

APPENDIX 6.3

PLAN AND PROFILE

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E3 Expressway

Between IC 10 and STA 15+000 (Intersection with Saydi Hasan Al Anwar St)

The section adjacent to IC 10 passes Jamal A'Din Afifi St. where a considerable length of viaduct already exists. The streets along this viaduct are narrow, limited by densely constructed buildings. Therefore, the expressway can be constructed only above the existing fly-over taking the form of double-deck. The upper level of the double-deck becomes Level 3. Double-deck structure becomes necessary to pass narrow A'Rawda St and Al Malik A'Slih St until entering Salah Salim Street.

Because of this double-deck structure and limited space, it seems to be difficult to construct an on-ramp and off-ramp to connect to Al Kumaysh St as proposed in CREATS.

STA 14+000: In front of a play garden [Funfair]

The street make sharp turn ($R = 85$ m) here. For design speed of 80 km/h, the minimum radius of curvature is 230 m. To enable this design speed, acquisition of additional land in the northern side (opposite side from the play ground) is necessary.

Near STA 12+000: In front of the Citadel

To minimize any impact to the Citadel, the expressway needs to be constructed above the railroad or in the space between the railroad and An Nasr St. For this reason, separate viaduct (Type 4) is suitable.

STA 5+800 – STA 4+500 (In front of Al Azhar University and the Memorial Monument)

This section of An Nasr St is used for military parade every year. Therefore, construction of viaduct should be avoided. Underground (tunnel) or half-underground structure is possible from viewpoint of vertical alignment. After over-passing the ramps of E1, E3 can come down to at-grade at the slope of 4 % and can go underground before coming to the main gate of Al Azhar University with same (4%) slope. The recommended profile shows that expressway come back to at-grade at around STA 4+500 after passing railroad on Usit Abbas St and goes up to become Type 1 (Standard Viaduct) structure.

E3-4 and E3-5 Sections

E3-4 Section is the section between IC 10 and IC 9. This section is discussed later together with E8 Expressway and E9 Expressway. E3-5 Section is the west-most section of E3 Expressway, branching out at IC 9, stretch towards west and connect to Ring Road. This section also is discussed together with (after) E8 and E9 Expressways.

E4 Expressway

Connection to Ring Road

In the CREATS Plan, E4 is to be connected to Ring Road (RR) by constructing a new interchange on RR. However, this newly constructed interchange of RR would be located approximately 1.2 km south of an existing interchange on the west bank of Nile River. It is not desirable to construct interchange on interurban expressway with such a short interval. Therefore, it is recommended that E4 is connected to the access road of the existing interchange on the west bank of Nile River. As explained in Section 6.5, connection of the expressway via the access road of the existing interchange of RR is more preferable than direct connection of expressway and RR.

STA 6+100 – 5+900 (Over-pass for Metro)

On this section, the existing street and railroad (city tram) over-pass the metro line. Both sides of this fly-over are limited by residential buildings. Accordingly, the expressway has to go over this fly-over.

STA 6+700 – 2+500 (Along Abu Bakar A'Sidiq St; El Matareya Square – Salah Salim St.)

Along on this section, the expressway is to be constructed above the railroad (city tram) with gantry-pier structure (Type 5). On this section, one of the traffic islands provided on the both sides of railroad is wide and has beautiful gardening. Small portion of this green belt may be lost by constructing piers at the edge of the green belt but the major part of the green belt should be preserved.

STA 2+500 – 1+700 (Along Abu Bakar A'Sidiq St; between Salim St – Husayin Kamil Silim St)

There is wide green belt at the median division. To preserve this beautiful green belt, it is desirable that the expressway goes underground. However, it is practically impossible to go underground after over-passing the existing fly-over on Salah Salim Street. Therefore, separated viaduct (Type 4) constructed on the both sides the street, leaving the space above the green belt open is recommended.

E5 Expressway

This expressway connected to existing E1 via IC 6 to be constructed over the vast railroad area on the north side of the Central Station and runs along the Ahumad Hilmi St which runs, in turn, along the railroad going to Al Iskandariyyan. No serious problem is foreseen on this expressway. Only one problem is construction of relatively high (level 2) viaduct from STA 4+500 to STA 3+700 to over-pass the existing railroad viaduct and fly-over of the street.

E6 Expressway

This expressway also can be constructed with no serious problem. Entire section can be constructed as the standard viaduct (Type 1) with standard height (about 8 m above the surface of the existing street).

E7 Expressway

This expressway also can be constructed with any serious problem. However, there is green belt at the median division along almost entire length of Aziz Al Masri Street and separated viaduct structure (Type 4) is proposed to preserve this green belt. Accordingly, trees existing along the both sides the street may adversely affected. It needs further discussion whether green belt at the median division or tree along the street sides should be preserved.

E8 Expressway, E3-4 and E3-5 Sections of E3 Expressway, and E9 Expressway

E9 Expressway

This expressway runs along the railroad which runs along A'Sudan St. The name of the existing street in the west side of the railroad is not clear, but some map shows the name of El Dakroor St. El Dakroor ST is narrow and densely populated on the opposite side of railroad. Acquisition of land for the construction of the expressway will cause serious negative social impact. Therefore, it is recommended the expressway be constructed above the railroad by basically adopting gantry-pier structure (Type 5). There are sometimes agricultural land or unused land along the railroad. Therefore, Type 4 (separated viaduct) structure may be possible depending on the availability of this kind of land.

E3-4 Section of E3 Expressway

This section of E3 is the section between E9 (IC 9) and E8 (IC 10), and from viewpoint of road structure, is continuous with E9. This section is also supposed to be constructed above the railroad.

E8 Expressway

Design/plan of this expressway need diligent consideration. First, design/plan of IC 10 is quite difficult because of various physical constraints of the location (see Section 6.5). Also connection to Ring Road (RR) is not easy because of the existing interchanges of RR and existence of railroad. Connection to RR is described in Section 6.5.

To cope with the physical constraints of IC10 and connection to RR, E8 Expressway is proposed to be constructed along two different streets; Tallal Muh. Sa'ad Allah St for the south-bound traffic and Salah Salim St for the north-bound traffic.

E3-5 Section of E3 Expressway

This section is planned to branch out from E3-4/E9 at IC 9 and run along Abd. A'Salam Arif St which extends to RR. The existing condition of this street is very narrow and densely populated on the both sides on the 1.8 km-long section connecting to RR. Under present condition, it is considerably difficult to construct regular urban expressway without large scale resettlement of the roadside residents. The Study Team has been informed that there is a plan of widening the existing street together with urban re-development plan. The expressway plan should be incorporated in these plans to avoid serious negative social impact. Accordingly, plan and profile for this E3-5 Section is not proposed here.

PLAN & PROFILE E.3 - 1

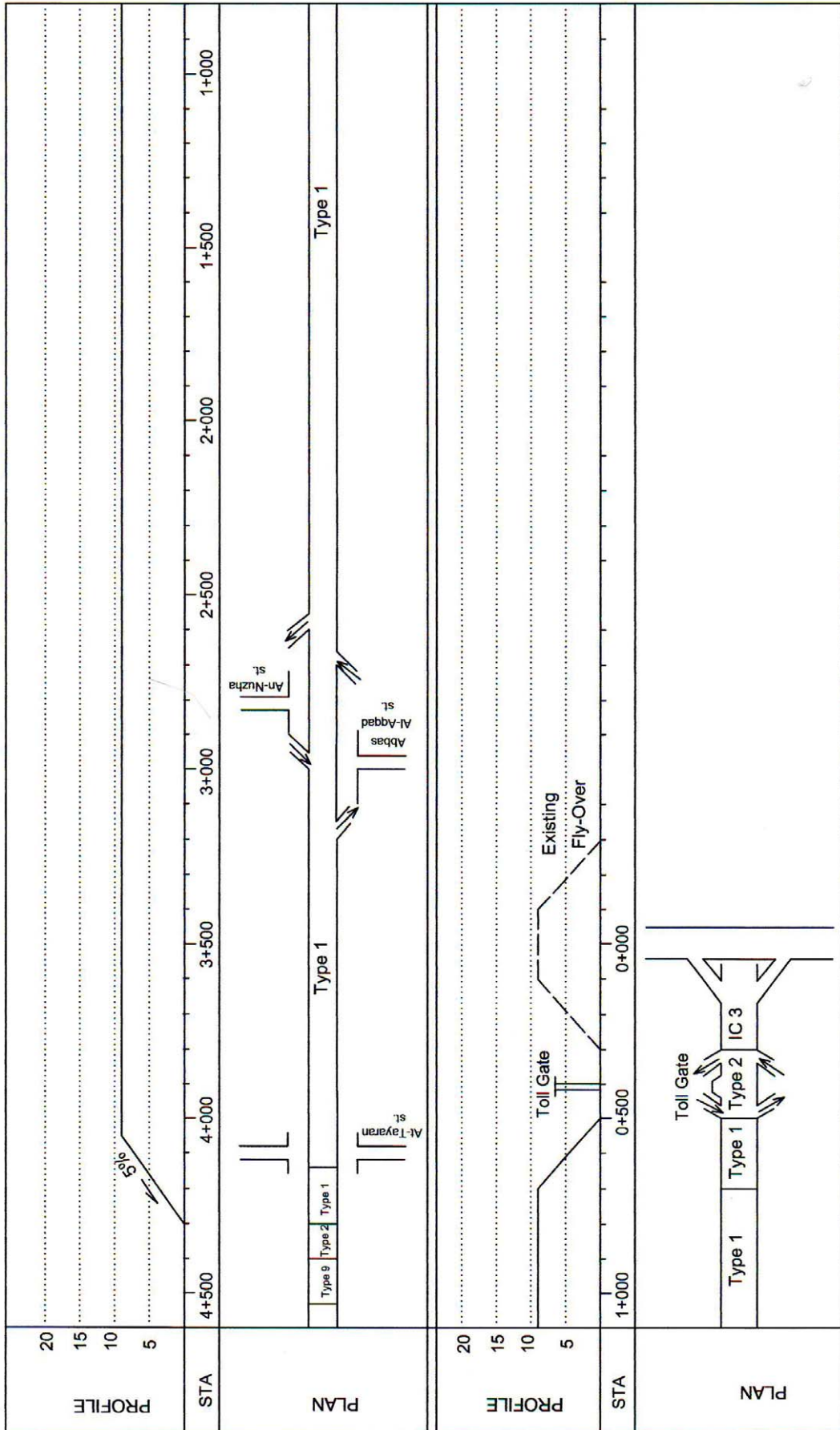


Figure A6.3-1(1/3) Plan and Profile : E3

PLAN & PROFILE E.3 - 2

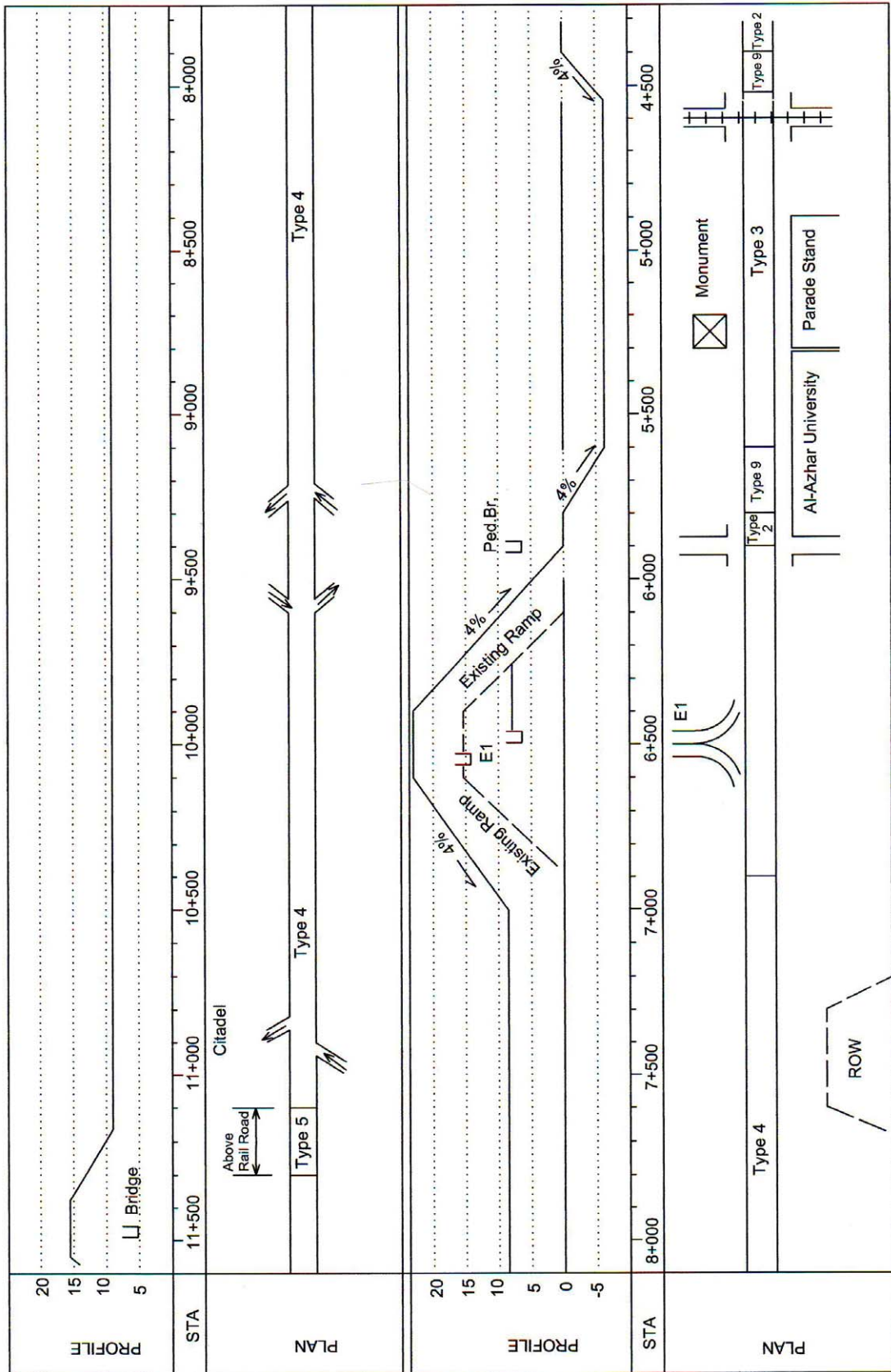


Figure A6.3-1(2/3) Plan and Profile : E3

PLAN & PROFILE E 3 - 3

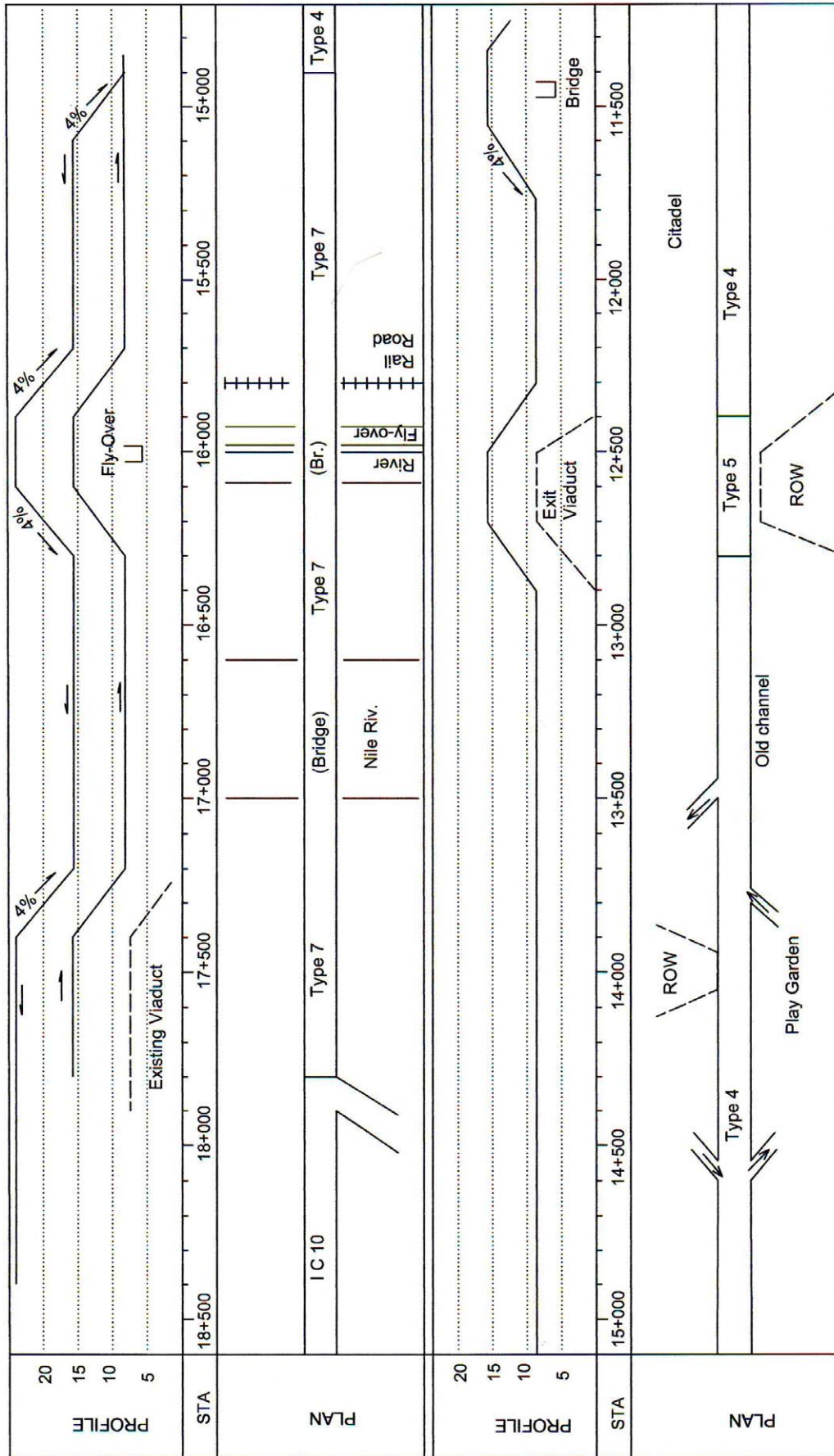


Figure A6.3-1(3/3) Plan and Profile : E3

PLAN & PROFILE E 4 - 1

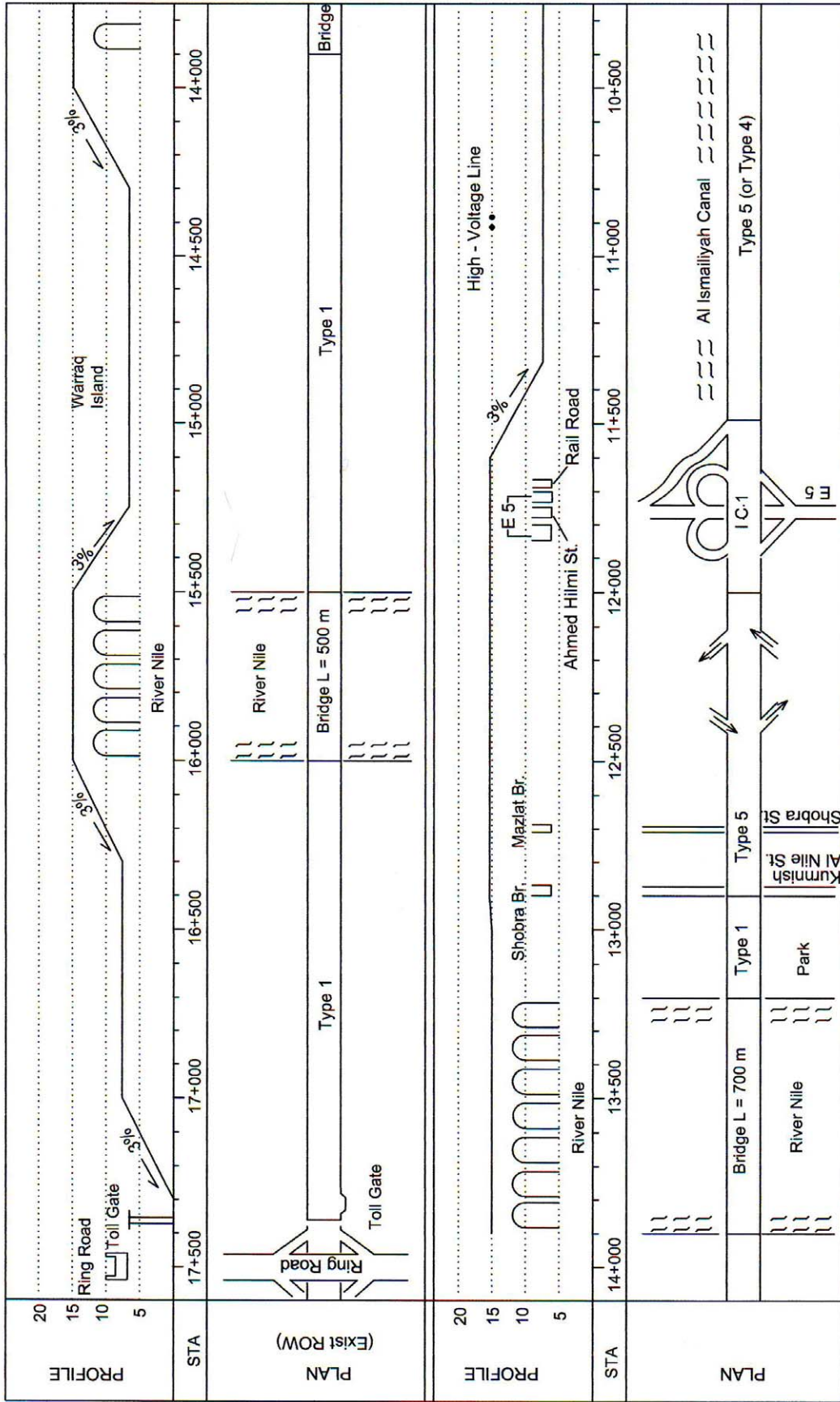


Figure A6.3-2(1/3) Plan and Profile : E4

PLAN & PROFILE E 4 - 2

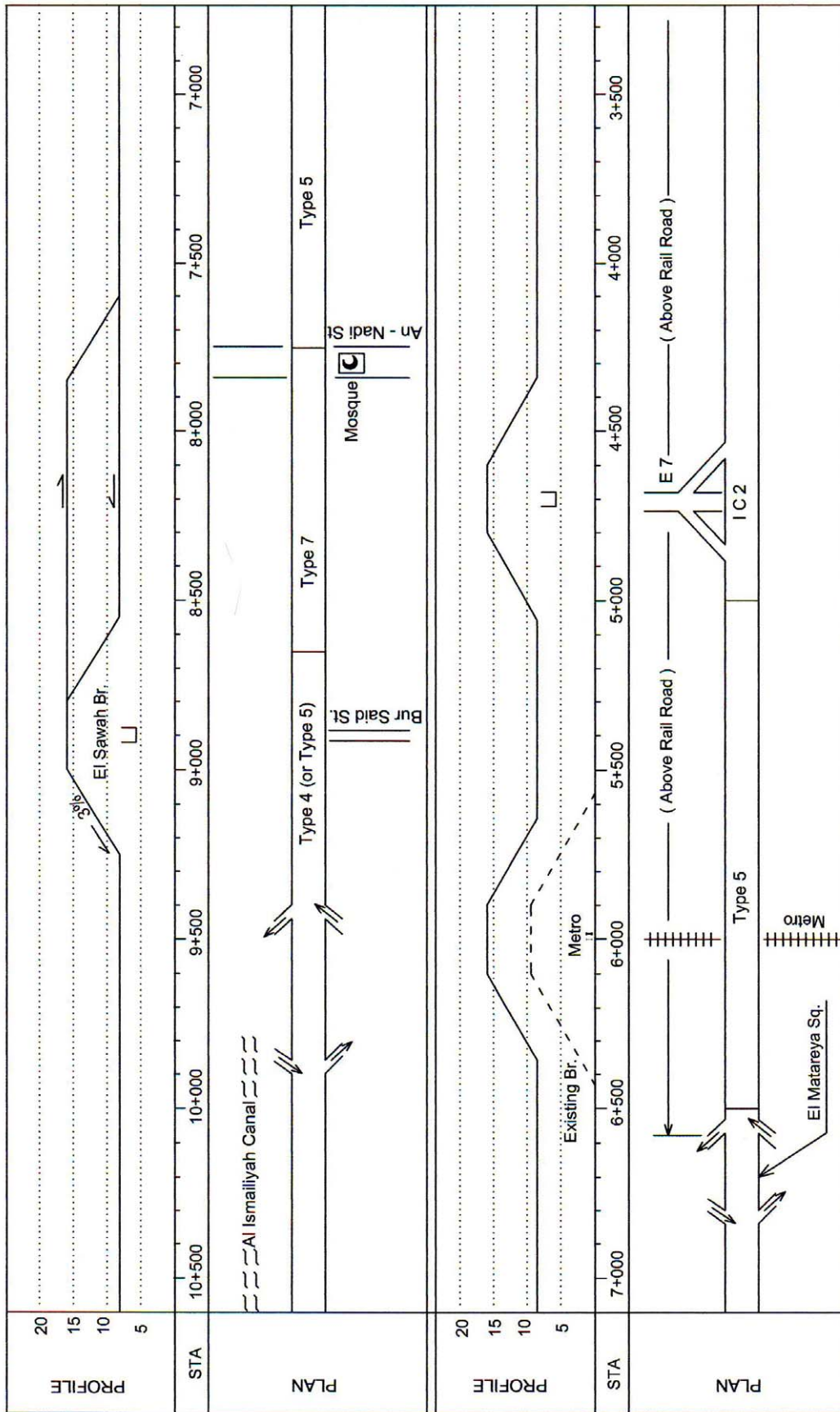


Figure A6.3-2(2/3) Plan and Profile : E4

PLAN & PROFILE E 4 -3

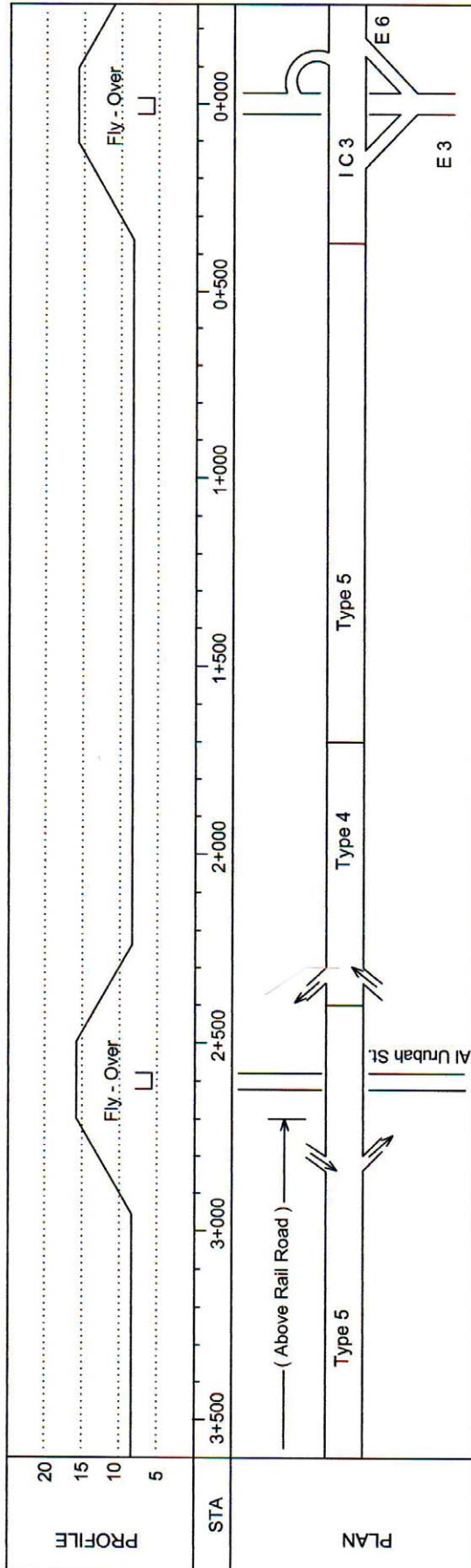


Figure A6.3-2(3/3) Plan and Profile : E4

PLAN & PROFILE E 5-1

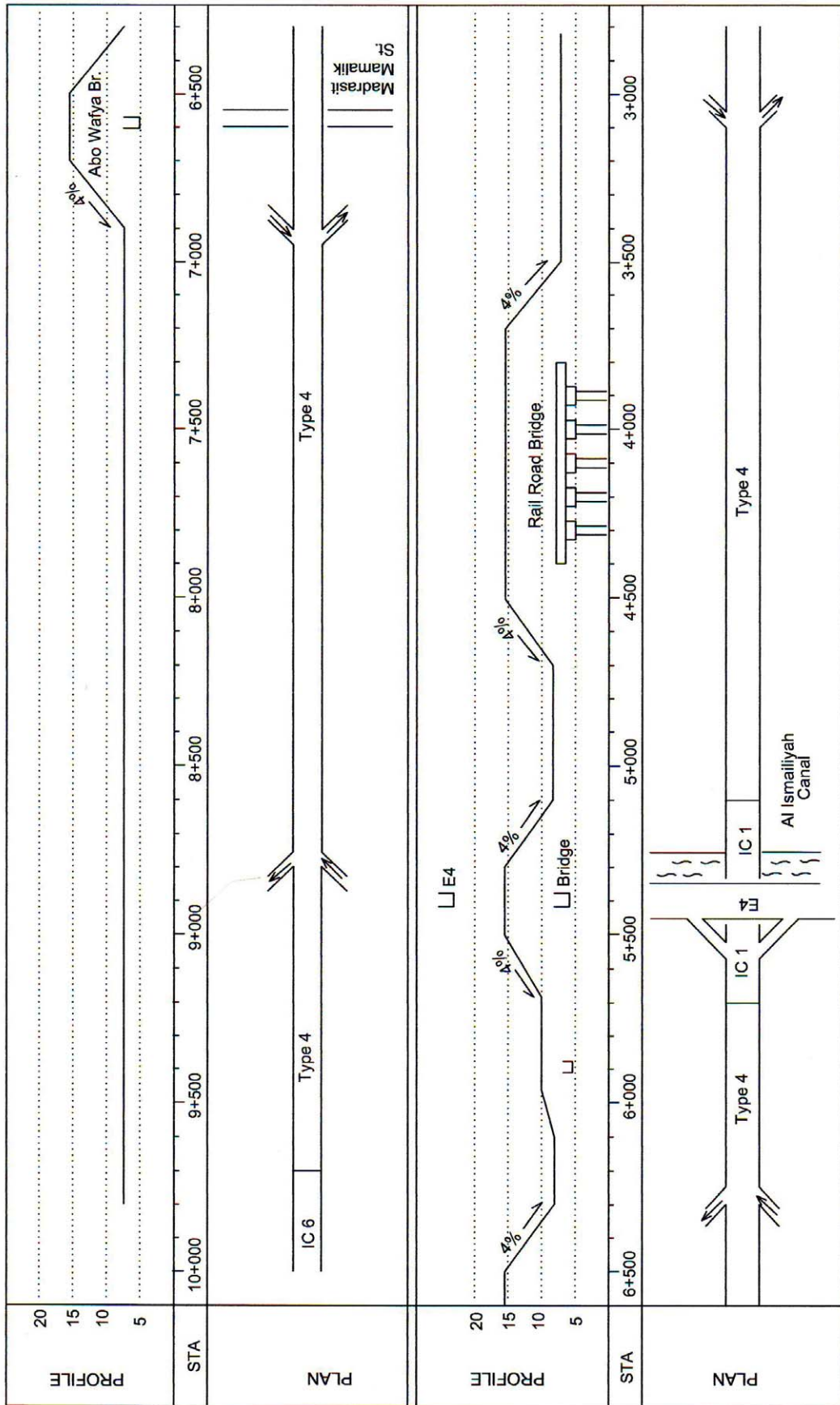


Figure A6.3-3(1/2) Plan and Profile : E5

PLAN & PROFILE E 5-2

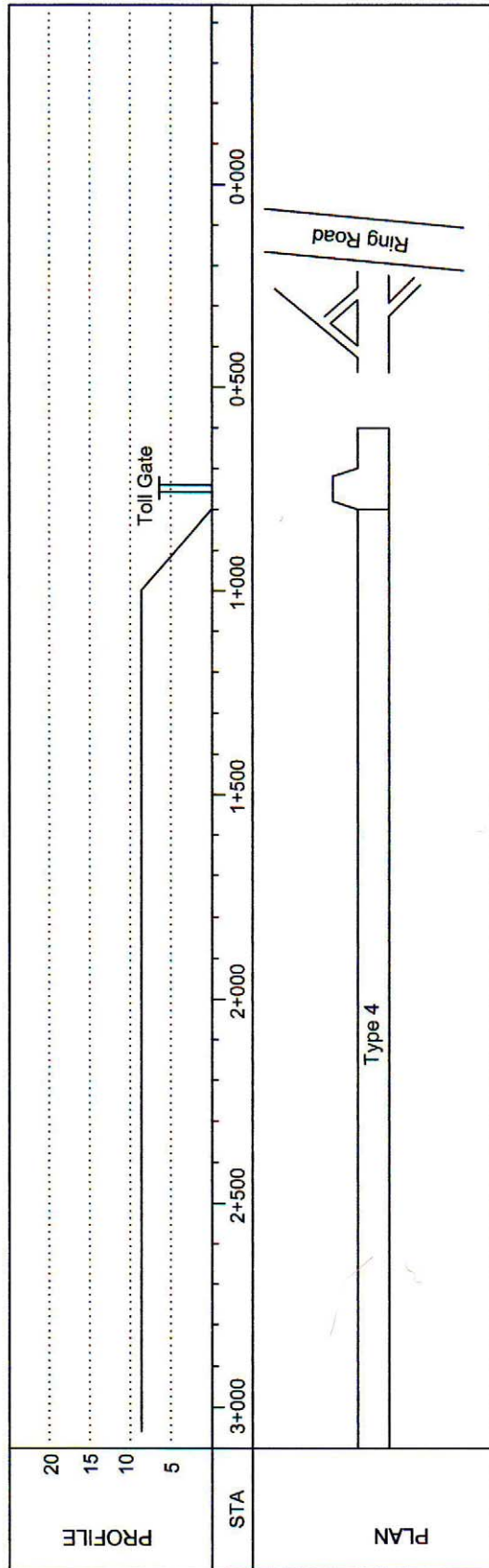


Figure A6.3-3(2/2) Plan and Profile : E5

PLAN & PROFILE E 6

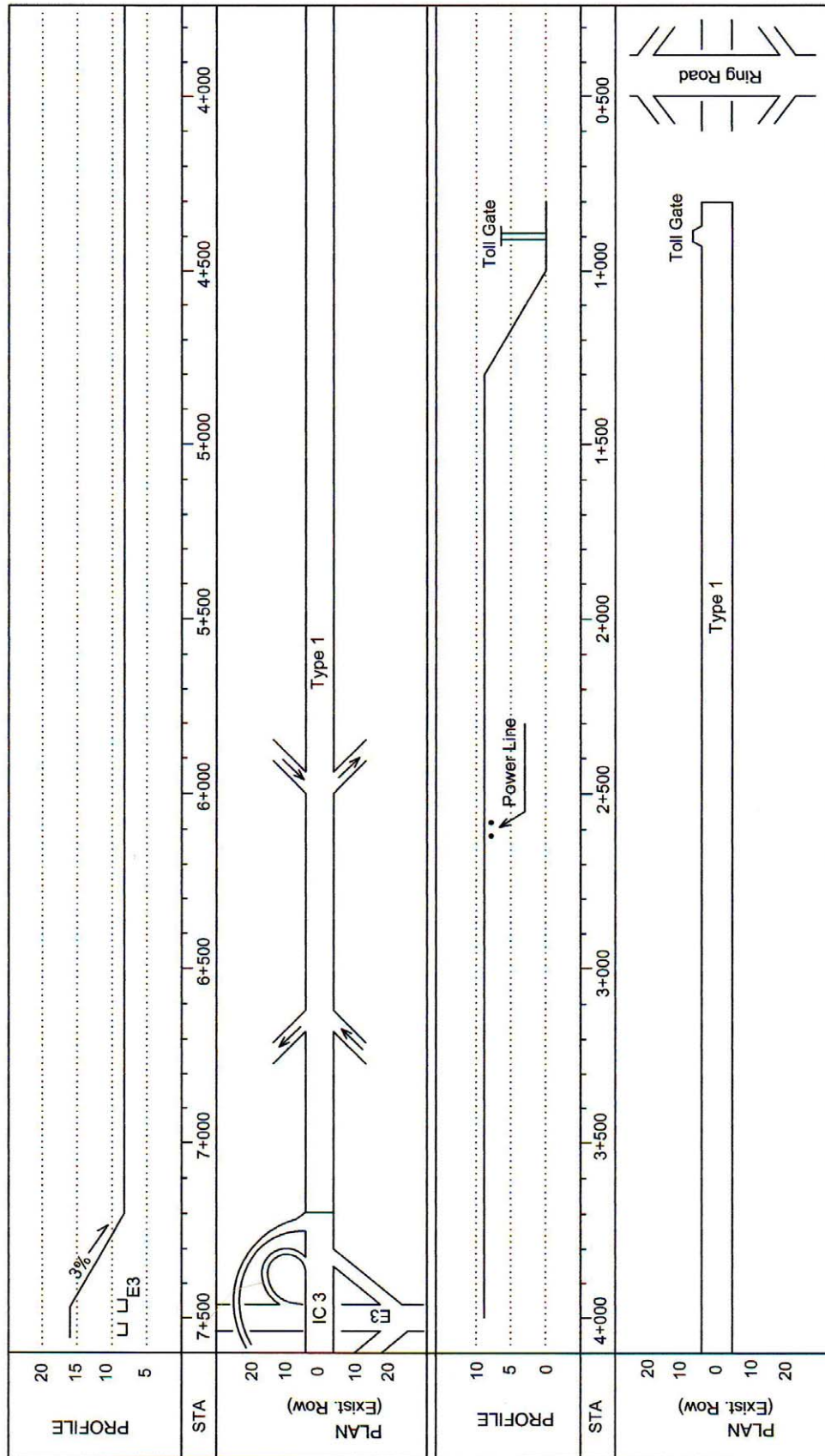


Figure A6.3-4 Plan and Profile : E6

PLAN & PROFILE E 7 - 1

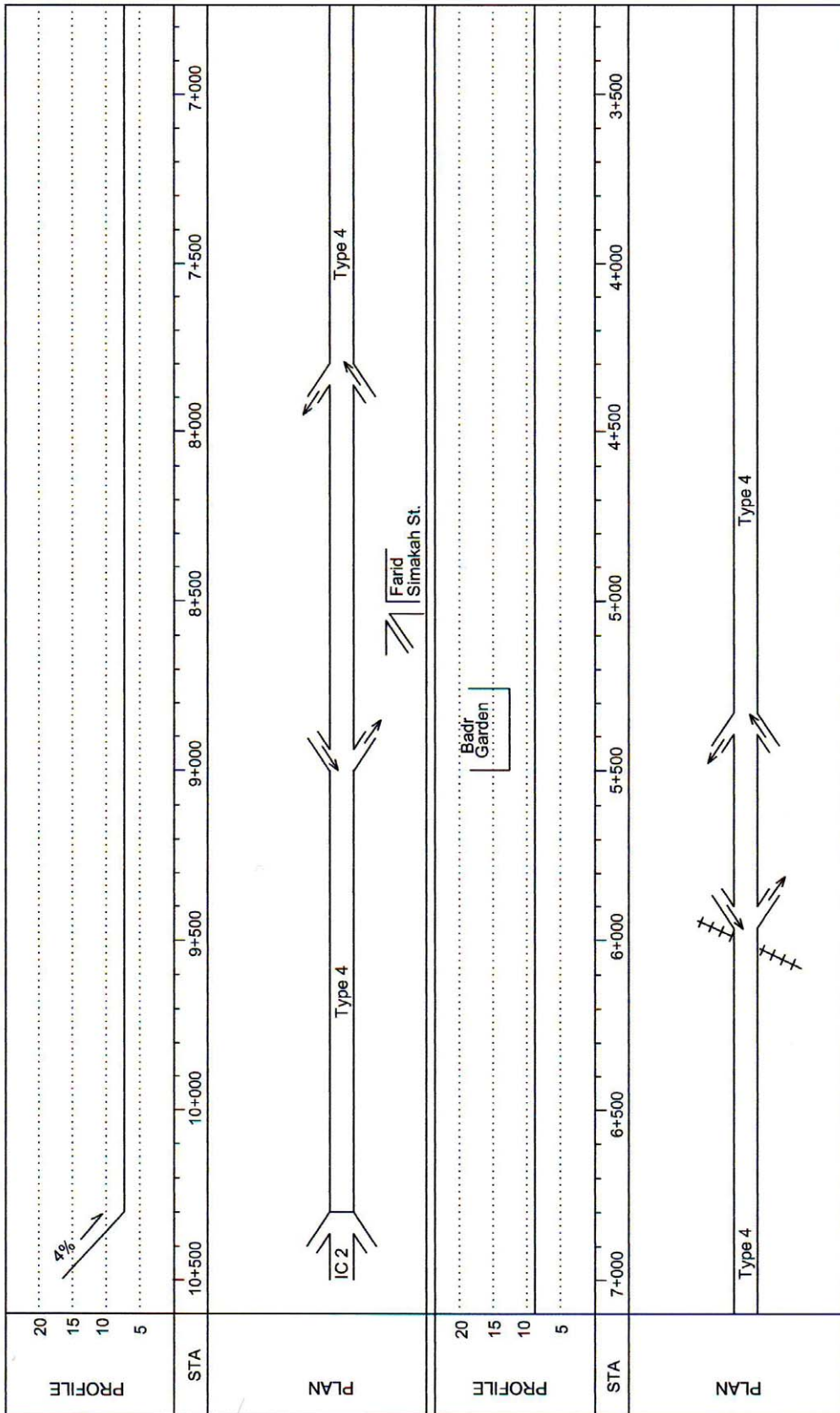


Figure A6.3-5(1/2) Plan and Profile : E7

PLAN & PROFILE E 7 - 2

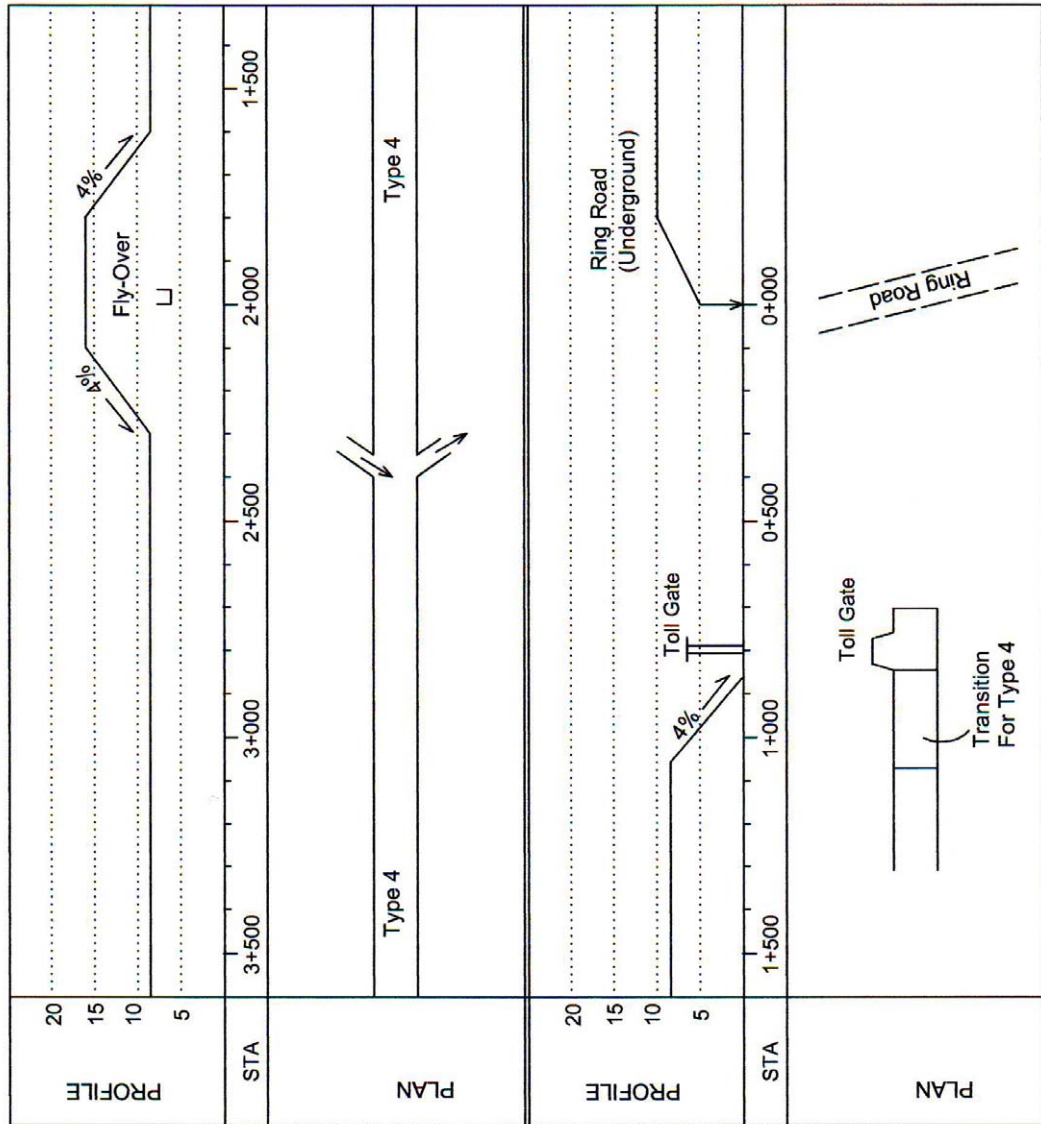


Figure A6.3-5(2/2) Plan and Profile : E7

PLAN & PROFILE E9 / E3 - 4 / E8 (1/2)

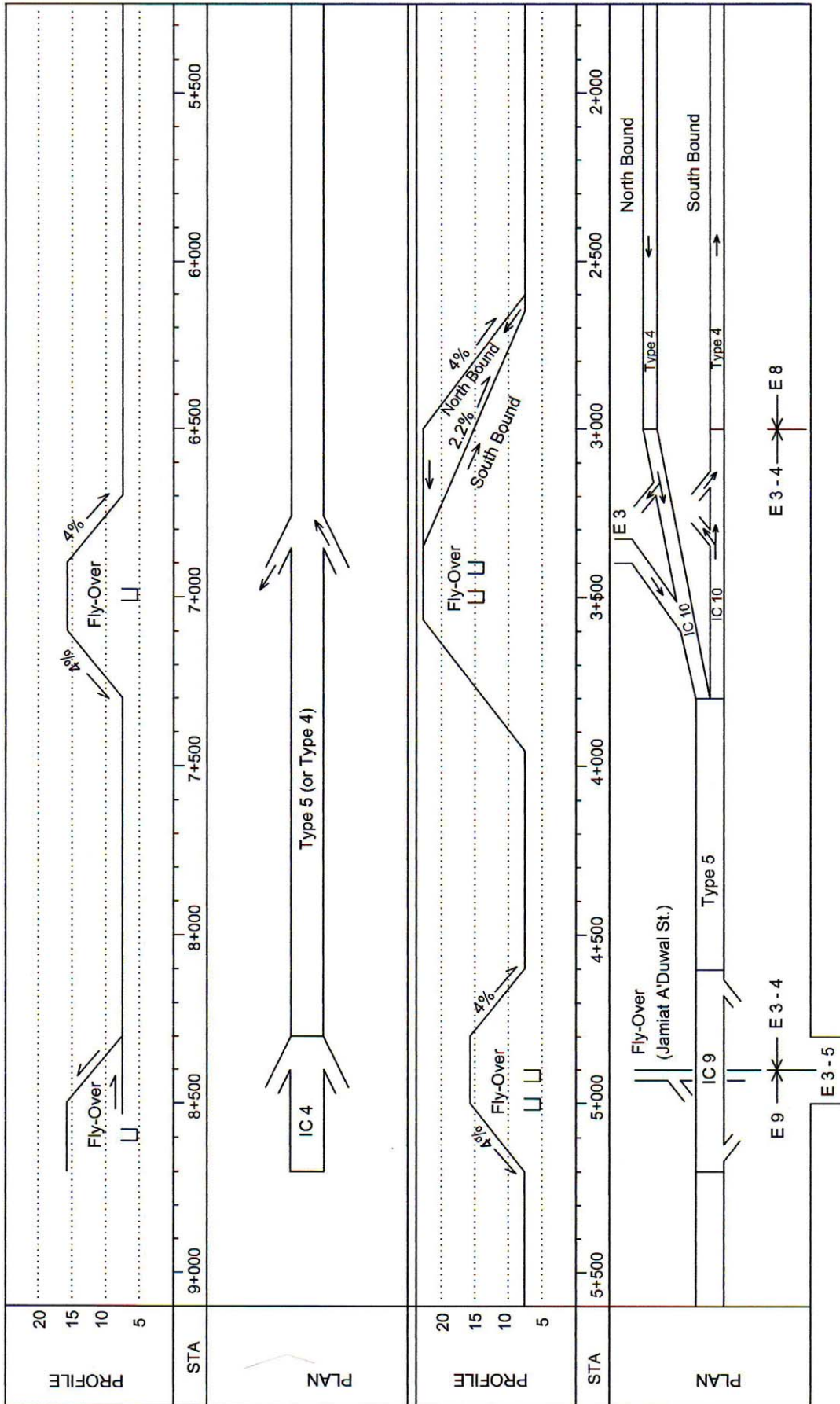


Figure A6.3-6(1/2) Plan and Profile : E9 / E 3-4 / E8

PLAN & PROFILE E9 / E3 - 4 / E8 9 (2/2)

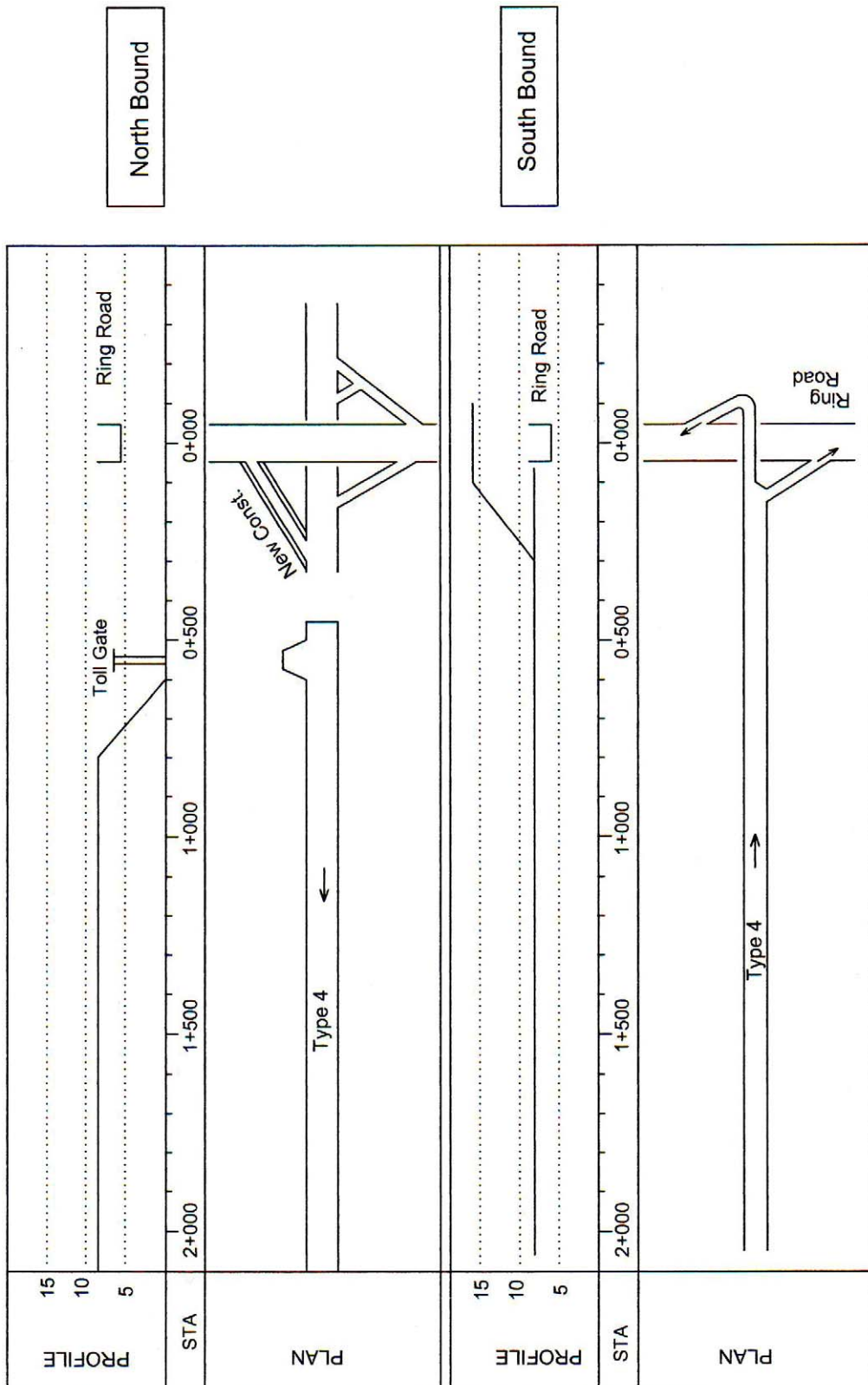


Figure A6.3-6(2/2) Plan and Profile : E9 / E 3-4 / E8