

Dayalbagh Security Surveillance System

A work in progress

DEI Security Lab

- DEI Security Lab was created in Dec @2013 in response to situations prevailing in the country in general and UGC directions in particular.
 - **UGC directive on campus security measures for women, girls, 2013**
 - UGC Guidelines on Safety of Students on and off Campuses of Higher Educational Institutions, 2014
- This Lab operates in a *Open Lab format* where Professors and Scholars ***Build, Operate & Maintain*** the technology needed for Campus Security Surveillance.
- It provides an ideal platform for pursuing R&D in Video Surveillance, access control, and analytics.

Corporate Social Responsibility

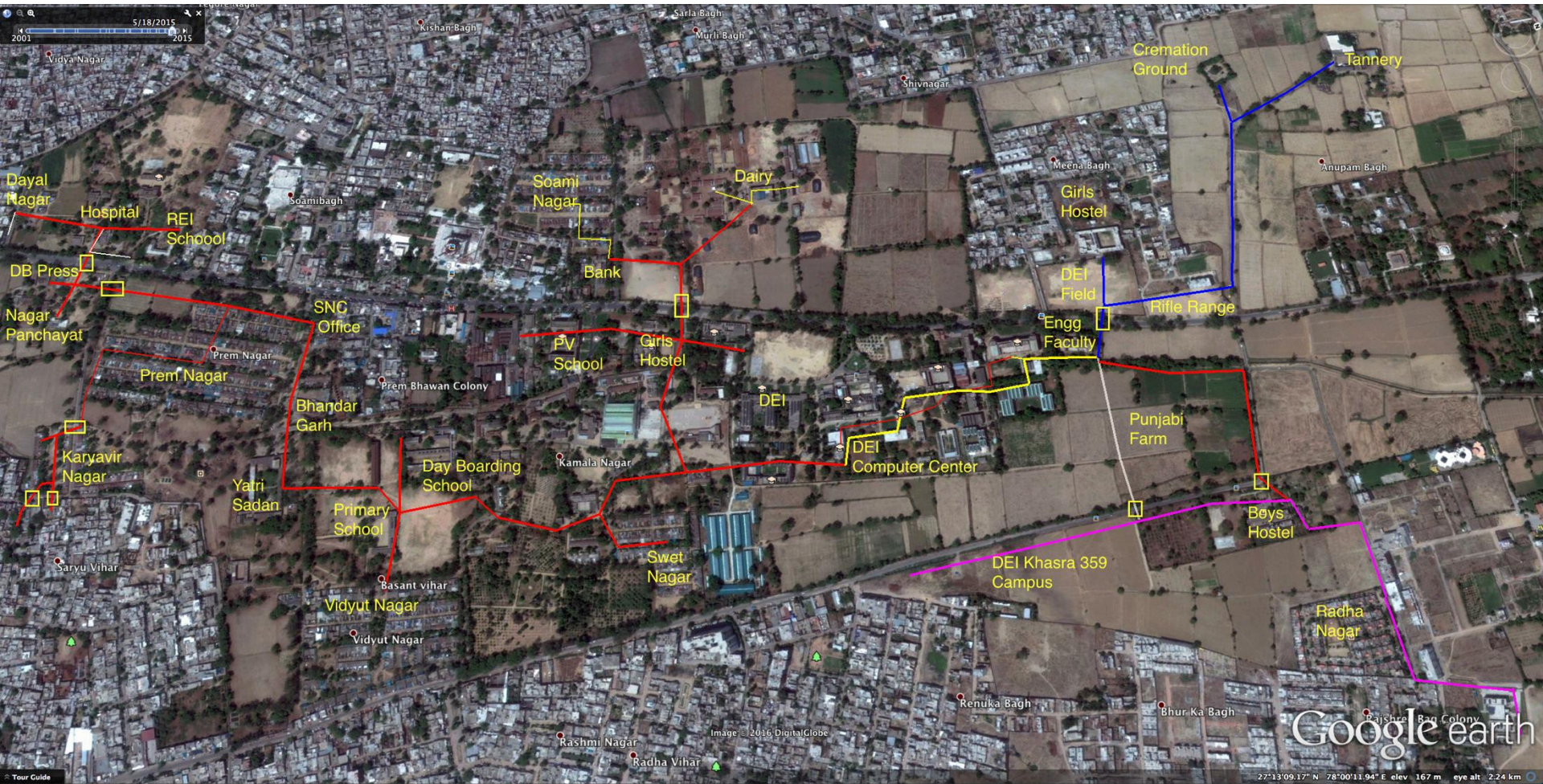
- DEI Security Lab is coordinating with Dayalbagh as part of its **Social Responsibility** in organizing a Security Surveillance Network that will exploit latest ICT technology for the benefit of its Institutions, Citizens and Vital Assets.
- DEI proposes to undertake research on Security Surveillance protocols with this network as real life Open Lab.
- *Prepare itself for contributing to Smart Agra concept.*

DEI Security Surveillance – A Glance


	Item	Specs	Qty
1	IP Cameras	3MegaPixel (MP)	43 +
		2MP	127
		1MP	82
		High speed	10
		PTZ	3
		Total	265
2	Network Video Recorder (NVR)	64 camera each	4
	NVR	16 camera each	3
3	Storage Capacity	Western Digital	150TB
	Storage duration	Days	30
4	Network Switch PoE	Cisco Managed	33
	Network Switch PoE	Netgear Unmanaged	30
	PoE Injector	DLink	60

5	IP Phones	Astra (Ericsson)	200
6	Optical Fiber 48 core	Single mode	4km
	Optical Fiber 24 core	Single mode	6km
	Optical Fiber 12 core	Single mode	6km
	Optical Fiber 4 core	Single mode	8km
7	Outdoor LAN	Cat 6	8km
	Indoor LAN	Cat 6	4km
8	Media Converter	20km range	20pair
	HDMI Extender		10pairs
	HDMI Splitter		5
	HDMI-VGA converter		10
9	Computers (PC)	Dual display Card	15
10	Display Screen (LFD)	Samsung 50 inch	17
11	Power – Solar Plants	Distributed	18
12	Area Covered	(DEI +DB)	500Acre

New Optical Fiber Laid



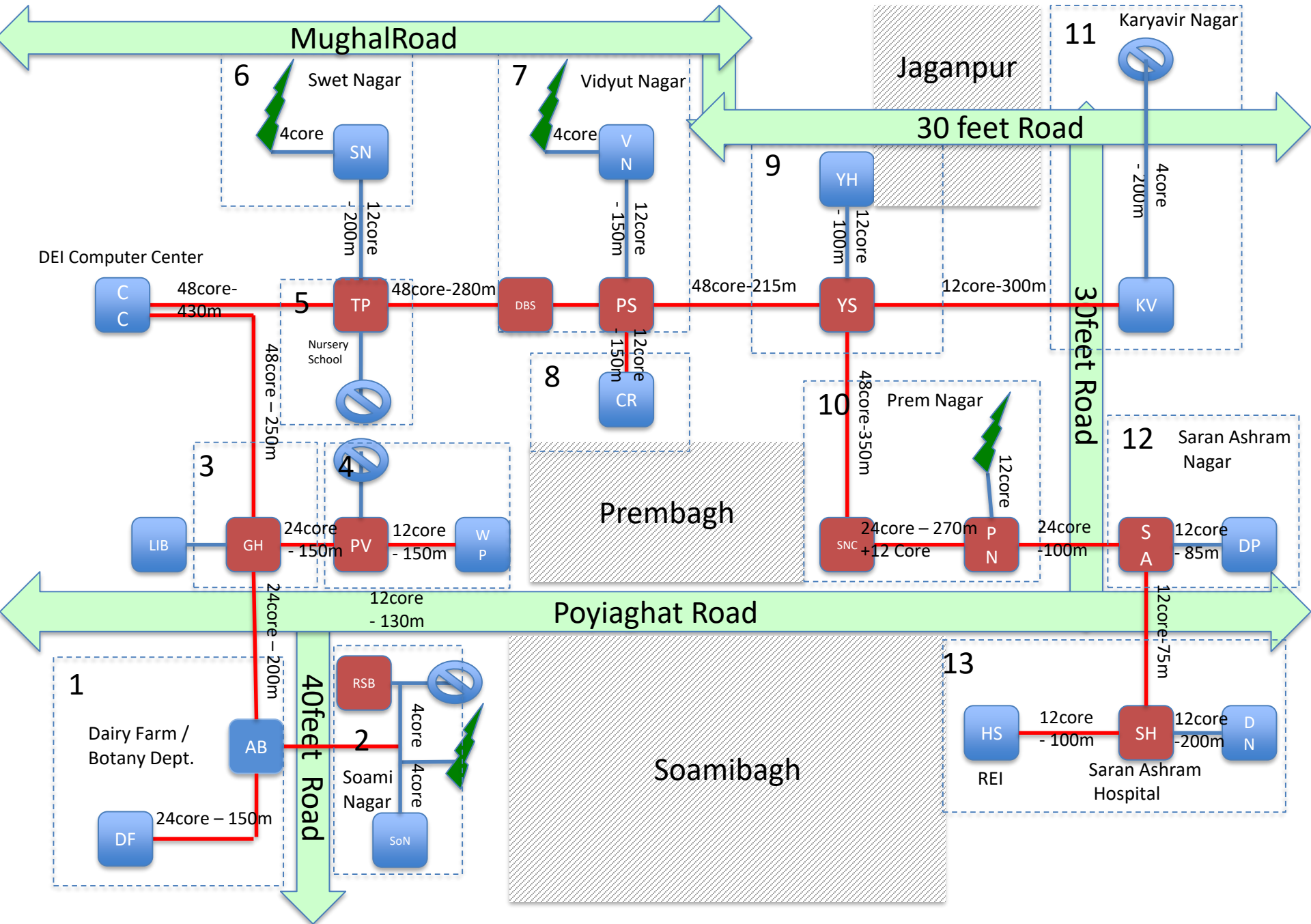
 Phase-1: Optical Fiber connecting Dayalbagh and its Institutions. (4 km underground, 4km aerial route)

 Phase-2: Optical Fiber connecting DEI and its Institutions. (3 km underground, 1km aerial route)

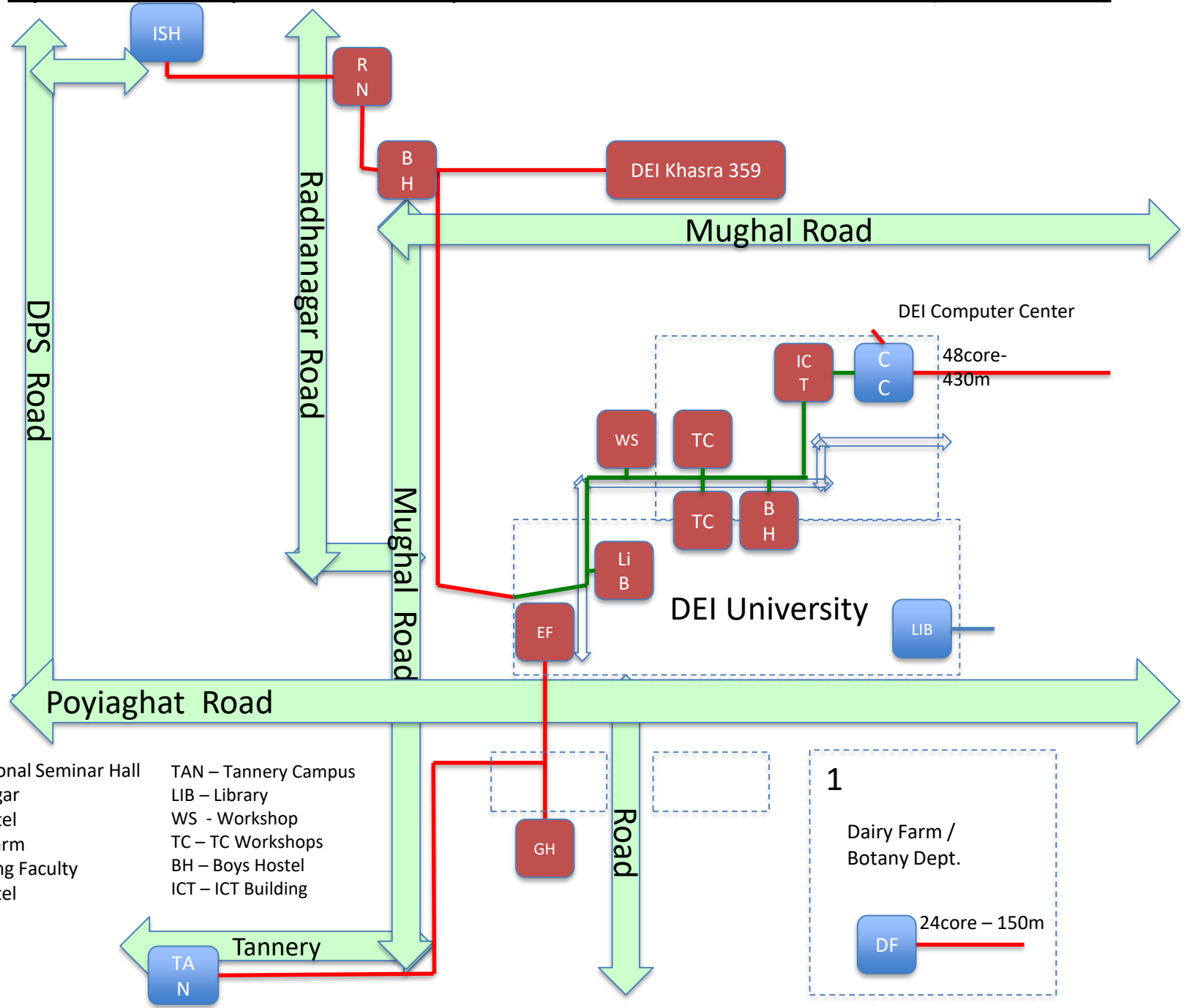
Convergence through ICT

- **Optical Fiber** network will have convergence of
 - **Security Surveillance**
 - IP Camera(250), Access Control
 - Central & Local Monitoring Stations with 24x7 vigilance
 - **ICT based Education** – high speed connectivity to support disseminating DEI System of School Education worldwide
 - **Communication** – IP Phones(100) to provide alternate secured communication pathway
 - **Connectivity** Backbone - high speed connectivity to offices and institutions.

Optical Fiber Layout for Security Surveillance Network – Phase 1 (inside Dayalbagh)



Optical Fiber Layout for Security Surveillance Network – Phase 2 (outside DEI)



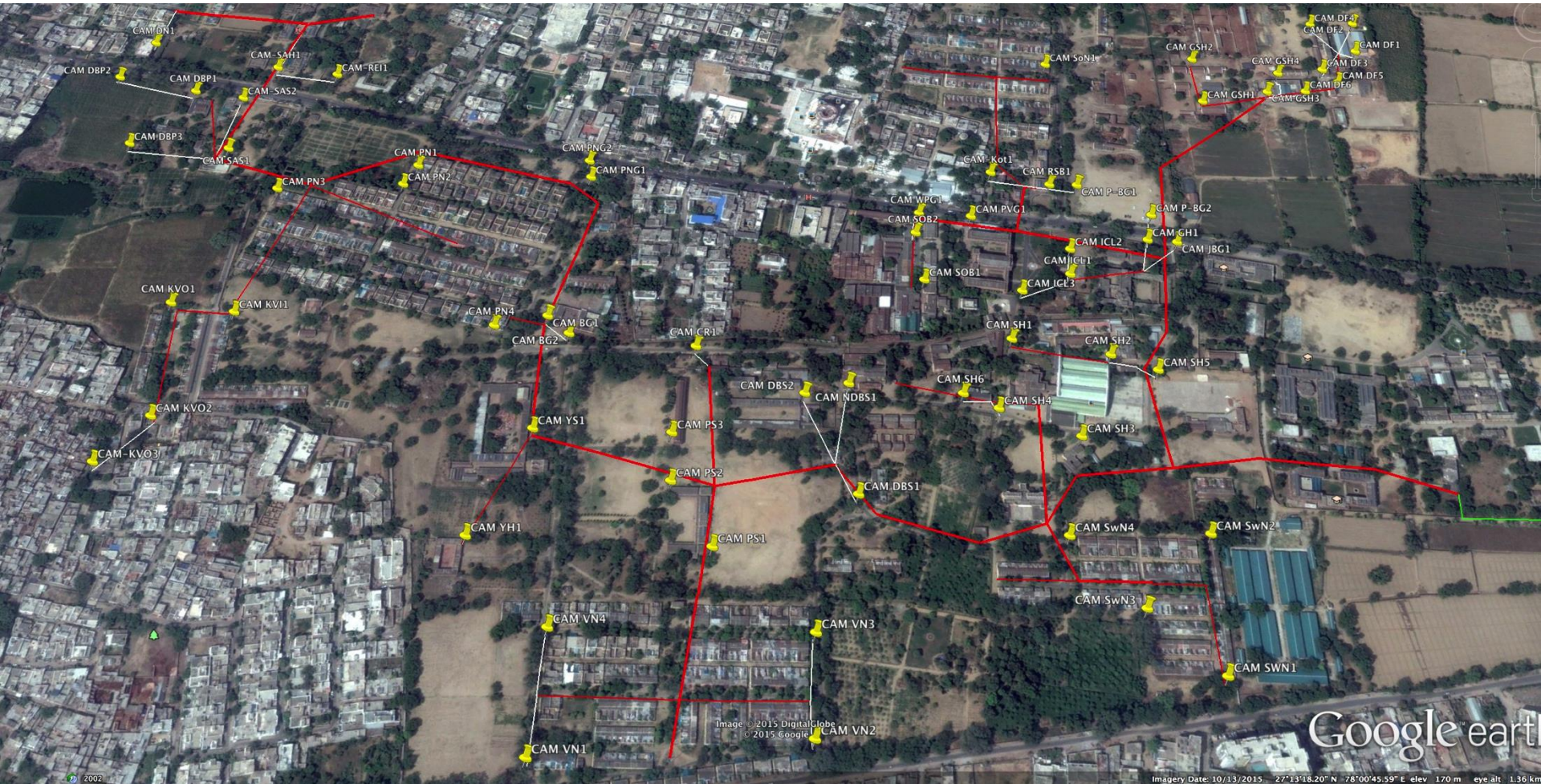
- ISH – International Seminar Hall
- RN – Radhanagar
- BH – Boys Hostel
- PF – Punjabi Farm
- EF – Engineering Faculty
- GH – Girls Hostel
- TAN – Tannery Campus
- LIB – Library
- WS - Workshop
- TC – TC Workshops
- BH – Boys Hostel
- ICT – ICT Building

1

Dairy Farm / Botany Dept.

DF 24core – 150m

Security Surveillance inside DB

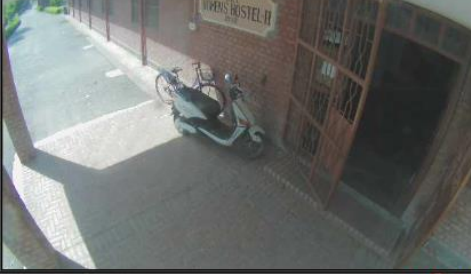


- IP Cameras(130), IP Phones(100), Access Control at entry points
- Central and Local Monitoring Stations with 24hrs vigilance
- Assured Passive Optical Fiber Connectivity to last mile – 7km
- Local Power from Solar Plants distributed across DB
- Long Term Storage(30days), Smart Analytics, Alarms

Sample of the Camera views



145 Girls Hostel 2



146 Boy's Hostel 2



147 Math Lawn FOS



148 Math Verandah



149 Math Corridor



150 FOS Ofc Veranda



151 Physics Corridor



152 PhysicsCorridor2



153ChemistryCorridor



154 Chemistry Lawn



155 DES Block



156 DEI_DB Gate



157 Behind Chemistry



158 Behind Sci Hall



159 Computer Lab



160 Instr Remote Lab



