

## **Management of building construction**

### **A. Architects**

By the end of 2011, the number of architects in practice is 3,546 which increases 2.99% in comparison with 3,443 in 2010, and 3,519 of them are Class A architects; in addition, the number of Class B architects (licensed according to Article 53 of the Architects Act) is 27. When compared in terms of each county (city), most of the architects are in the Five Special Municipalities and Taoyuan County. Taipei City has the most architects: 1,268 people; 539 in Taichung City, 520 in New Taipei City, 323 in Kaohsiung City, 230 in Tainan City and 160 in Taoyuan County. The 6 cities/counties above cover 85.7% of all architects in practice. It shows that the request in the space of buildings in urban area is rarely high due to centralization of population. With the convenience of information and traffic, urban city becomes the area for architects in practice centralized.

### **B. Construction Industry management**

According to the Construction Industry Act, construction is divided into comprehensive construction enterprises, specialized construction enterprises and civil engineering contractors. Comprehensive construction enterprises are categorized into three groups: A grade, B grade and C grade. By the end of 2011, the number of construction companies, exclusive of the companies without renewing certificates after Construction Industry Act was enacted, was 16,052. With the limitations in founding threshold and regulations in Construction Industry Act, there were 6,244 companies of C grade comprehensive construction enterprises (38.9%), 6,115 companies of civil engineering contractors (38.1%), 2,098 A grade comprehensive construction enterprises (13.1%), 1,274 B grade comprehensive construction enterprises (7.9%) and 321 companies of specialized construction enterprise (2.0%). When compared in terms of each county(city), most of the architects are in the Five Special Municipalities and Taoyuan County. Taichung City has the most companies. There are 2,125 companies (13.2%) in Taichung City, followed by 1,954 companies (12.17%) in Kaohsiung City, and 1,887 companies (11.76%) in New Taipei City.

In terms of total capital, the capital of the whole construction was 620,880,000,000 dollars: A grade comprehensive construction enterprises had 49.0% of the whole capital, specialized construction enterprises had 41.0%, followed by 5.2% of C grade and 3.6% of B grade. The total investment of civil engineering contractors constituted as few as only 1.1%.

In terms of construction companies' average capital, the average amount for each company was 38,680,000 dollars by the end of year 2011. There thus has concluded a comparison results that in terms of geological location, mainly in Taipei City and Kaohsiung City, the average capital for each company reaches 170,940,000. Kaohsiung city has the highest average of 119,800,000 dollars, followed by 23,380,000 dollars in New Taipei City.

### **C. Safety inspection in lifting equipment of buildings**

By the end of 2011, there were 8 institutions of safety inspection in lifting equipment of buildings, including 6 institutions in Taipei City, 1 in Kaohsiung City and 1 in Taichung City and 450 specialized companies which increased 3.4% in comparison with 435 in previous year (2010). When compared in terms of each county(city), most of the specialized companies are in the Five Special Municipalities and Taoyuan County. Taipei City had the most specialized companies –101 (22.4%), followed by 82 companies in New Taipei City (18.2%) and 71 companies in Taichung City (15.8%). There were 7,090 professional technicians which increased 4.8% in comparison with 6,768 in 2010. When compared in terms of each county(city), most of the professional technicians are in the Five Special Municipalities and Taoyuan County; 4,069 in Taipei City (57.4%), 811 in New Taipei City (11.4%), 533 in Kaohsiung City (7.5%) and 530 in Taichung City (7.5%).

The number of the inspected lifting equipments in 2011 is 140,655, which decreases 8.1% in comparison with 153,095 in 2010. The qualified case number of the inspected lifting equipments was 140,650, nearly 100%. The cities and counties which had over ten thousand inspected lifting equipments were: 30,329 in Taipei City (21.6%), 29,139 in New Taipei City (20.7%), 18,143 in Kaohsiung City (12.9%), 17,086 in Taichung City (12.1%), and 14,803 in Taoyuan County (10.5%) ; in addition, the five counties and cities had 77.9% of the inspected amount.

### **D. Safety inspection in mechanical recreation facilities**

The recreation center will be deregulated if mechanical recreation facilities were removed completely. In year 2011, one city (county) for recreation center was deregulated individually in each of Chiayi County (1) and Hsinchu City (1). Yet, a new recreation center was established in each of New Taipei City and Taichung City. Therefore, by the end of 2011, the number of recreation center was 33, remain the same with 2010; 24 were in business and 9 had been suspended by the enterprise.

The number of mechanical recreation facilities totaled up to 266, however, 210 were still running, 56 have been suspended, 204 in business have duly obtained building licenses, and 6 in Taipei Children's Recreation Center have not obtained the usage license yet. Taipei City Government allows the business with special signature. The facilities and equipments are maintained with records and processed with safety inspection periodically.

#### **E. Safety inspectors of buildings**

By the end of 2011, the number of safety inspectors of fire prevention facilities in buildings was 3,036, followed by 2,973 of equipment inspection staff. The architects of various expertise amounted to 2,345 and 2,343, ranking the first, followed by 119 electronic engineering technicians and then 107 civil engineers. When compared with that of previous year (2010), the amount of architects, refrigeration and air-conditioning technicians increased, and that of structure technicians, and mechanical technicians remained unchanged.

#### **F. Building interior construction**

There were 4,969 building interior construction companies by the end of 2011 which increased 9.5% in comparison with 4,537 in 2010; 3,633 design construction factories (73.1%) and 1,299 construction factories (26.1%). In terms of geographical locations, Taipei City had the most companies –1,983 (39.9%), followed by 876 in New Taipei City (17.6%) and 617 in Taichung City (12.4%). There were 14,470 construction specialists which increased 6.2% in comparison with 13,628 in 2010; 9,743 of professional design construction specialists (67.3%) and 4,403 professional construction specialists (30.4%).

#### **G. Parking spaces in the buildings**

There were 3,585,750 parking spaces in the buildings by the end of 2011; 43,350 for large vehicles (1.2%), 2,907,691 for automobiles (81.1%), 634,709 for motorcycles (17.7%). In terms of geographical locations, Taipei City had the most parking spaces of 930,128 (25.9%), followed by New Taipei City, 523,480(14.6%), and Taoyuan County, 424,124 (11.8%). The number of the above parking spaces in the urban development project areas was 3,267,929(91.1%) and 317,821(8.9%) parking spaces for in non-urban development project areas.

## **H. Statistics of Advertisement Management**

The number of applying permission advertisement is 1,962 in 2011: 1,627 of signboard (82.9%) and 335 of vertical advertisement (17.1%). In terms of the county/city, Taichung City had the most advertisement –682(34.8%), followed by 671 in Taipei City (34.2%), and 226 in Kaohsiung City (11.5%). There were 9,015 of prosecution cases, in which 8,743 of removing and tearing (97.0%) is the highest, followed by 272 of fine (3.0%).

## **I. Management Companies in Apartment and Large Buildings**

By the end of 2011, the latest statistics indicates that the number of management companies in apartment and large buildings is 613, in which Taichung City has the highest number of 140(22.8%), followed by 135 in Taipei City (22.0%) and 111 in New Taipei City (18.1%). It has been required that both the administration and technology management staff shall pass the qualification and certification before getting the employment for handling such affairs since the duly enactment of Condominium Management and Ordinance (CMO) Act. The latest statistics indicate the amount and growth rate of employees with certification were 4,540. Among them, management staff and technicians are half and half; the technician category is composed of disaster prevention and building facility maintenance in which the former amounted to 877 and the latter, 1,359 respectively.

## **J. Removal of Illegal Constructions**

Buildings without legal permits (also called Illegal Construction) do not only damage the urban landscape beauty but also influence the sight of the city and endangered public security. According to Article 11 in Approaches of Illegal Constructions, the illegal construction must be processed based on the time of existence, the influence degree in city, transportation, and public security to be divided into the old and the new illegal constructions. The enforcement rules of the base date for separating the old from the new illegal constructions must be enacted duly according to the regulations of relevant competent authorities.

By the end of 2011, the number of illegal construction was 546,757 for the whole country. The new added unauthorized building was 50,209 and the removal of illegal construction was 30,989. The enforced supplementary application cases are 51. There were 19,169 more illegal construction cases in comparison with the amount of 527,588 and a growth ratio of 3.6% in 2010.

In terms of the county/city, New Taipei City had the most number of illegal construction, 175,520(32.1%), followed by Kaohsiung City, 111,634(20.4%) and Taipei City 81,511(14.9%). The number of illegal construction in these three cities

and counties occupied 67% throughout the country. City/county with the number of illegal construction below 1,000 contained Taitung County, Lienchiang County and Penghu County. In which, Penghu County had the smallest number of 51 cases.

#### **K. Issue of Construction Licenses**

33,161 Construction Licenses were issued in 2011 and compared with last year's figure, the number increased 11.7%. The total floor area was 34,148,423 square meters, which increased 9.5%.

In terms of county/city, Taichung City, which had 4,820,000 square meters (14.1%), had the most total floor area; followed by 4,704,000 square meters (13.8%) in New Taipei City, and 4,018,000 square meters (11.8%) in Kaohsiung City. In comparison with last year, the total floor area increased the most in New Taipei City by 1,315,000 square meters (38.8%), followed by 513,000 square meters (93.7%) in Hsinchu City and 486,000 square meters (13.7%) in Kaohsiung City. The three biggest decrease of areas were 846,000 (24.0%) in Taipei City, 72,000 (28.0%) in Keelung City and 63,000 (24.8%) in Taitung County.

In terms of the usages, Housing(including farmhouse) had 19,787,000 square meters (57.9%), Industry and Warehousing had 6,133,000 square meters (18.0%) and Business and Service had 2,076,000 square meters (6.1%).

In terms of the structures, 26,333,000 square meters were concrete construction, including steel concrete construction (77.1%), 4,643,000 square meters were steel construction (13.6%) and 2,842,000 square meters were steel reinforce concrete construction (8.3%).

#### **L. Issue of Usage Licenses**

26,250 usage Licenses were issued in 2011, which increased 17.8% compared with last year's figure; the total floor area was 25,885,000 square meters (increased 7.8%).

In terms of county/city, Taichung City had the most construction area: 3,409,000 square meters (13.2%), followed by 3,324,000 square meters in Taoyuan County (12.8%) and 3,220,000 square meters in New Taipei City (12.4%). In comparison with last year, the three biggest increases of areas and increase ratios were: 1,081,000 (48.2%) in Taoyuan County and 432,000 (72.6%) in Changhua County and 403,000 square meters (21.9%) in Tainan City. The three biggest

decreases of areas and ratios were: 926,000 (22.3%) in New Taipei City and 426,000 (15.2%) in Kaohsiung City and 403,000 square meters (16.4%) in Taipei City.

In terms of the usages, Housing(including farmhouse) had 13,253,000 square meters (51.2%), Industry and Warehousing had 6,014,000 square meters (23.2%), Leisure and Education had 1,497,000 square meters (5.8%).

In terms of the structures, 19,261,000 square meters were concrete construction, including steel concrete construction (74.4%), 4,064,000 square meters were steel construction (15.7%) and 2,278,000 square meters were steel reinforce concrete construction (8.8%).

In terms of the height, it shows an increase, compared to last years' figures. For the increasing, the floor area for the buildings over between 30-45 meters increased 40.0%, followed by 28.4% for the category of over between 7-15 meters. For the decreasing, the floor area for the building over 90 meter decreased 52.6%, followed by the decreasing of 47.3% for the category of between 75-90 meters.

In terms of high rise building over 15 floors, the total floor area of 15 floors or over 15 floors buildings was 3,769,000 square meters in 2011 and was about 14.6% of 25,885,000 square meters for the whole year, decreased 25.3% in comparison with last year. New Taipei City had the square meters of 1,175,000, followed by Taichung City of 830,000 square meters, Taipei City of 538,000 square meters.