GRADING

GRADING TABLE OF CONTENTS SECTION 3

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GRADING

All costs in this manual assume average or typical hard and soft costs. In many instances price ranges have been given to assist the appraiser in making quality and quantity adjustments. The high and low ranges do not necessarily reflect the highest or lowest possible price for a particular item, but only show normal variations and price fluctuations.

The normal hard and soft cost included in this manual are:

Hard (Direct) Costs

- Materials, products and equipment
- o Labor
- Building permits
- Contractor's office and security fencing
- Temporary utility lines
- Contractor's profit and overhead, including subcontractors, job supervision, worker's compensation, construction insurance, and unemployment insurance.
- Performance bond

Soft (Indirect) Costs

- Architectural and engineering fees
- Appraisal, consulting, accounting, and legal fees
- Property (Ad Valorem) taxes during construction

Entrepreneurial profit is not included in the various costs throughout this manual. Entrepreneurial profit is a market-derived figure that reflects the amount an entrepreneur would expect to receive for their contribution to any given construction project. It represents the degree of risk and expertise associated with the development of a construction project.

COST SECTIONS OF THIS MANUAL

ANALYZED UNIT COST

This section sets forth the costs of the various components necessary to construct most types of structures. The various site improvements are also noted in this section. The cost is reflected in each particular item's most common unit of comparison. For example, floor covering costs are given as a cost per square foot while wall coverings are given as a cost per square foot of surface area. All costs in this section includes the hard and soft costs noted above.

COMMERCIAL & INDUSTRIAL SHORT FORM

This section has been incorporated into this manual to save the appraiser the tedious task of building-up each item from the preceding analyzed unit cost section. An example of cost in this section would be a rubber membrane roof with insulation on a metal deck, supported by steel bar joist. To arrive at a price for this roof from the analyzed unit cost section the appraiser must look up and add a minimum of four figures. This short form is designed to incorporate those steps into one process for the appraiser.

PRECOMPUTED COMMERCIAL SCHEDULE

This section contains square foot, lineal foot or cubic foot costs for various occupancy types. In computing these schedules, average quality construction was assumed and certain norms in finish, partitions, utilities, etc. are also assumed. The quality of materials and workmanship greatly influence costs. Therefore, the grading schedules found later in this section were devised to adjust the base cost from this section for variations in quality.

RESIDENTIAL SCHEDULE

This section contains the base costs for various residential structures. Additional pricing tables are included to adjust for the various components normally found in residential construction. Like the pre-computed schedules, these schedules were constructed with certain norms in finish assumed. Therefore, it is necessary to adjust the base cost using the grading schedules from this section.

COST SECTIONS OF THIS MANUAL (Continued)

AGRICULTURAL BUILDINGS

This section of the manual was developed for the appraiser or assessor as a guide to establish replacement cost of agricultural structures. The replacement costs in this section are calculated on the basis of nonunion labor. Due to the various degrees of quality found in agricultural buildings it is necessary to utilize the grading schedules for these structures.

EXEMPT

The various occupancy types found in this section are not normally taxable. However, the assessor is usually obligated to place a value on them for reporting purposes. These schedules have been computed to provide the assessor with a uniform method of arriving at replacement cost. Unlike other sections in this manual, the exempt section gives a range of cost based on the different qualities of construction. Therefore it is not necessary to utilize the grading schedules for these structures. Even though the actual grade schedules are not utilized for this section the cost in this section should be adjusted based on the 4 grade factor found on the appropriate grade adjustment schedule.

SELECTING THE PROPER GRADE ADJUSTMENT SCHEDULE

The proper grade adjustment schedule is determined by gathering information pertaining to local material costs, labor rates, labor efficiency, architectural fees and contractors expected overhead and profit. These items can, of course, vary from year to year and from one community to another. To prepare an individual manual for each assessing district would be unrealistic due to the time and costs involved. Therefore, it becomes necessary to construct a manual which may be easily adjusted for each assessing district. Furthermore, each assessment district will need to adjust the cost manual due to changing market conditions (changes in cost due to the passage of time, inflation, etc.).

In order to determine the correct grade adjustment schedule for a particular district, each assessor/appraiser must first determine the percentage relationship which exists between the manual replacement costs and the local costs. The best method of doing this is to have available an accumulation of actual construction costs and compare the prices with the manual. An example of this would be as follows:

	Date of	Actual Cost	Adiust for	Adiusted	Manual Replacement	Percentage Schedule
Property Type	Const.	of Const.	Time	Actual Costs	Cost	Needed
<u></u>						
Single Family	2018	\$234,650	4%	\$244,036	\$273,150	89.34%
Single Family	2019	380,000	2%	387,600	427,600	90.64%
Single Family	2020	196,200	0%	196,200	227,300	86.31%
Single Family	2020	182,300	0%	182,300	203,610	89.53%
Single Family	2020	155,700	0%	155,700	165,100	94.31%
Retail Store	2019	345,100	2%	352,002	388,250	90.66%
Large Retail Store	2020	2,704,300	0%	2,704,300	3,108,300	87.00%
Office Bldg.	2020	507,500	0%	507,500	558,300	90.90%
Apartment Bldg.	2019	450,800	2%	459,816	505,600	90.94%
Warehouse	2020	2,232,000	0%	2,232,000	2,398,200	93.07%
Mtl/Stl Warehouse	2020	95,360	0%	95,360	111,320	85.66%
Neighborhood	2020	943,100	0%	943,100	1,051,300	89.71%
Shopping Ctr.						
Mean:	89	2.84				
Median:	90).17				
Weighted Average:	89	9.83				
	Single Family Single Family Single Family Single Family Single Family Retail Store Large Retail Store Office Bldg. Apartment Bldg. Warehouse Mtl/Stl Warehouse Neighborhood Shopping Ctr. Mean: Median:	Property TypeConst.Single Family2018Single Family2019Single Family2020Single Family2020Single Family2020Single Family2020Single Family2020Retail Store2019Large Retail Store2020Office Bldg.2020Apartment Bldg.2019Warehouse2020Mtl/Stl Warehouse2020Shopping Ctr.Median:Median:90	Property Type Const. of Const. Single Family 2018 \$234,650 Single Family 2019 380,000 Single Family 2019 380,000 Single Family 2020 196,200 Single Family 2020 182,300 Single Family 2020 155,700 Retail Store 2019 345,100 Large Retail Store 2020 507,500 Apartment Bldg. 2019 450,800 Warehouse 2020 2,232,000 Mtl/Stl Warehouse 2020 95,360 Neighborhood 2020 943,100 Shopping Ctr. 89.84 Median:	Property Type Const. of Const. Time Single Family 2018 \$234,650 4% Single Family 2019 380,000 2% Single Family 2020 196,200 0% Single Family 2020 182,300 0% Single Family 2020 155,700 0% Single Family 2020 155,700 0% Single Family 2020 2,704,300 0% Single Family 2020 2,704,300 0% Coffice Bldg. 2020 2,704,300 0% Office Bldg. 2019 450,800 2% Warehouse 2020 2,232,000 0% Mtl/Stl Warehouse 2020 95,360 0% Neighborhood 2020 943,100 0% Shopping Ctr. 89.84 Median: 90.17	Property Type Const. of Const. Time Actual Costs Single Family 2018 \$234,650 4% \$244,036 Single Family 2019 380,000 2% 387,600 Single Family 2020 196,200 0% 196,200 Single Family 2020 182,300 0% 182,300 Single Family 2020 155,700 0% 155,700 Single Family 2020 2,704,300 0% 2,704,300 Single Retail Store 2020 2,704,300 0% 2,704,300 Office Bldg. 2020 2,704,300 0% 2,704,300 Office Bldg. 2019 450,800 2% 459,816 Warehouse 2020 2,232,000 0% 9,5360 Metanewee 2020 9,5360 0% 9,5,360 Neighborhood 2020 9,43,100 0% 943,100 Shopping Ctr. 89.84 Median: 90.17	Property Type Date of Const. Actual Cost of Const. Adjust for Time Adjusted Actual Costs Replacement Cost Single Family 2018 \$234,650 4% \$244,036 \$273,150 Single Family 2019 380,000 2% 387,600 427,600 Single Family 2020 196,200 0% 196,200 227,300 Single Family 2020 182,300 0% 182,300 203,610 Single Family 2020 155,700 0% 155,700 165,100 Single Family 2020 2,704,300 2% 352,002 388,250 Large Retail Store 2020 2,704,300 0% 2,704,300 3,108,300 Office Bldg. 2020 507,500 0% 507,500 558,300 Apartment Bldg. 2019 450,800 2% 459,816 505,600 Warehouse 2020 2,232,000 0% 9,3360 111,320 Neighborhood 2020 95,360 0% 943,100

It is apparent from the data above that the manual is 10% too high and 90% of the replacement costs must be used for that particular assessing district. Therefore a 90% grade adjustment schedule should be utilized for this assessing district.

SELECTING THE PROPER GRADE ADJUSTMENT SCHEDULE (Continued)

A similar exercise of comparing actual cost to the manual replacement cost can be accomplished by gathering cost data from building contractors within the assessment district. This process would involve having set plans for various types of structures. These plans could then be given to the local building contractors for the purpose of gathering their average bid price for the structure. These bid prices could then be compared to the manual prices to determine the appropriate grade adjustment schedule.

It is not uncommon for builders to incur all cost associated with the construction of a new property. This is especially true with residential construction. In these instances the builder incurs all cost associated with construction the sells the property to the buyer. These are typically pre-arranged agreements. The resulting sale price would reflect the complete construction cost as the builder would include all hard and soft cost (including profit) in the sale price. However, it is important that the assessor/appraiser determine what building features were, or were not, included in the sale. For example – the agreement may not have included basement finish, but the buyer added basement at his/her own expense after gaining occupancy of the property. It would be important in this situation that the basement finish not be included in the analysis. The assessor/appraiser should also confirm if the lot (land) was included in the sale price. An example of this type of analysis would be as follows:

						Manual	Percentage
				Est.	Sale Price	Replacement	Schedule
<u>Parcel Number</u>	Property Type	<u>Sale Date</u>	Sale Price	Land Value	Less Land	<u>Cost</u>	<u>Needed</u>
02-12-101-009	Single Family	10/12/2019	\$327,062	60,000	\$267,062	\$242,650	90.86
02-12-100-010	Single Family	1/10/2020	315,000	60,000	255,000	227,170	89.09
01-13-201-016	Single Family	2/1/2020	298,500	55,000	243,500	222,790	91.49
01-13-200-002	Single Family	11/18/2019	291,161	55,000	236,161	213,180	90.27
08-24-304-017	Single Family	3/1/2020	349,188	60,000	289,188	259,210	89.63
08-24-304-019	Single Family	4/13/2020	332,070	60,000	272,070	244,100	89.72
08-22-217-002	Single Family	2/15/2020	319,871	60,000	259,871	235,800	90.74

Mean:	90.26	
Median:	90.27	
Weighted Mean:	90.24	
Grade Adjustment Schedule:	90%	

A combination analysis of actual costs, average bid prices and sales of new properties from builders can also be utilized. It is best to use detailed documented costs for this analysis to assure an accurate comparison. For example, if the new construction includes a parking lot, it is important to know if the reported costs include the cost of the parking lot. It is also more desirable to utilize typical construction for this analysis. Costs gathered on 4 and 3 grade structures are more reliable than the costs gathered on that one-of-a-kind executive grade structures.

When the proper grade adjustment schedule is determined it should be used to determine the grade adjustment factors for that particular assessment district. Based on the previous data and calculations a 90% grade adjustment schedule should be used for this particular assessment district. For uniformity purposes, a different grade adjustment schedule should not be used elsewhere within the same district.

Once an appropriate grade adjustment schedule is determined, all grade factors should come from that particular schedule. Commercial, industrial, residential and agricultural properties will be graded based on the various grading components that determine a proper grade (discussed later in this section). The corresponding grade factor will then be applied to the base prices of this manual. Price variations are seldom made for accessory improvements such as detached garages, sheds, swimming pools, etc. If the assessment district wishes to make adjustments on these items they should make the percentage adjustment directly from the grade adjustment schedule. If, for example, an assessment district is using a 90% grading adjustment schedule these accessory improvements should be factored 90%.

GRADE ADJUSTMENT SCHEDULES

There are seven basic whole grades. They are as follows:

- E Executive Quality
- 1 Superior Quality
- 2 High Quality
- 3 Good
- 4 Average
- 5 Below Average
- 6 Sub-standard

In addition to the preceding grades, each whole grade is broken down into sub-grades. These sub-grades are described as + and - on the grade adjustment schedule. For example, in-between a 4 grade and a 3 grade will be sub-grades of 4+5, 4+10, 3-10 and 3-5. The sub-grades were added to give the assessor/appraiser additional flexibility in determining the proper grade adjustment. Also, by adding the sub-grades the assessor/appraiser is not forced into making large percentage adjustments when moving from one grade of building to another.

The following is a brief description of each building grade. Additional grade descriptions for residential properties can be found in the Residential Schedule. In addition, photographs of various grade buildings can be found in the Pre-computed Schedule, Residential Schedule and Agricultural Buildings sections of this manual.

E (EXECUTIVE) GRADE

Executive grade structures can be best described as prestige buildings. They will exhibit extensive ornamentation or special design features of excellent quality material and workmanship. Very few commercial buildings are constructed of this quality. In fact, many small assessing districts may never have a structure of this caliber constructed.

1 (SUPERIOR QUALITY) GRADE

This grade of structure will also exhibit excellent quality materials and workmanship, but will be less pretentious than an E grade structure. Ornamentation and interior finish will typically be designed for the upper-class. Industrial buildings requiring special construction features, such as sound absorbing walls, precise humidity controls and dust free environments may also fall into this category.

2 (HIGH QUALITY) GRADE

Architecturally pleasing structures designed for comfort and convenience will fall into this category. While these structures will exhibit a good quality appearance they will not consist of the excellent quality materials found in E or 1 grade structures. A bank or office building designed to portray a successful image will typically be of this grade or above. Many new structures built in today's business environment are constructed to this grading standard.

3 (GOOD QUALITY) GRADE

3 grade structures will typically lack the architectural frills found in higher grade structures, however, they will basically be of good practical design and layout. The materials and workmanship will barely be above average. Areas with stringent building codes will typically require most structures to be built to this standard.

4 (AVERAGE QUALITY) GRADE

Structures constructed with average quality material and workmanship, with simple designs fall into this category. These structures will be constructed to conform to the minimum building codes. The cost tables found in the pre-computed, residential and agricultural sections are designed to this construction standard.

5 (BELOW AVERAGE) GRADE

These lower cost structures are generally constructed to minimum specifications. They will typically be structures of straight rectangular design with no extras or ornamentation. Newer structures of this grade could only be constructed in areas with no (or very limited) building codes. Older structures of this grade are structures which would not adhere to modern building codes.

6 (SUB-STANDARD) GRADE

These sub-standard structures do not meet even the minimum building code requirements. They are often owner built using inferior finish or used material and exhibit low quality workmanship. Interior finished will normally have minimal trim or may lack trim altogether. Very few structures are built to this standard.

DETERMINING THE PROPER GRADE

When attempting to determine a proper grade for any structure it is important to compare the structure to other structures of similar occupancy to assure consistency in grading. Office buildings should be compared to other office buildings, warehouses to other warehouses, etc. The following is a list of items to consider when attempting to determining a proper grade.

<u>Building Codes</u> can have a large impact on grading. Many larger municipalities have more stringent building codes than small municipalities and rural areas. Older buildings which do not meet current building code requirements will tend to indicate a lower grade. Obsolescence should also be considered for these inferior structures. Conversely, it is not uncommon for stringent building codes to add one whole grade to a given structure.

<u>Quality of Construction</u> will have the single largest impact on the grade of a building. A construction project that will spend the extra money for high quality materials will also be willing to pay extra for high quality craftsmanship or workmanship. The thickness or gauge of building materials, ornamentation, and design should all be considered when determining the quality of a structure.

<u>Quantity of Construction</u> can also impact the grade. A structure may be constructed with average quality materials; however an accumulation of extra building components may indicate a higher grade is necessary. For example, an office building may have more plumbing and electrical fixtures, a higher amount of partitioning, than normal. Even though these extra components are of average quality the extra quantity causes the building to be of a higher grade.

<u>Fire Rated Construction</u> can add significant cost to a building. A property that has fire rated doors (identified by the underwriter's laboratory tag on the hinged side of a door) will also have fire rated drywall throughout the structure, including fire rated drywall above suspended ceilings. These factors, which are part of the overall quality, can add significantly to the cost. It is not uncommon for fire rated finishes to add one whole grade to a structure.

<u>Framing</u> is the skeleton portion of a building. It is said that a building with good framing will also have good building material elsewhere. Typically, if a builder uses lower cost framing materials they will also use lower cost materials elsewhere, such as the thickness of the drywall and better quality mechanical items. The engineering and material cost associated with increasing the weight bearing capacity of an industrial building can also add to the cost of a structure.

<u>Mechanical Items</u> such as electrical, HVAC and plumbing also should be considered when determining the grade of a building. Many building codes require commercial buildings to use conduit wiring. Conduit wiring is more expensive than non-metallic (Romex) wiring. Even though the wiring is not visible in a structure with interior finish the requirement to utilize conduit wiring will have added to the cost of the structure. Plumbing fixtures with automatic flush systems will be more expensive than typical plumbing fixtures. The type and quality of HVAC systems also impact the overall cost. Multiple zone heating is more expensive than single zone systems.

<u>Fenestration</u> is the placement of windows and doors in a structure. The quality and cost of these items varies significantly. Not only should the quality be considered, but the quantity of doors and windows should also be considered in the grade. For example, most retail store buildings will have a glass store front and a rear entrance door. A retail store building with large windows on all sides will obviously cost more than a similar quality structure with windows on only one side.

<u>Shape</u> is also an important factor in determining cost. The pre-computed, residential, agricultural and exempt section prices all assume buildings of basic rectangular design. Structures with many corners, offsets and intricate designs can cost much more than a similar quality structure with a simple square or rectangular design. These factors should all be considered when making a judgment of grade

<u>Age</u> of a structure might also influence its cost. What is considered average in construction has changed through the years. Modern buildings are typically constructed with more plumbing fixtures and electrical outlets than buildings constructed many years ago. However, some newer construction has seen a decrease in the quality of interior and exterior finished as compared to older structures. Old structures of lower quality will tend to show more signs of age, such as out of square buildings, cracks in the interior finish, doors and windows that do not open and close properly and floors that creak. Good quality older structures will tend to retain more of their original appearance. These structures will remain sound and the woodwork will maintain a good appearance. It is easy to be influenced by a structures condition when grading. It is important to remember that the adjustment for the condition of a structure is an element of physical depreciation. Therefore, the current condition of a structure is not to be considered in the grading process.

It is only when all of the preceding factors are considered in total that a proper judgment of grade for a given structure can be determined. Again, it is important to emphasize that consistency in grading is equally as important, if not more important, than the accuracy of a grade applied to a single structure.

The following pages contain the grade adjustment schedules from a high of 160% to a low of 50%.

GRA	DE ADJUS	STMENTS								
	160% SCHEDULE									
	E	1	2	3	4	5	6			
	373	291	238	195	160	128	102			
+5	392	306	250	205	168	134	108			
+10	410	322	262	215	175	141	113			
+20	448									
+30	485									
+40	522									
+50	559									
+75	652									
+100	746									
+125	839									
+150	932									
+175	1,025									
+200	1,118									
-5	354	281	230	187	152	122	98			
-10	336	272	222	179	144	115	92			
-15							88			
-20							83			
-25							79			
-30							76			

Е Executive Quality

1 Superior Quality

- 2 High Quality
- 3 Good
- 4 5 Average
- Below Average

			155%	SCHEDULE			
	E	1	2	3	4	5	6
	361	282	231	189	155	124	99
+5	379	296	242	198	163	130	104
+10	397	312	254	209	170	136	109
+20	433						
+30	469						
+40	506						
+50	542						
+75	632						
+100	722						
+125	813						
+150	903						
+175	993						
+200	1,083						
-5	343	272	223	181	147	118	95
-10	326	263	215	174	140	112	89
-15							85
-20							81
-25							77
-30							73

E Executive Quality

1 Superior Quality

2 High Quality

3 Good

4 Average

5 Below Average

GRADE ADJUSTMENTS										
	150% SCHEDULE									
	E	1	2	3	4	5	6			
	350	272	224	182	150	120	96			
+5	367	287	234	192	158	126	101			
+10	384	302	246	202	164	132	106			
+20	419									
+30	454									
+40	489									
+50	524									
+75	612									
+100	699									
+125	786									
+150	874									
+175	961									
+200	1,049									
-5	332	259	212	174	143	114	92			
-10	315	247	203	166	135	108	86			
-15							83			
-20							78			
-25							74			
-30							71			

E Executive Quality

1 Superior Quality

- 2 High Quality
- 3 Good
- 4 Average
- 5 Below Average
- 6 Sub-standard

	145% SCHEDULE										
	E	1	2	3	4	5	6				
	338	263	216	176	145	116	93				
+5	355	277	226	186	152	122	97				
+10	372	291	238	195	159	128	102				
+20	405										
+30	439										
+40	473										
+50	507										
+75	591										
+100	676										
+125	760										
+150	845										
+175	929										
+200	1,014										
-5	320	251	205	168	138	110	88				
-10	305	239	196	160	131	104	84				
-15							80				
-20							75				

-30

-25

Executive Quality

72

68

Е 1 Superior Quality

2 High Quality

3 Good

4 Average

5 Below Average

GRA	DE ADJ <u>US</u>	STMENTS								
	140% SCHEDULE									
	E	1	2	3	4	5	6			
	326	254	209	170	140	112	90			
+5	343	267	218	179	147	118	94			
+10	359	281	230	188	153	123	99			
+20	391									
+30	424									
+40	457									
+50	489									
+75	571									
+100	652									
+125	734									
+150	816									
+175	897									
+200	979									
-5	309	242	198	162	133	106	85			
-10	294	231	189	155	126	101	81			
-15							77			
-20							73			
-25							69			
-30							66			

1

2

3 Good

4 Average

Below Average Sub-standard 5

	135% SCHEDULE									
	E	1	2	3	4	5	6			
	315	245	201	164	135	108	86			
+5	330	258	211	173	142	113	91			
+10	346	271	221	181	148	119	95			
+20	377									
+30	409									
+40	440									
+50	472									
+75	550									
+100	629									
+125	708									
+150	786									
+175	865									
+200	944									
-5	298	233	191	157	128	103	82			
-10	284	222	183	149	122	97	78			
-15							74			
-20							70			
-25							67			
-30							64			

E Executive Quality

1 Superior Quality

2 High Quality

3 Good

4 Average

5 Below Average

GRA		STMENTS							
130% SCHEDULE									
	E	11	2	3	4	5	6		
	303	236	194	158	130	104	83		
+5	318	248	203	166	137	109	87		
+10	333	261	213	175	142	114	92		
+20	363								
+30	394								
+40	424								
+50	454								
+75	530								
+100	606								
+125	682								
+150	757								
+175	833								
+200	909								
-5	287	225	184	151	124	99	79		
-10	273	214	176	144	117	94	75		
-15							72		
-20							68		
-25							64		
-30							61		

- 2
- 3 Good
- 4 5 Average
- Below Average Sub-standard
- 6

			125%	SCHEDULE			
	E	1	2	3	4	5	6
	291	227	186	152	125	100	80
+5	306	239	195	160	131	105	84
+10	320	251	205	168	137	110	88
+20	350						
+30	379						
+40	408						
+50	437						
+75	510						
+100	583						
+125	655						
+150	728						
+175	801						
+200	874						
-5	276	216	177	145	119	95	76
-10	263	206	169	138	113	90	72
-15							69
-20							65
-25							62

-30

E Executive Quality

59

1 Superior Quality

2 High Quality

3 Good

4 Average

5 Below Average

GRAD	DE ADJU	STMENTS					
			120%	SCHEDULE			
	E	1	2	3	4	5	6
	280	218	179	146	120	96	77
+5	294	229	187	154	126	101	82
+10	308	241	197	162	132	107	85
+20	336						
+30	363						
+40	391						
+50	419						
+75	489						
+100	559						
+125	629						
+150	699						
+175	769						
+200	839						
-5	265	211	173	140	114	91	73
-10	252	204	167	134	108	86	70
-15							66
-20							64
-25							60
-30							58

1

2

3 Good

4 Average

Below Average Sub-standard 5

			115%	SCHEDULE			
	E	1	2	3	4	5	6
	268	209	171	140	115	92	74
+5	281	220	179	147	121	97	78
+10	295	231	189	155	126	102	82
+20	322						
+30	348						
+40	375						
+50	402						
+75	469						
+100	536						
+125	603						
+150	670						
+175	737						
+200	804						
-5	254	202	166	135	109	87	70
-10	242	195	160	129	103	83	67
-15							63
-20							61

-30

-25

55

58

E Executive Quality

1 Superior Quality

2 High Quality

3 Good

4 Average

5 Below Average

GRAD	DE ADJ <u>US</u>	STMENTS					
			110%	SCHEDULE			
	<u> </u>	1	2	3	4	5	6
	256	200	164	134	110	88	70
+5	269	210	172	141	115	92	75
+10	282	221	180	148	121	98	78
+20	308						
+30	333						
+40	359						
+50	384						
+75	449						
+100	513						
+125	577						
+150	641						
+175	705						
+200	769						
-5	243	194	158	129	104	84	67
-10	231	187	153	123	99	79	64
-15							60
-20							58
-25							55
-30							53

Е

Executive Quality Superior Quality High Quality Good 1

- 2 3
- 4 5
- Average Below Average Sub-standard
- 6

-30

			105%	SCHEDULE			
	E	1	2	3	4	5	6
	245	191	156	128	105	84	67
+5	257	201	164	134	110	88	71
+10	269	211	172	142	115	93	75
+20	294						
+30	318						
+40	343						
+50	367						
+75	428						
+100	489						
+125	550						
+150	612						
+175	673						
+200	734						
-5	232	185	151	123	100	80	64
-10	221	179	146	118	94	76	61
-15							58
-20							56
-25							52

Executive Quality Superior Quality Е 1

50

2 High Quality

3 Good

4 Average

5 Below Average

GRAD	DE ADJUS	STMENTS					
			100%	SCHEDULE			
	E	1	2	3	4	5	6
	233	182	149	122	100	80	64
+5	245	191	156	128	105	84	68
+10	256	201	164	135	110	89	71
+20	280						
+30	303						
+40	326						
+50	350						
+75	408						
+100	466						
+125	524						
+150	583						
+175	641						
+200	699						
-5	221	176	144	117	95	76	61
-10	210	170	139	112	90	72	58
-15							55
-20							53
-25							50
-30							48

- E 1 2 3
- 4 5
- Average Below Average Sub-standard
- 6

			95%	SCHEDULE			
	E	1	2	3	4	5	6
	221	173	142	116	95	76	61
+5	232	181	148	122	100	80	65
+10	243	191	156	128	104	85	67
+20	266						
+30	288						
+40	310						
+50	332						
+75	387						
+100	443						
+125	498						
+150	553						
+175	609						
+200	664						
-5	210	167	137	111	90	72	58
-10	200	161	132	106	86	68	55
-15							52
-20							50
-25							47
-30							46

E Executive Quality

1 Superior Quality

2 High Quality

3 Good

4 Average

5 Below Average

GRA	DE ADJUS	STMENTS					
			90 %	SCHEDULE			
	E	1	2	3	4	5	6
	210	164	134	110	90	72	58
+5	220	172	140	115	94	76	61
+10	231	181	148	121	99	80	64
+20	252						
+30	273						
+40	294						
+50	315						
+75	367						
+100	419						
+125	472						
+150	524						
+175	577						
+200	629						
-5	199	158	130	105	85	68	55
-10	189	153	125	101	81	65	52
-15							50
-20							49
-25							45
-30							43

1

2

3 Good

4 Average

Below Average Sub-standard 5

			85%	SCHEDULE			
	E	1	2	3	4	5	6
	198	155	127	104	85	68	54
+5	208	162	133	109	89	71	58
+10	218	171	139	115	93	76	60
+20	238						
+30	257						
+40	277						
+50	297						
+75	347						
+100	396						
+125	446						
+150	495						
+175	545						
+200	594						
-5	188	150	122	99	81	65	52
-10	179	144	118	95	77	61	49
-15							47
-20							45
-25							42

-30

54

E Executive Quality1 Superior Quality

2 High Quality

3 Good

4 Average

5 Below Average

GRA	DE ADJUS	STMENTS					
			80 % :	SCHEDULE			
	E	1	2	3	4	5	6
	186	146	119	98	80	64	51
+5	196	153	125	102	84	67	54
+10	205	161	131	108	88	71	57
+20	224						
+30	242						
+40	261						
+50	280						
+75	326						
+100	373						
+125	419						
+150	466						
+175	513						
+200	559						
-5	177	141	115	94	76	61	49
-10	168	136	111	90	72	58	46
-15							44
-20							42
-25							40
-30							38

1

2

3 Good

4 5 Average

Below Average Sub-standard

		STMENTS					
GRAL			75%	SCHEDULE			
	E	1	2	3	4	5	6
	175	136	112	91	75	60	48
+5	183	143	118	96	79	63	50
+10	192	150	124	101	83	66	53
+20	210						
+30	227						
+40	245						
+50	262						
+75	306						
+100	350						
+125	393						
+150	437						
+175	481						
+200	524						
-5	166	129	107	87	71	57	46
-10	158	125	102	84	68	54	43
-15							41
-20							39
-25							37
-30							35

E Executive Quality1 Superior Quality2 High Quality3 Good

4 Average5 Below Average6 Sub-standard

GRA	DE ADJUS	STMENTS					
			70%	SCHEDULE			
	E	1	2	3	4	5	6
	163	127	104	85	70	56	45
+5	171	134	110	90	74	59	47
+10	179	140	116	95	77	62	50
+20	196						
+30	212						
+40	228						
+50	245						
+75	285						
+100	326						
+125	367						
+150	408						
+175	449						
+200	489						
-5	155	120	100	81	67	53	43
-10	147	117	95	78	63	50	40
-15							39
-20							36
-25							35
-30							33

1

2

3 Good

4 Average5 Below Average6 Sub-standard

$\begin{array}{c c c c c c c c c } \hline E & 1 & 2 & 3 & 4 & 5 \\ \hline 151 & 118 & 97 & 79 & 65 & 52 \\ \hline +5 & 159 & 124 & 102 & 83 & 68 & 55 \\ \hline +10 & 167 & 130 & 107 & 88 & 72 & 57 \\ \hline +20 & 182 & & & & & & & & & & \\ \hline +30 & 197 & & & & & & & & & & & & & \\ \hline +40 & 212 & & & & & & & & & & & & & & & \\ \hline +50 & 227 & & & & & & & & & & & & & & & & &$	6 42 43 46
$\begin{array}{c cccccccccccc} +5 & 159 & 124 & 102 & 83 & 68 & 55 \\ +10 & 167 & 130 & 107 & 88 & 72 & 57 \\ +20 & 182 & & & & & & & & & & & & & & & & & & &$	43
+10167130107887257+20182	
+20 182 $+30$ 197 $+40$ 212 $+50$ 227 $+75$ 265 $+100$ 303 $+125$ 341 $+150$ 379 $+175$ 416	46
+30 197 +40 212 +50 227 +75 265 +100 303 +125 341 +150 379 +175 416	
+40 212 +50 227 +75 265 +100 303 +125 341 +150 379 +175 416	
+50 227 +75 265 +100 303 +125 341 +150 379 +175 416	
+75 265 +100 303 +125 341 +150 379 +175 416	
+100 303 +125 341 +150 379 +175 416	
+125 341 +150 379 +175 416	
+150 379 +175 416	
+175 416	
+200 454	
-5 144 112 93 75 62 49	40
-10 137 108 88 73 59 47	37
-15	36
-20	34
-25	32
-30	30

E Executive Quality

1 Superior Quality

2 High Quality

3 Good

4 Average

5 Below Average

GRADE ADJUSTMENTS								
60% SCHEDULE								
	<u> </u>	1	2	3	4	5	6	
	140	109	89	73	60	48	38	
+5	147	115	94	77	63	50	40	
+10	154	120	99	81	66	53	43	
+20	168							
+30	182							
+40	196							
+50	210							
+75	245							
+100	280							
+125	315							
+150	350							
+175	384							
+200	419							
-5	133	103	86	70	57	46	37	
-10	126	100	82	67	54	43	34	
-15							33	
-20							31	
-25							30	
-30							28	

1

- 2
- 3 Good
- 4 5 Average
- Below Average

55% SCHEDULE								
	E	1	2	3	4	5	6	
	128	100	82	67	55	44	35	
+5	135	105	87	70	58	46	37	
+10	141	110	91	74	61	48	39	
+20	154							
+30	167							
+40	179							
+50	192							
+75	224							
+100	256							
+125	288							
+150	320							
+175	352							
+200	384							
-5	122	95	78	64	52	42	34	
-10	116	92	75	62	50	40	32	
-15							30	
-20							29	
-25							27	
-30							26	

E Executive Quality

1 Superior Quality

2 High Quality

3 Good

4 Average

5 Below Average

GRADE ADJUSTMENTS								
50% SCHEDULE								
	E	1	2	3	4	5	6	
	117	91	75	61	50	40	32	
+5	122	96	79	64	53	42	33	
+10	128	100	83	68	55	44	36	
+20	140							
+30	151							
+40	163							
+50	175							
+75	204							
+100	233							
+125	262							
+150	291							
+175	320							
+200	350							
-5	111	86	71	58	48	38	31	
-10	105	83	68	56	45	36	29	
-15							28	
-20							26	
-25							25	
-30							23	

- 2
- 3 Good
- 4 Average5 Below Average6 Sub-standard