



CITYSCAPE QATAR

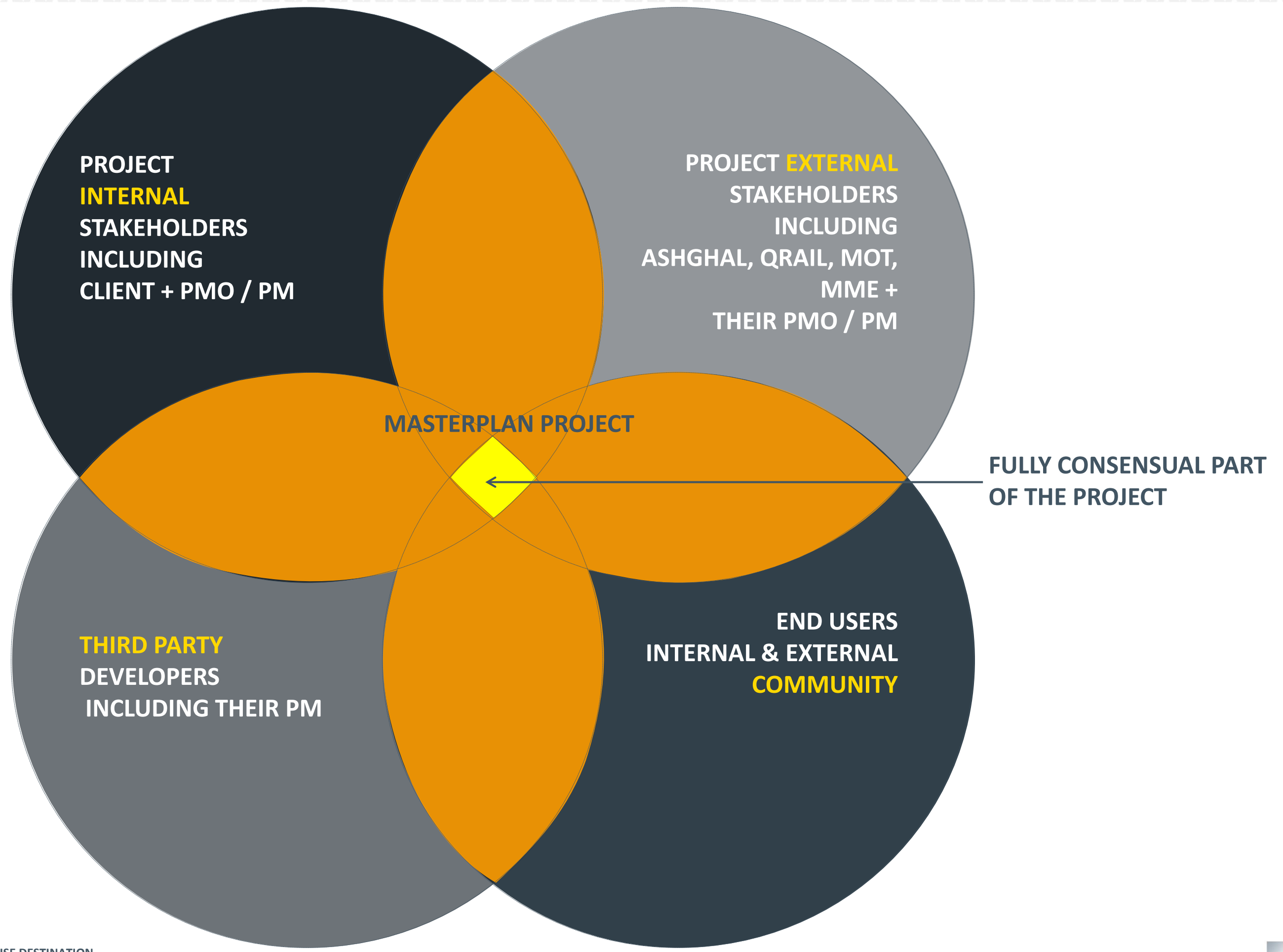
INTEGRATED DELIVERY OF A
MIXED USE DESTINATION

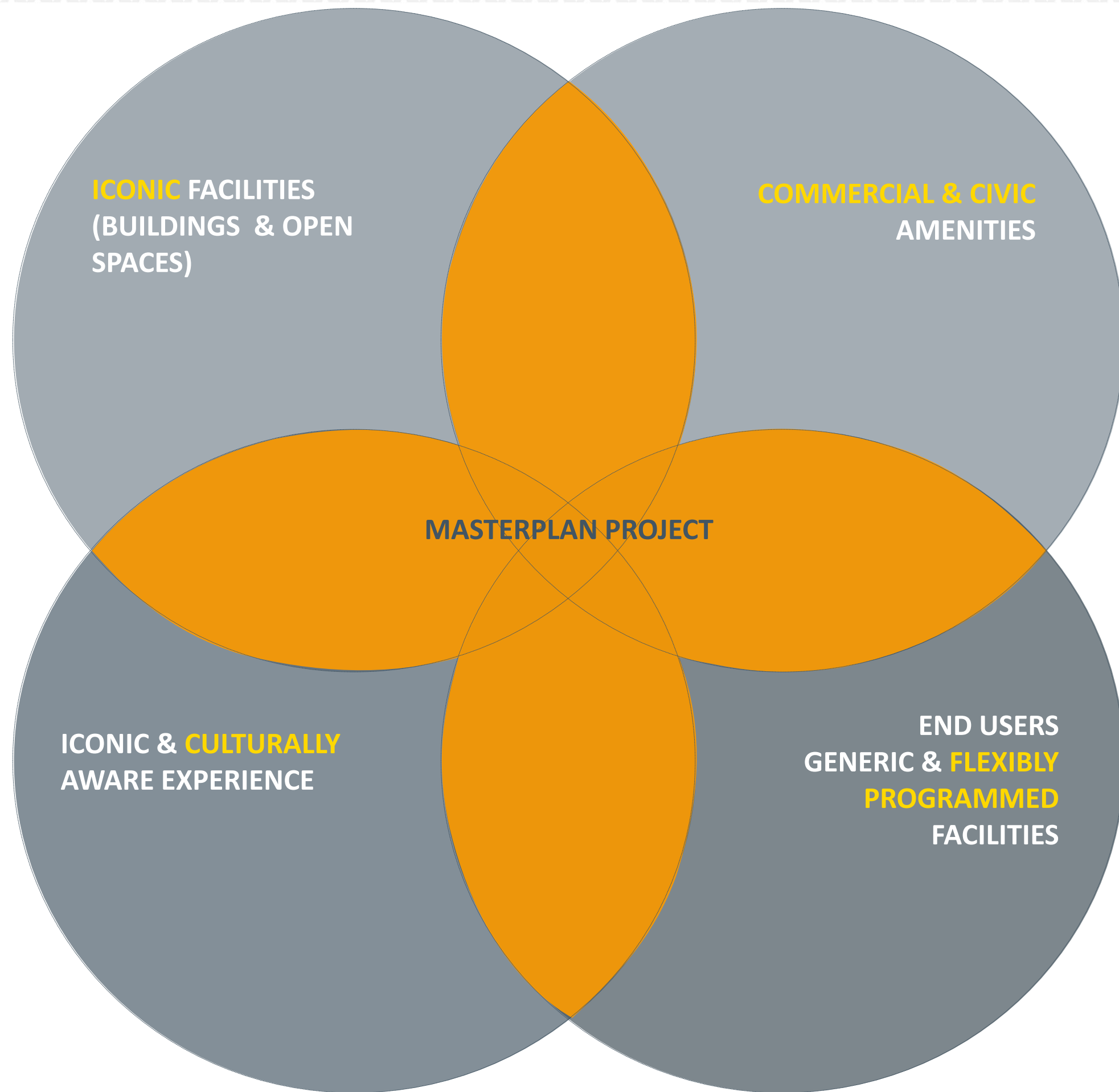
27TH April 2016

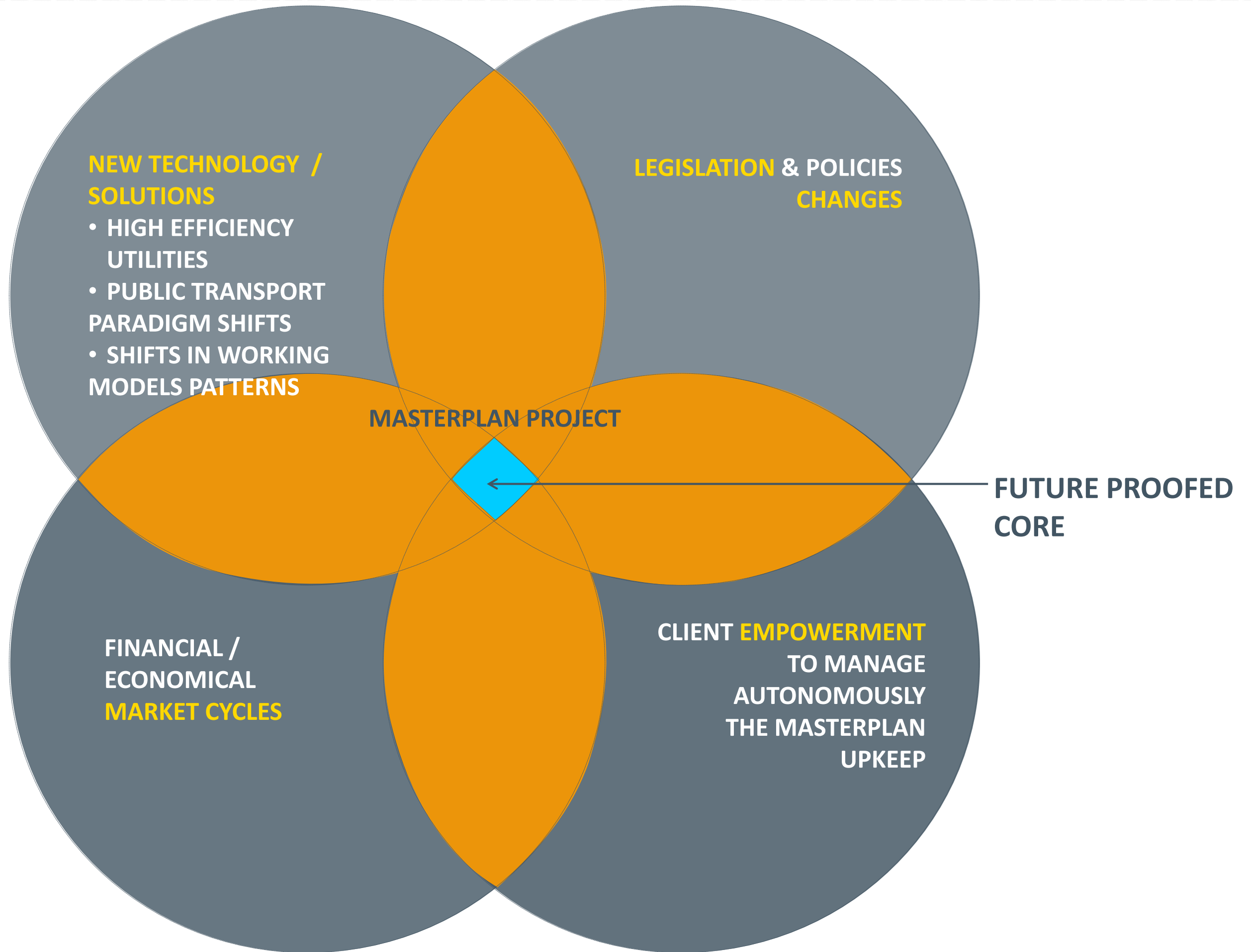
INTEGRATED DELIVERY OF A MIXED USE DESTINATION

- A. Introduction & Common Themes
- B. Highlights on case studies as integrated suite of large scale destinations
 - CASE STUDY EDUCATION CITY
 - CASE STUDY :QATAR ECONOMIC ZONES
- C. Dynamic engagement of client and external stakeholders
- D. Conclusions - by Fahad Al Jahrami

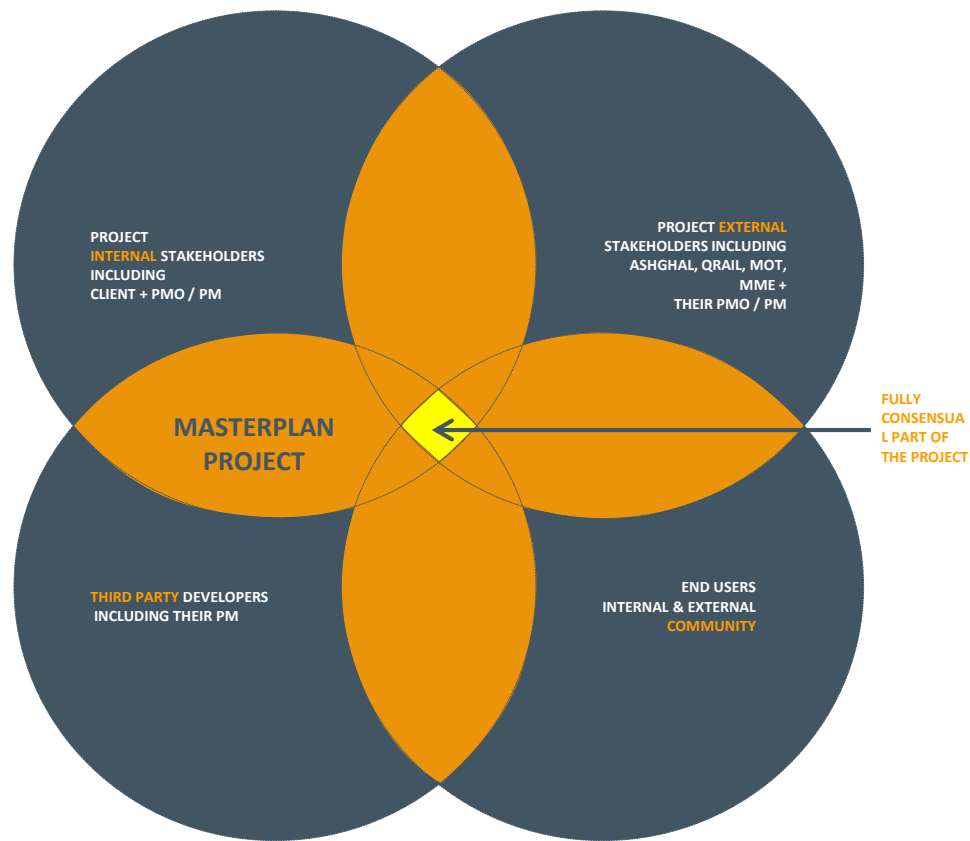
A. INTRODUCTION



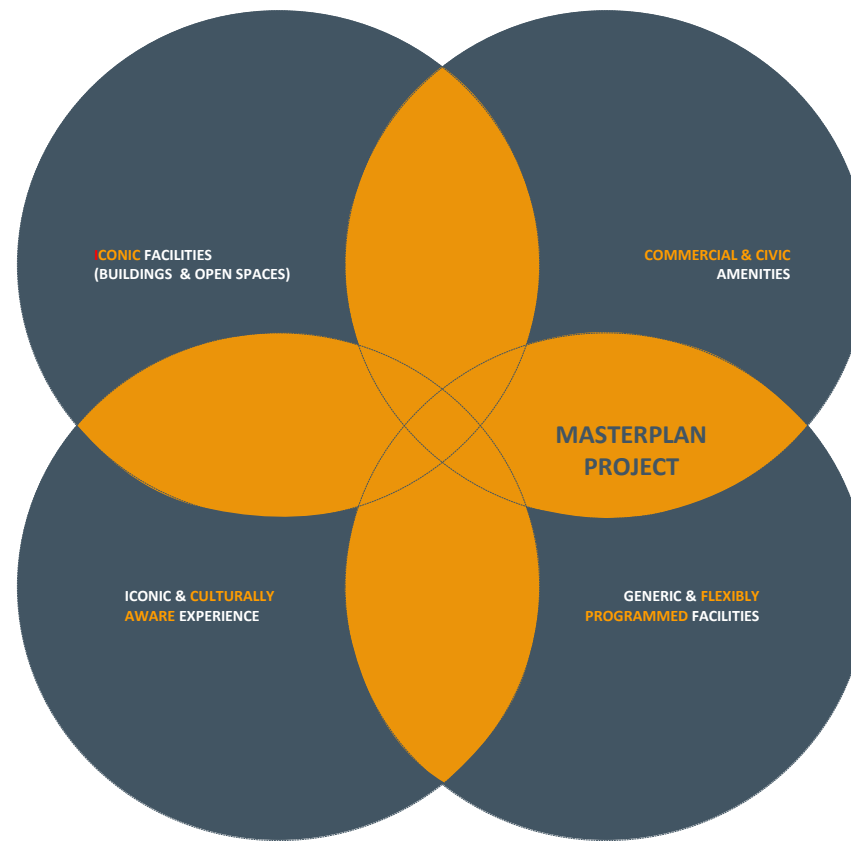




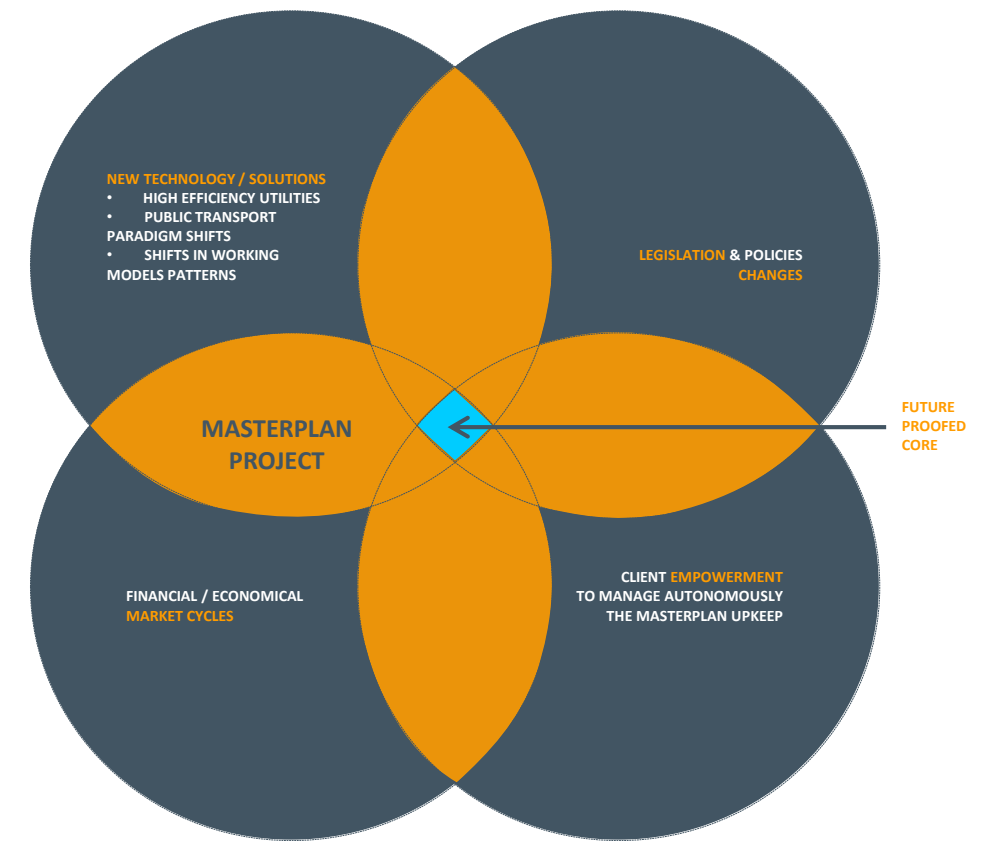
DELIVERY / MANAGEMENT & ENGAGEMENT



DESTINATION / MIX & USABILITY



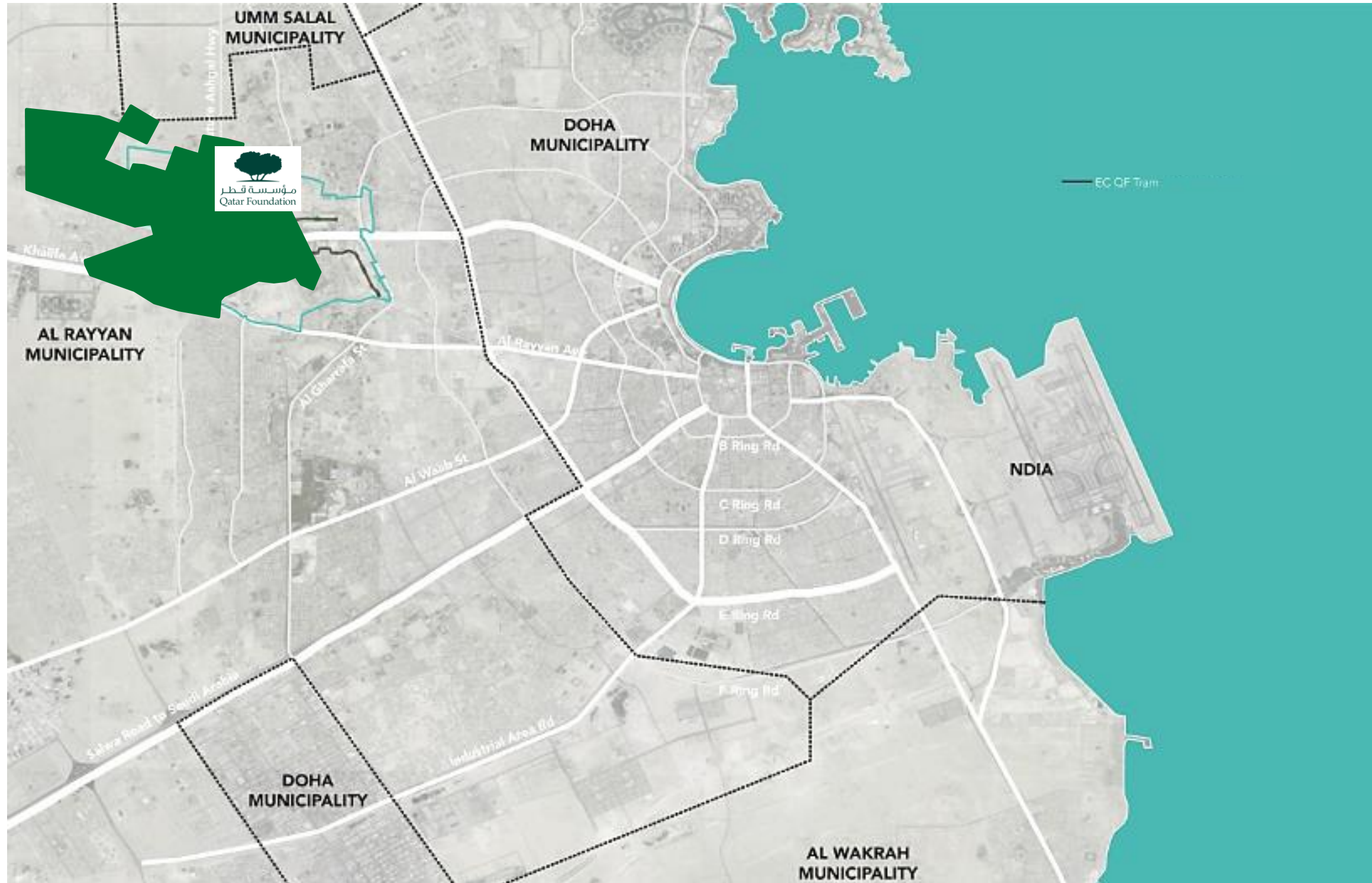
FUTURE PROOFING THE MASTERPLAN / SUSTAINABILITY OF PROJECTS



B. HIGHLIGHTS ON CASE STUDIES AS INTEGRATED SUITE OF LARGE SCALE DESTINATIONS

CASE STUDY EDUCATION CITY

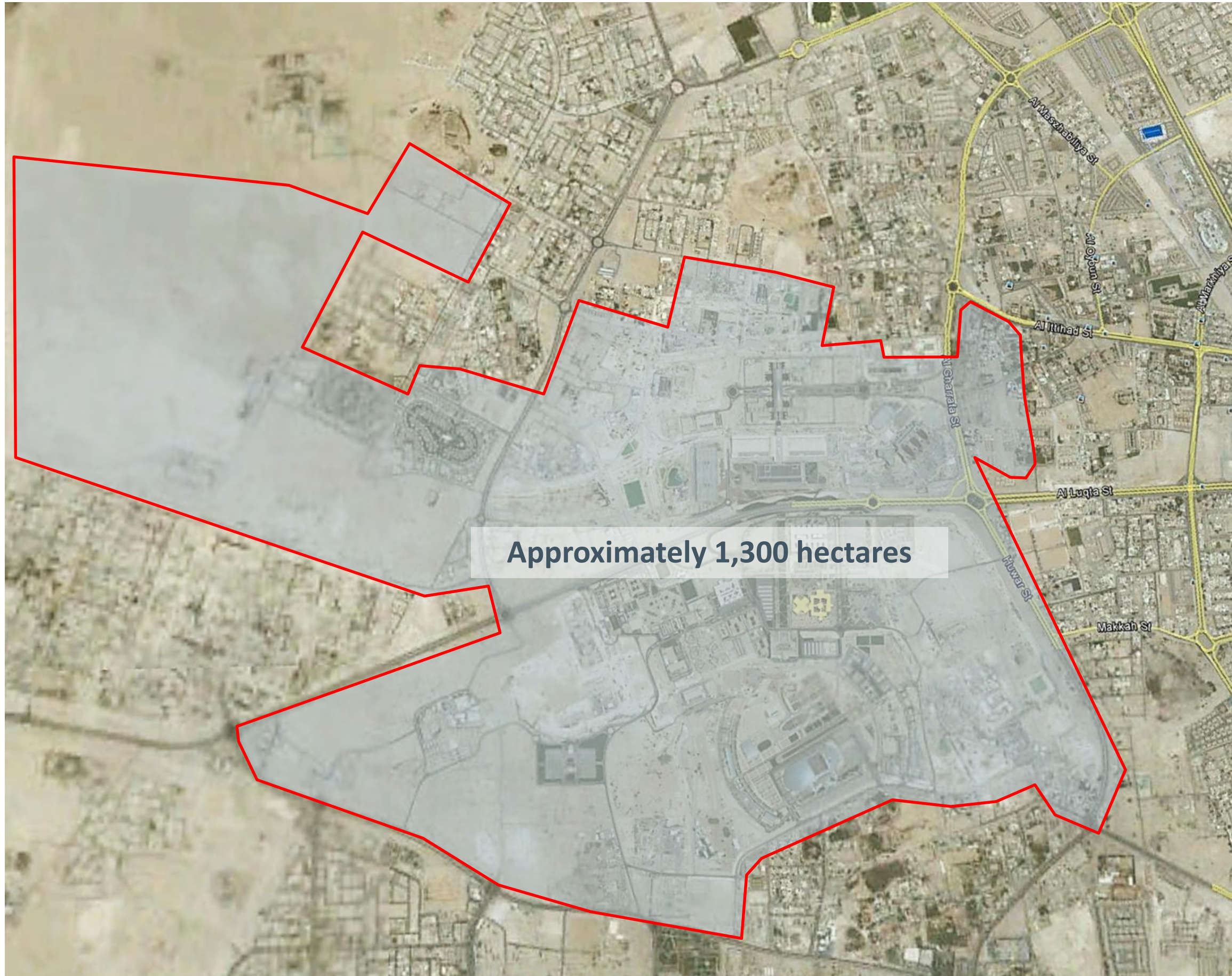
EDUCATION CITY IN RELATION TO DOHA CITY



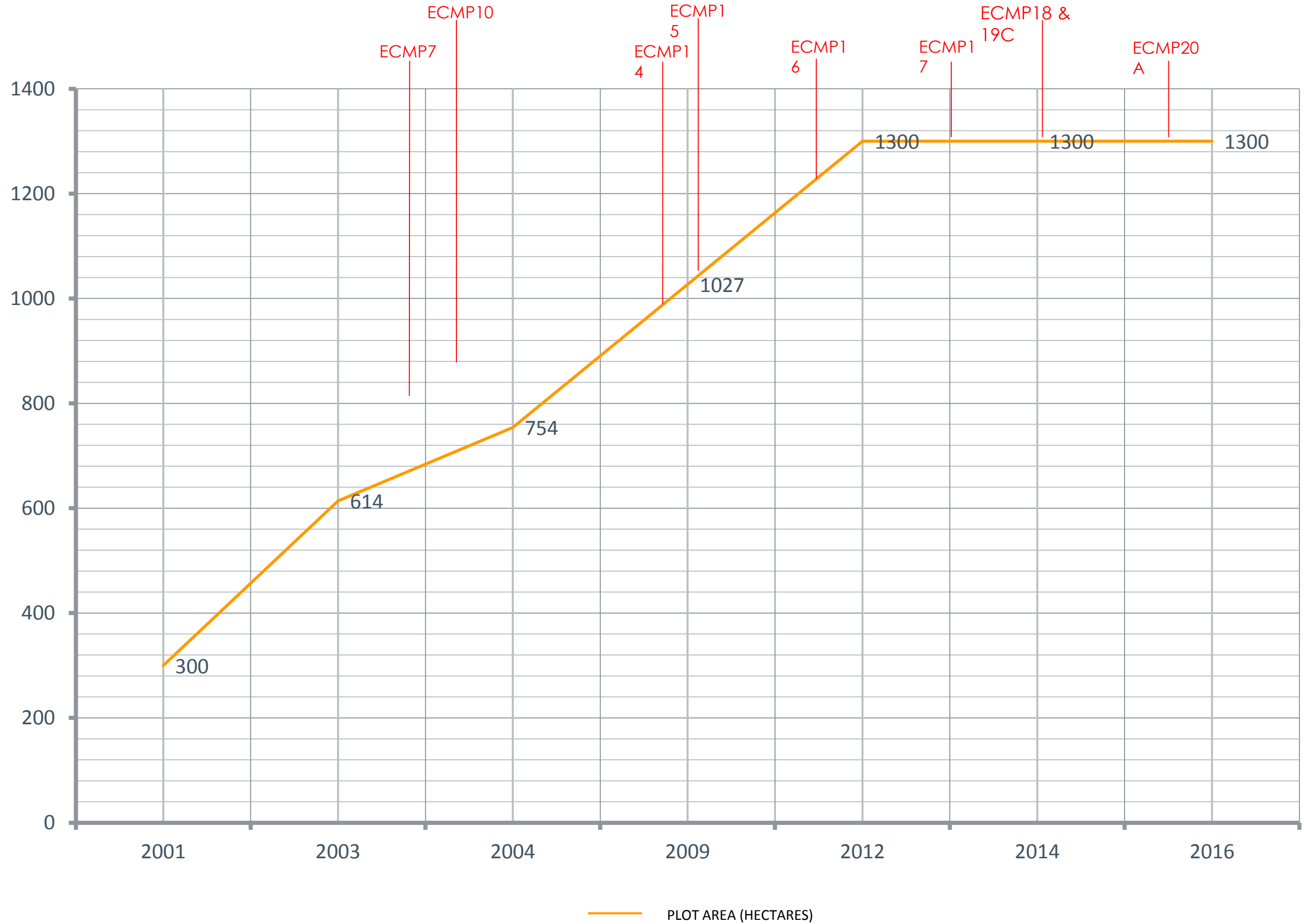






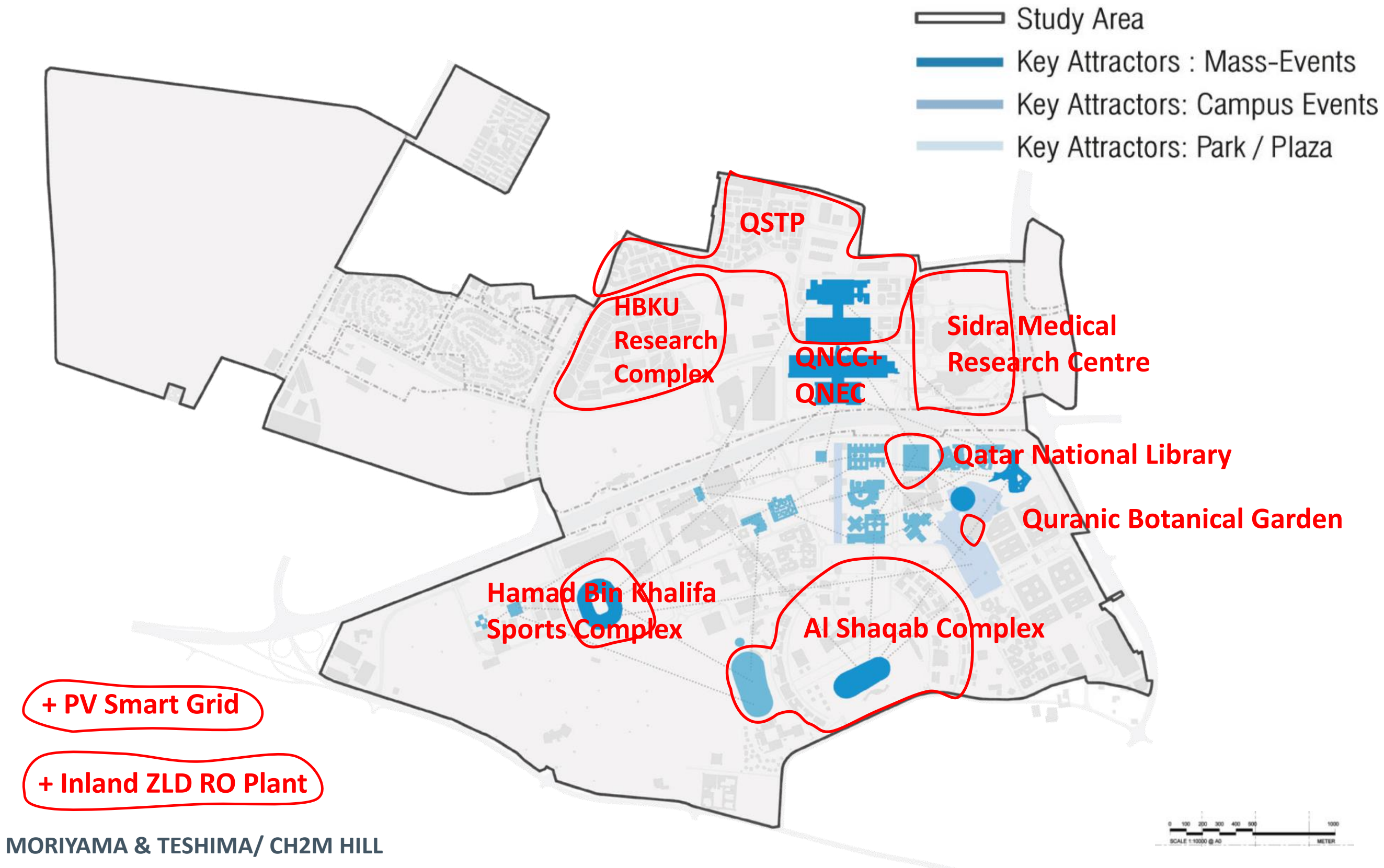


EDUCATION CITY LAND EXPANSION (HA / YEAR)





KEY ATTRACTORS



MORIYAMA & TESHIMA/ CH2M HILL



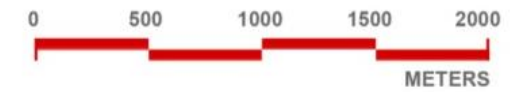
QATAR EDUCATION CITY

SCALE COMPARISON:

- Education City
- State of Vatican City Territory
- New York Manhattan Downtown
- London Olympic Park



STATE OF VATICAN CITY TERRITORY



MANHATTAN DOWNTOWN AREA, NEW YORK



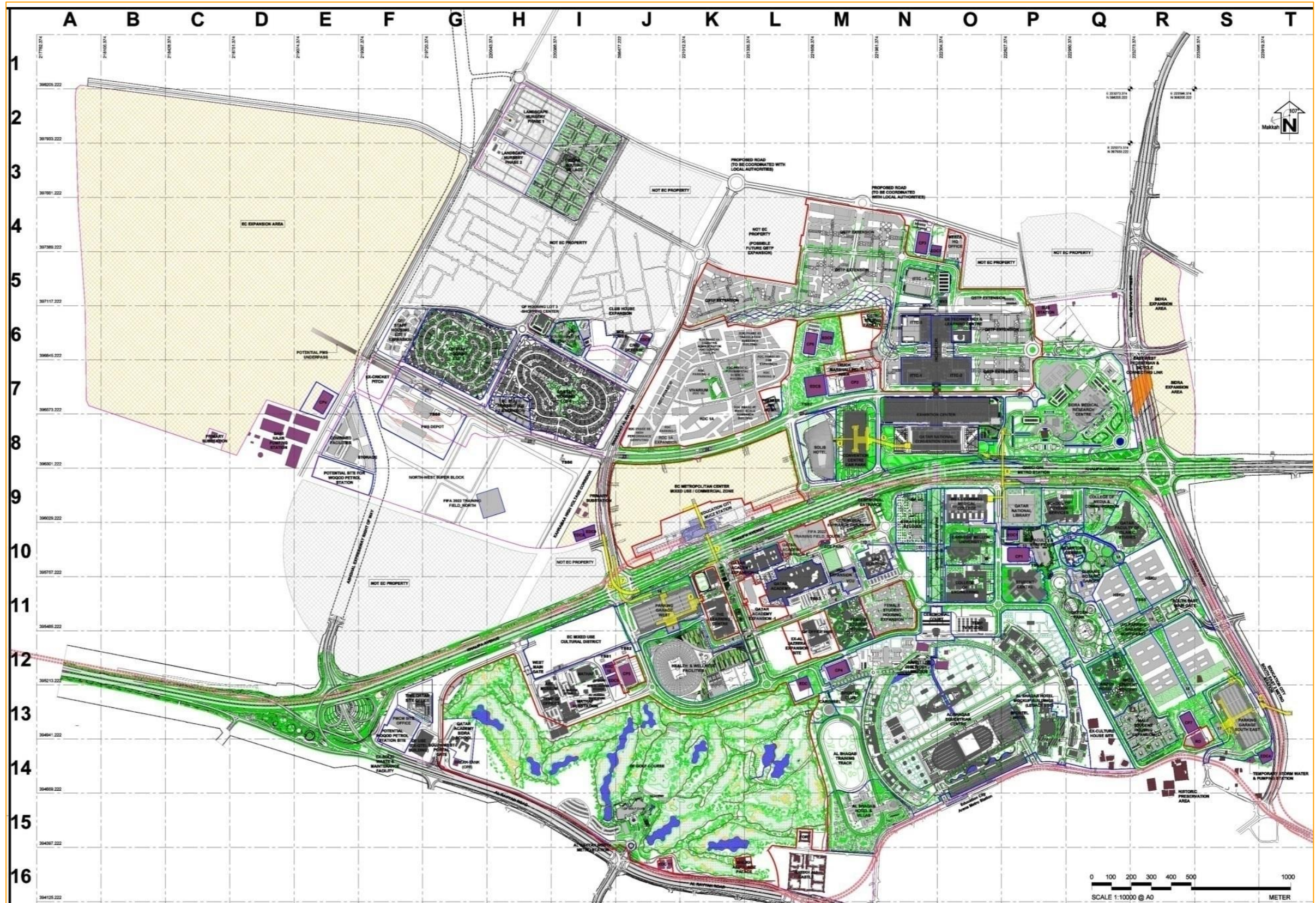
QUEEN ELIZABETH LONDON OLYMPIC PARK, LONDON - UK

EDUCATION CITY SCALE COMPARISON





EDUCATION CITY MASTERPLAN – REVISION 20A, MAY 2015



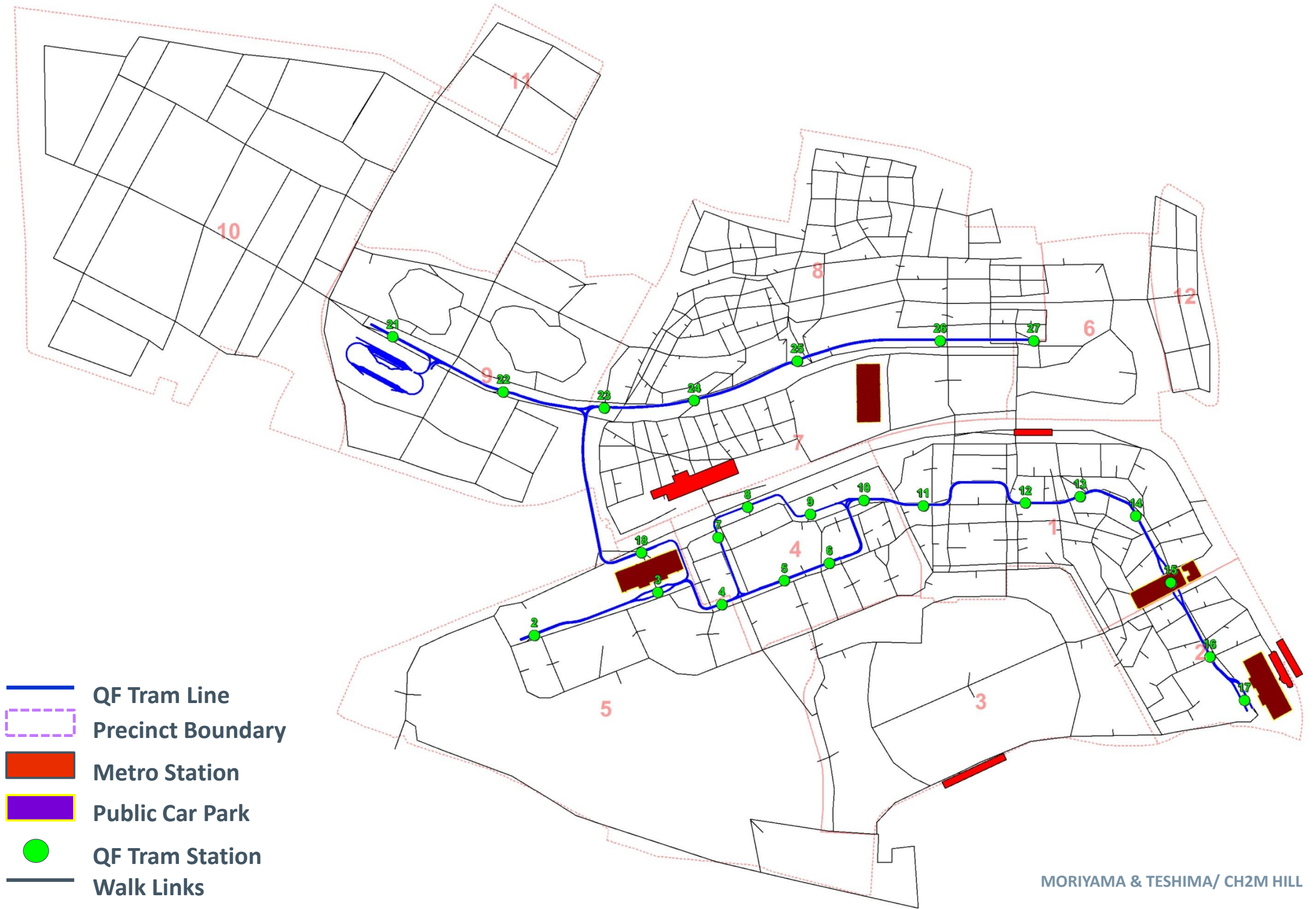
INTEGRATED TRANSPORTATION

- 1
ARRIVE AT AN EQUILIBRIUM BETWEEN LAND USE AND TRANSPORT FACILITY PROVISION;
- 2
OPTIMIZE NUMBER OF TRIPS, MINIMIZE THE NUMBER OF EXTERNAL TRIPS, MAKING THE EC DEVELOPMENT A SELF CONTAINED ENVIRONMENT;
- 3
PROMOTE PUBLIC TRANSPORT, CYCLING AND WALKING;
- 4
ACHIEVE A BALANCE BETWEEN HIGHWAY AND OTHER MEANS OF TRANSPORT.

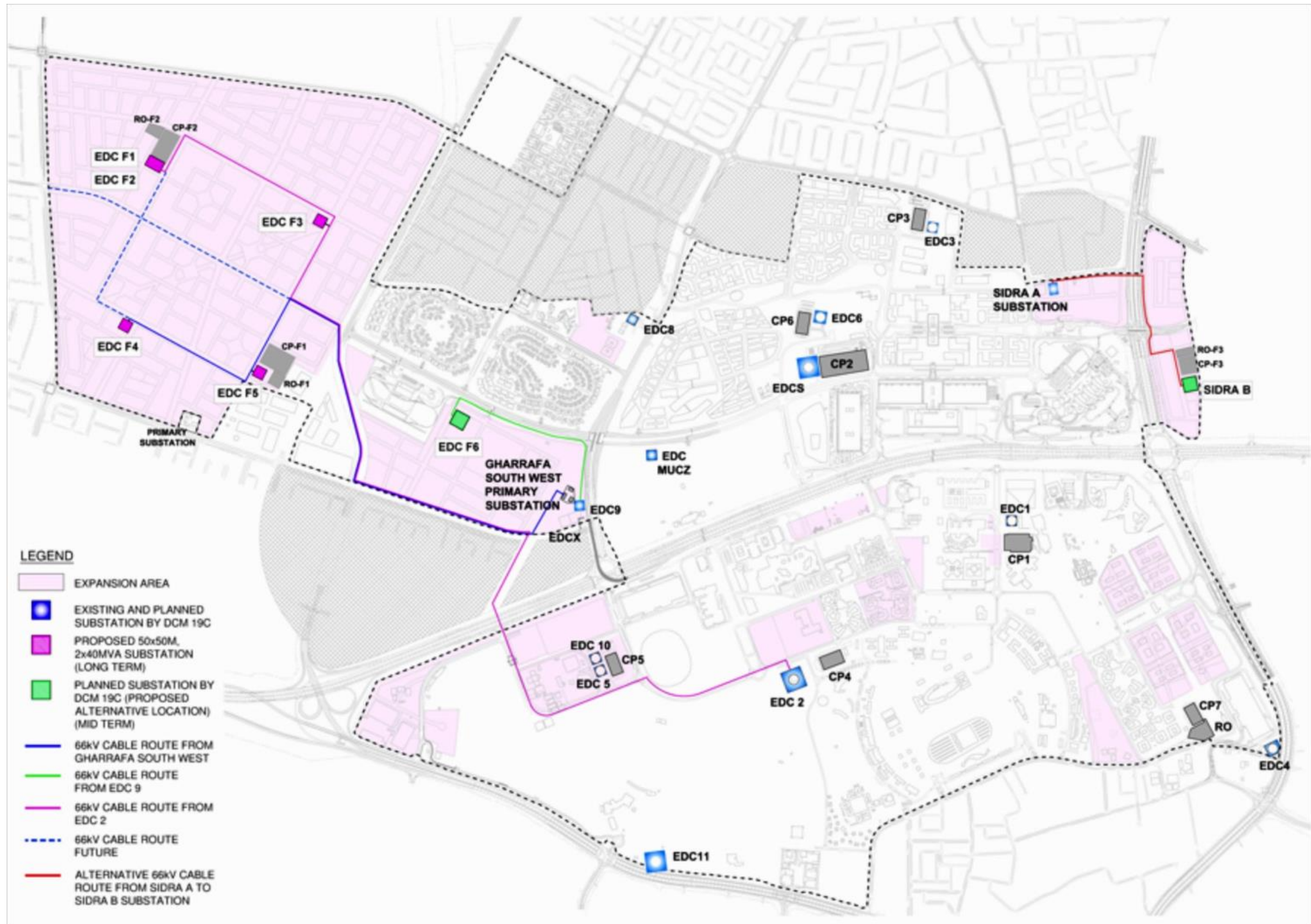


MORIYAMA & TESHIMA/ CH2M HILL

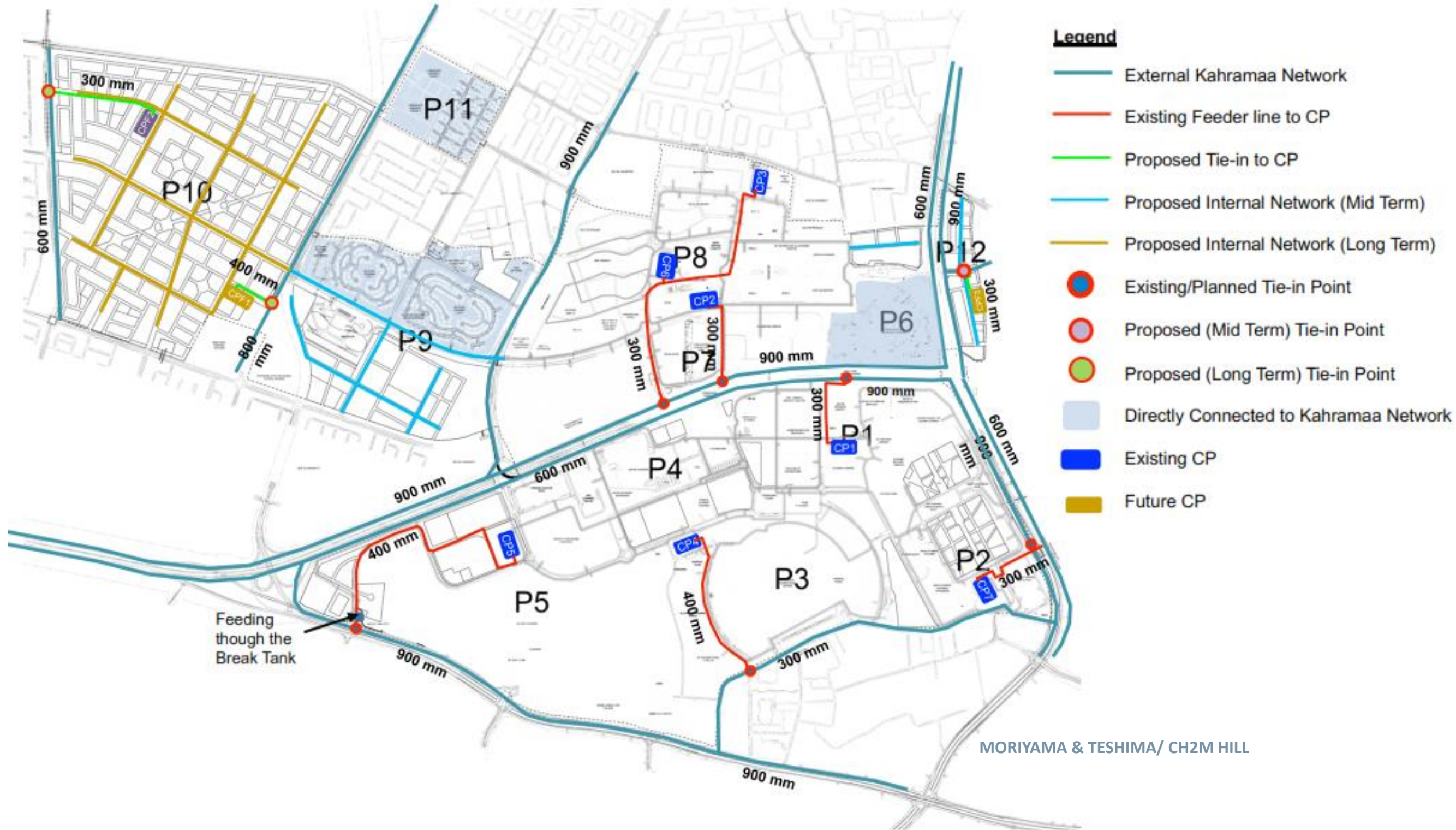
EDUCATION CITY – QF TRAM AND QF TRAM STATIONS/ METRO STATIONS



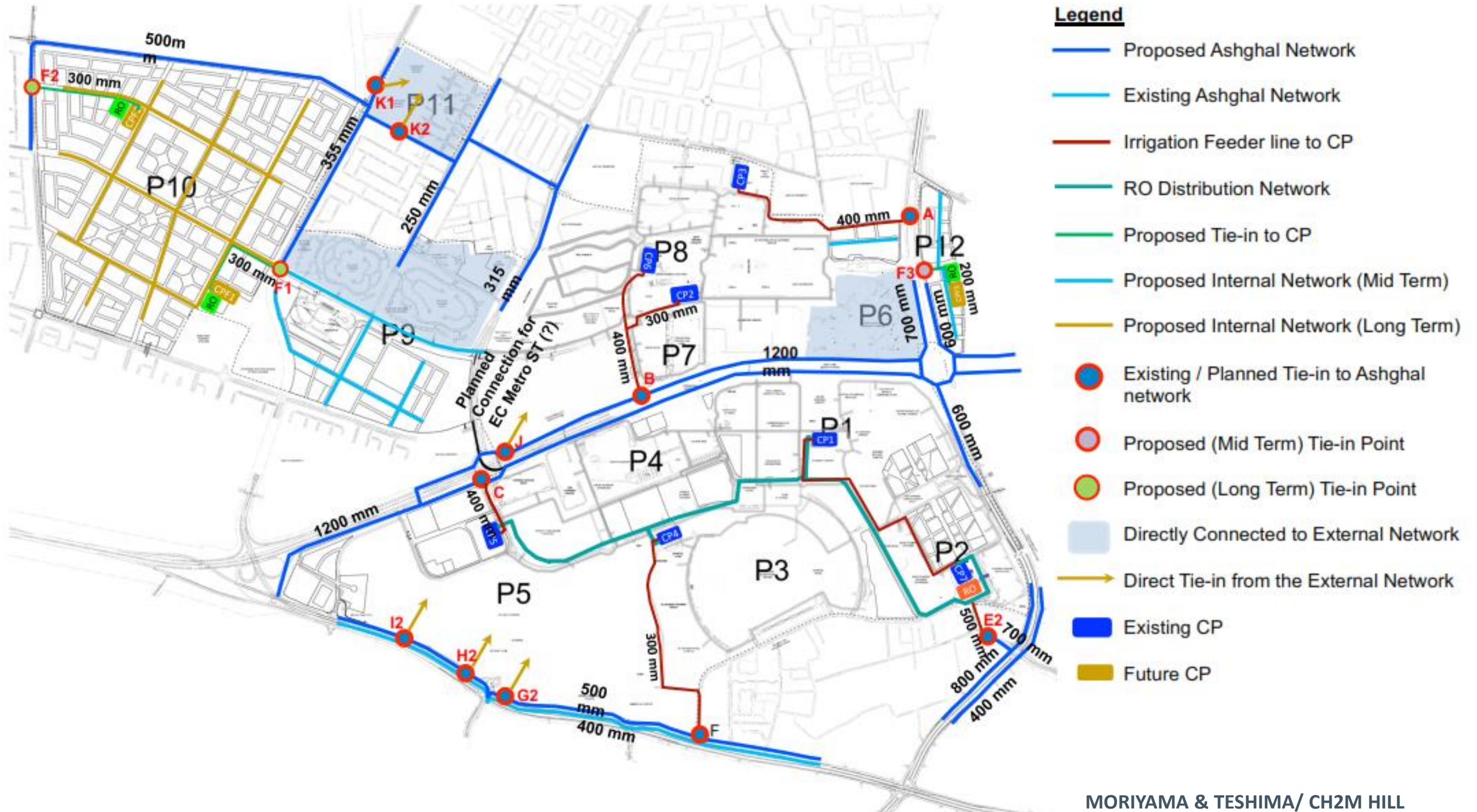
POWER NETWORKS



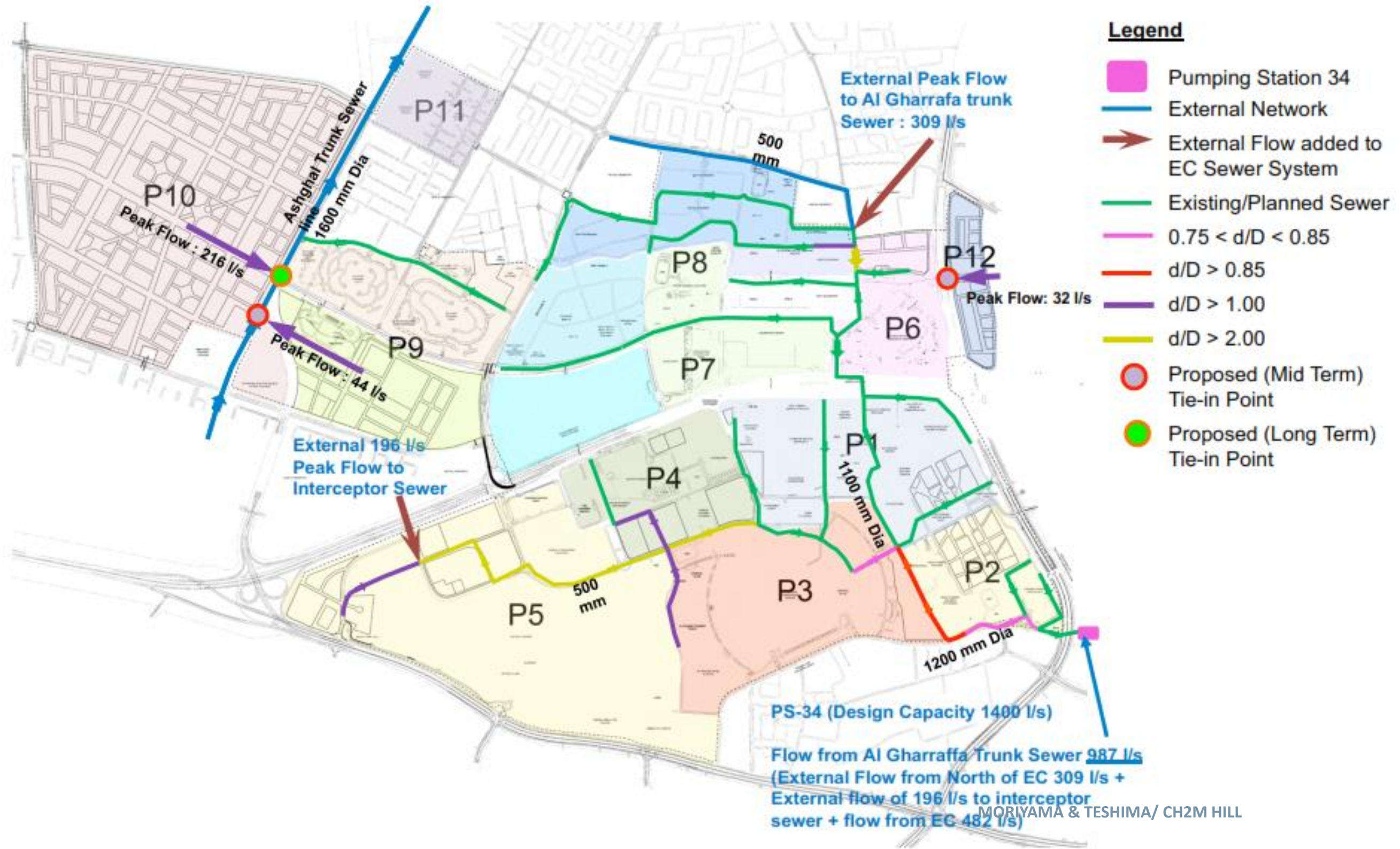
POTABLE WATER NETWORKS



TREATED SEWAGE EFFLUENT (TSE) NETWORKS

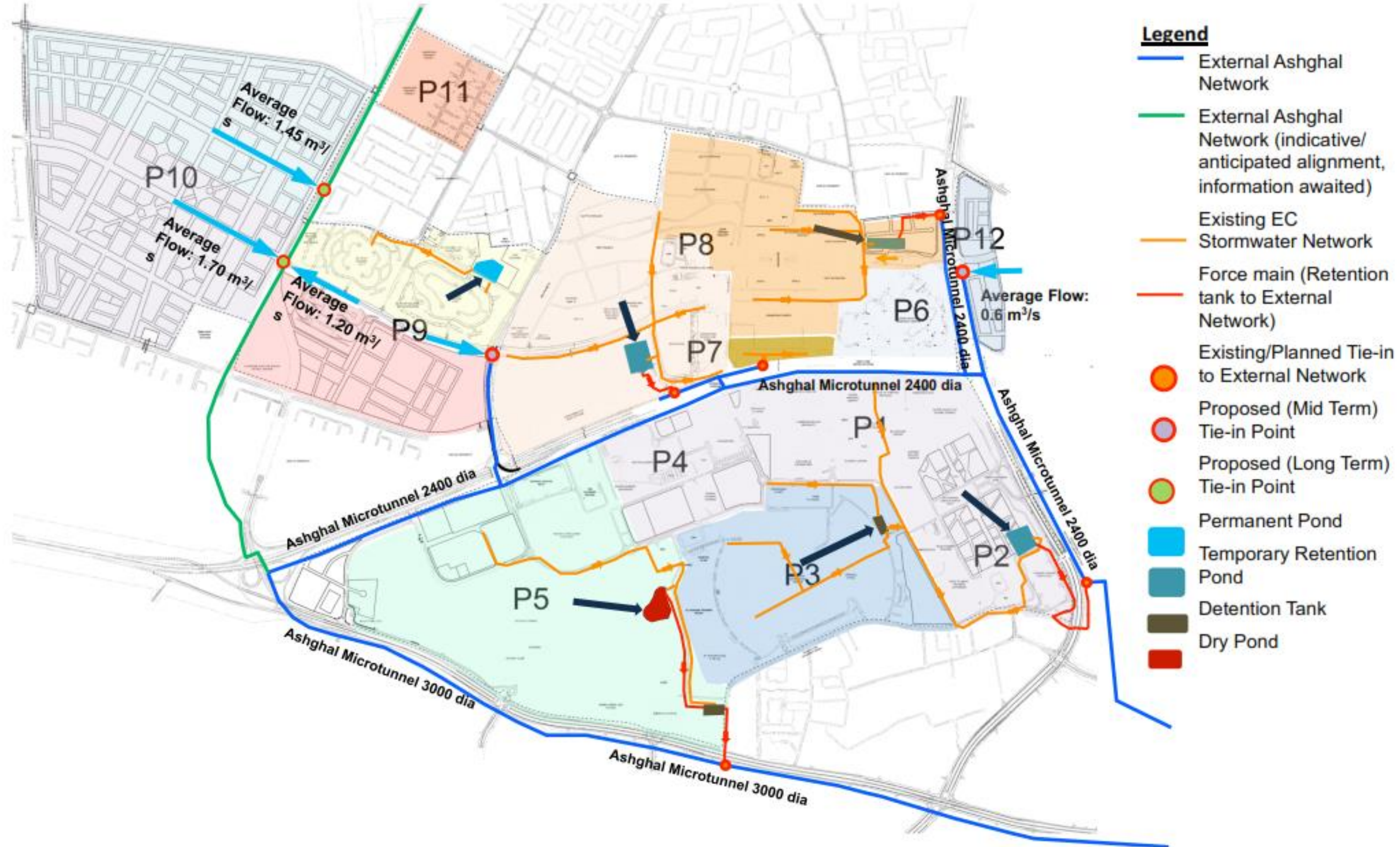


FOUL SEWER NETWORKS



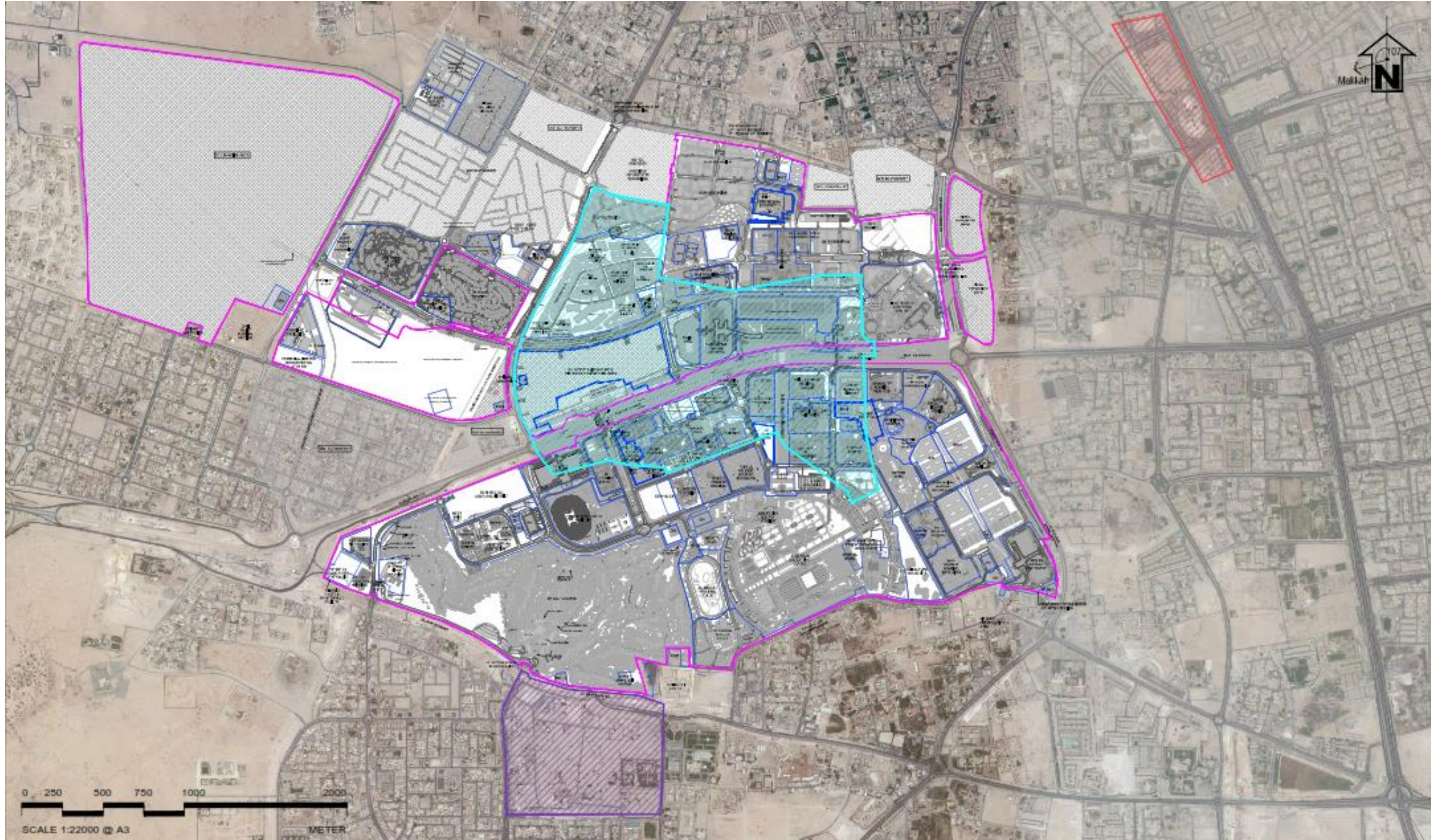
STORMWATER NETWORKS

MORIYAMA & TESHIMA/ CH2M HILL



- Legend**
- External Ashghal Network
 - External Ashghal Network (indicative/ anticipated alignment, information awaited)
 - Existing EC Stormwater Network
 - Force main (Retention tank to External Network)
 - Existing/Planned Tie-in to External Network
 - Proposed (Mid Term) Tie-in Point
 - Proposed (Long Term) Tie-in Point
 - Permanent Pond
 - Temporary Retention Pond
 - Detention Tank
 - Dry Pond

DYNAMIC ENGAGEMENT OF CLIENT AND EXTERNAL STAKEHOLDERS



LEGEND

- Education City Land Deed Boundary
- Education City Approved Plot Boundaries

- Metropolitan Centre
- Town Centre
- District Centre

EDUCATION CITY – INTERNAL COORDINATION BETWEEN ASTAD MASTERPLANNING MANAGEMENT TEAMS

ASTAD INFRA-COORDINATION TEAM

Since ASTAD Infra team took over from KEO the Infrastructure Coordination for EC (Mid 2011)

- Initial infrastructure masterplanning
- Infrastructure design, adjustments and updates for areas not specific to project plots
- Reporting on issues related to existing and proposed utilities.
- Infrastructure Design Basis Brief.
- Upkeep / Maintenance of latest infrastructure requirements/
- Custodian of Land Management Drawing Coordination of infrastructure interface with other adjacent stakeholders, infra consultants.

ASSISTED BY HAJV DATA COLLECTION MATRIX CONSULTANT

ASTAD MASTERPLANNING MANAGEMENT ARCHITECTURE TEAM

Since ASTAD Masterplanning Management Architecture team took over from KEO the Masterplanning Coordination for EC (July 2010)

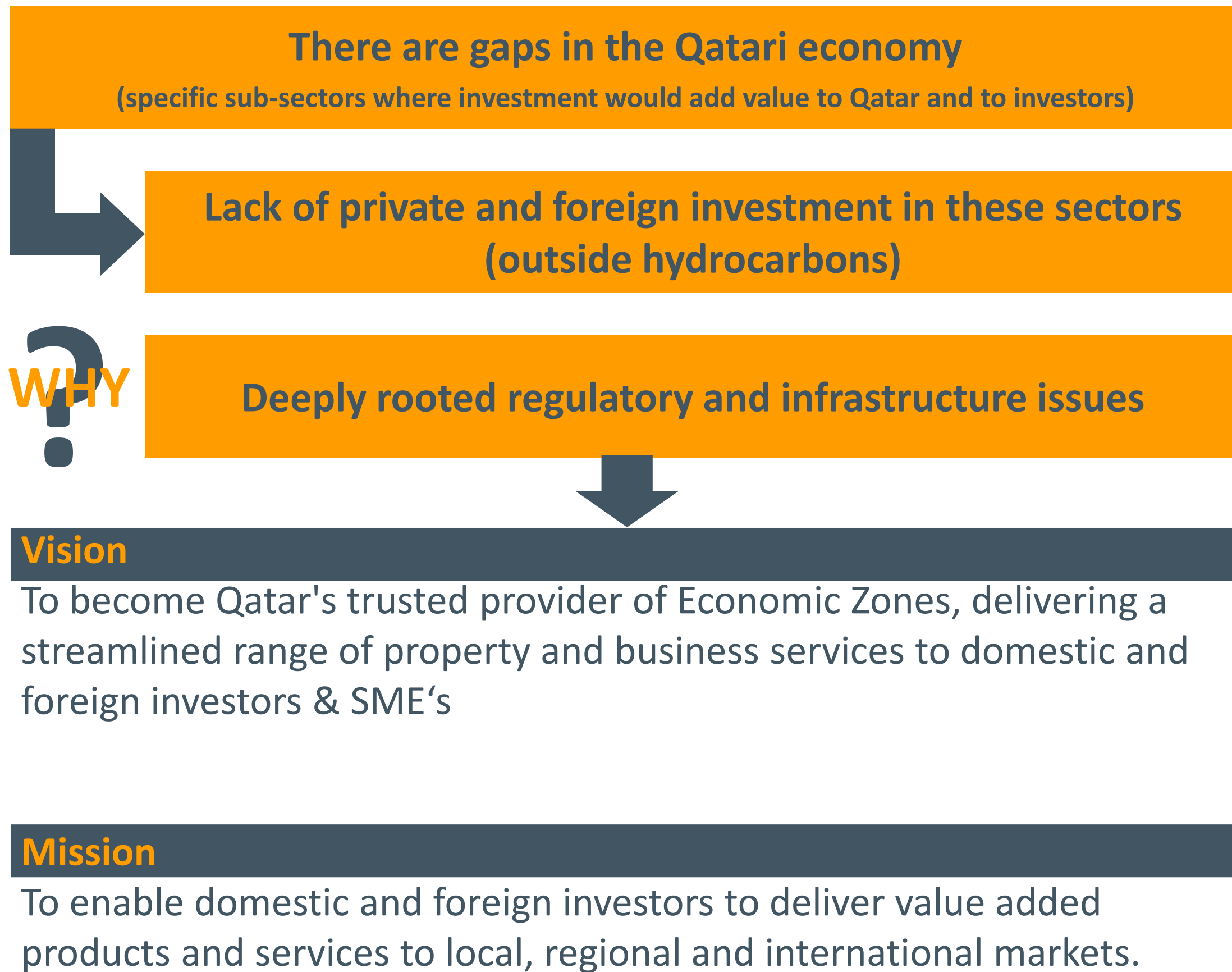
- Providing Masterplanning Management and Upkeep services during all Masterplan stages: initiation, design, construction and maintenance
- Benchmark Studies – high level spatial urban design studies
- Masterplanning sketches for spatial feasibility options
- Management of authorities approval process
- Supervision of Interdisciplinary & Stakeholders Workshops
- Development of stakeholders vision statement, stakeholders engagement and management

RECENTLY ASSISTED BY ECMPI CONSULTANT FOR A DEFINED PERIOD AND DEFINED SCOPE

INTERNAL
ASTAD
COORDINATION

CASE STUDY - MANATEQ SPECIAL ECONOMIC ZONES



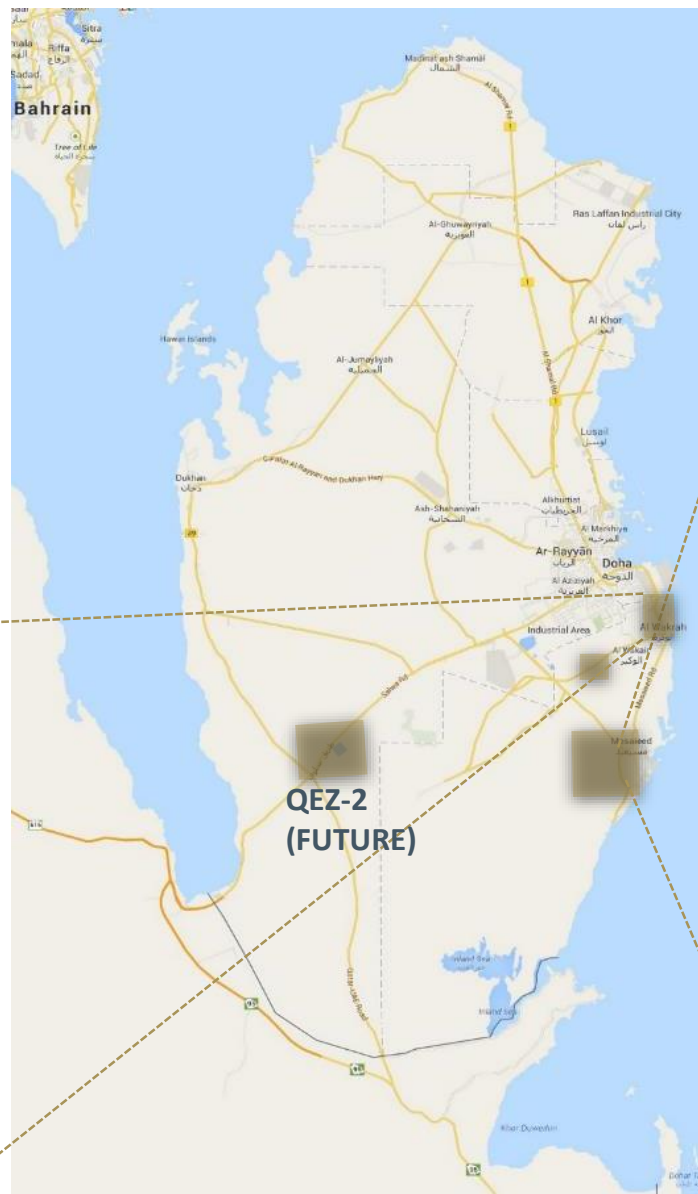
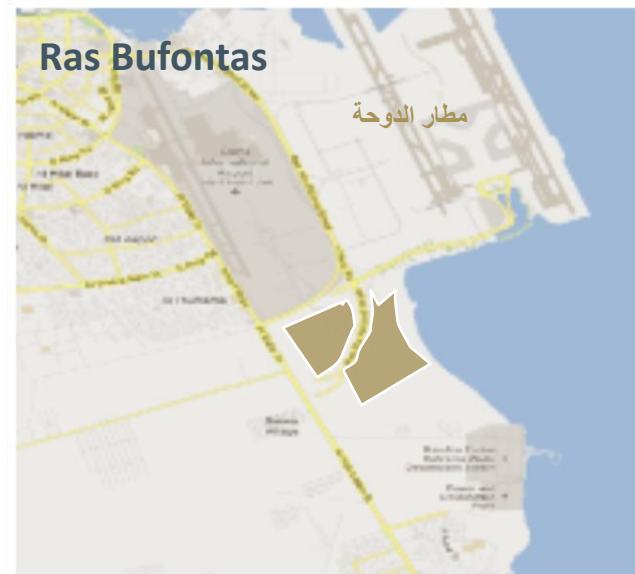


Ras Bufontas – Advanced Technology & Logistics Zone

- Logistics
- Advanced Technology
- Healthcare & Medical Facilities
- Automotive & Aerospace
- Clean & Light Industries

Um Al Houl – Light Manufacturing Zone

- Petro Chemicals
- Building Materials
- Maritime
- Logistics
- Metals
- Electrical/ Machinery
- Food & Beverages





QEZ-1 (Ras Boufontas Economic Zone)

Land Use	Gross Land Area		GFA Gross Floor Area	
	[Ha]		[m ²]	
Light Ind-Warehouses	131	33%	786,000	49%
Light Ind-Assembly	34	8%	201,000	13%
Showrooms	14	3%	103,000	6%
Retail	9	2%	106,000	7%
Mixed Use	10	2%	165,000	10%
Hospitality	3	1%	19,000	1%
Service Hubs	10	2%	39,000	2%
Worker Accommodation	12	3%	174,000	11%
Public Space	12	3%	-	
Coastal Buffer	44	11%	-	
Roads	110	27%	-	
Utilities	12	3%	-	
Total	401	100%	1,593,000	100%





QEZ-3 (Um Al Houf Economic Zone)

Land Use	Gross Land Area		GFA Gross Floor Area	
	[Ha]		[m ²]	
Metals	180	5%	899,000	8%
Petrochemicals	345	10%	1,727,000	15%
Logistics	392	11%	1,920,000	17%
Building Materials	278	8%	1,390,000	12%
Tools & Machinery	196	6%	982,000	9%
Transport & Automotive	146	4%	729,000	7%
Food Processing	46	1%	232,000	2%
Marine Industry	170	5%	851,000	8%
Business Park	16	0%	257,000	2%
Hospitality	3	0%	31,000	0%
Community Facilities	57	2%	103,000	1%
Commercial	79	2%	464,000	4%
Residential	127	4%	714,000	6%
Others	308	9%	376,100	3%
Roads/Utilities	955	28%	514,900	5%
Public Space	127	4%	-	0%
Total	3,425	100%	11,190,000	100%

Final Master Plan



- Key**
- QEZ-1 Site Boundary
 - Road Network
 - Commercial Retail
 - Hospitality
 - Light Industrial - Warehouses + Logistics
 - Light Industrial - Assembly
 - Showroom Commercial
 - Service Hubs
 - Worker's Accommodation
 - Mixed Use Development
 - Public Realm Easement
 - Waterfront Buffer
 - Open Space
 - Utilities
 - Manateq Headquarters
 - Walk in Clinic and Urgent Care Facility



DATE OF ISSUE : 30/03/15

FMP SK001/02

QATAR ECONOMIC ZONE 1

STRUCTURED MASTER PLANS (Um Al Houl)



Figure 3.1 Master Plan



Superblock

Subdivided (40 plots)

14 plots 3,200m² each

15 plots, 1,800m²/6,000m² each

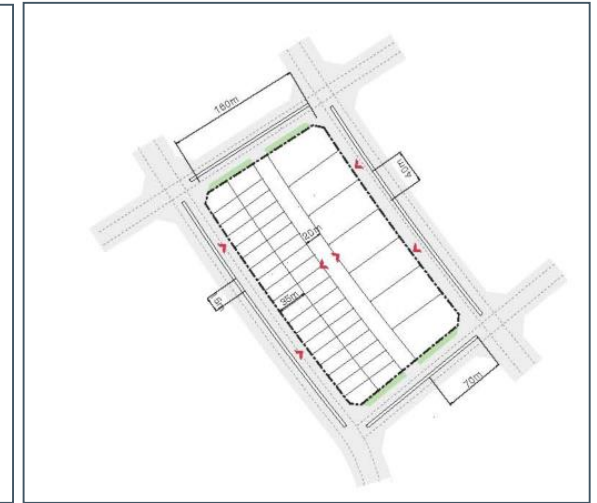
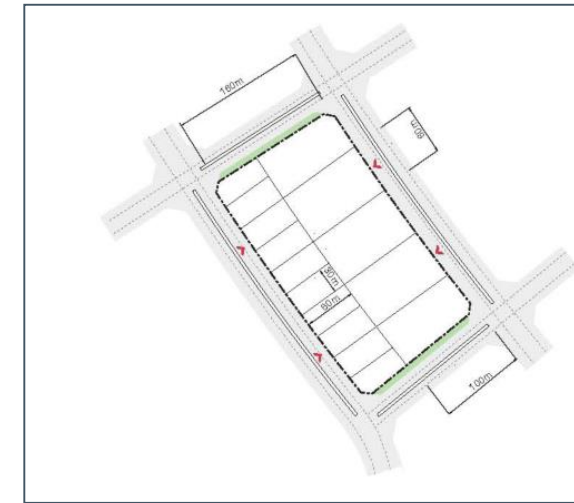
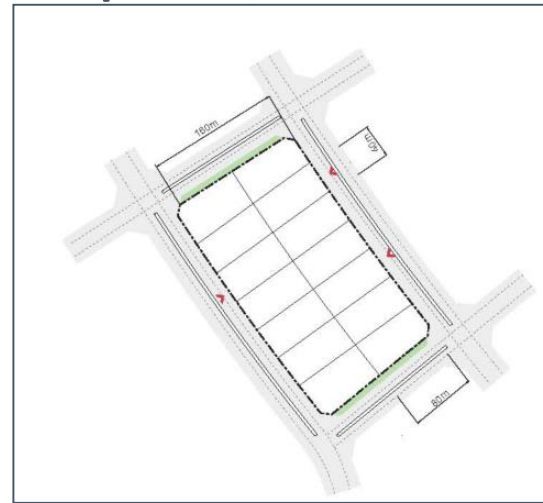
45 plots, 500m²/2,800m² each



Figure 4.4 Single Tenant User (Superblock)



Figure 4.5 Multi-Tenant User(Superblock)



ras bufontas
منطقة اقتصادية خاصة، من مناطق
SPECIAL ECONOMIC ZONE, BY MANATEQ

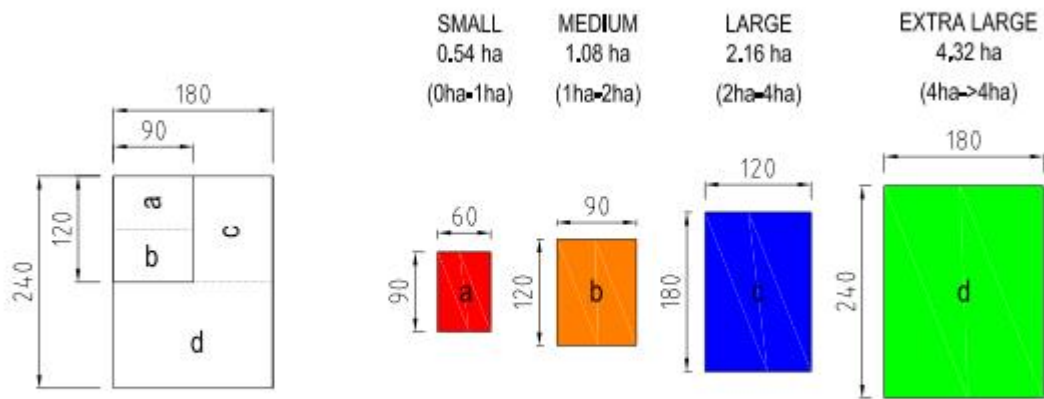


Figure 5.7 Subdivision Strategy Plot Sizes

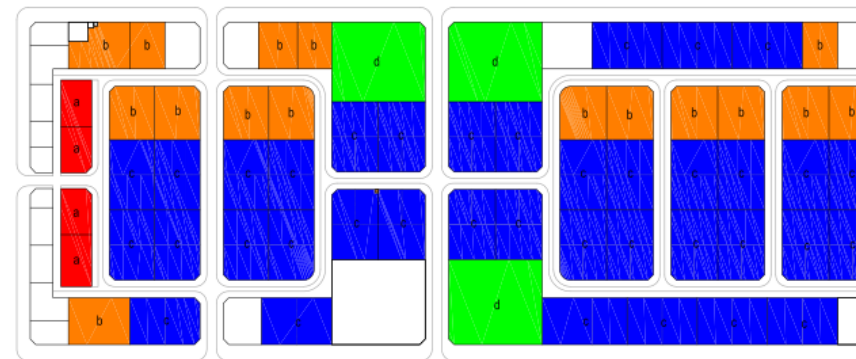


Figure 5.11 Subdivision Example 2

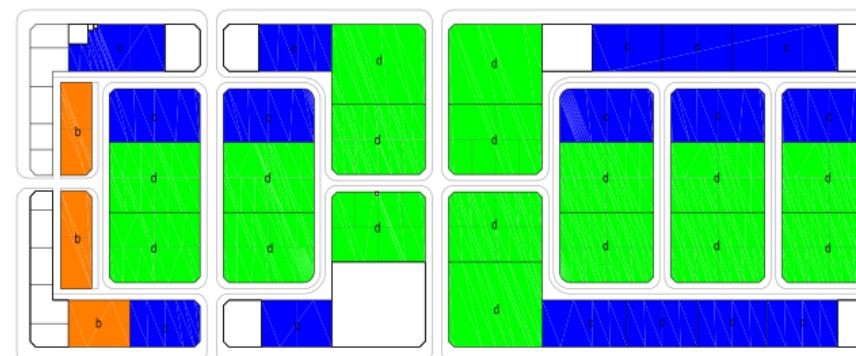


Figure 5.12 Subdivision Example 3

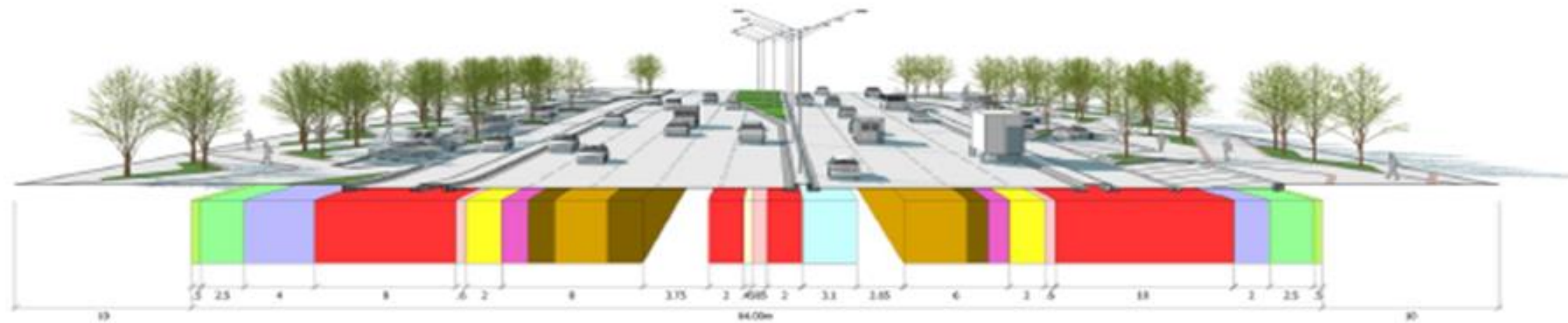
um alhouf
منطقة اقتصادية خاصة، من مناطق
SPECIAL ECONOMIC ZONE, BY MANATEQ



RAS BUFONTAS UTILITIES - COMPLEX INFRASTRUCTURE NETWORKS

RAS BUFONTAS(2012 ROW Sections)

64m Road Corridor



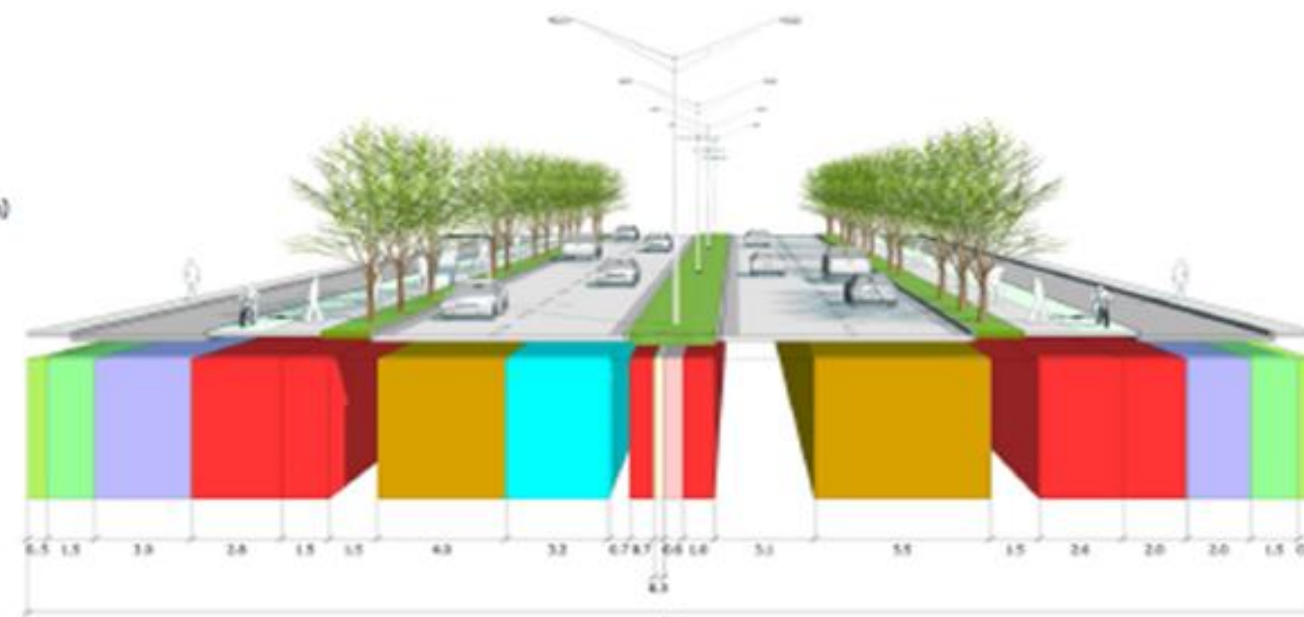
EXTENSIVE UTILITIES:

- 4 no. 80 MVA Primary Substations
- 3 no. Lifting Stations
- 1 no. Sewage Treatment Plant
- District Cooling Plant (17,000 TR)
- 40km of Road Network
- 7,600 m³/day Potable Water Demand

40m Road Corridor

KEY

- E (T) Electricity (Transmission)
- E (D) Electricity (Distribution)
- E (D) Electricity (Street Lighting + Intelligont Traffic System)
- E (T) Telecommunications (Qatar Armed Forces)
- E (D) Telecommunications
- E (D) Sewerage
- E (T) Surface Water
- E (D) Treated Sewerage Effluent
- E (D) Water
- E (D) Chilled Water
- E (D) Doha Surveillance Security System
- E (D) Gas

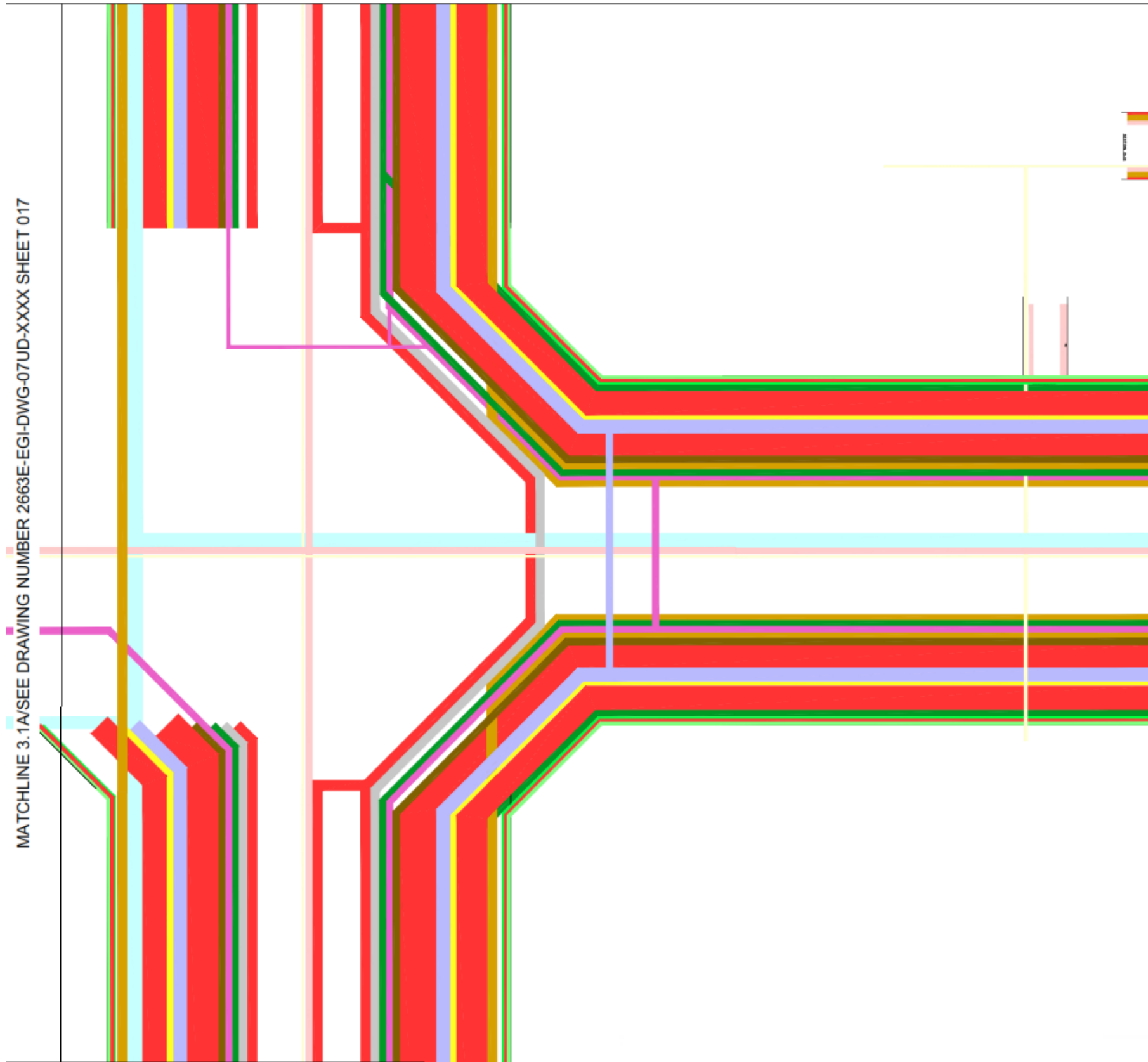


UM AL HOUL (2014 ROW Compliant)



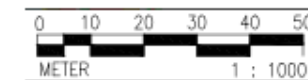
- Roads, utilities and landscaping for servicing 1,700 plots
- Total Length of Roads: 50 km
- 5.5 Million m³ Excavation and 8.0 Million m³ of fill
- Power Demand - 1,468 MVA; two Super Primary grid stations, 27 primary substations (80MVA)
- Foul Sewage Generation - 14,300 m³/day.
- Irrigation Water Demand - 15,000m³/day
- 3 District Cooling Plants - 104,500 TR

MATCHLINE 3.1A/SEE DRAWING NUMBER 2663E-EGI-DWG-07UD-XXXX SHEET 012



CORRIDOR LEGEND:-

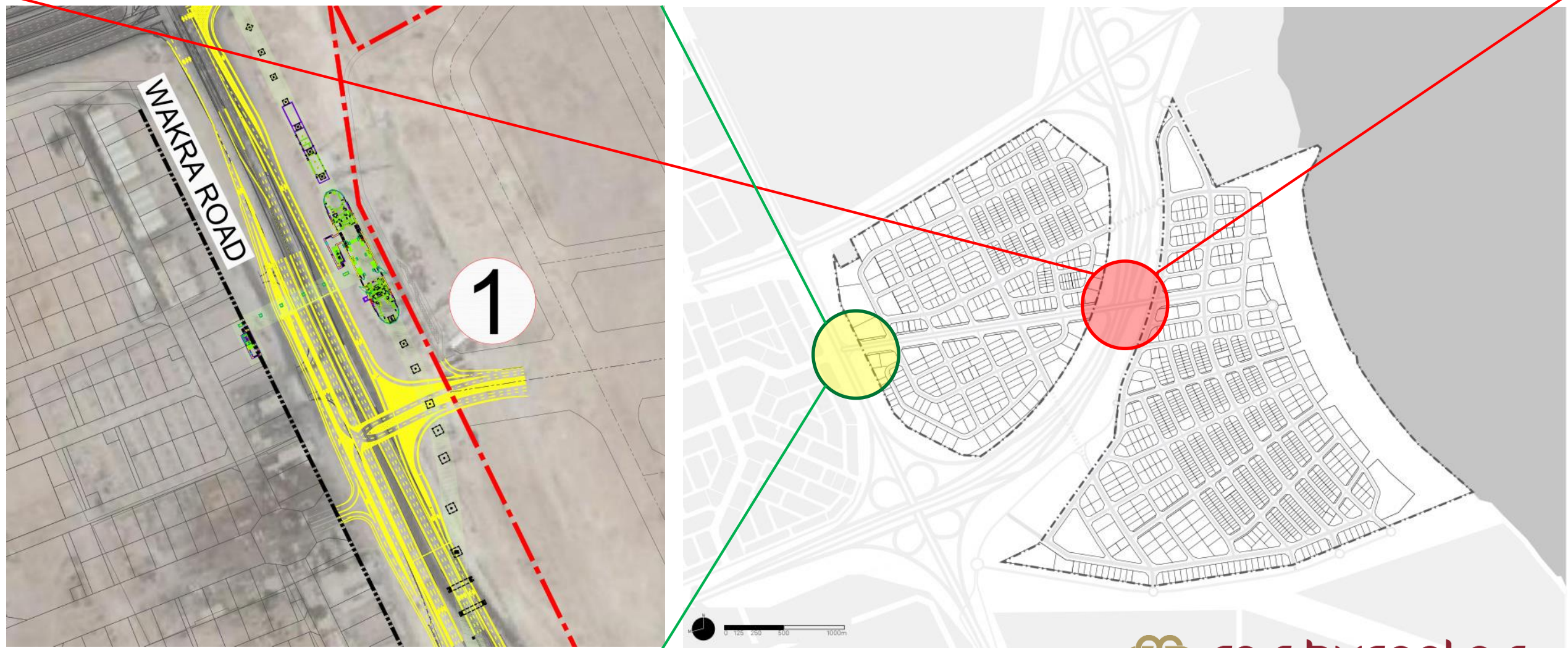
E(T)	ELECTRICITY (TRANSMISSION)
CW	CHILLED WATER
E (+ITS)	ELECTRICITY (STREET LIGHTING + INTELLIGENT TRAFFIC SYSTEM)
FS	FOUL SEWAGE
SW	SURFACE WATER
GAS	GAS
PW	POTABLE WATER
DSSS	DOHA SURVEILLANCE SECURITY SYSTEM
T/ FH	TREE/ FIRE HYDRANT
TSE	TREATED SEWAGE EFFLUENT
T (QAF)	TELECOMMUNICATIONS (QATAR ARMED FORCES)
T	TELECOMMUNICATIONS
TRANS	TRANSMISSION



MATCHLINE 3.1A/SEE DRAWING NUMBER 2663E-EGI-DWG-07UD-XXXX SHEET 017

DRAWING NUMBER 2663E-EGI-DWG-07UD-XXXX SHEET 017

MAJOR ROAD INTERCHANGES REQUIRED



RAS BUFONTAS SPECIFIC	BOTH ZONES	UM AL HOUL SPECIFIC
 <p>الهيئة العامة للطيران المدني CIVIL AVIATION AUTHORITY</p> <p>مطار حمد الدولي Hamad International Airport QATAR قطر</p>	 <p>قطر تستحق الأفضل Qatar Deserves The Best</p> <p>وزارة البلدية والتخطيط العمراني State of Qatar Ministry of Municipality and Urban Planning</p> <p>وزارة البيئة Ministry of Environment</p> <p>www.moi.gov.qa</p> <p>الريل RAIL تحقيق رؤيته Accomplishing a Vision</p> <p>وقود WQOD</p> <p>vodafone</p> <p>ooredoo</p>	 <p>قطر للبترول Qatar Petroleum</p> <p>ميناء حمد HAMAD PORT</p> <p>Qatar Emiri Naval Forces</p> <p>مدينة مسعيد الصناعية MESAIEED INDUSTRIAL CITY</p>
	 <p>vodafone</p> <p>ooredoo</p> <p>دولة قطر State of Qatar</p> <p>المجلس الأعلى للصحة SUPREME COUNCIL OF HEALTH</p>	

C. CONCLUSION

None of the large projects we saw can be delivered by one entity. Their success comes through the integrated work of numerous entities, individuals and authorities.

Project Management firms are tasked with setting the course through the development process, bringing all parties in at the correct time, addressing concerns and coordinating of Clients, Stakeholders , Planners and Designers

This process only comes to the first success milestone when it opens to the public. Continued success of these Integrated Projects requires continuous management, adaptation and adjustment over the lifetime of such destinations.

شكراً