adani

Ref No: TKIAL/CO/AERA-MYTP/2023/1 21st February, 2023

To,
The Chairperson,
Airports Economic Regulatory Authority of India,
AERA Building, New Administrative Block,
Safdarjung Airport,
New Delhi- 110003.

Sub: Submission of Multi Year Tariff Proposal (MYTP) by TRV (Kerala) International Airport Limited (TKIAL) for True up period (From COD to 31st March 2022) & Projections for Third Control Period (FY2022-23 to FY2026-27)

Dear Sir,

The Authority vide order No. 03/2017-18 dated 2nd June 2017 approved the existing tariff for Thiruvananthapuram International Airport till 31st March 2021, vide Order No. 42/2021-22 dated 14th March 2022 extended the said tariff till 30th September 2022. It was further extended till 31st March 2023 vide Order No. 22/2022-23 dated 20th September 2022.

A clarification was sought for the Control Period for Jaipur, Guwahati & Thiruvananthapuram Airports on 15th April 2022, against which the Authority vide its Public Notice No 05/2022-23 dated 20th June 2022 decided as under:

> *4. Accordingly, in view of position explained in the preceding paras, which makes it difficult for AERA to stick to original tariff cycle in case of these three Airports, Concession Agreements and the request received from the Airport Operator, the Authority takes the following decision:*
> *(i) To shift the Control Period for Guwahati, Jaipur and Thiruvananthapuram Airports from 01.04.2021-31.03.2026 to 01.04.2022-31.03.2027. The periodicity of the Control Period will be five years only.*
> *(ii) To consider the true up for 01.04.2021 to 31.03.2022 at the time of determination of tariff for the Third Control Period as per AERA policy.*
> *(iii) This issue will be suitably highlighted in the Consultation Paper to be issued by the Authority for determination of Aeronautical tariff for the Third Control Period in respect of Guwahati, Jaipur and Trivandrum Airports.*

TRV (Kerala) International Airport Limited
(Formerly known as Adani Thiruvananthapuram International Airport Limited)
Adani Corporate House,
Shantigram, Near Vaishno Devi Circle,
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(iv) The decision to shift the start of the tariff period by one year while keeping the Control Period of 05 years as per the provisions of AERA Act is taken under exceptional circumstances as elaborated above.

In line with the Authority's decision, we hereby submit the Multi Year Tariff Proposal for Thiruvananthapuram International Airport (TKIAL) for the True up period (from COD to 31st March 2022) and determination of Aeronautical Tariff for Third Control Period starting from 1st April 2022 to 31st March 2027 for kind consideration and approval of the same.

We shall be pleased to provide any further information that Authority may require in this regard.

Thanking you

Yours truly,
For TRV (Kerala) International Airport Limited,

Manoj Chanduka
Authorized Signatory

Enclosures : -

1. Multi Year Tariff Proposal along with annexures
2. Financial Model in Excel format

TRV (Kerala) International Airport Limited
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BEFORE THE AIRPORTS ECONOMIC REGULATORY AUTHORITY OF INDIA AT NEW DELHI
SUBMISSION OF MULTI YEAR TARIFF PROPOSAL FOR AND ON BEHALF OF: M/S TRV (KERELA) INTERNATIONAL AIRPORT LIMITED (TKIAL)

I, Manoj Chanduka, aged 56, resident of Gujarat, India acting in my official capacity as authorized signatory in M/s TRV (Kerala) International Airport Limited having its registered office at Adani Corporate House, Shantigram, S G Highway, Ahmedabad, 382421 do hereby state and affirm as under that:

1. That I am duly authorized to act for and on behalf of M/s TRV (Kerala) International Airport Limited in the matter of making this submission before the Airports Economic Regulatory Authority of India, New Delhi ('the Authority');

2. I am competent to make this submission before the Authority;

3. I am making this submission in my official capacity and the facts stated herein are based on official records;

4. The contents of this submission which include (i) Business Plan; (ii) Information pertaining to physical assets; (iii) Information relation to the Regulatory Building Blocks; (iv) Historical and Forecasted Volumes; and (v) Historical Revenue, are correct and true to my knowledge and belief and nothing material has been concealed there from.

For **TRV (Kerala) International Airport Limited,**

Manoj Chanduka
Authorized Signatory
Place: Ahmedabad
Date: 21st February, 2023

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Confidential Information

With reference to this MYTP, TKIAL will make various submissions/providing information, including but not limited to the information being submitted along with this MYTP, from time to time to the Authority.

TKIAL would request the Authority to maintain the confidentiality of financial information and commercial agreements by not sharing any such information in the public domain. TKIAL would not have objections with the Authority publishing documents that should be available to public under any other law or are already under public domain. TKIAL's MYTP business plan containing financials are requested not to be placed in public. The following legal agreements which contain commercially sensitive data for which parties have the responsibility to maintain confidentiality and/or are the property of parties signing them should not be published for common access:

- Any communication between AEL/AAHL/TKIAL and AAI/Authority
- Commercial Agreements/arrangements/Letter of Awards/Bid documents etc.

Multi Year Tariff Proposal for TRV (Kerala) International Airport Limited (TKIAL) (Formerly known as Adani Thiruvananthapuram International Airport Limited) for True up period (from COD to 31st March 2022) and Determination of Aeronautical Tariff for Third Control Period (from 1st April 2022 to 31st March 2027)

21st February, 2023

Contents

List of Abbreviations

AAHL	Adani Airport Holdings Limited
AAI	Airports Authority of India
AAICLAS	Airports Authority of India Cargo Logistics and Allied Services Company Limited
AEL	Adani Enterprises Limited
AERA	Airports Economic Regulatory Authority of India
ANS	Airport Navigation Services
AO	Airport Operator
AOCC	Airport Operations Control Center
AODB	Airport Operations Data Base
ARFF	Aviation Rescue and Fire Fighting
ARR	Aggregate Revenue Requirement
ASQ	Airport Service Quality
ATC	Air Traffic Control
ATM	Air Traffic Movements
AUCC	Airports Users Consultative Committee
BCAS	Bureau of Civil Aviation Security
BHS	Baggage Handling System
BMA	Baggage Makeup Area
BRS	Baggage Reconciliation System
CA	Concession Agreement
CAGR	Compounded Annual Growth Rate
CAPM	Capital Asset Pricing Model
CBR	California Bearing Ratio
CGF	Cargo, Ground handling, and Fuel
CISF	Central Industrial Security Force
COD	Commercial Operations Date
CoD	Cost of Debt
CoE	Cost of Equity
CNS/ATM	Communications, Navigation and Surveillance Systems for Air Traffic Management
CPI	Consumer Price Index

CPWD	Central Public Works Department
CUSS	Common User Self Service
CUTE	Common User Terminal Equipment
CWIP	Capital Work In Progress
DFMD	Door Frame Metal Detector
DGCA	Directorate General of Civil Aviation
DVOR	Doppler Very high frequency Omni Range
ERP	Equity Risk Premium
ETD	Explosive Trace Detector
FCP	First Control Period
FIDS	Flight Information Display Systems
FRoR	Fair Rate of Return
GA	General Aviation
GoI	Government of India
GP	Glide Path
GSE	Ground Support Equipment
GST	Goods & Service Tax
HOS	Head of Stand
HVAC	Heating, Ventilation and Air Conditioning
ICC	International Cargo Center
IDC	Interest During Construction
IE	Independent Engineer
ILHBS	In-Line Hold Baggage Screening
IMD	India Meteorological Department
IMF	International Monetary Fund
IMG	Inter-Ministerial Group
ITB	Integrated Terminal Building
KSIE	Kerala State Industrial Enterprises Limited
LoA	Letter of Award
LLZ	Localizer
MoCA	Ministry of Civil Aviation
MPPA	Million Passengers Per Annum
MoU	Memorandum of Understanding
MSSR	Mono-pulse Secondary Surveillance Radar

MYTP	Multi Year Tariff Proposal
NAR	Non-Aeronautical Revenue
NCAP	National Civil Aviation Policy
ORAT	Operational Readiness and Airport Transfer
O&M	Operation & Maintenance
Pax	Passengers
PBB	Passenger Boarding Bridge
PBG	Performance Bank Guarantee
PCN	Pavement Classification Number
PHP	Peak Hour Passenger
PIDS	Perimeter Intrusion Detection System
PPP	Public Private Partnership
R&M	Repair and Maintenance
RAB	Regulatory Asset Base
RESA	Runway End Safety Area
RfP	Request for Proposal
RWY	Runway
SBD	Self-Baggage Drop
SCP	Second Control Period
SMR	Surface Movement Radar
SOFR	Secured Overnight Financing Rate
SPV	Special Purpose Vehicle
STP	Sewage Treatment Plant
TCP	Third Control Period
TIA	Thiruvananthapuram International Airport
TKIAL	TRV (Kerala) International Airport Limited
UDF	User Development Fee
UK	United Kingdom
UPS	Uninterruptible Power Supply
WDV	Written Down Value Method
WIPA	Work In Progress Asset
WPI	Wholesale Price Index
XBIS	X-ray Baggage Inspection System
YoY	Year On Year

1. Background

1.1. Kerala is a state on the Malabar Coast of India. It was formed on 1 November 1956, following the passage of the States Reorganisation Act, by combining Malayalam-speaking regions of the erstwhile regions of Cochin, Malabar, South Canara, and Travancore. Spread over 38,863 sq km (15,005 sq mi)[1], Kerala is the 21st largest Indian state by area. It is bordered by Karnataka to the north and northeast, Tamil Nadu to the east and south, and the Lakshadweep Sea to the west. With 33 million[2] inhabitants as per the 2011 census, Kerala is the 13th-largest Indian state by population.

1.2. Thiruvananthapuram is the capital of Kerala. It is the most populous city in Kerala with a population of 3.3 million[3] as of 2011 which includes 1.77 million of Urban Population. Thiruvananthapuram is a major information technology hub in Kerala and contributes 55% of the state's software exports as of 2016.

1.3. Thiruvananthapuram International Airport (IATA: TRV, ICAO: VOTV), is an international airport which serves the city of Thiruvananthapuram. Established in 1932, it is the first airport in the state of Kerala and fifth international airport of India, officially declared in 1991. Spread over an area of 700 acres (280 ha), the airport is approximately 3.7 km (2.3 mi) due west from the city centre and the Padmanabhaswamy Temple, 16 km (9.9 mi) from Kovalam beach, 13 km (8.1 mi) from Technopark and 21 km (13 mi) from the under construction Vizhinjam International Seaport. It shares a visible proximity to Shankumugham Beach making it the nearest airport to a sea in India, just about 0.6 miles (approx. 1 km) away from the sea.

1.4. The Government of India (GoI), in an attempt to bring expertise, enterprise, professionalism, investments, and efficiency in service

[1] https://kerala.gov.in/subdetail/NTM1ODMxNzQuNDg=/MjA0ODc2ODQuMzY=
[2] https://censusindia.gov.in/census.website/data/population-finder
[3] https://censusindia.gov.in/census.website/data/population-finder

delivery to airports, decided to privatize the operations, management, and development of Thiruvananthapuram International Airport (TIA), Thiruvananthapuram.

1.5. Accordingly, the Airports Authority of India (hereinafter referred to as "AAI") invited proposals, through a global competitive bidding process, for the operations, management, and development of TIA, while prescribing technical and commercial terms and conditions. In a competitive bidding, Adani Enterprises Limited (AEL) emerged as the highest bidder to operate, manage, and develop TIA.

1.6. Having evaluated the bids and having received security clearance from the Ministry of Home Affairs, GoI, AAI accepted the bid of AEL, and issued a Letter of Award (LOA). As per the Concession Agreement, AEL has promoted and incorporated the Special Purpose Vehicle (SPV) – TRV (Kerala) International Airport Limited (TKIAL), as the concessionaire under the Companies Act, 2013. TKIAL signed the Concession Agreement with AAI on 19th January 2021 for exclusive right to operate, manage and develop Thiruvananthapuram Airport for a period of 50 (fifty) years from the Commercial Operations Date (COD).

1.7. AEL holds 100% shareholders equity in TKIAL.

1.8. TKIAL achieved Commercial Operations Date (COD) on 14th October 2021.

1.9. The Concession Agreement between AAI and TKIAL (refer Annexure – A) and Memorandum of Understanding between GoI and TKIAL (refer Annexure – B) provides TKIAL the right to levy aeronautical and non-aeronautical charges from users effective from the COD.

1.10. With respect to TKIAL's right to demand User Fees for aeronautical and non-aeronautical services, the Concession Agreement[4] states that:

[4] Clause 28.1.1. of the Concession Agreement

"On and from COD and till the Transfer Date, the Concessionaire has the sole and exclusive right to demand, collect and appropriate Fees from the Users for the provision of the Aeronautical Services and Non-Aeronautical Services, including the airlines and passengers, in accordance with the provisions of the Regulatory Framework and this Agreement including the terms set out in Schedule R (Memorandum of Understanding), provided that the Concessionaire may determine and collect Fees at such lower rates as may be agreed with the Users or any category of Users in accordance with the Applicable Laws and Applicable Permits."

Additionally, the Memorandum of Understanding[5] entitles TKIAL to levy, collect and appropriate aeronautical charges from the COD, from the users of the TIA at the tariff rates approved by AERA.

1.11. In accordance with the same, AAI issued a notification to all the stakeholders of TIA informing that TKIAL commenced operation from 14th October 2021 and shall be entitled to demand and collect fees in accordance with the provisions of the Concession Agreement.
A copy of said notification is enclosed herewith and marked as Annexure C.

1.12. As mentioned above, TKIAL has an exclusive right to demand, collect and appropriate fees from COD onwards at the rates determined by AERA. As an interim measure, TKIAL applied to AERA vide letter with reference no. ATIAL/CO/AERA-IT/2021/1 dated 27th August, 2021 to allow the existing rates at TIA from the COD till 31st Mar 2022. Subsequently, AERA vide order No. 22/2020-21 dated 6th Oct 2021 stated the following: -

(i) The new Airport Operator, M/s Adani is allowed to levy and collect the existing Aeronautical Tariffs as per the Tariff Orders mentioned at Table-I [(A) & (B)] above, at the International Airports of Jaipur, Thiruvananthapuram and Guwahati from their respective CODs (ref. Table-II) till the period ending 31.03.2022, or, till regular

[5] Clause 2.2.5 of the Memorandum of Understanding

determination of tariff for the 3rd Control Period, whichever is earlier.

(ii) The Airport Operator shall submit MYTP for 3rd Control Period well in time as per the provisions of AERA Regulatory Guidelines and as per the timelines specified in the Concession Agreement with AAI.

1.13. Subsequently, TKIAL vide letters TKIAL/CO/AERA-IT/2022/2 dated 28th February 2022 and TKIAL/CO/AERA-IT/2021/3 dated 1st September 2022 respectively asked for extension of existing rates till 30 September 2022 and then till 31 March 2023 respectively for which TKIAL received approval from the Authority as per Order No. 42/2021-22 dated 14th March 2022 and Order No. 22/2022-23 dated 20th September 2022 respectively.

1.14. In addition to Airport activities, TKIAL is also providing the Cargo Handling services at the TIA. AERA vide order no. 47/2021-22 dated 17th March allowed TKIAL to levy the existing charges for Domestic Cargo Handling Services till 30st September 2022. Further, in order to avoid a regulatory vacuum, AERA vide Order No. 46/2022-23 dated 23rd September 2022 allowed TKIAL continuation of existing rates for the Cargo facility till 31st March 2023.

1.15. On 15th April 2022, a clarification was sought from AERA on the commencement of control period in respect of three Airports viz., Guwahati, Jaipur and Thiruvananthapuram.

AERA decided the following vide Public Notice No. 05/2022-23 dated 20th June 2022:

Accordingly, in view of position explained in the preceding paras, which makes it difficult for AERA to stick to original tariff cycle in case of these three Airports, Concession Agreements and the request received from the Airport Operator, the Authority takes the following decision:

(i) *To shift the Control Period for Guwahati, Jaipur and Thiruvananthapuram Airports from 01.04.2021-31.03.2026 to 01.04.2022-31.03.2027. The periodicity of the Control Period will be five years only.*

(ii) *To consider the true up for 01.04.2021 to 31.03.2022 at the time of determination of tariff for the Third Control Period as per AERA policy.*

(iii) *This issue will be suitably highlighted in the Consultation Paper to be issued by the Authority for determination of Aeronautical tariff for the Third Control Period in respect of Guwahati, Jaipur and Thiruvananthapuram Airports.*

(iv) *The decision to shift the start of the tariff period by one year while keeping the Control Period of 05 years as per the provisions of AERA Act is taken under exceptional circumstances as elaborated above.*

1.16. TKIAL through this document aims to submit a detailed Multi Year Tariff Proposal (MYTP) for the True up period starting from 14th October 2021 to 31st March 2022 and for 3rd Control Period from 1st April 2022 to 31st March 2027 (TCP) of TIA.

Features of the Airport:

1.17. The traffic handled by TIA between FY2017 to FY2022 is given in the table below:

	Pax			ATMs		
Year	**Dom.**	**Int.**	**Total**	**Dom.***	**Int.**	**Total**
2016-17	1,571,767	2,309,742	**3,881,509**	12,473	16,644	**29,117**
2017-18	1,916,127	2,477,342	**4,393,469**	14,680	19,058	**33,738**
2018-19	1,904,908	2,529,551	**4,434,459**	14,452	18,641	**33,093**
2019-20	1,709,229	2,209,964	**3,919,193**	14,030	14,812	**28,842**
2020-21	476,559	458,876	**935,435**	5,111	4,202	**9,313**
2021-22	699,447	956,059	**1,655,506**	7,010	8,346	**15,356**

*Above table includes total domestic ATMs, which comprise both ATMs less than 80-seater and ATMs more than 80-seater. Less than 80-seater aircraft movements account for approx. 10% - 15% of total domestic ATMs. TKIAL requests AERA to kindly take cognizance of the fact.

1.18. Technical and Terminal building details of TIA are provided in the table below:

Particulars	Details
Total airport area	630 acres Carved Out approx. 30 Acres Demised approx. 600 Acres
Total covered area of Terminal Building (TB)	Terminal 1 – 15,800 sqm, Terminal 2 – 43,500 sqm as per area statement received from AAI on 1st December 2022. A copy of AAI's letter is enclosed herewith and marked as Annexure D.
Existing Passenger Capacity	4 to 4.5 MPPA
Main Runway orientation and length	Runway 14/32, dimension 3,373m x 45m
Apron	International- 13 Narrow body equivalent Domestic - 11 Narrow body equivalent

2. Methodology to determine Aggregate Revenue Requirement (ARR)

2.1. The Concession Agreement[6] defines the regulator and regulatory framework as the following:

""Regulator" means AERA or any other entity as may be designated by GoI for determination of Aeronautical Charges for the Airport as per Applicable Laws, as the case may be."

""Regulatory Framework" means the framework adopted by the Regulator as per the Applicable Laws, including the AERA Act and Airports Economic Regulatory Authority (Terms and Conditions for Determination of Tariff for Airport Operators) Guidelines, 2011."

2.2. As per the Concession Agreement[7]:
"The GOI has, through the National Civil Aviation Policy, dated June 16, 2016, approved, ("Shared-Till Approval") the 30% (thirty percent) shared-till framework for the determination and regulation of the Aeronautical Charges for all airports in India, and the same shall be accordingly considered by the Regulator for the purposes of the determination of the Fees/Aeronautical Charges pursuant to the provisions of this Agreement."

2.3. As per clause 13 (1) of the AERA Act, 2018, the authority shall determine the tariff for aeronautical services taking into consideration "the concession offered by the Central Government in any agreement or memorandum of understanding or otherwise."

2.4. The methodology adopted by the Authority to determine tariff is based on AERA Act, 2008 (AERA Act) and the AERA (Terms and Conditions for

[6] As per definitions of Concession Agreement
[7] Clause 28.3.2. of the Concession Agreement

Determination of Tariff for Airport Operators) Guidelines, 2011 dated 28th February 2011 (Tariff Guidelines).

2.5. Further, tariff is based on 'hybrid till' method wherein 30% of non-aeronautical revenues is used to cross-subsidize ARR (Order No. 14/ 2016-17 "In the matter of aligning certain aspects of AERA's Regulatory Approach (Adoption of Regulatory Till) with the provisions of the National Civil Aviation Policy-2016 (NCAP-2016) approved by the Government of India" dated 12.01.2017).

2.6. The Authority shall determine the ARR for the current control period on the basis of the following Regulatory Building Blocks:

- Regulatory Asset Base (RAB)
- Depreciation (D);
- Fair Rate of Return applied to the Regulatory Asset Base (FRoR x RAB);
- Operation and Maintenance Expenditure (O);
- Taxation (T);
- Revenue from services other than aeronautical services (NAR).

2.7. Based on the building blocks provided above, the formula for determining ARR under Hybrid Till is as follows:

$$ARR = \sum_{t=1}^{5} (ARR_t) \; and$$

$$ARR_t = (FRoR \times RAB_t) + D_t + O_t + T_t - 30\% \; of \; NAR_t$$

Where:

- 't' is the Tariff Year in the Control Period;
- ARR_t is the Aggregate Revenue Requirement for year 't';
- FRoR is the Fair Rate of Return for the control period;
- RAB_t is the Regulatory Asset Base for the year 't';
- D_t is the Depreciation corresponding to the RAB for the year 't';

- $O_t$is the Operation and Maintenance Expenditure for the year 't', which includes all expenditures incurred by the Airport Operator(s) including expenditure incurred on statutory operating costs and other mandate operating costs;
- T_t is the corporate tax for the year 't' paid by the airport operator on the aeronautical profits; and
- NAR_t is revenue from services other than aeronautical services for the year 't'

2.8. TKIAL has adopted a similar approach for determination of aeronautical revenues as stated in the guidelines of AERA, as also in line with AERA Act and as mandated under the Concession Agreement.

2.9. A true up of all regulatory blocks in the next control period is required as per AERA methodology. In respect to the true-up till COD, it is to be provided by AAI to AERA for consideration. Further TKIAL has done calculations of true-up of the period from COD to 31st March 2022 and projections for Third Control Period from 01st April 2022 to 31st March 2027.

2.10. TKIAL has capitalised financing allowance using the formula provided by the Guidelines, 2011:

$$Financing\ Allowance = R_d \times (WIPA_{t-1} + \frac{Capex - SC - CA}{2})$$

Where

(i) R_d is the cost of debt determined by the Authority

(ii) SC are the capital receipts

(iii) CA are the commissioned assets

3. True-up for Second Control Period

True-up for SCP upto COD and related clauses under the Concession Agreement signed between AAI and TKIAL

3.1. AAI vide letter reference number AAI/Tariff/CHQ/Trivandrum/MYTP/2022-23 dated 14th December 2022 has submitted the true-up for SCP upto COD to AERA with a true-up claim of INR 812.67 Crores as on COD.

3.2. In November 2022, AAI & TKIAL team members jointly carried out the physical verification of the assets and have signed the joint verification fixed asset register as on COD. The summary of the signed statement is as follows: -

S. No.	Particulars	No. of Assets	Amount (₹ in Crores)
A1	Aeronautical assets handed over to ATIAL	1664	486.21
A2	Non-Aeronautical assets handed over to ATIAL	171	1.56
A3	ANS assets handed over to ATIAL	46	0.05
	TOTAL	**1881**	**487.82**

Joint asset reconciliation statement signed with AAI for assets handed over to TKIAL on COD is provided as Annexure E.

3.3. As per the provisions of the Concession Agreement, TKIAL is required to pay to AAI the amount of WDV (Written Down Value Method of Depreciation) of assets as on COD. The amount paid by TKIAL to AAI for assets as at 31st March 2018 (Estimated Deemed Initial RAB) was INR 424 Crores for Aeronautical Assets and INR 7.15 Crores for Non-Aeronautical Assets. Invoices received from AAI for Estimated Deemed Initial RAB and Initial Non-Aeronautical Investment are enclosed herewith and marked as Annexure F.

3.4. **The amounts paid for Estimated Deemed Initial RAB is subject to final reconciliation by AERA to arrive the Adjusted Deemed Initial RAB as per**

below clauses of CA including adjustment for over-recovery or under-recovery of true-up amount relating to period before COD.

"28.11.3 *(a) It is agreed by the Parties that the Concessionaire shall be liable to pay to the Authority an amount equivalent to the investments made by the Authority in the Aeronautical Assets as of the COD and considered by the Regulator as part of the Regulatory Asset Base, subject to requisite reconciliation, true-up and final determination by the Regulator of the quantum of such investment ("**Deemed Initial RAB**").*

*(b) The estimated depreciated value of investments made by the Authority in the Aeronautical Assets at the Airport as on March 31, 2018 is Rs. 424,00,00,000 (Rupees Four hundred twenty four crores) ("**Estimated Deemed Initial RAB**"). It is agreed by the Parties that the Estimated Deemed Initial RAB shall be due and payable by the Concessionaire to the Authority within 90 (ninety) days of COD*

*28.11.4 Pursuant to the payment of the Estimated Deemed Initial RAB, and upon the reconciliation, true-up and final determination by the Regulator of the quantum of the investment under 28.11.3(a), any surplus or deficit in the Estimated Deemed Initial RAB with respect to the Deemed Initial RAB shall be adjusted as part of the Balancing Payment that becomes due and payable as per Clause 31.4 after the expiry of 15 (fifteen) days from such final determination by the Regulator, with due adjustment for the following ("**Adjusted Deemed Initial RAB**"):*

(a) reduced to the extent of over-recoveries, if any, of Aeronautical Revenues by the Authority until the COD, that the Regulator would provide for as a downward adjustment while determining Aeronautical Charges for the next Control Period; or

(b) increased to the extent of under-recoveries, if any, of Aeronautical Revenues by the Authority until the COD, that the Regulator would provide for as an upward adjustment while determining Aeronautical Charges for the next Control Period.

The amount(s) to be paid by the Authority or Concessionaire shall be the present value of Adjusted Deemed Initial RAB calculated using the fair

rate of return as determined by the Regulator for the time period from the COD to the date of actual payment of the Adjusted Deemed Initial RAB.

28.11.5 Upon reimbursement of such amount by the Concessionaire to the Authority, the Deemed Initial RAB will, in addition to the investments made by the Concessionaire, be considered for the purpose of determination of Aeronautical Charges by the Regulator.

(a) The Authority undertakes to make any required supporting submissions to the Regulator towards such consideration and determination by the Regulator.

(b) The Parties shall submit to and request the Regulator to separately identify the Deemed Initial RAB in future determinations of Aeronautical Charges with regard to consideration of depreciation, required returns, etc.

*28.11.6 For the purpose of this Clause 28.11, "**Control Period**" and "**Regulatory Asset Base**" shall have the meaning set forth in Airports Economic Regulatory Authority (Terms and Conditions for Determination of Tariff for Airport Operators) Guidelines, 2011."*

28.12 "It is agreed by the Parties that the Concessionaire shall pay to the Authority an amount equivalent to the estimated depreciated value of investments made by the Authority in the Airport as of the COD towards development of Non-Aeronautical Assets ("Initial Non-Aeronautical Investments").

The estimated depreciated value of investments made by the Authority towards development of the Non-Aeronautical Assets at the Airport as on March 31, 2018 is Rs. 7,15,00,000 (Rupees Seven Crores and Fifteen Lakhs) ("Estimated Initial Non-Aeronautical Investments"). It is agreed by the Parties that the Estimated Initial Non-Aeronautical Investments shall be due and payable by the Concessionaire to the Authority within 90 (ninety) days of COD.

28.12.3 Pursuant to the payment of the Estimated Initial Non-Aeronautical Investments, and upon the final determination by the

Independent Engineer of the quantum of the Initial Non-Aeronautical Investments, any surplus or deficit amount(s) to be paid by the Authority to the Concessionaire or the Concessionaire to the Authority, as the case may be, shall be adjusted as part of the Balancing Payment that becomes due and payable as per Clause 31.4 after the expiry of 15 (fifteen) days from such final determination.

28.12.4 The amount(s) to be paid by the Authority or Concessionaire pursuant to Clause 28.12.3 shall be the present value of the same, calculated using the fair rate of return as determined by the Regulator for the time period from the COD to the date of actual payment of such amount(s).

31.4 Reconciliation

31.4.1 Every quarter the balancing payment (reflecting netting of amounts which are due and payable as reimbursement, adjustment or otherwise, or as Damages which are not paid, or not recovered from the Performance Security or the Bid Security, as the case may be, under this Agreement) (the "Balancing Payment") shall be calculated by the Authority who shall deliver its calculation and statement to the Concessionaire within 15 (fifteen) days of the end of each quarter of an Accounting Year. Each such statement shall have attachments reasonably supporting evidence of all amounts claimed. For the avoidance of any doubt, Balancing Payment calculated under this Clause 31.4.1 shall not take into account the Monthly Concession Fee for such calculation, but shall include any adjustment pursuant to Clause 27.5.

31.4.2 On receipt of the Authority's statement under Clause 31.4.1, the Concessionaire shall have 20 (twenty) days in which to (a) approve or (b) require recalculations and amendments. Both Parties shall maintain sufficient records to enable verification of all the Authority's statements made under Clause 31.4.1. Failure by the Concessionaire to comment on any Authority's statement within the above 20 (twenty) day period shall be deemed to constitute approval.

31.4.3 If the Authority does not submit its calculation of the Balancing Payment within 10 (ten) days of the end of any quarter of an Accounting Year, the Concessionaire shall be entitled to submit such calculation, together with attachments reasonably supporting evidence of all

amounts claimed, and in such event, the provisions of Clause 31.4.2 above shall apply to the Parties in reverse.

TKIAL has not added the True-up amount of SCP claimed by AAI while calculating the ARR in Chapter 18. We request AERA to kindly calculate the Adjusted Deemed Initial RAB and suitably add the true-up amount while determining the ARR for the TCP.

Capital Work in Progress (CWIP):

3.5. With respect to TKIAL's obligations to pay AAI any amount incurred by AAI as on COD with respect to the contracts related to works-in progress, the Concession Agreement states the following[8]:

"6.4.5 Work in Progress

Notwithstanding anything to the contrary in this Clause 6.4, the Concessionaire shall be liable to pay to the Authority such amounts as may have been incurred by the Authority as on the COD in respect of the contracts relating to works-in-progress as have been set forth in Schedule T. Such amounts shall be intimated by the Authority with supporting documents and details within 30 (thirty) days of COD and shall be due and payable by the Concessionaire to the Authority within a period of 90 (ninety) days thereon.

The Parties shall constitute a committee comprising representatives of the Concessionaire, Authority and each of the counterparties under such contracts, which committee shall be responsible for: (a) facilitating any discussions and/ or interactions amongst AAI, the Concessionaire and the counterparties under such contracts, including in respect of any modifications to the works, and (b) coordinating, facilitating, and monitoring the progress of such works-in-progress. The Concessionaire shall be responsible to incur any additional cost towards completion of such work-in-progress assets after COD.

[8] Clause 6.4.5. of the Concession Agreement

Upon reimbursement by the Concessionaire to the Authority, of amounts as may have been incurred by the Authority as on the COD for such work-in-progress assets as provided for above, and completion of such works-in-progress by the Concessionaire, such works-in-progress assets shall form part of the Airport.

The amounts reimbursed by the Concessionaire to the Authority and additional amounts incurred by the Concessionaire for completion of such work-in-progress assets shall be considered as investments made by the Concessionaire in creation of such assets for the purpose of determination of Aeronautical Charges by the Regulator. In the event that any part of the amounts reimbursed by the Concessionaire to the Authority pursuant to this Clause 6.4.5 are not considered for pass-through by the Regulator due to any act or omission on the part of the Authority, the adjustment towards any differences in the amounts reimbursed by the Concessionaire to the Authority and the amounts considered for pass-through by the Regulator shall be undertaken as part of the Balancing Payment that becomes due and payable as per Clause 31.4 immediately after the determination of the Aeronautical Charges by the Regulator."

3.6. TKIAL received the CWIP invoices (refer Annexure G) from AAI totalling INR 0.85 Crores (excluding GST). The assets under CWIP were subsequently completed and capitalised in books of accounts of TKIAL.

3.7. As mentioned earlier, TCP is starting from 1st April 2022. However, TKIAL started operations from COD, i.e. 14th October 2021. Accordingly, TKIAL is entitled for a true-up for the interim period between COD to 31st March 2022. The following table summarizes the submission of TKIAL under various regulatory blocks:

Particulars (in INR Crores)	COD to 31st March 2022
Opening RAB as on COD	**486.26**
Closing RAB as on 31st March 2022	**442.02**
Average RAB	**464.14**
Add: FRoR return @14% on Average RAB	30.09
Add: Operating expenses	67.38
Add: Expenses pertaining to pre-COD period incurred to achieve successful transition of operation and management of Airport from AAI to PPP*	9.02
Add: Depreciation	48.71
Add: Taxes	-
Less: 30% of Non – Aero revenues	(4.45)
ARR (A)	150.74
Actual Aero Revenues earned (B)	71.15
True-up (A-B)	79.59
Present Value (PV) of True-up @14% as on 31st March 2022	84.57

Summary of information used for True-up calculation is as follows:

Items	Assumption	Remarks
Fair Rate of Return	14%	Considered in line with AERA order for Second Control Period
Operating Expenditure	Manpower AAI INR 28.08 Crores Manpower ADANI INR 4.20 Crores Utility Expenses INR 5.60 Crores IT Expenses INR 0.88 Crores Security Expenses INR 3.76 Crores Corporate Allocation INR 7.01 Crores Collection Charge on UDF INR 0.11 Crores Administrative Expenses INR 2.92 Crores Insurance INR 0.76 Crores R&M INR 5.96 Crores Other Operating Exp INR 4.46 Crores Bank & Finance Charges INR 0.37 Crores Working Capital Interest INR 1.59 Crores Independent Engineer INR 1.67 Crores **Total INR 67.38 Crores**	The same can be referred from audited financial statement provided as Annexure H. Working capital interest is calculated on net cash requirement during the period. As detailed in Chapter 10, all expenses are considered to be expense relating to Regulated Assets and services.

Non-Aeronautical Revenues	Master Concession INR 6.67 Crores Building Rent INR 2.66 Crores Other Income INR 5.38 Crores Car Parking INR 0.13 Crores **Total INR 14.84 Crores**	In the financial statement total non-Aeronautical revenues is INR 14.64 Crores. Further there are other income of Rs 0.19 Crores added in the same.
Aeronautical Revenues	Landing & Parking INR 13.28 Crores Ground Handling INR 3.24 Crores UDF INR 53.03 Crores CUTE and BRS INR 1.13 Crores Other Income INR 0.48 Crores **Total INR 71.16 Crores**	In the financial statement total Aeronautical revenues is INR 71.16 Crores
Expenses pertaining to pre-COD period incurred to achieve successful transition of operation and management of Airport from AAI to PPP*	INR 9.02 Crores	Refer detailed note provided below
Regulated Asset Base and Depreciation	Opening RAB as on COD transferred from AAI as per joint asset register signed (A) Add: Assets Capitalised During period from COD to 31st March 2022 (B) Less: Depreciation calculated for Opening RAB based on balance useful life of the asset (useful life as per Chapter 10 is considered) (C1) Less: Depreciation on new assets capitalised as per useful life provided in AERA order (C2) Closing RAB = A + B – C Average RAB = (Opening RAB +Closing RAB)/2	Refer 3.2 point above about the reconciliation of opening RAB agreed with AAI. As detailed in Chapter 10, all assets are considered to be Regulated Assets Due to timing difference of reconciliation of opening RAB with AAI, the depreciation amount will not match with depreciation amount provided in the financial statements.

***Expenses incurred to achieve successful transition of operation and management of Airport from AAI to PPP**

- Adani Enterprises Limited (AEL) was announced the successful bidder for Thiruvananthapuram Airport in February-2019. As the Concession agreement was a part of the Bid, AEL was aware of its obligations and responsibilities under the Concession Agreement and activities that were required to be done to

achieve the successful Commercial Operations Date (COD). This process was akin to Operational Readiness and Airport Transfer (ORAT) activity which is done when green field facility is commissioned at the Airport. When an old asset is taken over by a new owner with a responsibility to maintain the superior service standards which were not supported by the existing infrastructure and bottlenecks, it is akin to a greenfield asset from the operations perspective.

- The Concession agreement mandated certain activities/obligations to be performed by the Airport Operator prior to COD so that the transition from AAI to AO is smooth. These activities covered many areas like operational readiness, familiarization & training, Trial programs, Airport facility assessment, capability building & human resource management, observation period, financial closure etc. Being an operating Airport, these were important from the perspective of Airport users and passengers as well. The relevant provisions of the CA for ready reference are as:-

Extract of relevant clauses from the Concession Agreement:

Clause 16.5 Observation Period prior to COD:- There was a requirement to have 60 days of observation period before COD whereby Concessionaire's team was to work along with AAI's team to understand the Airport operations. In order to have a dedicated Airport team to be ready for participation in Observation period Concessionaire is required to hire personnel well before the time.

Further As per Clause 5.8 of the CA, Concessionaire is obligated to have trained personnel employed all the time. Before taking over the Airport, the AO is required to hire people who are trained to take care of safe operations of the Airport.

As per Clause 4.1.3 of the CA, as a condition precedent; Concessionaire needs to fulfill the following activities: -

Particulars	Details
Submission of PBG within 120 days of signing of CA.	Submission of PBG requires engagement with various Banks, lenders and financial institution. This also requires dedicated finance team to work with various financial institutions.
Procure all the applicable permits	All the necessary applicable permits need to be obtained which encompass all the functions of the Airport: - Operational like CTO, Fire NOCs, Clearance of BoD Financial – GST / PAN / TAN Engineering & Maintenance – Travelators, Weights & Measures, Single Line, HR Compliances – Shops & Establishment / ESI / PSF / CLRA Security – Clearance of Aviation Security Program

Particulars	Details
	In order to process and obtain the necessary applicable permits adequate manpower had to be onboarded well before the COD so that necessary applications are made timely, and approvals are obtained.
List of construction works to be undertaken in the first seven concession years	In order to provide list of construction works, Master planning needed to be undertaken which required engagement of master planner, designer, architects, town planners etc. Further under **clause 5.12 of the CA Obligations** relating to aesthetic quality of the Airport it is stated that "The Concessionaire shall engage professional architects and town planners of repute for ensuring that the design of the Airport meets the aforesaid aesthetic standards"
Execution of the escrow agreement as per Schedule M	This requires engagement with banks, lenders, financial institutions to perform the necessary documentation.

Clause 6.4.5 Works In Progress: - Concessionaire is obligated to pay CWIP amounts to AAI. "*The Parties shall constitute a committee comprising representatives of the Concessionaire, Authority and each of the counterparties under such contracts, which committee shall be responsible for: (a) facilitating any discussions and/ or interactions amongst AAI, the Concessionaire and the counterparties under such contracts, including in respect of any modifications to the works, and (b) coordinating, facilitating, and monitoring the progress of such works-in-progress.*"
In order to assess, the works in progress both physical and financial, necessary teams were engaged from master planning, designing, asset health check, vendor management and financial experts.

Clause 10.2 Lease, Access, and Right of Way:- Concessionaire is allowed to take necessary surveys, investigations etc of the property prior to COD to assess various risks associated with the site.
This activity required engagement of various experts and agencies.

Clause 10.3 Procurement of the Site:- Both AAI and Concessionaire need to undertake joint inspection of site, inventory of buildings, structures, roads works etc.
This required dedicated finance, operations and engineering & maintenance team in place to do the joint inspection and asset health check.

Clause 15.1 / 26.1 Commercial Operation Date / Financial Close:- In order to achieve COD, financial close is a mandatory requirement.

To make financial projections necessary studies were required to be undertaken like traffic study, revenue potential study, capex planning based on master planning, estimation of capex, operating cost estimation, engagement of financial consultant, financial modelling etc. This required engagement of consultants and also in-house corporate finance team.

Clause 18.17 Maintenance Programme :- On or before COD, Concessionaire needs to submit detailed Maintenance Programme which shall include: (a) preventive maintenance schedule; (b) arrangements and procedures for carrying out urgent repairs; (c) criteria to be adopted for deciding maintenance needs; (d) intervals and procedures for carrying out inspection of all elements of the Airport; (e) intervals at which the Concessionaire shall carry out periodic maintenance; (f) arrangements and procedures for carrying out safety related measures; and (g) intervals for major maintenance works and the scope thereof.
In order to prepare the Maintenance Programme a dedicated Engineer's team involvement was required. Further this required investigation and detailed health study of the existing assets. The detailed study was conducted by engagement of both in-house team and expert consultants.

Clause 28.1 Collection of Fees by the Concessionaire: - On and from COD and till the Transfer Date, the Concessionaire has the sole and exclusive right to demand, collect and appropriate Fees from the Users for the provision of the Aeronautical Services and Non-Aeronautical Services, including the airlines and passengers, in accordance with the provisions of the Regulatory Framework.
In order to collect the fees from COD onwards necessary IT infrastructure was required to be set up which included SAP, AODB, AOCC, Billing Systems, Passenger Data Collection System. In addition, it required Engagement of Finance team, assessment of existing IT Infrastructure, engagement of IT experts and experts who understood the regulatory framework.

Clause 28.8 Display of Aeronautical Charges:- Website was required to be ready and necessary aeronautical charges needed to be provided on the website. This required creation of websites, domains, engaging IT experts, domain experts, experts from regulatory framework etc.

Clause 30.3 Insurances:- No later than 30 (thirty) days prior to commencement of the Concession Period, the Concessionaire shall by notice furnish to the Authority, in reasonable detail, information in respect of the insurances that it proposes to take.
This required engagement of insurance agents, risk measurement, assessment of asset value, risk mitigation plan etc.

Various other requirements under the CA which entailed onboarding of personnel/consultants: -

- Operational SOPs

- Clause 23 - Readiness of Performance Measurement Plan
- Schedule H - to obtain ACI Membership
- Schedule 1 - Submission of Aerodrome Emergency Plan prior to COD
- 18.15.4 Establishing Airport Safety Management Unit (ASMU)
- Formation of various committees - JCC for CNS ATM, MoU, Capex, Right of Way
- Aeronautical Information Services
- Apron Management Unit

From the foregoing submissions, it is evident that without having proper manpower and professional support it would not have been possible to achieve transition of airport from AAI to TKIAL as mandated under the CA. These activities were required to be performed prior to COD. TKIAL has incurred expenditure of INR 9.02 Crores to achieve successful COD. In the financial statement the amount is reflected as Intangible Assets as per accounting principles. However, for MYTP purposes the same has been considered as operating expenditure in the first year of operation.

Particulars	INR Crores	Remarks
Expenses till letter of award	1.72	Majorly includes bid advisory expenses
Expenses from letter of award to COD	7.30	Majorly includes Salaries, professional services, and corporate Allocation
Total	**9.02**	

Disclaimer for GST on Opening RAB and CWIP

As described in detail in Chapter 3 above, as per CA clause 28.11 TKIAL is required to make payment of Estimated Deemed Initial RAB and Initial Non-Aeronautical Investment. In addition, as per CA clause 6.4.5 TKIAL is required to make payment of CWIP as on COD. TKIAL had received invoice from AAI for RAB and CWIP exclusive of GST. AAI had taken legal opinion on applicability of GST on RAB and CWIP invoices and based on the said opinion, AAI requested TKIAL to provide necessary indemnity bond in case in future GST amount is payable by AAI to tax authorities on RAB and CWIP invoices. TKIAL submitted the necessary indemnity bonds (Refer Annexure I for the Indemnity Bonds). If in future, AAI is required to bear the GST, which based on indemnity bond inter-alia will be recovered by AAI from TKIAL, the GST amount will be added to the Initial RAB and CWIP. For the time being, the Initial RAB and CWIP numbers provided in this MYTP are exclusive of GST. TKIAL hereby, reserves the right to include the GST and to revise the Initial RAB and CWIP and thereby the MYTP or shall be

considered in subsequent control periods as part of true-up, depending on the future outcome of the matter.

We request AERA to kindly take note of the above submissions and make necessary disclosures in the tariff order.

Disclaimer on stamp duty and registration charges

TKIAL is required to pay the stamp duty and registration charges on the Concession Agreement. TKIAL would be required to bear the stamp duty and registration charges based on decision by the State Authorities, and it will be added to the capital expenditure. For the time being, the numbers provided below for capital expenditure are exclusive of stamp duty and registration charges for the purpose of this MYTP calculation. TKIAL hereby, reserves the right to include the stamp duty and registration charges and revise the Capital Expenditure in MYTP or shall be considered in subsequent control periods as part of true-up, depending on the future outcome of the matter.

The relevant extract from Concession Agreement is as follows : -

Clause 44.17 Stamp Duty:- *Stamp duty and registration charges shall be payable by the Concessionaire on the execution or delivery of this Agreement.*

We request AERA to kindly take note of the above submissions and make necessary disclosures in the tariff order.

4. Passenger Traffic, Air Traffic Movements (ATMs) and Cargo forecasts for TCP

Impact of COVID-19 on Aviation Industry

4.1. The airlines and airports industries were one of the worst affected sectors due to Covid-19 in FY21 and FY22, as countries across the World imposed travel restrictions and lockdowns in different phases.

Impact on Traffic in India

4.2. India's aviation sector faced an unprecedented situation in March 2020, when the government grounded all scheduled domestic and international air services. While it took two months for domestic operations to recommence (domestic operations recommenced on 25th May 2020), international travel recommenced largely on account of repatriations, chartered, and bubble flights by both Indian and foreign operators still leaving travel operations out of ambit.

4.3. Total passenger traffic at Indian airports fell by 66.3% annually in FY2020-21 to 115 million passengers, a level last seen in FY2007-08, which comprised of 105 million domestic airport passengers and 10 mn international pax.

4.4. The second wave in 2021 and third wave in Jan 2022 coupled with economic slowdown impacted a number of travel segments and the aviation sector as a whole.

4.5. Full international operations commenced from 27th March 2022.

Robust recovey of Traffic in India

4.6. As per ICRA November 2022 Aviation outlook (refer Annexure J): - *Domestic passenger traffic recovery stood at 93% while international traffic recovered to 81% of pre-Covid levels in November 2022, supported by resilient passenger demand and onset of peak season.*

Overall passenger traffic recovered to 91% of pre-Covid-levels in November 2022.

4.6.1 ICRA's outlook on the airport infrastructure sector is Stable. With strong rebound and healthy momentum in domestic passenger traffic and the uptick in international passenger traffic after resumption of operations, the overall air passenger traffic is likely to cross pre-Covid levels of 341 million passengers on a forward looking 12-month period (Sep-22 to Aug-23).

4.6.2 The domestic passenger traffic increased by 3% sequentially in November 2022 with the onset of peak season and resilient passenger demand. Domestic traffic stood at 23.4 million, 93% of pre-Covid levels (similar period in FY2020) in November 2022. Overall, the recovery in domestic passenger traffic has been strong since April 2022 supported by the easing of travel restrictions, resilient passenger demand, reopening of offices, and increase in business and leisure travel. Domestic passenger traffic is estimated to reach 97-98% of pre-Covid levels (FY2020) in FY2023 itself.

4.6.3 After the resumption of international commercial operations from March 27, 2022, international passenger traffic has steadily increased and reached 81% of pre-Covid levels in November 2022. International traffic is expected to reach 87%-90% of pre-Covid levels by end-FY2023. Overall, passenger traffic is expected to witness a yearly growth of 71%-73% and reach 324-327 million (95-96% of pre-Covid levels) for FY2023.

4.6.4 Supported by the increase in passenger traffic, aircraft traffic stood at 91% of pre-Covid levels in November 2022. ICRA expects 45-47% YoY growth in aircraft traffic which is likely to reach pre-Covid levels in FY2023. Total cargo volumes stood at 85% of pre-Covid levels in October 2022. The cargo volumes are expected to increase by 5%-7% and cross pre-Covid levels in FY2023.

Exhibit 1: Total passenger traffic (in million)

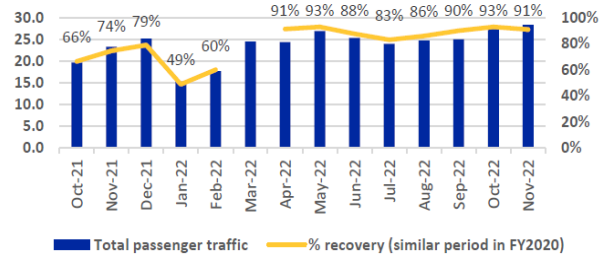


Exhibit 2: Domestic passenger traffic (in million)

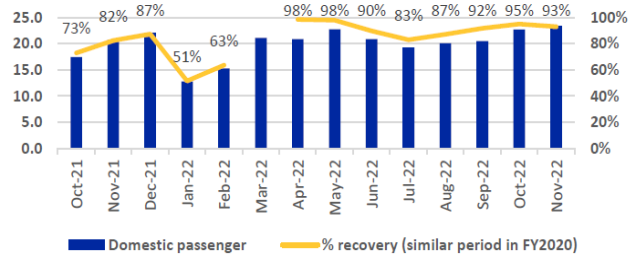
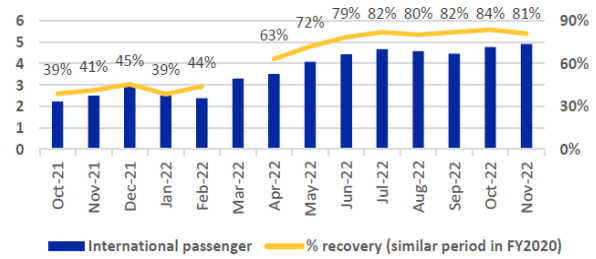


Exhibit 3: International passenger traffic (in million)



- Supported by resilient passenger demand and onset of peak season, domestic passenger traffic witnessed sequential growth of 3% and stood at 93% of pre-Covid levels (Nov 2019) in Nov 2022. Domestic passenger traffic is estimated to reach 97-98% of pre-Covid levels in FY2023 itself.
- Post resumption of international commercial operations from March 27, 2022, international passenger traffic has steadily improved and witnessed a 3% growth in Nov 2022. International traffic is expected to reach 87%-90% of pre-Covid levels by end of FY2023.
- The ramp-up in overall passenger traffic has been healthy in the last six months and has stood at 91% of pre-Covid levels in Nov 2022.

4.7 As per OAG report on Aircraft Supply Capacity as on December-22

4.7.1 The Airlines seat supply capacity in India has reached to 95% of the Pre-COVID period.

4.7.2 Indigo Airline seat supply capacity has reached more than Pre-COVID period.

Top 20 Country Market Capacity (mn seats)

Country	2019	2020	2021	2022	% Change Year on Year	% Change V's 2020	% Change V's 2019
USA	1,145	678	883	1,062	20.30%	56.60%	-7.20%
China	836	684	783	666	-14.90%	-2.60%	-20.30%
India	211	127	153	199	30.00%	56.50%	-5.70%
Japan	215	138	106	150	41.60%	8.30%	-30.10%
Spain	159	65	85	146	70.90%	125.60%	-8.20%
United Kingdom	178	67	59	142	140.50%	110.10%	-20.50%
Brazil	134	66	85	119	40.10%	79.50%	-11.00%
Indonesia	154	117	86	112	30.70%	-3.90%	-27.20%
Germany	160	58	60	108	80.10%	85.20%	-32.80%
Italy	119	49	60	106	78.50%	119.20%	-10.30%
Mexico	96	61	83	106	27.30%	72.10%	10.00%
Russian Federation	125	87	113	105	-6.90%	20.10%	-15.90%
France	117	50	59	99	68.10%	97.20%	-15.60%
Australia	107	42	49	83	69.50%	97.90%	-22.90%
Canada	106	42	39	82	110.60%	93.30%	-23.00%
Viet Nam	71	51	40	67	68.80%	30.80%	-5.90%
United Arab Emirat	76	32	38	64	67.40%	97.90%	-15.70%
Saudi Arabia	68	34	42	61	47.50%	78.90%	-9.60%
Turkey	117	58	81	54	-32.90%	-6.70%	-53.90%
Colombia	44	18	35	54	53.00%	200.00%	21.10%

Top 20 Airlines Capacity

Airline	2019	2020	2021	2022	% Change Year on Yea	% Change V's 202	% Change V's 201
American Airlines	265	157	217	248	14.60%	58.10%	-6.30%
Delta Air Lines	243	139	186	210	13.10%	51.60%	-13.70%
Southwest Airlines	211	149	169	208	23.30%	39.70%	-1.30%
United Airlines	200	102	141	178	26.20%	74.60%	-11.10%
Ryanair	151	68	88	170	92.40%	149.40%	12.00%
China Southern Airlines	141	112	123	107	-13.70%	-5.10%	-24.50%
China Eastern Airlines	134	98	116	101	-12.80%	2.80%	-24.60%
IndiGo	89	56	72	99	37.30%	76.50%	12.00%
Turkish Airlines	93	42	64	89	40.80%	114.00%	-4.10%
Easyjet	106	39	39	88	123.20%	128.10%	-16.70%
LATAM Airlines Group	87	38	52	82	56.70%	117.10%	-5.80%
Air China	94	69	80	66	-17.70%	-4.40%	-29.40%
Deutsche Lufthansa AG	92	31	35	64	82.80%	109.80%	-30.10%
Emirates	76	27	31	55	76.30%	103.40%	-27.20%
Alaska Airlines	59	36	47	53	12.90%	48.30%	-10.50%
All Nippon Airways	74	58	36	52	46.40%	-9.80%	-29.80%
JetBlue Airways Corporation	52	27	40	51	27.50%	90.40%	-1.90%
Air France	60	30	34	50	47.90%	69.70%	-16.50%
Spirit Airlines	42	27	41	49	20.70%	80.10%	16.90%
Air Canada	66	24	21	48	126.40%	102.00%	-26.30%

4.8 The trend of recovery of Pre-COVID traffic achieved in the recent period[9] is as follows : -

a. Actual traffic (Dom +Intl) from April 2022 to December 2022 was ~ 237 million all over India which is approx. 90% recovery of Pre-COVID traffic of 263 million April 2019 to December 2019).

b. Actual ATMs (Dom +Intl) from April 2022 to December 2022 was ~ ~1,846,000 all over India which is approx. 94% recovery of pre-COVID traffic of 1,965,000 from April 2019 to December 2019).

4.9 It is opined by various aviation experts that passenger traffic for Domestic sector will reach Pre-COVID in FY22-23 and international traffic will reach Pre-COVID in FY23-24.

Traffic projections for TCP

4.10 The traffic at TIA increased at a CAGR of **8%** to 4.43 mn in FY2019 from 2.83 mn passengers in FY 2013. At TKIAL, the ratio of Domestic and International is approx. 50%:50%. **However, due to the impact of Covid-19 in FY 2021, CAGR may not be a good indicator to gauge the recovery growth of passenger traffic.**

[9] AAI Aero Traffic News

4.11 The following table illustrates the traffic for 9 months (from April to December) for previous 4 years and post COVID recovery trend:

Particular	Apr 2019 - Dec 2019	Apr 2020 - Dec 2020	Apr 2021 - Dec 2021	Apr 2022 - Dec 2022	Recovery in 22 vs 19
Passenger Traffic (No.)	3.051,375	516,161	1,117,116	2,561,892	84%
Air Traffic Movements (No.)	21,971	5,733	10,797	18,059	82%
Cargo (in MT)	20,370	11,368	12,699	12,566	62%

In April to December 2022, the passenger and ATM has reached 84% of Pre-COVID level. It is likely that TKIAL will achieve approx. 3.4 mn passenger traffic for the full year FY22-23 which is approx. 87% of Pre-COVID traffic of 3.91 mn in FY19-20. These are also corroborated by traffic study conducted by Mott-Macdonald in September-2021.

4.12 As per the aforementioned Mott-Macdonald study (Refer Annexure K), the traffic growth rates and traffic forecasts for the TCP for TIA are as follows:

Passenger Traffic (Pax) and Pax growth rate forecasts for TIA for TCP

	Passenger Traffic			Growth rate		
Year	**Dom**	**Intl**	**Combined**	**Dom**	**Intl**	**Combined**
2019-20* (Pre-COVID)	1,709,229	2,209,964	**3,919,193**			
2020-21*	476,559	458,876	**935,435**	-72%	-79%	-76%
2021-22*	699,447	956,059	**1,655,506**	47%	108%	77%
2022-23	1,544,108	1,912,523	**3,456,631**	121%	100%	109%
2023-24	1,973,016	2,468,437	**4,441,453**	28%	29%	28%
2024-25	2,252,173	2,878,675	**5,130,848**	14%	17%	16%
2025-26	2,446,514	3,169,234	**5,615,748**	9%	10%	9%
2026-27	2,647,049	3,388,367	**6,035,416**	8%	7%	7%

** Actuals as per AAI Aero traffic news*

Air Traffic Movements (ATM) and ATM growth rate forecasts for TIA for TCP

	ATM			Growth rate		
Year	**Dom**	**Intl**	**Combined**	**Dom**	**Intl**	**Combined**
2019-20* (Pre-COVID)	14,030	14,812	**28,842**			
2020-21*	5,111	4,202	**9,313**	-64%	-72%	-68%
2021-22*	7,010	8,346	**15,356**	37%	99%	65%
2022-23	12,275	12,967	**25,242**	75%	55%	64%
2023-24	15,430	16,278	**31,708**	26%	26%	26%
2024-25	17,570	18,934	**36,504**	14%	16%	15%
2025-26	19,039	20,784	**39,823**	8%	10%	9%
2026-27	20,551	22,134	**42,685**	8%	6%	7%

** Actuals as per AAI Aero traffic news*

4.13 Further it is to be noted that TIA handles significant volumes of ATM which are less than 80-seater capacity, some of which are under RCS category. Based on historical trend, for the purpose of MYTP, less than 80-seater capacity category ATMs has been considered as approx. 8% - 15% of domestic ATMs.

Please refer below table indicating the historic volume of Domestic ATMs which are less than 80-seater:

Month	Less than 80-Seater ATM	Other ATM	Total ATM	Exempt ATM %
	(A)	(B)	(C = A + B)	(D = A / C x 100)
Oct-21	35	130	165	21%
Nov-21	59	322	381	15%
Dec-21	63	371	434	15%
Jan-22	56	308	364	15%
Feb-22	35	193	228	15%
Mar-22	62	320	382	16%
Apr-22	60	465	525	11%
May-22	65	468	533	12%
Jun-22	64	420	484	13%
Jul-22	63	413	476	13%
Aug-22	65	406	471	14%
Sep-22	63	394	457	14%
Total	**690**	**4,210**	**4,900**	**14%**

4.14 Similarly, the historical trend of exempt category of passengers is 4% (as indicated in table below), while we have considered 3% for the MYTP.

Month	Exempt Pax (Transit, Infant & Diplomat)	Total Pax	Exempt Pax %
Nov-21	5,573	190,703	3%
Dec-21	5,898	237,400	2%
Jan-22	4,366	176,629	2%
Feb-22	3,798	145,861	3%
Mar-22	5,061	215,900	2%
Apr-22	4,438	257,176	2%
May-22	4,995	287,670	2%
Jun-22	4,614	266,240	2%
Jul-22	19,682	285,603	7%
Aug-22	25,650	296,054	9%
Sep-22	20,710	279,604	7%
Grand Total	**104,785**	**2,638,840**	**4%**

4.15 In view of GoI/MoCA guidelines, the aircrafts less than 80-seater and RCS category are exempt from landing charges. Further, as per DGCA circular AIC No. 14/2019 dated 16.05.2019 and AIC No. 20/2019 dated 06.11.2019, certain category of passengers (Transit/transfer passengers, Children below 2 years, Diplomatic passport holders, Airline Crew etc.). The relevant circulars/guidelines are enclosed herewith and marked as Annexure L. Accordingly, for the purpose of revenue projection, TKIAL request the Authority to consider the billable traffic after adjustment of the above is made in Total ATM and Total Pax Traffic in line with practice adopted across all major airports.

4.16 Therefore, while calculating the revised aeronautical charges, the ATM and Passenger traffic is suitably adjusted to account for only billable ATMs and billable Passengers. The adjusted billable ATM and Passengers after excluding exempted categories are as follows:

Adjusted Billable Air Traffic Movements (ATM) forecasts for TIA for TCP:

Year	Dom	Intl	Combined
2022-23	10,679	12,967	**23,646**
2023-24	13,733	16,278	**30,011**
2024-25	15,813	18,934	**34,747**
2025-26	17,325	20,784	**38,109**
2026-27	18,907	22,134	**41,041**

Adjusted Billable Pax Traffic forecasts for TIA for TCP

Year	Dom	Intl	Combined
2022-23	1,497,785	1,855,147	**3,352,932**
2023-24	1,913,826	2,394,384	**4,308,209**
2024-25	2,184,608	2,792,315	**4,976,922**
2025-26	2,373,119	3,074,157	**5,447,276**
2026-27	2,567,637	3,286,716	**5,854,353**

4.17 Based on Mott Macdonald traffic forecast, the Cargo forecasts and growth rate for TIA for TCP is as follows:

Year	Domestic	Intl	Combined	Domestic	Intl	Combined
2019-20*	2,023	23,488	25,511			
2020-21*	1,048	13,751	14,799	-48%	-41%	-42%
2021-22*	1,706	14,873	16,579	63%	8%	12%
2022-23	1,686	20,474	22,160	-1%	38%	34%
2023-24	2,142	25,654	27,796	27%	25%	25%
2024-25	2,568	30,323	32,891	20%	18%	18%
2025-26	2,923	33,828	36,751	14%	12%	12%
2026-27	3,307	36,635	39,942	13%	8%	9%

** Actuals as per AAI Aero traffic news*

4.18 TKIAL is expected to process certain cargo volumes out of the total volume at its own Cargo facility as discussed in Chapter 6.

5. Capital Expenditure for TCP

5.1. TKIAL is required to undertake the operation, development, maintenance, and management of the airport to meet the requisite performance standards to ensure its obligations as described under the Concession Agreement (CA). As outlined in CA, the design, construction, modernization, up-gradation, and operation of the Airport shall comply with all Service Quality requirements as set out in Schedule H (Annex I) of CA and IATA Level of Service Optimum.

5.2. As required under the Concession Agreement, TKIAL in accordance with Clause 12.2 of Article 12 and in compliance with requirements set forth in Schedule A (and its Annex II and III), Schedule B (and its Annex I), Schedule C and Schedule H (Annex I) of the Concession Agreement, has finalized the Proposed Master Plan for development of TIA. TKIAL has identified basic improvements projects to be implemented in five-year period from 1st April 2022 to 31st March 2027. The master plan has been prepared, based on a traffic forecast study carried out by TKIAL with the support of Mott MacDonald, for the concession period of 50 years. TKIAL has proposed projects which can be broadly classified under the following categories:

5.2.1. Passenger Terminal & Associated works

5.2.2. Airside Improvement Works

5.2.3. Ancillary Building Works

5.2.4. Development of Cargo Facilities

5.2.5. ATF storage and distribution system

5.2.6. Environment Related

5.2.7. Sustaining / Minor Capex Works

5.3. Passenger Terminal & Associated works

5.3.1. Mott Macdonald has carried out the study on traffic projections along with daily distribution flight simulation. Based on the same, following peak hour capacity and terminal area requirement is projected: -

Peak Hour Projection Vs Peak Hour Available Capacity

Peak Hour Forecasts	Unit	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Domestic Arrivals	Nos	297	535	685	799	883	938
Domestic Departures	Nos	325	585	746	844	905	933
International Arrivals	Nos	362	605	719	742	726	760
International Departures	Nos	253	414	481	567	633	687
Total PHP required	**Nos**	**1,237**	**2,139**	**2,631**	**2,952**	**3,147**	**3,318**
PHP Supply During the TCP							
Terminal 1	Nos	800	800	800			
New Terminal 1	Nos						2,500
Terminal 2	Nos	1,800	1,800	1,800	2,500	2,500	2,500
Total PHP available	**Nos**	**2,600**	**2,600**	**2,600**	**2,500**	**2,500**	**5,000**
Area requirement in TCP							
Area Requirement based on 35 sq mtr per peak passenger	Sqm	43,295	74,865	92,085	103,320	110,145	116,130
Area Availability/ planned for TCP							
Terminal 1	Sqm	15,800	15,800	15,800	-	-	-
New Terminal 1	Sqm	-	-	-	-	-	56,000
Terminal 2	Sqm	43,500	43,500	43,500	63,000	63,000	63,000
Total Area Supplied	**Sqm**	**59,300**	**59,300**	**59,300**	**63,000**	**63,000**	**119,000**

As can be seen from above the terminal capacity is severely constrained and there is need to increase the terminal area. Considering the limited land availability at Thiruvananthapuram, TKIAL has projected to increase terminal capacity in a modular fashion as follows: -

5.3.2 T2 refurbishment

The international terminal is located in the northern side of the airport with a dedicated access and carpark facilities. The entrance to the terminal is from the Chacka-Eenchakkal road. A bridge has been built across the Parvathy Puthanar canal to link the new terminal to the Kazhakuttam-Inchivila NH (National Highway) 47 bypass. The building

opened in 2011 and is approximately 43,500 sqm divided in 3 levels and has a declared capacity of one-way peak of 900 pax.

The terminal currently handles international flights and domestic flights of Air India. During the detailed assessment of this terminal, we envisaged that there is an opportunity to convert this into a full-fledged integrated terminal by optimizing the spaces and increasing the areas to accommodate the processors and improvising the baggage handling system. Once T2 is refurbished all the traffic from T1 will be shifted to T2.

TIAL has planned for the following modifications to convert T2 to an integrated terminal and to meet the traffic requirements till the new Terminal T1 is commissioned:

1. Enhancement of Terminal 2 capacity by converting it into an integrated terminal by sweating underutilized spaces and creating additional space of approximately 19,500 Sqm, and re-orienting the pax flows to accomplish the passenger growth till FY 26-27
2. Reorientation of International passenger flows and adding domestic passenger processors and flows ensuring clear demarcation between Intl and Dom flows.
3. Re-orientation of check in counters to islands, create additional 16 check in counters and 10 SBDs. Total check in counters including SBD will be 65.
4. Enhancing the BHS to level 5, including additional area for screening and makeup carousel in BMA
5. Relocation of Emigration area
6. Addition of 1 Terminal entry point and fast track entry and exit and associated modifications to existing façade and improvements in Departure & Arrival Kerb.
7. Relocation of current international arrivals and Immigration; with increase in number of immigration counters from 16 to 21

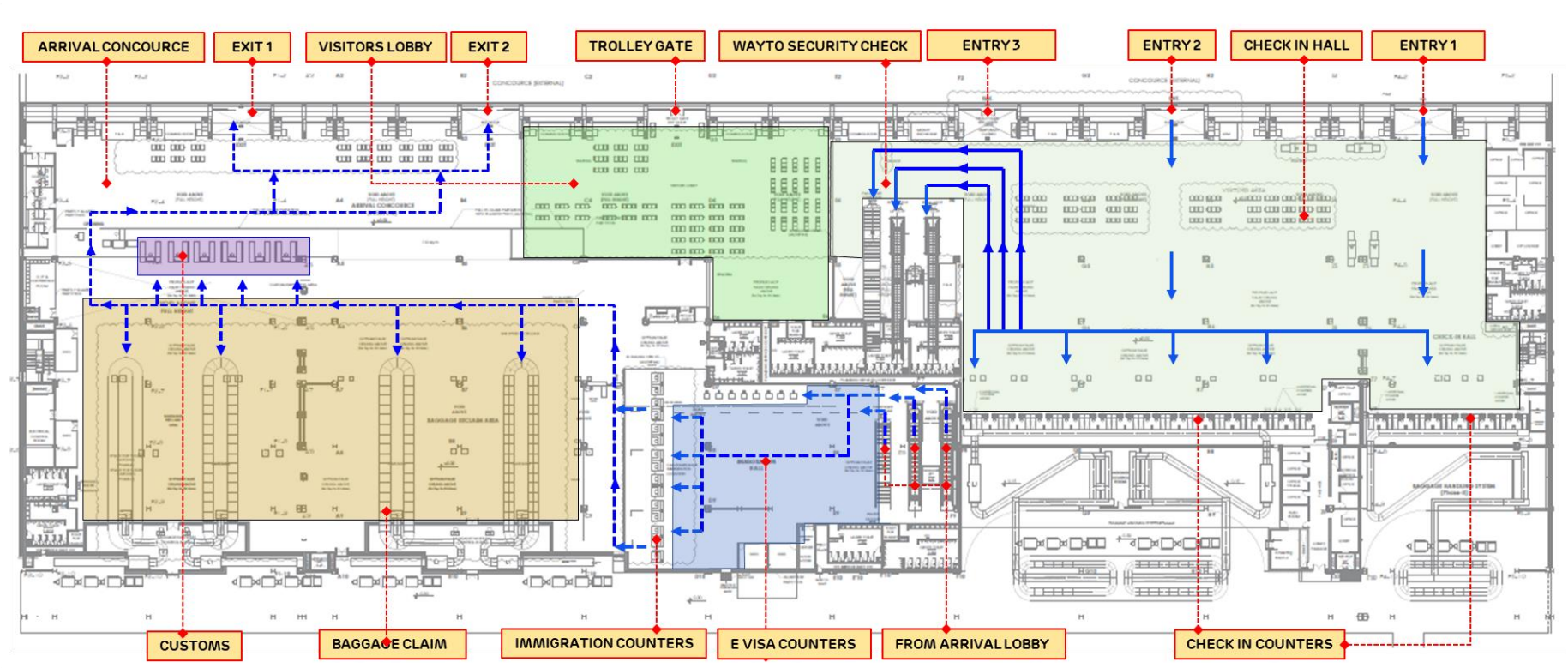
Item Description	Existing	Proposed
Throughput Capacity	System congestion and dieback is experienced beyond 400 bags per hour	3000 Bags per Hour (2400 bags per hour is achievable with major single-point failure)

Item Description	Existing	Proposed
	per check in line (1200 bags/hr combined capacity)	
Redundancy		
Check-in	Limited, reversible conveyor between zone 1 & 2. No redundancy for zone 3	Complete flexibility in island setup with additional redundancy via 180-degree curves
Level-1 X-ray lines	No redundancy	100% redundancy with load sharing and fallback capabilities
Level-3,4 feeder lines	No redundancy	Dual feeder lines to Level-3, 4 and new standalone X-ray machine.
Sortation area	NA	100% redundancy with common sortation
Check-in Counters	38 Nos	55 Nos
SBD's	Nil	10 Nos
Makeup positions	38 (3 carousels)	54 (4 carousels + 8 accumulation chutes)
Security decision time	20s (Level 2 screening)	90s (BCAS compliant Level 2A/2B screening)

- Traditional check-in counters will increase from 39 to 55.
- Self check-in kiosks will increase from 2 to 14.
- Self-bag drop counters which are non-existent at the moment will be introduced with 10 no.
- X ray screening machines will increase from 3 to 12
- DFMD will increase from 6 to 18
- Terminal interior will be redefined to improve the look & feel and sense of the place
- Kerbside - Condition of the existing pavement is deteriorated and needs to be recarpeted as per maintenance requirements of IRC.
- Access Roads – In order to debottleneck traffic flow, the exit road is proposed to be widened from 2 lanes to 3 lanes.
- Existing traffic movement network has multiple entry and exit points which causes obstruction in normal movement of vehicles; hence parking is being reconfigured in order to carry out the movements efficiently.

Existing & Proposed Layouts with Pax Flow are indicated below:

EXISTING GROUND FLOOR



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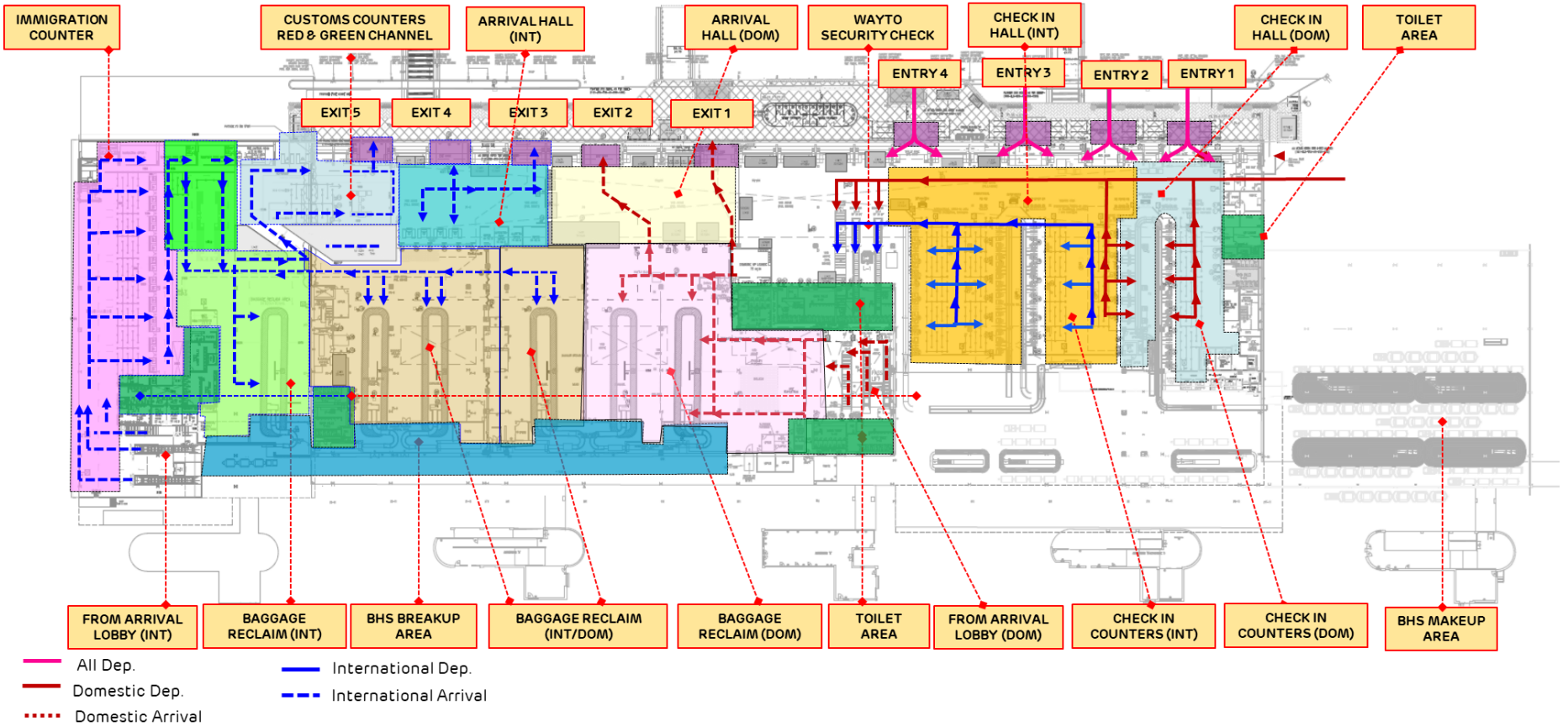
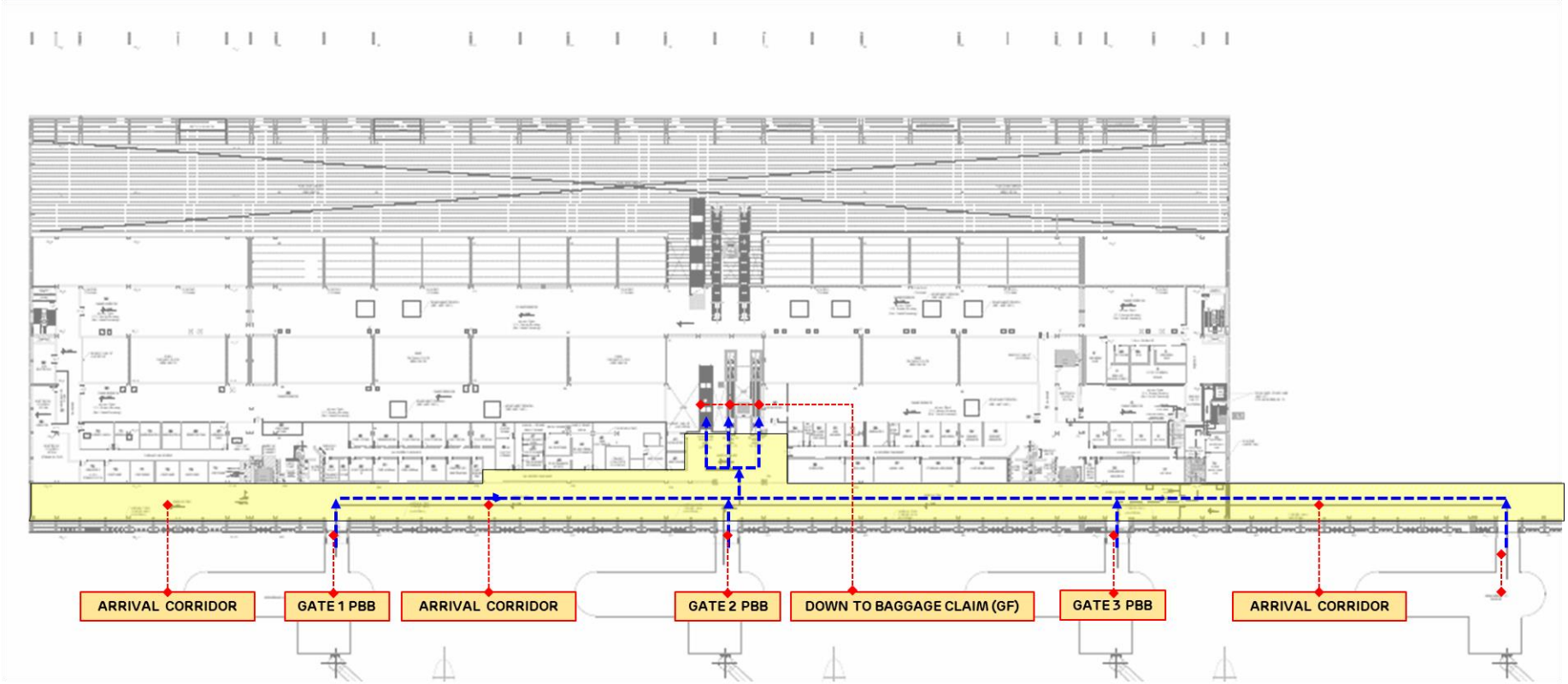
PROPOSED GROUND FLOOR

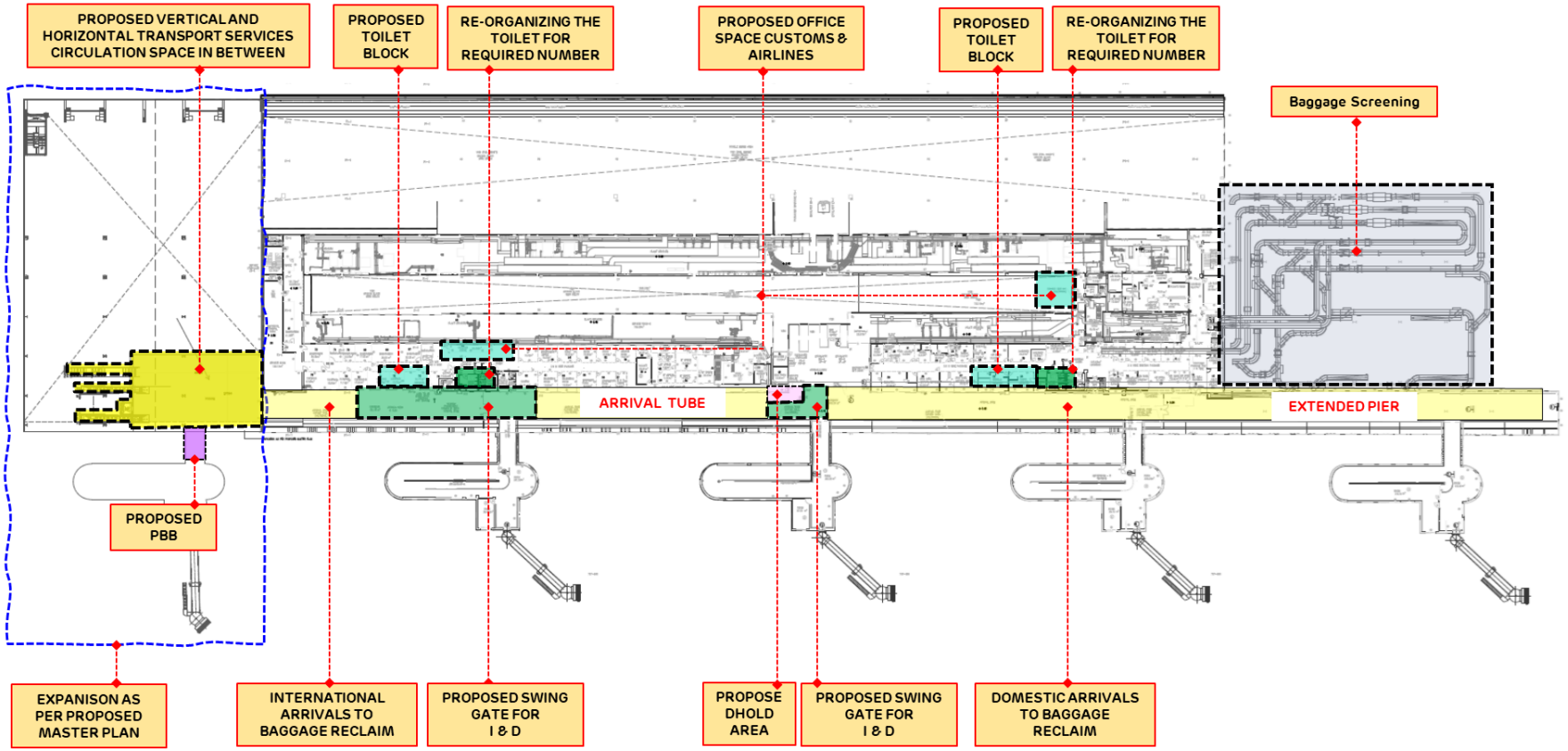


EXISTING MEZZANINE FLOOR

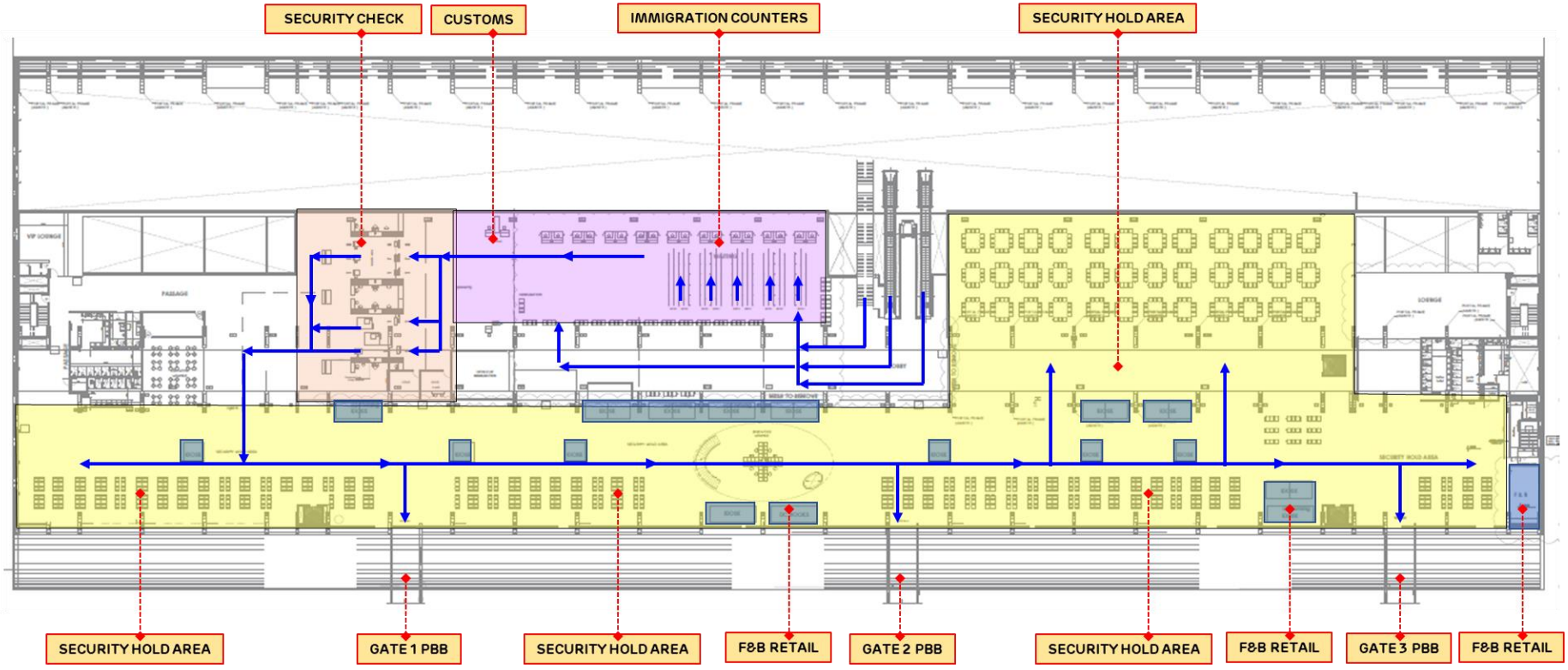


--- International Arrival

PROPOSED MEZZANINE FLOOR



EXISTING FIRST FLOOR



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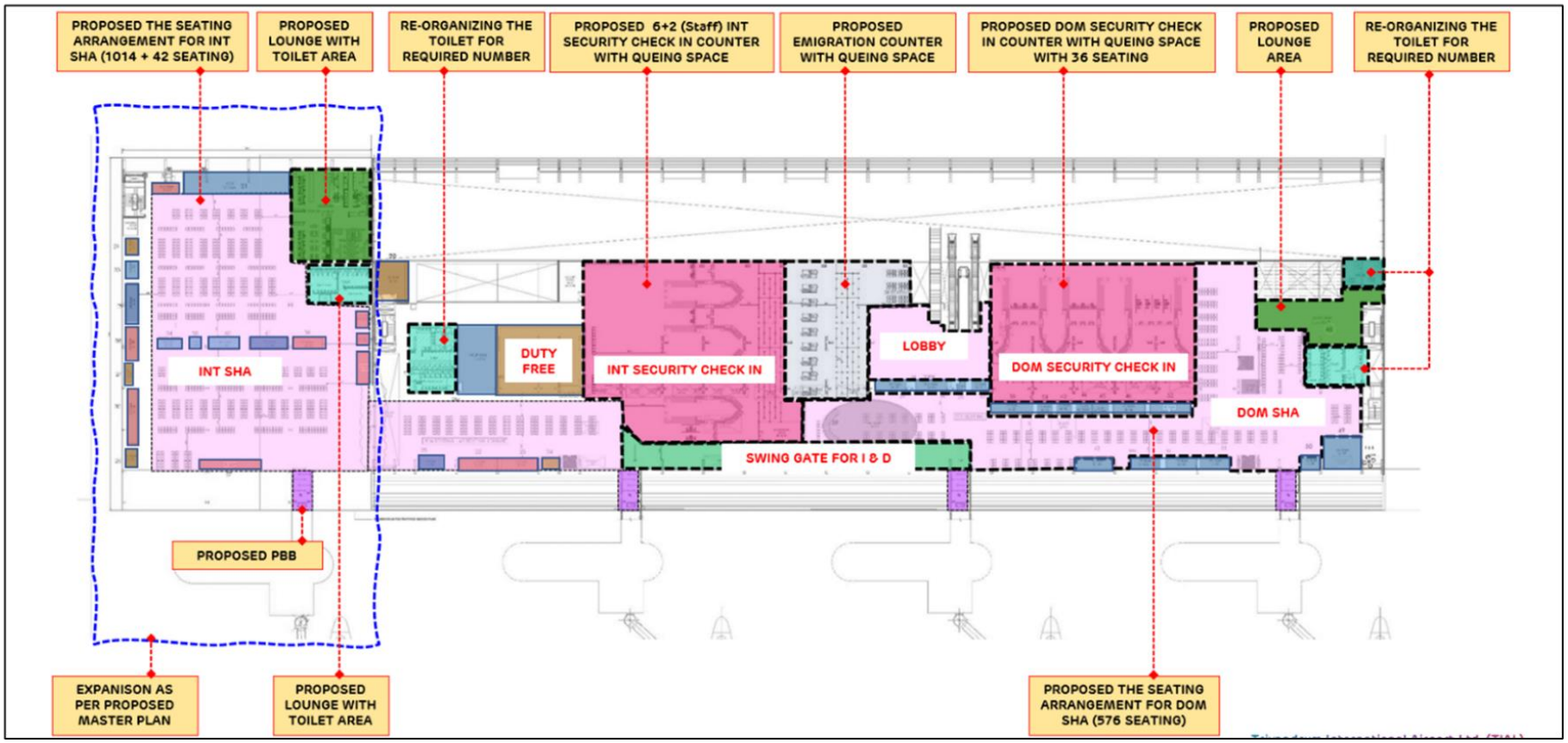
PROPOSED FIRST FLOOR



5.3.3 T1 refurbishment

The existing domestic terminal building, T1 was commissioned in 1985 and is 37 years old. It is located in the southern part of the airport is spread across an area of approximately 15,800 sqm in two levels. The declared peak hour capacity of T1 is 400 one way.

The upgradation of the domestic terminal T1 is being taken up by TKIAL to cater the passenger traffic up to the horizon year March 2024 following which it is envisaged that all the passenger traffic will be shifted to Terminal T2, i.e., international terminal to have an integrated domestic-international operations at T2. The proposed integrated arrangement will continue in operations, till such time TIAL plans to re-build the new Domestic Terminal T1.

- Based on the study (demand capacity analysis) carried out by TKIAL, the following modifications are required to meet with the traffic demand.

Processor	Existing	Required	Proposed Modification
Terminal Entry (Departure)	4	5/1 (Economy/ Premium)	Currently, two entry gates (with two check points each), make a total of 4 entry points. The demand for FY 2023-24 is 6, therefore, an additional entry gate is required.
Self Service Kiosks (CUSS)	3	9	Additional 6 CUSS units are proposed on the Curbside.
Security Screening XBIS	2	6	The provision of additional 4 machines would require considerable expansion of the building towards airside and relocation of baggage make up area. It is proposed to add 2 additional XBIS with minimal modification to the building with 1.5 DFMD per XBIS.
Security Screening DFMD	4	6	Provide additional 2 DFMD along with frisking booth and podium

- The proposed modifications are also required to meet with the Level of Service requirements as mentioned in Concession Agreement Schedule H.

Schedule H Parameters	Proposed Development
2. Security Check – waiting time in queue – 95% of	1. Increase the number of security screening XBIS machines from 2 to 4 and add one additional DFMD. Realign the queuing space accordingly. This would

Schedule H Parameters	Proposed Development
peak hour passengers wait less than 5 minutes	require expanding the security screening area towards airside, by relocating the wall and baggage belt (make up area) conveyor belt 2. Also, all existing XBIS machines to be replaced with dual view XBIS as per the BCAS circular AC-11-2017
16. Elevators, Escalators & travelators – Percentage time availability – 98% of the time	Currently, there is only one elevator (with a limited capacity of 3-4 pax) available in T1, and there is no alternate provision but to use stairs when the elevator is not functioning / under maintenance. Due to this, majority of the passengers are not able to use the lift, wheelchair passengers have to wait in long queue. It is proposed to add one escalator and an additional elevator to meet with the LOS requirements.

- Currently, the X ray screening machines at the pre-check in area and hand baggage screening area are of single view. As per BCAS Circular No: 11/2017, the machines shall be of dual view. In order to meet with this regulatory requirement, the following modifications are proposed, as part of the Terminal 1 upgradation plan.

Processor	Existing	Additional	Proposed Modification
Pre-check in X Ray Screening machines	2	2	The existing machines shall be replaced. Total requirement of dual view machines - 4
Handbag screening X Ray Screening machines	2	1	The existing machines shall be replaced. Total requirement of dual view machines - 3
Stand by X Ray Screening machines	1	-	The existing machines shall be replaced. Total requirement of dual view machines - 1

- In order to improve the security of the terminal, it is proposed to add more CCTV cameras, especially to the expanded area near hand baggage screening and to the forecourt area.

CCTV Cameras	Existing	Additional
Numbers	116	26

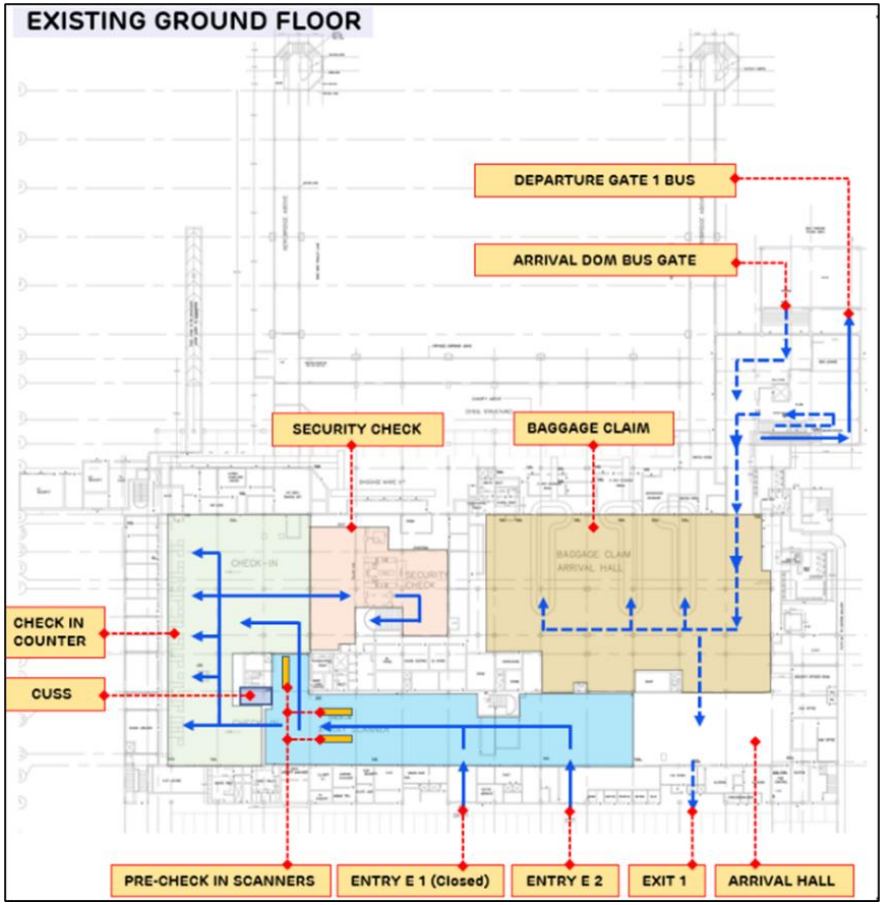
- As per Article 4 – Conditions Precedent of the Concession Agreement, and Schedule U, the Concessionaire has included the following works as part of the Terminal 1 upgradation.

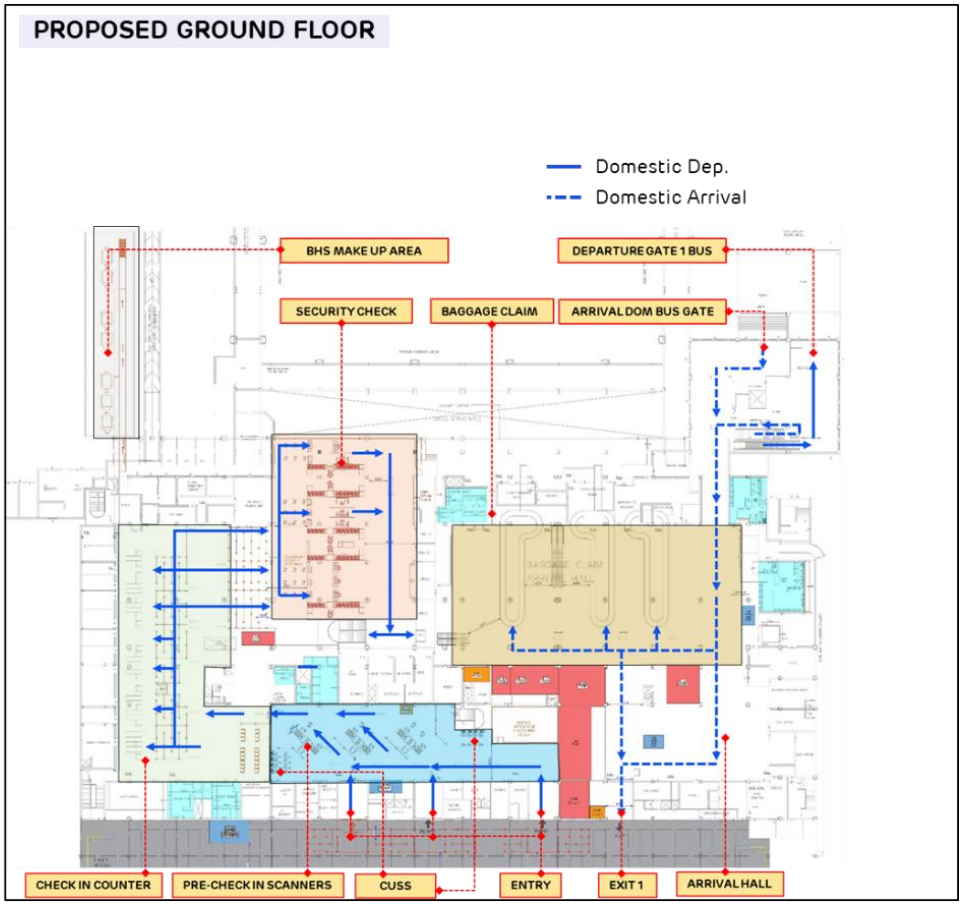
Schedule U S No:	Name of Work / Scheme
29,36	Facelift works in Domestic Terminal Building including electrical - works

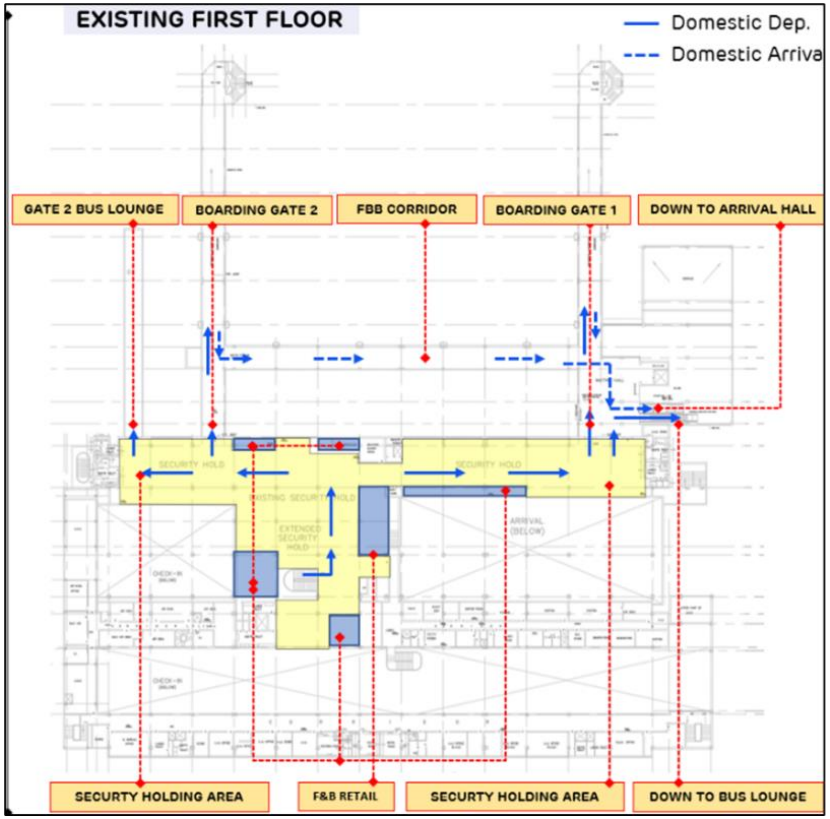
Schedule U S No:	Name of Work / Scheme
31	Provision of Mural/ Art Installation of Thiruvananthapuram Airport
18	Extension of security hold area at domestic terminal building at - Thiruvananthapuram Airport (C+E+L)

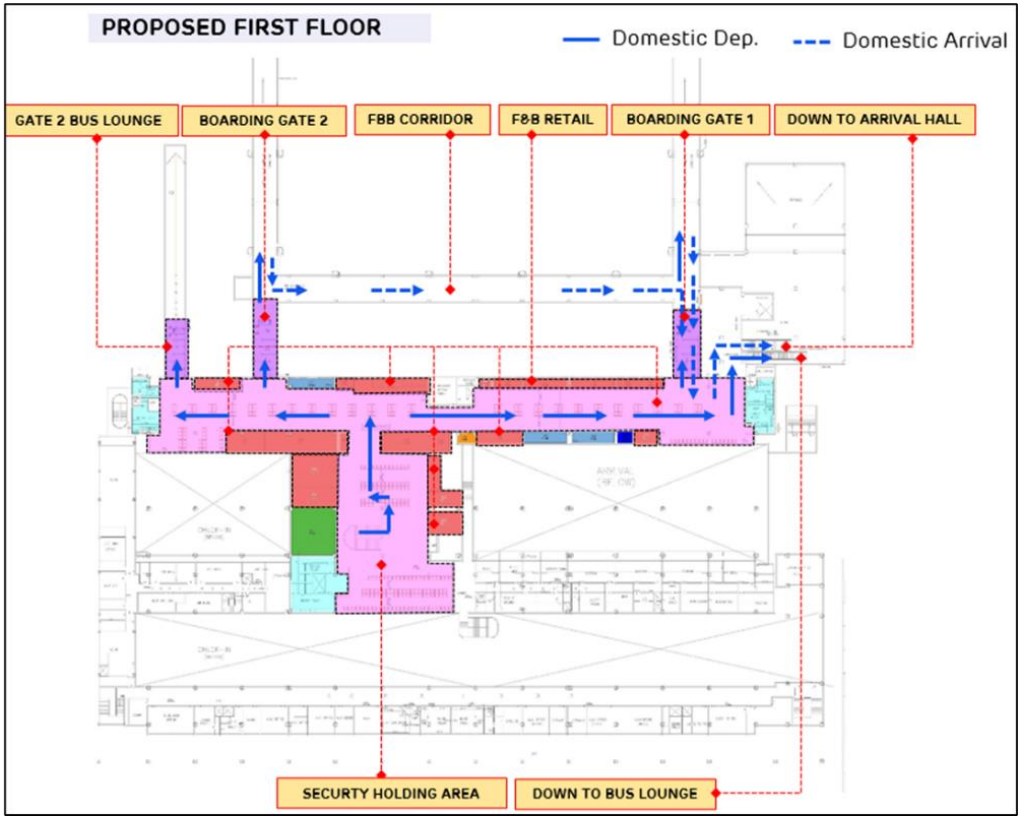
- As part of the facelift works, it is proposed to change the interior of the terminal building including toilet renovation, changing the damaged and discoloured floor tiles, damaged ceiling tiles, adding more lights, change in glass facade and airside canopy and changing entrance canopy.

Existing & Proposed Layouts with Pax Flow are indicated below:






EXISTING FIRST FLOOR
Domestic Dep.
Domestic Arriva
GATE 2 BUS LOUNGE
BOARDING GATE 2
FBB CORRIDOR
BOARDING GATE 1
DOWN TO ARRIVAL HALL
SECURTY HOLDING AREA
F&B RETAIL
SECURTY HOLDING AREA
DOWN TO BUS LOUNGE


PROPOSED FIRST FLOOR
Domestic Dep.
Domestic Arrival
GATE 2 BUS LOUNGE
BOARDING GATE 2
FBB CORRIDOR
F&B RETAIL
BOARDING GATE 1
DOWN TO ARRIVAL HALL
SECURTY HOLDING AREA
DOWN TO BUS LOUNGE

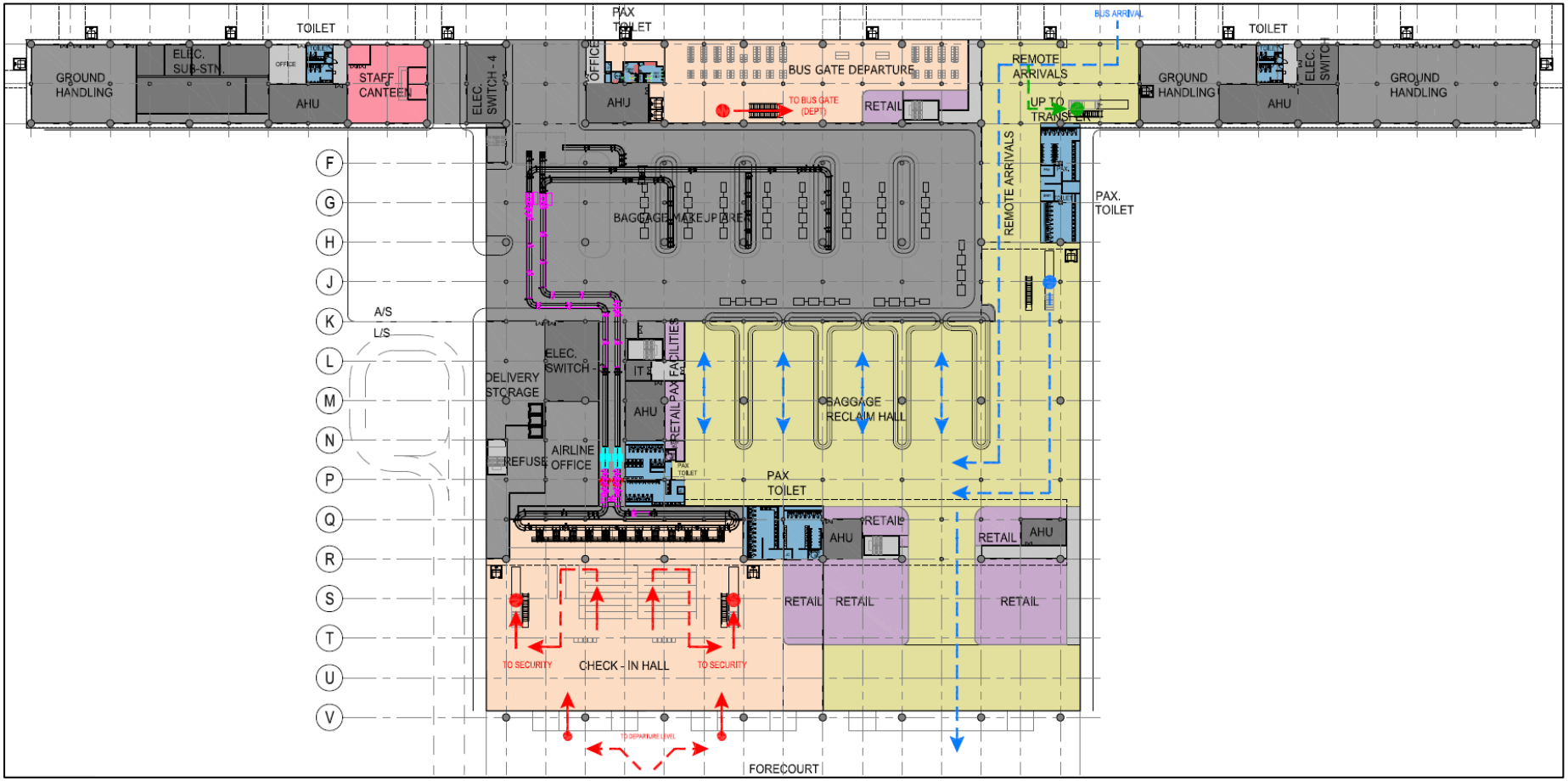
5.3.4 New Domestic Terminal

Existing T1 which has lived its useful life will be demolished and a new Domestic Terminal with built up area of 56,000 sq mtr is planned at the existing place of T1.

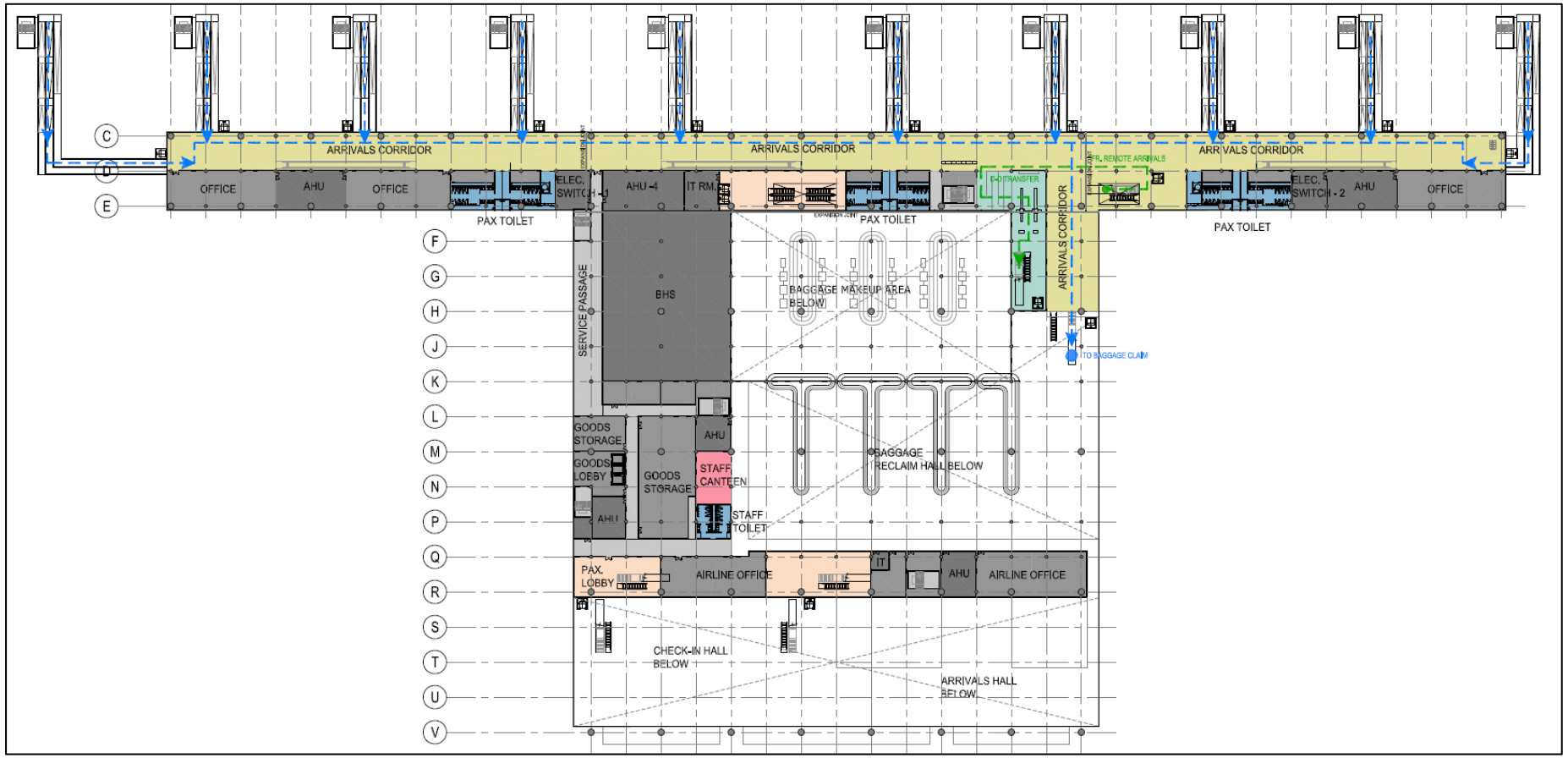
As explained in above point 5.3.1, as there will be requirement of approx. 116,000 sq mtr to cater to the required peak hour capacity, a new domestic terminal having size of 56,000 sq mtr is proposed on the same place as existing old T1. The combined area for T2 and new Domestic terminal will help to create necessary capacity to meet the demand requirements.

The plan of the proposed new T1 Terminal is given below:

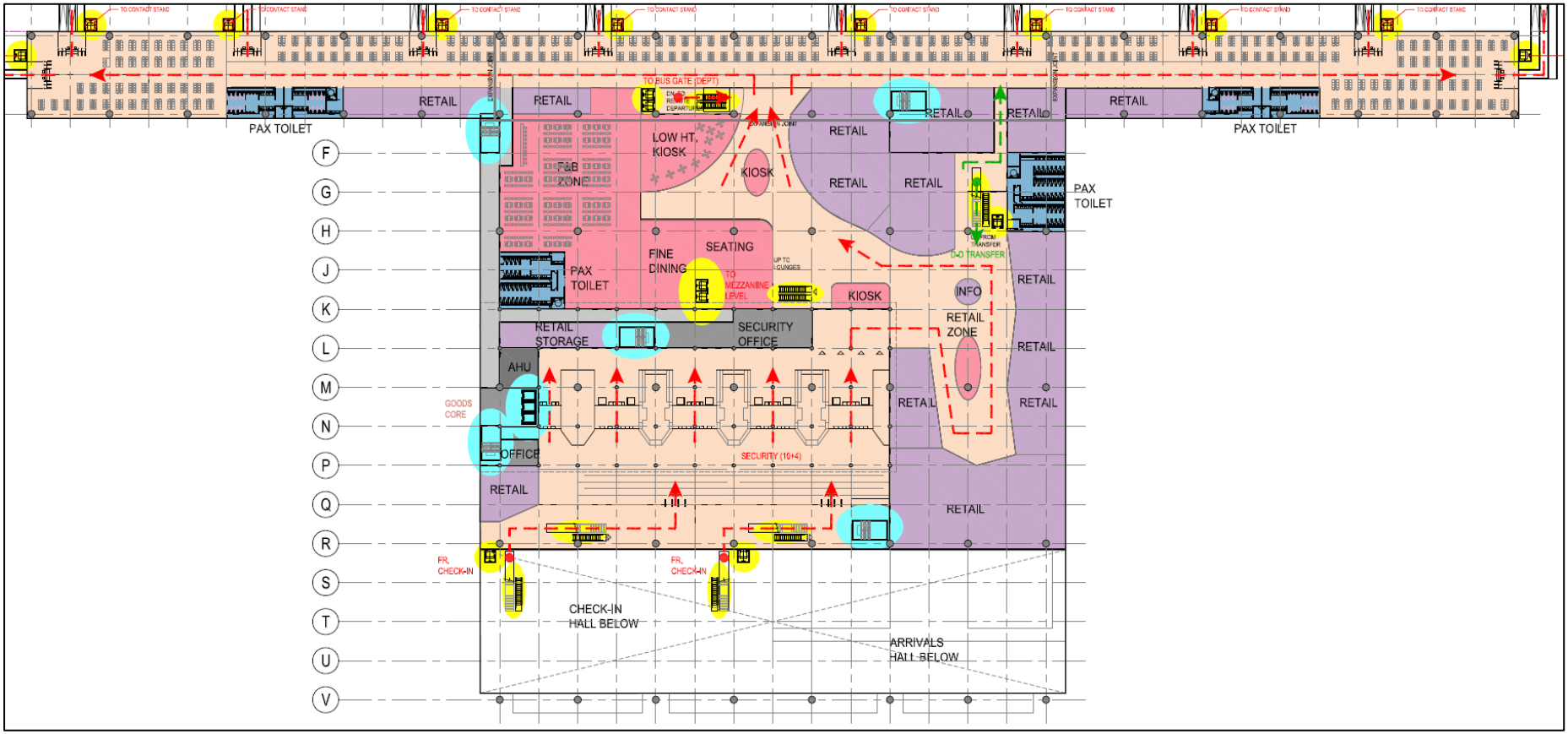
Level 0 Plan – Check in Hall



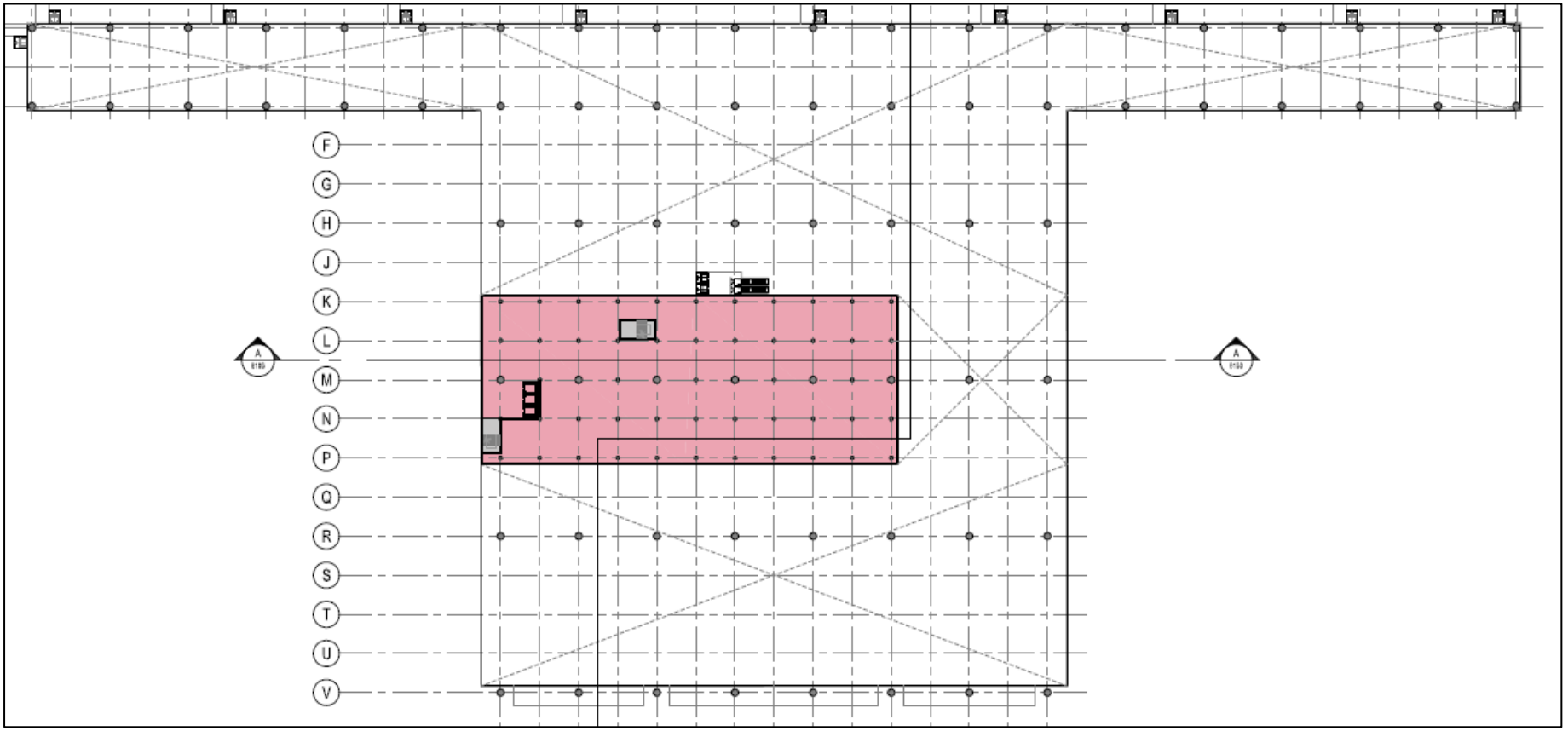
Level +5.5 m Plan – Arrival Hall



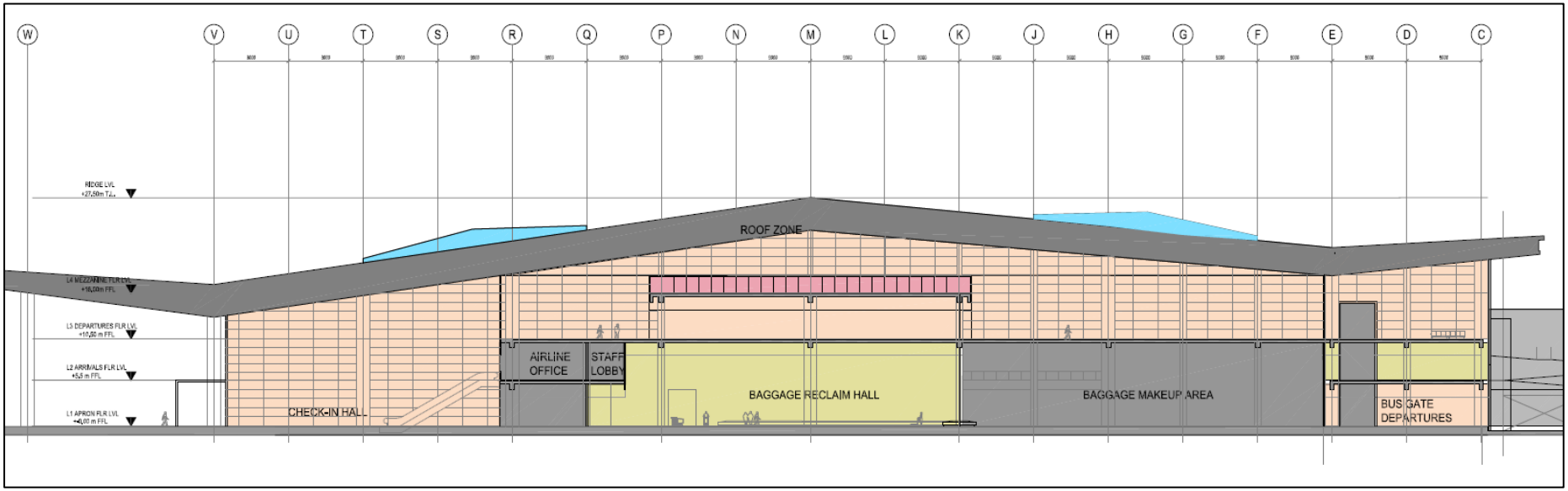
Level +10.5 m Plan – Departure Level



Level +16.0 m Plan – Mezzanine Level



Sectional Elevation

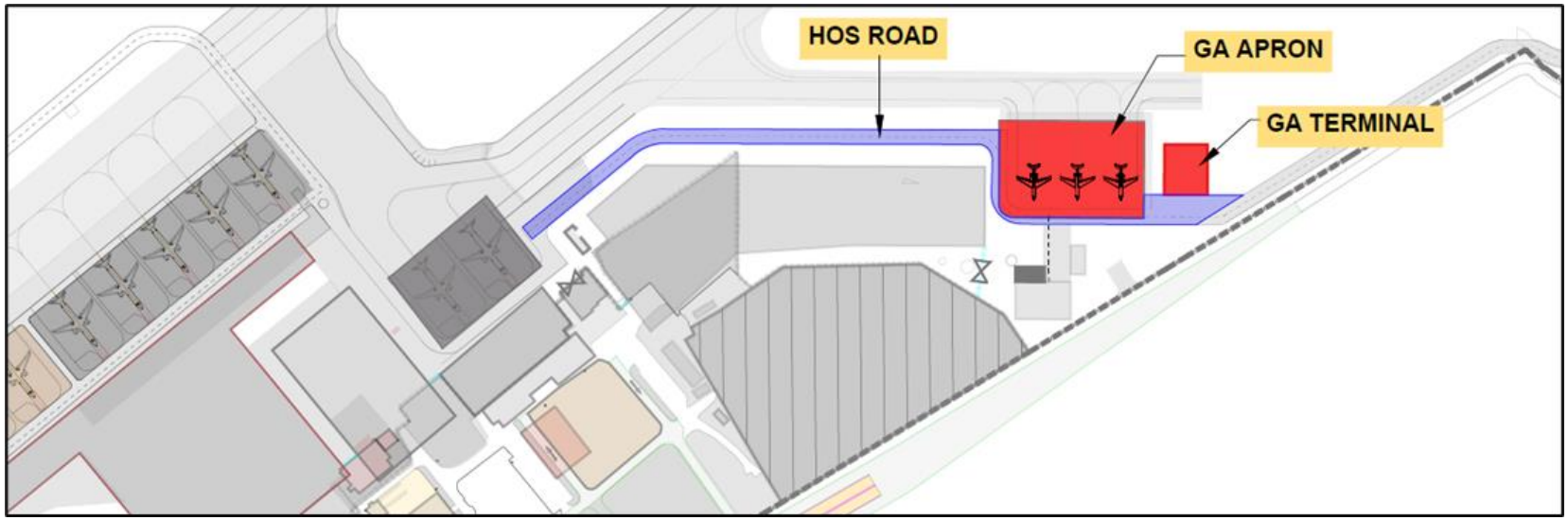


Sl. No	Processors	Numbers
Departure Process Capacities		
1	**Entry gates**	5
2	**Full-service Check-in Counters**	8
3	**Self-service Check-in Counters**	10
4	**Self-bag Drops**	5
5	**E-Gates _ Domestic Security screening**	5

6	**Domestic Security screening Lanes**	14
7	**Contact gates _ Domestic**	10
8	**Bus gates _ Domestic**	4
Arrival Process Capacities		
9	**Domestic Baggage Reclaim Belts**	4
Transfer Process Capacities		
10	**Domestic to Domestic Transfer**	
a)	**Check-in counters**	1
b)	**Security screening lanes**	2

Floors	Level	Area (Sqm tr)
L3 Lounge	+16m	3,200
L2 Departure Concourse	+10.5m	19,000
L1 Arrival	+5.5m	11,800
GF Check in hall + Baggage Reclaim	+0.0m	21,110
FLB	-	890
Total Terminal Built Up area		**56,000**

5.3.5 **General Aviation Terminal:** Currently, the General Aviation passengers are using the domestic terminal and there is no dedicated aircraft parking space. As the GA traffic grows (as per the traffic forecast), a General Aviation Terminal for dedicated use is required. The built up area of the new proposed terminal will be approximately 680 Sqm.




TIAL

5.4 Airside Improvement Works

5.4.1 Mott Macdonald has carried out the study on traffic projections along with daily distribution flight simulation. Based on the same, following peak hour runway capacity is projected:-

Runway Peak Hour Projection Vs Peak Hour Available Capacity

	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Runway Capacity peak ATM availaable						
Total Peak ATM Available	**24**	**24**	**24**	**24**	**24**	**24**
Aarrivals only	18	18	18	18	18	18
Departures only	20	20	20	20	20	20
Projected Peak hour ATMs						
Total Peak ATM projections	**9**	**13**	**18**	**20**	**20**	**21**
Arrivals only	3	5	7	8	8	9
Departures only	3	4	6	7	8	8
Domestic Arrivals	2	3	4	5	5	6
Domestic Departures	3	3	5	6	6	6
International Arrivals	2	4	5	5	5	5
International Departures	2	3	4	4	4	4

Relevant extract from Minutes of Slot Coordination Committee Meeting dated 21st March 2022 published by AAI is :-

- *Maximum number of arrivals and departures in one hour - 24*
- *Maximum number of arrivals only in one hour - 18*
- *Maximum number of departures only in one hour - 20*

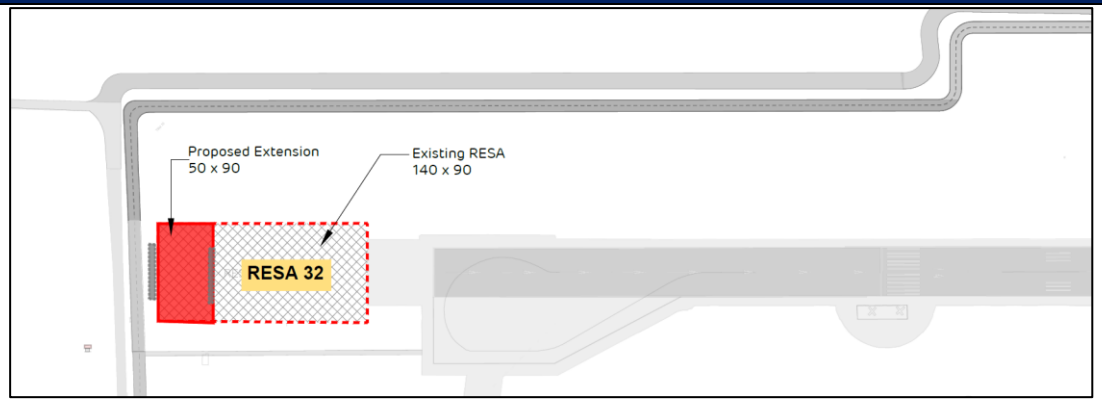
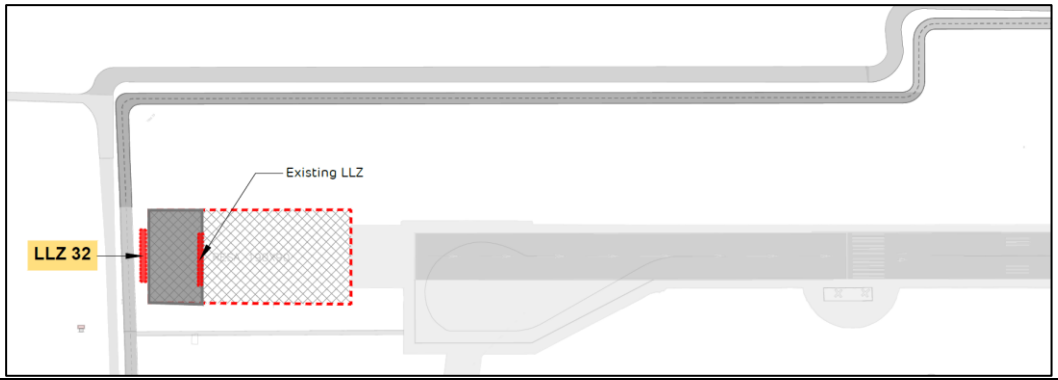
5.4.2 Presently, TIA has a single runway (14-32) orientated in south-west to north-east direction, with length of 3,374 meters and width of 45m which is adequate for Code 4E aircraft operations. It should be noted that the predominant landing direction is Runway 32 which accounts for approximately 90% of overall movements.

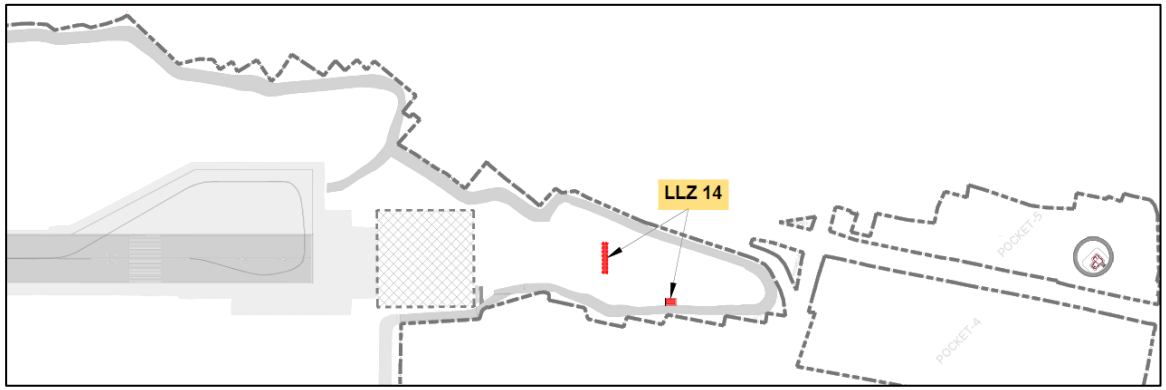
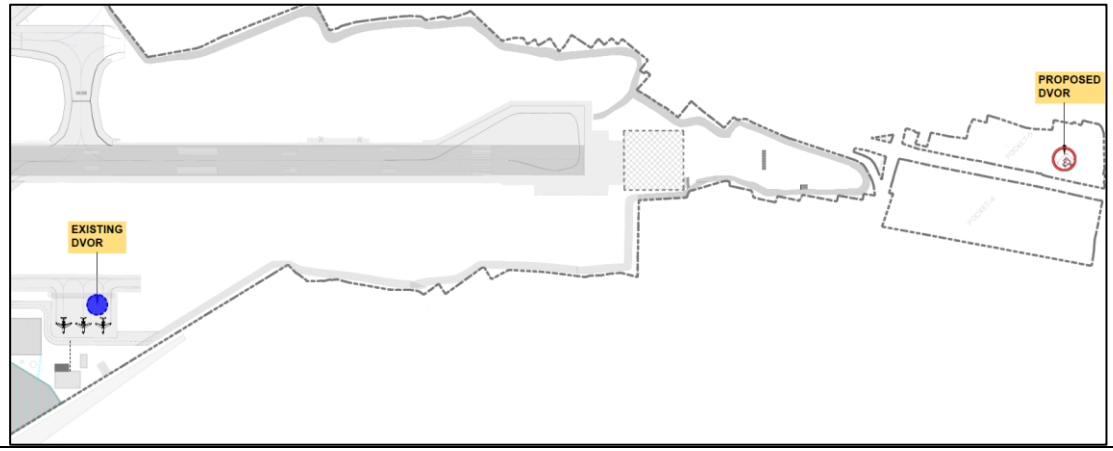
The existing runway and taxiway system can handle up to 24 aircraft traffic movements (ATMs) in one hour. As depicted above Runway capacity is sufficient at the moment. Hence no major project is proposed to be taken up to increase the runway capacity.

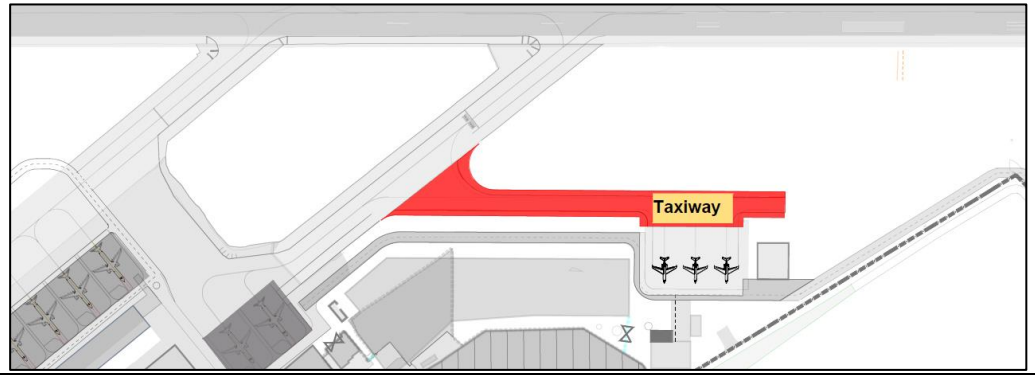
5.4.3 However with the increase in traffic, conversion of T2 as integrated terminal and to meet the service level requirements additional Aprons will be required. Further there are certain activities to mitigate the non-compliances relating to Airside activities like RESA, Basic Strip and Runway recarpeting which had to be taken up.

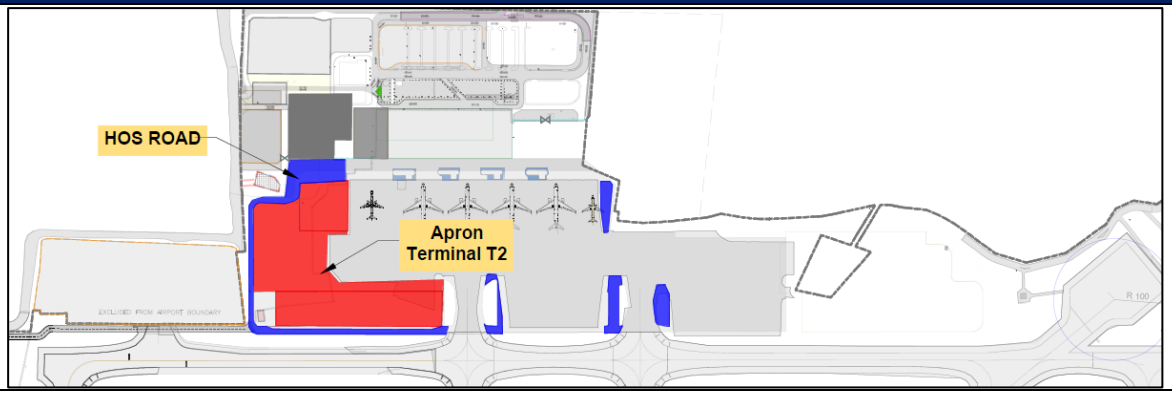
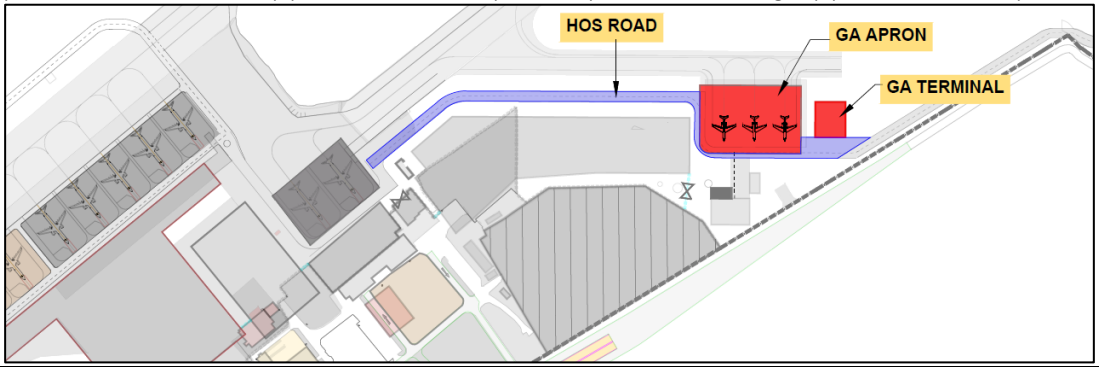
5.4.4 The list of major Airside Improvement Works is tabled below:

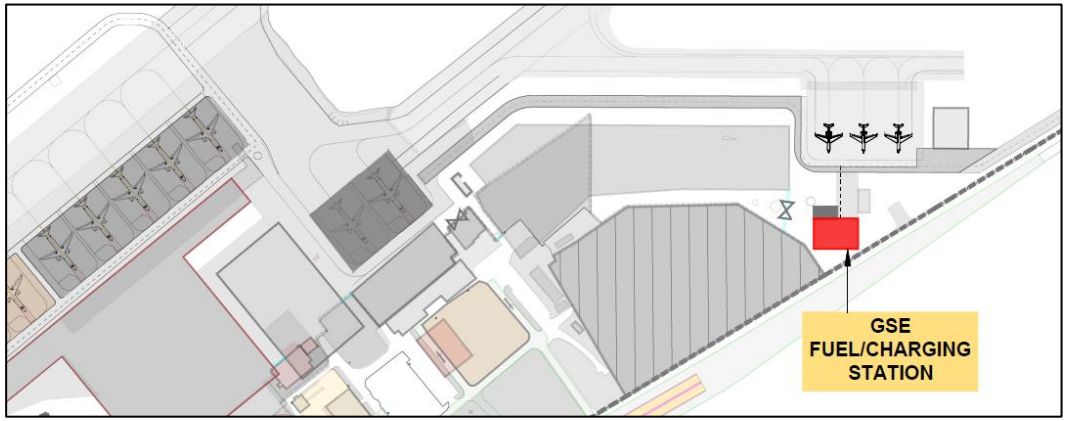
S.N.	Airside improvement projects	Need for the project
1. Runway Improvement Works		
1	Development of RESA for RWY 32	The existing RESA for RWY 32 is 140m x 90m. In accordance with ICAO Annex 14 recommended RESA length within the available land, area of 190m x 90m of the RESA is proposed for RWY 32. Development of RESA for RWY 32 is required to ensure safety of flight operations and DGCA compliance. The existing RESA is not meeting the compliance requirements hence, the entire 190m x 90m is to be redeveloped. This development involves approx. 4,500 sqm (50m x 90m) of RESA area.

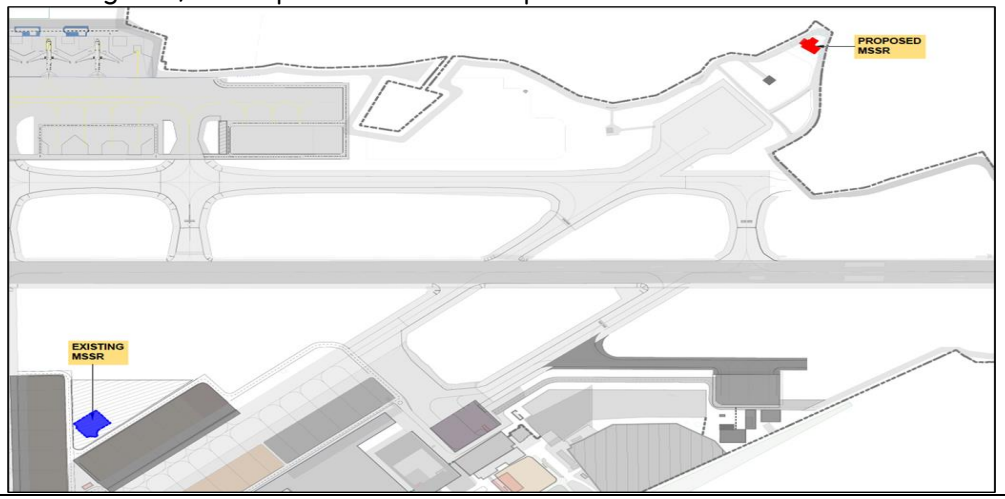
S.N.	Airside improvement projects	Need for the project
		
2	Relocation of LLZ32	The current location of LLZ32 comes within the footprint of the proposed RESA extension for RWY32. Hence it is pertinent to shift the LLZ32. A LLZ hut of 27 sqm is planned near to LLZ. 
3	Provision of LLZ14 & GP14	As we intent to make RWY14 as ILS from simple approach, provision of Localizer & Glide Path for RWY 14 is proposed. This provision will help better reliable guidance for approaching aircraft on RWY 14. The localizer is typically installed 300 meters from the far end of runway threshold. However, in line to the land availability towards RWY 32, the localizer shall be

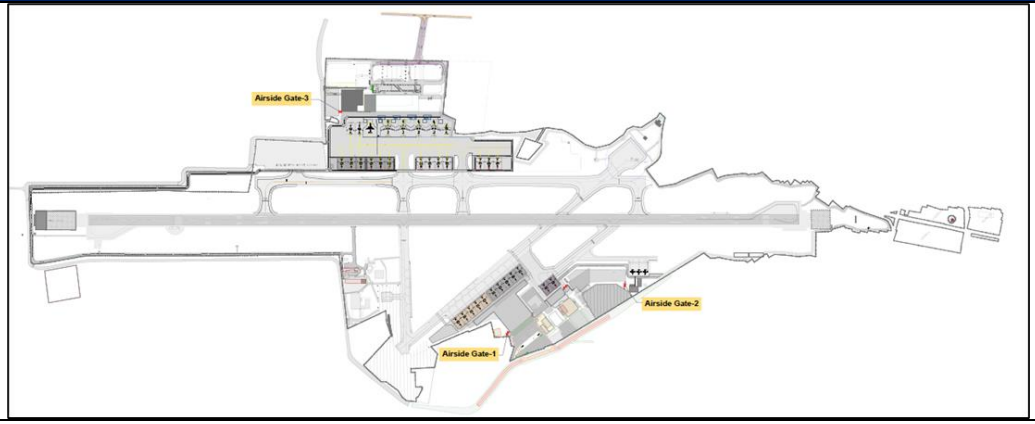
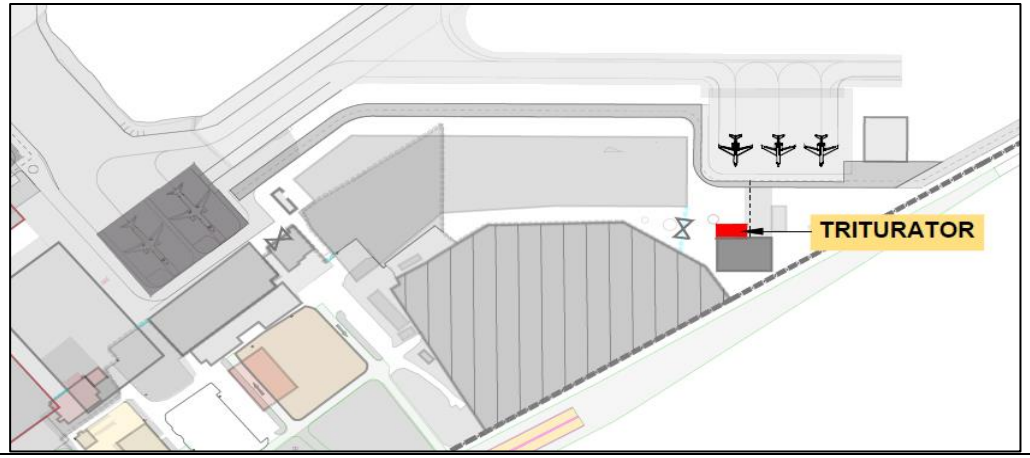
S.N.	Airside improvement projects	Need for the project
		installed at approx. 270m from the runway far end. A LLZ hut & GP hut of 27 sqm is planned near on RWY 32 end. 
4	Relocation of DVOR	There is a need to shift the DVOR as the same falls in the footprint of the proposed GA apron development north of the existing Terminal 1. The new location as finalised, which is also as per AAI's master plan, for relocating the DVOR is south of RWY 32. A DVOR hut of 66 sqm is planned near on RWY 32 end. 

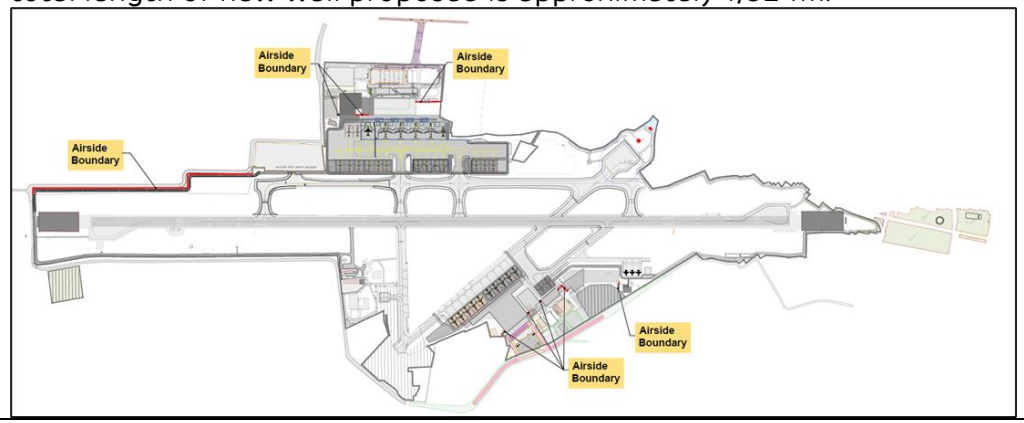
S.N.	Airside improvement projects	Need for the project
2. Taxiway Improvement Works		
1	Construction of Code C Taxiway for GA Apron	Traffic estimate for GA is approx. 5% of total traffic. Currently there is no GA facility at TIA. We are proposing the same as there is a huge potential for GA. Code C taxiway is proposed to ensure connectivity from runway to GA apron, through taxiway A. This project includes construction of a taxiway (Code C compliant) to connect the new proposed GA apron to the runway via taxiway A. Taxiway of approx. length of 353m is proposed along the entire GA apron. This includes the construction of approx. 12,155 sqm of pavement with its shoulders. 
3. Apron Improvements Works		
1	Expansion of Terminal 2 apron	Currently, there are 13 NBE stands for the pre covid traffic of 2.5 Mn Int'l pax. For FY 2027, the number of NBE stands required are 21 for 6.1 Mn pax traffic (Int'l + Dom). To meet the stand demand, this project is proposed:

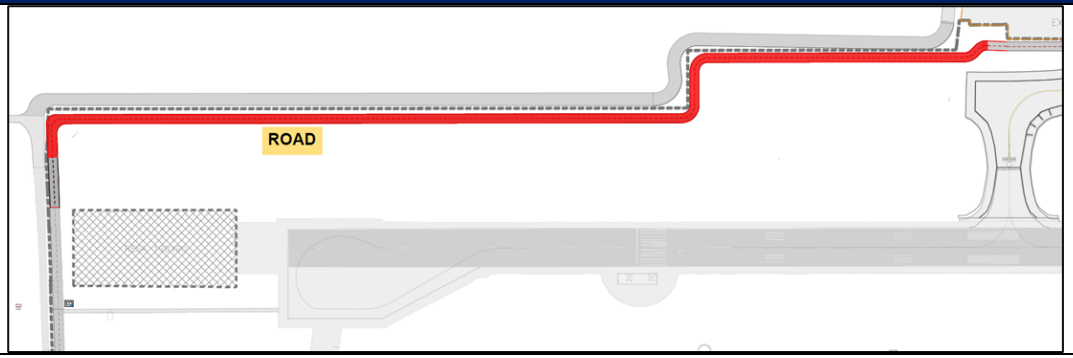
S.N.	Airside improvement projects	Need for the project
		
2	Construction of General Aviation (GA) Apron	The demand of General Aviation (GA) at TIA requires additional dedicated aircraft parking stands. Therefore, new GA Apron needs to be constructed on available land on South-East part of airport along with taxi lane, airside roads associated with GA, and new VVIP Terminal which proposed close to it. The apron for GA to be developed for Code C compliance accommodating 3 Code C aircraft parking stands. This apron shall be constructed for a pavement area of approx. 11,900 sqm of apron including approx. 6,155 sqm of HOS road. 
4	Development of Airside Fuel/EV	Presently TIA does not have the vehicle fuelling facility on airside. To reduce movement from airside to landside for re-fuelling of airside vehicles, this facility is very essential. It shall

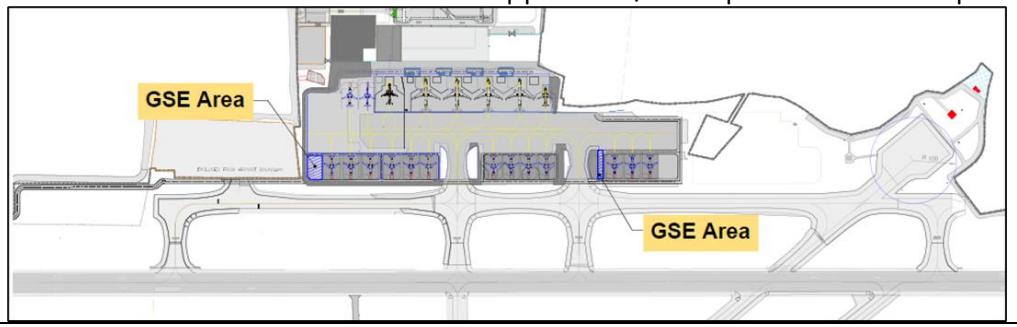
S.N.	Airside improvement projects	Need for the project
	charging Station	dispense diesel, petrol, CNG as well as provide electric charging facility for all airside vehicles. One Airside Fuel Station which includes 2 nos. fuel dispensers, and 3 nos. of EV charging stations is proposed to the south-west of the existing Terminal 1 which shall be developed over a plot of approx. area 576 sqm. 

S.N.	Airside improvement projects	Need for the project
5	Relocation of MSSR	As per the master plan, to accommodate the remote aircraft stands for T1, we need to relocate the current MSSR. The relocation of Mono-pulse Secondary Surveillance Radar (MSSR) is essentially required to ensure safe, smooth, and efficient operation of the expanded airfield and development of New Remote stand for Terminal 1. The current location of MSSR falls within the footprint of the apron expansion of Terminal 1. The new MSSR building of 1,058 sqm shall be developed. 
6	Construction of New Airside Security Gates	Security Gates are a necessity and acts as a connectivity for the airfield. In accordance with the proposed airfield developments for Terminal 1 apron, Terminal 2 apron and other airside developments, new Security Gates are required. Three nos. of Airside Security Gates are proposed.

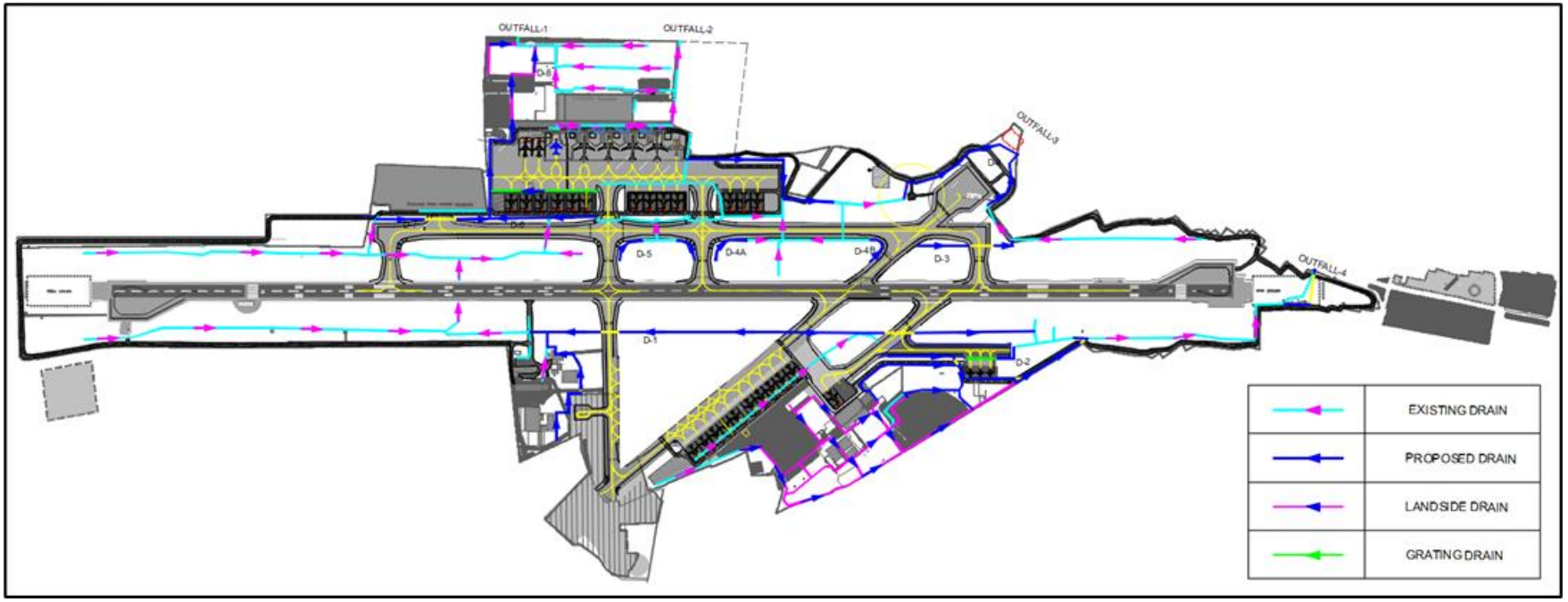
S.N.	Airside improvement projects	Need for the project
		
7	Provision of Triturator	This facility is required for safe and hygienic disposal of waste from aircraft toilets to ensure compliance with safety and environment regulations. Liquid waste from aircraft shall be treated at Triturator as a primary treatment & further will be pumped to STP for secondary treatment. This facility is proposed on a plot southeast of Terminal 1. 

S.N.	Airside improvement projects	Need for the project
8	Construction of Airside Boundary Wall	In view of the proposed land acquisition for implementation of projects like clearing of Basic strip north and east of RWY 14, full RESA development for RWY32, etc the existing airside boundary wall to the North and East of RWY 14 needs to be re-constructed. Similarly, some of the existing airport site area which were not utilised earlier, need to be included within airside area, and therefore new airside boundary wall needs to be built at these locations. This project development however is subject to the land acquisition/availability at the development side. The Airside Boundary Wall proposal is explained in the Figure below. The total length of new wall proposed is approximately 1,624m. 
9	Construction of Perimeter Road	The perimeter road towards North-East of RWY 14 falls within the basic strip of Runway 14-32. Due to this non-compliance of basic strip on RWY 14, perimeter road needs to be shifted towards cityside to clear the basic strip. This project development is subject to land acquisition/availability. The other perimeter road that needs to be developed is to the southwest of RESA 14. This development involves construction of approx. 13,812 sqm road pavement works.

S.N.	Airside improvement projects	Need for the project
		
10	Provision of Oil Water Separator	Wastewater from aprons, hangars, cargo facility, GA & GSE workshop, etc contains floating oil along with suspended solids. These need to be separated from the water through screens, oil water separator and Grit Chamber. After removal of floating oil and suspended solids, the wastewater is to be treated in STP. This is an important environmental compliance which is not present in the existing infrastructure. Therefore, Oil Water Separator/s are proposed to be provided at required locations on the airside.
11	Installation of New SMR	Surface movement radar (SMR) is used to detect aircraft and vehicles on the surface of an airport. It is used by air traffic controllers to supplement visual observations. It may also be used at night time and during low visibility to monitor the movement of aircraft and vehicles. Currently, TIA does not have this radar at the airport. Thus, this project is proposed, and the radar shall be installed to ensure safe, smooth, and efficient operation of the expanded airfield. The SMR shall be installed near the existing ARFF facility building.

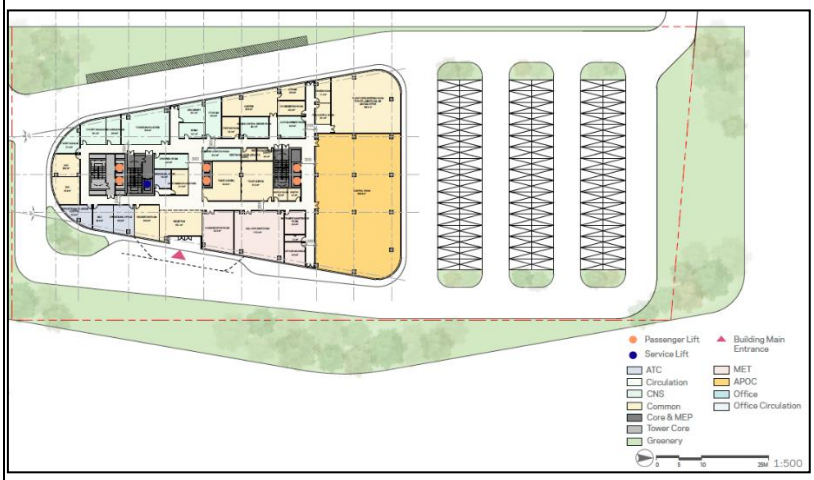
S.N.	Airside improvement projects	Need for the project
		
12	Development of GSE Staging Area	The demand for GSE staging area exceeds its current provision. Considering the GSE staging area requirement for future, new GSE staging facility is proposed to be developed in phases at different locations. GSE area of approx. 16,267 sqm will be developed at various location. 
13	Provision of Perimeter Intrusion Detection System (PIDS)	TIA presently does not have Perimeter Intrusion Detection System (PIDS) along / on its airside boundary wall. However, in view of security considerations, TIA requires PIDS as part of its airport security infrastructure. Therefore, installation of PIDS is proposed for a stretch of approximately 12,645m on the boundary wall.

S.N.	Airside improvement projects	Need for the project
14	Wall to wall grading and strengthening of the runway basic strip.	As per recent evaluation. the CBR for basic strip is less than 7. As per DGCA requirement, graded portion of runway strip should meet the strength requirement of clause 3.4.17 and 3.4.18 of CAR and clause 5.3.25 of aerodrome design manual part I. According to this CBR value of 15-20 is required at a depth of 15 cm from the top surface of the strip. In order to achieve the necessary CBR value and to comply with DGCA requirement, grading and strengthening of Basic Strip is planned,
15	Runway Recarpeting	The previous runway recarpeting was carried out by AAI in FY16-17. As per AAI existing policy the runway recarpeting needs to be done every 5 years. The next runway recarpeting is due in FY22-23. However due to pandemic the traffic was limited in FY20-21 and therefore not done. Hence runway recarpeting is now proposed in FY24-25. Present PCN value is 90/F/C/W/T. Only resurfacing is proposed hence there will be no change in PCN value. The PCN value will be restored to its original value.
16	Stormwater Drainage system	The proposed airside development will result in an increase in storm water run-off in the existing drainage network so enhancement of existing airside & landside storm water drainage will be required. A new storm water drainage system to carry runoff to existing drainage system towards the outfalls is proposed. The indicative layout of the system is shown in the figure below. The total length of drainage network is 20,917 m, out of which 10,833 m is existing and new proposed works is about 10,084 m. Layout of the Drainage system is provided below:


OUTFALL-1
OUTFALL-2
OUTFALL-3
OUTFALL-4
D-1
D-2
D-3
D-4B
D-4A
D-5
D-6
EXISTING DRAIN
PROPOSED DRAIN
LANDSIDE DRAIN
GRATING DRAIN

5.5 Ancillary Building Development Works

5.5.1 To ensure a seamless operation of the airport, many ancillary & support buildings are proposed to be developed. These are tabled below:

S.N.	Other building works	Need for the project
1	**ATC Tower and Technical Block**	This was also proposed by AAI in schedule-U of the concession agreement. Existing ATC Tower is located near the domestic terminal T1, which has a height of 33 m. To pave way for other infrastructure expansion works and to have a clear line of sight to all the movement area the ATC tower needs to be suitably relocated. The existing ATC Tower has constrained visibility to the proposed airside developments and some parts of the existing runway. The AAI has already proposed an alternate location for ATC Tower near T2, which is marked as a carved-out area. The proposal is to relocate the ATC Tower and Technical Block near Terminal 2, where the Authority has carved out the land (3.04 acres) for proposed ATC Tower. Siting study for the location has been done for the ATC. The indicative layout and elevation is provided below:- 

S.N.	Other building works	Need for the project
		
2	**Airport Administration Building**	The existing Administration Building is small in size and cannot accommodate all the staff. A dedicated administration building would be required for TIAL to have their administration set up. A plot area of approximately 2,000 sqm near the T2 is earmarked for this facility to construct the building of 5,600 sqm.

5.6 Development of TIAL Cargo facility

5.6.1 As per Clause 19.4, 19.5 of the Concession Agreement, TKIAL is required to provide Cargo Facilities at the Airport. The relevant clauses from the Concession Agreement as s follows:-

19.4 Cargo Facilities
19.4.1 (a) The Concessionaire shall upgrade, develop, operate and maintain the Cargo Facilities in accordance with the provisions of this Agreement, Applicable Laws, Applicable Permits, relevant ICAO Documents and Annexes and Good Industry Practice.

19.4.2 The Concessionaire shall:
(a) make reasonable endeavors to ensure that the Cargo Facilities include adequate cargo and parcel space, handling equipment, storage and handling of perishable cargo and dangerous goods, space for cargo agents and customers, inspection area, office space, automation systems, screening equipment, storage facilities, and facilities for mail handling and courier shipments in accordance with the provisions of this Agreement and Good Industry Practice;
(b) operate and maintain the Cargo Facilities and provide the associated services to airlines and consignors in accordance with the provisions of this Agreement, Applicable Laws and Good Industry Practice;
(c) provide, free of charge and in accordance with Good Industry Practice, operational space and other facilities to the customs, security, quarantine and other Designated GOI Agencies, as the case may be, for discharging their statutory functions;
(d) install and keep operating in good working condition, web-cams, at all the strategic locations, wherever, the cargo facilities are being handled or dealt with in any manner whatsoever.

19.5.1 The Concessionaire shall ensure that the Master Plan earmarks an area for Cargo Facilities, and that such area shall be used only for handling of cargo and for associated activities.

"Cargo Facilities" means the buildings, structures and equipment, docking space, aircraft parking, vehicular parking and land appurtenant thereto, as the case may be, required for handling of incoming and outgoing cargo, including short-term warehousing thereof;

5.6.2 In Compliance to the CA, TKIAL has planned for Cargo Facilities and its operations, the details of which are provided in Chapter 6.

5.7 Development of Fuel Storage and distribution Facility

5.7.1 As per Clause 19.3, the Concession Agreement, TKIAL is required to provide infrastructure required for operation of fuelling services on equal access basis (Open access basis) at the Airport. The relevant clauses from the Concession Agreement as s follows:-

19.3 Aircraft Fueling Services
The Concessionaire shall provide, or cause to be provided, the infrastructure required for operation of fueling services on equal access basis for all the aircrafts at the Airport in a transparent and non-discriminatory manner. Such infrastructure shall include tank farms and associated facilities in accordance with the provisions of this Agreement, Applicable Laws and Good Industry Practice. Good Industry Practice.

5.7.2 In Compliance to the CA, TKIAL has planned for fuel farm infrastructure and its operations. The details regarding projected fuel throughput volume, short term and long-term infrastructure planning, operating expenses relating to planned fuel farm infrastructure are provided in Chapter 7.

5.8 Environment Related Capital Expenditure

In view of Aviation and Airport Industry's initiatives towards Carbon Neutrality and Net Zero Emissions, TKIAL has planned certain capital expenditure to reduce emissions, development of green infrastructure, improving energy efficiency and improved airport operations with resource conservations. Few of the major Environment related capital expenditure are listed below:

I. Provision of Triturator (already explained above in Airside projects, whereas cost is considered in Environment related category)
II. Electric Vehicle for BDDS dog Squad
III. Conversion of Halogen type runway fittings with LED type fittings
IV. Solid Waste Management Plant
V. Continuous (real-time) Ambient air quality monitoring stations (CAAQM)
VI. Continuous (real-time) Noise monitoring stations (CNMS)
VII. DG Retro fitting

VIII. Airport Owned Electric Vehicles Procurement

IX. IoT based Water Management

X. Energy Management system for monitoring Electricity Consumption including Digital energy meters.

5.9 Sustaining/Minor capital expenditure

A detailed list of sustaining / minor capital works is provided below in point 5.11.

5.10 Basis of Costing

5.10.1 **Block Cost Estimate**: - Block Cost estimation for works / projects as included in each category of capex are based on DSR / MoRTH / PAR / Market rate including all necessary Taxes, duties, levies etc. as applicable. Indexation @ 5% per annum has been considered (as per RBI forecaster survey Dec 2022).

5.10.2 **Soft Costs of approx. 16%** - Technical consultancies, contingencies, pre-operative Cost, design cost, PMC, preliminary expenses

5.10.2.1 As per recent released CPWD SOP 2022 dated 13.07.2022 https://cpwd.gov.in/Publication/sop2022.pdf, the Project Estimation should take of the following requirements :-

10. Preliminary estimate (PE) is to be prepared on the basis of Plinth Area Rates or length of road etc. worked out on the rate per unit area/length/number, or such other method adopted for ready and rough calculation, so as to give an idea of the approximate cost involved in the proposal.
11. Prevailing Cost Index over the plinth area rates, effect of ESI & EPF leviable (rates as given in Annexure -14, Contingencies and Departmental Charges (if applicable) are to be added in the PE.

As per CPWD norms, the various costs to be considered while preparing the preliminary estimates and should include the following components:

i. Planning Consultancy 4% and Project Management Consultancy 5% *(refer below PART 1 as the relevant extract from CPWD SOP2022)*
ii. Other Technical Services like Preliminary Sketches, Detailed Drawings, Preliminary Estimates, Structural Design, Execution,

Audit & Account etc. is ranging between 7% to 24% depending upon size of the project *(refer below PART 2 as the relevant extract from CPWD SOP2022)*

iii. Contingency cost is 3% *(refer below PART 3 as the relevant extract from CPWD SOP2022)*

iv. ESI & EPF ranging between 0.85% to 4.2%, say average of 2% *(refer below PART 4 as the relevant extract from CPWD SOP2022)*

5.10.2.2 As per accounting standards *(refer extract as PART 5 below)* the costs relating to Project Team is required to be capitalized. These costs have been approved by AERA in various orders for PPP and AAI Airports ranging between 2-3% of the project cost *(refer below PART 6 for few Airports examples)*. The same is recognized by AERA in its Guidelines Form F11 (b) *(refer below PART 7 as the extract from AERA Guidelines)*.

The overall Soft Costs based on point 5.10.2.1 and 5.10.2.2 above is minimum 18-20%.

5.10.2.3 As per "Airport Capital Improvements: A Business Planning and Decision-Making Approach" study conducted by Airport Cooperative Research Program (ACRP), Transport Research Board (sponsored by US Government's Federal Aviation Administration). The soft costs range between 10% to 30%. The extract from Page 48 the report is as follows:

Soft costs typically range from 10% to 30% of total project costs. These include design fees, permitting fees, utilities, costs associated with inspections and land acquisition, costs associated with the bidding and procurement process, and project administration and management costs.

Full study report by ACRP is provided as Annexure M.

5.10.2.4 **Based on information from reputed agencies from India and Overseas, it is evident that soft costs requested by TKIAL is within the reasonable range. We have therefore proposed soft cost of 16% of total capex.**

PART 1

SOP No. 8/7: Levy of Fees by CPWD for Consultancy Services (Para 8.20)

CPWD handles consultancy works of planning and designing (with or without construction) of

various projects including high-rise buildings, housing complexes etc of Public Sector Undertakings and other organizations to undertake construction on turnkey basis, or for
Mission's buildings abroad, etc. at negotiated rates. Fee for the Consultancy Services is charged.
by CPWD as given below.

FEES FOR CONSULTANCY SERVICES

(a) Planning 4%
(b) Construction Management 5%
(c) Visits of CPWD Officers from India 1%

For planning and designing work, the following charges is levied:
(i) Development of Master Plan Rs.10000/- per hectare
(ii) Architectural plans and drawings 3 % for original work ½ % for repetition
(iii) Structural designs and drawings 1% for original work ½ % for repetition

PART 2

ANNEXURE- 5

(Reference Para 3.1.1.4 (1))

RATES OF DEPARTMENTAL CHARGES

Objectives of works	All maintenance works, and minor works costing upto Rs. one lakh	Construction works costing upto Rs. Two Crores	Construction works costing between Rs. Two and five Crores	Construction works costing more than Rs. five crores
1	2	3	4	5
(A) Establishment Charges				
1. Preparation of preliminary sketches	½%	¼%	¼%	¼%
2. Preparation of detailed working drawings	1%	¾%	½%	¼%
3. Preparation of preliminary estimates	¼%	¼%	¼%	¼%
4. Preparation of detailed estimates	½%	¾%	½%	¼%
5. Preparation of structural designs	1%	1%	¾%	¾%
6. Execution	19-¼%	7-¾%	4-¾%	4-¼%
Total Establishment charges	22-½%	10-¾%	7%	6%
(B) T&P (Machinery Equipment)	¾%	¾%	½%	½%
(C) Audit & Account	¼%	¼%	¼%	¼%
(D) Pensionary	¼%	¼%	¼%	¼%
	23-¾%	12%	8%	7%

PART 3

SOP No. ¾: Provision for Contingencies and its Utilization (Refer Para 3.1.1.3 (3))

1. *In addition to the provision for all expenditure which can be foreseen for a work, a provision of contingency is kept as follows : (i) Estimated cost up to Rs. 1 Crore ..... 5% (ii)* ***Estimated cost more than Rs. 1 Crore ... 3%, subject to minimum of Rs. 5 Lakh***

PART 4

ANNEXURE- 14

(Refer SOP No. 3/2)

STATEMENT SHOWING THE RATES OF EPF and ESI CHARGES TO BE INCLUDIED IN PRELIMINARY ESTIMATE

Category of work	Component of Labour	EPF @12.5 % of labour Component	ESI @ 4.5 %of labour Component	Total of EPF & ESI
Buildings	25%	3.125%	1.125 %	4.25%
Road Works & pavements in airfields	5%	0.625%	0.225%	0.85%
External sewerage	10%	1.25 %	0.45%	1.70%
External water supply	5%	0.625%	0.225%	0.85%
Bridge/Flyover works	25%	3.125%	1.225%	4.25%
Maintenance works engaging only labour component	100%	12.50 %.	4.50%	17.00 %
Other Maintenance work	70%	8.75%	3.15%	11.9%

PART 5

Indian Accounting Standard (Ind AS) 16 ***Property, Plant and Equipment***

Elements of cost

16 The cost of an item of property, plant and equipment comprises:

(a) its purchase price, including import duties and non-refundable purchase taxes, after deducting trade discounts and rebates.

(b) any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management.

(c) the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located, the obligation for which an entity incurs either when the item is acquired or as a consequence of having used the item during a particular period for purposes other than to produce inventories during that period.

17 Examples of directly attributable costs are:

(a) costs of employee benefits (as defined in Ind AS 19, Employee Benefits) arising directly from the construction or acquisition of the item of property, plant and equipment;

(b) costs of site preparation;

(c) initial delivery and handling costs;

(d) installation and assembly costs;

(e) costs of testing whether the asset is functioning properly, after deducting the net proceeds from selling any items produced while bringing the asset to that location and condition (such as samples produced when testing equipment); and

(f) professional fees.

PART 6

Extract from Chennai Airport Order No. 38/2021-22 for the Third Control Period

Grand Total of Capital Additions Proposed in the Third Control Period				
Grand total of capital additions proposed to be considered	Total	3,882.58	2,139.82	(1,742.66)
	Financing Allowance	51.88	-	(51.88)
	IDC	108.17	21.93	(86.27)
	Project division expenses capitalized (Exp. Cap)	87.07	47.58	(39.57)

Order No. 38/2021-22 for the Third Control Period

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~2.25%

Extract from Pune Airport Order No. 38/2021-22 for the Third Control Period

the control of Pune International Airport or its contracting agency and is properly justified, the same would be considered by the Authority while truing up the actual cost at the time of determination of tariff for the Fourth Control Period. Further, this proposal was applicable to all the projects forecasted to be capitalized in the Third Control Period given in this Consultation Paper. This will ensure timely adherence to the capital expenditure plan proposed in the Third Control Period.

4.2.33 Based on the discussion above, the total capital additions proposed to be considered by the Authority in the Third Control Period was as tabulated below:

4.2.34 Based on the Authority's analysis of capital expenditure deferred from Second Control Period (Para 4.2.9 to Para 4.2.24) and new capital expenditure proposed to be incurred in the Third Control Period (Para 4.2.25 to Para 4.2.31), the Authority considered a total Capital Expenditure of Rs. 52,540.93 lakhs as given below:

Table 83: Capital Expenditure additions for the Third Control Period considered by the Authority

Reference	Project	No.	Particulars	Submitted by AAI	Proposed by the Authority	Difference
				1	2	3=2-1
I	Capital additions deferred from the Second Control Period to the Third Control Period	I.A	New Integrated Terminal Building	44,621.19	43,694.92	-926.27
		I.B	PMC-Expansion of Terminal Building- (Tensile canopy)			
		I.C	PMC-Expansion of Terminal Building-Electrical works (aerobridge)			
		I.D	Baggage Trolley & XBIS	508.47	508.47	-
		I.E	Financing Allowance	3,337.57	-	-3,337.57
		I.F	IDC	2,023.22	2,005.96	-17.26
		I.G	Project division expenses capitalized (Exp. Cap)	1,651.26	1,630.60	-20.66
		I	Sub Total (A+B)	52,141.71	47,839.95	-4,301.77

~3.5%

PART 7

Form F11 (b): Payroll Related Expenditure and Provisions (ref: Section A5.5.6)

S.N.	Particulars - with detailed breakup	Last available audited year^	Financial Year before Tariff Year 1*	Tariff Year 1	Tariff Year 2	Tariff Year 3	Tariff Year 4	Tariff Year 5
A	*Salaries and Wages*							
B	*PF Contribution*							
C	*Medical Expenses*							
D	*Overtime*							
E	*Staff Welfare Fund*							
F	.....							
1	Grand Total							
2	Employee expenses capitalised							
3	Net Employee expenses (1)-(2)							

* Projected values to be provided
# Fields in italics are indicative only
^ Information for last financial year for which audited accounts are available

5.10.3 **Interest During Construction (IDC)** – IDC is calculated based on construction phasing of the proposed capital expenditure and capitalized as per accounting policies. The amount is calculated considering debt portion of 65% with cost of debt as 12%.

5.10.4 **Financing Allowance** – As per clause 5.2.7 of AERA Guidelines Clause, financing allowance is provided on Works in Progress. The relevant extract from the AERA Guidelines is as

5.2.7. Work In Progress assets
(a) Work in Progress Assets (WIPA) are such assets as have not been commissioned during a Tariff Year or Control period, as the case may be. Work in Progress assets shall be accounted for as:

$WIP\,t$ = $WIPA\,t-1$

+ Capital Expenditure (Capex)
+ Financing Allowance
- Capital receipts of the nature of contributions from stakeholders (SC)
- Commissioned Assets (CA)

Where: -
$WIP\,t$ *: Work in progress asset at the end of Tarif Year t*
$WIP\,t-1$ *: Work in progress asset at the end of Tarif Year t – 1*
Capital Expenditure: Expenditure on capital projects and capital! items made during Tariff Year t.

The Financing Allowance shall be calculated as follows:

$$Financing\ Allowance = R_d \times (WIPA_{t-1} + \frac{Capex-SC-CA}{2})$$

Where

(iv) R_d *is the cost of debt determined by the Authority*

(v) *SC are the capital receipts*

(vi) *CA are the commissioned assets*

As per AERA Guidelines, financing allowance is to be provided on WIPA (irrespective of the source of funds). Since IDC is already proposed on the 65% of the debt portion, the financing allowance is proposed on the balance 35% funding source.

All the procurement will be done as per company procurement policy which is available on the company website. The same can be accessed

at the link https://www.adani.com/thiruvananthapuram-airport/-/media/D2C93A40021F469B99600037431E9586.ashx

5.11 Total cost of the proposed Capital expenditure during TCP is table as

Project Heading and project details	Asset Category for Gross Block and Depreciation	Amount (Rs Crores)	Start Date	End Date
A. Airside Improvement Works		**431.30**		
Development of RESA for RWY 32	Runway, Taxiway and Apron	0.55	Jan-24	Apr-24
Relocation of LLZ32	Other Buildings	0.21	Jan-24	Mar-24
Provision of LLZ14 & GP14	Other Buildings	0.45	May-24	Aug-24
Relocation of DVOR	Other Buildings	0.33	Apr-23	Mar-24
Construction of Code C Taxiway for GA Apron (Activity includes demolition items)	Runway, Taxiway and Apron	12.81	Apr-24	Nov-24
Expansion of Terminal 2 apron (Area includes HOS, Transition pavements, demolition & new pavements)	Runway, Taxiway and Apron	85.83	Oct-23	Mar-24
Construction of General Aviation (GA) Apron (Area includes HOS, Transition pavements, demolition & new pavements)	Runway, Taxiway and Apron	12.25	Apr-24	Nov-24
Airside Fuel/ EV Charging Station (30KW charging points 3 nos; 2 fuel dispensing units and associated facilities)	Plant and Machinery	2.29	May-24	Nov-24
MSSR Facilities (New CONSTRUCTION) (Cost includes construction of New building)	Other Buildings	5.68	Oct-23	Mar-24
New Airside Security Gate -1	Other Buildings	0.76	Dec-23	Jun-24
New Airside Security Gate -2	Other Buildings	0.79	Dec-24	Apr-25
New Airside Security Gate -3	Other Buildings	0.86	Mar-26	Jan-27
Security equipment for Gates	Other Buildings	1.83	Jan-26	Jan-27
Upgradation of Airside gates- Crash Gates, Morcha construction at gate 6,10,11	Other Buildings	2.78	Jan-26	Jan-27
Airport Boundary Wall	Boundary Wall	5.44	Jan-26	Jan-27
New Airside Perimeter after shifting boundary	Boundary Wall	6.62	Mar-24	Oct-24
Oil Water Separators (OWS)	Plant and Machinery	12.41	Dec-23	Oct-24
SMR Facilities (New CONSTRUCTION)	Other Buildings	0.64	Oct-23	Mar-24
GSE Staging - (Rigid Pavement)	Runway, Taxiway and Apron	2.52	Jan-24	Dec-24
Perimeter Intrusion Detection System (PIDS)	Boundary Wall	31.28	Feb-26	Feb-27
Airside Drain Network (3.5m W x 2 m D)	Runway, Taxiway and Apron	141.16	Feb-26	Feb-27
Grading of runway, taxiway strips and other critical areas in operational area.	Runway, Taxiway and Apron	17.33	Apr-23	Jun-23
Runway and taxiway micro/ re surfacing and associated works	Runway, Taxiway and Apron	86.47	Apr-24	Jun-24
B. Passenger Terminal & Associated works		**1,795.95**		
Upgradation of T-1 Terminal	Terminal Building	19.48	Mar-23	Aug-23
Terminal 2 Upgradation & Expansion	Terminal Building	729.48	May-23	Dec-24
Construction of new Domestic Terminal -1	Terminal Building	1,038.58	Mar-25	Feb-27

Project Heading and project details	Asset Category for Gross Block and Depreciation	Amount (Rs Crores)	Start Date	End Date
GA Terminal	Terminal Building	8.42	Apr-24	Dec-24
C. Ancillary Building Development Works		**361.96**		
ATC Tower and Technical Block	Other Buildings	311.84	Dec-23	Jun-25
Airport Administration Building	Other Buildings	50.13	Dec-23	Jun-25
D. ATF storage and distribution system		**371.13**		
Fuel storage farm	Fuel	153.50	Dec-23	Sep-25
Fuel hydrant line	Fuel	186.65	Dec-23	Dec-25
Equipment cost	Fuel	15.23	Apr-23	Mar-24
IOCL & BPCL Asset procurement including Dead stock of Product	Fuel	10.50	Apr-23	Jun-23
Dead stock of Product	Fuel	5.25	Apr-23	Jun-23
E. Development of Cargo Facilities		**90.42**		
International Cargo Centre (ICC)	Cargo Building	82.52	Oct-24	Aug-25
Interim ICC and DCC equipment	Cargo Equipment	7.90	Oct-22	Mar-23
F. Environment Related		**23.48**		
Triturator	Plant and Machinery	3.69	May-24	Mar-25
Conversion of Halogen type runway fittings with LED type fittings	Plant and Machinery	5.78	FY24	
Electric Vehicle for BDDS dog Squad	Vehicles	0.40	FY24	
Solid Waste Management - Landside	Other Buildings	0.44	FY23	
Solid Waste Management Plant at T2	Other Buildings	0.58	FY24	
Continuous (real-time) Ambient air quality monitoring stations (CAAQM)	Plant and Machinery	1.27	FY26	
Continuous (real-time) Noise monitoring stations (CNMS)	Plant and Machinery	1.27	FY26	
DG Retro fitting	Plant and Machinery	3.28	FY23 to FY26	
Airport Owned Electric Vehicles Procurement	Vehicles	5.96	FY23 to FY25	
Energy Management system for monitoring Electricity Consumption including Digital energy meters.	Plant and Machinery	0.65	FY23 – 24	
IoT based Water Management	Plant and Machinery	0.17	FY23	
G. Sustaining / Minor Capex Works		**191.27**		
Strengthening of Admin block/Offices & office development of Engineering, Finance and HR offices including furniture.	Other Buildings	5.20	Throughout the control period. The detailed information is provided in the excel model attached	
Construction of Storeroom for Techno commercial and E&M.	Other Buildings	3.18		
Provision for car/scooter shed for staffs (as per CA -Planned capex work)	Other Buildings	1.16		
Replacement of scooter shed & provision of compound wall with covered parking at fire station	Other Buildings	0.81		
Provision of water less urinal sensors at admin blocks and other ancillary buildings.	Other Buildings	0.35		
AHCR, RLCC Furniture	Furniture & fixtures	0.06		
Replacement of 11KV Old HT panels in CCR with associated works	Other Buildings	1.73		
Replacement of VDGS with AVDGS Laser unit for AVDGS for Bay nos 24, 25, 26, 5 & 6 and SITC of A-VDGS at Bay no. 44,45, 46 and 47 at Trivandrum Airport.	Runway, Taxiway and Apron	3.54		
Provision of LED flood lights for Apron Lighting	Runway, Taxiway and Apron	1.73		

Project Heading and project details	Asset Category for Gross Block and Depreciation	Amount (Rs Crores)	Start Date	End Date
ASFT (Airfield surface friction tester)	Plant and Machinery	1.76		
View Cutter	Security equipment	1.10		
Vehicle recovery Van	Vehicles	0.17		
Grass cutting and collection machine - Trilo	Plant and Machinery	1.27		
Purchase of Ambulance	Vehicles	3.17		
Structural strengthening of ancillary buildings	Other Buildings	3.17		
Flexible Pavements in Operational Area at Airport (Phase 2 Ramp areas, approach roads and blast pad)	Runway, Taxiway and Apron	1.28		
Strategic Projects	IT equipment	48.10		
BU Growth & Sustainance	IT equipment	3.52		
Passenger processing system	Plant and Machinery	4.71		
Workstation with required accessories like LaserJet Printers, Scanners etc.	IT equipment	1.60		
Requirement of Furniture/ RO (Reverse Osmosis) plant / Labour Management system/GYM material for CISF	Furniture & fixtures	1.82		
RT sets for Apron+Fire+AOCC+Terminal	Plant and Machinery	0.19		
Flight Radar monitoring screen at AOCC	Plant and Machinery	2.42		
1 RRRM (Procuring Runway rubber removal machine for Thiruvananthapuram international airport)	Plant and Machinery	6.82		
Procurement of 01 no. EICHER Truck Pro 2075 having 18 Feet long vehicle for carrying Triage Equipment by Fire services	Vehicles	0.22		
Providing new Bird scarer hut and other miscellaneous works at Operational Area, Trivandrum Airport	Plant and Machinery	0.07		
Facility for Wildlife Hazard Management	Plant and Machinery	1.93		
Fire Alarm system for 66KV Substation and CCR	Plant and Machinery	0.04		
Provision for Fire alarm monitoring system (T1 and T2) in New Fire station.	Plant and Machinery	0.07		
Fire Fighting Equipment and facilities	Plant and Machinery	46.83		
Electric buggies to shuttle nursery between the two terminals	Vehicles	0.31		
Development of open drains and area at new fire station including dismantling of old fire station and Developing the pavement and other ancillary facilities after demolishing the old fire station	Other Buildings	2.12		
Providing and laying waterproofing on the terrace of old domestic terminal.	Other Buildings	0.37		
Replacement of Roofing sheet at ATC Tower	Other Buildings	0.13		
Construction of New Staff Canteen & Creche in Terminal T2, Upgradation of T1 Existing Canteen, Kitchen, Kitchen equipment and Furniture's at TRV(Kerala)International Airport Ltd.	Other Buildings	1.28		
Integration	IT equipment	3.54		

Project Heading and project details	Asset Category for Gross Block and Depreciation	Amount (Rs Crores)	Start Date	End Date
Automation of all forms at Apron and IT equipment upgradation in Apron Control	IT equipment	1.11		
Safety Occurrence Reporting Software	IT equipment	0.58		
Cyber	IT equipment	2.39		
Supply of 60Nos of 3mtrs light pole with 50w led light for carparking area in domestic and international terminal.	Plant and Machinery	0.25		
Automated External Defibrillators - For handling passenger medical emergency	Plant and Machinery	0.39		
Upgradation of Network Adapter by replacement of Media converter with Industrial grade Managed Ethernet switch. The scope includes supplying all the necessary hardware including power supplies for each managed switch, disconnecting old media converters from the system & connecting new managed Ethernet switches in the system.	IT equipment	0.27		
Grading of the runway strip	Runway, Taxiway and Apron	1.02		
Replacing of Ground Light Facility (GLF)cables approximate 8000 mtrs	Plant and Machinery	0.98		
Replacing of GLF light UPS 100kva 3Nos	Plant and Machinery	0.28		
SCADA system for CCR	Plant and Machinery	1.46		
Installation of Stopbar and runway Guard lights at Airport	Plant and Machinery	2.31		
Speed sensor gun with camera Opex mentioned in Sl. No. 19	Plant and Machinery	0.17		
BA Equipment	Plant and Machinery	0.06		
BA set inclusive of software for monitoring	Plant and Machinery	0.67		
BA face mask and regulator disinfecting machine with CAMC	Plant and Machinery	0.35		
BA compressor- 02 nos.	Plant and Machinery	0.20		
Aerodrome Safeguarding Equipment	Security equipment	0.34		
CTSR (Containerized Tubular Shooting Range)	Security equipment	1.62		
Passive Components.	IT equipment	1.38		
CISF QRT Vehicle	Vehicles	1.43		
Motorcycle (Electric)	Vehicles	0.06		
Four-Wheeler Electric	Vehicles	0.91		
Providing LED signages " Thiruvananthapuram International Airport" at Air side of T1 and T2	Plant and Machinery	0.45		
Provision of Additional Visual Guidance Signboards Near IAF Apron	Plant and Machinery	0.10		
Providing and fixing welcome/exit/entry signages near Bypass road, chackai (2 nos of boards)	Plant and Machinery	0.16		
Tensa barriers/ Stanchions	Other Buildings	1.13		
Trolleys	Furniture & fixtures	8.63		
Improvement works for chute (Gate no.4) of domestic terminal	Terminal Building	0.20		
Golf cart	Vehicles	0.44		
SITC of 13 /8 Mtr LED High mast shaft polygon in shape , continuously tapered split into two section, made from high tensile Steel, hot dip galvanised, suitable for 42m/sec	Plant and Machinery	0.35		

Project Heading and project details	Asset Category for Gross Block and Depreciation	Amount (Rs Crores)	Start Date	End Date
wind speed as per IS 875 part (3), (Ops area - 3 High masts)				
Supply and laying of 11kV HT feeder cables to various substations/Power houses	Plant and Machinery	0.97		
Replacement of Current Transformer at 66 KV Substation at Airport	Plant and Machinery	0.29		
Replacement of Old LT PCC panels in CCR and associated works	Plant and Machinery	0.58		
Garden lighting and T2 terminal building south side neon strip lighting with Programmable DMX controller and Improvement to external garden lighting from chackai to shangumugham.	Plant and Machinery	1.13		
Automatic rescue device for existing lift in T2	Plant and Machinery	0.10		
Replacement of starter panel to VFD for all 19Nos of AHU'S with thermostat and fire dampers DTB	Plant and Machinery	0.40		
Online UPS for Terminal Lighting at T1	Plant and Machinery	0.09		
Procurement of painting machine, mini roller, walk behind roller for runway, taxiway, carpark, approach roads and other landside maintenance works	Plant and Machinery	0.46		
Mobile Mast for runway work	Plant and Machinery	0.07		
Procurement of diesel dewatering pump 5hp	Plant and Machinery	0.29		
Procurement of 22mtrs Boom lift and vehicle mounted hydraulic ladder for maintenance work	Plant and Machinery	1.39		
Provision of E taps, Touchless/ sensor soap dispensers at DTB washrooms	Plant and Machinery	0.06		
Grand Total (A to F)		**3,265.51**		

S. No	Project Name	Cost (INR Crores)
A	Basic Cost (including indexation) as tabled above	3,265.51
B	Soft Costs	522.48
C	Interest During Construction	221.22
D	Financing Allowance	119.12
A to D	**Grand Total (A to D)**	**4,128.33**

Out of overall projects listed above, two projects i.e. Construction of Perimeter Road on North Side and Airport Boundary wall on North Side are dependent on land acquisition. TKIAL acknowledges that acquisition of land is time consuming. It involves multiple stakeholders, various processes and procedures which have variability on the timing and cost of the acquisition of land. Considering these factors, TKIAL has not projected the costs of land acquisition. Therefore, TKIAL requests the

AERA to kindly consider the necessary true-ups for the same in the next control period and to provide for eligible return on land acquisition cost.

5.12 Following is the summary of cash flows of third control period for the airport based on project phasing plan is as follows:

S. No.	Particulars (INR Crores)	FY23	FY24	FY25	FY26	FY27	Total
1	Terminal Building	3.94	501.33	506.27	632.09	666.96	**2,310.60**
2	Runway, Taxiway and Apron*	3.57	129.34	32.78	23.87	150.36	**339.92**
3	Boundary wall	-	0.94	7.05	6.70	38.63	**53.31**
4	IT equipment	3.93	47.82	6.25	6.83	7.65	**72.48**
5	Security equipment	1.38	2.17	-	-	-	**3.55**
6	Plant and Machinery	25.60	45.66	35.72	20.03	2.75	**129.76**
7	Other Buildings	6.45	108.71	297.11	82.09	7.18	**501.54**
8	Furniture	0.72	2.80	2.51	3.00	3.17	**12.20**
9	Vehicles	6.51	4.37	2.90	1.09	0.31	**15.17**
10	**Total Airport**	**52.09**	**843.15**	**890.58**	**775.70**	**877.02**	**3,438.54**
11	Cargo building	-	-	52.69	48.21	-	**100.90**
12	Cargo Equipment	9.44	-	-	-	-	**9.44**
13	Fuel	-	102.06	219.19	156.39	-	**477.65**
14	**Grand Total (10 to 13)**	**61.53**	**945.21**	**1,162.46**	**980.30**	**877.02**	**4,026.52**

**Runway recarpeting is not capitalised as asset in the above table since it is claimed as amortization as per AERA Guidelines*

5.13 Total capitalization amount during the TCP is as:

S No.	Particulars (INR Crores)	FY23	FY24	FY25	FY26	FY27	Total
1	Terminal Building	0.23	23.26	940.01	0.00	1,347.09	**2,310.60**
2	Runway, Taxiway and Apron*	3.57	128.14	33.98	0.00	174.24	**339.92**
3	Boundary wall	0.00	0.00	7.99	0.00	45.32	**53.31**
4	IT equipment	3.93	47.82	6.25	6.83	7.65	**72.48**
5	Security equipment	1.38	2.17	0.00	0.00	0.00	**3.55**
6	Plant and Machinery	25.60	40.46	40.92	20.03	2.75	**129.76**
7	Other Buildings	6.45	21.76	4.52	460.35	8.47	**501.54**
8	Furniture	0.72	2.80	2.51	3.00	3.17	**12.20**
9	Vehicles	6.51	4.37	2.90	1.09	0.31	**15.17**
10	**Total Airport**	**48.38**	**270.79**	**1,039.08**	**491.29**	**1,589.00**	**3,438.54**
11	Cargo building	0.00	0.00	0.00	100.90	0.00	**100.90**
12	Cargo Equipment	9.44	0.00	0.00	0.00	0.00	**9.44**
13	Fuel	0.00	37.25	0.00	440.39	0.00	**477.65**
14	**Grand Total (10 to 13)**	**57.82**	**308.05**	**1,039.08**	**1,032.58**	**1,589.00**	**4,026.52**

**Runway recarpeting is not capitalised as asset in the above table since it is claimed as amortization as per AERA Guidelines*

Airport Users Consultative Committee (AUCC): TKIAL conducted Airports Users Consultative Committee with all relevant stakeholders on 23rd January 2023. The need and costs for all the projects above INR 25 Crores (5% of opening RAB or INR 50 Crores whichever is lower) were discussed in AUCC. The project information memorandum (PIF) was circulated to all stakeholders including AERA well in advance. The AUCC presentation and minutes of the meeting of AUCC are being submitted as Annexure N.

6 Cargo Handling Operations in TCP

6.1 TKIAL handled cargo volume of approx. 25,511 MT in 2019-20 (Pre Covid). This was split into 23,488 MT of international cargo and 2,023 MT of domestic cargo. Within the international cargo, 98% volume is for exports and 2% for imports, whereas in domestic 70% cargo is in-bound and 30% cargo is outbound.

6.2 Before the COD, domestic air cargo was handled by AAICLAS (carved out facility) and international air cargo was managed by Kerala State Industrial Enterprises Limited (KSIE). The summary of various facilities as on COD is as follows:-

Operator	Capacity	Status
AAICLASS	Domestic facility with capacity of 2,600 ton	The facility is in Carved Out area as per Concession Agreement.
Kerala State Industrial Enterprises (KSIE)	International facilities with capacity of approx. 12,000 tonnes	The international facilities are either (i) carved out or (ii) coming under the proposed expansion of T2 whereby it will be demolished.

6.3 TKIAL being a part of Adani Group, which has strategic interest in logistics business, has decided to participate in the cargo handling business. Accordingly, TKIAL has started processing domestic cargo with capacity of 3,000 tonnes p.a. from August 2022 onwards. In this regard. AERA vide order no. 47/2021-22 dated 17th March allowed TKIAL to levy the existing charges for Domestic Cargo Handling Services at TIA till 30st September 2022. Further, in order to avoid a regulatory vacuum, AERA vide Order No. 46/2022-23 dated 23rd September 2022 allowed TKIAL continuation of existing rates for the Cargo facility till 31st March 2023.

6.4 In addition to domestic cargo facility, TKIAL is proposing to operate International Cargo Facility from 1st April 2023. Initially, TKIAL will

commence International Cargo processing from an interim facility with an annual handling capacity of 6,000 tonnes. TKIAL has an unutilised old structure having an area of approx. 1,200 sq mtr which is being renovated and necessary equipment is being installed to operate it as interim facility for International Cargo processing. The cost of basic investment including the domestic facility and the interim facility will be approx. INR 8.30 Crores (soft cost, interest during construction and financing allowance will be separate) largely in building refurbishment and equipment. However, the location of the interim facility has limited capacity and will not be able to cater to the increased demand in future. Therefore, a new International Cargo Complex (ICC) of approx. 5,000 sq mtr with handling capacity of 25,000 tonnes is proposed to be made operational in FY25-26. The ICC facility at TIA will have office and warehouse space dedicated for cargo operations. The equipment of ICC shall be meeting the needs of the cargo operations and regulations, that include battery operated forklifts, tractors, temperature-controlled facilities for perishable cargo, cargo dedicated dollies, weighing scales (that are integrated with Warehouse Management System, build/ break workstations, etc. The security systems will include regulatory compliant dual view X-ray machines in both international and domestic terminals, ETDs, CCTV, etc. The facility will be well equipped with the required firefighting equipment and systems that will be fully integrated with the airport systems. Cost of new facility along with equipment is expected to be around INR 82.50 Crores (soft costs, interest during construction and financing allowance will be separate).

		FY19-20	FY20-21	FY 21-22	FY22-23	FY23-24	FY24-25	FY25-26	FY26-27
		Actuals	Actuals	Actuals	Base Case Projection as per Mott Macdonald				
Volume	Ton	25,511	14,799	16,579	22,160	27,796	32,891	36,751	39,942
ATMs	No.	28,842	9,313	15,356	25,242	31,708	36,504	39,823	42,685
Ton / ATM		**0.88**	**1.59**	**1.08**	**0.88**	**0.88**	**0.90**	**0.92**	**0.94**
Cargo Volume									
International	Ton	23,488	13,751	14,873	20,474	25,654	30,323	33,828	36,635
Domestic	Ton	2,023	1,048	1,706	1,686	2,142	2,568	2,923	3,307
Total	**Ton**	**25,511**	**14,799**	**16,579**	**22,160**	**27,796**	**32,891**	**36,751**	**39,942**

		FY19-20	FY20-21	FY 21-22	FY22-23	FY23-24	FY24-25	FY25-26	FY26-27
Volume to be processed by TKIAL									
International	Ton				-	4,500	6,000	23,668	25,772
Domestic	Ton				1,000	2,000	2,000	2,058	2,237
Total	**Ton**				**1,000**	**6,500**	**8,000**	**25,726**	**27,959**
% Market Share	**%**							**75%**	**75%**
Capacity Proposed									
International New Facility	Ton							25,000	25,000
International - Interim Facility	Ton					6,000	6,000		
Domestic Facility	Ton				3,000	3,000	3,000	3,000	3,000
Total					**3,000**	**9,000**	**9,000**	**28,000**	**28,000**
Capacity Utilization %						**72%**	**89%**	**92%**	**100%**

6.5 The day-to-day operations and management of existing domestic cargo facility are performed through outsourced employees with fixed cost of INR 0.10 Crores per month. However once TKIAL develops international facility it is expected to outsource all day-to-day operations (domestic and international) to an O&M agency for a fee (O&M fees). It is expected that O&M Fees will be a variable fee based on volume of cargo tonnage processed from the cargo facility. The O&M Fee is expected to increase by 10% per annum.

Based on experience of Ahmedabad and Lucknow Airport in FY22, TKIAL expect the average fees for O&M agency will be approx. INR 3,000 per ton subject to annual inflation: -

Airport	Fees
Ahmedabad	INR 3,130/ton
Lucknow	INR 2,590/ton
Thiruvananthapuram **(projected)**	**INR 3,000/ton**

6.6 In addition to O&M fees, TKIAL being operator for international facility will have to bear custom cost recovery charges of **INR 1.80 Crores** p.a. as per custom regulation circular 02/2021 dated 19.01.2021.

The calculation of custom cost recovery is given here under

5 staff required as follows: -

Deputy Commissioner – 1 No.

Superintendent – 1 No.

Appraiser – 1 No.

Inspector – 1 No.

Helper/Sepoy – 1 No.

Calculation

Average Salary per month – INR 160,000 (based on industry experience)

Salary for 5 staff (per month) – 5*160,000 = INR 800,000

As per Customs Circular – Cost of 1.85 times of Monthly Salary = 1.85*800,000 = INR 1,480,000

Annual Cost – INR 1,480,000 * 12 Months = INR 17,760,000 [Considered as INR 1.80 Crores (Rounded Up)]

The basis of 1.85 times is provided in the custom circular. The relevant extract is as follows -

7. **Payment of Cost Recovery Charges[5]**

7.1. The Cost Recovery Charges shall be payable by facilities at the uniform rate of 1.85 times of the monthly average cost[6] of the post plus other allowances (such as Dearness Allowance, House Rent Allowance, etc.) For this purpose, the following factors may also be kept in view for working out the cost regarding all the cost recovery posts:

6.7 TKIAL will be a Customs Custodian for the facility. TKIAL is the ultimate responsible entity for any loss of cargo, loss of property, any issues in service levels of cargo processing, loss of brand name and any statutory liability. While the O&M is expected to be outsourced, TKIAL will continue to retain Supervisory staff and Duty managers who look after the facility and functioning of the O&M operator on a day-to-day basis. It is a 24 * 7 facility, hence TKIAL has retained the following staff in shifts:-

Supervisor 3

Duty Manager 3

The average annual cost per person is approx. INR 16 Lakhs (approx. INR 1 Crores per annum).

Future requirement of manpower requirement is projected based on likely volume to be processed.

6.8 TKIAL's cargo operating expenses are projected to be as follows:

Operating expense (INR Crores)	FY23	FY24	FY25	FY26	FY27	Total
TKIAL Staff salary	-	1.00	1.35	2.39	2.86	**7.61**
O&M Expenses	1.44	1.95	2.64	9.34	11.16	**26.53**
Customs Cost Recovery	-	1.80	1.98	2.18	2.40	**8.35**
Total	**1.44**	**4.75**	**5.97**	**13.91**	**16.42**	**42.50**

7 Fuel Farm Operations in TCP

7.1 At present various Oil Marketing Companies (OMCs) (IOCL, BPCL and HPCL with storage facility of 950KL, 850KL, and 140KL respectively) have their respective fuel tanks and refuelling facilities at Thiruvananthapuram Airport. OMCs manage their operations on its own, and currently operating expenditure and other charges are embedded in Aviation Turbine Fuel (ATF) fuel price. Therefore, as on date there is no concept of open access facility at the Airport.

7.2 TKIAL's obligations towards providing aircraft fuelling services, the Concession Agreement[10] states that:

"The Concessionaire shall provide, or cause to be provided, the infrastructure required for operation of fuelling services on equal access basis for all the aircrafts at the Airport in a transparent and non-discriminatory manner. Such infrastructure shall include tank farms and associated facilities in accordance with the provisions of this Agreement, Applicable Laws and Good Industry Practice."

Under the Concession Agreement, it is responsibility of Airport Operator to provide necessary open access facility for the users.

7.3 Based on IATA Guidance Note on assessment of storage requirement (refer Annexure O for IATA guidance note) and past experience of various PPP Airports where Open Access is prevalent, it is proposed to provide open access storage facility equivalent to 9-10 day's throughput.

7.3.1 Any open access fuel storage needs to have four tanks, as per details below. This is essentially because of prevailing batch control systems and quality control procedures in Jet Fuel handling: -

7.3.1.1 One tank on product receipt

[10] Clause 19.3. of the Concession Agreement

7.3.1.2 One tank on delivery

7.3.1.3 One tank under product settling

7.3.1.4 One tank as stand-by (to cover, issues like maintenance, periodic tank cleaning, tank sealing for VVIP movement etc)

7.3.2 Any greenfield facility should be developed with minimum 10 years horizon. The reason is that Open Access Fuel Farm is the sole facility at any airport, and it remains operational 24x7. It is serious hazard to carry out construction/fabrication work in such running facility which operates with such high inflammable product. In fact, since in India the growth is robust, the planning is done with 10 years horizon. In Europe, the horizon considered is for up to 25-30 years.

7.3.3 Broad consideration while designing fuel storage are:-

Demand
- To accommodate current demand
- To accommodate future demand growth (for the next 10 years)
- To cater for unexpected demand surge

Supply
- To accommodate normal current supply
- Buffer for supply schedule
- Cover against significant supply interruptions

Stock management
- To allow for day-to-day stock fluctuations
- To allow for seasonal variations in stock
- To provide an appropriate level of redundancy in case part of the infrastructure fails.

Quality Control

- To allow for settling time & quality control checks for recertification
- Maintenance requirements (preventive and breakdown)
- To allow for recirculation and filtering of product from any tank

IATA issued a guidance note in 2008 for estimation on fuel storage. It clearly defines that the facility should be able to withstand any

abnormality/disruption in any of parameter related to demand, supply, storage and functioning of facility.

The guideline suggests that, while estimation is done, the additional days storage required on account on any normality/disruption which may take place in whole value chain, should be identified. Then, it can be fairly assumed that all the disruption may not take place simultaneously and therefore, the sum of total days of disruptions (for all parameters) needs to be discounted by 15%, and only 85% of same to be considered.

Estimation for TKIAL

For TIAL, the various parameters are as listed below: -

Storage and Day-to-day operations

At any given point, facility should have clear (QC cleared and ready to fuel) product for at least two days. This is to cover demand uncertainty (at TRV, there are unplanned heavy movement of non-scheduled operators' flights and also VVIP movements etc).

Product receipt and settling

One day storage should be considered on this account on normal course. However, there may by a upside by two days, on account of any equipment failure, quality concerns in product received, retesting of products etc.

Product receipt

The product at TIAL fuel farm facility is received from BPCL Kochi Refinery located around 210km by road via tank trucks and another source of the ATF is from IOCL Paradip refinery which transport the ATF via sea route and then followed by road transport via Tank Trucks to TIAL Fuel Farm Facility. Further, no pipeline transfer is envisaged from any of the OMCs in near future.

In normal course, the product is received on day-to-day basis. However, as experienced, and well established in Indian downstream Oil & Gas supply chain, there may be complete supply disruption for up to four days. It is on account of various factors like shutdown of refinery, transporter strike, breakdowns in offsite oil terminals of OMCs, batch failure in refinery (quality issues), disruption in crude oil supply (like the Suez Canal blockage few years back). In case of TRV, the uncertainties may be slightly on higher side, due to 200 kms distance between airport AFS and offsite OMC storage.

Basis above, all parameters are tabulated below: -

S. no.	Potential Purpose	Average Stock Required for this purpose	Max Stock Required for Worst Case scenario	Difference Between Avg & Max
1	Product readiness, storage	2	2	0
2	Product storage and settling	1	2	1
3	Product receipt, Logistic contingency, OMC's issue	0	5	5*
4	Total (Average)	3		
5	Total (Difference)			6
6	85% of Total Difference			5.1
7	Overall Total			8.1
Recommended ATF Storage Days				**8.1**

**Kerala is vulnerable to strikes and disruption in movement on highways. Therefore, for higher number of days have been considered for contingency in product logistics.*

7.3.4 Examples of storage capacity at various Open Access Facilities in India

Airport	AERA order reference no.	Storage Facility KL	Annual Fuel Throughput KL	Storage days No.	Owners of the facility
Mumbai	Order No. 20/ 2021-22 dated 24th September 2021	47,500	Pre-COVID volume of ~1,400,000	12	Joint venture of DIAL, IOCL, BPCL, HPCL
Bangalore	Order No. 30/ 2021-22 dated 07th December 2021	19,800	Pre-COVID volume of ~7,00,000 - 800,000	9-10	Indian Oil Skytanking
Kannur	Order No. 44/2021-22 dated 15th March 2022	1,000	~45,000	8	Joint Venture of BPCL and Kannur Airport

7.4 In order to provide open access facilities as per Concession Agreement, TKIAL has planned the following infrastructure as follows:-

7.4.1 **Immediate Plan** - TKIAL is planning to purchase existing assets of IOCL and BPCL which will be converted into Open Access facility. The budget proposed to acquire these assets is approx. **INR 10 Crores** for Fuel Farm tanks and other allied infrastructure facilities. Additionally, there will be requirement to acquire **12** refuelers/bowsers to deliver ATF from Fuel Farm storage tanks to Aircrafts at a cost of around **INR 15 Crores** Delivery of new refuelers /bowsers have lead time of 9-12 months, therefore TKIAL will hire refuelers/bowsers on rentals basis for approx. **INR 2 Crores p.a.** to operate the facility for first year of operations. The negotiations with IOCL and BPCL are at advanced stage. The open

access facility is expected to be operational in July 2023 subject to necessary regulatory approvals.

7.4.2 **Long Term Plan** – TKIAL is proposing to build a new facility of approx. 5,000 KL with hydrant system of 7 Kms. The proposed cost of these facilities is approx. INR 340 Crores (soft costs, interest during construction and financing allowance will be separate) which includes 4 number storage Tanks, Admin Facilities, Refilling / offloading area, Fuel Hydrant System, Pit Flushers, dead stock. The new facility will be operational during FY25-26.

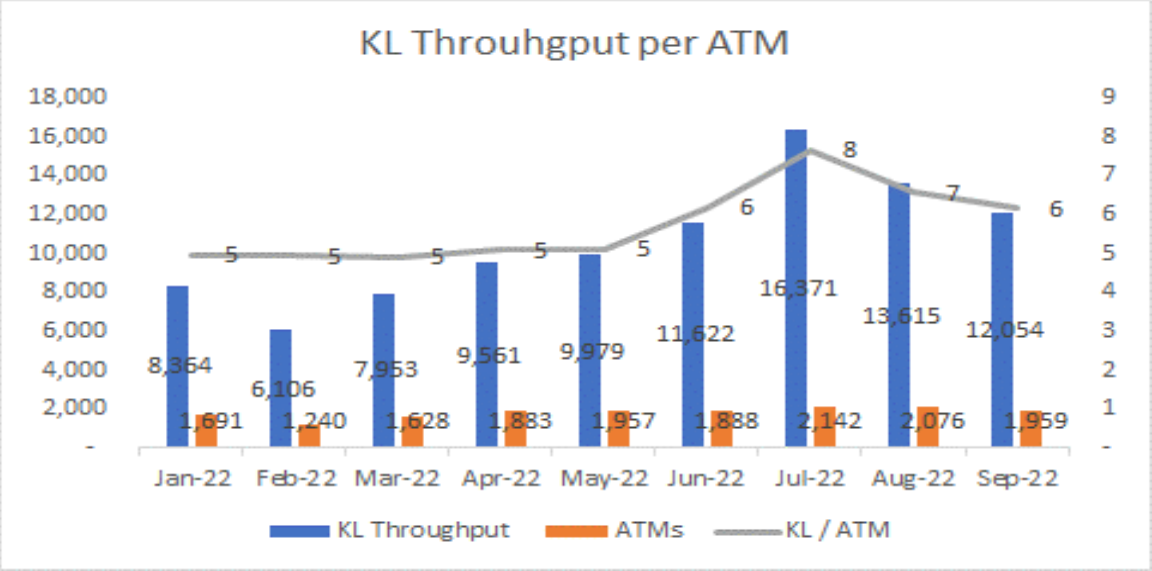
7.4.3 Apart from above, TKIAL is required to purchase the deadstock of approx. 1,612 KL with an estimated investment of INR 20 Crores.

S. No.	Description	Quantity	Unit	Remarks
1	Hydrant Line	1,150	KL	Total length of around 7,000 meter of pipeline dia of 18inch. Apart from that there are various risers and branch lines
2	Storage tanks	250	KL	5% of total planned storage of 5,000 KL
3	Various Fuel Pipeline and filters	200	KL	Fuel Farm has a complex grid of pipelines of various diameter. Moreover, there is a long 18inch diameter pipeline connecting Hydrant System. There are 10 filters as well. It is combined volume of all of them
4	Refuellers	12	KL	There are around 12 refuellers of volume approx. 1 KL each
	Total Requirement **Cost @ INR 1.2 Lakhs per KL**	**1,612 KL** **INR 20 Crores**		

7.5 TKIAL storage requirement and throughput analysis

		FY23	FY24	FY25	FY26	FY27
IOCL & BPCL Facility	KL	1,850	1,850	1,850		
New Facility Proposed	KL				5,000	5,000
Total	**KL**	**1,850**	**1,850**	**1,850**	**5,000**	**5,000**
Fuel Throughput Projected						
Total ATMs	No.	25,242	31,708	36,504	39,823	42,685
Fuel per ATM	KL	5	5	5	5	5
Total Projected Volume	KL	126,210	158,540	182,520	199,115	213,425
Storage Days	**No.**	**5**	**4**	**4**	**9**	**9**

Recent Trend for Throughput per ATM at Thiruvananthapuram Airport



7.6 The day-to-day operations and management of the Fuel Farm will be outsourced to an O&M agency for a fee (O&M fees). It is expected that O&M Fees will be a combination of minimum fixed fees and variable fees based on volume of fuel processed from the fuel farm facility. The O&M Fee is expected to increase by inflation rate of 5% per annum. Based on experience of Ahmedabad and Lucknow Airport in FY22, TKIAL expect the fees for O&M agency will be as follows subject to annual inflation: -

Airport	Fixed Fees	Variable Fees
Ahmedabad	Volume upto 130,000 KL, fixed fees of INR 11.68 Crores p.a.	Rs 270/KL for volume above 130,000
Lucknow	Volume upto 80,000 KL, fixed fees of INR 7.69 Crores p.a.	Rs 280/KL for volume above 80,000
Thiruvananthapuram (projected)	Volume upto 100,000 KL, fixed fees of INR 9.22 Crores p.a.	Rs 275/KL for volume above 100,000

7.7 Following is the summary of fuel farm operation and maintenance costs as per TKIAL for the TCP:

Particulars (in INR Crores)	FY23	FY24	FY25	FY26	FY27	Total
O&M Expenses	-	8.53	12.07	13.17	14.29	**48.06**
Bowser Rental	-	1.20	1.26	-	-	**2.46**
Total	**-**	**9.73**	**13.33**	**13.17**	**14.29**	**50.52**

8 Ground Handling Operations in TCP

8.1 Ground handling (GH) activity has been outsourced by TKIAL as per the Ground Handling Regulations. There are currently two service providers for Ground Handling services at the airport, (1) GSEC Bird Airport Services Limited and (2) Air India SATS Airport Services Private Limited. As per commercial arrangement with the service provider, they are required to make two payments:-

1. Land Rentals; and
2. Revenue Share expressed as a percentage of GH revenue

8.2 Revenue Share payable is based on concession contract with Ground Handling service providers and are fixed until the end of concession term. The revenues expected from Ground Handling services to TKIAL are as given in the table below:-

Revenue (INR crores)		FY23	FY24	FY25	FY26	FY27	Total
Total ATMs	No.	25,242	31,708	36,504	39,823	42,685	**175,962**
Share of airlines having its own GH facilities	No.	12,621	15,854	18,252	19,912	21,343	**87,981**
Balance ATM handled by Ground Handling (GHAs) Agencies	No.	12,621	15,854	18,252	19,912	21,343	**87,981**
Total Turnarounds handled by GHAs	No.	6,311	7,927	9,126	9,956	10,671	**43,991**
Avg. Revenue per turnaround earned by GH Agencies	INR	64,000	67,200	70,560	74,088	77,792	
Total GH Agencies Revenues	INR Crores	40.38	53.26	64.39	73.76	83.01	**314.84**
Revenue Share to TKIAL	%	45%	45%	45%	45%	45%	
Revenues Share earned by TKIAL	**INR Crores**	**18.17**	**23.97**	**28.98**	**33.19**	**37.36**	**141.67**

8.3 Amounts paid by ground handling service providers have been considered as Aeronautical revenues for tariff determination.

Refer Annexure P for the Concession Agreement signed with GSEC Bird Airport Services Limited.

9 Allocation Methodology for TCP

Regulated Asset Base

9.1 As per AERA Order No 14/2016-17 and as mandated under the Concession Agreement, the Hybrid-Till with 30% cross subsidisation of non-Aeronautical revenues is the applicable methodology. The relevant extract from AERA order and Concession Agreement is as follows:

9.1.1 Extract from AERA order:

The authority, in exercise of powers conferred by Section 13(1)(a) of the Airports Economic Regulatory of India Act 2008 and after careful consideration of the comments of the stakeholders on the subject issue, decides and orders that : -

(i) The Authority will in future determine the tariffs of major airports under "Hybrid Till" where in 30% of non-aeronautical revenues will be used to cross-subsidise aeronautical charges. Accordingly, to that extent the airport operator guidelines of the Authority shall be amended. The provisions of the Guidelines issued by the Authority, other than regulatory till, shall remain the same.

(ii) In case of Delhi and Mumbai airports, tariff will continue to be determined as per the SSA entered into between Government of India and the respective airport operators at Delhi and Mumbai.

9.1.2 Extract from Concession Agreement:

28.3.2 The GOI has, through the National Civil Aviation Policy dated June 15, 2016, approved, ("Shared-Till Approval") the 30% (thirty percent) shared-till framework for the determination and regulation of the Aeronautical Charges for all airports in India, and the same shall be accordingly considered by the Regulator for the purposes of the determination of the Fees/ Aeronautical Charges pursuant to the provisions of this Agreement. It is clarified that, for the purposes of this Agreement, the Shared-Till Approval shall apply as on the date of this Agreement notwithstanding any subsequent revision or amendment of such Shared-Till Approval.

28.3.3 The Aeronautical Charges shall be regulated and set/ re-set, in accordance with the Shared-Till Approval, terms of this Agreement including the terms set out in Schedule R (Memorandum of Understanding) and the Applicable Laws.

9.1.3 Extract from Schedule R of the Concession Agreement:

2.2 Principles for Determination and Revision of Fees

2.2.1 The GOI has, through the National Civil Aviation Policy dated June 15, 2016 approved the 30% (thirty percent) shared-till framework for the determination and regulation of the Aeronautical Charges for all Airports in India ("Shared-Till Approval"), and the same shall be accordingly considered by AERA, for the purposes of the determination of the Fees/ Aeronautical Charges pursuant to the provisions of this Agreement.

2.2.2 The Aeronautical Charges shall be regulated and set/ re-set, in accordance with the Shared-Till Approval, the terms of the Concession Agreement and the Applicable Laws.

9.2 As per Clause 5.2 of the AERA Guidelines:

5.2.1. Scope of the RAB

(a) In normal course, all airport fixed assets will come under the scope of the RAB. However, the Authority may, based on due consideration of relevant factors, include or exclude certain fixed assets from the scope of RAB.

(b) The relevant RAB assets shall be all the fixed assets proposed by the Airport Operator(s), after providing for such exclusions therefrom or such inclusions therein, as may be determined by the Authority in respect of specific assets based on following principles:-

(i) The assets that substantially provide amenities / facilities/ services that are not related to, or not normally provided at an airport, may be excluded from the scope of RAB;

(ii) The assets that in the opinion of the Authority do not derive any material commercial advantage from the airport (for example from

being located close to the airport) may be excluded from the scope of RAB;

(iii) Responses by stakeholders in relation to their inclusion or exclusion during consultations;

(iv) Specification of, to the Authority's satisfaction, sufficient accounting separation to ensure that the costs and revenues associated with the assets shall be clearly identified for the preparation and audit of regulated airport accounts;

(v) Specification of, to the Authority's satisfaction wherever appropriate (where the Authority considers there may be substantial financial risks associated with any asset), sufficient legal separation to protect the Airport Operators, and thus airport Users, in the event of any substantial financial risks materialising. The Authority shall require the Airport Operator(s) to insulate the Users by suitably ring fencing the assets excluded from the scope of RAB. The principles governing the ring fencing are mentioned in the paragraph 7.5 of Order Number 13/2010-11 of the Authority issued on 12-Jan-2011.

(vi) Notwithstanding the principles mentioned under points (i) to (v) above, assets with fixed locations inside terminal buildings shall be considered within the scope of RAB.

(c) Any exclusion/ inclusion shall only be considered if it is proposed to be executed in the Control Period for which the Multi Year Tariff Proposal is submitted.

(d) The Authority may also, in its discretion, consider any other relevant factors for exclusion or inclusion of assets.

(e) The assets related to any service(s) provided by the Airport Operator that are subject to separate control and regulated as per Clause 5.7, shall be excluded from the scope of RAB.

9.2.1 It is observed that as per AERA Guidelines, 5.2.1 (b) (vi) all the assets which are part of the terminal building shall be considered as part of RAB. Therefore, terminal building as a whole should be considered as RAB / Aeronautical asset and not required to be allocated into Aero and Non-Aero.

9.3 The norms mentioned in IMG report are not applicable to PPP airports, as per clause no. G of IMG Report. reproduced below:

"In case of airports developed through Public Private Partnerships the project authorities may adopt a case-by-case approach with respect to norms relating to unit area and unit costs. Based on the judicious consideration of international best practices and financial viability, the norms may be specified in each case prior to inviting bids for private participation."

No norms with respect to unit area and costs were mentioned in the bidding documents and Concession Agreement of Thiruvananthapuram Airport.

9.4 *Clause 5.4.1 of AERA Guidelines relating to Operation and Maintenance Expenditure (O) is as follows*

5.4.1. The operation and maintenance expenditure shall include all expenditures incurred by the Airport Operator(s) including expenditure incurred on statutory operating costs and other mandated operating costs as defined in Clause 5.4.2.

5.4.2. The assessment of operation and maintenance expenditure by the Authority shall include a review of the forecast of such expenditure as submitted by the Airport Operator based on the following principles:

(a) Assessment of baseline operation and maintenance expenditure based on review of actual expenditure indicated in last audited accounts, and prudency check inter alia with respect to underlying factors impacting variance over the preceding year(s) including treatment for one-time costs or atypical costs. For avoidance of doubt, the operation and maintenance expenditure to be assessed will be limited to only those expenditure that relate to assets and services taken into consideration for determination of Aggregate Revenue Requirement;

(b) Assessment of efficiency improvement with respect to such costs based on review of factors such as trends in operating costs,

productivity improvements, cost drivers as may be identified, and other factors as maybe considered appropriate; and

(c) Assessment of other mandated operating costs or statutory operating costs, where (i) subject to Clause 5.4.5, other mandated operating costs are costs incurred in compliance to directions received from regulatory agencies including Director General Civil Aviation; and (ii) statutory operating costs are costs incurred on account of fees, levies, taxes and other such charges, directly imposed on the Airport Operator by the regulatory agencies and directly paid for by the Airport Operator.

9.5 The summary of TKIAL proposal is as follows:-

9.5.1 Shared-till/Hybrid till methodology which mandates the cross subsidization of 30% non-aeronautical revenues for determination of aeronautical charges is considered. Under the Shared-Till model, 30% of Non-Aeronautical Revenues are accounted for cross subsidizing the ARR. Therefore, there is no need to apply the allocation ratio whereby, capital and operating expenditure is reduced.

9.5.2 IMG norms are not applicable to TKIAL as the same is not specifically mentioned in Concession Agreement for Thiruvananthapuram Airport. Hence, unit area norms as mentioned in IMG norms are not relevant.

9.5.3 TKIAL has considered all assets as Regulated Asset Base as provided in clause 5.2.1 (b)(vi) of the AERA Guidelines.

9.5.4 Accordingly, as per clause 5.4.1 of the AERA Guidelines, all the operating and maintenance expenditures are considered to be relating to assets taken into consideration for determination of Aggregate Revenue Requirement, other than expenses which are specifically not allowed as pass-through as per Concession Agreement like Concession Fees.

10 Depreciation on Regulatory Asset Base for TCP

10.1 With respect to assets taken over from AAI as on COD as per signed Fixed Asset Register, TKIAL proposes to calculate depreciation based on the remaining useful lives of the assets. This in in line with the decision 1.d of Authority`s Order No. 35/2017-18 dated 12th January 2018 and amendment to Order No. 35/2017-18 dated 09th April 2018. The relevant extract of the order is as follows:-

1.d To propose that the carrying amount of the asset as on the date of effect shall be depreciated over the remaining useful life of asset.

10.2 TKIAL has considered the depreciation for the assets based on the useful life of the assets as per the Companies Act and useful life of various assets as recommended by independent technical evaluation for Lucknow and Ahmedabad Airports. TKIAL also submits that the same is consistent with Authority's Order No. 35/2017-18 dated 12th January 2018 and amendment to the Order dated 09th April 2018.

10.3 Following are the useful life and depreciation rates assumed for the TCP:

Particulars	Book Depreciation	Useful Life (Years)	Income Tax Rates
Terminal Building	4%	25	10.0 %
Runway, Taxiway and Apron	5%	20	10.0 %
Cargo building	4%	25	10.0 %
Cargo Equipment	13.3%	7.5	15.0 %
Boundary wall	20%	5	10.0 %
Software	33.3%	Not provided	40.0 %
IT equipment	33.3%	3	15.0 %
Security equipment	13.3%	7.5	15.0 %
Plant and Machinery	13.3%	7.5	15.0 %
Other Buildings	3.3%	30	10.0 %
Access Road	10%	10	10.0 %
Fuel Farm (considered same as Plant & Machinery)	13.3%	7.5	15.0%
Furniture & fixtures	14.3%	7	10.0%
Vehicles	20%	5	15.0%
Office equipment	20%	5	15.0%

10.4 For the purpose of MYTP, depreciation has been computed for full year for the Opening Gross Block and half year for the assets capitalised during the particular year. The methodology is used throughout the control period.

Following is the depreciation and amortization calculated by TKIAL based on above methodology and also after considering all assets as 100% RAB:-

Particulars (in INR Crores)	FY23	FY24	FY25	FY26	FY27	Total
Depreciation and Amortization on Deemed Initial RAB	49.06	46.43	43.36	40.14	35.12	**214.11**
Depreciation and Amortization on Asset acquired during the period	2.84	27.20	69.92	136.51	209.16	**445.63**
Total Depreciation	**51.90**	**73.63**	**113.28**	**176.65**	**244.28**	**659.74**

11 Regulatory Asset Base for TCP

11.1 After considering the financing allowance as per Clause 5.2.7 of the AERA Guidelines and capitalization of fixed assets, following is the summary of the Opening RAB and Closing RAB :-

Particulars (in INR Crores)	FY23	FY24	FY25	FY26	FY 27
Opening RAB	441.88	447.79	682.21	1,608.01	2,463.94
Assets Capitalised	57.82	308.05	1,039.08	1,032.58	1,589.00
Depreciation	51.90	73.63	113.28	176.65	244.28
Closing RAB	447.79	682.21	1,608.01	2,463.94	3,808.66
Average RAB = (Opening RAB + Closing RAB) / 2	**444.84**	**565.00**	**1,145.11**	**2,035.98**	**3,136.30**

12 Fair Rate of Return for TCP

Cost of Equity (COE)

12.1 It is mandated under the AERA Guidelines that Cost of Equity is to be calculated based on Capital Asset Pricing Model (CAPM). The relevant extract from AERA Guideline is as

5.1.3. Cost of Equity

The Authority shall estimate cost of equity, for a Control Period, by using the Capital Asset Pricing Model (CAPM) for each Airport Operator, subject to the consideration of such factors as the Authority may deem fit.

12.1.1 TKIAL is a new Concession Agreement whose terms and conditions are different than other Concessions Agreement like Delhi Airport, Mumbai Airport, Hyderabad Airport, Bangalore Airport and Cochin Airport, hence it cannot be compared with these Airports

12.1.1.1 Delhi and Mumbai Airports went into regulatory framework after 3 years of operations when all the initial improvement, service standards and AAI manpower obligation were phased out, whereas TKIAL is already under regulatory framework with the transition phase of first few years and improvement process is still under progress.

12.1.1.2 Bangalore and Hyderabad Airport have no constraint on availability of land for expansion whereas the land is limited at TKIAL.

12.1.1.3 Also, it is acknowledged by AERA in point 4.6.20 Tariff Order No 08/2021-22 for Cochin Airport for the Third Control Period that newer airport operators cannot be compared with old airport operators. It is reasonable to presume that newer companies would have a greater risk when compared to a well-established company.

12.2 TKIAL believes that it is similar to Lucknow International Airport Limited (LIAL) in terms of size (with pax traffic between 5 to 10 mppa and similar

Concession Agreement framework) and it would have similar risk factors except an additional factor that TKIAL has more than 50% International traffic which makes the airport susceptible to higher risks due to global shocks. Accordingly, TKIAL has adopted the CoE computed for LIAL.

12.3 The three components to be estimated in the CAPM are (a) the beta of the Airport, (b) the risk-free rate and (c) the equity risk premium. The process is elaborated in the table below:

Estimated parameter	Methodology/Approach	Result
Beta	Identification of comparable airports: Various airports were identified which are listed on stock exchanges across the globe or have regulated betas. A set of airports were removed from the list because of either lack of data for the required time period or unreliable data.	-
	Determination of equity and asset beta for the selected airports: Beta is indicative of the systematic risk of the project. In order to calculate this, the analysis regresses the movement of the stock prices (of respective airports) on the movement of an index representing the market portfolio. The beta values pertaining to this regression are called the 'equity' betas. Once the equity beta is calculated, the analysis 'un-levers' the beta (i.e., purges off the effects of the capital structure) by using the Hamada equation: $\beta_U = \frac{\beta_L}{(1+(1-t)(\frac{D}{E}))}$, where t is the tax rate, D and E are debt and equity respectively. This unlevered beta is called the 'asset' beta for the respective airports.	-
	Computing the proximity scores for each airport and asset beta of the airport: Once the asset betas have been computed, quantifiable assessment has been undertaken for identified airports to determine the proximity/ relevance scores. All the airports have been compared with the airport based on the following airport characteristics: Regulatory Environment Operational Structure	0.80 to 0.81

	Payment Structure Ownership Structure Numeric values of 1 to 3 have been assigned to each factor wherein lower the score, more comparable is the airport. Furthermore, an inverse of the proximity scores are used to calculate the 'asset' beta.	
	Re-lever the asset beta to obtain the equity beta: The asset beta is re-levered using the Hamada equation to obtain the equity (re-levered) beta. As the re-levered beta is a function of D/E or gearing ratio, the beta value changes whenever the D/E or gearing ratio changes. A gearing ratio of 48:52 is considered. This has been derived from the gearing ratios set by the regulators at different comparable international airports.	1.35-1.38
Risk Free Rate	An average of daily yield for 10 years of the 10-year Government of India security has been considered as the risk-free rate.	7.57%
Equity Risk Premium	To avoid any bias, an average of equity risk premiums computed by a list of studies and standard market indices are taken for the analysis. The list of the same is provided as follows: Prof Damodaran's estimate of ERP as of January 2021 based on ratings of sovereign bonds. Prof Damodaran's estimate of ERP as of January 2021 based on ratings of sovereign bonds. Forward looking ERP of India as estimated in a study conducted in April 2019 by Grant Thornton ERP published by Incwert Valuation Chronicles in June 2020 ERP computed based on Nifty 50 ERP computed based on Sensex.	7.06%

12.4 After computing the parameters as mentioned in the table above, the inputs are fed into the CAPM:

$$R_e = R_f + \beta * (R_m - R_f)$$

Where,

R_e is the Cost of Equity

R_f is the risk-free rate

β is the equity beta of the airport

$(R_m - R_f)$ is the equity risk premium

12.5 After incorporating the above estimated figures in the CAPM equation, the computed CoE is 17.11% - 17.28%. The following table summarizes the sensitivity of the gearing ratio:

Gearing Ratio	CoE
48:52	17.11%-17.28%
60:40	19.55%-19.76%
65:35	21.06%-21.29%
70:30	23.07%-23.34%

12.6 Accordingly, CoE should be allowed at 17.30% for TKIAL for the TCP, based on report by PWC which recommended CoE at 17.11% - 17.28%.

Cost of Debt

12.7 TKIAL has considered cost of debt to be 12% per annum based on actual debt taken as of date.

12.8 In May-2022, AAHL had raised a 3-year External Commercial Borrowing facility from a consortium of Standard Chartered Bank and Barclays Bank PLC. The all-in borrowing cost of this facility is 12.10% p.a. (as tabled below). The part of the proceeds raised from this facility are being on-lent to TKIAL for the purpose of financing its capital expenditure and other requirements at the rate of 12.25% p.a. For the purposes of computation of weighted average cost of capital, cost of debt has been assumed as 12% p.a. The raising of funds at TKIAL was not possible without Corporate Guarantee support from Adani Group and hence borrowing with Corporate Guarantee of Adani Group in turn tantamount to Borrowing at Holding Company level.

Parameters	**Value**
Secured Overnight Financing Rate (SOFR) reference	2.28%
Spread over SOFR	4.25%
Withholding tax gross up (at 5% of SOFR + spread)	0.33%
One-year forward Dollar-Rupee hedge cost (mandatory as per RBI guidelines)	4.51%
Other Charges	0.73%
All-in Cost of External Commercial Borrowing	**12.10%**

Gearing Ratio

12.9 For calculating the fair rate of return (FRoR), TKIAL has assumed debt-equity ratio of 48%:52% which is consistent with debt-equity ratio considered by AERA in various recent tariff orders.

FRoR

12.10 Based on above parameters, the below table summarizes the FRoR for TCP:

Particulars	FY23	FY24	FY25	FY26	FY27
Cost of Debt	12.0%	12.0%	12.0%	12.0%	12.0%
Cost of Equity	17.3%	17.3%	17.3%	17.3%	17.3%
D/E Ratio	0.48:0.52	0.48:0.52	0.48:0.52	0.48:0.52	0.48: 0.52
FRoR	14.76%				

13 Operation & Maintenance for TCP

13.1 **Introduction**

13.1.1 TKIAL is committed to abide by the provisions of the Concession Agreement in totality and ensure a smooth transition and transformation of TIA from AAI to TKIAL.

13.1.2 With respect to the O&M obligations of TKIAL, the Concession Agreement[11] states that:

"...the Concessionaire shall operate and maintain the Airport in accordance with this Agreement, Applicable Laws and Applicable Permits, either by itself, or through O&M Contractors and if required, modify, repair or otherwise make improvements to the Airport to comply with the provisions of this Agreement, Applicable Laws and Applicable Permits, and conform to Specifications and Standards and Good Industry Practice. The obligations of the Concessionaire hereunder shall include but not limited to:

(a) ensuring to provide the Aeronautical Services, Non-Aeronautical Services and such other services, as are required as per the terms of this Agreement and Good Industry Practice;

(b) permitting safe, smooth and uninterrupted movement of Users and flow of traffic on the Airport, including prevention of loss or damage thereto, during normal operating conditions;

(c) collecting and appropriating the Fee;

(d) minimising disruption to the operation of the Airport, including airside, Terminal Building and land side, in the event of accidents or other incidents affecting the safety and use of the Airport by providing a rapid and effective response and maintaining liaison with emergency services of the State;

(e) carrying out periodic preventive maintenance of the Airport;

(f) ensuring that the Aeronautical Assets, including Runway, taxiways, aprons and approach areas are maintained and operated in

[11] Clause 18.1. of the Concession Agreement

accordance with the provisions contained in Applicable Laws, Applicable Permits and relevant ICAO Documents and Annexes;

(g) ensuring that Runway, including the strips, shoulders, stop way and runway end safety area for Runway and strips and shoulders for taxiways and isolation bays are maintained in accordance with the provisions contained in Applicable Laws, Applicable Permits and relevant ICAO Documents and Annexes;

(h) ensuring that the obstacle limitation surfaces of the Airport and the approach and take-off areas are free from obstructions or that the obstructions shall be limited to the permissible limits specified in Applicable Laws, Applicable Permits and relevant ICAO Documents and Annexes;

(i) undertaking routine maintenance including prompt repairs of cracks, joints, drainage systems, embankments, structures, buildings, pavement markings, signaling systems, communication systems, lighting, signage and other equipment;

(j) undertaking major maintenance such as repairs to structures, repairs and refurbishment of equipment, signaling and communication system and major overhaul of equipment;

(k) ensuring that the sensitive and critical areas, as identified by the Authority or the Designated GOI Agency, as the case may be, for the operation of CNS/ATM Equipment and facilities shall be maintained free of any obstructions and that no obstruction which may hamper the safety or functioning of these equipment and facilities or endanger the safety of aircraft operations shall be permitted;

(l) ensuring that appropriate arrangements and precautions have been undertaken at the Airport to prevent bird and animal nuisance in and around the Airport, in accordance with the Applicable Laws and Good Industry Practices;

(m) maintaining the Airfield Lighting System and the main and standby power supply systems in accordance with the standards prescribed in Applicable Laws and relevant ICAO Documents and Annexes, and DGCA Civil Aviation Requirements, as may be issued or updated from time to time, and relevant codes and standards;

(n) preventing, with the assistance of the concerned law enforcement agencies, any encroachments on, unauthorised entry to or unauthorised use of the Airport;

(o) protection and conservation of the environment and provision of equipment and materials therefor;

(p) operation and maintenance of all communication, control and administrative systems necessary for the efficient operation and management of the Aeronautical Services and Non-Aeronautical Services;

(q) maintaining a public relations unit to interface with and attend to suggestions from the Users, Government Instrumentalities, media and other agencies in accordance with the Applicable Laws, for providing the requisite information;

(r) complying with Safety Requirements in accordance with Article 18;

(s) operation and maintenance of all Project Assets diligently and efficiently and in accordance with Good Industry Practice;

(t) maintaining punctuality and reliability in operating the Airport;

(u) maintaining a high standard of cleanliness and hygiene on the Airport including disposal of all kinds of waste at an appropriate location;

(v) taking all measures relating to fire precautions in accordance with relevant ICAO standards or appropriate international guidelines, Applicable Laws, Applicable Permits and Good Industry Practice;

(w) providing all the requisite information, data, operating statistics, etc., as may be required by the Authority, any of the Government Instrumentality, DGCA, State Government or GOI, from time to time."

13.1.3 Additionally, with respect to TKIAL's obligations towards *IATA Level of Service Optimum*, the Concession Agreement[12] states that:

"Commencing from the date which is 1 (one) year from the COD, the Concessionaire agrees and undertakes to achieve IATA Level of Service

[12] Clause 19.6.9. of Concession Agreement

Optimum at the Airport. In the event it is observed that the level of service is inferior to IATA Level of Service Optimum during Peak Hours in any quarter and the Concessionaire does not cure the same within 90 (ninety) days from the occurrence of such degradation of level of service in any Concession Year, the Concessionaire shall pay Damages to the Authority which shall be determined at the rate of 0.5% (zero point five percent) of the total revenue from Fees for the immediate preceding quarter."

Where,

"IATA Level of Service Optimum" means the minimum service requirements at various airport subsystems as set out in the 'Optimum' category in the 10th edition of IATA's Airport Development Reference Manual, as may be amended, modified or supplemented from time to time, and shall, for the avoidance of doubt, mean any similar level of service framework in the event of IATA discontinuing publication of the Airport Development Reference Manual;"

13.1.4 In addition to the abovementioned clause, the Concession Agreement further elaborates on the service level monitoring obligations of TKIAL. The Concession Agreement[13] states that:

"The Concessionaire shall:

(a) throughout the Concession Period, regularly monitor traffic flows at the Airport and regularly examine levels of service at the Airport;

(b) after achieving the COD, regularly monitor and count Peak Hour passengers enplaning to and deplaning from aircraft at the Airport;

(c) by the 7th (seventh) day after the end of each quarter, provide to the Authority, a detailed report: (i) confirming that the levels of service at the Airport over the preceding quarter (or part thereof) never fell below IATA Level of Service Optimum or describing the dates on or periods of time during which the levels of service at the Airport fell below IATA

[13] Clause 21.3. of the Concession Agreement

Level of Service Optimum, and (ii) setting forth its analysis (along with any and all supporting data) of the level of service anticipated at the Airport over the reporting quarter, including any period of time when the level of service at the Airport is projected to fall below IATA Level of Service Optimum; and

(d) promptly advise the Authority in writing, if it otherwise determines that the level of service at the Airport is projected to fall or has fallen below IATA Level of Service Optimum at any time and provide to the Authority any and all data related to such determination along with the mitigation plan for such deficiency."

13.1.5 The abovementioned clauses of the CA illustrate TKIAL's obligations towards maintaining superior service standards. In addition to these obligations, expected increase in capacity due to existing Terminal refurbishment, completion of New Integrated Terminal Building, and development of additional facilities, warrants an increase in TKIAL's O&M expenses.

13.1.6 In this MYTP, TKIAL has adopted following aspects and principles to determine efficient aeronautical operating and maintenance cost:

13.1.6.1 Upcoming expansion at Thiruvananthapuram Airport: As explained in Chapter 7, Thiruvananthapuram Airport will be undertaking refurbishment of existing Terminals which are expected to be completed during FY2024-25. Year wise increase in operational terminal area is tabled below. Accordingly, there will be correspondingly increase in costs of various services like manpower, IT, Security, Utility, Housekeeping, Others etc.

Year	T1	T2	**Total**	**YoY % Increase in Area**
	Sq mtr	Sq mtr	**Sq mtr**	
FY21-22	15,800	43,500	**59,300**	
FY22-23	15,800	43,500	**59,300**	**0%**
FY23-24	15,800	43,500	**59,300**	**0%**
FY24-25*		63,000	**63,000**	**+ 6.2%**
FY25-26		63,000	**63,000**	**0%**

**T1 will be available till the time refurbishment of T2 is completed. Once T2 refurbishment is commissioned all traffic from T1 will be moved to T2 and T1 will be demolished for undertaking construction of new domestic terminal.*

13.1.6.2 Inflationary Increase: TKIAL has considered inflationary increase based on 79th Round of RBI forecaster survey Dec-2022 towards all expenses which is considered basis the projections provided in Chapter 14 below.

13.1.6.3 Base Year: FY22-23 is the first full year of operations after transition from AAI to PPP. Based on progress for 9 months from April-2022 to December-2022, TKIAL has estimated likely expenditure for full year ending 31st March 2023. Therefore FY22-23 is considered generally as the base year and relevant growth percentages are applied over it.

13.1.6.4 **Airports have high fixed costs associated with the provision and maintenance of infrastructure and services such as safety and security. These are incurred regardless of traffic levels. Airport operators, therefore, have limited scope to curtail costs when facing a downturn in demand.**

13.2 Employees Cost

13.2.1 Manpower is a crucial resource of service-oriented industries such as airports. TKIAL considers manpower as its biggest asset. Total employee costs covered under this section include salaries, wages and bonuses, contribution to PF, gratuity expenses, and staff welfare and training costs.

AAI Employees

13.2.2 With respect to TKIAL's obligations towards AAI employees, the Concession Agreement states the following[14]:

"With the exception of the Select Employees, the Concessionaire shall have no obligations in relation to the existing employees of the Authority serving in connection with the Airport."

[14] Clause 6.5.2. of Concession Agreement

Where,

""Select Employees" shall mean those employees of the Authority as set forth in Schedule S[15] (of the rank of assistant general manager and below) who are posted at the Airport by the Authority and shall be deployed at the Airport for the duration of the Joint Management Period and Deemed Deputation Period."

13.2.3 With respect to the obligations of TKIAL towards Select Employee Costs, the Concession Agreement[16] states that:

"The Concessionaire shall bear the Select Employee Costs for the Joint Management Period and Deemed Deputation Period.

... the Concessionaire shall pay to the Authority, on a monthly basis, such amounts as may be indicated in an invoice to be raised by the Authority on the Concessionaire with regard to the emoluments payable by the Authority to the Select Employees."

Where,

""Joint Management Period" shall mean the period commencing from the COD and ending on the date which is 1 (one) calendar year after the COD."

And,

""Deemed Deputation Period" shall mean the period commencing from the expiry of the Joint Management Period and ending on the date which is 2 (two) calendar years therefrom."

13.2.4 With respect to TKIAL's association with AAI's senior personnel, the Concession Agreement[17] states that:

[15] Annexure - A
[16] Clauses 6.5.4. and 6.5.5.
[17] Clause 6.5.3. of the Concession Agreement

"The senior management staff of the Authority of the rank of deputy general manager and above ("Senior Personnel") shall remain deputed at the Airport for a period not exceeding 3 (three) months from the COD.

(i) On the expiry of such 3 (three) month period, the Senior Personnel shall be transferred out of the Airport and redeployed by the Authority.

(ii) It is clarified that the Concessionaire shall not be liable to bear any costs in respect of the Senior Personnel, which costs shall be borne entirely by the Authority."

13.2.5 There were 336 Select Employees[18] (as on November-2022, 275[19] employees) from AAI at TIA (level of AGM and below) whose employee costs are to be incurred by TKIAL as stated in the abovementioned clauses of the Concession Agreement. In addition to this, a growth assumption of annual escalation of salaries was taken at 10%.

13.2.6 With respect to TKIAL's retention obligations of during the Joint Management Period, the Concession Agreement[20] states that:

"At any time during the Joint Management Period, but no later than 90 (ninety) days from the COD, the Concessionaire shall make offers of employment ("Employment Offers") to a minimum of 60% (sixty percent) of the Select Employees.

(i) It is clarified that, in the event of reduction in the number of Select Employees in the manner set forth in Clause 6.5.1, the minimum number of Select Employees to whom Employment Offers are required to be made shall stand correspondingly reduced, with any fractions thereof rounded off to the nearest whole number.

(ii) The terms and conditions of the Employment Offers shall, in terms of salary, position, etc., be the same as the current employment terms of the Select Employees on an annual cost-to-company basis."

[18] Schedule – S of Concession Agreement (Annexure – A)
[19] Refer Annexure - Q
[20] Clause 6.5.6. of the Concession Agreement

13.2.7 As per the abovementioned clauses of the Concession Agreement, TKIAL is required to provide offer of employment to at least 60% of Select Employees of AAI. However, it has to bear the cost of 100% of Select Employees of AAI for a period of 3 years. This cost will reduce to 60% of the employees after 3 years of COD in line with provisions of the Concession Agreement.

13.2.8 Moreover, in such a case where less than 60% of the Select Employees accept offers from TKIAL, the Concession Agreement[21] states that:

"If, at the expiry of the Deemed Deputation Period, the number of Accepting Employees is less than 60% (sixty) percent of the Select Employees (the "Deficit Employees"), the Concessionaire shall, commencing from the expiry of the Deemed Deputation Period, pay to the Authority, on a monthly basis, such amounts as may be indicated in an invoice to be raised by the Authority on the Concessionaire with regard to the emoluments payable by the Authority in respect of such Deficit Employees (the "Deficit Employee Costs").

(i) The Select Employees in respect of which the Deficit Employee Costs are payable shall be mutually identified by the Parties no later than 3 (three) months prior to the expiry of the Deemed Deputation Period."

(ii) The Deficit Employee Costs shall be considered for pass-through in the determination of the Aeronautical Charges.

(iii) The provisions of sub-clauses 6.5.5 (i), 6.5.5 (ii), 6.5.5 (iii), and 6.5.5(iv) shall, mutatis mutandis, apply to payment of the Deficit Employee Costs.

(iv) The Deficit Employee Costs shall be payable until retirement or other separation from Authority's services of the Deficit Employees, whichever is earlier."

[21] Clause 6.5.10. of the Concession Agreement

13.2.9 As mentioned in the above clauses of the Concession Agreement, TKIAL is obligated to bear the Deficit Employee Cost as well. As stipulated above, Deficit Employee Cost shall be considered for pass-through in the determination of the aeronautical charges.

13.2.10 On 30th December 2021, TKIAL made an offer to all AAI employees with substantial increase in their remuneration packages. The offer was valid till 30th January 2022. None of the AAI employees accepted the offer till the validity of the offer date.

13.2.11 Airports are national assets and need to be operated with utmost care and security. It is also a known fact that aviation industry in India is short of skilled manpower (which is also critically mentioned in the Vision 2040 for the Civil Aviation in India[22]). TKIAL is impacted from both the sides i.e. AAI employees want to continue with AAI and there is shortage of skilled manpower in the market. Aviation Sector was hit hardest by the COVID-19 situation and hence people from other industries are hesitant about joining the Aviation industry at the moment.

13.2.12 TKIAL is ramping up its own manpower through all means, irrespective of the adverse circumstances, so that necessary on-the-job-training, know-how transfer and skill enhancement is done before the Joint Management Period and the Deemed Deputation Period (total 3 years from COD) ends.

TKIAL Employees

13.2.13 Additionally, TKIAL has also to hire its own employees for the airport operations. TKIAL workforce planning is based keeping in mind the following:

(i) TKIAL is committed to maintain the highest service standards and ensure highest level of user experience.

[22] https://dag.um.dk/~/media/danishaviationgroup/market%20information/vision-2040-for-the-civil-aviation-industry-in-india.pdf?la=en

(ii) There are various obligations and responsibilities mandated under Concession Agreement which were not performed by AAI.

(iii) There is a need to hire, train, and maintain a greater number of employees. As explained above, Select Employees have not accepted the offer and therefore TKIAL needs to find replacement for all employees.

(iv) Senior Personnel of AAI (approx. 10) were not part of the Schedule S and their deputation at TIA ended after 3 months from the COD as per the Concession Agreement. Therefore, there is a need for TKIAL to replace and also train the replacements for these Senior Personnel.

(v) High attrition rates in the aviation sector with a recent increase in privatisation of Airports.

(vi) With suitable talent in the aviation sector being scarce, TKIAL's expenses at seeking, hiring, and retaining suitable employees is estimated to increase.

13.2.14 TKIAL average employee costs are assumed to increase by 10% in line with growth assumed for AAI Manpower.

13.2.15 Based on the above assumptions, TKIAL proposes the following projections for employee costs:

Particulars	FY23	FY24	FY25	FY26	FY27	Total
AAI employees (Nos.)	275	275	275*	-	-	
AAI employees cost (INR Crores)	69.04	75.94	73.33	67.36	74.10	**359.77**
TKIAL employees (Nos.)	150	300	350	400	400	
TKIAL employees (INR Crores)	14.16	32.18	51.12	64.89	76.13	**238.48**
Total employee cost (INR Crores)	**83.20**	**108.11**	**124.45**	**132.25**	**150.23**	**598.25**

*AAI Select Employees are available till 13th October 2024. After that, cost of 60% of Select Employees to be incurred by TKIAL as mandated under CA.

Employee recruitment Plan for the control period is as follows:

	AAI Employees	Adani Employee Projections				
Departments	As on Dec-22^	FY22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
Chief Airport Office (CAO office)	4	2	3	3	4	4
Chief Operating Officer office~		1	1	2	3	3
Regulatory~		1	1	1	1	1

	AAI Employees	Adani Employee Projections				
Departments	**As on Dec-22^**	**FY22-23**	**FY 23-24**	**FY 24-25**	**FY 25-26**	**FY 26-27**
Airline Marketing~			1	1	2	2
Environment & Sustainability~		1	2	2	2	2
Air Cargo~		1	3	3	4	4
Airside Management#	7	26	40	42	44	44
Aviation Safety~		1	5	5	5	5
Occupational Safety (OHS)~		1	2	3	4	4
Aviation Rescue and Fire Fighting (ARFF)*	96	5	95	105	116	116
Screeners (Including Shift-In-Charge & Manager)**		54	54	54	73	73
Terminal and Operation#	22	14	23	33	33	33
Horticulture~		1	2	3	4	4
Quality~		1	3	4	5	5
Engineering & Maintenance#	72	6	16	30	34	34
Land department~	1			1	1	1
Fuel Farm (Location in Charge) and shift managers~			1	3	3	3
Techno Commercial (Procurement department)~		3	6	6	6	6
Corporate communication~		2	3	3	3	3
Corporate Affairs~		1	1	2	2	2
Security#	1	9	12	13	14	14
Legal	1	1	2	3	3	3
Information Technology#	15	3	4	5	7	7
Human Resources and Admin#	47	6	8	8	9	9
Finance	8	4	6	7	8	8
Commercial	1	5	5	6	8	8
Digital~		1	1	2	2	2
Total Manpower Requirement	**275^**	**150**	**300**	**350**	**400**	**400**

^AAI has total strength of 346 (336 is approved strength as per Schedule S + 10 AAI senior management who are not part of Schedule S and has left the Airport after 3 months of transition as per CA). Out of 346 only 275 are available at the Airport as on date). Refer Annexure Q for sample invoice for AAI Manpower.

*ARFF manpower requirement is projected as per DGCA Taskforce Resource Analysis report (refer Annexure R)

**ILHBS Screeners requirement is projected as per requirement based on detailed peak hour wise assessment done (refer Annexure S)

#AAI has approx. 163 employees in core operation department like Airside Management, Terminal and Operations, Engineering & Maintenance, Security and Human Resource & Admin Department. Whereas TKIAL has rationalised it to 134 over the control period.

~The new departments created based on various requirements emanating from CA and experience from other PPP Airports.

Airside manpower projected by TKIAL includes shift staff for various activities like AOCC, Airside Operations Executives, Aerodrome Safeguarding etc. Similarly, Security manpower projected by TKIAL includes staff for Pass Section, AvSec Training and Compliances, Liaising with CISF/BCAS/Police and Monitoring of outsourced staff etc.

13.3 **Utilities - Electricity, Water and Diesel for genset**

13.3.1 Electricity and water costs are calculated at net level, i.e. gross expenses less recovery from various users / concessionaires.

13.3.2 TKIAL has consumed approx. 11.6 mn units of electricity for 9 months of FY 2022-23 (from Apr-22 to Dec-22) and expected to consume approx. 15.5 mn units of electricity for full year FY 2022-23. The electricity regulated average rate at Thiruvananthapuram is INR 8.6 per unit, TKIAL's expenses on electricity (net of 6% recoveries) for 2022-23 is expected to be approx. INR 14.00 Crores. The latest trend in electricity consumption and recovery pattern is as below:-

Year	Electricity Consumption kwh	Per Unit Cost	Recovery from Concessionaire
Apr-22	1,306,800	8.29	5%
May-22	1,362,600	8.17	5%
Jun-22	1,271,250	8.26	5%
Jul-22	1,262,250	8.83	5%
Aug-22	1,293,750	8.85	6%
Sep-22	1,251,450	8.90	7%
Oct-22	1,260,000	8.81	5%
Nov-22	1,273,050	8.80	7%
Dec-22	1,339,200	8.76	6%

13.3.3 Apart from Electricity, TKIAL has assumed cost of water and diesel for genset for approx. INR 0.30 Crore p.a. based on the usage pattern.

13.3.4 Utility consumption is expected to increase by passenger growth and rate per unit to increase by inflation growth. In addition, TKIAL has considered increase of 6.2% p.a. in FY26 cost due to increase in terminal area because of refurbishment of existing terminals.

13.3.5 Based on the above assumptions, TKIAL proposes the following projections for electricity and water costs (net of recoveries):

Particulars (in INR Crores)	FY23	FY24	FY25	FY26	FY27	Total
Electricity cost (net of recoveries)	13.98	15.22	16.74	19.35	21.29	**86.58**
Water and Diesel	0.30	0.39	0.45	0.49	0.52	**2.14**
Total (net of recoveries)	**14.28**	**15.60**	**17.18**	**19.84**	**21.81**	**88.72**

13.4 **Corporate Allocation**

13.4.1 TKIAL is a Company of the Adani Group.

13.4.2 AEL is the flagship company for Adani Group which has promoted various businesses like Power, Renewable, Ports, Logistics, Airports, Data Center, Défense etc.

13.4.3 AAHL, 100% subsidiary of AEL, is a special purposes company incorporated with an aim to promote Airport and airport related activities.

13.4.4 AEL and AAHL have developed various capabilities, infrastructure and processes in various areas ("Corporate Support Services").

13.4.4.1 AEL has consolidated various strategic functions/activities like corporate finance, legal, central procurement, green initiative, ESG, Information technology, taxation, management assurance, internal audit, shared service for financial transactions. human resource management. AEL also includes various strategic and leadership functions like Chairman office, Group CFO office, Corporate Communication and Branding etc. AEL provides support on these functions to all group companies including but not limited to Power, Renewable, Ports, Logistics, Airports, Data Centrer, Défense etc.

13.4.4.2 AAHL houses a team of specialised subject matter expert in Aviation sector having domain knowledge and expertise in Airports Operation,

Airside Management, Master Planning, Designing, Airport Development, Airport Regulatory, Human Resources, Transition Management, Hospitality, Customer management, Finance Management, Legal expertise, Cargo Development and Management, Airline Marketing, Retail, Commercial, Space Leasing, Non-Aeronautical etc.

13.4.5 These capabilities, infrastructure, and processes (retained under AEL and AAHL) are very important for sustainable operations of any business including Airports.

13.4.6 Cost is incurred by AEL and AAHL on overall basis to provide these services and support to various group companies (including Airports) by AEL and to various Airport companies in case of AAHL respectively. The major composition of these costs includes salaries and administrative cost.

13.4.7 These costs (except shareholders services and non-Aeronautical services) are recovered by AEL and AAHL through appropriate allocation method/keys. AEL and AAHL do not allocate the costs which are related to shareholders services (activities performed by AEL / AAHL for their own benefits like consolidation of accounts, secretarial etc.) and Non-Aeronautical services.

13.4.8 The cost is allocated on cost-to-cost basis "without any mark-up". As on date Adani Group has portfolio of 8 Airports. In case these services are to be maintained by each Airport on standalone basis then the summation of cost incurred by each Airport will be much higher than the consolidated cost incurred by AEL and AAHL to maintain these services.

13.4.9 Corporate cost allocation has various benefits like: -

- Leveraging on best practices
- Centralized monitoring and control
- Efficiencies and economies of scale

13.4.10 It has been a common practice across all the industries operated by big business houses including private Airport entities and AAI, whereby cost allocation process is prevalent. Similar corporate cost allocation practice is used by aviation companies For e.g., GMR Infrastructure Limited (GIL) and GMR airports Limited (GAL) provides services to DIAL and GHIAL and their costs are allocated based on suitable drivers. Similar practice is followed by AAI as well in allocating its Central Head Quarters (CHQ) / Regional Head Quarters (RHQ) costs to various airports.

13.4.11 AAHL hired an independent consultant, PwC, to undertake the study on Corporate Cost Allocation who have opined that consolidation of support services have benefits like: -

a) Leveraging on best practices
b) Centralized monitoring and control
c) Efficiencies and economies of scale

The independent consultant also opined that such corporate cost allocation practice is adopted by various large corporates including Aviation companies in India and overseas.

Further the independent consultant has advised that non-allocation of shareholders cost, non-allocation of non-aeronautical services at AAHL, recovery at cost to cost without mark-up and allocation based on various drivers, are suggested approach for allocation methodology.

13.4.12 The cost is escalated based on employee growth.

13.4.13 Based on the above assumptions, TKIAL proposes the following projections for corporate allocation as an operating expenditure:

Particulars (in INR Crores)	FY23	FY24	FY25	FY26	FY27	Total
Corporate allocation	15.00	30.00	35.00	40.00	42.00	**162.00**

13.5 **Repairs & Maintenance expenses**

13.5.1 TKIAL aims at maintaining best-in-class service quality levels through the best upkeep and maintenance of the buildings, equipment and other infrastructure to ensure hassle-free, safe and smooth operations. Repairs and Maintenance includes civil, electrical and mechanical works for the maintenance of the airport including the terminal, runways, taxiways, parking bays, aprons, aerobridges, power substations, IT and other plants and machinery.

On Existing Assets

13.5.2 In relation to TKIAL's obligations with respect to existing contracts with AAI, the Concession Agreement[23] states that:

"The Authority shall, during the Inception Period, perform and comply with all its obligations under the Existing Contracts, and shall, at its own cost and expense, procure novation of such contracts and agreements in favour of the Concessionaire, to take effect from the COD and remain in force for the remaining term thereunder. The Parties agree to execute the documents necessary for novation of the Existing Contracts ("Novated Contracts") as contemplated under this Clause 6.4.1. The Concessionaire shall bear and pay all stamp duties payable in connection therewith.

In the event the Authority is unable to procure novation of any Existing Contract in accordance with the foregoing ("Non-Novated Contracts"), it shall execute a power of attorney, effective on and from the COD, designating the Concessionaire (acting through its authorised representative) as its attorney and agent with powers to act on its behalf for all intents and purposes to the extent of the scope of the Non-Novated Contracts, including the power to appropriate all benefits which may accrue to the Authority from time to time under any such Non-Novated Contract, and terminate such Non-Novated Contracts in

[23] Clause 6.4. from the Concession Agreement

accordance with their terms. The Concessionaire shall bear and pay all stamp duties payable in connection with such power(s) of attorney.

On and from the COD, the Concessionaire shall, at its own risk and cost, perform and comply with (i) all its obligations under the Novated Contracts; and (ii) all obligations of the Authority under the Non-Novated Contracts, as if the Concessionaire were an original party to such contracts. The Concessionaire agrees and undertakes to indemnify, defend, save and hold harmless the Government Indemnified Persons against any and all suits, proceedings, actions, demands and claims for any loss, damage, cost and expense of whatever kind and nature under or in connection with any Novated Contract or the Non-Novated Contract arising after the COD save and except any loss, damage, cost and expense arising after the COD but relating to any act or omission of the Authority prior to the COD. It is clarified that, unless they are terminated earlier in accordance with the terms of such agreements, the Novated Contracts and Non-Notated Contracts shall subsist until their expiry. Pursuant to such expiry or termination, the Concessionaire may, at its own discretion, enter into any contract with respect to the subject matter of the relevant Novated Contract and/ or Non-Notated Contract, with any third party, on such terms and conditions as it may deem fit."

13.5.3 With respect to Repairs and Maintenance, TKIAL received over 100 contracts from AAI. These contracts are of varied nature, including but not limited to: -

a. Electrical
b. Civil
c. HVAC
d. PBB
e. BHS
f. Airside
g. Public Address System
h. STP
i. Water Management
j. Waste Management

k. UPS

l. Lift

m. Escalator

13.5.4 While taking over the Airport, TKIAL carried out a facility health assessment and found various deficiencies.

13.5.5 During the first year of operations TKIAL felt a need to improve the service level of the vendors and also to address the identified deficiencies, TKIAL carried out a consolidation of the contracts and awarded fresh contracts through a transparent bidding process. Refer Annexure T for the major contract/LOA for Repair & Maintenance.

13.5.6 The estimated expenses that will be incurred by TKIAL on the repairs and maintenance works of existing assets (transferred from AAI to TKIAL), are expected to increase by 5% inflation and another 5% allowance is provided as contingency for change of scope, overtime, escalation etc.

On New Assets

13.5.7 Repairs and maintenance expenses that are to be incurred by TKIAL for new assets have been calculated as 3% of the opening gross block of new assets of the respective years.

Total R&M Expenditure

13.5.8 Based on the above assumptions, TKIAL proposes the following projections for repair and maintenance:

Particulars (in INR Crores)	FY23	FY24	FY25	FY26	FY27	Total
R&M (Initial assets)	28.85	31.73	34.91	38.40	42.24	**176.13**
R&M (New Assets)	-	2.43	11.62	44.92	74.95	**133.92**
Total R&M cost	**28.85**	**34.17**	**46.53**	**83.32**	**117.18**	**310.04**

13.6 **Insurance**

13.6.1 With respect to TKIAL's insurance obligations, the Concession Agreement states that:

*"**Insurance Obligations***

The Concessionaire shall effect and maintain at its own cost, during the Concession Period, such insurances for such maximum sums as may be required under the Financing Agreements and Applicable Laws, and such insurances as may be necessary or prudent in accordance with Good Industry Practice. The Concessionaire shall also effect and maintain such insurances as may be necessary for mitigating the risks that may devolve on the Authority as a consequence of any act or omission of the Concessionaire. The Concessionaire shall procure that in each insurance policy, the Authority shall be a co-assured and that the insurer shall pay the proceeds of insurance into the Escrow Account. The Parties agree that the level of insurance to be maintained by the Concessionaire after repayment of Senior Lenders' dues in full shall be determined on the same principles as applicable for determining the level of insurance prior to such repayment of Senior Lenders' dues.

Insurance Cover

Without prejudice to the provisions contained in Clause 30.1, the Concessionaire shall, during the Concession Period, procure and maintain Insurance Cover including but not limited to the following:

(a) loss, damage or destruction of the Project Assets, including assets handed over by the Authority to the Concessionaire, at replacement value;

(b) comprehensive third party liability insurance, including injury to or death of personnel of the Authority or others who may enter the Airport;

(c) the Concessionaire's general liability arising out of the Concession;

(d) liability to third parties for goods or property damage;

(e) workmen's compensation insurance; and

(f) any other insurance that may be necessary to protect the Concessionaire and its employees, including all Force Majeure Events and not otherwise covered in items (a) to (e) above."

Being an airport operator, TKIAL is expected to take various insurances for property damage, business interruption, third party liabilities, and terrorism. TKIAL has incurred insurance expenses of INR 2.00 Crores for 2022-23 for the initial asset base with a replacement cost coverage of Rs 1,830 Crores. The implied cost is approx. 0.11% of the replacement cost. The cost is expected to increase by inflation @5%.

The insurance expenses for new assets to be acquired/added have been calculated as 0.1% of the new additions to the gross block based on market rates.

13.6.2 Based on the above assumptions, TKIAL proposes the following projections for insurance:

Particulars (in INR Crores)	FY23	FY24	FY25	FY26	FY27	Total
Existing Assets	2.00	2.20	2.42	2.66	2.93	**12.21**
New Assets	0.06	0.37	1.48	2.48	4.01	**8.40**
Total Insurance cost	**2.06**	**2.57**	**3.90**	**5.14**	**6.94**	**20.61**

13.7 **Rates and taxes**

13.7.1 Rates and taxes costs contain several costs such as property tax, water tax and sewage tax to local authorities.

13.7.2 TKIAL is expected to incur approx. INR 1.00 Crores as property taxes and other statutory obligations in FY23. This is based on property tax invoice raised by local authorities on AAI which has in turn requested for reimbursement from TKIAL as per terms of the concession agreement. The cost is estimated to increase by inflation of 5%. Further TKIAL has considered increase of 6% p.a. in FY26 cost due to increase in terminal area due to refurbishment of existing terminals.

13.7.3 Based on the above assumptions, TKIAL proposes the following projections for rates and taxes:

Particulars (in INR Crores)	FY23	FY24	FY25	FY26	FY27	Total
Rates and taxes	1.00	1.05	1.10	1.23	1.29	**5.67**

13.8 **Security Expenses**

13.8.1 Security related operating expenses are dynamic in nature and the requirement of the same varies with perceived security threat and mandates from various agencies. TKIAL expects to incur significant security expenses with the expansion of the terminal building area. TKIAL's security expenses includes outsourced manpower, security guards, security operation maintenance, surveillance vehicles, access controls and expenses related to other automation systems. Total cost estimated for FY 23 to be INR 6.77 Crores which is expected to increase in line with traffic growth.

The activities covered under outsourced Security Services include T1 Kerbside Management, T2 Kerbside Management and Other Area (ALS, Patrolling, Pass Section and other Automations) for which the Annual cost is approx. INR 2.6 Cr

As per Concession Agreement, Terminal Building *includes kerbside and access roads.* The definition of Terminal Building as provided in the Concession Agreement is as follows:-

*"Terminal Building" means the stand-alone and/ or integrated passenger terminal building with separately identified area for domestic passengers and international passengers on the Site and the land appurtenant thereto, **including the kerbside and approach roads** and including the existing terminal building, as described and demarcated in the perspective plan set out at Annex II of Schedule A, and/ or the Master Plan, as the case may be.*

13.8.2 For the forecasts, security expenses are expected to increase by a traffic growth. Further TKIAL has considered increase of 6.2% p.a. in FY26 cost due to increase in terminal area due to refurbishment of existing terminals.

13.8.3 Based on the above assumptions, TKIAL proposes the following projections for security expenses:

Particulars (in INR Crores)	FY23	FY24	FY25	FY26	FY27	Total
Security expenses	6.77	8.70	10.06	11.63	12.50	**49.67**

Counter Drone Expenses

Bureau of Civil Aviation Security (BCAS) had directed the Indian Airports to implement Counter drone technology/solution for Surveillance, detection and Neutralization of drones/ UAVs vide AVSEC Circular no 02/2020 dated 11th February 2020 and vide addendum dated 09th February 2021 to the said circular. However, the above-mentioned Circular has been subsequently withdrawn by BCAS vide Order No. CAS-6(11)/2018/ Div-I/RPA/ (Part2)/ 180940 dated 23rd February 2022. For the time being, the numbers provided in this MYTP are exclusive of such expenses as the circular has been withdrawn. In future, TKIAL may require to incur expenses relating to counter drone subject to revised guidelines.

We request AERA to kindly true-up such expenditure on actual incurrence basis in the tariff determination of the next control period. However, if revised guidelines are issued before tariff approval by AERA, we will provide details of likely expenditure for consideration and inclusion of the same in ARR by AERA.

13.9 IT Expenses

13.9.1 With respect to TKIAL's obligations with respect to setting up of an Airport Operation Data Base, the Concession Agreement[24] states that:

"The Concessionaire shall set up Airport Operation Data Base ("AODB") consisting of an airport operations database, communications layer and visual system that link various systems in the Airport together. The AODB must provide all operations data at the Airport including but not limited to the data related to objective service quality requirement and parameters defining level of service of the Terminal Building and any other such information as may be required by the Authority and/ or any Designated GOI Agency pursuant to this Agreement. AODB shall generate daily, weekly, monthly, quarterly and annual reports as per the requirements of this Agreement. The AODB system should be capable to provide historical, real-time data to assist in strategic decision making as well as to help the Concessionaire for various compliance requirements. The Concessionaire shall provide AODB access to the Authority for periodic review and generation of reports."

13.9.2 To ensure world-class IT infrastructure, TKIAL intends to revamp the existing IT capacity and efficiency. IT expenses incurred by TKIAL include the following:

- System license costs
- IT consumables
- IO/AO support
- Digitization, travel, and group governance
- Operating cost of servers, website, and other systems
- Maintenance costs (office, cables, and DC room)
- IT resources
- AMC for airport systems
- AAI end user system support

[24] Clause 21.1. of the Concession Agreement

13.9.3 For the forecasts, IT expenses are expected to increase in line with growth in manpower strength.

13.9.4 Based on the above assumptions, TKIAL proposes the following projections for IT expenses:

Particulars (in INR Crores)	FY23	FY24	FY25	FY26	FY27	Total
IT expense	6.00	12.00	14.00	16.87	17.72	**66.59**

13.10 **Administrative and General Expenses**

13.10.1 Administrative costs contain expenses such as consultancy expenses, advertisement, travel, audit, printing & stationery, office expenses, communication costs, business promotion etc. These costs are necessary for the efficient working of the Airport. The initiatives include industry outreach programs, meeting various stakeholders, participation in various domestic and international forums and catchment area programs. TKIAL is transforming the Thiruvananthapuram Airport into a smart and futuristic airport.

13.10.2 Admin and General expenses expected to increase by inflation 5% and another 5% allowance is provided as contingency for change of scope, overtime, escalation etc.

13.10.3 Based on the above assumptions, TKIAL proposes the following projections for admin expenses:

Particulars (in INR Crores)	FY23	FY24	FY25	FY26	FY27	Total
Admin expenses	15.00	36.00	39.60	43.56	47.92	**182.08**

13.11 **UDF Collection Charges**

13.11.1 UDF collection charges are currently applicable as INR 5 per departing passenger. The same has been used to project the cost during TCP.

13.11.2 Based on the above assumptions, TKIAL proposes the following projections for UDF collection charges:-

Particulars (in INR Crores)	FY23	FY24	FY25	FY26	FY27	Total
UDF Collection Charges	0.86	1.11	1.28	1.40	1.51	6.17

13.12 **Other Operating Expenses**

13.12.1 Other operating expenses include expenses such as (i) housekeeping and upkeep expenses; (ii) horticulture expenses; and (iii) outsourced manpower/ hire charges.

The other Operating Expenses largely incudes Cleaning & Housekeeping Services, Pest Control Services, Cleaning of Public Toilet, providing biomedical waste management services, garbage collection services etc. Refer the attached Annexure U for LOA issued for one of the major contract. In order to provide its annualised impact necessary increase factor has been considered in FY24.

Outsourced manpower hire charges include expenses such as operations of Bird Scarers for WHM, customer service executive, guest relation executive etc. and a trolley management O&M contract.

13.12.2 In line with growth assumptions mentioned earlier, from FY25 onwards other operating expenses are expected to increase by inflation of 5%. Further TKIAL has considered increase of 6.2% p.a. in FY26 cost due to increase in terminal area due to refurbishment of existing terminals.

13.12.3 TKIAL proposes the following projections for other operating expenses:

Particulars (in INR Crores)	FY23	FY24	FY25	FY26	FY27	Total
Other operating expenses	19.00	28.50	32.92	38.09	40.94	159.45

13.13 **Independent Engineers' Cost**

13.13.1 As per Article 24 of the Concession Agreement, AAI and TKIAL will appoint the Independent Engineer (IE). The IE to be appointed initially for 3 years and thereafter for every 3 years till the end of concession period of 50 years. The cost of the Independent Engineer shall be paid by AAI and that shall be reimbursed by TKIAL to AAI. The cost of Independent Engineer will be pass-through for the determination of Aeronautical Charges by the regulator.

13.13.2 The extract of the relevant clause is as follows: -

24.1.2 The appointment of the Independent Engineer shall be made within 90 (ninety) days of the date of execution of this Agreement, and such appointment shall be valid for a period of 3 (three) years. On the expiry or termination of the said appointment, the Authority shall appoint an Independent Engineer for a further term of 3 (three) years in accordance with the provisions of Schedule K, and such procedure shall be repeated after expiry of each appointment.

24.3.1 The remuneration, cost and expenses of the Independent Engineer shall be paid by the Authority, and all such remuneration, cost and expenses shall be reimbursed by the Concessionaire to the Authority within 15 (fifteen) days of receiving a statement of expenditure from the Authority. Any amounts paid to the Independent Engineer shall be considered for a pass-through for the determination of the Aeronautical Charges by the Regulator.

13.13.3 In accordance with above, AAI has appointed M/s RITES Limited as the Independent Engineer initially for 3 years with total cost of INR 11.35 Crores (or INR 3.78 Crores annually). TKIAL has assumed escalation in cost based on inflation of 5% after the expiry of initial period of 3 years. Refer Annexure V for the agreement between AAI and Independent Engineer.

13.13.4 TKIAL proposes the following projections for the cost of Independent Engineer.

Particulars (in INR Crores)	FY23	FY24	FY25	FY26	FY27	Total
Independent Engineers	3.78	3.78	3.78	3.97	4.17	**19.49**

13.14 **Runway Re-Carpeting**

13.14.1 AERA Order No. 35/2017-18, explains that the useful life prescribed to runways "would depend on the design life planned at the time of construction of the pavement based on which composition, thickness of each layer and other components of the pavement would have been planned for construction." The runway at TRV requires recarpeting in order to ensure the minimum quality required for future use. The previous runway recarpeting was done in FY2016-17 by AAI for approx. cost of INR 52 Crores. As per AAI practice the runway is recarpeted every 5 years and accordingly the next runway-recarpeting was due in FY21-22 considering the traffic movement, wear & tear and weather condition. However, considering the low traffic movement in FY20 and FY21 due to COVID restricted travel, the runway recarpeting has been postponed to FY24-25. This will help to restore the PCN value of the runway. The cost of runway re-carpeting proposed in FY2024-25 is considered at INR 85 Crores (soft cost, interest during construction and financial allowance is separate) (similar to the amount AAI had to incur in FY16-17 + increase due to WPI over a period).

13.14.2 In terms of provisions of AERA Order no. 35/2017-18 dated 12th January, 2018 in respect of useful life of assets, the Authority has allowed the expense incurred on re-carpeting of runways, taxiways and apron as O&M expenses which are to be amortized over a period of 5 years to avoid burden on users. Authority should provide a carrying cost on the balance unamortized portion of such expense incurred by TKIAL which will accrue in future, though the expense has already been incurred upfront. TKIAL submits that the carrying cost on the unamortized balance of the expense incurred on re-carpeting of runways / taxiways

will enable it to obtain return of capital together with the reasonable return on investment commensurate with the risk involved. The amortization of runway recarpeting expense has been provided as: -

Particulars (in INR Crores)	FY23	FY24	FY25	FY26	FY27	Total
Runway re-carpeting			25.90	30.33	27.38	83.61

13.15 **Financing Charges**

13.15.1 Financing charges includes but not limited to bank charges for routine operations, debt arranging charges, processing fees and upfront fees payable to lenders, documentation charges, and various agencies. As per industry trade practice, the cost for upfront fees ranges from 1.5% to 2.5% depending on the size and complexity of the transaction. Accordingly, TKIAL has assumed 1.5% of the debt amount as financing charges.

13.15.2 TKIAL has also tendered a Performance Bank Guarantee to AAI as mandated by the CA[25] as follows:

"The Concessionaire shall, for the performance of its obligations during Phase I hereunder, provide to the Authority, no later than 120 (one hundred and twenty) days from the date of this Agreement, an irrevocable and unconditional guarantee from a Bank for a sum equivalent to Rs. 80,00,00,000 (Rupees Eighty Crore) in the form set forth in Schedule E ("Performance Security"). Until such time the Performance Security is provided by the Concessionaire pursuant hereto and the same comes into effect, the Bid Security shall remain in force and effect, and upon such provision of the Performance Security pursuant hereto, the Authority shall release the Bid Security to the Concessionaire."

13.15.2.1 TKIAL has arranged Performance Bank Guarantee from WOORI Bank in favor of AAI. Annual fee of 0.50% of the Performance Bank Guarantee is

[25] Clause 9.1.1.

to be paid to the lenders as per agreed terms. (Refer Annexure W for the copy of Performance Bank Guarantee and agreement with WOORI Bank)

13.15.3 Additionally, a working capital loan has been assumed at an interest rate of 12% per annum of average of opening and closing balance.

The following table provides a summary of the various financing charges that are incurred by TKIAL:-

Particulars (in INR Crores)	FY23	FY24	FY25	FY26	FY27	Total
Finance charges	-	37.02	-	-	-	**37.02**
Annual Fee for Performance BG	0.40	0.40	0.40	0.40	0.40	**2.00**
Working Capital interest	0.67	3.42	8.27	11.81	13.26	**37.43**
Total	**1.07**	**40.84**	**8.67**	**12.21**	**13.66**	**76.45**

13.16 **Summary of O&M Expenses**

13.16.1 The summary of aeronautical operation and maintenance expenditure for the TCP is as follows:

No	Particulars	FY23	FY24	FY25	FY26	FY27	Total
1	Manpower expenses - AAI employees	69.04	75.94	73.33	67.36	74.10	**359.77**
2	Manpower expenses - Adani employees	14.16	32.18	51.12	64.89	76.13	**238.48**
3	Utility expenses	14.28	15.60	17.18	19.84	21.81	**88.72**
4	IT expenses	6.00	12.00	14.00	16.87	17.72	**66.59**
5	Rates & taxes	1.00	1.05	1.10	1.23	1.29	**5.67**
6	Security expenses	6.77	8.70	10.06	11.63	12.50	**49.67**
7	Corporate Allocation	15.00	30.00	35.00	40.00	42.00	**162.00**
8	Administrative Expenses	15.00	36.00	39.60	43.56	47.92	**182.08**
9	Collection Charges on UDF	0.86	1.11	1.28	1.40	1.51	**6.17**
10	Insurance	2.06	2.57	3.90	5.14	6.94	**20.61**
11	R&M	28.85	34.17	46.53	83.32	117.18	**310.04**
12	Others Operating expenses	19.00	28.50	32.92	38.09	40.94	**159.45**
13	Independent Engineers Cost	3.78	3.78	3.78	3.97	4.17	**19.49**
14	Runway recarpeting	-	-	25.90	30.33	27.38	**83.61**
15	Financing Charges and Others	1.07	40.84	8.67	12.21	13.66	**76.45**
16	**Total (Airport related)**	**196.89**	**322.44**	**364.39**	**439.84**	**505.24**	**1,828.80**
17	Cargo operating expenses	1.44	4.75	5.97	13.91	16.42	**42.50**
18	Fuel Farm operating expenses	-	9.73	13.33	13.17	14.29	**50.52**
19	**Grand Total (16 + 17 + 18)**	**198.33**	**336.92**	**383.69**	**466.93**	**535.95**	**1,921.81**

13.17 **Concession Fee**

13.17.1 Clause 27.3.1. of the Concession Agreement states that "the Parties hereto acknowledge and agree that the Per Passenger Fee for Domestic Passengers and Per Passenger Fee for International Passengers shall be applicable from the COD and shall be revised annually on each anniversary of the COD to take account of the variation in the CPI (IW)."

13.17.2 As per the abovementioned clause, the per passenger fee for domestic passengers in the first 15 (fifteen) concession years shall be revised in accordance with the following formula:

$$PPF\ for\ Dom.Pass._{(CY)} = PPF\ for\ Dom.Pass._{(CY-1)} \times (1 + 85\%\ of\ Delta\ CPI\ (IW))$$

Additionally, the per passenger fee for domestic passengers in the remaining concession years shall be revised in accordance with the following formula:

$$PPF\ for\ Dom.Pass._{(CY)} = PPF\ for\ Dom.Pass._{(CY-1)} \times (1 + 50\%\ of\ Delta\ CPI\ (IW))$$

Where,

- $PPF\ for\ Dom.Pass._{(CY)}$ means the revised Domestic Per Passenger Fee to be paid by the Concessionaire in the new Concession Year;
- $PPF\ for\ Dom.Pass._{(CY-1)}$ means Per Passenger Fee being paid by the Concessionaire in the previous Concession Year;
- $Delta\ CPI\ (IW)$ shall be calculated as follows:

$$\frac{\text{[Latest available monthly CPI (IW) as of the date of calculation]} - \text{[CPI (IW) pertaining to 12 (twelve) months prior to such latest available monthly CPI (IW)]}}{\text{CPI (IW) pertaining to 12 (twelve) months prior to such latest available monthly CPI (IW)}}$$

13.17.3 As per clause 27.1.2 of the Concession Agreement, the concession fees are not a pass-through expense. Hence, TKIAL has not included the concession fees paid/payable to AAI in the O&M expenses as submitted above.

14 Inflation considered for TCP

14.1 As per RBI Forecaster Survey 79th round dated 07th Dec 2022, the projection of inflation is as follows : -

Calendar Year	WPI All commodities
FY22-23	Mean as 10.4%
FY23-24	Mean as 5%

14.2 Based on the above data, TKIAL has assumed inflation as 10.4% for FY22-23 and 5% from FY23-24 onwards every year, while projecting capital expenditure and operating expenditure.

15 Non-Aeronautical Revenue for TCP

15.1 TKIAL has outsourced all non-aeronautical businesses to the Master Concessionaire with emphasis on: -

15.1.1 High standards of airport services, safety and security

15.1.2 Functionality and flexibility

15.1.3 Deployment of modern information technology systems and equipment

15.1.4 Environment friendliness

15.1.5 Cost effectiveness

15.1.6 Ability and willingness to provide a high level of customer service at competitive prices

15.1.7 Experience and expertise in provision of non-aeronautical services with innovation in concept and design

15.1.8 Experience and expertise in city side development to meet the requirements of the travellers

15.1.9 Follow good industry practice in performing the Airport Services

15.2 The process for selection and appointment of Master Concessionaire was carried out through a global competitive bidding process as per the terms of the Concession Agreement. The RfP for the tendering process was issued in March 2021 and a Master Service Agreement has been signed on 25th October 2021. The agreement was effective from December 2021.

15.3 The Master Concessionaire scope is to develop, operate, maintain, manage the following at TIA in accordance with best-in-class standards and facilities at comparable airports and good industry practices:

- Duty free stores
- Food and beverages outlets
- Retail outlets
- Lounges

- Advertising, sponsorship and promotion opportunities
- Car parks and ground transportation facilities
- Airport hotels and transit hotels
- Preferred partners association for including but not limited to pouring rights, services in air (Wi-Fi, Bluetooth, aroma etc.), music and video rights, mobile wallet, payment gateway and other as may be approved by Airport Operator
- Business centre
- City side development
- Flight catering services
- Foreign exchange services
- Freight consolidators/forwarders or agents
- Left luggage, lost and found, excess baggage
- Messenger services
- Porter service
- Special assistance services
- Vending machines
- Meet and assist services
- Provision of land and space for various stakeholders at Airport
- Various passenger amenities, including but not limited to, banks, foreign exchange, SIM card, child-care room, kids play areas, car rental and hotel reservation counters, digital wallet tie-ups, ATMs, spas, and entertainment areas
- Airport village comprising of various retail, food and beverage, entertainment and amenities options; and
- Any other services as may be mutually agreed or permitted pursuant to applicable law.

15.4 For each year during the term of the Agreement, Master Concessionaire will pay to airport operator an amount which is higher of the following:

- Minimum Guarantee amount of INR 20 Crores per annum; or
- Amount arrived by multiplying the revenue share percentage i.e. 10% as quoted by Master Concessionaire with Gross Revenue in that year.

15.5 Minimum Guarantee amount will remain unchanged for first five years and will increase by 50% of CPI thereafter.

Refer Annexure X for the relevant extract of the Master Service Agreement.

15.6 Apart from above, TKIAL has provided rental space to various government agencies like Customs, Immigration, CISF, Plant or Animal quarantine, IMD, Coast guard, Airforce, BCAS, etc. The annual space rentals from these Government Agencies is approx. INR 0.50 Crore. The same is projected to be increase by inflation rate of 5%.

15.7 Following table summarizes the projection for non-aeronautical revenues at TKIAL: -

Particulars (in INR Crores)	FY23	FY24	FY25	FY26	FY27	Total
Revenue from Master Concession	20.00	20.00	20.00	20.00	20.00	**100.00**
Other revenues	0.50	0.53	0.55	0.58	0.61	**2.76**
Total Non-Aero Revenue	**20.50**	**20.53**	**20.55**	**20.58**	**20.61**	**102.76**

16 Aeronautical Income Tax for TCP

16.1 The computation of income tax on aeronautical income, has been made on the prevailing Income Tax laws and rules. Further, the aeronautical segment has been treated as a standalone entity with its own tax computations. Therefore, this may not necessarily reflect the overall tax computation of TKIAL as a whole.

16.2 The following treatment is considered while calculating aeronautical tax:

I. 30% of Non-Aeronautical income which was reduced while calculating the ARR and corresponding Aeronautical revenues streams, are added back to reflect the comprehensive revenues for the Airports. This is in line with AERA Guidelines as mentioned below.

As per AERA guidelines 5.5.1 as provided below, corporate tax paid on ***income from assets/ amenities/ facilities/ services*** (emphasis) taken into consideration for determination of Aggregate Revenue Requirement (ARR) will be considered for calculation of taxation component of ARR. Clause 5.5 of the AERA Guidelines is reproduced below:

5.5. Taxation (T)

5.5.1. Taxation represents payments by the Airport Operator in respect of corporate tax on income from assets/ amenities/ facilities/ services taken into consideration for determination of Aggregate Revenue Requirement.

5.5.2. The Authority shall review forecast for corporate tax calculation with a view to ascertain inter alia the appropriateness of the allocation and the calculations thereof.

Explanation: For avoidance of doubt, it is clarified that any interest payments, penalty, fines and other such penal levies associated with corporate tax, shall not be taken into consideration for calculation of Taxation.

II. Concession Fee is not considered as expenditure in line with Supreme Court judgement dated 07th July 2022 in case of Delhi and Mumbai Airport.

16.3 The following table summarizes the income tax projections that have been calculated as per the above assumptions for TKIAL:

Particulars (in INR Crores)	FY23	FY24	FY25	FY26	FY27	Total
Aero Revenues	202.11	548.96	976.84	1131.61	1270.59	**4130.11**
Add 30% Non-Aero Revenues	6.15	6.16	6.17	6.17	6.18	**30.83**
Less Aero Expenses (as per 13.16.1 above)	(198.33)	(336.92)	(383.69)	(466.93)	(535.95)	**(1921.81)**
Less Depreciation	(55.75)	(71.96)	(135.17)	(236.23)	(352.05)	**(851.16)**
Aero PBT	**(45.83)**	**146.24**	**464.15**	**434.63**	**388.77**	**1387.96**
Tax expenses @25.17%	**0.00**	**(36.81)**	**(116.83)**	**(109.40)**	**(97.85)**	**(360.88)**

17 Airport Service Quality

17.1 With respect to the Airport Service Quality obligations of TKIAL the Concession Agreement has defined them *"as set forth in Annex I of Schedule H;"* (Annexure – A).

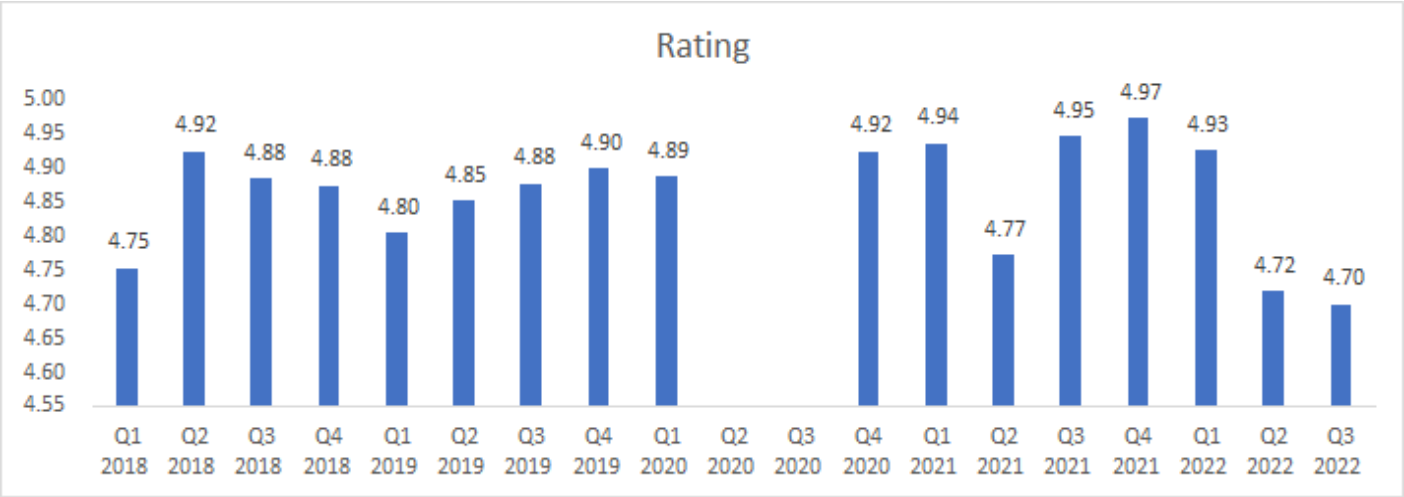
17.2 These service qualities have been summarized on the basis of performance indicators, measures, measurement mechanisms and measurement frequency. TKIAL is committed to abide by the following ASQ performance indicators mentioned in Annex I of Schedule H:

S. No.	Performance Indicator	Performance Measure	Minimum Performance Standard
1	**Car Parking**	Average time taken to find parking space including the time taken for payment of parking fee or collection of ticket Average time from parking slot to the exit gate including the time for payment of parking fee	95% of drivers take less than 5 minutes 95% of drivers take less than 5 minutes
2	**Security Check**	Waiting time in queue	95% of the Peak Hour passengers wait less than 5 minutes
3	**Check-in**	Waiting time in queue	95% of business class passengers wait less than 5 minutes 95% of economy class passengers wait less than 20 minutes
4	**Immigration**	Waiting time in queue	95% of passengers wait less than 10 minutes
5	**Baggage delivery domestic**	Time taken for baggage delivery from aircraft arrival	First baggage will arrive on baggage belt within 10 minutes of aircraft on blocks time, and Last baggage will arrive on baggage belt within 30 minutes for Code C aircraft 45 minutes for Code E of aircraft on-blocks time
6	**Baggage delivery domestic**	% time available	Each baggage belt should be available at least 95% of the time
7	**Baggage delivery international**	Time taken for baggage delivery from aircraft arrival	First baggage will arrive on baggage belt within 15 minutes of aircraft on blocks time, and Last baggage will arrive on baggage belt within 40 minutes for Code C

S. No.	Performance Indicator	Performance Measure	Minimum Performance Standard
			aircraft 45 minutes for Code E of aircraft on-blocks time
8	**Baggage delivery international**	% time available	Each baggage belt should be available at least 95% of the time
9	**Passenger arrival process**	Time taken from aircraft arrival to kerbside	International – 95% of passengers take less than 45 minutes Domestic – 95% of passengers take less than 35 minutes
10(a)	**Passenger boarding bridges**	Percentage time available	Each Passenger boarding bridge should be available at least 95% of the time
10(b)		Availability for % of aircraft movements to meet airline request	The Passenger boarding bridges should be available to 90% of international passengers and to 90% of domestic passengers travelling on aircrafts B737/A320 or larger unless not required by airlines.
11	**Parking bays**	Percentage time available	Each parking bay stand should be available at least 99% of the time.
12	**Availability of Flight Information Display Systems (FIDS)**	Percentage time available	Each FIDS should be available at least 98% of the time.
13	**Availability of baggage trolleys**	Percentage time available	Baggage trolleys should be available 100% of the time.
14	**Passengers requiring wheel chairs**	Waiting time for provision of assistance	100% of departing Passengers, needing a wheel chair, should not wait longer than 5 minutes
15	**Transit/transfer Passengers**	Minimum connect time for transit/transfer Passengers (i) domestic / domestic or (ii) domestic / international or (iii) international / international	Minimum connect time to be not more than 60 minutes for 80% of the domestic / domestic Passengers , Minimum connect time to be not more than 75 minutes for 80% of the domestic / international Passengers Minimum connect time to be not more than 60 minutes for 80% of the international / international Passengers
16	**Escalators, elevators, & travellators**	Percentage time availability	Escalators, elevators & travellators should be available 98% of the time.
17	**Automated services**	Percentage time availability	Automated services should be available 98% of the time. "Automated services" shall include

S. No.	Performance Indicator	Performance Measure	Minimum Performance Standard
			but not limited to inbound baggage system, outbound baggage system, X-Ray machines and public announcement system.
18	**Information /complaint desks**	Availability of personnel at the information/ complaint desk	Information/complaint desks should be manned 100% of the time.
19	**Ambient conditions in the Passenger Terminals**	Maintenance of ambient conditions in the Passenger Terminals	Temperature range in a Passenger Terminal to be 21-25 degree Celsius during operational hours in the Passengers areas, and Relative humidity levels – correlated relative humidity to specified temperature range
20	**Runway operational safety**	Number of runway incursions	Recording, investigating and minimizing runway incursions
21	**ARFF**	Response time to incident	As specified by ICAO achieve a response time not exceeding 3 minutes to any point of each operational runway, and to any other part of the movement area in optimum visibility and surface conditions Any other vehicles required to deliver the amounts of extinguishing agents should arrive no more than 1 minute after the first responding vehicle(s) (i.e. no more than 4 minutes after the first call) so as to provide continuous agent application.
22	**Availability of taxi**	Waiting time in queue	Queuing time for taxis will not be more than 5 minutes for 95% of the passengers.
23	**Handling of complaints**	Percentage of complaints responded within specified time	100% of complaints responded within 2 working days.
24	**Repair completion Time**	Percentage of repairs done within specified time	95% of high priority repair works should be addressed within 4 hours, 95% of others should be addressed within 24 hours
25	**Cleanliness**	Ratings during cleanliness surveys	Achieve a satisfactory cleanliness rating for 95% of all inspections
26	**Gate lounges**	Seating availability	As per IATA Optimum Level of Service
27	**Buggy Services**	Availability of buggies	Buggy service should be available 98% of the time

17.3 The ASQ rating achieved by the Airport in last few years is as follows:



*In Q2 & Q3 2020, the ASQ rating was not conducted due to lockdown restriction imposed by Government of India as a measure against pandemic COVID-19

18 Aggregate Revenue Requirement (ARR) for TCP

18.1 Based on the above analysis, TKIAL estimates the present value of target revenue for the airport related services (including Cargo handling and Fuel farm services) to be INR 2,904 Crores (India Rupees Two Thousand Nine Hundred and Four Crores). The following table summarizes the ARR of TKIAL for the TCP:

Particulars (in INR Crores)	FY23	FY24	FY25	FY26	**FY27**	**Total**
Opening RAB	441.88	447.79	682.21	1,608.01	2,463.94	
Closing RAB	447.79	682.21	1,608.01	2,463.94	3,808.66	
Average RAB	444.84	565.00	1,145.11	2,035.98	3,136.30	
Add: FRoR return on avg. RAB @14.76%	65.64	83.37	168.97	300.43	462.79	**1,081.21**
Add: Operating expenses	198.33	336.92	383.69	466.93	535.95	**1,921.81**
Add: Depreciation	51.90	73.63	113.28	176.65	244.28	**659.74**
Add: Amortisation of land	0.00	0.00	0.00	0.00	0.00	**0.00**
Add: Taxes	0.00	36.81	116.83	109.40	97.85	**360.88**
Add: True-up for SCP for TKIAL	84.57					**84.57**
Add: True-up for SCP for AAI						
Less: 30% Non - Aero	(6.15)	(6.16)	(6.17)	(6.17)	(6.18)	**(30.83)**
ARR	394.29	524.56	776.60	1,047.23	1,334.69	**4,077.38**
Discounting Factor applied to compute present value	1.00	0.87	0.76	0.66	0.58	
Present Value (PV) of ARR	394.29	457.11	589.72	692.97	769.63	**2,903.73**
Sum of PV of ARR for Control Period	**2,903.73**					

19 Annual Tariff Proposal for TCP

19.1 The existing applicable rate card is provided at company's website. The same can be accessed at the link https://www.adani.com/thiruvananthapuram-airport/-/media/391A24EA235B460F9CF9E01FE358EEEA.ashx.

19.2 As regard to the annual tariff proposal for TCP, it is submitted that the in line with the extant practice, the detailed pricing proposal (rate card) will be submitted upon release of consultation paper by AERA.

20 Annexures

(A) Concession Agreement and its Schedules (https://www.aai.aero/en/system/files/resources/Signing-of-Concession-Agreement---Thiruvananthapuram-Airport.pdf)

(B) Memorandum of Understanding between GoI and TKIAL

(C) AAI notification for handover

(D) Letter from AAI on Terminal Area

(E) Joint Asset Reconciliation Statement signed between AAI and TKIAL

(F) Invoice from AAI for Estimated Deemed Initial RAB and Initial Non-Aero Investment

(G) Invoices from AAI for CWIP handed over to TKIAL

(H) Financial Statements - FY 21-22

(I) Indemnity Bond for GST

(J) ICRA – November 22 - Airport Infrastructure

(K) Traffic Forecast Report from Mott Macdonald

(L) Circulars & Guidelines on Exempt ATM and Exempt Pax

(M) Report on ACRP Study

(N) AUCC Presentation and Minutes of Meeting

(O) IATA Guidance Note on Fuel Storage Capacity

(P) Concession Agreement with Ground Handling Agency

(Q) Sample Monthly Invoice for AAI Manpower

(R) Task Resource Analysis for ARFF

(S) ILHBS Staff Requirement Assessment

(T) Major Contract for Repairs & Maintenance

(U) Major Contract for Other Operating Expenses

(V) Agreement with Independent Engineer

(W) PBG from Woori Bank

(X) Annexure H of TRV Master Service Agreement

(Y) Forms as required under AERA guidelines