0 dB (A)
10.00 Hrs	48.2 dB (A)	03.00 Hrs	37.7 dB (A)
11.00 Hrs	51.2 dB (A)	04.00 Hrs	36.6 dB (A)
12.00 Hrs	48.6 dB (A)	05.00 Hrs	38.4 dB (A)
13.00 Hrs	47.9 dB (A)	RESULTS	
14.00 Hrs	48.2 dB (A)		
15.00 Hrs	48.6 dB (A)	Noise Level (Leq) Daytime	46.7 dB (A)
16.00 Hrs	49.7 dB (A)		
17.00 Hrs	50.1 dB (A)	Noise Level (Leq) Nighttime	36.9 dB (A)
18.00 Hrs	44.9 dB (A)		
19.00 Hrs	41.6 dB (A)		
20.00 Hrs	37.8 dB (A)		
21.00 Hrs	37.4 dB (A)		
22.00 Hrs	34.9 dB (A)		

\*\*\*End of Report\*\*\*

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## TEST REPORT

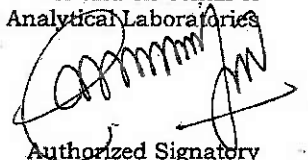
Test Report No: SEANN/1809/R848	Date: 05.10.2018	Page 1 of 1
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CUSTOMER DETAILS				
Customer Name & Address	M/s SmartCity (Kochi) Infrastructure Pvt. Ltd. Kochi, Ernakulam District			
Location of Site	Survey No	640/1, 640/2	Survey No	62/1, 62/2
	Village	Kakkanad	Village	Puthencruz
	Taluk	Kanayannur	Taluk	Kunnathunad
	District	Ernakulam	District	Ernakulam
	State	Kerala	State	Kerala
Customer Reference	---			
SAMPLE DETAILS				
Source of Sample	Stack Emission	Sample Diameter	0.40 m	
Stack Identity	1500 KVA DG Set 1	Sample Code	SEANN/1809/S835	
Date of Monitoring	28.09.2018	Sampled By	Laboratory	
Sample Received On	28.09.2018	Test Started On	30.09.2018	
Sampling Procedure	IS 11255	Test Completed On	01.10.2018	

SL NO	PARAMETERS	TEST METHOD	UNIT	RESULT	KSPCB LIMIT
01	Temperature	IS 11255 Part3: 2008 RA 2009	°C	152	---
02	Velocity of Gas Discharged	IS 11255 Part 3: 2008 RA 2009	m/sec	5.12	---
03	Volume of Gas Discharged	IS 11255 Part 3: 2008 RA 2009	Nm <sup>3</sup> /Hr	1623	---
04	Particulate Matter	IS 11255 Part 1: 1985 RA 2014	mg/Nm <sup>3</sup>	34.2	150

\*\*\*End of Report\*\*\*

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## TEST REPORT

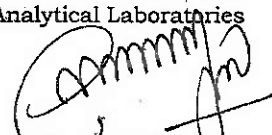
Test Report No: SEANN/1809/R849	Date: 05.10.2018	Page 1 of 1
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CUSTOMER DETAILS				
Customer Name & Address	M/s SmartCity (Kochi) Infrastructure Pvt. Ltd. Kochi, Ernakulam District			
Location of Site	Survey No	640/1, 640/2	Survey No	62/1, 62/2
	Village	Kakkanad	Village	Puthencruz
	Taluk	Kanayannur	Taluk	Kunnathunad
	District	Ernakulam	District	Ernakulam
	State	Kerala	State	Kerala
Customer Reference	---			
SAMPLE DETAILS				
Source of Sample	Stack Emission	Sample Diameter	0.40 m	
Stack Identity	1500 KVA DG Set 2	Sample Code	SEANN/1809/S836	
Date of Monitoring	28.09.2018	Sampled By	Laboratory	
Sample Received On	28.09.2018	Test Started On	30.09.2018	
Sampling Procedure	IS 11255	Test Completed On	01.10.2018	

SL NO	PARAMETERS	TEST METHOD	UNIT	RESULT	KSPCB LIMIT
01	Temperature	IS 11255 Part 3: 2008 RA 2009	°C	160	---
02	Velocity of Gas Discharged	IS 11255 Part 3: 2008 RA 2009	m/sec	5.31	---
03	Volume of Gas Discharged	IS 11255 Part 3: 2008 RA 2009	Nm <sup>3</sup> /Hr	1652	---
04	Particulate Matter	IS 11255 Part 1: 1985 RA 2014	mg/Nm <sup>3</sup>	30.5	150

\*\*\*End of Report\*\*\*

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## TEST REPORT

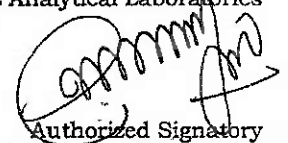
Test Report No: SEANN/1809/R850	Date: 05.10.2018	Page 1 of 1
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CUSTOMER DETAILS				
Customer Name & Address	M/s SmartCity (Kochi) Infrastructure Pvt. Ltd. Kochi, Ernakulam District			
Location of Site	Survey No	640/1, 640/2	Survey No	62/1, 62/2
	Village	Kakkanad	Village	Puthencruz
	Taluk	Kanayannur	Taluk	Kunnathunad
	District	Ernakulam	District	Ernakulam
	State	Kerala	State	Kerala
Customer Reference	---			
SAMPLE DETAILS				
Source of Sample	Stack Emission	Sample Diameter	0.40 m	
Stack Identity	1500 KVA DG Set 3	Sample Code	SEANN/1809/S837	
Date of Monitoring	28.09.2018	Sampled By	Laboratory	
Sample Received On	28.09.2018	Test Started On	30.09.2018	
Sampling Procedure	IS 11255	Test Completed On	01.10.2018	

SL NO	PARAMETERS	TEST METHOD	UNIT	RESULT	KSPCB LIMIT
01	Temperature	IS 11255 Part 3: 2008 RA 2009	°C	153	---
02	Velocity of Gas Discharged	IS 11255 Part 3: 2008 RA 2009	m/sec	5.47	---
03	Volume of Gas Discharged	IS 11255 Part 3: 2008 RA 2009	Nm <sup>3</sup> /Hr	1730	---
04	Particulate Matter	IS 11255 Part 1: 1985 RA 2014	mg/Nm <sup>3</sup>	37.4	150

\*\*\*End of Report\*\*\*

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Test Report No: SEANN/1809/R851	Date: 05.10.2018	Page 1 of 2
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### CUSTOMER DETAILS

Customer Name & Address	M/s SmartCity (Kochi) Infrastructure Pvt. Ltd. Kochi, Ernakulam District			
Location Of Site	Survey No	640/1, 640/2	Survey No	62/1, 62/2
	Village	Kakkanad	Village	Puthencruz
	Taluk	Kanayannur	Taluk	Kunnathunad
	District	Ernakulam	District	Ernakulam
	State	Kerala	State	Kerala
Customer Reference	---			

### SAMPLE DETAILS

Sample Code	SEANN/1809/S838	Sample Received On	28.09.2018
Sample Name	Water	Sampling Procedure	---
Sample Description	Open Well	Sampling Location	Land B
Identification By Customer	---	Sample Condition	Good
Sampled On	---	Test Started On	29.09.2018
Sampled By	Customer	Test Completed On	03.10.2018

SL NO	TEST PARAMETER	TEST METHOD	UNITS	RESULT	ACCEPTABLE LIMIT (IS 10500 - 2012)
01	Colour	IS 3025 Part 4: 1983 RA 2012	Hazen	1.00	5.00 (Max)
02	Odour	IS 3025 Part 5: 1983 RA 2012	---	Unobjectionable	Unobjectionable
03	Conductivity	IS 3025 Part 14:1984 RA 2013	µS/cm	380	---
04	Temperature	IS 3025 Part 9: 1984 RA 2013	°C	27.0	---
05	Turbidity	IS 3025 Part 10:1984 RA 2012	NTU	0.60	1.00 (Max)
06	pH	IS 3025 Part 11:1983 RA 2012	---	6.72	6.50 - 8.50
07	Total Dissolved Solids	IS 3025 Part 16:1984 RA 2012	mg/L	230	500 (Max)
08	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 Part 21: 2009 RA 2014	mg/L	96.9	200 (Max)
09	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 Part 23: 1986 RA 2014	mg/L	107	200 (Max)
10	Free Residual Chlorine	IS 3025 Part 26:1986 RA 2014	mg/L	< 0.10	0.20 (Min)
11	Chloride (as Cl)	IS 3025 Part 32:1988 RA 2014	mg/L	15.8	250 (Max)
12	Calcium (as Ca)	IS 3025 Part 40:1991 RA 2014	mg/L	30.7	75.0 (Max)
13	Magnesium (as Mg)	IS 3025 Part 46:1994 RA 2014	mg/L	4.88	30.0 (Max)
14	Iron (as Fe)	IS 3025 Part 53:2003 RA 2014	mg/L	0.21	1.00 (Max)
15	Sulphate (as SO <sub>4</sub> )	IS 3025 Part 24: 1986 RA 2014	mg/L	< 0.10	200 (Max)
16	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition 4500-F- B D: 2017	mg/L	< 0.10	1.00 (Max)
17	Silica as SiO <sub>2</sub>	IS 3025 Part 35:1988 RA 2014	mg/L	5.40	---
18	Phosphate (as PO <sub>4</sub> )	IS 3025 Part 31: 1988 RA 2014	mg/L	< 0.10	---
19	Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition 4500-NO3 B 2017	mg/L	4.71	45.0 (Max)

### Standard<sup>S</sup> Environmental & Analytical Laboratories

Accreditation and Approval: NABL as per ISO 17025: 2005 & "A" Grade laboratory of KSPCB  
K.J. Tower, Pathalam, Udyogamandal P.O., Ernakulam-683 501, Tel. 0484-2546660, 93 87 27 24 02, 90 74 34 14 43  
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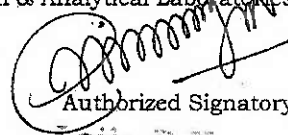


Test Report No: SEANN/1809/R851	Date: 05.10.2018	Page 2 of 2
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20	Salinity	SEAAL/SOP/06	ppm	0.029	---
21	Selenium (as Se)	IS 3025 Part 56: 2003 RA 2014	mg/L	< 0.01	0.01 (Max)
22	Arsenic (as As)	IS 3025 Part 37: 1988 RA 2014	mg/L	< 0.002	0.01 (Max)
23	Copper (as Cu)	IS 3025 Part 42:1992 RA 2014	mg/L	< 0.05	0.05 (Max)
24	Manganese (as Mn)	IS 3025 Part 59:2006 RA 2012	mg/L	< 0.05	0.10 (Max)
25	Cadmium (as Cd)	IS 3025 Part 41:1992 RA 2014	mg/L	< 0.003	0.003 (Max)
26	Chromium (as Cr)	IS 3025 Part 52: 2003 RA 2014	mg/L	< 0.05	0.05 (Max)
27	Zinc (as Zn)	IS 3025 Part 49: 1994 RA 2014	mg/L	< 0.20	5.00 (Max)
28	Mercury (as Hg)	IS 3025 Part 48: 1994 RA 2014	mg/L	< 0.001	0.001 (Max)
29	Cyanide (as CN)	IS 3025 Part 27:1986 RA 2014	mg/L	< 0.01	0.05 (Max)
30	Lead (as Pb)	IS 3025 Part 47: 1994 RA 2014	mg/L	< 0.01	0.01 (Max)
31	Aluminium (as Al)	IS 3025 Part 55:2003 RA 2014	mg/L	< 0.03	0.03 (Max)
32	Boron (as B)	IS 3025 Part 57: 2005 RA 2012	mg/L	< 0.50	0.50 (Max)
33	Sodium (as Na)	IS 3025 Part 45: 1993 RA 2014	mg/L	6.21	---
34	Potassium (as K)	IS 3025 Part 45: 1993 RA 2014	mg/L	< 0.25	---
35	Nickel (as Ni)	IS 3025 Part 54: 2003 RA 2014	mg/L	< 0.02	0.02 (Max)
36	Total Nitrogen	IS 3025 Part 34: 1988 RA 2014	mg/L	9.70	---
37	Total Phosphorous	IS 3025 Part 31: 1988 RA 2014	mg/L	< 0.10	---
38	Total Coliform	IS 1622:1981 RA 2014	---	Absent/100 ml	Absent/100 ml
39	E coli	IS 15185 : 2016	---	Absent/100 ml	Absent/100 ml

\*\*\*End of Report\*\*\*

For and on behalf of  
Standard<sup>S</sup> Environmental & Analytical Laboratories

  
Authorized Signatory  
Raju P. N.  
Laboratory Head

Standard<sup>S</sup> Environmental & Analytical Laboratories

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