Jalandhar - Vision

Annexure 3.3

"Jalandhar: The Leading Sports and Manufacturing hub in Asia"

The world of sports is a growing industry in India. A thriving sports sector has significant socio-economic impact, as it is instrumental in improving the physical health and mental agility of human resources, and in promoting unity and national pride. Sports as an industry have contributed 1%- 5% of the GDP of various countries.

Manufacturing is the foundation of a strong economy. The most successful countries have a strong industrial and manufacturing presence underpinning their economic growth. Manufacturing has the potential to help take many residents, currently living in slums, above the poverty line by providing better paid and higher skilled jobs, goals also highlighted in Make in India national mission.

Jalandhar has the opportunity to build upon its existing sports and manufacturing base to create sustainable jobs, increase productivity and drive innovation. The city would benefit from taking a strategic approach that will focus on the sports and manufacturing sector, including:

- Becoming a leading hub for sports goods globally not just in manufacturing but also in research and development in terms of production methods and new cutting-edge sporting goods.
- Focusing on the potential of Small and Medium Enterprises ensuring they are ready to up-skill and expand from their current low-tech base to ensure their goods reach national and global consumers.

In order to develop Jalandhar as envisaged and make it more livable and sustainable, the strategic blueprint for next 5-10 years entails the following;

1) Promote economic growth of the city by creating state of the art sports infrastructure that aggregates the youth and attracts national/ international events, exhibitions, leagues & tournaments converging with the country's sports ecosystem.

2) To create public & recreational spaces for the benefit of the city's residents which can also host cultural events.

3) Investing in public transport and traffic management. This will increase accessibility, reduce congestion, promote walk-ability and ensure better parking provision leading to higher productivity.

4) Upgrading the city's poor public realm and urban environment. Currently, a lack of safe and inclusive spaces means that citizens cannot engage in an active and social lifestyle.

5) The city's aging physical infrastructure needs to be upgraded to cater for an increased population.

6) Improving urban governance by introducing smart technologies/ ICT solutions that help bring systemic efficiency in infrastructure service provision and improved two-way communication.

Sailent Features of Smart City Jallandhar

- 1) The Sports hub will create employment opportunities for 1000 people.

2) Creation of Skill Development Center will train 800 personnel per annum on continuum basis for entire project period with convegence of Pradahan Mantri Kaushal Vikas Yojna.

- 2) Efficient Public transportation system will help iby reduction of 9% in CO2 emission and 14% in Nox.

3) Reliance on renewable energy measures at Pan City levels will help in Carbon footprint reduction to the tune of 81 tonnes per day

4) Financially Self Sustaining SPV to take care of O&M expenses.

5) Convergence with 9 State/Central Government Schemes to Support development interventions envisaged in City.

6) All essential features are incorporated as per the recommendation of MoUD

City-Profile

Annexure 3.4

1. **Historical Significance**

The city of Jalandhar is one of the oldest cities since it finds earliest mention in the times of King Kanishka (100 A.D.). Has one of the 51 Shaktipeeth of the Country. The city had been capital of Punjab before formation of Chandigarh.

2. **A Sports Hub**

Possess good Sports infrastructure (11 Sports facilities comprising stadiums, colleges etc) that produced various national and international players (21 Olympians & 12 International in Hockey, 3 Olympian & 12 International in Athletics, 19 International in wrestling, 2 International in Table Tennis, 3 International in Cricket, 3, International in Swimming, 3 International in Badminton and 5 International in Football). It is also hub for Sports Training with Private Sports Academies like Harbhajan Singh's Cricket Academy .

3. **A Prominent Sports & Handtool Industrial Hub**

Jalandhar is internationally specialized in manufacturing of Sports Goods,Leather Goods, Hand Tools, Pipe Fittings and Surgical Implements etc. For 2014 FIFA World Cup in Brazil, Jalandhar supplied 80,000 soccer balls (Source: IBEF). The share of Small Scale Industries has been found to be of the order of 99.77%. (Source Master Plan 2031). Small scale industrial units is generator of major proportion of employment in the city. As per the master plan, out of the total employment in Industrial sector, 97.06% of people are employed in Small Scale Industries.

4. **Strong Regional Linkages**

The city is well connected with other areas of state as well as the country through roads like NH1, NH1A, NH 70 and NH 71 and by rail links.

5. **Adequate Health & Education Facilities**

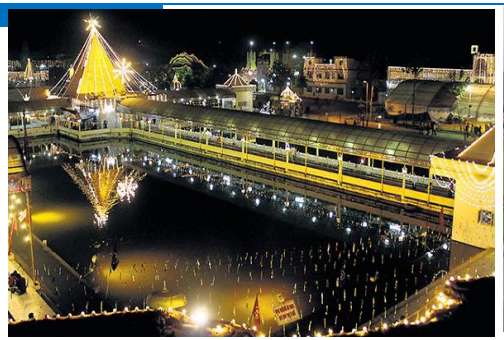
Jalandhar is a predominant educational centre of the state. It has the privilege to provide education at different levels ranging from Primary Schools to Universities. Two universities namely Punjab Technical University and Lovely Professional University and six engineering colleges are working in the city. Jalandhar is also hub of Medical facilities. The total number of health care units operating at various levels in the city is 396 which provide latest health care facilities at regional and international level

6. **NRI community**

Strong NRI community which aspires to have Quality of Life

7. **Hygenie**

Ranked 28th at National in terms of sanitation with more than 95% of households having toilets.



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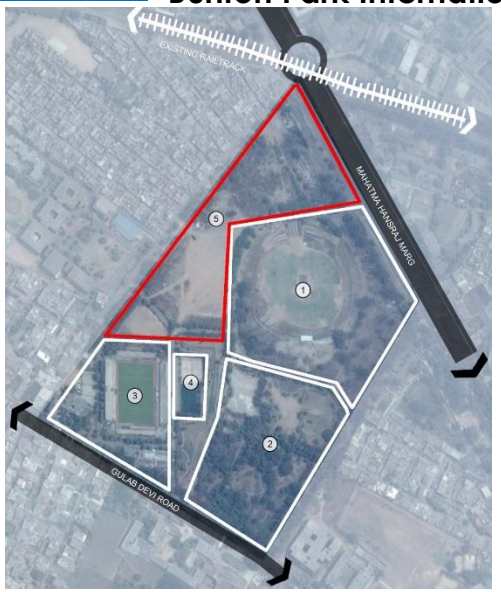
Sports Hub (Redevelopment)

Annexure 3.5

Burlton Park International Sports Hub



Concept

- Proposal to develop a multipurpose stadium of 30,000 spectator capacity.
- Provision of practice areas and stadiums for other sports like tennis, indoor games, etc.
- Provision of adequate Hotels, Restaurants and Clubs for the visitors.
- Provision of adequate parking facilities by building Multilevel Car parks.
- Multipurpose arena/ Commercial for promoting the Jalndhar's Sports Goods

Impacts

- Development of an international sports hub in Jalandhar would attract investment opportunities in the city and would trigger a smart and positiive growth.
- The sports hub would further compliment the existing education institutes in the area
- The currently unorganized sports and training activities would be formally recognized and will be equipped with world class facilities.
- The inflow of tourists due to large sports events like international cricket matches will bring secondary economic resources for the residents of this area.

Canal Area Rejuvenation

Annexure 3.6

Concept

1. The existing canal would be made perineal under the larger Punjab Government's programe of Rejuvenation of Bisht Doab Canal and this would support leisure activities in its vicinity.

2. The edge of the canal will be cleared to release the existing right of way of Canal road.

3. Reorganizing the existing right of way of canal road to create a wide pedestrian promenade for the residents along the canal.
4. creating street furniture, mini amphitheatres, terraces and planters along the promenade for residents to sit and enjoy the canal side activities.

5. Providing safety measures like railings along the canal on both sides.
6. Providing Smart LED street lights on both sides of the canal to promote nighttime activity along the canal.
7.
8. Green maintained hedges would be provided to distinguish between the vehicular and pedestrian zones.

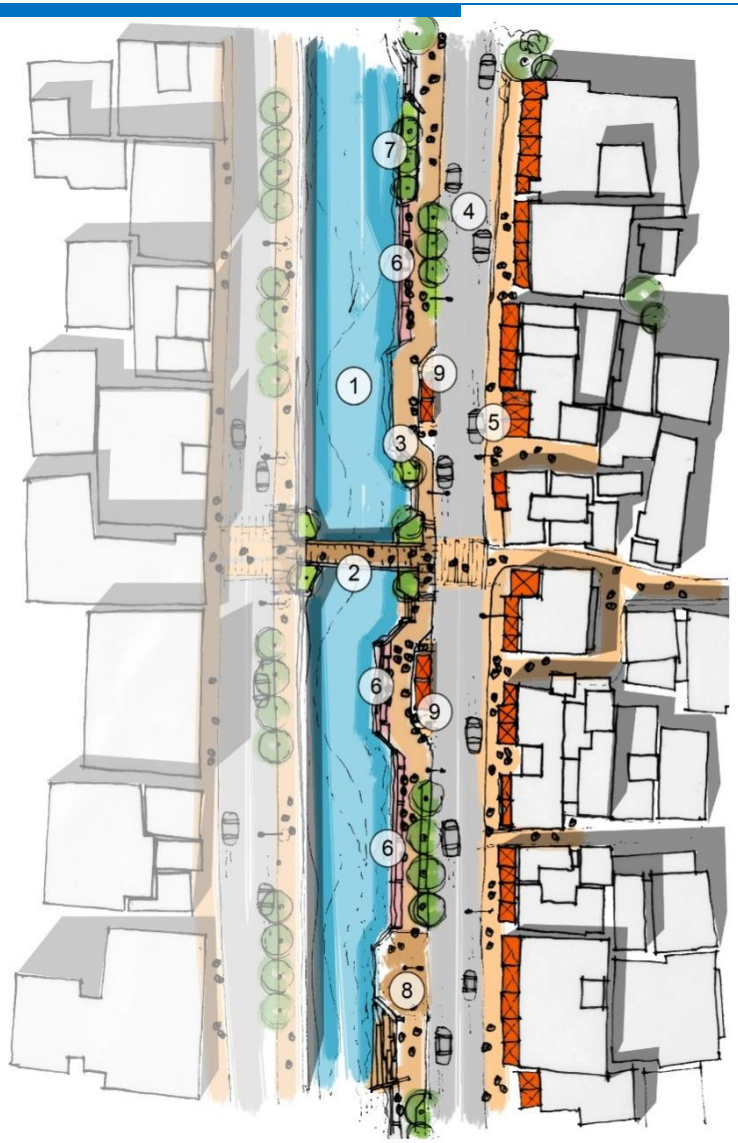
9. Demarcating certain areas where registered informal vendors selling street food , etc can park their carts in the evening.

10. Provision of pedestrian ramps, railings for the safety of specially-abled and elderly residents.

Impacts:

1. The canal area development will create a positive environment for the residents and create a general uplift of the whole area.

2. Residents will have a safe and active public space for leisure and walking.
3. The environmental problems due to the garbage dumping in the canal will be addressed.



Legend

1. Canal
2. Pedestrian Bridge
3. Continious Footpath
4. Vehicular Road
5. Continious Shop Frontage
6. Seating Arrangement
7. Trees & Planter
8. Viewing Deck
9. Vendors' Zone

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Water Supply -Proposal

Annexure 3.7

For making the Jalandhar as smart city, following proposals in Water Supply should be considered in Proposed area:

1. Reduce subsidy on water supply and sewerage. This will be done by migrating from area based charges to telescopic volumetric charges. This will include minimum charges for survival level consumption upto 40 lpcd, covering O&M cost for consumption upto 70 lpcd, higher cosuption upto 150 lpcd should be double the previous slab.

2. Pumps of the area are more than 20 year old thus require frequent repairs, efficiency of these pumps has also gone down. It is estimated that increase in efficiency resulting in 16.5% power saving will take place. This alone will result in savings of almost Rs 18 lakhs per annum in power costs.

3. Pipeline of ward 43 and 44 is old and in bad condition and needs to be completely replaced. In order to to achieve 24x7 water supply and minimize losses replacement of old service connections with better material of pipe line. Almost 25 km of pipeline in these two wards is proposed. To reorient the supply for 24x7 water supply it is estimated that around 65 kms (including 25 kms in ward 43 & 44) of line will age out in next five years and should be replaced.

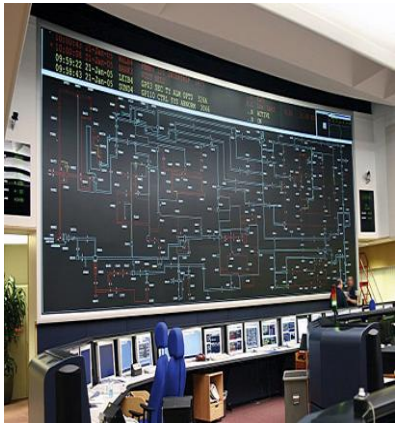
4. Construction of 3ML (in addition to 3.86 ML) of storage facility at different locations is also proposed to act as balancing reservoirs.

5. Installation of advanced type of AMR water meters for all consumers irrespective of method of billing will not only help in identification of usage pattern but also irregularities in supply and losses.

6. Provision of SCADA system which will enable better control and monitoring of water supply system. This will also include installation of District level bulk meters to check and control pressures.

7. Introduction of Smart billing and collection system

8. It is proposed to reuse water 5 MLD of treated waste water from Basti Peerdad STP for uses, such as residential irrigation, car washing, landscaping and in Burlton park. This along with saving in fresh water treatment cost will also result in recharging of ground water thus saving future increase in pumping head.



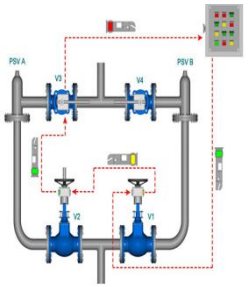


Table 5: Proposed Capital & Operational Expenditure

S.N.	Particulars	Remark	Capex
1	Tube wells	For 6 OHSR's which are not being used due to bad condition of tubewells which were meant to feed water in them.	47.77 Crs
2	Automation of existing T/W	Advanced automation in 32 tubewells of area.	
3	Replacement of pumps	It is estimated that increase in efficiency & 16.5% power saving will take place by replacing these pumps	
4	Chlorinators & chloronome	To ensure set water quality standards	
5	OHSR (10 Nos)	For ensuring 24X7 water supply with adequate pressure in each property.	
6	New Lines	25 kms new line in Ward 43 & 44, another 40 kms for modifications to be done for 24x7 zoning.	
7	Replace existing valves DI Valves	To reduce losses where line not replaced	
8	Central control room and office	For centralised operations of valves to equalise pressure in lines	
9	New MDPE connections	Replace old connections to avoid leakage	
10	SCADA	For centralised operations of valves to equalise pressure in lines	
11	AMR	For Automatic RFID based readings	
12	RFID meter readers		

Sewerage System- Proposal

Annexure 3.8

For making the Jalandhar as smart city, following proposals in Sewerage should be considered in Proposed area:

1. Old sewerage network has got silted and gets chocked especially during the rainy season, this causes overflow of sewers. The sewerage thus mixes up with storm water thus polluting it. CPCB has asked to prevent mixing of storm water and sewerage for rain water harvesting structures. Cleaning of sewerage system will remove siltation in sewers thereby preventing overflow of sewers. Cleaning of the system thus is proposed using modern super suction machinery to increase efficiency of system .

2. Remote monitoring of sewer level in underground pipes and channels will reduces maintenance costs, prevents environmental disasters, responds to regulatory requirements and allows quantization of sewer flow for costing purposes. Utility teams will be sent at the right time to the exact spot for preventive and periodic maintenance. Overflow conditions will be detected prior to catastrophic urban floods. Irregular flow will be detected on time and prevented. Measuring sewer flow will aids in charging industrial plants for releasing excessive waste into the public domain. Thus Efficient management of Sewage can be enabled by E-Sensors for Man-holes for real time monitoring of sewage.

3. Supervisory Control and Data Acquisition (SCADA) technique will be used for quick and accurate identification of operational status of sewerage facilities. Automatic control will enables smooth and smart operation of the facilities to conserve energy.Thus provision of SCADA system will enable better monitoring of sewage system in proposed area.

4. Public toilets are an important amenity for slum-dwellers, the homeless and those working in the informal sector – people who often do not have access to private sanitation, either at home, or at their workplace. They are also important for the general population, especially for floating population & women. Increasing number of public & community toilets will decrease open defecation and increase health & dignity in area.

5. Replacement of sewage lines which have exceeded their design life thus is proposed so as to avoid mixing of sewage with fresh ground water.

Table 9: Proposed Capital & Operational Expenditure

S.N.	Particulars	Remark	Capex
1	Cleaning of Existing sewer	Super suction machine which can handle all forms of sanitary waste to increase efficiency of sewage system .	**19.36 Cr**
2	Sensors on manholes	For efficient management & real time monitoring of sewage.	
3	SCADA system	For better monitoring of sewage system in area	
4	Replacement of sewage lines	Sewage lines which have exceeded their design life is to be replaced	
5	Construction of Public – Community toilets	Increasing number of public & community toilets to decrease open defecation and increasing overall sanitation scenario of area	

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Storm Water-Proposal

Annexure 3.9

To upgrade Proposed area's storm water network, following proposals can be considered

1. Laying of storm water lines on all arterial, subarterial and collector roads with regular maintenance of storm water line ,to effectively use its design carrying capacity.

2. Pumping sets to pump water from 20 low elevation level in proposed area.

3. Sensors for auto start and closure with centralized monitoring system, which would guide pumps to start whenever the water level increases from certain level.

4. Recharge wells at 20 low elevation levels for
   (i) Enhancing the sustainable yield in area where over-development has depleted the aquifer.
   (ii) Conservation and storage of excess surface water for future requirements, since these requirements often changes within a season or a period.
   (iii) To improve the quality of existing ground water through dilution.

5. Creating water bodies with perforated bottoms for ground water recharge in Parks/ Public spaces as part of landscaping.

Table 11: Proposed Capital & Operational Expenditure

S. N.	Particulars	Remark	Capex
1	Construction of storm water drains	Construction of major drain under footpaths and internal drains on collector and local roads	**78.06 Crs**
2	Recharge wells	To minimise effect of flooding and to increase ground water level recharge wells are proposed at 20 low elevation levels	
3	Pumps at low elevation points	Capacity of recharge well is limited, in case of heavy rainfall pumps are proposed at 20 low elevation points which will transmit water from there.	
4	Sensors	Sensors for auto start and closure with centralized monitoring system, which would guide pumps to start whenever the water level increases from certain level.	
5	Water bodies in Public places	To manage storm water runoff and provide a range of co-benefits	

Street Light-Existing Scenario & Proposal

1. Coverage of Street light- There are 4125 number of sodium vapor street lights covering almost 90 % of roads in proposed area.

2. Type of lights – 1.90 % Sodium vapor lights are installed on arterial road of 400 wattage, 92.24 % Sodium vapor lights are installed on sub-arterial road & collector roads of 250,150 & 70 wattage rest 5.86 % tube points are installed on local roads of 40 wattage.

Table 12: Existing Street Light

Sl. No		Local Roads	Sub-Arterial & Collector Road			Arterial Road
	Ward number	40 watt Tube Points	70 Watt Sodium	150 Watt Sodium	250 Watt Sodium	400 Watt Sodium
1	24	7	12	28	8	0
2	37	12	215	392	44	9
3	38	25	146	369	6	0
4	43	38	202	557	21	12
5	44	48	348	388	11	0
6	45	39	216	384	16	18
7	46	16	116	375	10	38
Total		185	1255	2493	116	77

Table 13: Proposed O&M Savings

Operational Cost (Lakh)		Maintenance Cost	
Current	Proposed	Current	Proposed
76.65	41.06	73.01	65.16
35.59		7.85	
Total Saving – 43.44 lakhs			

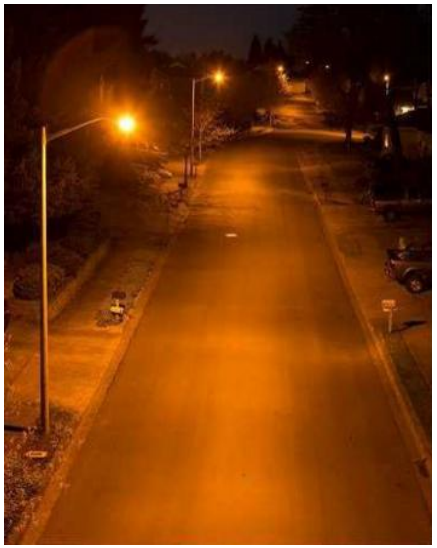


Table 12: Proposed Capital & Operational Expenditure

S.N.	Particulars	Remark	Capex
1	Replacing Sodium Vapor lights	Migrating from Sodium Vapour Street lights to LED lights will improve visibility, extend service life and also do power saving.	7.1 Crs
2	Retrofitting of Existing poles & Installation of new poles	Modification of existing poles vis-à-vis specifications required for LED lights.	
3	Sensors & SCADA	Brightness sensor which will turns on when it is dark & Central monitoring station which will control of all street lights	

Visible Improvement

Annexure 3.11

Concept

1. In the neighborhoods of Windsor park and Rose park, the existing right of way would be reorganized to create a safe walking footpath.
2. The currently haphazard electrical connections would be organized into neat insulated single cables.
3. Adequate street lighting will be ensured through smart bracket mounted LED lights.
4. Safe universal access will be ensured for the elderly and specially able citizens through provisions of pedestrian ramps and railings along footpaths.
5. Street furniture would be provided for the residents.

Visible Improvement

Annexure 3.12

Concept

1. Signage control through fixed signage size and locations will be done.
2. Parking lots will be organized to carve out space for greens, public plazas.
3. Overhead electric lines will be relayed underground.
4. Paving and surface change for smooth pedestrian experience will be done.
5. Adequate Smart LED street lights would be provided.
6. Safe universal access will be ensured for the elderly and specially able citizens through provisions of pedestrian ramps and railings along footpaths.
7. Street furniture and water fountains will be provided for the citizens.
8. CCTV security camera surveillance would be done for the safety of the citizens.

Urban Transport – Existing Scenario

Annexures 3.13

1. **Road Network Characteristics**
   - Road network pattern is partially complete with some bottle necks
   - 40% of the roads are 2-Lane and only 6% are 4-Lane
   - The current average traffic speed is 26 km/hr
   - Average V/C ratio across major city roads is 1.2-1.4
   - The average travel time is approx. 15 minutes and the average commuting distance is approx. 5 kms
   - 25 intersections are signalized across the city
   - 7 major at-grade railway crossings across the city

2. **City Bus System-** 15 low floor standard non AC buses were operated by private operator till 2014 and catered to 9,000 passengers daily. City bus operations were stopped in 2014 owing to completion of operator's contract period.

3. **Mini Buses-** Mini Buses mainly connects suburban towns and villages. 137 mini buses are currently in and around the city catering to 17,000 passengers daily. 40-50% users use mini buses to travel within urban area, thus catering to 6% of the total urban trips

4. **Intermediate Public Transport-** Currently approx. 15,000 personalized and shared auto rickshaws are plying on city roads catering to 50,000 passengers daily. These forms major public transport mode catering to 11% of the total trips.

5. **Parking-** Currently no organized paid parking spaces are available in the city. Two basement parking with a limited capacity of 70 cars and 35 two wheelers are operating on PPP basis and having a monthly charge of Rs 800 and Rs 200 respectively. Vehicles are largely parked on-street contributing to traffic congestion

6. **Pedestrian Facilities-** 60% of the arterial and sub-arterial roads in the city have footpaths. No pedestrian phasing, pelican signals or FoBs across the city. Existing footpaths remains largely unused due to hindrances by utilities, trees etc. and also due to bad design.

7. **Non Motorized Transport Infrastructure-** No NMT infrastructure available in the city

8. **Enforcement and Penalisation-** Currently only one intersection have CCTV cameras which are not connected by a central server. All enforcement and penalisations are done manually only.

Table1 : Existing V/C ratios on major roads

Sl. No	Name of the Road	Peak Hour (PCU)	V/C	LOS
1	Mahaveer Marg	7177	1.22	F
2	Model town Road	1239	0.71	C
3	Nakodar Road	9511	1.24	F
4	Nehru Garden	1467	0.72	C
5	Nehru Garden Road	2368	1.56	F
6	Old GT Road	6293	1.71	F
7	Old GT Road (DAV)	3054	1.75	F
8	120ft Road	2767	**0.56**	B

Figure 1 : Daily Traffic at Major Intersections

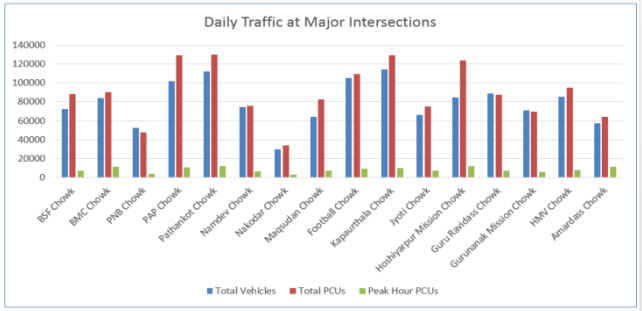


Table 2 : RoW of Major Roads

Type of Roads	Length in km	ROW (m)	Carriageway (m)
National Highway			
Jalandhar – Amritsar Road (NH-1)	24	39-82	10+10
Jalandhar – Ludhiana Road (NH-1)	24	39-82	10+10
Jalandhar- Pathankot Road (NH-1A)	15.075	32-34	10+10
Jalandhar – Hoshiarpur Road (NH-70)	20.375	30-34	7
Jalandhar – Nakodar Road (NH-71)	17	27.34	10+6
State Highway			
Jalandhar – Kapurthala Road (SH)	17	18-48	10+10

Urban Transport - Proposals

Annexure 3.14

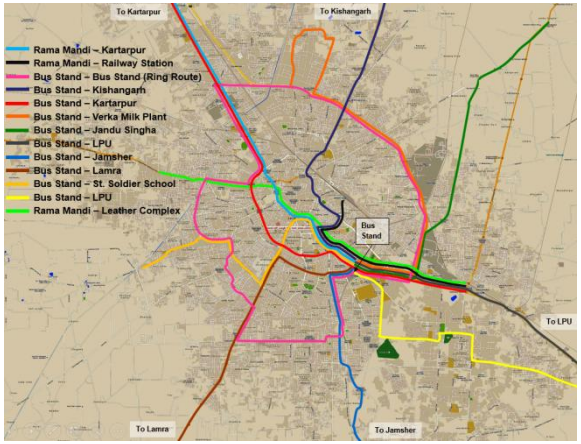
For making the Jalandhar as smart city, following proposals in Transport should be considered in Proposed area:

1. **Smart City Bus System (SCBS)**
   - 128 Midi AC and Non AC Buses (50:50 ratio) are proposed to ply on 13 designated routes
   - Construction of 216 new bus Q shelters and renovation of 47 existing Q shelters are proposed
   - Renovation and up-gradation of existing depots and terminals are proposed
   - Modern comprehensive ITS infrastructure proposed

2. **ITS Infrastructure for SCBS-**
   - The new bus fleet is proposed to comply with UBS-II specifications, thus shall be equipped with GPS Tracking System, LED Display Boards and Audio Units
   - Bus Q Shelters are proposed to be equipped with LED Display boards, communication unit and power backup unit
   - Bus terminal is proposed to have LED Display board, communication unit, Power backup unit
   - Bus Depots are proposed to have ETM issuing system, reconciliation system and reporting
   - Control Centre controlling and monitoring various on field ITS equipment and equipped with Video Wall, Online UPS, Smart Card issuing and personalization system and MIS
   - Fare collection system proposed to include ETMs, Smart Cards, Point of Sale (POS), Depot and Central systems

3. **Vehicle Actuated Signals (VAS) with Area Traffic Control System (ATCS) Compatibility-** 25 existing signalized intersections are proposed to be up-graded to VAS with ATCS compatibility. 100 new non-signalized intersections are proposed to be converted to VAS with ATCS compatibility in next 5-10 years and all the VAS to be controlled by a signal control room equipped with master controller and video wall

4. **Traffic Enforcement Through CCTV Surveillance System-** A comprehensive CCTV based safety and security system is being proposed. As part of this system an integrated suite of complementary solutions including ANPR, RLVD, Speed Detection, Penalty Management and Public Access System is proposed.



Routes ID	Route Name	Length	Fleet Size
Route-01	Rama Mandi – Kartarpur (Via Mahavir Road)	20.3	10
Route-02	Rama Mandi – Railway Station	8.5	4
Route-03	Bus Stand – Bus Stand (Ring Route via Bypass, 120ft Road, Urban Estate Road	29.5	16
Route-04	Bus Stand – Kishangarh	15	4
Route-05	Bus Stand – Kartarpur (Via Jyoti Chowk)	17.5	20
Route-06	Bus Stand – Verka Milk Plant	11.7	8
Route-07	Bus Stand – Jandu Singha	12.8	4
Route-08	Bus Stand – LPU (Via PAP Chowk)	13.8	8
Route-09	Bus Stand – Jamsher	13.9	4
Route-10	Bus Stand – Lamra	10	12
Route-11	Bus Stand – St. Soldier School	10	14
Route-12	Bus Stand – LPU (Via Old Phagwara Road)	12.3	12
Route-13	Rama Mandi – Leather Complex	13.5	6
	Total	**188.8**	**122**

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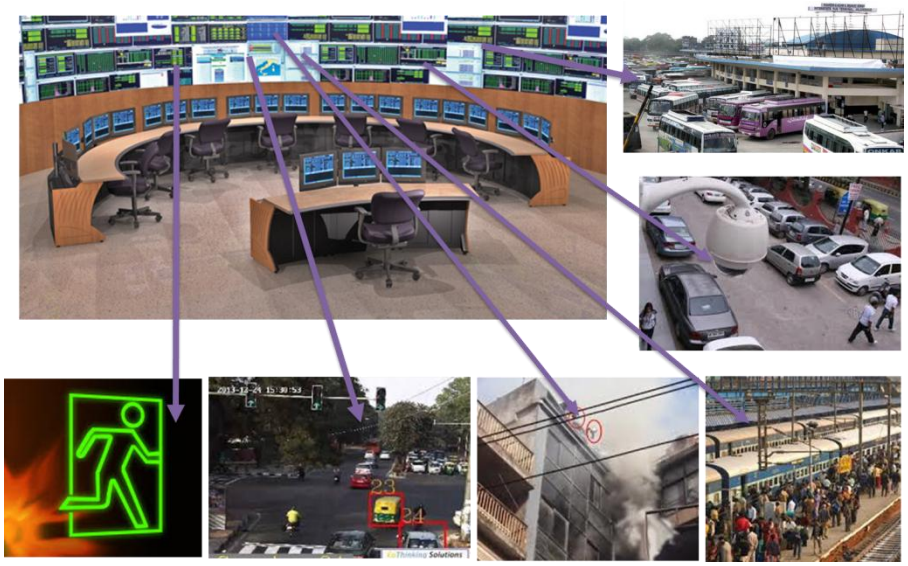
City Surveillance System

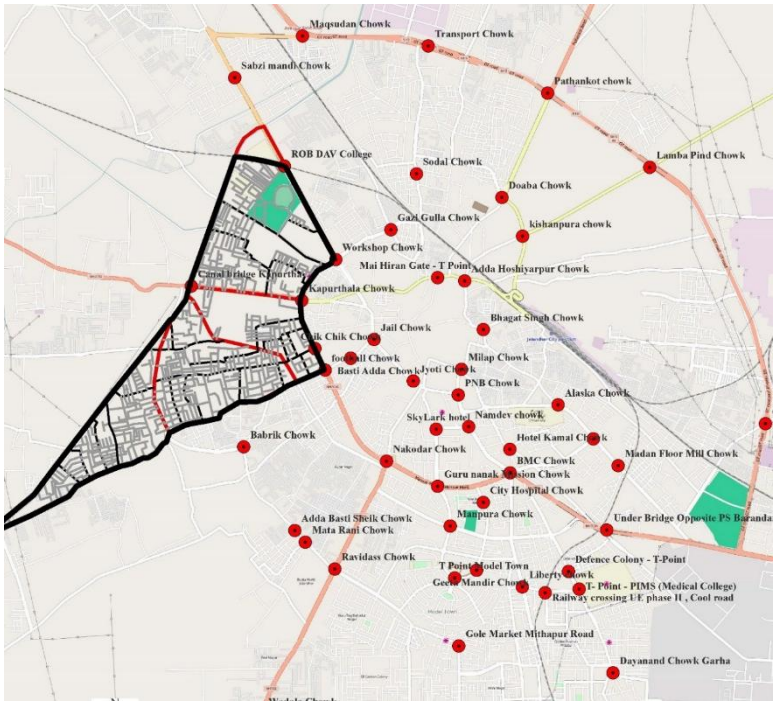
Annexure 3.15

- **City Wide Surveillance System with Central Command and Control integrated with**
  - Video surveillance System,
  - Dial 100 System,
  - Predictive Analysis System,
  - ITMS System,
  - Data Center & FMS/NOC System
  - Power System etc.

- Total 78 Locations identified for City Surveillance Intervention

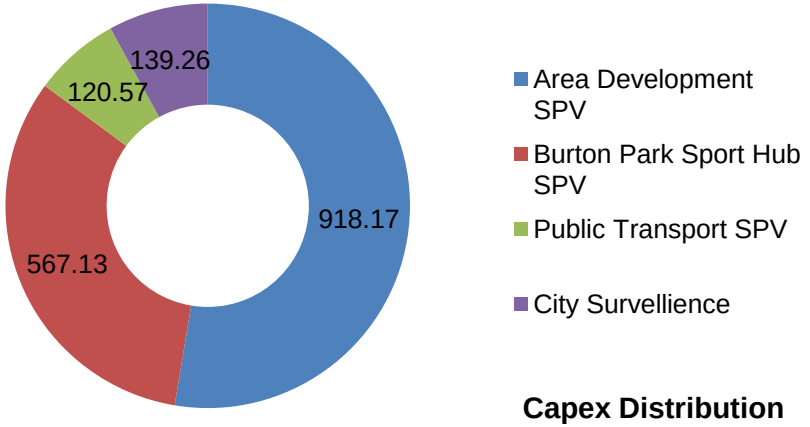
- **The System aims to achieve :**
  - Emergency Response System
  - Intrusion Detection (Public & Institutional Buildings)
  - Smoke Detection
  - License Plate Recognition
  - Crowd Behavior (Recognition of unexpected/unwanted accumulation/movement of crowd)



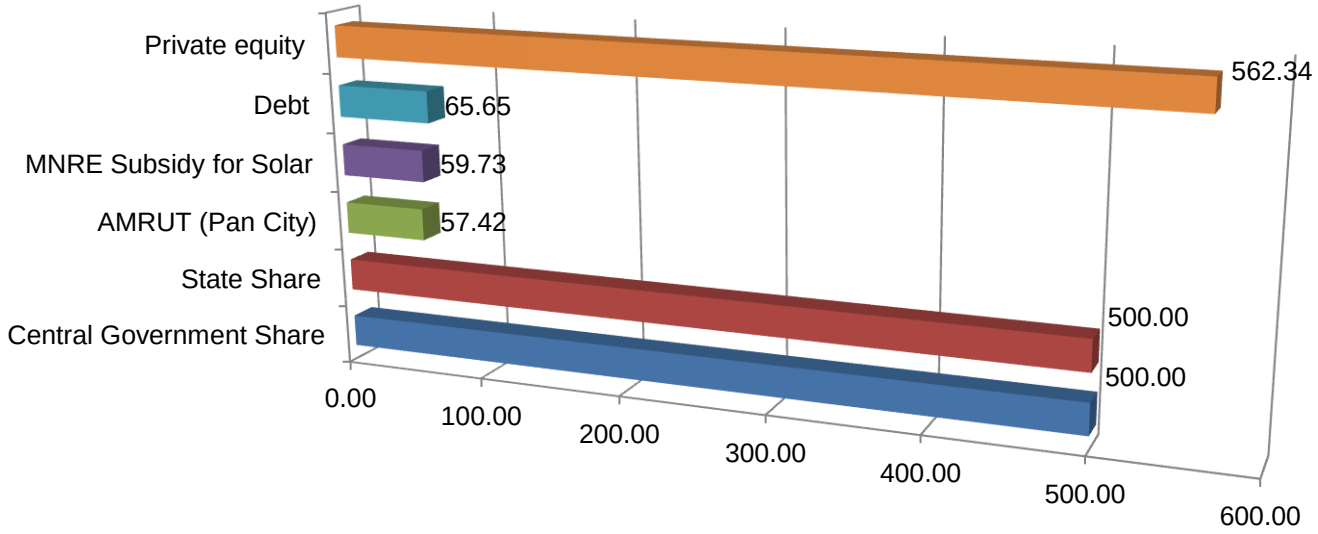


Estimated Project Cost & Funding Sources

S. No.	Proposal	Capex (Rs Cr)
1	**Redevelopment Project**	**567.13**
2	**Pan City Projects**	**257.07**
	Public Transport	120.57
	City Surveillance	136.50
3	**Retrofitting Area Proposals**	**918.17**
	Total Project Cost	**1745.14**



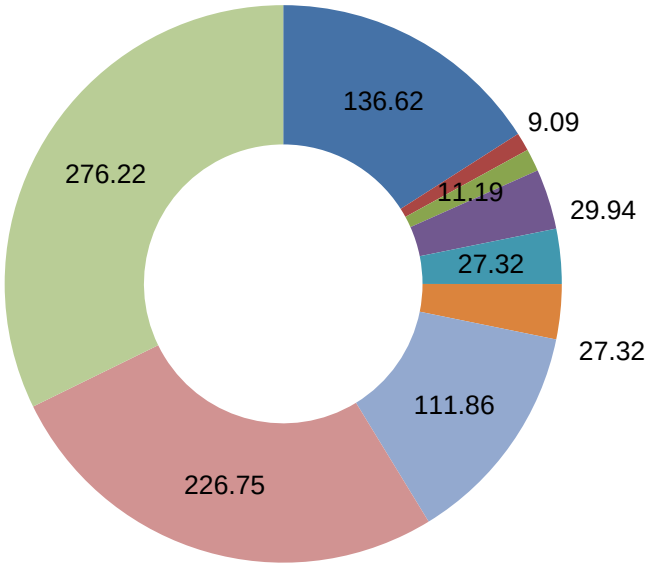
Capex Distribution



Funding Sources

Revenues & Cash Flows

Annexure 3.17

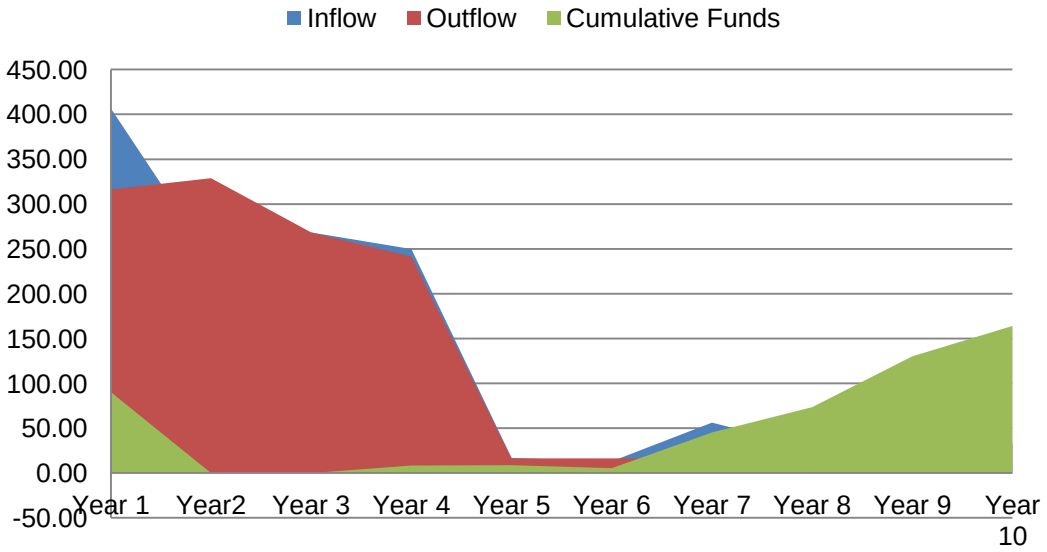


Revenue Distribution

- Diversified Revenue Sources for a period of 10 Years
- Improved collection efficiency of User Charges
- Capturing Value Creation from additional FSI and Mixed Land use Development
- Revenues from Redevelopment Area

- Cashflows at par during implementation period
- Self sustenance evident from Year 5 after stabilisation of operations
- Generation of own resources to take care of new projects/augmentation

Fundflow



Note: All figures in Rs. Crores

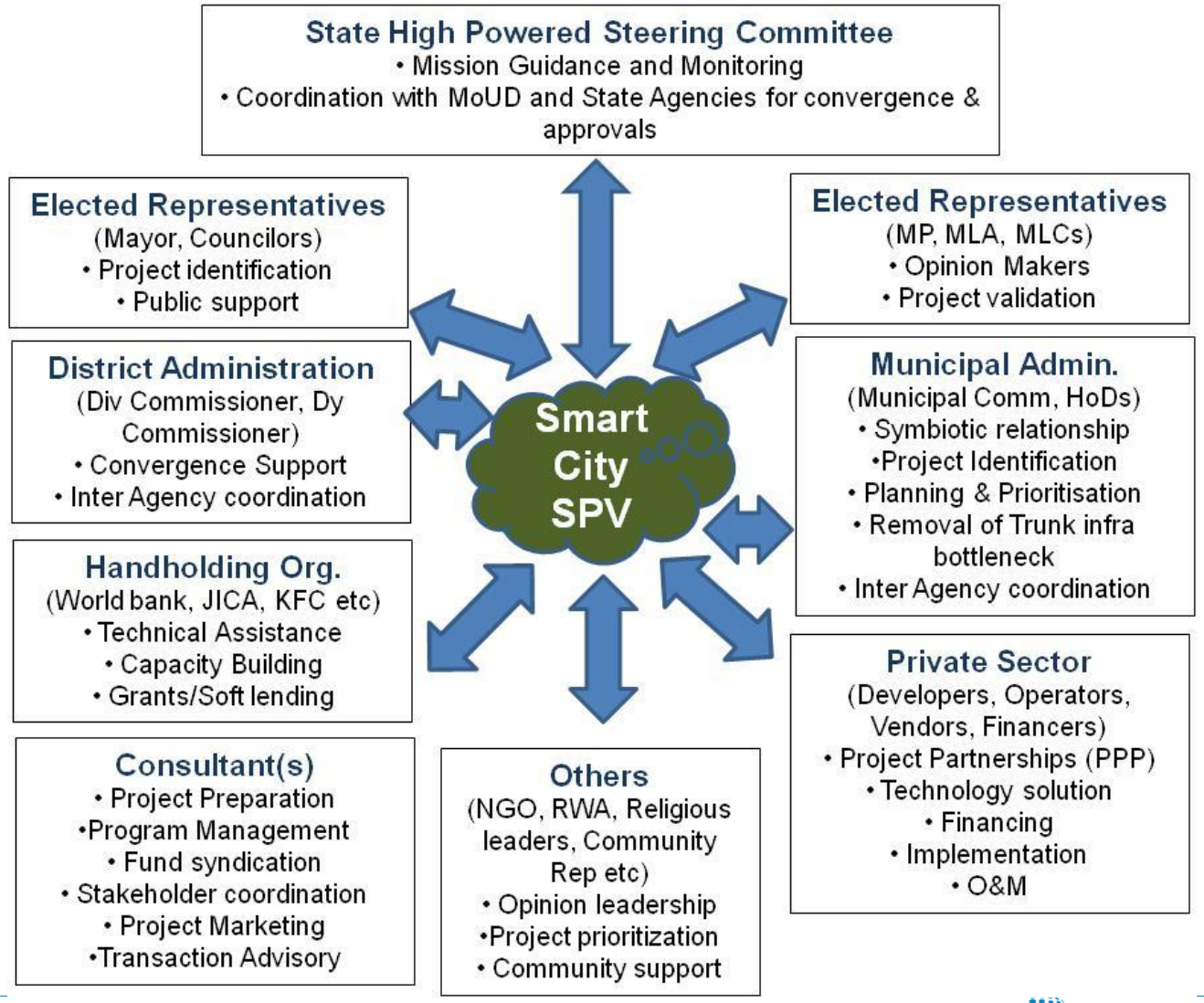
PERT CHART

Annexure 3.18

PERT CHART																				
S.No	Activity	No of months	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 5	Quarter 6	Quarter 7	Quarter 8	Quarter 9	Quarter 10	Quarter 11	Quarter 12	Quarter 13	Quarter 14	Quarter 15	Quarter 16	Quarter 17	Quarter 18
A	**General activities**																			
1	Formation of Nodal SPV	1																		
2	Appointment of SPV Team	2																		
3	Issuance of RFP and selection of Consultants by the SPV	3																		
4	Preperation of DPRs	9																		
B	**Retrofitting Area**																			
5	Issue of RfP & Selection of Private sector partner	3																		
6	Water , Waste-Water & Utility Ducting	48																		
7	Area Improvement	48																		
8	Traffic Circulation & Pedastrian facilities	36																		
9	Roof Top Solar	48																		
10	Social Interventions	24																		
C	**Sports Hub**																			
11	Issue of RfP & Selection of BOT partner	3																		
12	Development of basic utilities	12																		
13	Construction of Stadium & Sports facilities	18																		
14	Construction of Commercial & Hotel space	18																		
D	**Pan City-Traffic Management**																			
15	Issue of RfP & Selection of Private sector partner	3																		
16	Purchase of Bus	18																		
17	Development of Bus shelters & Depo	12																		
18	Installation of ATCS	12																		
E	**Pan City- City Surveillance**																			
19	Issue of RfP & Selection of Private sector partner	3																		
20	Installation of cameras	12																		
21	Laying of backbone	12																		
22	Installation of command & Control room	12																		

Stakeholder Roles - Organogram

Annexure 3.19



Institutional Structure

Annexure 3.20