



INSTITUTE OF ARCHITECTS PAKISTAN

24th March 2007

Sindh Environmental Protection Agency

EPA Complex, ST-2/1, Sector-23,

Korangi Industrial Area

Karachi

Ph: 506-5950, 506-5637

Attn: **Mr Naeem Ahmed Mughal**

Deputy Director (EIA)

Subject: Karachi Elevated Expressway – Comments on Environmental Impact Assessment

Dear Sir,

The Institute of Architects, Pakistan has thoroughly reviewed the Environmental Impact Assessment Report submitted by the City District Government Karachi (CDGK) to the Sindh Environmental Protection Agency (SEPA) and we herewith submit our comments to the same.

Procedural Issues

1. Powers under *PEPA (Review of IEE & EIA) Regulations 2000* have not been delegated to the Sindh Province, and consequently Federal EPA must conduct the EIA. In any case, powers have not been delegated by the Provincial Government to the Sindh EPA u/s 26(2) *PEP Act 1997*.
2. Guidelines to ensure “*effective public consultation, involvement and participation in EIA assessment*” have not been issued by the Federal EPA.
3. A “*Committee of Experts*” u/s 11(2) and 23 of the *Regulations 2000* to review the EIA has not been formed u/s 10(6) of *Regulations 2000*. Additionally, a “*Sectoral Advisory Committee*” u/s 5(6) of the *Act 1997* is not available for the Transport Sector.
4. The IAP requested a copy of the EIA report by letter on the 5th of March 2007. Initially we were told to study the 2 volume, 262 page document at the SEPA offices. We finally received an executive summary and a CD of the report on the 27th of March 2007. This tardiness in providing copies of the report is not conducive the public comment process. This process needs to be improved.

Technical and Conceptual Issues

1. The identities, qualifications, and experience of the technical consultants (whose name is not given in the report) in the field of transportation and traffic planning are not known or disclosed. Such a critical and complex issue as the KEE must be addressed with great expertise. It is not possible for the citizens to participate in a public hearing if they are unaware of identities of the experts/consultants who have prepared this report.



2. The Karachi Elevated Expressway is project conceived in isolation by the CDGK to reap political capital. It is devoid of any practical or technical justification. The EIA report is nominally composed on the format required by the “Sectoral Guidelines for Environmental Reports – Major Roads” but the project itself is not designed with this document in mind. As such, the EIA report is largely an attempt to justify the need for the project.

3. The Sectoral Guidelines for Environmental Reports – Major Roads issued by PEPA states that

Direct impacts of road and highways projects result from construction, maintenance and traffic use. The most significant construction impact are those related to . . . loss of vegetation cover . . . degradation of vistas or destruction of cultural sites; and interference with the movements . . . local residents.

Direct road and highway use impacts may include: increased demand for motor fuels; accidents; displacement of non-motorised methods of transport; increased air pollution, noise and roadside litter; injury or death to . . . people attempting to cross roadways.

Siting of road is the most critical decision in road construction. It will largely determine the type and magnitude of environmental and social impacts that will result from road construction.”

Decisions on roads siting frequently involve rapid screening and appraisal of many proposed locations and road specifications, and should involve a wide range of line agencies and levels of organization.

4. It further lists the matters to be considered in initial site assessment:

- If this is a new road reserve, is the corridor location consistent with any strategic transport plan for the area”
- Does the site or corridor provide sufficient land area for present and future requirements?
- Can clearing of vegetation of high significance be avoided . . . ?
- Does the proposal in this location enhance the efficiency of the transport network including public transport?
- Can the standard and capacity of the surrounding road network accommodate traffic likely to be generated directly or indirectly by the proposal?
- Is the proposal likely to be compatible with surrounding existing or proposed land uses, particularly any residential, special uses (such as schools, hospitals, community buildings), any sites of outstanding natural, environmental, agricultural or minerals value?
- Is there likely to be a problem with air or water quality, or noise levels due to the proximity and nature of nearby land uses? Is the proposal likely to pose health risks?
- Is the proposal likely to affect heritage values or sites of significance?
- Is the highly visible? Can significant visual impacts be avoided?
- Is the proposal at the proposed location, in concert with others recent and planned road networks improvements, likely to cause cumulative problems, or contribute to existing problems (air, noise, congestion, economic hardship, social issues, inappropriate land use)?



It is our contention that the CDGK has blindly proposed this project without considering any of the above issues. The Elevated Expressway will have a major negative impact on the city of Karachi and its environment. The problems it proposes to address will not be solved by this project but in fact will be further exacerbated.

5. The Elevated Expressway is being developed to ease the current and projected traffic load on Shahrah-e-Faisal. The project does not take into account the alternative route and the consequent relief that will be provided by the completion of the Lyari Expressway nor does it consider any different corridors to divert traffic off of Shahrah-e-Faisal in order to reduce its traffic load. The EIA provides no study of the effect of the road network under consideration, which includes the Lyari Expressway, the Northern Bypass, the proposed ring roads and the signal-free corridors. Listing the number of vehicles at each intersection does not give any idea of the flow of traffic. Most of the traffic at any given intersection is probably local traffic since the numbers at each intersection vary so much.
6. The Elevated Expressway is proposed to be a high speed link for freight and passenger traffic between the Jinnah International Airport, Karachi Harbour and the Port Qasim. Realistically, there is very limited traffic between the airport and the two ports. Instead there is much greater freight traffic between the ports and the rest of the country; this traffic is adequately serviced by the recently completed Northern Bypass. Most of the traffic, currently on Shahrah-e-Faisal is local traffic commuting to and from the Central Business District. The limitations of the Corridor are such that the design of the KEE does not cater to the needs of these commuters since there is no exit ramp between FTC intersection and Jinnah Bridge.
7. It is also not correct to refer to the Elevated Expressway as the Southern Bypass as has been suggested because it bypasses nothing and in fact ploughs through the densest and most valuable real estate in Karachi.
8. The Elevated Expressway also does not service any of the Industrial Estates of Karachi. There is no direct access to the Elevated Expressway from Korangi, SITE and North Karachi except through residential neighbourhoods. These areas are much better served by the Northern Bypass and the National Highway.
9. The project is conceptually flawed because it proposes to place a limited access high-speed expressway over the alignment of Shahrah-e-Faisal and M.T. Khan Road. This would mean that the Expressway would have the same constraints and limitations as Shahrah-e-Faisal and M.T. Khan Road and will hardly allow expressway speeds. For Example, the Expressway will travel over the Bridge at PIDC, squeeze between Hotel Pearl Continental and Hotel Sheraton; curve around Hotel Metropole and past Hotel Avari. The limitations of the Corridor are such it is impossible to design the Elevated Expressway as an independent roadway. All the entry and exit ramps are accessed from the at-grade roadway of Shahrah-e-Faisal. This will lead to unbearable congestion at points where the Expressway traffic will merge with the at-grade roadway.
10. The Elevated Expressway is completely inappropriate conduit for the movement of heavy freight vehicles. The limitation of the Corridor and the need to ascend and descend over each existing flyover and toll plaza will prevent driving at a steady expressway speed. There is a high risk of accidents involving dangerous and volatile cargoes. There is no mention in the EIA report of any measure that would address such an eventuality, in terms of access to the accident site by emergency vehicles, evacuation plans for area residents and other mitigation measures.
11. By constructing the Elevated Expressway, the volume of traffic that can be handled by the Shahrah-e-Faisal corridor may be increased but the roads leading into Shahrah-e-Faisal and away



from it will remain the same. This will create major traffic congestion of traffic on roads feeding into the Shahrah-e-Faisal Corridor.

12. An Elevated Expressway is an expensive and inefficient response to the city's traffic problems. When the traffic volume exceeds the capacity of the Elevated Expressway, it will not be possible to widen it by constructing additional lanes. Therefore, this project will have much shorter productive life span than an on-grade highway.
13. The Elevated Expressway is being proposed as a 4 lane highway with two lanes travelling in either direction (The 6-lanes claimed in CDGK publications includes entry and exit lanes). There is no provision for a shoulder or emergency lane. A car breakdown or accident on the Expressway will result in traffic jams of monumental proportions, with no escape for vehicles and no access for fire tenders or ambulances except from the six exit points.
14. The placement of the six entry and exit points is not rationally based on the requirements of the city's traffic but rather on the limited space available for entry and exit ramps and toll plazas. For example, there is no entry or exit at Jinnah Airport. Airport traffic will exit the Expressway at Star Gate intersection and merge with Shahrah-e-Faisal traffic till the JIA intersection. Similarly, there is no interchange at either Rashid Minhas Road or FTC. Residents of Gulshan-e-Iqbal and DHA would have to exit earlier and merge with Shahrah-e-Faisal traffic. The design is compromised by the physical limitations of the Shahrah-e-Faisal corridor and it will serve to make a bad situation much worse.
15. The proposed Karachi Master Plan 2020 calls for the development of multiple nuclei, i.e. additional business districts at different locations throughout the city to reduce commuting time and pressure on our roads and other resources. The goal of this proposal is to decrease the dependence on Saddar as the city's Central Business District. The Elevated Expressway tends to contradict this goal of the Master Plan as it seeks to concentrate more traffic into the Saddar area. If the considerable financial resources allocated to this project were applied instead to develop a Central Business District in Port Qasim it would open up employment opportunity there and reduce the volume of traffic flowing daily to Saddar.
16. The increase in the number of cars on the roads in Karachi is not a valid justification for the construction of new highways. The CDGK should opt to urgently focus these same resources to develop an urban mass transport system.
17. The problem of traffic volume on Shahrah-e-Faisal is the result of mismanagement of the traffic, disregard of traffic laws, encroachment of service lanes and parking and the inconsistency of the road width along the Corridor. The CDGK needs to address these concerns first before it can justify increasing the volume of the Corridor.
18. The need for a freight route through the Southern sections of the city connecting Karachi Port to the National Highway is metropolitan problem that requires the concerted and coordinated effort of all the city's administrating agencies not just the CDGK.
19. The Institute of Architects, Pakistan has proposed to the CDGK that the traffic load on the Shahrah-e-Faisal Corridor be reduced by constructing an at-grade expressway from Quaidabad along the Malir River bed for commuter traffic and by further developing the already under-construction road through the Korangi Industrial Area as a truck route to National Highway. Lateral roads would need to be built across the Malir River between Shahrah-e-Faisal and these two expressways. Both routes would merge at Hino Chowk and continue south through DHA's Phase VIII and then along the Clifton Seafont to Keamari. The route along the seafont could be constructed under ground to preserve the connection of the city to the sea and safeguard



pedestrian access to the beach. The choice to run the route through DHA's Phase VIII is based on the fact that the area is still largely undeveloped and can tolerate highway construction. These alternative options are not considered in the EIA report, presumably because it includes areas that are not in the CDGK's jurisdiction.

Environmental Issues

1. The construction of the Elevated Expressway will ruin one of the most attractive boulevards in Karachi. The construction of the Expressway will result in the loss of most of the trees along Shahrah-e-Faisal. It will effectively place a roof over the existing roadway, substantially cutting off sunlight and breezes. Anyone wanting to imagine the ambience of the resulting roadway need only stand under the NIPA flyover or the Liaquatabad Flyover and imagine it extending for 24km. The loss of daylight will create a dark and desirable environment under the Expressway. It will require the entire length to be illuminated 24 hours of the day. There is no study of the impact of long term exposure to sodium halide lighting. Nor is there any assessment of the electrical load of this Expressway.
2. The EIA report asserts that the only the vegetation along the median will be affected and this consists mostly of non-photosensitive hedges. This is nonsense and factually incorrect. There is no such thing as a hedge that is "not radiation sensitive." The EIA report further lists in its survey, nearly 1100 trees on the media of the Corridor including 242 Neem trees. The 'inference' that the trees along the north and south side of the corridor will not be impacted is also inaccurate since the realignment of the Shahrah-e-Faisal ROW and the construction of the toll plazas and ramps will necessitate the removal of a large percentage of the trees. In the same vein, it is likely that many of the pedestrian bridges recently built over the Corridor will need to be demolished in order to accommodate the widened ROW.
3. The increased traffic load on the Shahrah-e-Faisal corridor and the construction of the Expressway will greatly increase the levels of automobile emission and resultant pollution in that area. The Expressway structure perched above Shahrah-e-Faisal will serve to trap the pollution and will prevent it from dispersing. This will negatively impact the air quality along the entire length of the Expressway. The promoters of this project have claimed that the pollution will be halved after the expressway is completed; nothing could be more ridiculous.
4. The Elevated Expressway passes through the heart of Karachi's thriving commercial, business and tourist districts. Much of its length is over Shahrah-e-Faisal which was recently designated as a corridor for high rise commercial development. Numerous high-rise are under construction along its length with many more in the design phase. After its completion, traffic on the Elevated Expressway will whiz past the third and fourth floor of these buildings. The high walls of these building will create a canyon-like effect which will further serve to trap the pollution and amplify traffic noise. The Expressway will obscure the facades of every building that it will cross and will greatly hinder people's access to these buildings and will certainly result in the depreciation of real estate values and deterioration of public health along its length.
5. The survey of trees along the Corridor is unacceptable. All trees are characterized as either being between 5-7' or taller than 7' in height. While canopies are described as Medium, Large or Extra Large. It would suggest that this survey was conducted without any measuring instruments. It gives no indication of many mature and historical trees along the Corridor, especially on Club Road.



6. Club Road, the worst affected part of the Corridor has the potential to develop into a very fine pedestrian district with access to nearby shopping areas and other amenities. A theatre and museum district is also possible near the Arts Council. The road is important part of the history of Karachi. Its wholesale destruction by the construction of the Expressway is heinous act not expected of the City Government.
7. The noise and air pollution studies and data quoted in the EIA report are questionable since they don't take into account the presence of high-rise buildings on either side that will trap the air pollution and prevent it to disperse. This condition will only get worse with time as the number of cars and buildings increase. There is no study or projections of the expected air pollution levels under the Expressway. Expected levels of air pollution can be inferred by a PEPA study of Nitrogen Dioxide (NO₂) levels measured at different parts of Karachi. The highest level of 399mg/m³, found at Karimabad intersection is four times higher to than the worst industrial areas. The only thing unique about the Karimabad intersection is that it sits under the Liaquatabad Flyover.
8. The noise level study reveals that the current noise levels are higher than recommended levels in international standards. The noise pollution after the construction of the Expressway is expected to be much higher. The proposed mitigation measures by the proponents in the form of suitable streetscaping and noise barriers are vague, unclear and unacceptable.
9. There is no indication of the cost in social and economic terms of the increased pollution level with respect to the increase in respiratory and other diseases and the additional burden on the health services.

Construction Issues

1. The construction of the Elevated Expressway will present serious challenges for the CDGK's ability to maintain regular traffic on Shahrah-e-Faisal. Shahrah-e-Faisal is the principal strategic traffic artery in Karachi and any interruption in its use would be a major hardship to the citizens of Karachi. Common sense and established practice would suggest that instead of expanding the same thoroughfare an alternative route should be developed close by so that normal traffic flow can be maintained during construction.
2. The construction of the Elevated Expressway will cause severe hardship to the residents of Karachi particularly to the businesses located on Shahrah-e-Faisal. The construction time of 30 months appears to be too optimistic considering the usual pace of construction in Pakistan (foreign developer notwithstanding). The construction of the Elevated Expressway will need to be undertaken in sections and traffic detours will need to be provided around the sections under construction. The CDGK has not shared any plans with the citizens of Karachi on how it plans to achieve these diversion plans during the construction period and which adjacent neighbourhoods will be affected.
3. Shahrah-e-Faisal is the main access route to the airport and is heavily used for the movement of VVIP's. How will this access be maintained during construction? What diversionary routes will be used for VVIP traffic at added security risks? What hardships will citizens be forced to endure in the name of questionable development? There have been no public hearing held to discuss this with residents and businesses along the Shahrah-e-Faisal / M.T. Khan Road corridor.
4. The EIA report does not adequately outline areas required during construction for the storage of material and equipment, or areas for the housing on construction workers. There is no mention of



the area required for construction yard activity and precasting work. All environmental issues related to these activities need to be mentioned in detail.

Financial Issues

1. The price tag for the Elevated Expressway has grown from the initial US\$225 Million through \$250 Million to \$350 Million (PKR 21 Billion). Figures much higher than these have been quoted by independent sources. It is essential that the final price tag for this project be firmly fixed and be publicly acknowledged. The feasibility of this project depends on the recovery of the cost through tolls. Since the volume of traffic will not grow proportionately to the cost of the project, the cost of the toll is likely to be enhanced. This will more than likely limit the number of drivers who would be able to afford the toll.
2. The financial feasibility of the project appears to be unsound. The Elevated Expressway project is expected to cost US\$ 350 Million or PKR 21 Billion. The cost of Rs.875,000,000 per kilometre is much higher than other comparable at-grade options. The developer is expected to recover their investment by collecting tolls from all vehicles over the first 20 years of its life. This means that the Expressway operator will need to collect PKR 1,050,000,000 per year or more than PKR 2,876,000 per day. If the average toll per vehicle per trip is set at PKR20 that would amount to 143,835 cars per day using the Expressway. Divided between the six entry/exit points, that amounts to almost 24,000 cars per exit per day or one car every 3.6 seconds. Even at Rs.200 per truck the Expressway will need to carry 14,384 trucks every day. That number of trucks entering from the two ends will completely tie up the Expressway. The actual number of vehicles will range between the two numbers quoted above. This estimate also does not include the cost of overheads, utilities, maintenance and inflation over twenty years. It would seem unlikely that the CDGK's financial claims about this project will be realized. The foreign developer of the project will surely claim the CDGK's financial guarantee.

Conclusion

The Institute of Architects, Pakistan believes the Elevated Expressway project to be conceptually flawed, conceived under a miscomprehension of the city's traffic problems, unlikely to solve the concerns raised in the EIA and guaranteed to cause irreparable environmental damage to the city of Karachi. We request the PEPA to reject this EIA on the basis of the above comments and we urge the CDGK to withdraw this project.

We thank you for this opportunity to submit our comments and will assist you during the public hearing with a presentation and additional comments.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ejaz Ahed', written in a cursive style.

Ejaz Ahed
President,
Institute of Architect Pakistan