Bengaluru Inner Ring Metro (IRM) Phase-3

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Acronyms

- □ ST Station
- □ RT Route
- □ EL Elevated
- UG Underground
- □ PH Phase
- CMP Comprehensive Mobility Plan
- TBM Tunnel Boring Machine*
- □ IRM Inner Ring Metro
- □ IRR Inner Ring Road (or) Intermediate Ring Road
- ORR Outer Ring Road
- □ PPP / CSR* Public Private Partnership / Corporate Social Responsibility*
- PPHPD Passenger Per Hour Per Direction

Content

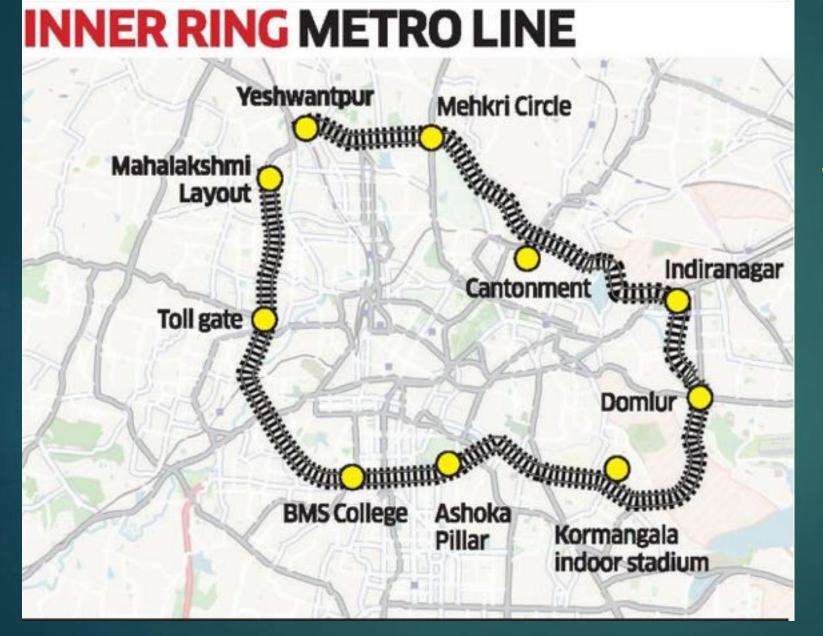
- Background
- Phase-3 Reaches
- □ IRM RT Map
- Glossary
- Metro RT and ST details
- Approach / Retract Locations
- Property Acquisition
- Project Highlights
- Assumption
- Suggestion
- Conclusion

Background

Bengaluru is fastest growing cosmopolitan city and third largest Urban agglomeration in India with population of more than 12 Million and metropolitan area of 741 Sq KMs. Traditionally Bengaluru is home to key Public Sector Units (PSU) and has large workforce. But post 2000 due to rapid growth of IT, ITE'S and Software industries at Central Business Districts (CBD) and peripheral areas, city has been witnessing huge transit of workforce from place to place within city on day today life. Hence Bengaluru has been transformed from pensioners paradise to one of the most densely populated cities around world.

Since core of city grown with narrow roads, unpredictable economic growth in 21st Century and non feasibility of upgrading existing infrastructure led to huge traffic jams. Also this is fueled by huge dependency of workforce to use central areas for transiting from one end of city to another end. This rapid unplanned growth has put more pressure on existing infrastructure caused loss of revenues and time for businesses. Hence it is inevitable to plan metro network along inner ring road (IRR) of city which connects prime areas and existing metro stations. This green transport not only brings robust sustainable urban mobility solutions for the city, but also influences citizens to shift from own vehicles to mass transport.

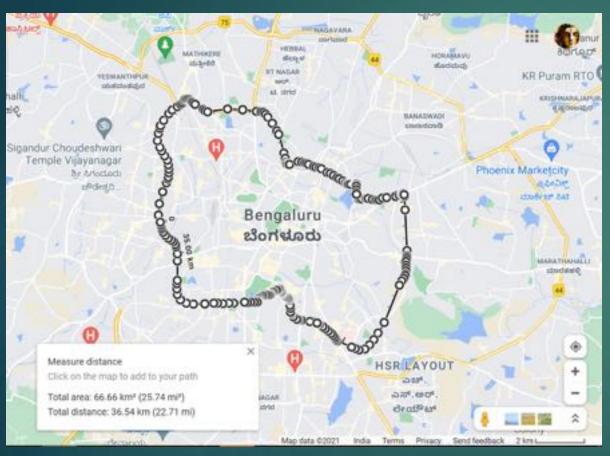
Inner Ring Metro (IRM) project is envisaged by IISC Bangalore in 2019 to cover core areas of Bengaluru mostly with underground along Inner Ring Road (IRR). This brought city planners and thinkers under one platform to share and exchange an ideas to bring the best out of virtual planning. Ultimately BMRCL, the agency responsible for implementation has been already included IRM at it's comprehensive mobility plan (CMP) 2031 and would bring official route by considering all suggestions and concepts depend upon local and practical conditions. As Metro Phase 2A and 2B is currently under construction stage, it's imperative to plan for Phase-3 for vital stretches of the city.

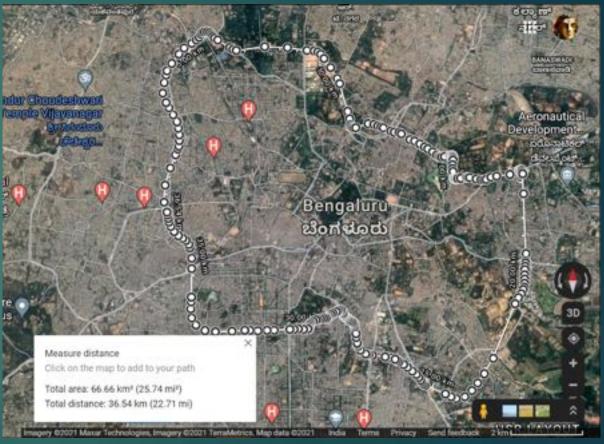


Phase-3 reaches - 74 KMs

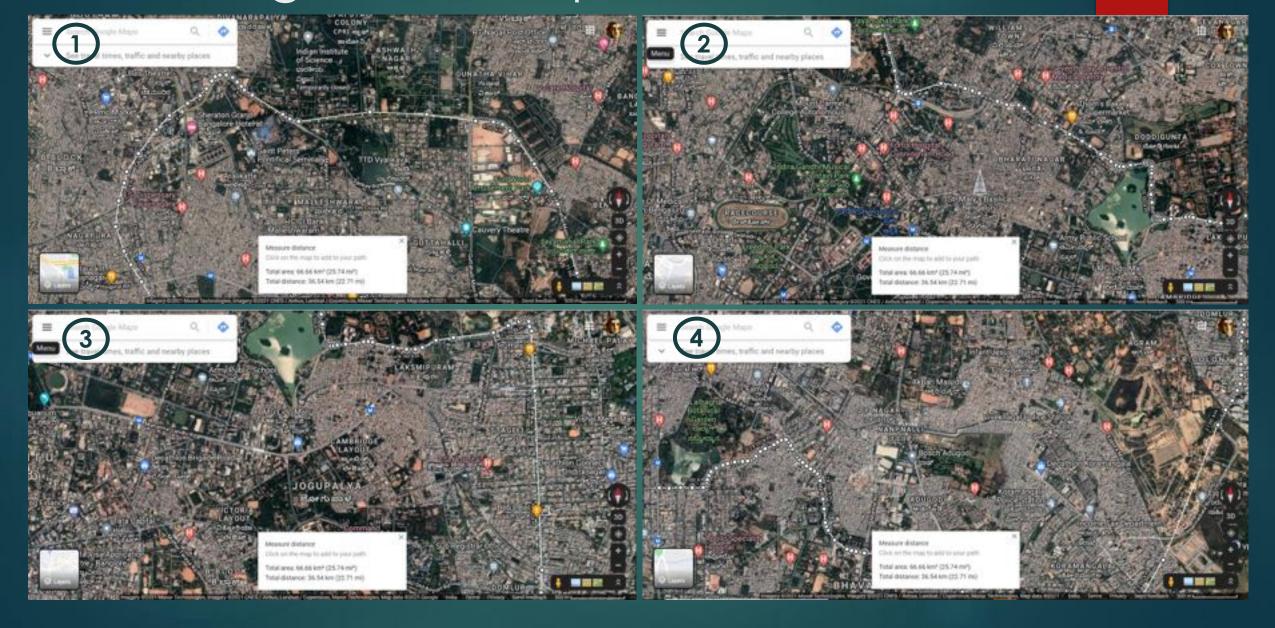
- □ JP Nagar to Hebbal (ORR)− Reach 1 (25 KMs)
- Magadi Road Toll gate to KadabagereReach 2 or 3 (12 KMs)
- ☐ Inner Ring Metro (IRM) Reach 2 or 3 (37 KMs)

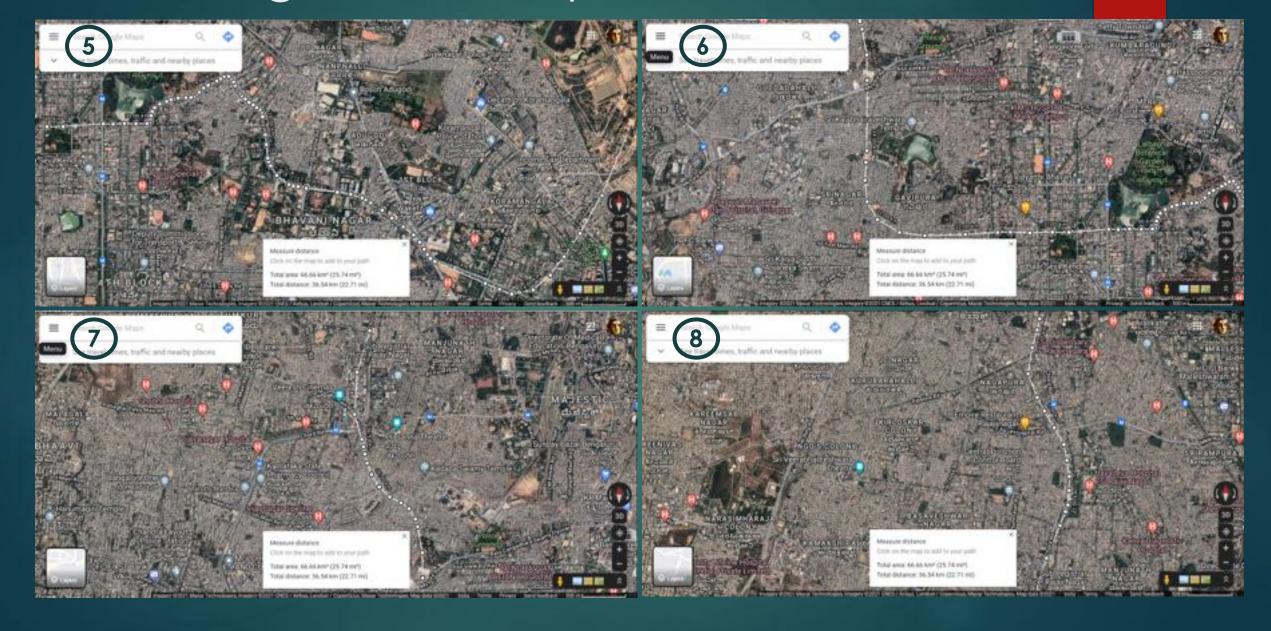
Inner Ring Metro Map – BIRD VIEW





Inner Ring Metro Map – DETAIL VIEW





Glossary

METRO STATION LOCATION

ELEVATED ROUTE

UNDERGROUND ROUTE

ELEVATED/UNDERGROUND BEGIN/END

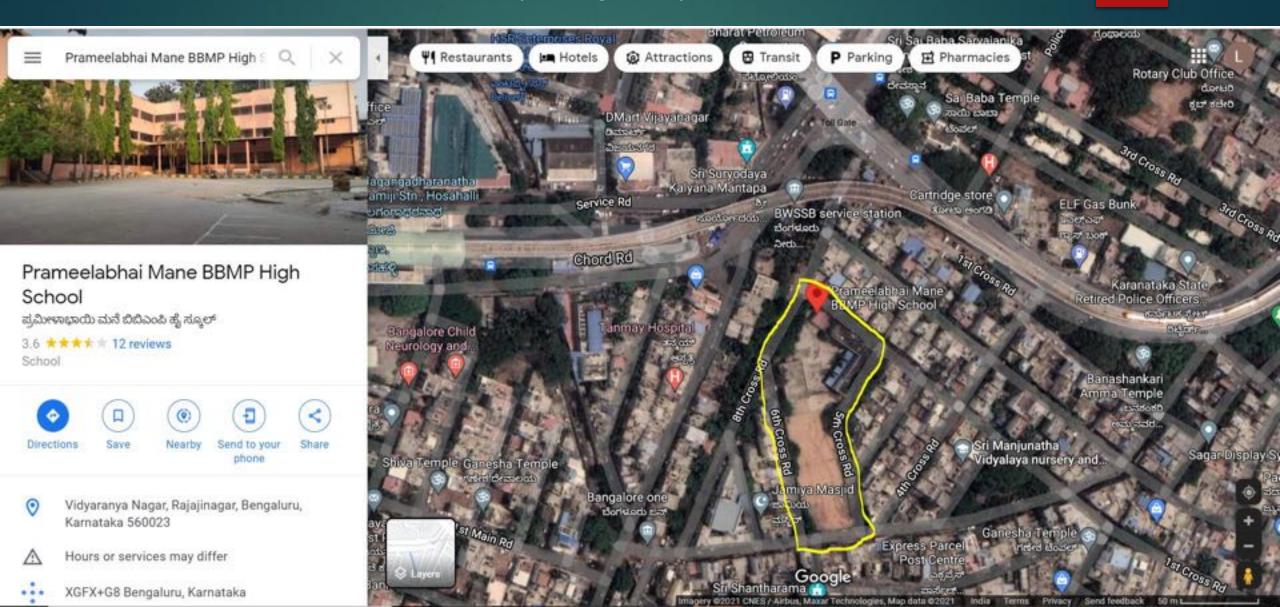
SERVICEABLE LOCATION

RETRACT LOCATION

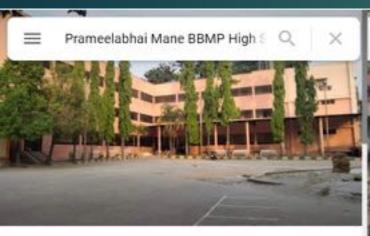
APPROACH LOCATION

Metro RT and ST Details (UG and EL)

ST #1: Magadi Road Toll Gate Metro Station (UG) Location: Prameelabhai Mane BBMP High School Previous ST: Kempambudhi Metro Station (Underground), Banashankari



ST #2: Dhobi Ghat Junction Metro Station (UG) Location: BESCOM Rajajinagar, West of Chord Road Previous ST: Magadi Road Toll Gate Metro Station (UG)



Prameelabhai Mane BBMP High School

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3.6 *** 12 reviews School











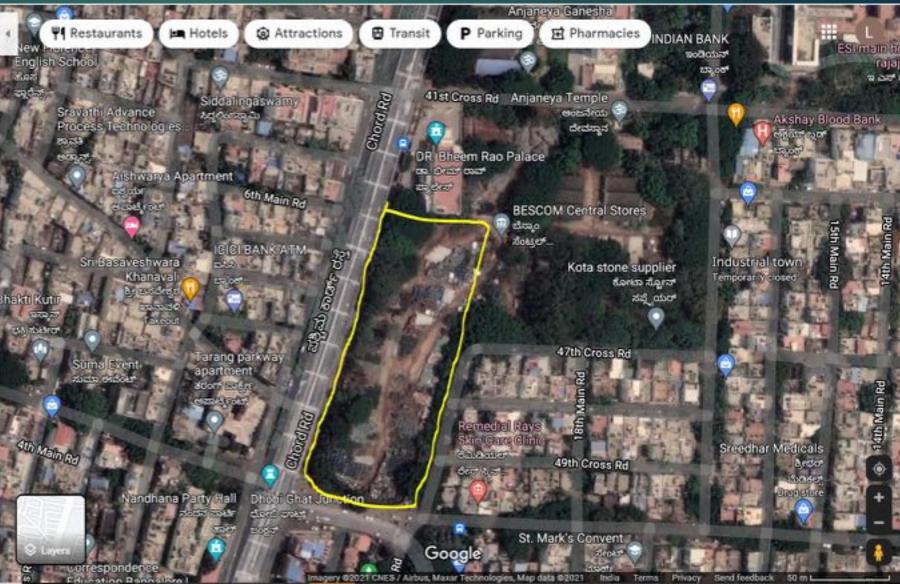




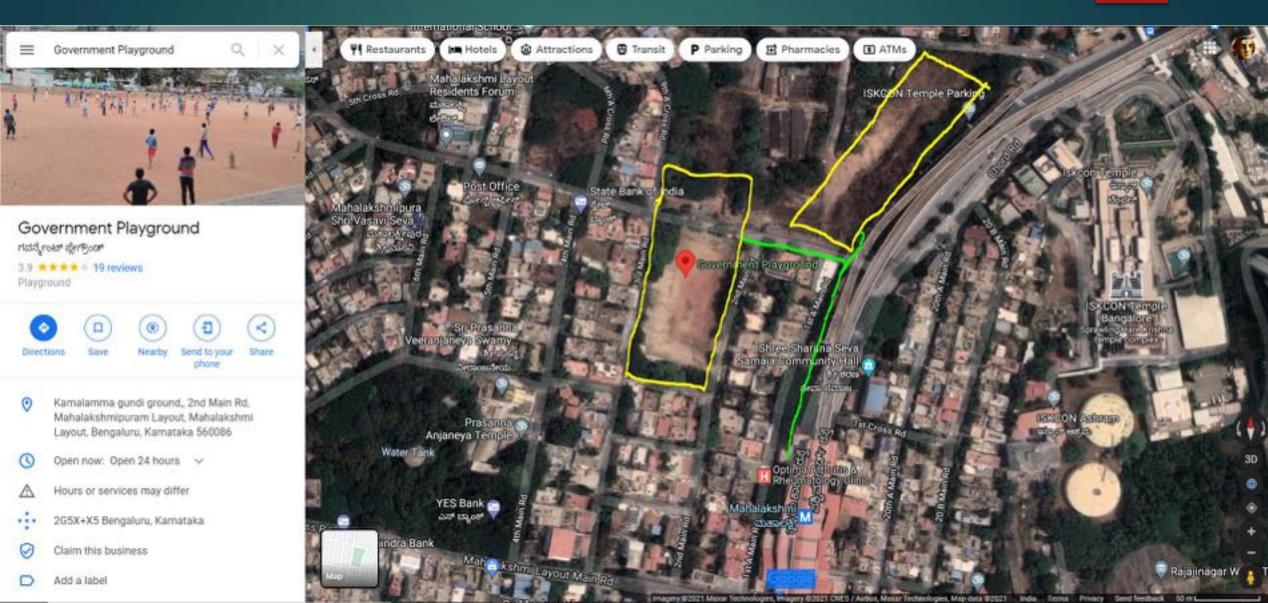


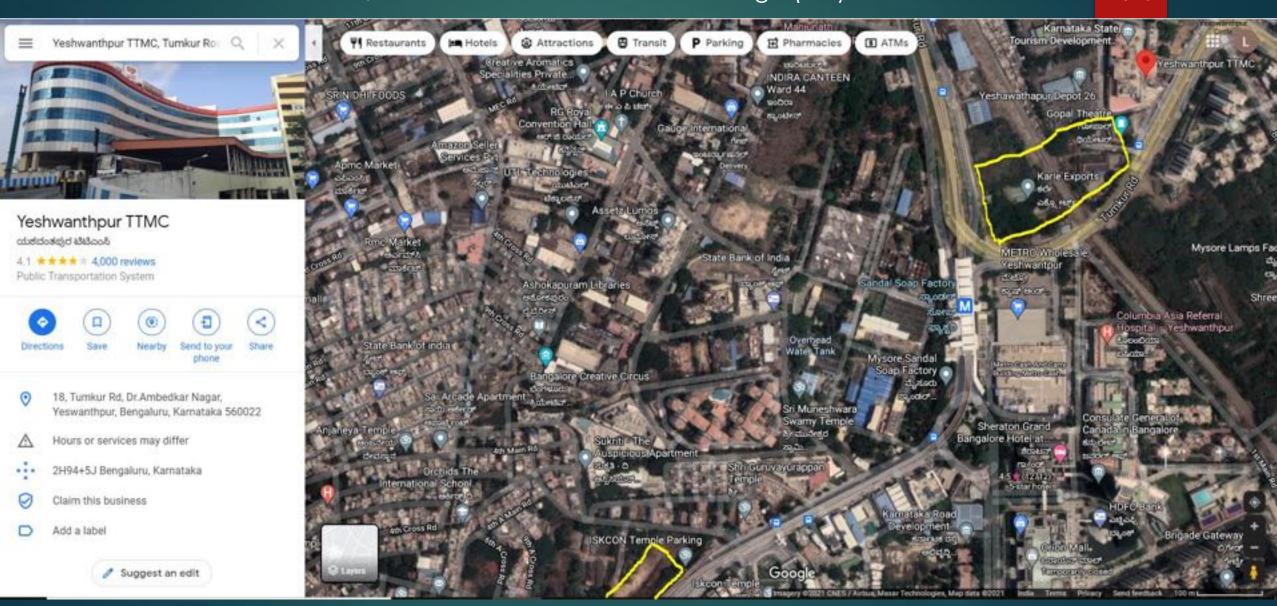
Hours or services may differ

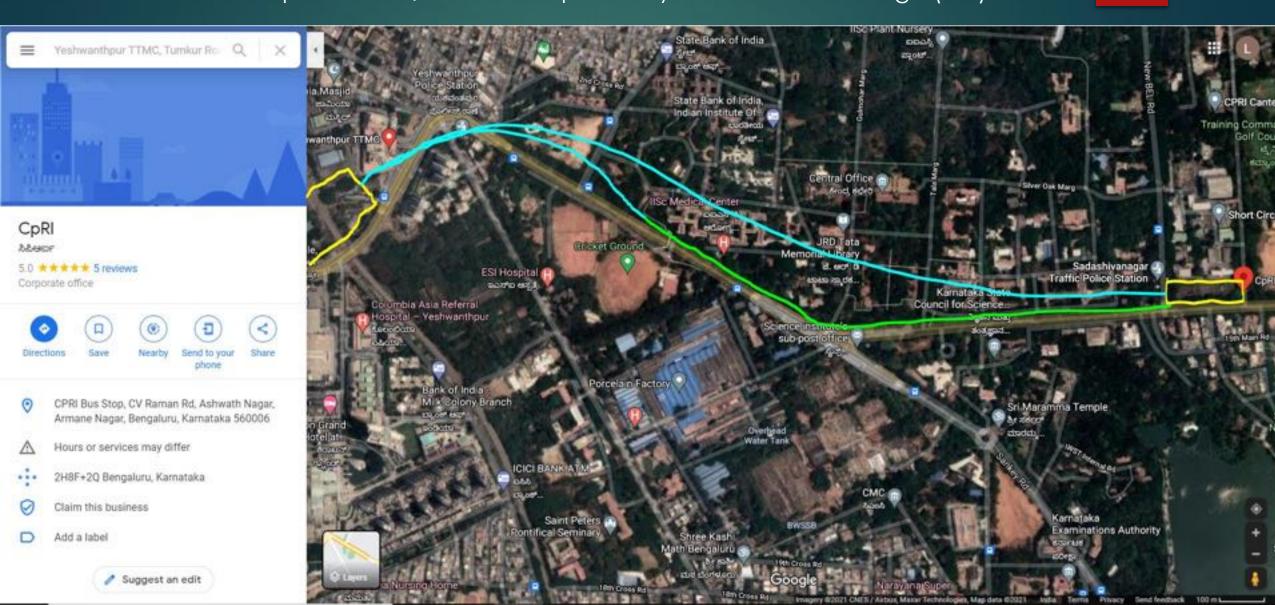
XGFX+G8 Bengaluru, Karnataka



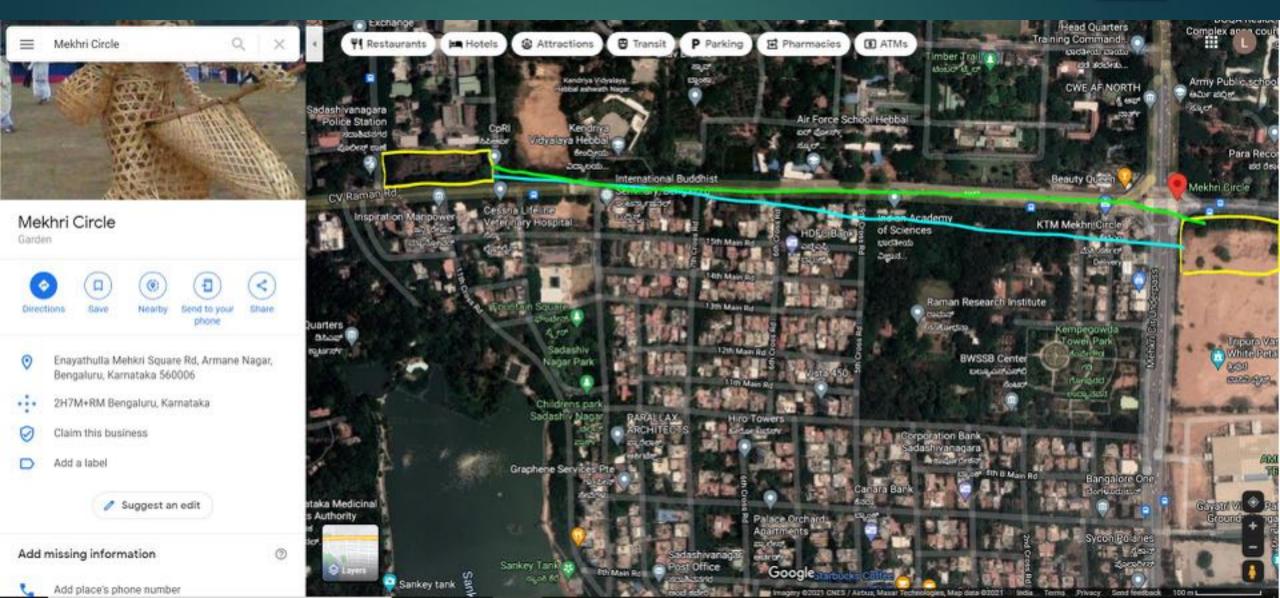
ST #3: ISCKON Metro ST (UG) / Mahalakshmi Metro ST Interchange (UG)
Location: Kamalamma Gundi (KG) Ground (or) ISKCON Temple Parking, West of Chord Road
Previous ST: Dhobi Ghat Junction Metro ST (UG)

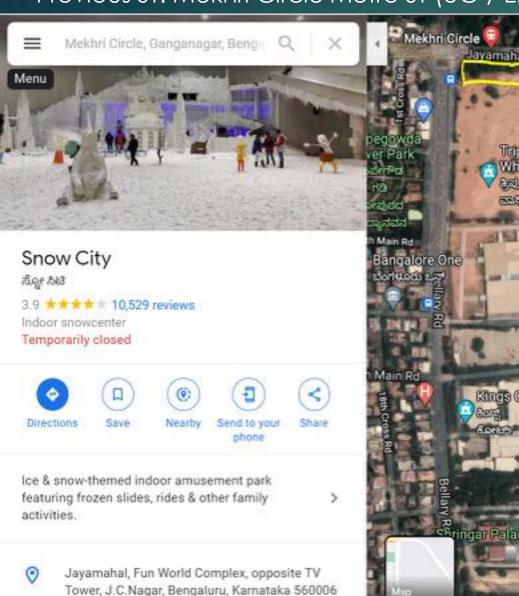




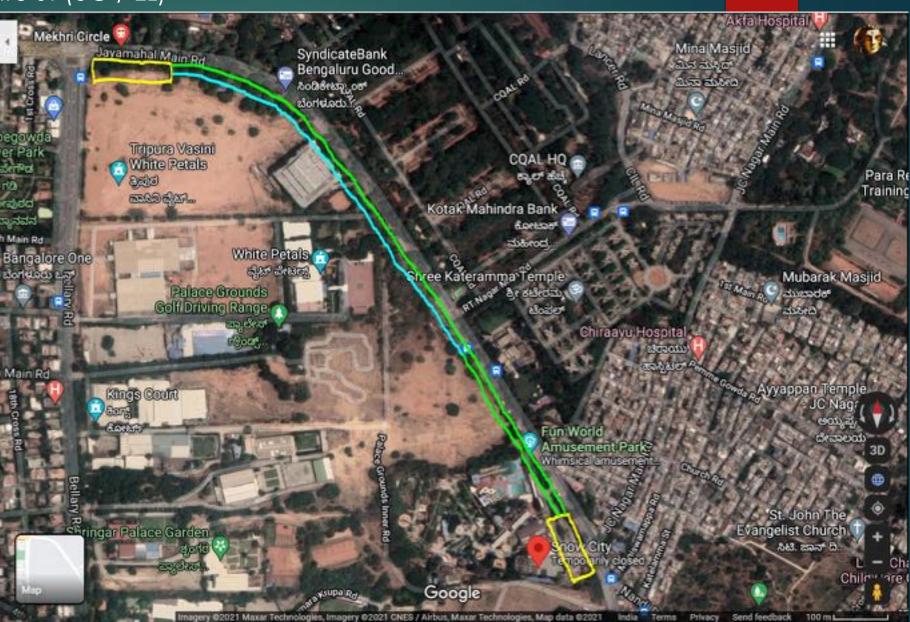


ST #6: Mekhri Circle Metro ST (UG / EL) Location: Palace Grounds, Jayamahal Main Road Previous ST: Sadashivanagara Metro ST (UG / EL)





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City Hospita Tannery Road

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WAHID GARDEN

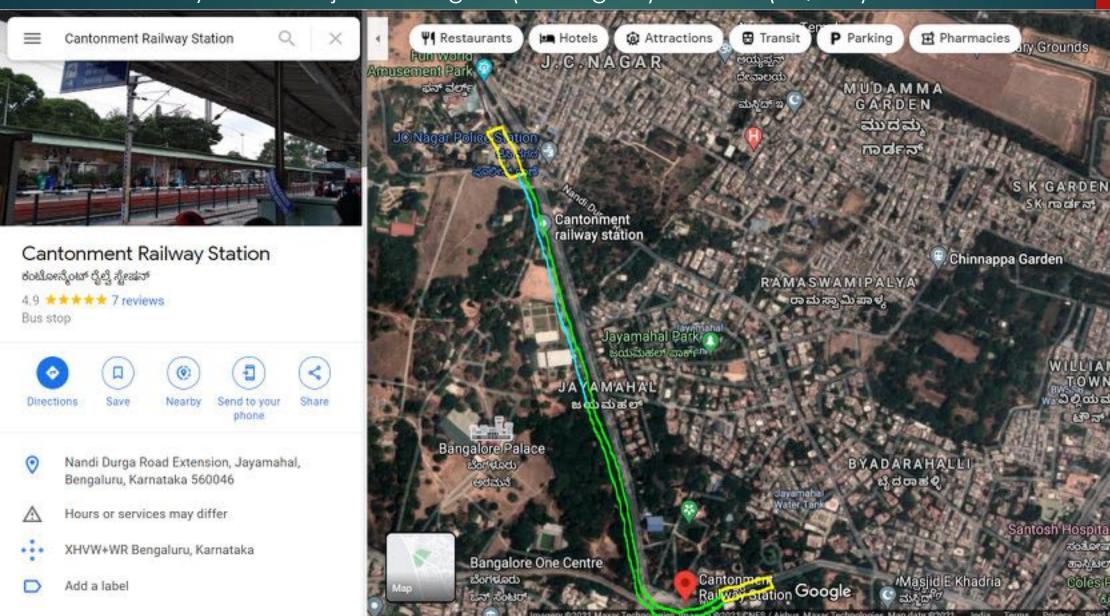
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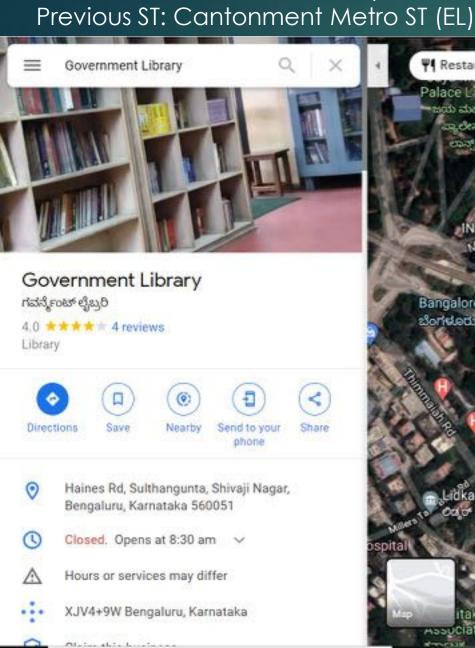
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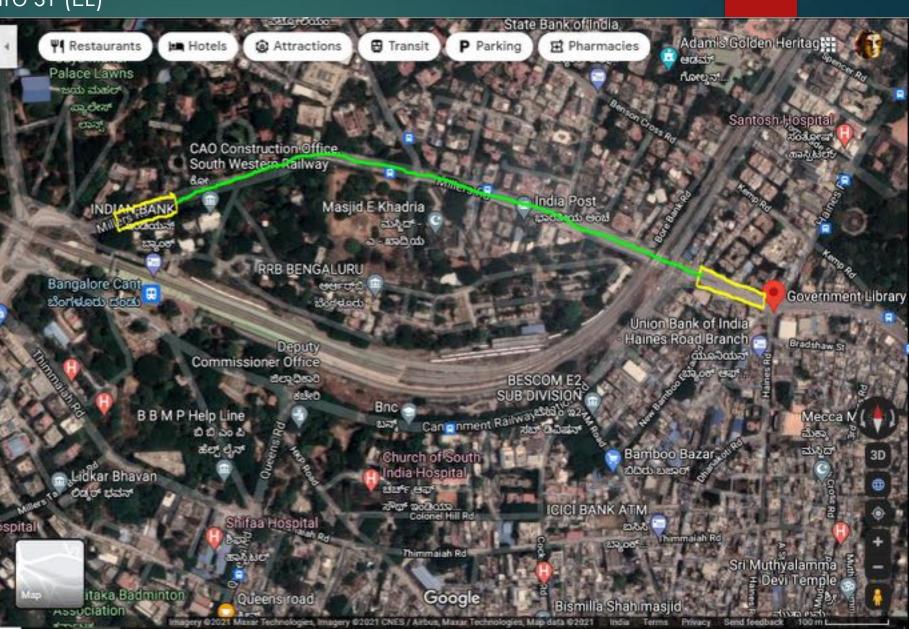
BWSSB

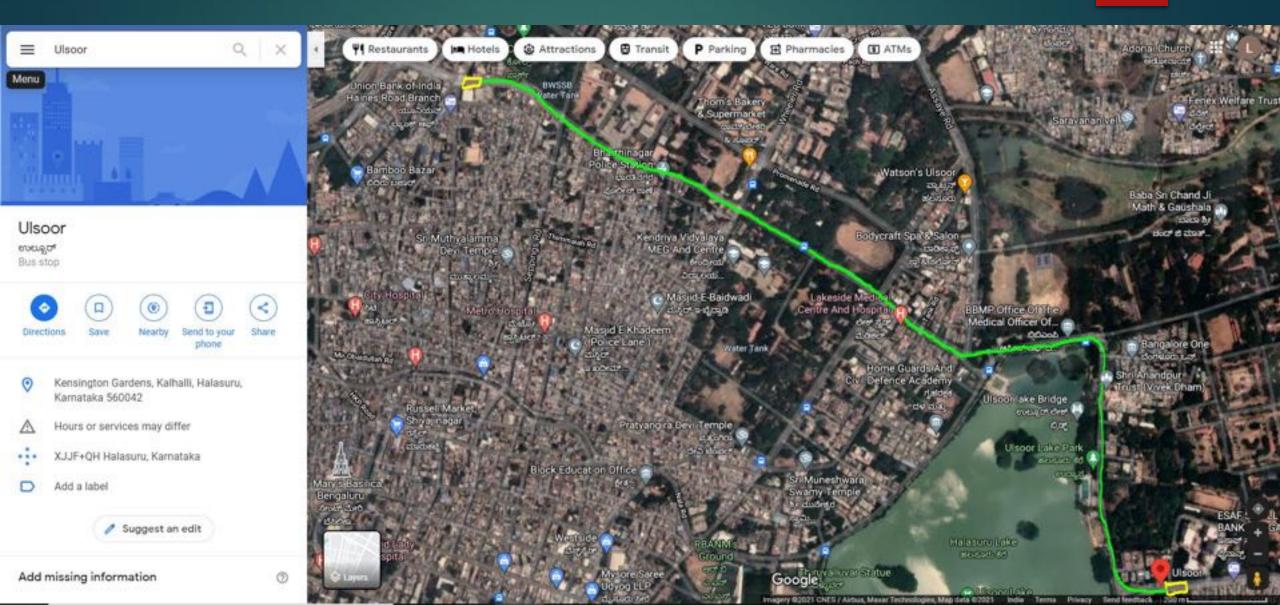
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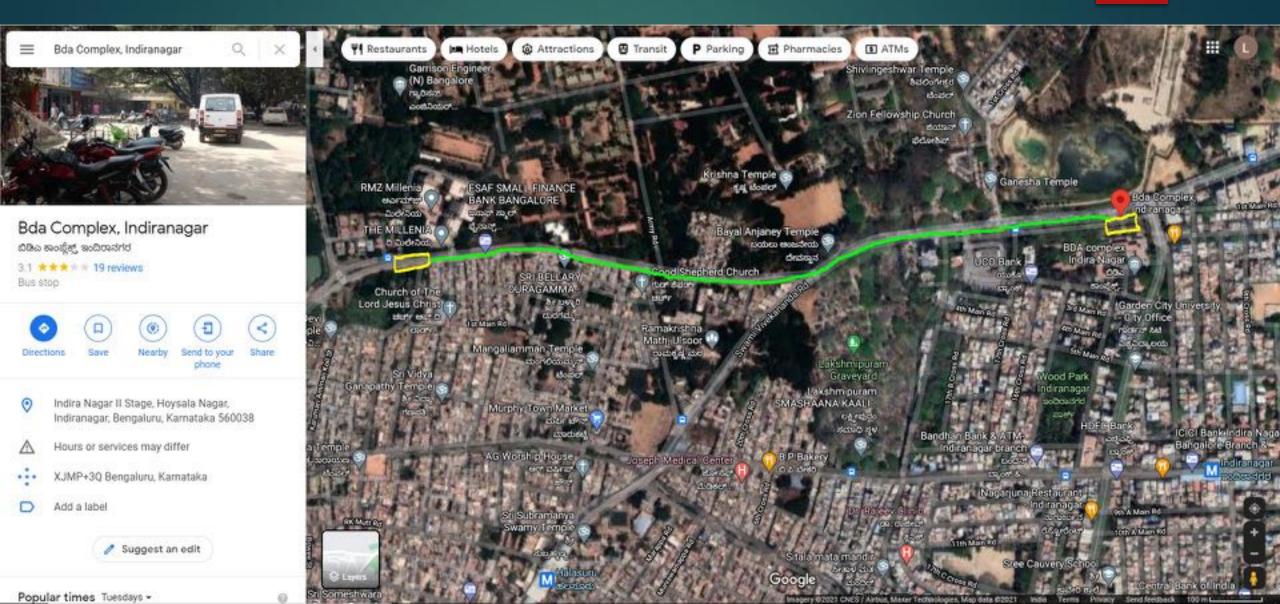






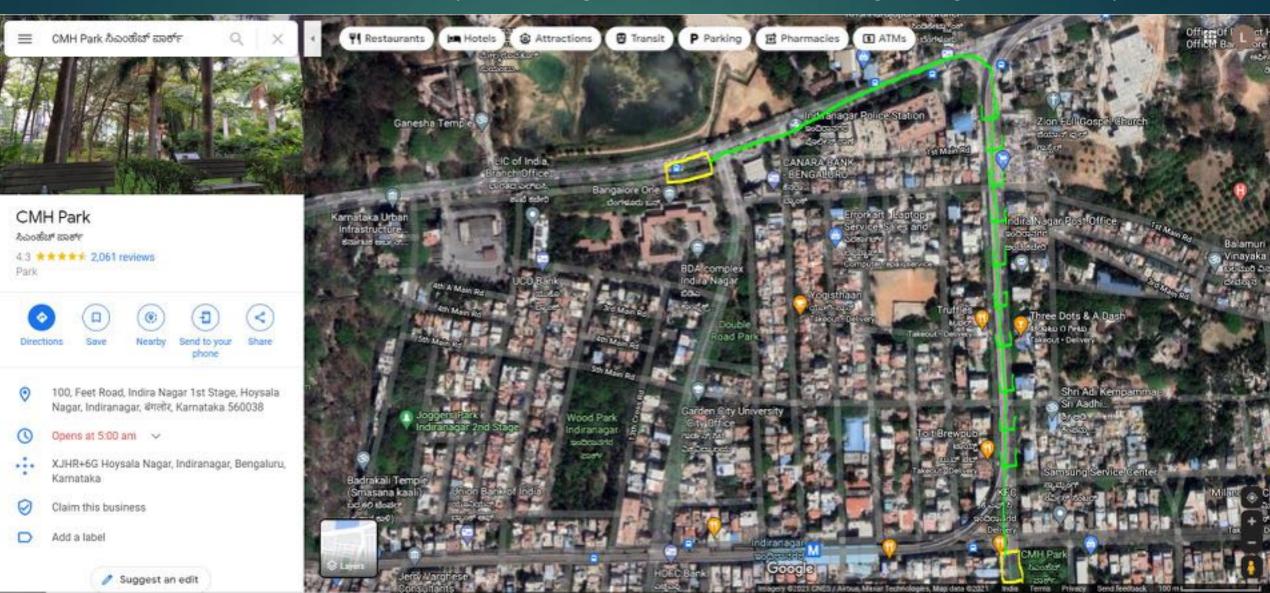


ST #11: BDA Complex Metro ST (EL) Location: BDA Complex Indiranagara, Swami Vivekananda Road Previous ST: Ulsoor Lake Metro ST (EL)

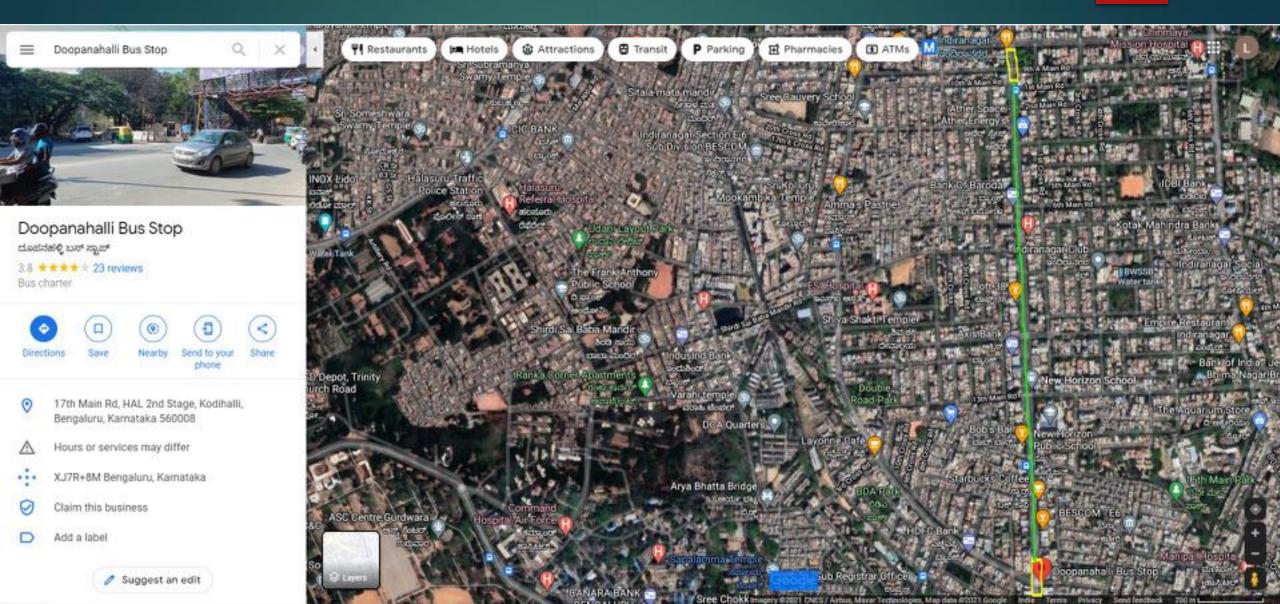


Previous ST: BDA Complex Metro ST (EL)

RT Type: Double Decker EL Metro RT (Binnamangala Bus Stop to Indiranagara Signal – 0.6 KMs)



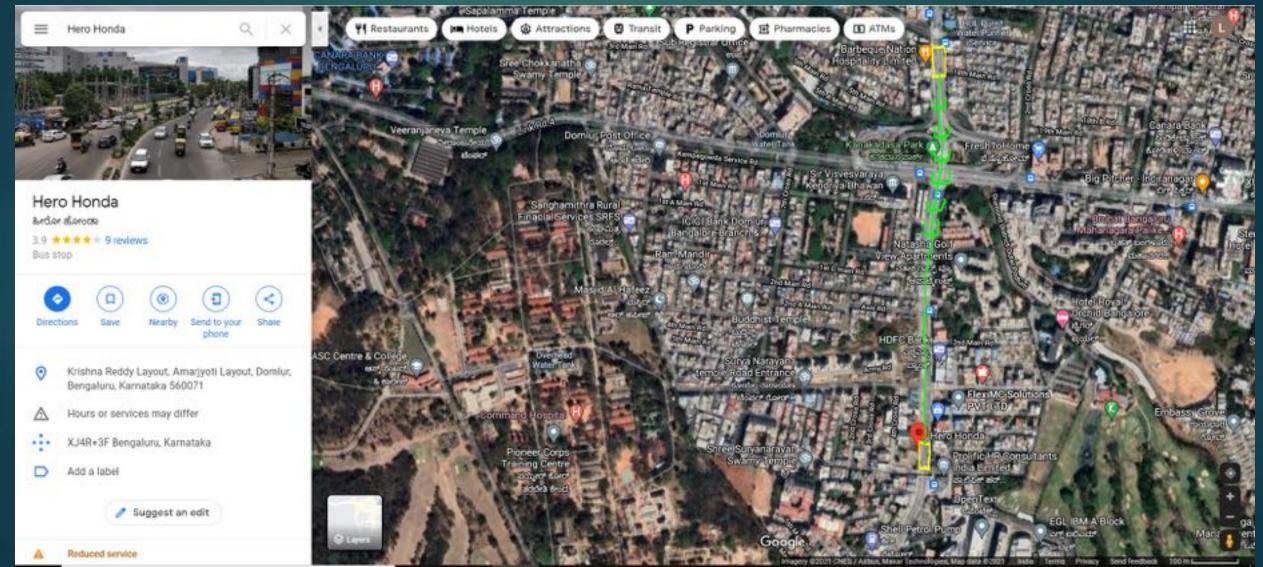
ST #13: Doopanahalli Metro ST (EL) Location: Doopanahalli Bus Stop, Intermediate Ring Road Previous ST: CMH Park Metro ST / Indiranagar Metro ST Interchange (EL)



ST #14: Embassy Golf Link (EGL) Metro ST (EL) – *Develop ST with PPP/CSR activities with Embassy Group (Similar to sponsored for Kadubeesanahalli metro ST (PH-2A) and Bettahalasur metro ST (PH-2B) by Embassy) Location: EGL Gate, Hero Honda Stop, Intermediate Ring Road

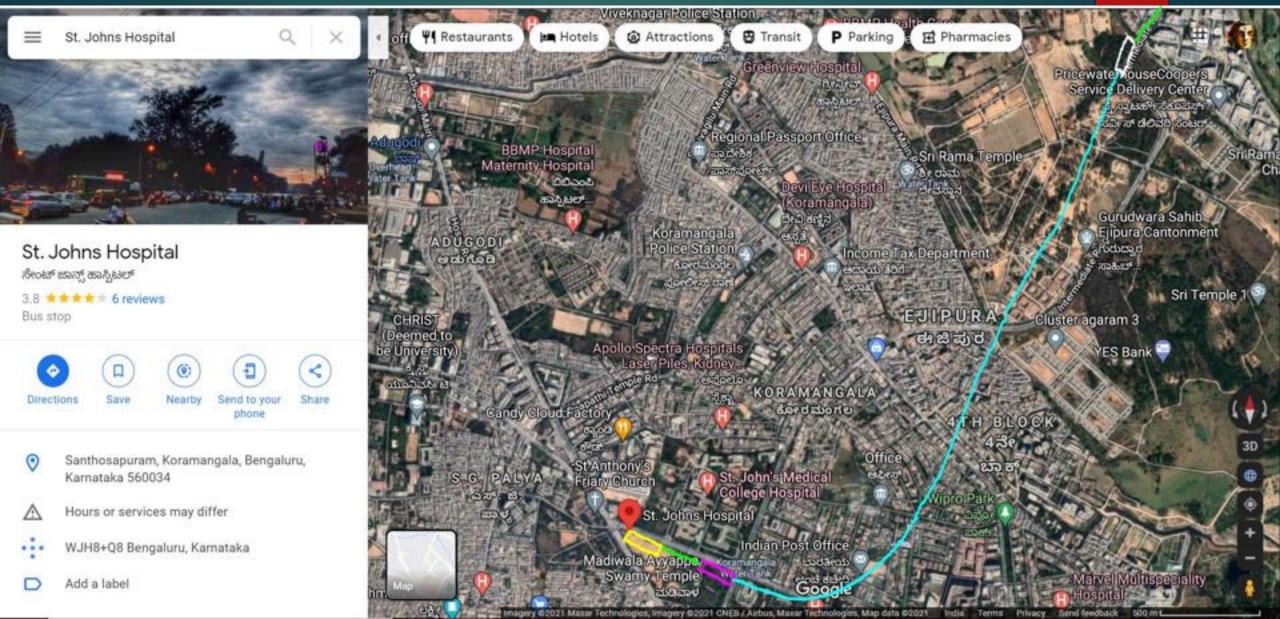
Previous ST: Doopanahalli Metro ST (EL)

RT Type: Double Decker Elevated Metro route (Domlur Flyover, 100 ft road, Intermediate Ring Road)



ST #15: Koramangala Metro ST (EL)

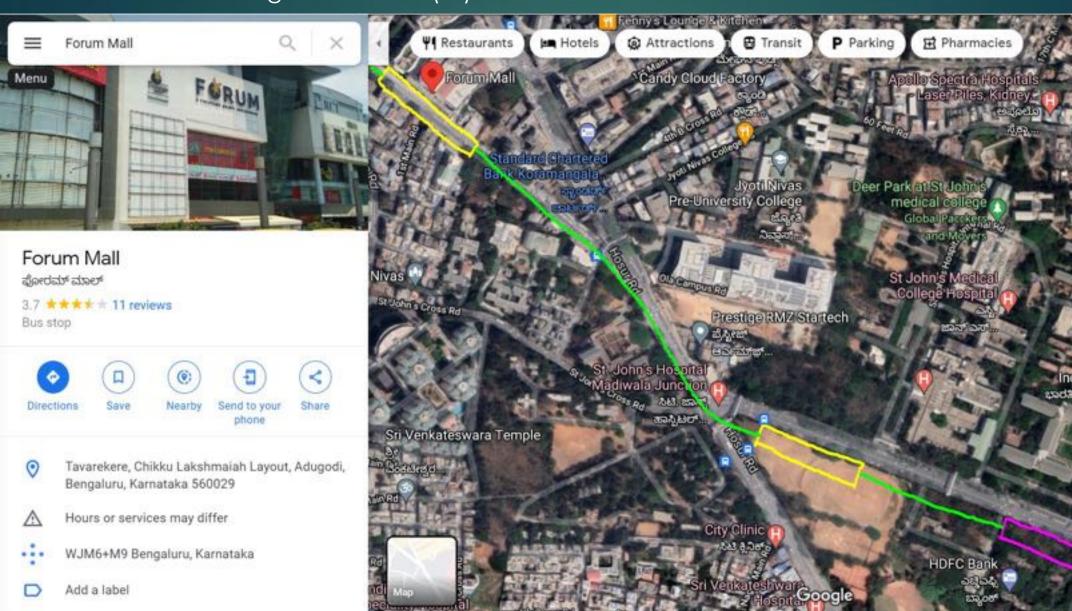
Location: St.John's Medical College Sports Ground, St. Johns Hospital Madivala Junction, Sar<mark>japura</mark> Road Previous ST: Embassy Golf Link (EGL) Metro ST (EL)



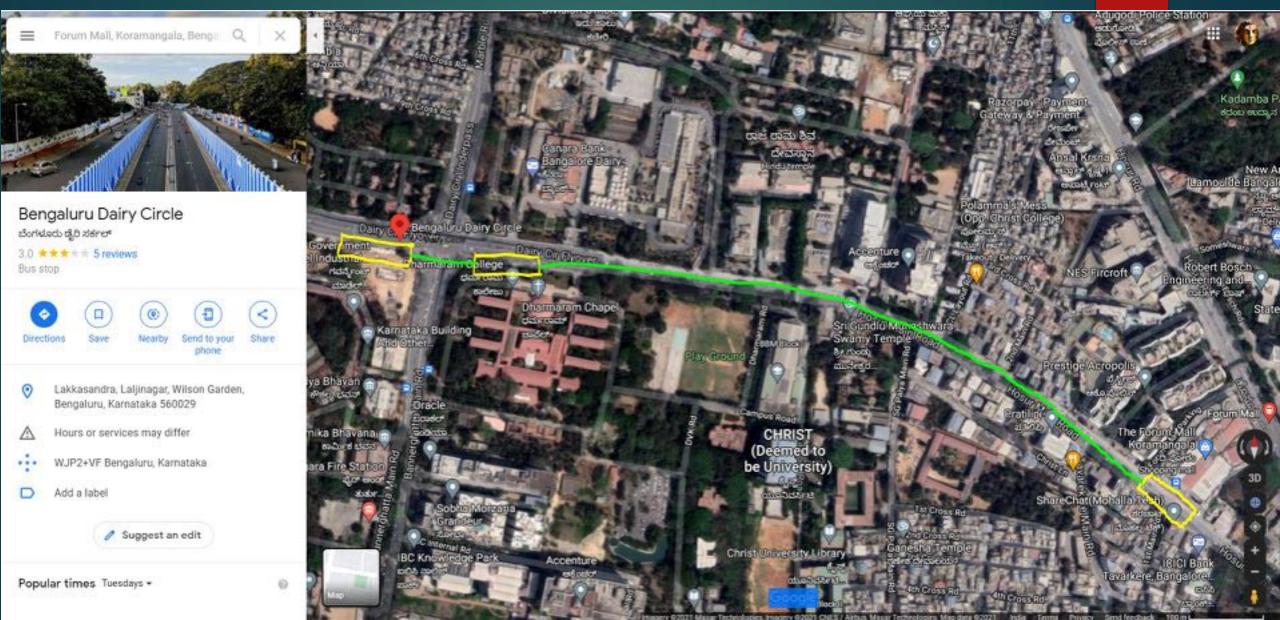
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ST #16: Forum Mall Metro ST (EL) Location: Forum Mall, Hosur Main Road Previous ST: Koramangala Metro ST (EL)

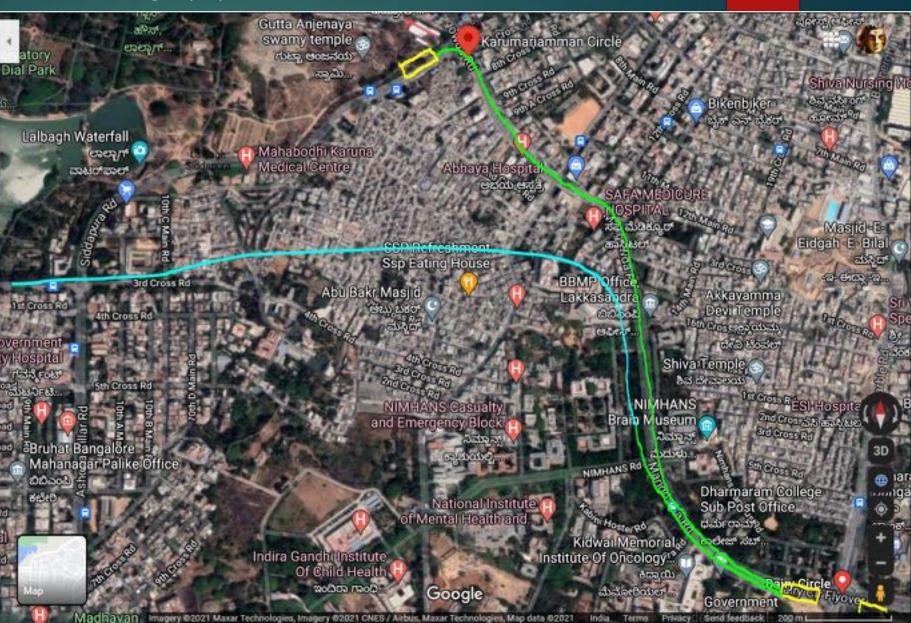


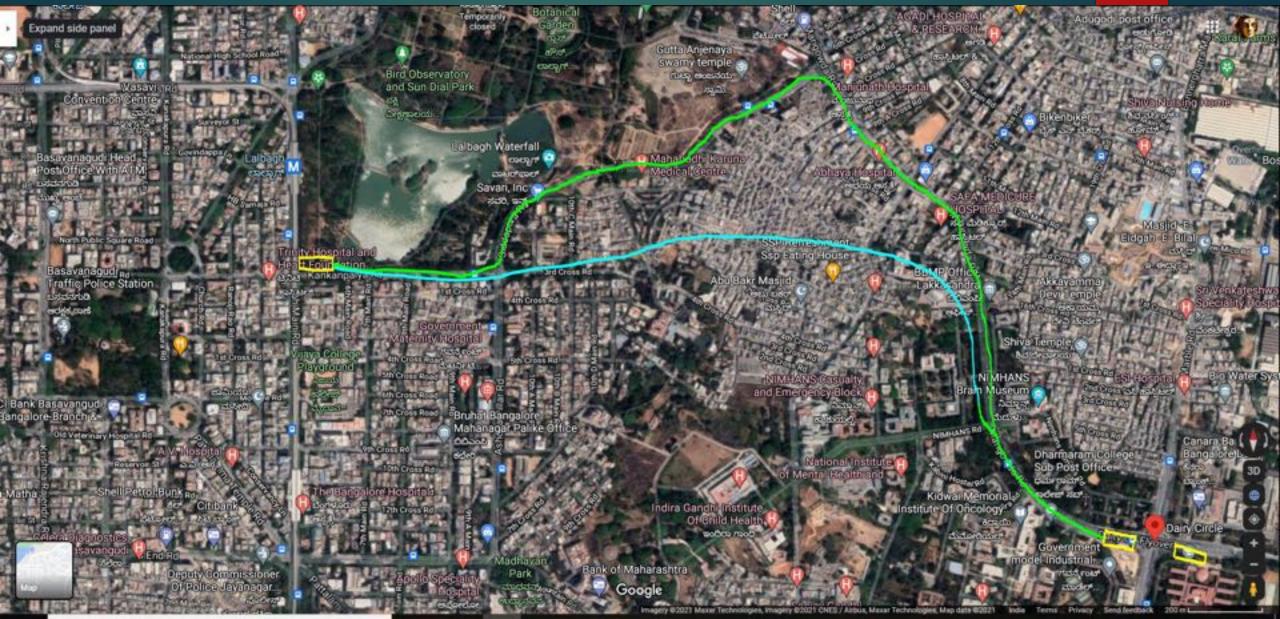
ST #17: Dairy Circle Metro ST Interchange (EL) Location: ITI College (or) Dharmaram College, Hosur Main Road Previous ST: Forum Mall Metro ST (EL)



ST #18: Wilson Garden Metro ST (EL) - Optional Location: Lalbagh Siddapura, Siddapura Road, Near Karumariamman Circle Previous ST: Dairy Circle Metro ST Interchange (EL)



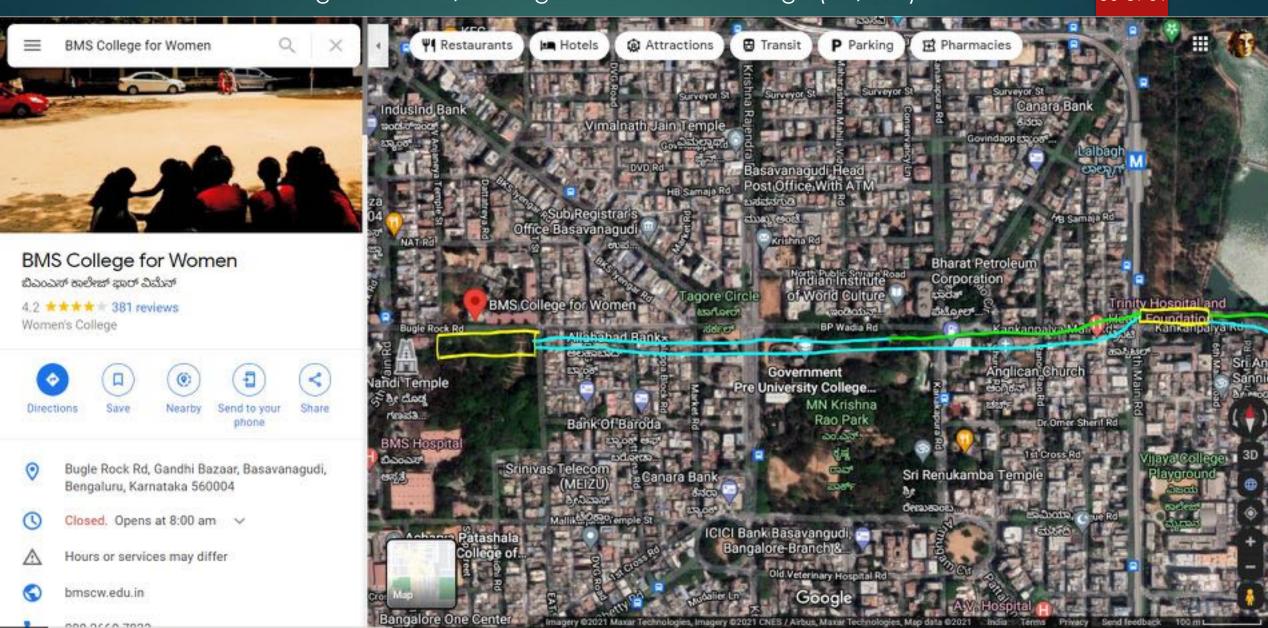


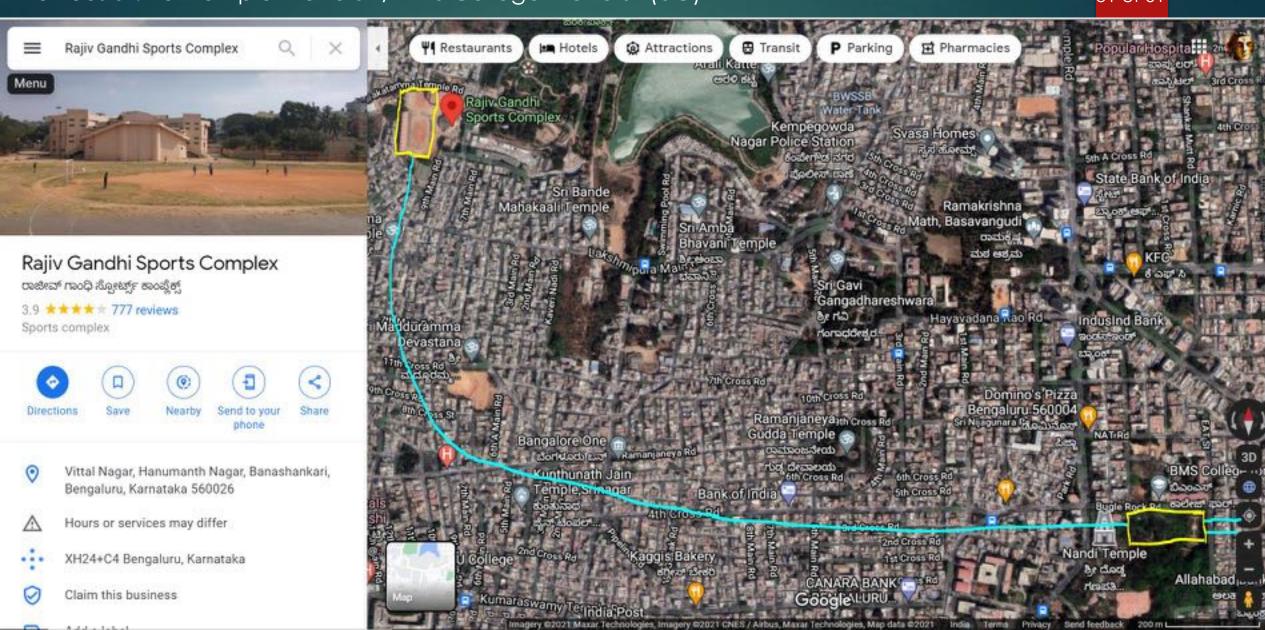


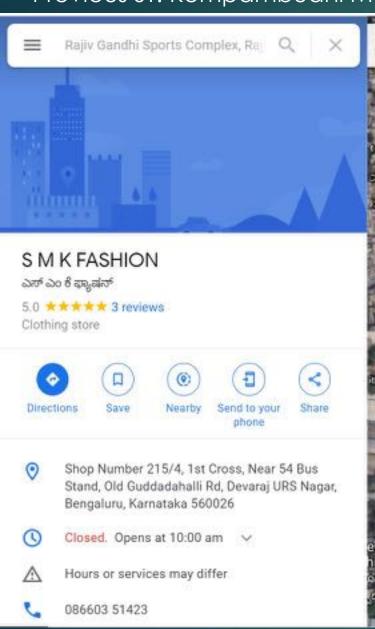
Location: Bugle Rock Park, Opposite BMS College for Women

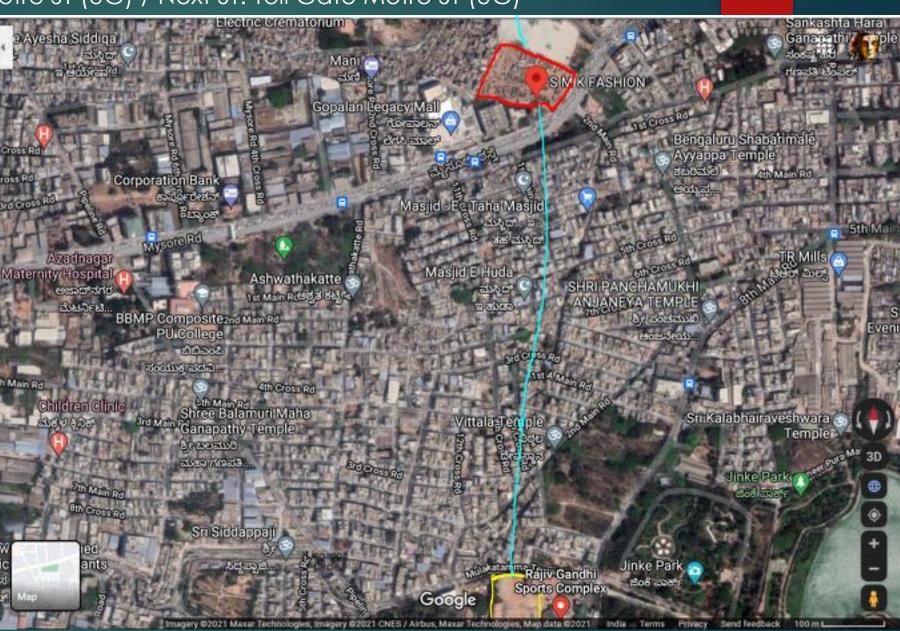
Previous ST: Teachers College Metro ST / Lalbagh Metro ST Interchange (EL / UG)

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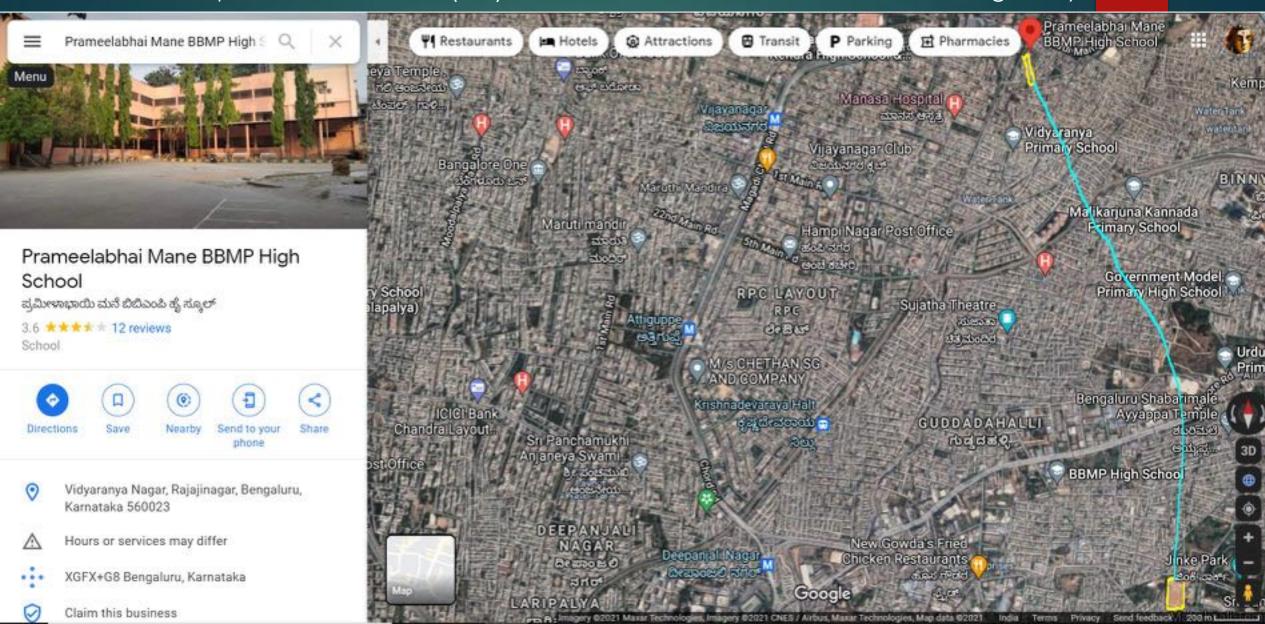




ST #1: Toll Gate Metro ST (UG)

Location: Prameelabhai Mane BBMP High School, Magadi Road Toll gate

Previous ST: Kempambudhi Metro ST (UG) / Previous Serviceable area: Jadeedh Eidgah Mysore Road



Metro ST Details – Total 37KMs

ST #	Metro Stations	Interchange ST	ST Type	ST Location	Previous ST	ST Distance in KM's
1	Toll Gate	 Hosahalli (PH-1) Tollgate {Magadi Road to Kadabagere (PH-3)} 	UG	Prameelabhai Mane BBMP High School	Kempambu dhi	2.6
2	Dhobi Ghat Junction	NA	UG	BESCOM Rajajinagar, West of Chord Road	Toll Gate	1.6
3	ISCKON	Mahalakshmi (PH-1) Connect with elevated Skywalk	UG	Kamalamma Gundi (KG) Ground (or) ISKCON Temple Parking	Dhobi Ghat Junction	2.6
4	Yeshwanth- pur TTMC	Sandal Soap Factory (PH-1) Connect with elevated Skywalk	UG	Karle Exports and Gopal Theatre	ISCKON	1
5	Sadashiva- nagar	NA	UG / EL	CPRI Campus, Yeshwanthpur-Mekhri Circle Road	Yeshwanth- pur TTMC	2.1
6	Mekhri Circle	NA	UG / EL	Palace Gounds, Jayamahal Main Road	Sadashiva- nagar	1.1
7	JC Nagara	NA	EL / UG	Funiture world ground, Opp. Snow City Jayamahal Main Road	Mekhri Circle	1.5

Metro ST Details - Total 37KMs

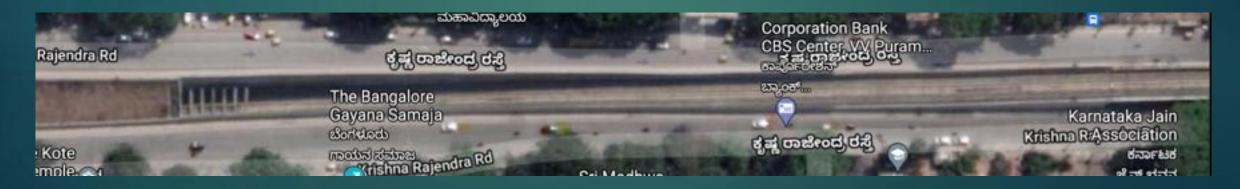
ST #	Metro ST	Interchange ST	ST Type	ST Location	Previous ST	ST Distance KMs
8	Cantonment	NA	EL	Kings Crest apartments, Millers Road, Jayamahal	JC Nagara	1.7
9	Government Library	Bamboo Bazar (PH-2) Connect with elevated Skywalk	EL	Government Library, Millers Road	Cantonment	1.1
10	Ulsoor Lake	NA	EL	Kensington Gardens, Murphy Road	Government Library	2.6
11	BDA Complex	NA	EL	BDA Complex Indiranagar, Swami Vivekananda Road	Ulsoor Lake	1.5
12	CMH Park	Indiranagar (PH-1) Connect with elevated Skywalk	EL	CMH Park Indiranagar, Intermediate Ring Road	BDA Complex	1.1
13	Doopanahalli	NA	EL	Doopanahalli Bus Stop, Intermediate Ring Road	CMH Park	1.7
14	Embassy Golf Link (EGL)*	NA	EL	EGL Gate, Hero Honda Stop, Intermediate Ring Road	Doopanahalli	1

Metro ST Details - Total 37KMs

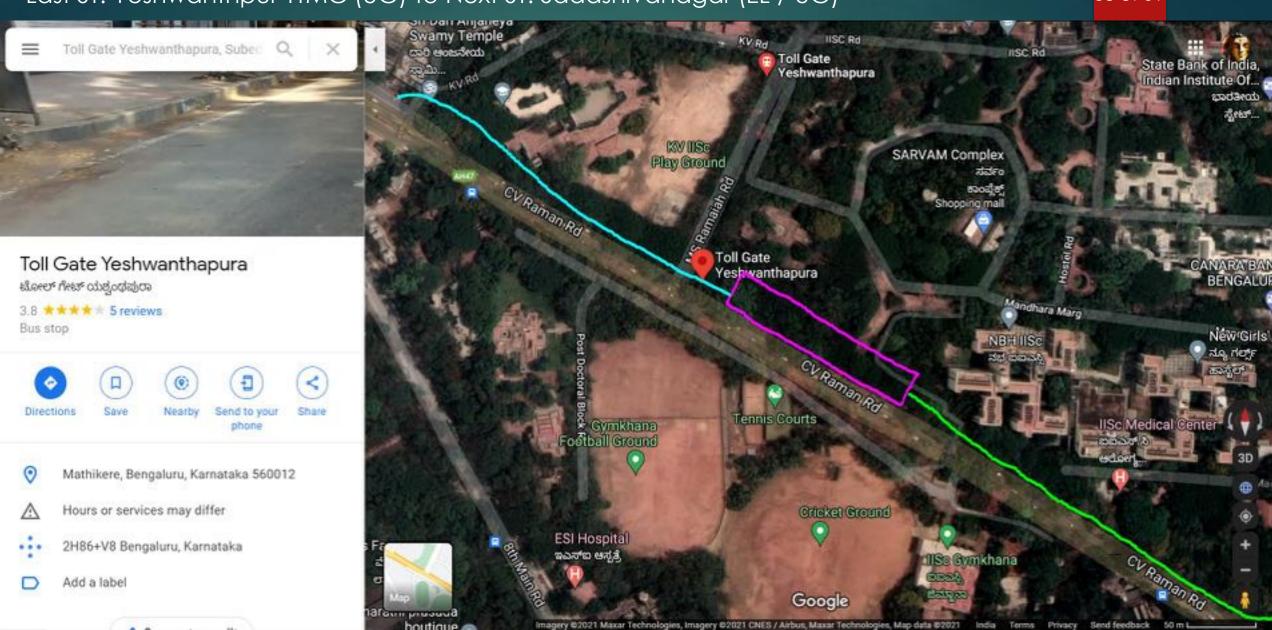
ST #	Metro ST	Interchange ST	ST Type	ST Location	Previous ST	ST Distance KMs
15	Koramangala	NA	EL	St.John's Medical College Sports Ground, Near St. Johns Hospital Madivala Junction	Embassy Golf Link (EGL)	5
16	Forum Mall	NA	EL	Forum Mall, Hosur Main Road	Koramangala	1
17	Dairy Circle	Dairy Circle (PH-2)	EL	ITI College (or) Dharmaram College, Hosur Main Road	Forum Mall	1
18	Wilson Garden (Optional)	NA	EL (Only)	Lalbag Siddapura, Siddapura Road, Near Karumariamman circle	Dairy Circle	1.6*
19	Teachers College	Lalbagh (PH-1) Connect with elevated Skywalk	UG / EL	Teachers College Circle, Opposite RV Teachers College	Dairy Circle / Wilson Garden (Optional)	2.8 / 1.7*
20	Bull Temple / BMS College	NA	UG	Bugle Rock Park, Opposite BMS College for Women	Teachers College	1.3
21	Kempambudhi	NA	UG	Rajiv Gandhi Sports Complex	Bull Temple / BMS College	2.3
NA	SMK Fashion*	NA	UG	Jadeedh Eidgah Mysore Road	Kempambudhi	(0.8)



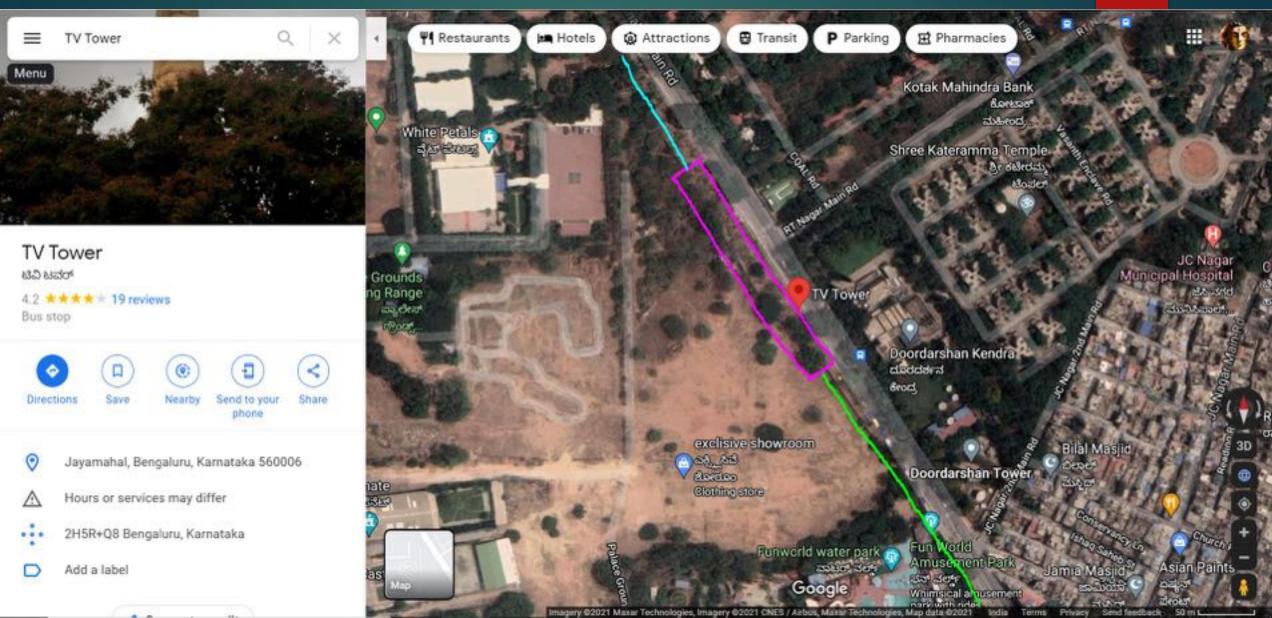
Possible Approach / Retract Locations for EL and UG Routes



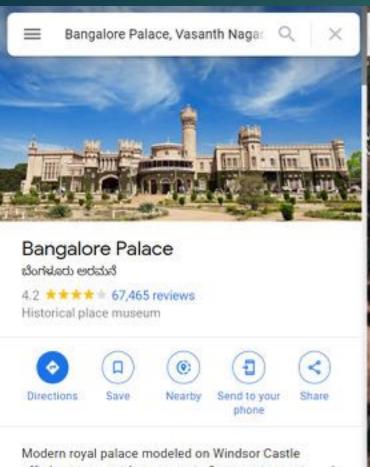
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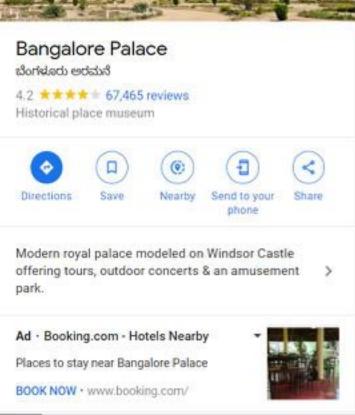


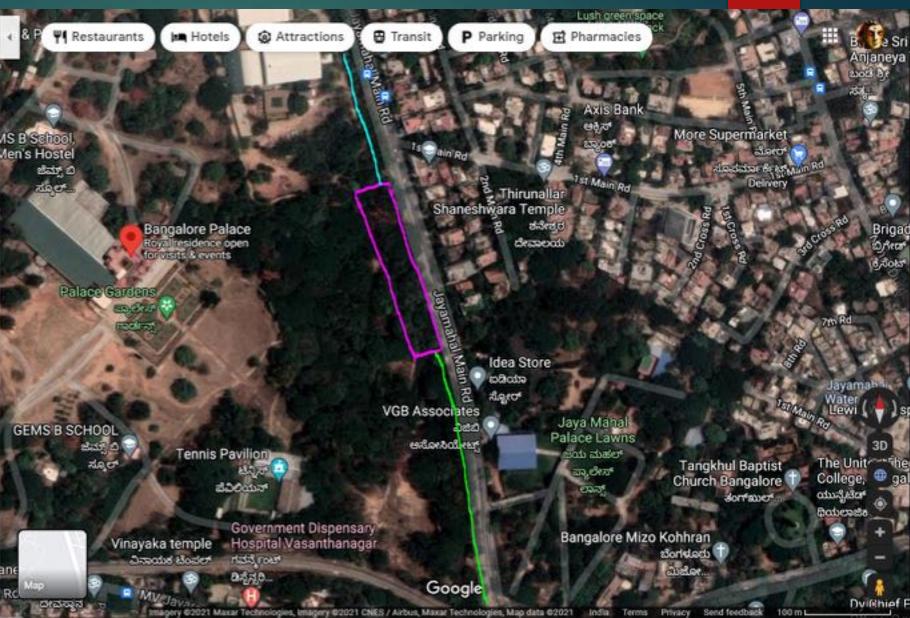
Location#2: TV Tower Bus Stop, Palace Ground, Opposite Doordarshan Kendra, Jayamahal <mark>Main R</mark>oad Location Type: Retract / RT Type: Underground (UG) to Elevated (EL)
Last ST: Mekhri Circle (UG / EL) / Next ST: Jayachamarajendra Nagara, JC Nagara (EL / UG) 39 of 61



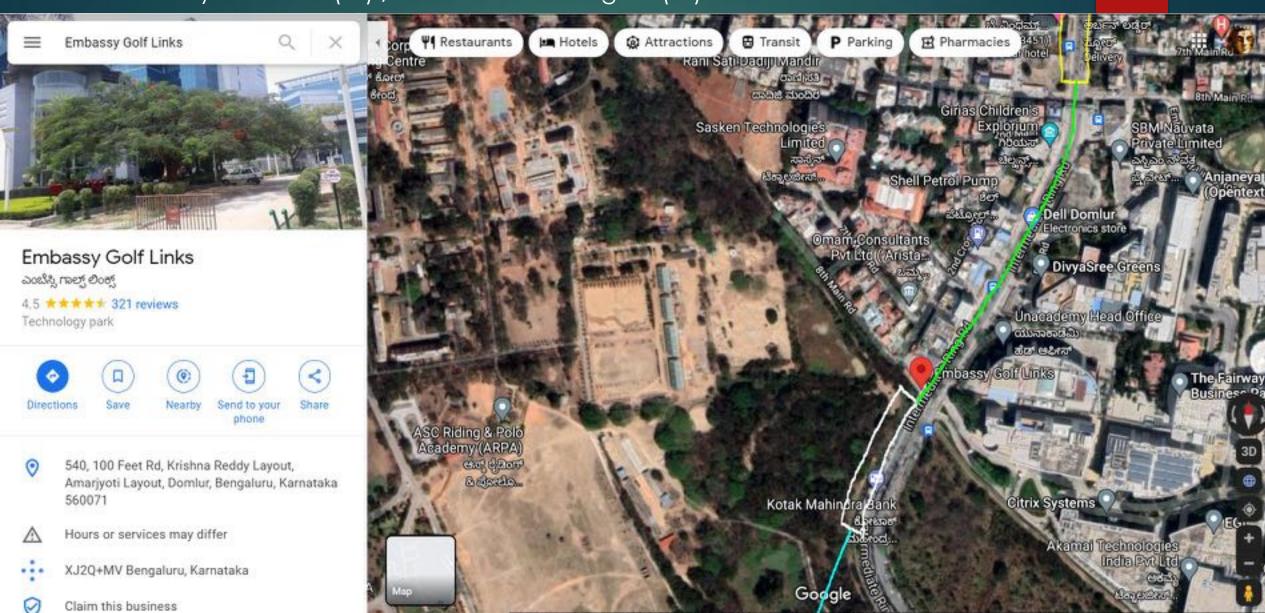
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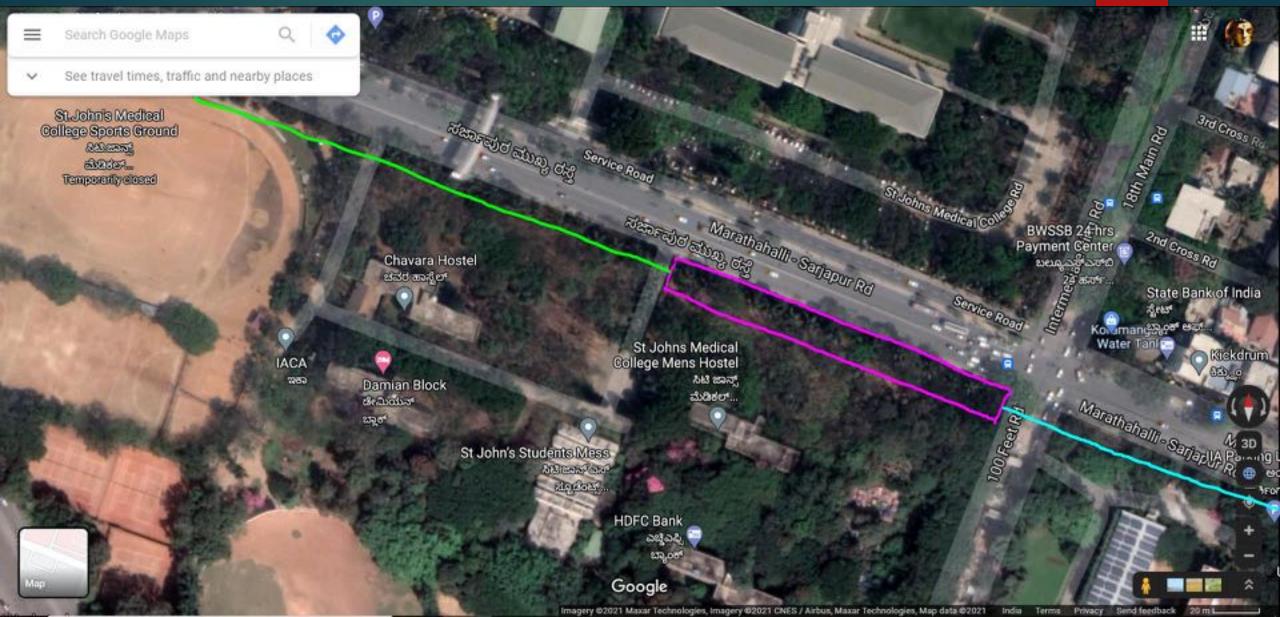




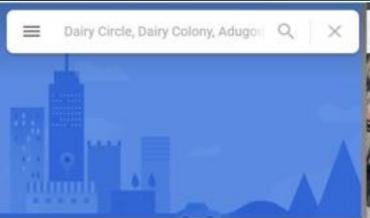
Location#4: After Embassy Golf Links Business Park, Army Service Corps (ASC), Intermediate Ring Road Location Type: Approach / RT Type: Elevated (EL) to Underground (UG)
Last ST: Embassy Golf Links (EL) / Next ST: Koramangala (EL)



Location#5: After Koramangala Water Tank signal, St Johns Medical College Mens Hostel, Sa<mark>rjapur</mark>a Road Location Type: Retract / RT Type: Underground (UG) to Elevated (EL)
Last ST: Embassy Golf Links (EL) / Next ST: Koramangala (EL)



Location#6: Parking area, Pavilion 1, Nimhans, Before NIMHANS convention Centre, Lakkasandra Location Type: Approach / RT Type: Elevated (EL) to Underground (UG) 43 of 61 Last ST: Dairy Circle (EL) / Next Station: Teachers College (or) Lalbagh Metro ST Interchange (UG)



Pavilion 1, NIMHANS

ಪೆವಿಲಿಯನ್ 1, ನಿಮ್ಮಾನ್ಸ್ Hospital









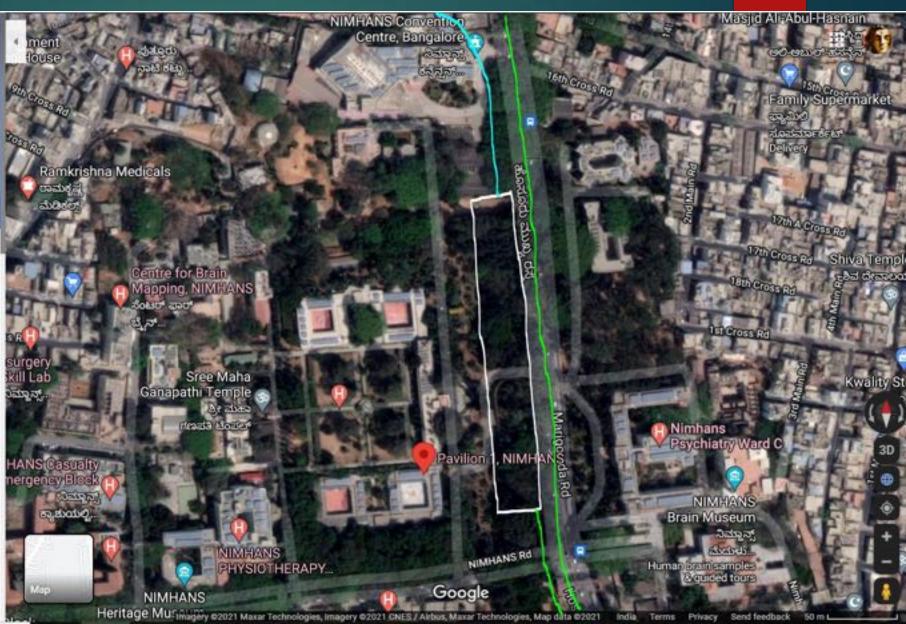
Share

COVID-19 alert

As per the MoHFW's guidelines, patients who are clinically assigned to be mild/asymptomatic are recommended for home isolation. Learn more



WHRW+6M Bengaluru, Karnataka



Location#7: MN Krishna Rao Park, BP Wadia Road, Basavanagudi Location Type: Approach / RT Type: Elevated (EL) to Underground (UG)

Last Station: Lalbagh Metro ST interchange (EL) / Next Station: Bull Temple / BMS College metro ST (UG)



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4.7 *** * 97 reviews Gym











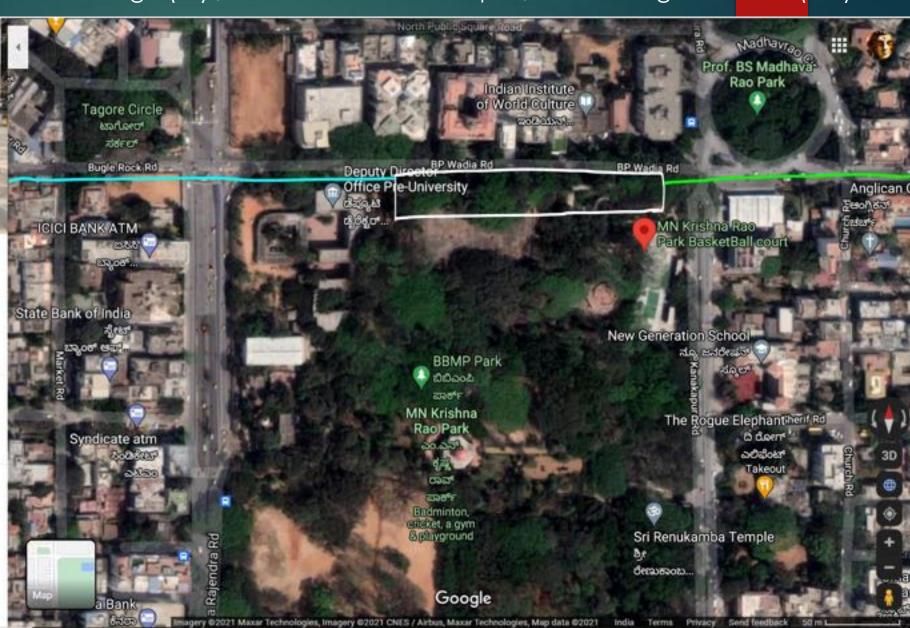


137, Kanakapura Rd, 2nd Block, 7th Block, Jayanagar, Bengaluru, Karnataka 560011, Kanakapura Rd, 2nd Block, 7th Block, Javanagar, Bengaluru, Karnataka 560011

Located in: M.N. Krishna Rao Park

Closed. Opens at 6:00 am v





Possible Approach/Retract Locations

Loc #	Location Type	Location	Last ST	Next ST	Last RT Type	Next RT Type	Alternate RT (Y/N)	Alternate RT Type
1	Retract	Tollgate Yeshwanthpur, R Block Hostel, IISC Campus, CV Raman Rd	Yeshwanthpur TTMC	Sadashivanagar	UG	EL	Yes	UG
2	Retract	TV Tower Bus Stop, Palace Ground, Opp. Doordarshan Kendra, Jayamahal Main Road	Mekhri Circle	JC Nagara	UG	EL	Yes	UG
3	Retract	Palace Ground, Opp. Jayamahal Palace	JC Nagara	Cantonment	UG	EL	No	NA
4	Approach	After Embassy Golf Links Park, Army Service Corps (ASC) Centre Intermediate Ring Road	Embassy Golf Links (EGL)	Koramangala	EL	UG	No	NA
5	Retract	After Koramangala Water Tank signal, St Johns Medical College Mens Hostel, Sarjapura Main Road	Embassy Golf Links (EGL)	Koramangala	UG	EL	No	NA

Possible Approach/Retract Locations

Loc #	Location Type	Location	Last ST	Next ST	Last RT Type	Next RT Type	Alternate RT (Y/N)	Alternate RT Type
6	Approach	Parking area, Pavilion 1, Nimhans, Before NIMHANS convention Centre, Lakkasandra	Dairy Circle metro ST Interchange	Wilson Garden (Optional) / Lalbagh metro ST Interchange	EL	UG	Yes	EL (Optional Station)
7	Approach	MN Krishna Rao Park, BP Wadia Road	Lalbagh metro ST Interchange	Bull Temple Metro ST / BMS College Metro ST	EL	UG	No	NA

Note:

- *Possible Approach/ Retract Locations are tentative locations which are identified for representation purpose only'
- BMRCL could covert from Approach / Retract locations to ST locations and vice versa based on situations i.e. land issues, cost saving etc..
- BMRCL may deviate from proposed plan by continuing with same RT type even though plan suggests for Approach/Retract. This would yield BMRCL to think and act smartly based on situations i.e. choosing different RT and ST type than proposed, land issues, cost saving etc..

Property Acquisition for ST's and Approach / Retract Location (UG and EL)

Property Acquisition Type – ST's (EL / UG)

ST #	Metro ST	ST Type	ST Point	Alternate ST Type Yes/No	Dedicated Property* Acquisition	Property Acquisition Type	Land Acquisition entity
1	Magadi Road Tollgate	UG	Prameelabhai Mane BBMP High School ground	No	Yes	Government	ВВМР
2	Dhobi Ghat Junction	UG	BESCOM Rajajinagar Storage yard	No	Yes	Government	BESCOM
3	ISCKON	UG	Kamalammana Gundi (KG) Ground (or) ISKCON Temple Parking	No	Yes	Government / Private	BBMP/ ISCON
4	Yeshwanthpur TTMC	UG	Karle Exports and Gopal Theatre	No	Yes	Government / Private	Railways / Karle Exports & Gopal Theatre
5	Sadashivanagar	EL	CPRI Campus	Yes	Yes	Government	CPRI
6	Mekhri Circle	EL	Palace Grounds	Yes	Yes	Government	Pramoda Devi, Wadiyar
7	JC Nagara	EL	Funiture world ground, Opp. Snow City Jayamahal Main Road	Yes	Yes	Private	Fun world
8	Cantonment	EL	Millers Road	No	No	Government	ВВМР

Property Acquisition Type - ST's (EL / UG)

ST #	Metro ST	ST Type	ST Point	Alternate ST Type Yes/No	Dedicated Property* Acquisition	Property Acquisition Type	Land Acquisition entity
9	Government Library	EL	Millers Road	No	No	Government	ВВМР
10	Ulsoor Lake	EL	Murphy Road	No	No	Government	ВВМР
11	BDA Complex	EL	Swamy Vivekananda Road	No	No	Government	ввмр
12	CMH Park	EL	100 Ft Road, CMH Park	No	No	Government	ВВМР
13	Doopanahalli	EL	100 Ft Road	No	No	Government	ВВМР
14	Embassy Golf Link (EGL)*	EL	100 Ft Road	No	No	Government	ввмр
15	Koramangala	EL	St.John's Medical College Sports Ground, Near St. Johns Hospital Madivala Junction	No	Yes	Private	St. Johns Medical College
16	Forum Mall	EL	Hosur Main Road	No	No	Government	ВВМР

Property Acquisition Type - ST's (EL / UG)

ST #	Metro ST	ST Type	ST Point	Alternate ST Type Yes/No	Dedicated Property* Acquisition	Property Acquisition Type	Property Acquisition entity
17	Dairy Circle	EL	ITI College (or) Dharmaram College, Hosur Main Road	No	Yes	Government / Private	ITI College / Dharmaram College
18	Wilson Garden (Optional)	EL	Lalbag Siddapura, Siddapura Road, Near Karumariamman circle	Near No Yes Governmen		Government	Lalbagh
19	Teachers College	EL	Kanakapalya Road (Dedicated portion opposite RV College)	Yes	No	Government	ввмр
20	Bull Temple / BMS College	UG	Bungle Rock Park, Bungle Rock Road	No	Yes	Government	ввмр
21	Kempambudhi	UG	Rajiv Gandhi Sports Complex Ground	No	Yes	Government	ВВМР

Note:

- *Dedicated Property includes complete 'Land parcel, empty land, Garden and constructed building'
- ☐ Most of the EL ST's are primarily planned on road networks, but may require minimal acquisitions from adjacent properties i.e, Government or Private.
- □ EL ST's have been avoided at narrow roads with busy traffic. Alternative locations have been chosen.

Property Acquisition Type – Approach and Retract Locations

#	Location Type	Location Point	Last RT Type	Next RT Type	Alternate RT Type Yes/No	Dedicated Property* Acquisition	Property Acquisition Type	Property Acquisition entity
1	Retract	After Tollgete Yeshwanthpura, R Block Hostel, IISC Campus, CV Raman Rd	UG	EL	Yes	Yes	Government	IISC
2	Retract	TV Tower Bus Stop, Palace Ground, Opp. Doordarshan Kendra, Jayamahal Main Road	UG	EL	Yes	Yes	Government	Pramoda Devi, Wadiyar
3	Retract	Palace Ground, Opp. Jayamahal Palace	UG	EL	No	Yes	Government	Pramoda Devi, Wadiyar
4	Approach	After Embassy Golf Links Business Park, Army Service Corps (ASC) Riding Polo Academy, Intermediate Ring Road	EL	UG	No	Yes	Government	Army Service Corps (ASC)

Property Acquisition Type – Approach and Retract Locations

#	Location Type	Location Point	Last RT Type	Next RT Type	Alternate RT Type Yes/No	Dedicated Property* Acquisition	Property Acquisition Type	Property Acquisition entity
5	Retract	After Koramangala Water Tank signal, St Johns Medical College Mens Hostel, Sarjapura Main Road	UG	EL	No	Yes	Private	St. Johns Medical College
6	Approach	Parking area, Pavilion 1, Nimhans, Before NIMHANS convention Centre, Lakkasandra	EL	UG	Yes (Optional Station)	Yes	Government	NIMHANS
7	Approach	MN Krishna Rao Park, BP Wadia Road	EL	UG	No	Yes	Government	ВВМР
8	TBM Check-in/ Checkout	SMK Fashion, Parking area, Jadeedh Eidgah Mysore Road	UG	UG	No	Yes	Private	Jadeedh Eidgah Mysore Road

Project Highlights (IRM)

Project Highlights

Inner Ring Metro (IRM) would be determined based of four important pillars

□ Acquisition:

Tentative plan on IRM has been designed with total 21 stations. Out of, 6 ST's have been planned to build with UG, 4 ST's either with EL or UG and finally 11 ST's are with EL. As most of ST's build under EL type, amount of acquisitions would come down significantly where most of them builds on the road network with minimal land acquisitions. Apart from that, most of ST's including EL or UG have been located at (or) adjacent to government entities. Hence land acquisitions by BMRCL may not face hurdles by considering better co-ordination and government assistance.

□ Ridership:

A Study by Civic Engineering Department of IISC, IRM has potential to increase the overall ridership of Namma Metro from 8 Lakh to 15.2 Lakh once under construction and when proposed metro lines are ready. The study finds that there will be nearly 77% increase in the ridership with addition of IRM to existing, under construction and proposed line, totaling 169 KM's at Business As Usual (BAU) scenario". The share of private models (Car and two Wheeler) would have decreased by 22% in 2030. There is about 9% increase in non-motorized transport users. Once IRM is integrated to overall metro network, the maximum PPHPD would go upto 48,425 between ST's of Whitefield and Ujjwal where 33,016 on IRM between Hosahalli and Pandarayanapura ST (Nearest ST is Kempambudhi). On the IRM's Yeshwantpur–Sandal Soap Factory–IISc stretch alone, the PPHPD would be 24,477. IRM would have 6 coach trains with capacity of 69,000 PPHPD.

Project Highlights

□ Environment:

IRM is promising plan to massive shift of regular commuters from fossil fuels to green transport which not only reduce traffic congestion, but also pollution levels. Analyzing the environmental benefits of the IRM, the IISC study found that the total per capita CO² emissions would be reduced due to ridership shift to the metro. "An 11% decline in fuel consumption in IRM scenario is observed due to sizeable modal shift.

□ Viability:

Bengaluru with a population more than 12 Million, currently it has metro network spreading across of 48 KM's out of which 42 KM's from Phase-1. The BMRCL has been constructing a 72-KM Metro network, which is expected to ready by 2023-24 under Phase-2. Union Government has been already approved Phase -2A and 2B of another 58 KM's metro network from Central Silk Board to Kempegowda International Airport (KIA) via KR Puram where land acquisitions have almost completed and it's currently under tender stages. So it's expected to complete at another 5 years. There is however, massive demand to expand the Metro lines quickly as population of Bengaluru is expected cross 20.3 Million by 2031 as per revised Bengaluru Masterplan 2031. This essentially requires robust network of IRM which connects existing metro network, prime commercial and educational hubs with dense population helps to reduce congestion of core areas. IISC Study says 'Since all the current phases of the metro would be completed and six-coach trains would be running with maximum capacity, the "IRM line can ply almost with 50% of its capacity in the year 2030 itself," the study says.

Assumption:

PPP / CSR Mode:

Though Metro Rail Policy 2017 mandates to explore Private participation or Public Private Participation (PPP) either for complete provisioning of metro rail or for some unbundled components will form an essential requirement for all metro rail project proposals seeking central financial assistance. Hence it's believed that IRM would be blessed with PPP participation at feasible opportunity.

■ Embassy Group:

Embassy group is pioneering real estate company based out of Bengaluru with areas of Commercial, Residential, Hospitality and Industrial parks. Embassy is also known for Real Estate Investment Trust (REIT), is the first real estate firm to file REIT, in partnership with Blackstone. As Embassy developed and managing multiple popular business Parks around the city sparked Bengaluru to be home of fortune 500 companies. Embassy group has been immensely contributed to develop and manage Metro ST of Kadubeesanahalli of PH-2A, Bettahalasuru of PH-2B with associated rights. So it's believed that Embassy group would also sponsor to develop and manage Metro ST close to it's one of business parks of proposed IRM network. This would be mutually benefitted to Embassy office Parks and BMRCL to work under PPP/CSR

- ✓ Proposed Metro ST: Embassy Golf Links (EGL)
- ✓ Landmark: Embassy Golf Links Business Park, 65 Acres with 4.5 Million Sq. Ft of fully developed office Park
- ✓ Benefits to Embassy Gp: Branding, advertisement, direct access and Commercial development of ST

Suggestion:

Inner Ring Metro (IRM)- Reach-2 or 3, is having significant importance with other two reaches of Phase-3 i.e,

■ JP Nagar to Hebbal: Reach-1

Integrate with Phase-1 at JP Nagar Metro ST Interchange as first point and Phase-2B at Hebbal Metro ST Interchange as last point, assures circular metro network along ORR which covers premier IT corridor with multiple tech Parks and IT SEZ units of the city. Hence implementing JP Nagar to Hebbal metro route as **Reach-1**, which eases traffic at core areas of city since regular commuters utilize ORR metro network to reach one end of city to other end instead of usage own vehicles. This reduction in traffic of one commuter section at core areas helps to execute IRM of EL routes with lesser vehicular density while UG routes of IRM continue to execute along Reach-1

Magadi Road Tollgate to Kadabagere: Reach-2 or 3

Integrate with Phase-1 at Hosahalli Metro ST Interchange and Phase-3 at Magadi Road Tollgate of IRM as both are first point. Traditionally Tollgate junction is higher traffic zone and surrounding areas thickly populated areas which doesn't have suitable options to build separate metro ST's dedicated for Reach 2 and Reach 3 at different locations. Hence It's practical to choose same location to build interchange ST (both) of Reach-2 and Reach-3 with combination of either UG (IRM) and EL (Tollgate to Kadabagere) (or) UG and UG (both) by acquiring an additional surrounding areas of 'Prameelabhai Mane BBMP High School'. This significantly reduces cost, time and risk of traffic disruption.

Suggestion:

Inner Ring Metro (IRM)- Reach-2 or 3, is having significant importance with pink line of Phase-2 i.e,

Cantonment Metro St to Bamboo Bazaar Metro ST interchange:

Actually BMRCL earlier planned to build MT station at Cantonment Railway station exactly at it's front under PH-2. Later BMRCL revised it's plan to shift Metro ST at Abdul Bari's High School Ground at Bamboo bazar due to land availability and route alignment issues. As this revision of plan made controversial and rail commuters demanded to bring ST back at Cantonment Railway ST. Later BMRCL decided to build Skywalk to connect Cantonment railway Station and Bamboo Bazaar Metro ST with distance of at least 1.2KM's from Main entrance of Cantonment Railway Station which is expensive to acquire land/build and longer distance to reach nearest metro ST at Bamboo Bazar. This also intended to failure as it's practically non feasible for commuters to effectively utilize multi model integration from railway network to Metro rail system due to long commuting duration and unfavorable nature of connectivity.

Hence at IRM has been planned to accommodate two EL metro stations which is one at Cantonment Railway station at Millers Road and another at "Bamboo Bazaar metro ST Interchange" at Government Library signal with travelling distance of 1.1KM which is shorter than skywalk distance which is planned by BMRCL. Fortunately the distance from IRM ST of Elevated type at government library (PH-3) to Bamboo Bazar Metro ST of Underground type (PH-2) is just 150 Meters and could be connected with Elevated Skywalk. Hence with proper planning and comfortable connectivity, BMRCL could eliminate unnecessary and expensive Skywalk and fulfills long pending demands of citizens.

Conclusion

This is tentative route plan and has been prepared by considering both virtual and mostly with actual physical conditions. Though this route plan may not be precise at all factors in BMRCL view, but surely it assures significant knowledge based on practical scenarios. Since core of the city especially southern part of Inner Ring Metro (IRM) is thickly populated areas and it's highly complicated to identify suitable locations for stations and routes by considering several factors i.e. length of stations, orientation of stations, distance between stations, minimum radius of routes, consideration of elevated or underground stations and approaching (or) retract locations for elevated or underground routes. Also this route plan has been striving to implement 'Comprehensive mobility plan' (CMP) of new Metro rail policy 2017 by connecting existing metro stations which already took shape at Phase-1 and 2. By taking an account of all factors, this route plan has been brought out with highest possible manner by fine tuned at liberal timeframe.

Inner Ring Metro is crucial for Bengaluru to address the challenges faced by citizens and government on everyday life. Hence BMRCL should prioritize metro route and take necessary steps to survey suggested routes at earliest in co-ordination with bureaucracy. Since city has narrow roads and depleting land parcels at core areas day by day, it's challenging task to identify suitable locations at right time. Hence BMRCL should initiate to decide an official route as part of phase-3 and freeze the plan of notification of land parcels and acquisitions to be first mover advantage before the commercial exploitation.

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THANK YOU

