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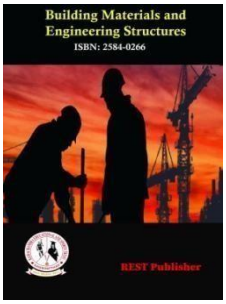

Fundamentals of Construction Materials and Types of Building Using WPM Method

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Abstract: *Building materials are construction materials. Natural resources such as branches, wood, clay, pebbles, and sand can all be used to build. Many naturally occurring compounds and some more and some less artificial man-made items are in use. Building materials are called from a range of sites and quarried and mined as jio goods. Must find new resources because the demand to cling to what is now available is expanding along with the world's population. Concrete has a long and illustrious history, but adobe bricks, stone, and clay were the primary building materials used throughout history. These products are still in demand, and any more quarry for their specific extractive industries in the same area causes issues. this is a list of construction supplies. Buildings and structures produce several types of building materials that are employed in the construction sector. Construction is used for projects to specify materials and processes, and project managers' materials and goods are utilized in this category by architects and construction. Blockwork, typically wood building materials, and cold, rolled steel frame are all considered modern construction techniques as opposed to slow ones. There are several applications for various building materials; as a result, you should always check with the manufacturer to be sure a product is good for your needs. Around the world, almost 11,000 new structures are constructed each day. Buildings, sidewalks, and skyscrapers the first being undersea constructions, mines, and bridges for building products, numerous structures up to various construction are used. This page discusses the various types of construction materials used in construction. A hotel and residential complex in midrice the trust is now in motion. Supported by types and earth steel wallers around the excavation the pile also holds the steel sheet. The equipment enters, and the image travels down the earth's curve before leaving the spot. On the right, is a large backhoe from the previous structure there following the ancient mounds around digging continues but pressure-painted setting up the concrete pile legs what is happening, in the movie, better-completed piles are visible in the nearby center and the far corners. Piledrivers in large groups work. Strengthening of columns and concrete pile caps construction is underway on an excavation in the middle of the center. A well-liked technique for multi-criteria decision analysis (MCDA) and multi-criteria decision making (MCDM) is the weighted product model (WPM). The weighted sum model is comparable to this (WSM). The primary distinction is that multiplication is used as the primary mathematical operation rather than addition. The decision-making model by multiplication in linking an attribute rating includes the Weighted Product (WP) technique. When attributes are multiplied, weight for attributes acts as a positive rank, whereas attribute rating acts as a negative rank for the cost attribute. Materials, Construction equipment, Labor, Finance, Enabling Expenses, Admin Expenses, Surplus Building, Roads, Bridges, Dams, Power, Railway, Mineral Plant, Transmission the result it is seen that Dams is got the first rank where as is the building is having the lowest rank. Dams is ranked first and industrial Building is ranked lowest.*

Keywords: *construction materials, building, Bridges, Dams.*

1. INTRODUCTION

Almost all building constructions at least some during construction kinds of earthworks. On undeveloped sites, trees and plants, stumps, large roots, and other surface materials removed by heavy machinery, sweeping and cleaning construction can begin with next, at the end of construction to wait for reuse, organically enriched topsoil is cleared, can be stored on one page. The construction site will be covered by the building if more than the area is sufficient, and excavation edges lean back or lower can be benched at an angle, this prevents the soil from going back into the hole [1]. This handbook, in the construction industry except for wood, but cement, concrete, gypsum, organic construction materials, adhesives, and paints a wide variety of products including includes thermal analyses. Each building material data is used for classification, tg, tma, dma, dea, and trafficking different types like calorimetry thermal analyzes and they are brief about the activities in the first chapter for explanations after

dedication [2]. Non-metallic minerals construction with focus flows of goods and on the collective study of existence, thirty-one scientific publications are reviewed. These surveys are for different purposes serve: future input and forecasting output flows and compare, many in the future run studying the influence of parameters, current or future stock and assessing its evolution, study of urban metabolism for making and flows and shares analyze the interactions between doing they are national and regional or carried out at the urban level and their duration is a century to a year [3]. For thousands of years, clay building materials and as an integral part of the goods widely used. Important structural clay product examples are bricks, blocks, and roof tiles. Floor and wall tiles are clay non-structural made examples of items. Made of clay material buildings is the development of civilization predating the early period. Concrete, fiberglass, etc although modern materials are available, clay is preferred for related products properties, durability, strength, heat, and sound insulation, and fire prevention is different and more substantial in fields there is a need for [4]. Population especially in the last decade due to increasing construction and the chronic shortage of goods cause, construction material a great demand is placed on the field. Rising housing demand for filling, brick, cement, aggregates, steel, aluminum, wood, cladding, and partitioning materials of construction materials such as there is an exponential demand for production. Like cement, brick, and steel conventional building materials production is high heat and electricity consumer's energy and pollutes air, water, and land. Suitable construction materials adequate care in use not paid. Agriculture and in industrial production activities solid waste generated from removal will develop like India another serious problem in countries [5]. Pcms are the energy of building components in addition to affecting efficiency, they are some of the building material's mechanical and durable features that can improve. For example, in the cement hydration process when the mass of concrete elements temperature variations in concrete and improving heat evolution, of concrete in the presence of pcs heat shrinkage, crack resistance and researchers also studied thermal contraction investigated. Including pcs frost on concrete pavements' thawing cycles or temperature bends Curling pressures due to heat stress and damage reduction has also been studied [6]. These natural fibers are cement paste, mortar, and/or in mixtures such as concrete as a construction material used by different researchers examined. Various studies carried out the results are presented briefly. The purpose of this review is to the last few various estimated decades available in natural fibers it is a collection of data, therefore, the upcoming of a particular thread as a reference/guide for research can be used. Of compounds to increase strength properties natural fibers are used [7]. Relative energy and carbon (dioxide) open access to emissions, and the development of a reliable database as described. Bat university's carbon and energy database the list is almost 200 different list items. Defined times and based on five criteria from fellow reviewed literature the data was extracted. Database through online websites available in public and industrial, education, government fields, and agencies remarkable has been attracted to interest [8]. Environmental management standards une-en iso 14040 and une-en iso 14044 since published in 2006, a large number of LCA databases have been created. Construction ecosystem in the study of impact can be used in several databases however, these studies are when reviewing, lca locations of the database and to places where the study was conducted inappropriateness in between, lack of transparency and/or building project data is not in matching for conditions there are many important problems such as [9]. Various research for decades to transform in the building setting in plans coordinating items (PCM) heat of lightweight buildings by the idea of improving the facility. Most of these efforts. Macro-capsules or direct using sinking processes, both provide many disorders. Because of these problems, these pcm products are wide and did not win in the market [10]. Construction International labor and information about labor have been identified as a profession. Among the project participants daily this of data and information is the mainstream of the rigorous exchange of one of the construction processes the feature. Thus, in the last two decades, real-time information settings construction plans as an important tool in managing have changed. Technologies in terms of the availability up, to the construction of multiple advanced technologies, are very useful. Their accuracy, credibility, and honesty are improved come, but at the same time, their costs are constantly declining [11]. Highway structures are usually from two construction materials are constructed: stainless steel concrete and configuration steel. Both products are decaying in ways, and more of them created bridges and bridge structures need to be reorganized or positioned to be replaced to get worse. These bridges are to reorganize or to them bring new ones the cost is shocking, approximately $ 90 billion per year. Diminishing state and central highway funds, new items, and finding the designs for transport companies put pressure on, they are low to construct bridges at cost and last long [12]. Cement and slag particles are usually spherical, the larger, tens of thousands of brittle particles required in the order of microns by grinding the particle size are created. So, flying gray Portland a flow in cement concrete widely included; spherical shaped, new cement pastel viscosity and yield to reduce the pressure, deposed for reasons including consequences operates. 60% angular (cement) settlement with particles and 40% water this is usually in concrete more water than used / cement is proportion when it is cut in the interconnected combination of particles let's meet problems [13]. Building and construction (b&c) occupation is one of the main business drivers, however in recent years the lack of skilled labor, automation, and security due to the problems, for the target less construction time, lower pollution and waste it is difficult to fill. In this regard, 3d printing (3dp) is the formwork and human intervention of the complex 3 dimensions (3d) without structural looks like a trusted technology [14]. Portland blocks of cement inspection in infrared research in the first decade. Portland the main cement in the current compounds of

the compounds was at the forefront of the study but later, calcium aluminate carbonation of cement and some research on processes were carried out. Also, port land cement and its component's hydration were created. After that early period, cement products by infrared many statements in the study of has been done. Calcium aluminates the latest related to cement studies have been reported. Then, in different documents, some of the qualities of objects have been presented and in infrared the spectrum is mainly the art and with analysis tools as a filling subtitle to attach multiple exposure levels using, they gave evolution on [15].

2. MATERIALS & METHODS

Alternative: Materials, Construction equipment, Labor, Finance, Enabling Expenses, Admin Expenses, Surplus.
Materials: traditionally three main type products are metals, polymers, and ceramics. Examples of these are steel, fabric, and ceramics. These classes usually have different sources, and characteristics and have applications. Meaning is an object the material of the making materials or composition. Products pure or impure, as a matter of living or living may. Products are their product's physical and chemical properties basically or their geographical origin or biology based on the process can be classified. Something the material used to do is called a substance. For example, a school desk tree, plastic or metal, or three goods can be made from the mixture.
Construction equipment: used in construction projects construction and construction for making machines construction equipment. Construction equipment construction tasks specially designed for doing mark heavy vehicles, often earthwork activities include. Construction equipment types and construction equipment check below the list. Appropriate equipment proper use of economy, quality, safety, speed, and timely completion of the project contributes to do. Construction any construction of equipment integrated with the process part. The project is required every type of construction equipment owning the contractor is always desirable or not possible. Any project the basis for construction activities is excavation, digging a large amount of earth picking, taking them far moving a long distance, employment, compacting, positioning, pasture, quality, Hulguling, etc. In india used in abroad, you can find below construction equipment.
Labor: labor is regular and painful uterine contractions defined as, this progressive decay and pregnancy mouth discharge causes. World health system (who) normal birth is spontaneous in the beginning, low at the beginning of labor risk and labor and the rest of the distribution is left throughout defined that. Pregnancy 37 to 42 weeks baby in vertex condition spontaneous. After birth, mother and child are in good condition". This topic is labor intrapartum of the first phase a paradigm for management offering (i, normal singleton
There will be vaginal cephalic birth expected pregnant full cervical decay in people start for. These patients have many options for maintenance in high-quality clinical trials not studied and for a specific approach to provide strong recommendations the available data is sufficient no. So, of our approach most of our medical experience, data from observational studies, and expert opinion based.
Finance: finance is money, currency, and capital assets study and discipline. This is related to the economy, but not identical, this production, distribution, and money, a study of assets consumption, goods and services (discipline of the financial economy contains two) bridges. Financial activities are various in financial systems for purposes the event is taking place, thus this department of personal, corporate and can be divided into public funds. In a financial system, assets coins, loans, securities, shares, stocks, options, and financial futures purchased as tools, sold, or traded are. Value increase and reduce loss bank assets, investing and insurance can. In practice, any financial activity and risks in companies always be. It's vast within the fund due to the purpose of a wide range of sub-fields there are. Property, money, risk, and investment management increase value reducing instability are aimed. Financial analysis is an act or the company's credibility, stability, and profit valuation. In some cases, testing science covered with funds financial related using the method principles can be tested.
Enabling expenses: to run 1 cost planning select the cost. Selecting only cost your for-cost planning chart of own accounts with key members to add creating an account structure. Selecting this option direct entry and trend-based planning activates. Accounts or driver-based sustainable planning to run the chart, accounts or pick drivers, then cost driver types select. For example, if you run compensation, salary cost head counts, and using the average salary is obtained. Study costs running is by trius internal and external to occur costs and expenses or at an effective date or after it costs incurred for the account, they run the study the cause of performance
Global development program.
Admin expenses: administrative costs are a company or caused by organization refers to costs, they are the company or administration within the organization workers' salaries includes concessions, but they are not limited, as well as rent and management compensation. Public and administrative also called costs sales and marketing and research separately from costs are classified. Administrative costs for the period in which they occurred are found in the income statement.

Surplus: seriously used an asset that violates the area or a surplus of the amount of resource describes. A surplus income, profits, capital, and various including products a set of items may indicate. Consumer surplus is the market

the result of competition the economics of consumer benefits measurement is. A product or consumers for service they pay the price that wants to pay when less than that a consumer surplus occurs.

Evaluation preference: Building, Roads, Bridges, Dams, Power, Railway, Mineral Plant, Transmission

Building: this building is a kind of framework is, it is by materials built and foundation, founding, walls, decks, roofs, chimneys, plumbing and building services, sustainable sites, verandahs, balconies, carnies or projects, a building a part or stick with it anything or any wall incorporate or connect wants. A building's basic function is for residents and the house of contents, and the structure to protect sound and ecologically is to provide control seats. This basic function if not achieved, and the building that's because some aspects have failed.

Roads: road traffic is from a place on the road's materials for the other and employees carrying. Road for two places a path between, this motor fitted and non-motorized carriages to enable traffic set or worked. Other with traffic routes road traffic compared to there are many benefits. Railway and aviation with other transportation systems, such as road traffic compared to road traffic the investment required is very low. Construction rather than railways, operating costs, and road maintenance costs is cheaper.

Bridges: a bridge is a water, a valley, or somebody like a road an obstacle is a structure, and its purpose is that is to provide a crossing over the barrier. Its weight is securely strong enough to support, it has to go through it is also weighing anything built. A bridge is a physical barrier water, valley, road, or train a body barrier Framework. This is a barrier providing passing built for purpose, it is usually difficult or something that cannot be overcome. Other the direct relationship with places due to transportation infrastructure bridges are a special place have. These structures traffic of the highway to carry the load, crossing any barrier, between two seats a useful communication they have the purpose of doing so.

Dams: a dam is a river or across the stream it is a structure built. Dams for centuries people are different to create they have used the goods. Ancient dam builders like rocks or clay they used natural materials. Modern day dam builders often concrete they use. The dam is surface water or underground streams stopping the flow or a barrier to control. Created by dams reservoirs flood not only to suppress, irrigation, human consumption, industrial use, fisheries, and navigation such actions water is supplied.

Power: construction is buildings and other immovable structures erectile dysfunction, maintenance and includes repairs a career, and structures turning into integrated areas and for their use required roads and creating service facilities. Power is a company or others of the individual control or lead capacity is, at the same time power is realized predictable in fairness influence. As a result, power is necessary, but without authority, there can be the authority. Other in words, authority is necessary but not enough for power.

Railway: as an important infrastructure, for upcoming growth centers participate in providing links a major responsibility for the railway is. Industrial and quick of the port department considering growth, transportation facilities strategy for improvement the government expects options. From a short meter scale, the train is wide changing paths, industrial development centers, logistic centers, and ports new rail lines to connect this includes installation. In this area, foreign direct investments are generally private the government expects sector participation. The country's main excavation Indian railway for the development of the country is important. This is an administration the lower third is the largest network. It is about 6.7 billion per year a large number of passengers, 2007-08 on the world's main train 794 million tons in large quantities of cargo one is systems.

Mineral plant: plants are raw materials from the soil used mineral material obtained in mineral material is known as nutrients. Plants are their growth, development, structure, and physiology essential for compiling objects' mineral composition or minerals absorption use and integration of mineral nutrition called. Mineral son earth, our bodies are normal develop and work also in foods elements. To health, calcium is necessary, as phosphorus, potassium, sodium, chloride, magnesium, iron, zinc, iodine, chromium, copper, fluoride, molybdenum, manganese, and selenium include.

Transmission: a transmission a gearbox also known, this rotation in a machine device change speed or direction a one that uses gears the engine device is. Many transactions are several gear ratios, but single some exchanges use the standard gear ratio. Gasoline or diesel engines are currently manufactured most passenger cars have 5-8 forward gear ratios and a reverse gear ratio use transaction. Electric vehicles usually single speed or two they use speed transfer.

Weighted Product Model (Wpm) Method: Weighted product model (wpm) is well known multi-criteria test performance (MCDM)/multi-standards test analysis (MCDA) technique. Both methods are similar, but that is the main difference the primary mathematical operation involves a multiplication in preference to an addition. This method is a simple combination same weight (saw). technique greater details about this method are given in MCDM E-book. Assume that a given MCDA problem is described in phrases of m options and n choice standards [16]. The weighted production method (wpm) added in 1922 via Bridgman has been confirmed to be a reliable approach to selecting multiple criteria and for three or more criteria researched as much as a hundred standards, many researchers have pronounced a hit use of wpm. Solve multi-criteria choices together with selecting a boarding house, deciding on an appropriate diet selecting an appropriate studying platform for detecting to cope with housing desire for individuals facing decision-making problems. The approach changed into calculated and carried out in an internet-based totally device. The principal goals of this look are to develop a domestic selection

model using wpm to calculate and sort advisory values, implementing a selection assist device in an internet-primarily based environment [17]. The weighted product approach in this version involves multiplication in preference to addition. Each opportunity is in comparison to the others through multiplying numerous ratios, a chief downside of the weighted product systemic, for undesirable effects overstating the importance of the key evaluates because it is any the last rating is also commendable supports/fixes in opportunity concerning a criterion. Is far from common [18]. The weighted product (WP) method calls the normalization method because of this approach and the evaluative effects of character multiplying. Multiplication consequences aren't meaningful unless they're compared (divided) using constant values. For benefit attributes, weight serves as a high-quality estimate multiplicative function, even as the value weight acts as a poor ranking [19]. A converts each bid into an estimate to provide a new scoring feature weighted product method. Many two types of types -characteristic bidding fashions are delivered based totally on that's the primary bidding design are classified fashions. Finally, our models by recognizing the assumptions [20]. A weighted product version (wpm) is used to remedy the routing decision hassle. This proposed scheme considers a relational assessment system. The relaxation the paper follows is organized in the section on the application of the multi-criteria decision model proposed and the calculation of weights as discussed in the section. Implementation of the tiny OS initiative in section v is defined and in section, an assessment of the challenge is provided. Section-related works are discussed. [21]. Weighted product (WP) and ideal through the solution (TOPSIS) etc order preference techniques in decision making are used extensively to help there are two techniques. As studies in assessment, the 2 techniques are not comprehensive, this observes goals to compare the 2 strategies by searching their complexity and accuracy, their complexity size became achieved the usage of the complexity of the cycle, and their accuracy calculated based on error fee received. Product model, or as it's miles known as wpm. The first step in wpm is primarily work standards and weightage based on requirements determine criteria. Wpm stands for decision making described in sentences a couple of selection criteria. This result may be expressed in a matrix, in which every [22]. The product-weighted technique is a way for fixing the FMADM problem. This method evaluates more than one alternative for attributes or standards synthesis, each characteristic is separate according to the weightless product approach, and each characteristic score has to be raised to boost its corresponding characteristic weights [23]. The use of multiplicative techniques to mix the rating attributes. Wpm research using excessive spatial resolution remote sensing facts land sat types of sensors are very important. Photos along with MODIS. Nevertheless, the common unavailability of high-decision photographs is a proscribing element. The international locations wherein rigorous information is required through metric or SEBAL can encourage wpm research and the usage of remote sensing [24]. Wpm inside lipid droplet surface after emulsion formation the composition is now determined, and of emulsions at one hundred and twenty thermal stability vision and evaluated microscopically. Wpm temperature is consistent in the course of the non-stop section of emulsification, however, because of the fast gelation of emulsions. In warm emulsions, fat droplets appeared to be attached via wpm. Caseins in contrast to wpm in lipid droplet ground because the heat balance of the emulsion is low and restore in excess whey protein concentrates allowed. This study, heat-stable whey protein mixing the rich broths shows that it is very possible [25]. Heat-strong wpm and sufficient amounts of caseins, previously aggregated whey proteins, to completely cowl the floor of the fats droplet. These effects will contribute to the improvement of heats table whey protein-rich emulsions. The proposed strategies provide better accuracy and faster computational performance when compared to different choice-developing techniques. Useful for bauxite mining proposed to determine mining approach techniques are provided. The results of these techniques with methods used in previous studies are compared. A regular cut and fill approach is maximally appropriate the results show that the mining method [26].

3. RESULT AND DISCUSSION

TABLE 1. building construction materials

	Materials	**Construction equipment**	**Labor**	**Finance**	**Enabling Expenses**	**Admin Expenses**	**Surplus**
Building	60.0	5.0	13.0	7.0	5.5	3.5	5.0
Roads	45.0	23.0	12.0	8.0	6.5	4.5	6.0
Bridges	48.0	28.0	11.0	9.0	5.6	3.6	5.0
Dams	46.0	21.0	10.0	8.0	53.0	3.8	6.0
Power	43.0	24.0	14.0	5.0	5.8	3.7	5.0
Railway	53.0	8.0	18.0	6.0	6.1	4.4	6.0
Mineral Plant	44.0	22.0	13.0	7.0	6.2	4.2	6.0
Transmission	51.0	7.0	21.0	8.0	6.0	4.1	6.0

Table 1. building construction materials Alternative: Materials, Construction equipment, Labor, Finance, Enabling Expenses, Admin Expenses, Surplus. Evaluation preference: Building, Roads, Bridges, Dams, Power, Railway, Mineral Plant, Transmission.

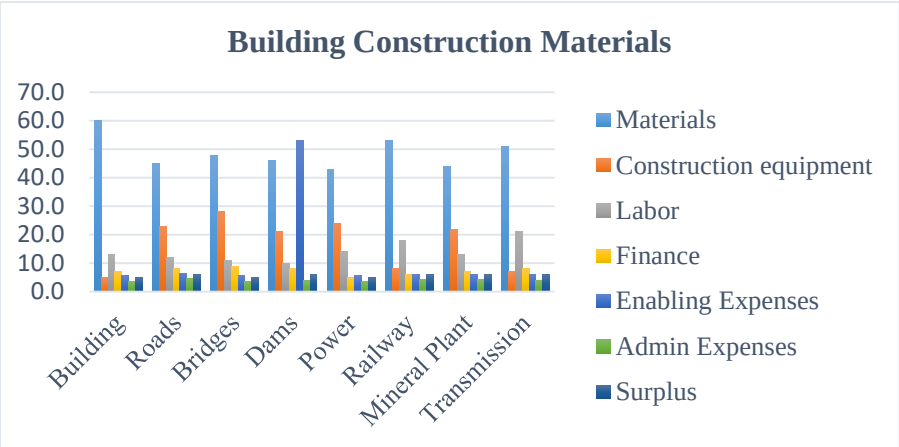

FIGURE 1. Building construction materials

Figure 2 building construction materials shows the graphical representation Materials it is seen that Building is showing the highest value for Power is showing the lowest value. Construction equipment it is seen that Bridges is showing the highest value for Building is showing the lowest value. Labor it is seen that Transmission is showing the highest value for Dams is showing the lowest value. Finance it is seen that Bridges is showing the highest value for Power is showing the lowest value. Enabling Expenses, it is seen that Dams is showing the highest value for Building is showing the lowest value. Admin Expenses it is seen that Roads is showing the highest value for Building is showing the lowest value. Surplus it is seen that Railway is showing the highest value for Building is showing the lowest value.

TABLE 2. Performance value

Performance value						
1	0.178571	0.619048	0.777778	0.103774	0.777778	0.833333
0.75	0.821429	0.571429	0.888889	0.122642	1	1
0.8	1	0.52381	1	0.10566	0.8	0.833333
0.766667	0.75	0.47619	0.888889	1	0.844444	1
0.716667	0.857143	0.666667	0.555556	0.109434	0.822222	0.833333
0.883333	0.285714	0.857143	0.666667	0.115094	0.977778	1
0.733333	0.785714	0.619048	0.777778	0.116981	0.933333	1
0.85	0.25	1	0.888889	0.113208	0.911111	1

Table 2 shows the performance value for Alternative: Materials, Construction equipment, Labor, Finance, Enabling Expenses, Admin Expenses, Surplus. Evaluation preference: Building, Roads, Bridges, Dams, Power, Railway, Mineral Plant, Transmission.

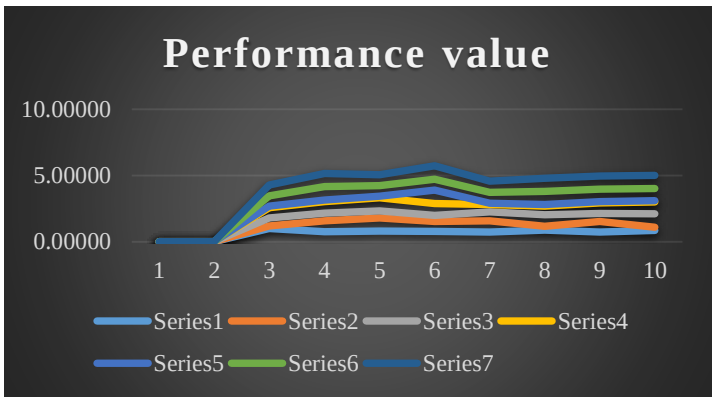

FIGURE 2. Performance value

TABLE 3. Weight

Weight						
0.25	0.25	0.25	0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25	0.25	0.25	0.25

Table 3 shows the Weightages used for the analysis. We take same weights for all the parameters for the analysis**.**

TABLE 3. Weighted normalized decision matrix

Weighted normalized decision matrix						
1	0.650059	0.887015	0.939104	0.567573	0.939104	0.955443
0.930605	0.952012	0.869442	0.970984	0.591779	1	1
0.945742	1	0.850733	1	0.570135	0.945742	0.955443
0.935732	0.930605	0.830702	0.970984	1	0.958612	1
0.920088	0.962195	0.903602	0.86334	0.575159	0.952242	0.955443
0.969463	0.73111	0.962195	0.903602	0.582456	0.994398	1
0.925391	0.941491	0.887015	0.939104	0.584829	0.9829	1
0.960185	0.707107	1	0.970984	0.580055	0.976996	1

Table 3 shows the Weighted Normalized Decision Matrix Alternative: Materials, Construction equipment, Labour, Finance, Enabling Expenses, Admin Expenses, Surplus. Evaluation preference: Building, Roads, Bridges, Dams, Power, Railway, Mineral Plant, Transmission.

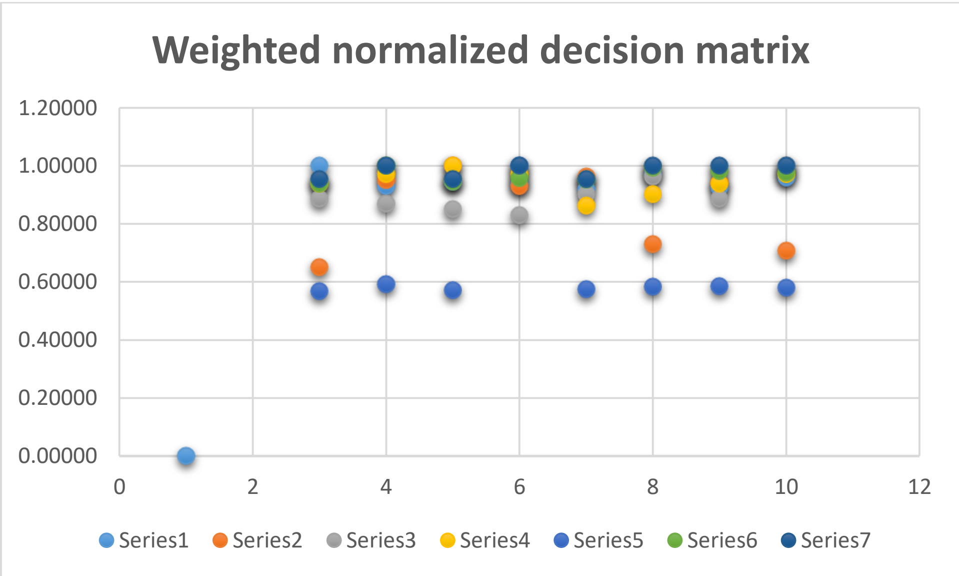

FIGURE 3. Weighted normalized decision matrix

Figure 3. Weighted normalized decision matrix Shows the Alternative: Materials is a series 1, Construction equipment is a series 2, Labor is a series 3, Finance is a series 4, Enabling Expenses is a series 5, Admin Expenses is a series 6, Surplus is a series 7. Evaluation preference: Building, Roads, Bridges, Dams, Power, Railway, Mineral Plant, Transmission.

TABLE 6. Preference Score & Rank

	Preference Score	Rank
Building	0.275764	8
Roads	0.442608	2
Bridges	0.414497	4
Dams	0.673313	1
Power	0.361403	6
Railway	0.356926	7
Mineral Plant	0.417181	3
Transmission	0.373606	5

Table 6. Preference Score & Rank shows the final result of this paper the building is in 8th rank, Roads is in 2nd rank, Bridges is in 4th rank, Dams is in 1st rank, Power is in 6th rank, Railway is in 7th rank, Mineral Plant is in 3rd rank, Transmission is in 5th rank. The final result is done by using the WPM method.

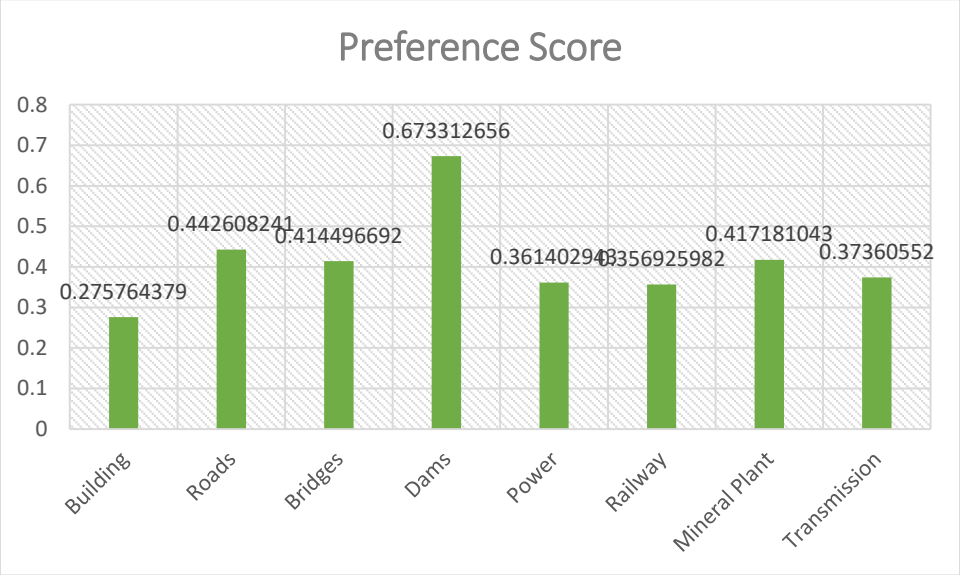

FIGURE 4. Preference Score

Figure 4 shows the preference Score for Building 0.275764, Roads 0.442608, Bridges 0.414497, Dams 0.673313, Power 0.361403, Railway 0.356926, Mineral Plant 0.417181, Transmission 0.373606.

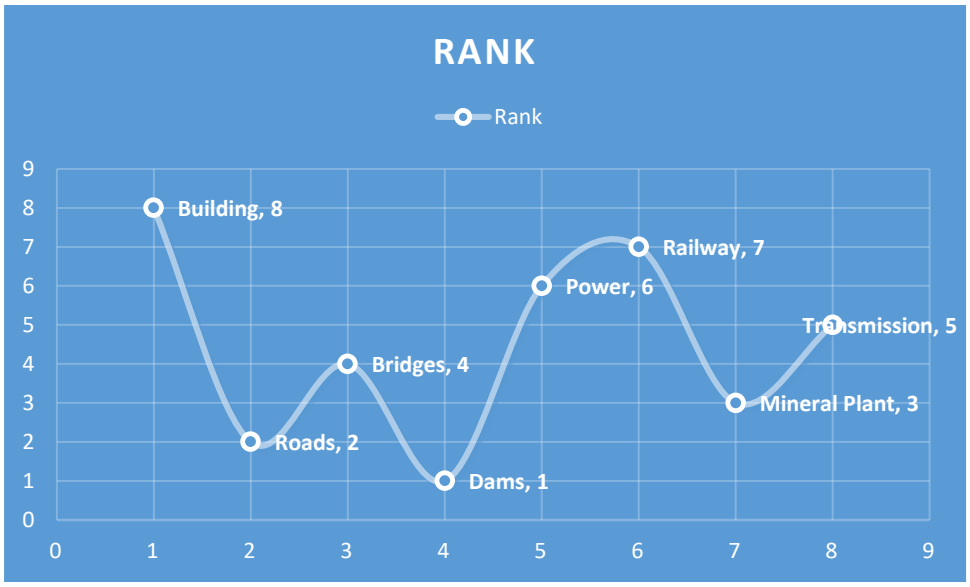

FIGURE 5. Rank

The final conclusion of this article is depicted graphically in Figure 5, where buildings are ranked eighth, roads are second, bridges are fourth, dams are first, power is sixth, railroad is seventh, mineral plants are third, and transmission is fifth. The WPM approach is used to complete the task.

4. CONCLUSION

The change of structural load function of a foundation from a building to the ground reliable. Each there must be a building there is some sort of foundation. A backyard tool it will not be the foundation of its foundation by changing a little damaged, thus required is a part of the ground spread its burden throughout only wooden attacks are it's enough to support weight surface. A wooden structure the house is more than a tool high stability is needed, so its foundation reaches via the unstable surface free for basic soil organic products and by winter freezing inaccessible. A large building cluster, steel or rather than concrete house many times more, they are its foundations to the earth to penetrate carrying its massive load soil capable of going or reach the rock. On some sites, this means 100 ft (30 m) or for it going down more surface. Foundation design is a special department load with various soil for the connection to the creation account, rock, and water conditions of the surface the ground met below. Founding the selection of the type is significant existing building costs, construction table, and impact on choice for the remainder of the building configuration systems. Public due to security considerations includes building codes there are many related rules for design and construction excavations and foundations. The types of soil ipcs are considered defines satisfactory to bear the weight and installation of buildings a set of requirements for the surface study, soil testing, and submission to the local building inspector of soil reports. This continues to be mentioned methods of engineering design can be used for foundations. It will bear the maximum load sets of the values will be considered a comprehensive test for soil lack of procedures again see. It is minimal installing dimensions legs, kaisens, piles and the basement walls and long debates contains are related to installation heaps and kaizens and drainage and molecules waterproof. Engineering for ipc required will retain the walls design. Overall building the code will confirm it trying every building safe foundation and dry sub transformer. The best choice of foundation for any particular building the type is sometimes obvious, where is shallow in particular foundations that will work? Other cases in, deep investigative evaluation may be required to determine the optimal design. Surface soil types, underground water conditions, and structure requirements of super framework primary considerations. In addition, local construction practices considerations of environmental noise, transport, and earth goods disposal and water; regulation restrictions. In nearby properties possible impacts are construction and other considerations may come to drama. For thousands of years, as a part of the spread of clay used construction products and products in integrated areas. Examples of key structural clay products are bricks, blocks, and roof tiles. Floor and floor wall tiles-built examples of non-products from clay. From clay materials, buildings produced are civilized for the early periods of growth previous ones. Clay-based products have desirable characteristics, durability, strength, heat, and sound insulation such as fir resistance, they have a variety of fields there is still considerable need, concrete, glass-fiber / resin compounds, steel and modern alternative like plastic despite the availability of goods.

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