

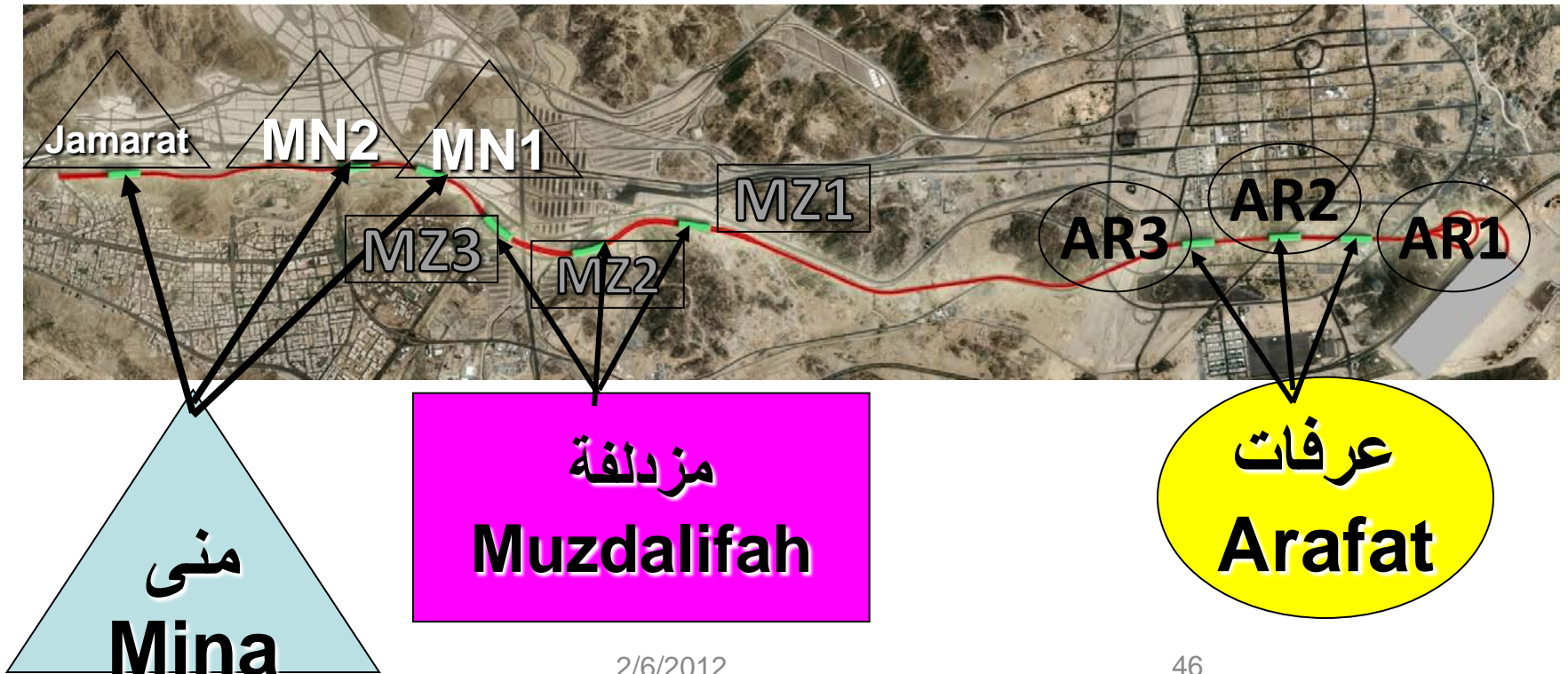


المحطة والمكيفات الصحراوية لتلطيف الجو بساحة الانتظار



Train Stations # 9

3 Mina – 3 Muzdalifa – 3 Arafat



Makkah Metro

قطار المشاعر المقدسة - الخط الجنوبي
Al Mashaer Al Mugaddassah Metro Southern Line



3 Stations in Arafat



Arafat 3

**Namerah
Mosque**

**Mercy
Mount**

Arafat 2

Arafat 1

Makkah Metro

قطار المشاعر المقدسة - الخط الجنوبي
Al Mashaer Al Mugaddassah Metro Southern Line



Arafat Station 1

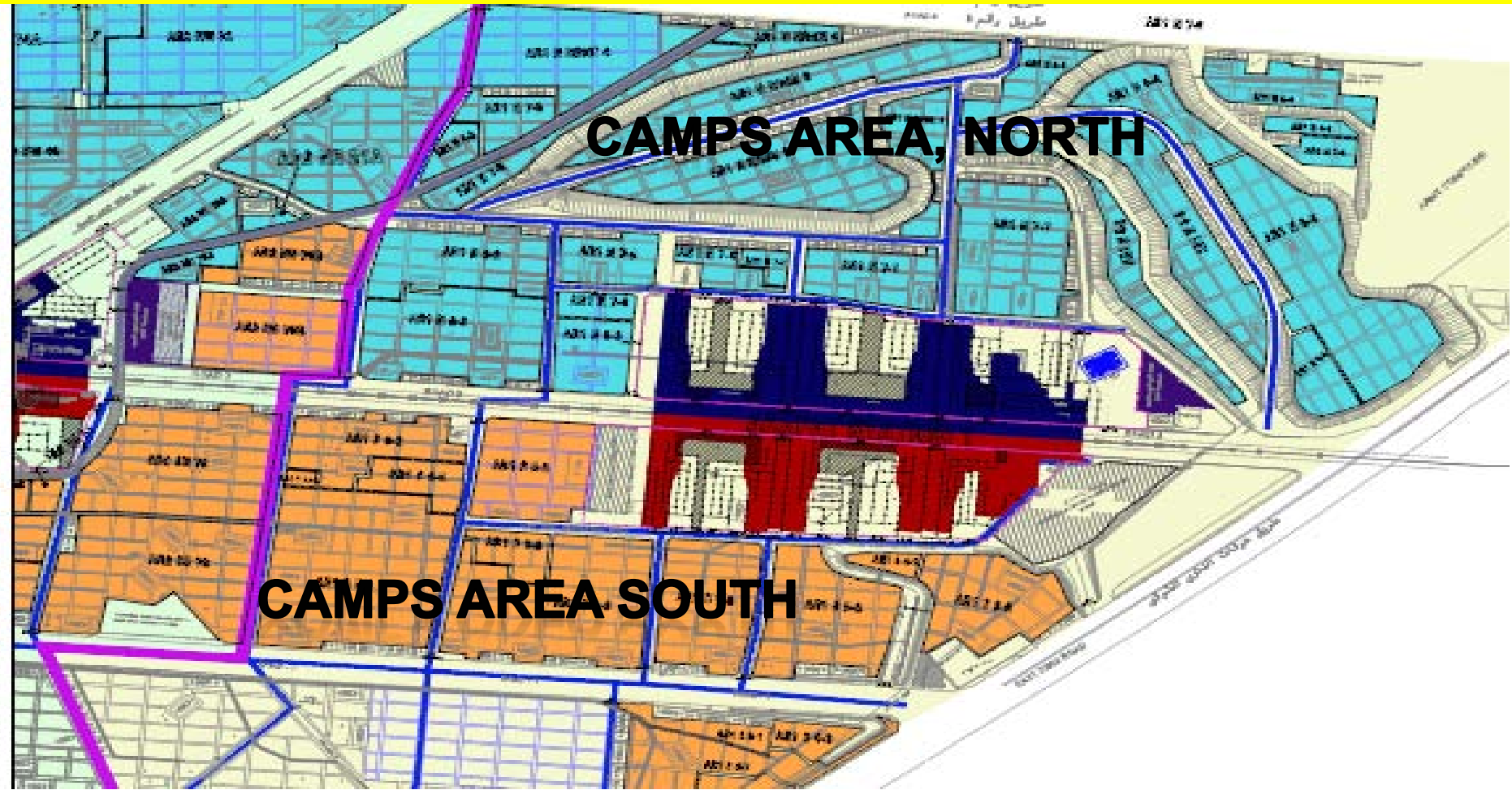


Makkah Metro



Camps Location of pilgrims (Metro Passengers)

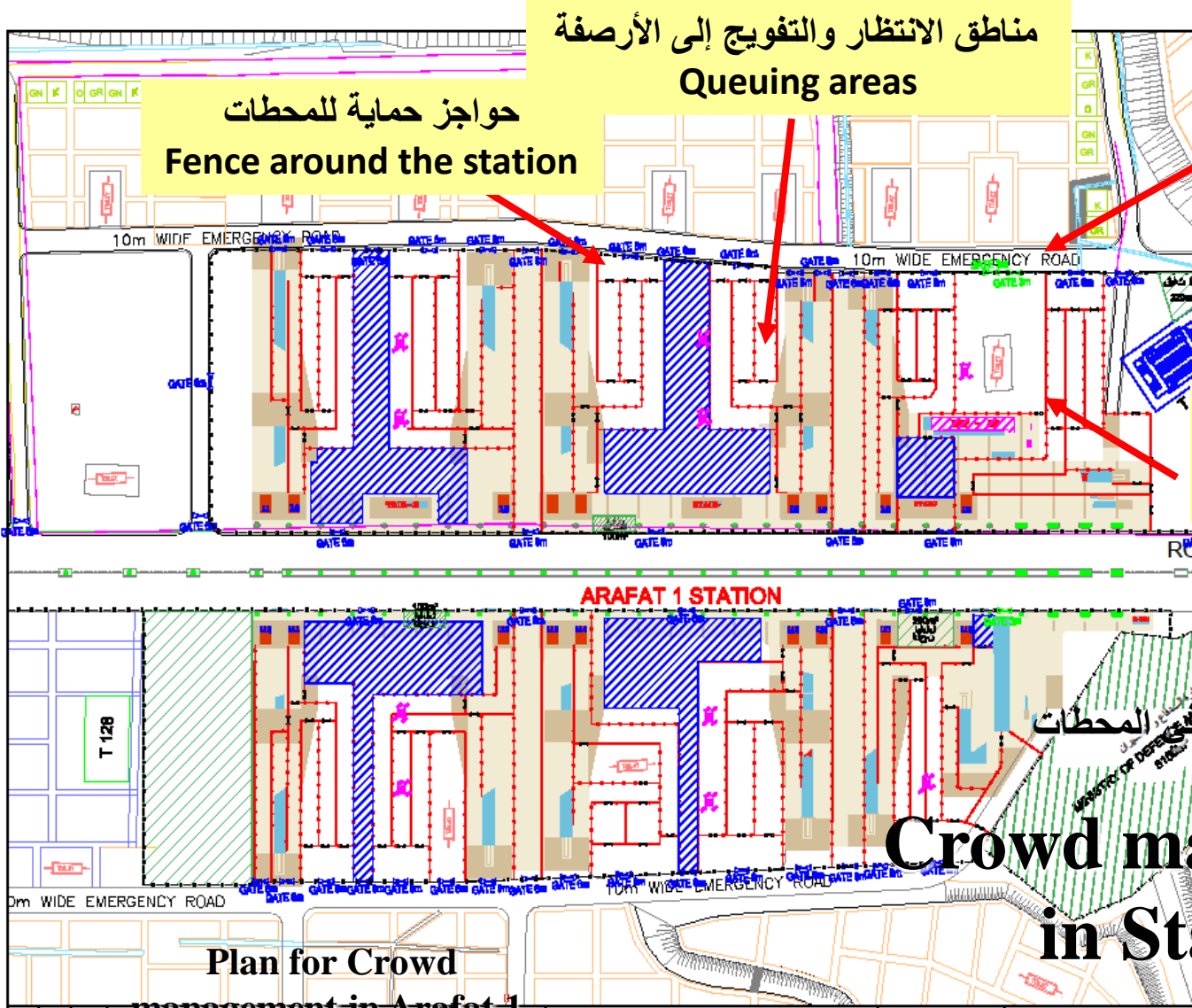
Arafat Station 1



Makkah Metro



A



حواجز حماية للمحطات
Fence around the station

مناطق الانتظار والتفويج إلى الأرصفة
Queuing areas

مداخل المحطة
المراقبة
Access control points

فاصل ممرات إلى المصاعد
Separated walkways to elevators

إدارة الحشود في المحطات
Crowd management in stations

Crowd management in Stations

Plan for Crowd management in Arafat 1 Stations

NO.	REVISION	DATE	BY	CHECKED	APPROVED
01	ISSUE FOR PERMIT	15-09-2011	VA	VA	VA
02	ISSUE FOR PERMIT	15-09-2011	VA	VA	VA
03	ISSUE FOR PERMIT	15-09-2011	VA	VA	VA
04	ISSUE FOR PERMIT	15-09-2011	VA	VA	VA
05	ISSUE FOR PERMIT	15-09-2011	VA	VA	VA
06	ISSUE FOR PERMIT	15-09-2011	VA	VA	VA
07	ISSUE FOR PERMIT	15-09-2011	VA	VA	VA
08	ISSUE FOR PERMIT	15-09-2011	VA	VA	VA
09	ISSUE FOR PERMIT	15-09-2011	VA	VA	VA
10	ISSUE FOR PERMIT	15-09-2011	VA	VA	VA

OWNER: K.T.

DESIGNER: R.W.

APPROVED: Y.N.

PROJECT MANAGER: R.H.

STATION: DETAIL DESIGN

DATE: SEPTEMBER 2011

FORMAT: A0

SCALE: 1/500

Scale given in the drawings are for the full form. For all format's scale should be checked by E.

CONSULTANT: KA

ARCHITECT: Khatib & Aljumi

ARCHITECT: Khatib & Aljumi



Makkah Metro

قطار المشاعر المقدسة - الخط الجنوبي
Al Mashaer Al Mugaddassah Metro Southern Line



Arafat Station 2

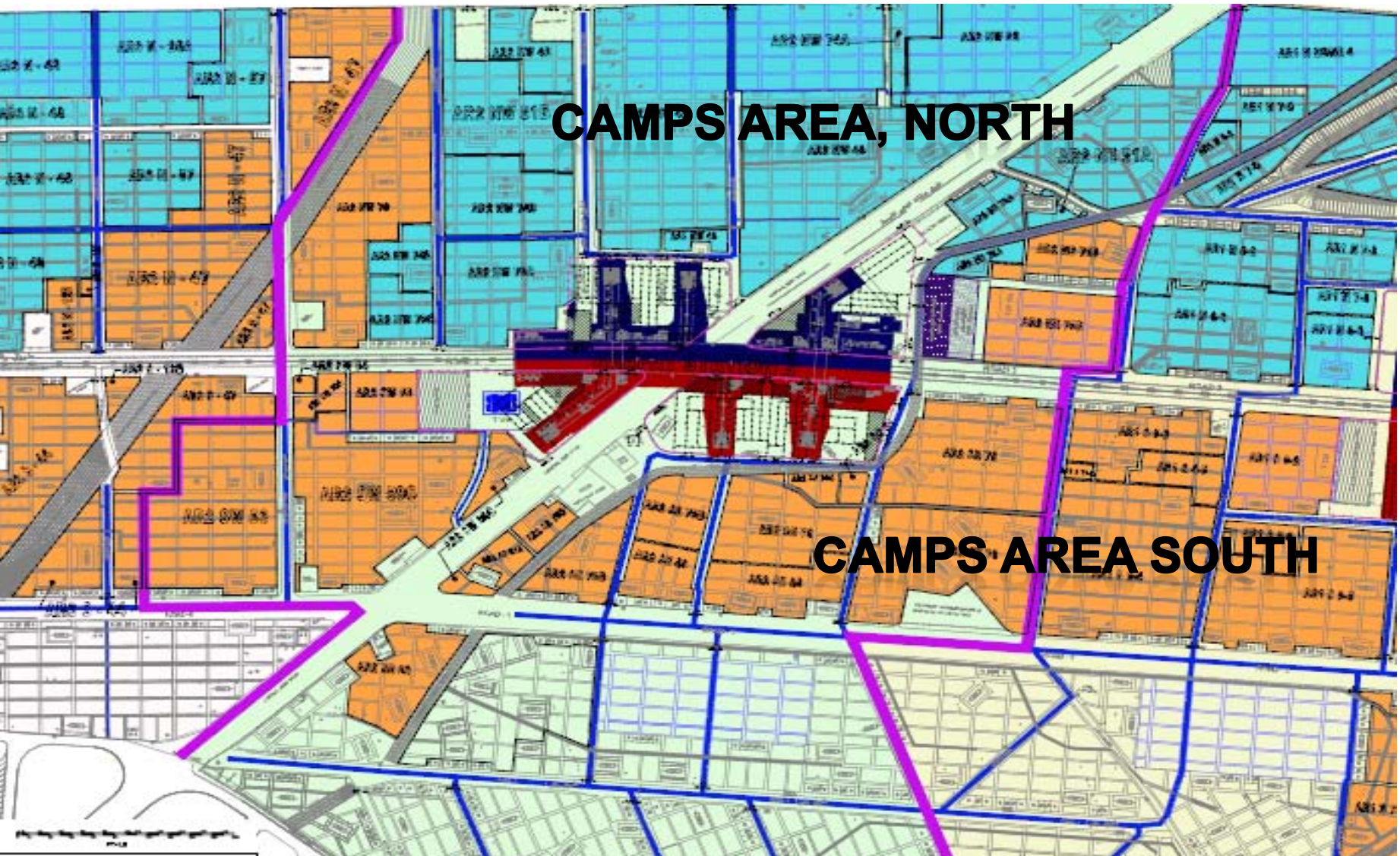


Makkah Metro



Camps Location of pilgrims (Metro Passengers)

Arafat Station 2



Makkah Metro

قطار المشاعر المقدسة - الخط الجنوبي
Al Mashaer Al Mugaddassah Metro Southern Line



Arafat Station 3



Makkah Metro

قطار المشاعر المقدسة - الخط الجنوبي
Al Mashaer Al Mugaddassah Metro Southern Line



Muzdalifah Station 1



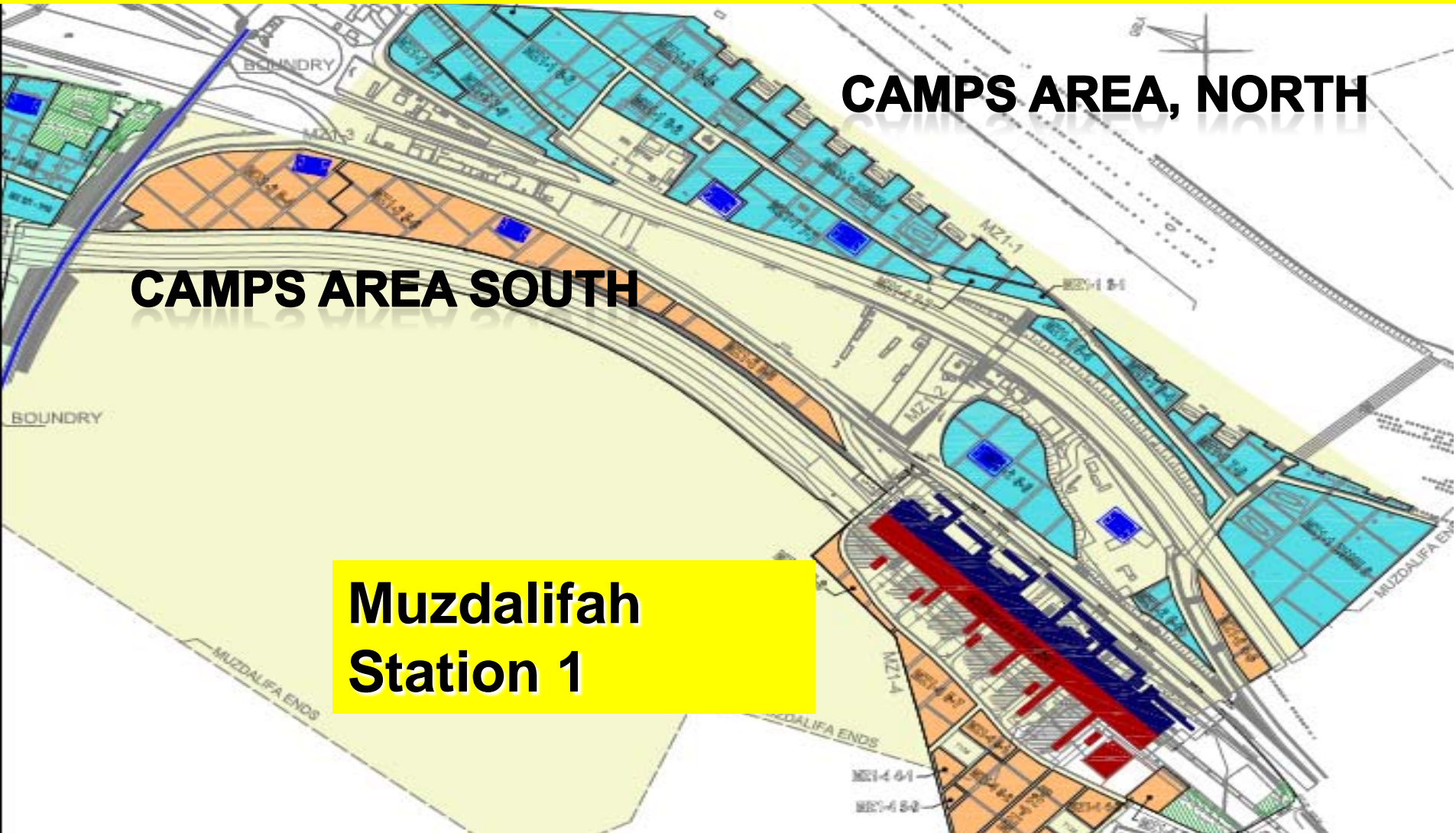
Makkah Metro

قطار المشاعر المقدسة - الخط الجنوبي
Al Masha'ar Al Mugaddassah Metro Southern Line



Camps Location of pilgrims (Metro Passengers)

Muzdalifah Station 1



Makkah Metro

قطار المشاعر المقدسة - الخط الجنوبي
Al Mashaer Al Mugaddassah Metro Southern Line



Muzdalifah Station 2

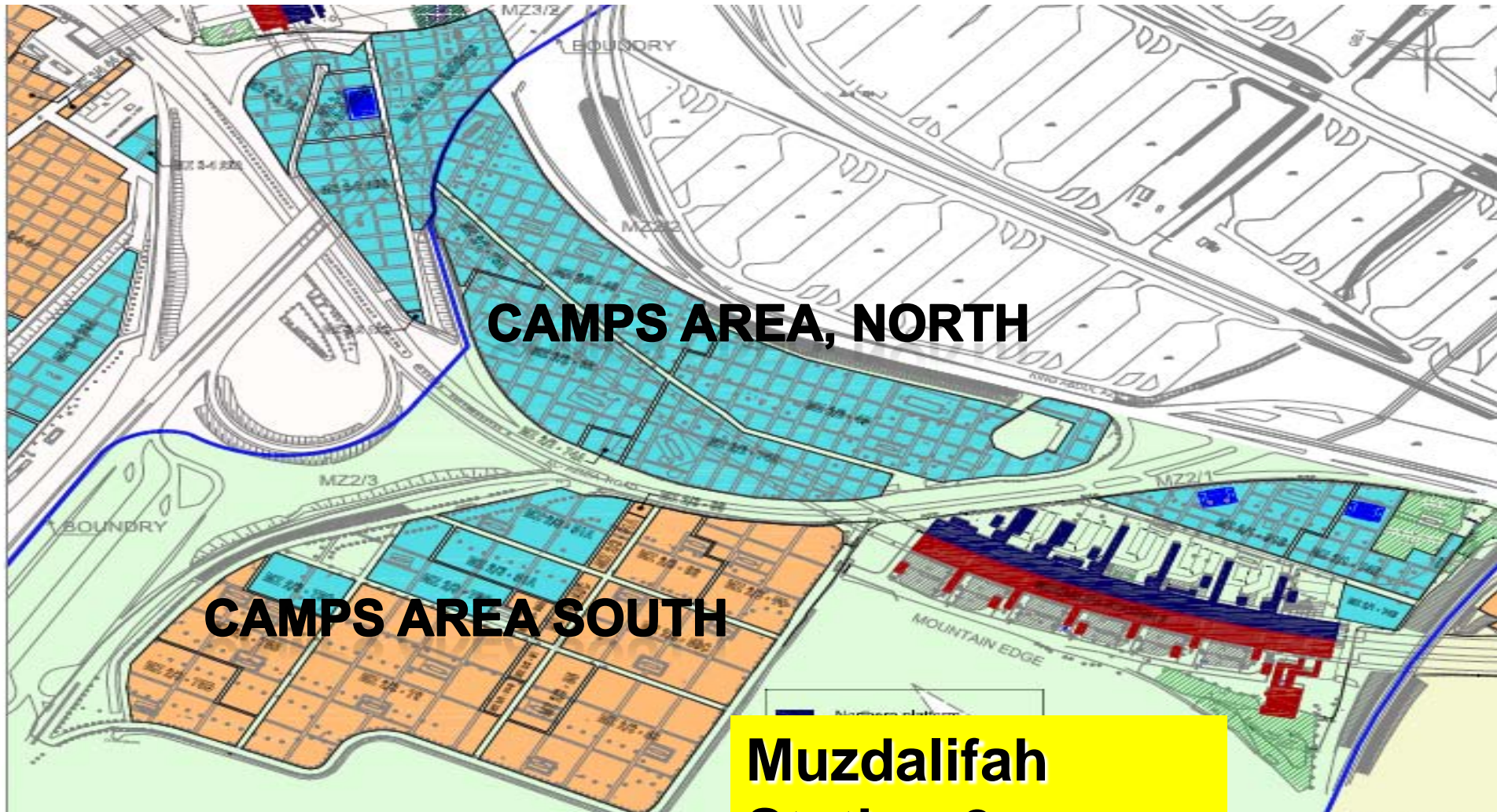


Makkah Metro



Camps Location of pilgrims (Metro Passengers)

Muzdalifah Station 2



Muzdalifah
Station 2

Makkah Metro

قطار المشاعر المقدسة - الخط الجنوبي
Al Mashaer Al Mugaddassah Metro Southern Line



Muzdalifa Station 3



Mina Tent residential city for Pilgrims

Clock tower

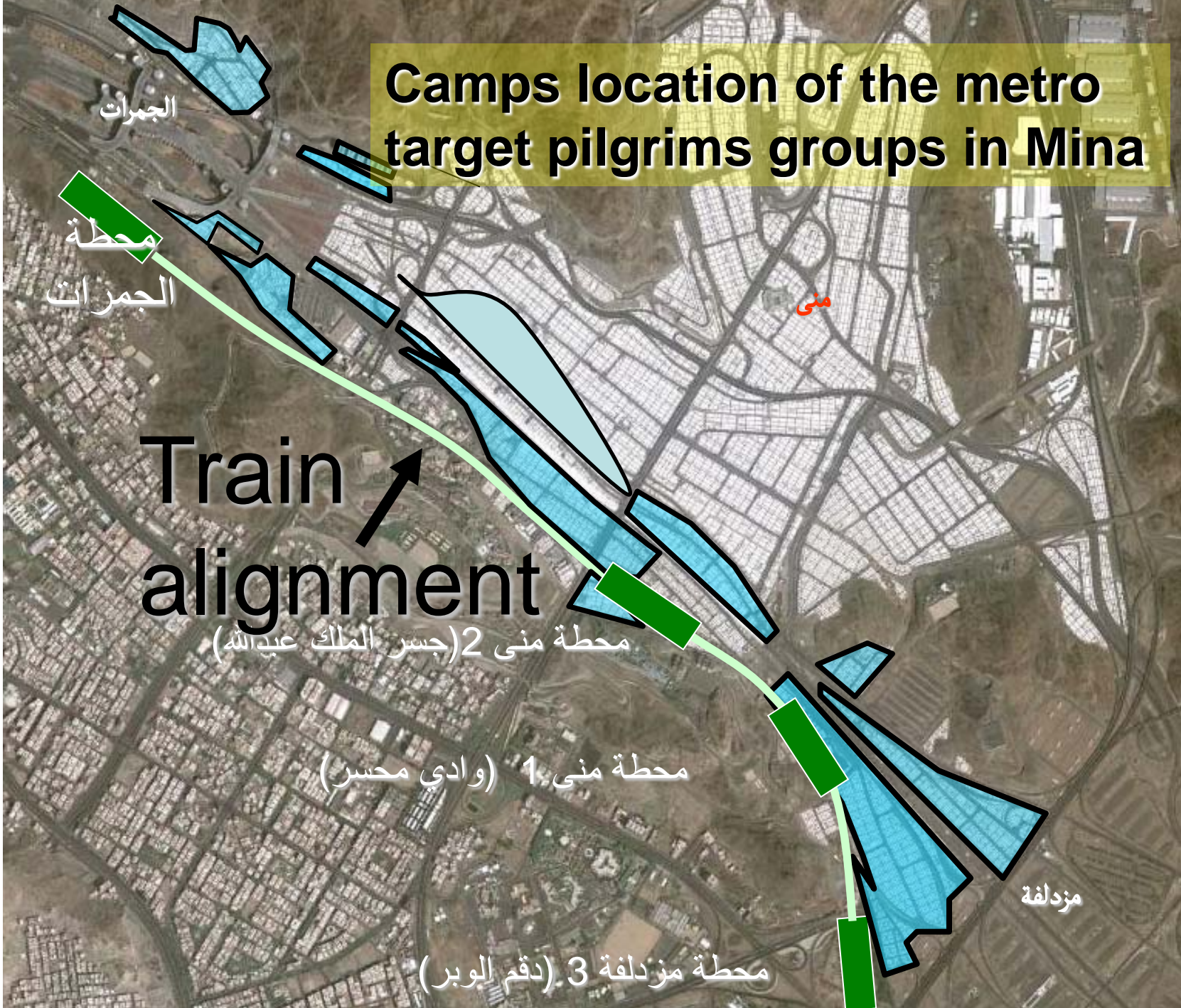
Jamarat

Pedestrian
city, Paths
streams to
Jamarat





Camps location of the metro target pilgrims groups in Mina



الجمرات

محطة الجمرات

Train alignment

محطة منى 2 (جسر الملك عبدالله)

محطة منى 1 (وادي محسر)

مزدلفة

محطة مزدلفة 3 (دقم الوبر)

Makkah Metro

قطار المشاعر المقدسة - الخط الجنوبي
Al Masha'ar Al Mugaddassah Metro Southern Line

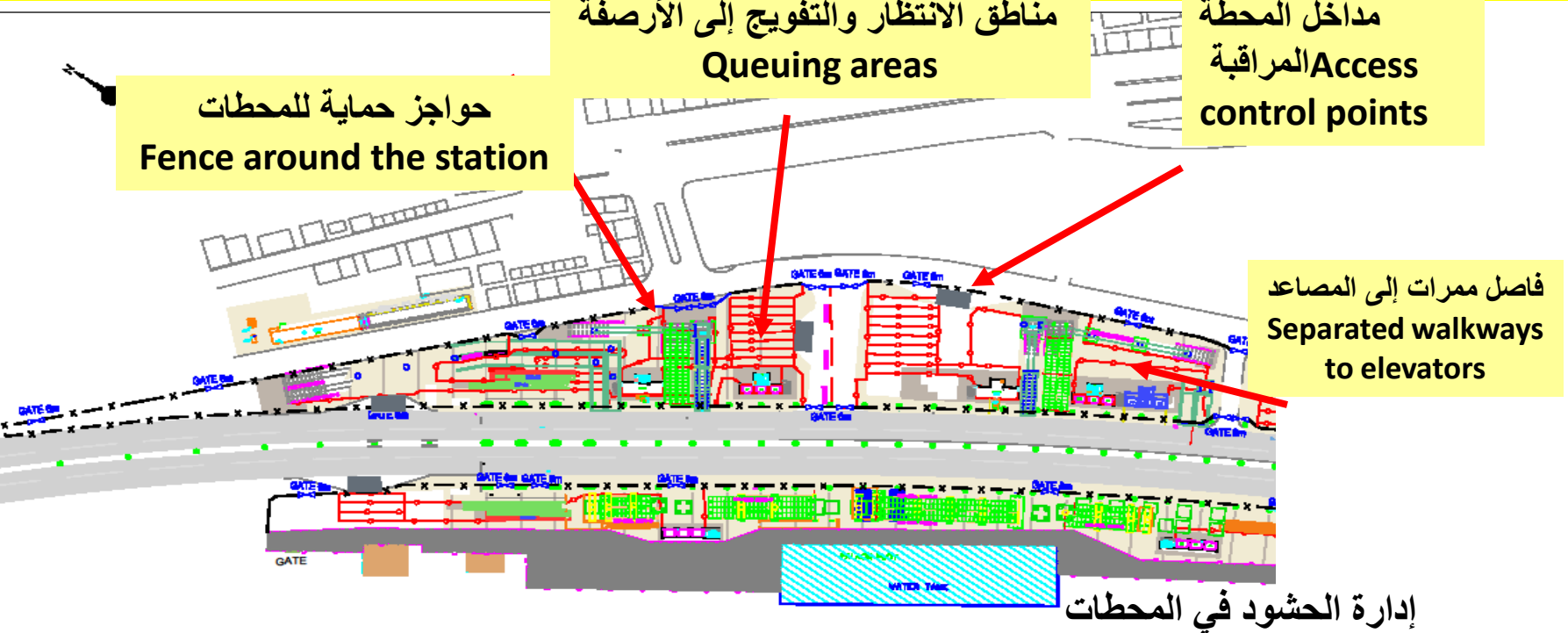


Mina Station 1





Mina Station 1



حواجز حماية للمحطات
Fence around the station

مناطق الانتظار والتفويج إلى الأرصفة
Queuing areas

مداخل المحطة
المراقبة Access
control points

فاصل ممرات إلى المصاعد
Separated walkways
to elevators

إدارة الحشود في المحطات

Plan for Crowd
management in Arafat 1
Stations

MINA 1 STATION

Crowd management in Stations

NO.	REVISION	DATE	BY	CHECKED	APPROVED



CONSULTANT:

DESIGNER:

كاتب و عليمي
Khatib & Alami

DESIGN:	M.A.	STATUS:	DETAIL DESIGN
CHECKING:	R.W.	DATE:	SEPTEMBER 2011
APPROVED:	Y.N.	PROJECT:	AD
PROJECT MANAGER:	R.H.	SCALE:	1/500

Scale given in the drawings are for the all items.
For the Permit scale should be stated by it.

Makkah Metro

قطار المشاعر المقدسة - الخط الجنوبي
Al Masha'ar Al Mugaddassah Metro Southern Line



Mina Station 2



Makkah Metro

قطار المشاعر المقدسة - الخط الجنوبي
Al Mashaer Al Mugaddassah Metro Southern Line



Mina Station 3 (Jamarat)

Metro Flow Rate 36.000 – 50.000 p/h





Capacity

- Maximum capacity expected when the two minutes headway and time available (6) hours = (30 trains per hour × 12 wagon × 300 pilgrims × 6 hours = **648.000 pilgrims**).
- Maximum capacity expected when time available (8) hours = (30 trains per hour × 12 wagons × 300 pilgrims × 8 hours = **864.000 pilgrims**).

Makkah Metro

قطار المشاعر المقدسة - الخط الجنوبي
Al Mashaer Al Mugaddassah Metro Southern Line



Management & Operation of Makkah Metro

Analog to the cumulative experiences on the operation of Jamarat during the pilgrimage in the last 6 years MOMRA has held workshops in 1431 with the participation of all stakeholders in Hajj, with local and international experts for the developing, planning and organization of the run of the train in the holy sites in Hajj.

