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SQUARE FOOT 2025 COSTBOOK

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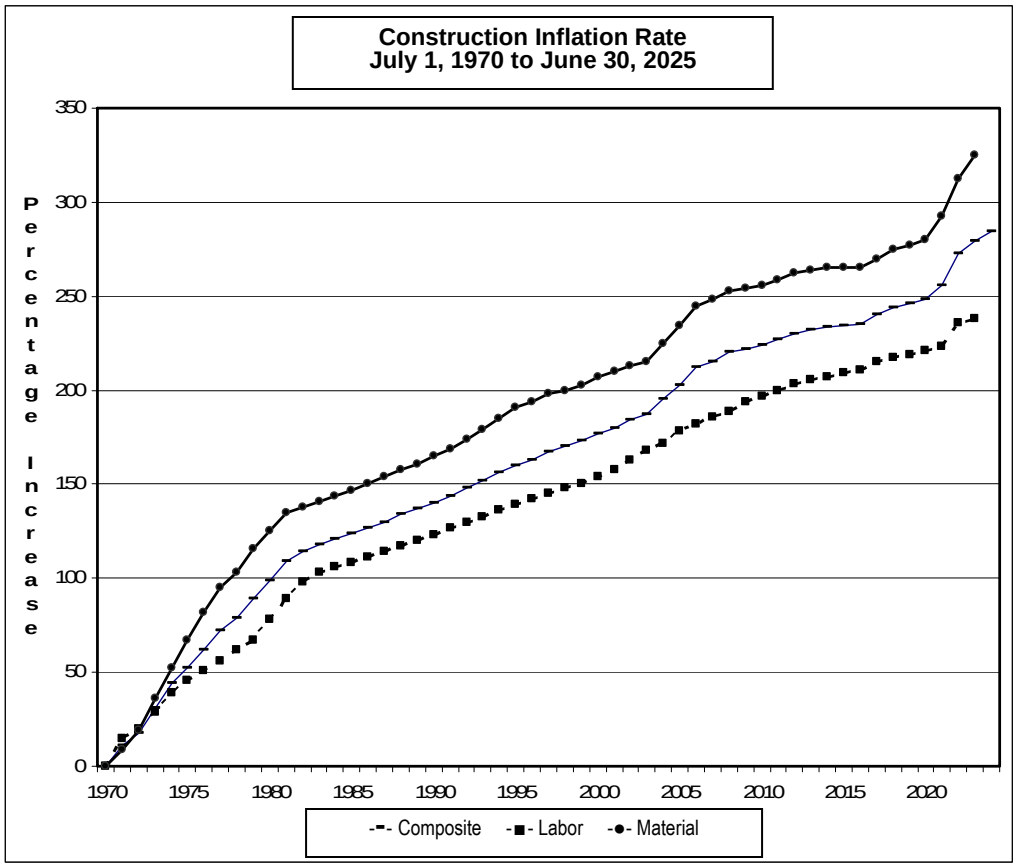
Construction Trends

The next page shows how the overall cost of construction has changed since 1970.

The following graph, "Construction Inflation Rates," is drawn from Design & Construction Resources Inflation Rates. The Inflation Rates Table is made up of 30 components: for example, portland cement, lumber, structural steel, and common (unskilled) labor.



NOTE: Over the past 55 years, the composite for construction inflation has risen 284%, while labor and material have risen 245% and 327% respectively. Many materials have increased this year, with noticeable increases and some decreases. For the year, this now represents increases of 7.15% in the cost of labor and 3% in the cost of material.

EXAMPLE: A $1,000,000 project built in 1970 would increase 284% to $3,840,000 in today's dollars.

Base price 1970 = $1,000,000
Increase to 2025 = 284%

1,000,000 X 2.84 (284%) = **$2,840,000** (this is the increase)
1,000,000 (original price) + 2,840,000 (increase) = **$3,840,000**

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How to Use This Book

There are four main sections to this manual – **Square Foot Cost Studies, Unit-In-Place Costs, Assemblies,** and **Supporting Reference Tables** (Metro Multipliers & Square Foot Tables).

Square Foot Cost Studies

Each square-foot cost study is based on an actual job – not a hypothetical model. This study may match the type of project you are estimating. It can provide you with a "feel" or breakout of the costs by division for the type of project you are estimating. Each study provides details of the updated costs per square foot of each major division, as well as the division percentage of the overall costs – based on an actual project. Subcontractors will find the percentage of the total cost by division very useful.

For example, if you are estimating the cost of a fire station, you could find actual square-foot costs. Not all buildings are exactly the same, but you would have a square-foot cost to turn to as a baseline for your estimate.

Along with the cost summary, you'll find an image of the project and a short narrative listing the special circumstances and requirements behind the design and construction. This data can help you match and adjust your own project's cost with those in the study. Applying the additional facts pertaining to the study (listed in the narrative) should help you sharpen your ballpark estimate on a specific project.

To fine tune your square-foot cost estimate, the second part of this book includes thousands of unit-in-place costs, assemblies and additional square foot costs to help you get an even more accurate estimate.

Unit-in-Place Costs

Unit costs located in the back of this book help you further detail your estimate by providing you with unit costs to help you compile an item-by-item estimate. To find the material, job or unit you need to estimate, find the item in either the index in the back of the book, or using the CSI division numbers. Go to that page. You'll find the item, followed by a unit of measurement, the man-hours for that unit of measurement, the labor cost, the material cost and a total cost.

Material Costs: The material costs used in the unit-in-place costs represent national averages for prices that a contractor would expect to pay, plus an allowance for freight (if applicable), handling, and storage. These costs reflect the typical average costs for that material. Material costs can fluctuate and, when the highest degree of accuracy is required, it is always best to check current prices from local suppliers.

Labor: Labor columns are based on prevailing Davis-Bacon labor wage rates and need to be adjusted to your location by using the modification factors for your area (included in this book). Labor and material prices can range widely depending on where your job site is located. Wage rates in this book include Worker's Comp, along with allowances for overhead and profit for the contractor. Each company has their own markup percentage (see below). Each job has its own general conditions.

Overhead and Profit: An allowance for these is included in the labor costs in the unit-in-place costs section. No cost allowances or fees are included for management of subcontractors by the general contractor or general manager. These costs, where appropriate, must be added to the costs listed in this book.

The allowance for overhead is included for office overhead and the contractor's typical cost of doing business. These costs normally include in-house staff salaries and benefits, office rent and operating expenses, professional fees, vehicle costs and other operating costs which are not directly applicable to specific jobs. It should be noted that for this book, office overhead needs to be distinguished from project overhead, the General

Requirements (Division 1) which is specific to particular projects. Project overhead should be included on an item-by-item basis for each job.

Equipment costs: Costs for various types and pieces of equipment are include in Division 1 (General Requirements), and can be included in an estimate, when required, either as a total "equipment" category, or with specific appropriate trades. In this book, costs for equipment are added, when appropriate, to the installation costs.

Estimating using the unit-in-place costs: Each item includes the name of the item (ridge boards), followed by the unit of measure. This is usually followed by the labor cost to furnish (install, dig, pour, etc.) the unit of measure to fulfill that job. This is followed by a total cost. Units of measure used in this book are:

SF – Square Foot
EA – Each
CY – Cubic Yard
LF – Linear Foot
SQ – Square

Suppose you were going to estimate the price of a wood 24-foot fence. First, you would go to the section on wood fence, under Division 2, Site Construction. There you'll find fences of different type materials, listed as either picket or privacy. For a privacy fence that is made of 1 x 6 planks, you will find the labor, material, and a total price.

For a 24-foot-long fence at 6-foot high, you would have to multiply 6 times 24 for a total of 144 square feet. In this instance, the price of the posts and fasteners are included in total square foot composite price.

Where do these unit-in-place prices come from? These prices are from a proprietary database based on input from an extensive network of contractors, subcontractors, engineers, architects and material suppliers throughout the U.S.

Assemblies

To help speed up the estimating process, we now include an assemblies section. Assemblies group together a project by items such as walls, floors, roofs, and foundations. The unit prices to make up these "systems" are detailed so you, the estimator, can add or delete items to create your own assembly that more closely represents what's in your actual project.

Remember that estimating is an art and not a science. Material prices can change throughout the year depending on availability. Nothing in this book is meant to be a substitute for your own good judgment. Use it as a guide and combine it with your experience and common sense.

Stumped? Give us a call at 1-888-264-2665 from 7 a.m. to 4 p.m. PST. We'll do our best to help.

Part One

Square Foot Costs

Every case study is described in a short summary. These summaries are given to provide insight into the circumstances and requirements behind the design. A building's function or location often influences the choice of building materials and thus the cost. Site limitations and local building and zoning codes are factors that have to be taken into consideration. Budget constraints, material availability and personal expertise of an individual builder all affect a project's outcome. Wherever appropriate, these types of issues are explained in the descriptions that accompany each case study. Further, when costs within one or more of the CSI divisions for the project are abnormally high or low, an explanation is usually provided.

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Civic/Government

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Fire Station 14
State Park Building 16
Family Shelter Administrative Building 18
Fire Station 20
Transportation Maintenance Center 22
Animal Care Center 24
Fire Station 26

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FILE 1

The scope of work for this project was to further improve upon the prototype Hillsborough County Fire Rescue Station by designing a 9,340-square-foot fire rescue station to serve Florida's Wimauma area.

The facility includes an apparatus area consisting of three double bays for fire rescue vehicles and other auxiliary equipment. Additionally, the work and live space provides:

- 11 Individual bunk areas
- Dining & day room
- Employee restroom
- Shower facilities
- Exercise room/safe room
- Office space
- Telecom room
- Mechanical room
- Storage area

The engineering and design of the storm water management system included the preparation of calculations and drawings required to meet the regulatory requirements of Hillsborough County Development Services, the Florida Department of Transportation (FDOT), and the Southwest Florida Water Management District (SWFWMD).

In addition to the design of the traditional storm water management system, the project included floodplain impact quantification and floodplain compensation/mitigation design and permitting. The utility systems included the design and permitting of domestic water and sanitary sewer extensions within an FDOT right-of-way to serve the subject property.

These systems consist of 710 linear feet of low-pressure sanitary sewer force main, an on-site lift station, and 1,050 linear feet of water main, with the reconnection of existing service connections to the new water main.

Permitting services for this project included submittal of plans, calculations, specifications, applications, and securing approval from the following agencies: Hillsborough County Development Services, SWFWMD, FDOT, Florida Department of Environmental Protection, and the Hillsborough County Department of Health.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	6.77	30.68	277,723
1	General Requirements	21.30	96.57	874,285
3	Concrete	6.35	28.79	260,708
4	Masonry	3.61	16.38	148,357
5	Metals	0.67	3.02	27,375
6	Wood, Plastics, and Composites	7.94	36.02	326,088
7	Thermal and Moisture Protection	7.49	33.95	307,389
8	Openings	5.26	23.83	215,751
9	Finishes	6.67	30.23	273,744
10	Specialties	1.15	5.22	47,317
11	Equipment	0.90	4.09	37,015
12	Furnishings	0.06	0.27	2,401
13	Special Construction	0.60	2.73	24,650
21	Fire Suppression	1.27	5.77	52,282
22	Plumbing	3.65	16.56	149,933
23	HVAC	12.82	58.13	526,243
26	Electrical	12.13	54.98	497,791
27	Communications	0.36	1.62	14,691
28	Electronic Safety and Security	1.01	4.58	41,358
	Total Building Costs	**100.00**	**453.41**	**4,105,106**

COST PER SQUARE FOOT = $453.41

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FILE 2

This 4,600-square-foot fire station with expansion capabilities was designed with residential lines and differing color schemes that matched local stations in the area.

The apparatus areas of the station are finished in a manner that allows for ease of cleaning. The walls of these areas are concrete block with a painted 100% acrylic paint.

Special features of the station include a CO_2 detection system, which automatically turns the exhaust system on in the apparatus bay to protect sleeping firemen. The electrical system that powers the cooking equipment can be turned off by remote shunt-trip while exiting the station during alarm.

The exterior of the station is split-face and smooth concrete block veneer, stained. The accents are Astra-Glaze-SW® glazed concrete block, color coordinated to the custom colored windows and storefront glazing system by EFCO Corporation. The colors were matched to the metal roof panels. The color combinations used on Stations 3 and 6 are designed to fit into a residential setting while those on Station 11 fit into the surrounding commercial and retail development.

The site plans for the stations have horseshoe drives with drive-through apparatus bays. The driveway paving is 8-inch-thick highway specification with perimeter grade beams to lessen the chance of pavement cracks at the edge of the driveways. Parking is situated along the access drives at two stations and at the front of the other. The parking paving is 4 inches thick. The side of each station has a wood-fence-enclosed outdoor area. This allows for privacy of outdoor activities for the firemen stationed at each fire station. The rear entrance drive to the apparatus bay is well lighted for nighttime clean up of the fire engines. The trucks are also provided with a pump-out standpipe for emptying the water from the engines and a fire hydrant to refill fire trucks at tank cleanings.

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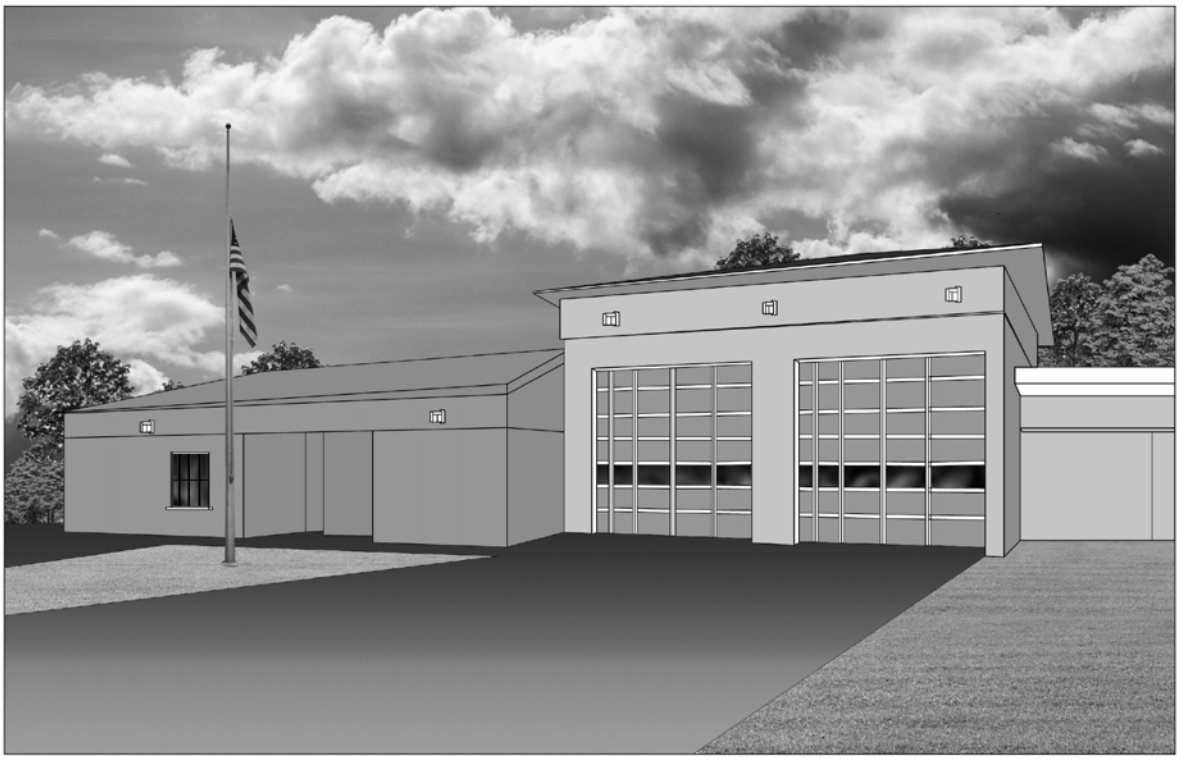

Code	Division Name	%	S F Cost	Projected
0	Bidding Requirements	19.73	98.17	452,086
3	Concrete	8.73	43.43	199,999
4	Masonry	15.76	78.42	361,151
5	Metals	0.42	2.10	9,614
6	Wood & Plastics	7.12	35.42	163,075
7	Thermal & Moisture Protection	7.47	37.17	171,152
8	Doors & Windows	10.16	50.53	232,690
9	Finishes	7.47	37.17	171,152
10	Specialties	1.24	6.19	28,462
11	Equipment	0.57	2.84	13,076
12	Furnishings	1.21	6.02	27,693
15	Mechanical	11.05	54.95	253,076
16	Electrical	9.07	45.11	207,690
	Total Building Costs	**100.00**	**497.49**	**2,290,916**

COST PER SQUARE FOOT = $497.49

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FILE 3

Grand Haven State Park in Grand Haven, Michigan, is one of the most popular parks in the state for camping and day use. Located at the mouth of the Grand River, the park offers spectacular views of Lake Michigan from many vantage points, including the Lake Michigan Grand Haven Lighthouse Pier, individual campsites, and the beach.

An existing restroom building had exceeded its useful visitor service and operational life expectancy, and had been slated for improvement. Michigan Department of Natural Resources Parks and Recreation Division (MDNR PRD) had a standard plan and supporting technical studies for replacement toilet buildings, which was the starting point for the new building design.

The design challenge was to create a simple, functional facility that matched existing buildings on site, yet was economical and required little maintenance. The design also had to consider the high humidity and special weather of a beach environment.

The plan provided for protected entrances, because of extensive windblown sand. Since some bathrooms are seasonal, they can be closed off with overhead coiling doors. One unisex toilet room is insulated and heated for year-round use to accommodate winter activities, including fishing from the pier.

The building materials include concrete masonry bearing walls, glued laminated beams, and wood decks to form the structure. The exterior materials of wood, stone, champagne anodized aluminum, and galvanized metal roofing were chosen to match existing buildings on site: A 1938 Beach House, a 1938 Storage and Maintenance Building, and a 2008 Toilet/Shower Building.

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Code	Division Name	%	S F Cost	Projected
1	General Requirements	28.41	169.24	233,557
3	Concrete	4.29	25.55	35,262
4	Masonry	14.87	88.59	122,266
5	Metals	0.32	1.88	2,587
6	Wood, Plastics	13.97	83.20	114,828
7	Thermal and Moisture	4.70	28.01	38,653
8	Openings	8.09	48.16	66,462
9	Finishes	1.85	11.01	15,199
10	Specialties	2.80	16.71	23,058
12	Furnishings	0.50	3.00	4,134
22	Plumbing	11.82	70.41	97,170
23	HVAC	2.79	16.60	22,920
26	Electrical	5.57	33.20	45,828
	Total Building Costs	**100.00**	**595.60**	**821,924**

COST PER SQUARE FOOT = $595.60

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FILE 4

In 2012, Casa Pacifica found themselves in critical need to expand their campus. Staples Construction was brought onboard to provide pre-construction services in collaboration with the design team for the Building New Foundations of Hope Capital Campaign. Over the following years the project team worked in partnership to develop a program.

The challenge presented to the project team from the start was to develop a design that preserved the current look and feel of the campus, provide the necessary space for Casa Pacifica's programmatic needs, and maintain an inviting and safe campus for the youth and staff. All aspects of the buildings and site improvements were carefully examined to ensure that the design/layout, materials, and systems selected were cost effective, durable, and maintenance-friendly. The proposed expansion and the construction sequencing/logistics strategy underwent several iterations to develop a comprehensive plan that allowed the project to break ground in January 2017.

The administration building including training, therapy, commercial kitchen, classroom, and warehouse facility that broke ground in July of 2017. This building was originally designed to be three separate buildings. As a cost savings measure it was combined into one large building to maximize use of common/shared spaces (restrooms, break rooms, therapy space, conference rooms, etc.). This decision yielded a significant savings to the project and contributed to a more collaborative working environment for employees. In order to maintain a more secure facility for youth and staff, only one third of the building is openly accessible to youth while two-thirds of the building has limited accessibility.

In addition, the existing parking lot needed to be expanded to meet the County's parking mandates for the campus, as well as required upgrades to the electrical services to accommodate the additional load of the new buildings and any future expansions on campus. This work was successfully scheduled to minimize impact to the ongoing operations of Casa Pacifica.

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Code	Division Name	%	S F Cost	Projected
0	Procurement	1.25	2.75	66,517
1	General Requirements	14.02	30.95	749,918
3	Concrete	5.07	11.20	271,404
4	Masonry	0.19	0.42	10,404
5	Metals	3.45	7.61	184,388
6	Wood, Plastics	15.21	33.56	812,927
7	Thermal and Moisture	5.80	12.80	310,071
8	Openings	5.70	12.59	305,037
9	Finishes	12.96	28.61	693,141
10	Specialties	0.75	1.66	40,315
12	Furnishings	0.96	2.11	50,995
21	Fire Suppression	1.57	3.46	83,692
22	Plumbing	5.05	11.15	270,124
23	HVAC	13.07	28.84	698,656
26	Electrical	14.95	33.01	799,612
	Total Building Costs	**100.00**	**220.74**	**5,347,203**

COST PER SQUARE FOOT = $220.74

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FILE 5

Located just west of Cincinnati, Miami Township contains a mix of suburban development and rural areas. The Township was looking to replace the oldest of their three fire stations, Station 69, which had been built in the 1940s to house a volunteer fire department. Response time mapping showed that the optimal site for a replacement station was that of the original station, so it was decided to build on land adjacent to the station to maintain uninterrupted fire and EMS service to this area of the Township during construction.

As the site was in a rural part of the Township without sanitary sewers, a septic system took up a good portion of the site. This, combined with the desire to keep the existing station in use during construction, limited the area on which the station could be built and pushed the design team to make sure space was used efficiently.

The resulting new 17,000-square-foot facility includes three apparatus bays, two mezzanines, six bunk rooms, a large training room, hose tower, and training facilities. The training facilities, located in and adjacent to the apparatus bay, include a wall for rappelling, a manhole in one of the mezzanines for simulating confined spaces, a balcony and window in the hose tower for practicing rescues, and hoist rings in the hose tower for rappelling practice. The large training room doubles as a community meeting room and a voting station during elections.

The exterior of the building was designed to have a more residential scale and appearance while still retaining qualities of a civic building. This was achieved through the use of gabled roofs with standing seam metal roofing, dormers on the apparatus bays, face brick and cast stone. Simple, durable materials were used on the interior — ground-face and painted CMU, painted gypsum board, and polished concrete floors.

With all living and administrative spaces on the ground floor, easy access is provided to the apparatus bays. The bunk rooms and day room are situated to provide the shortest route possible to the bays, improving response times for the Department.

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Code	Division Name	%	S F Cost	Projected
1	General Requirements	7.05	35.67	488,967
3	Concrete	8.28	41.91	574,472
4	Masonry	16.77	84.85	1,163,158
5	Metals	8.77	44.36	608,054
6	Wood & Plastics	1.24	6.26	85,856
7	Thermal & Moisture	10.43	52.76	723,225
8	Openings	5.28	26.73	366,453
9	Finishes	8.27	41.87	573,968
10	Specialties	3.27	16.55	226,870
12	Furnishings	0.74	3.74	51,225
21	Fire Suppression	2.90	14.67	201,139
22	Plumbing	5.27	26.68	365,710
23	HVAC	7.57	38.3	525,031
26	Electrical	11.94	60.42	828,255
27	Communications	2.22	11.24	154,127
	Total Building Costs	**100.00**	**506.02**	**6,936,510**

COST PER SQUARE FOOT = $506.02

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FILE 6

The Transportation Maintenance Center was completed in 2023 by SLA Architects. This facility provides storage and maintenance facilities for the City's Falls Ride bus system as well as Rolling Plains Management Corporation's (RPMC) SHARP Lines Rural Transportation.

The Wichita Falls Transit System, Falls Ride, provides public transportation for the City of Wichita Falls and its residents. SHARP Lines Rural Public Transportation is a rural public transportation program and non-emergency medical transportation service for residents of Archer, Baylor, Cottle, Foard, Hardeman, Jack, rural Wichita, Wilbarger, and Young counties. Destinations include shopping centers, beauty/barber shops, social service agencies, and medical clinics.

The project scope includes administrative offices for the City of Wichita Falls Transportation staff and RPMC staff, maintenance facilities, parking, both covered and uncovered, for both organization's fleet, and bus washing area and fueling station. The site is designed to handle the capacity of as many as forty-three transit vehicles of various sizes. Access control and surveillance systems are utilized for both the site and all buildings.

The 8,468-square-foot administrative building includes multiple offices for RPMC SHARP Lines, Falls Ride, Wichita Falls Metropolitan Planning Organization and the DAV Chapter 41 staff, along with a shared conference/training room, break room, and secure vault. The design also includes a wellness room with fitness equipment and shower facilities. A dispatch office is located right off the lobby area. Adjacent to the administrative building, and connected with a covered walk, is the maintenance repair building. The 11,426-square-foot building consists of seven drive-thru bays, parts and tire storage areas, mechanics' offices, and mechanics' work area.

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Code	Division Name	%	S F Cost	Projected
0	Procurement	1.03	8.07	160,511
1	General Requirements	20.06	157.66	3,136,498
3	Concrete	7.60	59.72	1,187,990
4	Masonry	3.77	29.65	589,910
5	Metals	5.02	39.46	784,980
6	Wood & Plastics	1.01	7.95	158,120
7	Thermal & Moisture	6.21	48.82	971,128
8	Openings	3.39	26.61	529,456
9	Finishes	5.82	45.75	910,144
10	Specialties	7.01	55.10	1,096,207
11	Equipment	9.05	71.11	1,414,702
12	Furnishings	0.26	2.08	41,315
13	Special Construction	6.74	52.99	1,054,138
21	Fire Suppression	1.16	9.10	181,066
22	Plumbing	4.01	31.55	627,695
23	HVAC	7.06	55.46	1,103,401
26	Electrical	10.31	81.03	1,612,103
28	Electronic Security	0.50	3.94	78,408
	Total Building Costs	**100.00**	**786.05**	**15,637,772**

COST PER SQUARE FOOT = $786.05

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FILE 7

The Eastern Madera County SPCA Adoption & Care Center provides the dogs and cats in eastern Madera County the services needed to increase their adoptability and provides a safe temporary home in the meantime.

Mr. Hendry utilized his knowledge of animal care facilities to design a state-of-the-art facility that would embody the EMC SPCA's mission statement and goals for the care of animals in the mountain communities just outside of Yosemite National Park.

The site featured a large legacy oak tree and the challenge of being at the base of a substantial hill. R Papike Construction was chosen to build the project and worked within the Owner's budget.

Mr. Hendry's design separates the dog and cat areas with the staff areas and the public areas providing the buffer between. A Community Room provides panoramic views of the Sierras and offers space for volunteer training along with other community groups.

Windows on the exterior kennel walls facing the Sierras provide ample light and incredible views much of the day, with glass block on the west face allowing afternoon light without overheating the space. The staff area allows access to all areas of the Care Center.

The choice of CMU for the dog kennel wing allowed durability as well as an opportunity for different textures. Multiple rooms provide a vestibule area for the dogs to prepare to meet their potential owners outside. The area outside of the kennels creates a wonderfull enclosed area for potential owners to meet and interact with their pets, with plenty of shade created by the legacy oak tree and durable artificial turf providing an attractive and environmentally friendly area.

From the Rotunda forever families can view both kittens and more mature cats in community settings and have separated rooms to enjoy interactions with their pets. Cat community rooms allow the cats to enjoy safe, outside enclosed areas along with various cat trees, bridges, and cubbies.

Durable roofing provides a barrier to the harsh summers and winters encountered in the western Sierra Nevada Mountains. Combined with fiber cement siding and architectural stone veneer, the building blends into the mountain environment and provides the fire resistance required by the California Building and Fire Codes.

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Code	Division Name	%	S F Cost	Projected
1	General Requirements	5.63	34.95	320,031
3	Concrete	8.65	53.70	491,699
4	Masonry	6.38	39.60	362,571
5	Metals	5.74	35.61	326,025
6	Wood & Plastics	10.16	63.06	577,385
7	Thermal & Moisture	5.64	35.00	320,500
8	Openings	4.75	29.49	270,016
9	Finishes	8.14	50.53	462,648
10	Specialties	1.90	11.78	107,854
11	Equipment	0.52	3.23	29,576
12	Furnishings	1.05	6.52	59,664
13	Special Construction	9.80	60.87	557,369
21	Fire Suppression	2.42	15.01	137,430
22	Plumbing	7.49	46.48	425,549
23	HVAC	13.20	81.97	750,511
26	Electrical	8.54	53.05	485,723
	Total Building Costs	**100.00**	**620.86**	**5,684,550**

COST PER SQUARE FOOT = $620.86

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FILE 8

The Town of Pensaukee is a growing Wisconsin community 30 minutes north of Green Bay. The volunteer fire department had outgrown its original station, built in 1975. The new station is a 7,240-square-foot, two-story building designed to serve the needs of 26 volunteer fire fighters and paramedics.

The department provides lockers for the crew. Since it is a volunteer department, no sleeping quarters were needed. The facility also includes three deep apparatus bays for vehicles to house six total vehicles if needed.

The new facility's exterior is metal with wood, and a standing seam metal roof. "The major design goal of the project was to meet the space and equipment needs of the fire department while not exceeding budget," says Kelly Kueper. "With budget in mind, it was also a design goal to create a modern and aesthetically pleasing building. Metal was ultimately chosen because it is a low-maintenance and high-performance material to protect the building envelope."

The town council decided the wide selection of metal roofing and wall panel profiles and colors from McElroy Metal would be the best long-term solution for this new facility.

"The old building simply could not meet the needs of the community and updated firefighting technology," says James Jones, Senior Project Manager at Muza Sheet Metal, Oshkosh, Wisconsin. "After assessing budget and functionality, metal systems were selected for the new station's walls and roofing. The durability and cost-effectiveness of metal panels made them the ideal choice."

The Wisconsin winter made the installation a little more challenging, but everything was completed on time, and everyone was pleased with the outcome.

"Our team faced the challenge of installing the systems during cold winter months, but through careful planning and coordination, we stayed on schedule and overcame the weather-related difficulties," Jones says. "Of all the building's excellent features, we were particularly proud of using multiple metal panel colors and profiles. The eye-catching red panels paired with the grey and natural Sandstone roofing create visual interest while meeting all performance requirements.

"The new station made smart use of architectural metals and provides an essential service," Jones added.

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Code	Division Name	%	S F Cost	Projected
0	Procurement	0.85	2.00	14,448
1	General Requirements	15.51	36.52	264,417
3	Concrete	7.05	16.60	120,167
5	Metals	0.88	2.08	15,068
6	Wood & Plastics	15.20	35.78	259,034
7	Thermal & Moisture	19.43	45.75	331,263
8	Openings	5.64	13.28	96,132
9	Finishes	5.10	12.00	86,857
10	Specialties	0.16	0.36	2,642
12	Furnishings	0.60	1.41	10,178
22	Plumbing	5.54	13.04	94,400
23	HVAC	12.38	29.16	211,111
26	Electrical	11.67	27.47	198,917
	Total Building Costs	**100.00**	**235.45**	**1,704,633**

COST PER SQUARE FOOT = $235.45

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Commercial

Lodge 30
Conference Center 32
Warehouse & Office Space 34
Airport Restroom 36
Restaurant 38
Hotel Renovation 40
Restaurant/Bar 42
Hangar Facility 44

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FILE 9

Trautman Associates worked with the Valley Community Association to provide a conceptual design for a public park now located on 2.5 acres of reclaimed brownfield land along the Buffalo River. Trautman Associates' architects and engineers designed and acted as Construction Administrator for the project.

In addition to the outdoor amphitheater, landscaped gardens, and public access to the river, the Association wanted to build a central pavilion building with a banquet room.

The pavilion (now called Tewksbury Lodge) was designed as a multi-functional space with a full-service kitchen and associated servery that can be used as a restaurant, banquet facility, or meeting/gathering space for community education, activism, and outreach.

Tewksbury Lodge was designed to reflect the site's industrial past, with a deliberate nod to the ambiance of the new riverfront park. Various building elements of the Lodge were proportioned to reduce the mass and height of the structure, thus "grounding" it to the park setting.

Areas for gathering at the perimeter of the Lodge were introduced into the architectural footprint to blend nature, architecture, and space. Exterior porches enhance the dining experience along the river, as well as provide flexible space for people to gather. Located at the southern end of the park, the Lodge provides a terminus that balances the overall park design and maintains its historic character and charm.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	1.41	6.13	44,156
1	General Requirements	13.64	59.39	427,618
3	Concrete	7.80	33.98	244,615
4	Masonry	11.7	50.95	366,832
5	Metals	4.95	21.57	155,272
6	Wood, Plastics, and Composites	16.00	69.71	501,905
7	Thermal and Moisture Protection	6.72	29.28	210,790
8	Openings	5.60	24.41	175,669
9	Finishes	8.36	36.41	262,185
10	Specialties	1.38	5.99	43,132
12	Furnishings	0.15	0.63	4,596
21	Fire Suppression	1.16	5.03	36,227
22	Plumbing	4.49	19.57	140,951
23	HVAC	6.08	26.48	190,633
26	Electrical	10.57	46.03	331,358
	Total Building Costs	**100.00**	**435.54**	**3,135,938**

COST PER SQUARE FOOT = $435.54

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FILE 10

The Jackson Avenue Center, referred to as "The JAC," is located just off the University of Mississippi campus on Jackson Avenue – one of Oxford's main arteries.

The second phase of a multi-phase renovation of a former big box retail space, this 45,000-square-foot renovation project created conference space, a testing center, and office space for the Division of Outreach. The renovation included new mechanical and electrical systems, total interior renovation of the existing space, exterior accessibility upgrades and multiple skylight systems, including solar control glazing on the main 110-foot-long skylight.

A "neighborhood" concept was used to create nine distinct suites for the administrative groups moving into the new facility, which share space with a new conference center and testing suite.

The addition of skylights and utilization of interior windows brought in natural light, creating not only a connection to the outdoors in the middle of the building, but also serving as a wayfinding tool for lost students seeking a guiding beacon.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	1.03	2.87	125,102
1	General Requirements	21.71	60.36	2,626,042
3	Concrete	2.22	6.16	267,997
4	Masonry	0.32	0.89	38,790
5	Metals	6.54	18.17	790,688
7	Thermal and Moisture Protection	3.72	10.34	449,487
8	Openings	7.75	21.57	937,970
9	Finishes	16.03	44.57	1,938,942
10	Specialties	2.85	7.95	345,333
12	Furnishings	0.83	2.31	100,927
21	Fire Suppression	1.18	3.29	143,213
22	Plumbing	3.64	10.12	440,755
23	HVAC	10.74	29.89	1,299,768
26	Electrical	18.30	50.90	2,214,430
27	Communications	0.70	1.95	84,957
28	Electronic Safety and Security	2.43	6.75	293,888
	Total Building Costs	**100.00**	**278.12**	**12,098,287**

COST PER SQUARE FOOT = $278.12

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FILE 11

The Lightspeed Technologies project was the interior renovation of an existing 12,100-square-foot space. At the heart of this project is a modernized and improved entry / "core" area of the building that has an upgraded reception area, large conference room with interior storefront system, employees' café area, waiting room, and some open collaboration space that is visible to incoming visitors.

After all existing ceilings, floor finishes, window treatments, and other finishes were removed, construction started basically from a blank slate.

The staging areas, testing lab, and inventory area are finished with standard 2×4 suspended ceilings with painted drywall walls and ground and sealed floors. The offices have Armstrong Fine Fissured 2nd Look II ceiling tile, painted drywall walls, and Mohawk Carpet tile.

In the core area of the building are solid surface countertops set on millwork with locally-sourced reclaimed wood. The flooring consists of Mohawk Carpet tile in the traffic areas and the lobby. In the café area, the flooring consists of Bentley LVT, walls are painted drywall, and ceilings are a combination of suspended drywall ceiling clouds and open painted structure above.

The core area features built-in benches and planters that are clad in locally-sourced reclaimed lumber and allow for an open collaboration space. The café area features a kitchen with tables, chairs, built-in banquet seating, dishwasher, refrigerator, microwave, upper and lower cabinets, and an under-mount sink.

One of the other main features upon entry is the large conference room that is partitioned off partly with the slim line PK-30 engineered aluminum glazing framework. This allows full views into the conference room through the glass wall.

Both the walls and the ceiling clouds in the core area are fitted with black accent strips of medium-density fiberboard (MDF), along with lineal lighting by PMC Lighting to offer the appearance of data flowing through a network cable.

Restroom spaces are finished with American Olean St. Germain 12×24 floor tile and the wet walls are finished with American Olean Color Appeal tile. Upgraded sink, water closet, and urinal fixtures are included in the restrooms as well.

The building was mostly fitted with all-new electrical, plumbing and HVAC fixtures. The building received a completely new fire alarm system that was purchased by the owner.

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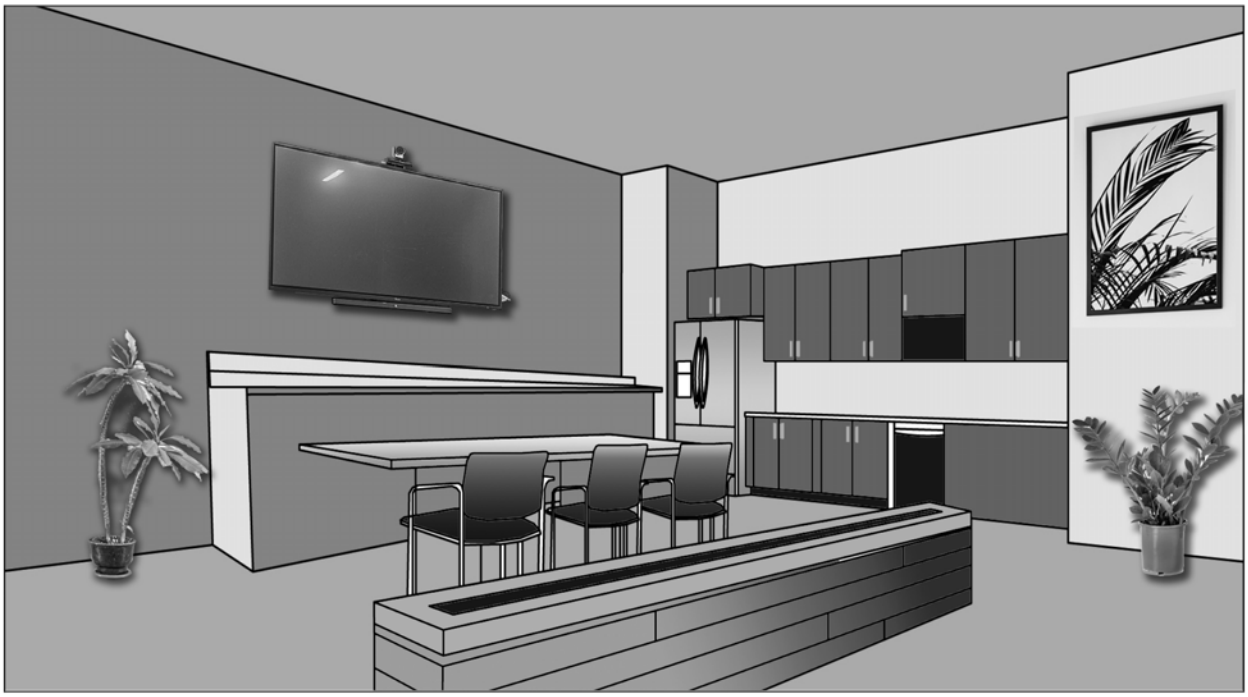

Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	0.86	0.64	7,897
1	General Requirements	16.78	12.73	153,939
3	Concrete	1.49	1.13	13,642
5	Metals	1.35	1.03	12,355
6	Wood, Plastics, and Composites	4.93	3.74	45,247
7	Thermal and Moisture Protection	0.64	0.48	5,867
8	Openings	12.29	9.32	112,790
9	Finishes	26.40	20.02	242,244
10	Specialties	1.36	1.04	12,515
22	Plumbing	3.68	2.78	33,727
23	HVAC	12.38	9.39	113,604
26	Electrical	15.45	11.70	141,720
28	Electronic Safety and Security	2.40	1.83	22,011
	Total Building Costs	**100.00**	**75.84**	**917,555**

COST PER SQUARE FOOT = $75.84

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FILE 12

The San Diego County Regional Airport Authority awarded JXR Constructors, Inc. the Terminal 2 West Restroom Remodel Project. The project involved two large men's and women's restrooms and an all-gender restroom. Work was broken out into two phases.

The initial challenge was making sure that no passengers would be affected through construction. The restrooms were in a high-visibility area and were overdue for a makeover. After working on a previous set of restrooms, Atkins Global's lead architect made more design adjustments to make these restrooms truly the best the airport had to offer.

Due to the high traffic location of the restrooms within the airport, the work was scheduled to be performed from 8pm to 5am to reduce impact to passengers and operations. Additional challenges included airport security and accessing secure areas to connect utilities.

Prior to commencing work, metal containment walls were fabricated and installed to separate the public from the work area. JXR Constructors, Inc. teamed up with McCain wall manufacturers to build the temporary aluminum walls. The airport personnel were so impressed with the walls that they started using them on subsequent projects.

Direct work in each phase involved complete interior demolition. Remodel began with rough-in of new HVAC duct and, concurrently, the installation of structural steel support for the sinks and countertops. After HVAC duct was installed, the ceiling was ready for framing and drywall. The next step was rough-in for new plumbing and electrical conduit. This was followed by new wall framing, drywall, and insulation. After that, drywall was installed on the ceilings and walls. The desired wall tile patterns were then installed.

Wall and floor tile activities took five weeks for each restroom. The large 2′×2′ black and white composite floor tiles went in faster. After the tile, the countertops, toilet partitions and accessories were installed; plumbing finishes, lighting fixtures, and new HVAC grilles followed.

Work on each phase was completed and accepted by the Airport Authority prior to beginning the next phase. The project was completed on schedule, within budget, and with zero accidents reported.

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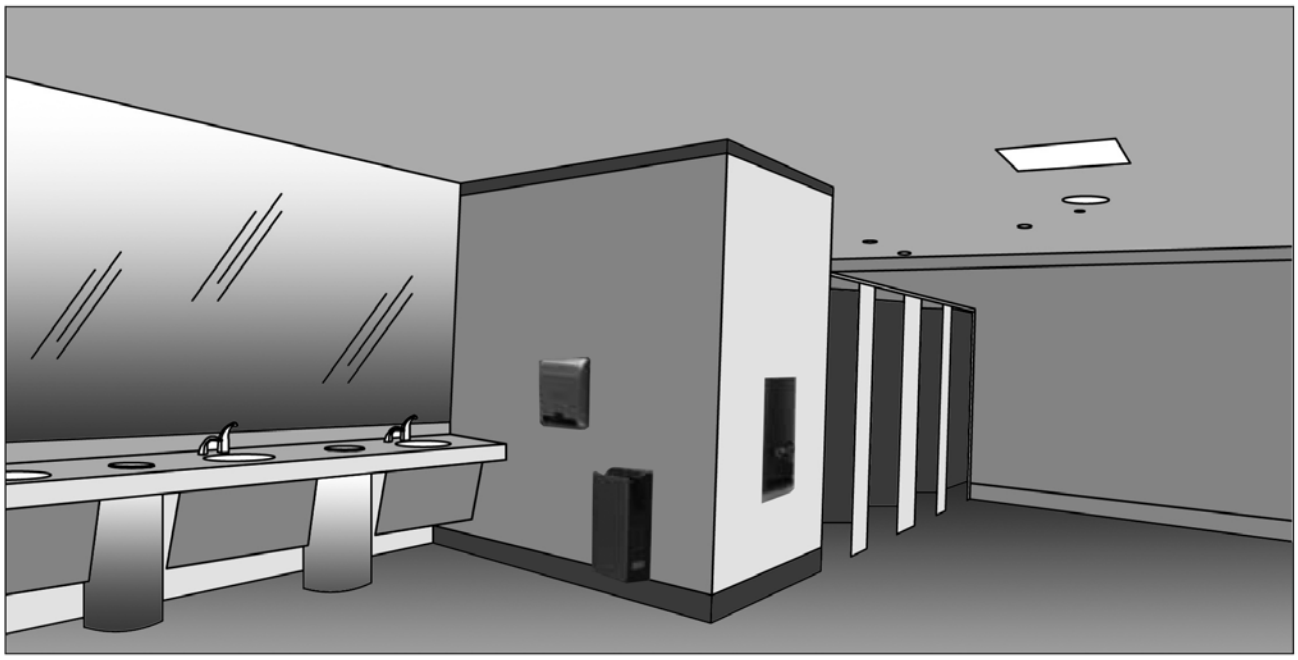

Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	5.12	33.49	90,785
1	General Requirements	20.29	132.79	359,881
3	Concrete	1.97	12.89	34,917
5	Metals	14.63	95.74	259,469
8	Openings	0.20	1.30	3,493
9	Finishes	24.90	163.01	441,776
10	Specialties	7.01	45.90	124,375
12	Furnishings	1.62	10.64	28,814
21	Fire Suppression	0.39	2.57	6,983
22	Plumbing	7.49	49.02	132,832
23	HVAC	5.76	37.71	102,169
26	Electrical	10.63	69.57	188,555
	Total Building Costs	**100.00**	**654.63**	**1,774,050**

COST PER SQUARE FOOT = $654.63

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FILE 13

Little Miami Brewing Company planned an expansion, with a focus on additional indoor taproom space. They also wanted to create a more robust outdoor experience that would capitalize on their unique view, being situated atop the banks of a scenic state waterway.

The construction type was structural steel, metal deck, cold formed metal framing and brick veneer. Due to existing soil conditions, micropiles were deployed to depths of 30 - 40 feet below grade, topped off with concrete grade beams and a slab on grade.

Property owner and general contractor, D.E.R. Development, mobilized and started construction in August 2019, with plans to add 1,160 square feet of taproom space, along with a 1,600-square-foot rooftop deck. The rooftop had a larger footprint than the enclosed addition, and would provide cover for tables and chairs from inclement weather and hot sunny days.

The added taproom area was simply one open room with sectional fully glazed openings, providing an open air feel and excellent circulation to a new brick-paver patio and natural gas fire pit overlooking the breathtaking Little Miami River below.

To attenuate sounds produced from large gatherings and live music, K-13 acoustical spray insulation was applied to the underside of the steel structure. To match the existing taproom, the interior walls were veneered with a thin brick version of the full depth brick veneer used on the exterior shell.

Two sets of steel stairs ascend up the rooftop deck. The roof assembly consists of a TPO membrane, precast concrete pavers, and adjustable pedestals, to offset the roof slope. Guarding the roof perimeter are decorative pipe and mesh railings — similar to those at sports ballparks. The rooftop features a fully-equipped bar placed underneath an aluminum framed canopy.

The custom beer draft system was expanded to serve all 16 beers that are available from the first floor taproom. For additional weather protection, three custom fabric sunshades float overhead, providing protection to patrons as they enjoy a "cold one".

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Code	Division Name	%	S F Cost	Projected
0	Procurement	2.31	7.27	20,064
1	General Requirements	7.38	23.26	64,223
3	Concrete	8.49	26.76	73,852
4	Masonry	4.10	12.94	35,715
5	Metals	25.52	80.45	222,064
6	Wood, Plastics	3.30	10.42	28,759
7	Thermal and Moisture	12.03	37.92	104,673
8	Openings	3.94	12.41	34,240
9	Finishes	7.39	23.29	64,273
10	Specialties	4.57	14.42	39,799
11	Equipment	6.15	19.38	53,504
21	Fire Suppression	1.14	3.59	9,918
22	Plumbing	3.22	10.15	28,005
23	HVAC	2.46	7.75	21,402
26	Electrical	5.36	16.90	46,634
27	Communications	1.84	5.81	16,052
28	Electronic Security	0.78	2.46	6,782
	Total Building Costs	**100.00**	**315.20**	**869,958**

COST PER SQUARE FOOT = $315.20

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FILE 14

In July of 2017, Gundlach Champion was hired by H.J. Larson and Associates to be the construction manager of their Holiday Inn hotel renovation. Construction on the 191-room hotel began in September of 2017. The project was to be completed over the course of 17 months, and done in five individual phases while the hotel was still occupied with staff and guests. The entire exterior was removed and replaced with steel studs, an air and moisture barrier and an Exterior Insulation Finish System (EIFS).

Every guest room, guest bathroom, hallway and stairwell was stripped down to the bearing walls and refinished. The guest bathrooms had the bathtubs, toilets, and sinks removed and replaced. All guest room furniture, appliances, TVs, artwork and beds were replaced.

The contractors had to work closely with the staff to coordinate shutdowns of water and electricity so the new systems wouldn't disrupt the hotel guests. The front entrance and drive-through canopy were completely removed, and a new canopy and front entrance was constructed. The front desk was temporarily relocated during construction so the hotel could stay operational while the lobby and staff offices were renovated.

This Holiday Inn is a full-service hotel that has a restaurant, bar, conference rooms, and meeting rooms. These rooms were also part of the renovation. The bar was moved into the restaurant, and the dining room was redesigned to fit the new bar in the existing space.

The dining room was renovated and brought up to current building code standards. The restaurant and bar are now used to cater summer weddings that are held in the beautiful South Courtyard. The renovation for these areas was constructed around the busy wedding season, and the results were well worth the effort.

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Code	Division Name	%	S F Cost	Projected
0	Procurement	0.39	0.44	52,699
1	General Requirements	4.37	4.93	584,387
3	Concrete	0.60	0.68	81,471
4	Masonry	1.39	1.57	186,260
5	Metals	8.50	9.58	1,138,124
6	Wood, Plastics	1.88	2.12	251,639
7	Thermal and Moisture	9.17	10.34	1,227,504
8	Openings	6.78	7.64	907,501
9	Finishes	15.70	17.70	2,101,481
10	Specialties	1.68	1.89	224,412
12	Furnishings	23.05	25.99	3,088,036
14	Conveying Systems	0.54	0.60	71,154
22	Plumbing	5.87	6.62	786,810
23	HVAC	8.75	9.86	1,171,321
25	Integrated Automation	0.70	0.78	93,049
26	Electrical	7.85	8.85	1,050,904
27	Communications	1.24	1.40	166,941
28	Electronic Security	1.56	1.76	209,360
	Total Building Costs	**100.00**	**112.74**	**13,393,052**

COST PER SQUARE FOOT = $112.74

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FILE 15

Hinterhof (which means "backyard") is a vegan German restaurant, bar, and beer garden in the Highland Park neighborhood of Los Angeles, California.

Aesthetically, the main challenge for the project was to capture the look, feel, and spirit of a historical German food establishment in a contemporary Southern Californian design culture and geographic climate.

To heighten the social impact, the garden is placed adjacent to the boulevard and the restaurant is situated to the rear. Patrons walk through the laughter of the beer garden upon entering Hinterhof. Planted with native species, the garden envelopes visitors in the ongoing conversations as they walk in. The interiors are designed to engage the lineage of the beer hall through material selection and detailing. Tables, display cases, and lighting were designed and fabricated to complete the overall impression of the space. The result is a fusion mixture of Los Angeles and Berlin that provides the eclectic background of a hip vegan German food establishment in modern Los Angeles.

This is not a traditional German restaurant. The floor is concrete, the decor is minimalist, and the soundtrack is subdued. There is no loud polka music playing in the background. If you're expecting to escape to Bavaria, think again. This is a modern, hip Berlin-style German restaurant transplanted to chic, sunny Los Angeles.

Aaron Neubert Architects, Inc. designed Hinterhof, which includes a 75-seat interior dining hall and a bar evoking traditional German social halls. The 30-seat exterior beer garden poetically connects to the visual and spatial history of Berlin backyard spaces and gatherings, and serves as the focal point and entrance.

The primary technical challenge, in addition to the City of Los Angeles' standard zoning restrictions affecting restaurant/bar development, was the building's high seismic requirements. These restraints required extensive geotechnical analysis and engineering solutions to ensure the building would survive the "big one" when it occurs.

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Code	Division Name	%	S F Cost	Projected
1	General Requirements	8.66	26.04	54,696
3	Concrete	9.32	28.03	58,880
5	Metals	0.94	2.83	5,936
6	Wood, Plastics	15.46	46.49	97,633
7	Thermal and Moisture	5.08	15.28	32,086
8	Openings	2.42	7.28	15,288
9	Finishes	7.82	23.51	49,379
11	Equipment	13.83	41.61	87,399
12	Furnishings	9.27	27.89	58,570
22	Plumbing	9.04	27.20	57,124
23	HVAC	8.61	25.90	54,397
26	Electrical	7.48	22.49	47,235
27	Communications	0.15	0.44	931
28	Electronic Security	0.53	1.61	3,381
44	Pollution Control	1.39	4.17	8,744
	Total Building Costs	**100.00**	**300.80**	**631,677**

COST PER SQUARE FOOT = $300.80

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FILE 16

After reviewing the owners' requirements, D.J. Maltese offered to complete the project closer to their budget as a Design-Build using a pre-engineered building in lieu of their current conventional design. It took six months to complete the construction documents, bid out the work, and start construction, which was to be completed in eleven months. This was delayed due to city and county construction issues that evolved after the engineering and permits were approved.

The first was the foam fire suppression system. The Building Official's solution was not acceptable to the owners, especially since the fire code is changing in a few years to not require foam systems. After months of deliberations to no avail, the city allowed the owners to install a wall between the offices and hangar to reduce the size of the hangar and to fire coat the structural steel columns. Once the code changes they can remove the wall.

The second construction issue was the approach to the property. Once the engineering was approved Maltese started the concrete approach — only to be stopped by the county. They decided that the approach should be wider and a deceleration lane needed to be added. Widening the approach required two power poles to be moved to allow for it to fit. With the moving of the poles, the wider approach and the deceleration lane added a cost of over $250,000.

The third issue was with the city. Keeping the project on schedule, Maltese installed hydro-seed for the lawn area in the fall of 2022. With the project complete in February, they requested a final Certificate of Occupancy, only to be told by the city that the hydro-seed was not acceptable and it needed to be replaced with sod. Even though the seed had rooted the City required it to be changed.

These delays added about five months to the schedule and with this Maltese was still about $800,000 under the owner's prior builder's cost.

One of the highlights of the project is the 110'x20' sectional power sliding hangar door with 8'x4' windows in each panel. The offices have polished concrete floors in the restrooms, lobbies, and hallways, with carpet tile in the offices. The hangar is heated with a direct-fired blow-thru space heater. The exterior walls of the building are 8'-high masonry using 4"-high color block; above that is vertical metal siding.

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Code	Division Name	%	S F Cost	Projected
0	Procurement	12.94	34.52	681,931
1	General Requirements	2.43	6.49	128,129
3	Concrete	15.58	41.57	821,164
4	Masonry	4.99	13.33	263,234
5	Metals	21.21	56.58	1,117,569
6	Wood & Plastics	4.99	13.33	263,234
7	Thermal & Moisture	7.50	20.00	394,993
8	Openings	6.53	17.41	343,955
9	Finishes	7.60	20.29	400,702
10	Specialties	0.47	1.25	24,772
14	Conveying Systems	0.27	0.72	14,237
21	Fire Suppression	2.54	6.79	134,122
22	Plumbing	1.98	5.29	104,414
23	HVAC	4.43	11.83	233,650
26	Electrical	6.53	17.41	343,969
	Total Building Costs	**100.00**	**266.81**	**5,270,073**

COST PER SQUARE FOOT = $266.81

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Educational

Student Union 48
Elementary School 50
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High School Addition 56
College Learning Center 58
High School Gym 60
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FILE 17

This design-build project included the removal of portions of the existing Student Union Facility and construction of 47,500 square feet of new space, as well as the conversion of the existing 24,000-square-foot bookstore into an event space.

The vision for the new University Student Center was to provide a fulfilling experience and the resources necessary to allow for student success. The environment was designed to ignite campus pride and improve student life. And students, no matter their demographic, will find their niche within the space.

The building is now a place where the student body can be engaged, empowered, and transformed. The Student Union is the heart of the university, and characterized by modern design and sustainable practices. The building met the goal of becoming a place where students can be collaborative, creative, and comfortable. It is the foundation of the new Stanislaus State.

The program for the project included lecture halls, theater space, offices, and food service vendor spaces.

The Technology Services included are: Campus Site Utility Coordination; Outside Plant Design Distribution (WAN); Information Technology Infrastructure (LAN); Wi-Fi Systems Design (WLAN); Security Design; and Audio-Visual Design.

Sustainable Building Features include: Dynamic daylight via glazing type, orientation, and shading; Improved envelope with limited thermal short circuits; Color-corrected LED lighting to maintain human circadian rhythms; Continuous indoor air quality monitoring for health awareness; Photovoltaic systems integrated with the building and/or landscape as an aesthetic feature; and Storm water collection and/or reuse to introduce/experiment with new concepts.

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Code	Division Name	%	S F Cost	Projected
0	Procurement	1.01	7.47	549,385
1	General Requirements	20.74	153.09	11,252,307
3	Concrete	4.89	36.06	2,650,516
5	Metals	9.62	71.00	5,218,815
6	Wood & Plastics	2.37	17.49	1,285,881
7	Thermal & Moisture	8.46	62.41	4,587,293
8	Openings	6.73	49.65	3,649,363
9	Finishes	16.20	119.55	8,786,953
10	Specialties	1.93	14.27	1,048,921
11	Equipment	0.13	0.96	70,714
12	Furnishings	0.97	7.15	525,757
14	Conveying Systems	0.41	3.06	224,771
21	Fire Suppression	1.06	7.86	577,466
22	Plumbing	2.19	16.19	1,190,080
23	HVAC	10.70	79.00	5,806,535
26	Electrical	10.90	80.42	5,910,781
27	Communications	0.71	5.24	385,071
28	Electronic Security	0.96	7.09	520,752
	Total Building Costs	**100.00**	**737.98**	**54,241,363**

COST PER SQUARE FOOT = $737.98

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FILE 18

John Dewey, at the turn of the 20th century, put forth a vision for modern education and reimagined a future in which schools "carefully balance the delivery of knowledge and learning through active inquiry". John S. McCain III Elementary, the only school to be named after the late senator, embraces and epitomizes these ideals.

The school is designed to support the C-STEM curriculum and also fosters social and emotional learning. A community-led, collaborative, co-creation process was utilized to establish a design direction, embed the school into its larger context, and set up the school district for future success.

JSM III is a learning community-based organization. There are three learning communities initially operated along traditional age-based grade bands. They can easily adapt to an ability-based cohort organized around pedagogies involving teacher-facilitated-student-directed learning. The learner-centric communities feature multi-dimensional infrastructures that support brain-based learning modalities, and offer a high degree of flexibility, variety, and collaborative opportunities at multiple scales.

High performance and biophilic design principles such as ample natural light, views, access to the outdoors, and balance of prospect and refuge, help cater to occupant wellness while creating a solid foundation for higher order learning.

The life, legacy, and ethics of Senator McCain are embedded through a branding strategy employing computational design, as traits for students to unpack through the course of their development and growth at the school.

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Code	Division Name	%	S F Cost	Projected
0	Procurement	3.26	14.41	1,369,378
1	General Requirements	25.54	112.84	10,720,165
3	Concrete	7.26	32.06	3,045,895
4	Masonry	0.19	0.84	80,126
5	Metals	8.67	38.33	3,640,901
6	Wood & Plastics	1.81	8.00	760,459
7	Thermal & Moisture	5.28	23.35	2,218,304
8	Openings	10.12	44.71	4,247,715
9	Finishes	12.01	53.08	5,042,610
10	Specialties	1.38	6.10	579,649
11	Equipment	2.79	12.34	1,172,482
14	Conveying Systems	0.31	1.37	130,361
21	Fire Suppression	0.68	3.02	287,209
22	Plumbing	3.20	14.15	1,343,838
23	HVAC	6.90	30.48	2,895,696
26	Electrical	9.19	40.60	3,857,306
28	Electronic Security	1.39	6.13	582,491
	Total Building Costs	**100.00**	**441.84**	**41,974,585**

COST PER SQUARE FOOT = $441.84

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FILE 19

The construction of the new student housing and dining commons on the east end of the Cal State San Bernardino campus was the largest single capital project in university history.

With 416 beds, the student housing development is the initial phase of a larger community that will be developed at CSUSB as enrollment grows. This residential community will eventually serve about 1,200 more students.

This phase was targeted to meet the needs of entering first-year students and is the first new housing community specifically designed to serve their needs since Serrano Village opened in 1972.

In addition to the new housing units for students, the community dedicated space for student advising and academic support, the Honors Program, two Faculty-in-Residence apartments, a community kitchen, multipurpose meeting rooms, and is the administrative home of the university's Department of Housing and Residential Education.

The new dining commons is a two level, multi-faceted campus dining facility. The capacity is nearly 700 customers; two dining experiences are available in this location.

The first offers an all-you-care-to-eat dining hall featuring a range of dining cuisines, including a grill, sandwiches/salads, display cooking, and a number of international choices. Seating is on multiple levels, including two enclosed outdoor locations, meeting rooms that can be reserved for groups and guests, and a faculty/staff collaboration dining room.

The second venue in the new dining commons is a cash-and-carry operation, as well as an enhanced convenience store. CSUSB's first planned late-night dining location, it offers sandwiches and grill-style cash options all day, providing an exciting place for the campus community to gather into the evening.

As with all campus housing, the project was funded through the rental rates of students living in the residence halls. No state general fund dollars were committed to this project.

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Code	Division Name	%	S F Cost	Projected
0	Procurement	1.53	8.67	930,111
1	General Requirements	17.84	100.99	10,831,694
3	Concrete	3.65	20.66	2,215,679
5	Metals	5.41	30.65	3,287,770
6	Wood & Plastics	1.13	6.42	688,641
7	Thermal & Moisture	3.19	18.07	1,938,096
8	Openings	6.23	35.26	3,781,758
9	Finishes	32.98	186.75	20,031,142
10	Specialties	1.17	6.64	711,914
11	Equipment	0.11	0.61	65,621
14	Conveying Systems	1.11	6.31	676,729
21	Fire Suppression	1.41	7.97	855,144
22	Plumbing	3.75	21.21	2,275,181
23	HVAC	9.97	56.45	6,054,496
26	Electrical	10.52	59.54	6,386,418
	Total Building Costs	**100.00**	**566.20**	**60,730,394**

COST PER SQUARE FOOT = $566.20

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FILE 20

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Code	Division Name	%	S F Cost	Projected
0	Procurement	1.56	13.62	658,470
1	General Requirements	17.13	149.70	7,239,375
3	Concrete	3.28	28.65	1,385,453
5	Metals	7.65	66.82	3,231,220
6	Wood & Plastics	1.96	17.14	828,847
7	Thermal & Moisture	4.42	38.66	1,869,759
8	Openings	6.40	55.94	2,705,320
9	Finishes	13.66	119.32	5,770,174
10	Specialties	0.49	4.28	207,154
11	Equipment	15.54	135.80	6,566,929
14	Conveying Systems	0.30	2.66	128,778
21	Fire Suppression	0.76	6.62	320,321
22	Plumbing	4.81	42.07	2,034,424
23	HVAC	9.43	82.42	3,985,865
26	Electrical	12.60	110.08	5,323,434
	Total Building Costs	**100.00**	**873.81**	**42,255,522**

COST PER SQUARE FOOT = $873.81

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FILE 21

The architects at Long & Associates had the incredible opportunity to design a remarkable 500-student station building addition for Spoto High School. Situated on their expansive 53-acre school site, Long & Associates' goal was to seamlessly integrate this addition into the existing campus fabric while enhancing its functionality and aesthetics.

Long's design encompassed several key aspects. First, they upgraded the Chiller Plant to accommodate the additional loads, ensuring optimal performance and comfort. Then they strategically rerouted major site utilities around the new building footprint, carefully considering efficiency and accessibility.

To maintain a cohesive architectural harmony, Long paid meticulous attention to detail in the tilt wall panel design. Each fenestration was thoughtfully placed to seamlessly match the existing school's aesthetic, creating a harmonious blend that adds to the overall campus fabric.

Inside the new addition, Long created a diverse range of educational facilities. These included 20 classrooms catering to specific disciplines such as Culinary Arts, Chemistry Labs, Biology Labs, Multipurpose Classrooms, Teacher Planning, Vertical Circulation, and dedicated support spaces. Their priority was to provide a safe environment for students, so each classroom features operable emergency escape windows and a discreet Shadow Zone design. In the unlikely event of an active security event, students can find a secure, concealed area within the classroom that remains out of sight from the door lite. This unique feature is visually indicated by a distinct flooring pattern, ensuring both students and faculty can easily identify and utilize the safe haven.

Furthermore, Long integrated the latest technology and teaching systems into each classroom, aligning them with the campus curriculum. Touch screen televisions, digital tools, alerting systems, and integrated cameras were seamlessly integrated to support modern teaching methods and enhance the learning experience.

Long & Associates takes great pride in their architectural design and commitment to excellence. The Spoto High School project allowed them to showcase their expertise in creating functional spaces that seamlessly blend with the existing campus while prioritizing safety and incorporating advanced technology. Long feels it was a privilege to contribute to the transformation of Spoto High School into an inspiring and innovative educational environment.

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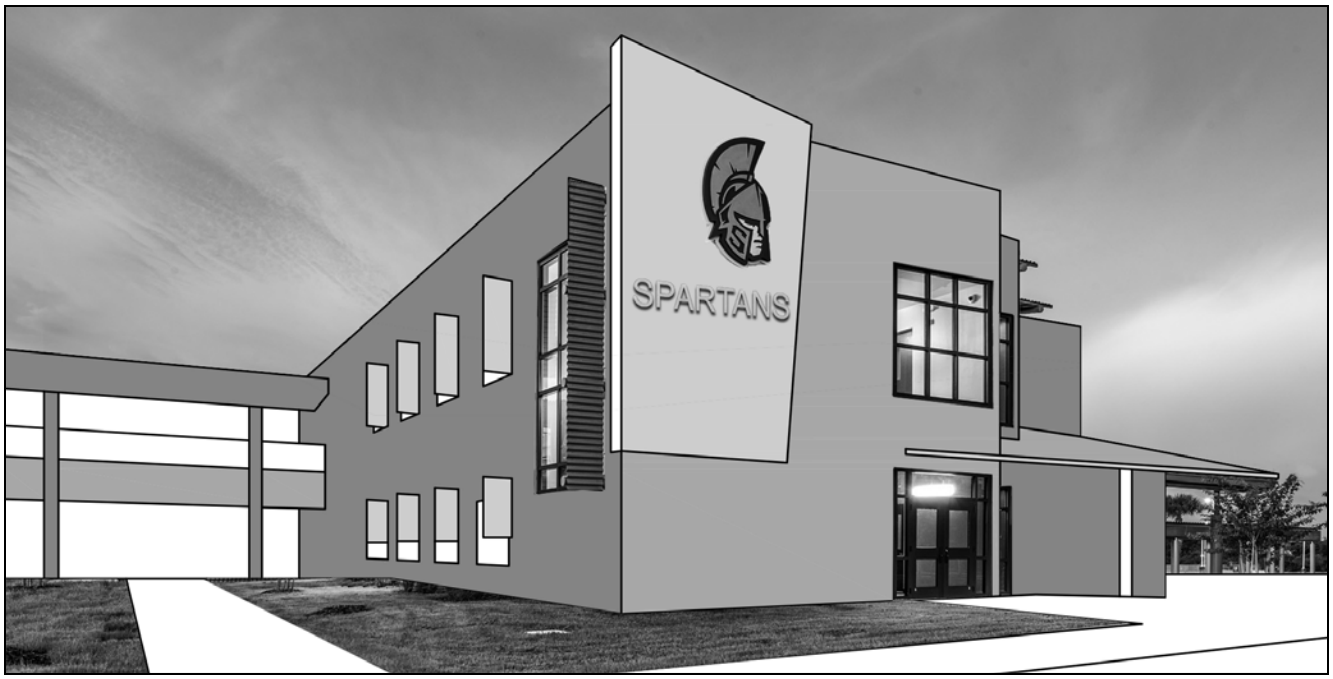

Code	Division Name	%	S F Cost	Projected
0	Procurement	3.94	15.05	466,877
1	General Requirements	17.25	66.00	2,046,766
3	Concrete	8.94	34.21	1,060,945
5	Metals	8.21	31.42	974,437
7	Thermal & Moisture	2.81	10.74	332,967
8	Openings	5.92	22.65	702,381
9	Finishes	10.85	41.51	1,287,493
10	Specialties	0.49	1.88	58,232
11	Equipment	0.16	0.60	18,644
12	Furnishings	1.25	4.78	148,329
21	Fire Suppression	0.80	3.05	94,726
22	Plumbing	4.81	18.41	570,977
23	HVAC	17.00	65.05	2,017,391
26	Electrical	17.57	67.20	2,084,115
	Total Building Costs	**100.00**	**382.56**	**11,864,280**

COST PER SQUARE FOOT = $382.56

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FILE 22

Campus officials, community members, and the construction and design team celebrated the groundbreaking of California State University, San Bernardino's new Center for Global Innovation (CGI) Building of the College of Extended Learning (CEL).

Sundt is the Construction Manager at Risk for the $55 million project. The firm constructed a 71,000-square-foot, three-story classroom and administrative office building. The new building provides a centralized location for international students, allows opportunities for them to integrate more with the general student population, and enriches student and academic life.

The event, held inside due to strong winds, was attended by campus administrators, including President Tomas D. Morales; Vice President for Administration and Finance, Douglas Freer; and San Bernardino Mayor R. Carey Davis. College of Extended Learning Dean Tatiana Karmanova talked about the tremendous positive impact the new facility will have on the college and the CSUSB campus.

CGI includes 24 classrooms, a 250-seat auditorium, reconfigurable multipurpose rooms, study lounges, retail food services, and spaces for hosting indoor and outdoor special programs. Sustainable building features include extensive use of natural lighting and ventilation, energy efficient LED lighting with smart controls, water efficient plumbing, and energy efficient windows.

"We are excited to build this new hub of student life at Cal State San Bernardino," said Sundt Project Executive Betty Lynn Senes. "Sundt Construction is all about continual learning, and the College of Extended Learning serves the local population — from high school to professionals seeking to advance to retirees — providing a rich educational experience for the diverse population of CSUSB students."

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Code	Division Name	%	S F Cost	Projected
0	Procurement	1.10	8.53	622,017
1	General Requirements	25.22	195.16	14,233,289
3	Concrete	6.15	47.62	3,472,742
5	Metals	13.43	103.96	7,581,950
6	Wood & Plastics	1.51	11.70	853,639
7	Thermal & Moisture	8.67	67.06	4,891,164
8	Openings	8.93	69.12	5,041,211
9	Finishes	13.74	106.36	7,756,919
10	Specialties	1.36	10.49	764,902
12	Furnishings	0.18	1.39	101,713
14	Conveying Systems	1.07	8.27	603,074
21	Fire Suppression	0.97	7.53	549,161
22	Plumbing	1.72	13.28	968,456
23	HVAC	5.36	41.49	3,025,716
26	Electrical	10.58	81.91	5,973,823
	Total Building Costs	**100.00**	**773.87**	**56,439,777**

COST PER SQUARE FOOT = $773.87

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FILE 23

The Millennium Gym features a three-court floor with bleachers arranged on three sides to capture an arena feel. The courts are arranged side-by-side, with a feature court at the center containing telescoping bleachers that can extend as needed to accommodate large crowds up to 2,500 — the full student population at Millennium High School.

A welcoming entry on the west side of the building invites Tigers' fans from three directions — parking to the north, west, and south — as well as students coming from the campus to the southeast. Glass allows the excitement and energy from within to be seen from the Welcome Plaza, connecting the two experiences on Game Day. A cantilevered overhang provides needed shade to those sitting outside, gathering before and after events. The building entry creates a Tunnel of Trophies, a unique experience where all visitors will travel through and see the Millennium Tigers' athletic accomplishments.

Clerestory glass above the court floor will allow natural light as well as views to the mountains beyond, contributing to a unique, one-of-a-kind experience in the Roar Room of the Millennium High School Arena. The glass will be protected by roof overhangs to prevent glare. Operable blackout shades will allow flexibility to control the interior environment, allowing for dramatic entries of student-athletes at the beginning of the game — much like the Phoenix Suns — or for school pep rallies and events.

Locker rooms are in the southeast corner of the building, with convenient access to the courts, the main campus, and the U-building to the south. A weight room is located on the south side of the building, with convenient access and views to the sand volleyball area. An outdoor training area is just east of the weight room, with access through overhead doors. Wrestling practice occurs in the northeast corner of the building, with storage for competition mats located just off the gym for ease of movement. The Training Room is located with direct access from the court floor on one side and direct access to the fire route on the exterior.

Process: BWS implemented an engaged design process, actively involving the broader Millennium community. By sharing options with leadership, staff, and faculty, the team developed a spirited facility of which all Millennium Tigers will be proud!

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Code	Division Name	%	S F Cost	Projected
0	Procurement	4.62	21.77	1,092,792
1	General Requirements	9.43	44.46	2,231,663
3	Concrete	9.20	43.39	2,177,731
4	Masonry	6.88	32.42	1,627,408
5	Metals	7.36	34.69	1,741,032
6	Wood & Plastics	1.55	7.30	366,533
7	Thermal & Moisture	4.71	22.22	1,115,307
8	Openings	4.43	20.86	1,047,238
9	Finishes	8.38	39.50	1,982,421
10	Specialties	1.60	7.53	378,053
11	Equipment	0.83	3.92	196,881
12	Furnishings	1.49	7.03	352,918
13	Special Construction	15.57	73.41	3,684,945
14	Conveying Systems	0.79	3.73	187,456
21	Fire Suppression	1.12	5.30	265,998
22	Plumbing	5.11	24.09	1,209,035
23	HVAC	9.07	42.77	2,146,837
26	Electrical	7.05	33.22	1,667,570
27	Communications	0.44	2.09	104,724
28	Electronic Security	0.37	1.75	87,968
	Total Building Costs	**100.00**	**471.46**	**23,664,512**

COST PER SQUARE FOOT = $471.46

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FILE 24

When it was completed, the CORE became a center for learning, engagement and collaboration. Located at the heart of Cal State East Bay's hilltop campus, the CORE's 21st-century academic library teaches students how to navigate the information age economy and become self-directed learners. The Student Center for Academic Achievement, located on the top floor, focuses on providing the skills needed for student inquiry, development, and research. The Hub for Entrepreneurship — prominently placed on the ground floor — provides a nexus for students and faculty to explore innovations.

The libraries inspire all to engage in the adventure of intellectual discovery and creation. The University Libraries moved into the CORE, and continue to build on their commitment to providing inclusive, expert, and timely support for the campus community's research, teaching, and service needs.

The University Libraries remain committed to preservation and access of the physical and digital scholarly record, collaboration, lifelong learning, service, diversity and social justice, and innovation in their new physical space. Their library faculty, staff, and students are working together to ensure that the University Libraries continue to innovate and advance in their work as the heart of the new CORE Building. The CORE Building offers students a technologically rich space designed to encourage student collaboration and foster student creativity. The CORE Building offers various academic learning spaces, including a new library, classroom space, various modular study spaces, community gathering spaces, and administrative office space.

The Project Team met the challenge of designing the new heart of the campus to accommodate a heavily sloped site in close proximity to a major earthquake fault. Their solution included buckling restrained braced frames to resist lateral forces on the building; considering the high level of seismic design and detailing by using ground anchors at the braced frame foundations to resist large seismic uplift forces; and including a long-span pedestrian bridge connecting the third floor of the building with a walkway connected to the rest of the campus at a higher elevation.

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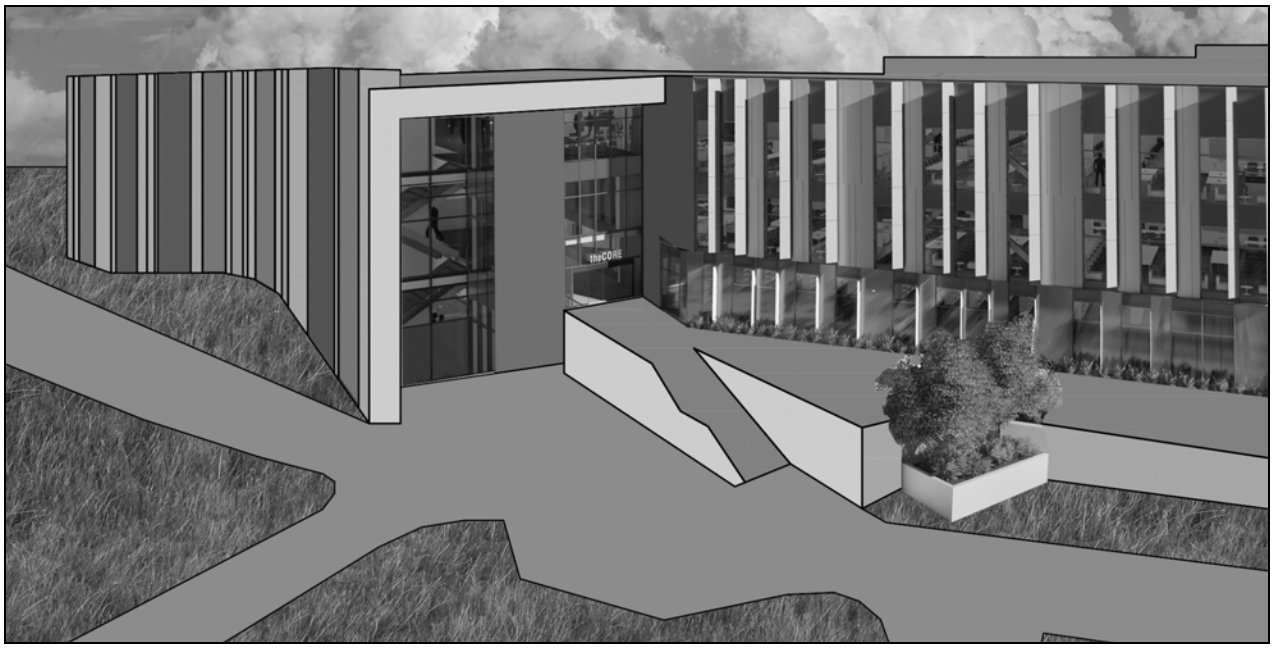

Code	Division Name	%	S F Cost	Projected
0	Procurement	8.45	81.07	8,176,689
1	General Requirements	6.22	59.67	6,018,951
3	Concrete	10.26	98.39	9,924,283
4	Masonry	6.55	62.80	6,334,649
5	Metals	8.88	85.17	8,590,990
6	Wood & Plastics	4.85	46.57	4,696,690
7	Thermal & Moisture	4.59	44.05	4,443,304
8	Openings	5.17	49.59	5,001,356
9	Finishes	10.00	95.94	9,676,930
10	Specialties	0.87	8.34	841,603
11	Equipment	1.59	15.30	1,542,940
12	Furnishings	3.45	33.11	3,339,264
14	Conveying Systems	2.46	23.60	2,380,018
21	Fire Suppression	1.48	14.18	1,430,169
22	Plumbing	2.35	22.56	2,275,679
23	HVAC	11.63	111.60	11,255,989
26	Electrical	9.00	86.31	8,705,618
27	Communications	1.36	13.05	1,316,136
28	Electronic Security	0.85	8.14	820,974
	Total Building Costs	**100.00**	**959.44**	**96,772,232**

COST PER SQUARE FOOT = $959.44

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Hotel

Hostel 66
Lodge 68
Treetop Villas 70
Hotel 72
Motel 74
Hotel 76
Hotel 78
Inn & Suites Hotel 80

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FILE 25

The owner's goal was to provide a budget-friendly, yet comfortable modern facility close to downtown and within walking distance of many local coffee shops, bars, and restaurants. A feasibility study revealed that the factors driving the building placement on site would be parking requirements and Austin's commercial design standards.

The hostel is designed to sleep up to 36 guests in six rooms. As a hostel, only four parking spaces were required.

The design consists of two buildings. A roughly 800-square-foot single-story building includes social spaces (a lounge, self-service kitchen, and dining area), the reception desk, luggage room, manager's office, and other operations spaces. A separate two-story building contains the sleeping rooms and bathrooms, which are accessed from exterior walkways and balconies. This motel-like layout allowed the owner to take advantage of Austin's relatively agreeable climate, and this open air arrangement is central to the hostel ethos, as it promotes the ability to see guests coming and going, and strike up casual conversations and impromptu get-togethers. An outdoor stairway with built-in stadium-type seating connects the two buildings, and doubles as outdoor lounge space.

The hostel features a mix of room types, including four-, six-, and eight-bed dormitory-style rooms, as well as two private rooms with ensuite bathrooms. Regulations required that one room on the ground floor be accessible and include a bathtub. The communal restrooms are not gender specific, but full-height doors and zero-sightline partitions provide privacy at the individual toilet and shower stalls.

The exterior cladding is fiber-cement plank and panel siding, and color blocking was used to highlight the entry doors. The fenestration is a mix of vinyl single-hung casement, awning windows in the guest wing, and aluminum storefront in the single-story building. Exterior wood framing and steel columns are exposed and painted. The roofing material consists of Energy Star certified white asphalt shingles.

The interior finishes are polished concrete floors at the ground-floor spaces and vinyl composition tile at the second-floor guest rooms. Ceramic tile was installed to wainscot height in the restrooms and full height in the showers. Pre-fabricated shower units were used where accessible showers and bathtubs were required.

A ductless variable refrigerant flow system is used for the common spaces, and the individual guest rooms have through-wall packaged terminal air conditioners. The water heaters are gas-fired tankless units, located outside near the shower facilities. The buildings are fully sprinklered.

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Code	Division Name	%	S F Cost	Projected
1	General Requirements	21.47	113.03	421,463
3	Concrete	7.05	37.09	138,312
5	Metals	2.48	13.04	48,625
6	Wood, Plastics, and Composites	14.24	74.94	279,432
7	Thermal and Moisture Protection	3.04	15.98	59,607
8	Openings	7.00	36.83	137,365
9	Finishes	6.44	33.87	126,317
10	Specialties	1.99	10.47	39,060
11	Equipment	0.50	2.64	9,803
12	Furnishings	0.19	0.98	3,637
21	Fire Suppression	4.46	23.48	87,562
22	Plumbing	8.73	45.92	171,260
23	HVAC	9.38	49.37	184,060
26	Electrical	11.29	59.40	221,517
28	Electronic Safety and Security	1.77	9.32	34,795
	Total Building Costs	**100.00**	**526.36**	**1,962,819**

COST PER SQUARE FOOT = $526.36

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FILE 26

Several years ago at this mission-based complex, a two-story training center was added to the existing office building, which greatly increased the capacity for training larger groups. This created a shortage of lodging space for the increased population and they soon proposed a guest lodge.

The new lodge has twenty-two rooms and four suites, and accommodates up to 104 guests. It is modest in décor, yet nicely finished, similar to many of the hotels in the community. It is located directly across the parking lot from the training center, to provide easy access and convenience, yet it is separate, since it has a different function on campus. It was also designed so it can easily accommodate another wing of guest rooms to the southwest should the need arise in the future.

The entry and lobby are modest since check-in occurs in the training center, but outfitted with some soft seating, a small hospitality refreshment counter, and casework. It is a straightforward plan with rooms double-loaded on each side of the center corridor. The end units at the north side are positioned so that they can be utilized as suites, with more privacy than the typical room. The stair tower adjacent to the suites' entries aligns with the training center entry for persons whose sense of pathway compels them to travel the most direct route from point A to B.

The exterior colors of gray, taupe and red are complementary to the training center. These same colors also help articulate the personality on campus. Split-face gray masonry was used at the base of the building and in a corner accent. The primary roofing is asphalt shingles, but in three locations (entry, shed roof at stair tower entry, and the east side of the end bay of the building), red metal roofing not only provides an accent, but is a direct tie-in to the red metal on the training center.

As one enters the site, the rear of the building is most visible until future campus development occurs, yet that façade was kept economical and simple. To add some variance and interest, the northeast corner is a break from the horizontal siding via the gray split-face corner, but the slope of the roof was made less shallow at the corner gesture, and utilized the red metal roofing to accentuate.

The success of this project was that it offered an affordable product and, although simply detailed, has an inviting feel and complements the campus fabric. This success was achieved in a close working relationship between owner, architect, and builder in a collaborative manner, ultimately with the design-build team bringing cost, schedule, and quality criteria to the owner to make a value-based decision that was right for them.

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Code	Division Name	%	S F Cost	Projected
1	General Requirements	21.94	46.12	683,599
3	Concrete	3.58	7.54	111,649
4	Masonry	3.55	7.46	110,654
5	Metals	0.90	1.89	28,165
6	Wood, Plastics, and Composites	9.43	19.82	293,805
7	Thermal and Moisture Protection	4.11	8.64	128,060
8	Openings	6.67	14.02	207,836
9	Finishes	10.97	23.05	341,731
10	Specialties	0.77	1.61	23,873
14	Conveying Systems	2.69	5.66	83,966
21	Fire Suppression	4.36	9.17	135,911
22	Plumbing	11.48	24.13	357,593
23	HVAC	6.75	14.18	210,314
26	Electrical	12.81	26.92	399,032
	Total Building Costs	**100.00**	**210.21**	**3,116,184**

COST PER SQUARE FOOT = $210.21

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FILE 27

Grand Vue Park recognized the popularity of their existing zip line and the potential of their property, and selected Omni Associates Architects to assist with a master plan that would further develop the concept of an adventure park.

In addition to the attractions designed for the park, there was a need for additional lodging. Hotel-style lodging and expansion of their current number of cabins were both discussed. The design team focused on the cabins, and with the adventure park theme, recommended building treehouses in order to take advantage of the many hilltop ridge lines within the park where a standard cabin couldn't be constructed.

But the Park didn't want a rustic, off-the-grid, independent-spirit type of living that a classic treehouse entails. The desired look and feel was that of a modern cabin with luxury amenities offering a stimulating experience of living in opulence among the treetops.

And so the design team developed a plan for one- and two-bedroom treehouses with a luxury feel. They made sure they met accessibility requirements, could be constructed at multiple locations on steep sloping hillsides and, most importantly, could be economically constructed to be profitable for the Park.

Support of a treehouse utilizing an actual tree is a viable option only if each treehouse is designed to fit a specific tree. With multiple treehouses of the same configuration, the treetop villa concept was established to provide the look and feel of a treehouse — but with independent support.

A simple straightforward wood post-and-beam construction for the villa was selected for economy, while maintaining the desired look and feel of a treehouse. The structural support elevating the villas needed to have minimal impact to the site, touching the ground only where necessary in order to allow the flora and fauna to continue to thrive.

The original concept for the structure was to be more "tree like," with heavy timber supports mimicking the trees on the hillside. But from an economic standpoint, steel supports were eventually utilized and created a design element of their own.

To minimize the impact of the structure on the view, the design team focused on the use of tension members wherever possible, allowing the decks to be suspended with steel cable from cantilevered beams. Vertical stainless cables for balusters also minimize the impact on the view. Every aspect of the interiors portrays luxury. Large glass walls in the living areas capitalize on breathtaking views and natural light fills every room.

This is only the beginning for the Park. They intend to add more treetop villas nestled atop trees where living high brings a natural high.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	2.56	14.90	45,225
1	General Requirements	15.73	91.54	277,744
5	Metals	15.93	92.75	281,365
6	Wood, Plastics, and Composites	11.79	68.61	208,152
7	Thermal and Moisture Protection	16.01	93.18	282,692
8	Openings	5.56	32.38	98,258
9	Finishes	10.04	58.45	177,363
10	Specialties	2.79	16.22	49,202
12	Furnishings	3.51	20.45	62,019
22	Plumbing	5.43	31.61	95,900
23	HVAC	5.78	33.64	102,087
26	Electrical	4.87	28.34	86,004
	Total Building Costs	**100.00**	**582.08**	**1,766,010**

COST PER SQUARE FOOT = $582.08

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FILE 28

The Hampton Inn of Carol Stream is located in the northwest suburb of Carol Stream, Illinois. The new hotel is situated on a well planned 3.3-acre development at 205 West North Avenue (Route 64).

This six-story, 71,000-square-foot hotel offers 116 standard, double suite, king and king suite guestrooms. Hotel amenities include seven Meeting/Seminar rooms, an indoor swimming pool and whirlpool spa, exercise facility and many amenities that cater to the business traveler or family on vacation.

The building, which is primarily a pre-cast insulated frame and floor deck structure, was erected and closed in four months from start to finish. The choice of pre-cast material was important to the role of bringing in the project on time and within budget.

This project combined the effort of BABCO Construction, Inc., along with the ownership and development team of Arrowhead Management and the architecture group of Karson & Associates, Inc.

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Code	Division Name	%	S F Cost	Projected
0	Bidding Requirements	10.22	26.56	1,884,738
3	Concrete	23.58	61.27	4,349,395
4	Masonry	0.31	0.81	57,991
5	Metals	1.57	4.09	289,960
6	Wood & Plastics	5.82	15.11	1,072,852
7	Thermal & Moisture Protection	3.38	8.77	623,413
8	Doors & Windows	5.45	14.16	1,006,161
9	Finishes	19.41	50.45	3,581,001
10	Specialties	0.58	1.52	107,285
13	Special Construction	0.90	2.33	165,277
14	Conveying Systems	2.23	5.81	411,742
15	Mechanical	15.47	40.19	2,853,203
16	Electrical	11.08	28.79	2,044,215
	Total Building Costs	**100.00**	**259.82**	**18,447,235**

COST PER SQUARE FOOT = $259.82

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FILE 29

Wanting to increase their presence, the owner of a casino/restaurant in Billings, Montana decided to build a motel adjacent to his property. CBG Architects developed a plan that allowed for the maximum adequate sized number of rooms while keeping with parking and landscaping requirements.

A basic pattern for the parking in an "L"-shaped pattern provided the most spaces laid out along with the "H" basic pattern for the rooms allowed to provide the most number of rooms. The number of parking spaces matched the number of motel rooms that would be provided. The motel also includes a drive-thru covered entry for guest convenience.

The motel layout includes sixteen guest rooms on the main floor along with a lobby area, registration, office, laundry, toilets, a meeting room and a manager's apartment. Two of the main floor guest rooms are handicap accessible, as are the toilets. The second floor has 23 rooms, three of which have corner whirlpool tubs and separate showers. Four of the other rooms include standard whirlpool tubs and separate showers.

The design includes a standard concrete foundation wall construction with slab on grade. The exterior and interior walls are one-hour wood construction. The floor/ceiling between the first and second floor is 22-inch-deep floor trusses of one-hour construction. The roof is cantilevered with pre-manufactured roof trusses with wood sheathing and asphalt shingles. A fire protection system is installed throughout the building.

The motel exterior is brick veneer wainscot and steel siding above the brick. Each guest room includes a six-by-four-foot vinyl sliding window. Each room is carpeted with ceramic tile in the bathrooms. Internet access is available with connections at the nightstand and desk. The overall rustic design intent of the motel includes 12-inch round half logs installed every 28 feet from foundation to the eave. The gable ends are also trimmed with 6-inch round half logs.

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Code	Division Name	%	S F Cost	Projected
1	General Requirements	3.80	5.61	123,717
3	Concrete	5.48	8.13	178,682
4	Masonry	2.18	3.22	70,940
5	Metals	1.01	1.49	32,985
6	Wood, Plastics, and Composites	19.59	29.04	638,419
7	Thermal and Moisture Protection	8.63	12.80	281,093
8	Openings	7.56	11.21	246,254
9	Finishes	17.88	26.49	582,540
10	Specialties	0.50	0.76	16,283
11	Equipment	1.88	2.80	61,347
22	Plumbing	12.84	19.03	418,576
23	HVAC	8.02	11.88	261,214
26	Electrical	8.68	12.86	282,992
28	Electronic Safety and Security	1.95	2.89	63,706
	Total Building Costs	**100.00**	**148.24**	**3,258,747**

COST PER SQUARE FOOT = $148.24

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FILE 30

This hotel is located on a fully-landscaped, two-acre site along the north end of a major expressway.

The ten-story hotel is a steel frame and glazed curtain wall structure with composite steel deck floors and pre-cast concrete, metal panel and EIFS columns running the height of the structure's two towers. Roofing is of EPDM rubber membrane. Glass curtain wall is used along the exterior façade to provide natural lighting. The site includes aboveground and underground parking for over 130 vehicles.

The hotel contains 245 suites with living areas and kitchenettes, as well as an indoor swimming pool, two-story lobby, exercise facilities, over 8,000 square feet of conference space, first floor restaurant space and the Marilyn Miglin Boutique.

The mechanical system includes two-pipe horizontal fan coil units with chilled water cooling and electric heating, as well as 600 tons of cooling supplied by rooftop chillers to supplement the fan coils in the hotel's public areas.

Construction included plumbing, electrical, fire protection and life safety systems. A hydraulic service elevator and an electric geared shuttle car, in addition to three passenger elevators, service the hotel. Interior finishes include tile flooring in the lobby and elevators and carpet in guest rooms and hallways where acoustics are a concern.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	9.67	20.95	4,013,724
3	Concrete	1.99	4.32	827,832
4	Masonry	0.54	1.17	225,771
5	Metals	7.76	16.82	3,223,522
6	Wood, Plastics, and Composites	1.60	3.47	664,773
7	Thermal and Moisture Protection	3.33	7.23	1,382,226
8	Openings	10.63	23.05	4,415,096
9	Finishes	15.24	33.02	6,326,634
10	Specialties	0.48	1.05	200,687
11	Equipment	0.33	0.72	137,971
12	Furnishings	1.48	3.20	614,603
14	Conveying Systems	3.03	6.56	1,259,305
21	Fire Suppression	2.51	5.43	1,041,061
22	Plumbing	12.99	28.15	5,393,443
23	HVAC	13.90	30.11	5,769,729
26	Electrical	14.50	31.42	6,020,585
	Total Building Costs	**100.00**	**216.68**	**41,516,960**

COST PER SQUARE FOOT = $216.68

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FILE 31

This extended-stay hotel is in close proximity to both commercial and residential developments. The owner's goals were to minimize square footage in order to minimize construction costs and maximize return on investments, as well as to minimize support space in order to maximize room for guests. The city included additional requirements for building finishes, landscaping, parking and chimneys.

The project scope called for design development through non-site-specific construction and purchasing documents, in order to create a design that could be adapted to any site. The company's prototype design called for a three-story building with either a "U," straight or "L" shape.

Prototypes also included a mid-rise variation of six to ten floors. The exterior of the structure is rendered in a palette of weathered stone, horizontal siding and simulated stucco with bronzed, anodized, multi-paned windows. The architect specified stacked stone, EIFS and vinyl siding. The exterior is heavily landscaped to comply with city requirements.

The interior design contains a combination of studio, one-bedroom and two-bedroom plans. Floor-to-ceiling windows in the main lobby provide extensive natural daylighting. The lobby also contains a central stone fireplace. The facility features a fitness center, on-site convenience store, outdoor pool, barbecue grills and an adjacent six mile running/biking trail.

Market research, industry tours, design charettes and in-progress mock-ups were used to ensure appropriate design and compliance with city requirements. An outside consultant was used to provide an independent cost estimate and cost controls.

A franchisee construction information package was provided and includes single line drawings, non-site-specific construction drawings and specifications for standard design elements. These non-site-specific specifications allow for site adaptability and flexibility in the number of units in the hotel, increasing the design's appeal to potential franchisees.

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Code	Division Name	%	S F Cost	Projected
1	General Requirements	1.18	2.92	218,265
3	Concrete	3.86	9.54	712,232
4	Masonry	2.66	6.56	490,137
5	Metals	1.87	4.62	344,629
6	Wood & Plastics	11.94	29.50	2,201,791
7	Thermal & Moisture Protection	6.45	15.95	1,188,967
8	Doors & Windows	5.29	13.09	976,446
9	Finishes	32.57	80.54	6,008,018
10	Specialties	0.93	2.31	172,314
11	Equipment	0.31	0.77	57,438
12	Furnishings	4.36	10.78	804,132
14	Conveying Systems	0.86	2.12	158,912
15	Mechanical	17.44	43.11	3,216,529
16	Electrical	10.28	25.40	1,895,455
	Total Building Costs	**100.00**	**247.22**	**18,445,264**

COST PER SQUARE FOOT = $247.22

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FILE 32

Located in a historic district of Chicago, this site required the facility's design to match that of the surrounding architecture.

The exterior of this high-rise hotel features metal windows and storefronts, an EPDM rubber roofing membrane and steel canopy and revolving doors.

The hotel offers 128 standard, king and double guest rooms, 60 two-room suites, 40 studios and two VIP suites. The interior features resilient vinyl composite tile flooring and wood doors. Elevators service all floors. The main lobby features high ceilings, formal living room style furniture and patterned carpeting. An open wood staircase connects the lobby to the second floor and an open wood railing encloses the overhang. High windows and wall sconces provide natural and artificial lighting.

The facility also houses six meeting rooms, an enclosed swimming pool, a whirlpool spa and an exercise facility. A 4,500-square-foot restaurant is located on the first floor and a second floor skywalk connects the hotel with the neighboring Ruth's Chris Steakhouse. The lobby showcases a collection of artifacts from famous Chicago buildings.

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Code	Division Name	%	S F Cost	Projected
0	Bidding Requirements	9.25	21.67	3,510,200
3	Concrete	25.06	58.74	9,515,093
4	Masonry	4.06	9.50	1,541,729
5	Metals	1.39	3.27	526,883
6	Wood & Plastics	5.54	12.98	2,101,633
7	Thermal & Moisture Protection	1.17	2.74	443,138
8	Doors & Windows	6.72	15.77	2,552,544
9	Finishes	11.81	27.67	4,481,416
10	Specialties	0.19	0.45	72,876
11	Equipment	0.06	0.15	23,386
12	Furnishings	0.06	0.14	22,231
13	Special Construction	0.56	1.31	211,857
14	Conveying Systems	3.24	7.60	1,230,608
15	Mechanical	21.92	51.36	8,323,002
16	Electrical	8.97	21.01	3,405,313
	Total Building Costs	**100.00**	**234.33**	**37,961,910**

COST PER SQUARE FOOT = $234.33

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Industrial

Tire Distribution Center 84
Maintenance / Storage Building 86
Innovation Center 88
Vehicle Maintenance Facility 90
Manufacturing Facility 92
Manufacturing Facility 94
Administrative Building 96
Fleet Maintenance Building 98

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FILE 33

This 303,000-square-foot, 39-foot-high warehouse and distribution center in Windsor, Connecticut represents a large-scale project within a tight schedule. Its basic construction type is new/tilt-up with reinforced grade beam foundations and slab on grade. The exterior and interior walls are tilt-wall panels.

To successfully meet the project's aggressive delivery schedule, the development team elected to use tilt-wall construction, a building method in which concrete panels are cast on site using the floor slab as a working platform. The panels are then tilted up with the help of a crane and held in place with temporary bracing until the roof is added. Erecting walls with tilt-up panels is faster than building walls using traditional construction techniques. The trades can begin work earlier, which allows greater overlapping of project phases.

While speed, durability, and quality are compelling reasons why owners are choosing tilt-up construction, value, reduced construction costs, and flexibility are added benefits that cannot be overlooked. Lower raw material costs combined with smaller work crews and a shortened construction schedule translated into lower project costs. The facility was constructed for about $29 per square foot, an extremely economical solution for companies looking to expand under today's economic conditions.

The technology used provided an efficient and flexible design for the building. The load-bearing walls of tilt-up construction eliminate the need for perimeter columns, creating more usable space. The floor is extremely level in this method of construction, an important attribute in many distribution and warehouse facilities. Moreover, with site approvals in place to grow the facility to 450,000 square feet, the modular design of the tilt panels allows for efficient expansion.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	4.29	2.26	687,379
1	General Requirements	3.53	1.86	565,899
3	Concrete	29.58	15.61	4,739,651
5	Metals	23.69	12.50	3,796,415
6	Wood, Plastics, and Composites	0.48	0.26	77,595
7	Thermal and Moisture Protection	12.52	6.61	2,006,529
8	Openings	1.17	0.62	187,207
9	Finishes	3.63	1.92	581,377
11	Equipment	0.56	0.30	89,089
21	Fire Suppression	9.90	5.22	1,586,709
22	Plumbing	0.56	0.30	89,952
23	HVAC	3.59	1.89	574,753
26	Electrical	6.51	3.43	1,042,434
	Total Building Costs	**100.00**	**52.75**	**16,024,993**

COST PER SQUARE FOOT = $52.75

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FILE 34

This 7,000-square-foot, 23-foot-high maintenance storage pre-engineered metal building was placed over a cast-in-place, pier-and-grade beam foundation and slab-on-grade. The exterior walls are steel, CMU and brick. The building was designed with four 16- by 14-foot sectional overhead doors, two each on opposing sides of the others, to allow for two drive-through lanes with additional space on both sides of the lanes for additional maneuverability and storage space. An additional 1,400 square feet of outside storage was created by carrying the eave out another twelve feet, as well as a rehabilitation of three existing storage buildings totaling 4,000 square feet.

The pre-engineered metal building was made clear span in order to maximize the utilization of space and ensure flexibility. The building is heated with gas-fired unit heaters to allow winter maintenance work. This also makes sure that the winter freeze does not damage any equipment or trucks that are equipped with water lines or pumps that may hold water in them and therefore possibly freeze, expand and rupture. Exterior storage on the longer side of the building expands their covered-storage capabilities by placing all of that space under an extended eave. Lighting consists of standard high-bay fixtures and fluorescent lighting. In order to keep operating costs down and go green, the Harley Associates implemented a daylighting system of ten 21-inch tubular skylights. The diffusers on the Solatube skylights do an incredible job of amplifying the natural lighting: even on a partly cloudy day there is no need for any of the electrical light fixtures to be turned on.

The site work around the new and existing buildings included extensive landscaping, a new asphalt parking lot and drive, and storm water management measures. The colors for the new building, as well as the brick masonry wainscot, were also chosen to match the surrounding CCWRD buildings.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	0.82	0.69	5,078
1	General Requirements	21.36	18.40	132,511
3	Concrete	14.73	12.68	91,383
4	Masonry	2.02	1.75	12,523
6	Wood, Plastics, and Composites	4.92	4.24	30,545
7	Thermal and Moisture Protection	1.91	1.65	11,845
8	Openings	6.55	5.65	40,616
9	Finishes	3.00	2.58	18,615
10	Specialties	1.42	1.23	8,800
13	Special Construction	30.28	26.09	187,845
23	HVAC	2.89	2.49	17,938
26	Electrical	10.09	8.69	62,615
	Total Building Costs	**100.00**	**86.15**	**620,314**

COST PER SQUARE FOOT = $86.15

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FILE 35

The Battery Innovation Center (BIC) combines a welcoming lobby and office environment at the building's entrance with a large-scale, versatile laboratory space. Both the office and laboratory components are designed to be adaptable environments, and incorporate adjustable modular walls and ceiling panels throughout for changes in equipment, power needs, and capacity, with ease and efficiency.

Flexibility in the office area is created by designing a small shell with a dimension depth that allows for a centrally located corridor through the space. The floor plate is designed to place work spaces freely throughout the open area, without impacting the exterior façade. The open work spaces are created the same throughout, allowing different users to equally use the space as needed.

The transition between the office and the laboratory space contains fixed support elements for both areas. Within the laboratory are the locker rooms, electrical room, power electronics lab, machine shop, and dry room. Flexibility in the laboratory space is of higher priority than the offices. The structure accounts for this, with minimal large columns dropping down through the spaces. This allows the equipment to be placed in the most appropriate location, without concern for structural column interference.

Efficiency became an important balancing act of the cost of square footage versus the cost of equipment required to run the facility at an appropriate level. The developer and the architect were able to reduce the initial square footage projected for the project once they had a full understanding of the equipment's needs and the facility's use.

The BIC is master planned to easily accommodate an expansion to the lab area without interrupting daily operations, and the building position supports ancillary buildings that can be added to the site in the future. The facility contains ample parking near its front entrance, with a solar parking canopy to charge electric cars. Truck and vehicular access were provided to the canopy-covered loading dock area at the rear of the facility. The site was also designed in a way to plan for stormwater detention, and utilities were extended from existing mains to service the building.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	0.42	2.67	81,005
1	General Requirements	4.64	29.63	891,055
3	Concrete	4.68	29.93	900,038
4	Masonry	0.15	0.94	28,288
5	Metals	2.71	17.34	521,361
7	Thermal and Moisture Protection	1.89	12.09	363,164
8	Openings	1.65	10.58	318,060
9	Finishes	4.86	31.04	933,865
11	Equipment	37.60	240.28	7,227,452
12	Furnishings	1.34	8.53	256,891
13	Special Construction	5.79	37.00	1,113,298
21	Fire Suppression	1.88	12.02	361,823
22	Plumbing	2.95	18.85	567,036
23	HVAC	20.11	128.48	3,864,345
26	Electrical	8.49	54.26	1,631,816
27	Communications	0.83	5.32	160,210
	Total Building Costs	**100.00**	**638.95**	**19,219,710**

COST PER SQUARE FOOT = $638.95

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FILE 36

J&S Construction Company, Inc. completed construction on the $12.2 million Vehicle Maintenance Facility for the 101st Combat Aviation Brigade for the U.S. Army Corps of Engineers (USACE) at Ft. Campbell, KY. This is the third facility J&S Construction has completed at the Ft. Campbell base.

The 35,290 square-foot facility consists of a tactical equipment maintenance facility, an organizational storage building, a hazardous waste storage building, a petroleum-oil and lubricant storage building, a tactical unmanned aerial vehicle storage building, an organization vehicle hardstand and a privately owned vehicle parking. These facility types are used for the purpose of maintaining and repairing vehicles, complete with equipment and parts storage and administrative offices.

This project was designed to meet LEED® Silver requirements by the U.S. Green Building Council (USGBC). Environmentally friendly features include: a transpired solar wall panel system, skylights, daylighting tubes, spray foam insulation, air barrier system, radon piping system, low-flow water fixtures, energy recovery units, in-floor radiant heating system, occupancy sensors, low volatile organic compounds in building materials and recycled materials.

"We are making great strides in the area of sustainability and building environmentally friendly projects," said Brad Leimer, project manager and LEED AP with J&S Construction. "Sustainable practices are good for the military, good for the Corps of Engineers and are a great value for the taxpayers."

One of the key goals of the USACE is to increase energy performance in its new and existing buildings. The energy simulations performed on this project show a 48 percent reduction in energy costs over the baseline building. These figures will translate into significant savings over the lifecycle of the facility.

Another goal of the USACE is to increase water efficiency with its buildings by reducing the burden on the water supply and wastewater system. J&S Construction used low-flow water fixtures throughout the facility which will save more than 44,000 gallons of water per year.

Previously, J&S Construction completed its first tactical maintenance facility. That $13 million project resulted in an Outstanding Rating by the USACE for J&S Construction's performance, as well as marking the first LEED Gold Certification at the Corps of Engineers' Ft. Campbell base and for the Louisville District.

"We most certainly enjoy working alongside the Corps of Engineers," said Jack Stites, president of J&S Construction. "The government sector is beginning to see how important sustainable construction is and what savings it can actually achieve. We are having more and more opportunities to assist our clients with energy audits, which can show that even the smallest of upgrades will pay back for years to come."

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Code	Division Name	%	S F Cost	Projected
3	Concrete	6.87	14.40	115,800
4	Masonry	0.84	1.76	14,196
5	Metals	10.33	21.68	174,272
7	Thermal and Moisture Protection	1.03	2.15	17,293
8	Openings	16.27	34.13	274,337
9	Finishes	5.01	10.52	84,453
13	Special Construction	24.15	50.66	407,380
21	Fire Suppression	3.66	7.68	61,765
23	HVAC	10.69	22.41	180,228
26	Electrical	20.06	42.08	338,323
28	Electronic Safety and Security	1.10	2.30	18,489
	Total Building Costs	**100.00**	**209.77**	**1,686,535**

COST PER SQUARE FOOT = $209.77

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FILE 37

Mountain Ridge Metals is a family-owned manufacturing business located in Millersburg, Pennsylvania. They specialize in custom extruded aluminum and serve a multitude of industries — from construction materials to the automotive industry. They had outgrown their existing plant and needed to add another extrusion line. They embarked on an expansion project, acquiring land nearby and placing the order for the new extrusion equipment from Germany. With a 16-month lead time, they turned to Mowery Construction to help them design a new facility which included space for the new equipment, a new offices, amenities for their employees, and room for future growth.

Mowery designed a 100,000-square-foot pre-engineered building with an attached 10,000-square-foot conventional steel frame office addition. The office space has views of both the plant operations and the exterior. The office not only serves as an expanded space for their staff, but a showpiece for visitors.

The facility was uniquely designed from a mechanical, electrical, and plumbing perspective. The aluminum extrusion equipment generates enough waste heat through the process to eliminate the need for much additional heat. In the summer, the mechanical system is designed to create a vortex within the space, which exhausts heat from the top and brings in cooler air at the bottom, driving down the ongoing operational costs significantly. Natural gas was unavailable at the new site, so a propane tank farm was created to serve the plant's needs.

The design of the space was carefully coordinated over three months, utilizing their existing plant for a measuring stick of needs. The office aesthetic was really intended to stand out as a focal point for the project, and was a unique feature in making the project look different from a typical manufacturing plant. Construction occurred during the time at which the after effects of the pandemic made certain materials hard to find; therefore, the team worked on creatively sourcing materials and utilizing regional subcontractors to ensure the impacts to the project from these outside constraints were minimized.

It was important for the business to have the right facility as they grow and expand, one which shows their commitment to their employees, their customers, and their vision for the future. This family run business has seen an improvement in employee engagement, morale, and overall productivity from the new facility.

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Code	Division Name	%	S F Cost	Projected
0	Procurement	0.87	0.84	94,792
1	General Requirements	4.53	4.38	491,468
3	Concrete	15.68	15.16	1,702,174
4	Masonry	0.66	0.64	72,042
5	Metals	23.36	22.59	2,536,695
6	Wood & Plastics	0.43	0.42	47,152
7	Thermal & Moisture	9.05	8.76	983,072
8	Openings	3.02	2.92	327,857
9	Finishes	10.46	10.12	1,136,029
10	Specialties	0.37	0.36	40,161
11	Equipment	0.80	0.77	86,704
12	Furnishings	0.16	0.16	17,631
14	Conveying Systems	1.05	1.01	113,624
21	Fire Suppression	2.68	2.59	290,579
22	Plumbing	3.73	3.60	404,634
23	HVAC	7.11	6.88	772,531
26	Electrical	16.04	15.52	1,742,008
	Total Building Costs	**100.00**	**96.72**	**10,859,151**

COST PER SQUARE FOOT = $96.72

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FILE 38

Schweiss Doors is the premier manufacturer of hydraulic and bifold liftstrap doors. Their doors are custom made to any size for any type of new or existing building, allowing architects and builders to do amazing things with their buildings. Schweiss also offers a cable-to-liftstrap conversion package.

Schweiss recently erected a new manufacturing facility which will also serve as a showcase for the company's new freestanding header frames. A postframe building erected in 1960 was torn down to make room for the 90'x94' metal building with an inside clearance of 20 feet. The building features three hydraulic doors that illustrate the company's freestanding header frames integrated into the hydraulic doors, allowing the doors to support themselves with no reliability on the building structure itself.

"The freestanding header frames are another unique innovation from Schweiss Doors," says Mike Schweiss, owner of Schweiss Doors. "The building and freestanding hydraulic door design will be a real exhibit that displays the new stand-alone hydraulic door. There's nothing on the market like it."

The doors measure 20'x14'; 28'x17'; and 37'7"x17'. The gray wall panels of the building are 3" expanded polyurethane sandwich panels with an R-value of 21. The doors are all sheeted with 2" ribbed tin, with a black exterior and a flat liner inside sheeting, allowing for two inches of insulation for an R-value of 14. Schweiss added that the expansion will serve as an additional door building shop, featuring six welders and custom-designed hoist systems throughout the facility to help maneuver the door frames.

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Code	Division Name	%	S F Cost	Projected
1	General Requirements	2.10	1.05	8,854
3	Concrete	7.93	3.95	33,416
5	Metals	4.46	2.22	18,794
7	Thermal & Moisture	45.20	22.52	190,533
8	Openings	14.04	7.00	59,196
9	Finishes	0.75	0.37	3,150
11	Equipment	6.53	3.25	27,512
22	Plumbing	3.94	1.96	16,590
23	HVAC	8.31	4.14	35,013
26	Electrical	5.25	2.62	22,146
28	Electronic Security	1.49	0.74	6,300
	Total Building Costs	**100.00**	**49.82**	**421,504**

COST PER SQUARE FOOT = $49.82

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FILE 39

The Consolidated Hardened Maintenance Facility (CHMF) at Valrico is a brand-new campus containing buildings and facilities for Hillsborough County Public Works, Public Utilities and Fleet Maintenance Departments.

The largest building on the site is the Core Building. This is a 41,000 sf hurricane hardened tilt-up concrete building that contains office space and warehouse storage space for the Public Works and Public Utilities Departments. This building is built to withstand up to 223 mph (ultimate) wind speeds and is intended to survive a Category 5 hurricane. It will therefore allow the County to continue its operations through a hurricane to provide critical infrastructure and utility support immediately following a major storm event. The building contains open office areas for County staff as well as break rooms, toilet and shower facilities, training rooms and a muster room for gathering employees to distribute critical information. Approximately 60% of the Core Building is warehouse space to store supplies and equipment used by County utility staff. The Core Building is connected to back-up emergency generator power.

The Fleet Building is an 11,212 sf pre-engineered metal building with three enclosed vehicle service bays as well as two covered exterior service bays. In addition, the building contains offices, toilet and shower facilities, a break room and a vehicle parts storage room. The bays contain vehicle lifts capable of lifting up to 100,000 pounds, a 2-ton overhead traveling hoist system, and distribution systems for compressed air and various lubricants.

The Fleet Building will enable the County Fleet Maintenance Department to service and maintain their fleet of service and emergency vehicles. The building is connected to back-up emergency generator power. The 30 acre site also contains a diesel and gasoline fueling station for County vehicles as well as various out-buildings to provide covered storage for materials and equipment.

The site's history as a former phosphate mine presented unique challenges for the structural design in order to support the buildings on extremely inconsistent soil. The result is a system of nearly 500 65' long concrete piles topped with a 20" thick concrete mat foundation.

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Code	Division Name	%	S F Cost	Projected
0	Procurement	1.49	6.19	260,856
1	General Requirements	27.45	113.68	4,790,484
3	Concrete	31.73	131.41	5,537,462
4	Masonry	0.34	1.39	58,462
5	Metals	6.33	26.23	1,105,300
6	Wood & Plastics	0.76	3.16	133,367
7	Thermal & Moisture	3.78	15.65	659,608
8	Openings	2.81	11.64	490,534
9	Finishes	6.79	28.14	1,185,686
10	Specialties	1.43	5.93	249,926
11	Equipment	0.19	0.77	32,520
12	Furnishings	0.17	0.71	29,796
13	Special Construction	0.37	1.52	63,943
21	Fire Suppression	1.04	4.31	181,781
22	Plumbing	1.85	7.67	323,369
23	HVAC	5.34	22.12	931,987
26	Electrical	7.62	31.55	1,329,333
28	Electronic Security	0.49	2.04	85,866
	Total Building Costs	**100.00**	**414.10**	**17,450,279**

COST PER SQUARE FOOT = $414.10

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FILE 40

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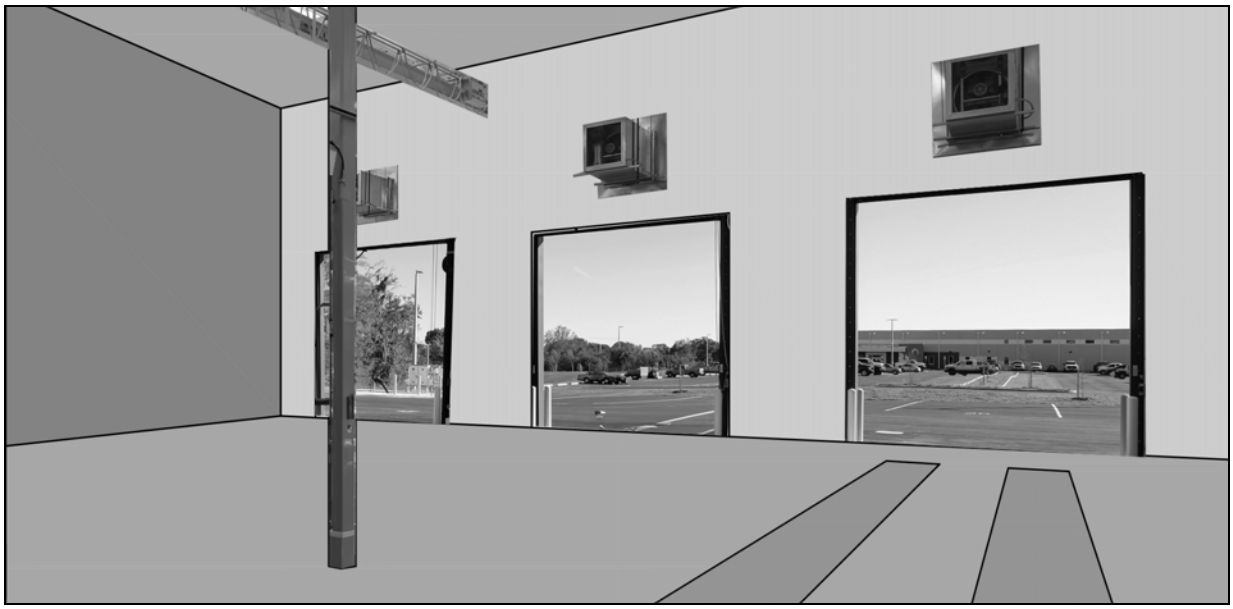

Code	Division Name	%	S F Cost	Projected
0	Procurement	2.64	21.14	257,823
1	General Requirements	48.54	388.22	4,734,781
3	Concrete	13.55	108.36	1,321,591
4	Masonry	0.54	4.28	52,185
5	Metals	2.50	19.99	243,769
6	Wood & Plastics	0.27	2.2	26,815
7	Thermal & Moisture	0.96	7.7	93,896
8	Openings	3.44	27.54	335,860
9	Finishes	2.45	19.6	239,047
10	Specialties	0.61	4.87	59,406
11	Equipment	0.10	0.77	9,390
13	Special Construction	4.86	38.84	473,669
21	Fire Suppression	1.30	10.36	126,399
22	Plumbing	4.07	32.57	397,254
23	HVAC	2.92	23.32	284,398
26	Electrical	10.60	84.79	1,034,106
28	Electronic Security	0.65	5.18	63,199
	Total Building Costs	**100.00**	**799.74**	**9,753,587**

COST PER SQUARE FOOT = $799.74

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Medical

Dental Office 102
Medical Center 104
Community Health Center 106
Dental Office 108
Assisted Living 110
Hospital 112
Surgery Center 114
Orthopedic Center 116

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FILE 41

DSHC Holdings, a partnership between Pediatric Dentists and Orthodontic Specialists, has been growing and expanding their practice for years throughout southeast Texas.

Their latest development is in the community of Lumberton, Texas. This 7,000-square-foot facility is the second for the pediatric dentists and the third for the orthodontists. The exterior design has a classic Tuscan appearance, which fits nicely with the neighboring traditional architecture and adjacent residential neighborhood.

The building includes many energy-saving features. The exterior skin of the building is designed for energy efficiency and includes 6" foam-insulated exterior walls, EIFS sheathing for added thermal value, and thermally insulated windows and doors which include 1-1/2" insulated low-E glazing.

The exterior of the building is the only traditional component of the building design. The interior echoes a modern design which reflects the cutting-edge dental practices taking place in the building. The building plan is split into two independent dental practices, pediatric and orthodontic, with staff support areas sandwiched in between.

The interior design, by one of the nation’s leading dental designers, Joyce Matlack of Matlack-Van Every Design, Santa Cruz, California, expresses a youthful character in the clinic.

The pediatric clinic contains video games, interactive recreations, and video screens mounted above all exam tables. The architecture is colorful, bright, and vibrant, reflecting the character of a youthful fun space.

The orthodontic clinic is a little more refined, reflecting a young adult and more tailored appearance. The orthodontic clinic also includes video games, a well-stocked "k-cup" coffee bar, and hot fresh cookies for clients.

Both clinics have large areas of exterior windows which allow the entrance of natural light, and provide a view into a nicely landscaped garden behind the building. The core of the building contains staff support areas such as break rooms, staff restrooms, an IT closet, and a laundry area. Doctor's private offices flank these spaces to form the core of the building.

The building’s interior design includes multi-colored furnishings reflecting the age of the patients served. The artwork, drawn by professional animators, all has a dental theme and bright colors to match other design components. Most walls are covered with vinyl wall covering, adding to the sumptuousness and warmth of the spaces.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	1.80	9.68	66,576
1	General Requirements	7.21	38.79	266,352
3	Concrete	12.18	65.51	449,763
4	Masonry	4.54	24.43	167,760
6	Wood, Plastics, and Composites	9.86	53.03	364,136
7	Thermal and Moisture Protection	5.58	30.03	206,163
8	Openings	7.08	38.09	261,526
9	Finishes	11.87	63.89	438,633
10	Specialties	1.76	9.45	64,917
11	Equipment	0.55	2.98	20,465
13	Special Construction	8.50	45.74	314,058
22	Plumbing	7.55	40.61	278,797
23	HVAC	6.04	32.48	223,089
26	Electrical	12.74	68.52	470,459
27	Communications	1.72	9.23	63,445
28	Electronic Safety and Security	1.03	5.52	37,892
	Total Building Costs	**100.00**	**538.02**	**3,694,034**

COST PER SQUARE FOOT = $538.02

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FILE 42

Critical Access Hospitals (CAH) do not have to be unimaginative and look inferior to larger health care providers. Actually, CAHs can be dynamic elements in their communities and emanate an image of high-quality healthcare services. This is what TEG Architects has accomplished with the North Caddo Medical Center (NCMC) in Northern Caddo Parish in Louisiana.

The components of this CAH are similar to most hospitals of this nature, with the exception of a 9,000-square-foot clinic attached to the facility. NCMC's clinic serves to educate future rural physicians through their LSU/NCMC Rural Residency Program, a unique asset to the community as well as the university.

The USDA funding process required that design development and construction documentation commence and close within a 10-week period. TEG accepted and fulfilled this challenge. Working closely with the hospital administration and staff, TEG was able to complete the project's design development within two weeks. An expedited eight-week construction document schedule followed, resulting in a project delivered on time for USDA review, as well as a project thoroughly detailed for the public bidding process.

TEG delivered this 72,000-square-foot rural replacement hospital with innovative design and efficiency. The main exterior materials of the facility are brick veneer, aluminum metal panel, and aluminum curtain wall. Design and materials were selected to highlight modern healthcare while embracing its rural location. Major departments with potential for growth — such as the emergency department, surgery, and the imaging room — are located on the perimeter of the building.

The laboratory, physical therapy room, and pharmacy are all located in the ancillary core due to the importance of their adjacency to other departments. Twenty-five patient rooms and an obstetrics department with two labor, delivery and recovery rooms are located on the second floor, along with administration and some multipurpose meeting rooms. All patient rooms are private, with accessible toilets and showers and a large exterior window. The new medical center to serve the Northern Caddo Parish in Louisiana will be a facility efficiently serving the local community for the next four decades.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	1.36	7.10	512,888
1	General Requirements	11.90	62.04	4,480,996
3	Concrete	5.83	30.39	2,194,926
4	Masonry	1.12	5.83	420,719
5	Metals	8.11	42.31	3,055,833
6	Wood, Plastics, and Composites	1.83	9.54	688,698
7	Thermal and Moisture Protection	9.16	47.76	3,449,750
8	Openings	5.23	27.26	1,969,073
9	Finishes	12.43	64.79	4,680,208
10	Specialties	0.45	2.37	170,509
14	Conveying Systems	1.11	5.76	416,746
21	Fire Suppression	1.04	5.40	390,651
22	Plumbing	14.01	73.03	5,275,667
23	HVAC	15.72	81.96	5,920,221
26	Electrical	10.73	55.93	4,039,820
	Total Building Costs	**100.00**	**521.49**	**37,666,707**

COST PER SQUARE FOOT = $521.49

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FILE 43

Keystone Healthcare Development Corporation (KHDC) developed a 46,000-square-foot multi-service medical facility located in Lewiston, Pennsylvania. The tenants include two major healthcare providers. The Primary Health Network offers primary care, dental care, and behavioral health services, along with a 340B Program pharmacy. Geisinger Health System operates their LIFE (Living Independently for the Elderly) Program for older adults to support independent living, an outpatient lab, and a Fresh Food Farmacy.

Total annual patient visits are projected at 52,000. Prior to the project completion, Lewistown had no medical services dedicated to serving low to moderate income citizens. The visits equate to approximately 21,000 individuals who now have a medical home.

The Fresh Food Farmacy offers those with diabetes and who suffer from food insecurity to be "prescribed" fresh produce and healthier food options from food banks. Nutritionists and social workers coach the patients to help manage diets and improve their general health.

The architectural team's challenge was to create a building design that would be a signature statement for the client and provide striking visibility from the highway, through the use of color and materials, while also providing an economical and functional solution. While the building is a simple rectangular box in its overall form, the architecture aesthetic relies on the metal skin to create scale, texture, and visual interest. The various metal panel profiles and depths allowed for the exterior skin to be a textured graphic expression, responding to the direction of the sunlight, creating movement through shade and shadow resulting in dynamic and ever-changing building façades. The four-color scheme creates visual interest and further defines the composition of the elements that create the architectural order of the building façades. The exposed fastener metal panels were selected for their aesthetic design appeal, durability, low maintenance, and economical value.

Working together, the principals delivered a project which succeeds on many levels, but most importantly provides a positive social impact through the delivery of healthcare services to a previously underserved community.

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Code	Division Name	%	S F Cost	Projected
0	Procurement	1.63	3.74	175,444
1	General Requirements	4.69	10.76	504,678
3	Concrete	5.09	11.68	547,824
4	Masonry	0.81	1.85	87,011
5	Metals	10.26	23.53	1,103,492
6	Wood, Plastics	0.96	2.20	103,289
7	Thermal and Moisture	8.87	20.36	954,469
8	Openings	6.98	16.02	751,526
9	Finishes	16.30	37.40	1,753,821
10	Specialties	0.67	1.54	72,564
12	Furnishings	2.29	5.25	245,802
14	Conveying Systems	1.88	4.32	202,656
21	Fire Suppression	1.85	4.24	198,733
22	Plumbing	7.23	16.59	777,936
23	HVAC	12.05	27.66	1,296,997
26	Electrical	18.45	42.34	1,985,427
	Total Building Costs	**100.00**	**229.47**	**10,761,667**

COST PER SQUARE FOOT = $229.47

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FILE 44

This practice is located in a new one-story 5,457-square-foot structure housing 12 operatories, including one surgical operatory, and related support spaces.

This one-story structure has a small adjacent park as a backdrop for its setting. The view is highlighted by a pond with a fountain feature. The building has a unifying center ridge with roof forms that slope to give the structure a strong identity and also a sense of recognition to the surrounding 1960s ranch-style suburban community. The primary exterior vocabulary of black cultured stone, black aluminum openings with sun shading devices, dark gray roof shingles and gray EIFS stucco are complementary to and in scale with the local community. The varied material selection offers strong contrasts in texture while maintaining a consistent palette across the façade.

The building entrance is highlighted by a prominent butterfly roof entryway reminiscent of mid-century modern design. Located along the roof ridge are several dormers that relate to chimney stacks found in the neighborhood. Each dormer window floods interior cross aisles with daylight that changes throughout the day. Natural daylighting is central to the building design as it makes for an enjoyable and calming environment for doctors and patients alike.

An open plan with warm custom woodwork, glass sliding doors, dormer skylights, unique lighting, aluminum and stainless steel features contribute to the modern palette of elements and materials. Each of the operatories receives natural light and a view of the outside. The large open windows that surround the building were purposefully used for their therapeutic benefits of reducing dental anxiety and improving color matching for cosmetic dental procedures.

Sterilization, lab and panoramic x-rays are centrally located for access to the operatories. Additionally, sterilization was centralized with pass-thru access serving two purposes: to improve patient confidence that state of the art sterilization was being used and staff access for work flow improvement. Small details collectively created a dental office that patients, staff and doctors enjoy. Overall, the plan provides a comprehensive facility that meets the needs of doctors and comforts of patients.

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Code	Division Name	%	S F Cost	Projected
1	General Requirements	10.52	39.84	217,414
3	Concrete	4.05	15.33	83,627
4	Masonry	4.12	15.60	85,098
5	Metals	0.37	1.40	7,652
6	Wood, Plastics	29.23	110.76	604,466
7	Thermal and Moisture	6.52	24.70	134,840
8	Openings	5.96	22.60	123,295
9	Finishes	8.12	30.77	167,955
10	Specialties	0.93	3.51	19,131
12	Furnishings	0.29	1.09	5,937
22	Plumbing	11.17	42.31	230,888
23	HVAC	5.33	20.19	110,166
26	Electrical	13.40	50.77	277,066
	Total Building Costs	**100.00**	**378.88**	**2,067,539**

COST PER SQUARE FOOT = $378.88

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FILE 45

The architects created a campus master plan that includes a new nursing home, assisted living, independent living, chapel, and additional employee parking. After initial planning and evaluating the immediate needs of the community, they moved ahead.

Assisted living facilities are a popular choice among seniors because they provide a level of independence with around-the-clock access to personal care services. For the community, keeping the senior population local is a major benefit to the elderly and their loved ones who can visit frequently — without the stress of traveling.

The 15,433-square-foot assisted living complex contains 14 apartments, five of which are two-bedroom units and nine are one-bedroom units. Each unit has a living area with a sloped ceiling and a bay window, and a kitchen with a dining area.

The units are sized to allow the residents to live comfortably, and have warm finishes that create an at-home environment. The complex also includes a serving room and a dining area for residents who choose to have meals prepared for them. The great room provides space for activities and hosts local events, while the family room is for more intimate gatherings. The facility is linked to the adjacent nursing home via a corridor, to assist with any care services.

The facility administrators also proceeded with a new chapel during the same construction period, to satisfy the request of community members who had helped raise funds for a new and larger chapel. The new 3,000-square-foot chapel addition is located to the north of the home activities room in the current courtyard. It accommodates seating for 50 people. The focal point of the chapel is the altar, which is surrounded by a beautiful stained-glass window designed by a local artist, with assistance from a local group. This addition also features a new boardroom that has been set up to also act as the chapel overflow via audio/video equipment, should the need arise to serve a large audience.

The chapel has become the focal point of the hospital and nursing home entrances, and offers serenity and faith for both those visiting and staying.

With the addition of a new nursing home, an assisted living and independent living complex, as well as a chapel, and additional employee parking, Mountrail County Health Center has made giant strides in its ability to serve the community.

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Code	Division Name	%	S F Cost	Projected
1	General Requirements	7.16	29.21	538,404
3	Concrete	16.48	67.23	1,239,343
4	Masonry	2.10	8.55	157,562
5	Metals	2.61	10.66	196,554
6	Wood & Plastics	9.09	37.10	683,858
7	Thermal & Moisture	5.14	20.99	386,759
8	Doors & Windows	4.93	20.13	370,972
9	Finishes	8.37	34.14	629,263
10	Specialties	0.71	2.91	53,654
12	Furnishings	2.99	12.20	225,014
13	Special Construction	0.36	1.47	26,924
15	Mechanical	26.60	108.53	2,000,509
16	Electrical	13.44	54.84	1,010,705
	Total Building Costs	**100.00**	**407.93**	**7,519,521**

COST PER SQUARE FOOT = $407.93

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FILE 46

Tippah County Hospital originally opened its doors in 1950 after being one of the first land sites approved in the nation under the Hill-Burton Act. The aging facility was due for an upgrade to help better serve the rural area of Tippah County. TCH solicited Dean Architecture to provide planning and design services for a new replacement facility that would improve the functional and operational efficiencies for each department within the hospital.

Dean Architecture worked closely with the hospital administration and staff to program and develop a design that met TCH's needs to serve the community and surrounding areas for decades to come.

The new Critical Access Hospital replacement facility is a one-story 63,620-square-foot structure which consists of 25 ADA-compliant med-surg patient rooms, a full service nine-room Emergency Department, Imaging Suite with mobile MRI, Outpatient Surgery Suite, Specialty/Outpatient Clinic, Inpatient Rehab Suite, Intensive Outpatient Program Suite, Respiratory Suite, Pharmacy, Lab, Cafeteria/Dietary Service, and requisite ancillary spaces.

The facility provides a six-exam Rural Health Clinic that is connected to the Emergency Department Waiting Room for patient convenience. The facility has a physical connection to the existing county-owned nursing home for the new food service department to serve the nursing home patients and staff. The new cafeteria is designed to serve the public and provides a separate exterior entrance for patrons.

The new hospital is Tippah County's premier health care facility. The staff is committed to providing a resource for quality services and compassionate care for the immediate and surrounding community.

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Code	Division Name	%	S F Cost	Projected
0	Procurement	1.08	6.11	388,661
1	General Requirements	14.62	82.53	5,250,596
3	Concrete	4.31	24.34	1,548,390
4	Masonry	2.49	14.07	894,898
5	Metals	6.73	38.01	2,417,965
6	Wood & Plastics	1.53	8.63	548,891
7	Thermal & Moisture	6.07	34.23	2,177,547
8	Openings	4.59	25.90	1,647,566
9	Finishes	12.76	72.00	4,580,758
10	Specialties	1.77	9.98	634,695
11	Equipment	0.02	0.09	5,595
12	Furnishings	0.20	1.11	70,373
21	Fire Suppression	1.01	5.69	361,818
22	Plumbing	11.51	64.94	4,131,650
23	HVAC	14.59	82.32	5,237,163
25	Integrated Automation	0.44	2.49	158,537
26	Electrical	14.14	79.79	5,076,341
27	Communications	2.15	12.11	770,301
	Total Building Costs	**100.00**	**564.32**	**35,901,744**

COST PER SQUARE FOOT = $564.32

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FILE 47

The Alliance Lake Hearn project, a collaborative effort between design team and client, creates an Ambulatory Surgery Center and Clinic that serves patients in a warm and welcoming environment while providing state-of-the-art care. Alliance Spine and Pain Centers brings healing from chronic pain, eases the burdens on families and caregivers, and helps solve the opioid epidemic.

Stegenga + PARTNERS worked diligently with the client to understand their vision for the facility. The resulting space is clean and modern while also being functional and efficient for innovative, integrated, evidence-based treatments. The client emphasized their desire for a welcoming atmosphere that would put patients at ease while also being mindful of their budget. The Architect implemented warm, natural materials such as wood and stone to create a sense of comfort and tranquility. The interior was designed with a neutral color palette that is both calming and inviting.

The Ambulatory Surgery Center is functional and efficient, with state-of-the-art equipment and an operating room that is sized just right for the surgical team. A separate pre-op and post-op area ensures that the care process is streamlined, and patients receive the best possible care. The racetrack layout provides a centralized teaming area with increased visibility, communication, and collaboration for care givers. The surgical suite is equipped with the latest technology, seamless flooring, modular storage, and provides flexibility for increased utilization. The ceiling system creates organized and predictable equipment configurations, reduces airborne pathogens, and helps in mitigating infection control.

The adjacent Clinic is designed with the patient in mind, featuring comfortable seating areas, private exam rooms, and positive distraction. The interior design included a mix of natural materials and modern finishes to create a welcoming and comfortable environment. The reception area was designed to be bright and welcoming, with ample natural light and views of the surrounding greenery.

Throughout the design process, Stegenga + PARTNERS approached stewardship of the client's resources with open collaboration to ensure that the design provides value while also creating a high-quality space. Cost-effective design choices such as durable materials that would require minimal maintenance and incorporating energy-efficient lighting and HVAC systems to reduce operating costs provide solutions within the client's budget.

The Alliance Lake Hearn ASC and Clinic is responsible both in design and functionality. Intentionally designed with a welcoming atmosphere and modern materials, the plan is based on increasing efficiency and satisfaction through a functional layout.

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Code	Division Name	%	S F Cost	Projected
0	Procurement	0.14	0.47	2,968
1	General Requirements	12.21	39.95	254,453
5	Metals	0.46	1.51	9,646
6	Wood & Plastics	10.40	34.04	216,814
8	Openings	3.46	11.33	72,172
9	Finishes	17.43	57.06	363,451
10	Specialties	1.35	4.42	28,182
12	Furnishings	0.39	1.27	8,078
21	Fire Suppression	2.03	6.66	42,409
22	Plumbing	9.85	32.24	205,388
23	HVAC	28.83	94.35	601,027
26	Electrical	12.77	41.80	266,273
28	Electronic Security	0.67	2.18	13,910
	Total Building Costs	**100.00**	**327.28**	**2,084,770**

COST PER SQUARE FOOT = $327.28

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FILE 48

Stegenga + PARTNERS worked methodically with the client to understand the needs of the medical professionals and the expectations of the patients. By collaborating closely with orthopedic specialists and physical therapists, they applied invaluable insights into the client's workflows, desired patient experiences, and technical requirements.

A key to the success is the streamlined patient experience and efficient workflow. The Optim Orthopedic Center is divided into zones that cater to different stages of patient care: the MRI, Physical Therapy (PT), and Clinic suites. The MRI Suite offers privacy and convenience to patients undergoing imaging procedures. The PT Suite boasts a dynamic space that caters to various physical therapy modalities while promoting a sense of community and support. The Clinic Suite embodies Optim's commitment to a patient-centric design. The exam modules are designed to facilitate smooth patient flow, ensure acoustical and visual privacy, and provide therapeutic efficiency during consultations and procedures.

The facility's interior layout optimizes patient flow, ensuring easy navigation for both patients and medical staff. Bright, open spaces, high ceilings, and strategically placed artwork create an inviting atmosphere that encourages optimism and a positive mindset for patients on their road to recovery. The digital imaging suite is equipped with the latest MRI and x-ray scan technology, giving the Care Team access to the highest quality medical imaging.

Waiting areas are strategically placed near windows, offering vistas of the outdoors to create a calming atmosphere. The facility is also designed to support a new second floor ambulatory surgery center (ASC).

The building mechanical system is a complete VRF system. Ground-level service gardens keep the mechanical units off the building roof. The future emergency generator will also be protected in the service garden for use during power outages or natural disasters.

By crafting a clinic that fosters positive healing, nurtures patient well-being, and harnesses advanced technologies, Optim Orthopedics is setting a new benchmark in orthopedic care.

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Code	Division Name	%	S F Cost	Projected
0	Procurement	1.97	7.18	159,980
1	General Requirements	9.73	35.52	791,402
3	Concrete	5.51	20.11	448,116
4	Masonry	3.24	11.84	263,731
5	Metals	11.28	41.17	917,372
6	Wood & Plastics	5.91	21.56	480,465
7	Thermal & Moisture	9.68	35.33	787,344
8	Openings	6.82	24.91	554,986
9	Finishes	13.34	48.68	1,084,827
10	Specialties	0.73	2.68	59,720
11	Equipment	1.06	3.88	86,501
12	Furnishings	0.27	0.98	21,786
13	Special Construction	3.20	11.69	260,459
21	Fire Suppression	1.40	5.09	113,469
22	Plumbing	2.45	8.95	199,361
23	HVAC	11.80	43.06	959,524
26	Electrical	11.25	41.07	915,185
27	Communications	0.35	1.26	28,139
	Total Building Costs	**100.00**	**364.96**	**8,132,367**

COST PER SQUARE FOOT = $364.96

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Office

Credit Union – Office Building 120
Lab Building 122
Office Building 124
Insurance Office 126
Corporate Office 128
Financial Office 130
County Central Office Complex 132
Corporate Offices 134

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FILE 49

Providing room for future expansion, the new Members Choice Credit Union headquarters is designed to elevate member and employee value, enable investment in new technologies, and promote sustainability. With these end goals in mind, the client began the process by commissioning Turner Duran Architects to design a structure that would serve as the operational brain center of the organization, as well as a "billboard" to establish the credit union's presence in its expansive market area.

The 84,000-square-foot headquarters facility advances the credit union's service-oriented structure and features a full-service call center, departmental and executive offices, conference rooms, and community rooms.

The four-story building is organized around a two-story lobby filled with natural daylight that unifies the structure and offers a dramatic area for communal interaction. Shared spaces, such as open break areas and two large community rooms, are offered for use to local city government, non-profit organizations, and other community-based associations. The upper floors of the building contain employee and executive offices, board rooms, and meeting rooms.

The design incorporates traditional materials in a creative fashion. The exterior of the building, sheathed in planes of a high-performance coated glass, dark iron-spot faced brick and sandstone veneer, is articulated and arranged to detail the various departments concealed behind the two sections on either side of the entrance. The structure's glass-enclosed entry unites the building and creates a dramatic two-story atrium with a 2nd floor glass balcony overlook. The lobby itself is gracefully defined by a rich material palette featuring carefully selected porcelain tile and stained walnut hardwood.

Offices and open workspace configurations balance this access with security measures to account for staff members who work with sensitive member information. Lounge areas situated on each floor offer employees a common space.

From the onset, using BIM reduced errors and omissions in the design phase, resulting in a further reduction of time, materials, and costs in the overall project.

The new headquarters creates a landmark and iconic corporate image for this growing credit union. The facility reinforces the progressive nature of the credit union; and allows them to continue operating with the people-helping-people philosophy on which they were founded, as they focus on new growth opportunities.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	1.00	3.34	281,820
1	General Requirements	8.22	27.37	2,306,168
3	Concrete	6.34	21.12	1,778,907
4	Masonry	3.10	10.34	871,315
5	Metals	14.05	46.81	3,944,120
6	Wood, Plastics, and Composites	0.17	0.55	46,706
7	Thermal and Moisture Protection	6.62	22.04	1,857,920
8	Openings	16.51	54.99	4,634,005
9	Finishes	9.96	33.18	2,796,187
10	Specialties	4.62	15.38	1,295,390
12	Furnishings	0.98	3.28	275,806
14	Conveying Systems	2.05	6.83	576,041
21	Fire Suppression	1.65	5.49	462,681
22	Plumbing	3.51	11.69	985,788
23	HVAC	7.91	26.35	2,220,091
26	Electrical	12.73	42.40	3,573,528
27	Communications	0.05	0.18	14,984
28	Electronic Safety and Security	0.52	1.74	145,470
	Total Building Costs	**100.00**	**333.06**	**28,066,927**

COST PER SQUARE FOOT = $333.06

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FILE 50

Located in the warehouse district of a historic urban downtown area of Pensacola, Florida, the new headquarters and robotics lab building for the Institute for Human & Machine Cognition embodies both familiar and exciting new imagery.

Researchers at IHMC pioneer technologies aimed at leveraging and extending human capabilities. Their human-centered approach often results in systems that can be regarded as cognitive, physical, or perceptual. The IHMC staff includes computer scientists, cognitive psychologists, neuroscientists, linguists, physicians, philosophers, engineers, and social scientists of various stripes.

Current active research areas include: artificial intelligence, cognitive science, knowledge modeling and sharing, human interactions with autonomy, humanoid robotics, exoskeletons, advanced interfaces and displays, cybersecurity, communication and collaboration, linguistics and natural language processing, computer-mediated learning systems, intelligent data understanding, software agents, expertise studies, work practice simulation, knowledge representation, and big data and machine learning, as well as other related areas. To blend these divergent technologies and express them in a building shape, the architects used traditional materials such as brick, concrete, glass, and steel to form an industrial frame, easily blending with Pensacola's existing waterfront warehouse structures.

Large interior spaces, some two stories high, are placed within the fenestration and the brick arcade. The roof-top terrace is shaded by a large canopy that connects to grade by a series of tall columns protecting the three-story glass lobby, exhibit gallery, and boardroom.

The result combines the new and the old, as if the brick warehouse was renovated and adapted to a new use. Research and invention is the product of IHMC, and a sense of discovery, wonder, and faith in science and creativity is displayed in its architecture.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	1.77	8.87	263,937
1	General Requirements	7.81	39.22	1,166,370
3	Concrete	7.72	38.76	1,152,746
4	Masonry	12.68	63.67	1,893,505
5	Metals	16.86	84.71	2,519,302
6	Wood, Plastics, and Composites	0.47	2.35	69,966
7	Thermal and Moisture Protection	3.73	18.75	557,448
8	Openings	13.15	66.06	1,964,935
9	Finishes	6.99	35.08	1,043,624
10	Specialties	0.47	2.37	70,407
12	Furnishings	1.51	7.59	225,705
14	Conveying Systems	1.28	6.40	190,513
21	Fire Suppression	1.12	5.61	167,060
22	Plumbing	2.72	13.64	405,796
23	HVAC	11.46	57.54	1,711,338
26	Electrical	8.90	44.70	1,329,617
27	Communications	1.38	6.92	205,820
	Total Building Costs	**100.00**	**502.29**	**14,938,095**

COST PER SQUARE FOOT = $502.29

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FILE 51

Architects IKM, Inc. recently completed the design of the interior renovation of approximately 12,400 square feet of office space on the 22nd Floor of 11 Stanwix in Downtown Pittsburgh. This future LEED® Gold CI Certified suite boasts 360° views of Mount Washington, Downtown Pittsburgh, and the Confluence of the Three Rivers.

Designing your own office has its advantages: there are six client-specific "base camps" for project teams, writeable surface walls, and respite lounges. "We recognized a change in how we do work for our clients, and our office needed to change with us," said IKM's Nicole Grayburn.

This new office design will enable expansion within the existing office footprint. The firm also has an option to take the remaining space on the floor in case of future expansion.

Programming of the space includes the reduction of individual work spaces, with greater emphasis on collaboration. Open office areas around the perimeter take advantage of unobstructed exterior views and daylighting strategies. Communal spaces are interspersed with workstation "neighborhoods" to create differing spaces for different office functions.

Base Camps — these six rooms are assigned to project teams or clients for use throughout the life of a project. Each base camp has a 60" monitor with computer, a writeable surface wall, storage, and the availability for employees to connect their computers into the space to work remotely.

Respite Lounges — This 15,200-square-foot space offers an unobstructed view of The Point State Park — to be shared by everyone — along with a private workroom for personal phone calls and a nursing lounge.

Jonathan Lusin, AIA, LEED AP, says, "We began this project more than a year ago, hosting 'round robin' discussions to determine what we value most as individuals and as a team. The question was not just of design, but how we want to work."

IKM designed with LEED Certification in mind, using LED light fixtures and Energy Star-rated appliances throughout the office. Occupancy sensors manage the light fixtures and conserve energy. Ninety-five windows surround the entire exterior; each window has shades to control the amount of natural light at various times of the day.

John Schrott, President, AIA, ACHA, EDAC, anticipates the positive influence this change will bring: "As intense advocates for the re-imagined use of space, this new open environment not only offers a huge boost in morale among our teams, but encourages a culture that supports a collaborative approach to design that will foster and promote better solutions for our clients. It is so refreshing to see the city we love and how it has transformed, as we ourselves experience a similar transformation."

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	12.49	14.70	182,269
1	General Requirements	1.95	2.30	28,520
5	Metals	2.09	2.47	30,533
6	Wood, Plastics, and Composites	12.00	14.11	174,999
8	Openings	8.31	9.79	121,243
9	Finishes	8.88	10.46	129,585
12	Furnishings	9.50	11.18	138,644
21	Fire Suppression	2.26	2.65	32,905
22	Plumbing	3.35	3.95	48,935
23	HVAC	19.86	23.37	289,669
26	Electrical	17.84	20.99	260,218
28	Electronic Safety and Security	1.47	1.74	21,408
	Total Building Costs	**100.00**	**117.66**	**1,458,926**

COST PER SQUARE FOOT = $117.66

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FILE 52

Norwood Richardson State Farm of Houston took up residence in their new headquarters in a LEED® Platinum certified two-story building.

A free-flowing design utilizing glass privacy walls gives an open and spacious feel throughout the office. The architect intended the design to give acoustical privacy while allowing natural light to flow into the offices, making the most of the space. The employees of Norwood Richardson State Farm enjoy vast amounts of daylight inside their offices, creating a happier working environment.

Close coordination among the tenant, architect, and building owner led to a cost-effective and timely execution of the 2,200-square-foot office space. The owner of Richardson State Farm selected the office's materials and finishes to provide a feeling of luxury combined with a 21st century modern appeal. Through coordination of all parties, the office took approximately 60 days to complete after final design approval.

The LEED® Platinum certified building includes high-efficiency mechanical and electrical systems, a vegetative roof that gives added insulation value and, with the lower temperature, reduces the cooling load, and reclaimed water used to flush toilets and urinals. All of these features combine to lower the operating expenses for the new tenant.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	23.35	38.18	84,005
1	General Requirements	2.93	4.78	10,548
6	Wood, Plastics, and Composites	7.46	12.20	26,834
8	Openings	10.13	16.56	36,435
9	Finishes	25.92	42.39	93,234
21	Fire Suppression	1.20	1.95	4,320
22	Plumbing	2.32	3.81	8,362
23	HVAC	12.85	21.01	46,219
26	Electrical	13.84	22.63	49,793
	Total Building Costs	**100.00**	**163.53**	**359,746**

COST PER SQUARE FOOT = $163.53

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FILE 53

The Pinnacle Corporate Centre campus is a four-building collection of Class-A corporate headquarters providing headquarters for a range of highly professional service firms and financial institutions.

The recent Pinnacle III Office Tenant Finish, designed by Hoefer Wysocki Architects, occupies 18,400 square feet on the top floor, connecting to the building's sole balcony on the east façade. The main entry has an abundance of glass partitions allowing light to penetrate the entire space through the entry, the main lobby, and the boardroom, the space's primary conference room.

The space is arranged around the central lobby with open office areas on either side. The open office arrangement, with glass-lined and open executive offices lining each bay, allows light to penetrate easily throughout the space, offering nearly every seat a clear view to the outdoors and ample light.

The essential shape of the main lobby is an elegant ellipse which echoes the ellipse of the first floor lobby. Its shape is outlined in the recessed ceiling details and echoed on the floor through a combination of curved walls, cut terrazzo, and carpet. A glass cloud element above the main reception desk echoes the shape again.

The palette of interior materials is warm and modern, utilizing generous amounts of wood, terrazzo, glass, stone, and steel baseboard. The central vertical elements of the main lobby are sculpted Armourcoat finishes, mimicking natural stone and giving form to the ellipse from floor to ceiling and offering the highest level of sophistication.

Spread throughout the building is a variety of spaces for teaming and conferencing. Three open resource/meeting areas, three glass-enclosed conference rooms and one large, flexible, and divisible space for a variety of functions, offer a range of spaces for collaboration. The terrace and the veranda are flexible spaces on the east end of the plan that serve as all-staff meeting space, presentation space, work areas, and the employee kitchen/break area. The two spaces can be divided by a fabric partition that recedes into the wall.

Each workstation is connected to the office network, joined by the central IT office and server room. While the boardroom, terrace, and veranda spaces are equipped with built-in and stand-alone projection and sound systems, an office-wide audio system is controlled from the IT office.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	5.98	5.17	95,095
5	Metals	0.10	0.09	1,605
6	Wood, Plastics, and Composites	5.07	4.40	80,702
8	Openings	6.37	5.50	101,361
9	Finishes	38.60	33.36	614,114
12	Furnishings	0.96	0.82	15,323
21	Fire Suppression	1.22	1.05	19,371
22	Plumbing	1.62	1.40	25,752
23	HVAC	14.12	12.20	224,667
26	Electrical	11.77	10.17	187,296
27	Communications	11.76	10.16	187,074
28	Electronic Safety and Security	2.43	2.11	38,732
	Total Building Costs	**100.00**	**86.42**	**1,591,093**

COST PER SQUARE FOOT = $86.42

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FILE 54

Jacob White Construction Company and Webb Architects worked together to deliver an inviting office for FCT Capital Partners, a firm that specializes in business consulting and counseling, balance sheet management including working capital, restructuring of liabilities, third party leasing services, and more.

Situated in a LEED® Platinum certified two-story building, the FCT Capital Partner's office enjoys views of the wooded surroundings with a shaded wrap-around balcony.

The 4,100-square-foot space is decorated with earth tones, floor finishes, and serene lighting, making it an elegant corporate office. A dramatic entrance of double-glazed doors gives a feeling of openness with matching walls and flooring. An open reception and work area lends a feeling of comfortable professionalism. Offices offer clients privacy with vast amounts of daylight. Ceiling heights are a pleasant nine feet.

The LEED® Platinum certified building also delivers the benefit of lower operating costs through high-efficiency mechanical and electrical systems, a vegetative roof that gives added insulation value and, with the lower temperature, reduces the cooling load, and reclaimed water used to flush toilets and urinals.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	21.85	26.35	108,020
1	General Requirements	1.67	2.02	8,252
6	Wood, Plastics, and Composites	4.07	4.90	20,105
8	Openings	8.77	10.58	43,383
9	Finishes	25.68	30.98	126,973
10	Specialties	0.96	1.16	4,762
21	Fire Suppression	2.14	2.57	10,580
22	Plumbing	3.85	4.63	19,046
23	HVAC	15.19	18.33	75,124
26	Electrical	14.66	17.68	72,493
28	Electronic Safety and Security	1.16	1.40	5,715
	Total Building Costs	**100.00**	**120.61**	**494,453**

COST PER SQUARE FOOT = $120.61

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FILE 55

The design of this 79,000-square-foot building was meant to reflect the type of activities that take place in the space. Departments — including building inspections, engineering, transportation and planning/zoning — are housed in the building, so the primary design was meant to have an industrial look, using raw, unfinished materials and a utilitarian form.

The project has open and flexible space to accommodate the owner's future growth and changes with technology. The building contains office space for multiple departments with joint use workspace, meeting and conference rooms, a large training room, and a public lobby with a two-story atrium that takes advantage of natural daylighting.

The complex has achieved points in all of the six possible LEED® credits categories, including all possible points for the "Innovation & Design Process" category, demonstrating the owner's efforts to stay ahead of the curve in design and technology. The building will use an estimated 32% less energy than the baseline building performance rating, and an estimated 38% less water than the baseline fixture performance requirements. In addition, 43% of the total building cost comes from materials containing recycled content, and 34% of the total building cost comes from materials containing regional materials. An incredible 96% of all construction waste was recycled, in large part by removing and recycling the entire asphalt parking lot of a "big box" store that sat on the original site.

The building also achieved Energy Star® certification when measuring the performance after one year of operation. The building proved to operate at a higher efficiency rate than expected from energy models.

Additional innovative features include the largest green roof system in the State of Florida and pervious concrete paving throughout the site. The building includes a water quality testing lab for on-site water testing and research of such innovative storm-water systems.

Many other "green" features incorporated into the design, including high-performance glazing, the use of additional building insulation, highly reflective Energy Star roofing materials, low energy light fixtures and low-VOC finishes.

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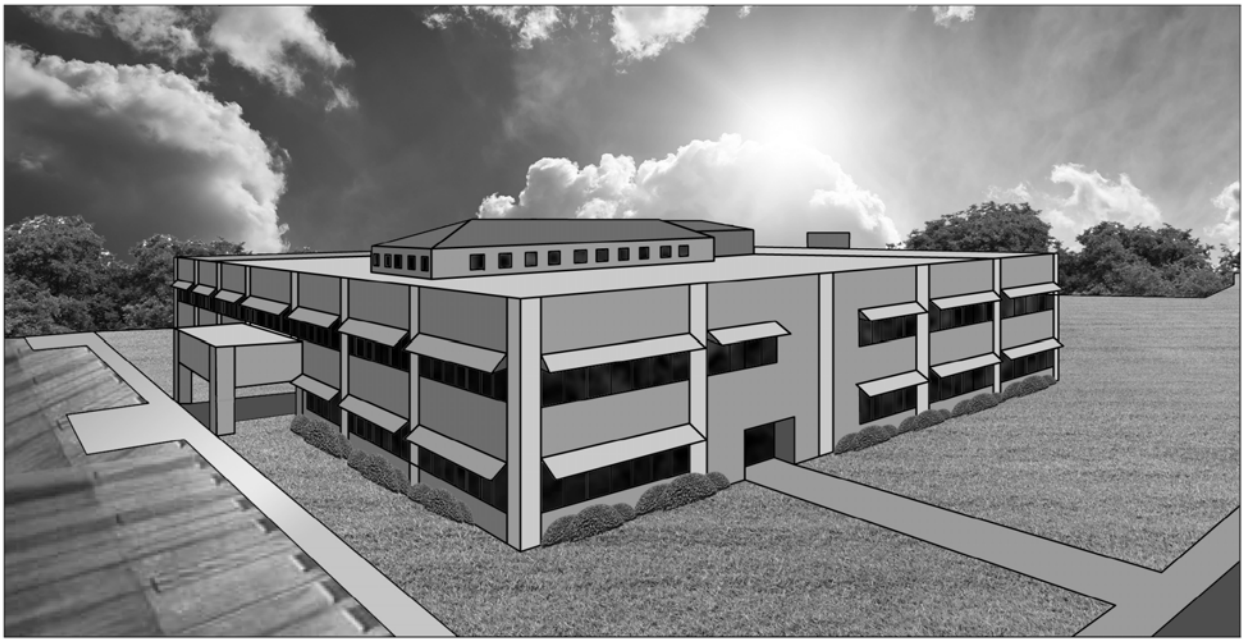

Code	Division Name	%	S F Cost	Projected
1	General Requirements	7.38	25.85	1,929,656
3	Concrete	6.59	23.08	1,722,507
4	Masonry	1.63	5.70	425,696
5	Metals	13.53	47.38	3,536,049
6	Wood & Plastics	1.65	5.76	430,805
7	Thermal & Moisture Protection	10.94	38.31	2,858,240
8	Doors & Windows	3.79	13.26	990,172
9	Finishes	8.99	31.46	2,349,005
10	Specialties	4.95	17.35	1,294,841
11	Equipment	0.59	2.06	153,091
14	Conveying Systems	0.93	3.27	243,253
15	Mechanical	23.04	80.70	6,022,612
16	Electrical	11.68	40.89	3,052,052
17	Telecommunications	4.31	15.10	1,126,508
	Total Building Costs	**100.00**	**350.19**	**26,134,487**

COST PER SQUARE FOOT = $350.19

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FILE 56

Davis & Davis Interior Design had a meeting with Zack Taylor, owner of Lee Steel Corporation. Mr. Taylor had recently purchased a building in Novi, Michigan for the new site of his corporate office and was working with interior furnishing associates, Facility Matrix Group.

Through meeting and discussing his ideas for the space, it became clear Mr. Taylor was looking for a state-of-the-art office environment that not only supported his staff, but also infused a modern, futuristic atmosphere for clients. He had a unique challenge for the design team: no exposed wood products. The Taylor family has owned and operated Lee Steel Corporation for over 60 years and has established itself as a leader in cutting-edge technology and a reliable source for quality steel products. The new office needed to reflect the company's success and innovation in their industry.

During the design process, Davis & Davis introduced a number of unique and modern elements such as back-lit LED wall panels, stainless steel mesh curtain walls, thirty-foot-long skylights, large format textured glass tiles and floating acrylic panel ceilings. After the initial programming, space planning and preliminary design phases, the team presented the design concept with a number of 3-D photo realistic renderings that showed Mr. Taylor what it would be like to stand in the finished space. With his enthusiastic approval, Davis & Davis spent about four months creating and developing a 100+ sheet set of fully engineered construction drawings to clearly define each detail and material going in the space.

That following fall, the owner and project team met with D.J. Maltese, the construction manager, who has worked with Lee Steel on various projects over the past three decades. D.J. Maltese reviewed the scope of the project and developed an estimate for the complex build-out. Since this was such a custom project, there were several specialized details and field conditions that needed attention from subcontractors prior to construction. Once the final budget was determined, an eight-month schedule was set in place and D. J. Maltese began construction.

Throughout the construction phase, Davis & Davis continued to work with Facility Matrix Group to specify high-end, ultramodern furnishings for the space. Furnishings include a back-painted glass conference table, futuristic lounge chairs, sleek executive desks and, of course, steel elements such as end tables and workstation panels.

The end result is a modern, innovative and cutting-edge office environment, particularly unique to the region. It successfully reflects Lee Steel's company culture, as well as their future success. Mr. Taylor and his staff are very pleased with the outcome and have received numerous accolades from clients.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	0.47	1.17	18,383
1	General Requirements	2.29	5.67	89,373
3	Concrete	0.44	1.08	17,214
5	Metals	4.01	9.90	156,333
6	Wood, Plastics, and Composites	24.82	61.33	967,725
7	Thermal and Moisture Protection	0.60	1.50	23,554
8	Openings	5.90	14.58	230,013
9	Finishes	28.63	70.73	1,116,227
21	Fire Suppression	1.13	2.80	44,168
22	Plumbing	4.09	10.11	159,603
23	HVAC	5.21	12.86	203,086
26	Electrical	15.12	37.36	589,555
27	Communications	3.09	7.64	120,581
28	Electronic Safety and Security	3.14	7.75	122,269
48	Electrical Power Generation	1.06	2.60	41,203
	Total Building Costs	**100.00**	**247.09**	**3,899,288**

COST PER SQUARE FOOT = $247.09

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FILE 57

Straits State Park in St. Ignace, Michigan has a seasonal campground with toilet/shower facilities serving the public during the summer months. Centrally-located toilet/shower facilities are equipped with hot showers, flush toilets, and two sanitation stations.

Two existing toilet/shower buildings in the lower campground had passed their useful visitor service and operational life expectancy, and had been slated for improvement. Michigan Department of Natural Resources had a standard plan and supporting technical studies for replacement of the toilet/shower buildings.

The project started with a preliminary analysis. The goal was to provide an improved and practical visitor experience that was operationally efficient. Options included the construction of new buildings within the existing building locations.

The study report recommendation was to proceed with the design of two facilities, using the prefabricated construction methodology.

A number of aesthetic options were available for consideration as the design process moved into the Preliminary Design Phase. Masonry walls, metal roofs, and low- or no-maintenance materials and systems were incorporated. In addition, the design character was appropriate for the environment, while also incorporating all the detailed functional requirements.

The project design challenges included designing a quality and harmonious prefabricated building. The design tasks encompassed creating covered and protected building entrances, facilitating daily and seasonal operational efficiencies, and developing the proper design expression with appropriate forms, materials, and finishes.

Ultimately, the initial construction documents were prepared to allow for a prefabricated building system or a conventional site-built system (depending on total cost). The hope was to determine definitively the best-value construction method for the MDNR Parks and Recreation Division (since there are over 100 state parks with multiple toilet facilities).

However, when the bids arrived, surprisingly the conventional site-built system toilet/shower buildings were nearly 25% less expensive than the prefabricated building system. Thus, the conventional site-built construction was fabricated at the Straits State Park, and became the preferred future methodology for the other Michigan state parks with multiple toilet systems.

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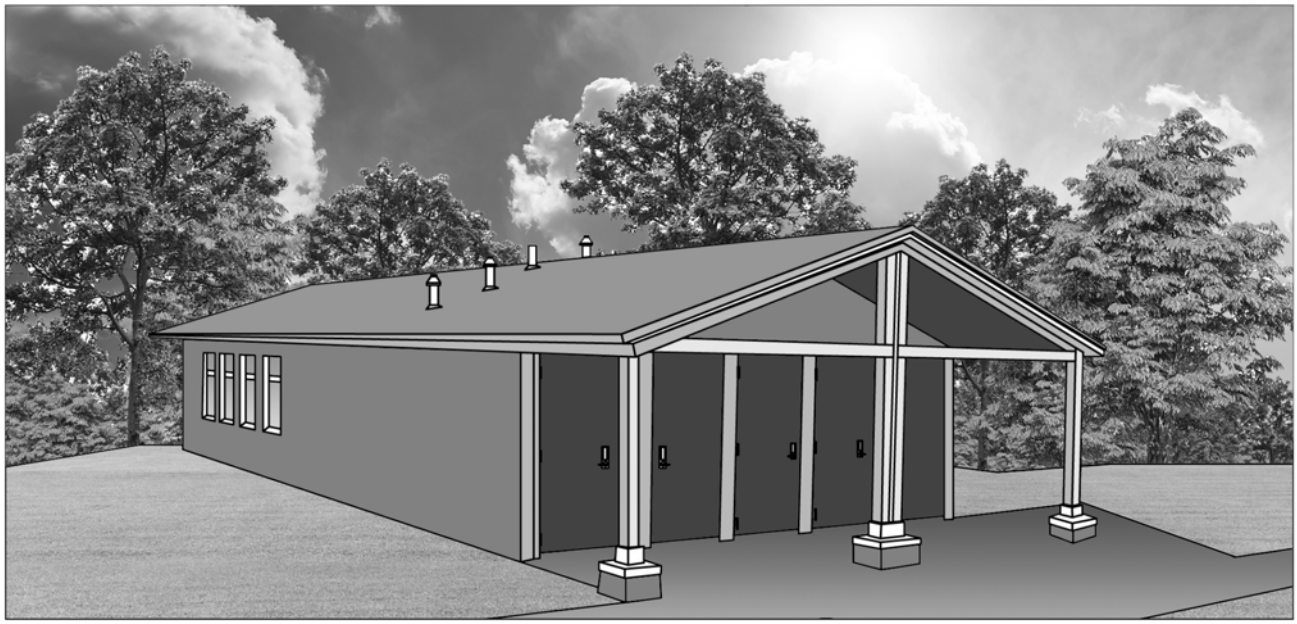

Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	3.39	19.57	39,021
1	General Requirements	17.93	103.38	206,145
3	Concrete	11.84	68.25	136,097
4	Masonry	7.75	44.69	89,107
5	Metals	0.64	3.70	7,380
6	Wood, Plastics, and Composites	10.55	60.83	121,299
7	Thermal and Moisture Protection	1.21	6.96	13,861
8	Openings	12.13	69.91	139,387
9	Finishes	0.64	3.67	7,330
10	Specialties	3.46	19.92	39,722
22	Plumbing	20.48	118.09	235,476
26	Electrical	9.98	57.55	114,750
	Total Building Costs	**100.00**	**576.51**	**1,149,575**

COST PER SQUARE FOOT = $576.51

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FILE 58

The idea and evolution of West Park took about a decade to come to fruition. This was accomplished due to the hard work and dedication of the Miami Township Trustees, community members, local school athletic boosters, and a local resident from the most well-established civil engineering and landscape architecture firms in the greater Cincinnati area – Bayer Becker.

The property itself, situated along the banks of the Great Miami River, was acquired from the West family, hence the name "West Park." The desire was to have a multi-faceted community park that would be available for use by the Three Rivers Local School District while also facilitating access to the river. The project was unique in that building construction was a small part of a larger civil construction project, necessitating a building general contractor with extensive experience in site development. The successful bidder was DER Development Company.

One of the benefits of the site also created a challenge: the Great Miami River was subject to seasonal flooding and, therefore, floodway regulations. The storm drainage system was designed to accommodate and quickly evacuate flood water. Through a grant from the Ohio Department of Natural Resources, a canoe ramp was installed to quickly and easily access the river for not only recreation purposes, but also emergency services in the event of river flooding.

Many of the structures and materials — ranging from shelter buildings to sports fencing — had to be floodway-certified and undergo a specific permitting process. The concession and restroom building had to be elevated a minimum of one foot above the floodway elevation – which also served to elevate the building so that it now has a very picturesque view of the whole park.

Additionally, the park features a playground and sports facilities for multiple sports, including tennis, baseball, softball, and soccer. Three Rivers Local Schools uses the baseball field and tennis courts. The community has access to an asphalt walk path that meanders around the perimeter of the 25-acre park.

West Park even has a dog park, with areas for large dogs and small dogs that also doubles as a retention pond during high-water events.

Today, the park is never without local residents enjoying the various amenities that are spread throughout the property. It is without a doubt a successful and valued addition to not only the village of Cleves, but Miami Township as well.

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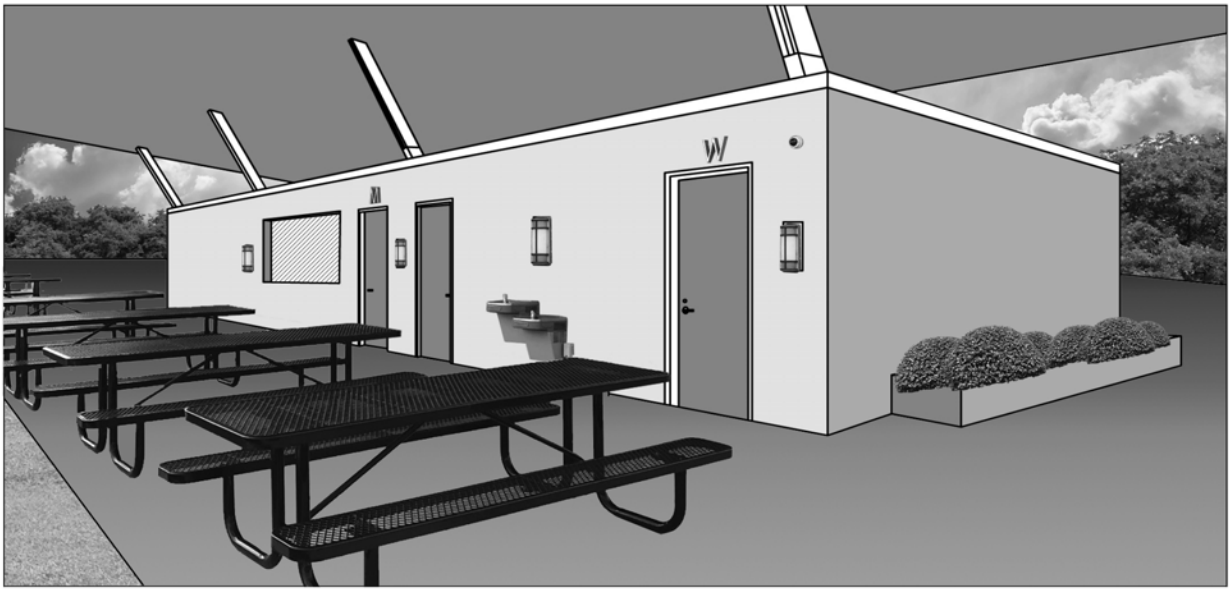

Code	Division Name	%	S F Cost	Projected
1	General Requirements	24.86	209.31	209,312
3	Concrete	6.90	58.13	58,125
4	Masonry	12.75	107.39	107,400
5	Metals	10.03	84.45	84,459
6	Wood, Plastics, and Composites	4.23	35.65	35,641
7	Thermal and Moisture Protection	5.97	50.28	50,284
8	Openings	2.17	18.31	18,304
9	Finishes	2.54	21.39	21,381
10	Specialties	6.92	58.31	58,302
12	Furnishings	2.90	24.41	24,407
22	Plumbing	6.37	53.63	53,626
23	HVAC	3.90	32.82	32,812
26	Electrical	10.46	88.07	88,058
	Total Building Costs	**100.00**	**842.11**	**842,113**

COST PER SQUARE FOOT = $842.11

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FILE 59

Sited in a former industrial zone, the original design of the Pittsburgh Ballet's studios had a definitively inward focus. Perhaps it was accidental; perhaps it was to shield itself from the grit and noise of the busy arterial. In any case, the Ballet conducted classes and professional practices in this bunker for thirty years.

Fast forward to 2012. The character of the Strip District, like much of inner-city Pittsburgh, continues to evolve. Many of the industrial buildings have been converted into other uses. Buildings on the surrounding blocks have new lives. It was time for the Ballet to come out of its shell. The facility had to grow to support their mission of performance, training, and community engagement.

The annex had functional requirements, such as dance studios reaching the volume of the Benedum stage and a new fitness space open to the public. Equally as important, though, were the goals set for the exterior design. As PBT Executive Director Harris Ferris said, "Dance is universal — whether it's for fitness, fun, self-expression or your life's work. We want this facility to serve the community as a resource for dance-based training, fitness, and learning."

The new design literally puts dance on display. During the day, dancers have the rich fabric of the Strip District as their backdrop. The 16-foot-high walls of north-facing windows harvest an abundance of daylight. At night, the movement silhouetted from within seeks to inspire and invite passersby to come inside.

Form and articulation of the exterior adopt a figurative interpretation of dance. It's about motion and balance. The solid base at street level allows the transparent second floor to soar, and shifting planes move past one another. The focus of color at the entrance - with the use of the wood siding — directs attention to the unified entry. Inside, the two-story atrium hosts the patrons on their way to the new studios and fitness center. A second-floor gallery floats above.

The open stair, with its glass railing and tectonic detailing, continues the transparency of the exterior. "It's fantastic. Just walking in that front door opening into that gorgeous entryway, you get the sense "wow, I'm in a pretty cool place," says Jonathan Breight, 20, a second-year graduate student. The Pittsburgh Ballet Theatre Annex illustrates how good design can bring creativity and movement to a Strip District and bring light to a forsaken part of town.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	2.77	12.27	171,569
1	General Requirements	20.05	88.62	1,239,928
3	Concrete	6.87	30.38	424,889
4	Masonry	1.35	5.97	83,509
5	Metals	10.89	48.16	673,828
6	Wood, Plastics, and Composites	2.84	12.54	175,373
7	Thermal and Moisture Protection	4.25	18.81	263,149
8	Openings	6.34	28.03	392,116
9	Finishes	26.99	119.32	1,669,220
10	Specialties	2.11	9.31	130,276
12	Furnishings	0.02	0.10	1,399
21	Fire Suppression	1.40	6.17	86,404
22	Plumbing	3.23	14.26	199,556
23	HVAC	4.68	20.70	289,605
26	Electrical	6.21	27.46	384,254
	Total Building Costs	**100.00**	**442.10**	**6,185,077**

COST PER SQUARE FOOT = $442.10

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FILE 60

The new Boulder Jewish Community Center has been planned for a decade and it embodies the timeless quality for architecture found in Jewish tradition. The entry courtyard, with its massive stone wall, brings together visitors and is protected for gatherings. The daycare and Early Childhood Center (ECC) fills one half of the building, while the other half houses a community hall, fitness center, library, and classrooms.

"Everyone is Welcome" The spirit of this message gave the design team freedom to look at the design as a positive reflection of all cultures.

Courtyards & Outside Gathering Space

The courtyard is anchored by a prominent stone wall, framing the main entry. The wall portrays height and verticality – balancing the otherwise horizontal massing.

Gathering space within the Early Childhood Center serves as an interior courtyard. Surrounded by classroom, kitchen, office, and support, it becomes the center of activities within the ECC. Similarly, in the adult wing, the community hall serves as an interior courtyard surrounded by office, stage, and support spaces on three of its sides. The west side captures spectacular views of the Flatirons rock formations.

Daylighting & Views

The building is oriented with north/south windows. In the children's gathering space, natural light enters through rooftop openings to illuminate play spaces.

In the gymnasium, light is harnessed through clerestory windows bringing in soft light. The community hall is lit by large windows to the west and tubular skylights; the large overhang cuts down on glare while providing covered outdoor space.

Main courtyard walls have openings creating circulation and lobby space inside. Light enters the second floor library through smaller punched windows.

Quantifiable Outcomes

The JCC has doubled the number of people they serve since opening the new space – from 625 people to 1,250 people per month. The number of children served by the new ECC grew from 90 to 175, with summer day camp ranging from 150 to 300 campers.

Anecdotally, the JCC has facility renters who have stated that their numbers are also up; they often attribute increased attendance to the fact that attendees are excited to come to the new Boulder JCC.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	1.10	4.95	259,395
1	General Requirements	14.03	63.09	3,308,698
3	Concrete	6.35	28.57	1,498,346
4	Masonry	8.16	36.66	1,923,137
5	Metals	9.80	44.06	2,310,621
6	Wood, Plastics, and Composites	7.22	32.46	1,701,908
7	Thermal and Moisture Protection	7.36	33.11	1,736,554
8	Openings	6.96	31.28	1,640,724
9	Finishes	13.53	60.83	3,190,007
10	Specialties	0.79	3.55	186,593
11	Equipment	1.09	4.93	258,083
12	Furnishings	0.25	1.09	57,834
14	Conveying Systems	0.53	2.39	125,704
23	HVAC	14.50	65.21	3,420,031
26	Electrical	8.33	37.44	1,963,276
	Total Building Costs	**100.00**	**449.64**	**23,580,907**

COST PER SQUARE FOOT = $449.64

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FILE 61

The 14,550-square-foot building houses a 75,590-gallon tank with water depths varying from five to twelve feet and features both above ground and underwater viewing areas. A hand-crafted rocky shoreline, air temp at a chilly 45 degrees, and falling snow emulate the Antarctic conditions. The entire exhibit processes light from day to night and uses seasonal lighting cycles to help regulate the penguins' hormonal balancing and breeding functions.

As visitors follow the exhibit's circulation pathway they encounter multiple, interactive educational activities. The first, a replica of a research vessel, creates the feeling of being on an ocean-going ship. Videos of the ship's bow cutting through the ocean reinforces the impression of being at sea. Interactive touch screens inside the vessel guide the visitor in learning about the different penguin species found in the southern hemisphere and the environmental factors that impact them. Among the interactive educational components scattered throughout the exhibit are "Ice Breaker" games, allowing multiple, hands-on, learning experiences, and a "selfie" station for photos with the penguins.

The underwater viewing room, the Ice Cave, is where visitors can step into a 10-foot-high view bubble that allows them to step into the exhibit and be surrounded by water and swimming penguins. A ceiling lighting system fluidly changes colors to reflect the Aurora Australis, also known as the Southern Lights.

Visitors needing refuge from the chilly climate can step onto the outdoor, multi-function deck, which provides an overlook of the zoo's park setting and nearby animal exhibits.

The design team's approach to this facility treated the exterior as an art installation with a stylistic iceberg-like façade while the interior imitates the Antarctic environment.

Designed to focus on the well-being of the animals and to encourage natural behaviors, the exhibit features a variety of high and low rock outcroppings for enrichment activities and nooks for resting or nesting. Support space for the keepers is organized for ease and safety of access to the animals, with areas for health care, feeding prep, and quarantine. The life support system cycles water through sand filters with a water turn-over rate every 30-60 minutes.

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Code	Division Name	%	S F Cost	Projected
0	Bidding Requirements	0.45	5.98	98,658
1	General Requirements	30.43	408.23	6,740,719
3	Concrete	18.74	251.35	4,150,330
4	Masonry	5.07	68.00	1,122,940
5	Metals	2.93	39.25	648,091
6	Wood & Plastics	0.42	5.63	93,082
7	Thermal & Moisture	5.20	69.73	1,151,342
8	Doors & Windows	6.38	85.63	1,413,987
9	Finishes	2.79	37.44	618,095
10	Specialties	0.11	1.45	24,006
11	Equipment	0.55	7.33	121,104
12	Furnishings	0.07	0.99	16,251
14	Conveying Systems	0.43	5.81	96,022
15	Mechanical	19.32	259.23	4,280,419
16	Electrical	7.12	95.47	1,576,509
	Total Building Costs	**100.00**	**1,341.54**	**22,151,553**

COST PER SQUARE FOOT = $1,341.54

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FILE 62

This project consists of two new dramatic components: a North End Zone seating area offering unique game-day amenities with premium seating options, and a 65,000-square-foot Athletic Operations Center supporting all student-athletes.

The new center also houses one of the largest full-team meeting rooms in college football, with 200 first-class fully customized theatre chairs, as well as training, treatment, and hydrotherapy rooms.

The new center is flanked by two large-scale water features that bring a level of ambiance. Patrons receive access to special menu options providing a local flavor. One of the most impressive features of this new fan experience is the re-imagined team tunnel.

The goal continues to be providing fans with great experiences on game day and giving student-athletes every opportunity to excel both on and off the playing field.

With an efficient layout the training spaces and stadium in one location offers an advantage: convenience. Student-athletes now enjoy some of the most innovative technologies and tools available to compete at high levels.

Coaches and training staff have access to all the resources needed to fuel, train and teach student-athletes. A massive new weight room, hydrotherapy equipment, team meeting spaces, lounge, coaches' offices and two full-service fuel stations are housed in the new building.

Another marquee space is the team locker room, complete with customized, fully-ventilated lockers, an enhanced lighting and audio system, and high-end graphic elements. A barber shop festooned in graffiti art by a local artist anchors the locker room entry.

All 150 loge boxes (600+ fans), configured in groups of four, provide superb sightlines that rise above industry standards to provide exceptional views to the field. New stadium product offerings also include two party terraces that serve as outdoor club spaces with access to two full-service bars to enhance the game day atmosphere.

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Code	Division Name	%	S F Cost	Projected
0	Procurement	0.47	2.82	182,774
1	General Requirements	10.27	61.10	3,971,167
3	Concrete	10.33	61.46	3,994,430
4	Masonry	4.14	24.60	1,598,785
5	Metals	15.68	93.30	6,064,537
6	Wood, Plastics	5.39	32.07	2,084,810
7	Thermal and Moisture	4.36	25.93	1,685,003
8	Openings	2.94	17.50	1,137,642
9	Finishes	9.59	57.06	3,708,585
10	Specialties	1.44	8.59	558,552
11	Equipment	1.42	8.44	548,592
12	Furnishings	0.10	0.58	37,356
13	Special Construction	0.10	0.59	38,275
14	Conveying Systems	0.54	3.19	206,890
21	Fire Suppression	1.08	6.43	417,613
22	Plumbing	4.09	24.31	1,580,260
23	HVAC	10.48	62.36	4,053,395
26	Electrical	12.28	73.04	4,747,587
27	Communications	4.95	29.46	1,915,215
28	Electronic Security	0.35	2.10	135,975
	Total Building Costs	**100.00**	**594.88**	**38,667,440**

COST PER SQUARE FOOT = $594.88

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FILE 63

This 38,000-square-foot athletic facility is housed in a pre-engineered metal building. It includes a 12,000-square-foot mezzanine, running track, and cardio training area. Exterior curtain walls focus light to illuminate the interior. This facility serves as an asset for local high school teams, as well as nearby medical centers.

Building construction is fully non-combustible, with sprinklered fire protection and alarm system. The roof is standing seam with 11" of insulation. The exterior wall system is horizontal roll-formed metal cladding over MBI.

The gym includes a three-lane track made from poured rubber "Pulastic" surface, where spikes can be worn. Athletic flooring is new generation virgin rubber 2' × 2' tiles. Railing cable systems are fabricated locally.

The front lobby includes a jet engine suspended from the building structure. The plate-loaded machine area features an expanded metal suspended tile and metal grid system, and site-applied graphic art by a local street artist. The Yoga Studio features conduit art incorporated into the lighting system by the electrical contractor. Café cabinetry is all locally fabricated steel.

The location for the 38,000-square-foot facility was selected with need in mind — there were no athletic facilities on that side of Amarillo. A nearby medical center offers a steady clientele of health care workers seeking a safe place to exercise after a hard day of practice.

The state-of-the-art facility offers the most advanced weightlifting and cardio training equipment in the entire region, and features expansive spaces, professional equipment, premium flooring surfaces, natural light, and advanced cleaning solutions. The gym includes premium ergonomic equipment for exceptional results and safety.

A professional quality half-size football turf field is also located in the center of the facility, along with cardio, yoga and aerobics on the 1st and 2nd levels. There is also a coffee and smoothie dining area that has drive-thru service, and an auto spa that offers treatments for enhancing your car's exterior shine.

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Code	Division Name	%	S F Cost	Projected
0	Procurement	1.15	3.52	127,902
1	General Requirements	5.16	15.86	575,751
3	Concrete	11.45	35.18	1,277,383
4	Masonry	3.97	12.22	443,289
5	Metals	1.81	5.57	201,970
6	Wood, Plastics	0.25	0.77	27,918
7	Thermal and Moisture	0.39	1.20	43,514
8	Openings	9.67	29.72	1,078,716
9	Finishes	10.08	30.98	1,124,624
10	Specialties	0.32	0.99	36,139
13	Special Construction	22.37	68.76	2,496,306
14	Conveying Systems	1.08	3.32	120,575
21	Fire Suppression	1.38	4.24	154,091
22	Plumbing	2.98	9.16	332,616
23	HVAC	9.63	29.62	1,075,086
26	Electrical	18.31	56.29	2,043,585
	Total Building Costs	**100.00**	**307.41**	**11,159,464**

COST PER SQUARE FOOT = $307.41

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FILE 64

The owners made a bold decision to expand the facility by 11,305 square feet, to attract a wider range of customers and lead to a completely renovated and expanded facility. The new facility includes an enlarged retail area and club repair, along with a restaurant, bar, and state-of-the-art kitchen.

5 Under Golf Center offers four suites featuring large screens that can simulate golf courses, baseball pitching, hockey, and other games. Guests can compete against each other in virtual games from the comfort of the lounge, with service from the bar and full-service restaurant.

Outside, a new two-level tee box overlooks the new driving range, which can help players track their shots, get feedback and play virtual courses against their friends. This renovation made 5 Under Golf Center much more than just a golf course; with indoor simulator games for high-tech gaming, a DJ Night for entertainment, and a bar and restaurant, it has something for everyone in the family.

Each simulation bay features a massive screen with a selection of virtual games, allowing you to hit a golf ball, throw a baseball, kick a soccer ball, and even attack zombies through a virtual screen! The game suites are surrounded by the lounge area with a full-service bar and restaurant. The indoor Topgolf Swing Suite simulators have a variety of different games, including over 140 golf courses you can choose from.

The outdoor driving range is two stories with 20 bays, powered by Toptracer Range technology. Serving the outdoor range area is patio dining, a music stage, restrooms, and an additional bar.

The renovation also provided new parking, landscaping, and updated exterior signage.

During renovation, the existing building was completely gutted and revamped. The existing driving range continued to remain open, and a mobile retail unit helped serve customer needs during construction.

5 Under Golf Center has brought the game of golf to all levels of players, and made it a family affair. This has enabled them to maintain their existing customer base as well as attract new customers who have never played golf before. The renovation has helped feed this growth with a state-of-the-art bar and kitchen that offers a wide variety of menus for the whole family.

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Code	Division Name	%	S F Cost	Projected
1	General Requirements	14.40	71.13	804,145
3	Concrete	3.23	15.97	180,580
4	Masonry	0.31	1.54	17,419
5	Metals	2.36	11.65	131,773
6	Wood, Plastics	2.68	13.25	149,802
7	Thermal and Moisture	0.04	0.22	2,400
8	Openings	2.05	10.12	114,442
9	Finishes	8.04	39.75	449,424
10	Specialties	2.75	13.58	153,550
13	Special Construction	35.26	174.23	1,969,590
21	Fire Suppression	1.16	5.71	64,619
22	Plumbing	4.63	22.87	258,455
23	HVAC	8.11	40.06	452,864
26	Electrical	9.29	45.88	518,673
27	Communications	5.21	25.76	291,157
28	Electronic Security	0.26	1.26	14,214
41	Material Handling Equip.	0.23	1.13	12,738
	Total Building Costs	**100.00**	**494.11**	**5,585,846**

COST PER SQUARE FOOT = $494.11

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Religious

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FILE 65

Located in Baytown, Texas, Our Lady of Guadalupe Catholic Church has a large and active congregation. They needed a multi-functional parish hall that could aesthetically set itself apart from the existing campus.

The new hall replaces a series of aging buildings circa the 1960s, and provides spaces that can hold simultaneous functions – including classes, catered events, large gatherings, covered sport practices, and day care.

The program consisted of a 600-occupant main hall, kitchen facilities, and four classrooms with moveable partitions that enable the separate rooms to combine into a large community space.

A traditional metal building provided the framework for the project, and led the selection of other economic, durable, and functional materials to help keep the overall project cost to a minimum. The design maximizes square footage, minimizes cost, and increases energy efficiency – achieved by using a high-albedo white roof, while air conditioning only 61% of the total programmed 18,000 square feet. Following the organizational spine, the roofs slope toward each other for a future rain water harvesting system to help maintain the sports fields.

The multiple functions of the program operate independently while linking to each other with wide overhangs, two patios, and a large exterior pavilion that provides maximum connection to the adjacent athletic fields. This also allows for efficient sound and traffic isolation between functions.

Inspired by the old parish hall's stained glass, the multi-colored storefront was installed adjacent to the main public spaces. The building's orientation, interior space plan, and location of programmed exterior space increases usable natural ambient light, while reducing electrical and mechanical energy consumption. The result is a perfect harmony within the two campuses that provides for the needs of the congregation.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	6.36	25.23	284,445
1	General Requirements	16.76	66.52	749,780
3	Concrete	6.60	26.20	295,209
5	Metals	18.68	74.14	835,496
6	Wood, Plastics, and Composites	0.50	1.98	22,410
7	Thermal and Moisture Protection	1.05	4.17	46,983
8	Openings	7.20	28.59	322,198
9	Finishes	7.74	30.72	346,304
10	Specialties	3.21	12.73	143,433
11	Equipment	3.19	12.65	142,630
21	Fire Suppression	2.57	10.19	114,766
22	Plumbing	7.45	29.55	333,129
23	HVAC	10.59	42.04	473,789
26	Electrical	7.51	29.80	335,834
28	Electronic Safety and Security	0.58	2.30	25,993
	Total Building Costs	**100.00**	**396.81**	**4,472,402**

COST PER SQUARE FOOT = $396.81

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FILE 66

St. Eugene Church is home to a thriving parish that has been an integral part of the north side Oklahoma City community for over 50 years. The congregation has had dreams of building a new church since the 1960s. Parishioners have been using a "temporary" church for over 50 years because their focus has been on building their school and daycare. Ground was later broken for the new building. The beautiful new church seats 800 people for both traditional and Spanish masses. The design is a traditional cruciform plan using classic materials to reflect the congregation's desire for a traditional Romanesque place of worship with contemporary amenities that promote efficient function and comfort.

Approaching the entry, the north façade of brick and arched cast stone is embedded with glittering gold glass tiles, creating a grand first impression. Upon entering the large narthex, rich oak wood trim, marble statue niches and antiqued glass pendant fixtures fill the entry space with a warm glow. A marble and glass-tile baptistery enhances the spiritual atmosphere with the gentle sound of flowing water.

The entire church is purposefully designed to facilitate traditional Catholic liturgy. Baptistery, altar and tabernacle are aligned and crowned by the crucifix to symbolize the faith journey. Pews are arranged so that everyone faces the altar, even the choir is positioned as an integral part of the worshipping community.

The church commissioned an Italian sculptor to create the crucifix suspended above the gold-domed baldacchino. The transepts include niches to accommodate artwork from the former worship space which is currently being renovated into a parish hall. The altar and pulpit of marble are accented with gold tiles and gold-leafed carvings. Thirty-three stained-glass windows are being crafted and will be installed throughout the church over the coming year. A bridal room, new restrooms and a sacristy were also included in the expansion.

A gallery links the new 20,000-square-foot building to the existing church complex. Exterior materials are brick with cast-stone detailing and a split-faced masonry block base complementing the original church and contextual neighborhood aesthetic. The roof and dome are metal clad to resemble copper. A crowning feature of the new St. Eugene's church is the cross-topped dome that creates a highly-visible and dramatic presence in northwest Oklahoma City.

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Code	Division Name	%	S F Cost	Projected
1	General Requirements	10.19	64.34	1,286,701
3	Concrete	5.25	33.15	662,817
4	Masonry	11.79	74.43	1,488,576
5	Metals	7.62	48.08	961,852
6	Wood, Plastics, and Composites	6.16	38.88	777,690
7	Thermal and Moisture Protection	9.87	62.29	1,245,990
8	Openings	3.34	21.12	422,151
9	Finishes	18.31	115.60	2,311,701
10	Specialties	0.34	2.15	43,190
11	Equipment	0.04	0.24	4,973
21	Fire Suppression	0.81	5.11	102,030
22	Plumbing	4.01	25.33	506,720
23	HVAC	13.68	86.33	1,726,717
26	Electrical	8.59	54.22	1,084,144
	Total Building Costs	**100.00**	**631.26**	**12,625,256**

COST PER SQUARE FOOT = $631.26

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FILE 67

This new 82,000-square-foot church has a footprint of 45,000 square feet. Sustainable design practices were employed throughout the project, which obtained LEED® Silver Certification. The project's sustainable features include responsible urban redevelopment, high-performance, low-energy and water usage, below grade parking and cool roof technology. Innovation in Design Credits for the LEED certification also include signage displayed throughout the facility that describes the sustainable aspects of the building.

Expansive sun-filled window walls serve as a signature feature of this contemporary structure. The low e-glass windows reflect heat energy from the outside, reducing summer cooling cost, and reflect heat from the inside, reducing cold weather energy needs.

Sunshades and exterior architectural detailing assist with the heating and cooling load. The large windows also provide daylight to 74 percent of occupied spaces and views to the outside for 92 percent of the occupants.

High-efficiency water reduction fixtures reduced the facility's projected use of potable water by 37.9 percent. Energy costs were reduced by almost 18 percent using an optimal number of high efficiency lighting fixtures.

The HVAC systems with premium efficiency fan motors modulate speed and energy consumption throughout the day. Variable-speed pumps deliver chilled water to the air-handling units and new energy-star appliances in the kitchen and the high-efficiency natural gas hot water heaters provide significant savings in energy consumption. Airflow sensors continuously measure the amount of outside air brought in by the air handler.

The building structure utilizes recycled concrete and recycled steel. Low-VOC paints, sealants, and adhesives, urea formaldehyde-free wood composite products, and low-VOC carpets were used, along with bamboo and other non-toxic flooring. The church also implemented a green cleaning program so that the congregation and the administration staff are not exposed to noxious fumes and harmful chemicals.

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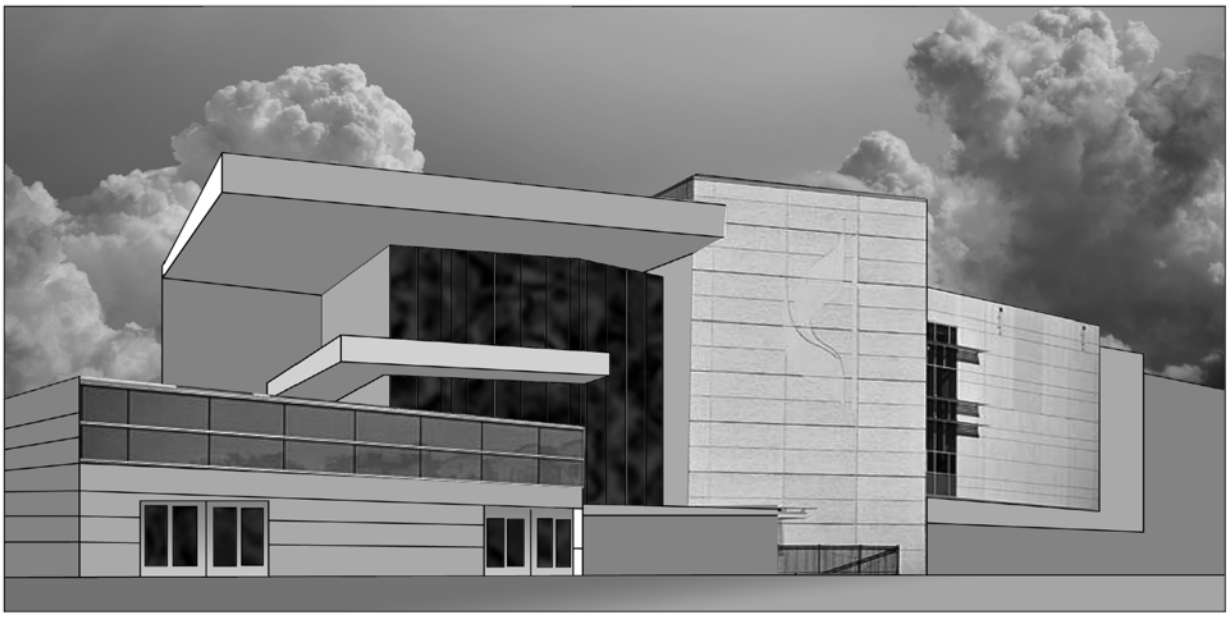

Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	8.73	34.01	4,135,204
1	General Requirements	9.11	35.51	4,314,849
3	Concrete	15.23	59.36	7,214,007
4	Masonry	8.55	33.33	4,051,463
5	Metals	6.52	25.42	3,090,282
6	Wood, Plastics, and Composites	3.41	13.28	1,614,826
7	Thermal and Moisture Protection	3.24	12.63	1,533,653
8	Openings	8.71	33.95	4,124,620
9	Finishes	8.99	35.04	4,260,000
10	Specialties	0.44	1.71	209,208
11	Equipment	0.64	2.48	302,976
12	Furnishings	0.31	1.22	148,492
14	Conveying Systems	1.42	5.54	673,436
21	Fire Suppression	0.98	3.82	465,414
22	Plumbing	3.75	14.62	1,778,368
23	HVAC	8.76	34.16	4,151,010
26	Electrical	11.18	43.56	5,293,629
	Total Building Costs	**100.00**	**389.70**	**47,361,433**

COST PER SQUARE FOOT = $389.70

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FILE 68

For almost 20 years the parish of Corpus Christi conducted all of its activities in a single multi-use/church building that accommodated every single parish activity. The building was being overwhelmed and functions compromised; and the parish kept growing.

A new two-story 23,000-square-foot building was designed to handle the parish's needs, except for worship, which continues in the original structure. Placing the new building on the 6.2-acre site was a challenge because the property is very narrow and the majority of the land is needed for parking. The site is also inconveniently bisected diagonally by a public utility easement. Perhaps it was those site challenges that contributed to the project's success due to the extra effort put into making the most of the available space for the building program.

Placed up against the east property line, to minimize the impact on parking, the structure has a long and narrow profile that allowed for the three major functions — administration, gatherings of all types, and religious education — to be well defined and logically arranged. On the north end of the building one finds the parish administration and ministry offices, in the center of the building is a spacious social and assembly space served by a commercial kitchen, and on the south end are the educational spaces and a youth center.

The 30-foot-high hall was shaped and appointed to be a dynamic and exciting space that is acoustically balanced and supported by a discrete audio/video installation.

Joining all of the building elements together are broad covered walkways and balconies that provide ample shade from the western sun, as well as plentiful space for casual year-round fellowship.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	14.79	54.99	1,297,813
1	General Requirements	3.04	11.30	266,647
3	Concrete	14.39	53.48	1,262,182
4	Masonry	1.25	4.66	109,467
5	Metals	4.30	15.98	377,110
6	Wood, Plastics, and Composites	13.23	49.20	1,160,974
7	Thermal and Moisture Protection	4.97	18.49	436,166
8	Openings	6.96	25.86	610,372
9	Finishes	11.39	42.34	999,127
10	Specialties	0.02	0.06	1,601
12	Furnishings	0.14	0.53	12,338
14	Conveying Systems	1.03	3.82	90,057
21	Fire Suppression	1.60	5.93	140,000
22	Plumbing	3.33	12.37	291,953
23	HVAC	5.89	21.89	516,845
26	Electrical	13.68	50.87	1,200,377
	Total Building Costs	**100.00**	**371.81**	**8,773,026**

COST PER SQUARE FOOT = $371.81

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FILE 69

This church welcome center is designed to give new life to an older facility and to include more modern worship spaces that are inviting to visitors. It also serves as the front door to the church with the turn-around drop-off area and a tower element signifying the entrance point. Foundations were prepared for the future installation of a drop-off canopy.

The interior of the building includes a contemporary worship multi-purpose space, cafe area, two classrooms, youth area, circulation space, and miscellaneous support spaces. The multi-purpose space features floating acoustical clouds designed to control worship music sound and provide visual intrigue in the space. An audio and video system was included in the project for sound amplification and visual display purposes. Furthermore, a steel beam was included for the future installation of a folding glass partition proposed between the multi-purpose space and cafe areas.

The cafe area includes an open seating area below north facing skylights. The position of the cafe area is such that all major circulation in the welcome center surrounds the space, creating a more inviting area. A serving counter, as well as a prep area are included within renovations to the existing building.

The second floor contains two classrooms, the youth area, and lobby/circulation space. The youth area is expansive and intended to provide different types of seating areas for the youth. This space will be adjacent to the future family life center and is intended to provide visual connection between the spaces. There is an ample amount of lobby and circulation space on the second floor. With the open glass railing, this is intended to provide a visual and audible connection between the two floors.

A front and rear-landing elevator was included to provide handicap access to the welcome center and the existing church, which before the addition, did not have any elevator access. Provisions for the mechanical equipment were made in the attic space by means of attic trusses. The welcome center addition was separated from the existing building by means of a firewall structure.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	13.78	49.49	434,649
1	General Requirements	12.43	44.64	392,212
3	Concrete	5.05	18.15	159,369
4	Masonry	4.59	16.47	144,701
5	Metals	6.43	23.10	202,870
6	Wood, Plastics, and Composites	5.85	21.01	184,664
7	Thermal and Moisture Protection	5.28	18.97	166,666
8	Openings	5.75	20.64	181,363
9	Finishes	15.67	56.31	494,531
10	Specialties	0.38	1.39	12,118
11	Equipment	0.34	1.23	10,824
14	Conveying Systems	3.18	11.42	100,210
21	Fire Suppression	3.04	10.92	96,009
22	Plumbing	4.27	15.37	134,815
23	HVAC	4.84	17.37	152,689
26	Electrical	9.11	32.74	287,543
	Total Building Costs	**100.00**	**359.24**	**3,155,238**

COST PER SQUARE FOOT = $359.24

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FILE 70

St. Martha's Church is a 40,000-square-foot structure on 35 wooded acres in a fast-growing area outside of Houston, Texas. Responding to the parish's desire for a "church that looks like a church", Turner Duran Architects knew the need could be answered in traditional terms. But the resulting building also had to meet the requirements of contemporary Roman Catholic liturgy which, in the past 25 years, has given rise to a variety of new expressions.

In order to look like a church, the building is cruciform in plan and its arched windows on the whole are proportional to the building size. Its pitched roof is broad, and inside a critical relationship is maintained between the width of the nave and transepts and the spring-point of the dome.

Natural light enters the church from four sides, and the seating is organized in rows facing the altar and side aisles to facilitate access. The placement of the altar has been designed to promote a sense of community within the church and to allow the congregation a greater feeling of involvement during liturgies.

To conform to the contemporary liturgical practice, the altar is placed in the crossing underneath the dome with worshippers arranged on three sides. On the fourth side stands a small adoration Chapel. It is a building within a building and its façade, oriented with a 16-foot-wide rose window, provides a backdrop for the main altar.

The floor is paved with stone. This along with simple glue-laminated wood trusses is meant by the architect as a reminder of fondly remembered centuries old church buildings. The stone floors and acoustically treated wood panel walls create a reverberant space ideal for organ music and for singing, yet the space is absorbent enough to clearly hear the articulated spoken word.

The church's location on the site respects the residential scale and character of its immediate neighborhood while, at the same time, resolving the complex circulation requirements of building entry and liturgical procession.

The building is clustered around a wide and open plaza in order to maximize views and to make a statement to the community. The building is linked by a covered ambulatory recalling the monasteries of Europe. A bell tower marks the church as one approaches from a distance.

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Code	Division Name	%	S F Cost	Projected
1	General Requirements	18.10	129.94	6,074,887
3	Concrete	8.25	59.23	2,768,736
4	Masonry	10.99	78.90	3,688,265
5	Metals	7.14	51.27	2,397,053
6	Wood & Plastics	12.12	87.01	4,067,308
7	Thermal & Moisture Protection	4.23	30.35	1,419,084
8	Doors & Windows	3.89	27.93	1,305,658
9	Finishes	14.77	106.08	4,958,910
10	Specialties	0.61	4.36	204,043
11	Equipment	0.23	1.67	77,646
15	Mechanical	12.01	86.24	4,031,634
16	Electrical	7.67	55.08	2,575,044
	Total Building Costs	**100.00**	**718.06**	**33,568,268**

COST PER SQUARE FOOT = $718.06

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FILE 71

The first challenge was determining what the limitations of the existing site would be, as well as identifying the future needs for the expanding church congregation. In the end, it was decided to design a facility that could be utilized as both a community center and church building.

The constructed addition and existing renovated building house several new and expanded functions: a new 1,600 seat auditorium with stadium seating, green room, catwalk, broadcast room, and a small AV studio.

The new southwest wing has secure children's classrooms on the lower level; these are used for children's ministry during weekend services, and the area is ultimately intended to host a child daycare during the weekdays.

Located directly above the classroom area is the church administration space which allows daylight to enter through large windows on three sides and roof skylights. The abundance of office space allows the church to bring all departments and personnel under one roof, after years of being spread out around different areas and buildings on the site due to previous space limitations.

An enlarged café was relocated to the main south entrance. The sitting area for the café links right into a wealth of gathering areas flowing from one end of the building to the other. In addition to the spacious café, the community will benefit from a children's indoor play area with climbable structures and a large slide, a renovated and enlarged banquet hall with a brand-new commercial kitchen, and a small cardio gym.

The new addition nearly tripled the size of the existing building. The much larger size of the building therefore necessitated that the space be divided into three fire building areas and that the building be fully sprinklered to meet building area code requirements. It was determined that traditional steel and CMU construction was the most effective method for this project.

Exterior façade materials included metal panel, split-face block, and E.I.F.S. to bring together a more contemporary look that still incorporates the materials of the existing building. By wrapping the new addition around the front of the existing structure, we were able to reface and update the style as the church desired without clashing with the more traditional existing façade.

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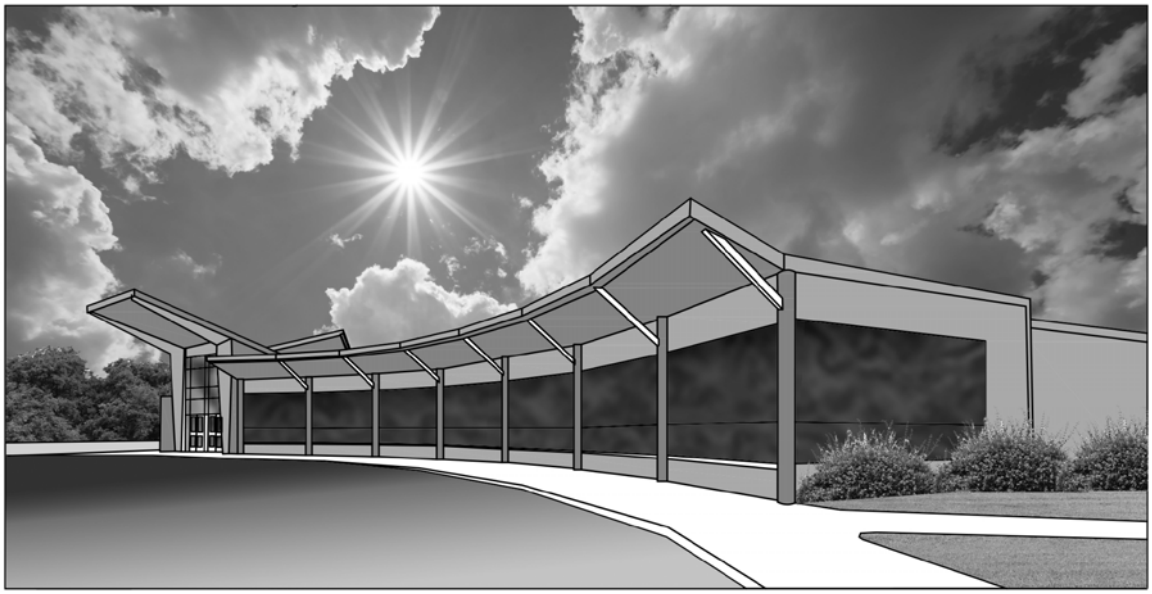

Code	Division Name	%	S F Cost	Projected
0	Procurement	5.77	8.11	944,963
1	General Requirements	4.88	6.87	800,701
3	Concrete	6.12	8.60	1,002,955
4	Masonry	6.30	8.86	1,032,412
5	Metals	18.73	26.35	3,069,627
6	Wood, Plastics	2.75	3.87	450,598
7	Thermal and Moisture	8.16	11.48	1,337,612
8	Openings	5.15	7.24	843,341
9	Finishes	10.53	14.81	1,726,834
10	Specialties	0.99	1.39	162,114
11	Equipment	0.68	0.95	110,305
14	Conveying Systems	0.41	0.58	67,826
21	Fire Suppression	1.74	2.44	284,355
22	Plumbing	2.68	3.77	439,521
23	HVAC	12.41	17.46	2,034,775
26	Electrical	12.71	17.88	2,083,488
	Total Building Costs	**100.00**	**140.68**	**16,391,429**

COST PER SQUARE FOOT = $140.68

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FILE 72

The church had outgrown its initial building and found it difficult to minister primarily to younger children. Additional areas were needed to create a safe, relevant, and fun environment for children.

In July of 2017, TC@GS voted unanimously to construct a new addition. GJS Architecture was selected to provide programming, master planning and architectural services.

The programming and design for the new facility included a secure children's check-in station, nine classrooms, a main gathering room and an indoor playground. In the analysis of the original facility it was determined that a new foyer with café was also needed. This new foyer would serve as the main focal point for the church and it was GJS's desire that the new addition would match the existing building in a seamless manner and looking like it had always been there. With the original building having a significant roof structure, a creative design approach for the addition allowed for it to give the appearance of being a taller structure with a high ceiling in the new foyer and cafe. The focal point within the new foyer would be a full height brick accent wall with a cross feature.

Having information on the original construction, the new addition's aesthetic features were designed so as to match the original. The foyer would be the main exterior focal point and directly align with the existing entrance drive, creating a very powerfully columned porte cochere entrance feature. Additional parking was also provided.

Programming and master planning also identified two future phases. Phase Two is programmed for an expandable 500 seat worship center with main foyer, café/bookstore, education facility expansion and an administrative center. Phase Three is programmed to expand the worship center to 1,000 seats and expand the education facility as based upon the appropriate attendance requirements.

Dedication of the new facility was held on Sunday, June 28, 2020, during the Covid-19 outbreak. TC@GS is now currently exploring the possibility of starting the planning process for Phase Two.

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Code	Division Name	%	S F Cost	Projected
1	General Requirements	6.73	20.37	170,121
3	Concrete	6.21	18.79	156,907
4	Masonry	5.80	17.57	146,706
5	Metals	9.40	28.45	237,608
6	Wood, Plastics	10.96	33.18	277,030
7	Thermal and Moisture	5.73	17.35	144,837
8	Openings	7.37	22.32	186,386
9	Finishes	16.17	48.96	408,853
10	Specialties	0.63	1.92	15,957
12	Furnishings	2.41	7.29	60,937
21	Fire Suppression	5.56	16.85	140,678
22	Plumbing	7.79	23.60	197,068
23	HVAC	5.66	17.14	143,124
26	Electrical	9.30	28.15	235,046
28	Electronic Security	0.27	0.82	6,874
	Total Building Costs	**100.00**	**302.74**	**2,528,133**

COST PER SQUARE FOOT = $302.74

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FILE 73

Building C, Academy Place at Houma, Louisiana, is a senior housing development that includes a new 56-unit, 47,000-square-foot, three-story multi-family housing development that is age restricted to seniors 62 and up. In addition (and separately on-site), is a complete renovation of the historic Houma Elementary School, which includes 47 apartments (costs not included with this project).

The development is immediately adjacent to transit and commercial/retail. Sixty percent of the apartments are income restricted. Of the total 103 units, 94 units will be one-bedroom units and nine will be two-bedroom units.

The site design is scaled to the surrounding historic downtown and serves to transition from the commercial properties with their larger scaled structures to the residential neighborhoods. This change in scale is accomplished through the planning of multiple smaller buildings on this site rather than a single, monolithic building.

The existing parking lot has been reconfigured for efficiency and is located behind the historic building's street entrances.

The new building is a wood-frame structure clad in a variation of Hardie cement board siding and wall panels, along with some brick veneer and wood slats. A dynamic approach was deployed in the composition and color scheme of the exterior façade to provide each of the units with a unique identity.

Each unit has its own exterior balcony and it is in this aspect that the variation occurs. The roof is a thermoplastic polyolefin (TPO) single-ply reflective roofing membrane that contributes to the energy-efficient performance.

Interior materials are modest and low maintenance. Each unit contains luxury vinyl tile (LVT) throughout, with carpet tile in the public corridors. Salvaged slate from the chalkboards of the original elementary school were repurposed for a system of indoor signage that allows residents to leave handwritten notes for their neighbors.

The development was certified with Enterprise Green Communities and Energy Star 3.0. It incorporates many green building strategies, including: durable materials, Energy Star® lighting and appliances, and energy-efficient building components. All of these contribute to lower costs for tenants on utilities.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	0.66	1.56	72,736
1	General Requirements	8.24	19.33	907,444
3	Concrete	5.96	13.98	656,371
4	Masonry	3.22	7.55	354,311
5	Metals	1.74	4.09	191,990
6	Wood, Plastics, and Composites	11.15	26.17	1,228,307
7	Thermal and Moisture Protection	8.80	20.65	969,769
8	Openings	7.35	17.26	809,825
9	Finishes	13.55	31.79	1,492,547
10	Specialties	1.15	2.69	126,383
11	Equipment	2.36	5.54	259,935
12	Furnishings	4.07	9.55	448,742
14	Conveying Systems	1.24	2.91	136,307
21	Fire Suppression	1.29	3.03	142,608
22	Plumbing	6.91	16.23	761,933
23	HVAC	8.39	19.68	924,078
26	Electrical	12.26	28.78	1,351,105
27	Communications	0.34	0.80	37,466
28	Electronic Safety and Security	1.33	3.12	146,977
	Total Building Costs	**100.00**	**234.73**	**11,018,838**

COST PER SQUARE FOOT = $234.73

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FILE 74

The 5,335-square-foot S. Ferdinand Townhomes project involved the conceptual design, permitting, construction documentation, and administration of three new townhouses on a tight site behind two existing historic residences within the Columbia City Historical District of Seattle, Washington.

Each of the approximately 1744-square-foot townhouse units features an efficient floor layout, including three bedrooms, 2.5 baths and a laundry room, and is located over a private garage.

Care was given to making the units contextual with the surrounding neighborhood while also intentionally not looking "historical." The townhomes were also designed to not distract from the 100+-year-old homes that prominently face S. Ferdinand Street, and the designs went through extensive screening before being approved by the Landmarks Preservation Board.

The exteriors are finished with a low-maintenance rainscreen system consisting of cement fiber panels and vertical cedar siding. Units are accessed via a shared brick paver courtyard and feature welcoming entry steps, trellises, gardens, and rooftop decks.

Inside, tall windows with transoms and slot windows bring light deep into the units. The stepping and cantilevered building elements balance the need for light, variation, fire separation, and visual interest with limited space, and allow the owner/developers to achieve maximum value from their site.

Broderick Architects used Graphisoft’s ArchiCAD BIM software from building concept to working drawings, and for extensive site modeling required for presentations to the Landmarks Preservation Board.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	1.83	6.29	33,545
1	General Requirements	30.14	103.79	553,692
3	Concrete	2.78	9.57	51,049
4	Masonry	5.81	20.00	106,652
5	Metals	1.63	5.59	29,852
6	Wood, Plastics, and Composites	11.08	38.16	203,549
7	Thermal and Moisture Protection	11.11	38.23	203,990
8	Openings	7.01	24.13	128,707
9	Finishes	9.67	33.29	177,670
10	Specialties	0.87	3.00	15,941
11	Equipment	1.17	4.04	21,537
12	Furnishings	2.25	7.73	41,282
21	Fire Suppression	1.52	5.22	27,833
22	Plumbing	5.25	18.08	96,464
23	HVAC	0.08	0.28	1,490
26	Electrical	7.82	26.92	143,609
	Total Building Costs	**100.00**	**344.30**	**1,836,866**

COST PER SQUARE FOOT = $344.30

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FILE 75

Country Meadows, founded in 1982 by former Pennsylvania Governor & Mrs. George M. Leader, includes ten campuses offering a variety of services to seniors, including Independent Living, Personal Care, Memory Support, and Skilled Nursing Care.

As part of the expansion of the Allentown, Pennsylvania campus, Cornerstone Design Architects worked alongside Country Meadows to develop a new 50-unit, independent living facility which adjoins the existing buildings on campus.

Taking into consideration the new building would unite with the existing facility, the focus for the articulation of the exterior façade was to provide a look that would tie into the existing buildings but provide an updated look. Exterior materials included EIFS, brick, and vinyl railings. The interior of the new facility offers a brand new commercial kitchen, dining space, resident apartments, outdoor courtyards, club room, lounge spaces, and resident storage.

Features of the apartments include unique, varying layouts, full operating kitchen with stainless steel appliances, private patios, courtyard access, and individual temperature controls. The apartments are available in studio, one- and two-bedroom models, with a range of sizes available in each apartment type.

The unique layouts provide a sense of individuality for the residents, in what could otherwise be an environment that fosters standardized layouts, treating every resident as if they have the same space needs.

Features of the common spaces include the dining room, where residents can order meals as though eating at their favorite restaurant, again promoting a sense of individuality for each resident. A feature of the dining room is the double-sided stone fireplace, occupying a prominent location in the center of the room and towering to the underside of the vaulted ceiling, with beams running across the vaulted space.

The lounge spaces, club room, and various seating areas foster a sense of community and provide spaces for residents to interact and build relationships. The overall atmosphere, regarding finishes, is an elegant yet homelike feeling, with warm tones, multi-textural materials, and quality furnishings throughout.

Eschewing the institutional feel of many outdated retirement facilities today, the new independent living facility at Country Meadows succeeds in providing a place that residents can be proud to call home.

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Code	Division Name	%	S F Cost	Projected
1	General Requirements	8.59	17.37	925,015
3	Concrete	3.75	7.59	403,380
4	Masonry	4.19	8.49	451,733
5	Metals	3.18	6.43	342,063
6	Wood, Plastics, and Composites	17.34	35.08	1,867,968
7	Thermal and Moisture Protection	7.37	14.90	794,034
8	Openings	4.65	9.40	500,559
9	Finishes	9.71	19.65	1,046,065
11	Equipment	6.29	12.72	677,317
12	Furnishings	0.22	0.45	23,661
21	Fire Suppression	3.09	6.25	333,221
22	Plumbing	10.31	20.87	1,110,480
23	HVAC	9.53	19.29	1,026,407
26	Electrical	10.05	20.32	1,081,975
27	Communications	1.73	3.51	186,545
	Total Building Costs	**100.00**	**202.31**	**10,770,425**

COST PER SQUARE FOOT = $202.31

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FILE 76

Brighton Construction Company completed Liberty Village, a one-acre, 20-unit, single-family workforce-housing subdivision located in a historical redevelopment.

The project incorporated PATH (Partnership for Advancing Technology in Housing) technology, innovative watershed management, and architecture responsive to a diverse, multicultural community.

Requirements of the Redevelopment Agreement with the City of Lincoln included: Owner-occupied houses, historically appropriate architecture, energy-efficient construction, and advanced watershed management techniques endorsed by an adjacent Army Corps municipal flood-control improvement plan.

Distinct cultural groups desired specific architectural preferences. Brighton canvassed the community, determined buyer needs and wants, and applied sometimes-contradictory survey results in the design and construction of Energy Star® certified, two-story, single-family and townhomes appealing to an "international" workforce.

All Liberty Village units include a rear-facing garage, served by a pervious concrete alley; the first installation of its kind in a northern climate. The 20-unit project includes 16 single-family homes and four townhouse units with base pricing ranged from $114,500 to $127,500.

Lincoln, Nebraska is one of ten "Refugee Relocation" sites in the United States and contains an international minority population. Liberty Village buyers included Bangladeshi, Russian, Argentinean, Vietnamese nationals, and hurricane Katrina relocations.

Floor-plan requirements differed from the standard North American blueprint. Some wanted flat roofs to sleep on; others wanted garage kitchens. All this occurred within a redevelopment area that espoused strict, and very American, neighborhood design standards.

This presented a unique opportunity to construct homes respectful of a Midwestern vernacular, while satisfying the special architectural desires of a burgeoning multicultural community. The development sold out within six months of beginning construction. Two of the 20 houses feature accessibility for buyers with special needs.

Project Partners: With the National Association of Homebuilders Research Center (NAHBRC), Brighton Construction designed a high-efficiency air-quality package, utilized advanced foundation and framing techniques, and participated in building science research related to building envelopes, resourced efficient foundations and framing, wall cavity wetting and drying characteristics of various weather resistant barriers and water-saving plumbing systems.

Along with the Concrete and Aggregates Institute, the NAHBRC assisted in the design of a climate-appropriate, pervious-concrete paving for the alley, which allows on-site disposal of storm water, water purification and eliminates the need for snow removal.

NeighborWorks, Inc. the nonprofit partner and Project Champion NeighborWorks of Lincoln provided pre-purchase and post-purchase training for all buyers and remains as a board member on the home-owner’s association to help facilitate the ongoing success of Liberty Village.

City-of-Lincoln Urban Development Department helped assemble and purchase land, arranged Tax Increment Financing (TIF), and contributed home funds and down payment assistance for buyers.

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Code	Division Name	%	S F Cost	Projected
1	General Requirements	16.68	32.63	48,941
3	Concrete	9.15	17.90	26,861
4	Masonry	0.84	1.65	2,460
6	Wood, Plastics, and Composites	34.02	66.54	99,817
7	Thermal and Moisture Protection	4.45	8.71	13,064
8	Openings	7.48	14.62	21,957
9	Finishes	11.93	23.34	35,019
10	Specialties	0.23	0.45	662
11	Equipment	0.55	1.08	1,618
22	Plumbing	6.37	12.47	18,704
23	HVAC	4.07	7.96	11,955
26	Electrical	4.22	8.24	12,376
	Total Building Costs	**100.00**	**195.61**	**293,429**

COST PER SQUARE FOOT = $195.61

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FILE 77

First Ward School was constructed between 1908 and 1909 as a facility to educate the children of Elkins' rapidly expanding population at the turn of the 20th century. Its design is attributed to Fairmont, West Virginia Architect, Andrew C. Lyons, and was constructed by local artisans and craftsmen utilizing locally available building materials, including hand-cut sandstone, brick, and native hardwoods.

The eight room schoolhouse stands two-stories tall and has a full basement. The floor plan, very modern for its day, uses a modified "H" and rows of large double-hung windows to flood the rooms in natural light. The floor plan also features large open rooms, twin sets of staircases, and wide hallways. In 1910, First Ward School's modern design and architecture were highlighted in a publication by the WV Department of Free Schools on school architecture in West Virginia.

First Ward served as a school until 1976, when it was converted into a warehouse for the county school board. Fortunately, changes to the structure were limited to the razing of the front portico and the installation of a conveyor system that involved cutting out a section of the first floor hall near the original entrance. However, deterioration of the roof and drainage system resulted in water damage to the roof framing members and exterior masonry, as well as to interior floors, ceiling, and walls.

The board transferred the vacant and deteriorated building to a local civic group (C-HOPE), which obtained a grant to repair the roof and stabilize the structure. It was listed on the National Register and selected for the Endangered Property list of the Preservation Alliance of West Virginia, where it caught the attention of developer AU Associates.

With the recent success of a similar project, Riverview at Clendenin School, Omni Associates, Architects was chosen by developer AU Associates to design the renovation of First Ward School into 16 affordable one- and two-bedroom apartments.

The exterior was completely restored to its early 1900s Georgian-Revival style. The slate roof was restored and the portico was reconstructed to match the original quarried stone.

Omni's design retained many of the key interior features reminiscent of the school days. Ornate furnace grates were incorporated into the building's signage system. The building logo and branding are inspired by the limestone plaque embedded above the main entrance. Apartments were sensitively integrated into the existing classroom spaces, repurposing the cloak room areas and innovatively re-using portions of the original classroom slate blackboards. Ground floor units were created by digging out the original concrete floor and lowering it to gain important headroom and ceiling height. The result is apartments filled with light from all directions, creating an exceptional living environment.

The building now is owned by a non-profit housing developer and managed by the County Housing Authority. It was opened to tenants and specifically targets seniors through a wellness collaboration program.

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Code	Division Name	%	S F Cost	Projected
0	Procurement and Contracting Requirements	0.62	1.00	26,949
1	General Requirements	21.04	33.67	909,121
3	Concrete	1.17	1.86	50,482
4	Masonry	7.71	12.33	333,354
5	Metals	0.71	1.14	30,747
6	Wood, Plastics, and Composites	13.86	22.18	598,952
7	Thermal and Moisture Protection	8.52	13.63	368,047
8	Openings	12.27	19.64	530,361
9	Finishes	13.41	21.48	579,670
10	Specialties	0.44	0.71	18,987
11	Equipment	1.04	1.68	45,150
12	Furnishings	0.32	0.51	13,835
14	Conveying Systems	2.36	3.78	101,811
21	Fire Suppression	2.70	4.32	116,495
22	Plumbing	4.84	7.75	208,956
26	Electrical	8.98	14.39	388,177
	Total Building Costs	**100.00**	**160.04**	**4,321,095**

COST PER SQUARE FOOT = $160.04

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FILE 78

The scope of this project included converting four existing one-bedroom apartments into four accessible units. The existing bathrooms were all the same and consisted of a water closet, lavatory, and tub in a 5 by 7-foot space. Making these bathrooms accessible required a complete demolition of all fixtures, wall and floor finishes, and the two interior walls, so that access for wheelchairs and people with disabilities could be provided. The final bathroom space was 6 by 8-feet. New plumbing fixtures and accessories were added to meet Uniform Federal Accessibility Standards (UFAS) requirements for both size and location. Wood blocking was installed at all locations for grab bars and accessories. Two of the apartments were designed for tub installations and two apartments were designed for roll-in shower installations. To finish the bathrooms, new ceramic tile floors and walls were installed. New lighting replaced the existing and an exhaust fan was added.

The existing kitchen area consisted of a single line of upper and lower cabinets of standard heights with standard appliances. The Owner had anticipated the possibility of accessibility remodeling when replacing the cabinets several years ago and installed the cabinets as separate units which could be easily moved and had also fabricated the base cabinets to meet the required UFAS heights. The kitchen remodel required eliminating a section of base and upper cabinets to allow for a new drop-in range, removing the sink cabinet and sink in order to allow for a new sink at an adjustable 28-inch height as required by UFAS. The upper cabinets were lowered to provide required reach height for the bottom shelf. Electrical outlets in the backsplash were lowered for the accessible reach height requirements. The existing exhaust range hood was provided with an accessible wall switch. New counter tops were installed at accessible heights. An approved accessible refrigerator was provided.

The existing entry area had the typical entry closet and did not provide space required for side or front wheelchair approach. A new expanded entrance was provided with accessible closet.

Other work included relocating electrical devices to within accessible reach requirements; replacing existing electric tank water heaters with electric tankless water heaters; installing new flooring and base throughout the bedroom and living room areas; painting new and existing walls; and installing new finish hardware with new lever handles.

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Code	Division Name	%	S F Cost	Projected
1	General Requirements	22.81	38.79	87,353
3	Concrete	1.04	1.76	3,984
6	Wood, Plastics, and Composites	6.41	10.91	24,564
8	Openings	1.91	3.25	7,303
9	Finishes	16.18	27.52	61,966
10	Specialties	2.66	4.51	10,180
11	Equipment	9.24	15.73	35,410
21	Fire Suppression	5.20	8.85	19,916
22	Plumbing	19.53	33.22	74,803
23	HVAC	5.20	8.85	19,916
26	Electrical	9.82	16.71	37,622
	Total Building Costs	**100.00**	**170.09**	**383,020**

COST PER SQUARE FOOT = $170.09

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FILE 79

A home of light, energy, life, and magic inspired by the land, light, views toward Marin County's landmark, Mount Tamalpais, air movement, and surrounding trees — the Architect Fani Danadjieva Hansen, AIA, has created a spectacular place for enjoying living, working and playing.

The light and air movement enter everywhere. Steel framed windows link the indoors with the outdoors. Clerestory windows deliver light throughout the day, illuminating the space at little cost.

Decks and multiple terraces on all sides link the interior with exterior space. Entertaining or working with socially distanced seating can take place outdoors, so that guests can visit and feel safe.

The client's program, budget, the community needs, the site, ecology, approvals, sustainability, building materials, schedules, availability of funds, and contractors' demands were some of the components that required a great deal of creativity, design skills, and teamwork. While performing the roles of designer and construction manager simultaneously, Fani Danadjieva Hansen, AIA, interpreted the diverse demands in sketch formats, nurtured the ideas, and integrated the myriad ideas to create a single totality for mutual benefit.

The simplification of the design/build process helped produce seamless spaces, unique to the land and as economically as possible.

Throughout, there is a strong indoors-outdoors connection with the land, bringing light and fresh air that helps to increase the feeling of freedom. As sustainability was a guiding force, natural ventilation provides the interior space with a breeze, cultivating a deep connection with the land. The light brings attention to different elements at different times of the day.

The elegant color palette originates from the surrounding trees' foliage and their bark. Standing seam roofing and the exterior plaster finish harmonize with the natural landscape. The wood flooring throughout provides a calming and warm foundation for enjoyment.

With solid walls framing the views, living room, cooking area, dining room, fireplaces, and bedrooms link with the open outdoor sitting area, available for conversation and play. The master bedroom, bathroom, and sauna access the pool deck and spa, offering spectacular views.

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Code	Division Name	%	S F Cost	Projected
0	Procurement	1.11	8.00	40,733
3	Concrete	17.96	129.68	660,221
5	Metals	30.78	222.22	1,131,306
6	Wood, Plastics	1.53	11.02	56,103
7	Thermal and Moisture	7.79	56.25	286,336
8	Openings	10.29	74.29	378,224
9	Finishes	5.80	41.87	213,197
10	Specialties	1.65	11.91	60,621
11	Equipment	3.41	24.64	125,421
12	Furnishings	2.68	19.32	98,340
14	Conveying Systems	0.94	6.80	34,667
21	Fire Suppression	0.56	4.04	20,576
22	Plumbing	1.98	14.27	72,687
23	HVAC	6.30	45.46	231,458
26	Electrical	6.52	47.05	239,578
27	Communications	0.70	5.03	25,603
	Total Building Costs	**100.00**	**721.87**	**3,675,067**

COST PER SQUARE FOOT = $721.87

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FILE 80

When the owners purchased this 1990's house, they knew from the start that the home was going to need an extensive kitchen makover.

It seemed right to modernize the whole house at once to ensure continuity, so the owners decided to hold off moving in until the renovations were finished. The owners met with Deems Kitchens, laid out their idea to have the kitchen as the center of the living area, and decided on a new open floor plan for their new home.

Once the project kicked-off, the existing space was completely gutted down to the studs. The wall between the living area and the kitchen was taken down, which created a wide open area. The office/bedroom double door in the breakfast area was closed to make a regular bedroom. With this doorway closed, the refrigerator was able to be moved and the kitchen expanded. The original island was removed to make room for a new larger island with additional storage and seating for four. Appliances and the sink were repositioned to create a seamless flow.

The countertops and backsplash are Cambria Premium Quartz. Both the island and backsplash behind the stove and range hood are one piece, with no seams, for easy cleaning. The cabinets are Shaker in white, with the island Dusk Maple to create contrast.

The new kitchen has provided a dramatic update to the home and transformed it into a home ideal for entertaining and relaxed living.

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Code	Division Name	%	S F Cost	Projected
1	General Requirements	1.69	7.00	1,120
6	Wood & Plastics	62.93	259.87	41,579
9	Finishes	7.49	30.93	4,948
11	Equipment	7.70	31.78	5,084
12	Furnishings	1.04	4.28	685
22	Plumbing	3.32	13.72	2,195
23	HVAC	2.21	9.13	1,461
26	Electrical	13.63	56.28	9,004
	Total Building Costs	**100.00**	**412.98**	**66,076**

COST PER SQUARE FOOT = $412.98

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Section Two

Unit-In-Place Costs

DIVISION	00	PROCUREMENT & CONTRACTING REQUIREMENTS
DIVISION	01	GENERAL REQUIREMENTS
DIVISION	02	EXISTING CONDITIONS
DIVISION	03	CONCRETE
DIVISION	04	MASONRY
DIVISION	05	METALS
DIVISION	06	WOOD, PLASTICS, AND COMPOSITES
DIVISION	07	THERMAL AND MOISTURE PROTECTION
DIVISION	08	OPENINGS
DIVISION	09	FINISHES
DIVISION	10	SPECIALTIES
DIVISION	11	EQUIPMENT
DIVISION	12	FURNISHINGS
DIVISION	13	SPECIAL CONSTRUCTION
DIVISION	14	CONVEYING EQUIPMENT
DIVISION	21	FIRE SUPPRESSION
DIVISION	22	PLUMBING
DIVISION	23	HEATING, VENTILATING, AND AIR-COND. (HVAC)
DIVISION	25	INTEGRATED AUTOMATION
DIVISION	26	ELECTRICAL
DIVISION	27	COMMUNICATIONS
DIVISION	28	ELECTRONIC SAFETY AND SECURITY
DIVISION	31	EARTHWORK
DIVISION	32	EXTERIOR IMPROVEMENTS
DIVISION	33	UTILITIES
DIVISION	34	TRANSPORTATION
DIVISION	35	WATERWAY AND MARINE CONSTRUCTION
DIVISION	40	PROCESS INTEGRATION
DIVISION	41	MATERIAL PROCESSING & HANDLING EQUIPMENT
DIVISION	42	PROCESS HEATING, COOLING, & DRYING EQUIP.
DIVISION	43	PROCESS GAS & LIQUID HANDLING, PURIFICATION, & STORAGE EQUIPMENT
DIVISION	44	POLLUTION CONTROL EQUIPMENT
DIVISION	45	INDUSTRY-SPECIFIC MANUFACTURING EQUIPMENT
DIVISION	48	ELECTRICAL POWER GENERATION

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	Unit	Man-Hrs	Material	Labor	Total
01210.01 ALLOWANCES					
ALLOWANCES					
Overhead					
$20,000 project					
Minimum	PCT				15.00
Average	PCT				20.00
Maximum	PCT				40.00
$100,000 project					
Minimum	PCT				12.00
Average	PCT				15.00
Maximum	PCT				25.00
$500,000 project					
Minimum	PCT				10.00
Average	PCT				12.00
Maximum	PCT				20.00
$1,000,000 project					
Minimum	PCT				6.00
Average	PCT				10.00
Maximum	PCT				12.00
$10,000,000 project					
Minimum	PCT				1.50
Average	PCT				5.00
Maximum	PCT				8.00
Profit					
$20,000 project					
Minimum	PCT				10.00
Average	PCT				15.00
Maximum	PCT				25.00
$100,000 project					
Minimum	PCT				10.00
Average	PCT				12.00
Maximum	PCT				20.00
$500,000 project					
Minimum	PCT				5.00
Average	PCT				10.00
Maximum	PCT				15.00
$1,000,000 project					
Minimum	PCT				3.00
Average	PCT				8.00
Maximum	PCT				15.00
Professional fees					
Architectural					
$100,000 project					
Minimum	PCT				5.00
Average	PCT				10.00
Maximum	PCT				20.00
$500,000 project					
Minimum	PCT				5.00
Average	PCT				8.00
Maximum	PCT				12.00
$1,000,000 project					
Minimum	PCT				3.50
Average	PCT				7.00
Maximum	PCT				10.00
Structural engineering					
Minimum	PCT				2.00
Average	PCT				3.00
Maximum	PCT				5.00
Mechanical engineering					
Minimum	PCT				4.00
Average	PCT				5.00
Maximum	PCT				15.00
Electrical engineering					
Minimum	PCT				3.00
Average	PCT				5.00

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	Unit	Man-Hrs	Material	Labor	Total
01210.01 ALLOWANCES (Cont.)					
Electrical engineering					
Maximum	PCT				12.00
Taxes					
Sales tax					
Minimum	PCT				4.00
Average	PCT				5.00
Maximum	PCT				10.00
Unemployment					
Minimum	PCT				3.00
Average	PCT				6.50
Maximum	PCT				8.00
Social security (FICA)	PCT				7.85
01311.30 FIELD STAFF					
FIELD STAFF					
Superintendent					
Minimum	YEAR				110,437.48
Average	YEAR				138,065.93
Maximum	YEAR				165,845.63
Field engineer					
Minimum	YEAR				108,926.39
Average	YEAR				125,022.52
Maximum	YEAR				143,685.70
Foreman					
Minimum	YEAR				73,403.90
Average	YEAR				117,390.73
Maximum	YEAR				137,441.52
Bookkeeper/timekeeper					
Minimum	YEAR				42,460.48
Average	YEAR				55,448.39
Maximum	YEAR				71,738.78
Watchman					
Minimum	YEAR				31,637.22
Average	YEAR				42,321.72
Maximum	YEAR				53,422.50
01321.30 SCHEDULING					
SCHEDULING					
Scheduling for					
$100,000 project					
Minimum	PCT				1.00
Average	PCT				2.00
Maximum	PCT				6.00
$500,000 project					
Minimum	PCT				0.50
Average	PCT				1.00
Maximum	PCT				2.00
$1,000,000 project					
Minimum	PCT				0.50
Average	PCT				0.75
Maximum	PCT				1.50
Scheduling software					
Minimum	EA				760.00
Average	EA				4,330.00
Maximum	EA				86,700.00
01322.30 SURVEYING					
SURVEYING					
Surveying					
Small crew	DAY				1,320.00
Average crew	DAY				1,980.00
Large crew	DAY				2,610.00
Lot lines and boundaries					
Minimum	ACRE				950.00
Average	ACRE				1,950.00
Maximum	ACRE				3,170.00

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	Unit	Man-Hrs	Material	Labor	Total
01323.30 JOB REQUIREMENTS					
JOB REQUIREMENTS					
Job photographs, small jobs					
Minimum	EA				190.00
Average	EA				280.00
Maximum	EA				660.00
Large projects					
Minimum	EA				950.00
Average	EA				1,420.00
Maximum	EA				4,730.00
01452.30 TESTING					
TESTING					
Testing concrete, per test					
Minimum	EA				32.00
Average	EA				53.00
Maximum	EA				110.00
Soil, per test					
Minimum	EA				66.00
Average	EA				160.00
Maximum	EA				440.00
Welding, per test					
Minimum	EA				32.00
Average	EA				53.00
Maximum	EA				210.00
01521.90 SANITARY FACILITIES					
SANITARY FACILITIES					
Porta Potty					
Rental per Day minimum	EA				87.00
Rental per Day Maximum	EA				220.00
Rental per Month minimum	EA				250.00
Rental per Month Maximum	EA				440.00
Specialized, ADA					
Rental per Day minimum	EA				150.00
Rental per Day Max	EA				220.00
Rental per Month, minimum	EA				440.00
Rental per Month, Maximum	EA				730.00
Purchase price, minimum	EA				1,020.00
For each additional servicing per unit per week	EA				49.50
For each delivery	EA				66.00
01540.01 CONSTRUCTION AIDS					
CONSTRUCTION AIDS					
Scaffolding/staging, rent per month					
Measured by lineal feet of base					
10' high	LF				18.00
20' high	LF				32.75
30' high	LF				46.00
40' high	LF				53.00
50' high	LF				63.00
Measured by square foot of surface					
Minimum	SF				0.80
Average	SF				1.38
Maximum	SF				2.47
Safety nets, heavy duty, per job					
Minimum	SF				0.53
Average	SF				0.65
Maximum	SF				1.41
Tarpaulins, fabric, per job					
Minimum	SF				0.37
Average	SF				0.63
Maximum	SF				1.64
Rolling scaffold					
To 10'					
By day	EA				63.00
By week	EA				130.00

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	Unit	Man-Hrs	Material	Labor	Total
01540.01 CONSTRUCTION AIDS (Cont.)					
To 10'					
By month	EA				320.00
To 15'					
By day	EA				76.00
By week	EA				150.00
By month	EA				340.00
To 20'					
By day	EA				89.00
By week	EA				180.00
By month	EA				380.00
01540.08 MOBILIZATION					
MOBILIZATION					
Equipment mobilization					
Bulldozer					
Minimum	EA				300.00
Average	EA				620.00
Maximum	EA				1,040.00
Backhoe/front-end loader					
Minimum	EA				180.00
Average	EA				310.00
Maximum	EA				680.00
Crane, crawler type					
Minimum	EA				3,270.00
Average	EA				8,040.00
Maximum	EA				17,270.00
Truck crane					
Minimum	EA				750.00
Average	EA				1,160.00
Maximum	EA				1,990.00
Pile driving rig					
Minimum	EA				14,890.00
Average	EA				29,780.00
Maximum	EA				53,600.00
01540.09 EQUIPMENT					
EQUIPMENT					
Air compressor					
60 cfm					
By day	EA				130.00
By week	EA				380.00
By month	EA				1,160.00
300 cfm					
By day	EA				270.00
By week	EA				840.00
By month	EA				2,540.00
600 cfm					
By day	EA				740.00
By week	EA				2,210.00
By month	EA				6,690.00
1300 cfm					
By day	EA				1,210.00
By week	EA				4,240.00
By month	EA				12,100.00
Air tools, per compressor, per day					
Minimum	EA				53.00
Average	EA				66.00
Maximum	EA				93.00
Generators, 5 kw					
By day	EA				120.00
By week	EA				360.00
By month	EA				1,100.00
Heaters, salamander type, per week					
Minimum	EA				140.00
Average	EA				200.00
Maximum	EA				430.00

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	Unit	Man-Hrs	Material	Labor	Total
01540.09 EQUIPMENT (Cont.)					
Pumps, submersible					
50 gpm					
By day	EA				96.00
By week	EA				290.00
By month	EA				860.00
100 gpm					
By day	EA				110.00
By week	EA				320.00
By month	EA				970.00
500 gpm					
By day	EA				170.00
By week	EA				520.00
By month	EA				1,560.00
Diaphragm pump, by week					
Minimum	EA				150.00
Average	EA				260.00
Maximum	EA				540.00
Pickup truck					
By day	EA				160.00
By week	EA				470.00
By month	EA				1,470.00
Dump truck					
6 c.y. truck					
By day	EA				430.00
By week	EA				1,300.00
By month	EA				3,900.00
10 c.y. truck					
By day	EA				540.00
By week	EA				1,620.00
By month	EA				4,870.00
16 c.y. truck					
By day	EA				870.00
By week	EA				2,590.00
By month	EA				7,800.00
Backhoe, track mounted					
1/2 c.y. capacity					
By day	EA				670.00
By week	EA				1,620.00
By month	EA				3,680.00
1 c.y. capacity					
By day	EA				1,560.00
By week	EA				4,690.00
By month	EA				14,090.00
2 c.y. capacity					
By day	EA				2,650.00
By week	EA				7,950.00
By month	EA				23,850.00
3 c.y. capacity					
By day	EA				5,060.00
By week	EA				15,140.00
By month	EA				45,520.00
Backhoe/loader, rubber tired					
1/2 c.y. capacity					
By day	EA				600.00
By week	EA				1,800.00
By month	EA				5,420.00
3/4 c.y. capacity					
By day	EA				720.00
By week	EA				2,160.00
By month	EA				6,500.00
Bulldozer					
75 hp					
By day	EA				840.00
By week	EA				2,530.00

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	Unit	Man-Hrs	Material	Labor	Total
01540.09 EQUIPMENT (Cont.)					
75 hp					
By month	EA				7,590.00
200 hp					
By day	EA				2,410.00
By week	EA				7,230.00
By month	EA				21,680.00
400 hp					
By day	EA				3,570.00
By week	EA				10,710.00
By month	EA				32,200.00
Cranes, crawler type					
15 ton capacity					
By day	EA				1,080.00
By week	EA				3,250.00
By month	EA				9,750.00
25 ton capacity					
By day	EA				1,320.00
By week	EA				3,970.00
By month	EA				11,920.00
50 ton capacity					
By day	EA				2,410.00
By week	EA				7,230.00
By month	EA				21,680.00
100 ton capacity					
By day	EA				3,610.00
By week	EA				10,840.00
By month	EA				32,620.00
Truck mounted, hydraulic					
15 ton capacity					
By day	EA				1,020.00
By week	EA				3,070.00
By month	EA				8,860.00
Loader, rubber tired					
1 c.y. capacity					
By day	EA				720.00
By week	EA				2,170.00
By month	EA				6,500.00
2 c.y. capacity					
By day	EA				1,080.00
By week	EA				4,210.00
By month	EA				12,640.00
3 c.y. capacity					
By day	EA				1,930.00
By week	EA				5,780.00
By month	EA				17,340.00
Electric, scissor platform lift					
To 10'					
By day	EA				150.00
By week	EA				290.00
By month	EA				600.00
To 18'					
By day	EA				150.00
By week	EA				300.00
By month	EA				620.00
To 20'					
By day	EA				180.00
By week	EA				360.00
By month	EA				750.00
Concrete Pump					
To 28 cy per hour					
By day	EA				190.00
By week	EA				390.00
By month	EA				790.00

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	Unit	Man-Hrs	Material	Labor	Total
01540.09 EQUIPMENT (Cont.)					
Concrete Pump					
To 38 cy per hour					
By day	EA				220.00
By week	EA				450.00
By month	EA				910.00
To 46 cy per hour					
By day	EA				300.00
By week	EA				600.00
By month	EA				1,270.00
Dumpsters					
10 c.y.					
By day	EA				320.00
By week	EA				380.00
By month	EA				510.00
20 c.y.					
By day	EA				440.00
By week	EA				510.00
By month	EA				630.00
30 c.y.					
By day	EA				570.00
By week	EA				630.00
By month	EA				760.00
Additional dump charges					
Asphalt, recycle	EA				250.00
Concrete, recycle	EA				230.00
Soil, recycle	EA				150.00
Assorted mix of conc, asphalt, soil at landfill	EA				95.00
Non-contaminated debris at landfill	EA				130.00
01562.30 TEMPORARY FACILITIES					
TEMPORARY FACILITIES					
Barricades, temporary					
Highway					
Concrete	LF	0.080	46.25	6.40	52.65
Wood	LF	0.032	10.50	2.56	13.06
Steel	LF	0.027	9.61	2.13	11.74
Pedestrian barricades					
Plywood	SF	0.027	9.61	2.13	11.74
Chain link fence	SF	0.027	7.69	2.13	9.82
Trailers, general office type, per month					
Minimum	EA				290.00
Average	EA				490.00
Maximum	EA				980.00
For skirting around trailer	EA				1,030.00
Crew change trailers, per month					
Minimum	EA				180.00
Average	EA				200.00
Maximum	EA				290.00
Temp const lights with protective cages, 10 lights	EA				120.00
Storage trailers, per month					
Minimum	EA				150.00
Average	EA				180.00
Maximum	EA				270.00
Temp components					
Plywood, 1/2" thick, per sheet					
Minimum	EA				36.25
Average	EA				42.25
Maximum	EA				54.00
Lumber, per foot					
Minimum	LF				1.04
Average	LF				1.59
Maximum	LF				3.58
Masonite / Protection board, per sheet					
Minimum	EA				14.50
Average	EA				21.75

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	Unit	Man-Hrs	Material	Labor	Total
01562.30 TEMPORARY FACILITIES (Cont.)					
Masonite / Protection board, per sheet					
Maximum	EA				30.25
01581.30 SIGNS					
SIGNS					
Construction signs, temporary					
Signs, 2' x 4'					
Minimum	EA				49.00
Average	EA				120.00
Maximum	EA				410.00
Signs, 4' x 8'					
Minimum	EA				100.00
Average	EA				270.00
Maximum	EA				1,150.00
Signs, 8' x 8'					
Minimum	EA				130.00
Average	EA				410.00
Maximum	EA				4,160.00
01783.30 BONDS					
BONDS					
Performance bonds					
Minimum	PCT				1.00
Average	PCT				2.00
Maximum	PCT				3.00
01998.01 SQUARE FOOT COSTS					
SQUARE FOOT COSTS					
Fire Suppression					
60-Model National Average Building					
Minimum	SF				1.98
Average	SF				4.56
Maximum	SF				6.58
Plumbing					
60-Model National Average Building					
Minimum	SF				12.00
Average	SF				21.00
Maximum	SF				22.75
Rough-in					
Minimum	SF				2.17
Average	SF				3.80
Maximum	SF				5.53
Fixtures					
Minimum	SF				2.89
Average	SF				4.56
Maximum	SF				4.85
HVAC					
60-Model National Average Building					
Minimum	SF				27.75
Average	SF				38.75
Maximum	SF				41.75
Controls					
Minimum	SF				5.26
Average	SF				5.78
Maximum	SF				6.97
Ductwork					
Minimum	SF				2.98
Average	SF				5.97
Maximum	SF				6.08
Electrical					
60-Model National Average Building					
Minimum	SF				34.25
Average	SF				47.25
Maximum	SF				71.00
Rough-in					
Minimum	SF				3.38
Average	SF				6.04

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	Unit	Man-Hrs	Material	Labor	Total
01998.01 SQUARE FOOT COSTS (Cont.)					
Electrical Rough-in					
Maximum	SF				11.75
Lighting					
Minimum	SF				4.55
Average	SF				10.75
Maximum	SF				12.50
Switchgear					
Minimum	SF				2.36
Average	SF				3.56
Maximum	SF				4.56
Communications					
60-Model National Average Building					
Minimum	SF				2.07
Average	SF				6.71
Maximum	SF				9.56
Electronic Safety and Security					
60-Model National Average Building					
Minimum	SF				2.33
Average	SF				4.55
Maximum	SF				5.26

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	Unit	Man-Hrs	Material	Labor	Total
02321.30 SOIL BORING					
SOIL BORING					
Borings, uncased, stable earth					
2-1/2" dia.					
Minimum	LF	0.200		29.25	29.25
Average	LF	0.300		43.75	43.75
Maximum	LF	0.480		70.00	70.00
4" dia.					
Minimum	LF	0.218		32.00	32.00
Average	LF	0.343		50.00	50.00
Maximum	LF	0.600		88.00	88.00
Cased, including samples					
2-1/2" dia.					
Minimum	LF	0.240		35.00	35.00
Average	LF	0.400		59.00	59.00
Maximum	LF	0.800		120.00	120.00
4" dia.					
Minimum	LF	0.480		70.00	70.00
Average	LF	0.686		100.00	100.00
Maximum	LF	0.960		140.00	140.00
Drilling in rock					
No sampling					
Minimum	LF	0.436		64.00	64.00
Average	LF	0.632		92.00	92.00
Maximum	LF	0.857		130.00	130.00
With casing and sampling					
Minimum	LF	0.600		88.00	88.00
Average	LF	0.800		120.00	120.00
Maximum	LF	1.200		180.00	180.00
Test pits					
Light soil					
Minimum	EA	3.000		440.00	440.00
Average	EA	4.000		590.00	590.00
Maximum	EA	8.000		1,170.00	1,170.00
Heavy soil					
Minimum	EA	4.800		700.00	700.00
Average	EA	6.000		880.00	880.00
Maximum	EA	12.000		1,760.00	1,760.00
02411.31 CATCH BASIN / MANHOLE DEMOLITION					
CATCH BASIN / MANHOLE DEMOLITION					
Abandon catch basin or manhole (fill with sand)					
Minimum	EA	3.000		440.00	440.00
Average	EA	4.800		700.00	700.00
Maximum	EA	8.000		1,170.00	1,170.00
Remove and reset frame and cover					
Minimum	EA	1.600		230.00	230.00
Average	EA	2.400		350.00	350.00
Maximum	EA	4.000		590.00	590.00
Remove catch basin, to 10' deep					
Masonry					
Minimum	EA	4.800		700.00	700.00
Average	EA	6.000		880.00	880.00
Maximum	EA	8.000		1,170.00	1,170.00
Concrete					
Minimum	EA	6.000		880.00	880.00
Average	EA	8.000		1,170.00	1,170.00
Maximum	EA	9.600		1,400.00	1,400.00
02411.32 FENCE DEMOLITION					
FENCE DEMOLITION					
Remove fencing					
Chain link, 8' high					
For disposal	LF	0.040		3.20	3.20
For reuse	LF	0.100		8.00	8.00

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	Unit	Man-Hrs	Material	Labor	Total
02411.32 FENCE DEMOLITION (Cont.)					
Remove fencing					
Wood					
4' high	SF	0.027		2.13	2.13
6' high	SF	0.032		2.56	2.56
8' high	SF	0.040		3.20	3.20
Masonry					
8" thick					
4' high	SF	0.080		6.40	6.40
6' high	SF	0.100		8.00	8.00
8' high	SF	0.114		9.15	9.15
12" thick					
4' high	SF	0.133		10.75	10.75
6' high	SF	0.160		12.75	12.75
8' high	SF	0.200		16.00	16.00
12' high	SF	0.267		21.25	21.25
02411.33 CURB & GUTTER DEMOLITION					
CURB & GUTTER DEMOLITION					
Curb removal					
Concrete, unreinforced					
Minimum	LF	0.048		7.02	7.02
Average	LF	0.060		8.77	8.77
Maximum	LF	0.075		11.00	11.00
Reinforced					
Minimum	LF	0.077		11.25	11.25
Average	LF	0.086		12.50	12.50
Maximum	LF	0.096		14.00	14.00
Combination curb and 2' gutter					
Unreinforced					
Minimum	LF	0.063		9.23	9.23
Average	LF	0.083		12.00	12.00
Maximum	LF	0.120		17.50	17.50
Reinforced					
Minimum	LF	0.100		14.50	14.50
Average	LF	0.133		19.50	19.50
Maximum	LF	0.240		35.00	35.00
Granite curb					
Minimum	LF	0.069		10.00	10.00
Average	LF	0.080		11.75	11.75
Maximum	LF	0.092		13.50	13.50
Asphalt curb					
Minimum	LF	0.040		5.85	5.85
Average	LF	0.048		7.02	7.02
Maximum	LF	0.057		8.35	8.35
02421.32 GUARDRAIL DEMOLITION					
GUARDRAIL DEMOLITION					
Remove standard guardrail					
Steel					
Minimum	LF	0.060		8.77	8.77
Average	LF	0.080		11.75	11.75
Maximum	LF	0.120		17.50	17.50
Wood					
Minimum	LF	0.052		7.63	7.63
Average	LF	0.062		9.00	9.00
Maximum	LF	0.100		14.50	14.50
02431.33 HYDRANT DEMOLITION					
HYDRANT DEMOLITION					
Remove fire hydrant					
Minimum	EA	3.000		440.00	440.00
Average	EA	4.000		590.00	590.00
Maximum	EA	6.000		880.00	880.00
Remove and reset fire hydrant					
Minimum	EA	8.000		1,170.00	1,170.00
Average	EA	12.000		1,760.00	1,760.00
Maximum	EA	24.000		3,510.00	3,510.00

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	Unit	Man-Hrs	Material	Labor	Total
02441.34 PAVEMENT AND SIDEWALK DEMOLITION					
PAVEMENT AND SIDEWALK DEMOLITION					
Bituminous pavement, up to 3" thick					
On streets					
Minimum	SY	0.069		10.00	10.00
Average	SY	0.096		14.00	14.00
Maximum	SY	0.160		23.50	23.50
On pipe trench					
Minimum	SY	0.096		14.00	14.00
Average	SY	0.120		17.50	17.50
Maximum	SY	0.240		35.00	35.00
Concrete pavement, 6" thick					
No reinforcement					
Minimum	SY	0.120		17.50	17.50
Average	SY	0.160		23.50	23.50
Maximum	SY	0.240		35.00	35.00
With wire mesh					
Minimum	SY	0.185		27.00	27.00
Average	SY	0.240		35.00	35.00
Maximum	SY	0.300		43.75	43.75
With rebars					
Minimum	SY	0.240		35.00	35.00
Average	SY	0.300		43.75	43.75
Maximum	SY	0.400		59.00	59.00
9" thick					
No reinforcement					
Minimum	SY	0.160		23.50	23.50
Average	SY	0.200		29.25	29.25
Maximum	SY	0.240		35.00	35.00
With wire mesh					
Minimum	SY	0.253		37.00	37.00
Average	SY	0.300		43.75	43.75
Maximum	SY	0.369		54.00	54.00
With rebars					
Minimum	SY	0.320		46.75	46.75
Average	SY	0.400		59.00	59.00
Maximum	SY	0.533		78.00	78.00
12" thick					
No reinforcement					
Minimum	SY	0.200		29.25	29.25
Average	SY	0.240		35.00	35.00
Maximum	SY	0.300		43.75	43.75
With wire mesh					
Minimum	SY	0.282		41.25	41.25
Average	SY	0.343		50.00	50.00
Maximum	SY	0.436		64.00	64.00
With rebars					
Minimum	SY	0.400		59.00	59.00
Average	SY	0.480		70.00	70.00
Maximum	SY	0.600		88.00	88.00
Sidewalk, 4" thick, with disposal					
Minimum	SY	0.057		8.35	8.35
Average	SY	0.080		11.75	11.75
Maximum	SY	0.114		16.75	16.75
Removal of pavement markings by waterblasting					
Minimum	SF	0.003		0.26	0.26
Average	SF	0.004		0.32	0.32
Maximum	SF	0.008		0.64	0.64
02451.34 DRAINAGE PIPING DEMOLITION					
DRAINAGE PIPING DEMOLITION					
Remove drainage pipe, not including excavation					
12" dia.					
Minimum	LF	0.080		11.75	11.75
Average	LF	0.100		14.50	14.50
Maximum	LF	0.126		18.50	18.50

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	Unit	Man-Hrs	Material	Labor	Total
02451.34 DRAINAGE PIPING DEMOLITION (Cont.)					
Remove drainage pipe, not including excavation					
18" dia.					
Minimum	LF	0.109		16.00	16.00
Average	LF	0.126		18.50	18.50
Maximum	LF	0.160		23.50	23.50
24" dia.					
Minimum	LF	0.133		19.50	19.50
Average	LF	0.160		23.50	23.50
Maximum	LF	0.200		29.25	29.25
36" dia.					
Minimum	LF	0.160		23.50	23.50
Average	LF	0.200		29.25	29.25
Maximum	LF	0.253		37.00	37.00
02461.34 GAS PIPING DEMOLITION					
GAS PIPING DEMOLITION					
Remove welded steel pipe, not including excavation					
4" dia.					
Minimum	LF	0.120		17.50	17.50
Average	LF	0.150		22.00	22.00
Maximum	LF	0.200		29.25	29.25
5" dia.					
Minimum	LF	0.200		29.25	29.25
Average	LF	0.240		35.00	35.00
Maximum	LF	0.300		43.75	43.75
6" dia.					
Minimum	LF	0.253		37.00	37.00
Average	LF	0.300		43.75	43.75
Maximum	LF	0.400		59.00	59.00
8" dia.					
Minimum	LF	0.369		54.00	54.00
Average	LF	0.480		70.00	70.00
Maximum	LF	0.632		92.00	92.00
10" dia.					
Minimum	LF	0.480		70.00	70.00
Average	LF	0.600		88.00	88.00
Maximum	LF	0.800		120.00	120.00
02471.34 SANITARY PIPING DEMOLITION					
SANITARY PIPING DEMOLITION					
Remove sewer pipe, not including excavation					
4" dia.					
Minimum	LF	0.067		9.75	9.75
Average	LF	0.096		14.00	14.00
Maximum	LF	0.160		23.50	23.50
6" dia.					
Minimum	LF	0.075		11.00	11.00
Average	LF	0.109		16.00	16.00
Maximum	LF	0.200		29.25	29.25
8" dia.					
Minimum	LF	0.080		11.75	11.75
Average	LF	0.120		17.50	17.50
Maximum	LF	0.240		35.00	35.00
10" dia.					
Minimum	LF	0.086		12.50	12.50
Average	LF	0.126		18.50	18.50
Maximum	LF	0.267		39.00	39.00
12" dia.					
Minimum	LF	0.092		13.50	13.50
Average	LF	0.133		19.50	19.50
Maximum	LF	0.300		43.75	43.75
15" dia.					
Minimum	LF	0.100		14.50	14.50
Average	LF	0.141		20.75	20.75
Maximum	LF	0.343		50.00	50.00

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	Unit	Man-Hrs	Material	Labor	Total
02471.34 SANITARY PIPING DEMOLITION (Cont.)					
Remove sewer pipe, not including excavation					
18" dia.					
Minimum	LF	0.109		16.00	16.00
Average	LF	0.160		23.50	23.50
Maximum	LF	0.400		59.00	59.00
24" dia.					
Minimum	LF	0.120		17.50	17.50
Average	LF	0.200		29.25	29.25
Maximum	LF	0.480		70.00	70.00
30" dia.					
Minimum	LF	0.133		19.50	19.50
Average	LF	0.240		35.00	35.00
Maximum	LF	0.600		88.00	88.00
36" dia.					
Minimum	LF	0.160		23.50	23.50
Average	LF	0.300		43.75	43.75
Maximum	LF	0.800		120.00	120.00
02481.34 WATER PIPING DEMOLITION					
WATER PIPING DEMOLITION					
Remove water pipe, not including excavation					
4" dia.					
Minimum	LF	0.096		14.00	14.00
Average	LF	0.109		16.00	16.00
Maximum	LF	0.126		18.50	18.50
6" dia.					
Minimum	LF	0.100		14.50	14.50
Average	LF	0.114		16.75	16.75
Maximum	LF	0.133		19.50	19.50
8" dia.					
Minimum	LF	0.109		16.00	16.00
Average	LF	0.126		18.50	18.50
Maximum	LF	0.150		22.00	22.00
10" dia.					
Minimum	LF	0.114		16.75	16.75
Average	LF	0.133		19.50	19.50
Maximum	LF	0.160		23.50	23.50
12" dia.					
Minimum	LF	0.120		17.50	17.50
Average	LF	0.141		20.75	20.75
Maximum	LF	0.171		25.00	25.00
14" dia.					
Minimum	LF	0.126		18.50	18.50
Average	LF	0.150		22.00	22.00
Maximum	LF	0.185		27.00	27.00
16" dia.					
Minimum	LF	0.133		19.50	19.50
Average	LF	0.160		23.50	23.50
Maximum	LF	0.200		29.25	29.25
18" dia.					
Minimum	LF	0.141		20.75	20.75
Average	LF	0.171		25.00	25.00
Maximum	LF	0.218		32.00	32.00
20" dia.					
Minimum	LF	0.150		22.00	22.00
Average	LF	0.185		27.00	27.00
Maximum	LF	0.240		35.00	35.00
Remove valves					
6"	EA	1.200		180.00	180.00
10"	EA	1.333		200.00	200.00
14"	EA	1.500		220.00	220.00
18"	EA	2.000		290.00	290.00

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	Unit	Man-Hrs	Material	Labor	Total
02491.35 SAW CUTTING PAVEMENT					
SAW CUTTING PAVEMENT					
Pavement, bituminous					
2" thick	LF	0.016		2.72	2.72
3" thick	LF	0.020		3.40	3.40
4" thick	LF	0.025		4.18	4.18
5" thick	LF	0.027		4.53	4.53
6" thick	LF	0.029		4.86	4.86
Concrete pavement, with wire mesh					
4" thick	LF	0.031		5.23	5.23
5" thick	LF	0.033		5.67	5.67
6" thick	LF	0.036		6.18	6.18
8" thick	LF	0.040		6.80	6.80
10" thick	LF	0.044		7.56	7.56
Plain concrete, unreinforced					
4" thick	LF	0.027		4.53	4.53
5" thick	LF	0.031		5.23	5.23
6" thick	LF	0.033		5.67	5.67
8" thick	LF	0.036		6.18	6.18
10" thick	LF	0.040		6.80	6.80
02492.98 WALL, EXTERIOR, DEMOLITION					
WALL, EXTERIOR, DEMOLITION					
Concrete wall					
Light reinforcing					
6" thick	SF	0.120		17.50	17.50
8" thick	SF	0.126		18.50	18.50
10" thick	SF	0.133		19.50	19.50
12" thick	SF	0.150		22.00	22.00
Medium reinforcing					
6" thick	SF	0.126		18.50	18.50
8" thick	SF	0.133		19.50	19.50
10" thick	SF	0.150		22.00	22.00
12" thick	SF	0.171		25.00	25.00
Heavy reinforcing					
6" thick	SF	0.141		20.75	20.75
8" thick	SF	0.150		22.00	22.00
10" thick	SF	0.171		25.00	25.00
12" thick	SF	0.200		29.25	29.25
Masonry					
No reinforcing					
8" thick	SF	0.053		7.80	7.80
12" thick	SF	0.060		8.77	8.77
16" thick	SF	0.069		10.00	10.00
Horizontal reinforcing					
8" thick	SF	0.060		8.77	8.77
12" thick	SF	0.065		9.48	9.48
16" thick	SF	0.077		11.25	11.25
Vertical reinforcing					
8" thick	SF	0.077		11.25	11.25
12" thick	SF	0.089		13.00	13.00
16" thick	SF	0.109		16.00	16.00
Remove concrete headwall					
15" pipe	EA	1.714		250.00	250.00
18" pipe	EA	2.000		290.00	290.00
24" pipe	EA	2.182		320.00	320.00
30" pipe	EA	2.400		350.00	350.00
36" pipe	EA	2.667		390.00	390.00
48" pipe	EA	3.429		500.00	500.00
60" pipe	EA	4.800		700.00	700.00
02510.61 COMPLETE BUILDING DEMOLITION					
COMPLETE BUILDING DEMOLITION					
Building, complete with disposal					
Wood frame	CF	0.003		0.51	0.51
Concrete	CF	0.004		0.77	0.77
Steel frame	CF	0.005		1.02	1.02

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02511.90 SELECTIVE BUILDING DEMOLITION

	Unit	Man-Hrs	Material	Labor	Total
SELECTIVE BUILDING DEMOLITION					
Partition removal					
Concrete block partitions					
4" thick	SF	0.040		3.20	3.20
8" thick	SF	0.053		4.27	4.27
12" thick	SF	0.073		5.82	5.82
Brick masonry partitions					
4" thick	SF	0.040		3.20	3.20
8" thick	SF	0.050		4.00	4.00
12" thick	SF	0.067		5.33	5.33
16" thick	SF	0.100		8.00	8.00
Cast-in-place concrete partitions					
Unreinforced					
6" thick	SF	0.160		23.50	23.50
8" thick	SF	0.171		25.00	25.00
10" thick	SF	0.200		29.25	29.25
12" thick	SF	0.240		35.00	35.00
Reinforced					
6" thick	SF	0.185		27.00	27.00
8" thick	SF	0.240		35.00	35.00
10" thick	SF	0.267		39.00	39.00
12" thick	SF	0.320		46.75	46.75
Terra cotta					
To 6" thick	SF	0.040		3.20	3.20
Stud partitions					
Metal or wood, with drywall both sides	SF	0.040		3.20	3.20
Metal studs, both sides, lath and plaster	SF	0.053		4.27	4.27
Door and frame removal					
Hollow metal in masonry wall					
Single					
2'6"x6'8"	EA	1.000		80.00	80.00
3'x7'	EA	1.333		110.00	110.00
Double					
3'x7'	EA	1.600		130.00	130.00
4'x8'	EA	1.600		130.00	130.00
Wood in framed wall					
Single					
2'6"x6'8"	EA	0.571		45.75	45.75
3'x6'8"	EA	0.667		53.00	53.00
Double					
2'6"x6'8"	EA	0.800		64.00	64.00
3'x6'8"	EA	0.889		71.00	71.00
Remove for re-use					
Hollow metal	EA	2.000		160.00	160.00
Wood	EA	1.333		110.00	110.00
Floor removal					
Brick flooring	SF	0.032		2.56	2.56
Ceramic or quarry tile	SF	0.018		1.42	1.42
Terrazzo	SF	0.036		2.84	2.84
Heavy wood	SF	0.021		1.70	1.70
Residential wood	SF	0.023		1.83	1.83
Resilient tile or linoleum	SF	0.008		0.64	0.64
Ceiling removal					
Acoustical tile ceiling					
Adhesive fastened	SF	0.008		0.64	0.64
Furred and glued	SF	0.007		0.53	0.53
Suspended grid	SF	0.005		0.40	0.40
Drywall ceiling					
Furred and nailed	SF	0.009		0.71	0.71
Nailed to framing	SF	0.008		0.64	0.64
Plastered ceiling					
Furred on framing	SF	0.020		1.60	1.60
Suspended system	SF	0.027		2.13	2.13

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	Unit	Man-Hrs	Material	Labor	Total
02511.90 SELECTIVE BUILDING DEMOLITION (Cont.)					
Roofing removal					
Steel frame					
Corrugated metal roofing	SF	0.016		1.28	1.28
Built-up roof on metal deck	SF	0.027		2.13	2.13
Wood frame					
Built-up roof on wood deck	SF	0.025		1.97	1.97
Roof shingles	SF	0.013		1.06	1.06
Roof tiles	SF	0.027		2.13	2.13
Concrete frame	CF	0.053		4.27	4.27
Concrete plank	SF	0.040		3.20	3.20
Built-up roof on concrete	SF	0.023		1.83	1.83
Cut-outs					
Concrete, elevated slabs, mesh reinforcing					
Under 5 cf	CF	0.800		64.00	64.00
Over 5 cf	CF	0.667		53.00	53.00
Bar reinforcing					
Under 5 cf	CF	1.333		110.00	110.00
Over 5 cf	CF	1.000		80.00	80.00
Window removal					
Metal windows, trim included					
2'x3'	EA	0.800		64.00	64.00
2'x4'	EA	0.889		71.00	71.00
2'x6'	EA	1.000		80.00	80.00
3'x4'	EA	1.000		80.00	80.00
3'x6'	EA	1.143		92.00	92.00
3'x8'	EA	1.333		110.00	110.00
4'x4'	EA	1.333		110.00	110.00
4'x6'	EA	1.600		130.00	130.00
4'x8'	EA	2.000		160.00	160.00
Wood windows, trim included					
2'x3'	EA	0.444		35.50	35.50
2'x4'	EA	0.471		37.75	37.75
2'x6'	EA	0.500		40.00	40.00
3'x4'	EA	0.533		42.75	42.75
3'x6'	EA	0.571		45.75	45.75
3'x8'	EA	0.615		49.25	49.25
6'x4'	EA	0.667		53.00	53.00
6'x6'	EA	0.727		58.00	58.00
6'x8'	EA	0.800		64.00	64.00
Walls, concrete, bar reinforcing					
Small jobs	CF	0.533		42.75	42.75
Large jobs	CF	0.444		35.50	35.50
Brick walls, not including toothing					
4" thick	SF	0.040		3.20	3.20
8" thick	SF	0.050		4.00	4.00
12" thick	SF	0.067		5.33	5.33
16" thick	SF	0.100		8.00	8.00
Concrete block walls, not including toothing					
4" thick	SF	0.044		3.55	3.55
6" thick	SF	0.047		3.76	3.76
8" thick	SF	0.050		4.00	4.00
10" thick	SF	0.057		4.57	4.57
12" thick	SF	0.067		5.33	5.33
Rubbish handling					
Load in dumpster or truck					
Minimum	CF	0.018		1.42	1.42
Maximum	CF	0.027		2.13	2.13
For use of elevators, add					
Minimum	CF	0.004		0.32	0.32
Maximum	CF	0.008		0.64	0.64
Rubbish hauling					
Rubbish chute, plastic. Minimum	LF				22.00
Rubbish chute, plastic. Maximum	LF				55.00
Hand loaded on trucks, 2 mile trip	CY	0.320		54.00	54.00
Machine loaded on trucks, 2 mile trip	CY	0.240		35.00	35.00

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	Unit	Man-Hrs	Material	Labor	Total
02650.06 UNDERGROUND STORAGE TANK REMOVAL					
UNDERGROUND STORAGE TANK REMOVAL					
Remove underground storage tank, and backfill					
50 to 250 gals	EA	8.000		1,170.00	1,170.00
600 gals	EA	8.000		1,170.00	1,170.00
1000 gals	EA	12.000		1,760.00	1,760.00
4000 gals	EA	19.200		2,810.00	2,810.00
5000 gals	EA	19.200		2,810.00	2,810.00
10,000 gals	EA	32.000		4,680.00	4,680.00
12,000 gals	EA	40.000		5,850.00	5,850.00
15,000 gals	EA	48.000		7,020.00	7,020.00
20,000 gals	EA	60.000		8,780.00	8,780.00
02650.07 SEPTIC TANK REMOVAL					
SEPTIC TANK REMOVAL					
Remove septic tank					
1000 gals	EA	2.000		290.00	290.00
2000 gals	EA	2.400		350.00	350.00
5000 gals	EA	3.000		440.00	440.00
15,000 gals	EA	24.000		3,510.00	3,510.00
25,000 gals	EA	32.000		4,680.00	4,680.00
40,000 gals	EA	48.000		7,020.00	7,020.00
02820.01 ASBESTOS REMOVAL					
ASBESTOS REMOVAL					
Enclosure using wood studs & poly, install & remove	SF	0.020	610.00	1.60	611.60
Trailer (change room)	DAY				140.00
Disposal suits (4 suits per man day)	DAY				57.00
Type C respirator mask, includes hose & filters, per man	DAY				28.25
Respirator mask & filter, light contamination	DAY				11.25
Air monitoring test, 12 tests per day					
Off job testing	DAY				1,580.00
On the job testing	DAY				2,110.00
Asbestos vacuum with attachments	EA				920.00
Hydraspray piston pump	EA				1,220.00
Negative air pressure system	EA				1,220.00
Grade D breathing air equipment	EA				2,750.00
Glove bag, 44" x 60" x 6 mil plastic	EA				8.86
40 CY asbestos dumpster					
Weekly rental	EA				1,020.00
Pick up/delivery	EA				470.00
Asbestos dump fee	EA				300.00
02820.02 DUCT INSULATION REMOVAL					
DUCT INSULATION REMOVAL					
Remove duct insulation, duct size					
6" x 12"	LF	0.044	310.00	3.55	313.55
x 18"	LF	0.062	230.00	4.92	234.92
x 24"	LF	0.089	160.00	7.11	167.11
8" x 12"	LF	0.067	210.00	5.33	215.33
x 18"	LF	0.073	190.00	5.82	195.82
x 24"	LF	0.100	140.00	8.00	148.00
12" x 12"	LF	0.067	210.00	5.33	215.33
x 18"	LF	0.089	160.00	7.11	167.11
x 24"	LF	0.114	120.00	9.15	129.15
02820.03 PIPE INSULATION REMOVAL					
PIPE INSULATION REMOVAL					
Removal, asbestos insulation					
2" thick, pipe					
1" to 3" dia.	LF	0.067		5.33	5.33
4" to 6" dia.	LF	0.076		6.10	6.10
3" thick					
7" to 8" dia.	LF	0.080		6.40	6.40
9" to 10" dia.	LF	0.084		6.74	6.74
11" to 12" dia.	LF	0.089		7.11	7.11
13" to 14" dia.	LF	0.094		7.53	7.53
15" to 18" dia.	LF	0.100		8.00	8.00

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	Unit	Man-Hrs	Material	Labor	Total
03013.01 CONCRETE REPAIR					
CONCRETE REPAIR					
Epoxy grout floor patch, 1/4" thick	SF	0.080	8.89	6.40	15.29
Grout, epoxy, 2 component system	CF				430.00
Epoxy sand	BAG				29.00
Epoxy modifier	GAL				190.00
Epoxy gel grout	SF	0.800	4.32	64.00	68.32
Injection valve, 1 way, threaded plastic	EA	0.160	12.00	12.75	24.75
Grout crack seal, 2 component	CF	0.800	1,000.00	64.00	1,064.00
Grout, non-shrink	CF	0.800	100.00	64.00	164.00
Concrete, epoxy modified					
Sand mix	CF	0.320	160.00	25.50	185.50
Gravel mix	CF	0.296	110.00	23.75	133.75
Concrete repair					
Soffit repair					
16" wide	LF	0.160	5.59	12.75	18.34
18" wide	LF	0.167	5.94	13.25	19.19
24" wide	LF	0.178	7.10	14.25	21.35
30" wide	LF	0.190	7.99	15.25	23.24
32" wide	LF	0.200	8.52	16.00	24.52
Edge repair					
2" spall	LF	0.200	2.66	16.00	18.66
3" spall	LF	0.211	2.74	16.75	19.49
4" spall	LF	0.216	2.83	17.25	20.08
6" spall	LF	0.222	2.93	17.75	20.68
8" spall	LF	0.235	3.11	18.75	21.86
9" spall	LF	0.267	3.19	21.25	24.44
Crack repair, 1/8" crack	LF	0.080	5.23	6.40	11.63
Reinforcing steel repair					
1 bar, 4 ft					
#4 bar	LF	0.100	0.78	10.50	11.28
#5 bar	LF	0.100	1.05	10.50	11.55
#6 bar	LF	0.107	1.40	11.25	12.65
#8 bar	LF	0.107	2.49	11.25	13.74
#9 bar	LF	0.114	3.17	12.00	15.17
#11 bar	LF	0.114	4.96	12.00	16.96
Form fabric, nylon					
18" diameter	LF				22.25
20" diameter	LF				22.50
24" diameter	LF				37.00
30" diameter	LF				38.00
36" diameter	LF				43.75
Pile repairs					
Polyethylene wrap					
30 mil thick					
60" wide	SF	0.267	24.00	21.25	45.25
72" wide	SF	0.320	26.25	25.50	51.75
60 mil thick					
60" wide	SF	0.267	28.25	21.25	49.50
80" wide	SF	0.364	33.00	29.00	62.00
Pile spall, average repair 3'					
18" x 18"	EA	0.667	74.00	53.00	127.00
20" x 20"	EA	0.800	99.00	64.00	163.00
03100.30 FORMWORK ACCESSORIES					
FORMWORK ACCESSORIES					
Column clamps					
Small, adjustable, 24"x24"	EA				110.00
Medium 36"x36"	EA				110.00
Large 60"x60"	EA				120.00
Forming hangers					
Iron 14 ga.	EA				3.25
22 ga.	EA				3.25
Snap ties					
Short-end with washers, 6" long	EA				1.91
12" long	EA				2.15

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	Unit	Man-Hrs	Material	Labor	Total
03100.30 FORMWORK ACCESSORIES (Cont.)					
Ties, Short-end with washers, 6" long					
18" long	EA				2.58
24" long	EA				2.77
Long-end with washers, 6' long	EA				2.24
12" long	EA				2.49
18" long	EA				2.82
24" long	EA				3.15
Stakes					
Round, pre-drilled holes, 12" long	EA				6.14
18" long	EA				6.87
24" long	EA				8.90
30" long	EA				11.50
36" long	EA				13.75
48" long	EA				18.50
I beam type, 12" long	EA				5.05
18" long	EA				5.75
24" long	EA				8.73
30" long	EA				10.25
36" long	EA				13.00
48" long	EA				16.25
Taper ties					
50K, 1-1/4" to 1", 35" long	EA				85.00
45" long	EA				140.00
55" long	EA				170.00
Walers					
5" deep, 4' long	EA				240.00
8' long	EA				310.00
12' long	EA				510.00
16' long	EA				660.00
8" deep, 4' long	EA				320.00
8' long	EA				580.00
12' long	EA				840.00
16' long	EA				1,330.00
03111.30 BEAM FORMWORK					
BEAM FORMWORK					
Beam forms, job built					
Beam bottoms					
1 use	SF	0.133	6.69	13.75	20.44
2 uses	SF	0.127	3.94	13.00	16.94
3 uses	SF	0.123	3.02	12.50	15.52
4 uses	SF	0.118	2.50	12.00	14.50
5 uses	SF	0.114	2.28	11.75	14.03
Beam sides					
1 use	SF	0.089	4.78	9.08	13.86
2 uses	SF	0.084	2.84	8.61	11.45
3 uses	SF	0.080	2.50	8.18	10.68
4 uses	SF	0.076	2.30	7.79	10.09
5 uses	SF	0.073	2.03	7.43	9.46
03111.31 BOX CULVERT FORMWORK					
BOX CULVERT FORMWORK					
Box culverts, job built					
6' x 6'					
1 use	SF	0.080	5.36	8.18	13.54
2 uses	SF	0.076	2.92	7.79	10.71
3 uses	SF	0.073	2.42	7.43	9.85
4 uses	SF	0.070	2.05	7.11	9.16
5 uses	SF	0.067	1.79	6.81	8.60
8' x 12'					
1 use	SF	0.067	5.36	6.81	12.17
2 uses	SF	0.064	2.92	6.54	9.46
3 uses	SF	0.062	2.42	6.29	8.71
4 uses	SF	0.059	2.05	6.05	8.10
5 uses	SF	0.057	1.79	5.84	7.63

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	Unit	Man-Hrs	Material	Labor	Total
03111.32 COLUMN FORMWORK					
COLUMN FORMWORK					
Column, square forms, job built					
8" x 8" columns					
1 use	SF	0.160	5.63	16.25	21.88
2 uses	SF	0.154	3.03	15.75	18.78
3 uses	SF	0.148	2.56	15.25	17.81
4 uses	SF	0.143	2.33	14.50	16.83
5 uses	SF	0.138	1.99	14.00	15.99
12" x 12" columns					
1 use	SF	0.145	5.13	14.75	19.88
2 uses	SF	0.140	2.85	14.25	17.10
3 uses	SF	0.136	2.28	13.75	16.03
4 uses	SF	0.131	1.99	13.50	15.49
5 uses	SF	0.127	1.67	13.00	14.67
16" x 16" columns					
1 use	SF	0.133	4.90	13.75	18.65
2 uses	SF	0.129	2.58	13.25	15.83
3 uses	SF	0.125	2.06	12.75	14.81
4 uses	SF	0.121	1.89	12.50	14.39
5 uses	SF	0.118	1.55	12.00	13.55
24" x 24" columns					
1 use	SF	0.123	4.90	12.50	17.40
2 uses	SF	0.119	2.28	12.25	14.53
3 uses	SF	0.116	1.90	11.75	13.65
4 uses	SF	0.113	1.55	11.50	13.05
5 uses	SF	0.110	1.42	11.25	12.67
36" x 36" columns					
1 use	SF	0.114	4.94	11.75	16.69
2 uses	SF	0.111	2.31	11.25	13.56
3 uses	SF	0.108	1.90	11.00	12.90
4 uses	SF	0.105	1.64	10.75	12.39
5 uses	SF	0.103	1.53	10.50	12.03
Round fiber forms, 1 use					
10" dia.	LF	0.160	5.79	16.25	22.04
12" dia.	LF	0.163	7.13	16.75	23.88
14" dia.	LF	0.170	9.36	17.50	26.86
16" dia.	LF	0.178	12.25	18.25	30.50
18" dia.	LF	0.190	20.00	19.50	39.50
24" dia.	LF	0.205	24.50	21.00	45.50
30" dia.	LF	0.222	36.75	22.75	59.50
36" dia.	LF	0.242	45.75	24.75	70.50
42" dia.	LF	0.267	83.00	27.25	110.25
03111.33 CURB FORMWORK					
CURB FORMWORK					
Curb forms					
Straight, 6" high					
1 use	LF	0.080	3.35	8.18	11.53
2 uses	LF	0.076	2.01	7.79	9.80
3 uses	LF	0.073	1.51	7.43	8.94
4 uses	LF	0.070	1.35	7.11	8.46
5 uses	LF	0.067	1.23	6.81	8.04
Curved, 6" high					
1 use	LF	0.100	3.63	10.25	13.88
2 uses	LF	0.094	2.28	9.62	11.90
3 uses	LF	0.089	1.74	9.08	10.82
4 uses	LF	0.085	1.58	8.70	10.28
5 uses	LF	0.082	1.48	8.34	9.82
03111.34 ELEVATED SLAB FORMWORK					
ELEVATED SLAB FORMWORK					
Elevated slab formwork					
Slab, with drop panels					
1 use	SF	0.064	6.63	6.54	13.17
2 uses	SF	0.062	3.84	6.29	10.13
3 uses	SF	0.059	2.98	6.05	9.03

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	Unit	Man-Hrs	Material	Labor	Total
03111.34 ELEVATED SLAB FORMWORK (Cont.)					
Slab, with drop panels					
4 uses	SF	0.057	2.64	5.84	8.48
5 uses	SF	0.055	2.37	5.64	8.01
Floor slab, hung from steel beams					
1 use	SF	0.062	5.33	6.29	11.62
2 uses	SF	0.059	2.92	6.05	8.97
3 uses	SF	0.057	2.66	5.84	8.50
4 uses	SF	0.055	2.29	5.64	7.93
5 uses	SF	0.053	1.96	5.45	7.41
Floor slab, with pans or domes					
1 use	SF	0.073	9.51	7.43	16.94
2 uses	SF	0.070	6.17	7.11	13.28
3 uses	SF	0.067	5.76	6.81	12.57
4 uses	SF	0.064	5.37	6.54	11.91
5 uses	SF	0.062	4.76	6.29	11.05
Equipment curbs, 12" high					
1 use	LF	0.080	4.69	8.18	12.87
2 uses	LF	0.076	3.02	7.79	10.81
3 uses	LF	0.073	2.62	7.43	10.05
4 uses	LF	0.070	2.36	7.11	9.47
5 uses	LF	0.067	2.04	6.81	8.85
03111.35 EQUIPMENT PAD FORMWORK					
EQUIPMENT PAD FORMWORK					
Equipment pad, job built					
1 use	SF	0.100	5.84	10.25	16.09
2 uses	SF	0.094	3.51	9.62	13.13
3 uses	SF	0.089	2.81	9.08	11.89
4 uses	SF	0.084	2.19	8.61	10.80
5 uses	SF	0.080	1.74	8.18	9.92
03111.36 FOOTING FORMWORK					
FOOTING FORMWORK					
Wall footings, job built, continuous					
1 use	SF	0.080	3.13	8.18	11.31
2 uses	SF	0.076	2.20	7.79	9.99
3 uses	SF	0.073	1.81	7.43	9.24
4 uses	SF	0.070	1.61	7.11	8.72
5 uses	SF	0.067	1.39	6.81	8.20
Column footings, spread					
1 use	SF	0.100	3.31	10.25	13.56
2 uses	SF	0.094	2.46	9.62	12.08
3 uses	SF	0.089	1.75	9.08	10.83
4 uses	SF	0.084	1.47	8.61	10.08
5 uses	SF	0.080	1.35	8.18	9.53
03111.37 GRADE BEAM FORMWORK					
GRADE BEAM FORMWORK					
Grade beams, job built					
1 use	SF	0.080	4.93	8.18	13.11
2 uses	SF	0.076	2.76	7.79	10.55
3 uses	SF	0.073	2.16	7.43	9.59
4 uses	SF	0.070	1.79	7.11	8.90
5 uses	SF	0.067	1.49	6.81	8.30
03111.38 PILE CAP FORMWORK					
PILE CAP FORMWORK					
Pile cap forms, job built					
Square					
1 use	SF	0.100	5.59	10.25	15.84
2 uses	SF	0.094	3.23	9.62	12.85
3 uses	SF	0.089	2.56	9.08	11.64
4 uses	SF	0.084	2.26	8.61	10.87
5 uses	SF	0.080	1.87	8.18	10.05
Triangular					
1 use	SF	0.114	5.94	11.75	17.69
2 uses	SF	0.107	3.91	11.00	14.91

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	Unit	Man-Hrs	Material	Labor	Total
03111.38 PILE CAP FORMWORK (Cont.)					
Triangular					
3 uses	SF	0.100	3.13	10.25	13.38
4 uses	SF	0.094	2.56	9.62	12.18
5 uses	SF	0.089	2.04	9.08	11.12
03111.39 SLAB / MAT FORMWORK					
SLAB / MAT FORMWORK					
Mat foundations, job built					
1 use	SF	0.100	4.88	10.25	15.13
2 uses	SF	0.094	2.82	9.62	12.44
3 uses	SF	0.089	2.08	9.08	11.16
4 uses	SF	0.084	1.75	8.61	10.36
5 uses	SF	0.080	1.41	8.18	9.59
Edge forms					
6" high					
1 use	LF	0.073	4.69	7.43	12.12
2 uses	LF	0.070	2.70	7.11	9.81
3 uses	LF	0.067	1.99	6.81	8.80
4 uses	LF	0.064	1.68	6.54	8.22
5 uses	LF	0.062	1.35	6.29	7.64
12" high					
1 use	LF	0.080	4.65	8.18	12.83
2 uses	LF	0.076	2.63	7.79	10.42
3 uses	LF	0.073	1.92	7.43	9.35
4 uses	LF	0.070	1.60	7.11	8.71
5 uses	LF	0.067	1.29	6.81	8.10
Formwork for openings					
1 use	SF	0.160	6.66	16.25	22.91
2 uses	SF	0.145	3.83	14.75	18.58
3 uses	SF	0.133	3.20	13.75	16.95
4 uses	SF	0.123	2.47	12.50	14.97
5 uses	SF	0.114	2.07	11.75	13.82
03111.40 STAIR FORMWORK					
STAIR FORMWORK					
Stairway forms, job built					
1 use	SF	0.160	7.69	16.25	23.94
2 uses	SF	0.145	4.30	14.75	19.05
3 uses	SF	0.133	3.35	13.75	17.10
4 uses	SF	0.123	3.06	12.50	15.56
5 uses	SF	0.114	2.57	11.75	14.32
Stairs, elevated					
1 use	SF	0.160	9.27	16.25	25.52
2 uses	SF	0.133	4.93	13.75	18.68
3 uses	SF	0.114	4.30	11.75	16.05
4 uses	SF	0.107	3.71	11.00	14.71
5 uses	SF	0.100	3.06	10.25	13.31
03111.41 WALL FORMWORK					
WALL FORMWORK					
Wall forms, exterior, job built					
Up to 8' high wall					
1 use	SF	0.080	5.26	8.18	13.44
2 uses	SF	0.076	2.91	7.79	10.70
3 uses	SF	0.073	2.56	7.43	9.99
4 uses	SF	0.070	2.20	7.11	9.31
5 uses	SF	0.067	1.93	6.81	8.74
Over 8' high wall					
1 use	SF	0.100	5.78	10.25	16.03
2 uses	SF	0.094	3.30	9.62	12.92
3 uses	SF	0.089	3.01	9.08	12.09
4 uses	SF	0.084	2.74	8.61	11.35
5 uses	SF	0.080	2.37	8.18	10.55
Over 16' high wall					
1 use	SF	0.114	6.07	11.75	17.82
2 uses	SF	0.107	3.64	11.00	14.64

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	Unit	Man-Hrs	Material	Labor	Total
03111.41 WALL FORMWORK (Cont.)					
Over 16' high wall					
3 uses	SF	0.100	3.30	10.25	13.55
4 uses	SF	0.094	3.01	9.62	12.63
5 uses	SF	0.089	2.74	9.08	11.82
Radial wall forms					
1 use	SF	0.123	5.66	12.50	18.16
2 uses	SF	0.114	3.39	11.75	15.14
3 uses	SF	0.107	3.14	11.00	14.14
4 uses	SF	0.100	2.85	10.25	13.10
5 uses	SF	0.094	2.56	9.62	12.18
Retaining wall forms					
1 use	SF	0.089	4.89	9.08	13.97
2 uses	SF	0.084	2.60	8.61	11.21
3 uses	SF	0.080	2.24	8.18	10.42
4 uses	SF	0.076	1.95	7.79	9.74
5 uses	SF	0.073	1.66	7.43	9.09
Radial retaining wall forms					
1 use	SF	0.133	5.18	13.75	18.93
2 uses	SF	0.123	3.18	12.50	15.68
3 uses	SF	0.114	2.72	11.75	14.47
4 uses	SF	0.107	2.58	11.00	13.58
5 uses	SF	0.100	2.22	10.25	12.47
Column pier and pilaster					
1 use	SF	0.160	5.53	16.25	21.78
2 uses	SF	0.145	3.26	14.75	18.01
3 uses	SF	0.133	3.04	13.75	16.79
4 uses	SF	0.123	2.78	12.50	15.28
5 uses	SF	0.114	2.48	11.75	14.23
Interior wall forms					
Up to 8' high					
1 use	SF	0.073	5.26	7.43	12.69
2 uses	SF	0.070	2.93	7.11	10.04
3 uses	SF	0.067	2.60	6.81	9.41
4 uses	SF	0.064	2.22	6.54	8.76
5 uses	SF	0.062	1.87	6.29	8.16
Over 8' high					
1 use	SF	0.089	5.78	9.08	14.86
2 uses	SF	0.084	3.30	8.61	11.91
3 uses	SF	0.080	3.01	8.18	11.19
4 uses	SF	0.076	2.74	7.79	10.53
5 uses	SF	0.073	2.39	7.43	9.82
Over 16' high					
1 use	SF	0.100	6.05	10.25	16.30
2 uses	SF	0.094	3.64	9.62	13.26
3 uses	SF	0.089	3.30	9.08	12.38
4 uses	SF	0.084	3.01	8.61	11.62
5 uses	SF	0.080	2.74	8.18	10.92
Radial wall forms					
1 use	SF	0.107	5.41	11.00	16.41
2 uses	SF	0.100	3.24	10.25	13.49
3 uses	SF	0.094	3.00	9.62	12.62
4 uses	SF	0.089	2.72	9.08	11.80
5 uses	SF	0.084	2.44	8.61	11.05
Curved wall forms, 24" sections					
1 use	SF	0.160	5.17	16.25	21.42
2 uses	SF	0.145	3.08	14.75	17.83
3 uses	SF	0.133	2.86	13.75	16.61
4 uses	SF	0.123	2.60	12.50	15.10
5 uses	SF	0.114	2.32	11.75	14.07
PVC form liner, per side, smooth finish					
1 use	SF	0.067	9.32	6.81	16.13
2 uses	SF	0.064	5.12	6.54	11.66
3 uses	SF	0.062	4.33	6.29	10.62
4 uses	SF	0.057	3.34	5.84	9.18
5 uses	SF	0.053	2.66	5.45	8.11

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	Unit	Man-Hrs	Material	Labor	Total
03112.42 MISCELLANEOUS FORMWORK					
MISCELLANEOUS FORMWORK					
Keyway forms (5 uses)					
2 x 4	LF	0.040	0.43	4.09	4.52
2 x 6	LF	0.044	0.62	4.54	5.16
Bulkheads					
Walls, with keyways					
2 piece	LF	0.073	5.88	7.43	13.31
3 piece	LF	0.080	7.44	8.18	15.62
Elevated slab, with keyway					
2 piece	LF	0.067	6.74	6.81	13.55
3 piece	LF	0.073	9.93	7.43	17.36
Ground slab, with keyway					
2 piece	LF	0.057	6.97	5.84	12.81
3 piece	LF	0.062	8.51	6.29	14.80
Chamfer strips					
Wood					
1/2" wide	LF	0.018	0.29	1.81	2.10
3/4" wide	LF	0.018	0.37	1.81	2.18
1" wide	LF	0.018	0.50	1.81	2.31
PVC					
1/2" wide	LF	0.018	1.29	1.81	3.10
3/4" wide	LF	0.018	1.40	1.81	3.21
1" wide	LF	0.018	2.03	1.81	3.84
Radius					
1"	LF	0.019	1.51	1.94	3.45
1-1/2"	LF	0.019	2.73	1.94	4.67
Reglets					
Galvanized steel, 24 ga.	LF	0.032	2.26	3.27	5.53
Metal formwork					
Straight edge forms					
4" high	LF	0.050	24.75	5.11	29.86
6" high	LF	0.053	27.00	5.45	32.45
8" high	LF	0.057	37.00	5.84	42.84
12" high	LF	0.062	43.00	6.29	49.29
16" high	LF	0.067	51.00	6.81	57.81
Curb form, S-shape					
12" x					
1'-6"	LF	0.114	54.00	11.75	65.75
2'	LF	0.107	60.00	11.00	71.00
2'-6"	LF	0.100	65.00	10.25	75.25
3'	LF	0.089	70.00	9.08	79.08
03150.01 CONCRETE ACCESSORIES					
CONCRETE ACCESSORIES					
Expansion joint, poured					
Asphalt					
1/2" x 1"	LF	0.016	1.31	1.28	2.59
1" x 2"	LF	0.017	4.10	1.39	5.49
Liquid neoprene, cold applied					
1/2" x 1"	LF	0.016	3.52	1.30	4.82
1" x 2"	LF	0.018	14.50	1.42	15.92
Polyurethane, 2 parts					
1/2" x 1"	LF	0.027	3.37	2.13	5.50
1" x 2"	LF	0.029	13.25	2.32	15.57
Rubberized asphalt, cold					
1/2" x 1"	LF	0.016	0.86	1.28	2.14
1" x 2"	LF	0.017	2.59	1.39	3.98
Hot, fuel resistant					
1/2" x 1"	LF	0.016	1.56	1.28	2.84
1" x 2"	LF	0.017	7.53	1.39	8.92
Expansion joint, premolded, in slabs					
Asphalt					
1/2" x 6"	LF	0.020	1.00	1.60	2.60
1" x 12"	LF	0.027	1.98	2.13	4.11

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	Unit	Man-Hrs	Material	Labor	Total
03150.01 CONCRETE ACCESSORIES (Cont.)					
Expansion joint, premolded, in slabs					
Cork					
1/2" x 6"	LF	0.020	1.99	1.60	3.59
1" x 12"	LF	0.027	7.56	2.13	9.69
Neoprene sponge					
1/2" x 6"	LF	0.020	3.70	1.60	5.30
1" x 12"	LF	0.027	13.50	2.13	15.63
Polyethylene foam					
1/2" x 6"	LF	0.020	1.25	1.60	2.85
1" x 12"	LF	0.027	5.73	2.13	7.86
Polyurethane foam					
1/2" x 6"	LF	0.020	1.79	1.60	3.39
1" x 12"	LF	0.027	4.62	2.13	6.75
Polyvinyl chloride foam					
1/2" x 6"	LF	0.020	4.40	1.60	6.00
1" x 12"	LF	0.027	9.51	2.13	11.64
Rubber, gray sponge					
1/2" x 6"	LF	0.020	4.97	1.60	6.57
1" x 12"	LF	0.027	21.50	2.13	23.63
Asphalt felt control joints or bond breaker, screed joints					
4" slab	LF	0.016	1.62	1.28	2.90
6" slab	LF	0.018	2.03	1.42	3.45
8" slab	LF	0.020	2.65	1.60	4.25
10" slab	LF	0.023	3.73	1.83	5.56
Keyed cold expansion and control joints, 24 ga.					
4" slab	LF	0.050	1.63	4.00	5.63
5" slab	LF	0.050	2.16	4.00	6.16
6" slab	LF	0.053	2.49	4.27	6.76
8" slab	LF	0.057	3.03	4.57	7.60
10" slab	LF	0.062	3.33	4.92	8.25
Waterstops					
Polyvinyl chloride					
Ribbed					
3/16" thick x					
4" wide	LF	0.040	2.57	3.20	5.77
6" wide	LF	0.044	3.14	3.55	6.69
1/2" thick x					
9" wide	LF	0.050	7.07	4.00	11.07
Ribbed with center bulb					
3/16" thick x 9" wide	LF	0.050	5.94	4.00	9.94
3/8" thick x 9" wide	LF	0.050	6.98	4.00	10.98
Dumbbell type, 3/8" thick x 6" wide	LF	0.044	7.07	3.55	10.62
Plain, 3/8" thick x 9" wide	LF	0.050	9.40	4.00	13.40
Center bulb, 3/8" thick x 9" wide	LF	0.050	11.25	4.00	15.25
Rubber					
Flat dumbbell					
3/8" thick x					
6" wide	LF	0.044	8.70	3.55	12.25
9" wide	LF	0.050	9.40	4.00	13.40
Center bulb					
3/8" thick x					
6" wide	LF	0.044	9.76	3.55	13.31
9" wide	LF	0.050	12.25	4.00	16.25
Vapor barrier					
4 mil polyethylene	SF	0.003	0.06	0.21	0.27
6 mil polyethylene	SF	0.003	0.09	0.21	0.30
10 mil polyethylene	SF	0.003	0.14	0.21	0.35
15 mil polyethylene	SF	0.003	0.15	0.21	0.36
Gravel porous fill, under floor slabs, 3/4" stone	CY	1.333	34.00	110.00	144.00
Reinforcing accessories					
Beam bolsters					
1-1/2" high, plain	LF	0.008	0.59	0.83	1.42
Galvanized	LF	0.008	1.30	0.83	2.13

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	Unit	Man-Hrs	Material	Labor	Total
03150.01 CONCRETE ACCESSORIES (Cont.)					
Beam bolsters					
3" high					
Plain	LF	0.010	1.37	1.04	2.41
Galvanized	LF	0.010	2.09	1.04	3.13
Slab bolsters					
1" high					
Plain	LF	0.004	0.63	0.41	1.04
Galvanized	LF	0.004	1.27	0.41	1.68
2" high					
Plain	LF	0.004	0.88	0.46	1.34
Galvanized	LF	0.004	1.49	0.46	1.95
Chairs, high chairs					
2" high					
Plastic	EA	0.020	0.82	2.08	2.90
Plain	EA	0.020	1.70	2.08	3.78
Galvanized	EA	0.020	1.87	2.08	3.95
3" high					
Plastic	EA	0.021	0.88	2.19	3.07
Plain	EA	0.021	1.76	2.19	3.95
Galvanized	EA	0.021	3.52	2.19	5.71
4-1/2" high					
Plastic	EA	0.023	1.65	2.38	4.03
Plain	EA	0.023	2.88	2.38	5.26
Galvanized	EA	0.023	4.88	2.38	7.26
6" high					
Plastic	EA	0.027	2.75	2.78	5.53
Plain	EA	0.027	5.20	2.78	7.98
Galvanized	EA	0.027	9.93	2.78	12.71
Continuous, high chair					
3" high					
Plain	LF	0.005	2.36	0.55	2.91
Galvanized	LF	0.005	2.92	0.55	3.47
5" high					
Plain	LF	0.006	2.36	0.59	2.95
Galvanized	LF	0.006	2.92	0.59	3.51
8" high					
Plain	LF	0.006	2.92	0.64	3.56
Galvanized	LF	0.006	3.79	0.64	4.43
12" high					
Plain	LF	0.007	3.76	0.69	4.45
Galvanized	LF	0.007	4.88	0.69	5.57
Spirals or Stirrups					
8" to 24"	TON	20.000	3,050.00	2,090.00	5,140.00
24" to 48"	TON	17.778	3,050.00	1,860.00	4,910.00
48" to 84"	TON	16.000	3,050.00	1,670.00	4,720.00
03210.01 BEAM REINFORCING					
BEAM REINFORCING					
Beam-girders					
#3 - #4	TON	20.000	1,880.00	2,090.00	3,970.00
#5 - #6	TON	16.000	1,650.00	1,670.00	3,320.00
#7 - #8	TON	13.333	1,610.00	1,390.00	3,000.00
#9 - #10	TON	11.429	1,610.00	1,190.00	2,800.00
#11	TON	10.667	1,610.00	1,110.00	2,720.00
#14	TON	10.000	1,610.00	1,040.00	2,650.00
Galvanized					
#3 - #4	TON	20.000	3,190.00	2,090.00	5,280.00
#5 - #6	TON	16.000	3,020.00	1,670.00	4,690.00
#7 - #8	TON	13.333	2,900.00	1,390.00	4,290.00
#9 - #10	TON	11.429	2,900.00	1,190.00	4,090.00
#11	TON	10.667	2,900.00	1,110.00	4,010.00
#14	TON	10.000	2,900.00	1,040.00	3,940.00
Epoxy coated					
#3 - #4	TON	22.857	3,040.00	2,390.00	5,430.00
#5 - #6	TON	17.778	2,850.00	1,860.00	4,710.00

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	Unit	Man-Hrs	Material	Labor	Total
03210.01 BEAM REINFORCING (Cont.)					
Epoxy coated					
#7 - #8	TON	14.545	2,760.00	1,520.00	4,280.00
#9 - #10	TON	12.308	2,760.00	1,280.00	4,040.00
#11	TON	11.429	2,760.00	1,190.00	3,950.00
#14	TON	10.667	2,760.00	1,110.00	3,870.00
Bond Beams					
#3 - #4	TON	26.667	1,880.00	2,780.00	4,660.00
#5 - #6	TON	20.000	1,650.00	2,090.00	3,740.00
#7 - #8	TON	17.778	1,610.00	1,860.00	3,470.00
Galvanized					
#3 - #4	TON	26.667	3,190.00	2,780.00	5,970.00
#5 - #6	TON	20.000	3,020.00	2,090.00	5,110.00
#7 - #8	TON	17.778	2,900.00	1,860.00	4,760.00
Epoxy coated					
#3 - #4	TON	32.000	3,040.00	3,340.00	6,380.00
#5 - #6	TON	22.857	2,850.00	2,390.00	5,240.00
#7 - #8	TON	20.000	2,760.00	2,090.00	4,850.00
03210.02 BOX CULVERT REINFORCING					
BOX CULVERT REINFORCING					
Box culverts					
#3 - #4	TON	10.000	1,880.00	1,040.00	2,920.00
#5 - #6	TON	8.889	1,650.00	930.00	2,580.00
#7 - #8	TON	8.000	1,610.00	840.00	2,450.00
#9 - #10	TON	7.273	1,610.00	760.00	2,370.00
#11	TON	6.667	1,610.00	700.00	2,310.00
Galvanized					
#3 - #4	TON	10.000	3,060.00	1,040.00	4,100.00
#5 - #6	TON	8.889	3,020.00	930.00	3,950.00
#7 - #8	TON	8.000	2,900.00	840.00	3,740.00
#9 - #10	TON	7.273	2,900.00	760.00	3,660.00
#11	TON	6.667	2,900.00	700.00	3,600.00
Epoxy coated					
#3 - #4	TON	10.667	3,040.00	1,110.00	4,150.00
#5 - #6	TON	9.412	2,850.00	980.00	3,830.00
#7 - #8	TON	8.421	2,760.00	880.00	3,640.00
#9 - #10	TON	7.619	2,760.00	800.00	3,560.00
#11	TON	6.957	2,760.00	730.00	3,490.00
03210.03 COLUMN REINFORCING					
COLUMN REINFORCING					
Columns					
#3 - #4	TON	22.857	1,880.00	2,390.00	4,270.00
#5 - #6	TON	17.778	1,650.00	1,860.00	3,510.00
#7 - #8	TON	16.000	1,610.00	1,670.00	3,280.00
#9 - #10	TON	14.545	1,610.00	1,520.00	3,130.00
#11	TON	13.333	1,610.00	1,390.00	3,000.00
#14	TON	12.308	1,610.00	1,280.00	2,890.00
#18	TON	11.429	1,610.00	1,190.00	2,800.00
Galvanized					
#3 - #4	TON	22.857	3,190.00	2,390.00	5,580.00
#5 - #6	TON	17.778	3,020.00	1,860.00	4,880.00
#7 - #8	TON	16.000	2,900.00	1,670.00	4,570.00
#9 - #10	TON	14.545	2,900.00	1,520.00	4,420.00
#11	TON	13.333	2,900.00	1,390.00	4,290.00
#14	TON	12.308	2,900.00	1,280.00	4,180.00
#18	TON	11.429	2,900.00	1,190.00	4,090.00
Epoxy coated					
#3 - #4	TON	26.667	3,040.00	2,780.00	5,820.00
#5 - #6	TON	20.000	2,850.00	2,090.00	4,940.00
#7 - #8	TON	17.778	2,760.00	1,860.00	4,620.00
#9 - #10	TON	16.000	2,760.00	1,670.00	4,430.00
#11	TON	14.545	2,760.00	1,520.00	4,280.00
#14	TON	13.333	2,760.00	1,390.00	4,150.00
#18	TON	12.308	2,760.00	1,280.00	4,040.00

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	Unit	Man-Hrs	Material	Labor	Total
03210.04 ELEVATED SLAB REINFORCING					
ELEVATED SLAB REINFORCING					
Elevated slab					
#3 - #4	TON	10.000	1,880.00	1,040.00	2,920.00
#5 - #6	TON	8.889	1,650.00	930.00	2,580.00
#7 - #8	TON	8.000	1,610.00	840.00	2,450.00
#9 - #10	TON	7.273	1,610.00	760.00	2,370.00
#11	TON	6.667	1,610.00	700.00	2,310.00
Galvanized					
#3 - #4	TON	10.000	3,060.00	1,040.00	4,100.00
#5 - #6	TON	8.889	3,020.00	930.00	3,950.00
#7 - #8	TON	8.000	2,900.00	840.00	3,740.00
#9 - #10	TON	7.273	2,900.00	760.00	3,660.00
#11	TON	6.667	2,900.00	700.00	3,600.00
Epoxy coated					
#3 - #4	TON	10.667	3,040.00	1,110.00	4,150.00
#5 - #6	TON	9.412	2,850.00	980.00	3,830.00
#7 - #8	TON	8.421	2,760.00	880.00	3,640.00
#9 - #10	TON	7.619	2,760.00	800.00	3,560.00
#11	TON	6.957	2,760.00	730.00	3,490.00
03210.05 EQUIP. PAD REINFORCING					
EQUIP. PAD REINFORCING					
Equipment pad					
#3 - #4	TON	16.000	1,880.00	1,670.00	3,550.00
#5 - #6	TON	14.545	1,650.00	1,520.00	3,170.00
#7 - #8	TON	13.333	1,610.00	1,390.00	3,000.00
#9 - #10	TON	12.308	1,610.00	1,280.00	2,890.00
#11	TON	11.429	1,610.00	1,190.00	2,800.00
03210.06 FOOTING REINFORCING					
FOOTING REINFORCING					
Footings					
Grade 50					
#3 - #4	TON	13.333	1,880.00	1,390.00	3,270.00
#5 - #6	TON	11.429	1,650.00	1,190.00	2,840.00
#7 - #8	TON	10.000	1,610.00	1,040.00	2,650.00
#9 - #10	TON	8.889	1,610.00	930.00	2,540.00
Grade 60					
#3 - #4	TON	13.333	1,880.00	1,390.00	3,270.00
#5 - #6	TON	11.429	1,650.00	1,190.00	2,840.00
#7 - #8	TON	10.000	1,610.00	1,040.00	2,650.00
#9 - #10	TON	8.889	1,610.00	930.00	2,540.00
Grade 70					
#3 - #4	TON	13.333	1,880.00	1,390.00	3,270.00
#5 - #6	TON	11.429	1,650.00	1,190.00	2,840.00
#7 - #8	TON	10.000	1,610.00	1,040.00	2,650.00
#9 - #10	TON	8.889	1,610.00	930.00	2,540.00
#11	TON	8.000	1,610.00	840.00	2,450.00
Straight dowels, 24" long					
1" dia. (#8)	EA	0.020	5.82	2.08	7.90
3/4" dia. (#6)	EA	0.019	5.24	1.94	7.18
5/8" dia. (#5)	EA	0.017	4.53	1.81	6.34
1/2" dia. (#4)	EA	0.016	3.41	1.67	5.08
03210.07 FOUNDATION REINFORCING					
FOUNDATION REINFORCING					
Foundations					
#3 - #4	TON	13.333	1,880.00	1,390.00	3,270.00
#5 - #6	TON	11.429	1,650.00	1,190.00	2,840.00
#7 - #8	TON	10.000	1,610.00	1,040.00	2,650.00
#9 - #10	TON	8.889	1,610.00	930.00	2,540.00
#11	TON	8.000	1,610.00	840.00	2,450.00
Galvanized					
#3 - #4	TON	13.333	3,210.00	1,390.00	4,600.00
#5 - #6	TON	11.429	3,030.00	1,190.00	4,220.00
#7 - #8	TON	10.000	2,910.00	1,040.00	3,950.00

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	Unit	Man-Hrs	Material	Labor	Total
03210.07 FOUNDATION REINFORCING (Cont.)					
Galvanized					
#9 - #10	TON	8.889	2,910.00	930.00	3,840.00
#11	TON	8.000	2,910.00	840.00	3,750.00
Epoxy Coated					
#3 - #4	TON	14.545	3,050.00	1,520.00	4,570.00
#5 - #6	TON	12.308	2,860.00	1,280.00	4,140.00
#7 - #8	TON	10.667	2,770.00	1,110.00	3,880.00
#9 - #10	TON	9.412	2,770.00	980.00	3,750.00
#11	TON	8.421	2,770.00	880.00	3,650.00
03210.08 GRADE BEAM REINFORCING					
GRADE BEAM REINFORCING					
Grade beams					
#3 - #4	TON	12.308	1,880.00	1,280.00	3,160.00
#5 - #6	TON	10.667	1,650.00	1,110.00	2,760.00
#7 - #8	TON	9.412	1,610.00	980.00	2,590.00
#9 - #10	TON	8.421	1,610.00	880.00	2,490.00
#11	TON	7.619	1,610.00	800.00	2,410.00
Galvanized					
#3 - #4	TON	12.308	3,210.00	1,280.00	4,490.00
#5 - #6	TON	10.667	3,030.00	1,110.00	4,140.00
#7 - #8	TON	9.412	2,910.00	980.00	3,890.00
#9 - #10	TON	8.421	2,910.00	880.00	3,790.00
#11	TON	7.619	2,910.00	800.00	3,710.00
Epoxy coated					
#3 - #4	TON	13.333	3,050.00	1,390.00	4,440.00
#5 - #6	TON	11.429	2,860.00	1,190.00	4,050.00
#7 - #8	TON	10.000	2,770.00	1,040.00	3,810.00
#9 - #10	TON	8.889	2,770.00	930.00	3,700.00
#11	TON	8.000	2,770.00	840.00	3,610.00
03210.09 SLAB / MAT REINFORCING					
SLAB / MAT REINFORCING					
Bars, slabs					
#3 - #4	TON	13.333	1,880.00	1,390.00	3,270.00
#5 - #6	TON	11.429	1,650.00	1,190.00	2,840.00
#7 - #8	TON	10.000	1,610.00	1,040.00	2,650.00
#9 - #10	TON	8.889	1,610.00	930.00	2,540.00
#11	TON	8.000	1,610.00	840.00	2,450.00
Galvanized					
#3 - #4	TON	13.333	3,210.00	1,390.00	4,600.00
#5 - #6	TON	11.429	3,030.00	1,190.00	4,220.00
#7 - #8	TON	10.000	2,910.00	1,040.00	3,950.00
#9 - #10	TON	8.889	2,910.00	930.00	3,840.00
#11	TON	8.000	2,910.00	840.00	3,750.00
Epoxy coated					
#3 - #4	TON	14.545	3,050.00	1,520.00	4,570.00
#5 - #6	TON	12.308	2,860.00	1,280.00	4,140.00
#7 - #8	TON	10.667	2,770.00	1,110.00	3,880.00
#9 - #10	TON	9.412	2,770.00	980.00	3,750.00
#11	TON	8.421	2,770.00	880.00	3,650.00
Wire mesh, slabs					
Galvanized					
2x2					
W.9xW.9	SF	0.005	2.64	0.55	3.19
4x4					
W1.4xW1.4	SF	0.005	0.67	0.55	1.22
W2.0xW2.0	SF	0.006	0.88	0.59	1.47
W2.9xW2.9	SF	0.006	1.22	0.64	1.86
W4.0xW4.0	SF	0.007	1.81	0.69	2.50
6x6					
W1.4xW1.4	SF	0.004	0.62	0.41	1.03
W2.0xW2.0	SF	0.004	0.88	0.46	1.34
W2.9xW2.9	SF	0.005	1.18	0.49	1.67
W4.0xW4.0	SF	0.005	1.27	0.55	1.82

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	Unit	Man-Hrs	Material	Labor	Total
03210.09 SLAB / MAT REINFORCING (Cont.)					
Wire mesh, slabs					
Standard					
2x2					
W.9xW.9	SF	0.005	0.61	0.55	1.16
4x4					
W1.4xW1.4	SF	0.005	0.44	0.55	0.99
W2.0xW2.0	SF	0.006	0.58	0.59	1.17
W2.9xW2.9	SF	0.006	0.80	0.64	1.44
W4.0xW4.0	SF	0.007	1.23	0.69	1.92
6x6					
W1.4xW1.4	SF	0.004	0.29	0.41	0.70
W2.0xW2.0	SF	0.004	0.40	0.46	0.86
W2.9xW2.9	SF	0.005	0.58	0.49	1.07
W4.0xW4.0	SF	0.005	0.82	0.55	1.37
03210.10 STAIR REINFORCING					
STAIR REINFORCING					
Stairs					
#3 - #4	TON	16.000	1,880.00	1,670.00	3,550.00
#5 - #6	TON	13.333	1,650.00	1,390.00	3,040.00
#7 - #8	TON	11.429	1,610.00	1,190.00	2,800.00
#9 - #10	TON	10.000	1,610.00	1,040.00	2,650.00
Galvanized					
#3 - #4	TON	16.000	3,210.00	1,670.00	4,880.00
#5 - #6	TON	13.333	3,030.00	1,390.00	4,420.00
#7 - #8	TON	11.429	2,910.00	1,190.00	4,100.00
#9 - #10	TON	10.000	2,910.00	1,040.00	3,950.00
Epoxy coated					
#3 - #4	TON	17.778	3,050.00	1,860.00	4,910.00
#5 - #6	TON	14.545	2,860.00	1,520.00	4,380.00
#7 - #8	TON	12.308	2,770.00	1,280.00	4,050.00
#9 - #10	TON	10.667	2,770.00	1,110.00	3,880.00
Stair Nosing, Steel, Galvanized					
3' long	EA	0.044	27.25	4.63	31.88
4' long	EA	0.053	37.00	5.56	42.56
5' long	EA	0.067	55.00	6.95	61.95
03210.11 WALL REINFORCING					
WALL REINFORCING					
Walls					
#3 - #4	TON	11.429	1,880.00	1,190.00	3,070.00
#5 - #6	TON	10.000	1,650.00	1,040.00	2,690.00
#7 - #8	TON	8.889	1,610.00	930.00	2,540.00
#9 - #10	TON	8.000	1,610.00	840.00	2,450.00
Galvanized					
#3 - #4	TON	11.429	3,210.00	1,190.00	4,400.00
#5 - #6	TON	10.000	3,030.00	1,040.00	4,070.00
#7 - #8	TON	8.889	2,910.00	930.00	3,840.00
#9 - #10	TON	8.000	2,910.00	840.00	3,750.00
Epoxy coated					
#3 - #4	TON	12.308	3,050.00	1,280.00	4,330.00
#5 - #6	TON	10.667	2,860.00	1,110.00	3,970.00
#7 - #8	TON	9.412	2,770.00	980.00	3,750.00
#9 - #10	TON	8.421	2,770.00	880.00	3,650.00
Masonry wall (horizontal)					
#3 - #4	TON	32.000	1,880.00	3,340.00	5,220.00
#5 - #6	TON	26.667	1,650.00	2,780.00	4,430.00
Galvanized					
#3 - #4	TON	32.000	3,210.00	3,340.00	6,550.00
#5 - #6	TON	26.667	3,030.00	2,780.00	5,810.00
Masonry wall (vertical)					
#3 - #4	TON	40.000	1,880.00	4,180.00	6,060.00
#5 - #6	TON	32.000	1,650.00	3,340.00	4,990.00
Galvanized					
#3 - #4	TON	40.000	3,210.00	4,180.00	7,390.00
#5 - #6	TON	32.000	3,030.00	3,340.00	6,370.00

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	Unit	Man-Hrs	Material	Labor	Total
03210.16 PILE CAP REINFORCING					
PILE CAP REINFORCING					
Pile caps					
#3 - #4	TON	20.000	1,880.00	2,090.00	3,970.00
#5 - #6	TON	17.778	1,650.00	1,860.00	3,510.00
#7 - #8	TON	16.000	1,610.00	1,670.00	3,280.00
#9 - #10	TON	14.545	1,610.00	1,520.00	3,130.00
#11	TON	13.333	1,610.00	1,390.00	3,000.00
Galvanized					
#3 - #4	TON	20.000	3,210.00	2,090.00	5,300.00
#5 - #6	TON	17.778	3,030.00	1,860.00	4,890.00
#7 - #8	TON	16.000	2,910.00	1,670.00	4,580.00
#9 - #10	TON	14.545	2,910.00	1,520.00	4,430.00
#11	TON	13.333	2,910.00	1,390.00	4,300.00
Epoxy coated					
#3 - #4	TON	22.857	3,050.00	2,390.00	5,440.00
#5 - #6	TON	20.000	2,860.00	2,090.00	4,950.00
#7 - #8	TON	17.778	2,770.00	1,860.00	4,630.00
#9 - #10	TON	16.000	2,770.00	1,670.00	4,440.00
#11	TON	14.545	2,770.00	1,520.00	4,290.00
03305.31 CONCRETE ADMIXTURES					
CONCRETE ADMIXTURES					
Concrete admixtures					
Water reducing admixture	GAL				20.25
Set retarder	GAL				16.75
Air entraining agent	GAL				19.25
03310.01 BEAM CONCRETE					
BEAM CONCRETE					
Beams and girders					
2500# or 3000# concrete					
By crane	CY	0.960	190.00	130.00	320.00
By pump	CY	0.873	190.00	120.00	310.00
By hand buggy	CY	0.800	190.00	64.00	254.00
3500# or 4000# concrete					
By crane	CY	0.960	200.00	130.00	330.00
By pump	CY	0.873	200.00	120.00	320.00
By hand buggy	CY	0.800	200.00	64.00	264.00
5000# concrete					
By crane	CY	0.960	220.00	130.00	350.00
By pump	CY	0.873	220.00	120.00	340.00
By hand buggy	CY	0.800	220.00	64.00	284.00
Bond beam, 3000# concrete					
By pump					
8" high					
4" wide	LF	0.019	1.60	2.57	4.17
6" wide	LF	0.022	2.41	2.92	5.33
8" wide	LF	0.024	3.23	3.22	6.45
10" wide	LF	0.027	4.01	3.58	7.59
12" wide	LF	0.030	4.84	4.02	8.86
16" high					
8" wide	LF	0.030	6.44	4.02	10.46
10" wide	LF	0.034	8.01	4.60	12.61
12" wide	LF	0.040	9.62	5.37	14.99
By crane					
8" high					
4" wide	LF	0.021	1.60	2.80	4.40
6" wide	LF	0.023	2.41	3.06	5.47
8" wide	LF	0.024	3.23	3.22	6.45
10" wide	LF	0.027	4.01	3.58	7.59
12" wide	LF	0.030	4.84	4.02	8.86
16" high					
8" wide	LF	0.030	6.44	4.02	10.46
10" wide	LF	0.032	8.01	4.29	12.30
12" wide	LF	0.037	9.62	4.95	14.57

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	Unit	Man-Hrs	Material	Labor	Total
03310.02 COLUMN CONCRETE					
COLUMN CONCRETE					
Columns					
2500# or 3000# concrete					
By crane	CY	0.873	190.00	120.00	310.00
By pump	CY	0.800	190.00	110.00	300.00
3500# or 4000# concrete					
By crane	CY	0.873	200.00	120.00	320.00
By pump	CY	0.800	200.00	110.00	310.00
5000# concrete					
By crane	CY	0.873	220.00	120.00	340.00
By pump	CY	0.800	220.00	110.00	330.00
03310.03 ELEVATED SLAB CONCRETE					
ELEVATED SLAB CONCRETE					
Elevated slab					
2500# or 3000# concrete					
By crane	CY	0.480	190.00	64.00	254.00
By pump	CY	0.369	190.00	49.50	239.50
By hand buggy	CY	0.800	190.00	64.00	254.00
3500# or 4000# concrete					
By crane	CY	0.480	200.00	64.00	264.00
By pump	CY	0.369	200.00	49.50	249.50
By hand buggy	CY	0.800	200.00	64.00	264.00
5000# concrete					
By crane	CY	0.480	220.00	64.00	284.00
By pump	CY	0.369	220.00	49.50	269.50
By hand buggy	CY	0.800	220.00	64.00	284.00
Topping					
2500# or 3000# concrete					
By crane	CY	0.480	190.00	64.00	254.00
By pump	CY	0.369	190.00	49.50	239.50
By hand buggy	CY	0.800	190.00	64.00	254.00
3500# or 4000# concrete					
By crane	CY	0.480	200.00	64.00	264.00
By pump	CY	0.369	200.00	49.50	249.50
By hand buggy	CY	0.800	200.00	64.00	264.00
5000# concrete					
By crane	CY	0.480	220.00	64.00	284.00
By pump	CY	0.369	220.00	49.50	269.50
By hand buggy	CY	0.800	220.00	64.00	284.00
03310.04 EQUIPMENT PAD CONCRETE					
EQUIPMENT PAD CONCRETE					
Equipment pad					
2500# or 3000# concrete					
By chute	CY	0.267	190.00	21.25	211.25
By pump	CY	0.686	190.00	92.00	282.00
By crane	CY	0.800	190.00	110.00	300.00
3500# or 4000# concrete					
By chute	CY	0.267	200.00	21.25	221.25
By pump	CY	0.686	200.00	92.00	292.00
By crane	CY	0.800	200.00	110.00	310.00
5000# concrete					
By chute	CY	0.267	220.00	21.25	241.25
By pump	CY	0.686	220.00	92.00	312.00
By crane	CY	0.800	220.00	110.00	330.00
03310.05 FOOTING CONCRETE					
FOOTING CONCRETE					
Continuous footing					
2500# or 3000# concrete					
By chute	CY	0.267	190.00	21.25	211.25
By pump	CY	0.600	190.00	81.00	271.00
By crane	CY	0.686	190.00	92.00	282.00
3500# or 4000# concrete					
By chute	CY	0.267	200.00	21.25	221.25
By pump	CY	0.600	200.00	81.00	281.00

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	Unit	Man-Hrs	Material	Labor	Total
03310.05 FOOTING CONCRETE (Cont.)					
3500# or 4000# concrete					
By crane	CY	0.686	200.00	92.00	292.00
5000# concrete					
By chute	CY	0.267	220.00	21.25	241.25
By pump	CY	0.600	220.00	81.00	301.00
By crane	CY	0.686	220.00	92.00	312.00
Spread footing					
2500# or 3000# concrete					
Under 5 c.y.					
By chute	CY	0.267	190.00	21.25	211.25
By pump	CY	0.640	190.00	86.00	276.00
By crane	CY	0.738	190.00	99.00	289.00
Over 5 c.y.					
By chute	CY	0.200	190.00	16.00	206.00
By pump	CY	0.565	190.00	76.00	266.00
By crane	CY	0.640	190.00	86.00	276.00
3500# or 4000# concrete					
Under 5 c.y.					
By chute	CY	0.267	210.00	21.25	231.25
By pump	CY	0.640	210.00	86.00	296.00
By crane	CY	0.738	210.00	99.00	309.00
Over 5 c.y.					
By chute	CY	0.200	200.00	16.00	216.00
By pump	CY	0.565	200.00	76.00	276.00
By crane	CY	0.640	200.00	86.00	286.00
5000# concrete					
Under 5 c.y.					
By chute	CY	0.267	230.00	21.25	251.25
By pump	CY	0.640	230.00	86.00	316.00
By crane	CY	0.738	230.00	99.00	329.00
Over 5 c.y.					
By chute	CY	0.200	220.00	16.00	236.00
By pump	CY	0.565	220.00	76.00	296.00
By crane	CY	0.640	220.00	86.00	306.00
03310.06 GRADE BEAM CONCRETE					
GRADE BEAM CONCRETE					
Grade beam					
2500# or 3000# concrete					
By chute	CY	0.267	190.00	21.25	211.25
By crane	CY	0.686	190.00	92.00	282.00
By pump	CY	0.600	190.00	81.00	271.00
By hand buggy	CY	0.800	190.00	64.00	254.00
3500# or 4000# concrete					
By chute	CY	0.267	200.00	21.25	221.25
By crane	CY	0.686	200.00	92.00	292.00
By pump	CY	0.600	200.00	81.00	281.00
By hand buggy	CY	0.800	200.00	64.00	264.00
5000# concrete					
By chute	CY	0.267	220.00	21.25	241.25
By crane	CY	0.686	220.00	92.00	312.00
By pump	CY	0.600	220.00	81.00	301.00
By hand buggy	CY	0.800	220.00	64.00	284.00
03310.07 PILE CAP CONCRETE					
PILE CAP CONCRETE					
Pile cap					
2500# or 3000 concrete					
By chute	CY	0.267	190.00	21.25	211.25
By crane	CY	0.800	190.00	110.00	300.00
By pump	CY	0.686	190.00	92.00	282.00
By hand buggy	CY	0.800	190.00	64.00	254.00
3500# or 4000# concrete					
By chute	CY	0.267	200.00	21.25	221.25
By crane	CY	0.800	200.00	110.00	310.00
By pump	CY	0.686	200.00	92.00	292.00

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	Unit	Man-Hrs	Material	Labor	Total
03310.07 PILE CAP CONCRETE (Cont.)					
3500# or 4000# concrete					
By hand buggy	CY	0.800	200.00	64.00	264.00
5000# concrete					
By chute	CY	0.267	220.00	21.25	241.25
By crane	CY	0.800	220.00	110.00	330.00
By pump	CY	0.686	220.00	92.00	312.00
By hand buggy	CY	0.800	220.00	64.00	284.00
03310.08 SLAB / MAT CONCRETE					
SLAB / MAT CONCRETE					
Slab on grade					
2500# or 3000# concrete					
By chute	CY	0.200	190.00	16.00	206.00
By crane	CY	0.400	190.00	54.00	244.00
By pump	CY	0.343	190.00	46.00	236.00
By hand buggy	CY	0.533	190.00	42.75	232.75
3500# or 4000# concrete					
By chute	CY	0.200	200.00	16.00	216.00
By crane	CY	0.400	200.00	54.00	254.00
By pump	CY	0.343	200.00	46.00	246.00
By hand buggy	CY	0.533	200.00	42.75	242.75
5000# concrete					
By chute	CY	0.200	220.00	16.00	236.00
By crane	CY	0.400	220.00	54.00	274.00
By pump	CY	0.343	220.00	46.00	266.00
By hand buggy	CY	0.533	220.00	42.75	262.75
Foundation mat					
2500# or 3000# concrete, over 20 c.y.					
By chute	CY	0.160	190.00	12.75	202.75
By crane	CY	0.343	190.00	46.00	236.00
By pump	CY	0.300	190.00	40.25	230.25
By hand buggy	CY	0.400	190.00	32.00	222.00
03310.09 WALL CONCRETE					
WALL CONCRETE					
Walls					
2500# or 3000# concrete					
To 4'					
By chute	CY	0.229	190.00	18.25	208.25
By crane	CY	0.800	190.00	110.00	300.00
By pump	CY	0.738	190.00	99.00	289.00
To 8'					
By crane	CY	0.873	190.00	120.00	310.00
By pump	CY	0.800	190.00	110.00	300.00
To 16'					
By crane	CY	0.960	190.00	130.00	320.00
By pump	CY	0.873	190.00	120.00	310.00
Over 16'					
By crane	CY	1.067	190.00	140.00	330.00
By pump	CY	0.960	190.00	130.00	320.00
3500# or 4000# concrete					
To 4'					
By chute	CY	0.229	200.00	18.25	218.25
By crane	CY	0.800	200.00	110.00	310.00
By pump	CY	0.738	200.00	99.00	299.00
To 8'					
By crane	CY	0.873	200.00	120.00	320.00
By pump	CY	0.800	200.00	110.00	310.00
To 16'					
By crane	CY	0.960	200.00	130.00	330.00
By pump	CY	0.873	200.00	120.00	320.00
Over 16'					
By crane	CY	1.067	200.00	140.00	340.00
By pump	CY	0.960	200.00	130.00	330.00

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	Unit	Man-Hrs	Material	Labor	Total
03310.09 WALL CONCRETE (Cont.)					
Walls					
5000# concrete					
To 4'					
By chute	CY	0.229	220.00	18.25	238.25
By crane	CY	0.800	220.00	110.00	330.00
By pump	CY	0.738	220.00	99.00	319.00
To 8'					
By crane	CY	0.873	220.00	120.00	340.00
By pump	CY	0.800	220.00	110.00	330.00
To 16'					
By crane	CY	0.960	220.00	130.00	350.00
By pump	CY	0.873	220.00	120.00	340.00
Filled block (CMU)					
3000# concrete, by pump					
4" wide	SF	0.034	2.39	4.60	6.99
6" wide	SF	0.040	3.57	5.37	8.94
8" wide	SF	0.048	4.80	6.44	11.24
10" wide	SF	0.056	3.54	7.58	11.12
12" wide	SF	0.069	4.57	9.20	13.77
Pilasters, 3000# concrete	CF	0.960	10.00	130.00	140.00
Wall cavity, 2" thick, 3000# concrete	SF	0.032	1.86	4.29	6.15
03310.11 STAIR CONCRETE					
STAIR CONCRETE					
Stairs					
2500# or 3000# concrete					
By chute	CY	0.267	190.00	21.25	211.25
By crane	CY	0.800	190.00	110.00	300.00
By pump	CY	0.686	190.00	92.00	282.00
By hand buggy	CY	0.800	190.00	64.00	254.00
3500# or 4000# concrete					
By chute	CY	0.267	200.00	21.25	221.25
By crane	CY	0.800	200.00	110.00	310.00
By pump	CY	0.686	200.00	92.00	292.00
By hand buggy	CY	0.800	200.00	64.00	264.00
5000# concrete					
By chute	CY	0.267	220.00	21.25	241.25
By crane	CY	0.800	220.00	110.00	330.00
By pump	CY	0.686	220.00	92.00	312.00
By hand buggy	CY	0.800	220.00	64.00	284.00
03350.01 CONCRETE FINISHES					
CONCRETE FINISHES					
Floor finishes					
Broom	SF	0.011		0.91	0.91
Screed	SF	0.010		0.80	0.80
Darby	SF	0.010		0.80	0.80
Steel float	SF	0.013		1.06	1.06
Granolithic topping					
1/2" thick	SF	0.036	0.61	2.91	3.52
1" thick	SF	0.040	1.11	3.20	4.31
2" thick	SF	0.044	2.15	3.55	5.70
Wall finishes					
Burlap rub, with cement paste	SF	0.013	0.16	1.06	1.22
Float finish	SF	0.020	0.16	1.60	1.76
Etch with acid	SF	0.013	0.53	1.06	1.59
Sandblast					
Minimum	SF	0.016	0.25	1.71	1.96
Maximum	SF	0.016	0.94	1.71	2.65
Bush hammer					
Green concrete	SF	0.040		3.20	3.20
Cured concrete	SF	0.062		4.92	4.92
Break ties and patch holes	SF	0.016		1.28	1.28
Carborundum					
Dry rub	SF	0.027		2.13	2.13
Wet rub	SF	0.040		3.20	3.20

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	Unit	Man-Hrs	Material	Labor	Total
03350.01 CONCRETE FINISHES (Cont.)					
Floor hardeners					
Metallic					
Light service	SF	0.010	0.67	0.80	1.47
Heavy service	SF	0.013	2.01	1.06	3.07
Non-metallic					
Light service	SF	0.010	0.33	0.80	1.13
Heavy service	SF	0.013	1.39	1.06	2.45
Rusticated concrete finish					
Beveled edge	LF	0.044	0.65	3.55	4.20
Square edge	LF	0.057	0.92	4.57	5.49
Solid board concrete finish					
Standard	SF	0.067	1.65	5.33	6.98
Rustic	SF	0.080	1.53	6.40	7.93
03371.90 PNEUMATIC CONCRETE					
PNEUMATIC CONCRETE					
Pneumatic applied concrete (gunite)					
2" thick	SF	0.030	6.55	4.38	10.93
3" thick	SF	0.040	8.04	5.85	13.89
4" thick	SF	0.048	9.81	7.02	16.83
Finish surface					
Minimum	SF	0.040		4.09	4.09
Maximum	SF	0.080		8.18	8.18
03372.10 CONCRETE DELIVERY SPECIALS					
CONCRETE DELIVERY SPECIALS					
Small loads, up to 3 cubic yards					
Minimum	CY				240.00
Average	CY				250.00
Maximum	CY				280.00
3 to 7 cubic yard deliveries					
Minimum	CY				190.00
Average	CY				200.00
Maximum	CY				210.00
03390.01 CURING CONCRETE					
CURING CONCRETE					
Sprayed membrane					
Slabs	SF	0.002	0.15	0.12	0.27
Walls	SF	0.002	0.21	0.16	0.37
Curing paper					
Slabs	SF	0.002	0.16	0.16	0.32
Walls	SF	0.002	0.16	0.18	0.34
Burlap					
7.5 oz.	SF	0.003	0.18	0.21	0.39
12 oz.	SF	0.003	0.24	0.22	0.46
03410.01 PRECAST BEAMS					
PRECAST BEAMS					
Prestressed, double tee, 24" deep, 8' wide					
35' span					
115 psf	SF	0.008	17.00	1.76	18.76
140 psf	SF	0.008	18.00	1.76	19.76
40' span					
80 psf	SF	0.009	16.25	1.89	18.14
143 psf	SF	0.009	16.75	1.89	18.64
45' span					
50 psf	SF	0.007	15.25	1.63	16.88
70 psf	SF	0.007	16.25	1.63	17.88
100 psf	SF	0.007	16.50	1.63	18.13
130 psf	SF	0.007	18.50	1.63	20.13
50' span					
75 psf	SF	0.007	15.25	1.47	16.72
100 psf	SF	0.007	16.50	1.47	17.97

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	Unit	Man-Hrs	Material	Labor	Total
03410.01 PRECAST BEAMS (Cont.)					
Precast beams, girders and joists					
1000 lb/lf live load					
10' span	LF	0.160	170.00	35.25	205.25
20' span	LF	0.096	180.00	21.25	201.25
30' span	LF	0.080	230.00	17.75	247.75
3000 lb/lf live load					
10' span	LF	0.160	180.00	35.25	215.25
20' span	LF	0.096	210.00	21.25	231.25
30' span	LF	0.080	270.00	17.75	287.75
5000 lb/lf live load					
10' span	LF	0.160	190.00	35.25	225.25
20' span	LF	0.096	240.00	21.25	261.25
30' span	LF	0.080	300.00	17.75	317.75
03410.02 PRECAST COLUMNS					
PRECAST COLUMNS					
Prestressed concrete columns					
10" x 10"					
10' long	EA	0.960	370.00	210.00	580.00
15' long	EA	1.000	550.00	220.00	770.00
20' long	EA	1.067	730.00	240.00	970.00
25' long	EA	1.143	950.00	250.00	1,200.00
30' long	EA	1.200	1,130.00	270.00	1,400.00
12" x 12"					
20' long	EA	1.200	1,010.00	270.00	1,280.00
25' long	EA	1.297	1,230.00	290.00	1,520.00
30' long	EA	1.371	1,560.00	300.00	1,860.00
16" x 16"					
20' long	EA	1.200	1,560.00	270.00	1,830.00
25' long	EA	1.297	2,300.00	290.00	2,590.00
30' long	EA	1.371	2,730.00	300.00	3,030.00
20" x 20"					
20' long	EA	1.263	2,810.00	280.00	3,090.00
25' long	EA	1.333	3,830.00	290.00	4,120.00
30' long	EA	1.412	4,390.00	310.00	4,700.00
24" x 24"					
20' long	EA	1.333	4,290.00	290.00	4,580.00
25' long	EA	1.412	5,220.00	310.00	5,530.00
30' long	EA	1.500	6,440.00	330.00	6,770.00
28" x 28"					
20' long	EA	1.500	5,830.00	330.00	6,160.00
25' long	EA	1.600	7,060.00	350.00	7,410.00
30' long	EA	1.714	8,740.00	380.00	9,120.00
32" x 32"					
20' long	EA	1.600	7,360.00	350.00	7,710.00
25' long	EA	1.714	9,510.00	380.00	9,890.00
30' long	EA	1.846	10,890.00	410.00	11,300.00
36" x 36"					
20' long	EA	1.714	9,200.00	380.00	9,580.00
25' long	EA	1.846	11,500.00	410.00	11,910.00
30' long	EA	2.000	13,810.00	440.00	14,250.00
03410.03 PRECAST SLABS					
PRECAST SLABS					
Prestressed flat slab					
6" thick, 4' wide					
20' span					
80 psf	SF	0.020	25.75	4.42	30.17
110 psf	SF	0.020	25.50	4.42	29.92
25' span					
80 psf	SF	0.019	26.50	4.24	30.74
Cored slab					
6" thick, 4' wide					
20' span					
80 psf	SF	0.020	13.50	4.42	17.92
100 psf	SF	0.020	13.75	4.42	18.17

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	Unit	Man-Hrs	Material	Labor	Total
03410.03 PRECAST SLABS (Cont.)					
20' span					
130 psf	SF	0.020	14.00	4.42	18.42
8" thick, 4' wide					
25' span					
70 psf	SF	0.019	13.50	4.24	17.74
125 psf	SF	0.019	14.50	4.24	18.74
170 psf	SF	0.019	14.25	4.24	18.49
30' span					
70 psf	SF	0.016	13.25	3.53	16.78
90 psf	SF	0.016	13.75	3.53	17.28
35' span					
70 psf	SF	0.015	14.00	3.31	17.31
10" thick, 4' wide					
30' span					
75 psf	SF	0.016	14.00	3.53	17.53
100 psf	SF	0.016	14.25	3.53	17.78
130 psf	SF	0.016	14.75	3.53	18.28
35' span					
60 psf	SF	0.015	14.25	3.31	17.56
80 psf	SF	0.015	14.75	3.31	18.06
120 psf	SF	0.015	15.25	3.31	18.56
40' span					
65 psf	SF	0.012	15.50	2.65	18.15
Slabs, roof and floor members, 4' wide					
6" thick, 25' span	SF	0.019	12.25	4.24	16.49
8" thick, 30' span	SF	0.015	14.00	3.21	17.21
10" thick, 40' span	SF	0.013	17.25	2.86	20.11
Tee members					
Multiple tee, roof and floor					
Minimum	SF	0.012	16.00	2.65	18.65
Maximum	SF	0.024	20.00	5.30	25.30
Double tee wall member					
Minimum	SF	0.014	14.75	3.03	17.78
Maximum	SF	0.027	18.50	5.89	24.39
Single tee					
Short span, roof members					
Minimum	SF	0.015	16.50	3.21	19.71
Maximum	SF	0.030	20.25	6.63	26.88
Long span, roof members					
Minimum	SF	0.012	21.00	2.65	23.65
Maximum	SF	0.024	25.00	5.30	30.30
03450.01 PRECAST WALLS					
PRECAST WALLS					
Wall panel, 8' x 20'					
Gray cement					
Liner finish					
4" wall	SF	0.014	21.75	3.03	24.78
5" wall	SF	0.014	27.25	3.12	30.37
6" wall	SF	0.015	32.75	3.21	35.96
8" wall	SF	0.015	43.75	3.31	47.06
Sandblast finish					
4" wall	SF	0.014	24.00	3.03	27.03
5" wall	SF	0.014	29.25	3.12	32.37
6" wall	SF	0.015	34.75	3.21	37.96
8" wall	SF	0.015	45.50	3.31	48.81
White cement					
Liner finish					
4" wall	SF	0.014	26.25	3.03	29.28
5" wall	SF	0.014	31.75	3.12	34.87
6" wall	SF	0.015	37.25	3.21	40.46
8" wall	SF	0.015	48.25	3.31	51.56
Sandblast finish					
4" wall	SF	0.014	28.25	3.03	31.28
5" wall	SF	0.014	33.50	3.12	36.62

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	Unit	Man-Hrs	Material	Labor	Total
03450.01 PRECAST WALLS (Cont.)					
Sandblast finish					
6" wall	SF	0.015	39.00	3.21	42.21
8" wall	SF	0.015	50.00	3.31	53.31
Double tee wall panel, 24" deep					
Gray cement					
Liner finish	SF	0.016	16.00	3.53	19.53
Sandblast finish	SF	0.016	20.00	3.53	23.53
White cement					
Form liner finish	SF	0.016	22.50	3.53	26.03
Sandblast finish	SF	0.016	28.75	3.53	32.28
Partition panels					
4" wall	SF	0.016	21.75	3.53	25.28
5" wall	SF	0.016	27.25	3.53	30.78
6" wall	SF	0.016	32.75	3.53	36.28
8" wall	SF	0.016	43.75	3.53	47.28
Cladding panels					
4" wall	SF	0.017	21.75	3.78	25.53
5" wall	SF	0.017	27.25	3.78	31.03
6" wall	SF	0.017	32.75	3.78	36.53
8" wall	SF	0.017	43.75	3.78	47.53
Sandwich panel, 2.5" cladding panel, 2" insulation					
5" wall	SF	0.017	31.75	3.78	35.53
6" wall	SF	0.017	37.25	3.78	41.03
8" wall	SF	0.017	48.25	3.78	52.03
03480.01 PRECAST SPECIALTIES					
PRECAST SPECIALTIES					
Precast concrete, coping, 4' to 8' long					
12" wide	LF	0.060	13.25	8.77	22.02
10" wide	LF	0.069	11.75	10.00	21.75
Splash block, 30"x12"x4"	EA	0.400	20.00	59.00	79.00
Stair unit, per riser	EA	0.400	130.00	59.00	189.00
Sun screen and trellis, 8' long, 12" high					
4" thick blades	EA	0.300	140.00	43.75	183.75
5" thick blades	EA	0.300	170.00	43.75	213.75
6" thick blades	EA	0.320	210.00	46.75	256.75
8" thick blades	EA	0.320	280.00	46.75	326.75
Bearing pads for precast members, 2" wide strips					
1/8" thick	LF	0.003	0.47	0.25	0.72
1/4" thick	LF	0.003	0.62	0.25	0.87
1/2" thick	LF	0.003	0.71	0.25	0.96
3/4" thick	LF	0.004	1.38	0.29	1.67
1" thick	LF	0.004	1.43	0.32	1.75
1-1/2" thick	LF	0.004	1.83	0.32	2.15
03530.01 CONCRETE TOPPINGS					
CONCRETE TOPPINGS					
Gypsum fill					
2" thick	SF	0.005	3.08	0.66	3.74
2-1/2" thick	SF	0.005	3.86	0.67	4.53
3" thick	SF	0.005	4.63	0.70	5.33
3-1/2" thick	SF	0.005	5.40	0.71	6.11
4" thick	SF	0.006	6.17	0.80	6.97
Formboard					
Mineral fiber board					
1" thick	SF	0.020	1.78	1.60	3.38
1-1/2" thick	SF	0.023	2.78	1.83	4.61
Cement fiber board					
1" thick	SF	0.027	2.71	2.13	4.84
1-1/2" thick	SF	0.031	4.07	2.46	6.53
Glass fiber board					
1" thick	SF	0.020	1.71	1.60	3.31
1-1/2" thick	SF	0.023	2.71	1.83	4.54

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	Unit	Man-Hrs	Material	Labor	Total
03530.01 CONCRETE TOPPINGS (Cont.)					
Poured deck					
Vermiculite or perlite					
1 to 4 mix	CY	0.800	300.00	110.00	410.00
1 to 6 mix	CY	0.738	270.00	99.00	369.00
Vermiculite or perlite					
2" thick					
1 to 4 mix	SF	0.005	2.65	0.67	3.32
1 to 6 mix	SF	0.005	1.93	0.61	2.54
3" thick					
1 to 4 mix	SF	0.007	3.61	0.99	4.60
1 to 6 mix	SF	0.007	2.85	0.92	3.77
Concrete plank, lightweight					
2" thick	SF	0.024	15.00	5.30	20.30
2-1/2" thick	SF	0.024	15.50	5.30	20.80
3-1/2" thick	SF	0.027	16.00	5.89	21.89
4" thick	SF	0.027	16.75	5.89	22.64
Channel slab, lightweight, straight					
2-3/4" thick	SF	0.024	12.25	5.30	17.55
3-1/2" thick	SF	0.024	12.50	5.30	17.80
3-3/4" thick	SF	0.024	13.50	5.30	18.80
4-3/4" thick	SF	0.027	17.00	5.89	22.89
Gypsum plank					
2" thick	SF	0.024	5.62	5.30	10.92
3" thick	SF	0.024	5.90	5.30	11.20
Cement fiber, T & G planks					
1" thick	SF	0.022	3.22	4.82	8.04
1-1/2" thick	SF	0.022	3.42	4.82	8.24
2" thick	SF	0.024	4.08	5.30	9.38
2-1/2" thick	SF	0.024	4.33	5.30	9.63
3" thick	SF	0.024	5.63	5.30	10.93
3-1/2" thick	SF	0.027	6.50	5.89	12.39
4" thick	SF	0.027	7.14	5.89	13.03
03610.01 GROUTING					
GROUTING					
Grouting for bases					
Non-shrink					
Metallic grout					
1" deep	SF	0.160	10.75	17.00	27.75
2" deep	SF	0.178	20.00	19.00	39.00
Non-metallic grout					
1" deep	SF	0.160	8.02	17.00	25.02
2" deep	SF	0.178	15.25	19.00	34.25
Fluid type					
Non-metallic					
1" deep	SF	0.160	8.20	17.00	25.20
2" deep	SF	0.178	14.50	19.00	33.50
Grouting for joints					
Portland cement grout (1 cement to 3 sand)					
1/2" joint thickness					
6" wide joints	LF	0.027	0.27	2.85	3.12
8" wide joints	LF	0.032	0.30	3.42	3.72
1" joint thickness					
4" wide joints	LF	0.025	0.30	2.67	2.97
6" wide joints	LF	0.028	0.49	2.95	3.44
8" wide joints	LF	0.033	0.61	3.56	4.17
Non-shrink, non-metallic grout					
1/2" joint thickness					
4" wide joint	LF	0.023	1.45	2.44	3.89
6" wide joint	LF	0.027	1.90	2.85	4.75
8" wide joint	LF	0.032	2.48	3.42	5.90
1" joint thickness					
4" wide joint	LF	0.025	2.48	2.67	5.15
6" wide joint	LF	0.028	3.75	2.95	6.70
8" wide joint	LF	0.033	5.07	3.56	8.63

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03821.31 CORE DRILLING

	Unit	Man-Hrs	Material	Labor	Total
CORE DRILLING					
Concrete					
6" thick					
3" dia.	EA	0.571		61.00	61.00
4" dia.	EA	0.667		71.00	71.00
6" dia.	EA	0.800		86.00	86.00
8" dia.	EA	1.333		140.00	140.00
8" thick					
3" dia.	EA	0.800		86.00	86.00
4" dia.	EA	1.000		110.00	110.00
6" dia.	EA	1.143		120.00	120.00
8" dia.	EA	1.600		170.00	170.00
10" thick					
3" dia.	EA	1.000		110.00	110.00
4" dia.	EA	1.143		120.00	120.00
6" dia.	EA	1.333		140.00	140.00
8" dia.	EA	2.000		210.00	210.00
12" thick					
3" dia.	EA	1.333		140.00	140.00
4" dia.	EA	1.600		170.00	170.00
6" dia.	EA	2.000		210.00	210.00
8" dia.	EA	2.667		290.00	290.00

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	Unit	Man-Hrs	Material	Labor	Total
04012.01 RESTORATION AND CLEANING					
RESTORATION AND CLEANING					
Masonry cleaning					
Washing brick					
Smooth surface	SF	0.013	0.21	1.30	1.51
Rough surface	SF	0.018	0.29	1.73	2.02
Steam clean masonry					
Smooth face					
Minimum	SF	0.010	0.56	1.06	1.62
Maximum	SF	0.015	0.90	1.55	2.45
Rough face					
Minimum	SF	0.013	0.82	1.42	2.24
Maximum	SF	0.020	1.21	2.13	3.34
Sandblast masonry					
Minimum	SF	0.016	0.40	1.71	2.11
Maximum	SF	0.027	0.60	2.85	3.45
Pointing masonry					
Brick	SF	0.032	1.19	3.12	4.31
Concrete block	SF	0.023	0.53	2.22	2.75
Cut and repoint					
Brick					
Minimum	SF	0.040	0.39	3.90	4.29
Maximum	SF	0.080	0.67	7.80	8.47
Stone work	LF	0.062	1.04	6.00	7.04
Cut and recaulk					
Oil base caulks	LF	0.053	1.39	5.20	6.59
Butyl caulks	LF	0.053	1.22	5.20	6.42
Polysulfides and acrylics	LF	0.053	2.37	5.20	7.57
Silicones	LF	0.053	2.77	5.20	7.97
Cement and sand grout on walls, to 1/8" thick					
Minimum	SF	0.032	0.64	3.12	3.76
Maximum	SF	0.040	1.63	3.90	5.53
Saw cutting masonry, concrete					
Average	LF	0.080		6.40	6.40
Maximum	LF	0.114		9.15	9.15
Masonry, initial 4" cut					
Minimum	LF	0.080		6.40	6.40
Average	LF	0.100		8.00	8.00
Maximum	LF	0.160		12.75	12.75
Additional 4" passes					
Minimum	LF	0.067		5.33	5.33
Core drilling masonry, concrete					
Average	EA	0.107		8.54	8.54
Maximum	EA	0.133		10.75	10.75
6" deep, 1" core					
Minimum	EA	0.073		5.82	5.82
Average	EA	0.089		7.11	7.11
Maximum	EA	0.133		10.75	10.75
2" core					
Minimum	EA	0.089		7.11	7.11
Average	EA	0.107		8.54	8.54
Maximum	EA	0.133		10.75	10.75
Brick removal and replacement					
Minimum	EA	0.100	0.68	9.75	10.43
Average	EA	0.133	0.89	13.00	13.89
Maximum	EA	0.400	1.80	39.00	40.80
04051.61 MASONRY GROUT					
MASONRY GROUT					
Grout, non-shrink, non-metallic, trowelable	CF	0.016	5.35	2.34	7.69
Grout door frame, hollow metal					
Single	EA	0.600	13.50	88.00	101.50
Double	EA	0.632	18.75	92.00	110.75
Grout-filled concrete block (CMU)					
4" wide	SF	0.020	0.35	2.92	3.27
6" wide	SF	0.022	0.93	3.19	4.12

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	Unit	Man-Hrs	Material	Labor	Total
04051.61 MASONRY GROUT (Cont.)					
Grout-filled concrete block (CMU)					
8" wide	SF	0.024	1.38	3.51	4.89
12" wide	SF	0.025	2.26	3.69	5.95
Grout-filled individual CMU cells					
4" wide	LF	0.012	0.29	1.75	2.04
6" wide	LF	0.012	0.40	1.75	2.15
8" wide	LF	0.012	0.53	1.75	2.28
10" wide	LF	0.014	0.66	2.00	2.66
12" wide	LF	0.014	0.80	2.00	2.80
Bond beams or lintels, 8" deep					
6" thick	LF	0.022	0.80	2.92	3.72
8" thick	LF	0.024	1.07	3.22	4.29
10" thick	LF	0.027	1.34	3.58	4.92
12" thick	LF	0.030	1.60	4.02	5.62
Cavity walls					
2" thick	SF	0.032	0.89	4.29	5.18
3" thick	SF	0.032	1.34	4.29	5.63
4" thick	SF	0.034	1.78	4.60	6.38
6" thick	SF	0.040	2.67	5.37	8.04
04052.31 MASONRY ACCESSORIES					
MASONRY ACCESSORIES					
Foundation vents	EA	0.320	32.25	31.25	63.50
Bar reinforcing					
Horizontal					
#3 - #4	LB	0.032	0.63	3.12	3.75
#5 - #6	LB	0.027	0.63	2.60	3.23
Vertical					
#3 - #4	LB	0.040	0.63	3.90	4.53
#5 - #6	LB	0.032	0.63	3.12	3.75
Horizontal joint reinforcing					
Truss type					
4" wide, 6" wall	LF	0.003	0.20	0.31	0.51
6" wide, 8" wall	LF	0.003	0.20	0.32	0.52
8" wide, 10" wall	LF	0.003	0.25	0.33	0.58
10" wide, 12" wall	LF	0.004	0.25	0.35	0.60
12" wide, 14" wall	LF	0.004	0.31	0.37	0.68
Ladder type					
4" wide, 6" wall	LF	0.003	0.15	0.31	0.46
6" wide, 8" wall	LF	0.003	0.17	0.32	0.49
8" wide, 10" wall	LF	0.003	0.18	0.33	0.51
10" wide, 12" wall	LF	0.003	0.21	0.33	0.54
Rectangular wall ties					
3/16" dia., galvanized					
2" x 6"	EA	0.013	0.38	1.30	1.68
2" x 8"	EA	0.013	0.41	1.30	1.71
2" x 10"	EA	0.013	0.47	1.30	1.77
2" x 12"	EA	0.013	0.53	1.30	1.83
4" x 6"	EA	0.016	0.43	1.56	1.99
4" x 8"	EA	0.016	0.49	1.56	2.05
4" x 10"	EA	0.016	0.64	1.56	2.20
4" x 12"	EA	0.016	0.73	1.56	2.29
1/4" dia., galvanized					
2" x 6"	EA	0.013	0.71	1.30	2.01
2" x 8"	EA	0.013	0.80	1.30	2.10
2" x 10"	EA	0.013	0.90	1.30	2.20
2" x 12"	EA	0.013	1.04	1.30	2.34
4" x 6"	EA	0.016	0.82	1.56	2.38
4" x 8"	EA	0.016	0.90	1.56	2.46
4" x 10"	EA	0.016	1.04	1.56	2.60
4" x 12"	EA	0.016	1.09	1.56	2.65
Z-type wall ties, galvanized					
6" long					
1/8" dia.	EA	0.013	0.33	1.30	1.63
3/16" dia.	EA	0.013	0.36	1.30	1.66

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	Unit	Man-Hrs	Material	Labor	Total
04052.31 MASONRY ACCESSORIES (Cont.)					
6" long					
1/4" dia.	EA	0.013	0.38	1.30	1.68
8" long					
1/8" dia.	EA	0.013	0.36	1.30	1.66
3/16" dia.	EA	0.013	0.38	1.30	1.68
1/4" dia.	EA	0.013	0.41	1.30	1.71
10" long					
1/8" dia.	EA	0.013	0.38	1.30	1.68
3/16" dia.	EA	0.013	0.43	1.30	1.73
1/4" dia.	EA	0.013	0.49	1.30	1.79
Dovetail anchor slots					
Galvanized steel, filled					
24 ga.	LF	0.020	0.82	1.95	2.77
20 ga.	LF	0.020	1.72	1.95	3.67
16 oz. copper, foam filled	LF	0.020	2.03	1.95	3.98
Dovetail anchors					
16 ga.					
3-1/2" long	EA	0.013	0.25	1.30	1.55
5-1/2" long	EA	0.013	0.30	1.30	1.60
12 ga.					
3-1/2" long	EA	0.013	0.33	1.30	1.63
5-1/2" long	EA	0.013	0.55	1.30	1.85
Dovetail, triangular galvanized ties, 12 ga.					
3" x 3"	EA	0.013	0.56	1.30	1.86
5" x 5"	EA	0.013	0.60	1.30	1.90
7" x 7"	EA	0.013	0.68	1.30	1.98
7" x 9"	EA	0.013	0.72	1.30	2.02
Brick anchors					
Corrugated, 3-1/2" long					
16 ga.	EA	0.013	0.23	1.30	1.53
12 ga.	EA	0.013	0.40	1.30	1.70
Non-corrugated, 3-1/2" long					
16 ga.	EA	0.013	0.32	1.30	1.62
12 ga.	EA	0.013	0.57	1.30	1.87
Cavity wall anchors, corrugated, galvanized					
5" long					
16 ga.	EA	0.013	0.71	1.30	2.01
12 ga.	EA	0.013	1.06	1.30	2.36
7" long					
28 ga.	EA	0.013	0.78	1.30	2.08
24 ga.	EA	0.013	0.99	1.30	2.29
22 ga.	EA	0.013	1.01	1.30	2.31
16 ga.	EA	0.013	1.14	1.30	2.44
Mesh ties, 16 ga., 3" wide					
8" long	EA	0.013	0.95	1.30	2.25
12" long	EA	0.013	1.06	1.30	2.36
20" long	EA	0.013	1.46	1.30	2.76
24" long	EA	0.013	1.61	1.30	2.91
04052.32 MASONRY CONTROL JOINTS					
MASONRY CONTROL JOINTS					
Control joint, cross shaped PVC	LF	0.020	2.17	1.95	4.12
Closed cell joint filler					
1/2"	LF	0.020	0.38	1.95	2.33
3/4"	LF	0.020	0.77	1.95	2.72
Rubber, for					
4" wall	LF	0.020	2.50	1.95	4.45
6" wall	LF	0.021	3.10	2.05	5.15
8" wall	LF	0.022	3.74	2.16	5.90
PVC, for					
4" wall	LF	0.020	1.30	1.95	3.25
6" wall	LF	0.021	2.20	2.05	4.25
8" wall	LF	0.022	3.33	2.16	5.49

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	Unit	Man-Hrs	Material	Labor	Total
04052.35 MASONRY FLASHING					
MASONRY FLASHING					
Through-wall flashing					
5 oz. coated copper	SF	0.067	3.35	6.50	9.85
0.030" elastomeric	SF	0.053	1.10	5.20	6.30
04211.31 BRICK MASONRY					
BRICK MASONRY					
Standard size brick, running bond					
Face brick, red (6.4/sf)					
Veneer	SF	0.133	5.65	13.00	18.65
Cavity wall	SF	0.114	5.65	11.25	16.90
9" solid wall	SF	0.229	11.25	22.25	33.50
Common brick (6.4/sf)					
Select common for veneers	SF	0.133	3.69	13.00	16.69
Back-up					
4" thick	SF	0.100	3.32	9.75	13.07
8" thick	SF	0.160	6.65	15.50	22.15
Firewall					
12" thick	SF	0.267	10.75	26.00	36.75
16" thick	SF	0.364	14.25	35.50	49.75
Glazed brick (7.4/sf)					
Veneer	SF	0.145	15.25	14.25	29.50
Buff or gray face brick (6.4/sf)					
Veneer	SF	0.133	6.58	13.00	19.58
Cavity wall	SF	0.114	6.58	11.25	17.83
Jumbo or oversize brick (3/sf)					
4" veneer	SF	0.080	4.33	7.80	12.13
4" back-up	SF	0.067	4.33	6.50	10.83
8" back-up	SF	0.114	5.02	11.25	16.27
12" firewall	SF	0.200	6.75	19.50	26.25
16" firewall	SF	0.267	9.52	26.00	35.52
Norman brick, red face (4.5/sf)					
4" veneer	SF	0.100	6.23	9.75	15.98
Cavity wall	SF	0.089	6.23	8.67	14.90
Chimney, standard brick, including flue					
16" x 16"	LF	0.800	26.75	78.00	104.75
16" x 20"	LF	0.800	45.00	78.00	123.00
16" x 24"	LF	0.800	48.00	78.00	126.00
20" x 20"	LF	1.000	37.50	98.00	135.50
20" x 24"	LF	1.000	51.00	98.00	149.00
20" x 32"	LF	1.143	57.00	110.00	167.00
Window sill, face brick on edge	LF	0.200	3.11	19.50	22.61
04212.31 STRUCTURAL TILE					
STRUCTURAL TILE					
Structural glazed tile					
6T series, 5-1/2" x 12"					
Glazed on one side					
2" thick	SF	0.080	11.50	7.80	19.30
4" thick	SF	0.080	14.00	7.80	21.80
6" thick	SF	0.089	21.75	8.67	30.42
8" thick	SF	0.100	26.75	9.75	36.50
Glazed on two sides					
4" thick	SF	0.100	20.25	9.75	30.00
6" thick	SF	0.114	27.75	11.25	39.00
8" thick	SF	0.123	27.75	12.00	39.75
Special shapes					
Group 1	SF	0.160	11.75	15.50	27.25
Group 2	SF	0.160	15.00	15.50	30.50
Group 3	SF	0.160	19.75	15.50	35.25
Group 4	SF	0.160	39.50	15.50	55.00
Group 5	SF	0.160	48.25	15.50	63.75
Fire rated					
4" thick, 1 hr rating	SF	0.080	18.75	7.80	26.55
6" thick, 2 hr rating	SF	0.089	23.00	8.67	31.67

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	Unit	Man-Hrs	Material	Labor	Total
04212.31 STRUCTURAL TILE (Cont.)					
Structural glazed tile					
8W series, 8" x 16"					
Glazed on one side					
2" thick	SF	0.053	11.75	5.20	16.95
4" thick	SF	0.053	12.75	5.20	17.95
6" thick	SF	0.062	21.00	6.00	27.00
8" thick	SF	0.062	23.00	6.00	29.00
Glazed on two sides					
4" thick	SF	0.067	20.00	6.50	26.50
6" thick	SF	0.080	28.00	7.80	35.80
8" thick	SF	0.080	34.00	7.80	41.80
Special shapes					
Group 1	SF	0.114	18.00	11.25	29.25
Group 2	SF	0.114	22.00	11.25	33.25
Group 3	SF	0.114	24.00	11.25	35.25
Group 4	SF	0.114	40.00	11.25	51.25
Group 5	SF	0.114	51.00	11.25	62.25
Fire rated					
4" thick, 1 hr rating	SF	0.114	30.00	11.25	41.25
6" thick, 2 hr rating	SF	0.114	36.00	11.25	47.25
04220.01 CONCRETE MASONRY UNITS					
CONCRETE MASONRY UNITS					
Hollow, load bearing					
4"	SF	0.059	1.63	5.78	7.41
6"	SF	0.062	2.38	6.00	8.38
8"	SF	0.067	2.73	6.50	9.23
10"	SF	0.073	3.78	7.09	10.87
12"	SF	0.080	4.34	7.80	12.14
Solid, load bearing					
4"	SF	0.059	2.55	5.78	8.33
6"	SF	0.062	2.86	6.00	8.86
8"	SF	0.067	3.91	6.50	10.41
10"	SF	0.073	4.17	7.09	11.26
12"	SF	0.080	6.19	7.80	13.99
Back-up block, 8" x 16"					
2"	SF	0.046	1.71	4.45	6.16
4"	SF	0.047	1.78	4.59	6.37
6"	SF	0.050	2.61	4.87	7.48
8"	SF	0.053	2.99	5.20	8.19
10"	SF	0.057	4.13	5.57	9.70
12"	SF	0.062	4.75	6.00	10.75
Foundation wall, 8" x 16"					
6"	SF	0.057	2.60	5.57	8.17
8"	SF	0.062	2.99	6.00	8.99
10"	SF	0.067	4.13	6.50	10.63
12"	SF	0.073	4.75	7.09	11.84
Solid					
6"	SF	0.062	3.14	6.00	9.14
8"	SF	0.067	4.29	6.50	10.79
10"	SF	0.073	4.57	7.09	11.66
12"	SF	0.080	6.79	7.80	14.59
Exterior, styrofoam inserts, std weight, 8" x 16"					
6"	SF	0.062	4.57	6.00	10.57
8"	SF	0.067	4.94	6.50	11.44
10"	SF	0.073	6.39	7.09	13.48
12"	SF	0.080	8.77	7.80	16.57
Lightweight					
6"	SF	0.062	5.09	6.00	11.09
8"	SF	0.067	5.73	6.50	12.23
10"	SF	0.073	6.09	7.09	13.18
12"	SF	0.080	8.04	7.80	15.84
Acoustical slotted block					
4"	SF	0.073	5.30	7.09	12.39
6"	SF	0.073	5.56	7.09	12.65

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	Unit	Man-Hrs	Material	Labor	Total
04220.01 CONCRETE MASONRY UNITS (Cont.)					
Acoustical slotted block					
8"	SF	0.080	6.94	7.80	14.74
Filled cavities					
4"	SF	0.089	5.68	8.67	14.35
6"	SF	0.094	6.56	9.18	15.74
8"	SF	0.100	8.40	9.75	18.15
Hollow, split face					
4"	SF	0.059	3.63	5.78	9.41
6"	SF	0.062	4.21	6.00	10.21
8"	SF	0.067	4.42	6.50	10.92
10"	SF	0.073	4.95	7.09	12.04
12"	SF	0.080	5.28	7.80	13.08
Split rib profile					
4"	SF	0.073	4.42	7.09	11.51
6"	SF	0.073	5.13	7.09	12.22
8"	SF	0.080	5.59	7.80	13.39
10"	SF	0.080	6.11	7.80	13.91
12"	SF	0.080	6.63	7.80	14.43
High strength block, 3500 psi					
2"	SF	0.059	1.72	5.78	7.50
4"	SF	0.062	2.15	6.00	8.15
6"	SF	0.062	2.56	6.00	8.56
8"	SF	0.067	2.89	6.50	9.39
10"	SF	0.073	3.37	7.09	10.46
12"	SF	0.080	4.00	7.80	11.80
Solar screen concrete block					
4" thick					
6" x 6"	SF	0.178	4.09	17.25	21.34
8" x 8"	SF	0.160	4.88	15.50	20.38
12" x 12"	SF	0.123	5.00	12.00	17.00
8" thick					
8" x 16"	SF	0.114	5.00	11.25	16.25
Glazed block					
Cove base, glazed 1 side, 2"	LF	0.089	11.00	8.67	19.67
4"	LF	0.089	11.25	8.67	19.92
6"	LF	0.100	11.50	9.75	21.25
8"	LF	0.100	12.50	9.75	22.25
Single face					
2"	SF	0.067	11.50	6.50	18.00
4"	SF	0.067	14.25	6.50	20.75
6"	SF	0.073	15.25	7.09	22.34
8"	SF	0.080	16.00	7.80	23.80
10"	SF	0.089	18.00	8.67	26.67
12"	SF	0.094	19.25	9.18	28.43
Double face					
4"	SF	0.084	17.25	8.21	25.46
6"	SF	0.089	20.25	8.67	28.92
8"	SF	0.100	21.25	9.75	31.00
Corner or bullnose					
2"	EA	0.100	11.50	9.75	21.25
4"	EA	0.114	14.75	11.25	26.00
6"	EA	0.114	18.00	11.25	29.25
8"	EA	0.133	19.75	13.00	32.75
10"	EA	0.145	21.25	14.25	35.50
12"	EA	0.160	23.00	15.50	38.50
Gypsum unit masonry					
Partition blocks (12"x30")					
Solid					
2"	SF	0.032	1.11	3.12	4.23
Hollow					
3"	SF	0.032	1.12	3.12	4.24
4"	SF	0.033	1.28	3.25	4.53
6"	SF	0.036	1.37	3.54	4.91

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	Unit	Man-Hrs	Material	Labor	Total
04220.01 CONCRETE MASONRY UNITS (Cont.)					
Vertical reinforcing					
4' o.c., add 5% to labor					
2'8" o.c., add 15% to labor					
Interior partitions, add 10% to labor					
04220.09 BOND BEAMS & LINTELS					
BOND BEAMS & LINTELS					
Bond beam, no grout or reinforcement					
8" x 16" x					
4" thick	LF	0.062	1.54	6.00	7.54
6" thick	LF	0.064	2.35	6.24	8.59
8" thick	LF	0.067	2.69	6.50	9.19
10" thick	LF	0.070	3.33	6.78	10.11
12" thick	LF	0.073	3.78	7.09	10.87
Beam lintel, no grout or reinforcement					
8" x 16" x					
10" thick	LF	0.080	6.16	7.80	13.96
12" thick	LF	0.089	7.82	8.67	16.49
Precast masonry lintel					
6 lf, 8" high x					
4" thick	LF	0.133	5.63	13.00	18.63
6" thick	LF	0.133	7.19	13.00	20.19
8" thick	LF	0.145	8.14	14.25	22.39
10" thick	LF	0.145	9.71	14.25	23.96
10 lf, 8" high x					
4" thick	LF	0.080	7.08	7.80	14.88
6" thick	LF	0.080	8.73	7.80	16.53
8" thick	LF	0.089	9.71	8.67	18.38
10" thick	LF	0.089	13.25	8.67	21.92
Steel angles and plates					
Minimum	LB	0.011	1.15	1.11	2.26
Maximum	LB	0.020	1.69	1.95	3.64
Various size angle lintels					
1/4" stock					
3" x 3"	LF	0.050	5.94	4.87	10.81
3" x 3-1/2"	LF	0.050	6.54	4.87	11.41
3/8" stock					
3" x 4"	LF	0.050	10.25	4.87	15.12
3-1/2" x 4"	LF	0.050	10.75	4.87	15.62
4" x 4"	LF	0.050	12.00	4.87	16.87
5" x 3-1/2"	LF	0.050	12.50	4.87	17.37
6" x 3-1/2"	LF	0.050	14.25	4.87	19.12
1/2" stock					
6" x 4"	LF	0.050	15.75	4.87	20.62
04230.01 GLASS BLOCK					
GLASS BLOCK					
Glass block, 4" thick					
6" x 6"	SF	0.267	30.25	26.00	56.25
8" x 8"	SF	0.200	19.00	19.50	38.50
12" x 12"	SF	0.160	24.25	15.50	39.75
04240.01 CLAY TILE					
CLAY TILE					
Hollow clay tile, for back-up, 12" x 12"					
Scored face					
Load bearing					
4" thick	SF	0.057	6.79	5.57	12.36
6" thick	SF	0.059	7.92	5.78	13.70
8" thick	SF	0.062	9.87	6.00	15.87
10" thick	SF	0.064	12.25	6.24	18.49
12" thick	SF	0.067	20.50	6.50	27.00
Non-load bearing					
3" thick	SF	0.055	5.51	5.38	10.89
4" thick	SF	0.057	6.37	5.57	11.94
6" thick	SF	0.059	7.37	5.78	13.15

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	Unit	Man-Hrs	Material	Labor	Total
04240.01 CLAY TILE (Cont.)					
Non-load bearing					
8" thick	SF	0.062	9.40	6.00	15.40
12" thick	SF	0.067	13.25	6.50	19.75
Partition, 12" x 12"					
In walls					
3" thick	SF	0.067	5.51	6.50	12.01
4" thick	SF	0.067	6.38	6.50	12.88
6" thick	SF	0.070	7.03	6.78	13.81
8" thick	SF	0.073	9.22	7.09	16.31
10" thick	SF	0.076	11.00	7.43	18.43
12" thick	SF	0.080	16.00	7.80	23.80
Clay tile floors					
4" thick	SF	0.044	6.37	4.33	10.70
6" thick	SF	0.047	7.92	4.59	12.51
8" thick	SF	0.050	9.87	4.87	14.74
10" thick	SF	0.053	12.25	5.20	17.45
12" thick	SF	0.057	18.25	5.57	23.82
Terra cotta					
Coping, 10" or 12" wide, 3" thick	LF	0.160	15.00	15.50	30.50
04430.01 STONE					
STONE					
Rubble stone					
Walls set in mortar					
8" thick	SF	0.200	15.50	19.50	35.00
12" thick	SF	0.320	18.75	31.25	50.00
18" thick	SF	0.400	24.75	39.00	63.75
24" thick	SF	0.533	31.00	52.00	83.00
Dry set wall					
8" thick	SF	0.133	17.50	13.00	30.50
12" thick	SF	0.200	19.75	19.50	39.25
18" thick	SF	0.267	27.25	26.00	53.25
24" thick	SF	0.320	33.25	31.25	64.50
Cut stone					
Imported marble					
Facing panels					
3/4" thick	SF	0.320	36.75	31.25	68.00
1-1/2" thick	SF	0.364	57.00	35.50	92.50
2-1/4" thick	SF	0.444	69.00	43.25	112.25
Base					
1" thick					
4" high	LF	0.400	18.25	39.00	57.25
6" high	LF	0.400	22.00	39.00	61.00
Columns, solid					
Plain faced	CF	5.333	130.00	520.00	650.00
Fluted	CF	5.333	350.00	520.00	870.00
Flooring, travertine, minimum	SF	0.123	17.75	12.00	29.75
Average	SF	0.160	23.50	15.50	39.00
Maximum	SF	0.178	43.25	17.25	60.50
Domestic marble					
Facing panels					
7/8" thick	SF	0.320	32.75	31.25	64.00
1-1/2" thick	SF	0.364	49.00	35.50	84.50
2-1/4" thick	SF	0.444	59.00	43.25	102.25
Stairs					
12" treads	LF	0.400	29.25	39.00	68.25
6" risers	LF	0.267	21.75	26.00	47.75
Thresholds, 7/8" thick, 3' long, 4" to 6" wide					
Plain	EA	0.667	28.00	65.00	93.00
Beveled	EA	0.667	30.75	65.00	95.75
Window sill					
6" wide, 2" thick	LF	0.320	15.50	31.25	46.75
Stools					
5" wide, 7/8" thick	LF	0.320	23.00	31.25	54.25

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	Unit	Man-Hrs	Material	Labor	Total
04430.01 STONE (Cont.)					
Cut stone					
Limestone panels up to 12' x 5', smooth finish					
2" thick	SF	0.096	30.50	14.00	44.50
3" thick	SF	0.096	35.75	14.00	49.75
4" thick	SF	0.096	51.00	14.00	65.00
Miscellaneous limestone items					
Steps, 14" wide, 6" deep	LF	0.533	65.00	52.00	117.00
Coping, smooth finish	CF	0.267	91.00	26.00	117.00
Sills, lintels, jambs, smooth finish	CF	0.320	91.00	31.25	122.25
Granite veneer facing panels, polished					
7/8" thick					
Black	SF	0.320	52.00	31.25	83.25
Gray	SF	0.320	41.00	31.25	72.25
Base					
4" high	LF	0.160	22.00	15.50	37.50
6" high	LF	0.178	26.50	17.25	43.75
Curbing, straight, 6" x 16"	LF	0.400	24.50	59.00	83.50
Radius curbs, radius over 5'	LF	0.533	30.00	78.00	108.00
Ashlar veneer					
4" thick, random	SF	0.320	36.75	31.25	68.00
Pavers, 4" x 4" split					
Gray	SF	0.160	36.25	15.50	51.75
Pink	SF	0.160	35.50	15.50	51.00
Black	SF	0.160	35.00	15.50	50.50
Slate, panels					
1" thick	SF	0.320	25.75	31.25	57.00
2" thick	SF	0.364	35.00	35.50	70.50
Sills or stools					
1" thick					
6" wide	LF	0.320	12.00	31.25	43.25
10" wide	LF	0.348	19.50	34.00	53.50
2" thick					
6" wide	LF	0.364	19.75	35.50	55.25
10" wide	LF	0.400	32.50	39.00	71.50
04510.01 FLUE LINERS					
FLUE LINERS					
Flue liners					
Rectangular					
8" x 12"	LF	0.133	7.91	13.00	20.91
12" x 12"	LF	0.145	9.87	14.25	24.12
12" x 18"	LF	0.160	17.50	15.50	33.00
16" x 16"	LF	0.178	18.75	17.25	36.00
18" x 18"	LF	0.190	23.25	18.50	41.75
20" x 20"	LF	0.200	38.75	19.50	58.25
24" x 24"	LF	0.229	46.50	22.25	68.75
Round					
18" dia.	LF	0.190	35.75	18.50	54.25
24" dia.	LF	0.229	71.00	22.25	93.25
04710.01 SIMULATED BRICK AND STONE					
SIMULATED BRICK AND STONE					
Brick Veneer Panel 48" x 33"					
Antique	EA	0.400	150.00	39.00	189.00
Baked Clay	EA	0.400	130.00	39.00	169.00
Brick Cream Caramel	EA	0.400	150.00	39.00	189.00
Dusky Evening	EA	0.400	150.00	39.00	189.00
Glacier	EA	0.400	120.00	39.00	159.00
Merlot	EA	0.400	150.00	39.00	189.00
Mixed Twilight	EA	0.400	130.00	39.00	169.00
Mocha	EA	0.400	150.00	39.00	189.00
Spiced	EA	0.400	130.00	39.00	169.00
Cast stone					
6" Window/Door Molding	LF	0.080	21.50	7.80	29.30
12" Dia. Column	LF	0.200	91.00	19.50	110.50
12" x 12" Quoins	EA	0.100	62.00	9.75	71.75

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04710.01 SIMULATED BRICK AND STONE (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Cast stone					
6" Base Molding	LF	0.080	17.00	7.80	24.80
10" Wallcap	LF	0.080	19.25	7.80	27.05
3 Piece baluster system	LF	0.100	110.00	9.75	119.75
24" x 24" x 1-1/2" Paver	SF	0.020	11.25	1.95	13.20
Simulated Stone					
Slate, 43-1/4" Wide × 8-1/2" High × approx. 1-3/4" Thick					
Arizona Red	EA	0.027	30.50	2.60	33.10
Brunswick Brown	EA	0.027	30.50	2.60	33.10
Midnight Ash	EA	0.027	30.50	2.60	33.10
Onyx	EA	0.027	30.50	2.60	33.10
Pewter	EA	0.027	30.50	2.60	33.10
Rocky Mountain Graphite	EA	0.027	30.50	2.60	33.10
Sahara	EA	0.027	30.50	2.60	33.10
Stacked Stone 49-1/4" Wide x 25" High 2" Thick					
Birchwood	EA	0.400	110.00	39.00	149.00
Earth	EA	0.400	110.00	39.00	149.00
Honey	EA	0.400	110.00	39.00	149.00
Espresso	EA	0.400	110.00	39.00	149.00
Spice	EA	0.400	110.00	39.00	149.00
Potomac	EA	0.400	110.00	39.00	149.00
Ponderosa	EA	0.400	110.00	39.00	149.00
Tudor	EA	0.400	110.00	39.00	149.00
Riviera	EA	0.400	110.00	39.00	149.00
White	EA	0.400	110.00	39.00	149.00
Corners 15-1/2 x 14-1/2 x 25" High x 2-1/4" Thick					
Birchwood	EA	0.100	67.00	9.75	76.75
Earth	EA	0.100	67.00	9.75	76.75
Honey	EA	0.100	67.00	9.75	76.75
Espresso	EA	0.100	67.00	9.75	76.75
Spice	EA	0.100	67.00	9.75	76.75
Potomac	EA	0.100	67.00	9.75	76.75
Ponderosa	EA	0.100	67.00	9.75	76.75
Tudor	EA	0.100	67.00	9.75	76.75
Riviera	EA	0.100	67.00	9.75	76.75
White	EA	0.100	67.00	9.75	76.75
Ledgers 48" Wide x 3-1/2" Deep x 3-5/8" High					
Birchwood	EA	0.267	40.75	26.00	66.75
Earth	EA	0.267	40.75	26.00	66.75
Honey	EA	0.267	40.75	26.00	66.75
Espresso	EA	0.267	40.75	26.00	66.75
Spice	EA	0.267	40.75	26.00	66.75
Potomac	EA	0.267	40.75	26.00	66.75
Ponderosa	EA	0.267	40.75	26.00	66.75
Tudor	EA	0.267	40.75	26.00	66.75
Riviera	EA	0.267	40.75	26.00	66.75
White	EA	0.267	40.75	26.00	66.75

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	Unit	Man-Hrs	Material	Labor	Total
05052.31 STRUCTURAL WELDING					
STRUCTURAL WELDING					
Welding					
Single pass					
1/8"	LF	0.040	0.46	4.14	4.60
3/16"	LF	0.053	0.76	5.52	6.28
1/4"	LF	0.067	1.07	6.90	7.97
Miscellaneous steel shapes					
Plain	LB	0.002	2.11	0.16	2.27
Galvanized	LB	0.003	2.65	0.27	2.92
Plates					
Plain	LB	0.002	1.86	0.20	2.06
Galvanized	LB	0.003	2.36	0.33	2.69
05052.39 METAL FASTENINGS					
METAL FASTENINGS					
Powder Actuated Anchors					
Loads					
Single Shot					
.22 Cal Green	EA				0.09
.22 Cal Yellow	EA				0.13
.22 Cal Red	EA				0.14
Strip					
.27 Cal Green	EA				0.22
.27 Cal Yellow	EA				0.21
.27 Cal Red	EA				0.21
Pins					
.145 Dia. x Length 300 Head					
1/2"	EA				0.19
5/8"	EA				0.26
3/4"	EA				0.31
1"	EA				0.39
1-1/4"	EA				0.40
1-1/2"	EA				0.46
2"	EA				0.48
2-1/2"	EA				0.52
3"	EA				0.55
Anchor bolts, material only					
3/8" x					
8" long	EA				1.77
10" long	EA				2.27
12" long	EA				2.56
1/2" x					
8" long	EA				2.79
10" long	EA				3.20
12" long	EA				3.61
18" long	EA				4.43
5/8" x					
8" long	EA				5.53
10" long	EA				5.94
12" long	EA				6.82
18" long	EA				9.15
24" long	EA				9.56
3/4" x					
8" long	EA				6.76
12" long	EA				9.67
18" long	EA				11.50
24" long	EA				13.50
7/8" x					
8" long	EA				6.76
12" long	EA				9.67
18" long	EA				11.50
24" long	EA				13.50
1" x					
12" long	EA				17.00
18" long	EA				20.75

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	Unit	Man-Hrs	Material	Labor	Total
05052.39 METAL FASTENINGS (Cont.)					
1" x					
24" long	EA				23.00
36" long	EA				34.00
Expansion shield					
1/4"	EA				0.87
3/8"	EA				1.46
1/2"	EA				2.86
5/8"	EA				4.15
3/4"	EA				5.07
1"	EA				6.87
Non-drilling anchor					
1/4"	EA				0.90
3/8"	EA				1.12
1/2"	EA				1.72
5/8"	EA				2.83
3/4"	EA				4.84
Self-drilling anchor					
1/4"	EA				2.27
5/16"	EA				2.84
3/8"	EA				3.41
1/2"	EA				4.55
5/8"	EA				8.64
3/4"	EA				11.25
7/8"	EA				16.00
Add 25% for galvanized anchor bolts					
Channel door frame, with anchors	LB	0.009	2.21	0.92	3.13
Corner guard angle, with anchors	LB	0.013	2.09	1.38	3.47
05052.40 METAL LINTELS					
METAL LINTELS					
Lintels, steel					
Plain	LB	0.020	2.09	2.07	4.16
Galvanized	LB	0.020	2.54	2.07	4.61
05120.01 BEAMS, GIRDERS, COLUMNS, TRUSSES					
BEAMS, GIRDERS, COLUMNS, TRUSSES					
Beams and girders, A-36					
Welded	TON	4.800	4,190.00	1,060.00	5,250.00
Bolted	TON	4.364	4,070.00	960.00	5,030.00
Columns					
Pipe					
6" dia.	LB	0.005	2.14	1.06	3.20
12" dia.	LB	0.004	1.82	0.88	2.70
Purlins and girts					
Welded	TON	8.000	4,320.00	1,770.00	6,090.00
Bolted	TON	6.857	4,320.00	1,520.00	5,840.00
Column base plates					
Up to 150 lb each	LB	0.005	2.53	0.55	3.08
Over 150 lb each	LB	0.007	2.06	0.69	2.75
Structural pipe					
3" to 5" o.d.	TON	9.600	4,730.00	2,120.00	6,850.00
6" to 12" o.d.	TON	6.857	4,390.00	1,520.00	5,910.00
Structural tube					
6" square					
Light sections	TON	9.600	4,990.00	2,120.00	7,110.00
Heavy sections	TON	6.857	5,150.00	1,520.00	6,670.00
6" wide rectangular					
Light sections	TON	8.000	5,490.00	1,770.00	7,260.00
Heavy sections	TON	6.000	5,150.00	1,330.00	6,480.00
Greater than 6" wide rectangular					
Light sections	TON	8.000	5,850.00	1,770.00	7,620.00
Heavy sections	TON	6.000	5,510.00	1,330.00	6,840.00
Miscellaneous structural shapes					
Steel angle	TON	12.000	3,900.00	2,650.00	6,550.00
Steel plate	TON	8.000	4,430.00	1,770.00	6,200.00

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	Unit	Man-Hrs	Material	Labor	Total
05120.01 BEAMS, GIRDERS, COLUMNS, TRUSSES (Cont.)					
Trusses, field welded					
60 lb/lf	TON	6.000	5,690.00	1,330.00	7,020.00
100 lb/lf	TON	4.800	4,980.00	1,060.00	6,040.00
150 lb/lf	TON	4.000	4,690.00	880.00	5,570.00
Bolted					
60 lb/lf	TON	5.333	5,620.00	1,180.00	6,800.00
100 lb/lf	TON	4.364	4,910.00	960.00	5,870.00
150 lb/lf	TON	3.692	4,660.00	820.00	5,480.00
Add for galvanizing	TON				890.00
05150.11 WIRE ROPE					
WIRE ROPE					
Galvanized Cable					
1/16"	LF				0.40
1/8"	LF				0.91
3/16"	LF				1.19
1/4"	LF				1.50
5/16"	LF				2.10
3/8"	LF				2.50
1/2"	LF				2.73
5/8"	LF				3.07
3/4"	LF				5.06
1-1/4"	LF				13.25
Stainless					
1/16"	LF				0.30
1/8"	LF				1.01
3/16"	LF				1.32
1/4"	LF				1.67
5/16"	LF				2.32
3/8"	LF				2.78
1/2"	LF				3.03
5/8"	LF				3.70
3/4"	LF				5.61
1-1/4"	LF				14.75
Coated					
1/16"	LF				0.52
1/8"	LF				1.12
3/16"	LF				1.80
Clips					
1/16"	EA				1.67
1/8"	EA				1.86
3/16"	EA				1.91
1/4"	EA				1.90
5/16"	EA				3.27
3/8"	EA				2.30
1/2"	EA				2.82
5/8"	EA				4.93
3/4"	EA				7.68
1-1/4"	EA				12.75
Thimbles					
3/16"	EA				0.92
1/4"	EA				1.22
5/16"	EA				1.31
3/8"	EA				1.79
1/2"	EA				2.23
5/8"	EA				6.03
3/4"	EA				5.91
1-1/4"	EA				16.25
Sleeves (Swage type)					
1/16"	EA				0.36
1/8"	EA				0.91
3/16"	EA				0.84
1/4"	EA				1.04
5/16"	EA				2.14
3/8"	EA				2.31

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	Unit	Man-Hrs	Material	Labor	Total
05150.11 WIRE ROPE (Cont.)					
Sleeves (Swage type)					
1/2"	EA				2.38
5/8"	EA				2.57
3/4"	EA				2.69
1-1/4"	EA				2.82
05210.01 METAL JOISTS					
METAL JOISTS					
Joist					
DLH series	TON	3.200	2,870.00	710.00	3,580.00
K series	TON	3.200	2,970.00	710.00	3,680.00
LH series	TON	3.200	2,870.00	710.00	3,580.00
05310.01 METAL DECKING					
METAL DECKING					
Roof, 1-1/2" deep, non-composite					
16 ga.					
Primed	SF	0.008	5.51	1.76	7.27
Galvanized	SF	0.008	5.78	1.76	7.54
18 ga.					
Primed	SF	0.008	4.30	1.76	6.06
Galvanized	SF	0.008	4.73	1.76	6.49
20 ga.					
Primed	SF	0.008	3.17	1.76	4.93
Galvanized	SF	0.008	3.76	1.76	5.52
22 ga.					
Primed	SF	0.008	2.57	1.76	4.33
Galvanized	SF	0.008	2.88	1.76	4.64
Open type decking, galvanized					
1-1/2" deep					
18 ga.	SF	0.008	4.55	1.76	6.31
20 ga.	SF	0.008	3.48	1.76	5.24
22 ga.	SF	0.008	3.33	1.76	5.09
3" deep					
16 ga.	SF	0.009	7.07	1.92	8.99
18 ga.	SF	0.009	6.66	1.92	8.58
20 ga.	SF	0.009	5.03	1.92	6.95
22 ga.	SF	0.009	4.88	1.92	6.80
4-1/2" deep					
16 ga.	SF	0.010	10.50	2.12	12.62
18 ga.	SF	0.010	8.67	2.12	10.79
6" deep					
16 ga.	SF	0.011	14.50	2.35	16.85
18 ga.	SF	0.011	12.50	2.35	14.85
7-1/2" deep					
16 ga.	SF	0.011	15.75	2.46	18.21
18 ga.	SF	0.011	14.75	2.46	17.21
Cellular type					
1-1/2" deep, galvanized					
18-18 ga.	SF	0.010	11.50	2.12	13.62
22-18 ga.	SF	0.010	10.25	2.12	12.37
3" deep, galvanized					
16-16 ga.	SF	0.011	16.25	2.35	18.60
18-16 ga.	SF	0.011	15.25	2.35	17.60
18-18 ga.	SF	0.011	14.00	2.35	16.35
20-18 ga.	SF	0.011	12.25	2.35	14.60
4-1/2" deep, galvanized					
16-16 ga.	SF	0.011	24.25	2.52	26.77
18-16 ga.	SF	0.011	22.50	2.52	25.02
18-18 ga.	SF	0.011	21.50	2.52	24.02
20-18 ga.	SF	0.011	19.50	2.52	22.02
Composite deck, non-cellular, galvanized					
1-1/2" deep					
18 ga.	SF	0.009	3.82	1.92	5.74
20 ga.	SF	0.009	3.48	1.92	5.40
22 ga.	SF	0.009	2.83	1.92	4.75

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	Unit	Man-Hrs	Material	Labor	Total
05310.01 METAL DECKING (Cont.)					
Composite deck, non-cellular, galvanized					
3" deep					
18 ga.	SF	0.009	5.39	2.04	7.43
20 ga.	SF	0.009	3.48	2.04	5.52
22 ga.	SF	0.009	2.83	2.04	4.87
Slab form floor deck					
9/16" deep					
28 ga.	SF	0.009	1.71	1.92	3.63
1-5/16" deep					
24 ga.	SF	0.009	2.51	2.00	4.51
22 ga.	SF	0.009	3.02	2.00	5.02
05410.01 METAL FRAMING					
METAL FRAMING					
Furring channel, galvanized					
Beams and columns, 3/4"					
12" o.c.	SF	0.080	0.51	8.28	8.79
16" o.c.	SF	0.073	0.39	7.52	7.91
Walls, 3/4"					
12" o.c.	SF	0.040	0.51	4.14	4.65
16" o.c.	SF	0.033	0.39	3.45	3.84
24" o.c.	SF	0.027	0.28	2.76	3.04
1-1/2"					
12" o.c.	SF	0.040	0.84	4.14	4.98
16" o.c.	SF	0.033	0.64	3.45	4.09
24" o.c.	SF	0.027	0.43	2.76	3.19
Stud, load bearing					
16" o.c.					
12 ga.					
2-1/2"	SF	0.036	1.89	3.68	5.57
3-5/8"	SF	0.036	2.23	3.68	5.91
4"	SF	0.036	2.34	3.68	6.02
6"	SF	0.040	2.91	4.14	7.05
8"	SF	0.040	3.55	4.14	7.69
12"	SF	0.044	4.69	4.60	9.29
14 ga.					
2-1/2"	SF	0.036	1.55	3.68	5.23
3-5/8"	SF	0.036	1.83	3.68	5.51
4"	SF	0.036	1.92	3.68	5.60
6"	SF	0.040	2.39	4.14	6.53
8"	SF	0.040	2.91	4.14	7.05
12"	SF	0.044	3.84	4.60	8.44
16 ga.					
2-1/2"	SF	0.036	1.41	3.68	5.09
3-5/8"	SF	0.036	1.66	3.68	5.34
4"	SF	0.036	1.73	3.68	5.41
6"	SF	0.040	2.18	4.14	6.32
8"	SF	0.040	2.79	4.14	6.93
12"	SF	0.044	3.49	4.60	8.09
18 ga.					
2-1/2"	SF	0.036	1.15	3.68	4.83
3-5/8"	SF	0.036	1.41	3.68	5.09
4"	SF	0.036	1.48	3.68	5.16
6"	SF	0.040	1.86	4.14	6.00
8"	SF	0.040	2.25	4.14	6.39
12"	SF	0.044	2.79	4.60	7.39
20 ga.					
2-1/2"	SF	0.036	0.76	3.68	4.44
3-5/8"	SF	0.036	0.92	3.68	4.60
4"	SF	0.036	1.00	3.68	4.68
6"	SF	0.040	1.23	4.14	5.37
8"	SF	0.040	1.46	4.14	5.60
12"	SF	0.044	1.74	4.60	6.34

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05410.01 METAL FRAMING (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Stud, load bearing					
24" o.c.					
12 ga.					
2-1/2"	SF	0.031	1.32	3.18	4.50
3-5/8"	SF	0.031	1.56	3.18	4.74
4"	SF	0.031	1.64	3.18	4.82
6"	SF	0.033	2.04	3.45	5.49
8"	SF	0.033	2.48	3.45	5.93
12"	SF	0.036	3.28	3.76	7.04
14 ga.					
2-1/2"	SF	0.031	1.08	3.18	4.26
3-5/8"	SF	0.031	1.28	3.18	4.46
4"	SF	0.031	1.34	3.18	4.52
6"	SF	0.033	1.67	3.45	5.12
8"	SF	0.033	2.04	3.45	5.49
12"	SF	0.036	2.69	3.76	6.45
16 ga.					
2-1/2"	SF	0.031	0.96	3.18	4.14
3-5/8"	SF	0.031	1.15	3.18	4.33
4"	SF	0.031	1.22	3.18	4.40
6"	SF	0.033	1.48	3.45	4.93
8"	SF	0.033	1.86	3.45	5.31
12"	SF	0.036	1.86	3.76	5.62
18 ga.					
2-1/2"	SF	0.031	0.76	3.18	3.94
3-5/8"	SF	0.031	0.89	3.18	4.07
4"	SF	0.031	0.96	3.18	4.14
6"	SF	0.033	1.22	3.45	4.67
8"	SF	0.033	1.48	3.45	4.93
12"	SF	0.036	1.48	3.76	5.24
20 ga.					
2-1/2"	SF	0.031	0.48	3.18	3.66
3-5/8"	SF	0.031	0.55	3.18	3.73
4"	SF	0.031	0.61	3.18	3.79
6"	SF	0.033	0.79	3.45	4.24
8"	SF	0.033	0.97	3.45	4.42
12"	SF	0.036	0.97	3.76	4.73
Track, load bearing, 12 ga.					
2-1/2"	LF	0.012	1.89	1.27	3.16
3-5/8"	LF	0.012	2.23	1.27	3.50
4"	LF	0.012	2.34	1.27	3.61
6"	LF	0.013	2.91	1.31	4.22
8"	LF	0.013	3.55	1.31	4.86
12"	LF	0.013	4.69	1.35	6.04
14 ga.					
2-1/2"	LF	0.012	1.55	1.27	2.82
3-5/8"	LF	0.012	1.83	1.27	3.10
4"	LF	0.012	1.92	1.27	3.19
6"	LF	0.013	2.39	1.31	3.70
8"	LF	0.013	2.91	1.31	4.22
12"	LF	0.013	3.84	1.35	5.19
16 ga.					
2-1/2"	LF	0.012	1.41	1.27	2.68
3-5/8"	LF	0.012	1.66	1.27	2.93
4"	LF	0.012	1.73	1.27	3.00
6"	LF	0.013	2.18	1.31	3.49
8"	LF	0.013	2.79	1.31	4.10
12"	LF	0.013	3.49	1.35	4.84
18 ga.					
2-1/2"	LF	0.012	1.15	1.27	2.42
3-5/8"	LF	0.012	1.41	1.27	2.68
4"	LF	0.012	1.48	1.27	2.75
6"	LF	0.013	1.86	1.31	3.17
8"	LF	0.013	2.25	1.31	3.56

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	Unit	Man-Hrs	Material	Labor	Total
05410.01 METAL FRAMING (Cont.)					
18 ga.					
12"	LF	0.013	2.79	1.35	4.14
20 ga.					
2-1/2"	LF	0.012	0.76	1.27	2.03
3-5/8"	LF	0.012	0.92	1.27	2.19
4"	LF	0.012	1.00	1.27	2.27
6"	LF	0.013	1.23	1.31	2.54
8"	LF	0.013	1.46	1.31	2.77
12"	LF	0.013	1.74	1.35	3.09
05510.01 STAIRS					
STAIRS					
Stock unit, steel, complete, per riser					
Tread					
3'-6" wide	EA	1.000	310.00	100.00	410.00
4' wide	EA	1.143	360.00	120.00	480.00
5' wide	EA	1.333	410.00	140.00	550.00
Metal pan stair, cement filled, per riser					
3'-6" wide	EA	0.800	330.00	83.00	413.00
4' wide	EA	0.889	380.00	92.00	472.00
5' wide	EA	1.000	430.00	100.00	530.00
Landing, steel pan	SF	0.200	110.00	20.75	130.75
Cast iron tread, steel stringers, stock units, per riser					
Tread					
3'-6" wide	EA	1.000	490.00	100.00	590.00
4' wide	EA	1.143	560.00	120.00	680.00
5' wide	EA	1.333	680.00	140.00	820.00
Stair treads, abrasive, 12" x 3'-6"					
Cast iron					
3/8"	EA	0.400	230.00	41.50	271.50
1/2"	EA	0.400	290.00	41.50	331.50
Cast aluminum					
5/16"	EA	0.400	260.00	41.50	301.50
3/8"	EA	0.400	280.00	41.50	321.50
1/2"	EA	0.400	340.00	41.50	381.50
05513.31 LADDERS					
LADDERS					
Ladder, 18" wide					
With cage	LF	0.533	140.00	55.00	195.00
Without cage	LF	0.400	89.00	41.50	130.50
05521.31 RAILINGS					
RAILINGS					
Railing, pipe					
1-1/4" diameter, welded steel					
2-rail					
Primed	LF	0.160	43.75	16.50	60.25
Galvanized	LF	0.160	56.00	16.50	72.50
3-rail					
Primed	LF	0.200	56.00	20.75	76.75
Galvanized	LF	0.200	73.00	20.75	93.75
Wall mounted, single rail, welded steel					
Primed	LF	0.123	29.25	12.75	42.00
Galvanized	LF	0.123	38.00	12.75	50.75
1-1/2" diameter, welded steel					
2-rail					
Primed	LF	0.160	47.50	16.50	64.00
Galvanized	LF	0.160	62.00	16.50	78.50
3-rail					
Primed	LF	0.200	60.00	20.75	80.75
Galvanized	LF	0.200	78.00	20.75	98.75
Wall mounted, single rail, welded steel					
Primed	LF	0.123	30.25	12.75	43.00
Galvanized	LF	0.123	39.25	12.75	52.00

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	Unit	Man-Hrs	Material	Labor	Total
05521.31 RAILINGS (Cont.)					
Railing, pipe					
2" diameter, welded steel					
2-rail					
Primed	LF	0.178	57.00	18.50	75.50
Galvanized	LF	0.178	74.00	18.50	92.50
3-rail					
Primed	LF	0.229	72.00	23.75	95.75
Galvanized	LF	0.229	93.00	23.75	116.75
Wall mounted, single rail, welded steel					
Primed	LF	0.133	32.75	13.75	46.50
Galvanized	LF	0.133	42.50	13.75	56.25
05530.01 METAL GRATING					
METAL GRATING					
Floor plate, checkered, steel					
1/4"					
Primed	SF	0.011	15.75	1.18	16.93
Galvanized	SF	0.011	24.00	1.18	25.18
3/8"					
Primed	SF	0.012	23.00	1.27	24.27
Galvanized	SF	0.012	36.50	1.27	37.77
Aluminum grating, pressure-locked bearing bars					
3/4" x 1/8"	SF	0.020	35.00	2.07	37.07
1" x 1/8"	SF	0.020	39.25	2.07	41.32
1-1/4" x 1/8"	SF	0.020	56.00	2.07	58.07
1-1/4" x 3/16"	SF	0.020	59.00	2.07	61.07
1-1/2" x 1/8"	SF	0.020	77.00	2.07	79.07
1-3/4" x 3/16"	SF	0.020	43.50	2.07	45.57
Miscellaneous expenses					
Cutting					
Minimum	LF	0.053		5.52	5.52
Maximum	LF	0.080		8.28	8.28
Banding					
Minimum	LF	0.133		13.75	13.75
Maximum	LF	0.160		16.50	16.50
Toe plates					
Minimum	LF	0.160		16.50	16.50
Maximum	LF	0.200		20.75	20.75
Steel grating, primed					
3/4" x 1/8"	SF	0.027	15.75	2.76	18.51
1" x 1/8"	SF	0.027	16.25	2.76	19.01
1-1/4" x 1/8"	SF	0.027	18.25	2.76	21.01
1-1/4" x 3/16"	SF	0.027	24.25	2.76	27.01
1-1/2" x 1/8"	SF	0.027	22.00	2.76	24.76
1-3/4" x 3/16"	SF	0.027	31.50	2.76	34.26
Galvanized					
3/4" x 1/8"	SF	0.027	19.75	2.76	22.51
1" x 1/8"	SF	0.027	20.50	2.76	23.26
1-1/4" x 1/8"	SF	0.027	22.75	2.76	25.51
1-1/4" x 3/16"	SF	0.027	30.25	2.76	33.01
1-1/2" x 1/8"	SF	0.027	27.50	2.76	30.26
1-3/4" x 3/16"	SF	0.027	39.50	2.76	42.26
Miscellaneous expenses					
Cutting					
Minimum	LF	0.057		5.91	5.91
Maximum	LF	0.089		9.20	9.20
Banding					
Minimum	LF	0.145		15.00	15.00
Maximum	LF	0.178		18.50	18.50
Toe plates					
Minimum	LF	0.178		18.50	18.50
Maximum	LF	0.229		23.75	23.75

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	Unit	Man-Hrs	Material	Labor	Total
05560.01 CASTINGS					
CASTINGS					
Miscellaneous castings					
Light sections	LB	0.016	9.72	1.65	11.37
Heavy sections	LB	0.011	7.12	1.18	8.30
Manhole covers and frames					
Regular, city type					
18" dia.					
100 lb	EA	1.600	770.00	170.00	940.00
24" dia.					
200 lb	EA	1.600	720.00	170.00	890.00
300 lb	EA	1.778	740.00	180.00	920.00
400 lb	EA	1.778	780.00	180.00	960.00
26" dia., 475 lb	EA	2.000	950.00	210.00	1,160.00
30" dia., 600 lb	EA	2.286	1,210.00	240.00	1,450.00
8" square, 75 lb	EA	0.320	340.00	33.00	373.00
24" square					
126 lb	EA	1.600	750.00	170.00	920.00
500 lb	EA	2.000	1,210.00	210.00	1,420.00
Watertight type					
20" dia., 200 lb	EA	2.000	630.00	210.00	840.00
24" dia., 350 lb	EA	2.667	1,060.00	280.00	1,340.00
Steps, cast iron					
7" x 9"	EA	0.160	35.00	16.50	51.50
8" x 9"	EA	0.178	50.00	18.50	68.50
Manhole covers and frames, aluminum					
12" x 12"	EA	0.320	170.00	33.00	203.00
18" x 18"	EA	0.320	180.00	33.00	213.00
24" x 24"	EA	0.400	190.00	41.50	231.50
Corner protection					
Steel angle guard with anchors					
2" x 2" x 3/16"	LF	0.114	17.50	11.75	29.25
2" x 3" x 1/4"	LF	0.114	19.75	11.75	31.50
3" x 3" x 5/16"	LF	0.114	23.00	11.75	34.75
3" x 4" x 5/16"	LF	0.123	27.75	12.75	40.50
4" x 4" x 5/16"	LF	0.123	28.75	12.75	41.50
05590.01 METAL SPECIALTIES					
METAL SPECIALTIES					
Kick plate					
4" high x 1/4" thick					
Primed	LF	0.160	8.63	16.50	25.13
Galvanized	LF	0.160	9.81	16.50	26.31
6" high x 1/4" thick					
Primed	LF	0.178	8.88	18.50	27.38
Galvanized	LF	0.178	10.50	18.50	29.00
05730.01 ORNAMENTAL METAL					
ORNAMENTAL METAL					
Railings, square bars, 6" o.c., shaped top rails					
Steel	LF	0.400	99.00	41.50	140.50
Aluminum	LF	0.400	120.00	41.50	161.50
Bronze	LF	0.533	250.00	55.00	305.00
Stainless steel	LF	0.533	250.00	55.00	305.00
Laminated metal or wood handrails					
2-1/2" round or oval shape	LF	0.400	290.00	41.50	331.50

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	Unit	Man-Hrs	Material	Labor	Total
06052.31 ACCESSORIES					
ACCESSORIES					
Column/post base, cast aluminum					
4" x 4"	EA	0.200	20.75	20.50	41.25
6" x 6"	EA	0.200	29.00	20.50	49.50
Bridging, metal, per pair					
12" o.c.	EA	0.080	2.92	8.18	11.10
16" o.c.	EA	0.073	2.69	7.43	10.12
Anchors					
Bolts, threaded two ends, with nuts and washers					
1/2" dia.					
4" long	EA	0.050	3.75	5.11	8.86
7-1/2" long	EA	0.050	4.37	5.11	9.48
3/4" dia.					
7-1/2" long	EA	0.050	7.39	5.11	12.50
15" long	EA	0.050	11.25	5.11	16.36
Framing anchors					
10 gauge	EA	0.067	1.60	6.81	8.41
Bolts, carriage					
1/4 x 4	EA	0.080	0.85	8.18	9.03
5/16 x 6	EA	0.084	1.93	8.61	10.54
3/8 x 6	EA	0.084	3.91	8.61	12.52
1/2 x 6	EA	0.084	5.45	8.61	14.06
Joist and beam hangers					
18 ga.					
2 x 4	EA	0.080	1.61	8.18	9.79
2 x 6	EA	0.080	1.93	8.18	10.11
2 x 8	EA	0.080	2.25	8.18	10.43
2 x 10	EA	0.089	2.42	9.08	11.50
2 x 12	EA	0.100	4.07	10.25	14.32
16 ga.					
3 x 6	EA	0.089	6.08	9.08	15.16
3 x 8	EA	0.089	7.38	9.08	16.46
3 x 10	EA	0.094	8.33	9.62	17.95
3 x 12	EA	0.107	9.38	11.00	20.38
3 x 14	EA	0.114	10.25	11.75	22.00
4 x 6	EA	0.089	9.47	9.08	18.55
4 x 8	EA	0.089	11.00	9.08	20.08
4 x 10	EA	0.094	12.75	9.62	22.37
4 x 12	EA	0.107	16.25	11.00	27.25
4 x 14	EA	0.114	17.25	11.75	29.00
Rafter anchors, 18 ga., 1-1/2" wide					
5-1/4" long	EA	0.067	1.19	6.81	8.00
10-3/4" long	EA	0.067	1.76	6.81	8.57
Shear plates					
2-5/8" dia.	EA	0.062	4.23	6.29	10.52
4" dia.	EA	0.067	8.78	6.81	15.59
Sill anchors					
Embedded in concrete	EA	0.080	3.10	8.18	11.28
Split rings					
2-1/2" dia.	EA	0.089	2.55	9.08	11.63
4" dia.	EA	0.100	4.70	10.25	14.95
Strap ties, 14 ga., 1-3/8" wide					
12" long	EA	0.067	3.19	6.81	10.00
18" long	EA	0.073	3.43	7.43	10.86
24" long	EA	0.080	5.11	8.18	13.29
36" long	EA	0.089	7.02	9.08	16.10
Toothed rings					
2-5/8" dia.	EA	0.133	2.95	13.75	16.70
4" dia.	EA	0.160	3.43	16.25	19.68
06057.31 WOOD TREATMENT					
WOOD TREATMENT					
Creosote preservative treatment					
8 lb/cf	BF				0.74
10 lb/cf	BF				0.88

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	Unit	Man-Hrs	Material	Labor	Total
06057.31 WOOD TREATMENT (Cont.)					
Salt preservative treatment					
Oil borne					
Minimum	BF				0.67
Maximum	BF				0.95
Water borne					
Minimum	BF				0.47
Maximum	BF				0.74
Fire retardant treatment					
Minimum	BF				0.95
Maximum	BF				1.15
Kiln dried, softwood, add to framing costs					
1" thick	BF				0.34
2" thick	BF				0.47
3" thick	BF				0.60
4" thick	BF				0.74
06110.01 BLOCKING					
BLOCKING					
Steel construction					
Walls					
2x4	LF	0.053	1.06	5.45	6.51
2x6	LF	0.062	1.59	6.29	7.88
2x8	LF	0.067	2.12	6.81	8.93
2x10	LF	0.073	2.66	7.43	10.09
2x12	LF	0.080	3.25	8.18	11.43
Ceilings					
2x4	LF	0.062	1.06	6.29	7.35
2x6	LF	0.073	1.59	7.43	9.02
2x8	LF	0.080	2.12	8.18	10.30
2x10	LF	0.089	2.66	9.08	11.74
2x12	LF	0.100	3.25	10.25	13.50
Wood construction					
Walls					
2x4	LF	0.044	1.06	4.54	5.60
2x6	LF	0.050	1.59	5.11	6.70
2x8	LF	0.053	2.12	5.45	7.57
2x10	LF	0.057	2.66	5.84	8.50
2x12	LF	0.062	3.25	6.29	9.54
Ceilings					
2x4	LF	0.050	1.06	5.11	6.17
2x6	LF	0.057	1.59	5.84	7.43
2x8	LF	0.062	2.12	6.29	8.41
2x10	LF	0.067	2.66	6.81	9.47
2x12	LF	0.073	3.25	7.43	10.68
06110.02 CEILING FRAMING					
CEILING FRAMING					
Ceiling joists					
12" o.c.					
2x4	SF	0.019	1.06	1.94	3.00
2x6	SF	0.020	1.59	2.04	3.63
2x8	SF	0.021	2.12	2.15	4.27
2x10	SF	0.022	2.66	2.27	4.93
2x12	SF	0.024	3.25	2.40	5.65
16" o.c.					
2x4	SF	0.015	1.04	1.57	2.61
2x6	SF	0.016	1.19	1.63	2.82
2x8	SF	0.017	1.59	1.70	3.29
2x10	SF	0.017	1.99	1.77	3.76
2x12	SF	0.018	2.44	1.85	4.29
24" o.c.					
2x4	SF	0.013	0.53	1.29	1.82
2x6	SF	0.013	0.82	1.36	2.18
2x8	SF	0.014	1.06	1.43	2.49
2x10	SF	0.015	1.33	1.51	2.84
2x12	SF	0.016	1.62	1.60	3.22

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	Unit	Man-Hrs	Material	Labor	Total
06110.02 CEILING FRAMING (Cont.)					
Headers and nailers					
2x4	LF	0.026	1.06	2.63	3.69
2x6	LF	0.027	1.59	2.72	4.31
2x8	LF	0.029	2.12	2.92	5.04
2x10	LF	0.031	2.66	3.14	5.80
2x12	LF	0.033	3.25	3.40	6.65
Sister joists for ceilings					
2x4	LF	0.057	1.06	5.84	6.90
2x6	LF	0.067	1.59	6.81	8.40
2x8	LF	0.080	2.12	8.18	10.30
2x10	LF	0.100	2.66	10.25	12.91
2x12	LF	0.133	3.25	13.75	17.00
06110.03 FLOOR FRAMING					
FLOOR FRAMING					
Floor joists					
12" o.c.					
2x6	SF	0.016	1.59	1.63	3.22
2x8	SF	0.016	2.12	1.66	3.78
2x10	SF	0.017	2.66	1.70	4.36
2x12	SF	0.017	3.25	1.77	5.02
2x14	SF	0.017	3.79	1.70	5.49
3x6	SF	0.017	4.12	1.74	5.86
3x8	SF	0.017	5.50	1.77	7.27
3x10	SF	0.018	6.87	1.85	8.72
3x12	SF	0.019	8.25	1.94	10.19
3x14	SF	0.020	9.62	2.04	11.66
4x6	SF	0.017	3.63	1.70	5.33
4x8	SF	0.017	4.84	1.77	6.61
4x10	SF	0.018	6.05	1.85	7.90
4x12	SF	0.019	7.26	1.94	9.20
4x14	SF	0.020	8.47	2.04	10.51
16" o.c.					
2x6	SF	0.013	1.19	1.36	2.55
2x8	SF	0.014	1.59	1.38	2.97
2x10	SF	0.014	1.99	1.41	3.40
2x12	SF	0.014	2.44	1.46	3.90
2x14	SF	0.015	2.83	1.51	4.34
3x6	SF	0.014	1.98	1.41	3.39
3x8	SF	0.014	2.64	1.46	4.10
3x10	SF	0.015	3.30	1.51	4.81
3x12	SF	0.015	3.96	1.57	5.53
3x14	SF	0.016	4.62	1.63	6.25
4x6	SF	0.014	2.64	1.41	4.05
4x8	SF	0.014	3.52	1.46	4.98
4x10	SF	0.015	4.40	1.51	5.91
4x12	SF	0.015	5.28	1.57	6.85
4x14	SF	0.016	6.16	1.63	7.79
Sister joists for floors					
2x4	LF	0.050	1.06	5.11	6.17
2x6	LF	0.057	1.59	5.84	7.43
2x8	LF	0.067	2.12	6.81	8.93
2x10	LF	0.080	2.66	8.18	10.84
2x12	LF	0.100	3.25	10.25	13.50
3x6	LF	0.080	4.12	8.18	12.30
3x8	LF	0.089	5.50	9.08	14.58
3x10	LF	0.100	6.87	10.25	17.12
3x12	LF	0.114	8.25	11.75	20.00
4x6	LF	0.080	3.63	8.18	11.81
4x8	LF	0.089	4.84	9.08	13.92
4x10	LF	0.100	6.05	10.25	16.30
4x12	LF	0.114	7.26	11.75	19.01

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	Unit	Man-Hrs	Material	Labor	Total
06110.03 FLOOR FRAMING (Cont.)					
Plywood Web Joists, 16" o.c.					
3/8" plywood web and 1-3/4" top & bottom chord					
9-1/2" depth	SF	0.014	2.41	1.41	3.82
11-7/8" depth	SF	0.016	2.48	1.63	4.11
14" depth	SF	0.018	3.05	1.81	4.86
16" depth	SF	0.020	4.58	2.04	6.62
Wood Trussed Floor Joists					
2" x 4" chord and truss members					
11-1/4" depth	SF	0.016	5.73	1.63	7.36
14" depth	SF	0.018	6.15	1.81	7.96
16" depth	SF	0.020	6.31	2.04	8.35
18" depth	SF	0.023	6.63	2.33	8.96
06110.04 FURRING					
FURRING					
Furring, wood strips					
Walls					
On masonry or concrete walls					
1x2 furring					
12" o.c.	SF	0.025	0.46	2.55	3.01
16" o.c.	SF	0.023	0.35	2.33	2.68
24" o.c.	SF	0.021	0.23	2.15	2.38
1x3 furring					
12" o.c.	SF	0.025	0.69	2.55	3.24
16" o.c.	SF	0.023	0.51	2.33	2.84
24" o.c.	SF	0.021	0.35	2.15	2.50
On wood walls					
1x2 furring					
12" o.c.	SF	0.018	0.46	1.81	2.27
16" o.c.	SF	0.016	0.35	1.63	1.98
24" o.c.	SF	0.015	0.23	1.48	1.71
1x3 furring					
12" o.c.	SF	0.018	0.69	1.81	2.50
16" o.c.	SF	0.016	0.51	1.63	2.14
24" o.c.	SF	0.015	0.35	1.48	1.83
Ceilings					
On masonry or concrete ceilings					
1x2 furring					
12" o.c.	SF	0.044	0.46	4.54	5.00
16" o.c.	SF	0.040	0.35	4.09	4.44
24" o.c.	SF	0.036	0.23	3.71	3.94
1x3 furring					
12" o.c.	SF	0.044	0.69	4.54	5.23
16" o.c.	SF	0.040	0.51	4.09	4.60
24" o.c.	SF	0.036	0.35	3.71	4.06
On wood ceilings					
1x2 furring					
12" o.c.	SF	0.030	0.46	3.02	3.48
16" o.c.	SF	0.027	0.35	2.72	3.07
24" o.c.	SF	0.024	0.23	2.47	2.70
1x3					
12" o.c.	SF	0.030	0.69	3.02	3.71
16" o.c.	SF	0.027	0.51	2.72	3.23
24" o.c.	SF	0.024	0.35	2.47	2.82
06110.05 ROOF FRAMING					
ROOF FRAMING					
Roof framing					
Rafters, gable end					
0-2 pitch (flat to 2-in-12)					
12" o.c.					
2x4	SF	0.017	1.06	1.70	2.76
2x6	SF	0.017	1.59	1.77	3.36
2x8	SF	0.018	2.12	1.85	3.97
2x10	SF	0.019	2.66	1.94	4.60
2x12	SF	0.020	3.25	2.04	5.29

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06110.05 ROOF FRAMING (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
0-2 pitch (flat to 2-in-12)					
16" o.c.					
2x6	SF	0.014	1.19	1.46	2.65
2x8	SF	0.015	1.59	1.51	3.10
2x10	SF	0.015	2.00	1.57	3.57
2x12	SF	0.016	2.44	1.63	4.07
24" o.c.					
2x6	SF	0.012	0.80	1.23	2.03
2x8	SF	0.013	1.06	1.27	2.33
2x10	SF	0.013	1.33	1.31	2.64
2x12	SF	0.013	1.62	1.36	2.98
4-6 pitch (4-in-12 to 6-in-12)					
12" o.c.					
2x4	SF	0.017	1.06	1.77	2.83
2x6	SF	0.018	1.59	1.85	3.44
2x8	SF	0.019	2.12	1.94	4.06
2x10	SF	0.020	2.66	2.04	4.70
2x12	SF	0.021	3.25	2.15	5.40
16" o.c.					
2x6	SF	0.015	1.19	1.51	2.70
2x8	SF	0.015	1.59	1.57	3.16
2x10	SF	0.016	2.00	1.63	3.63
2x12	SF	0.017	2.44	1.70	4.14
24" o.c.					
2x6	SF	0.013	0.80	1.27	2.07
2x8	SF	0.013	1.06	1.31	2.37
2x10	SF	0.014	1.33	1.41	2.74
2x12	SF	0.015	1.62	1.57	3.19
8-12 pitch (8-in-12 to 12-in-12)					
12" o.c.					
2x4	SF	0.018	1.15	1.85	3.00
2x6	SF	0.019	1.72	1.94	3.66
2x8	SF	0.020	2.29	2.04	4.33
2x10	SF	0.021	2.87	2.15	5.02
2x12	SF	0.022	3.51	2.27	5.78
16" o.c.					
2x6	SF	0.015	1.29	1.57	2.86
2x8	SF	0.016	1.72	1.63	3.35
2x10	SF	0.017	2.16	1.70	3.86
2x12	SF	0.017	2.63	1.77	4.40
24" o.c.					
2x6	SF	0.013	0.86	1.31	2.17
2x8	SF	0.013	1.15	1.36	2.51
2x10	SF	0.014	1.43	1.41	2.84
2x12	SF	0.014	1.75	1.46	3.21
Ridge boards					
2x6	LF	0.040	1.59	4.09	5.68
2x8	LF	0.044	2.12	4.54	6.66
2x10	LF	0.050	2.66	5.11	7.77
2x12	LF	0.057	3.25	5.84	9.09
Hip rafters					
2x6	LF	0.029	1.59	2.92	4.51
2x8	LF	0.030	2.12	3.02	5.14
2x10	LF	0.031	2.66	3.14	5.80
2x12	LF	0.032	3.25	3.27	6.52
Jack rafters					
4-6 pitch (4-in-12 to 6-in-12)					
16" o.c.					
2x6	SF	0.024	1.19	2.40	3.59
2x8	SF	0.024	1.59	2.47	4.06
2x10	SF	0.026	2.00	2.63	4.63
2x12	SF	0.027	2.44	2.72	5.16
24" o.c.					
2x6	SF	0.018	0.80	1.85	2.65
2x8	SF	0.019	1.06	1.90	2.96

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	Unit	Man-Hrs	Material	Labor	Total
06110.05 ROOF FRAMING (Cont.)					
24" o.c.					
2x10	SF	0.020	1.33	1.99	3.32
2x12	SF	0.020	1.62	2.04	3.66
8-12 pitch (8-in-12 to 12-in-12)					
16" o.c.					
2x6	SF	0.025	1.29	2.55	3.84
2x8	SF	0.026	1.72	2.63	4.35
2x10	SF	0.027	2.16	2.72	4.88
2x12	SF	0.028	2.63	2.82	5.45
24" o.c.					
2x6	SF	0.019	0.86	1.94	2.80
2x8	SF	0.020	1.15	1.99	3.14
2x10	SF	0.020	1.43	2.04	3.47
2x12	SF	0.021	1.75	2.09	3.84
Sister rafters					
2x4	LF	0.057	1.06	5.84	6.90
2x6	LF	0.067	1.59	6.81	8.40
2x8	LF	0.080	2.12	8.18	10.30
2x10	LF	0.100	2.66	10.25	12.91
2x12	LF	0.133	3.25	13.75	17.00
Fascia boards					
2x4	LF	0.040	1.16	4.09	5.25
2x6	LF	0.040	1.76	4.09	5.85
2x8	LF	0.044	2.34	4.54	6.88
2x10	LF	0.044	2.93	4.54	7.47
2x12	LF	0.050	3.52	5.11	8.63
Cant strips					
Fiber					
3x3	LF	0.023	0.84	2.33	3.17
4x4	LF	0.024	1.17	2.47	3.64
Wood					
3x3	LF	0.024	4.36	2.47	6.83
06110.06 SLEEPERS					
SLEEPERS					
Sleepers, over concrete					
12" o.c.					
1x2	SF	0.018	0.47	1.85	2.32
1x3	SF	0.019	0.69	1.94	2.63
2x4	SF	0.022	1.07	2.27	3.34
2x6	SF	0.024	1.59	2.40	3.99
16" o.c.					
1x2	SF	0.016	0.35	1.63	1.98
1x3	SF	0.016	0.51	1.63	2.14
2x4	SF	0.019	0.81	1.94	2.75
2x6	SF	0.020	1.19	2.04	3.23
06110.07 SOFFITS					
SOFFITS					
Soffit framing					
2x3	LF	0.057	0.81	5.84	6.65
2x4	LF	0.062	1.07	6.29	7.36
2x6	LF	0.067	1.59	6.81	8.40
2x8	LF	0.073	2.12	7.43	9.55
06110.08 WALL FRAMING					
WALL FRAMING					
Framing wall, studs					
12" o.c.					
2x3	SF	0.015	0.80	1.51	2.31
2x4	SF	0.015	1.06	1.51	2.57
2x6	SF	0.016	1.59	1.63	3.22
2x8	SF	0.017	2.12	1.70	3.82
16" o.c.					
2x3	SF	0.013	0.60	1.27	1.87
2x4	SF	0.013	0.80	1.27	2.07

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	Unit	Man-Hrs	Material	Labor	Total
06110.08 WALL FRAMING (Cont.)					
16" o.c.					
2x6	SF	0.013	1.19	1.36	2.55
2x8	SF	0.014	1.59	1.41	3.00
24" o.c.					
2x3	SF	0.011	0.40	1.10	1.50
2x4	SF	0.011	0.53	1.10	1.63
2x6	SF	0.011	0.79	1.16	1.95
2x8	SF	0.012	1.06	1.20	2.26
Plates, top or bottom					
2x3	LF	0.024	0.80	2.40	3.20
2x4	LF	0.025	1.06	2.55	3.61
2x6	LF	0.027	1.59	2.72	4.31
2x8	LF	0.029	2.12	2.92	5.04
Headers, door or window					
2x6					
Single					
3' long	EA	0.400	4.78	41.00	45.78
6' long	EA	0.500	9.57	51.00	60.57
Double					
3' long	EA	0.444	9.57	45.50	55.07
6' long	EA	0.571	19.25	58.00	77.25
2x8					
Single					
4' long	EA	0.500	8.49	51.00	59.49
8' long	EA	0.615	17.00	63.00	80.00
Double					
4' long	EA	0.571	17.00	58.00	75.00
8' long	EA	0.727	34.00	74.00	108.00
2x10					
Single					
5' long	EA	0.615	13.25	63.00	76.25
10' long	EA	0.800	26.50	82.00	108.50
Double					
5' long	EA	0.667	26.50	68.00	94.50
10' long	EA	0.800	53.00	82.00	135.00
2x12					
Single					
6' long	EA	0.615	19.25	63.00	82.25
12' long	EA	0.800	38.25	82.00	120.25
Double					
6' long	EA	0.727	38.25	74.00	112.25
12' long	EA	0.889	77.00	91.00	168.00
06130.01 HEAVY TIMBER					
HEAVY TIMBER					
Mill framed structures					
Beams to 20' long					
Douglas fir					
6x8	LF	0.080	13.75	10.75	24.50
6x10	LF	0.083	17.00	11.00	28.00
6x12	LF	0.089	20.50	12.00	32.50
6x14	LF	0.092	23.75	12.50	36.25
6x16	LF	0.096	27.25	13.00	40.25
8x10	LF	0.083	22.75	11.00	33.75
8x12	LF	0.089	27.25	12.00	39.25
8x14	LF	0.092	31.75	12.50	44.25
8x16	LF	0.096	36.25	13.00	49.25
Southern yellow pine					
6x8	LF	0.080	10.50	10.75	21.25
6x10	LF	0.083	12.75	11.00	23.75
6x12	LF	0.089	16.50	12.00	28.50
6x14	LF	0.092	18.75	12.50	31.25
6x16	LF	0.096	20.75	13.00	33.75
8x10	LF	0.083	17.50	11.00	28.50
8x12	LF	0.089	21.25	12.00	33.25

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	Unit	Man-Hrs	Material	Labor	Total
06130.01 HEAVY TIMBER (Cont.)					
Southern yellow pine					
8x14	LF	0.092	24.25	12.50	36.75
8x16	LF	0.096	28.00	13.00	41.00
Columns to 12' high					
Douglas fir					
6x6	LF	0.120	10.25	16.00	26.25
8x8	LF	0.120	17.75	16.00	33.75
10x10	LF	0.133	31.00	18.00	49.00
12x12	LF	0.133	38.25	18.00	56.25
Southern yellow pine					
6x6	LF	0.120	8.25	16.00	24.25
8x8	LF	0.120	13.75	16.00	29.75
10x10	LF	0.133	21.50	18.00	39.50
12x12	LF	0.133	30.00	18.00	48.00
Posts, treated					
4x4	LF	0.032	2.87	3.27	6.14
6x6	LF	0.040	8.33	4.09	12.42
06150.01 WOOD DECKING					
WOOD DECKING					
Decking, T&G solid					
Cedar					
3" thick	SF	0.020	15.25	2.04	17.29
4" thick	SF	0.021	19.00	2.18	21.18
Fir					
3" thick	SF	0.020	6.63	2.04	8.67
4" thick	SF	0.021	8.05	2.18	10.23
Southern yellow pine					
3" thick	SF	0.023	6.63	2.33	8.96
4" thick	SF	0.025	7.01	2.51	9.52
White pine					
3" thick	SF	0.020	8.05	2.04	10.09
4" thick	SF	0.021	11.00	2.18	13.18
Residential decking					
Framing, treated lumber					
12" o.c.					
2x6	SF	0.018	2.20	1.81	4.01
2x8	SF	0.018	2.93	1.85	4.78
2x10	SF	0.019	3.66	1.90	5.56
2x12	SF	0.020	4.40	1.99	6.39
16" o.c.					
2x6	SF	0.015	1.65	1.51	3.16
2x8	SF	0.015	2.20	1.54	3.74
2x10	SF	0.015	2.75	1.57	4.32
2x12	SF	0.016	3.30	1.63	4.93
24" o.c.					
2x6	SF	0.015	1.10	1.54	2.64
2x8	SF	0.016	1.47	1.60	3.07
2x10	SF	0.017	1.83	1.70	3.53
2x12	SF	0.018	2.20	1.81	4.01
Wood Posts, 4x4					
4' high	EA	0.400	11.75	41.00	52.75
6' high	EA	0.533	17.50	55.00	72.50
Wood Decking					
Treated, Southern Yellow Pine					
5/4x6	SF	0.064	4.62	6.54	11.16
2x4	SF	0.080	4.75	8.18	12.93
2x6	SF	0.070	4.62	7.11	11.73
Redwood/Cedar					
1x6	SF	0.064	8.25	6.54	14.79
2x4	SF	0.080	9.90	8.18	18.08
2x6	SF	0.070	9.90	7.11	17.01
Railing, 2x4 rails, 2x2 balusters					
Redwood/cedar	LF	0.160	12.75	16.25	29.00
SYP treated lumber	LF	0.160	7.08	16.25	23.33

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	Unit	Man-Hrs	Material	Labor	Total
06150.01 WOOD DECKING (Cont.)					
For composites see Division 06448					
06160.01 FLOOR SHEATHING					
FLOOR SHEATHING					
Sub-flooring, plywood, CDX					
1/2" thick	SF	0.010	0.82	1.02	1.84
5/8" thick	SF	0.011	0.93	1.16	2.09
3/4" thick	SF	0.013	1.10	1.36	2.46
Structural plywood					
1/2" thick	SF	0.010	1.27	1.02	2.29
5/8" thick	SF	0.011	1.44	1.16	2.60
3/4" thick	SF	0.012	1.70	1.25	2.95
Board type sub-flooring					
1x6					
Minimum	SF	0.018	1.65	1.81	3.46
Maximum	SF	0.020	1.92	2.04	3.96
1x8					
Minimum	SF	0.017	2.20	1.72	3.92
Maximum	SF	0.019	2.58	1.92	4.50
1x10					
Minimum	SF	0.016	2.75	1.63	4.38
Maximum	SF	0.018	3.24	1.81	5.05
Underlayment					
Hardboard, 1/4" tempered	SF	0.010	1.57	1.02	2.59
Plywood, CDX					
3/8" thick	SF	0.010	0.71	1.02	1.73
1/2" thick	SF	0.011	0.82	1.09	1.91
5/8" thick	SF	0.011	0.93	1.16	2.09
3/4" thick	SF	0.012	1.10	1.25	2.35
06160.02 ROOF SHEATHING					
ROOF SHEATHING					
Sheathing					
Plywood, CDX					
3/8" thick	SF	0.010	0.71	1.05	1.76
1/2" thick	SF	0.011	0.82	1.09	1.91
5/8" thick	SF	0.011	0.93	1.16	2.09
3/4" thick	SF	0.012	1.10	1.25	2.35
Structural plywood					
3/8" thick	SF	0.010	0.44	1.05	1.49
1/2" thick	SF	0.011	0.70	1.09	1.79
5/8" thick	SF	0.011	0.88	1.16	2.04
3/4" thick	SF	0.012	1.04	1.25	2.29
06160.03 WALL SHEATHING					
WALL SHEATHING					
Sheathing					
Plywood, CDX					
3/8" thick	SF	0.012	0.71	1.21	1.92
1/2" thick	SF	0.012	0.82	1.25	2.07
5/8" thick	SF	0.013	0.93	1.36	2.29
3/4" thick	SF	0.015	1.10	1.48	2.58
Waferboard					
3/8" thick	SF	0.012	0.44	1.21	1.65
1/2" thick	SF	0.012	0.70	1.25	1.95
5/8" thick	SF	0.013	0.88	1.36	2.24
3/4" thick	SF	0.015	1.04	1.48	2.52
Structural plywood					
3/8" thick	SF	0.012	1.10	1.21	2.31
1/2" thick	SF	0.012	1.27	1.25	2.52
5/8" thick	SF	0.013	1.44	1.36	2.80
3/4" thick	SF	0.015	1.70	1.48	3.18
Gypsum, 1/2" thick	SF	0.012	0.62	1.25	1.87
5/8" thick	SF	0.012	0.94	1.25	2.19
Asphalt impregnated fiberboard, 1/2" thick	SF	0.012	1.07	1.25	2.32

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	Unit	Man-Hrs	Material	Labor	Total
06175.31 WOOD TRUSSES					
WOOD TRUSSES					
Truss, fink, 2x4 members					
3-in-12 slope					
24' span	EA	0.686	220.00	92.00	312.00
26' span	EA	0.686	240.00	92.00	332.00
28' span	EA	0.727	260.00	98.00	358.00
30' span	EA	0.727	260.00	98.00	358.00
34' span	EA	0.774	270.00	100.00	370.00
38' span	EA	0.774	280.00	100.00	380.00
5-in-12 slope					
24' span	EA	0.706	240.00	95.00	335.00
28' span	EA	0.727	250.00	98.00	348.00
30' span	EA	0.750	270.00	100.00	370.00
32' span	EA	0.750	290.00	100.00	390.00
40' span	EA	0.800	390.00	110.00	500.00
Gable, 2x4 members					
5-in-12 slope					
24' span	EA	0.706	270.00	95.00	365.00
26' span	EA	0.706	290.00	95.00	385.00
28' span	EA	0.727	330.00	98.00	428.00
30' span	EA	0.750	350.00	100.00	450.00
32' span	EA	0.750	360.00	100.00	460.00
36' span	EA	0.774	380.00	100.00	480.00
40' span	EA	0.800	410.00	110.00	520.00
King post type, 2x4 members					
4-in-12 slope					
16' span	EA	0.649	160.00	87.00	247.00
18' span	EA	0.667	180.00	90.00	270.00
24' span	EA	0.706	190.00	95.00	285.00
26' span	EA	0.706	210.00	95.00	305.00
30' span	EA	0.750	260.00	100.00	360.00
34' span	EA	0.750	280.00	100.00	380.00
38' span	EA	0.774	330.00	100.00	430.00
42' span	EA	0.828	390.00	110.00	500.00
06181.31 LAMINATED BEAMS					
LAMINATED BEAMS					
Parallel strand beams 3-1/2" wide x					
9-1/2"	LF	0.034	23.50	4.60	28.10
11-1/4"	LF	0.036	24.75	4.77	29.52
11-7/8"	LF	0.037	26.25	4.95	31.20
14"	LF	0.044	33.25	5.85	39.10
16"	LF	0.048	39.50	6.44	45.94
18"	LF	0.053	46.75	7.16	53.91
Laminated veneer beams, 1-3/4" wide x					
11-7/8"	LF	0.037	16.00	4.95	20.95
14"	LF	0.044	20.00	5.85	25.85
16"	LF	0.048	19.50	6.44	25.94
18"	LF	0.053	24.75	7.16	31.91
Laminated strand beams, 1-3/4" wide x					
9-1/2"	LF	0.034	10.25	4.60	14.85
11-7/8"	LF	0.037	11.75	4.95	16.70
14"	LF	0.044	13.75	5.85	19.60
16"	LF	0.048	15.75	6.44	22.19
3-1/2" wide x					
9-1/2"	LF	0.034	18.00	4.60	22.60
11-7/8"	LF	0.037	23.50	4.95	28.45
14"	LF	0.044	27.50	5.85	33.35
16"	LF	0.048	33.00	6.44	39.44
Gluelam beam, 3-1/2" wide x					
10"	LF	0.034	16.25	4.60	20.85
12"	LF	0.040	19.75	5.37	25.12
15"	LF	0.046	24.50	6.13	30.63

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	Unit	Man-Hrs	Material	Labor	Total
06181.31 LAMINATED BEAMS (Cont.)					
Gluelam beam					
5-1/2" wide x					
10"	LF	0.034	25.75	4.60	30.35
16"	LF	0.048	30.75	6.44	37.19
20"	LF	0.056	38.50	7.58	46.08
7-1/2" wide x					
10"	LF	0.037	35.00	4.95	39.95
12"	LF	0.051	42.00	6.78	48.78
15"	LF	0.060	53.00	8.05	61.05
18"	LF	0.064	63.00	8.59	71.59
9-1/2" wide x					
10"	LF	0.037	44.50	4.95	49.45
16"	LF	0.051	71.00	6.78	77.78
20"	LF	0.060	89.00	8.05	97.05
24"	LF	0.064	110.00	8.59	118.59
30"	LF	0.074	130.00	9.91	139.91
06202.31 FINISH CARPENTRY					
FINISH CARPENTRY					
Mouldings and trim					
Apron, flat					
9/16 x 2	LF	0.040	1.97	4.09	6.06
9/16 x 3-1/2	LF	0.042	4.55	4.30	8.85
Base					
Colonial					
7/16 x 2-1/4	LF	0.040	2.58	4.09	6.67
7/16 x 3	LF	0.040	3.34	4.09	7.43
7/16 x 3-1/4	LF	0.040	3.42	4.09	7.51
9/16 x 3	LF	0.042	3.34	4.30	7.64
9/16 x 3-1/4	LF	0.042	3.50	4.30	7.80
11/16 x 2-1/4	LF	0.044	3.67	4.54	8.21
Ranch					
7/16 x 2-1/4	LF	0.040	2.83	4.09	6.92
7/16 x 3-1/4	LF	0.040	3.34	4.09	7.43
9/16 x 2-1/4	LF	0.042	3.08	4.30	7.38
9/16 x 3	LF	0.042	3.34	4.30	7.64
9/16 x 3-1/4	LF	0.042	3.42	4.30	7.72
Casing					
11/16 x 2-1/2	LF	0.036	2.66	3.71	6.37
11/16 x 3-1/2	LF	0.038	3.00	3.89	6.89
Chair rail					
9/16 x 2-1/2	LF	0.040	2.83	4.09	6.92
9/16 x 3-1/2	LF	0.040	3.92	4.09	8.01
Closet pole					
1-1/8" dia.	LF	0.053	1.92	5.45	7.37
1-5/8" dia.	LF	0.053	2.83	5.45	8.28
Cove					
9/16 x 1-3/4	LF	0.040	2.17	4.09	6.26
11/16 x 2-3/4	LF	0.040	3.34	4.09	7.43
Crown					
9/16 x 1-5/8	LF	0.053	2.57	5.45	8.02
9/16 x 2-5/8	LF	0.062	2.80	6.29	9.09
11/16 x 3-5/8	LF	0.067	3.04	6.81	9.85
11/16 x 4-1/4	LF	0.073	4.55	7.43	11.98
11/16 x 5-1/4	LF	0.080	5.08	8.18	13.26
Drip cap					
1-1/16 x 1-5/8	LF	0.040	2.73	4.09	6.82
Glass bead					
3/8 x 3/8	LF	0.050	1.08	5.11	6.19
1/2 x 9/16	LF	0.050	1.33	5.11	6.44
5/8 x 5/8	LF	0.050	1.42	5.11	6.53
3/4 x 3/4	LF	0.050	1.67	5.11	6.78
Half round					
1/2	LF	0.032	1.25	3.27	4.52
5/8	LF	0.032	1.67	3.27	4.94

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06202.31 FINISH CARPENTRY (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Half round					
3/4	LF	0.032	2.26	3.27	5.53
Lattice					
1/4 x 7/8	LF	0.032	0.91	3.27	4.18
1/4 x 1-1/8	LF	0.032	0.98	3.27	4.25
1/4 x 1-3/8	LF	0.032	1.05	3.27	4.32
1/4 x 1-3/4	LF	0.032	1.18	3.27	4.45
1/4 x 2	LF	0.032	1.36	3.27	4.63
Ogee molding					
5/8 x 3/4	LF	0.040	1.36	4.09	5.45
11/16 x 1-1/8	LF	0.040	3.19	4.09	7.28
11/16 x 1-3/8	LF	0.040	2.50	4.09	6.59
Parting bead					
3/8 x 7/8	LF	0.050	1.52	5.11	6.63
Quarter round					
1/4 x 1/4	LF	0.032	0.53	3.27	3.80
3/8 x 3/8	LF	0.032	0.76	3.27	4.03
1/2 x 1/2	LF	0.032	0.98	3.27	4.25
11/16 x 11/16	LF	0.035	0.98	3.55	4.53
3/4 x 3/4	LF	0.035	1.81	3.55	5.36
1-1/16 x 1-1/16	LF	0.036	1.43	3.71	5.14
Railings, balusters					
1-1/8 x 1-1/8	LF	0.080	4.86	8.18	13.04
1-1/2 x 1-1/2	LF	0.073	5.69	7.43	13.12
Screen moldings					
1/4 x 3/4	LF	0.067	1.21	6.81	8.02
5/8 x 5/16	LF	0.067	1.52	6.81	8.33
Shoe					
7/16 x 11/16	LF	0.032	1.51	3.27	4.78
Sash beads					
1/2 x 3/4	LF	0.067	1.74	6.81	8.55
1/2 x 7/8	LF	0.067	1.97	6.81	8.78
1/2 x 1-1/8	LF	0.073	2.12	7.43	9.55
5/8 x 7/8	LF	0.073	2.12	7.43	9.55
Stop					
5/8 x 1-5/8					
Colonial	LF	0.050	1.05	5.11	6.16
Ranch	LF	0.050	1.05	5.11	6.16
Stools					
11/16 x 2-1/4	LF	0.089	4.63	9.08	13.71
11/16 x 2-1/2	LF	0.089	4.86	9.08	13.94
11/16 x 5-1/4	LF	0.100	5.01	10.25	15.26
Exterior trim, casing, select pine, 1x3	LF	0.040	1.65	4.09	5.74
1x4	LF	0.040	2.42	4.09	6.51
1x6	LF	0.044	3.85	4.54	8.39
1x8	LF	0.050	5.39	5.11	10.50
Douglas fir					
1x3	LF	0.040	1.59	4.09	5.68
1x4	LF	0.040	1.96	4.09	6.05
1x6	LF	0.044	2.58	4.54	7.12
1x8	LF	0.050	3.56	5.11	8.67
Cellular PVC trim					
1x3	LF	0.040	2.33	4.09	6.42
1x4	LF	0.040	3.43	4.09	7.52
1x6	LF	0.044	4.67	4.54	9.21
1x8	LF	0.050	6.18	5.11	11.29
Cornices, white pine, #2 or better					
1x2	LF	0.040	0.99	4.09	5.08
1x4	LF	0.040	1.21	4.09	5.30
1x6	LF	0.044	1.96	4.54	6.50
1x8	LF	0.047	2.42	4.81	7.23
1x10	LF	0.050	3.11	5.11	8.22
1x12	LF	0.053	3.87	5.45	9.32

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06202.31 FINISH CARPENTRY (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Cellular PVC trim					
1x2	LF	0.040	1.71	4.09	5.80
1x4	LF	0.040	3.43	4.09	7.52
1x6	LF	0.044	4.67	4.54	9.21
1x8	LF	0.047	6.18	4.81	10.99
1x10	LF	0.050	7.70	5.11	12.81
1x12	LF	0.053	9.28	5.45	14.73
Cellular PVC 4'x8' sheets, per sheet					
1/2"	EA				140.00
3/4"	EA				160.00
Hardwood trim					
1x2	LF	0.047	2.31	4.81	7.12
1x4	LF	0.047	4.35	4.81	9.16
1x6	LF	0.053	6.53	5.45	11.98
1x8	LF	0.057	8.67	5.84	14.51
1x10	LF	0.062	11.00	6.29	17.29
1x12	LF	0.067	13.25	6.81	20.06
Shelving, pine					
1x8	LF	0.062	2.62	6.29	8.91
1x10	LF	0.064	3.42	6.54	9.96
1x12	LF	0.067	4.33	6.81	11.14
Plywood shelf, 3/4", with edge band, 12" wide	LF	0.080	4.67	8.18	12.85
Adjustable shelf, and rod, 12" wide					
3' to 4' long	EA	0.200	31.00	20.50	51.50
5' to 8' long	EA	0.267	58.00	27.25	85.25
Prefinished wood shelves with brackets and supports					
8" wide					
3' long	EA	0.200	91.00	20.50	111.50
4' long	EA	0.200	100.00	20.50	120.50
6' long	EA	0.200	150.00	20.50	170.50
10" wide					
3' long	EA	0.200	100.00	20.50	120.50
4' long	EA	0.200	150.00	20.50	170.50
6' long	EA	0.200	160.00	20.50	180.50

06220.01 MILLWORK

	Unit	Man-Hrs	Material	Labor	Total
MILLWORK					
Countertop, laminated plastic					
25" x 7/8" thick					
Minimum	LF	0.200	19.00	20.50	39.50
Average	LF	0.267	35.50	27.25	62.75
Maximum	LF	0.320	52.00	32.75	84.75
25" x 1-1/4" thick					
Minimum	LF	0.267	22.75	27.25	50.00
Average	LF	0.320	45.50	32.75	78.25
Maximum	LF	0.400	68.00	41.00	109.00
Add for cutouts	EA	0.500		51.00	51.00
Backsplash, 4" high, 7/8" thick	LF	0.160	25.00	16.25	41.25
Plywood, sanded, A-C					
1/4" thick	SF	0.027	1.58	2.72	4.30
3/8" thick	SF	0.029	1.71	2.92	4.63
1/2" thick	SF	0.031	1.94	3.14	5.08
A-D					
1/4" thick	SF	0.027	1.50	2.72	4.22
3/8" thick	SF	0.029	1.71	2.92	4.63
1/2" thick	SF	0.031	1.86	3.14	5.00
Base cabinet, 34-1/2" high, 24" deep, hardwood					
Minimum	LF	0.320	360.00	32.75	392.75
Average	LF	0.400	410.00	41.00	451.00
Maximum	LF	0.533	460.00	55.00	515.00
Wall cabinets					
Minimum	LF	0.267	110.00	27.25	137.25
Average	LF	0.320	150.00	32.75	182.75
Maximum	LF	0.400	190.00	41.00	231.00

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	Unit	Man-Hrs	Material	Labor	Total
06260.01 PANEL WORK					
PANEL WORK					
Hardboard, tempered, 1/4" thick					
Natural faced	SF	0.020	1.63	2.04	3.67
Plastic faced	SF	0.023	2.44	2.33	4.77
Pegboard, natural	SF	0.020	2.05	2.04	4.09
Plastic faced	SF	0.023	1.63	2.33	3.96
Untempered, 1/4" thick					
Natural faced	SF	0.020	1.37	2.04	3.41
Plastic faced	SF	0.023	2.37	2.33	4.70
Pegboard, natural	SF	0.020	1.46	2.04	3.50
Plastic faced	SF	0.023	2.10	2.33	4.43
Plywood, unfinished, 1/4" thick					
Birch					
Natural	SF	0.027	1.83	2.72	4.55
Select	SF	0.027	2.69	2.72	5.41
Knotty pine	SF	0.027	3.55	2.72	6.27
Cedar (closet lining)					
Standard boards T&G	SF	0.027	4.41	2.72	7.13
Particle board	SF	0.027	2.69	2.72	5.41
Plywood, prefinished, 1/4" thick, premium grade					
Birch veneer	SF	0.032	5.16	3.27	8.43
Cherry veneer	SF	0.032	6.02	3.27	9.29
Chestnut veneer	SF	0.032	7.23	3.27	10.50
Lauan veneer	SF	0.032	2.23	3.27	5.50
Mahogany veneer	SF	0.032	5.94	3.27	9.21
Oak veneer (red)	SF	0.032	5.94	3.27	9.21
Pecan veneer	SF	0.032	7.49	3.27	10.76
Rosewood veneer	SF	0.032	5.03	3.27	8.30
Teak veneer	SF	0.032	7.67	3.27	10.94
Walnut veneer	SF	0.032	6.63	3.27	9.90
06431.31 STAIRWORK					
STAIRWORK					
Risers, 1x8, 42" wide					
White oak	EA	0.400	46.50	41.00	87.50
Pine	EA	0.400	41.25	41.00	82.25
Treads, 1-1/16" x 9-1/2" x 42"					
White oak	EA	0.500	56.00	51.00	107.00
06440.01 COLUMNS					
COLUMNS					
Column, hollow, round wood					
12" diameter					
10' high	EA	0.800	1,380.00	120.00	1,500.00
12' high	EA	0.857	1,690.00	130.00	1,820.00
14' high	EA	0.960	2,030.00	140.00	2,170.00
16' high	EA	1.200	2,510.00	180.00	2,690.00
24" diameter					
16' high	EA	1.200	5,740.00	180.00	5,920.00
18' high	EA	1.263	6,530.00	180.00	6,710.00
20' high	EA	1.263	8,020.00	180.00	8,200.00
22' high	EA	1.333	8,450.00	200.00	8,650.00
24' high	EA	1.333	9,220.00	200.00	9,420.00
06448.01 COMPOSITE RESIDENTIAL DECKS					
COMPOSITE RESIDENTIAL DECKS					
Composite Decking					
1x6 board					
Minimum	SF	0.067	5.50	6.81	12.31
Average	SF	0.080	6.60	8.18	14.78
Maximum	SF	0.100	8.25	10.25	18.50
Post					
4x4	EA	0.400	49.50	41.00	90.50
6x6	EA	0.533	83.00	55.00	138.00
Post fixtures					
Shoe	EA	0.080	5.22	8.18	13.40
Cap	EA	0.080	7.70	8.18	15.88

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	Unit	Man-Hrs	Material	Labor	Total
06448.01 COMPOSITE RESIDENTIAL DECKS (Cont.)					
Composite Decking					
Railing, including rails and balusters					
Minimum	LF	0.133	44.00	13.75	57.75
Average	LF	0.160	55.00	16.25	71.25
Maximum	LF	0.200	66.00	20.50	86.50

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	Unit	Man-Hrs	Material	Labor	Total
07110.01 DAMPPROOFING					
DAMPPROOFING					
Silicone dampproofing, sprayed on					
Concrete surface					
1 coat	SF	0.004	0.68	0.35	1.03
2 coats	SF	0.006	1.12	0.49	1.61
Concrete block					
1 coat	SF	0.005	0.68	0.42	1.10
2 coats	SF	0.007	1.12	0.58	1.70
Brick					
1 coat	SF	0.006	0.78	0.49	1.27
2 coats	SF	0.008	1.21	0.64	1.85
07111.31 BITUMINOUS DAMPPROOFING					
BITUMINOUS DAMPPROOFING					
Building paper, asphalt felt					
15 lb	SF	0.032	0.22	2.56	2.78
30 lb	SF	0.033	0.40	2.66	3.06
Asphalt, troweled, cold, primer plus					
1 coat	SF	0.027	0.74	2.13	2.87
2 coats	SF	0.040	1.57	3.20	4.77
3 coats	SF	0.050	2.25	4.00	6.25
Fibrous asphalt, hot troweled, primer plus					
1 coat	SF	0.032	0.74	2.56	3.30
2 coats	SF	0.044	1.57	3.55	5.12
3 coats	SF	0.057	2.25	4.57	6.82
Asphaltic paint dampproofing, per coat					
Brush on	SF	0.011	0.38	0.91	1.29
Spray on	SF	0.009	0.55	0.71	1.26
07111.61 PARGING / MASONRY PLASTER					
PARGING / MASONRY PLASTER					
Parging					
1/2" thick	SF	0.053	0.29	5.20	5.49
3/4" thick	SF	0.067	0.37	6.50	6.87
1" thick	SF	0.080	0.50	7.80	8.30
07130.01 WATERPROOFING					
WATERPROOFING					
Membrane waterproofing, elastomeric					
Butyl					
1/32" thick	SF	0.032	2.01	2.56	4.57
1/16" thick	SF	0.033	2.61	2.66	5.27
Butyl with nylon					
1/32" thick	SF	0.032	2.34	2.56	4.90
1/16" thick	SF	0.033	2.82	2.66	5.48
Neoprene					
1/32" thick	SF	0.032	3.30	2.56	5.86
1/16" thick	SF	0.033	4.73	2.66	7.39
Neoprene with nylon					
1/32" thick	SF	0.032	2.75	2.56	5.31
1/16" thick	SF	0.033	4.43	2.66	7.09
Bituminous membrane, asphalt felt, 15 lb.					
One ply	SF	0.020	0.91	1.60	2.51
Two ply	SF	0.024	1.07	1.94	3.01
Three ply	SF	0.029	1.34	2.28	3.62
Four ply	SF	0.033	1.54	2.66	4.20
Five ply	SF	0.042	1.63	3.37	5.00
Modified asphalt membrane, fibrous asphalt					
One ply	SF	0.033	0.60	2.66	3.26
Two ply	SF	0.040	1.23	3.20	4.43
Three ply	SF	0.044	1.91	3.55	5.46
Four ply	SF	0.053	2.55	4.27	6.82
Five ply	SF	0.064	3.05	5.12	8.17
Asphalt coated protective board					
1/8" thick	SF	0.020	0.88	1.60	2.48
1/4" thick	SF	0.020	1.19	1.60	2.79

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	Unit	Man-Hrs	Material	Labor	Total
07130.01 WATERPROOFING (Cont.)					
Asphalt coated protective board					
3/8" thick	SF	0.020	1.33	1.60	2.93
1/2" thick	SF	0.021	1.60	1.68	3.28
Cement protective board					
3/8" thick	SF	0.027	1.60	2.13	3.73
1/2" thick	SF	0.027	2.24	2.13	4.37
Fluid applied, neoprene					
50 mil	SF	0.027	2.24	2.13	4.37
90 mil	SF	0.027	3.70	2.13	5.83
Tab extended polyurethane					
.050" thick	SF	0.020	2.07	1.60	3.67
Fluid applied rubber based polyurethane					
6 mil	SF	0.025	1.32	2.00	3.32
15 mil	SF	0.020	2.51	1.60	4.11
Bentonite waterproofing, panels					
3/16" thick	SF	0.020	2.25	1.60	3.85
1/4" thick	SF	0.020	2.56	1.60	4.16
5/8" thick	SF	0.021	3.80	1.68	5.48
Granular admixtures, trowel on, 3/8" thick	SF	0.020	2.11	1.60	3.71
Metallic oxide, iron compound, troweled					
5/8" thick	SF	0.020	1.91	1.60	3.51
3/4" thick	SF	0.023	2.32	1.83	4.15
07211.31 BOARD INSULATION					
BOARD INSULATION					
Insulation, rigid					
Fiberglass, roof					
0.75" thick, R2.78	SF	0.007	0.58	0.58	1.16
1.06" thick, R4.17	SF	0.008	0.88	0.61	1.49
1.31" thick, R5.26	SF	0.008	1.18	0.64	1.82
1.63" thick, R6.67	SF	0.008	1.46	0.67	2.13
2.25" thick, R8.33	SF	0.009	1.61	0.71	2.32
Composite board, roof					
1-1/2" thick, R6.67	SF	0.008	1.26	0.64	1.90
1-5/8" thick, R7.69	SF	0.008	1.33	0.67	2.00
2" thick, R10.0	SF	0.009	2.41	0.71	3.12
2-1/4" thick, R12.50	SF	0.009	2.66	0.75	3.41
2-1/2" thick, R14.29	SF	0.010	2.89	0.80	3.69
2-3/4" thick, R16.67	SF	0.011	3.18	0.85	4.03
3-1/4" thick, R20.00	SF	0.011	4.09	0.91	5.00
Perlite board, roof					
1.00" thick, R2.78	SF	0.007	0.67	0.53	1.20
1.50" thick, R4.17	SF	0.007	1.04	0.55	1.59
2.00" thick, R5.92	SF	0.007	1.28	0.58	1.86
2.50" thick, R6.67	SF	0.008	1.56	0.61	2.17
3.00" thick, R8.33	SF	0.008	1.95	0.64	2.59
4.00" thick, R10.00	SF	0.008	2.17	0.67	2.84
5.25" thick, R14.29	SF	0.009	2.39	0.71	3.10
Rigid urethane					
Roof					
1" thick, R6.67	SF	0.007	1.15	0.53	1.68
1.20" thick, R8.33	SF	0.007	1.32	0.54	1.86
1.50" thick, R11.11	SF	0.007	1.56	0.55	2.11
2" thick, R14.29	SF	0.007	2.02	0.58	2.60
2.25" thick, R16.67	SF	0.008	2.65	0.61	3.26
Wall					
1" thick, R6.67	SF	0.008	1.15	0.67	1.82
1.5" thick, R11.11	SF	0.009	1.56	0.71	2.27
2" thick, R14.29	SF	0.009	2.07	0.75	2.82
Polystyrene					
Roof					
1.0" thick, R4.17	SF	0.007	0.77	0.53	1.30
1.5" thick, R6.26	SF	0.007	1.17	0.55	1.72
2.0" thick, R8.33	SF	0.007	1.44	0.58	2.02

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	Unit	Man-Hrs	Material	Labor	Total
07211.31 BOARD INSULATION (Cont.)					
Polystyrene					
Wall					
1.0" thick, R4.17	SF	0.008	0.77	0.67	1.44
1.5" thick, R6.26	SF	0.009	1.17	0.71	1.88
2.0" thick, R8.33	SF	0.009	1.44	0.75	2.19
Rigid board insulation, deck					
Mineral fiberboard					
1" thick, R3.0	SF	0.007	0.83	0.53	1.36
2" thick, R5.26	SF	0.007	1.82	0.58	2.40
Fiberglass					
1" thick, R4.3	SF	0.007	1.13	0.53	1.66
2" thick, R8.5	SF	0.007	1.68	0.58	2.26
Polystyrene					
1" thick, R5.4	SF	0.007	0.55	0.53	1.08
2" thick, R10.8	SF	0.007	1.39	0.58	1.97
Urethane					
.75" thick, R5.4	SF	0.007	1.05	0.53	1.58
1" thick, R6.4	SF	0.007	1.24	0.53	1.77
1.5" thick, R10.7	SF	0.007	1.50	0.55	2.05
2" thick, R14.3	SF	0.007	1.70	0.58	2.28
Foamglass					
1" thick, R1.8	SF	0.007	1.54	0.53	2.07
2" thick, R5.26	SF	0.007	1.96	0.58	2.54
Wood fiber					
1" thick, R3.85	SF	0.007	1.74	0.53	2.27
2" thick, R7.7	SF	0.007	2.10	0.58	2.68
Particle board					
3/4" thick, R2.08	SF	0.007	0.92	0.53	1.45
1" thick, R2.77	SF	0.007	0.96	0.53	1.49
2" thick, R5.50	SF	0.007	1.27	0.58	1.85
07211.61 BATT INSULATION					
BATT INSULATION					
Ceiling, fiberglass, unfaced					
3-1/2" thick, R11	SF	0.009	0.45	0.75	1.20
6" thick, R19	SF	0.011	0.59	0.85	1.44
9" thick, R30	SF	0.012	1.15	0.98	2.13
Suspended ceiling, unfaced					
3-1/2" thick, R11	SF	0.009	0.49	0.71	1.20
6" thick, R19	SF	0.010	0.65	0.80	1.45
9" thick, R30	SF	0.011	1.27	0.91	2.18
Crawl space, unfaced					
3-1/2" thick, R11	SF	0.012	0.49	0.98	1.47
6" thick, R19	SF	0.013	0.65	1.06	1.71
9" thick, R30	SF	0.015	1.27	1.16	2.43
Wall, fiberglass					
Paper backed					
2" thick, R7	SF	0.008	0.36	0.67	1.03
3" thick, R11	SF	0.009	0.40	0.71	1.11
4" thick, R13	SF	0.009	0.65	0.75	1.40
6" thick, R19	SF	0.010	0.97	0.80	1.77
9" thick, R30	SF	0.010	1.76	0.80	2.56
12" thick, R38	SF	0.010	2.20	0.80	3.00
Foil backed, 1 side					
2" thick, R8	SF	0.008	0.70	0.67	1.37
3" thick, R11	SF	0.009	0.75	0.71	1.46
4" thick, R13	SF	0.009	0.78	0.75	1.53
6" thick, R19	SF	0.010	1.03	0.80	1.83
9" thick, R30	SF	0.010	1.96	0.80	2.76
12" thick, R38	SF	0.010	2.31	0.80	3.11
FSK backed 2 sides					
2" thick, R8	SF	0.009	0.80	0.75	1.55
3" thick, R11	SF	0.010	1.01	0.80	1.81
4" thick, R13	SF	0.011	1.20	0.85	2.05
6" thick, R19	SF	0.011	1.29	0.91	2.20

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	Unit	Man-Hrs	Material	Labor	Total
07211.61 BATT INSULATION (Cont.)					
FSK backed 2 sides					
9" thick, R30	SF	0.010	2.58	0.80	3.38
12" thick, R38	SF	0.010	3.30	0.80	4.10
Unfaced					
2" thick, R8	SF	0.008	0.44	0.67	1.11
3" thick, R11	SF	0.009	0.50	0.71	1.21
4" thick, R13	SF	0.009	0.54	0.75	1.29
6" thick, R19	SF	0.010	0.70	0.80	1.50
9" thick, R30	SF	0.010	1.32	0.80	2.12
12" thick, R38	SF	0.010	1.96	0.80	2.76
Mineral wool batts					
Paper backed					
2" thick, R6	SF	0.008	0.48	0.67	1.15
4" thick, R12	SF	0.009	1.09	0.71	1.80
6" thick, R19	SF	0.010	1.36	0.80	2.16
Unfaced					
1" thick, R3	SF	0.008	0.27	0.67	0.94
1-1/2" thick, R4	SF	0.009	0.38	0.73	1.11
2" thick, R6	SF	0.009	0.48	0.75	1.23
2-1/2" thick, R7	SF	0.009	0.61	0.75	1.36
3" thick, R9	SF	0.010	0.75	0.77	1.52
3-1/2" thick, R11	SF	0.010	0.92	0.77	1.69
4" thick, R12	SF	0.010	1.08	0.80	1.88
6" thick, R19	SF	0.011	1.36	0.85	2.21
Rigid Safing, flame resistant, unfaced					
1" thick, R4	SF	0.009	1.29	0.75	2.04
2" thick, R8	SF	0.010	1.36	0.80	2.16
4" thick, R16	SF	0.011	1.76	0.85	2.61
Fasteners, self adhering, attached to ceiling deck					
2-1/2" long	EA	0.013	0.27	1.06	1.33
4-1/2" long	EA	0.015	0.30	1.16	1.46
Capped, self-locking washers	EA	0.008	0.27	0.64	0.91
07212.31 LOOSE FILL INSULATION					
LOOSE FILL INSULATION					
Blown-in type					
Fiberglass					
5" thick, R11	SF	0.007	0.41	0.53	0.94
6" thick, R13	SF	0.008	0.48	0.64	1.12
9" thick, R19	SF	0.011	0.58	0.91	1.49
Rockwool, attic application					
6" thick, R13	SF	0.008	0.38	0.64	1.02
8" thick, R19	SF	0.010	0.45	0.80	1.25
10" thick, R22	SF	0.012	0.53	0.98	1.51
12" thick, R26	SF	0.013	0.68	1.06	1.74
15" thick, R30	SF	0.016	0.82	1.28	2.10
Poured type					
Fiberglass					
1" thick, R4	SF	0.005	0.45	0.40	0.85
2" thick, R8	SF	0.006	0.84	0.45	1.29
3" thick, R12	SF	0.007	1.24	0.53	1.77
4" thick, R16	SF	0.008	1.63	0.64	2.27
Mineral wool					
1" thick, R3	SF	0.005	0.55	0.40	0.95
2" thick, R6	SF	0.006	1.01	0.45	1.46
3" thick, R9	SF	0.007	1.54	0.53	2.07
4" thick, R12	SF	0.008	1.80	0.64	2.44
Vermiculite or perlite					
2" thick, R4.8	SF	0.006	0.98	0.45	1.43
3" thick, R7.2	SF	0.007	1.39	0.53	1.92
4" thick, R9.6	SF	0.008	1.81	0.64	2.45
Masonry, poured vermiculite or perlite					
4" block	SF	0.004	0.59	0.32	0.91
6" block	SF	0.005	0.90	0.40	1.30
8" block	SF	0.006	1.31	0.45	1.76

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	Unit	Man-Hrs	Material	Labor	Total
07212.31 LOOSE FILL INSULATION (Cont.)					
Masonry, poured vermiculite or perlite					
10" block	SF	0.006	1.73	0.49	2.22
12" block	SF	0.007	2.16	0.53	2.69
07212.91 SPRAYED INSULATION					
SPRAYED INSULATION					
Foam, sprayed on					
Polystyrene					
1" thick, R4	SF	0.008	0.91	0.64	1.55
2" thick, R8	SF	0.011	1.78	0.85	2.63
Urethane					
1" thick, R4	SF	0.008	0.78	0.64	1.42
2" thick, R8	SF	0.011	1.50	0.85	2.35
07240.01 AGGREGATE COATED PANELS					
AGGREGATE COATED PANELS					
Dryvit type system					
1" thick	SF	0.027	3.31	2.76	6.07
1-1/2" thick	SF	0.029	3.45	2.95	6.40
2" thick	SF	0.033	3.91	3.45	7.36
07240.11 EXTERIOR INSULATION FINISH SYSTEM, EIFS					
EXTERIOR INSULATION FINISH SYSTEM, EIFS					
EIFS, 8' x 12' sheets, 2" thick	SF	0.009	3.74	0.91	4.65
3" thick	SF	0.010	5.08	0.80	5.88
4" thick	SF	0.011	6.05	1.04	7.09
5" thick	SF	0.011	6.87	1.11	7.98
6" thick	SF	0.012	8.25	1.20	9.45
Mesh reinforcing					
15 oz.	SF	0.007	0.88	0.65	1.53
20 oz.	SF	0.007	1.10	0.71	1.81
For Base & Finish Only	SF				1.83
Water resistant finish, complete					
Minimum	SF				1.76
Average	SF				2.20
Maximum	SF				3.30
07260.01 VAPOR BARRIERS					
VAPOR BARRIERS					
Vapor barrier, polyethylene					
2 mil	SF	0.004	0.02	0.32	0.34
6 mil	SF	0.004	0.08	0.32	0.40
8 mil	SF	0.004	0.09	0.35	0.44
10 mil	SF	0.004	0.11	0.35	0.46
07311.31 ASPHALT SHINGLES					
ASPHALT SHINGLES					
Standard asphalt shingles, strip shingles					
210 lb/square	SQ	0.800	130.00	78.00	208.00
235 lb/square	SQ	0.889	140.00	87.00	227.00
240 lb/square	SQ	1.000	140.00	98.00	238.00
260 lb/square	SQ	1.143	200.00	110.00	310.00
300 lb/square	SQ	1.333	220.00	130.00	350.00
385 lb/square	SQ	1.600	310.00	160.00	470.00
Roll roofing, mineral surface					
90 lb	SQ	0.571	58.00	56.00	114.00
110 lb	SQ	0.667	96.00	65.00	161.00
140 lb	SQ	0.800	99.00	78.00	177.00
Roofing, accessories					
8" Starter strip (roll)	LF	0.020	1.15	1.95	3.10
Starter shingle	LF	0.023	0.55	2.23	2.78
Ice & water shield	SF	0.027	0.99	2.60	3.59
07311.61 METAL SHINGLES					
METAL SHINGLES					
Aluminum, .020" thick					
Plain	SQ	1.600	290.00	160.00	450.00
Colors	SQ	1.600	320.00	160.00	480.00

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	Unit	Man-Hrs	Material	Labor	Total
07311.61 METAL SHINGLES (Cont.)					
Steel, galvanized					
26 ga.					
Plain	SQ	1.600	360.00	160.00	520.00
Colors	SQ	1.600	460.00	160.00	620.00
24 ga.					
Plain	SQ	1.600	420.00	160.00	580.00
Colors	SQ	1.600	530.00	160.00	690.00
Porcelain enamel, 22 ga.					
Minimum	SQ	2.000	870.00	200.00	1,070.00
Average	SQ	2.000	1,000.00	200.00	1,200.00
Maximum	SQ	2.000	1,120.00	200.00	1,320.00
07312.61 SLATE SHINGLES					
SLATE SHINGLES					
Slate shingles					
Pennsylvania					
Ribbon	SQ	4.000	600.00	390.00	990.00
Clear	SQ	4.000	770.00	390.00	1,160.00
Vermont					
Black	SQ	4.000	710.00	390.00	1,100.00
Gray	SQ	4.000	780.00	390.00	1,170.00
Green	SQ	4.000	800.00	390.00	1,190.00
Red	SQ	4.000	1,440.00	390.00	1,830.00
Replacement shingles					
Small jobs	EA	0.267	12.75	26.00	38.75
Large jobs	SF	0.133	9.94	13.00	22.94
07312.91 WOOD SHINGLES					
WOOD SHINGLES					
Wood shingles, on roofs					
White cedar, #1 shingles					
4" exposure	SQ	2.667	270.00	260.00	530.00
5" exposure	SQ	2.000	240.00	200.00	440.00
#2 shingles					
4" exposure	SQ	2.667	190.00	260.00	450.00
5" exposure	SQ	2.000	160.00	200.00	360.00
Resquared and rebutted					
4" exposure	SQ	2.667	240.00	260.00	500.00
5" exposure	SQ	2.000	200.00	200.00	400.00
On walls					
White cedar, #1 shingles					
4" exposure	SQ	4.000	270.00	390.00	660.00
5" exposure	SQ	3.200	240.00	310.00	550.00
6" exposure	SQ	2.667	200.00	260.00	460.00
#2 shingles					
4" exposure	SQ	4.000	190.00	390.00	580.00
5" exposure	SQ	3.200	160.00	310.00	470.00
6" exposure	SQ	2.667	130.00	260.00	390.00
Add for fire retarding	SQ				120.00
07312.92 WOOD SHAKES					
WOOD SHAKES					
Shakes, hand split, 24" red cedar, on roofs					
5" exposure	SQ	4.000	800.00	390.00	1,190.00
7" exposure	SQ	3.200	750.00	310.00	1,060.00
9" exposure	SQ	2.667	680.00	260.00	940.00
On walls					
6" exposure	SQ	4.000	750.00	390.00	1,140.00
8" exposure	SQ	3.200	710.00	310.00	1,020.00
10" exposure	SQ	2.667	680.00	260.00	940.00
Add for fire retarding	SQ				120.00
07321.61 CONCRETE ROOF TILE					
CONCRETE ROOF TILE					
Concrete Roof Tile, Corrugated					
13"x16-1/2", 90/SQ, 950 LB/SQ Earthtone Colors	SQ	4.000	180.00	390.00	570.00
Custom Blues	SQ	4.000	390.00	390.00	780.00

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	Unit	Man-Hrs	Material	Labor	Total
07321.61 CONCRETE ROOF TILE (Cont.)					
13"x16-1/2", 90/SQ, 950 LB/SQ Earthtone Colors					
Custom Greens	SQ	4.000	230.00	390.00	620.00
Concrete Roof Tile, Shakes					
13"x16-1/2", 90/SQ,950 LB/SQ,Colors	SQ	4.000	240.00	390.00	630.00
07410.01 MANUFACTURED ROOFS					
MANUFACTURED ROOFS					
Aluminum roof panels, for steel framing					
Corrugated					
Unpainted finish					
.024"	SF	0.020	2.06	1.95	4.01
.030"	SF	0.020	3.35	1.95	5.30
Painted finish					
.024"	SF	0.020	2.61	1.95	4.56
.030"	SF	0.020	3.52	1.95	5.47
V-beam					
Unpainted finish					
.032"	SF	0.020	2.96	1.95	4.91
.040"	SF	0.020	3.56	1.95	5.51
.050"	SF	0.020	4.48	1.95	6.43
Painted finish					
.032"	SF	0.020	3.85	1.95	5.80
.040"	SF	0.020	4.61	1.95	6.56
.050"	SF	0.020	5.51	1.95	7.46
Steel roof panels, for structural steel framing					
Corrugated, painted					
18 ga.	SF	0.020	4.26	1.95	6.21
20 ga.	SF	0.020	3.97	1.95	5.92
22 ga.	SF	0.020	3.50	1.95	5.45
Box rib, painted					
18 ga.	SF	0.021	4.97	2.05	7.02
20 ga.	SF	0.021	4.09	2.05	6.14
22 ga.	SF	0.021	3.64	2.05	5.69
4" rib, painted					
18 ga.	SF	0.022	5.73	2.17	7.90
20 ga.	SF	0.022	4.85	2.17	7.02
22 ga.	SF	0.022	4.34	2.17	6.51
Standing seam roof					
2" high seam, painted					
22 ga.	SF	0.032	5.55	3.12	8.67
24 ga.	SF	0.032	5.43	3.12	8.55
26 ga.	SF	0.032	5.26	3.12	8.38
07420.03 MANUFACTURED WALLS					
MANUFACTURED WALLS					
Sandwich panels with 1-1/2" fiberglass insulation					
Galvanized 18 ga. steel interior panels					
Exterior panels					
16 ga. aluminum	SF	0.107	7.26	11.00	18.26
18 ga. galvanized steel	SF	0.107	10.25	11.00	21.25
20 ga. painted steel	SF	0.107	10.50	11.00	21.50
20 ga. stainless steel	SF	0.107	10.75	11.00	21.75
Metal liner panels, 1-3/8" thick, 24" wide					
Galvanized					
22 ga.	SF	0.027	3.64	2.76	6.40
20 ga.	SF	0.027	4.01	2.76	6.77
18 ga.	SF	0.027	4.93	2.76	7.69
Primed					
22 ga.	SF	0.027	2.83	2.76	5.59
20 ga.	SF	0.027	3.26	2.76	6.02
18 ga.	SF	0.027	4.01	2.76	6.77

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	Unit	Man-Hrs	Material	Labor	Total
07420.05 METAL SIDING PANELS					
METAL SIDING PANELS					
Aluminum siding panels					
Corrugated					
Plain finish					
.024"	SF	0.032	2.23	3.31	5.54
.032"	SF	0.032	2.62	3.31	5.93
Painted finish					
.024"	SF	0.032	2.78	3.31	6.09
.032"	SF	0.032	3.19	3.31	6.50
V-beam					
Plain finish					
.032"	SF	0.032	3.37	3.31	6.68
.040"	SF	0.032	3.89	3.31	7.20
.050"	SF	0.032	4.93	3.31	8.24
Painted finish					
.032"	SF	0.032	4.15	3.31	7.46
.040"	SF	0.032	4.90	3.31	8.21
.050"	SF	0.032	6.97	3.31	10.28
4" rib					
Plain finish					
.032"	SF	0.036	3.09	3.76	6.85
.040"	SF	0.036	3.44	3.76	7.20
.050"	SF	0.036	4.19	3.76	7.95
Painted finish					
.032"	SF	0.036	4.01	3.76	7.77
.040"	SF	0.036	4.18	3.76	7.94
.050"	SF	0.036	4.78	3.76	8.54
Steel siding panels					
Corrugated					
22 ga.	SF	0.053	2.73	5.52	8.25
24 ga.	SF	0.053	2.49	5.52	8.01
26 ga.	SF	0.053	2.26	5.52	7.78
Box rib					
20 ga.	SF	0.053	4.08	5.52	9.60
22 ga.	SF	0.053	3.42	5.52	8.94
24 ga.	SF	0.053	3.01	5.52	8.53
26 ga.	SF	0.053	2.46	5.52	7.98
Ribbed, sheets, galvanized					
22 ga.	SF	0.032	3.42	3.31	6.73
24 ga.	SF	0.032	3.01	3.31	6.32
26 ga.	SF	0.032	2.46	3.31	5.77
28 ga.	SF	0.032	2.25	3.31	5.56
Primed					
24 ga.	SF	0.032	3.01	3.31	6.32
26 ga.	SF	0.032	2.46	3.31	5.77
28 ga.	SF	0.032	2.25	3.31	5.56
07462.31 WOOD SIDING					
WOOD SIDING					
Beveled siding, cedar					
A grade					
1/2 x 6	SF	0.040	4.89	4.09	8.98
1/2 x 8	SF	0.032	5.00	3.27	8.27
3/4 x 10	SF	0.027	6.43	2.72	9.15
Clear					
1/2 x 6	SF	0.040	5.44	4.09	9.53
1/2 x 8	SF	0.032	5.56	3.27	8.83
3/4 x 10	SF	0.027	7.45	2.72	10.17
B grade					
1/2 x 6	SF	0.040	5.26	4.09	9.35
1/2 x 8	SF	0.032	5.94	3.27	9.21
3/4 x 10	SF	0.027	5.60	2.72	8.32

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	Unit	Man-Hrs	Material	Labor	Total
07462.31 WOOD SIDING (Cont.)					
Board and batten					
Cedar					
1x6	SF	0.040	6.84	4.09	10.93
1x8	SF	0.032	6.22	3.27	9.49
1x10	SF	0.029	5.62	2.92	8.54
1x12	SF	0.026	5.04	2.63	7.67
Pine					
1x6	SF	0.040	2.25	4.09	6.34
1x8	SF	0.032	2.20	3.27	5.47
1x10	SF	0.029	2.11	2.92	5.03
1x12	SF	0.026	1.94	2.63	4.57
Redwood					
1x6	SF	0.040	7.44	4.09	11.53
1x8	SF	0.032	6.93	3.27	10.20
1x10	SF	0.029	6.43	2.92	9.35
1x12	SF	0.026	5.93	2.63	8.56
Tongue and groove					
Cedar					
1x4	SF	0.044	7.39	4.54	11.93
1x6	SF	0.042	7.11	4.30	11.41
1x8	SF	0.040	6.67	4.09	10.76
1x10	SF	0.038	6.55	3.89	10.44
Pine					
1x4	SF	0.044	2.44	4.54	6.98
1x6	SF	0.042	2.31	4.30	6.61
1x8	SF	0.040	2.16	4.09	6.25
1x10	SF	0.038	2.05	3.89	5.94
Redwood					
1x4	SF	0.044	6.80	4.54	11.34
1x6	SF	0.042	6.55	4.30	10.85
1x8	SF	0.040	6.33	4.09	10.42
1x10	SF	0.038	6.04	3.89	9.93
07462.91 PLYWOOD SIDING					
PLYWOOD SIDING					
Rough sawn cedar, 3/8" thick	SF	0.027	2.16	2.72	4.88
Fir, 3/8" thick	SF	0.027	1.19	2.72	3.91
Texture 1-11, 5/8" thick					
Cedar	SF	0.029	2.92	2.92	5.84
Fir	SF	0.029	2.04	2.92	4.96
Redwood	SF	0.029	3.14	2.79	5.93
Southern Yellow Pine	SF	0.029	1.66	2.92	4.58
07463.31 PLASTIC SIDING					
PLASTIC SIDING					
Horizontal vinyl siding, solid					
8" wide					
Standard	SF	0.031	1.76	3.14	4.90
Insulated	SF	0.031	2.13	3.14	5.27
10" wide					
Standard	SF	0.029	1.82	2.92	4.74
Insulated	SF	0.029	2.18	2.92	5.10
Vinyl moldings for doors and windows	LF	0.032	0.87	3.27	4.14
07464.61 WOOD FIBER CEMENT SIDING					
WOOD FIBER CEMENT SIDING					
Lap siding 5/16" x 8.25 x 12', 7" exposure	SF	0.031	1.82	3.14	4.96
Panel siding 4' x 8'	SF	0.029	1.37	2.92	4.29
Shingle siding 14-5/8" x 25-5/32" (per bundle)	EA				190.00
07511.31 BUILT-UP ASPHALT ROOFING					
BUILT-UP ASPHALT ROOFING					
Built-up roofing, asphalt felt, including gravel					
2 ply	SQ	2.000	120.00	200.00	320.00
3 ply	SQ	2.667	160.00	260.00	420.00
4 ply	SQ	3.200	230.00	310.00	540.00

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	Unit	Man-Hrs	Material	Labor	Total
07511.31 BUILT-UP ASPHALT ROOFING (Cont.)					
Built-up roofing					
Walkway, for built-up roofs					
3' x 3' x					
1/2" thick	SF	0.027	3.24	2.60	5.84
3/4" thick	SF	0.027	5.03	2.60	7.63
1" thick	SF	0.027	5.45	2.60	8.05
Roof bonds					
10 yrs	SQ				49.25
20 yrs	SQ				56.00
Cant strip, 4" x 4"					
Treated wood	LF	0.023	3.38	2.23	5.61
Foamglass	LF	0.020	2.90	1.95	4.85
Mineral fiber	LF	0.020	0.58	1.95	2.53
New gravel for built-up roofing, 400 lb/sq	SQ	1.600	59.00	160.00	219.00
Roof gravel (ballast)	CY	4.000	43.25	390.00	433.25
Aluminum coating, top surfacing, for built-up roofing	SQ	1.333	65.00	130.00	195.00
Remove 4-ply built-up roof (includes gravel)	SQ	4.000		390.00	390.00
Remove & replace gravel, includes flood coat	SQ	2.667	77.00	260.00	337.00
07530.01 SINGLE-PLY ROOFING					
SINGLE-PLY ROOFING					
Elastic sheet roofing					
Neoprene, 1/16" thick	SF	0.010	2.83	0.97	3.80
EPDM rubber					
45 mil	SF	0.010	1.78	0.97	2.75
60 mil	SF	0.010	2.44	0.97	3.41
PVC					
45 mil	SF	0.010	2.34	0.97	3.31
60 mil	SF	0.010	2.78	0.97	3.75
TPO					
45 mil	SF	0.010	1.66	0.97	2.63
60 mil	SF	0.010	2.25	0.97	3.22
Flashing					
Pipe flashing, 90 mil thick					
1" pipe	EA	0.200	34.00	19.50	53.50
2" pipe	EA	0.200	36.50	19.50	56.00
3" pipe	EA	0.211	36.75	20.50	57.25
4" pipe	EA	0.211	40.00	20.50	60.50
5" pipe	EA	0.222	42.75	21.75	64.50
6" pipe	EA	0.222	46.50	21.75	68.25
8" pipe	EA	0.235	53.00	23.00	76.00
10" pipe	EA	0.267	61.00	26.00	87.00
12" pipe	EA	0.267	74.00	26.00	100.00
Neoprene flashing, 60 mil thick strip					
6" wide	LF	0.067	2.06	6.51	8.57
12" wide	LF	0.100	4.06	9.76	13.82
18" wide	LF	0.133	5.98	13.00	18.98
24" wide	LF	0.200	7.86	19.50	27.36
Adhesives					
Mastic sealer, applied at joints only					
1/4" bead	LF	0.004	0.23	0.39	0.62
Fluid applied roofing					
Urethane, 2 part, elastomeric membrane					
1" thick	SF	0.013	4.97	1.30	6.27
Vinyl liquid roofing, 2 coats, 2 mils per coat	SF	0.011	7.07	1.11	8.18
Silicone roofing, 2 coats sprayed, 16 mil per coat	SF	0.013	5.28	1.30	6.58
Inverted roof system					
Insulated membrane with coarse gravel ballast					
3 ply with 2" polystyrene	SF	0.013	8.47	1.30	9.77
Ballast, 3/4" through 1-1/2" gravel, 100lb/sf	SF	0.008	0.52	0.78	1.30
Walkway for membrane roofs, 1/2" thick	SF	0.027	2.69	2.60	5.29
07610.01 METAL ROOFING					
METAL ROOFING					
Sheet metal roofing, copper, 16 oz, batten seam	SQ	5.333	1,800.00	520.00	2,320.00
Standing seam	SQ	5.000	1,760.00	490.00	2,250.00

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	Unit	Man-Hrs	Material	Labor	Total
07610.01 METAL ROOFING (Cont.)					
Aluminum roofing, natural finish					
Corrugated, on steel frame					
.0175" thick	SQ	2.286	140.00	220.00	360.00
.0215" thick	SQ	2.286	180.00	220.00	400.00
.024" thick	SQ	2.286	210.00	220.00	430.00
.032" thick	SQ	2.286	260.00	220.00	480.00
V-beam, on steel frame					
.032" thick	SQ	2.286	270.00	220.00	490.00
.040" thick	SQ	2.286	290.00	220.00	510.00
.050" thick	SQ	2.286	370.00	220.00	590.00
Ridge cap					
.019" thick	LF	0.027	4.24	2.60	6.84
Corrugated galvanized steel roofing, on steel frame					
28 ga.	SQ	2.286	230.00	220.00	450.00
26 ga.	SQ	2.286	270.00	220.00	490.00
24 ga.	SQ	2.286	300.00	220.00	520.00
22 ga.	SQ	2.286	330.00	220.00	550.00
26 ga., factory insulated with 1" polystyrene	SQ	3.200	510.00	310.00	820.00
Ridge roll					
10" wide	LF	0.027	2.31	2.60	4.91
20" wide	LF	0.032	4.70	3.12	7.82
07620.01 FLASHING AND TRIM					
FLASHING AND TRIM					
Counter flashing					
Aluminum, .032"	SF	0.080	2.51	7.81	10.32
Stainless steel, .015"	SF	0.080	8.03	7.81	15.84
Copper					
16 oz.	SF	0.080	7.48	7.81	15.29
20 oz.	SF	0.080	8.89	7.81	16.70
24 oz.	SF	0.080	10.75	7.81	18.56
32 oz.	SF	0.080	13.25	7.81	21.06
Valley flashing					
Aluminum, .032"	SF	0.050	1.74	4.88	6.62
Stainless steel, .015	SF	0.050	5.56	4.88	10.44
Copper					
16 oz.	SF	0.050	7.48	4.88	12.36
20 oz.	SF	0.067	8.89	6.51	15.40
24 oz.	SF	0.050	10.75	4.88	15.63
32 oz.	SF	0.050	13.25	4.88	18.13
Base flashing					
Aluminum, .040"	SF	0.067	2.60	6.51	9.11
Stainless steel, .018"	SF	0.067	6.65	6.51	13.16
Copper					
16 oz.	SF	0.067	15.00	6.51	21.51
20 oz.	SF	0.050	17.75	4.88	22.63
24 oz.	SF	0.067	21.50	6.51	28.01
32 oz.	SF	0.067	26.50	6.51	33.01
Waterstop, T section, 22 ga.					
1-1/2" x 3"	LF	0.040	3.25	3.90	7.15
2" x 2"	LF	0.040	3.60	3.90	7.50
4" x 3"	LF	0.040	4.41	3.90	8.31
6" x 4"	LF	0.040	4.67	3.90	8.57
8" x 4"	LF	0.040	5.79	3.90	9.69
Scupper outlets					
10" x 10" x 4"	EA	0.200	58.00	19.50	77.50
22" x 4" x 4"	EA	0.200	62.00	19.50	81.50
8" x 8" x 5"	EA	0.200	57.00	19.50	76.50
Flashing and trim, aluminum					
.019" thick	SF	0.057	2.25	5.58	7.83
.032" thick	SF	0.057	2.75	5.58	8.33
.040" thick	SF	0.062	4.71	6.00	10.71

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	Unit	Man-Hrs	Material	Labor	Total
07620.01 FLASHING AND TRIM (Cont.)					
Neoprene sheet flashing, .060" thick	SF	0.050	3.75	4.88	8.63
Copper, paper backed					
2 oz.	SF	0.080	4.81	7.81	12.62
5 oz.	SF	0.080	6.21	7.81	14.02
Drainage boots, roof, cast iron					
2 x 3	LF	0.100	170.00	9.76	179.76
3 x 4	LF	0.100	220.00	9.76	229.76
4 x 5	LF	0.107	230.00	10.50	240.50
4 x 6	LF	0.107	260.00	10.50	270.50
5 x 7	LF	0.114	280.00	11.25	291.25
Pitch pocket, copper, 16 oz.					
4 x 4	EA	0.200	130.00	19.50	149.50
6 x 6	EA	0.200	140.00	19.50	159.50
8 x 8	EA	0.200	180.00	19.50	199.50
8 x 10	EA	0.200	210.00	19.50	229.50
8 x 12	EA	0.200	240.00	19.50	259.50
Reglets, copper 10 oz.	LF	0.053	11.75	5.20	16.95
Stainless steel, .020"	LF	0.053	5.28	5.20	10.48
Gravel stop					
Aluminum, .032"					
4"	LF	0.027	3.07	2.60	5.67
6"	LF	0.027	4.52	2.60	7.12
8"	LF	0.031	6.06	3.00	9.06
10"	LF	0.031	7.58	3.00	10.58
Copper, 16 oz.					
4"	LF	0.027	11.50	2.60	14.10
6"	LF	0.027	17.00	2.60	19.60
8"	LF	0.031	23.00	3.00	26.00
10"	LF	0.031	28.50	3.00	31.50
07710.01 MANUFACTURED SPECIALTIES					
MANUFACTURED SPECIALTIES					
Moisture relief vent					
Aluminum	EA	0.114	29.00	11.25	40.25
Copper	EA	0.114	79.00	11.25	90.25
Expansion joint					
Aluminum					
Opening to 2.5"	LF	0.057	22.25	5.58	27.83
Opening to 3.5"	LF	0.062	21.75	6.00	27.75
Copper, 16 oz.					
Opening to 2.5"	LF	0.057	41.75	5.58	47.33
Opening to 3.5"	LF	0.062	52.00	6.00	58.00
Butyl or neoprene					
4" wide					
16 oz. copper bellows	LF	0.067	40.00	6.51	46.51
28 ga. stainless steel bellows	LF	0.067	25.00	6.51	31.51
6" wide					
Copper bellows	LF	0.073	44.00	7.10	51.10
Stainless steel					
Opening to 2.5"	LF	0.057	25.75	5.58	31.33
Opening to 3.5"	LF	0.062	32.50	6.00	38.50
Smoke vent, 48" x 48"					
Aluminum	EA	2.000	3,930.00	200.00	4,130.00
Galvanized steel	EA	2.000	3,460.00	200.00	3,660.00
Heat/smoke vent, 48" x 96"					
Aluminum	EA	2.667	5,510.00	260.00	5,770.00
Galvanized steel	EA	2.667	4,700.00	260.00	4,960.00
Ridge vent strips					
Mill finish	LF	0.053	3.90	5.20	9.10
Connectors	EA	0.200	3.85	19.50	23.35
End cap	EA	0.229	1.92	22.25	24.17
Soffit vents					
Mill finish					
2-1/2" wide	LF	0.032	0.49	3.12	3.61
3" wide	LF	0.032	0.60	3.12	3.72

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	Unit	Man-Hrs	Material	Labor	Total
07710.01 MANUFACTURED SPECIALTIES (Cont.)					
Mill finish					
6" wide	LF	0.032	1.04	3.12	4.16
Roof hatches					
Steel, plain, primed					
2'6" x 3'0"	EA	2.000	1,000.00	200.00	1,200.00
2'6" x 4'6"	EA	2.667	1,480.00	260.00	1,740.00
2'6" x 8'0"	EA	4.000	2,280.00	390.00	2,670.00
Galvanized steel					
2'6" x 3'0"	EA	2.000	1,240.00	200.00	1,440.00
2'6" x 4'6"	EA	2.667	1,870.00	260.00	2,130.00
2'6" x 8'0"	EA	4.000	2,910.00	390.00	3,300.00
Aluminum					
2'6" x 3'0"	EA	2.000	1,190.00	200.00	1,390.00
2'6" x 4'6"	EA	2.667	1,790.00	260.00	2,050.00
2'6" x 8'0"	EA	4.000	3,320.00	390.00	3,710.00
Ceiling access doors					
Swing up model, metal frame					
Steel door					
2'6" x 2'6"	EA	0.800	690.00	82.00	772.00
2'6" x 3'0"	EA	0.800	740.00	82.00	822.00
Aluminum door					
2'6" x 2'6"	EA	0.800	850.00	82.00	932.00
2'6" x 3'0"	EA	0.800	920.00	82.00	1,002.00
Swing down model, metal frame					
Steel door					
2'6" x 2'6"	EA	0.800	1,040.00	82.00	1,122.00
2'6" x 3'0"	EA	0.800	1,120.00	82.00	1,202.00
Aluminum door					
2'6" x 2'6"	EA	0.800	1,240.00	82.00	1,322.00
2'6" x 3'0"	EA	0.800	1,330.00	82.00	1,412.00
Stainless door					
12" x 12"	EA	0.800	990.00	82.00	1,072.00
2'6" x 2'6"	EA	0.800	1,650.00	82.00	1,732.00
2'6" x 3'0"	EA	0.800	1,760.00	82.00	1,842.00
Gravity ventilators, with curb, base, damper and screen					
Stationary siphon					
6" dia.	EA	0.533	70.00	52.00	122.00
12" dia.	EA	0.533	120.00	52.00	172.00
24" dia.	EA	0.800	440.00	78.00	518.00
36" dia.	EA	0.800	940.00	78.00	1,018.00
Wind driven spinner					
6" dia.	EA	0.533	110.00	52.00	162.00
12" dia.	EA	0.533	140.00	52.00	192.00
24" dia.	EA	0.800	530.00	78.00	608.00
36" dia.	EA	0.800	1,090.00	78.00	1,168.00
Stationary mushroom					
16" dia.	EA	0.800	870.00	78.00	948.00
30" dia.	EA	1.000	1,960.00	98.00	2,058.00
36" dia.	EA	1.333	2,520.00	130.00	2,650.00
42" dia.	EA	1.600	3,770.00	160.00	3,930.00
07712.31 GUTTERS AND DOWNSPOUTS					
GUTTERS AND DOWNSPOUTS					
Copper gutter and downspout					
Downspouts, 16 oz. copper					
Round					
3" dia.	LF	0.053	15.50	5.20	20.70
4" dia.	LF	0.053	19.50	5.20	24.70
Rectangular, corrugated					
2" x 3"	LF	0.050	15.00	4.88	19.88
3" x 4"	LF	0.050	18.50	4.88	23.38
Rectangular, flat surface					
2" x 3"	LF	0.053	17.25	5.20	22.45
3" x 4"	LF	0.053	24.50	5.20	29.70

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	Unit	Man-Hrs	Material	Labor	Total
07712.31 GUTTERS AND DOWNSPOUTS (Cont.)					
Copper gutter and downspout					
Lead-coated copper downspouts					
Round					
3" dia.	LF	0.050	24.50	4.88	29.38
4" dia.	LF	0.057	29.50	5.58	35.08
Rectangular, corrugated					
2" x 3"	LF	0.053	20.50	5.20	25.70
3" x 4"	LF	0.053	24.50	5.20	29.70
Rectangular, plain					
2" x 3"	LF	0.053	14.25	5.20	19.45
3" x 4"	LF	0.053	16.50	5.20	21.70
Gutters, 16 oz. copper					
Half round					
4" wide	LF	0.080	14.00	7.81	21.81
5" wide	LF	0.089	17.00	8.68	25.68
Type K					
4" wide	LF	0.080	15.50	7.81	23.31
5" wide	LF	0.089	16.25	8.68	24.93
Lead-coated copper gutters					
Half round					
4" wide	LF	0.080	17.00	7.81	24.81
6" wide	LF	0.089	23.25	8.68	31.93
Type K					
4" wide	LF	0.080	18.50	7.81	26.31
5" wide	LF	0.089	24.00	8.68	32.68
Aluminum gutter and downspout					
Downspouts					
2" x 3"	LF	0.053	2.19	5.20	7.39
3" x 4"	LF	0.057	3.02	5.58	8.60
4" x 5"	LF	0.062	3.48	6.00	9.48
Round					
3" dia.	LF	0.053	3.51	5.20	8.71
4" dia.	LF	0.057	4.50	5.58	10.08
Gutters, stock units					
4" wide	LF	0.084	2.60	8.22	10.82
5" wide	LF	0.089	3.09	8.68	11.77
Galvanized steel gutter and downspout					
Downspouts, round corrugated					
3" dia.	LF	0.053	2.87	5.20	8.07
4" dia.	LF	0.053	3.85	5.20	9.05
5" dia.	LF	0.057	5.74	5.58	11.32
6" dia.	LF	0.057	7.62	5.58	13.20
Rectangular					
2" x 3"	LF	0.053	2.60	5.20	7.80
3" x 4"	LF	0.050	3.72	4.88	8.60
4" x 4"	LF	0.050	4.65	4.88	9.53
Gutters, stock units					
5" wide					
Plain	LF	0.089	2.51	8.68	11.19
Painted	LF	0.089	2.72	8.68	11.40
6" wide					
Plain	LF	0.094	3.50	9.19	12.69
Painted	LF	0.094	3.93	9.19	13.12
07810.01 FIREPROOFING					
FIREPROOFING					
Sprayed on					
1" thick					
On beams	SF	0.018	0.89	1.42	2.31
On columns	SF	0.016	0.91	1.28	2.19
On decks					
Flat surface	SF	0.008	0.91	0.64	1.55
Fluted surface	SF	0.010	1.15	0.80	1.95
1-1/2" thick					
On beams	SF	0.023	1.60	1.83	3.43

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	Unit	Man-Hrs	Material	Labor	Total
07810.01 FIREPROOFING (Cont.)					
1-1/2" thick					
On columns	SF	0.020	1.81	1.60	3.41
On decks					
Flat surface	SF	0.010	1.36	0.80	2.16
Fluted surface	SF	0.013	1.60	1.06	2.66
07920.01 CAULKING					
CAULKING					
Caulk exterior, two component					
1/4 x 1/2	LF	0.040	0.43	4.09	4.52
3/8 x 1/2	LF	0.044	0.66	4.54	5.20
1/2 x 1/2	LF	0.050	0.90	5.11	6.01
Caulk interior, single component					
1/4 x 1/2	LF	0.038	0.29	3.89	4.18
3/8 x 1/2	LF	0.042	0.41	4.30	4.71
1/2 x 1/2	LF	0.047	0.54	4.81	5.35
Butyl rubber fillers					
1/4" x 1/4"	LF	0.016	0.83	1.63	2.46
1/2" x 1/2"	LF	0.027	1.21	2.72	3.93
1/2" x 3/4"	LF	0.032	1.85	3.27	5.12
3/4" x 3/4"	LF	0.032	2.43	3.27	5.70
1" x 1"	LF	0.036	2.85	3.63	6.48
Seals, O-ring type cord					
1/4" dia.	LF	0.020	0.91	2.04	2.95
1/2" dia.	LF	0.021	2.72	2.15	4.87
1" dia.	LF	0.022	9.64	2.27	11.91
1-1/4" dia.	LF	0.024	12.25	2.40	14.65
1-1/2" dia.	LF	0.025	16.25	2.55	18.80
1-3/4" dia.	LF	0.026	24.00	2.63	26.63
2" dia.	LF	0.027	31.00	2.72	33.72
Polyvinyl chloride, closed cell					
1/4" x 2"	LF	0.029	0.62	2.92	3.54
1/4" x 6"	LF	0.036	1.96	3.71	5.67
Silicone foam penetration seal					
1/4" x 1/2"	LF	0.010	0.24	1.02	1.26
1/2" x 1/2"	LF	0.013	0.41	1.36	1.77
1/2" x 3/4"	LF	0.016	0.64	1.63	2.27
3/4" x 3/4"	LF	0.020	0.96	2.04	3.00
1/8" x 1"	LF	0.010	0.24	1.02	1.26
1/8" x 3"	LF	0.016	0.64	1.63	2.27
1/4" x 3"	LF	0.020	1.27	2.04	3.31
1/4" x 6"	LF	0.027	2.61	2.72	5.33
1/2" x 6"	LF	0.062	5.14	6.29	11.43
1/2" x 9"	LF	0.100	7.72	10.25	17.97
1/2" x 12"	LF	0.145	10.25	14.75	25.00
Oil base sealants and caulking					
1/4" x 1/4"	LF	0.020	0.05	2.04	2.09
1/4" x 3/8"	LF	0.021	0.11	2.12	2.23
1/4" x 1/2"	LF	0.022	0.12	2.21	2.33
3/8" x 3/8"	LF	0.023	0.15	2.33	2.48
3/8" x 1/2"	LF	0.024	0.17	2.47	2.64
3/8" x 5/8"	LF	0.026	0.31	2.63	2.94
3/8" x 3/4"	LF	0.028	0.35	2.82	3.17
1/2" x 1/2"	LF	0.031	0.31	3.14	3.45
1/2" x 5/8"	LF	0.035	0.39	3.55	3.94
1/2" x 3/4"	LF	0.040	0.45	4.09	4.54
1/2" x 7/8"	LF	0.041	0.53	4.19	4.72
1/2" x 1"	LF	0.042	0.58	4.30	4.88
3/4" x 3/4"	LF	0.043	0.68	4.42	5.10
1" x 1"	LF	0.044	1.19	4.54	5.73
Polyurethane compounds					
1/4" x 1/4"	LF	0.020	0.24	2.04	2.28
1/4" x 3/8"	LF	0.021	0.43	2.12	2.55
1/4" x 1/2"	LF	0.022	0.54	2.21	2.75
3/8" x 3/8"	LF	0.023	0.60	2.33	2.93

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	Unit	Man-Hrs	Material	Labor	Total
07920.01 CAULKING (Cont.)					
Polyurethane compounds					
3/8" x 1/2"	LF	0.024	0.77	2.47	3.24
3/8" x 5/8"	LF	0.026	0.96	2.63	3.59
3/8" x 3/4"	LF	0.028	1.16	2.82	3.98
1/2" x 1/2"	LF	0.031	1.11	3.14	4.25
1/2" x 5/8"	LF	0.035	1.21	3.55	4.76
1/2" x 3/4"	LF	0.040	1.39	4.09	5.48
1/2" x 7/8"	LF	0.041	1.77	4.19	5.96
1/2" x 1"	LF	0.044	2.24	4.54	6.78
3/4" x 3/4"	LF	0.043	2.28	4.42	6.70
3/4" x 1"	LF	0.044	2.49	4.54	7.03
Backer rod, polyethylene					
1/4"	LF	0.020	0.09	2.04	2.13
1/2"	LF	0.021	0.15	2.15	2.30
3/4"	LF	0.022	0.19	2.27	2.46
1"	LF	0.024	0.28	2.40	2.68
07950.01 EXPANSION JOINTS					
EXPANSION JOINTS					
Expansion joints with covers, floor assembly type					
With 1" space					
Aluminum	LF	0.133	33.00	13.75	46.75
Bronze	LF	0.133	69.00	13.75	82.75
Stainless steel	LF	0.133	53.00	13.75	66.75
With 2" space					
Aluminum	LF	0.133	35.50	13.75	49.25
Bronze	LF	0.133	63.00	13.75	76.75
Stainless steel	LF	0.133	55.00	13.75	68.75
Ceiling and wall assembly type					
With 1" space					
Aluminum	LF	0.160	18.25	16.50	34.75
Bronze	LF	0.160	63.00	16.50	79.50
Stainless steel	LF	0.160	57.00	16.50	73.50
With 2" space					
Aluminum	LF	0.160	20.25	16.50	36.75
Bronze	LF	0.160	68.00	16.50	84.50
Stainless steel	LF	0.160	60.00	16.50	76.50
Exterior roof and wall, aluminum					
Roof to roof					
With 1" space	LF	0.133	54.00	13.75	67.75
With 2" space	LF	0.133	58.00	13.75	71.75
Roof to wall					
With 1" space	LF	0.145	41.75	15.00	56.75
With 2" space	LF	0.145	49.50	15.00	64.50
Flat wall to wall					
With 1" space	LF	0.133	20.25	13.75	34.00
With 2" space	LF	0.133	22.00	13.75	35.75
Corner to flat wall					
With 1" space	LF	0.160	24.25	16.50	40.75
With 2" in space	LF	0.160	24.75	16.50	41.25

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	Unit	Man-Hrs	Material	Labor	Total
08111.31 METAL DOORS					
METAL DOORS					
Flush hollow metal, std. duty, 20 ga., 1-3/8" thick					
2-6 x 6-8	EA	0.889	570.00	91.00	661.00
2-8 x 6-8	EA	0.889	600.00	91.00	691.00
3-0 x 6-8	EA	0.889	640.00	91.00	731.00
1-3/4" thick					
2-6 x 6-8	EA	0.889	580.00	91.00	671.00
2-8 x 6-8	EA	0.889	710.00	91.00	801.00
3-0 x 6-8	EA	0.889	660.00	91.00	751.00
2-6 x 7-0	EA	0.889	640.00	91.00	731.00
2-8 x 7-0	EA	0.889	660.00	91.00	751.00
3-0 x 7-0	EA	0.889	700.00	91.00	791.00
Heavy duty, 20 ga., unrated, 1-3/4"					
2-8 x 6-8	EA	0.889	640.00	91.00	731.00
3-0 x 6-8	EA	0.889	680.00	91.00	771.00
2-8 x 7-0	EA	0.889	720.00	91.00	811.00
3-0 x 7-0	EA	0.889	700.00	91.00	791.00
3-4 x 7-0	EA	0.889	720.00	91.00	811.00
18 ga., 1-3/4", unrated door					
2-0 x 7-0	EA	0.889	670.00	91.00	761.00
2-4 x 7-0	EA	0.889	670.00	91.00	761.00
2-6 x 7-0	EA	0.889	670.00	91.00	761.00
2-8 x 7-0	EA	0.889	740.00	91.00	831.00
3-0 x 7-0	EA	0.889	680.00	91.00	771.00
3-4 x 7-0	EA	0.889	840.00	91.00	931.00
2", unrated door					
2-0 x 7-0	EA	1.000	740.00	100.00	840.00
2-4 x 7-0	EA	1.000	740.00	100.00	840.00
2-6 x 7-0	EA	1.000	740.00	100.00	840.00
2-8 x 7-0	EA	1.000	810.00	100.00	910.00
3-0 x 7-0	EA	1.000	840.00	100.00	940.00
3-4 x 7-0	EA	1.000	860.00	100.00	960.00
Galvanized metal door					
3-0 x 7-0	EA	1.000	880.00	100.00	980.00
For lead lining in doors	EA				1,600.00
For sound attenuation	EA				140.00
Vision glass					
8" x 8"	EA	1.000	140.00	100.00	240.00
8" x 48"	EA	1.000	210.00	100.00	310.00
Fixed metal louver	EA	0.800	320.00	82.00	402.00
For fire rating, add					
3 hr door	EA				690.00
1-1/2 hr door	EA				310.00
3/4 hr door	EA				150.00
1' extra height, add to material, 20%					
1'6" extra height, add to material, 60%					
For dutch doors with shelf, add to material, 100%					
08111.34 METAL DOOR FRAMES					
METAL DOOR FRAMES					
Hollow metal, stock, 18 ga., 4-3/4" x 1-3/4"					
2-0 x 7-0	EA	1.000	160.00	100.00	260.00
2-4 x 7-0	EA	1.000	180.00	100.00	280.00
2-6 x 7-0	EA	1.000	180.00	100.00	280.00
2-8 x 7-0	EA	1.000	180.00	100.00	280.00
3-0 x 7-0	EA	1.000	180.00	100.00	280.00
4-0 x 7-0	EA	1.333	200.00	140.00	340.00
5-0 x 7-0	EA	1.333	210.00	140.00	350.00
6-0 x 7-0	EA	1.333	250.00	140.00	390.00
16 ga., 6-3/4" x 1-3/4"					
2-0 x 7-0	EA	1.000	180.00	100.00	280.00
2-4 x 7-0	EA	1.000	170.00	100.00	270.00
2-6 x 7-0	EA	1.000	170.00	100.00	270.00
2-8 x 7-0	EA	1.000	180.00	100.00	280.00
3-0 x 7-0	EA	1.000	190.00	100.00	290.00

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08111.34 METAL DOOR FRAMES (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
16 ga., 6-3/4" x 1-3/4"					
4-0 x 7-0	EA	1.333	220.00	140.00	360.00
6-0 x 7-0	EA	1.333	260.00	140.00	400.00
Transom frame					
3-4 x 1-6	EA	1.000	130.00	100.00	230.00
3-8 x 1-6	EA	1.000	130.00	100.00	230.00
6-4 x 1-6	EA	1.000	180.00	100.00	280.00
Transom sash					
3-0 x 1-4	EA	1.000	110.00	100.00	210.00
3-4 x 1-4	EA	1.000	120.00	100.00	220.00
6-0 x 1-4	EA	1.000	180.00	100.00	280.00
1' extension of frame, add	EA				23.75
14 ga. frame, add	EA				23.75
For fire rating, add					
3 hour	EA				59.00
1-1/2 hour	EA				47.25
3/4 hour	EA				41.50
Lead lining in frame, add	EA				120.00
Sidelights, complete					
1-0 x 7-2	EA	1.000	410.00	100.00	510.00
1-4 x 7-2	EA	1.000	450.00	100.00	550.00
1-0 x 8-8	EA	1.000	470.00	100.00	570.00
1-6 x 8-8	EA	1.000	490.00	100.00	590.00
16 ga., 4-3/4" x 1-3/4"					
2-0 x 7-0	EA	1.000	150.00	100.00	250.00
2-4 x 7-0	EA	1.000	150.00	100.00	250.00
2-6 x 7-0	EA	1.000	150.00	100.00	250.00
2-8 x 7-0	EA	1.000	150.00	100.00	250.00
3-0 x 7-0	EA	1.000	150.00	100.00	250.00
4-0 x 7-0	EA	1.333	160.00	140.00	300.00
6-0 x 7-0	EA	1.333	170.00	140.00	310.00
Transom frame					
3-4 x 1-6	EA	1.000	100.00	100.00	200.00
3-8 x 1-6	EA	1.000	100.00	100.00	200.00
6-4 x 1-6	EA	1.000	140.00	100.00	240.00
Transom sash					
3-0 x 1-4	EA	1.000	89.00	100.00	189.00
3-4 x 1-4	EA	1.000	95.00	100.00	195.00
6-0 x 1-4	EA	1.000	140.00	100.00	240.00
1' extension of door frame, add	EA				21.75
14 ga., metal frame, add	EA				21.75
For fire rating, add					
3 hour	EA				56.00
1-1/2 hour	EA				45.00
3/4 hour	EA				39.50
Lead lining in frame, add	EA				120.00
Sidelights, complete					
1-0 x 7-2	EA	1.000	380.00	100.00	480.00
1-4 x 7-2	EA	1.000	410.00	100.00	510.00
1-0 x 8-8	EA	1.000	440.00	100.00	540.00
1-4 x 8-8	EA	1.000	450.00	100.00	550.00
16 ga., 5-3/4" x 1-3/4"					
2-0 x 7-0	EA	1.000	150.00	100.00	250.00
2-4 x 7-0	EA	1.000	150.00	100.00	250.00
2-6 x 7-0	EA	1.000	160.00	100.00	260.00
2-8 x 7-0	EA	1.000	160.00	100.00	260.00
3-0 x 7-0	EA	1.000	160.00	100.00	260.00
4-0 x 7-0	EA	1.333	180.00	140.00	320.00
5-0 x 7-0	EA	1.333	180.00	140.00	320.00
6-0 x 7-0	EA	1.333	190.00	140.00	330.00
Mullions, vertical					
5-1/4" x 1-3/4"	LF	0.100	16.75	10.25	27.00
5-1/4" x 2"	LF	0.100	20.75	10.25	31.00

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	Unit	Man-Hrs	Material	Labor	Total
08111.34 METAL DOOR FRAMES (Cont.)					
Mullions, vertical					
Horizontal					
5-1/4" x 1-3/4"	LF	0.100	16.75	10.25	27.00
5-1/4" x 2"	LF	0.100	20.75	10.25	31.00
08111.61 ALUMINUM DOORS					
ALUMINUM DOORS					
Aluminum doors, commercial					
Narrow stile					
2-6 x 7-0	EA	4.000	920.00	410.00	1,330.00
3-0 x 7-0	EA	4.000	970.00	410.00	1,380.00
3-6 x 7-0	EA	4.000	1,000.00	410.00	1,410.00
Pair					
5-0 x 7-0	EA	8.000	1,540.00	830.00	2,370.00
6-0 x 7-0	EA	8.000	1,570.00	830.00	2,400.00
7-0 x 7-0	EA	8.000	1,640.00	830.00	2,470.00
Wide stile					
2-6 x 7-0	EA	4.000	1,300.00	410.00	1,710.00
3-0 x 7-0	EA	4.000	1,340.00	410.00	1,750.00
3-6 x 7-0	EA	4.000	1,380.00	410.00	1,790.00
Pair					
5-0 x 7-0	EA	8.000	2,380.00	830.00	3,210.00
6-0 x 7-0	EA	8.000	2,490.00	830.00	3,320.00
7-0 x 7-0	EA	8.000	2,530.00	830.00	3,360.00
08140.01 WOOD DOORS					
WOOD DOORS					
Solid core, 1-3/8" thick					
Birch faced					
2-4 x 7-0	EA	1.000	190.00	100.00	290.00
2-8 x 7-0	EA	1.000	200.00	100.00	300.00
3-0 x 7-0	EA	1.000	200.00	100.00	300.00
3-4 x 7-0	EA	1.000	400.00	100.00	500.00
2-4 x 6-8	EA	1.000	190.00	100.00	290.00
2-6 x 6-8	EA	1.000	190.00	100.00	290.00
2-8 x 6-8	EA	1.000	200.00	100.00	300.00
3-0 x 6-8	EA	1.000	200.00	100.00	300.00
Lauan faced					
2-4 x 6-8	EA	1.000	160.00	100.00	260.00
2-8 x 6-8	EA	1.000	170.00	100.00	270.00
3-0 x 6-8	EA	1.000	180.00	100.00	280.00
3-4 x 6-8	EA	1.000	290.00	100.00	390.00
Tempered hardboard faced					
2-4 x 7-0	EA	1.000	200.00	100.00	300.00
2-8 x 7-0	EA	1.000	210.00	100.00	310.00
3-0 x 7-0	EA	1.000	240.00	100.00	340.00
3-4 x 7-0	EA	1.000	250.00	100.00	350.00
Hollow core, 1-3/8" thick					
Birch faced					
2-4 x 7-0	EA	1.000	160.00	100.00	260.00
2-8 x 7-0	EA	1.000	160.00	100.00	260.00
3-0 x 7-0	EA	1.000	170.00	100.00	270.00
3-4 x 7-0	EA	1.000	180.00	100.00	280.00
Lauan faced					
2-4 x 6-8	EA	1.000	81.00	100.00	181.00
2-6 x 6-8	EA	1.000	88.00	100.00	188.00
2-8 x 6-8	EA	1.000	110.00	100.00	210.00
3-0 x 6-8	EA	1.000	110.00	100.00	210.00
3-4 x 6-8	EA	1.000	130.00	100.00	230.00
Tempered hardboard faced					
2-4 x 7-0	EA	1.000	83.00	100.00	183.00
2-6 x 7-0	EA	1.000	89.00	100.00	189.00
2-8 x 7-0	EA	1.000	98.00	100.00	198.00
3-0 x 7-0	EA	1.000	100.00	100.00	200.00
3-4 x 7-0	EA	1.000	110.00	100.00	210.00

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	Unit	Man-Hrs	Material	Labor	Total
08140.01 WOOD DOORS (Cont.)					
Solid core, 1-3/4" thick					
Birch faced					
2-4 x 7-0	EA	1.000	270.00	100.00	370.00
2-6 x 7-0	EA	1.000	270.00	100.00	370.00
2-8 x 7-0	EA	1.000	290.00	100.00	390.00
3-0 x 7-0	EA	1.000	270.00	100.00	370.00
3-4 x 7-0	EA	1.000	270.00	100.00	370.00
Lauan faced					
2-4 x 7-0	EA	1.000	190.00	100.00	290.00
2-6 x 7-0	EA	1.000	210.00	100.00	310.00
2-8 x 7-0	EA	1.000	230.00	100.00	330.00
3-0 x 7-0	EA	1.000	240.00	100.00	340.00
3-4 x 7-0	EA	1.000	250.00	100.00	350.00
Tempered hardboard faced					
2-4 x 7-0	EA	1.000	200.00	100.00	300.00
2-6 x 7-0	EA	1.000	220.00	100.00	320.00
2-8 x 7-0	EA	1.000	240.00	100.00	340.00
3-0 x 7-0	EA	1.000	250.00	100.00	350.00
3-4 x 7-0	EA	1.000	270.00	100.00	370.00
Hollow core, 1-3/4" thick					
Birch faced					
2-4 x 7-0	EA	1.000	190.00	100.00	290.00
2-6 x 7-0	EA	1.000	190.00	100.00	290.00
2-8 x 7-0	EA	1.000	200.00	100.00	300.00
3-0 x 7-0	EA	1.000	200.00	100.00	300.00
3-4 x 7-0	EA	1.000	210.00	100.00	310.00
Lauan faced					
2-4 x 6-8	EA	1.000	110.00	100.00	210.00
2-6 x 6-8	EA	1.000	120.00	100.00	220.00
2-8 x 6-8	EA	1.000	110.00	100.00	210.00
3-0 x 6-8	EA	1.000	120.00	100.00	220.00
3-4 x 6-8	EA	1.000	120.00	100.00	220.00
Tempered hardboard					
2-4 x 7-0	EA	1.000	100.00	100.00	200.00
2-6 x 7-0	EA	1.000	110.00	100.00	210.00
2-8 x 7-0	EA	1.000	110.00	100.00	210.00
3-0 x 7-0	EA	1.000	120.00	100.00	220.00
3-4 x 7-0	EA	1.000	120.00	100.00	220.00
Add-on, louver	EA	0.800	34.50	82.00	116.50
Glass	EA	0.800	110.00	82.00	192.00
Exterior doors, 3-0 x 7-0 x 2-1/2", solid core					
Carved					
One face	EA	2.000	1,150.00	200.00	1,350.00
Two faces	EA	2.000	1,590.00	200.00	1,790.00
Closet doors, 1-3/4" thick					
Bi-fold or bi-passing, includes frame and trim					
Paneled					
4-0 x 6-8	EA	1.333	460.00	140.00	600.00
6-0 x 6-8	EA	1.333	520.00	140.00	660.00
Louvered					
4-0 x 6-8	EA	1.333	280.00	140.00	420.00
6-0 x 6-8	EA	1.333	330.00	140.00	470.00
Flush					
4-0 x 6-8	EA	1.333	200.00	140.00	340.00
6-0 x 6-8	EA	1.333	260.00	140.00	400.00
Primed					
4-0 x 6-8	EA	1.333	220.00	140.00	360.00
6-0 x 6-8	EA	1.333	250.00	140.00	390.00
08140.09 WOOD FRAMES					
WOOD FRAMES					
Frame, interior, pine					
2-6 x 6-8	EA	1.143	83.00	120.00	203.00
2-8 x 6-8	EA	1.143	89.00	120.00	209.00
3-0 x 6-8	EA	1.143	92.00	120.00	212.00

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	Unit	Man-Hrs	Material	Labor	Total
08140.09 WOOD FRAMES (Cont.)					
Frame, interior, pine					
5-0 x 6-8	EA	1.143	96.00	120.00	216.00
6-0 x 6-8	EA	1.143	100.00	120.00	220.00
2-6 x 7-0	EA	1.143	95.00	120.00	215.00
2-8 x 7-0	EA	1.143	110.00	120.00	230.00
3-0 x 7-0	EA	1.143	110.00	120.00	230.00
5-0 x 7-0	EA	1.600	120.00	160.00	280.00
6-0 x 7-0	EA	1.600	130.00	160.00	290.00
Exterior, custom, with threshold, including trim					
Walnut					
3-0 x 7-0	EA	2.000	330.00	200.00	530.00
6-0 x 7-0	EA	2.000	380.00	200.00	580.00
Oak					
3-0 x 7-0	EA	2.000	300.00	200.00	500.00
6-0 x 7-0	EA	2.000	340.00	200.00	540.00
Pine					
2-4 x 7-0	EA	1.600	120.00	160.00	280.00
2-6 x 7-0	EA	1.600	130.00	160.00	290.00
2-8 x 7-0	EA	1.600	160.00	160.00	320.00
3-0 x 7-0	EA	1.600	170.00	160.00	330.00
3-4 x 7-0	EA	1.600	180.00	160.00	340.00
6-0 x 7-0	EA	2.667	190.00	270.00	460.00
08311.31 CONTROL					
CONTROL					
Access control, 7' high, indoor or outdoor impenetrability					
Remote or card control, type B	EA	10.667	1,970.00	1,110.00	3,080.00
Free passage, type B	EA	10.667	1,600.00	1,110.00	2,710.00
Remote or card control, type AA	EA	10.667	3,140.00	1,110.00	4,250.00
Free passage, type AA	EA	10.667	2,840.00	1,110.00	3,950.00
08340.01 SPECIAL DOORS					
SPECIAL DOORS					
Vault door and frame, class 5, steel	EA	8.000	7,940.00	820.00	8,760.00
Overhead door, coiling insulated					
Chain gear, no frame, 12' x 12'	EA	10.000	3,410.00	1,020.00	4,430.00
Aluminum, bronze glass panels, 12-9 x 13-0	EA	8.000	3,850.00	820.00	4,670.00
Garage, flush, ins. metal, primed, 9-0 x 7-0	EA	2.667	1,100.00	270.00	1,370.00
Sliding fire doors, motorized, fusible link, 3 hr.					
3-0 x 6-8	EA	16.000	5,620.00	1,640.00	7,260.00
3-8 x 6-8	EA	16.000	5,690.00	1,640.00	7,330.00
4-0 x 8-0	EA	16.000	5,790.00	1,640.00	7,430.00
5-0 x 8-0	EA	16.000	5,900.00	1,640.00	7,540.00
Metal clad doors, including electric motor					
Light duty					
Minimum	SF	0.133	45.00	13.75	58.75
Maximum	SF	0.320	73.00	32.75	105.75
Heavy duty					
Minimum	SF	0.400	70.00	41.00	111.00
Maximum	SF	0.500	110.00	51.00	161.00
Hangar doors, based on 150' openings					
To 20' high	SF	0.096	61.00	13.00	74.00
20' to 40' high	SF	0.060	67.00	8.05	75.05
40' to 60' high	SF	0.040	70.00	5.37	75.37
60' to 80' high	SF	0.024	73.00	3.22	76.22
Over 80' high	SF	0.019	100.00	2.57	102.57
Counter doors (roll-up shutters), std, manual					
Opening, 4' high					
4' wide	EA	6.667	650.00	680.00	1,330.00
6' wide	EA	6.667	880.00	680.00	1,560.00
8' wide	EA	7.273	990.00	740.00	1,730.00
10' wide	EA	10.000	1,100.00	1,020.00	2,120.00
14' wide	EA	10.000	1,380.00	1,020.00	2,400.00
6' high					
4' wide	EA	6.667	770.00	680.00	1,450.00
6' wide	EA	7.273	1,000.00	740.00	1,740.00

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	Unit	Man-Hrs	Material	Labor	Total
08340.01 SPECIAL DOORS (Cont.)					
6' high					
8' wide	EA	8.000	1,100.00	820.00	1,920.00
10' wide	EA	10.000	1,240.00	1,020.00	2,260.00
14' wide	EA	11.429	1,400.00	1,170.00	2,570.00
For stainless steel, add to material, 40%					
For motor operator, add	EA				1,520.00
Service doors (roll-up shutters), std, manual					
Opening					
8' high x 8' wide	EA	4.444	1,320.00	450.00	1,770.00
10' high x 10' wide	EA	6.667	1,650.00	680.00	2,330.00
12' high x 12' wide	EA	10.000	1,850.00	1,020.00	2,870.00
14' high x 14' wide	EA	13.333	2,420.00	1,360.00	3,780.00
16' high x 14' wide	EA	13.333	3,390.00	1,360.00	4,750.00
20' high x 14' wide	EA	20.000	3,830.00	2,050.00	5,880.00
24' high x 16' wide	EA	17.778	6,250.00	1,820.00	8,070.00
For motor operator					
Up to 12-0 x 12-0, add	EA				1,550.00
Over 12-0 x 12-0, add	EA				1,980.00
Roll-up doors					
13-0 high x 14-0 wide	EA	11.429	2,020.00	1,170.00	3,190.00
12-0 high x 14-0 wide	EA	11.429	2,580.00	1,170.00	3,750.00
Top coiling grilles, manual, steel or aluminum					
Opening, 4' high x					
4' wide	EA	3.200	1,830.00	330.00	2,160.00
6' wide	EA	3.200	1,890.00	330.00	2,220.00
8' wide	EA	4.444	2,190.00	450.00	2,640.00
12' wide	EA	4.444	2,530.00	450.00	2,980.00
16' wide	EA	6.667	2,900.00	680.00	3,580.00
6' high x					
4' wide	EA	6.667	1,920.00	680.00	2,600.00
6' wide	EA	7.273	2,140.00	740.00	2,880.00
8' wide	EA	8.000	2,220.00	820.00	3,040.00
12' wide	EA	8.889	2,690.00	910.00	3,600.00
16' wide	EA	11.429	3,420.00	1,170.00	4,590.00
Side coiling grilles, manual, aluminum					
Opening, 8' high x					
18' wide	EA	60.000	4,370.00	8,060.00	12,430.00
24' wide	EA	68.571	5,640.00	9,210.00	14,850.00
12' high x					
12' wide	EA	60.000	4,430.00	8,060.00	12,490.00
18' wide	EA	68.571	5,640.00	9,210.00	14,850.00
24' wide	EA	80.000	8,060.00	10,740.00	18,800.00
Accordion folding, tracks and fittings included					
Vinyl covered, 2 layers	SF	0.320	14.50	32.75	47.25
Woven mahogany and vinyl	SF	0.320	18.25	32.75	51.00
Economy vinyl	SF	0.320	12.25	32.75	45.00
Rigid polyvinyl chloride	SF	0.320	20.00	32.75	52.75
Sectional wood overhead, frames not incl.					
Commercial grade, HD, 1-3/4" thick, manual					
8' x 8'	EA	6.667	1,460.00	680.00	2,140.00
10' x 10'	EA	7.273	2,110.00	740.00	2,850.00
12' x 12'	EA	8.000	2,740.00	820.00	3,560.00
Chain hoist					
12' x 16' high	EA	13.333	3,770.00	1,360.00	5,130.00
14' x 14' high	EA	10.000	4,130.00	1,020.00	5,150.00
20' x 8' high	EA	16.000	3,550.00	1,640.00	5,190.00
16' high	EA	20.000	7,970.00	2,050.00	10,020.00
Sectional metal overhead doors, complete					
Residential grade, manual					
9' x 7'	EA	3.200	720.00	330.00	1,050.00
16' x 7'	EA	4.000	1,280.00	410.00	1,690.00
Commercial grade					
8' x 8'	EA	6.667	1,080.00	680.00	1,760.00
10' x 10'	EA	7.273	1,440.00	740.00	2,180.00

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	Unit	Man-Hrs	Material	Labor	Total
08340.01 SPECIAL DOORS (Cont.)					
Commercial grade					
12' x 12'	EA	8.000	2,390.00	820.00	3,210.00
20' x 14', with chain hoist	EA	16.000	5,720.00	1,640.00	7,360.00
Sliding glass doors					
Tempered plate glass, 1/4" thick					
6' wide					
Economy grade	EA	2.667	1,130.00	270.00	1,400.00
Premium grade	EA	2.667	1,820.00	270.00	2,090.00
12' wide					
Economy grade	EA	4.000	1,590.00	410.00	2,000.00
Premium grade	EA	4.000	2,390.00	410.00	2,800.00
Insulating glass, 5/8" thick					
6' wide					
Economy grade	EA	2.667	1,400.00	270.00	1,670.00
Premium grade	EA	2.667	1,800.00	270.00	2,070.00
12' wide					
Economy grade	EA	4.000	1,740.00	410.00	2,150.00
Premium grade	EA	4.000	2,790.00	410.00	3,200.00
1" thick					
6' wide					
Economy grade	EA	2.667	1,760.00	270.00	2,030.00
Premium grade	EA	2.667	2,030.00	270.00	2,300.00
12' wide					
Economy grade	EA	4.000	2,730.00	410.00	3,140.00
Premium grade	EA	4.000	3,990.00	410.00	4,400.00
Added costs					
Custom quality, add to material, 30%					
Tempered glass, 6' wide, add	SF				4.90
Vertical lift doors, channel frame construction					
20' high x					
10' wide	EA	9.600	40,360.00	1,400.00	41,760.00
15' wide	EA	9.600	50,450.00	1,400.00	51,850.00
20' wide	EA	17.143	55,490.00	2,510.00	58,000.00
25' wide	EA	17.143	60,530.00	2,510.00	63,040.00
25' high x					
20' wide	EA	17.143	63,060.00	2,510.00	65,570.00
25' wide	EA	20.000	70,630.00	2,930.00	73,560.00
30' high x					
25' wide	EA	20.000	75,670.00	2,930.00	78,600.00
30' wide	EA	20.000	83,240.00	2,930.00	86,170.00
35' wide	EA	20.000	98,370.00	2,930.00	101,300.00
Residential storm door					
Minimum	EA	1.333	180.00	140.00	320.00
Average	EA	1.333	230.00	140.00	370.00
Maximum	EA	2.000	510.00	200.00	710.00
08410.01 STOREFRONTS					
STOREFRONTS					
Storefront, aluminum and glass					
Minimum	SF	0.100	35.75	10.25	46.00
Average	SF	0.114	53.00	11.75	64.75
Maximum	SF	0.133	110.00	13.75	123.75
Entrance doors, premium, closers, panic dev.,etc.					
1/2" thick glass					
3' x 7'	EA	6.667	3,660.00	690.00	4,350.00
6' x 7'	EA	10.000	6,250.00	1,040.00	7,290.00
3/4" thick glass					
3' x 7'	EA	6.667	3,790.00	690.00	4,480.00
6' x 7'	EA	10.000	6,310.00	1,040.00	7,350.00
1" thick glass					
3' x 7'	EA	6.667	4,100.00	690.00	4,790.00
6' x 7'	EA	10.000	7,260.00	1,040.00	8,300.00

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	Unit	Man-Hrs	Material	Labor	Total
08410.01 STOREFRONTS (Cont.)					
Revolving doors					
7' diameter, 7' high					
Minimum	EA	60.000	26,000.00	8,780.00	34,780.00
Average	EA	96.000	32,710.00	14,040.00	46,750.00
Maximum	EA	120.000	42,210.00	17,550.00	59,760.00
08440.01 GLAZED CURTAIN WALLS					
GLAZED CURTAIN WALLS					
Curtain wall, aluminum system, framing sections					
2" x 3"					
Jamb	LF	0.067	19.75	6.90	26.65
Horizontal	LF	0.067	20.00	6.90	26.90
Mullion	LF	0.067	26.75	6.90	33.65
2" x 4"					
Jamb	LF	0.100	26.75	10.25	37.00
Horizontal	LF	0.100	27.50	10.25	37.75
Mullion	LF	0.100	26.75	10.25	37.00
3" x 5-1/2"					
Jamb	LF	0.100	35.50	10.25	45.75
Horizontal	LF	0.100	39.50	10.25	49.75
Mullion	LF	0.100	35.75	10.25	46.00
4" corner mullion	LF	0.133	47.25	13.75	61.00
Coping sections					
1/8" x 8"	LF	0.133	45.00	13.75	58.75
1/8" x 9"	LF	0.133	45.25	13.75	59.00
1/8" x 12-1/2"	LF	0.160	46.25	16.50	62.75
Sill section					
1/8" x 6"	LF	0.080	44.25	8.28	52.53
1/8" x 7"	LF	0.080	44.75	8.28	53.03
1/8" x 8-1/2"	LF	0.080	45.75	8.28	54.03
Column covers, aluminum					
1/8" x 26"	LF	0.200	66.00	20.75	86.75
1/8" x 34"	LF	0.211	74.00	21.75	95.75
1/8" x 38"	LF	0.211	75.00	21.75	96.75
Doors					
Aluminum framed, standard hardware					
Narrow stile					
2-6 x 7-0	EA	4.000	820.00	410.00	1,230.00
3-0 x 7-0	EA	4.000	820.00	410.00	1,230.00
3-6 x 7-0	EA	4.000	850.00	410.00	1,260.00
Wide stile					
2-6 x 7-0	EA	4.000	1,400.00	410.00	1,810.00
3-0 x 7-0	EA	4.000	1,510.00	410.00	1,920.00
3-6 x 7-0	EA	4.000	1,620.00	410.00	2,030.00
Flush panel doors, to match adjacent wall panels					
2-6 x 7-0	EA	5.000	1,180.00	520.00	1,700.00
3-0 x 7-0	EA	5.000	1,250.00	520.00	1,770.00
3-6 x 7-0	EA	5.000	1,290.00	520.00	1,810.00
Wall panel, insulated					
U=.08	SF	0.067	15.00	6.90	21.90
U=.10	SF	0.067	14.00	6.90	20.90
U=.15	SF	0.067	12.75	6.90	19.65
Window wall system, complete					
Minimum	SF	0.080	52.00	8.28	60.28
Average	SF	0.089	83.00	9.20	92.20
Maximum	SF	0.114	190.00	11.75	201.75
Added costs					
For bronze, add 20% to material					
For stainless steel, add 50% to material					
08511.31 ALUMINUM WINDOWS					
ALUMINUM WINDOWS					
Jalousie					
3-0 x 4-0	EA	1.000	360.00	100.00	460.00
3-0 x 5-0	EA	1.000	420.00	100.00	520.00

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	Unit	Man-Hrs	Material	Labor	Total
08511.31 ALUMINUM WINDOWS (Cont.)					
Fixed window					
6 sf to 8 sf	SF	0.114	19.75	11.75	31.50
12 sf to 16 sf	SF	0.089	17.75	9.20	26.95
Projecting window					
6 sf to 8 sf	SF	0.200	44.00	20.75	64.75
12 sf to 16 sf	SF	0.133	39.75	13.75	53.50
Horizontal sliding					
6 sf to 8 sf	SF	0.100	28.50	10.25	38.75
12 sf to 16 sf	SF	0.080	26.50	8.28	34.78
Double hung					
6 sf to 8 sf	SF	0.160	39.75	16.50	56.25
10 sf to 12 sf	SF	0.133	35.25	13.75	49.00
Storm window, 0.5 cfm, up to					
60 u.i. (united inches)	EA	0.400	92.00	41.50	133.50
70 u.i.	EA	0.400	95.00	41.50	136.50
80 u.i.	EA	0.400	110.00	41.50	151.50
90 u.i.	EA	0.444	110.00	46.00	156.00
100 u.i.	EA	0.444	110.00	46.00	156.00
2.0 cfm, up to					
60 u.i.	EA	0.400	120.00	41.50	161.50
70 u.i.	EA	0.400	120.00	41.50	161.50
80 u.i.	EA	0.400	120.00	41.50	161.50
90 u.i.	EA	0.444	130.00	46.00	176.00
100 u.i.	EA	0.444	130.00	46.00	176.00
08512.31 STEEL WINDOWS					
STEEL WINDOWS					
Steel windows, primed					
Casements					
Operable					
Minimum	SF	0.047	56.00	4.87	60.87
Maximum	SF	0.053	84.00	5.52	89.52
Fixed sash	SF	0.040	44.75	4.14	48.89
Double hung	SF	0.044	84.00	4.60	88.60
Industrial windows					
Horizontally pivoted sash	SF	0.053	78.00	5.52	83.52
Fixed sash	SF	0.044	56.00	4.60	60.60
Security sash					
Operable	SF	0.053	89.00	5.52	94.52
Fixed	SF	0.044	79.00	4.60	83.60
Picture window	SF	0.044	38.25	4.60	42.85
Projecting sash					
Minimum	SF	0.050	66.00	5.17	71.17
Maximum	SF	0.050	81.00	5.17	86.17
Mullions	LF	0.040	17.50	4.14	21.64
08520.01 WOOD WINDOWS					
WOOD WINDOWS					
Double hung					
24" x 36"					
Minimum	EA	0.800	250.00	82.00	332.00
Average	EA	1.000	370.00	100.00	470.00
Maximum	EA	1.333	490.00	140.00	630.00
24" x 48"					
Minimum	EA	0.800	300.00	82.00	382.00
Average	EA	1.000	440.00	100.00	540.00
Maximum	EA	1.333	620.00	140.00	760.00
30" x 48"					
Minimum	EA	0.889	320.00	91.00	411.00
Average	EA	1.143	450.00	120.00	570.00
Maximum	EA	1.600	640.00	160.00	800.00
30" x 60"					
Minimum	EA	0.889	350.00	91.00	441.00
Average	EA	1.143	560.00	120.00	680.00
Maximum	EA	1.600	680.00	160.00	840.00

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08520.01 WOOD WINDOWS (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Casement					
1 leaf, 22" x 38" high					
Minimum	EA	0.800	380.00	82.00	462.00
Average	EA	1.000	460.00	100.00	560.00
Maximum	EA	1.333	540.00	140.00	680.00
2 leaf, 50" x 50" high					
Minimum	EA	1.000	1,020.00	100.00	1,120.00
Average	EA	1.333	1,330.00	140.00	1,470.00
Maximum	EA	2.000	1,520.00	200.00	1,720.00
3 leaf, 71" x 62" high					
Minimum	EA	1.000	1,460.00	100.00	1,560.00
Average	EA	1.333	1,490.00	140.00	1,630.00
Maximum	EA	2.000	1,780.00	200.00	1,980.00
4 leaf, 95" x 75" high					
Minimum	EA	1.143	1,940.00	120.00	2,060.00
Average	EA	1.600	2,210.00	160.00	2,370.00
Maximum	EA	2.667	2,820.00	270.00	3,090.00
5 leaf, 119" x 75" high					
Minimum	EA	1.143	2,510.00	120.00	2,630.00
Average	EA	1.600	2,700.00	160.00	2,860.00
Maximum	EA	2.667	3,460.00	270.00	3,730.00
Picture window, fixed glass, 54" x 54" high					
Minimum	EA	1.000	520.00	100.00	620.00
Average	EA	1.143	580.00	120.00	700.00
Maximum	EA	1.333	1,030.00	140.00	1,170.00
68" x 55" high					
Minimum	EA	1.000	930.00	100.00	1,030.00
Average	EA	1.143	1,070.00	120.00	1,190.00
Maximum	EA	1.333	1,400.00	140.00	1,540.00
Sliding, 40" x 31" high					
Minimum	EA	0.800	310.00	82.00	392.00
Average	EA	1.000	470.00	100.00	570.00
Maximum	EA	1.333	560.00	140.00	700.00
52" x 39" high					
Minimum	EA	1.000	380.00	100.00	480.00
Average	EA	1.143	570.00	120.00	690.00
Maximum	EA	1.333	610.00	140.00	750.00
64" x 72" high					
Minimum	EA	1.000	600.00	100.00	700.00
Average	EA	1.333	950.00	140.00	1,090.00
Maximum	EA	1.600	1,050.00	160.00	1,210.00
Awning windows					
34" x 21" high					
Minimum	EA	0.800	310.00	82.00	392.00
Average	EA	1.000	360.00	100.00	460.00
Maximum	EA	1.333	420.00	140.00	560.00
40" x 21" high					
Minimum	EA	0.889	360.00	91.00	451.00
Average	EA	1.143	410.00	120.00	530.00
Maximum	EA	1.600	450.00	160.00	610.00
48" x 27" high					
Minimum	EA	0.889	390.00	91.00	481.00
Average	EA	1.143	460.00	120.00	580.00
Maximum	EA	1.600	540.00	160.00	700.00
60" x 36" high					
Minimum	EA	1.000	400.00	100.00	500.00
Average	EA	1.333	720.00	140.00	860.00
Maximum	EA	1.600	810.00	160.00	970.00
Window frame, milled					
Minimum	LF	0.160	5.73	16.25	21.98
Average	LF	0.200	6.39	20.50	26.89
Maximum	LF	0.267	9.61	27.25	36.86

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	Unit	Man-Hrs	Material	Labor	Total
08620.01 PLASTIC SKYLIGHTS					
PLASTIC SKYLIGHTS					
Single thickness, not including mounting curb					
2' x 4'	EA	1.000	430.00	98.00	528.00
4' x 4'	EA	1.333	580.00	130.00	710.00
5' x 5'	EA	2.000	770.00	200.00	970.00
6' x 8'	EA	2.667	1,630.00	260.00	1,890.00
Double thickness, not including mounting curb					
2' x 4'	EA	1.000	560.00	98.00	658.00
4' x 4'	EA	1.333	710.00	130.00	840.00
5' x 5'	EA	2.000	1,040.00	200.00	1,240.00
6' x 8'	EA	2.667	1,820.00	260.00	2,080.00
Metal framed skylights					
Translucent panels, 2-1/2" thick	SF	0.080	46.00	7.81	53.81
Continuous vaults, 8' wide					
Single glazed	SF	0.100	62.00	9.76	71.76
Double glazed	SF	0.114	100.00	11.25	111.25
08621.01 SOLAR SKYLIGHTS					
SOLAR SKYLIGHTS					
Tubular solar skylight, basic kit					
Minimum	EA	2.667	390.00	270.00	660.00
Average	EA	4.000	450.00	410.00	860.00
Maximum	EA	8.000	500.00	820.00	1,320.00
Tubular solar skylight dome, 10" Diameter					
Minimum	EA	0.800	81.00	82.00	163.00
Average	EA	1.000	88.00	100.00	188.00
Maximum	EA	1.333	94.00	140.00	234.00
14" Diameter					
Minimum	EA	0.800	94.00	82.00	176.00
Average	EA	1.000	100.00	100.00	200.00
Maximum	EA	1.333	110.00	140.00	250.00
Straight extension tube, 10" Diameter x 12" long					
Minimum	EA	0.667	54.00	68.00	122.00
Average	EA	0.800	63.00	82.00	145.00
Maximum	EA	1.000	69.00	100.00	169.00
24" long					
Minimum	EA	0.667	63.00	68.00	131.00
Average	EA	0.800	69.00	82.00	151.00
Maximum	EA	1.000	75.00	100.00	175.00
36" long					
Minimum	EA	0.667	93.00	68.00	161.00
Average	EA	0.800	100.00	82.00	182.00
Maximum	EA	1.000	110.00	100.00	210.00
48" long					
Minimum	EA	0.800	110.00	82.00	192.00
Average	EA	1.000	120.00	100.00	220.00
Maximum	EA	1.333	120.00	140.00	260.00
14" Diameter x 12" long					
Minimum	EA	0.667	69.00	68.00	137.00
Average	EA	0.800	75.00	82.00	157.00
Maximum	EA	1.000	81.00	100.00	181.00
24" long					
Minimum	EA	0.667	88.00	68.00	156.00
Average	EA	0.800	100.00	82.00	182.00
Maximum	EA	1.000	110.00	100.00	210.00
36" long					
Minimum	EA	0.667	120.00	68.00	188.00
Average	EA	0.800	130.00	82.00	212.00
Maximum	EA	1.000	140.00	100.00	240.00
90 Degree extension tubes, 10" Diameter					
Minimum	EA	0.444	63.00	45.50	108.50
Average	EA	0.500	73.00	51.00	124.00
Maximum	EA	0.571	81.00	58.00	139.00

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	Unit	Man-Hrs	Material	Labor	Total
08621.01 SOLAR SKYLIGHTS (Cont.)					
90 Degree extension tubes					
14" Diameter					
Minimum	EA	0.444	78.00	45.50	123.50
Average	EA	0.500	86.00	51.00	137.00
Maximum	EA	0.571	94.00	58.00	152.00
Bottom tube adaptor, 10" Diameter					
Minimum	EA	0.444	66.00	45.50	111.50
Average	EA	0.500	73.00	51.00	124.00
Maximum	EA	0.571	78.00	58.00	136.00
14" Diameter					
Minimum	EA	0.444	81.00	45.50	126.50
Average	EA	0.500	88.00	51.00	139.00
Maximum	EA	0.571	94.00	58.00	152.00
Top tube adaptor, 10" Diameter					
Minimum	EA	0.444	66.00	45.50	111.50
Average	EA	0.500	73.00	51.00	124.00
Maximum	EA	0.571	78.00	58.00	136.00
14" Diameter					
Minimum	EA	0.444	81.00	45.50	126.50
Average	EA	0.500	88.00	51.00	139.00
Maximum	EA	0.571	94.00	58.00	152.00
Tube flashing					
Minimum	EA	0.667	88.00	68.00	156.00
Average	EA	0.800	100.00	82.00	182.00
Maximum	EA	1.000	110.00	100.00	210.00
Daylight dimmer switch					
Minimum	EA	0.444	120.00	45.50	165.50
Average	EA	0.500	130.00	51.00	181.00
Maximum	EA	0.571	140.00	58.00	198.00
Dimmer					
Minimum	EA	0.444	260.00	45.50	305.50
Average	EA	0.500	290.00	51.00	341.00
Maximum	EA	0.571	310.00	58.00	368.00
08630.11 METAL-FRAMED SKYLIGHTS					
METAL-FRAMED SKYLIGHTS					
Metal Framed, 2-1/4" Thick, Translucent, <5,000 SF	SF	0.400	31.25	39.00	70.25
>5,000 SF	SF	0.444	28.25	43.50	71.75
Continous Vaulted - Semi-Circular					
Skylight, 2-1/4" Thick, to 8', Single Glazed	SF	0.400	36.75	39.00	75.75
Double Glazed	SF	0.400	45.00	39.00	84.00
Skylight, 2-1/4" Thick, to 9', Single Glazed	SF	0.444	63.00	43.50	106.50
Double Glazed	SF	0.444	72.00	43.50	115.50
Pyramid Type, Self Supporting, Clear Opening					
Minimum	SF	0.348	50.00	34.00	84.00
Average	SF	0.400	56.00	39.00	95.00
Maximum	SF	0.533	73.00	52.00	125.00
Grid Type, 4' x 10' Modlule					
Minimum	SF	0.320	30.75	31.25	62.00
Maximum	SF	0.533	57.00	52.00	109.00
Preformed Acrylic Skylight					
Minimum	SF	0.320	24.50	31.25	55.75
Maximum	SF	0.533	40.75	52.00	92.75
08710.01 HINGES					
HINGES					
Hinges, material only					
3 x 3 butts, steel, interior, plain bearing	PAIR				21.00
4 x 4 butts, steel, standard	PAIR				31.00
5 x 4-1/2 butts, bronze/s. steel, heavy duty	PAIR				80.00
Pivot hinges					
Top pivot	EA				50.00
Intermediate pivot	EA				53.00
Bottom pivot	EA				100.00

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	Unit	Man-Hrs	Material	Labor	Total
08710.01 HINGES (Cont.)					
Hinges, material only					
BHMA specifications					
3-1/2 x 3-1/2, full mortise butts					
Plain bearing	PAIR				25.00
Ball bearing	PAIR				30.25
Half surface butts	PAIR				43.00
4 x 4					
Full mortise butts, plain bearing, standard duty	PAIR				27.25
Full mortise butts, ball bearing	PAIR				33.00
Half surface butts					
Standard duty	PAIR				49.75
Ball bearing	PAIR				49.75
4-1/2 x 4-1/2					
Full mortise butts, plain bearing	PAIR				36.25
Ball bearing, heavy duty	PAIR				74.00
Half mortise and half surface butts					
Plain bearing	PAIR				43.00
Full surface and half surface butts					
Standard duty	PAIR				73.00
Heavy duty	PAIR				130.00
Full mortise and full slide-in butts, ball bearing	PAIR				33.50
Half mortise butts, ball bearing					
Standard duty	PAIR				150.00
Heavy duty	PAIR				170.00
5 x 5, ball bearing					
Full mortise butts	PAIR				70.00
Half mortise, full & half surface butts	PAIR				150.00
Full mortise, full surface and half surface butts	PAIR				200.00
4 x 4					
Full mortise butts, plain bearing, standard duty	PAIR				16.75
5 x 4-1/2					
Full mortise butts, ball bearing, heavy duty	PAIR				78.00
Aluminum, full surface, geared continuous					
Minimum	EA				110.00
Average	EA				160.00
Maximum	EA				220.00
08710.02 LOCKSETS					
LOCKSETS					
Latchset, heavy duty					
Cylindrical	EA	0.500	190.00	51.00	241.00
Mortise	EA	0.800	200.00	82.00	282.00
Lockset, heavy duty					
Cylindrical	EA	0.500	310.00	51.00	361.00
Mortise	EA	0.800	350.00	82.00	432.00
Mortise locks and latchsets, chrome					
Latchset passage or closet latch	EA	0.667	340.00	68.00	408.00
Privacy (bath or bedroom)	EA	0.667	360.00	68.00	428.00
Entry lockset	EA	0.667	440.00	68.00	508.00
Classroom lockset (outside key operated)	EA	0.667	440.00	68.00	508.00
Storeroom lock	EA	0.667	440.00	68.00	508.00
Front door lock	EA	0.667	440.00	68.00	508.00
Dormitory or exit lock	EA	0.667	440.00	68.00	508.00
Preassembled locks and latches, brass					
Latchset, passage or closet latch	EA	0.667	63.00	68.00	131.00
Lockset					
Privacy (bath or bathroom)	EA	0.667	240.00	68.00	308.00
Entry lock	EA	0.667	350.00	68.00	418.00
Classroom lock (outside key operated)	EA	0.667	350.00	68.00	418.00
Storeroom lock	EA	0.667	380.00	68.00	448.00
Bored locks and latches, satin chrome plated					
Latchset passage or closet latch	EA	0.667	160.00	68.00	228.00
Lockset					
Privacy (bath or bedroom)	EA	0.667	250.00	68.00	318.00
Entry lock	EA	0.667	280.00	68.00	348.00

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	Unit	Man-Hrs	Material	Labor	Total
08710.02 LOCKSETS (Cont.)					
Lockset					
Classroom lock	EA	0.667	280.00	68.00	348.00
Corridor lock	EA	0.667	280.00	68.00	348.00
Miscellaneous locks					
Exit lock with alarm, single door	EA	3.200	550.00	330.00	880.00
Electric strike					
Rim mounted wrought steel	EA	2.000	590.00	200.00	790.00
Mortised, wrought steel with bronze plating	EA	3.200	230.00	330.00	560.00
Dead bolt					
Bored, wrought brass, keyed both sides	EA	1.333	130.00	140.00	270.00
Mortised, cast brass	EA	1.333	340.00	140.00	480.00
Lockset, cipher, mechanical	EA	0.800	710.00	82.00	792.00
Cabinet drawer/door lock					
Minimum	EA				9.90
Average	EA				18.75
Maximum	EA				38.50
Electric strike, Stainless, for mortise or cylindrical locks	EA	0.571	620.00	58.00	678.00
Meeting astragals, split stile, 5/8" brush, face mount, alum.	EA	0.500	22.00	51.00	73.00
Door sweep, 2-1/2" brush, aluminum	EA	0.500	33.00	51.00	84.00
08710.03 CLOSERS					
CLOSERS					
Door closers					
Surface mounted, traditional type, parallel arm					
Standard	EA	1.000	250.00	100.00	350.00
Heavy duty	EA	1.000	290.00	100.00	390.00
Modern type, parallel arm, standard duty	EA	1.000	290.00	100.00	390.00
For delayed action, add	EA	0.533	180.00	55.00	235.00
For Advanced Variable Backcheck (AVB), average, add	EA	0.533	440.00	55.00	495.00
Overhead, concealed, pivot hung, single acting					
Interior	EA	1.000	460.00	100.00	560.00
Exterior	EA	1.000	680.00	100.00	780.00
Floor concealed, single acting, offset, pivoted					
Interior	EA	2.667	740.00	270.00	1,010.00
Exterior	EA	2.667	950.00	270.00	1,220.00
Panic/Exit Devices					
Push bar, surface, rated, narrow stile, anodized alum.	EA	1.000	1,980.00	100.00	2,080.00
Satin finish	EA	1.000	1,870.00	100.00	1,970.00
Chrome	EA	1.000	2,420.00	100.00	2,520.00
Lever trim, cylinder, anodized, add	EA	0.533	440.00	55.00	495.00
Night latch pull trim, add	EA	0.533	450.00	55.00	505.00
7' Steel mullion, removable, for panic rim	EA	0.533	570.00	55.00	625.00
08710.04 DOOR TRIM					
DOOR TRIM					
Door bumper, bronze, wall type	EA	0.160	6.44	16.25	22.69
Aluminum	EA	0.160	5.50	16.25	21.75
Wall type, 4" dia. with convex rubber pad, aluminum	EA	0.160	12.00	16.25	28.25
Floor type					
Aluminum	EA	0.160	7.84	16.25	24.09
Brass	EA	0.160	9.45	16.25	25.70
Door holders					
Wall type, bronze	EA	0.160	45.50	16.25	61.75
Overhead	EA	0.400	38.25	41.00	79.25
Floor type	EA	0.400	38.25	41.00	79.25
Plunger type	EA	0.400	37.00	41.00	78.00
Wall type, aluminum	EA	0.400	35.75	41.00	76.75
Surface bolt	EA	0.160	32.00	16.25	48.25
Panic device					
Rim type with thumb piece	EA	2.000	660.00	200.00	860.00
Mortise	EA	2.000	830.00	200.00	1,030.00
Vertical rod	EA	2.000	1,250.00	200.00	1,450.00
Labeled, rim type	EA	2.000	860.00	200.00	1,060.00
Mortise	EA	2.000	1,130.00	200.00	1,330.00
Vertical rod	EA	2.000	1,200.00	200.00	1,400.00

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	Unit	Man-Hrs	Material	Labor	Total
08710.04 DOOR TRIM (Cont.)					
Silencers, rubber type	EA	0.016	0.55	1.63	2.18
Dust proof strike with plate, brass	EA	0.267	19.00	27.25	46.25
Flush bolt, lever extension, brass, rated	EA	0.160	34.75	16.25	51.00
Surface bolt with strike, brass, 6" long	EA	0.160	26.25	16.25	42.50
Door coordinator, labeled, brass, satin chrome	EA	0.571	130.00	58.00	188.00
Door plates					
Kick plate, aluminum, 3 beveled edges					
10" x 28"	EA	0.400	31.00	41.00	72.00
10" x 30"	EA	0.400	34.00	41.00	75.00
10" x 34"	EA	0.400	37.25	41.00	78.25
10" x 38"	EA	0.400	40.25	41.00	81.25
Push plate, 4" x 16"					
Aluminum	EA	0.160	14.00	16.25	30.25
Bronze	EA	0.160	44.50	16.25	60.75
Stainless steel	EA	0.160	35.75	16.25	52.00
Armor plate, 40" x 34"	EA	0.320	98.00	32.75	130.75
Pull handle, 4" x 16"					
Aluminum	EA	0.160	70.00	16.25	86.25
Bronze	EA	0.160	140.00	16.25	156.25
Stainless steel	EA	0.160	100.00	16.25	116.25
Hasp assembly					
3"	EA	0.133	4.68	13.75	18.43
4-1/2"	EA	0.178	5.86	18.25	24.11
6"	EA	0.229	9.32	23.25	32.57
Electro-magnetic door holder					
Wall mounted	EA	2.667	260.00	270.00	530.00
Floor mounted	EA	2.667	460.00	270.00	730.00
Smoke detector door holder					
Photoelectric type	EA	2.667	300.00	270.00	570.00
Ionization type	EA	2.667	300.00	270.00	570.00
Pneumatic operators, activated by rubber mats					
Swing					
Single	EA	6.667	5,500.00	680.00	6,180.00
Double	EA	10.000	8,700.00	1,020.00	9,720.00
Sliding					
Single	EA	6.667	6,080.00	680.00	6,760.00
Double	EA	10.000	8,820.00	1,020.00	9,840.00
08710.06 WEATHERSTRIPPING					
WEATHERSTRIPPING					
Weatherstrip, head and jamb, metal strip, neoprene bulb					
Standard duty	LF	0.044	5.27	4.54	9.81
Heavy duty	LF	0.050	5.86	5.11	10.97
Spring type					
Metal doors	EA	2.000	58.00	200.00	258.00
Wood doors	EA	2.667	58.00	270.00	328.00
Sponge type with adhesive backing	EA	0.800	55.00	82.00	137.00
Astragal					
1-3/4" x 13 ga., aluminum	LF	0.067	7.20	6.81	14.01
1-3/8" x 5/8", oak	LF	0.053	5.86	5.45	11.31
Thresholds					
Bronze	LF	0.200	57.00	20.50	77.50
Aluminum					
Plain	LF	0.200	26.25	20.50	46.75
Vinyl insert	LF	0.200	26.75	20.50	47.25
Aluminum with grit	LF	0.200	25.50	20.50	46.00
Steel					
Plain	LF	0.200	25.25	20.50	45.75
Interlocking	LF	0.667	33.75	68.00	101.75
08810.01 GLASS GLAZING					
GLASS GLAZING					
Sheet glass, 1/8" thick	SF	0.044	9.04	4.60	13.64
Plate glass, bronze or grey, 1/4" thick	SF	0.073	13.25	7.52	20.77
Clear	SF	0.073	10.25	7.52	17.77
Polished	SF	0.073	12.25	7.52	19.77

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08810.01 GLASS GLAZING (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Plexiglass					
1/8" thick	SF	0.073	5.82	7.52	13.34
1/4" thick	SF	0.044	10.50	4.60	15.10
Float glass, clear					
3/16" thick	SF	0.067	7.04	6.90	13.94
1/4" thick	SF	0.073	7.17	7.52	14.69
5/16" thick	SF	0.080	13.50	8.28	21.78
3/8" thick	SF	0.100	14.50	10.25	24.75
1/2" thick	SF	0.133	24.25	13.75	38.00
5/8" thick	SF	0.160	32.00	16.50	48.50
3/4" thick	SF	0.200	35.00	20.75	55.75
1" thick	SF	0.267	62.00	27.50	89.50
Tinted glass, polished plate, twin ground					
3/16" thick	SF	0.067	9.69	6.90	16.59
1/4" thick	SF	0.073	9.69	7.52	17.21
3/8" thick	SF	0.100	15.50	10.25	25.75
1/2" thick	SF	0.133	25.25	13.75	39.00
Total, full vision, all glass window system					
To 10' high					
Minimum	SF	0.200	65.00	20.75	85.75
Average	SF	0.200	85.00	20.75	105.75
Maximum	SF	0.200	100.00	20.75	120.75
10' to 20' high					
Minimum	SF	0.200	78.00	20.75	98.75
Average	SF	0.200	95.00	20.75	115.75
Maximum	SF	0.200	120.00	20.75	140.75
Insulated glass, bronze or gray					
1/2" thick	SF	0.133	19.75	13.75	33.50
1" thick	SF	0.200	23.50	20.75	44.25
Spandrel, polished, 1 side, 1/4" thick	SF	0.073	15.75	7.52	23.27
Tempered glass (safety)					
Clear sheet glass					
1/8" thick	SF	0.044	11.00	4.60	15.60
3/16" thick	SF	0.062	13.25	6.36	19.61
Clear float glass					
1/4" thick	SF	0.067	11.25	6.90	18.15
5/16" thick	SF	0.080	20.50	8.28	28.78
3/8" thick	SF	0.100	25.00	10.25	35.25
1/2" thick	SF	0.133	34.00	13.75	47.75
5/8" thick	SF	0.160	38.50	16.50	55.00
3/4" thick	SF	0.267	47.50	27.50	75.00
Tinted float glass					
3/16" thick	SF	0.062	13.75	6.36	20.11
1/4" thick	SF	0.067	15.00	6.90	21.90
3/8" thick	SF	0.100	27.25	10.25	37.50
1/2" thick	SF	0.133	36.25	13.75	50.00
Laminated glass					
Float safety glass with polyvinyl plastic layer					
1/4", sheet or float					
Two lites, 1/8" thick, clear glass	SF	0.067	14.50	6.90	21.40
1/2" thick, float glass					
Two lites, 1/4" thick, clear glass	SF	0.133	22.00	13.75	35.75
Tinted glass	SF	0.133	25.75	13.75	39.50
Insulating glass, two lites, clear float glass					
1/2" thick	SF	0.133	14.00	13.75	27.75
5/8" thick	SF	0.160	16.25	16.50	32.75
3/4" thick	SF	0.200	17.75	20.75	38.50
7/8" thick	SF	0.229	18.75	23.75	42.50
1" thick	SF	0.267	25.00	27.50	52.50
Glass seal edge					
3/8" thick	SF	0.133	11.75	13.75	25.50
Tinted glass					
1/2" thick	SF	0.133	29.00	13.75	42.75
1" thick	SF	0.267	31.00	27.50	58.50

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	Unit	Man-Hrs	Material	Labor	Total
08810.01 GLASS GLAZING (Cont.)					
Insulating glass					
Tempered, clear					
1" thick	SF	0.267	47.25	27.50	74.75
Wire reinforced	SF	0.267	60.00	27.50	87.50
Plate mirror glass					
1/4" thick					
15 sf	SF	0.080	15.25	8.28	23.53
Over 15 sf	SF	0.073	14.00	7.52	21.52
Door type, 1/4" thick	SF	0.080	16.00	8.28	24.28
Transparent, one-way vision, 1/4" thick	SF	0.080	26.25	8.28	34.53
Sheet mirror glass					
3/16" thick	SF	0.080	10.75	8.28	19.03
1/4" thick	SF	0.067	11.50	6.90	18.40
Wall tiles, 12" x 12"					
Clear glass	SF	0.044	3.69	4.60	8.29
Veined glass	SF	0.044	4.68	4.60	9.28
Wire glass, 1/4" thick					
Clear	SF	0.267	22.00	27.50	49.50
Hammered	SF	0.267	22.00	27.50	49.50
Obscure	SF	0.267	25.75	27.50	53.25
Bullet resistant, plate, with inter-leaved vinyl					
1-3/16" thick					
To 15 sf	SF	0.400	130.00	41.50	171.50
Over 15 sf	SF	0.400	140.00	41.50	181.50
2" thick					
To 15 sf	SF	0.667	170.00	69.00	239.00
Over 15 sf	SF	0.667	170.00	69.00	239.00
Glazing accessories					
Neoprene glazing gaskets					
1/4" glass	LF	0.032	0.58	3.31	3.89
3/8" glass	LF	0.033	0.64	3.45	4.09
1/2" glass	LF	0.035	0.67	3.60	4.27
3/4" glass	LF	0.036	0.96	3.76	4.72
1" glass	LF	0.040	1.12	4.14	5.26
Mullion section					
1/4" glass	LF	0.016	0.71	1.65	2.36
3/8" glass	LF	0.020	0.90	2.07	2.97
1/2" glass	LF	0.023	1.29	2.36	3.65
3/4" glass	LF	0.027	1.93	2.76	4.69
1" glass	LF	0.032	2.57	3.31	5.88
Molded corners	EA	0.533	2.76	55.00	57.76
08910.01 VENTS AND WALL LOUVERS					
VENTS AND WALL LOUVERS					
Block vent, 8"x16"x4" alum., w/screen, mill finish	EA	0.267	210.00	27.50	237.50
Standard	EA	0.250	120.00	25.75	145.75
Vents w/screen, 4" deep, 8" wide, 5" high					
Modular	EA	0.250	140.00	25.75	165.75
Grilles and louvers					
Aluminum gable louvers	SF	0.133	25.00	13.75	38.75
Vent screen aluminum, 4" wide, continuous	LF	0.027	7.27	2.76	10.03
Fixed type louvers					
4 through 10 sf	SF	0.133	42.25	13.75	56.00
Over 10 sf	SF	0.100	50.00	10.25	60.25
Movable type louvers					
4 through 10 sf	SF	0.133	50.00	13.75	63.75
Over 10 sf	SF	0.100	55.00	10.25	65.25
Aluminum louvers					
Louvers, aluminum, anodized, fixed blade					
Horizontal line	SF	0.200	74.00	20.75	94.75
Vertical line	SF	0.200	74.00	20.75	94.75
Wall louver, aluminum mill finish					
Under, 2 sf	SF	0.100	56.00	10.25	66.25
2 to 4 sf	SF	0.089	49.00	9.20	58.20
5 to 10 sf	SF	0.089	46.00	9.20	55.20

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	Unit	Man-Hrs	Material	Labor	Total
08910.01 VENTS AND WALL LOUVERS (Cont.)					
Wall louver					
Galvanized steel					
Under 2 sf	SF	0.100	53.00	10.25	63.25
2 to 4 sf	SF	0.089	36.50	9.20	45.70
5 to 10 sf	SF	0.089	34.25	9.20	43.45
Residential use, fixed type, with screen					
8" x 8"	EA	0.400	32.00	41.50	73.50
12" x 12"	EA	0.400	35.25	41.50	76.75
12" x 18"	EA	0.400	42.25	41.50	83.75
14" x 24"	EA	0.400	61.00	41.50	102.50
18" x 24"	EA	0.400	68.00	41.50	109.50
30" x 24"	EA	0.444	93.00	46.00	139.00
08912.61 DOOR LOUVERS					
DOOR LOUVERS					
Fixed, 1" thick, enameled steel					
8"x8"	EA	0.100	72.00	10.25	82.25
12"x8"	EA	0.100	83.00	10.25	93.25
12"x12"	EA	0.114	93.00	11.75	104.75
16"x12"	EA	0.123	130.00	12.50	142.50
18"x12"	EA	0.200	130.00	20.50	150.50
20"x8"	EA	0.114	150.00	11.75	161.75
20"x12"	EA	0.229	170.00	23.25	193.25
20"x16"	EA	0.267	170.00	27.25	197.25
20"x20"	EA	0.320	180.00	32.75	212.75
24"x12"	EA	0.267	150.00	27.25	177.25
24"x16"	EA	0.286	160.00	29.25	189.25
24"x18"	EA	0.308	180.00	31.50	211.50
24"x20"	EA	0.333	190.00	34.00	224.00
24"x24"	EA	0.364	190.00	37.25	227.25
26"x26"	EA	0.500	230.00	51.00	281.00

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09211.61 METAL STUDS

	Unit	Man-Hrs	Material	Labor	Total
METAL STUDS					
Studs, non load bearing, galvanized					
1-5/8", 20 ga.					
12" o.c.	SF	0.017	0.91	1.70	2.61
16" o.c.	SF	0.013	0.74	1.36	2.10
25 ga.					
12" o.c.	SF	0.017	0.83	1.70	2.53
16" o.c.	SF	0.013	0.68	1.36	2.04
2-1/2", 20 ga.					
12" o.c.	SF	0.017	1.02	1.70	2.72
16" o.c.	SF	0.013	0.77	1.36	2.13
25 ga.					
12" o.c.	SF	0.017	0.93	1.70	2.63
16" o.c.	SF	0.013	0.70	1.36	2.06
24" o.c.	SF	0.011	0.46	1.13	1.59
3-5/8", 20 ga.					
12" o.c.	SF	0.020	1.89	2.04	3.93
16" o.c.	SF	0.016	1.43	1.63	3.06
24" o.c.	SF	0.013	0.94	1.36	2.30
25 ga.					
12" o.c.	SF	0.020	0.98	2.04	3.02
16" o.c.	SF	0.016	0.74	1.63	2.37
24" o.c.	SF	0.013	0.49	1.36	1.85
4", 20 ga.					
12" o.c.	SF	0.020	1.57	2.04	3.61
16" o.c.	SF	0.016	1.18	1.63	2.81
24" o.c.	SF	0.013	0.78	1.36	2.14
25 ga.					
12" o.c.	SF	0.020	1.21	2.04	3.25
16" o.c.	SF	0.016	0.91	1.63	2.54
24" o.c.	SF	0.013	0.60	1.36	1.96
6", 20 ga.					
12" o.c.	SF	0.025	1.69	2.55	4.24
16" o.c.	SF	0.020	1.26	2.04	3.30
24" o.c.	SF	0.017	0.84	1.70	2.54
25 ga.					
12" o.c.	SF	0.025	1.30	2.55	3.85
16" o.c.	SF	0.020	0.98	2.04	3.02
24" o.c.	SF	0.017	0.65	1.70	2.35
Tracks, 20 ga.					
1-5/8"	LF	0.012	0.74	1.25	1.99
2-1/2"	LF	0.012	0.77	1.25	2.02
3-5/8"	LF	0.012	0.89	1.25	2.14
4"	LF	0.012	1.20	1.25	2.45
6"	LF	0.013	1.26	1.29	2.55
25 ga.					
1-5/8"	LF	0.012	0.68	1.25	1.93
2-1/2"	LF	0.012	0.70	1.25	1.95
3-5/8"	LF	0.012	0.74	1.25	1.99
4"	LF	0.012	0.91	1.25	2.16
6"	LF	0.013	0.98	1.29	2.27
Load bearing studs, galvanized					
3-5/8", 16 ga.					
12" o.c.	SF	0.040	2.05	4.09	6.14
16" o.c.	SF	0.036	1.63	3.63	5.26
18 ga.					
12" o.c.	SF	0.040	1.54	4.09	5.63
16" o.c.	SF	0.036	1.18	3.63	4.81
4", 16 ga.					
12" o.c.	SF	0.040	2.19	4.09	6.28
16" o.c.	SF	0.036	1.70	3.63	5.33
6", 16 ga.					
12" o.c.	SF	0.040	2.76	4.09	6.85
16" o.c.	SF	0.036	2.13	3.63	5.76

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	Unit	Man-Hrs	Material	Labor	Total
09211.61 METAL STUDS (Cont.)					
Furring					
On beams and columns					
7/8" channel	LF	0.053	0.65	5.45	6.10
1-1/2" channel	LF	0.062	0.77	6.29	7.06
On ceilings					
3/4" furring channels					
12" o.c.	SF	0.033	0.45	3.40	3.85
16" o.c.	SF	0.032	0.34	3.27	3.61
24" o.c.	SF	0.029	0.22	2.92	3.14
1-1/2" furring channels					
12" o.c.	SF	0.036	0.77	3.71	4.48
16" o.c.	SF	0.033	0.58	3.40	3.98
24" o.c.	SF	0.031	0.38	3.14	3.52
On walls					
3/4" furring channels					
12" o.c.	SF	0.027	0.45	2.72	3.17
16" o.c.	SF	0.025	0.34	2.55	2.89
24" o.c.	SF	0.024	0.22	2.40	2.62
1-1/2" furring channels					
12" o.c.	SF	0.029	0.77	2.92	3.69
16" o.c.	SF	0.027	0.58	2.72	3.30
24" o.c.	SF	0.025	0.38	2.55	2.93
09223.61 GYPSUM LATH					
GYPSUM LATH					
Gypsum lath, 1/2" thick					
Clipped	SY	0.044	5.12	4.54	9.66
Nailed	SY	0.050	5.12	5.11	10.23
09223.62 METAL LATH					
METAL LATH					
Diamond expanded, galvanized					
2.5 lb., on walls					
Nailed	SY	0.100	6.58	10.25	16.83
Wired	SY	0.114	6.58	11.75	18.33
On ceilings					
Nailed	SY	0.114	6.58	11.75	18.33
Wired	SY	0.133	6.58	13.75	20.33
3.4 lb., on walls					
Nailed	SY	0.100	8.94	10.25	19.19
Wired	SY	0.114	8.94	11.75	20.69
On ceilings					
Nailed	SY	0.114	8.94	11.75	20.69
Wired	SY	0.133	8.94	13.75	22.69
Flat rib					
2.75 lb., on walls					
Nailed	SY	0.100	6.22	10.25	16.47
Wired	SY	0.114	8.94	11.75	20.69
On ceilings					
Nailed	SY	0.114	8.94	11.75	20.69
Wired	SY	0.133	8.94	13.75	22.69
3.4 lb., on walls					
Nailed	SY	0.100	8.94	10.25	19.19
Wired	SY	0.114	7.49	11.75	19.24
On ceilings					
Nailed	SY	0.114	7.49	11.75	19.24
Wired	SY	0.133	7.49	13.75	21.24
Stucco lath					
1.8 lb.	SY	0.100	7.73	10.25	17.98
3.6 lb.	SY	0.100	8.68	10.25	18.93
Paper backed					
Minimum	SY	0.080	6.02	8.18	14.20
Maximum	SY	0.114	9.70	11.75	21.45

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	Unit	Man-Hrs	Material	Labor	Total
09223.66 PLASTER ACCESSORIES					
PLASTER ACCESSORIES					
Expansion joint, 3/4", 26 ga., galv.	LF	0.020	1.69	2.04	3.73
Plaster corner beads, 3/4", galvanized	LF	0.023	0.47	2.33	2.80
Casing bead, expanded flange, galvanized	LF	0.020	0.64	2.04	2.68
Expanded wing, 1-1/4" wide, galvanized	LF	0.020	0.75	2.04	2.79
Joint clips for lath	EA	0.004	0.20	0.40	0.60
Metal base, galvanized, 2-1/2" high	LF	0.027	0.86	2.72	3.58
Stud clips for gypsum lath	EA	0.004	0.20	0.40	0.60
Tie wire galvanized, 18 ga., 25 lb. hank	EA				54.00
Sound deadening board, 1/4"	SF	0.013	0.36	1.36	1.72
09230.01 PLASTER					
PLASTER					
Gypsum plaster, trowel finish, 2 coats					
Ceilings	SY	0.250	6.70	23.75	30.45
Walls	SY	0.235	6.70	22.50	29.20
3 coats					
Ceilings	SY	0.348	9.30	33.25	42.55
Walls	SY	0.308	9.30	29.25	38.55
Vermiculite plaster					
2 coats					
Ceilings	SY	0.381	5.59	36.25	41.84
Walls	SY	0.348	5.59	33.25	38.84
3 coats					
Ceilings	SY	0.471	8.79	44.75	53.54
Walls	SY	0.421	8.79	40.25	49.04
Keenes cement plaster					
2 coats					
Ceilings	SY	0.308	3.34	29.25	32.59
Walls	SY	0.267	3.34	25.50	28.84
3 coats					
Ceilings	SY	0.348	3.12	33.25	36.37
Walls	SY	0.308	3.12	29.25	32.37
On columns, add to installation, 50%					
Chases, fascia, and soffits, add to installation, 50%					
Beams, add to installation, 50%					
09240.01 PORTLAND CEMENT PLASTER					
PORTLAND CEMENT PLASTER					
Stucco, portland, gray, 3 coat, 1" thick					
Sand finish	SY	0.348	12.25	33.25	45.50
Trowel finish	SY	0.364	12.25	34.75	47.00
White cement					
Sand finish	SY	0.364	14.00	34.75	48.75
Trowel finish	SY	0.400	14.00	38.00	52.00
Scratch coat					
For ceramic tile	SY	0.080	4.45	7.62	12.07
For quarry tile	SY	0.080	4.45	7.62	12.07
Portland cement plaster					
2 coats, 1/2"	SY	0.160	8.84	15.25	24.09
3 coats, 7/8"	SY	0.200	10.50	19.00	29.50
09290.01 GYPSUM BOARD					
GYPSUM BOARD					
Vinyl faced, fastened to metal studs					
1/2" thick	SF	0.010	1.24	1.02	2.26
5/8" thick	SF	0.010	1.18	1.02	2.20
Standard drywall, 3/8" thick					
Nailed or screwed to					
Wood or metal framed ceiling	SF	0.008	0.46	0.81	1.27
Columns and beams	SF	0.018	0.46	1.81	2.27
Walls	SF	0.007	0.46	0.74	1.20
1/2" thick					
Nailed or screwed to					
Wood or metal framed ceiling	SF	0.008	0.43	0.81	1.24
Columns and beams	SF	0.018	0.43	1.81	2.24

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	Unit	Man-Hrs	Material	Labor	Total
09290.01 GYPSUM BOARD (Cont.)					
Nailed or screwed to					
Walls	SF	0.007	0.43	0.74	1.17
5/8" thick					
Nailed or screwed to					
Wood or metal framed ceiling	SF	0.010	0.48	1.02	1.50
Columns and beams	SF	0.022	0.48	2.27	2.75
Walls	SF	0.009	0.48	0.90	1.38
Lightweight drywall, 1/2" thick					
Nailed or screwed to					
Wood or metal framed ceiling	SF	0.008	0.41	0.81	1.22
Columns and beams	SF	0.018	0.41	1.81	2.22
Walls	SF	0.007	0.41	0.74	1.15
5/8" thick					
Nailed or screwed to					
Wood or metal framed ceiling	SF	0.010	0.45	1.02	1.47
Columns and beams	SF	0.022	0.45	2.27	2.72
Walls	SF	0.009	0.45	0.90	1.35
Mold resistant drywall, 1/2" thick					
Nailed or screwed to					
Wood or metal framed ceiling	SF	0.008	0.60	0.81	1.41
Columns and beams	SF	0.018	0.60	1.81	2.41
Walls	SF	0.007	0.60	0.74	1.34
5/8" thick					
Nailed or screwed to					
Wood or metal framed ceiling	SF	0.010	0.65	1.02	1.67
Columns and beams	SF	0.022	0.65	2.27	2.92
Walls	SF	0.009	0.65	0.90	1.55
Blue Board drywall, 1/2" thick					
Nailed or screwed to					
Wood or metal framed ceiling	SF	0.008	0.52	0.81	1.33
Columns and beams	SF	0.018	0.52	1.81	2.33
Walls	SF	0.007	0.52	0.74	1.26
5/8" thick					
Nailed or screwed to					
Wood or metal framed ceiling	SF	0.010	0.57	1.02	1.59
Columns and beams	SF	0.022	0.57	2.27	2.84
Walls	SF	0.009	0.57	0.90	1.47
Soundproof drywall, 1/2" thick					
Nailed or screwed to					
Wood or metal framed ceiling	SF	0.008	1.80	0.81	2.61
Columns and beams	SF	0.018	1.80	1.81	3.61
Walls	SF	0.007	1.80	0.74	2.54
5/8" thick					
Nailed or screwed to					
Wood or metal framed ceiling	SF	0.010	2.00	1.02	3.02
Columns and beams	SF	0.022	2.00	2.27	4.27
Walls	SF	0.009	2.00	0.90	2.90
Fire-resistant drywall, 1/2" thick					
Nailed or screwed to					
Wood or metal framed ceiling	SF	0.008	0.52	0.81	1.33
Columns and beams	SF	0.018	0.52	1.81	2.33
Walls	SF	0.007	0.52	0.74	1.26
5/8" thick					
Nailed or screwed to					
Wood or metal framed ceiling	SF	0.010	0.57	1.02	1.59
Columns and beams	SF	0.022	0.57	2.27	2.84
Walls	SF	0.009	0.57	0.90	1.47
Impact-resistant drywall, 5/8" thick					
Nailed or screwed to					
Wood or metal framed ceiling	SF	0.010	0.94	1.02	1.96
Columns and beams	SF	0.022	0.94	2.27	3.21
Walls	SF	0.009	0.94	0.90	1.84
High-flex drywall, 1/4" thick, nailed or screwed					
Walls	SF	0.009	0.48	0.90	1.38

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	Unit	Man-Hrs	Material	Labor	Total
09290.01 GYPSUM BOARD (Cont.)					
Shaftwall drywall, 1" thick, nailed or screwed					
Walls	SF	0.011	0.89	1.16	2.05
Stretch drywall, 1/2" thick					
Nailed or screwed to					
Wood or metal framed ceiling	SF	0.009	0.34	0.90	1.24
Walls	SF	0.008	0.34	0.81	1.15
Tile backer board, screwed to wall					
1/4" thick	SF	0.032	1.02	3.27	4.29
7/16" thick	SF	0.032	1.14	3.27	4.41
1/2" thick	SF	0.032	0.97	3.27	4.24
5/8" thick	SF	0.032	1.13	3.27	4.40
Casing bead					
Minimum	LF	0.023	0.17	2.33	2.50
Average	LF	0.027	0.18	2.72	2.90
Maximum	LF	0.040	0.23	4.09	4.32
Corner bead					
Minimum	LF	0.023	0.18	2.33	2.51
Average	LF	0.027	0.23	2.72	2.95
Maximum	LF	0.040	0.28	4.09	4.37
Taping and finishing joints					
Level 1	SF	0.005	0.05	0.54	0.59
Level 2	SF	0.006	0.05	0.62	0.67
Level 3	SF	0.007	0.07	0.68	0.75
Level 4	SF	0.008	0.06	0.81	0.87
Level 5 (includes skim coat)	SF	0.008	0.11	0.81	0.92
Add to above for Special Textures					
Orange Peel	SF	0.013	0.40	1.36	1.76
Santa-Fe	SF	0.016	0.57	1.63	2.20
Skip Trowel	SF	0.015	0.51	1.48	1.99
Smooth	SF	0.013	0.40	1.36	1.76
Splatter Knockdown	SF	0.015	0.51	1.48	1.99
Swirl	SF	0.018	0.51	1.81	2.32
Rosebud	SF	0.018	0.51	1.81	2.32
Popcorn	SF	0.015	0.51	1.48	1.99
09301.31 CERAMIC TILE					
CERAMIC TILE					
Glazed wall tile, 4-1/4" x 4-1/4"					
Minimum	SF	0.057	2.57	5.57	8.14
Average	SF	0.067	4.08	6.50	10.58
Maximum	SF	0.080	14.50	7.80	22.30
6" x 6"					
Minimum	SF	0.050	1.74	4.87	6.61
Average	SF	0.057	3.04	5.57	8.61
Maximum	SF	0.067	3.80	6.50	10.30
8" x 8"					
Minimum	SF	0.044	1.87	4.33	6.20
Average	SF	0.050	3.08	4.87	7.95
Maximum	SF	0.057	3.85	5.57	9.42
Base, 4-1/4" high					
Minimum	LF	0.100	4.72	9.75	14.47
Average	LF	0.100	5.48	9.75	15.23
Maximum	LF	0.100	7.25	9.75	17.00
Glazed moldings and trim, 12" x 12"					
Minimum	LF	0.080	2.59	7.80	10.39
Average	LF	0.080	5.14	7.80	12.94
Maximum	LF	0.080	6.92	7.80	14.72
Unglazed floor tile					
Portland cem., cushion edge, face mtd					
1" x 1"	SF	0.073	17.75	7.09	24.84
2" x 2"	SF	0.067	18.75	6.50	25.25
4" x 4"	SF	0.067	17.50	6.50	24.00
6" x 6"	SF	0.057	6.26	5.57	11.83
12" x 12"	SF	0.050	5.51	4.87	10.38
16" x 16"	SF	0.044	4.78	4.33	9.11

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	Unit	Man-Hrs	Material	Labor	Total
09301.31 CERAMIC TILE (Cont.)					
Portland cem., cushion edge, face mtd					
18" x 18"	SF	0.040	4.63	3.90	8.53
Adhesive bed, with white grout					
1" x 1"	SF	0.073	14.75	7.09	21.84
2" x 2"	SF	0.067	15.75	6.50	22.25
4" x 4"	SF	0.067	15.75	6.50	22.25
6" x 6"	SF	0.057	5.22	5.57	10.79
12" x 12"	SF	0.050	4.58	4.87	9.45
16" x 16"	SF	0.044	3.96	4.33	8.29
18" x 18"	SF	0.040	3.85	3.90	7.75
Organic adhesive bed, thin set, back mounted					
1" x 1"	SF	0.073	14.75	7.09	21.84
2" x 2"	SF	0.067	17.25	6.50	23.75
For group 2 colors, add to material, 10%					
For group 3 colors, add to material, 20%					
For abrasive surface, add to material, 25%					
Porcelain floor tile					
1" x 1"	SF	0.073	10.50	7.09	17.59
2" x 2"	SF	0.070	9.55	6.78	16.33
4" x 4"	SF	0.067	8.87	6.50	15.37
6" x 6"	SF	0.057	3.19	5.57	8.76
12" x 12"	SF	0.050	2.87	4.87	7.74
16" x 16"	SF	0.044	2.28	4.33	6.61
18" x 18"	SF	0.040	2.15	3.90	6.05
Unglazed wall tile					
Organic adhesive, face mounted cushion edge					
1" x 1"					
Minimum	SF	0.067	6.87	6.50	13.37
Average	SF	0.073	9.00	7.09	16.09
Maximum	SF	0.080	13.50	7.80	21.30
2" x 2"					
Minimum	SF	0.062	7.94	6.00	13.94
Average	SF	0.067	9.00	6.50	15.50
Maximum	SF	0.073	14.75	7.09	21.84
Back mounted					
1" x 1"					
Minimum	SF	0.067	6.87	6.50	13.37
Average	SF	0.073	9.00	7.09	16.09
Maximum	SF	0.080	13.50	7.80	21.30
2" x 2"					
Minimum	SF	0.062	7.94	6.00	13.94
Average	SF	0.067	9.00	6.50	15.50
Maximum	SF	0.073	14.75	7.09	21.84
For glazed finish, add to material, 25%					
For glazed mosaic, add to material, 100%					
For metallic colors, add to material, 125%					
For exterior wall use, add to total, 25%					
For exterior soffit, add to total, 25%					
For portland cement bed, add to total, 25%					
For dry set portland cement bed, add to total, 10%					
Conductive floor tile, unglazed square edged					
Portland cement bed					
1 x 1	SF	0.100	7.31	9.75	17.06
1-9/16 x 1-9/16	SF	0.100	6.73	9.75	16.48
Dry set					
1 x 1	SF	0.100	7.31	9.75	17.06
1-9/16 x 1-9/16	SF	0.100	6.73	9.75	16.48
Epoxy bed with epoxy joints					
1 x 1	SF	0.100	7.31	9.75	17.06
1-9/16 x 1-9/16	SF	0.100	6.73	9.75	16.48

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	Unit	Man-Hrs	Material	Labor	Total
09301.31 CERAMIC TILE (Cont.)					
Conductive floor tile, unglazed square edged					
For WWF in bed add to total, 15%					
For abrasive surface, add to material, 40%					
Ceramic accessories					
Towel bar, 24" long					
Minimum	EA	0.320	19.00	31.25	50.25
Average	EA	0.400	23.25	39.00	62.25
Maximum	EA	0.533	63.00	52.00	115.00
Soap dish					
Minimum	EA	0.533	8.93	52.00	60.93
Average	EA	0.667	12.00	65.00	77.00
Maximum	EA	0.800	32.00	78.00	110.00
09301.61 QUARRY TILE					
QUARRY TILE					
Floor					
4 x 4 x 1/2"	SF	0.107	6.93	10.50	17.43
6 x 6 x 1/2"	SF	0.100	6.79	9.75	16.54
6 x 6 x 3/4"	SF	0.100	8.43	9.75	18.18
12 x 12 x 3/4"	SF	0.089	11.75	8.67	20.42
16 x 1 6 x 3/4"	SF	0.080	8.27	7.80	16.07
18 x 18 x 3/4"	SF	0.067	5.82	6.50	12.32
Medallion					
36" dia.	EA	2.000	610.00	200.00	810.00
48" dia.	EA	2.000	720.00	200.00	920.00
Wall, applied to 3/4" portland cement bed					
4 x 4 x 1/2"	SF	0.160	6.16	15.50	21.66
6 x 6 x 3/4"	SF	0.133	6.89	13.00	19.89
Cove base					
5 x 6 x 1/2" straight top	LF	0.133	7.03	13.00	20.03
6 x 6 x 3/4" round top	LF	0.133	6.52	13.00	19.52
Moldings					
2 x 12	LF	0.080	11.25	7.80	19.05
4 x 12	LF	0.080	17.50	7.80	25.30
Stair treads 6 x 6 x 3/4"	LF	0.200	9.63	19.50	29.13
Window sill 6 x 8 x 3/4"	LF	0.160	8.79	15.50	24.29
For abrasive surface, add to material, 25%					
09510.01 CEILINGS AND WALLS					
CEILINGS AND WALLS					
Acoustical panels, suspension system not included					
Fiberglass panels					
5/8" thick					
2' x 2'	SF	0.011	1.96	1.16	3.12
2' x 4'	SF	0.009	1.62	0.90	2.52
3/4" thick					
2' x 2'	SF	0.011	2.60	1.16	3.76
2' x 4'	SF	0.009	2.52	0.90	3.42
Glass cloth faced fiberglass panels					
3/4" thick	SF	0.013	3.71	1.36	5.07
1" thick	SF	0.013	4.13	1.36	5.49
Wood laminate faced, minimum	SF	0.016	12.75	1.63	14.38
Maximum	SF	0.018	15.00	1.81	16.81
Mineral fiber panels					
5/8" thick					
2' x 2'	SF	0.011	1.66	1.16	2.82
2' x 4'	SF	0.009	1.66	0.90	2.56
3/4" thick					
2' x 2'	SF	0.011	2.60	1.16	3.76
2' x 4'	SF	0.009	2.55	0.90	3.45

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09510.01 CEILINGS AND WALLS (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
For aluminum faced panels, add to material, 80%					
For vinyl faced panels, add to total, 125%					
For fire rated panels, add to material, 75%					
Wood fiber panels					
1/2" thick					
2' x 2'	SF	0.011	2.80	1.16	3.96
2' x 4'	SF	0.009	2.80	0.90	3.70
5/8" thick					
2' x 2'	SF	0.011	3.22	1.16	4.38
2' x 4'	SF	0.009	3.22	0.90	4.12
3/4" thick					
2' x 2'	SF	0.011	3.95	1.16	5.11
2' x 4'	SF	0.009	3.95	0.90	4.85
2" thick					
2' x 2'	SF	0.013	4.61	1.36	5.97
2' x 4'	SF	0.010	4.61	1.02	5.63
For flameproofing, add to material, 10%					
For sculptured finish, add to material, 15%					
Air distributing panels					
3/4" thick	SF	0.020	2.78	2.04	4.82
5/8" thick	SF	0.016	2.39	1.63	4.02
Acoustical tiles, suspension system not included					
Fiberglass tile, 12" x 12"					
5/8" thick	SF	0.015	2.11	1.48	3.59
3/4" thick	SF	0.018	2.45	1.81	4.26
Glass cloth faced fiberglass tile					
3/4" thick	SF	0.018	3.93	1.81	5.74
3" thick	SF	0.020	4.40	2.04	6.44
Mineral fiber tile, 12" x 12"					
5/8" thick					
Standard	SF	0.016	1.10	1.63	2.73
Vinyl faced	SF	0.016	2.20	1.63	3.83
3/4" thick					
Standard	SF	0.016	1.61	1.63	3.24
Vinyl faced	SF	0.016	2.81	1.63	4.44
Fire rated	SF	0.016	3.57	1.63	5.20
Aluminum or mylar faced	SF	0.016	6.83	1.63	8.46
Wood fiber tile, 12" x 12"					
1/2" thick	SF	0.016	1.77	1.63	3.40
3/4" thick	SF	0.016	2.57	1.63	4.20
For flameproofing, add to material, 10%					
For sculptured 3 dimensional, add to material, 50%					
Metal pan units, 24 ga. steel					
12" x 12"	SF	0.032	12.00	3.27	15.27
12" x 24"	SF	0.027	13.75	2.72	16.47
Aluminum, .025" thick					
12" x 12"	SF	0.032	14.00	3.27	17.27
12" x 24"	SF	0.027	14.50	2.72	17.22
Anodized aluminum, 0.25" thick					
12" x 12"	SF	0.032	15.50	3.27	18.77
12" x 24"	SF	0.027	18.50	2.72	21.22
Stainless steel, 24 ga.					
12" x 12"	SF	0.032	35.50	3.27	38.77
12" x 24"	SF	0.027	30.50	2.72	33.22
For flameproof sound absorbing pads, add to material	SF				2.41
Metal ceiling systems					
.020" thick panels					
10', 12', and 16' lengths	SF	0.023	11.00	2.33	13.33
Custom lengths, 3' to 20'	SF	0.023	11.25	2.33	13.58
.025" thick panels					
32 sf, 38 sf, and 52 sf pieces	SF	0.027	5.82	2.72	8.54
Custom lengths, 10 sf to 65 sf	SF	0.027	6.79	2.72	9.51
Carriers, black, add	SF				3.49
Recess filler strip, add	SF				1.17

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	Unit	Man-Hrs	Material	Labor	Total
09510.01 CEILINGS AND WALLS (Cont.)					
Custom lengths, add	SF				1.74
Sound absorption walls, with fabric cover					
2-6" x 9' x 3/4"	SF	0.027	14.25	2.72	16.97
2' x 9' x 1"	SF	0.027	15.50	2.72	18.22
Starter spline	LF	0.020	2.26	2.04	4.30
Internal spline	LF	0.020	1.98	2.04	4.02
Acoustical treatment					
Barriers for plenums					
Leaded vinyl					
0.48 lb per sf	SF	0.038	4.46	3.89	8.35
0.87 lb per sf	SF	0.040	5.39	4.09	9.48
Aluminum foil, fiberglass reinforcement					
Minimum	SF	0.027	2.15	2.72	4.87
Maximum	SF	0.040	2.45	4.09	6.54
Aluminum mesh, paper backed	SF	0.027	2.02	2.72	4.74
Fibered cement sheet, 3/16" thick	SF	0.029	4.15	2.92	7.07
Sheet lead, 1/64" thick	SF	0.020	7.08	2.04	9.12
Sound attenuation blanket					
1" thick	SF	0.080	0.45	8.18	8.63
1-1/2" thick	SF	0.080	0.63	8.18	8.81
2" thick	SF	0.080	0.79	8.18	8.97
3" thick	SF	0.089	0.95	9.08	10.03
Ceiling suspension systems					
T-bar system					
2' x 4'	SF	0.008	1.34	0.81	2.15
2' x 2'	SF	0.009	1.45	0.90	2.35
Concealed Z-bar suspension system, 12" module	SF	0.013	1.38	1.36	2.74
For 1-1/2" carrier channels, 4' o.c., add	SF				0.44
Carrier channel for recessed light fixtures	SF				0.80
T-bar system grid components					
2' Cross Tee	EA	0.010	2.32	1.02	3.34
4' Cross Tee	EA	0.011	4.64	1.09	5.73
Main Beam	LF	0.011	1.27	1.16	2.43
Wall Molding	LF	0.008	0.69	0.81	1.50
Ceiling tile, quick costs					
Minimum	SF	0.016	1.85	1.63	3.48
Average	SF	0.018	2.61	1.81	4.42
Maximum	SF	0.020	6.49	2.04	8.53
09630.01 FLOOR LEVELING					
FLOOR LEVELING					
Repair and level floors to receive new flooring					
Minimum	SY	0.027	1.69	2.72	4.41
Average	SY	0.067	4.01	6.81	10.82
Maximum	SY	0.080	5.96	8.18	14.14
09631.61 UNIT MASONRY FLOORING					
UNIT MASONRY FLOORING					
Clay brick					
9 x 4-1/2 x 3" thick					
Glazed	SF	0.067	7.44	6.81	14.25
Unglazed	SF	0.067	7.13	6.81	13.94
8 x 4 x 3/4" thick					
Glazed	SF	0.070	6.73	7.11	13.84
Unglazed	SF	0.070	6.42	7.11	13.53
For herringbone pattern, add to labor, 15%					
09640.01 WOOD FLOORING					
WOOD FLOORING					
Wood strip flooring, unfinished					
Fir floor					
C and better					
Vertical grain	SF	0.027	3.64	2.72	6.36
Flat grain	SF	0.027	4.55	2.72	7.27

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	Unit	Man-Hrs	Material	Labor	Total
09640.01 WOOD FLOORING (Cont.)					
Wood strip flooring, unfinished					
Oak floor					
Minimum	SF	0.038	3.85	3.89	7.74
Average	SF	0.038	5.31	3.89	9.20
Maximum	SF	0.038	7.69	3.89	11.58
Maple floor					
25/32" x 2-1/4"					
Minimum	SF	0.038	5.50	3.89	9.39
Maximum	SF	0.038	7.80	3.89	11.69
33/32" x 3-1/4"					
Minimum	SF	0.038	7.68	3.89	11.57
Maximum	SF	0.038	8.68	3.89	12.57
Added costs					
For factory finish, add to material, 10%					
For random width floor, add to total, 20%					
For simulated pegs, add to total, 10%					
Wood block industrial flooring					
Creosoted					
2" thick	SF	0.021	4.34	2.15	6.49
2-1/2" thick	SF	0.025	4.52	2.55	7.07
3" thick	SF	0.027	4.69	2.72	7.41
Parquet, 5/16", white oak					
Finished	SF	0.040	10.50	4.09	14.59
Unfinished	SF	0.040	5.04	4.09	9.13
Gym floor, 2 ply felt, 25/32" maple, finished, in mastic	SF	0.044	8.88	4.54	13.42
Over wood sleepers	SF	0.050	9.05	5.11	14.16
Finishing, sand, fill, finish, and wax	SF	0.020	0.69	2.04	2.73
Refinish sand, seal, and 2 coats of polyurethane	SF	0.027	1.20	2.72	3.92
Clean and wax floors	SF	0.004	0.25	0.40	0.65
09651.31 RESILIENT BASE AND ACCESSORIES					
RESILIENT BASE AND ACCESSORIES					
Wall base, vinyl					
Group 1					
4" high	LF	0.027	1.71	2.72	4.43
6" high	LF	0.027	2.33	2.72	5.05
Group 2					
4" high	LF	0.027	1.51	2.72	4.23
6" high	LF	0.027	2.39	2.72	5.11
Group 3					
4" high	LF	0.027	3.40	2.72	6.12
6" high	LF	0.027	3.83	2.72	6.55
Stair accessories					
Treads, 1/4" x 12", rubber diamond surface					
Marbled	LF	0.067	20.75	6.81	27.56
Plain	LF	0.067	21.25	6.81	28.06
Grit strip safety tread, 12" wide, colors					
3/16" thick	LF	0.067	21.25	6.81	28.06
5/16" thick	LF	0.067	28.50	6.81	35.31
Risers, 7" high, 1/8" thick, colors					
Flat	LF	0.040	7.97	4.09	12.06
Coved	LF	0.040	5.50	4.09	9.59
Nosing, rubber					
3/16" thick, 3" wide					
Black	LF	0.040	6.91	4.09	11.00
Colors	LF	0.040	7.78	4.09	11.87
6" wide					
Black	LF	0.067	8.48	6.81	15.29
Colors	LF	0.067	9.06	6.81	15.87
09651.61 RESILIENT SHEET FLOORING					
RESILIENT SHEET FLOORING					
Vinyl sheet flooring					
Minimum	SF	0.008	4.39	0.81	5.20
Average	SF	0.010	9.37	0.97	10.34
Maximum	SF	0.013	17.75	1.36	19.11

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	Unit	Man-Hrs	Material	Labor	Total
09651.61 RESILIENT SHEET FLOORING (Cont.)					
Vinyl sheet flooring					
Cove, to 6"	LF	0.016	5.13	1.63	6.76
Fluid applied resilient flooring					
Polyurethane, poured in place, 3/8" thick	SF	0.067	11.00	6.81	17.81
Vinyl sheet goods, backed					
0.070" thick	SF	0.010	4.26	1.02	5.28
0.093" thick	SF	0.010	6.60	1.02	7.62
0.125" thick	SF	0.010	7.62	1.02	8.64
0.250" thick	SF	0.010	8.77	1.02	9.79
09651.91 RESILIENT TILE FLOORING					
RESILIENT TILE FLOORING					
Solid vinyl tile, 1/8" thick, 12" x 12"					
Marble patterns	SF	0.020	5.34	2.04	7.38
Solid colors	SF	0.020	6.92	2.04	8.96
Travertine patterns	SF	0.020	7.78	2.04	9.82
Conductive resilient flooring, vinyl tile					
1/8" thick, 12" x 12"	SF	0.023	9.28	2.33	11.61
09661.31 TERRAZZO					
TERRAZZO					
Floors on concrete, 1-3/4" thick, 5/8" topping					
Gray cement	SF	0.114	7.25	11.00	18.25
White cement	SF	0.114	7.58	11.00	18.58
Sand cushion, 3" thick, 5/8" top, 1/4"					
Gray cement	SF	0.133	8.56	12.75	21.31
White cement	SF	0.133	8.90	12.75	21.65
Monolithic terrazzo, 3-1/2" base slab, 5/8" topping	SF	0.100	6.07	9.53	15.60
Terrazzo wainscot, cast-in-place, 1/2" thick	SF	0.200	7.38	19.00	26.38
Base, cast-in-place, terrazzo cove type, 6" high	LF	0.114	9.28	11.00	20.28
Curb, cast-in-place, 6" wide x 6" high, polished top	LF	0.400	8.43	38.00	46.43
For venetian type terrazzo, add to material, 10%					
For abrasive heavy duty terrazzo, add to material, 15%					
Divider strips					
Zinc	LF				1.52
Brass	LF				2.83
Stairs, cast-in-place, topping on concrete or metal					
1-1/2" thick treads, 12" wide	LF	0.400	5.97	38.00	43.97
Combined tread and riser	LF	1.000	8.97	95.00	103.97
Precast terrazzo, thin set					
Terrazzo tiles, non-slip surface					
9" x 9" x 1" thick	SF	0.114	17.00	11.00	28.00
12" x 12"					
1" thick	SF	0.107	18.50	10.25	28.75
1-1/2" thick	SF	0.114	19.25	11.00	30.25
18" x 18" x 1-1/2" thick	SF	0.114	25.25	11.00	36.25
24" x 24" x 1-1/2" thick	SF	0.094	32.25	8.97	41.22
For white cement, add to material, 10%					
For venetian type terrazzo, add to material, 25%					
Terrazzo wainscot					
12" x 12" x 1" thick	SF	0.200	9.41	19.00	28.41
18" x 18" x 1-1/2" thick	SF	0.229	15.25	21.75	37.00
Base					
6" high					
Straight	LF	0.062	13.50	5.86	19.36
Coved	LF	0.062	16.00	5.86	21.86
8" high					
Straight	LF	0.067	15.25	6.35	21.60
Coved	LF	0.067	17.75	6.35	24.10
Terrazzo curbs					
8" wide x 8" high	LF	0.320	35.00	30.50	65.50
6" wide x 6" high	LF	0.267	31.75	25.50	57.25
Precast terrazzo stair treads, 12" wide					
1-1/2" thick					
Diamond pattern	LF	0.145	42.25	13.75	56.00
Non-slip surface	LF	0.145	44.50	13.75	58.25

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	Unit	Man-Hrs	Material	Labor	Total
09661.31 TERRAZZO (Cont.)					
Precast terrazzo stair treads, 12" wide					
2" thick					
Diamond pattern	LF	0.145	44.50	13.75	58.25
Non-slip surface	LF	0.160	46.75	15.25	62.00
Stair risers, 1" thick to 6" high					
Straight sections	LF	0.080	14.25	7.62	21.87
Cove sections	LF	0.080	16.75	7.62	24.37
Combined tread and riser					
Straight sections					
1-1/2" tread, 3/4" riser	LF	0.229	61.00	21.75	82.75
3" tread, 1" riser	LF	0.229	73.00	21.75	94.75
Curved sections					
2" tread, 1" riser	LF	0.267	78.00	25.50	103.50
3" tread, 1" riser	LF	0.267	81.00	25.50	106.50
Stair stringers, notched for treads and risers					
1" thick	LF	0.200	37.00	19.00	56.00
2" thick	LF	0.267	38.25	25.50	63.75
Landings, structural, nonslip					
1-1/2" thick	SF	0.133	34.75	12.75	47.50
3" thick	SF	0.160	48.75	15.25	64.00
Conductive terrazzo, spark proof industrial floor					
Epoxy terrazzo					
Floor	SF	0.050	7.34	4.76	12.10
Base	SF	0.067	8.20	6.35	14.55
Polyacrylate					
Floor	SF	0.050	9.43	4.76	14.19
Base	SF	0.067	10.75	6.35	17.10
Polyester					
Floor	SF	0.032	4.39	3.05	7.44
Base	SF	0.040	4.68	3.81	8.49
Synthetic latex mastic					
Floor	SF	0.050	7.61	4.76	12.37
Base	SF	0.067	7.61	6.35	13.96
09670.01 SPECIAL FLOORING					
SPECIAL FLOORING					
Epoxy flooring, marble chips					
Epoxy with colored quartz chips in 1/4" base	SF	0.044	4.87	4.54	9.41
Heavy duty epoxy topping, 3/16" thick	SF	0.044	3.94	4.54	8.48
Epoxy terrazzo					
1/4" thick chemical resistant	SF	0.050	7.15	5.11	12.26
09680.01 CARPET PADDING					
CARPET PADDING					
Carpet padding					
Foam rubber, waffle type, 0.3" thick	SY	0.040	6.98	4.09	11.07
Jute padding					
Minimum	SY	0.036	5.92	3.71	9.63
Average	SY	0.040	7.71	4.09	11.80
Maximum	SY	0.044	11.50	4.54	16.04
Sponge rubber cushion					
Minimum	SY	0.036	5.61	3.71	9.32
Average	SY	0.040	7.47	4.09	11.56
Maximum	SY	0.044	10.50	4.54	15.04
Urethane cushion, 3/8" thick					
Minimum	SY	0.036	5.61	3.71	9.32
Average	SY	0.040	6.54	4.09	10.63
Maximum	SY	0.044	8.53	4.54	13.07
09680.02 CARPET					
CARPET					
Carpet, acrylic					
24 oz., light traffic	SY	0.089	19.25	9.08	28.33
28 oz., medium traffic	SY	0.089	23.00	9.08	32.08

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	Unit	Man-Hrs	Material	Labor	Total
09680.02 CARPET (Cont.)					
Residential					
Nylon					
15 oz., light traffic	SY	0.089	26.75	9.08	35.83
28 oz., medium traffic	SY	0.089	34.75	9.08	43.83
Commercial					
Nylon					
28 oz., medium traffic	SY	0.089	33.25	9.08	42.33
35 oz., heavy traffic	SY	0.089	40.50	9.08	49.58
Wool					
30 oz., medium traffic	SY	0.089	82.00	9.08	91.08
36 oz., medium traffic	SY	0.089	87.00	9.08	96.08
42 oz., heavy traffic	SY	0.089	120.00	9.08	129.08
Carpet tile					
Foam backed					
Minimum	SF	0.016	4.43	1.63	6.06
Average	SF	0.018	5.12	1.81	6.93
Maximum	SF	0.020	8.12	2.04	10.16
Tufted loop or shag					
Minimum	SF	0.016	4.80	1.63	6.43
Average	SF	0.018	5.78	1.81	7.59
Maximum	SF	0.020	9.31	2.04	11.35
Clean and vacuum carpet					
Minimum	SY	0.004	0.39	0.32	0.71
Average	SY	0.005	0.60	0.54	1.14
Maximum	SY	0.008	0.83	0.81	1.64
09690.01 ACCESS & PEDESTAL FLOOR					
ACCESS & PEDESTAL FLOOR					
Panels, no covering, 2'x2'					
Plain	SF	0.010	13.50	1.02	14.52
Perforated	SF	0.400	18.75	41.00	59.75
Pedestals					
For 6" to 12" clearance	EA	0.080	10.75	8.18	18.93
Stringers					
2'	LF	0.038	3.47	3.89	7.36
6'	LF	0.027	3.47	2.72	6.19
Accessories					
Ramp assembly	SF	0.032	72.00	3.27	75.27
Elevated floor assembly	SF	0.030	110.00	3.02	113.02
Handrail	LF	0.400	89.00	41.00	130.00
Fascia plate	LF	0.200	43.50	20.50	64.00
For carpet tiles, add	SF				12.00
For vinyl flooring, add	SF				13.75
RF shielding components, floor liner					
Hot rolled steel sheet					
14 ga.	SF	0.020	18.00	2.04	20.04
11 ga.	SF	0.062	25.00	6.29	31.29
09720.01 WALL COVERING					
Vinyl wall covering					
Medium duty	SF	0.011	1.18	0.97	2.15
Heavy duty	SF	0.013	2.43	1.13	3.56
Over pipes and irregular shapes					
Lightweight, 13 oz.	SF	0.016	2.04	1.36	3.40
Medium weight, 25 oz.	SF	0.018	2.43	1.51	3.94
Heavyweight, 34 oz.	SF	0.020	2.97	1.70	4.67
Cork wall covering					
1' x 1' squares					
1/4" thick	SF	0.020	6.09	1.70	7.79
1/2" thick	SF	0.020	7.74	1.70	9.44
3/4" thick	SF	0.020	8.72	1.70	10.42
Wall fabrics					
Natural fabrics, grass cloths					
Minimum	SF	0.012	1.77	1.05	2.82
Average	SF	0.013	1.97	1.13	3.10

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	Unit	Man-Hrs	Material	Labor	Total
09720.01 WALL COVERING (Cont.)					
Natural fabrics, grass cloths					
Maximum	SF	0.016	6.60	1.36	7.96
Flexible gypsum coated wall fabric, fire resistant	SF	0.008	1.99	0.68	2.67
Vinyl corner guards					
3/4" x 3/4" x 8'	EA	0.100	9.35	8.53	17.88
2-3/4" x 2-3/4" x 4'	EA	0.100	5.52	8.53	14.05
09910.01 PAINTING PREPARATION					
PAINTING PREPARATION					
Dropcloths					
Minimum	SF	0.001	0.17	0.04	0.21
Average	SF	0.001	0.19	0.05	0.24
Maximum	SF	0.001	0.39	0.07	0.46
Masking					
Paper and tape					
Minimum	LF	0.008	0.04	0.68	0.72
Average	LF	0.010	0.07	0.85	0.92
Maximum	LF	0.013	0.08	1.13	1.21
Doors					
Minimum	EA	0.100	0.05	8.53	8.58
Average	EA	0.133	0.07	11.25	11.32
Maximum	EA	0.178	0.08	15.25	15.33
Windows					
Minimum	EA	0.100	0.05	8.53	8.58
Average	EA	0.133	0.07	11.25	11.32
Maximum	EA	0.178	0.08	15.25	15.33
Sanding					
Walls and flat surfaces					
Minimum	SF	0.005		0.45	0.45
Average	SF	0.007		0.56	0.56
Maximum	SF	0.008		0.68	0.68
Doors and windows					
Minimum	EA	0.133		11.25	11.25
Average	EA	0.200		17.00	17.00
Maximum	EA	0.267		22.75	22.75
Trim					
Minimum	LF	0.010		0.85	0.85
Average	LF	0.013		1.13	1.13
Maximum	LF	0.018		1.51	1.51
Puttying					
Minimum	SF	0.012	0.02	1.05	1.07
Average	SF	0.016	0.03	1.36	1.39
Maximum	SF	0.020	0.05	1.70	1.75
09910.09 PAINT					
PAINT					
Paint, enamel					
600 sf per gal.	GAL				58.00
550 sf per gal.	GAL				54.00
500 sf per gal.	GAL				38.25
450 sf per gal.	GAL				35.75
350 sf per gal.	GAL				34.50
Filler, 60 sf per gal.	GAL				41.00
Latex, 400 sf per gal.	GAL				38.25
Aluminum					
400 sf per gal.	GAL				51.00
500 sf per gal.	GAL				82.00
Red lead, 350 sf per gal.	GAL				72.00
Primer					
400 sf per gal.	GAL				34.25
300 sf per gal.	GAL				34.50
Latex base, interior, white	GAL				38.25
Sealer and varnish					
400 sf per gal.	GAL				35.75
425 sf per gal.	GAL				51.00
600 sf per gal.	GAL				67.00

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09911.30 EXT. PAINTING, SITEWORK

	Unit	Man-Hrs	Material	Labor	Total
EXT. PAINTING, SITEWORK					
Benches					
Brush					
First Coat					
Minimum	SF	0.008	0.21	0.68	0.89
Average	SF	0.010	0.23	0.85	1.08
Maximum	SF	0.013	0.23	1.13	1.36
Second Coat					
Minimum	SF	0.005	0.19	0.42	0.61
Average	SF	0.006	0.21	0.48	0.69
Maximum	SF	0.007	0.22	0.56	0.78
Roller					
First Coat					
Minimum	SF	0.004	0.21	0.34	0.55
Average	SF	0.004	0.22	0.37	0.59
Maximum	SF	0.005	0.23	0.42	0.65
Second Coat					
Minimum	SF	0.003	0.19	0.24	0.43
Average	SF	0.003	0.21	0.28	0.49
Maximum	SF	0.004	0.22	0.31	0.53
Brickwork					
Brush					
First Coat					
Minimum	SF	0.005	0.21	0.42	0.63
Average	SF	0.007	0.22	0.56	0.78
Maximum	SF	0.010	0.23	0.85	1.08
Second Coat					
Minimum	SF	0.004	0.21	0.37	0.58
Average	SF	0.005	0.22	0.45	0.67
Maximum	SF	0.007	0.23	0.56	0.79
Spray					
First Coat					
Minimum	SF	0.002	0.16	0.18	0.34
Average	SF	0.003	0.18	0.24	0.42
Maximum	SF	0.004	0.19	0.31	0.50
Second Coat					
Minimum	SF	0.002	0.16	0.17	0.33
Average	SF	0.003	0.18	0.22	0.40
Maximum	SF	0.003	0.19	0.28	0.47
Concrete Block					
Roller					
First Coat					
Minimum	SF	0.004	0.21	0.34	0.55
Average	SF	0.005	0.22	0.45	0.67
Maximum	SF	0.008	0.23	0.68	0.91
Second Coat					
Minimum	SF	0.003	0.21	0.28	0.49
Average	SF	0.004	0.22	0.37	0.59
Maximum	SF	0.007	0.23	0.56	0.79
Spray					
First Coat					
Minimum	SF	0.002	0.16	0.18	0.34
Average	SF	0.003	0.18	0.22	0.40
Maximum	SF	0.003	0.19	0.26	0.45
Second Coat					
Minimum	SF	0.001	0.16	0.12	0.28
Average	SF	0.002	0.18	0.15	0.33
Maximum	SF	0.003	0.19	0.21	0.40
Fences, Chain Link					
Brush					
First Coat					
Minimum	SF	0.008	0.14	0.68	0.82
Average	SF	0.009	0.15	0.75	0.90
Maximum	SF	0.010	0.16	0.85	1.01

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	Unit	Man-Hrs	Material	Labor	Total
09911.30 EXT. PAINTING, SITEWORK (Cont.)					
Brush					
Second Coat					
Minimum	SF	0.005	0.14	0.45	0.59
Average	SF	0.006	0.15	0.52	0.67
Maximum	SF	0.007	0.16	0.62	0.78
Roller					
First Coat					
Minimum	SF	0.006	0.14	0.48	0.62
Average	SF	0.007	0.15	0.56	0.71
Maximum	SF	0.008	0.16	0.65	0.81
Second Coat					
Minimum	SF	0.003	0.14	0.28	0.42
Average	SF	0.004	0.15	0.34	0.49
Maximum	SF	0.005	0.16	0.42	0.58
Spray					
First Coat					
Minimum	SF	0.003	0.11	0.21	0.32
Average	SF	0.003	0.12	0.24	0.36
Maximum	SF	0.003	0.14	0.28	0.42
Second Coat					
Minimum	SF	0.002	0.11	0.16	0.27
Average	SF	0.002	0.12	0.18	0.30
Maximum	SF	0.003	0.14	0.21	0.35
Fences, Wood or Masonry					
Brush					
First Coat					
Minimum	SF	0.008	0.21	0.71	0.92
Average	SF	0.010	0.22	0.85	1.07
Maximum	SF	0.013	0.23	1.13	1.36
Second Coat					
Minimum	SF	0.005	0.21	0.42	0.63
Average	SF	0.006	0.22	0.52	0.74
Maximum	SF	0.008	0.23	0.68	0.91
Roller					
First Coat					
Minimum	SF	0.004	0.21	0.37	0.58
Average	SF	0.005	0.22	0.45	0.67
Maximum	SF	0.006	0.23	0.52	0.75
Second Coat					
Minimum	SF	0.003	0.21	0.26	0.47
Average	SF	0.004	0.22	0.32	0.54
Maximum	SF	0.005	0.23	0.42	0.65
Spray					
First Coat					
Minimum	SF	0.003	0.16	0.24	0.40
Average	SF	0.004	0.18	0.31	0.49
Maximum	SF	0.005	0.19	0.42	0.61
Second Coat					
Minimum	SF	0.002	0.16	0.17	0.33
Average	SF	0.003	0.18	0.21	0.39
Maximum	SF	0.003	0.19	0.28	0.47
Storage Tanks					
Roller					
First Coat					
Minimum	SF	0.003	0.16	0.28	0.44
Average	SF	0.004	0.18	0.34	0.52
Maximum	SF	0.005	0.19	0.42	0.61
Second Coat					
Minimum	SF	0.003	0.16	0.22	0.38
Average	SF	0.003	0.18	0.27	0.45
Maximum	SF	0.004	0.19	0.34	0.53
Spray					
First Coat					
Minimum	SF	0.002	0.14	0.17	0.31
Average	SF	0.002	0.15	0.20	0.35

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	Unit	Man-Hrs	Material	Labor	Total
09911.30 EXT. PAINTING, SITEWORK (Cont.)					
First Coat					
Maximum	SF	0.003	0.16	0.24	0.40
Second Coat					
Minimum	SF	0.002	0.14	0.13	0.27
Average	SF	0.002	0.15	0.15	0.30
Maximum	SF	0.002	0.16	0.17	0.33
09911.31 EXT. PAINTING, BUILDINGS					
EXT. PAINTING, BUILDINGS					
Decks, Metal					
Spray					
First Coat					
Minimum	SF	0.004	0.14	0.31	0.45
Average	SF	0.004	0.15	0.34	0.49
Maximum	SF	0.004	0.16	0.37	0.53
Second Coat					
Minimum	SF	0.003	0.12	0.21	0.33
Average	SF	0.003	0.14	0.24	0.38
Maximum	SF	0.003	0.15	0.28	0.43
Decks, Wood, Stained					
Brush					
First Coat					
Minimum	SF	0.004	0.16	0.34	0.50
Average	SF	0.004	0.18	0.37	0.55
Maximum	SF	0.005	0.19	0.42	0.61
Second Coat					
Minimum	SF	0.003	0.16	0.24	0.40
Average	SF	0.003	0.18	0.26	0.44
Maximum	SF	0.003	0.19	0.28	0.47
Roller					
First Coat					
Minimum	SF	0.003	0.16	0.24	0.40
Average	SF	0.003	0.18	0.26	0.44
Maximum	SF	0.003	0.19	0.28	0.47
Second Coat					
Minimum	SF	0.003	0.16	0.21	0.37
Average	SF	0.003	0.18	0.22	0.40
Maximum	SF	0.003	0.19	0.26	0.45
Spray					
First Coat					
Minimum	SF	0.003	0.14	0.21	0.35
Average	SF	0.003	0.15	0.22	0.37
Maximum	SF	0.003	0.16	0.26	0.42
Second Coat					
Minimum	SF	0.002	0.14	0.18	0.32
Average	SF	0.002	0.15	0.20	0.35
Maximum	SF	0.003	0.16	0.22	0.38
Doors, Metal					
Roller					
First Coat					
Minimum	SF	0.006	0.16	0.48	0.64
Average	SF	0.007	0.18	0.56	0.74
Maximum	SF	0.008	0.19	0.68	0.87
Second Coat					
Minimum	SF	0.004	0.16	0.34	0.50
Average	SF	0.004	0.18	0.37	0.55
Maximum	SF	0.005	0.19	0.42	0.61
Spray					
First Coat					
Minimum	SF	0.005	0.14	0.42	0.56
Average	SF	0.006	0.15	0.48	0.63
Maximum	SF	0.007	0.16	0.56	0.72
Second Coat					
Minimum	SF	0.004	0.14	0.31	0.45
Average	SF	0.004	0.15	0.34	0.49

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	Unit	Man-Hrs	Material	Labor	Total
09911.31 EXT. PAINTING, BUILDINGS (Cont.)					
Second Coat					
Maximum	SF	0.004	0.16	0.37	0.53
Door Frames, Metal					
Brush					
First Coat					
Minimum	LF	0.010	0.21	0.85	1.06
Average	LF	0.013	0.22	1.06	1.28
Maximum	LF	0.015	0.23	1.24	1.47
Second Coat					
Minimum	LF	0.006	0.21	0.48	0.69
Average	LF	0.007	0.22	0.56	0.78
Maximum	LF	0.008	0.23	0.68	0.91
Spray					
First Coat					
Minimum	LF	0.004	0.14	0.37	0.51
Average	LF	0.006	0.15	0.48	0.63
Maximum	LF	0.008	0.16	0.68	0.84
Second Coat					
Minimum	LF	0.004	0.14	0.31	0.45
Average	LF	0.004	0.15	0.34	0.49
Maximum	LF	0.004	0.16	0.37	0.53
Doors, Wood					
Brush					
First Coat					
Minimum	SF	0.012	0.16	1.05	1.21
Average	SF	0.016	0.18	1.36	1.54
Maximum	SF	0.020	0.19	1.70	1.89
Second Coat					
Minimum	SF	0.010	0.16	0.85	1.01
Average	SF	0.011	0.18	0.97	1.15
Maximum	SF	0.013	0.19	1.13	1.32
Roller					
First Coat					
Minimum	SF	0.005	0.16	0.45	0.61
Average	SF	0.007	0.18	0.56	0.74
Maximum	SF	0.010	0.19	0.85	1.04
Second Coat					
Minimum	SF	0.004	0.16	0.34	0.50
Average	SF	0.004	0.18	0.37	0.55
Maximum	SF	0.007	0.19	0.56	0.75
Spray					
First Coat					
Minimum	SF	0.003	0.14	0.21	0.35
Average	SF	0.003	0.15	0.26	0.41
Maximum	SF	0.004	0.16	0.34	0.50
Second Coat					
Minimum	SF	0.002	0.14	0.17	0.31
Average	SF	0.002	0.15	0.19	0.34
Maximum	SF	0.003	0.16	0.22	0.38
Gutters and Downspouts					
Brush					
First Coat					
Minimum	LF	0.010	0.21	0.85	1.06
Average	LF	0.011	0.22	0.97	1.19
Maximum	LF	0.013	0.23	1.13	1.36
Second Coat					
Minimum	LF	0.007	0.21	0.56	0.77
Average	LF	0.008	0.22	0.68	0.90
Maximum	LF	0.010	0.23	0.85	1.08
Siding, Metal					
Roller					
First Coat					
Minimum	SF	0.003	0.16	0.28	0.44
Average	SF	0.004	0.18	0.31	0.49

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	Unit	Man-Hrs	Material	Labor	Total
09911.31 EXT. PAINTING, BUILDINGS (Cont.)					
First Coat					
Maximum	SF	0.004	0.19	0.34	0.53
Second Coat					
Minimum	SF	0.003	0.16	0.26	0.42
Average	SF	0.003	0.18	0.28	0.46
Maximum	SF	0.004	0.19	0.31	0.50
Spray					
First Coat					
Minimum	SF	0.003	0.14	0.21	0.35
Average	SF	0.003	0.15	0.24	0.39
Maximum	SF	0.003	0.16	0.28	0.44
Second Coat					
Minimum	SF	0.002	0.14	0.13	0.27
Average	SF	0.002	0.15	0.17	0.32
Maximum	SF	0.003	0.16	0.22	0.38
Siding, Wood					
Roller					
First Coat					
Minimum	SF	0.003	0.14	0.24	0.38
Average	SF	0.003	0.15	0.28	0.43
Maximum	SF	0.004	0.16	0.31	0.47
Second Coat					
Minimum	SF	0.003	0.14	0.28	0.42
Average	SF	0.004	0.15	0.31	0.46
Maximum	SF	0.004	0.16	0.34	0.50
Spray					
First Coat					
Minimum	SF	0.003	0.14	0.22	0.36
Average	SF	0.003	0.15	0.24	0.39
Maximum	SF	0.003	0.16	0.26	0.42
Second Coat					
Minimum	SF	0.002	0.14	0.17	0.31
Average	SF	0.003	0.15	0.22	0.37
Maximum	SF	0.004	0.16	0.34	0.50
Stucco					
Roller					
First Coat					
Minimum	SF	0.004	0.21	0.31	0.52
Average	SF	0.004	0.22	0.35	0.57
Maximum	SF	0.005	0.23	0.42	0.65
Second Coat					
Minimum	SF	0.003	0.21	0.25	0.46
Average	SF	0.003	0.22	0.29	0.51
Maximum	SF	0.004	0.23	0.34	0.57
Spray					
First Coat					
Minimum	SF	0.003	0.16	0.21	0.37
Average	SF	0.003	0.18	0.24	0.42
Maximum	SF	0.003	0.19	0.28	0.47
Second Coat					
Minimum	SF	0.002	0.16	0.17	0.33
Average	SF	0.002	0.18	0.19	0.37
Maximum	SF	0.003	0.19	0.22	0.41
Trim					
Brush					
First Coat					
Minimum	LF	0.003	0.21	0.28	0.49
Average	LF	0.004	0.22	0.34	0.56
Maximum	LF	0.005	0.23	0.42	0.65
Second Coat					
Minimum	LF	0.003	0.21	0.21	0.42
Average	LF	0.003	0.22	0.28	0.50
Maximum	LF	0.005	0.23	0.42	0.65

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	Unit	Man-Hrs	Material	Labor	Total
09911.31 EXT. PAINTING, BUILDINGS (Cont.)					
Walls					
Roller					
First Coat					
Minimum	SF	0.003	0.16	0.24	0.40
Average	SF	0.003	0.18	0.25	0.43
Maximum	SF	0.003	0.19	0.27	0.46
Second Coat					
Minimum	SF	0.003	0.16	0.21	0.37
Average	SF	0.003	0.18	0.22	0.40
Maximum	SF	0.003	0.19	0.26	0.45
Spray					
First Coat					
Minimum	SF	0.001	0.12	0.10	0.22
Average	SF	0.002	0.14	0.13	0.27
Maximum	SF	0.002	0.15	0.17	0.32
Second Coat					
Minimum	SF	0.001	0.12	0.09	0.21
Average	SF	0.001	0.14	0.11	0.25
Maximum	SF	0.002	0.15	0.15	0.30
Windows					
Brush					
First Coat					
Minimum	SF	0.013	0.14	1.13	1.27
Average	SF	0.016	0.15	1.36	1.51
Maximum	SF	0.020	0.16	1.70	1.86
Second Coat					
Minimum	SF	0.011	0.14	0.97	1.11
Average	SF	0.013	0.15	1.13	1.28
Maximum	SF	0.016	0.16	1.36	1.52
09911.32 EXT. PAINTING, MISC.					
EXT. PAINTING, MISC.					
Gratings, Metal					
Roller					
First Coat					
Minimum	SF	0.023	0.16	1.95	2.11
Average	SF	0.027	0.18	2.27	2.45
Maximum	SF	0.032	0.19	2.73	2.92
Second Coat					
Minimum	SF	0.016	0.16	1.36	1.52
Average	SF	0.020	0.18	1.70	1.88
Maximum	SF	0.027	0.19	2.27	2.46
Spray					
First Coat					
Minimum	SF	0.011	0.14	0.97	1.11
Average	SF	0.013	0.15	1.13	1.28
Maximum	SF	0.016	0.16	1.36	1.52
Second Coat					
Minimum	SF	0.009	0.14	0.75	0.89
Average	SF	0.010	0.15	0.85	1.00
Maximum	SF	0.011	0.16	0.97	1.13
Ladders					
Brush					
First Coat					
Minimum	LF	0.020	0.21	1.70	1.91
Average	LF	0.023	0.22	1.95	2.17
Maximum	LF	0.027	0.23	2.27	2.50
Second Coat					
Minimum	LF	0.016	0.21	1.36	1.57
Average	LF	0.018	0.22	1.51	1.73
Maximum	LF	0.020	0.23	1.70	1.93
Spray					
First Coat					
Minimum	LF	0.013	0.14	1.13	1.27
Average	LF	0.015	0.15	1.24	1.39

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	Unit	Man-Hrs	Material	Labor	Total
09911.32 EXT. PAINTING, MISC. (Cont.)					
First Coat					
Maximum	LF	0.016	0.16	1.36	1.52
Second Coat					
Minimum	LF	0.011	0.14	0.97	1.11
Average	LF	0.012	0.15	1.05	1.20
Maximum	LF	0.013	0.16	1.13	1.29
Shakes					
Spray					
First Coat					
Minimum	SF	0.003	0.15	0.28	0.43
Average	SF	0.004	0.16	0.31	0.47
Maximum	SF	0.004	0.18	0.34	0.52
Second Coat					
Minimum	SF	0.003	0.15	0.26	0.41
Average	SF	0.003	0.16	0.28	0.44
Maximum	SF	0.004	0.18	0.31	0.49
Shingles, Wood					
Roller					
First Coat					
Minimum	SF	0.004	0.16	0.37	0.53
Average	SF	0.005	0.18	0.42	0.60
Maximum	SF	0.006	0.19	0.48	0.67
Second Coat					
Minimum	SF	0.003	0.16	0.26	0.42
Average	SF	0.003	0.18	0.28	0.46
Maximum	SF	0.004	0.19	0.31	0.50
Spray					
First Coat					
Minimum	LF	0.003	0.14	0.26	0.40
Average	LF	0.003	0.15	0.28	0.43
Maximum	LF	0.004	0.16	0.31	0.47
Second Coat					
Minimum	LF	0.002	0.14	0.20	0.34
Average	LF	0.003	0.15	0.21	0.36
Maximum	LF	0.003	0.16	0.22	0.38
Shutters and Louvers					
Brush					
First Coat					
Minimum	EA	0.160	0.21	13.75	13.96
Average	EA	0.200	0.22	17.00	17.22
Maximum	EA	0.267	0.23	22.75	22.98
Second Coat					
Minimum	EA	0.100	0.21	8.53	8.74
Average	EA	0.123	0.22	10.50	10.72
Maximum	EA	0.160	0.23	13.75	13.98
Spray					
First Coat					
Minimum	EA	0.053	0.15	4.55	4.70
Average	EA	0.064	0.16	5.46	5.62
Maximum	EA	0.080	0.18	6.82	7.00
Second Coat					
Minimum	EA	0.040	0.15	3.41	3.56
Average	EA	0.053	0.16	4.55	4.71
Maximum	EA	0.064	0.18	5.46	5.64
Stairs, metal					
Brush					
First Coat					
Minimum	SF	0.009	0.21	0.75	0.96
Average	SF	0.010	0.22	0.85	1.07
Maximum	SF	0.011	0.23	0.97	1.20
Second Coat					
Minimum	SF	0.005	0.21	0.42	0.63
Average	SF	0.006	0.22	0.48	0.70
Maximum	SF	0.007	0.23	0.56	0.79

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09911.32 EXT. PAINTING, MISC. (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Stairs, metal					
Spray					
First Coat					
Minimum	SF	0.004	0.15	0.37	0.52
Average	SF	0.006	0.16	0.48	0.64
Maximum	SF	0.006	0.18	0.52	0.70
Second Coat					
Minimum	SF	0.003	0.15	0.28	0.43
Average	SF	0.004	0.16	0.34	0.50
Maximum	SF	0.005	0.18	0.42	0.60
Steel, Structural, Light					
Brush					
First Coat					
Minimum	SF	0.016	0.16	1.36	1.52
Average	SF	0.020	0.18	1.70	1.88
Maximum	SF	0.027	0.19	2.27	2.46
Second Coat					
Minimum	SF	0.011	0.15	0.97	1.12
Average	SF	0.013	0.16	1.13	1.29
Maximum	SF	0.016	0.18	1.36	1.54
Roller					
First Coat					
Minimum	SF	0.011	0.16	0.97	1.13
Average	SF	0.013	0.18	1.13	1.31
Maximum	SF	0.016	0.19	1.36	1.55
Second Coat					
Minimum	SF	0.007	0.15	0.56	0.71
Average	SF	0.008	0.16	0.68	0.84
Maximum	SF	0.010	0.18	0.85	1.03
Spray					
First Coat					
Minimum	SF	0.007	0.15	0.56	0.71
Average	SF	0.008	0.16	0.68	0.84
Maximum	SF	0.010	0.18	0.85	1.03
Second Coat					
Minimum	SF	0.006	0.11	0.48	0.59
Average	SF	0.007	0.12	0.56	0.68
Maximum	SF	0.008	0.14	0.68	0.82
Steel, Medium to Heavy					
Brush					
First Coat					
Minimum	SF	0.008	0.16	0.68	0.84
Average	SF	0.009	0.18	0.75	0.93
Maximum	SF	0.010	0.19	0.85	1.04
Second Coat					
Minimum	SF	0.007	0.15	0.56	0.71
Average	SF	0.008	0.16	0.68	0.84
Maximum	SF	0.009	0.18	0.80	0.98
Roller					
First Coat					
Minimum	SF	0.007	0.16	0.56	0.72
Average	SF	0.008	0.18	0.68	0.86
Maximum	SF	0.009	0.19	0.80	0.99
Second Coat					
Minimum	SF	0.005	0.15	0.42	0.57
Average	SF	0.006	0.16	0.48	0.64
Maximum	SF	0.007	0.18	0.56	0.74
Spray					
First Coat					
Minimum	SF	0.004	0.15	0.37	0.52
Average	SF	0.005	0.16	0.42	0.58
Maximum	SF	0.006	0.18	0.48	0.66
Second Coat					
Minimum	SF	0.004	0.11	0.31	0.42
Average	SF	0.004	0.12	0.34	0.46

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	Unit	Man-Hrs	Material	Labor	Total
09911.32 EXT. PAINTING, MISC. (Cont.)					
Second Coat					
Maximum	SF	0.004	0.14	0.37	0.51
09912.33 INT. PAINTING, BUILDINGS					
INT. PAINTING, BUILDINGS					
Acoustical Ceiling					
Roller					
First Coat					
Minimum	SF	0.005	0.21	0.42	0.63
Average	SF	0.007	0.22	0.56	0.78
Maximum	SF	0.010	0.23	0.85	1.08
Second Coat					
Minimum	SF	0.004	0.21	0.34	0.55
Average	SF	0.005	0.22	0.42	0.64
Maximum	SF	0.007	0.23	0.56	0.79
Spray					
First Coat					
Minimum	SF	0.002	0.16	0.18	0.34
Average	SF	0.003	0.18	0.22	0.40
Maximum	SF	0.003	0.19	0.28	0.47
Second Coat					
Minimum	SF	0.002	0.16	0.15	0.31
Average	SF	0.002	0.18	0.17	0.35
Maximum	SF	0.002	0.19	0.19	0.38
Cabinets and Casework					
Brush					
First Coat					
Minimum	SF	0.008	0.21	0.68	0.89
Average	SF	0.009	0.22	0.75	0.97
Maximum	SF	0.010	0.23	0.85	1.08
Second Coat					
Minimum	SF	0.007	0.21	0.56	0.77
Average	SF	0.007	0.22	0.62	0.84
Maximum	SF	0.008	0.23	0.68	0.91
Spray					
First Coat					
Minimum	SF	0.004	0.16	0.34	0.50
Average	SF	0.005	0.18	0.40	0.58
Maximum	SF	0.006	0.19	0.48	0.67
Second Coat					
Minimum	SF	0.003	0.16	0.27	0.43
Average	SF	0.003	0.18	0.29	0.47
Maximum	SF	0.004	0.19	0.37	0.56
Ceilings					
Roller					
First Coat					
Minimum	SF	0.003	0.16	0.28	0.44
Average	SF	0.004	0.18	0.31	0.49
Maximum	SF	0.004	0.19	0.34	0.53
Second Coat					
Minimum	SF	0.003	0.16	0.22	0.38
Average	SF	0.003	0.18	0.26	0.44
Maximum	SF	0.003	0.19	0.28	0.47
Spray					
First Coat					
Minimum	SF	0.002	0.14	0.17	0.31
Average	SF	0.002	0.15	0.18	0.33
Maximum	SF	0.003	0.16	0.21	0.37
Second Coat					
Minimum	SF	0.002	0.14	0.13	0.27
Average	SF	0.002	0.15	0.14	0.29
Maximum	SF	0.002	0.16	0.17	0.33

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09912.33 INT. PAINTING, BUILDINGS (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Doors, Metal					
Roller					
First Coat					
Minimum	SF	0.005	0.21	0.45	0.66
Average	SF	0.006	0.22	0.52	0.74
Maximum	SF	0.007	0.23	0.62	0.85
Second Coat					
Minimum	SF	0.004	0.21	0.32	0.53
Average	SF	0.004	0.22	0.35	0.57
Maximum	SF	0.005	0.23	0.40	0.63
Spray					
First Coat					
Minimum	SF	0.004	0.14	0.37	0.51
Average	SF	0.005	0.15	0.42	0.57
Maximum	SF	0.006	0.16	0.48	0.64
Second Coat					
Minimum	SF	0.003	0.21	0.28	0.49
Average	SF	0.004	0.22	0.31	0.53
Maximum	SF	0.004	0.23	0.34	0.57
Doors, Wood					
Brush					
First Coat					
Minimum	SF	0.011	0.21	0.97	1.18
Average	SF	0.015	0.22	1.24	1.46
Maximum	SF	0.018	0.23	1.51	1.74
Second Coat					
Minimum	SF	0.009	0.15	0.75	0.90
Average	SF	0.010	0.16	0.85	1.01
Maximum	SF	0.011	0.18	0.97	1.15
Spray					
First Coat					
Minimum	SF	0.002	0.15	0.20	0.35
Average	SF	0.003	0.16	0.24	0.40
Maximum	SF	0.004	0.18	0.31	0.49
Second Coat					
Minimum	SF	0.002	0.15	0.16	0.31
Average	SF	0.002	0.16	0.18	0.34
Maximum	SF	0.003	0.18	0.21	0.39
Ductwork					
Brush					
Minimum	LF	0.010	0.16	0.85	1.01
Average	LF	0.011	0.18	0.97	1.15
Maximum	LF	0.013	0.19	1.13	1.32
Roller					
Minimum	SF	0.007	0.16	0.56	0.72
Average	SF	0.007	0.18	0.62	0.80
Maximum	SF	0.008	0.19	0.68	0.87
Spray					
Minimum	SF	0.003	0.16	0.24	0.40
Average	SF	0.003	0.18	0.26	0.44
Maximum	SF	0.003	0.19	0.28	0.47
Floors					
Roller					
First Coat					
Minimum	SF	0.003	0.16	0.21	0.37
Average	SF	0.003	0.18	0.25	0.43
Maximum	SF	0.003	0.19	0.28	0.47
Second Coat					
Minimum	SF	0.002	0.16	0.17	0.33
Average	SF	0.002	0.18	0.18	0.36
Maximum	SF	0.002	0.19	0.20	0.39
Spray					
First Coat					
Minimum	SF	0.002	0.15	0.15	0.30
Average	SF	0.002	0.16	0.16	0.32

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	Unit	Man-Hrs	Material	Labor	Total
09912.33 INT. PAINTING, BUILDINGS (Cont.)					
First Coat					
Maximum	SF	0.002	0.18	0.17	0.35
Second Coat					
Minimum	SF	0.002	0.15	0.13	0.28
Average	SF	0.002	0.16	0.14	0.30
Maximum	SF	0.002	0.18	0.15	0.33
Pipes to 6" diameter					
Brush					
Minimum	LF	0.010	0.21	0.85	1.06
Average	LF	0.011	0.22	0.97	1.19
Maximum	LF	0.013	0.23	1.13	1.36
Spray					
Minimum	LF	0.003	0.16	0.28	0.44
Average	LF	0.004	0.18	0.34	0.52
Maximum	LF	0.005	0.19	0.45	0.64
Pipes to 12" diameter					
Brush					
Minimum	LF	0.020	0.37	1.70	2.07
Average	LF	0.023	0.39	1.95	2.34
Maximum	LF	0.027	0.40	2.27	2.67
Spray					
Minimum	LF	0.007	0.33	0.56	0.89
Average	LF	0.008	0.35	0.68	1.03
Maximum	LF	0.010	0.36	0.85	1.21
Trim					
Brush					
First Coat					
Minimum	LF	0.003	0.21	0.27	0.48
Average	LF	0.004	0.22	0.31	0.53
Maximum	LF	0.004	0.23	0.37	0.60
Second Coat					
Minimum	LF	0.002	0.21	0.20	0.41
Average	LF	0.003	0.22	0.26	0.48
Maximum	LF	0.004	0.23	0.37	0.60
Walls					
Roller					
First Coat					
Minimum	SF	0.003	0.16	0.24	0.40
Average	SF	0.003	0.18	0.25	0.43
Maximum	SF	0.003	0.19	0.28	0.47
Second Coat					
Minimum	SF	0.003	0.16	0.21	0.37
Average	SF	0.003	0.18	0.22	0.40
Maximum	SF	0.003	0.19	0.26	0.45
Spray					
First Coat					
Minimum	SF	0.001	0.14	0.10	0.24
Average	SF	0.002	0.15	0.13	0.28
Maximum	SF	0.002	0.16	0.17	0.33
Second Coat					
Minimum	SF	0.001	0.14	0.09	0.23
Average	SF	0.001	0.15	0.11	0.26
Maximum	SF	0.002	0.16	0.15	0.31

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	Unit	Man-Hrs	Material	Labor	Total
10111.30 CHALKBOARDS					
CHALKBOARDS					
Chalkboard, metal frame, 1/4" thick					
48"x60"	EA	0.800	580.00	82.00	662.00
48"x96"	EA	0.889	790.00	91.00	881.00
48"x144"	EA	1.000	1,060.00	100.00	1,160.00
48"x192"	EA	1.143	1,430.00	120.00	1,550.00
Liquid chalkboard					
48"x60"	EA	0.800	770.00	82.00	852.00
48"x96"	EA	0.889	980.00	91.00	1,071.00
48"x144"	EA	1.000	1,470.00	100.00	1,570.00
48"x192"	EA	1.143	1,680.00	120.00	1,800.00
Map rail, deluxe	LF	0.040	9.14	4.09	13.23
Tackboard, aluminum frame, cork, installed					
48"x60"	EA	0.800	220.00	82.00	302.00
48"x96"	EA	0.889	330.00	91.00	421.00
48"x144"	EA	1.000	520.00	100.00	620.00
10130.01 IDENTIFYING DEVICES					
IDENTIFYING DEVICES					
Directory and bulletin boards					
Open face boards					
Chrome plated steel frame	SF	0.400	40.25	41.00	81.25
Aluminum framed	SF	0.400	69.00	41.00	110.00
Bronze framed	SF	0.400	89.00	41.00	130.00
Stainless steel framed	SF	0.400	120.00	41.00	161.00
Tack board, aluminum framed	SF	0.400	28.25	41.00	69.25
Visual aid board, aluminum framed	SF	0.400	28.25	41.00	69.25
Glass encased boards, hinged and keyed					
Aluminum framed	SF	1.000	160.00	100.00	260.00
Bronze framed	SF	1.000	180.00	100.00	280.00
Stainless steel framed	SF	1.000	230.00	100.00	330.00
Chrome plated steel framed	SF	1.000	250.00	100.00	350.00
10140.04 SIGNAGE					
SIGNAGE					
Metal plaque					
Cast bronze	SF	0.667	700.00	68.00	768.00
Aluminum	SF	0.667	400.00	68.00	468.00
Metal engraved plaque					
Porcelain steel	SF	0.667	850.00	68.00	918.00
Stainless steel	SF	0.667	670.00	68.00	738.00
Brass	SF	0.667	1,000.00	68.00	1,068.00
Aluminum	SF	0.667	620.00	68.00	688.00
Metal built-up plaque					
Bronze	SF	0.800	760.00	82.00	842.00
Copper and bronze	SF	0.800	670.00	82.00	752.00
Copper and aluminum	SF	0.800	750.00	82.00	832.00
Metal nameplate plaques					
Cast bronze	SF	0.500	760.00	51.00	811.00
Cast aluminum	SF	0.500	550.00	51.00	601.00
Engraved, 1-1/2" x 6"					
Bronze	EA	0.500	380.00	51.00	431.00
Aluminum	EA	0.500	290.00	51.00	341.00
Letters, on masonry, aluminum, satin finish					
1/2" thick					
2" high	EA	0.320	35.25	32.75	68.00
4" high	EA	0.400	53.00	41.00	94.00
6" high	EA	0.444	70.00	45.50	115.50
3/4" thick					
8" high	EA	0.500	110.00	51.00	161.00
10" high	EA	0.571	120.00	58.00	178.00
1" thick					
12" high	EA	0.667	140.00	68.00	208.00
14" high	EA	0.800	150.00	82.00	232.00
16" high	EA	1.000	190.00	100.00	290.00

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	Unit	Man-Hrs	Material	Labor	Total
10140.04 SIGNAGE (Cont.)					
1" thick					
24" high	EA	1.143	330.00	120.00	450.00
30" high	EA	1.333	560.00	140.00	700.00
For polished aluminum add, 15%					
For clear anodized aluminum add, 15%					
For colored anodic aluminum add, 30%					
For profiled and color enameled letters add, 50%					
Cast bronze, satin finish letters					
3/8" thick					
2" high	EA	0.320	42.50	32.75	75.25
4" high	EA	0.400	64.00	41.00	105.00
1/2" thick, 6" high	EA	0.444	87.00	45.50	132.50
5/8" thick, 8" high	EA	0.500	130.00	51.00	181.00
1" thick					
10" high	EA	0.571	160.00	58.00	218.00
12" high	EA	0.667	200.00	68.00	268.00
14" high	EA	0.800	240.00	82.00	322.00
16" high	EA	1.000	360.00	100.00	460.00
Interior door signs, adhesive, flexible					
2" x 8"	EA	0.200	32.75	16.00	48.75
4" x 4"	EA	0.200	34.50	16.00	50.50
6" x 7"	EA	0.200	43.75	16.00	59.75
6" x 9"	EA	0.200	56.00	16.00	72.00
10" x 9"	EA	0.200	73.00	16.00	89.00
10" x 12"	EA	0.200	95.00	16.00	111.00
Hard plastic type, no frame					
3" x 8"	EA	0.200	73.00	16.00	89.00
4" x 4"	EA	0.200	72.00	16.00	88.00
4" x 12"	EA	0.200	78.00	16.00	94.00
Hard plastic type, with frame					
3" x 8"	EA	0.200	220.00	16.00	236.00
4" x 4"	EA	0.200	170.00	16.00	186.00
4" x 12"	EA	0.200	270.00	16.00	286.00
10145.30 TRAFFIC SIGNAGE					
TRAFFIC SIGNAGE					
Traffic signs					
Reflectorized per OSHA stds., incl. post					
Stop, 24"x24"	EA	0.533	100.00	42.75	142.75
Yield, 30" triangle	EA	0.533	56.00	42.75	98.75
Speed limit, 12"x18"	EA	0.533	64.00	42.75	106.75
Directional, 12"x18"	EA	0.533	77.00	42.75	119.75
Exit, 12"x18"	EA	0.533	77.00	42.75	119.75
Entry, 12"x18"	EA	0.533	77.00	42.75	119.75
Warning, 24"x24"	EA	0.533	100.00	42.75	142.75
Informational, 12"x18"	EA	0.533	52.00	42.75	94.75
Handicap parking, 12"x18"	EA	0.533	53.00	42.75	95.75
10170.01 TELEPHONE ENCLOSURES					
TELEPHONE ENCLOSURES					
Enclosure, wall mounted, shelf, 28" x 30" x 15"	EA	2.000	2,590.00	200.00	2,790.00
Directory shelf, stainless steel, 3 binders	EA	1.333	2,220.00	140.00	2,360.00
10211.30 TOILET PARTITIONS					
TOILET PARTITIONS					
Toilet partition, plastic laminate					
Ceiling mounted	EA	2.667	1,480.00	270.00	1,750.00
Floor mounted	EA	2.000	970.00	200.00	1,170.00
Metal					
Ceiling mounted	EA	2.667	1,010.00	270.00	1,280.00
Floor mounted	EA	2.000	960.00	200.00	1,160.00
Wheelchair partition, plastic laminate					
Ceiling mounted	EA	2.667	2,200.00	270.00	2,470.00
Floor mounted	EA	2.000	1,930.00	200.00	2,130.00
Painted metal					
Ceiling mounted	EA	2.667	1,570.00	270.00	1,840.00
Floor mounted	EA	2.000	1,430.00	200.00	1,630.00

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	Unit	Man-Hrs	Material	Labor	Total
10211.30 TOILET PARTITIONS (Cont.)					
Urinal screen, plastic laminate					
Wall hung	EA	1.000	680.00	100.00	780.00
Floor mounted	EA	1.000	610.00	100.00	710.00
Porcelain enameled steel, floor mounted	EA	1.000	790.00	100.00	890.00
Painted metal, floor mounted	EA	1.000	520.00	100.00	620.00
Stainless steel, floor mounted	EA	1.000	990.00	100.00	1,090.00
Metal toilet partitions					
Front door and side divider, floor mounted					
Porcelain enameled steel	EA	2.000	1,620.00	200.00	1,820.00
Painted steel	EA	2.000	950.00	200.00	1,150.00
Stainless steel	EA	2.000	2,350.00	200.00	2,550.00
10211.60 SHOWER STALLS					
SHOWER STALLS					
Shower receptors					
Precast, terrazzo					
32" x 32"	EA	0.667	850.00	75.00	925.00
32" x 48"	EA	0.800	900.00	90.00	990.00
Concrete					
32" x 32"	EA	0.667	350.00	75.00	425.00
48" x 48"	EA	0.889	390.00	100.00	490.00
Shower door, trim and hardware					
Economy, 24" wide, chrome, tempered glass	EA	0.800	380.00	90.00	470.00
Porcelain enameled steel, flush	EA	0.800	700.00	90.00	790.00
Baked enameled steel, flush	EA	0.800	410.00	90.00	500.00
Aluminum, tempered glass, 48" wide, sliding	EA	1.000	860.00	110.00	970.00
Folding	EA	1.000	830.00	110.00	940.00
Aluminum and tempered glass, molded plastic					
Complete with receptor and door					
32" x 32"	EA	2.000	1,050.00	220.00	1,270.00
36" x 36"	EA	2.000	1,180.00	220.00	1,400.00
40" x 40"	EA	2.286	1,230.00	260.00	1,490.00
Shower compartment, precast concrete receptor					
Single entry type					
Porcelain enameled steel	EA	8.000	2,950.00	900.00	3,850.00
Baked enameled steel	EA	8.000	2,830.00	900.00	3,730.00
Stainless steel	EA	8.000	2,720.00	900.00	3,620.00
Double entry type					
Porcelain enameled steel	EA	10.000	5,270.00	1,120.00	6,390.00
Baked enameled steel	EA	10.000	3,600.00	1,120.00	4,720.00
Stainless steel	EA	10.000	5,820.00	1,120.00	6,940.00
10212.30 CUBICLES					
CUBICLES					
Hospital track					
Ceiling hung	LF	0.089	9.43	9.08	18.51
Suspended	LF	0.114	10.25	11.75	22.00
Hospital metal dividers, galvanized steel					
Baked enamel finish					
54" high					
10" glass light	LF	0.400	160.00	41.00	201.00
14" glass light	LF	0.400	160.00	41.00	201.00
24" glass light	LF	0.400	150.00	41.00	191.00
60" high					
10" glass light	LF	0.444	170.00	45.50	215.50
14" glass light	LF	0.444	170.00	45.50	215.50
24" glass light	LF	0.444	150.00	45.50	195.50
Stainless steel					
54" high					
10" glass light	LF	0.444	270.00	45.50	315.50
14" glass light	LF	0.444	300.00	45.50	345.50
24" glass light	LF	0.444	350.00	45.50	395.50
60" high					
10" glass light	LF	0.500	310.00	51.00	361.00
14" glass light	LF	0.500	310.00	51.00	361.00

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	Unit	Man-Hrs	Material	Labor	Total
10212.30 CUBICLES (Cont.)					
60" high					
24" glass light	LF	0.500	380.00	51.00	431.00
10221.90 MOVABLE PARTITIONS					
MOVABLE PARTITIONS					
Partition, movable, 2-1/2" thick, vinyl-gypsum	SF	0.040	26.25	4.09	30.34
Enameled steel frame, with 1/4" thick clear glass	SF	0.040	32.25	4.09	36.34
Door frame and hardware for movable partitions	EA	2.667	890.00	270.00	1,160.00
Add for acoustic movable partition	SF				1.96
Accordion partition, 12' high					
Vinyl	SF	0.133	14.25	13.75	28.00
Acoustical	SF	0.133	17.00	13.75	30.75
Standard office cubicles, 8' high, steel framed					
Baked enamel finish					
100% flush	LF	0.200	220.00	20.50	240.50
75% flush and 25% glass	LF	0.222	270.00	22.75	292.75
50% flush and 50% glass	LF	0.222	380.00	22.75	402.75
100% glass	LF	0.267	440.00	27.25	467.25
Natural hardwood panels					
100% flush	LF	0.267	240.00	27.25	267.25
50% flush and 50% glass	LF	0.286	310.00	29.25	339.25
Plastic laminated panels					
100% flush	LF	0.267	270.00	27.25	297.25
75% flush and 25% glass	LF	0.286	350.00	29.25	379.25
50% flush and 50% glass	LF	0.286	390.00	29.25	419.25
Vinyl covered panels					
100% flush	LF	0.276	240.00	28.25	268.25
75% flush and 25% glass	LF	0.296	310.00	30.25	340.25
50% and 50% glass	LF	0.296	380.00	30.25	410.25
Aluminum framed					
Enameled or anodized aluminum panels					
100% flush	LF	0.200	190.00	20.50	210.50
75% flush and 25% glass	LF	0.222	180.00	22.75	202.75
50% flush and 50% glass	LF	0.222	160.00	22.75	182.75
Vinyl covered panels					
100% flush	LF	0.276	200.00	28.25	228.25
75% flush and 25% glass	LF	0.296	220.00	30.25	250.25
50% flush and 50% glass	LF	0.296	250.00	30.25	280.25
60" high partitions, steel framed					
Enameled panels	LF	0.178	95.00	18.25	113.25
Natural hardwood panels, two sides	LF	0.186	380.00	19.00	399.00
Plastic laminated panels	LF	0.186	200.00	19.00	219.00
Vinyl covered panels	LF	0.178	260.00	18.25	278.25
Aluminum framed					
Anodized or baked enamel panels	LF	0.178	140.00	18.25	158.25
Natural hardwood panels	LF	0.186	410.00	19.00	429.00
Plastic laminated panels	LF	0.186	210.00	19.00	229.00
Vinyl covered panels	LF	0.178	260.00	18.25	278.25
Wire mesh partitions					
Wall panels					
4' x 7'	EA	0.500	200.00	51.00	251.00
4' x 8'	EA	0.533	210.00	55.00	265.00
4' x 10'	EA	0.615	240.00	63.00	303.00
Wall filler panels					
1' x 7'	EA	0.500	110.00	51.00	161.00
1' x 8'	EA	0.533	120.00	55.00	175.00
1' x 10'	EA	0.571	140.00	58.00	198.00
2' x 7'	EA	0.500	120.00	51.00	171.00
2' x 8'	EA	0.533	130.00	55.00	185.00
2' x 10'	EA	0.571	150.00	58.00	208.00
3' x 7'	EA	0.500	150.00	51.00	201.00
3' x 8'	EA	0.533	200.00	55.00	255.00
3' x 10'	EA	0.571	220.00	58.00	278.00

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10221.90 MOVABLE PARTITIONS (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Ceiling panels					
10' x 2'	EA	1.143	150.00	120.00	270.00
10' x 4'	EA	1.600	230.00	160.00	390.00
Wall panel with service window					
5' wide					
7' high	EA	0.500	610.00	51.00	661.00
8' high	EA	0.533	640.00	55.00	695.00
10' high	EA	0.571	620.00	58.00	678.00
Doors					
Sliding					
3' x 7'	EA	2.000	410.00	200.00	610.00
3' x 8'	EA	2.286	550.00	230.00	780.00
3' x 10'	EA	3.200	580.00	330.00	910.00
4' x 7'	EA	2.286	520.00	230.00	750.00
4' x 8'	EA	3.200	580.00	330.00	910.00
4' x 10'	EA	4.000	620.00	410.00	1,030.00
5' x 7'	EA	3.200	570.00	330.00	900.00
5' x 8'	EA	4.000	620.00	410.00	1,030.00
5' x 10'	EA	4.000	690.00	410.00	1,100.00
Swing door					
3' x 7'	EA	2.000	340.00	200.00	540.00
4' x 7'	EA	2.286	380.00	230.00	610.00
Swing door, with 1' transom					
3' x 7'	EA	2.286	500.00	230.00	730.00
4' x 7'	EA	3.200	560.00	330.00	890.00
Swing door, with 3' transom					
3' x 7'	EA	3.200	620.00	330.00	950.00
4' x 7'	EA	4.000	650.00	410.00	1,060.00

10281.60 BATH ACCESSORIES

	Unit	Man-Hrs	Material	Labor	Total
BATH ACCESSORIES					
Ash receiver, wall mounted, aluminum	EA	0.400	260.00	41.00	301.00
Grab bar, 1-1/2" dia., stainless steel, wall mounted					
24" long	EA	0.400	91.00	41.00	132.00
36" long	EA	0.421	100.00	43.00	143.00
42" long	EA	0.444	110.00	45.50	155.50
48" long	EA	0.471	130.00	48.00	178.00
52" long	EA	0.500	140.00	51.00	191.00
1" dia., stainless steel					
12" long	EA	0.348	57.00	35.50	92.50
18" long	EA	0.364	68.00	37.25	105.25
24" long	EA	0.400	77.00	41.00	118.00
30" long	EA	0.421	91.00	43.00	134.00
36" long	EA	0.444	100.00	45.50	145.50
48" long	EA	0.471	110.00	48.00	158.00
Clothes hook, commercial, chrome	EA	0.320	23.75	32.75	56.50
Stainless	EA	0.320	23.75	32.75	56.50
Hand dryer, surface mounted, 110 volt	EA	1.000	1,300.00	100.00	1,400.00
Medicine cabinet, 16 x 22, baked enamel, lighted	EA	0.320	260.00	32.75	292.75
With mirror, lighted	EA	0.533	380.00	55.00	435.00
Mirror, 1/4" plate glass, up to 10 sf	SF	0.080	20.00	8.18	28.18
Mirror, stainless steel frame					
18"x24"	EA	0.267	150.00	27.25	177.25
18"x32"	EA	0.320	180.00	32.75	212.75
18"x36"	EA	0.400	180.00	41.00	221.00
24"x30"	EA	0.400	190.00	41.00	231.00
24"x36"	EA	0.444	200.00	45.50	245.50
24"x48"	EA	0.667	280.00	68.00	348.00
24"x60"	EA	0.800	700.00	82.00	782.00
30"x30"	EA	0.800	610.00	82.00	692.00
30"x72"	EA	1.000	1,090.00	100.00	1,190.00
48"x72"	EA	1.333	1,190.00	140.00	1,330.00
With shelf, 18"x24"	EA	0.320	470.00	32.75	502.75
Sanitary napkin dispenser, stainless steel	EA	0.533	1,130.00	55.00	1,185.00

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	Unit	Man-Hrs	Material	Labor	Total
10281.60 BATH ACCESSORIES (Cont.)					
Shower rod, 1" diameter					
Chrome finish over brass	EA	0.400	410.00	41.00	451.00
Stainless steel	EA	0.400	280.00	41.00	321.00
Soap dish, stainless steel, wall mounted	EA	0.533	260.00	55.00	315.00
Soap dispenser, commercial					
Minimum	EA	0.800	55.00	82.00	137.00
Average	EA	0.800	83.00	82.00	165.00
Maximum	EA	0.800	160.00	82.00	242.00
Toilet tissue dispenser, stainless, wall mounted					
Single roll	EA	0.200	130.00	20.50	150.50
Double roll	EA	0.229	250.00	23.25	273.25
Towel dispenser, stainless steel					
Flush mounted	EA	0.444	490.00	45.50	535.50
Surface mounted	EA	0.400	700.00	41.00	741.00
Combination towel and waste receptacle	EA	0.533	1,060.00	55.00	1,115.00
Towel bar, stainless steel					
18" long	EA	0.320	160.00	32.75	192.75
24" long	EA	0.364	220.00	37.25	257.25
30" long	EA	0.400	220.00	41.00	261.00
36" long	EA	0.444	240.00	45.50	285.50
Toothbrush and tumbler holder	EA	0.267	99.00	27.25	126.25
Waste receptacle, stainless steel, wall mounted	EA	0.667	800.00	68.00	868.00
10440.01 FIRE PROTECTION					
FIRE PROTECTION					
Portable fire extinguishers					
Water pump tank type					
2.5 gal.					
Red enameled galvanized	EA	0.533	170.00	42.75	212.75
Red enameled copper	EA	0.533	250.00	42.75	292.75
Polished copper	EA	0.533	320.00	42.75	362.75
Carbon dioxide type, red enamel steel					
Squeeze grip with hose and horn					
2.5 lb	EA	0.533	250.00	42.75	292.75
5 lb	EA	0.615	360.00	49.25	409.25
10 lb	EA	0.800	370.00	64.00	434.00
15 lb	EA	1.000	420.00	80.00	500.00
20 lb	EA	1.000	510.00	80.00	590.00
Wheeled type					
125 lb	EA	1.600	4,570.00	130.00	4,700.00
250 lb	EA	1.600	5,770.00	130.00	5,900.00
500 lb	EA	1.600	7,450.00	130.00	7,580.00
Dry chemical, pressurized type					
Red enameled steel					
2.5 lb	EA	0.533	79.00	42.75	121.75
5 lb	EA	0.615	110.00	49.25	159.25
10 lb	EA	0.800	230.00	64.00	294.00
20 lb	EA	1.000	290.00	80.00	370.00
30 lb	EA	1.000	360.00	80.00	440.00
Chrome plated steel, 2.5 lb	EA	0.533	340.00	42.75	382.75
Other type extinguishers					
2.5 gal, stainless steel, pressurized water tanks	EA	0.533	260.00	42.75	302.75
Soda and acid type	EA	0.533	210.00	42.75	252.75
Cartridge operated, water type	EA	0.533	190.00	42.75	232.75
Loaded stream, water type	EA	0.533	230.00	42.75	272.75
Foam type	EA	0.533	300.00	42.75	342.75
40 gal, wheeled foam type	EA	1.600	6,820.00	130.00	6,950.00
Fire extinguisher cabinets					
Enameled steel					
8" x 12" x 27"	EA	1.600	170.00	130.00	300.00
8" x 16" x 38"	EA	1.600	210.00	130.00	340.00
Aluminum					
8" x 12" x 27"	EA	1.600	270.00	130.00	400.00
8" x 16" x 38"	EA	1.600	320.00	130.00	450.00

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	Unit	Man-Hrs	Material	Labor	Total
10440.01 FIRE PROTECTION (Cont.)					
Fire extinguisher cabinets					
Stainless steel					
8" x 16" x 38"	EA	1.600	300.00	130.00	430.00
10510.01 LOCKERS					
LOCKERS					
Locker bench, floor mounted, laminated maple					
4'	EA	0.667	430.00	68.00	498.00
6'	EA	0.667	600.00	68.00	668.00
Wardrobe locker, 12" x 60" x 15", baked on enamel					
1-tier	EA	0.400	470.00	41.00	511.00
2-tier	EA	0.400	490.00	41.00	531.00
3-tier	EA	0.421	550.00	43.00	593.00
4-tier	EA	0.421	600.00	43.00	643.00
12" x 72" x 15", baked on enamel					
1-tier	EA	0.400	390.00	41.00	431.00
2-tier	EA	0.400	480.00	41.00	521.00
4-tier	EA	0.421	590.00	43.00	633.00
5-tier	EA	0.421	590.00	43.00	633.00
15" x 60" x 15", baked on enamel					
1-tier	EA	0.400	520.00	41.00	561.00
4-tier	EA	0.421	570.00	43.00	613.00
Wardrobe locker, single tier type					
12" x 15" x 72"	EA	0.800	350.00	82.00	432.00
18" x 15" x 72"	EA	0.842	430.00	86.00	516.00
12" x 18" x 72"	EA	0.889	380.00	91.00	471.00
18" x 18" x 72"	EA	0.941	490.00	96.00	586.00
Double tier type					
12" x 15" x 36"	EA	0.400	280.00	41.00	321.00
18" x 15" x 36"	EA	0.400	270.00	41.00	311.00
12" x 18" x 36"	EA	0.400	290.00	41.00	331.00
18" x 18" x 36"	EA	0.400	310.00	41.00	351.00
Two person unit					
18" x 15" x 72"	EA	1.333	740.00	140.00	880.00
18" x 18" x 72"	EA	1.600	840.00	160.00	1,000.00
Duplex unit					
15" x 15" x 72"	EA	0.800	760.00	82.00	842.00
15" x 21" x 72"	EA	0.800	800.00	82.00	882.00
Basket lockers, basket sets with baskets					
24 basket set	SET	4.000	1,860.00	410.00	2,270.00
30 basket set	SET	5.000	2,230.00	510.00	2,740.00
36 basket set	SET	6.667	2,520.00	680.00	3,200.00
42 basket set	SET	8.000	2,820.00	820.00	3,640.00
10550.01 POSTAL SPECIALTIES					
POSTAL SPECIALTIES					
Mail chutes					
Single mail chute					
Finished aluminum	LF	2.000	970.00	200.00	1,170.00
Bronze	LF	2.000	1,360.00	200.00	1,560.00
Single mail chute receiving box					
Finished aluminum	EA	4.000	1,440.00	410.00	1,850.00
Bronze	EA	4.000	1,730.00	410.00	2,140.00
Twin mail chute, double parallel					
Finished aluminum	FLR	4.000	2,120.00	410.00	2,530.00
Bronze	FLR	4.000	2,780.00	410.00	3,190.00
Receiving box, 36" x 20" x 12"					
Finished aluminum	EA	6.667	3,320.00	680.00	4,000.00
Bronze	EA	6.667	4,470.00	680.00	5,150.00
Locked receiving mail box					
Finished aluminum	EA	4.000	1,460.00	410.00	1,870.00
Bronze	EA	4.000	2,840.00	410.00	3,250.00
Commercial postal accessories for mail chutes					
Letter slot, brass	EA	1.333	140.00	140.00	280.00
Bulk mail slot, brass	EA	1.333	290.00	140.00	430.00

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	Unit	Man-Hrs	Material	Labor	Total
10550.01 POSTAL SPECIALTIES (Cont.)					
Mail boxes					
Residential postal accessories					
Letter slot	EA	0.400	110.00	41.00	151.00
Rural letter box	EA	1.000	210.00	100.00	310.00
Apartment house, keyed, 3.5" x 4.5" x 16"	EA	0.267	200.00	27.25	227.25
Ranch style	EA	0.400	210.00	41.00	251.00
Commercial postal accessories					
Letter box, with combination lock	EA	0.286	150.00	29.25	179.25
Key lock	EA	0.286	170.00	29.25	199.25
Mail box, aluminum w/glass front, 4x5					
Horizontal rear load	EA	0.229	260.00	23.25	283.25
Vertical front load	EA	0.229	140.00	23.25	163.25
10570.01 WARDROBE SPECIALTIES					
WARDROBE SPECIALTIES					
Hospital wardrobe units, 24" x 24" x 76", with door					
Baked enameled steel	EA	4.444	5,240.00	450.00	5,690.00
Hardwood	EA	4.444	2,800.00	450.00	3,250.00
Stainless steel	EA	4.444	8,740.00	450.00	9,190.00
Plastic laminated	EA	4.444	3,150.00	450.00	3,600.00
Dormitory wardrobe units, 24" x 76", with door					
Hardwood	EA	4.444	2,920.00	450.00	3,370.00
Plastic laminated	EA	4.444	2,630.00	450.00	3,080.00
Hat and coat rack					
Single tier					
Baked enameled steel	EA	0.200	330.00	20.50	350.50
Stainless steel	EA	0.200	370.00	20.50	390.50
Aluminum	EA	0.200	340.00	20.50	360.50
Double tier					
Baked enameled steel	EA	0.229	620.00	23.25	643.25
Stainless steel	EA	0.229	850.00	23.25	873.25
Aluminum	EA	0.229	690.00	23.25	713.25
10572.30 SHELVING					
SHELVING					
Shelving, enamel, closed side and back, 12" x 36"					
5 shelves	EA	1.333	350.00	140.00	490.00
8 shelves	EA	1.778	390.00	180.00	570.00
Open					
5 shelves	EA	1.333	180.00	140.00	320.00
8 shelves	EA	1.778	200.00	180.00	380.00
Metal storage shelving, baked enamel					
7 shelf unit, 72" or 84" high					
10" shelf	LF	0.800	61.00	82.00	143.00
12" shelf	LF	0.842	68.00	86.00	154.00
15" shelf	LF	0.889	120.00	91.00	211.00
18" shelf	LF	0.941	120.00	96.00	216.00
24" shelf	LF	1.000	140.00	100.00	240.00
30" shelf	LF	1.067	130.00	110.00	240.00
36" shelf	LF	1.143	160.00	120.00	280.00
4 shelf unit, 40" high					
10" shelf	LF	0.667	83.00	68.00	151.00
12" shelf	LF	0.727	90.00	74.00	164.00
15" shelf	LF	0.800	110.00	82.00	192.00
18" shelf	LF	0.842	120.00	86.00	206.00
24" shelf	LF	0.889	180.00	91.00	271.00
3 shelf unit, 32" high					
10" shelf	LF	0.400	72.00	41.00	113.00
12" shelf	LF	0.421	72.00	43.00	115.00
15" shelf	LF	0.444	78.00	45.50	123.50
18" shelf	LF	0.471	82.00	48.00	130.00
24" shelf	LF	0.500	90.00	51.00	141.00
Single shelf unit, attached to masonry					
10" shelf	LF	0.133	25.00	13.75	38.75
12" shelf	LF	0.145	27.75	14.75	42.50
15" shelf	LF	0.154	28.75	15.75	44.50

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	Unit	Man-Hrs	Material	Labor	Total
10572.30 SHELVING (Cont.)					
Single shelf unit, attached to masonry					
18" shelf	LF	0.163	32.25	16.75	49.00
24" shelf	LF	0.174	39.50	17.75	57.25
For stainless steel, add to material, 120%					
For attachment to gypsum board, add to labor, 50%					
Built-in wood shelves					
Posts and trimmed plywood	LF	0.114	7.85	11.75	19.60
Solid clear pine	LF	0.123	12.25	12.50	24.75
Closet shelf, pine with rod	LF	0.123	8.39	12.50	20.89
For lumber edge band, add to material	LF				4.30
For prefinished shelves, add to material, 225%					
10750.01 FLAGPOLES					
FLAGPOLES					
Installed in concrete base					
Fiberglass					
25' high	EA	5.333	2,210.00	550.00	2,760.00
50' high	EA	13.333	5,840.00	1,360.00	7,200.00
Aluminum					
25' high	EA	5.333	2,140.00	550.00	2,690.00
50' high	EA	13.333	4,240.00	1,360.00	5,600.00
Bonderized steel					
25' high	EA	6.154	2,400.00	630.00	3,030.00
50' high	EA	16.000	4,800.00	1,640.00	6,440.00
Freestanding tapered, fiberglass					
30' high	EA	5.714	2,630.00	580.00	3,210.00
40' high	EA	7.273	3,410.00	740.00	4,150.00
50' high	EA	8.000	8,710.00	820.00	9,530.00
60' high	EA	9.412	9,310.00	960.00	10,270.00
Wall mounted, with collar, brushed aluminum finish					
15' long	EA	4.000	2,030.00	410.00	2,440.00
18' long	EA	4.000	2,300.00	410.00	2,710.00
20' long	EA	4.211	2,510.00	430.00	2,940.00
24' long	EA	4.706	2,690.00	480.00	3,170.00
Outrigger, wall, including base					
10' long	EA	5.333	2,060.00	550.00	2,610.00
20' long	EA	6.667	2,730.00	680.00	3,410.00
10810.01 PEST CONTROL					
PEST CONTROL					
Termite control					
Under slab spraying					
Minimum	SF	0.002	1.31	0.16	1.47
Average	SF	0.004	1.31	0.32	1.63
Maximum	SF	0.008	1.87	0.64	2.51

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	Unit	Man-Hrs	Material	Labor	Total
11110.01 SPECIAL SYSTEMS					
SPECIAL SYSTEMS					
Air compressor, air cooled, two stage					
5.0 cfm, 175 psi	EA	16.000	2,840.00	1,790.00	4,630.00
10 cfm, 175 psi	EA	17.778	3,470.00	1,990.00	5,460.00
20 cfm, 175 psi	EA	19.048	4,780.00	2,140.00	6,920.00
50 cfm, 125 psi	EA	21.053	6,970.00	2,360.00	9,330.00
80 cfm, 125 psi	EA	22.857	9,980.00	2,560.00	12,540.00
Single stage, 125 psi					
1.0 cfm	EA	11.429	2,740.00	1,280.00	4,020.00
1.5 cfm	EA	11.429	2,790.00	1,280.00	4,070.00
2.0 cfm	EA	11.429	2,860.00	1,280.00	4,140.00
Automotive, hose reel, air and water, 50' hose	EA	6.667	1,280.00	750.00	2,030.00
Lube equipment, 3 reel, with pumps	EA	32.000	6,680.00	3,590.00	10,270.00
Tire changer					
Truck	EA	11.429	15,150.00	1,280.00	16,430.00
Passenger car	EA	6.154	3,580.00	690.00	4,270.00
Air hose reel, includes 50' hose	EA	6.154	950.00	690.00	1,640.00
Hose reel, 5 reel, motor oil, gear oil, lube, air & water	EA	32.000	8,840.00	3,590.00	12,430.00
Water hose reel, 50' hose	EA	6.154	950.00	690.00	1,640.00
Pump, for motor or gear oil, fits 55 gal drum	EA	0.800	1,240.00	90.00	1,330.00
For chassis lube	EA	0.800	2,020.00	90.00	2,110.00
Fuel dispensing pump, lighted dial, one product					
One hose	EA	6.667	4,410.00	750.00	5,160.00
Two hose	EA	6.667	7,780.00	750.00	8,530.00
Two products, two hose	EA	6.667	8,200.00	750.00	8,950.00
11130.01 LOADING DOCK EQUIPMENT					
LOADING DOCK EQUIPMENT					
Dock leveler, 10 ton capacity					
6' x 8'	EA	8.000	6,710.00	820.00	7,530.00
7' x 8'	EA	8.000	7,710.00	820.00	8,530.00
Bumpers, laminated rubber					
4-1/2" thick					
6" x 14"	EA	0.160	82.00	16.25	98.25
6" x 36"	EA	0.178	160.00	18.25	178.25
10" x 14"	EA	0.200	110.00	20.50	130.50
10" x 24"	EA	0.229	160.00	23.25	183.25
10" x 36"	EA	0.267	230.00	27.25	257.25
12" x 14"	EA	0.211	140.00	21.50	161.50
12" x 24"	EA	0.250	200.00	25.50	225.50
12" x 36"	EA	0.296	280.00	30.25	310.25
6" thick					
10" x 14"	EA	0.229	130.00	23.25	153.25
10" x 24"	EA	0.276	140.00	28.25	168.25
10" x 36"	EA	0.400	290.00	41.00	331.00
Extruded rubber bumpers					
T-section, 22" x 22" x 3"	EA	0.160	190.00	16.25	206.25
Molded rubber bumpers					
24" x 12" x 3" thick	EA	0.400	110.00	41.00	151.00
Door seal, 12" x 12", vinyl covered	LF	0.200	67.00	20.50	87.50
Dock boards, heavy duty, 5' x 5'					
5000 lb					
Minimum	EA	6.667	1,580.00	680.00	2,260.00
Maximum	EA	6.667	1,750.00	680.00	2,430.00
9000 lb					
Minimum	EA	6.667	1,820.00	680.00	2,500.00
Maximum	EA	7.273	2,180.00	740.00	2,920.00
15,000 lb	EA	7.273	2,480.00	740.00	3,220.00
Truck shelters					
Minimum	EA	6.154	1,320.00	630.00	1,950.00
Maximum	EA	11.429	2,200.00	1,170.00	3,370.00

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	Unit	Man-Hrs	Material	Labor	Total
11150.01 SECURITY EQUIPMENT					
SECURITY EQUIPMENT					
Bulletproof teller window					
4' x 4'	EA	13.333	3,080.00	1,360.00	4,440.00
5' x 4'	EA	16.000	3,970.00	1,640.00	5,610.00
Bulletproof partitions					
Up to 12' high, 2.5" thick	SF	0.053	260.00	5.45	265.45
Counter for banks					
Minimum	LF	1.600	1,090.00	160.00	1,250.00
Maximum	LF	2.667	4,860.00	270.00	5,130.00
Drive-up window					
Minimum	EA	11.429	6,760.00	1,170.00	7,930.00
Maximum	EA	26.667	7,330.00	2,730.00	10,060.00
Night depository					
Minimum	EA	11.429	12,680.00	1,170.00	13,850.00
Maximum	EA	26.667	18,030.00	2,730.00	20,760.00
Office safes, 30" x 20" x 20", 1 hr rating	EA	2.000	4,930.00	200.00	5,130.00
30" x 16" x 15", 2 hr rating	EA	1.600	2,520.00	160.00	2,680.00
30" x 28" x 20", H&G rating	EA	1.000	5,840.00	100.00	5,940.00
Service windows, pass through painted steel					
24" x 36"	EA	8.000	4,250.00	820.00	5,070.00
48" x 40"	EA	10.000	6,620.00	1,020.00	7,640.00
72" x 40"	EA	16.000	8,320.00	1,640.00	9,960.00
Special doors and windows					
3' x 7' bulletproof door with frame	EA	11.429	8,450.00	1,170.00	9,620.00
12" x 12" vision panel	EA	5.714	4,900.00	580.00	5,480.00
Surveillance system					
Minimum	EA	16.000	8,380.00	1,640.00	10,020.00
Maximum	EA	80.000	15,140.00	8,180.00	23,320.00
Vault door, 3' wide, 6'6" high					
3-1/2" thick	EA	100.000	5,450.00	10,230.00	15,680.00
7" thick	EA	133.333	8,730.00	13,630.00	22,360.00
10" thick	EA	160.000	10,910.00	16,360.00	27,270.00
Insulated vault door					
2 hr rating					
32" wide	EA	8.000	5,450.00	820.00	6,270.00
40" wide	EA	8.421	6,060.00	860.00	6,920.00
4 hr rating					
32" wide	EA	8.889	6,030.00	910.00	6,940.00
40" wide	EA	10.000	7,020.00	1,020.00	8,040.00
6 hr rating					
32" wide	EA	8.889	6,940.00	910.00	7,850.00
40" wide	EA	10.000	8,110.00	1,020.00	9,130.00
Insulated file room door					
1 hr rating					
32" wide	EA	8.000	5,360.00	820.00	6,180.00
40" wide	EA	8.889	5,970.00	910.00	6,880.00
11160.01 VAULTS					
VAULTS					
Floor safes					
Class C					
1.0 cf	EA	0.667	1,300.00	68.00	1,368.00
1.3 cf	EA	1.000	1,440.00	100.00	1,540.00
1.9 cf	EA	1.333	1,880.00	140.00	2,020.00
5.2 cf	EA	1.333	3,840.00	140.00	3,980.00
11213.30 CHECKROOM EQUIPMENT					
CHECKROOM EQUIPMENT					
Motorized checkroom equipment					
No shelf system, 6'4" height					
7'6" length	EA	8.000	6,140.00	820.00	6,960.00
14'6" length	EA	8.000	6,210.00	820.00	7,030.00
28' length	EA	8.000	7,480.00	820.00	8,300.00
One shelf, 6'8" height					
7'6" length	EA	8.000	7,530.00	820.00	8,350.00
14'6" length	EA	8.000	7,730.00	820.00	8,550.00

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	Unit	Man-Hrs	Material	Labor	Total
11213.30 CHECKROOM EQUIPMENT (Cont.)					
One shelf, 6'8" height					
28' length	EA	8.000	9,290.00	820.00	10,110.00
Two shelves, 7'5" height					
7'6" length	EA	8.000	9,250.00	820.00	10,070.00
14'6" length	EA	8.000	11,680.00	820.00	12,500.00
28' length	EA	8.000	11,920.00	820.00	12,740.00
Three shelves, 8' height					
7'6" length	EA	16.000	9,450.00	1,640.00	11,090.00
14'6" length	EA	16.000	11,910.00	1,640.00	13,550.00
28' length	EA	16.000	12,010.00	1,640.00	13,650.00
Four shelves, 8'7" height					
7'6" length	EA	16.000	9,560.00	1,640.00	11,200.00
14'6" length	EA	16.000	12,200.00	1,640.00	13,840.00
28' length	EA	16.000	12,470.00	1,640.00	14,110.00
11230.01 LAUNDRY EQUIPMENT					
LAUNDRY EQUIPMENT					
High capacity, heavy duty					
Washer extractors					
135 lb					
Standard	EA	6.667	40,910.00	680.00	41,590.00
Pass through	EA	6.667	47,010.00	680.00	47,690.00
200 lb					
Standard	EA	6.667	50,240.00	680.00	50,920.00
Pass through	EA	6.667	61,010.00	680.00	61,690.00
110 lb dryer	EA	6.667	15,390.00	680.00	16,070.00
Hand operated presser	EA	8.889	11,040.00	910.00	11,950.00
Mushroom press	EA	8.889	6,900.00	910.00	7,810.00
Spreader feeders					
2 station	EA	8.889	78,560.00	910.00	79,470.00
4 station	EA	16.000	92,850.00	1,640.00	94,490.00
Delivery carts					
12 bushel	EA	0.100	400.00	10.25	410.25
16 bushel	EA	0.107	490.00	11.00	501.00
18 bushel	EA	0.114	620.00	11.75	631.75
30 bushel	EA	0.133	900.00	13.75	913.75
40 bushel	EA	0.160	1,080.00	16.25	1,096.25
Low capacity					
Pressers					
Air operated	EA	3.200	8,570.00	330.00	8,900.00
Hand operated	EA	3.200	6,780.00	330.00	7,110.00
Extractor, low capacity	EA	3.200	6,180.00	330.00	6,510.00
Ironer, 48"	EA	1.600	4,670.00	160.00	4,830.00
Coin washers					
10 lb capacity	EA	1.600	2,270.00	160.00	2,430.00
20 lb capacity	EA	1.600	5,360.00	160.00	5,520.00
Coin dryer	EA	1.000	1,080.00	100.00	1,180.00
Coin dry cleaner, 20 lb	EA	3.200	4,670.00	330.00	5,000.00
11240.01 MAINTENANCE EQUIPMENT					
MAINTENANCE EQUIPMENT					
Vacuum cleaning system					
3 valves					
1.5 hp	EA	8.889	1,180.00	910.00	2,090.00
2.5 hp	EA	11.429	1,420.00	1,170.00	2,590.00
5 valves	EA	16.000	2,220.00	1,640.00	3,860.00
7 valves	EA	20.000	2,950.00	2,050.00	5,000.00
11260.01 FOOD SERVICE EQUIPMENT					
FOOD SERVICE EQUIPMENT					
Commercial water filtration systems					
Minimum	EA	4.000	990.00	450.00	1,440.00
Average	EA	4.706	1,480.00	530.00	2,010.00
Maximum	EA	5.333	2,530.00	600.00	3,130.00

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11260.01 FOOD SERVICE EQUIPMENT (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Unit kitchens					
30" compact kitchen					
Refrigerator, with range, sink	EA	4.000	1,930.00	420.00	2,350.00
Sink only	EA	2.667	2,450.00	280.00	2,730.00
Range only	EA	2.000	2,000.00	210.00	2,210.00
Cabinet for upper wall section	EA	1.143	500.00	120.00	620.00
Stainless shield, for rear wall	EA	0.320	200.00	33.25	233.25
Side wall	EA	0.320	150.00	33.25	183.25
42" compact kitchen					
Refrigerator with range, sink	EA	4.444	2,350.00	460.00	2,810.00
Sink only	EA	4.000	1,280.00	420.00	1,700.00
Cabinet for upper wall section	EA	1.333	990.00	140.00	1,130.00
Stainless shield, for rear wall	EA	0.333	800.00	34.75	834.75
Side wall	EA	0.333	220.00	34.75	254.75
54" compact kitchen					
Refrigerator, oven, range, sink	EA	5.714	3,150.00	600.00	3,750.00
Cabinet for upper wall section	EA	1.600	1,280.00	170.00	1,450.00
Stainless shield, for					
Rear wall	EA	0.364	800.00	37.75	837.75
Side wall	EA	0.364	220.00	37.75	257.75
60" compact kitchen					
Refrigerator, oven, range, sink	EA	5.714	4,280.00	600.00	4,880.00
Cabinet for upper wall section	EA	1.600	290.00	170.00	460.00
Stainless shield, for					
Rear wall	EA	0.364	950.00	37.75	987.75
Side wall	EA	0.364	240.00	37.75	277.75
72" compact kitchen					
Refrigerator, oven, range, sink	EA	6.667	4,520.00	690.00	5,210.00
Cabinet for upper wall section	EA	1.600	310.00	170.00	480.00
Stainless shield for					
Rear wall	EA	0.400	1,030.00	41.75	1,071.75
Side wall	EA	0.400	240.00	41.75	281.75
Bake oven					
Single deck					
Minimum	EA	1.000	4,550.00	100.00	4,650.00
Maximum	EA	2.000	8,700.00	210.00	8,910.00
Double deck					
Minimum	EA	1.333	8,110.00	140.00	8,250.00
Maximum	EA	2.000	25,340.00	210.00	25,550.00
Triple deck					
Minimum	EA	1.333	28,750.00	140.00	28,890.00
Maximum	EA	2.667	51,300.00	280.00	51,580.00
Convection type oven, electric, 40" x 45" x 57"					
Minimum	EA	1.000	4,490.00	100.00	4,590.00
Maximum	EA	2.000	7,900.00	210.00	8,110.00
Broiler, without oven, 69" x 26" x 39"					
Minimum	EA	1.000	7,150.00	100.00	7,250.00
Maximum	EA	1.333	11,240.00	140.00	11,380.00
Coffee urns, 10 gallons					
Minimum	EA	2.667	5,440.00	280.00	5,720.00
Maximum	EA	4.000	6,160.00	420.00	6,580.00
Fryer, with submerger					
Single					
Minimum	EA	1.600	2,230.00	170.00	2,400.00
Maximum	EA	2.667	6,120.00	280.00	6,400.00
Double					
Minimum	EA	2.000	3,700.00	210.00	3,910.00
Maximum	EA	2.667	19,820.00	280.00	20,100.00
Griddle, counter					
3' long					
Minimum	EA	1.333	3,600.00	140.00	3,740.00
Maximum	EA	1.600	7,410.00	170.00	7,580.00
5' long					
Minimum	EA	2.000	7,800.00	210.00	8,010.00
Maximum	EA	2.667	17,980.00	280.00	18,260.00

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11260.01 FOOD SERVICE EQUIPMENT (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Kettles, steam, jacketed					
20 gallons					
Minimum	EA	2.000	17,160.00	210.00	17,370.00
Maximum	EA	4.000	18,760.00	420.00	19,180.00
40 gallons					
Minimum	EA	2.000	26,330.00	210.00	26,540.00
Maximum	EA	4.000	38,030.00	420.00	38,450.00
60 gallons					
Minimum	EA	2.000	28,950.00	210.00	29,160.00
Maximum	EA	4.000	40,950.00	420.00	41,370.00
Range					
Heavy duty, single oven, open top					
Minimum	EA	1.000	11,070.00	100.00	11,170.00
Maximum	EA	2.667	23,300.00	280.00	23,580.00
Fry top					
Minimum	EA	1.000	11,310.00	100.00	11,410.00
Maximum	EA	2.667	15,840.00	280.00	16,120.00
Steamers, electric					
27 kw					
Minimum	EA	2.000	20,090.00	210.00	20,300.00
Maximum	EA	2.667	36,720.00	280.00	37,000.00
18 kw					
Minimum	EA	2.000	11,060.00	210.00	11,270.00
Maximum	EA	2.667	25,940.00	280.00	26,220.00
Dishwasher, rack type					
Single tank, 190 racks/hr	EA	4.000	29,450.00	420.00	29,870.00
Double tank					
234 racks/hr	EA	4.444	60,810.00	460.00	61,270.00
265 racks/hr	EA	5.333	72,690.00	560.00	73,250.00
Dishwasher, automatic 100 meals/hr	EA	2.667	23,650.00	280.00	23,930.00
Disposals					
100 gal/hr	EA	2.667	1,970.00	280.00	2,250.00
120 gal/hr	EA	2.759	2,290.00	290.00	2,580.00
250 gal/hr	EA	2.857	2,700.00	300.00	3,000.00
Exhaust hood for dishwasher, gutter 4 sides					
4'x4'x2'	EA	2.963	4,780.00	310.00	5,090.00
4'x7'x2'	EA	3.200	6,480.00	330.00	6,810.00
Food preparation machines					
Vertical cutter mixers					
25 quart	EA	2.667	19,500.00	280.00	19,780.00
40 quart	EA	2.667	25,180.00	280.00	25,460.00
80 quart	EA	4.000	32,180.00	420.00	32,600.00
130 quart	EA	6.667	42,900.00	690.00	43,590.00
Choppers					
5 lb	EA	2.000	5,450.00	210.00	5,660.00
16 lb	EA	2.667	8,580.00	280.00	8,860.00
40 lb	EA	4.000	10,790.00	420.00	11,210.00
Mixers, floor models					
20 quart	EA	1.000	6,000.00	100.00	6,100.00
60 quart	EA	1.000	29,840.00	100.00	29,940.00
80 quart	EA	1.143	48,750.00	120.00	48,870.00
140 quart	EA	1.600	58,160.00	170.00	58,330.00
Ice cube maker					
50 lb per day					
Minimum	EA	8.000	3,700.00	830.00	4,530.00
Maximum	EA	8.000	5,460.00	830.00	6,290.00
500 lb per day					
Minimum	EA	13.333	8,780.00	1,390.00	10,170.00
Maximum	EA	13.333	10,370.00	1,390.00	11,760.00
Ice flakers					
300 lb per day	EA	8.000	6,430.00	830.00	7,260.00
600 lb per day	EA	13.333	10,550.00	1,390.00	11,940.00
1000 lb per day	EA	17.778	12,030.00	1,850.00	13,880.00

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	Unit	Man-Hrs	Material	Labor	Total
11260.01 FOOD SERVICE EQUIPMENT (Cont.)					
Ice flakers					
2000 lb per day	EA	20.000	23,210.00	2,080.00	25,290.00
Refrigerated cases					
Dairy products					
Multi-deck type	LF	0.533	2,080.00	56.00	2,136.00
For rear sliding doors, add	LF				400.00
Delicatessen case, service deli					
Single deck	LF	4.000	1,490.00	420.00	1,910.00
Multi-deck	LF	5.000	1,700.00	520.00	2,220.00
Meat case					
Single deck	LF	4.706	1,280.00	490.00	1,770.00
Multi-deck	LF	5.000	1,490.00	520.00	2,010.00
Produce case					
Single deck	LF	4.706	1,480.00	490.00	1,970.00
Multi-deck	LF	5.000	1,590.00	520.00	2,110.00
Bottle coolers					
6' long					
Minimum	EA	16.000	4,210.00	1,670.00	5,880.00
Maximum	EA	16.000	6,240.00	1,670.00	7,910.00
10' long					
Minimum	EA	26.667	5,460.00	2,780.00	8,240.00
Maximum	EA	26.667	10,730.00	2,780.00	13,510.00
Frozen food cases					
Chest type	LF	4.706	1,140.00	490.00	1,630.00
Reach-in, glass door	LF	5.000	1,570.00	520.00	2,090.00
Island case, single	LF	4.706	1,400.00	490.00	1,890.00
Multi-deck	LF	5.000	2,230.00	520.00	2,750.00
Ice storage bins					
500 lb capacity	EA	11.429	2,350.00	1,190.00	3,540.00
1000 lb capacity	EA	22.857	3,510.00	2,380.00	5,890.00
11270.01 DARKROOM EQUIPMENT					
DARKROOM EQUIPMENT					
Dryers					
36" x 25" x 68"	EA	4.000	16,350.00	450.00	16,800.00
48" x 25" x 68"	EA	4.000	16,890.00	450.00	17,340.00
Processors, film					
Black and white	EA	4.000	26,050.00	450.00	26,500.00
Color negatives	EA	4.000	29,510.00	450.00	29,960.00
Prints	EA	4.000	33,830.00	450.00	34,280.00
Transparencies	EA	4.000	37,120.00	450.00	37,570.00
Sinks with cabinet and/or stand					
5" sink with stand					
24" x 48"	EA	2.000	1,460.00	220.00	1,680.00
32" x 64"	EA	2.667	2,240.00	300.00	2,540.00
38" x 52"	EA	2.667	3,150.00	300.00	3,450.00
42" x 132"	EA	4.000	4,700.00	450.00	5,150.00
48" x 52"	EA	4.000	3,610.00	450.00	4,060.00
5" sink with cabinet					
24" x 48"	EA	2.000	3,010.00	220.00	3,230.00
32" x 64"	EA	2.667	3,760.00	300.00	4,060.00
38" x 52"	EA	2.667	3,860.00	300.00	4,160.00
42" x 132"	EA	4.000	6,290.00	450.00	6,740.00
48" x 52"	EA	4.000	5,260.00	450.00	5,710.00
10" sink with stand					
24" x 48"	EA	2.000	2,480.00	220.00	2,700.00
32" x 64"	EA	2.667	2,630.00	300.00	2,930.00
38" x 52"	EA	2.667	3,570.00	300.00	3,870.00
10" sink with cabinet					
24" x 48"	EA	2.000	2,730.00	220.00	2,950.00
38" x 52"	EA	2.667	5,050.00	300.00	5,350.00
11310.01 RESIDENTIAL EQUIPMENT					
RESIDENTIAL EQUIPMENT					
Clothes Dryer					
Minimum	EA	2.667	280.00	210.00	490.00

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	Unit	Man-Hrs	Material	Labor	Total
11310.01 RESIDENTIAL EQUIPMENT (Cont.)					
Clothes Dryer					
Maximum	EA	2.667	830.00	210.00	1,040.00
Clothes Washer					
Minimum	EA	2.667	600.00	210.00	810.00
Maximum	EA	2.667	1,040.00	210.00	1,250.00
Compactor, 4 to 1 compaction	EA	2.000	2,350.00	210.00	2,560.00
Dishwasher, built-in					
2 cycles	EA	4.000	1,160.00	420.00	1,580.00
4 or more cycles	EA	4.000	3,120.00	420.00	3,540.00
Disposal					
Garbage disposer	EA	2.667	320.00	280.00	600.00
Heaters, electric, built-in					
Ceiling type	EA	2.667	660.00	280.00	940.00
Wall type					
Minimum	EA	2.000	330.00	210.00	540.00
Maximum	EA	2.667	1,150.00	280.00	1,430.00
Hood for range, 2-speed, vented					
30" wide	EA	2.667	910.00	280.00	1,190.00
42" wide	EA	2.667	1,680.00	280.00	1,960.00
Ice maker, automatic					
30 lb per day	EA	1.143	3,080.00	120.00	3,200.00
50 lb per day	EA	4.000	3,900.00	420.00	4,320.00
Folding access stairs, disappearing metal stair					
8' long	EA	1.143	1,610.00	120.00	1,730.00
11' long	EA	1.143	1,680.00	120.00	1,800.00
12' long	EA	1.143	1,790.00	120.00	1,910.00
Wood frame, wood stair					
22" x 54" x 8'9" long	EA	0.800	310.00	83.00	393.00
25" x 54" x 10' long	EA	0.800	380.00	83.00	463.00
Microwave, built-in					
Minimum	EA	2.000	690.00	210.00	900.00
Maximum	EA	2.667	5,390.00	280.00	5,670.00
Ranges, electric					
Built-in, 30", 1 oven	EA	2.667	3,370.00	280.00	3,650.00
2 oven	EA	2.667	3,900.00	280.00	4,180.00
Countertop, 4 burner, standard	EA	2.000	1,950.00	210.00	2,160.00
With grill	EA	2.000	4,870.00	210.00	5,080.00
Freestanding, 21", 1 oven	EA	2.667	1,760.00	280.00	2,040.00
30", 1 oven	EA	1.600	3,410.00	170.00	3,580.00
2 oven	EA	1.600	5,560.00	170.00	5,730.00
Refrigerator/freezer, free-standing					
Minimum	EA	2.000	830.00	160.00	990.00
Maximum	EA	2.667	4,840.00	210.00	5,050.00
Water softener					
30 grains per gallon	EA	2.667	1,910.00	280.00	2,190.00
70 grains per gallon	EA	4.000	2,400.00	420.00	2,820.00
11530.01 LABORATORY EQUIPMENT					
LABORATORY EQUIPMENT					
Cabinets, base					
Minimum	LF	0.667	550.00	68.00	618.00
Maximum	LF	0.667	1,000.00	68.00	1,068.00
Full storage, 7' high					
Minimum	LF	0.667	530.00	68.00	598.00
Maximum	LF	0.667	1,010.00	68.00	1,078.00
Wall					
Minimum	LF	0.800	200.00	82.00	282.00
Maximum	LF	0.800	340.00	82.00	422.00
Countertops					
Minimum	SF	0.100	82.00	10.25	92.25
Average	SF	0.114	96.00	11.75	107.75
Maximum	SF	0.133	110.00	13.75	123.75
Tables					
Open underneath	SF	0.400	180.00	41.00	221.00
Doors underneath	SF	0.500	590.00	51.00	641.00

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	Unit	Man-Hrs	Material	Labor	Total
11530.01 LABORATORY EQUIPMENT (Cont.)					
Medical laboratory equipment					
Analyzer					
Chloride	EA	0.400	6,590.00	41.75	6,631.75
Blood	EA	0.667	36,260.00	69.00	36,329.00
Bath, water, utility, countertop unit	EA	0.800	1,360.00	83.00	1,443.00
Hot plate, lab, countertop	EA	0.727	520.00	76.00	596.00
Stirrer	EA	0.727	630.00	76.00	706.00
Incubator, anaerobic, 23x23x36"	EA	4.000	11,180.00	420.00	11,600.00
Dry heat bath	EA	1.333	1,210.00	140.00	1,350.00
Incinerator, for sterilizing	EA	0.080	830.00	8.33	838.33
Meter, serum protein	EA	0.100	1,280.00	10.50	1,290.50
pH analog, general purpose	EA	0.114	1,380.00	12.00	1,392.00
Refrigerator, blood bank	EA	1.333	10,580.00	140.00	10,720.00
5.4 cf, undercounter type	EA	1.333	7,180.00	140.00	7,320.00
Refrigerator/freezer, 4.4 cf, undercounter type	EA	1.333	1,360.00	140.00	1,500.00
Sealer, impulse, free standing, 20x12x4"	EA	0.267	760.00	27.75	787.75
Timer, electric, 1-60 minutes, bench or wall mounted	EA	0.444	290.00	46.25	336.25
Glassware washer-dryer, undercounter	EA	10.000	12,520.00	1,040.00	13,560.00
Balance, torsion suspension, tabletop, 4.5 lb capacity	EA	0.444	1,650.00	46.25	1,696.25
Binocular microscope, with in-base illuminator	EA	0.308	5,020.00	32.00	5,052.00
Centrifuge, table model, 19x16x13"	EA	0.320	1,930.00	33.25	1,963.25
Clinical model, with four place head	EA	0.178	2,080.00	18.50	2,098.50
11570.01 INDUSTRIAL EQUIPMENT					
INDUSTRIAL EQUIPMENT					
Vehicular paint spray booth, solid back, 14'4" x 9'6"					
24' deep	EA	8.000	10,390.00	820.00	11,210.00
26'6" deep	EA	8.000	11,880.00	820.00	12,700.00
28'6" deep	EA	8.000	13,710.00	820.00	14,530.00
Drive through, 14'9" x 9'6"					
24' deep	EA	8.000	11,060.00	820.00	11,880.00
26'6" deep	EA	8.000	13,330.00	820.00	14,150.00
28'6" deep	EA	8.000	15,210.00	820.00	16,030.00
Water wash, paint spray booth					
5' x 11'2" x 10'8"	EA	8.000	7,500.00	820.00	8,320.00
6' x 11'2" x 10'8"	EA	8.000	7,850.00	820.00	8,670.00
8' x 11'2" x 10'8"	EA	8.000	8,480.00	820.00	9,300.00
10' x 11'2" x 11'2"	EA	8.000	9,620.00	820.00	10,440.00
12' x 12'2" x 11'2"	EA	8.000	11,180.00	820.00	12,000.00
14' x 12'2" x 11'2"	EA	8.000	12,650.00	820.00	13,470.00
16' x 12'2" x 11'2"	EA	8.000	15,410.00	820.00	16,230.00
20' x 12'2" x 11'2"	EA	8.000	18,700.00	820.00	19,520.00
Dry type spray booth, with paint arrestors					
5'4" x 7'2" x 6'8"	EA	8.000	4,530.00	820.00	5,350.00
6'4" x 7'2" x 6'8"	EA	8.000	5,890.00	820.00	6,710.00
8'4" x 7'2" x 9'2"	EA	8.000	6,680.00	820.00	7,500.00
10'4" x 7'2" x 9'2"	EA	8.000	7,860.00	820.00	8,680.00
12'4" x 7'6" x 9'2"	EA	8.000	7,820.00	820.00	8,640.00
14'4" x 7'6" x 9'8"	EA	8.000	10,580.00	820.00	11,400.00
16'4" x 7'7" x 9'8"	EA	8.000	12,090.00	820.00	12,910.00
20'4" x 7'7" x 10'8"	EA	8.000	13,750.00	820.00	14,570.00
Air compressor, electric					
1 hp					
115 volt	EA	5.333	1,730.00	550.00	2,280.00
7.5 hp					
115 volt	EA	8.000	5,140.00	820.00	5,960.00
230 volt	EA	8.000	6,420.00	820.00	7,240.00
Hydraulic lifts					
8,000 lb capacity	EA	20.000	3,550.00	2,050.00	5,600.00
11,000 lb capacity	EA	32.000	6,350.00	3,270.00	9,620.00
24,000 lb capacity	EA	53.333	11,180.00	5,450.00	16,630.00
Power tools					
Band saws					
10"	EA	0.667	1,510.00	68.00	1,578.00
14"	EA	0.800	2,270.00	82.00	2,352.00

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	Unit	Man-Hrs	Material	Labor	Total
11570.01 INDUSTRIAL EQUIPMENT (Cont.)					
Power tools					
Motorized shaper	EA	0.615	1,210.00	63.00	1,273.00
Motorized lathe	EA	0.667	1,440.00	68.00	1,508.00
Bench saws					
9" saw	EA	0.533	3,780.00	55.00	3,835.00
10" saw	EA	0.571	4,530.00	58.00	4,588.00
12" saw	EA	0.667	5,580.00	68.00	5,648.00
Electric grinders					
1/3 hp	EA	0.320	590.00	32.75	622.75
1/2 hp	EA	0.348	600.00	35.50	635.50
3/4 hp	EA	0.348	1,020.00	35.50	1,055.50
11610.01 THEATER EQUIPMENT					
THEATER EQUIPMENT					
Roll out stage, steel frame, wood floor					
Manual	SF	0.050	63.00	5.11	68.11
Electric	SF	0.080	61.00	8.18	69.18
Portable stages					
8" high	SF	0.040	24.75	4.09	28.84
18" high	SF	0.044	29.00	4.54	33.54
36" high	SF	0.047	33.75	4.81	38.56
48" high	SF	0.050	37.75	5.11	42.86
Band risers					
Minimum	SF	0.040	65.00	4.09	69.09
Maximum	SF	0.040	130.00	4.09	134.09
Chairs for risers					
Minimum	EA	0.036	840.00	2.91	842.91
Maximum	EA	0.036	1,350.00	2.91	1,352.91
11660.01 ATHLETIC EQUIPMENT					
ATHLETIC EQUIPMENT					
Basketball backboard					
Fixed	EA	10.000	3,590.00	1,020.00	4,610.00
Swing-up	EA	16.000	5,740.00	1,640.00	7,380.00
Portable, hydraulic	EA	4.000	28,190.00	410.00	28,600.00
Suspended type, standard	EA	16.000	8,180.00	1,640.00	9,820.00
For glass backboard, add	EA				2,370.00
For electrically operated, add	EA				2,770.00
Bleacher, telescoping, manual					
15 tier, minimum	SEAT	0.160	220.00	16.25	236.25
Maximum	SEAT	0.160	540.00	16.25	556.25
20 tier, minimum	SEAT	0.178	150.00	18.25	168.25
Maximum	SEAT	0.178	460.00	18.25	478.25
30 tier, minimum	SEAT	0.267	120.00	27.25	147.25
Maximum	SEAT	0.267	360.00	27.25	387.25
Boxing ring, elevated, complete, 22' x 22'	EA	114.286	15,040.00	11,690.00	26,730.00
Gym divider curtain					
Minimum	SF	0.011	4.88	1.09	5.97
Maximum	SF	0.011	7.33	1.09	8.42
Scoreboards, single face					
Minimum	EA	8.000	10,380.00	820.00	11,200.00
Maximum	EA	40.000	56,380.00	4,090.00	60,470.00
Parallel bars					
Minimum	EA	8.000	2,160.00	820.00	2,980.00
Maximum	EA	13.333	11,520.00	1,360.00	12,880.00
11660.02 POLICE EQUIPMENT					
POLICE EQUIPMENT					
Firing range equipment, rifle					
3 position	EA	26.667	21,570.00	2,730.00	24,300.00
4 position	EA	40.000	27,630.00	4,090.00	31,720.00
5 position	EA	44.444	33,700.00	4,540.00	38,240.00
6 position	EA	47.059	40,440.00	4,810.00	45,250.00

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11682.30 RECREATIONAL COURTS

	Unit	Man-Hrs	Material	Labor	Total
RECREATIONAL COURTS					
Walls, galvanized steel					
8' high	LF	0.160	17.50	12.75	30.25
10' high	LF	0.178	20.75	14.25	35.00
12' high	LF	0.211	23.75	16.75	40.50
Vinyl coated					
8' high	LF	0.160	16.75	12.75	29.50
10' high	LF	0.178	20.50	14.25	34.75
12' high	LF	0.211	23.00	16.75	39.75
Gates, galvanized steel					
Single, 3' transom					
3'x7'	EA	4.000	510.00	320.00	830.00
4'x7'	EA	4.571	540.00	370.00	910.00
5'x7'	EA	5.333	740.00	430.00	1,170.00
6'x7'	EA	6.400	800.00	510.00	1,310.00
Double, 3' transom					
10'x7'	EA	16.000	1,240.00	1,280.00	2,520.00
12'x7'	EA	17.778	1,580.00	1,420.00	3,000.00
14'x7'	EA	20.000	1,900.00	1,600.00	3,500.00
Double, no transom					
10'x10'	EA	13.333	1,330.00	1,070.00	2,400.00
12'x10'	EA	16.000	1,600.00	1,280.00	2,880.00
14'x10'	EA	17.778	1,830.00	1,420.00	3,250.00
Vinyl coated					
Single, 3' transom					
3'x7'	EA	4.000	990.00	320.00	1,310.00
4'x7'	EA	4.571	1,080.00	370.00	1,450.00
5'x7'	EA	5.333	1,080.00	430.00	1,510.00
6'x7'	EA	6.400	1,110.00	510.00	1,620.00
Double, 3'					
10'x7'	EA	16.000	2,940.00	1,280.00	4,220.00
12'x7'	EA	17.778	3,010.00	1,420.00	4,430.00
14'x7'	EA	20.000	3,260.00	1,600.00	4,860.00
Double, no transom					
10'x10'	EA	13.333	2,920.00	1,070.00	3,990.00
12'x10'	EA	16.000	2,970.00	1,280.00	4,250.00
14'x10'	EA	17.778	3,260.00	1,420.00	4,680.00
Baseball backstop, regulation, including material					
Galvanized	EA				11,200.00
Vinyl coated	EA				15,600.00
Softball backstop, regulation, including material					
14' high					
Galvanized	EA				12,150.00
Vinyl coated	EA				19,310.00
18' high					
Galvanized	EA				13,440.00
Vinyl coated	EA				19,430.00
20' high					
Galvanized	EA				15,920.00
Vinyl coated	EA				22,930.00
22' high					
Galvanized	EA				18,400.00
Vinyl coated	EA				26,880.00
24' high					
Galvanized	EA				19,460.00
Vinyl coated	EA				32,010.00
Wire and miscellaneous metal fences					
Chicken wire, post 4' o.c.					
2" mesh					
4' high	LF	0.040	2.15	3.20	5.35
6' high	LF	0.053	2.42	4.27	6.69
Galvanized steel					
12 gauge, 2" by 4" mesh, posts 5' o.c.					
3' high	LF	0.040	3.43	3.20	6.63
5' high	LF	0.050	4.90	4.00	8.90

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	Unit	Man-Hrs	Material	Labor	Total
11682.30 RECREATIONAL COURTS (Cont.)					
Galvanized steel					
14 gauge, 1" by 2" mesh, posts 5' o.c.					
3' high	LF	0.040	2.87	3.20	6.07
5' high	LF	0.050	4.68	4.00	8.68
11683.30 RECREATIONAL FACILITIES					
RECREATIONAL FACILITIES					
Bleachers, outdoor, portable, per seat					
10 tiers					
Minimum	EA	0.150	100.00	22.00	122.00
Maximum	EA	0.200	130.00	29.25	159.25
20 tiers					
Minimum	EA	0.141	110.00	20.75	130.75
Maximum	EA	0.185	140.00	27.00	167.00
Grandstands, fixed, wood seat, steel frame					
Per seat, 15 tiers					
Minimum	EA	0.240	75.00	35.00	110.00
Maximum	EA	0.400	130.00	59.00	189.00
30 tiers					
Minimum	EA	0.218	78.00	32.00	110.00
Maximum	EA	0.343	170.00	50.00	220.00
Seats					
Seat backs only					
Fiberglass	EA	0.080	43.00	6.40	49.40
Steel and wood seat	EA	0.080	62.00	6.40	68.40
Seat restoration, fiberglass on wood					
Seats	EA	0.160	31.00	12.75	43.75
Plain bench, no backs	EA	0.067	19.00	5.33	24.33
Benches					
Park, precast concrete with backs					
4' long	EA	2.667	1,190.00	210.00	1,400.00
8' long	EA	4.000	2,620.00	320.00	2,940.00
Fiberglass, with backs					
4' long	EA	2.000	950.00	160.00	1,110.00
8' long	EA	2.667	1,820.00	210.00	2,030.00
Wood, with backs and fiberglass supports					
4' long	EA	2.000	530.00	160.00	690.00
8' long	EA	2.667	550.00	210.00	760.00
Steel frame, 6' long					
All steel	EA	2.000	450.00	160.00	610.00
Hardwood boards	EA	2.000	310.00	160.00	470.00
Players bench, steel frame, fir seat, 10' long	EA	2.667	340.00	210.00	550.00
Backstops					
Handball or squash court, outdoor					
Wood	EA				52,860.00
Masonry	EA				39,450.00
Soccer goal posts	PAIR				3,530.00
Running track					
Gravel and cinders over stone base	SY	0.060	11.25	8.77	20.02
Rubber-cork base resilient pavement	SY	0.480	16.00	70.00	86.00
For colored surfaces, add	SY	0.048	10.00	7.02	17.02
Colored rubberized asphalt	SY	0.600	21.50	88.00	109.50
Artificial resilient mat over asphalt	SY	1.200	51.00	180.00	231.00
Tennis courts					
Bituminous pavement, 2-1/2" thick	SY	0.150	38.25	22.00	60.25
Colored sealer, acrylic emulsion					
3 coats	SY	0.053	9.36	4.27	13.63
For 2 color seal coating, add	SY	0.008	12.00	0.64	12.64
For preparing old courts, add	SY	0.005	3.95	0.42	4.37
Net, nylon, 42' long	EA	1.000	550.00	80.00	630.00
Paint markings on asphalt, 2 coats	EA	8.000	210.00	640.00	850.00
Complete court with fence, etc., bituminous					
Minimum	EA				38,730.00
Average	EA				66,650.00
Maximum	EA				94,590.00

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	Unit	Man-Hrs	Material	Labor	Total
11683.30 RECREATIONAL FACILITIES (Cont.)					
Complete court with fence, etc.,					
Clay court					
Minimum	EA				40,310.00
Average	EA				54,950.00
Maximum	EA				83,320.00
Playground equipment					
Basketball backboard					
Minimum	EA	2.000	1,330.00	160.00	1,490.00
Maximum	EA	2.286	2,510.00	180.00	2,690.00
Bike rack, 10' long	EA	1.600	900.00	130.00	1,030.00
Golf shelter, fiberglass	EA	2.000	4,540.00	160.00	4,700.00
Ground socket for movable posts					
Minimum	EA	0.500	150.00	40.00	190.00
Maximum	EA	0.500	300.00	40.00	340.00
Horizontal monkey ladder, 14' long	EA	1.333	990.00	110.00	1,100.00
Posts, tether ball	EA	0.400	480.00	32.00	512.00
Multiple purpose, 10' long	EA	0.800	490.00	64.00	554.00
Safety mats, playground					
Minimum	SF	0.008	17.50	0.64	18.14
Maximum	SF	0.013	38.50	1.06	39.56
See-saw, steel					
Minimum	EA	3.200	1,170.00	260.00	1,430.00
Average	EA	4.000	2,260.00	320.00	2,580.00
Maximum	EA	5.333	3,320.00	430.00	3,750.00
Slide					
Minimum	EA	6.400	2,260.00	510.00	2,770.00
Maximum	EA	7.273	5,980.00	580.00	6,560.00
Swings, plain seats					
8' high					
Minimum	EA	5.333	1,080.00	430.00	1,510.00
Maximum	EA	6.154	2,050.00	490.00	2,540.00
12' high					
Minimum	EA	6.154	1,650.00	490.00	2,140.00
Maximum	EA	8.889	2,980.00	710.00	3,690.00
11720.01 MEDICAL EQUIPMENT					
MEDICAL EQUIPMENT					
Hospital equipment, lights					
Examination, portable	EA	0.667	2,310.00	69.00	2,379.00
Meters					
Air flow meter	EA	0.444	120.00	46.25	166.25
Oxygen flow meters	EA	0.333	150.00	34.75	184.75
Racks					
40 chart, revolving open frame; mobile caddy	EA	0.667	1,600.00	69.00	1,669.00
Scales					
Clinical, metric with measure rod, 350 lb	EA	0.727	850.00	76.00	926.00
Physical therapy					
Chair, hydrotherapy	EA	0.133	900.00	13.75	913.75
Diathermy, shortwave, portable, on casters	EA	0.320	3,850.00	32.75	3,882.75
Exercise bicycle, floor standing, 35" x 15"	EA	0.267	3,740.00	27.25	3,767.25
Hydrocollator, 4 pack, portable, 129 x 90 x 160"	EA	0.114	670.00	11.75	681.75
Lamp, infrared, mobile with variable heat control	EA	0.615	910.00	63.00	973.00
Ultraviolet, base mounted	EA	0.615	830.00	63.00	893.00
Mirror, posture training, 27" wide and 72" high	EA	0.200	920.00	20.50	940.50
Parallel bars, adjustable	EA	1.000	3,990.00	100.00	4,090.00
Platform mat 10'x6', 1" thick	EA	0.200	1,290.00	20.50	1,310.50
Pulley, duplex, wall mounted	EA	2.667	2,180.00	270.00	2,450.00
Rack, crutch, wall mounted, 66 x 16 x 13"	EA	0.800	530.00	82.00	612.00
Stimulator, galvanic-faradic, handheld	EA	0.053	470.00	5.45	475.45
Ultrasound stimulator, portable, 13x13x8"	EA	0.067	4,000.00	6.81	4,006.81
Sandbag set, velcro straps, saddle bag type	EA	0.114	210.00	11.75	221.75
Whirlpool, 85 gallon	EA	4.000	7,670.00	410.00	8,080.00
65 gallon capacity	EA	4.000	6,930.00	410.00	7,340.00

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11720.01 MEDICAL EQUIPMENT (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Hospital equipment					
Radiology					
Radiographic table, motor driven tilting table	EA	80.000	67,730.00	8,180.00	75,910.00
Fluoroscope image/tv system	EA	160.000	112,370.00	16,360.00	128,730.00
Processor for washing and drying radiographs					
Water filter unit, 30" x 48-1/2" x 37-1/2"	EA	13.333	150.00	1,390.00	1,540.00
Base storage cabinets, sectional design					
With backsplash, 24" deep and 35" high	LF	0.667	770.00	69.00	839.00
Wall storage cabinets	LF	1.000	300.00	100.00	400.00
Steam sterilizers					
For heat and moisture stable materials	EA	0.800	6,540.00	83.00	6,623.00
For fast drying after sterilization	EA	1.000	8,470.00	100.00	8,570.00
Compact unit	EA	1.000	2,740.00	100.00	2,840.00
Semi-automatic	EA	4.000	3,230.00	420.00	3,650.00
Floor loading					
Single door	EA	6.667	95,900.00	690.00	96,590.00
Double door	EA	8.000	105,050.00	830.00	105,880.00
Utensil washer, sanitizer	EA	6.154	21,090.00	640.00	21,730.00
Automatic washer/sterilizer	EA	16.000	23,090.00	1,670.00	24,760.00
16 x 16 x 26", including accessories	EA	26.667	26,540.00	2,780.00	29,320.00
Steam generator, elec., 10 kw to 180 kw	EA	16.000	43,870.00	1,670.00	45,540.00
Surgical scrub					
Minimum	EA	2.667	2,310.00	280.00	2,590.00
Maximum	EA	2.667	13,400.00	280.00	13,680.00
Gas sterilizers					
Automatic, freestanding, 21x19x29"	EA	8.000	8,240.00	830.00	9,070.00
Surgical tables					
Minimum	EA	11.429	28,530.00	1,190.00	29,720.00
Maximum	EA	16.000	34,710.00	1,670.00	36,380.00
Surgical lights, ceiling mounted					
Minimum	EA	13.333	11,390.00	1,390.00	12,780.00
Maximum	EA	16.000	23,240.00	1,670.00	24,910.00
Water stills					
4 liters/hr	EA	2.667	5,160.00	280.00	5,440.00
8 liters/hr	EA	2.667	8,240.00	280.00	8,520.00
19 liters/hr	EA	6.667	16,930.00	690.00	17,620.00
X-ray equipment					
Mobile unit					
Minimum	EA	4.000	15,080.00	420.00	15,500.00
Maximum	EA	8.000	29,200.00	830.00	30,030.00
Film viewers					
Minimum	EA	1.333	380.00	140.00	520.00
Maximum	EA	2.667	1,310.00	280.00	1,590.00
Autopsy table					
Minimum	EA	8.000	21,040.00	830.00	21,870.00
Maximum	EA	8.000	29,730.00	830.00	30,560.00
Incubators					
15 cf	EA	4.000	10,500.00	420.00	10,920.00
29 cf	EA	6.667	14,240.00	690.00	14,930.00
Infant transport, portable	EA	4.211	7,900.00	440.00	8,340.00
Beds					
Stretcher, with pad, 30" x 78"	EA	2.000	5,870.00	210.00	6,080.00
Transfer, for patient transport	EA	2.000	6,910.00	210.00	7,120.00
Headwall					
Aluminum, with back frame and console	EA	4.000	5,930.00	420.00	6,350.00
Hospital ground detection system					
Power ground module	EA	2.286	1,850.00	240.00	2,090.00
Ground slave module	EA	1.739	790.00	180.00	970.00
Master ground module	EA	1.509	690.00	160.00	850.00
Remote indicator	EA	1.600	730.00	170.00	900.00
X-ray indicator	EA	1.739	2,070.00	180.00	2,250.00
Micro ammeter	EA	2.000	2,460.00	210.00	2,670.00
Supervisory module	EA	1.739	2,070.00	180.00	2,250.00
Ground cords	EA	0.296	190.00	30.75	220.75

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	Unit	Man-Hrs	Material	Labor	Total
11720.01 MEDICAL EQUIPMENT (Cont.)					
Hospital equipment					
Hospital isolation monitors, 5 ma					
120v	EA	3.478	3,930.00	360.00	4,290.00
208v	EA	3.478	3,930.00	360.00	4,290.00
240v	EA	3.478	4,250.00	360.00	4,610.00
Digital clock-timers separate display	EA	1.600	2,000.00	170.00	2,170.00
One display	EA	1.600	1,280.00	170.00	1,450.00
Remote control	EA	1.250	620.00	130.00	750.00
Battery pack	EA	1.250	150.00	130.00	280.00
Surgical chronometer clock and 3 timers	EA	2.500	3,740.00	260.00	4,000.00
Auxiliary control	EA	1.159	1,020.00	120.00	1,140.00
11740.01 DENTAL EQUIPMENT					
DENTAL EQUIPMENT					
Dental care equipment					
Drill console with accessories	EA	13.333	7,170.00	1,390.00	8,560.00
Amalgamator	EA	0.400	770.00	41.75	811.75
Lathe	EA	0.267	1,770.00	27.75	1,797.75
Finish polisher	EA	0.533	2,330.00	56.00	2,386.00
Model trimmer	EA	0.364	1,430.00	37.75	1,467.75
Motor, wall mounted	EA	0.364	1,610.00	37.75	1,647.75
Cleaner, ultrasonic	EA	0.800	4,320.00	83.00	4,403.00
Curing unit, bench mounted	EA	1.333	6,630.00	140.00	6,770.00
Oral evacuation system, dual pump	EA	1.000	8,070.00	100.00	8,170.00
Sterilizer, table top, self contained	EA	0.444	3,410.00	46.25	3,456.25
Dental lights					
Light, floor or ceiling mounted	EA	4.000	2,890.00	420.00	3,310.00
X-ray unit					
Portable	EA	2.000	7,170.00	210.00	7,380.00
Wall mounted with remote control	EA	6.667	10,040.00	690.00	10,730.00
Illuminator, single panel	EA	11.429	1,030.00	1,190.00	2,220.00
X-ray film processor	EA	6.667	12,530.00	690.00	13,220.00
Shield, portable x-ray, lead lined	EA	0.533	2,330.00	56.00	2,386.00
11820.01 WASTE HANDLING					
WASTE HANDLING					
Incinerator, electric					
100 lb/hr					
Minimum	EA	8.000	17,940.00	830.00	18,770.00
Maximum	EA	8.000	30,830.00	830.00	31,660.00
400 lb/hr					
Minimum	EA	16.000	45,180.00	1,670.00	46,850.00
Maximum	EA	16.000	56,480.00	1,670.00	58,150.00
1000 lb/hr					
Minimum	EA	24.242	106,320.00	2,520.00	108,840.00
Maximum	EA	24.242	159,480.00	2,520.00	162,000.00
Incinerator, medical-waste					
25 lb/hr, 2-7 x 4-0	EA	16.000	15,280.00	1,670.00	16,950.00
50 lb/hr, 2-11 x 4-11	EA	16.000	29,640.00	1,670.00	31,310.00
75 lb/hr, 3-8 x 5-0	EA	32.000	39,870.00	3,330.00	43,200.00
100 lb/hr, 3-8 x 6-0	EA	32.000	59,800.00	3,330.00	63,130.00
Industrial compactor					
1 c.y.	EA	8.889	15,680.00	930.00	16,610.00
3 c.y.	EA	11.429	24,450.00	1,190.00	25,640.00
5 c.y.	EA	16.000	46,510.00	1,670.00	48,180.00
Trash chutes, steel, including sprinklers					
18" dia.	LF	4.000	120.00	410.00	530.00
24" dia.	LF	4.211	150.00	430.00	580.00
30" dia.	LF	4.444	180.00	450.00	630.00
36" dia.	LF	4.706	220.00	480.00	700.00
Refuse bottom hopper	EA	4.444	1,990.00	450.00	2,440.00
11822.30 GRAY WATER RECYCLING SYSTEM					
GRAY WATER RECYCLING SYSTEM					
Residential, small commercial, 150 Gallons					
Minimum	EA				5,030.00
Average	EA				5,700.00

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	Unit	Man-Hrs	Material	Labor	Total
11822.30 GRAY WATER RECYCLING SYSTEM (Cont.)					
Residential, small commercial, 150 Gallons					
Maximum	EA				6,370.00
250 Gallons					
Minimum	EA				5,860.00
Average	EA				6,530.00
Maximum	EA				7,200.00
350 Gallons					
Minimum	EA				6,370.00
Average	EA				6,870.00
Maximum	EA				7,370.00
450 Gallons					
Minimum	EA				6,700.00
Average	EA				7,200.00
Maximum	EA				7,710.00
550 Gallons					
Minimum	EA				8,210.00
Average	EA				6,790.00
Maximum	EA				8,710.00

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	Unit	Man-Hrs	Material	Labor	Total
12210.01 BLINDS					
BLINDS					
Venetian blinds					
2" slats	SF	0.020	48.25	2.04	50.29
1" slats	SF	0.020	52.00	2.04	54.04
12210.02 SHADES					
SHADES					
Standard window shades, light filtering					
Minimum	SF	0.013	7.70	1.36	9.06
Average	SF	0.016	11.00	1.63	12.63
Maximum	SF	0.023	24.25	2.33	26.58
12220.01 WINDOW TREATMENT					
WINDOW TREATMENT					
Drapery tracks, wall or ceiling mounted					
Basic traverse rod					
50 to 90"	EA	0.400	64.00	41.00	105.00
84 to 156"	EA	0.444	85.00	45.50	130.50
136 to 250"	EA	0.444	120.00	45.50	165.50
165 to 312"	EA	0.500	190.00	51.00	241.00
Traverse rod with stationary curtain rod					
30 to 50"	EA	0.400	96.00	41.00	137.00
50 to 90"	EA	0.400	110.00	41.00	151.00
84 to 156"	EA	0.444	150.00	45.50	195.50
136 to 250"	EA	0.500	190.00	51.00	241.00
Double traverse rod					
30 to 50"	EA	0.400	110.00	41.00	151.00
50 to 84"	EA	0.400	140.00	41.00	181.00
84 to 156"	EA	0.444	150.00	45.50	195.50
136 to 250"	EA	0.500	200.00	51.00	251.00
12320.01 CASEWORK					
CASEWORK					
Kitchen base cabinet, standard, 24" deep, 35" high					
12" wide	EA	0.800	250.00	82.00	332.00
18" wide	EA	0.800	290.00	82.00	372.00
24" wide	EA	0.889	370.00	91.00	461.00
27" wide	EA	0.889	420.00	91.00	511.00
36" wide	EA	1.000	500.00	100.00	600.00
48" wide	EA	1.000	600.00	100.00	700.00
Drawer base, 24" deep, 35" high					
15" wide	EA	0.800	310.00	82.00	392.00
18" wide	EA	0.800	330.00	82.00	412.00
24" wide	EA	0.889	540.00	91.00	631.00
27" wide	EA	0.889	610.00	91.00	701.00
30" wide	EA	0.889	710.00	91.00	801.00
Sink-ready base cabinet					
30" wide	EA	0.889	330.00	91.00	421.00
36" wide	EA	0.889	350.00	91.00	441.00
42" wide	EA	0.889	380.00	91.00	471.00
60" wide	EA	1.000	450.00	100.00	550.00
Corner cabinet, 36" wide	EA	1.000	630.00	100.00	730.00
Wall cabinet, 12" deep, 12" high					
30" wide	EA	0.800	320.00	82.00	402.00
36" wide	EA	0.800	330.00	82.00	412.00
15" high					
30" wide	EA	0.889	370.00	91.00	461.00
36" wide	EA	0.889	560.00	91.00	651.00
24" high					
30" wide	EA	0.889	410.00	91.00	501.00
36" wide	EA	0.889	430.00	91.00	521.00
30" high					
12" wide	EA	1.000	240.00	100.00	340.00
18" wide	EA	1.000	270.00	100.00	370.00
24" wide	EA	1.000	290.00	100.00	390.00
27" wide	EA	1.000	350.00	100.00	450.00

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	Unit	Man-Hrs	Material	Labor	Total
12320.01 CASEWORK (Cont.)					
30" high					
30" wide	EA	1.143	390.00	120.00	510.00
36" wide	EA	1.143	400.00	120.00	520.00
Corner cabinet, 30" high					
24" wide	EA	1.333	440.00	140.00	580.00
30" wide	EA	1.333	530.00	140.00	670.00
36" wide	EA	1.333	580.00	140.00	720.00
Wardrobe	EA	2.000	1,160.00	200.00	1,360.00
Vanity with top, laminated plastic					
24" wide	EA	2.000	960.00	200.00	1,160.00
30" wide	EA	2.000	1,070.00	200.00	1,270.00
36" wide	EA	2.667	1,240.00	270.00	1,510.00
48" wide	EA	3.200	1,380.00	330.00	1,710.00
Cabinet hardware					
Handles					
Minimum	EA	0.133	3.30	13.75	17.05
Average	EA	0.160	4.40	16.25	20.65
Maximum	EA	0.200	8.80	20.50	29.30
Pulls/knobs					
Minimum	EA	0.080	2.20	8.18	10.38
Average	EA	0.089	3.30	9.08	12.38
Maximum	EA	0.107	6.60	11.00	17.60
12360.01 COUNTERTOPS					
COUNTERTOPS					
Stainless steel, countertop, with backsplash	SF	0.200	290.00	20.50	310.50
Acid-proof, kemrock surface	SF	0.133	120.00	13.75	133.75
Stone countertop, installed complete					
Minimum	SF				77.00
Average	SF				99.00
Maximum	SF				130.00
Add for backsplash	SF				150.00
Add for cutouts	EA				330.00
12480.01 FLOOR MATS					
FLOOR MATS					
Recessed entrance mat, 3/8" thick, aluminum link	SF	0.400	70.00	41.00	111.00
Steel, flexible	SF	0.400	25.25	41.00	66.25
12560.01 EDUCATIONAL FURNITURE					
EDUCATIONAL FURNITURE					
Tables, minimum	EA				280.00
Maximum	EA				440.00
Chairs, minimum	EA				49.50
Maximum	EA				160.00

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	Unit	Man-Hrs	Material	Labor	Total
13110.01 SWIMMING POOL EQUIPMENT					
SWIMMING POOL EQUIPMENT					
Diving boards					
14' long					
Aluminum	EA	4.444	6,190.00	360.00	6,550.00
Fiberglass	EA	4.444	4,680.00	360.00	5,040.00
Ladders, heavy duty					
2 steps					
Minimum	EA	1.600	1,470.00	130.00	1,600.00
Maximum	EA	1.600	2,290.00	130.00	2,420.00
4 steps					
Minimum	EA	2.000	1,560.00	160.00	1,720.00
Maximum	EA	2.000	2,510.00	160.00	2,670.00
Lifeguard chair					
Minimum	EA	8.000	4,160.00	640.00	4,800.00
Maximum	EA	8.000	6,450.00	640.00	7,090.00
Lights, underwater					
12 volt, with transformer, 100 watt					
Incandescent	EA	2.000	310.00	160.00	470.00
Halogen	EA	2.000	260.00	160.00	420.00
LED	EA	2.000	830.00	160.00	990.00
110 volt					
Minimum	EA	2.000	1,400.00	160.00	1,560.00
Maximum	EA	2.000	3,390.00	160.00	3,550.00
Ground fault interrupter for 110 volt, each light	EA	0.667	300.00	53.00	353.00
Pool cover					
Reinforced polyethylene	SF	0.062	3.00	4.92	7.92
Vinyl water tube					
Minimum	SF	0.062	1.84	4.92	6.76
Maximum	SF	0.062	2.75	4.92	7.67
Safety mats					
Average	SF	0.007	3.30	0.53	3.83
Maximum	SF	0.009	11.00	0.71	11.71
Slides with water tube					
Minimum	EA	6.667	1,470.00	530.00	2,000.00
Maximum	EA	6.667	31,380.00	530.00	31,910.00
13241.60 SAUNAS					
SAUNAS					
Prefabricated, cedar siding, insulated panels, prehung door, 240					
4'x8"x4'-8"x6'-6"	EA				8,090.00
5'-8"x6'-8"x6'-6"	EA				9,790.00
6'-8"x6'-8"x6'-6"	EA				11,400.00
7'-8"x7'-8"x6'-6"	EA				13,770.00
7'-8"x9'-8"x6'-6"	EA				18,140.00
13341.90 PRE-ENGINEERED BUILDINGS					
PRE-ENGINEERED BUILDINGS					
Pre-engineered metal building, 40'x100'					
14' eave height	SF	0.032	11.75	7.07	18.82
16' eave height	SF	0.037	13.50	8.16	21.66
20' eave height	SF	0.048	15.25	10.50	25.75
60'x100'					
14' eave height	SF	0.032	14.75	7.07	21.82
16' eave height	SF	0.037	16.50	8.16	24.66
20' eave height	SF	0.048	18.25	10.50	28.75
80'x100'					
14' eave height	SF	0.032	11.50	7.07	18.57
16' eave height	SF	0.037	11.75	8.16	19.91
20' eave height	SF	0.048	13.25	10.50	23.75
100'x100'					
14' eave height	SF	0.032	11.25	7.07	18.32
16' eave height	SF	0.037	11.50	8.16	19.66
20' eave height	SF	0.048	12.75	10.50	23.25
100'x150'					
14' eave height	SF	0.032	9.94	7.07	17.01
16' eave height	SF	0.037	10.25	8.16	18.41

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	Unit	Man-Hrs	Material	Labor	Total
13341.90 PRE-ENGINEERED BUILDINGS (Cont.)					
100'x150'					
20' eave height	SF	0.048	11.00	10.50	21.50
120'x150'					
14' eave height	SF	0.032	10.50	7.07	17.57
16' eave height	SF	0.037	10.75	8.16	18.91
20' eave height	SF	0.048	11.25	10.50	21.75
140'x150'					
14' eave height	SF	0.032	9.94	7.07	17.01
16' eave height	SF	0.037	10.25	8.16	18.41
20' eave height	SF	0.048	11.00	10.50	21.50
160'x200'					
14' eave height	SF	0.032	7.67	7.07	14.74
16' eave height	SF	0.037	7.90	8.16	16.06
20' eave height	SF	0.048	8.36	10.50	18.86
200'x200'					
14' eave height	SF	0.032	6.60	7.07	13.67
16' eave height	SF	0.037	7.26	8.16	15.42
20' eave height	SF	0.048	7.72	10.50	18.22
Hollow metal door and frame, 6' x 7'	EA				1,730.00
Sectional steel overhead door, manually operated					
8' x 8'	EA				2,840.00
12' x 12'	EA				3,780.00
Roll-up steel door, manually operated					
10' x 10'	EA				2,210.00
12' x 12'	EA				3,960.00
For gravity ridge ventilator with birdscreen	EA				950.00
9" throat x 10'	EA				1,040.00
12" throat x 10'	EA				1,260.00
For 20" rotary vent with damper	EA				480.00
For 4' x 3' fixed louver	EA				340.00
For 4' x 3' aluminum sliding window	EA				300.00
For 3' x 9' fiberglass panels	EA				220.00
Liner panel, 26 ga, painted steel	SF	0.020	4.16	2.07	6.23
Wall panel insulated, 26 ga. steel, foam core	SF	0.020	13.00	2.07	15.07
Roof panel, 26 ga. painted steel	SF	0.011	3.93	1.18	5.11
Plastic (skylight)	SF	0.011	8.87	1.18	10.05
Insulation, 3-1/2" thick blanket, R11	SF	0.005	2.66	0.55	3.21

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	Unit	Man-Hrs	Material	Labor	Total
14110.01 DUMBWAITERS					
DUMBWAITERS					
28' travel, extruded alum., 4 stops, 100 lbs. capacity	EA				7,500.00
150 lbs. capacity	EA				10,550.00
200 lbs. capacity	EA				15,150.00
14210.01 ELEVATORS					
ELEVATORS					
Passenger elevators, electric, geared					
Based on a shaft of 6 stops and 6 openings					
50 fpm, 2000 lb	EA	24.000	161,590.00	3,510.00	165,100.00
100 fpm, 2000 lb	EA	26.667	167,570.00	3,900.00	171,470.00
150 fpm					
2000 lb	EA	30.000	184,880.00	4,390.00	189,270.00
3000 lb	EA	34.286	232,870.00	5,010.00	237,880.00
4000 lb	EA	40.000	242,310.00	5,850.00	248,160.00
200 fpm					
2500 lb	EA	34.286	223,430.00	5,010.00	228,440.00
3000 lb	EA	36.923	229,730.00	5,400.00	235,130.00
4000 lb	EA	40.000	242,310.00	5,850.00	248,160.00
250 fpm					
2500 lb	EA	34.286	231,300.00	5,010.00	236,310.00
3000 lb	EA	36.923	244,120.00	5,400.00	249,520.00
4000 lb	EA	40.000	249,790.00	5,850.00	255,640.00
300 fpm					
2500 lb	EA	34.286	229,100.00	5,010.00	234,110.00
3000 lb	EA	36.923	242,310.00	5,400.00	247,710.00
4000 lb	EA	24.000	246,560.00	3,510.00	250,070.00
For each additional; 50 fpm, add per stop	EA				7,180.00
500 lb, add per stop	EA				9,570.00
Opening, add per stop	EA				10,770.00
Stop, add per stop	EA				9,570.00
Bonderized steel door, add per opening	EA				360.00
Colored aluminum door, add per opening	EA				2,030.00
Stainless steel door, add per opening	EA				1,440.00
Cast bronze door, add per opening	EA				2,390.00
Two speed door, add per opening	EA				960.00
Bi-parting door, add per opening	EA				2,030.00
Custom cab interior add	EA				10,770.00
Based on a shaft of 8 stops and 8 openings					
300 fpm					
3000 lb	EA	48.000	299,800.00	7,020.00	306,820.00
3500 lb	EA	48.000	304,530.00	7,020.00	311,550.00
4000 lb	EA	53.333	319,520.00	7,800.00	327,320.00
5000 lb	EA	57.143	355,020.00	8,360.00	363,380.00
400 fpm					
3000 lb	EA	48.000	314,070.00	7,020.00	321,090.00
3500 lb	EA	48.000	319,520.00	7,020.00	326,540.00
4000 lb	EA	53.333	341,610.00	7,800.00	349,410.00
5000 lb	EA	57.143	388,940.00	8,360.00	397,300.00
600 fpm					
3000 lb	EA	53.333	442,360.00	7,800.00	450,160.00
3500 lb	EA	57.143	452,850.00	8,360.00	461,210.00
4000 lb	EA	58.537	457,580.00	8,560.00	466,140.00
5000 lb	EA	60.000	470,210.00	8,780.00	478,990.00
800 fpm					
3000 lb	EA	53.333	524,640.00	7,800.00	532,440.00
3500 lb	EA	57.143	530,160.00	8,360.00	538,520.00
4000 lb	EA	58.537	536,480.00	8,560.00	545,040.00
5000 lb	EA	60.000	540,030.00	8,780.00	548,810.00
For each additional; 100 fpm add per stop	EA				29,920.00
500 lb, add per stop	EA				15,560.00
Opening add per stop	EA				23,930.00
Stop add per stop	EA				10,770.00
Bypass floor, add per each	EA				4,790.00
Bonderized steel door, add per opening	EA				360.00

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	Unit	Man-Hrs	Material	Labor	Total
14210.01 ELEVATORS (Cont.)					
For each additional; 100 fpm add per stop					
Colored aluminum door, add per opening	EA				2,150.00
Stainless steel door, add per opening	EA				1,440.00
Cast bronze door, add per opening	EA				1,440.00
Two speed bi-parting door, add per opening	EA				2,390.00
Custom cab interior, add	EA				11,970.00
Hydraulic, based on a shaft of 3 stops, 3 openings					
50 fpm					
2000 lb	EA	20.000	112,340.00	2,930.00	115,270.00
2500 lb	EA	20.000	120,140.00	2,930.00	123,070.00
3000 lb	EA	20.870	126,780.00	3,050.00	129,830.00
100 fpm					
2000 lb	EA	20.000	123,070.00	2,930.00	126,000.00
2500 lb	EA	20.870	129,780.00	3,050.00	132,830.00
3000 lb	EA	21.818	138,850.00	3,190.00	142,040.00
150 fpm					
2000 lb	EA	20.000	133,330.00	2,930.00	136,260.00
2500 lb	EA	20.870	145,950.00	3,050.00	149,000.00
3000 lb	EA	22.857	156,210.00	3,340.00	159,550.00
For each additional; 50 fpm add per stop	EA				8,380.00
500 lb, add per stop	EA				8,380.00
Opening, add	EA				10,170.00
Stop, add per stop	EA				12,560.00
Bonderized steel door, add per opening	EA				960.00
Colored aluminum door, add per opening	EA				3,590.00
Stainless steel door, add per opening	EA				1,560.00
Cast bronze door, add per opening	EA				2,870.00
Two speed door, add per opening	EA				960.00
Bi-parting door, add per opening	EA				2,150.00
Custom cab interior, add per cab	EA				11,970.00
Small elevators, 4 to 6 passenger capacity					
Electric, push					
2 stops	EA	20.000	38,290.00	2,930.00	41,220.00
3 stops	EA	21.818	47,870.00	3,190.00	51,060.00
4 stops	EA	24.000	54,490.00	3,510.00	58,000.00
Freight elevators, electric					
Based on a shaft of 6 stops and 6 openings					
50 fpm					
3500 lb	EA	26.667	288,660.00	3,900.00	292,560.00
4000 lb	EA	26.667	289,400.00	3,900.00	293,300.00
5000 lb	EA	30.000	294,550.00	4,390.00	298,940.00
100 fpm					
3500 lb	EA	30.000	301,920.00	4,390.00	306,310.00
4000 lb	EA	30.000	306,340.00	4,390.00	310,730.00
5000 lb	EA	34.286	311,710.00	5,010.00	316,720.00
200 fpm					
3500 lb	EA	34.286	300,450.00	5,010.00	305,460.00
4000 lb	EA	34.286	301,920.00	5,010.00	306,930.00
5000 lb	EA	40.000	304,860.00	5,850.00	310,710.00
For elevator with manual door, deduct 15%					
For variable voltage control, add 20%					
Based on shaft of 8 stops and 8 openings					
100 fpm					
4000 lb	EA	30.000	290,650.00	4,390.00	295,040.00
6000 lb	EA	30.769	293,080.00	4,500.00	297,580.00
8000 lb	EA	32.432	298,240.00	4,740.00	302,980.00
150 fpm					
4000 lb	EA	34.286	294,550.00	5,010.00	299,560.00
6000 lb	EA	35.294	294,550.00	5,160.00	299,710.00
8000 lb	EA	37.500	303,390.00	5,480.00	308,870.00
200 fpm					
4000 lb	EA	40.000	296,030.00	5,850.00	301,880.00
6000 lb	EA	41.379	303,390.00	6,050.00	309,440.00
8000 lb	EA	43.636	316,650.00	6,380.00	323,030.00

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	Unit	Man-Hrs	Material	Labor	Total
14210.01 ELEVATORS (Cont.)					
For each additional; 50 fpm, add per stop	EA				4,790.00
500 lb, add per stop	EA				1,440.00
Opening, add per stop	EA				16,750.00
Stop, add per stop	EA				14,360.00
For variable voltage, add 20%					
Hydraulic, based on 3 stops and 3 openings					
50 fpm					
3000 lb	EA	17.143	123,710.00	2,510.00	126,220.00
4000 lb	EA	17.778	135,500.00	2,600.00	138,100.00
6000 lb	EA	18.462	157,590.00	2,700.00	160,290.00
100 fpm					
3000 lb	EA	17.143	139,910.00	2,510.00	142,420.00
4000 lb	EA	17.778	147,280.00	2,600.00	149,880.00
6000 lb	EA	18.462	173,790.00	2,700.00	176,490.00
150 fpm					
3000 lb	EA	17.143	153,170.00	2,510.00	155,680.00
4000 lb	EA	17.778	164,950.00	2,600.00	167,550.00
6000 lb	EA	18.462	188,520.00	2,700.00	191,220.00
For each additional; 50 fpm, add per stop	EA				4,790.00
500 lb, add per stop	EA				1,440.00
Opening, add per stop	EA				14,360.00
Stop, add per stop	EA				14,360.00
For elevator with manual door deduct from total, 15%					
14310.01 ESCALATORS					
ESCALATORS					
Escalators					
32" wide, floor to floor					
12' high	EA	40.000	199,890.00	5,850.00	205,740.00
15' high	EA	48.000	218,400.00	7,020.00	225,420.00
18' high	EA	60.000	235,220.00	8,780.00	244,000.00
22' high	EA	80.000	232,760.00	11,700.00	244,460.00
25' high	EA	96.000	264,500.00	14,040.00	278,540.00
48" wide					
12' high	EA	41.379	222,700.00	6,050.00	228,750.00
15' high	EA	50.000	243,050.00	7,310.00	250,360.00
18' high	EA	63.158	261,090.00	9,240.00	270,330.00
22' high	EA	85.714	292,270.00	12,540.00	304,810.00
25' high	EA	96.000	312,090.00	14,040.00	326,130.00
14410.01 PERSONNEL LIFTS					
PERSONNEL LIFTS					
Electrically operated, 1 or 2 person lift					
With attached foot platforms					
3 stops	EA				13,750.00
5 stops	EA				21,440.00
7 stops	EA				24,990.00
For each additional stop, add	EA				2,990.00
Residential stair climber, per story	EA	6.667	6,380.00	690.00	7,070.00
curved	EA	8.000	13,480.00	830.00	14,310.00
14420.01 WHEELCHAIR LIFTS					
WHEELCHAIR LIFTS					
600 lb, Residential	EA	8.000	7,580.00	830.00	8,410.00
Commercial	EA	8.000	17,920.00	830.00	18,750.00
14450.01 VEHICLE LIFTS					
VEHICLE LIFTS					
Automotive hoist, one post, semi-hydraulic, 8,000 lb	EA	24.000	4,590.00	3,510.00	8,100.00
Full hydraulic, 8,000 lb	EA	24.000	4,730.00	3,510.00	8,240.00
2 post, semi-hydraulic, 10,000 lb	EA	34.286	4,950.00	5,010.00	9,960.00
Full hydraulic					
10,000 lb	EA	34.286	5,830.00	5,010.00	10,840.00
13,000 lb	EA	60.000	7,280.00	8,780.00	16,060.00
18,500 lb	EA	60.000	11,650.00	8,780.00	20,430.00
24,000 lb	EA	60.000	16,390.00	8,780.00	25,170.00

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	Unit	Man-Hrs	Material	Labor	Total
14450.01 VEHICLE LIFTS (Cont.)					
Full hydraulic					
26,000 lb	EA	60.000	15,950.00	8,780.00	24,730.00
Pneumatic hoist, fully hydraulic					
11,000 lb	EA	80.000	7,870.00	11,700.00	19,570.00
24,000 lb	EA	80.000	14,200.00	11,700.00	25,900.00
14910.01 CHUTES					
CHUTES					
Linen chutes, stainless steel, with supports					
18" dia.	LF	0.057	180.00	5.91	185.91
24" dia.	LF	0.062	230.00	6.36	236.36
30" dia.	LF	0.067	250.00	6.90	256.90
Hopper	EA	0.533	2,970.00	55.00	3,025.00
Skylight	EA	0.800	1,810.00	83.00	1,893.00
Sprinkler unit at top	EA	0.889	680.00	92.00	772.00
For galvanized metal, deduct from material cost, 35%					
For aluminum, deduct from material cost, 25%					
14920.01 PNEUMATIC SYSTEMS					
PNEUMATIC SYSTEMS					
Pneumatic message tube system					
Average, 20 station job					
3" round system	EA	72.727	49,520.00	7,570.00	57,090.00
4" round system	EA	80.000	62,560.00	8,330.00	70,890.00
6" round system	EA	88.889	107,340.00	9,260.00	116,600.00
4" x 7" oval system	EA	160.000	113,070.00	16,660.00	129,730.00
Trash and linen tube system					
10 stations	EA	120.000	33,360.00	17,550.00	50,910.00
15 stations	EA	160.000	41,820.00	23,400.00	65,220.00
20 stations	EA	184.615	55,730.00	27,000.00	82,730.00
30 stations	EA	218.182	72,490.00	31,910.00	104,400.00

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	Unit	Man-Hrs	Material	Labor	Total
21111.60 HYDRANTS					
HYDRANTS					
Wall hydrant					
8" thick	EA	1.333	400.00	150.00	550.00
12" thick	EA	1.600	470.00	180.00	650.00
18" thick	EA	1.778	510.00	200.00	710.00
24" thick	EA	2.000	560.00	220.00	780.00
Ground hydrant					
2' deep	EA	1.000	740.00	110.00	850.00
4' deep	EA	1.143	860.00	130.00	990.00
6' deep	EA	1.333	970.00	150.00	1,120.00
8' deep	EA	2.000	1,090.00	220.00	1,310.00
21130.01 WET SPRINKLER SYSTEM					
WET SPRINKLER SYSTEM					
Sprinkler head, 212 deg, brass, exposed piping	EA	0.320	16.00	35.75	51.75
Chrome, concealed piping	EA	0.444	19.50	49.75	69.25
Water motor alarm	EA	1.333	370.00	150.00	520.00
Fire department inlet connection	EA	1.600	270.00	180.00	450.00
Wall plate for fire dept connection	EA	0.667	130.00	75.00	205.00
Swing check valve flanged iron body, 4"	EA	2.667	350.00	300.00	650.00
Check valve, 6"	EA	4.000	1,150.00	450.00	1,600.00
Wet pipe valve, flange to groove, 4"	EA	0.889	990.00	100.00	1,090.00
Flange to flange					
6"	EA	1.333	1,340.00	150.00	1,490.00
8"	EA	2.667	2,360.00	300.00	2,660.00
Alarm valve, flange to flange (wet valve)					
4"	EA	0.889	1,530.00	100.00	1,630.00
8"	EA	6.667	2,420.00	750.00	3,170.00
Inspector's test connection	EA	0.667	70.00	75.00	145.00
Wall hydrant, polished brass, 2-1/2" x 2-1/2", single	EA	0.571	470.00	64.00	534.00
2-way	EA	0.571	1,060.00	64.00	1,124.00
3-way	EA	0.571	2,170.00	64.00	2,234.00
Wet valve trim, includes retard chamber & gauges, 4"-6"	EA	0.667	740.00	75.00	815.00
Retard pressure switch for wet systems	EA	1.600	1,300.00	180.00	1,480.00
Air maintenance device	EA	0.667	390.00	75.00	465.00
Addressable monitor module, 2 wire	EA	0.800	190.00	83.00	273.00
Wall hydrant non-freeze, 8" thick wall, vacuum breaker	EA	0.400	51.00	44.75	95.75
12" thick wall	EA	0.400	56.00	44.75	100.75
21210.01 CO2 SYSTEM					
CO2 SYSTEM					
CO2 system, high pressure, 75# cylinder with					
Valve assemblies	EA	1.600	2,660.00	180.00	2,840.00
Storage rack	EA	1.143	1,420.00	130.00	1,550.00
Manifold	EA	5.714	1,030.00	640.00	1,670.00
Flexible loops	EA	0.100	84.00	11.25	95.25
Beam scale for cylinders	EA	1.333	700.00	150.00	850.00
Mechanically controlled head	EA	0.533	590.00	60.00	650.00
Electrically controlled head	EA	0.533	590.00	60.00	650.00
Stop valves	EA	0.800	1,500.00	90.00	1,590.00
Check valves	EA	1.000	680.00	110.00	790.00
Activation station	EA	0.800	790.00	90.00	880.00
Nozzles	EA	0.667	130.00	75.00	205.00
Hose reel with 75' of 3/4" hose	EA	4.000	4,750.00	450.00	5,200.00
Main/reserve transfer switch	EA	1.333	5,530.00	150.00	5,680.00
Pressure switch	EA	0.800	490.00	90.00	580.00
Heat responsive device	EA	1.333	780.00	150.00	930.00
Battery and charger	EA	4.000	4,430.00	450.00	4,880.00
Low pressure					
Battery and charger	EA	4.000	4,430.00	450.00	4,880.00
Pressure switch	EA	0.889	440.00	100.00	540.00
Nozzles	EA	0.727	130.00	82.00	212.00
Master selector valve	EA	1.333	380.00	150.00	530.00
Selector valve	EA	1.333	5,530.00	150.00	5,680.00
Low pressure hose reel with 75' of 3/4" hose	EA	4.000	6,860.00	450.00	7,310.00
Tank fill lines	EA	1.000	1,550.00	110.00	1,660.00

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	Unit	Man-Hrs	Material	Labor	Total
21210.01 CO2 SYSTEM (Cont.)					
Low pressure					
Activation stations	EA	0.667	780.00	75.00	855.00
Electro manual pilot panels	EA	1.000	1,550.00	110.00	1,660.00
21240.01 DRY SPRINKLER SYSTEM					
DRY SPRINKLER SYSTEM					
Dry pipe valve, flange to flange					
4"	EA	1.600	2,250.00	180.00	2,430.00
6"	EA	2.000	2,820.00	220.00	3,040.00
Trim, 4" and 6", includes gauges	EA	0.667	870.00	75.00	945.00
Field testing and flushing	EA	6.667		750.00	750.00
Disinfection	EA	6.667		750.00	750.00
Pressure switch double circuit, open/close contacts	EA	2.000	420.00	220.00	640.00
Low air					
Supervisory unit	EA	1.333	1,360.00	150.00	1,510.00
Pressure switch	EA	0.667	430.00	75.00	505.00

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22052.36 VALVES

	Unit	Man-Hrs	Material	Labor	Total
VALVES					
Gate valve, 125 lb, bronze, soldered					
1/2"	EA	0.200	43.75	22.50	66.25
3/4"	EA	0.200	52.00	22.50	74.50
1"	EA	0.267	64.00	30.00	94.00
1-1/2"	EA	0.320	110.00	35.75	145.75
2"	EA	0.400	160.00	44.75	204.75
2-1/2"	EA	0.500	360.00	56.00	416.00
Threaded					
1/4", 125 lb	EA	0.320	37.50	35.75	73.25
1/2"					
125 lb	EA	0.320	35.75	35.75	71.50
300 lb	EA	0.320	90.00	35.75	125.75
3/4"					
125 lb	EA	0.320	42.00	35.75	77.75
300 lb	EA	0.320	110.00	35.75	145.75
1"					
125 lb	EA	0.320	54.00	35.75	89.75
300 lb	EA	0.400	150.00	44.75	194.75
1-1/2"					
125 lb	EA	0.400	94.00	44.75	138.75
300 lb	EA	0.444	280.00	49.75	329.75
2"					
125 lb	EA	0.571	130.00	64.00	194.00
300 lb	EA	0.667	350.00	75.00	425.00
Cast iron, flanged					
2", 150 lb	EA	0.667	490.00	75.00	565.00
2-1/2"					
125 lb	EA	0.667	480.00	75.00	555.00
250 lb	EA	0.667	1,310.00	75.00	1,385.00
3"					
125 lb	EA	0.800	570.00	90.00	660.00
250 lb	EA	0.800	1,200.00	90.00	1,290.00
4"					
125 lb	EA	1.143	750.00	130.00	880.00
250 lb	EA	1.143	1,610.00	130.00	1,740.00
6"					
125 lb	EA	1.600	1,380.00	180.00	1,560.00
250 lb	EA	1.600	3,230.00	180.00	3,410.00
8"					
125 lb	EA	2.000	2,200.00	220.00	2,420.00
250 lb	EA	2.000	6,260.00	220.00	6,480.00
OS&Y, flanged					
2"					
125 lb	EA	0.667	450.00	75.00	525.00
250 lb	EA	0.667	1,190.00	75.00	1,265.00
2-1/2"					
125 lb	EA	0.667	470.00	75.00	545.00
250 lb	EA	0.800	1,470.00	90.00	1,560.00
3"					
125 lb	EA	0.800	520.00	90.00	610.00
250 lb	EA	0.800	1,530.00	90.00	1,620.00
4"					
125 lb	EA	1.333	690.00	150.00	840.00
250 lb	EA	1.333	2,340.00	150.00	2,490.00
6"					
125 lb	EA	1.600	1,160.00	180.00	1,340.00
250 lb	EA	1.600	3,700.00	180.00	3,880.00
Ball valve, bronze, 250 lb, threaded					
1/2"	EA	0.320	20.50	35.75	56.25
3/4"	EA	0.320	30.50	35.75	66.25
1"	EA	0.400	38.75	44.75	83.50
1-1/4"	EA	0.444	57.00	49.75	106.75
1-1/2"	EA	0.500	90.00	56.00	146.00

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22052.36 VALVES (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Ball valve, bronze, 250 lb, threaded					
2"	EA	0.571	100.00	64.00	164.00
Angle valve, bronze, 150 lb, threaded					
1/2"	EA	0.286	100.00	32.00	132.00
3/4"	EA	0.320	140.00	35.75	175.75
1"	EA	0.320	210.00	35.75	245.75
1-1/4"	EA	0.400	270.00	44.75	314.75
1-1/2"	EA	0.444	350.00	49.75	399.75
Balancing valve, meter connections, circuit setter					
1/2"	EA	0.320	99.00	35.75	134.75
3/4"	EA	0.364	100.00	40.75	140.75
1"	EA	0.400	130.00	44.75	174.75
1-1/4"	EA	0.444	190.00	49.75	239.75
1-1/2"	EA	0.533	230.00	60.00	290.00
2"	EA	0.667	320.00	75.00	395.00
2-1/2"	EA	0.800	630.00	90.00	720.00
3"	EA	1.000	920.00	110.00	1,030.00
4"	EA	1.333	1,290.00	150.00	1,440.00
Pressure reducing valve, bronze, threaded, 250 lb					
1/2"	EA	0.500	200.00	56.00	256.00
3/4"	EA	0.500	200.00	56.00	256.00
1"	EA	0.500	310.00	56.00	366.00
1-1/4"	EA	0.571	450.00	64.00	514.00
1-1/2"	EA	0.667	520.00	75.00	595.00
Pressure regulating valve, bronze, class 300					
1"	EA	0.500	750.00	56.00	806.00
1-1/2"	EA	0.615	1,000.00	69.00	1,069.00
2"	EA	0.800	1,130.00	90.00	1,220.00
3"	EA	1.143	1,280.00	130.00	1,410.00
4"	EA	1.600	1,600.00	180.00	1,780.00
5"	EA	2.000	2,420.00	220.00	2,640.00
6"	EA	2.667	2,460.00	300.00	2,760.00
Solar water temperature regulating valve					
3/4"	EA	0.667	770.00	75.00	845.00
1"	EA	0.800	790.00	90.00	880.00
1-1/4"	EA	0.889	850.00	100.00	950.00
1-1/2"	EA	1.000	950.00	110.00	1,060.00
2"	EA	1.143	1,170.00	130.00	1,300.00
2-1/2"	EA	2.000	2,210.00	220.00	2,430.00
Tempering valve, threaded					
3/4"	EA	0.267	470.00	30.00	500.00
1"	EA	0.320	600.00	35.75	635.75
1-1/4"	EA	0.400	880.00	44.75	924.75
1-1/2"	EA	0.400	1,010.00	44.75	1,054.75
2"	EA	0.500	1,390.00	56.00	1,446.00
2-1/2"	EA	0.667	2,340.00	75.00	2,415.00
3"	EA	0.800	3,090.00	90.00	3,180.00
4"	EA	1.143	6,180.00	130.00	6,310.00
Thermostatic mixing valve, threaded					
1/2"	EA	0.286	130.00	32.00	162.00
3/4"	EA	0.320	130.00	35.75	165.75
1"	EA	0.348	480.00	39.00	519.00
1-1/2"	EA	0.400	540.00	44.75	584.75
2"	EA	0.500	680.00	56.00	736.00
Sweat connection					
1/2"	EA	0.286	110.00	32.00	142.00
3/4"	EA	0.320	140.00	35.75	175.75
Mixing valve, sweat connection					
1/2"	EA	0.286	79.00	32.00	111.00
3/4"	EA	0.320	79.00	35.75	114.75
Liquid level gauge, aluminum body					
3/4"	EA	0.320	400.00	35.75	435.75
125 psi, PVC body					
3/4"	EA	0.320	470.00	35.75	505.75

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	Unit	Man-Hrs	Material	Labor	Total
22052.36 VALVES (Cont.)					
Liquid level gauge					
150 psi, CRS body					
3/4"	EA	0.320	380.00	35.75	415.75
1"	EA	0.320	410.00	35.75	445.75
175 psi, bronze body, 1/2"	EA	0.286	760.00	32.00	792.00
22052.91 PIPE HANGERS, HEAVY					
PIPE HANGERS, HEAVY					
Hangers					
1/2" pipe, clevis pipe hanger					
Black steel	EA	0.267	1.87	30.00	31.87
Galvanized	EA	0.267	2.81	30.00	32.81
U bolt	EA	0.080	1.74	8.96	10.70
3/4" pipe, clevis pipe hanger					
Black steel	EA	0.267	1.91	30.00	31.91
Galvanized	EA	0.267	2.88	30.00	32.88
1" pipe, clevis pipe hanger					
Black steel	EA	0.267	1.96	30.00	31.96
Galvanized	EA	0.267	3.09	30.00	33.09
2" pipe, clevis pipe hanger					
Black steel	EA	0.267	2.66	30.00	32.66
Galvanized	EA	0.267	4.36	30.00	34.36
3" pipe, clevis pipe hanger					
Black steel	EA	0.267	5.22	30.00	35.22
Galvanized	EA	0.267	9.10	30.00	39.10
4" pipe, clevis pipe hanger					
Black steel	EA	0.267	6.39	30.00	36.39
Galvanized	EA	0.267	11.50	30.00	41.50
6" pipe, clevis pipe hanger					
Black steel	EA	0.320	10.25	35.75	46.00
Galvanized	EA	0.320	20.50	35.75	56.25
12" pipe, clevis pipe hanger					
Black steel	EA	0.320	36.00	35.75	71.75
Galvanized	EA	0.320	53.00	35.75	88.75
Threaded rod, galvanized, material only					
3/8"	LF				1.13
1/2"	LF				2.25
Hex nuts, galvanized					
3/8"	EA				0.23
1/2"	EA				0.48
1"	EA				3.04
C-clamp, steel, with lock nut					
3/8"	EA	0.100	4.24	11.25	15.49
1/2"	EA	0.100	4.76	11.25	16.01
22062.91 PIPE HANGERS, LIGHT					
PIPE HANGERS, LIGHT					
A band, black iron					
1/2"	EA	0.057	1.03	6.40	7.43
1"	EA	0.059	1.11	6.64	7.75
1-1/4"	EA	0.062	1.23	6.89	8.12
1-1/2"	EA	0.067	1.28	7.47	8.75
2"	EA	0.073	1.36	8.15	9.51
2-1/2"	EA	0.080	2.03	8.96	10.99
3"	EA	0.089	2.48	9.96	12.44
4"	EA	0.100	3.26	11.25	14.51
5"	EA	0.107	4.13	12.00	16.13
6"	EA	0.114	7.14	12.75	19.89
8"	EA	0.133	11.50	15.00	26.50
Copper					
1/2"	EA	0.057	1.67	6.40	8.07
3/4"	EA	0.059	1.94	6.64	8.58
1"	EA	0.059	1.94	6.64	8.58
1-1/4"	EA	0.062	2.09	6.89	8.98
1-1/2"	EA	0.067	2.24	7.47	9.71
2"	EA	0.073	2.37	8.15	10.52

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22062.91 PIPE HANGERS, LIGHT (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Copper					
2-1/2"	EA	0.080	4.79	8.96	13.75
3"	EA	0.089	4.99	9.96	14.95
4"	EA	0.100	5.51	11.25	16.76
Black riser friction hangers					
3/4"	EA	0.067	4.36	7.47	11.83
1"	EA	0.070	4.42	7.79	12.21
1-1/4"	EA	0.073	5.52	8.15	13.67
1-1/2"	EA	0.076	6.00	8.54	14.54
2"	EA	0.080	6.12	8.96	15.08
2-1/2"	EA	0.089	6.60	9.96	16.56
3"	EA	0.100	6.79	11.25	18.04
4"	EA	0.114	8.67	12.75	21.42
Short pattern black riser clamps					
1-1/2"	EA	0.073	5.55	8.15	13.70
2"	EA	0.076	5.81	8.54	14.35
3"	EA	0.080	6.38	8.96	15.34
4"	EA	0.089	7.32	9.96	17.28
Copper riser friction hanger					
1/2"	EA	0.062	6.47	6.89	13.36
3/4"	EA	0.064	6.66	7.17	13.83
1"	EA	0.067	6.79	7.47	14.26
1-1/4"	EA	0.070	8.45	7.79	16.24
1-1/2"	EA	0.073	9.18	8.15	17.33
2"	EA	0.076	9.38	8.54	17.92
2-1/2"	EA	0.080	10.00	8.96	18.96
3"	EA	0.080	17.25	8.96	26.21
4"	EA	0.089	22.00	9.96	31.96
Auto grip hangers, galvanized					
1/2"	EA	0.057	1.34	6.40	7.74
1"	EA	0.064	1.58	7.17	8.75
2"	EA	0.073	2.64	8.15	10.79
3"	EA	0.080	4.02	8.96	12.98
4"	EA	0.089	4.98	9.96	14.94
Copper					
1/2"	EA	0.057	1.70	6.40	8.10
1"	EA	0.064	1.98	7.17	9.15
2"	EA	0.073	3.28	8.15	11.43
3"	EA	0.080	6.45	8.96	15.41
4"	EA	0.089	7.98	9.96	17.94
Split rings (F&M), galvanized					
1/2"	EA	0.062	3.38	6.89	10.27
1"	EA	0.067	4.67	7.47	12.14
2"	EA	0.076	6.69	8.54	15.23
3"	EA	0.084	16.25	9.44	25.69
4"	EA	0.089	17.00	9.96	26.96
Copper					
1/2"	EA	0.062	5.11	6.89	12.00
1"	EA	0.067	7.06	7.47	14.53
2"	EA	0.076	10.00	8.54	18.54
3"	EA	0.084	24.50	9.44	33.94
4"	EA	0.089	25.50	9.96	35.46
2 hole clips, galvanized					
3/4"	EA	0.053	0.27	5.97	6.24
1"	EA	0.055	0.33	6.18	6.51
1-1/4"	EA	0.057	0.43	6.40	6.83
1-1/2"	EA	0.059	0.53	6.64	7.17
2"	EA	0.062	0.70	6.89	7.59
2-1/2"	EA	0.064	1.25	7.17	8.42
3"	EA	0.067	1.66	7.47	9.13
4"	EA	0.073	3.56	8.15	11.71
Perforated strap					
3/4"					
Galvanized, 20 ga.	LF	0.040	0.44	4.48	4.92
Copper, 22 ga.	LF	0.040	2.20	4.48	6.68

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22062.91 PIPE HANGERS, LIGHT (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Threaded rod couplings					
1/4"	EA	0.050	1.57	5.60	7.17
3/4"	EA	0.053	1.65	5.97	7.62
1/2"	EA	0.057	1.87	6.40	8.27
5/8"	EA	0.062	2.88	6.89	9.77
Reducing rod coupling, 1/2" x 3/8"	EA	0.057	2.59	6.40	8.99
C-clamps					
3/4"	EA	0.080	2.24	8.96	11.20
Top beam clamp					
3/8"	EA	0.067	3.45	7.47	10.92
1/2"	EA	0.073	4.27	8.15	12.42
Side beam connector					
3/8"	EA	0.067	1.49	7.47	8.96
1/2"	EA	0.073	3.31	8.15	11.46
Hex nuts, heavy, material only					
1"	EA				3.80
Heavy washers					
3/8"	EA				0.11
1/2"	EA				0.26
5/8"	EA				0.53
3/4"	EA				1.06
Lag rod, 3/8" x					
4"	EA				0.74
4-1/2"	EA				0.74
6"	EA				0.77
8"	EA				1.38
10"	EA				1.63
12"	EA				2.01
18"	EA				2.72
J-Hooks					
1/2"	EA	0.036	0.87	4.07	4.94
3/4"	EA	0.036	0.93	4.07	5.00
1"	EA	0.038	0.95	4.27	5.22
1-1/4"	EA	0.039	1.00	4.37	5.37
1-1/2"	EA	0.040	1.02	4.48	5.50
2"	EA	0.040	1.07	4.48	5.55
3"	EA	0.042	1.23	4.72	5.95
4"	EA	0.042	1.33	4.72	6.05
PVC coated hangers, galvanized, 28 ga.					
1-1/2" x 12"	EA	0.053	1.86	5.97	7.83
2" x 12"	EA	0.057	2.04	6.40	8.44
3" x 12"	EA	0.062	2.28	6.89	9.17
4" x 12"	EA	0.067	2.53	7.47	10.00
Copper, 30 ga.					
1-1/2" x 12"	EA	0.053	2.28	5.97	8.25
2" x 12"	EA	0.057	2.71	6.40	9.11
3" x 12"	EA	0.062	3.01	6.89	9.90
4" x 12"	EA	0.067	3.30	7.47	10.77
Wire hook hangers					
Black wire, 1/2" x					
4"	EA	0.040	0.44	4.48	4.92
6"	EA	0.042	0.50	4.72	5.22
8"	EA	0.044	0.55	4.98	5.53
10"	EA	0.044	0.70	4.98	5.68
12"	EA	0.047	0.83	5.27	6.10
3/4" x					
4"	EA	0.042	0.53	4.72	5.25
6"	EA	0.044	0.58	4.98	5.56
8"	EA	0.047	0.59	5.27	5.86
10"	EA	0.050	0.81	5.60	6.41
12"	EA	0.053	0.82	5.97	6.79
1" x					
4"	EA	0.044	0.53	4.98	5.51
6"	EA	0.047	0.55	5.27	5.82

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	Unit	Man-Hrs	Material	Labor	Total
22062.91 PIPE HANGERS, LIGHT (Cont.)					
1" x					
8"	EA	0.050	0.59	5.60	6.19
10"	EA	0.053	0.80	5.97	6.77
12"	EA	0.057	0.86	6.40	7.26
Copper wire hooks					
1/2" x					
4"	EA	0.040	0.58	4.48	5.06
6"	EA	0.042	0.66	4.72	5.38
8"	EA	0.044	0.74	4.98	5.72
10"	EA	0.047	0.93	5.27	6.20
12"	EA	0.050	1.06	5.60	6.66
3/4" x					
4"	EA	0.042	0.58	4.72	5.30
6"	EA	0.044	0.72	4.98	5.70
8"	EA	0.047	0.83	5.27	6.10
10"	EA	0.050	0.95	5.60	6.55
12"	EA	0.053	1.13	5.97	7.10
22064.81 VIBRATION CONTROL					
VIBRATION CONTROL					
Vibration isolator, in-line, stainless connector					
1/2"	EA	0.444	100.00	49.75	149.75
1"	EA	0.500	120.00	56.00	176.00
2"	EA	0.615	230.00	69.00	299.00
3"	EA	0.727	400.00	82.00	482.00
6"	EA	0.889	860.00	100.00	960.00
22069.31 SPECIALTIES					
SPECIALTIES					
Wall penetration					
Concrete wall, 6" thick					
2" dia.	EA	0.267		21.25	21.25
4" dia.	EA	0.400		32.00	32.00
8" dia.	EA	0.571		45.75	45.75
12" thick					
2" dia.	EA	0.364		29.00	29.00
4" dia.	EA	0.571		45.75	45.75
8" dia.	EA	0.889		71.00	71.00
Non-destructive testing, piping systems					
X-ray of welds					
3" dia. pipe	EA	0.800	25.75	90.00	115.75
4" dia. pipe	EA	0.800	34.25	90.00	124.25
6" dia. pipe	EA	0.800	34.25	90.00	124.25
8" dia. pipe	EA	1.000	34.25	110.00	144.25
10" dia. pipe	EA	1.000	45.00	110.00	155.00
Liquid penetration of welds					
2" dia. pipe	EA	0.500	8.05	56.00	64.05
3" dia. pipe	EA	0.500	8.05	56.00	64.05
4" dia. pipe	EA	0.500	8.05	56.00	64.05
6" dia. pipe	EA	0.500	8.05	56.00	64.05
8" dia. pipe	EA	0.500	12.00	56.00	68.00
10" dia. pipe	EA	0.500	12.00	56.00	68.00
22071.61 EQUIPMENT INSULATION					
EQUIPMENT INSULATION					
Equipment insulation, 2" thick, cellular glass	SF	0.050	3.56	5.60	9.16
Urethane, rigid, jacket, plastered finish	SF	0.100	3.81	11.25	15.06
Fiberglass, rigid, with vapor barrier	SF	0.044	3.56	4.98	8.54
22071.91 FIBERGLASS PIPE INSULATION					
FIBERGLASS PIPE INSULATION					
Fiberglass insulation on 1/2" pipe					
1" thick	LF	0.027	1.75	2.98	4.73
1-1/2" thick	LF	0.033	3.69	3.73	7.42
3/4" pipe					
1" thick	LF	0.027	2.14	2.98	5.12
1-1/2" thick	LF	0.033	3.89	3.73	7.62

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	Unit	Man-Hrs	Material	Labor	Total
22071.91 FIBERGLASS PIPE INSULATION (Cont.)					
Fiberglass insulation on,					
1" pipe					
1" thick	LF	0.027	2.14	2.98	5.12
1-1/2" thick	LF	0.033	4.08	3.73	7.81
2" pipe					
1" thick	LF	0.033	2.91	3.73	6.64
1-1/2" thick	LF	0.036	5.05	4.07	9.12
2" thick	LF	0.040	7.39	4.48	11.87
2-1/2" pipe					
1" thick	LF	0.033	3.09	3.73	6.82
1-1/2" thick	LF	0.036	5.43	4.07	9.50
2" thick	LF	0.040	7.88	4.48	12.36
3" pipe					
1" thick	LF	0.038	3.49	4.27	7.76
1-1/2" thick	LF	0.040	5.63	4.48	10.11
2" thick	LF	0.044	8.53	4.98	13.51
4" pipe					
1" thick	LF	0.038	4.46	4.27	8.73
1-1/2" thick	LF	0.040	6.40	4.48	10.88
2" thick	LF	0.044	9.82	4.98	14.80
5" pipe					
1" thick	LF	0.038	5.14	4.27	9.41
2" thick	LF	0.040	11.00	4.48	15.48
6" pipe					
1" thick	LF	0.042	5.82	4.72	10.54
2" thick	LF	0.044	12.00	4.98	16.98
8" pipe					
2" thick	LF	0.042	15.00	4.72	19.72
3" thick	LF	0.044	24.00	4.98	28.98
10" pipe					
2" thick	LF	0.042	18.75	4.72	23.47
3" thick	LF	0.044	27.50	4.98	32.48
12" pipe					
2" thick	LF	0.042	20.50	4.72	25.22
3" thick	LF	0.044	31.00	4.98	35.98
22071.93 EXTERIOR PIPE INSULATION					
EXTERIOR PIPE INSULATION					
Fiberglass insulation, aluminum jacket					
1/2" pipe					
1" thick	LF	0.062	2.38	6.89	9.27
1-1/2" thick	LF	0.067	4.49	7.47	11.96
3/4" pipe					
1" thick	LF	0.062	2.80	6.89	9.69
1-1/2" thick	LF	0.067	4.76	7.47	12.23
1" pipe					
1" thick	LF	0.062	2.91	6.89	9.80
1-1/2" thick	LF	0.067	5.01	7.47	12.48
1-1/4" pipe					
1" thick	LF	0.073	3.24	8.15	11.39
1-1/2" thick	LF	0.076	5.44	8.54	13.98
1-1/2" pipe					
1" thick	LF	0.073	3.51	8.15	11.66
1-1/2" thick	LF	0.076	5.64	8.54	14.18
2" pipe					
1" thick	LF	0.073	3.96	8.15	12.11
1-1/2" thick	LF	0.076	5.89	8.54	14.43
3" pipe					
1" thick	LF	0.080	4.76	8.96	13.72
1-1/2" thick	LF	0.084	7.04	9.44	16.48
6" pipe					
1" thick	LF	0.089	7.91	9.96	17.87
2" thick	LF	0.094	14.00	10.50	24.50

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	Unit	Man-Hrs	Material	Labor	Total
22071.93 EXTERIOR PIPE INSULATION (Cont.)					
Fiberglass insulation, aluminum jacket					
10" pipe					
2" thick	LF	0.089	20.00	9.96	29.96
3" thick	LF	0.094	28.75	10.50	39.25
22071.94 PIPE INSULATION FITTINGS					
PIPE INSULATION FITTINGS					
Insulation protection saddle					
1" thick covering					
1/2" pipe	EA	0.320	7.75	35.75	43.50
3/4" pipe	EA	0.320	7.97	35.75	43.72
1" pipe	EA	0.320	8.17	35.75	43.92
2" pipe	EA	0.320	9.01	35.75	44.76
3" pipe	EA	0.364	10.25	40.75	51.00
6" pipe	EA	0.500	10.25	56.00	66.25
1-1/2" thick covering					
3/4" pipe	EA	0.320	13.00	35.75	48.75
1" pipe	EA	0.320	13.25	35.75	49.00
2" pipe	EA	0.320	11.50	35.75	47.25
3" pipe	EA	0.320	13.00	35.75	48.75
6" pipe	EA	0.500	15.25	56.00	71.25
10" pipe	EA	0.667	16.00	75.00	91.00
22111.61 COPPER PIPE					
COPPER PIPE					
Type K copper					
1/4"	LF	0.024	2.12	2.63	4.75
3/8"	LF	0.024	3.25	2.63	5.88
1/2"	LF	0.025	3.77	2.80	6.57
3/4"	LF	0.027	7.03	2.98	10.01
1"	LF	0.029	9.20	3.20	12.40
1-1/4"	LF	0.031	11.50	3.44	14.94
1-1/2"	LF	0.033	15.00	3.73	18.73
2"	LF	0.036	23.00	4.07	27.07
2-1/2"	LF	0.040	33.75	4.48	38.23
3"	LF	0.042	47.00	4.72	51.72
3-1/2"	LF	0.043	61.00	4.84	65.84
4"	LF	0.044	78.00	4.98	82.98
DWV, copper					
1-1/4"	LF	0.033	10.25	3.73	13.98
1-1/2"	LF	0.036	13.00	4.07	17.07
2"	LF	0.040	17.00	4.48	21.48
3"	LF	0.044	29.00	4.98	33.98
4"	LF	0.050	50.00	5.60	55.60
6"	LF	0.057	200.00	6.40	206.40
Refrigeration tubing, copper, sealed					
1/8"	LF	0.032	0.93	3.58	4.51
3/16"	LF	0.033	1.08	3.73	4.81
1/4"	LF	0.035	1.30	3.89	5.19
5/16"	LF	0.036	1.66	4.07	5.73
3/8"	LF	0.038	1.91	4.27	6.18
1/2"	LF	0.040	2.51	4.48	6.99
7/8"	LF	0.046	6.09	5.12	11.21
1-1/8"	LF	0.053	8.74	5.97	14.71
1-3/8"	LF	0.062	13.50	6.89	20.39
Type L copper					
1/4"	LF	0.024	1.67	2.63	4.30
3/8"	LF	0.024	2.56	2.63	5.19
1/2"	LF	0.025	2.98	2.80	5.78
3/4"	LF	0.027	4.76	2.98	7.74
1"	LF	0.029	7.16	3.20	10.36
1-1/4"	LF	0.031	10.25	3.44	13.69
1-1/2"	LF	0.033	13.25	3.73	16.98
2"	LF	0.036	20.50	4.07	24.57
2-1/2"	LF	0.040	30.50	4.48	34.98
3"	LF	0.042	41.00	4.72	45.72

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	Unit	Man-Hrs	Material	Labor	Total
22111.61 COPPER PIPE (Cont.)					
Type L copper					
3-1/2"	LF	0.043	54.00	4.84	58.84
4"	LF	0.044	68.00	4.98	72.98
Type M copper					
3/8"	LF	0.024	1.81	2.63	4.44
1/2"	LF	0.025	2.10	2.80	4.90
3/4"	LF	0.027	3.43	2.98	6.41
1"	LF	0.029	5.57	3.20	8.77
1-1/4"	LF	0.031	8.21	3.44	11.65
1-1/2"	LF	0.033	11.00	3.73	14.73
2"	LF	0.036	18.00	4.07	22.07
2-1/2"	LF	0.040	26.25	4.48	30.73
3"	LF	0.042	34.75	4.72	39.47
3-1/2"	LF	0.043	46.50	4.84	51.34
4"	LF	0.044	61.00	4.98	65.98
22111.62 COPPER FITTINGS					
COPPER FITTINGS					
Coupling, with stop					
1/4"	EA	0.267	0.95	30.00	30.95
3/8"	EA	0.320	1.24	35.75	36.99
1/2"	EA	0.348	0.99	39.00	39.99
5/8"	EA	0.400	2.87	44.75	47.62
3/4"	EA	0.444	1.97	49.75	51.72
1"	EA	0.471	4.06	53.00	57.06
3"	EA	0.800	49.25	90.00	139.25
4"	EA	1.000	110.00	110.00	220.00
Reducing coupling					
1/4" x 1/8"	EA	0.320	2.54	35.75	38.29
3/8" x 1/4"	EA	0.348	2.79	39.00	41.79
1/2" x					
3/8"	EA	0.400	2.10	44.75	46.85
1/4"	EA	0.400	2.54	44.75	47.29
1/8"	EA	0.400	2.80	44.75	47.55
3/4" x					
3/8"	EA	0.444	4.50	49.75	54.25
1/2"	EA	0.444	3.56	49.75	53.31
1" x					
3/8"	EA	0.500	8.08	56.00	64.08
1" x 1/2"	EA	0.500	7.82	56.00	63.82
1" x 3/4"	EA	0.500	6.59	56.00	62.59
1-1/4" x					
1/2"	EA	0.533	9.82	60.00	69.82
3/4"	EA	0.533	9.29	60.00	69.29
1"	EA	0.533	9.29	60.00	69.29
1-1/2" x					
1/2"	EA	0.571	12.25	64.00	76.25
3/4"	EA	0.571	11.50	64.00	75.50
1"	EA	0.571	11.50	64.00	75.50
1-1/4"	EA	0.571	11.50	64.00	75.50
2" x					
1/2"	EA	0.667	26.75	75.00	101.75
3/4"	EA	0.667	25.50	75.00	100.50
1"	EA	0.667	25.00	75.00	100.00
1-1/4"	EA	0.667	23.75	75.00	98.75
1-1/2"	EA	0.667	23.75	75.00	98.75
2-1/2" x					
1"	EA	0.800	49.00	90.00	139.00
1-1/4"	EA	0.800	48.50	90.00	138.50
1-1/2"	EA	0.800	43.00	90.00	133.00
2"	EA	0.800	42.00	90.00	132.00
3" x					
1-1/2"	EA	1.000	59.00	110.00	169.00
2"	EA	1.000	53.00	110.00	163.00
2-1/2"	EA	1.000	54.00	110.00	164.00

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22111.62 COPPER FITTINGS (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Reducing coupling					
4" x					
2"	EA	1.143	120.00	130.00	250.00
2-1/2"	EA	1.143	120.00	130.00	250.00
3"	EA	1.143	110.00	130.00	240.00
Slip coupling					
1/4"	EA	0.267	0.78	30.00	30.78
1/2"	EA	0.320	1.31	35.75	37.06
3/4"	EA	0.400	2.74	44.75	47.49
1"	EA	0.444	5.82	49.75	55.57
1-1/4"	EA	0.500	8.76	56.00	64.76
1-1/2"	EA	0.533	11.75	60.00	71.75
2"	EA	0.667	20.00	75.00	95.00
2-1/2"	EA	0.667	26.25	75.00	101.25
3"	EA	0.800	50.00	90.00	140.00
4"	EA	1.000	93.00	110.00	203.00
Coupling with drain					
1/2"	EA	0.400	10.00	44.75	54.75
3/4"	EA	0.444	14.75	49.75	64.50
1"	EA	0.500	18.25	56.00	74.25
Reducer					
3/8" x 1/4"	EA	0.320	2.85	35.75	38.60
1/2" x 3/8"	EA	0.320	2.29	35.75	38.04
3/4" x					
1/4"	EA	0.364	4.65	40.75	45.40
3/8"	EA	0.364	4.86	40.75	45.61
1/2"	EA	0.364	5.06	40.75	45.81
1" x					
1/2"	EA	0.400	6.99	44.75	51.74
3/4"	EA	0.400	5.36	44.75	50.11
1-1/4" x					
1/2"	EA	0.444	9.87	49.75	59.62
3/4"	EA	0.444	9.87	49.75	59.62
1"	EA	0.444	9.87	49.75	59.62
1-1/2" x					
1/2"	EA	0.500	10.25	56.00	66.25
3/4"	EA	0.500	10.25	56.00	66.25
1"	EA	0.500	10.25	56.00	66.25
1-1/4"	EA	0.500	10.25	56.00	66.25
2" x					
1/2"	EA	0.571	25.50	64.00	89.50
3/4"	EA	0.571	25.50	64.00	89.50
1"	EA	0.571	25.50	64.00	89.50
1-1/4"	EA	0.571	24.25	64.00	88.25
1-1/2"	EA	0.571	24.25	64.00	88.25
2-1/2" x					
1"	EA	0.667	56.00	75.00	131.00
1-1/4"	EA	0.667	50.00	75.00	125.00
1-1/2"	EA	0.667	49.25	75.00	124.25
2"	EA	0.667	48.25	75.00	123.25
3" x					
1-1/4"	EA	0.800	66.00	90.00	156.00
1-1/2"	EA	0.800	68.00	90.00	158.00
2"	EA	0.800	61.00	90.00	151.00
2-1/2"	EA	0.800	62.00	90.00	152.00
4" x					
2"	EA	1.000	140.00	110.00	250.00
3"	EA	1.000	130.00	110.00	240.00
Female adapters					
1/4"	EA	0.320	5.92	35.75	41.67
3/8"	EA	0.364	6.06	40.75	46.81
1/2"	EA	0.400	2.88	44.75	47.63
3/4"	EA	0.444	3.95	49.75	53.70
1"	EA	0.444	9.16	49.75	58.91

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22111.62 COPPER FITTINGS (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Female adapters					
1-1/4"	EA	0.500	13.50	56.00	69.50
1-1/2"	EA	0.500	21.00	56.00	77.00
2"	EA	0.533	28.50	60.00	88.50
2-1/2"	EA	0.571	65.00	64.00	129.00
3"	EA	0.667	99.00	75.00	174.00
4"	EA	0.800	120.00	90.00	210.00
Increasing female adapters					
1/8" x					
3/8"	EA	0.320	7.27	35.75	43.02
1/2"	EA	0.320	6.78	35.75	42.53
1/4" x 1/2"	EA	0.348	7.10	39.00	46.10
3/8" x 1/2"	EA	0.364	7.62	40.75	48.37
1/2" x					
3/4"	EA	0.400	8.08	44.75	52.83
1"	EA	0.400	16.25	44.75	61.00
3/4" x					
1"	EA	0.444	17.25	49.75	67.00
1-1/4"	EA	0.444	29.25	49.75	79.00
1" x					
1-1/4"	EA	0.444	31.00	49.75	80.75
1-1/2"	EA	0.444	34.00	49.75	83.75
1-1/4" x					
1-1/2"	EA	0.500	37.00	56.00	93.00
2"	EA	0.500	47.25	56.00	103.25
1-1/2" x 2"	EA	0.533	69.00	60.00	129.00
Reducing female adapters					
3/8" x 1/4"	EA	0.364	6.55	40.75	47.30
1/2" x					
1/4"	EA	0.400	5.63	44.75	50.38
3/8"	EA	0.400	5.63	44.75	50.38
3/4" x 1/2"	EA	0.444	7.86	49.75	57.61
1" x					
1/2"	EA	0.444	14.75	49.75	64.50
3/4"	EA	0.444	11.75	49.75	61.50
1-1/4" x					
1/2"	EA	0.500	20.00	56.00	76.00
3/4"	EA	0.500	25.00	56.00	81.00
1"	EA	0.500	25.00	56.00	81.00
1-1/2" x					
1"	EA	0.533	23.25	60.00	83.25
1-1/4"	EA	0.533	25.25	60.00	85.25
2" x					
1"	EA	0.571	31.50	64.00	95.50
1-1/4"	EA	0.571	47.00	64.00	111.00
1-1/2"	EA	0.571	40.75	64.00	104.75
Female fitting adapters					
1/2"	EA	0.400	10.00	44.75	54.75
3/4"	EA	0.400	13.00	44.75	57.75
3/4" x 1/2"	EA	0.421	15.50	47.25	62.75
1"	EA	0.444	17.25	49.75	67.00
1-1/4"	EA	0.471	27.75	53.00	80.75
1-1/2"	EA	0.500	36.50	56.00	92.50
2"	EA	0.533	48.50	60.00	108.50
Male adapters					
1/4"	EA	0.364	11.25	40.75	52.00
3/8"	EA	0.364	5.63	40.75	46.38
3"	EA	0.667	140.00	75.00	215.00
4"	EA	0.800	200.00	90.00	290.00
Increasing male adapters					
3/8" x 1/2"	EA	0.364	7.68	40.75	48.43
1/2" x					
3/4"	EA	0.400	6.66	44.75	51.41
1"	EA	0.400	15.00	44.75	59.75

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22111.62 COPPER FITTINGS (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Increasing male adapters					
3/4" x					
1"	EA	0.421	14.75	47.25	62.00
1-1/4"	EA	0.421	18.75	47.25	66.00
1" x 1-1/4"	EA	0.444	18.75	49.75	68.50
1-1/2" x					
3/4"	EA	0.471	22.50	53.00	75.50
1"	EA	0.471	33.25	53.00	86.25
1-1/4"	EA	0.471	36.00	53.00	89.00
2" x					
1"	EA	0.500	60.00	56.00	116.00
1-1/4"	EA	0.500	61.00	56.00	117.00
1-1/2"	EA	0.500	58.00	56.00	114.00
2" x 2-1/2"	EA	0.533	98.00	60.00	158.00
Copper pipe fittings					
1/2"					
90 deg ell	EA	0.178	1.62	20.00	21.62
45 deg ell	EA	0.178	2.04	20.00	22.04
Tee	EA	0.229	2.71	25.50	28.21
Cap	EA	0.089	1.10	9.96	11.06
Coupling	EA	0.178	1.18	20.00	21.18
Union	EA	0.200	8.21	22.50	30.71
3/4"					
90 deg ell	EA	0.200	3.54	22.50	26.04
45 deg ell	EA	0.200	4.13	22.50	26.63
Tee	EA	0.267	5.92	30.00	35.92
Cap	EA	0.094	2.15	10.50	12.65
Coupling	EA	0.200	2.40	22.50	24.90
Union	EA	0.229	12.00	25.50	37.50
1"					
90 deg ell	EA	0.267	8.21	30.00	38.21
45 deg ell	EA	0.267	10.75	30.00	40.75
Tee	EA	0.320	13.50	35.75	49.25
Cap	EA	0.133	4.00	15.00	19.00
Coupling	EA	0.267	5.92	30.00	35.92
Union	EA	0.267	15.75	30.00	45.75
1-1/4"					
90 deg ell	EA	0.229	11.25	25.50	36.75
45 deg ell	EA	0.229	13.75	25.50	39.25
Tee	EA	0.400	18.25	44.75	63.00
Cap	EA	0.133	3.19	15.00	18.19
Union	EA	0.286	26.25	32.00	58.25
1-1/2"					
90 deg ell	EA	0.286	14.50	32.00	46.50
45 deg ell	EA	0.286	17.25	32.00	49.25
Tee	EA	0.444	24.00	49.75	73.75
Cap	EA	0.133	3.19	15.00	18.19
Coupling	EA	0.267	10.75	30.00	40.75
Union	EA	0.364	39.75	40.75	80.50
2"					
90 deg ell	EA	0.320	28.50	35.75	64.25
45 deg ell	EA	0.500	26.25	56.00	82.25
Tee	EA	0.500	41.00	56.00	97.00
Cap	EA	0.160	6.61	18.00	24.61
Coupling	EA	0.320	17.25	35.75	53.00
Union	EA	0.400	43.25	44.75	88.00
2-1/2"					
90 deg ell	EA	0.400	55.00	44.75	99.75
45 deg ell	EA	0.400	47.75	44.75	92.50
Tee	EA	0.571	55.00	64.00	119.00
Cap	EA	0.200	13.50	22.50	36.00
Coupling	EA	0.400	26.25	44.75	71.00
Union	EA	0.444	80.00	49.75	129.75

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	Unit	Man-Hrs	Material	Labor	Total
22111.65 BRASS FITTINGS					
BRASS FITTINGS					
Compression fittings, union					
3/8"	EA	0.133	2.85	15.00	17.85
1/2"	EA	0.133	6.16	15.00	21.16
5/8"	EA	0.133	7.84	15.00	22.84
Union elbow					
3/8"	EA	0.133	9.14	15.00	24.14
1/2"	EA	0.133	15.25	15.00	30.25
5/8"	EA	0.133	20.50	15.00	35.50
Union tee					
3/8"	EA	0.133	8.57	15.00	23.57
1/2"	EA	0.133	12.50	15.00	27.50
5/8"	EA	0.133	17.25	15.00	32.25
Brass flare fittings, union					
3/8"	EA	0.129	3.70	14.50	18.20
1/2"	EA	0.129	5.11	14.50	19.61
5/8"	EA	0.129	6.58	14.50	21.08
90 deg elbow union					
3/8"	EA	0.129	7.95	14.50	22.45
1/2"	EA	0.129	11.75	14.50	26.25
5/8"	EA	0.129	20.50	14.50	35.00
22111.67 CHROME PLATED FITTINGS					
CHROME PLATED FITTINGS					
Fittings					
90 ell					
3/8"	EA	0.200	22.00	22.50	44.50
1/2"	EA	0.200	28.50	22.50	51.00
45 ell					
3/8"	EA	0.200	28.50	22.50	51.00
1/2"	EA	0.200	37.50	22.50	60.00
Tee					
3/8"	EA	0.267	30.75	30.00	60.75
1/2"	EA	0.267	36.50	30.00	66.50
Coupling					
3/8"	EA	0.200	21.50	22.50	44.00
1/2"	EA	0.200	21.50	22.50	44.00
Union					
3/8"	EA	0.200	35.50	22.50	58.00
1/2"	EA	0.200	36.75	22.50	59.25
Tee					
1/2" x 3/8" x 3/8"	EA	0.267	40.50	30.00	70.50
1/2" x 3/8" x 1/2"	EA	0.267	41.25	30.00	71.25
22111.68 PVC/CPVC PIPE					
PVC/CPVC PIPE					
PVC schedule 40					
1/2" pipe	LF	0.033	0.63	3.73	4.36
3/4" pipe	LF	0.036	0.86	4.07	4.93
1" pipe	LF	0.040	1.10	4.48	5.58
1-1/4" pipe	LF	0.044	1.41	4.98	6.39
1-1/2" pipe	LF	0.050	2.11	5.60	7.71
2" pipe	LF	0.057	2.68	6.40	9.08
2-1/2" pipe	LF	0.067	4.33	7.47	11.80
3" pipe	LF	0.080	5.51	8.96	14.47
4" pipe	LF	0.100	7.87	11.25	19.12
6" pipe	LF	0.200	14.25	22.50	36.75
8" pipe	LF	0.267	20.75	30.00	50.75
PVC schedule 80 pipe					
1-1/2" pipe	LF	0.050	2.80	5.60	8.40
2" pipe	LF	0.057	3.78	6.40	10.18
3" pipe	LF	0.080	7.80	8.96	16.76
4" pipe	LF	0.100	10.25	11.25	21.50

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22111.68 PVC/CPVC PIPE (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Polypropylene, acid resistant, DWV pipe					
Schedule 40					
1-1/2" pipe	LF	0.057	11.00	6.40	17.40
2" pipe	LF	0.067	15.00	7.47	22.47
3" pipe	LF	0.080	30.50	8.96	39.46
4" pipe	LF	0.100	38.75	11.25	50.00
6" pipe	LF	0.200	77.00	22.50	99.50
Polyethylene pipe and fittings					
SDR-21					
3" pipe	LF	0.100	4.12	11.25	15.37
4" pipe	LF	0.133	6.51	15.00	21.51
6" pipe	LF	0.200	9.03	22.50	31.53
8" pipe	LF	0.229	13.00	25.50	38.50
10" pipe	LF	0.267	14.75	30.00	44.75

22111.69 STEEL PIPE

STEEL PIPE					
Black steel, extra heavy pipe, threaded					
1/2" pipe	LF	0.032	2.81	3.58	6.39
3/4" pipe	LF	0.032	3.64	3.58	7.22
1" pipe	LF	0.040	4.68	4.48	9.16
1-1/2" pipe	LF	0.044	7.03	4.98	12.01
2-1/2" pipe	LF	0.100	14.00	11.25	25.25
3" pipe	LF	0.133	18.75	15.00	33.75
4" pipe	LF	0.160	28.25	18.00	46.25
5" pipe	LF	0.200	38.25	22.50	60.75
6" pipe	LF	0.200	47.75	22.50	70.25
8" pipe	LF	0.267	70.00	30.00	100.00
10" pipe	LF	0.320	110.00	35.75	145.75
12" pipe	LF	0.400	140.00	44.75	184.75
Fittings, malleable iron, threaded, 1/2" pipe					
90 deg ell	EA	0.267	3.37	30.00	33.37
45 deg ell	EA	0.267	4.56	30.00	34.56
Tee	EA	0.400	3.66	44.75	48.41
3/4" pipe					
90 deg ell	EA	0.267	3.95	30.00	33.95
45 deg ell	EA	0.400	6.26	44.75	51.01
Tee	EA	0.400	5.31	44.75	50.06
1" pipe					
90 deg ell	EA	0.320	6.12	35.75	41.87
45 deg ell	EA	0.320	8.09	35.75	43.84
Tee	EA	0.444	9.18	49.75	58.93
1-1/2" pipe					
90 deg ell	EA	0.400	12.50	44.75	57.25
45 deg ell	EA	0.400	15.50	44.75	60.25
Tee	EA	0.571	18.25	64.00	82.25
2-1/2" pipe					
90 deg ell	EA	1.000	48.25	110.00	158.25
45 deg ell	EA	1.000	68.00	110.00	178.00
Tee	EA	1.333	67.00	150.00	217.00
3" pipe					
90 deg ell	EA	1.333	71.00	150.00	221.00
45 deg ell	EA	1.333	88.00	150.00	238.00
Tee	EA	2.000	99.00	220.00	319.00
4" pipe					
90 deg ell	EA	1.600	150.00	180.00	330.00
45 deg ell	EA	1.600	170.00	180.00	350.00
Tee	EA	2.667	240.00	300.00	540.00
90 deg ell	EA	1.600	420.00	180.00	600.00
6" pipe					
45 deg ell	EA	1.600	490.00	180.00	670.00
Tee	EA	2.667	750.00	300.00	1,050.00

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	Unit	Man-Hrs	Material	Labor	Total
22111.69 STEEL PIPE (Cont.)					
Fittings, malleable iron, threaded,					
8" pipe					
90 deg ell	EA	3.200	840.00	360.00	1,200.00
45 deg ell	EA	3.200	950.00	360.00	1,310.00
Tee	EA	5.000	590.00	560.00	1,150.00
10" pipe					
90 deg ell	EA	4.000	930.00	450.00	1,380.00
45 deg ell	EA	4.000	1,050.00	450.00	1,500.00
Tee	EA	5.000	670.00	560.00	1,230.00
12" pipe					
90 deg ell	EA	5.000	1,020.00	560.00	1,580.00
45 deg ell	EA	5.000	1,160.00	560.00	1,720.00
Tee	EA	6.667	780.00	750.00	1,530.00
22111.70 GALVANIZED STEEL PIPE					
GALVANIZED STEEL PIPE					
Galvanized pipe					
1/2" pipe	LF	0.080	4.97	8.96	13.93
3/4" pipe	LF	0.100	6.47	11.25	17.72
1" pipe	LF	0.114	6.61	12.75	19.36
1-1/4" pipe	LF	0.133	8.20	15.00	23.20
1-1/2" pipe	LF	0.160	9.00	18.00	27.00
2" pipe	LF	0.200	13.00	22.50	35.50
2-1/2" pipe	LF	0.267	18.75	30.00	48.75
3" pipe	LF	0.286	25.75	32.00	57.75
4" pipe	LF	0.333	35.25	37.25	72.50
6" pipe	LF	0.667	64.00	75.00	139.00
22111.71 STAINLESS STEEL PIPE					
STAINLESS STEEL PIPE					
Stainless steel, schedule 40, threaded					
1/2" pipe	LF	0.114	10.50	12.75	23.25
3/4" pipe	LF	0.118	14.75	13.25	28.00
1" pipe	LF	0.123	17.25	13.75	31.00
1-1/2" pipe	LF	0.133	23.50	15.00	38.50
2" pipe	LF	0.145	35.25	16.25	51.50
2-1/2" pipe	LF	0.160	49.50	18.00	67.50
3" pipe	LF	0.178	69.00	20.00	89.00
4" pipe	LF	0.200	89.00	22.50	111.50
22111.91 BACKFLOW PREVENTERS					
BACKFLOW PREVENTERS					
Backflow preventer, flanged, cast iron, with valves					
3" pipe	EA	4.000	4,030.00	450.00	4,480.00
4" pipe	EA	4.444	4,700.00	500.00	5,200.00
6" pipe	EA	6.667	8,030.00	750.00	8,780.00
8" pipe	EA	8.000	12,240.00	900.00	13,140.00
Threaded					
3/4" pipe	EA	0.500	640.00	56.00	696.00
2" pipe	EA	0.800	1,120.00	90.00	1,210.00
Reduced pressure assembly, bronze, threaded					
3/4"	EA	0.500	640.00	56.00	696.00
1"	EA	0.571	660.00	64.00	724.00
1-1/4"	EA	0.667	960.00	75.00	1,035.00
1-1/2"	EA	0.800	1,080.00	90.00	1,170.00
22111.96 VACUUM BREAKERS					
VACUUM BREAKERS					
Vacuum breaker, atmospheric, threaded connection					
3/4"	EA	0.320	55.00	35.75	90.75
1"	EA	0.320	81.00	35.75	116.75
Anti-siphon, brass					
3/4"	EA	0.320	60.00	35.75	95.75
1"	EA	0.320	93.00	35.75	128.75
1-1/4"	EA	0.400	160.00	44.75	204.75
1-1/2"	EA	0.444	190.00	49.75	239.75
2"	EA	0.500	300.00	56.00	356.00

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	Unit	Man-Hrs	Material	Labor	Total
22112.30 PUMPS					
PUMPS					
In-line pump, bronze, centrifugal					
5 gpm, 20' head	EA	0.500	680.00	56.00	736.00
20 gpm, 40' head	EA	0.500	1,220.00	56.00	1,276.00
50 gpm					
50' head	EA	1.000	1,390.00	110.00	1,500.00
Cast iron, centrifugal					
50 gpm, 200' head	EA	1.000	1,320.00	110.00	1,430.00
100 gpm					
100' head	EA	1.333	2,250.00	150.00	2,400.00
Centrifugal, close coupled, C.I., single stage					
50 gpm, 100' head	EA	1.000	1,580.00	110.00	1,690.00
100 gpm, 100' head	EA	1.333	1,920.00	150.00	2,070.00
Base mounted					
50 gpm, 100' head	EA	1.000	3,220.00	110.00	3,330.00
100 gpm, 50' head	EA	1.333	3,660.00	150.00	3,810.00
200 gpm, 100' head	EA	2.000	4,690.00	220.00	4,910.00
300 gpm, 175' head	EA	2.000	4,980.00	220.00	5,200.00
Condensate pump, simplex					
1000 sf EDR, 2 gpm	EA	6.667	1,650.00	750.00	2,400.00
2000 sf EDR, 3 gpm	EA	6.667	1,680.00	750.00	2,430.00
4000 sf EDR, 6 gpm	EA	7.273	1,690.00	820.00	2,510.00
6000 sf EDR, 9 gpm	EA	7.273	1,720.00	820.00	2,540.00
Duplex, bronze					
8000 sf EDR, 12 gpm	EA	7.273	2,360.00	820.00	3,180.00
10,000 sf EDR, 15 gpm	EA	10.000	2,450.00	1,120.00	3,570.00
15,000 sf EDR, 23 gpm	EA	11.429	2,940.00	1,280.00	4,220.00
20,000 sf EDR, 30 gpm	EA	16.000	3,420.00	1,790.00	5,210.00
25,000 sf EDR, 38 gpm	EA	16.000	3,540.00	1,790.00	5,330.00
22120.04 STORAGE TANKS					
STORAGE TANKS					
Hot water storage tank, cement lined					
10 gallon	EA	2.667	540.00	300.00	840.00
70 gallon	EA	4.000	1,700.00	450.00	2,150.00
200 gallon	EA	5.714	3,220.00	640.00	3,860.00
900 gallon	EA	10.000	3,340.00	1,120.00	4,460.00
1100 gallon	EA	10.000	4,470.00	1,120.00	5,590.00
2000 gallon	EA	10.000	6,380.00	1,120.00	7,500.00
22131.40 EXTRA HEAVY SOIL PIPE					
EXTRA HEAVY SOIL PIPE					
Extra heavy soil pipe, single hub					
2" x 5'	EA	0.160	180.00	18.00	198.00
3" x 5'	EA	0.170	210.00	19.00	229.00
4" x 5'	EA	0.186	260.00	20.75	280.75
6" x 5'	EA	0.200	310.00	22.50	332.50
Double hub					
2" x 5'	EA	0.200	120.00	22.50	142.50
4" x 5'	EA	0.211	150.00	23.50	173.50
5" x 5'	EA	0.222	240.00	25.00	265.00
6" x 5'	EA	0.229	280.00	25.50	305.50
Single hub					
3" x 10'	EA	0.133	240.00	15.00	255.00
4" x 10'	EA	0.138	320.00	15.50	335.50
6" x 10'	EA	0.145	480.00	16.25	496.25
22131.50 SERVICE WEIGHT PIPE					
SERVICE WEIGHT PIPE					
Service weight pipe, single hub					
3" x 5'	EA	0.170	81.00	19.00	100.00
4" x 5'	EA	0.178	94.00	20.00	114.00
6" x 5'	EA	0.200	180.00	22.50	202.50
Double hub					
3" x 5'	EA	0.216	90.00	24.25	114.25
4" x 5'	EA	0.229	100.00	25.50	125.50

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	Unit	Man-Hrs	Material	Labor	Total
22131.50 SERVICE WEIGHT PIPE (Cont.)					
Double hub					
6" x 5'	EA	0.267	190.00	30.00	220.00
Single hub					
3" x 10'	EA	0.216	110.00	24.25	134.25
4" x 10'	EA	0.229	140.00	25.50	165.50
6" x 10'	EA	0.267	240.00	30.00	270.00
1/8 bend					
3"	EA	0.320	21.25	35.75	57.00
4"	EA	0.364	31.00	40.75	71.75
6"	EA	0.400	53.00	44.75	97.75
1/4 bend					
3"	EA	0.320	25.50	35.75	61.25
4"	EA	0.364	39.75	40.75	80.50
6"	EA	0.400	69.00	44.75	113.75
Sweep					
3"	EA	0.320	41.25	35.75	77.00
4"	EA	0.364	60.00	40.75	100.75
6"	EA	0.400	120.00	44.75	164.75
Sanitary T					
3"	EA	0.571	43.00	64.00	107.00
4"	EA	0.667	53.00	75.00	128.00
6"	EA	0.727	120.00	82.00	202.00
Wye					
3"	EA	0.444	45.00	49.75	94.75
4"	EA	0.471	60.00	53.00	113.00
6"	EA	0.571	140.00	64.00	204.00
22131.60 C.I. PIPE, ABOVE GROUND					
C.I. PIPE, ABOVE GROUND					
No hub pipe					
1-1/2" pipe	LF	0.057	12.25	6.40	18.65
2" pipe	LF	0.067	10.75	7.47	18.22
3" pipe	LF	0.080	15.00	8.96	23.96
4" pipe	LF	0.133	19.50	15.00	34.50
6" pipe	LF	0.160	34.50	18.00	52.50
8" pipe	LF	0.267	55.00	30.00	85.00
10" pipe	LF	0.320	87.00	35.75	122.75
No hub fittings, 1-1/2" pipe					
1/4 bend	EA	0.267	13.50	30.00	43.50
1/8 bend	EA	0.267	11.50	30.00	41.50
Sanitary tee	EA	0.400	19.00	44.75	63.75
Coupling	EA				27.00
Wye	EA	0.400	23.50	44.75	68.25
2" pipe					
1/4 bend	EA	0.320	17.00	35.75	52.75
1/8 bend	EA	0.320	13.75	35.75	49.50
Sanitary tee	EA	0.533	23.25	60.00	83.25
Coupling	EA				25.75
Wye	EA	0.667	21.75	75.00	96.75
3" pipe					
1/4 bend	EA	0.400	23.25	44.75	68.00
1/8 bend	EA	0.400	19.50	44.75	64.25
Sanitary tee	EA	0.500	28.50	56.00	84.50
Coupling	EA				29.50
Wye	EA	0.667	31.00	75.00	106.00
4" pipe					
1/4 bend	EA	0.400	33.75	44.75	78.50
1/8 bend	EA	0.400	24.75	44.75	69.50
Sanitary tee	EA	0.667	44.00	75.00	119.00
Coupling	EA				28.75
Wye	EA	0.667	51.00	75.00	126.00
6" pipe					
1/4 bend	EA	0.667	85.00	75.00	160.00
1/8 bend	EA	0.667	57.00	75.00	132.00
Sanitary tee	EA	0.800	130.00	90.00	220.00

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	Unit	Man-Hrs	Material	Labor	Total
22131.60 C.I. PIPE, ABOVE GROUND (Cont.)					
6" pipe					
Coupling	EA				73.00
Wye	EA	0.800	130.00	90.00	220.00
8" pipe					
1/4 bend	EA	0.667	150.00	75.00	225.00
1/8 bend	EA	0.667	100.00	75.00	175.00
Sanitary tee	EA	1.000	330.00	110.00	440.00
Coupling	EA				140.00
Wye	EA	0.800	200.00	90.00	290.00
10" pipe					
1/4 bend	EA	0.667	300.00	75.00	375.00
1/8 bend	EA	0.667	190.00	75.00	265.00
Coupling	EA				180.00
Wye	EA	1.333	440.00	150.00	590.00
10x6" wye	EA	1.333	320.00	150.00	470.00
22131.61 C.I. PIPE, BELOW GROUND					
C.I. PIPE, BELOW GROUND					
No hub pipe					
1-1/2" pipe	LF	0.040	13.00	4.48	17.48
2" pipe	LF	0.044	13.25	4.98	18.23
3" pipe	LF	0.050	18.25	5.60	23.85
4" pipe	LF	0.067	23.75	7.47	31.22
6" pipe	LF	0.073	41.00	8.15	49.15
8" pipe	LF	0.089	64.00	9.96	73.96
10" pipe	LF	0.100	110.00	11.25	121.25
Fittings, 1-1/2"					
1/4 bend	EA	0.229	15.50	25.50	41.00
1/8 bend	EA	0.229	13.00	25.50	38.50
Wye	EA	0.320	21.75	35.75	57.50
2"					
1/4 bend	EA	0.267	17.00	30.00	47.00
1/8 bend	EA	0.267	14.50	30.00	44.50
3"					
1/4 bend	EA	0.320	23.25	35.75	59.00
1/8 bend	EA	0.320	19.50	35.75	55.25
Wye	EA	0.500	31.00	56.00	87.00
4"					
1/4 bend	EA	0.320	33.75	35.75	69.50
1/8 bend	EA	0.320	24.75	35.75	60.50
Wye	EA	0.500	51.00	56.00	107.00
6"					
1/4 bend	EA	0.500	54.00	56.00	110.00
1/8 bend	EA	0.500	36.00	56.00	92.00
8"					
1/4 bend	EA	0.500	150.00	56.00	206.00
1/8 bend	EA	0.500	100.00	56.00	156.00
Wye	EA	0.667	200.00	75.00	275.00
10"					
1/4 bend	EA	0.500	300.00	56.00	356.00
1/8 bend	EA	0.500	190.00	56.00	246.00
Plug	EA				90.00
Wye	EA	1.000	440.00	110.00	550.00
22131.63 ABS DWV PIPE					
ABS DWV PIPE					
Schedule 40 ABS					
1-1/2" pipe	LF	0.040	1.81	4.48	6.29
2" pipe	LF	0.044	2.42	4.98	7.40
3" pipe	LF	0.057	4.97	6.40	11.37
4" pipe	LF	0.080	7.04	8.96	16.00
6" pipe	LF	0.100	14.50	11.25	25.75

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	Unit	Man-Hrs	Material	Labor	Total
22131.65 PLASTIC PIPE					
PLASTIC PIPE					
Fiberglass reinforced pipe					
2" pipe	LF	0.062	4.38	6.89	11.27
3" pipe	LF	0.067	6.23	7.47	13.70
4" pipe	LF	0.073	8.14	8.15	16.29
6" pipe	LF	0.080	15.50	8.96	24.46
8" pipe	LF	0.133	22.75	15.00	37.75
10" pipe	LF	0.160	34.00	18.00	52.00
12" pipe	LF	0.200	44.25	22.50	66.75
22131.67 DRAINS, ROOF & FLOOR					
DRAINS, ROOF & FLOOR					
Floor drain, cast iron, with cast iron top					
2"	EA	0.667	220.00	75.00	295.00
3"	EA	0.667	230.00	75.00	305.00
4"	EA	0.667	480.00	75.00	555.00
6"	EA	0.800	620.00	90.00	710.00
9"	SF	1.000	880.00	110.00	990.00
Roof drain, cast iron					
2"	EA	0.667	280.00	75.00	355.00
3"	EA	0.667	290.00	75.00	365.00
4"	EA	0.667	370.00	75.00	445.00
5"	EA	0.800	540.00	90.00	630.00
6"	EA	0.800	550.00	90.00	640.00
22131.68 TRAPS					
TRAPS					
Bucket trap, threaded					
3/4"	EA	0.500	230.00	56.00	286.00
1"	EA	0.533	650.00	60.00	710.00
1-1/4"	EA	0.615	770.00	69.00	839.00
1-1/2"	EA	0.727	1,160.00	82.00	1,242.00
Inverted bucket steam trap, threaded					
3/4"	EA	0.500	280.00	56.00	336.00
1"	EA	0.500	550.00	56.00	606.00
1-1/4"	EA	0.444	830.00	49.75	879.75
1-1/2"	EA	0.667	880.00	75.00	955.00
Float trap, 15 psi					
3/4"	EA	0.500	200.00	56.00	256.00
1"	EA	0.533	310.00	60.00	370.00
1-1/4"	EA	0.571	400.00	64.00	464.00
1-1/2"	EA	0.667	510.00	75.00	585.00
2"	EA	0.800	880.00	90.00	970.00
Float and thermostatic trap, 15 psi					
3/4"	EA	0.500	210.00	56.00	266.00
1"	EA	0.533	240.00	60.00	300.00
1-1/4"	EA	0.571	370.00	64.00	434.00
1-1/2"	EA	0.667	480.00	75.00	555.00
2"	EA	0.800	880.00	90.00	970.00
Steam trap, cast iron body, threaded, 125 psi					
3/4"	EA	0.500	250.00	56.00	306.00
1"	EA	0.533	290.00	60.00	350.00
1-1/4"	EA	0.571	430.00	64.00	494.00
1-1/2"	EA	0.667	690.00	75.00	765.00
22131.92 CLEANOUTS					
CLEANOUTS					
Cleanout, wall					
2"	EA	0.533	240.00	60.00	300.00
3"	EA	0.533	340.00	60.00	400.00
4"	EA	0.667	340.00	75.00	415.00
6"	EA	0.800	560.00	90.00	650.00
8"	EA	1.000	780.00	110.00	890.00
Floor					
2"	EA	0.667	220.00	75.00	295.00
3"	EA	0.667	290.00	75.00	365.00

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	Unit	Man-Hrs	Material	Labor	Total
22131.92 CLEANOUTS (Cont.)					
Floor					
4"	EA	0.800	300.00	90.00	390.00
6"	EA	1.000	410.00	110.00	520.00
8"	EA	1.143	770.00	130.00	900.00
22131.93 GREASE TRAPS					
GREASE TRAPS					
Grease traps, cast iron, 3" pipe					
35 gpm, 70 lb capacity	EA	8.000	6,920.00	900.00	7,820.00
50 gpm, 100 lb capacity	EA	10.000	8,810.00	1,120.00	9,930.00
22330.01 DOMESTIC WATER HEATERS					
DOMESTIC WATER HEATERS					
Water heater, electric					
6 gal	EA	1.333	450.00	150.00	600.00
10 gal	EA	1.333	460.00	150.00	610.00
15 gal	EA	1.333	450.00	150.00	600.00
20 gal	EA	1.600	630.00	180.00	810.00
30 gal	EA	1.600	820.00	180.00	1,000.00
40 gal	EA	1.600	890.00	180.00	1,070.00
52 gal	EA	2.000	1,200.00	220.00	1,420.00
66 gal	EA	2.000	1,450.00	220.00	1,670.00
80 gal	EA	2.000	1,580.00	220.00	1,800.00
100 gal	EA	2.667	1,950.00	300.00	2,250.00
120 gal	EA	2.667	2,500.00	300.00	2,800.00
Oil fired					
20 gal	EA	4.000	1,430.00	450.00	1,880.00
50 gal	EA	5.714	2,230.00	640.00	2,870.00
Tankless water heater, natural gas					
Minimum	EA	5.333	770.00	600.00	1,370.00
Average	EA	8.000	880.00	900.00	1,780.00
Maximum	EA	16.000	990.00	1,790.00	2,780.00
Propane					
Minimum	EA	5.333	660.00	600.00	1,260.00
Average	EA	8.000	770.00	900.00	1,670.00
Maximum	EA	16.000	880.00	1,790.00	2,670.00
Electric					
Minimum	EA	5.333	770.00	600.00	1,370.00
Average	EA	8.000	880.00	900.00	1,780.00
Maximum	EA	16.000	990.00	1,790.00	2,780.00
Commercial, electric					
20 gal	EA	1.600	1,320.00	180.00	1,500.00
30 gal	EA	1.600	2,090.00	180.00	2,270.00
50 gal	EA	2.000	2,750.00	220.00	2,970.00
80 gal	EA	2.000	3,410.00	220.00	3,630.00
100 gal	EA	2.667	5,500.00	300.00	5,800.00
120 gal	EA	2.667	8,250.00	300.00	8,550.00
Natural gas					
20 gal	EA	1.600		180.00	180.00
30 gal	EA	1.600	2,140.00	180.00	2,320.00
50 gal	EA	2.000	3,630.00	220.00	3,850.00
80 gal	EA	2.000	4,840.00	220.00	5,060.00
100 gal	EA	2.667	5,610.00	300.00	5,910.00
120 gal	EA	2.667	8,800.00	300.00	9,100.00
For trim and rough-in					
Minimum	EA	2.667	210.00	300.00	510.00
Average	EA	4.000	300.00	450.00	750.00
Maximum	EA	8.000	860.00	900.00	1,760.00
22330.02 SOLAR WATER HEATERS					
SOLAR WATER HEATERS					
Hydronic system, 100-120 Gallons including material					
Minimum	EA				14,360.00
Average	EA				15,120.00
Maximum	EA				15,880.00

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	Unit	Man-Hrs	Material	Labor	Total
22330.02 SOLAR WATER HEATERS (Cont.)					
Direct-Solar, 100-120 Gallons					
Minimum	EA				9,530.00
Average	EA				9,970.00
Maximum	EA				10,420.00
Indirect-Solar tank, 50-80 Gallons					
Minimum	EA				1,910.00
Average	EA				2,350.00
Maximum	EA				2,800.00
100-120 Gallons					
Minimum	EA				3,180.00
Average	EA				3,620.00
Maximum	EA				4,070.00
Solar water collector panel, 3 x 8					
Minimum	EA	1.000	1,020.00	110.00	1,130.00
Average	EA	1.143	1,050.00	130.00	1,180.00
Maximum	EA	1.333	1,080.00	150.00	1,230.00
4 x 7					
Minimum	EA	1.000	1,140.00	110.00	1,250.00
Average	EA	1.143	1,180.00	130.00	1,310.00
Maximum	EA	1.333	1,210.00	150.00	1,360.00
4 x 8					
Minimum	EA	1.000	1,210.00	110.00	1,320.00
Average	EA	1.143	1,240.00	130.00	1,370.00
Maximum	EA	1.333	1,270.00	150.00	1,420.00
4 x 10					
Minimum	EA	1.143	1,400.00	130.00	1,530.00
Average	EA	1.333	1,520.00	150.00	1,670.00
Maximum	EA	1.600	1,650.00	180.00	1,830.00
Passive tube tank system, 12 Tube					
Minimum	EA	1.000	760.00	110.00	870.00
Average	EA	1.143	950.00	130.00	1,080.00
Maximum	EA	1.333	1,140.00	150.00	1,290.00
24 Tube					
Minimum	EA	1.000	1,140.00	110.00	1,250.00
Average	EA	1.143	1,330.00	130.00	1,460.00
Maximum	EA	1.333	1,520.00	150.00	1,670.00
27 Tube					
Minimum	EA	1.000	1,270.00	110.00	1,380.00
Average	EA	1.143	1,590.00	130.00	1,720.00
Maximum	EA	1.333	1,910.00	150.00	2,060.00
22420.09 FIXTURE CARRIERS					
FIXTURE CARRIERS					
Water fountain, wall carrier					
Minimum	EA	0.800	120.00	90.00	210.00
Average	EA	1.000	160.00	110.00	270.00
Maximum	EA	1.333	200.00	150.00	350.00
Lavatory, wall carrier					
Minimum	EA	0.800	190.00	90.00	280.00
Average	EA	1.000	280.00	110.00	390.00
Maximum	EA	1.333	350.00	150.00	500.00
Sink, industrial, wall carrier					
Minimum	EA	0.800	210.00	90.00	300.00
Average	EA	1.000	240.00	110.00	350.00
Maximum	EA	1.333	300.00	150.00	450.00
Toilets, water closets, wall carrier					
Minimum	EA	0.800	310.00	90.00	400.00
Average	EA	1.000	360.00	110.00	470.00
Maximum	EA	1.333	1,020.00	150.00	1,170.00
Floor support					
Minimum	EA	0.667	150.00	75.00	225.00
Average	EA	0.800	180.00	90.00	270.00
Maximum	EA	1.000	200.00	110.00	310.00
Urinals, wall carrier					
Minimum	EA	0.800	160.00	90.00	250.00

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	Unit	Man-Hrs	Material	Labor	Total
22420.09 FIXTURE CARRIERS (Cont.)					
Urinals, wall carrier					
Average	EA	1.000	320.00	110.00	430.00
Maximum	EA	1.333	1,130.00	150.00	1,280.00
Floor support					
Minimum	EA	0.667	130.00	75.00	205.00
Average	EA	0.800	190.00	90.00	280.00
Maximum	EA	1.000	220.00	110.00	330.00
22421.35 URINALS					
URINALS					
Urinal, flush valve, floor mounted					
Minimum	EA	2.000	660.00	220.00	880.00
Average	EA	2.667	780.00	300.00	1,080.00
Maximum	EA	4.000	910.00	450.00	1,360.00
Wall mounted					
Minimum	EA	2.000	490.00	220.00	710.00
Average	EA	2.667	680.00	300.00	980.00
Maximum	EA	4.000	880.00	450.00	1,330.00
For trim and rough-in					
Minimum	EA	2.000	220.00	220.00	440.00
Average	EA	4.000	320.00	450.00	770.00
Maximum	EA	5.333	430.00	600.00	1,030.00
22421.36 WATER CLOSETS					
WATER CLOSETS					
Water closet flush tank, floor mounted					
Minimum	EA	2.000	320.00	220.00	540.00
Average	EA	2.667	630.00	300.00	930.00
Maximum	EA	4.000	960.00	450.00	1,410.00
Handicapped					
Minimum	EA	2.667	540.00	300.00	840.00
Average	EA	4.000	970.00	450.00	1,420.00
Maximum	EA	8.000	1,850.00	900.00	2,750.00
Bowl, with flush valve, floor mounted					
Minimum	EA	2.000	560.00	220.00	780.00
Average	EA	2.667	610.00	300.00	910.00
Maximum	EA	4.000	1,200.00	450.00	1,650.00
Wall mounted					
Minimum	EA	2.000	560.00	220.00	780.00
Average	EA	2.667	650.00	300.00	950.00
Maximum	EA	4.000	1,250.00	450.00	1,700.00
Flush valves					
Manual water closet/urinal flush valve	EA				280.00
Automatic battery powered water closet/urinal flush valve	EA				430.00
For trim and rough-in					
Minimum	EA	2.000	250.00	220.00	470.00
Average	EA	2.667	300.00	300.00	600.00
Maximum	EA	4.000	400.00	450.00	850.00
22421.62 LAVATORIES					
LAVATORIES					
Lavatory, countertop, porcelain enamel on cast iron					
Minimum	EA	1.600	230.00	180.00	410.00
Average	EA	2.000	350.00	220.00	570.00
Maximum	EA	2.667	630.00	300.00	930.00
Wall hung, china					
Minimum	EA	1.600	320.00	180.00	500.00
Average	EA	2.000	370.00	220.00	590.00
Maximum	EA	2.667	930.00	300.00	1,230.00
Handicapped					
Minimum	EA	2.000	520.00	220.00	740.00
Average	EA	2.667	600.00	300.00	900.00
Maximum	EA	4.000	1,000.00	450.00	1,450.00
Lavatory shutoff and drainline guards/covers	EA	0.400	140.00	44.75	184.75
For trim and rough-in					
Minimum	EA	2.000	270.00	220.00	490.00

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	Unit	Man-Hrs	Material	Labor	Total
22421.62 LAVATORIES (Cont.)					
For trim and rough-in					
Average	EA	2.667	450.00	300.00	750.00
Maximum	EA	4.000	560.00	450.00	1,010.00
22421.64 SINKS					
SINKS					
Service sink, 24"x29"					
Minimum	EA	2.000	770.00	220.00	990.00
Average	EA	2.667	960.00	300.00	1,260.00
Maximum	EA	4.000	1,410.00	450.00	1,860.00
Kitchen sink, single, stainless steel, single bowl					
Minimum	EA	1.600	340.00	180.00	520.00
Average	EA	2.000	390.00	220.00	610.00
Maximum	EA	2.667	710.00	300.00	1,010.00
Double bowl					
Minimum	EA	2.000	390.00	220.00	610.00
Average	EA	2.667	430.00	300.00	730.00
Maximum	EA	4.000	750.00	450.00	1,200.00
Porcelain enamel, cast iron, single bowl					
Minimum	EA	1.600	260.00	180.00	440.00
Average	EA	2.000	350.00	220.00	570.00
Maximum	EA	2.667	540.00	300.00	840.00
Double bowl					
Minimum	EA	2.000	370.00	220.00	590.00
Average	EA	2.667	510.00	300.00	810.00
Maximum	EA	4.000	730.00	450.00	1,180.00
Mop sink, 24"x36"x10"					
Minimum	EA	1.600	590.00	180.00	770.00
Average	EA	2.000	710.00	220.00	930.00
Maximum	EA	2.667	950.00	300.00	1,250.00
Washing machine box					
Minimum	EA	2.000	53.00	220.00	273.00
Average	EA	2.667	77.00	300.00	377.00
Maximum	EA	4.000	93.00	450.00	543.00
For trim and rough-in					
Minimum	EA	2.667	350.00	300.00	650.00
Average	EA	4.000	530.00	450.00	980.00
Maximum	EA	5.333	680.00	600.00	1,280.00
22421.90 BATHS					
BATHS					
Bathtub, 5' long					
Minimum	EA	2.667	640.00	300.00	940.00
Average	EA	4.000	1,400.00	450.00	1,850.00
Maximum	EA	8.000	3,190.00	900.00	4,090.00
6' long					
Minimum	EA	2.667	720.00	300.00	1,020.00
Average	EA	4.000	1,460.00	450.00	1,910.00
Maximum	EA	8.000	4,140.00	900.00	5,040.00
Square tub, whirlpool, 4'x4'					
Minimum	EA	4.000	2,200.00	450.00	2,650.00
Average	EA	8.000	3,110.00	900.00	4,010.00
Maximum	EA	10.000	9,500.00	1,120.00	10,620.00
5'x5'					
Minimum	EA	4.000	2,200.00	450.00	2,650.00
Average	EA	8.000	3,110.00	900.00	4,010.00
Maximum	EA	10.000	9,680.00	1,120.00	10,800.00
6'x6'					
Minimum	EA	4.000	2,680.00	450.00	3,130.00
Average	EA	8.000	3,910.00	900.00	4,810.00
Maximum	EA	10.000	11,220.00	1,120.00	12,340.00
For trim and rough-in					
Minimum	EA	2.667	230.00	300.00	530.00
Average	EA	4.000	330.00	450.00	780.00
Maximum	EA	8.000	950.00	900.00	1,850.00

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	Unit	Man-Hrs	Material	Labor	Total
22422.30 SHOWERS					
SHOWERS					
Shower, fiberglass, 36"x34"x84"					
Minimum	EA	5.714	690.00	640.00	1,330.00
Average	EA	8.000	970.00	900.00	1,870.00
Maximum	EA	8.000	1,400.00	900.00	2,300.00
Steel, 1 piece, 36"x36"					
Minimum	EA	5.714	640.00	640.00	1,280.00
Average	EA	8.000	970.00	900.00	1,870.00
Maximum	EA	8.000	1,140.00	900.00	2,040.00
Receptor, molded stone, 36"x36"					
Minimum	EA	2.667	270.00	300.00	570.00
Average	EA	4.000	450.00	450.00	900.00
Maximum	EA	6.667	690.00	750.00	1,440.00
For trim and rough-in					
Minimum	EA	3.636	270.00	410.00	680.00
Average	EA	4.444	450.00	500.00	950.00
Maximum	EA	8.000	560.00	900.00	1,460.00
22422.60 DISPOSALS & ACCESSORIES					
DISPOSALS & ACCESSORIES					
Disposal, continuous feed					
Minimum	EA	1.600	83.00	180.00	263.00
Maximum	EA	2.667	440.00	300.00	740.00
Batch feed, 1/2 hp					
Minimum	EA	1.600	320.00	180.00	500.00
Maximum	EA	2.667	1,090.00	300.00	1,390.00
Hot water dispenser					
Minimum	EA	1.600	230.00	180.00	410.00
Maximum	EA	2.667	580.00	300.00	880.00
22423.90 FAUCETS					
FAUCETS					
Kitchen					
Minimum	EA	1.333	95.00	150.00	245.00
Average	EA	1.600	270.00	180.00	450.00
Maximum	EA	2.000	330.00	220.00	550.00
Bath					
Minimum	EA	1.333	95.00	150.00	245.00
Average	EA	1.600	280.00	180.00	460.00
Maximum	EA	2.000	430.00	220.00	650.00
Lavatory, domestic					
Minimum	EA	1.333	100.00	150.00	250.00
Average	EA	1.600	320.00	180.00	500.00
Maximum	EA	2.000	530.00	220.00	750.00
Hospital, patient rooms					
Minimum	EA	2.000	140.00	220.00	360.00
Average	EA	2.667	440.00	300.00	740.00
Maximum	EA	4.000	780.00	450.00	1,230.00
Operating room					
Minimum	EA	2.000	290.00	220.00	510.00
Average	EA	2.667	640.00	300.00	940.00
Maximum	EA	4.000	930.00	450.00	1,380.00
Washroom					
Minimum	EA	1.333	130.00	150.00	280.00
Average	EA	1.600	320.00	180.00	500.00
Maximum	EA	2.000	580.00	220.00	800.00
Handicapped					
Minimum	EA	1.600	140.00	180.00	320.00
Average	EA	2.000	420.00	220.00	640.00
Maximum	EA	2.667	650.00	300.00	950.00
Shower					
Minimum	EA	1.333	130.00	150.00	280.00
Average	EA	1.600	370.00	180.00	550.00
Maximum	EA	2.000	2,780.00	220.00	3,000.00
For trim and rough-in					
Minimum	EA	1.600	89.00	180.00	269.00

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	Unit	Man-Hrs	Material	Labor	Total
22423.90 FAUCETS (Cont.)					
For trim and rough-in					
Average	EA	2.000	140.00	220.00	360.00
Maximum	EA	4.000	230.00	450.00	680.00
22423.98 HOSE BIBBS					
HOSE BIBBS					
Hose bibb					
1/2"	EA	0.267	10.50	30.00	40.50
3/4"	EA	0.267	11.00	30.00	41.00
22470.01 MISCELLANEOUS FIXTURES					
MISCELLANEOUS FIXTURES					
Electric water cooler					
Floor mounted	EA	2.667	1,110.00	300.00	1,410.00
Wall mounted	EA	2.667	1,040.00	300.00	1,340.00
Wash fountain					
Wall mounted	EA	4.000	2,660.00	450.00	3,110.00
Circular, floor supported	EA	8.000	4,660.00	900.00	5,560.00
Deluge shower and eye wash	EA	4.000	1,110.00	450.00	1,560.00
22510.07 SOLAR WATER HEATERS, POOLS					
SOLAR WATER HEATERS, POOLS					
Solar Water Heater, 1000 BTU/SF panel, 4x8	EA	1.000	140.00	110.00	250.00
4 x 10	EA	1.143	160.00	130.00	290.00
4 x 12	EA	1.333	180.00	150.00	330.00
Panel Mounting Kit, 4x8	EA	0.400	38.00	44.75	82.75
4 x 10	EA	0.444	57.00	49.75	106.75
4 x 12	EA	0.500	70.00	56.00	126.00
22660.01 GLASS PIPE					
GLASS PIPE					
Glass pipe					
1-1/2" dia.	LF	0.160	15.50	18.00	33.50
2" dia.	LF	0.178	21.00	20.00	41.00
3" dia.	LF	0.200	28.00	22.50	50.50
4" dia.	LF	0.229	51.00	25.50	76.50
6" dia.	LF	0.267	94.00	30.00	124.00

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	Unit	Man-Hrs	Material	Labor	Total
23071.31 DUCTWORK INSULATION					
DUCTWORK INSULATION					
Fiberglass duct insulation, plain blanket					
1-1/2" thick	SF	0.010	0.50	1.12	1.62
2" thick	SF	0.013	0.66	1.49	2.15
With vapor barrier					
1-1/2" thick	SF	0.010	0.58	1.12	1.70
2" thick	SF	0.013	0.73	1.49	2.22
Rigid with vapor barrier					
2" thick	SF	0.027	3.17	2.98	6.15
3" thick	SF	0.032	4.36	3.58	7.94
4" thick	SF	0.040	5.55	4.48	10.03
6" thick	SF	0.053	8.73	5.97	14.70
Weatherproof, poly, 3" thick, w/vapor barrier	SF	0.080	6.75	8.96	15.71
Urethane board with vapor barrier	SF	0.100	9.52	11.25	20.77
23091.31 HVAC CONTROLS					
HVAC CONTROLS					
Pressure gauge, direct reading gauge cock and siphon	EA	0.500	130.00	56.00	186.00
Control valve, 1", modulating					
2-way	EA	0.667	1,010.00	75.00	1,085.00
3-way	EA	1.000	1,140.00	110.00	1,250.00
Self contained control valve w/ sensing elmnt, 3/4"	EA	0.500	190.00	56.00	246.00
Inst air syst 2-1/2 hp comp, rcvr refrg dryer	EA				8,490.00
Thermostat primary control device	EA				190.00
Electronic, non-programmable	EA				44.50
Electronic, programmable	EA				38.50
Thermostat guard	EA				39.00
Transformer, single hub	EA				49.75
Humidistat primary control device	EA				150.00
Timers primary control device, indoor/outdoor, 24 hour	EA				300.00
Thermometer, dir. reading, 3 dial	EA				150.00
Controllers, system					
Minimum	EA	2.667	1,650.00	280.00	1,930.00
Average	EA	4.000	2,420.00	410.00	2,830.00
Maximum	EA	5.333	5,500.00	550.00	6,050.00
VAV Controller (external)	EA	1.333	390.00	140.00	530.00
Read Out Meter, water balancing system	EA	4.000	4,840.00	410.00	5,250.00
Control dampers, round					
6" dia.	EA	0.320	130.00	35.75	165.75
8" dia	EA	0.320	180.00	35.75	215.75
10" dia	EA	0.320	240.00	35.75	275.75
12" dia	EA	0.320	320.00	35.75	355.75
16" dia	EA	0.400	470.00	44.75	514.75
18" dia	EA	0.400	500.00	44.75	544.75
20" dia	EA	0.400	670.00	44.75	714.75
Rectangular, parallel blade standard leakage					
12" x 12"	EA	0.400	120.00	44.75	164.75
16" x 16"	EA	0.400	180.00	44.75	224.75
20" x 20"	EA	0.400	210.00	44.75	254.75
48" x 48"	EA	1.143	630.00	130.00	760.00
48" x 60"	EA	1.333	800.00	150.00	950.00
48" x 72"	EA	1.333	970.00	150.00	1,120.00
Low leakage					
12" x 12"	EA	0.400	230.00	44.75	274.75
16" x 16"	EA	0.400	290.00	44.75	334.75
36" x 36"	EA	0.667	740.00	75.00	815.00
48" x 48"	EA	1.143	1,330.00	130.00	1,460.00
48" x 72"	EA	1.333	2,080.00	150.00	2,230.00
Rectangular, opposed horizontal blade					
6" x 6"	EA	0.400	83.00	41.50	124.50
8" x 8"	EA	0.400	94.00	41.50	135.50
10" x 8"	EA	0.400	100.00	41.50	141.50
12" x 12"	EA	0.400	120.00	44.75	164.75
16" x 16"	EA	0.400	170.00	44.75	214.75

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	Unit	Man-Hrs	Material	Labor	Total
23091.31 HVAC CONTROLS (Cont.)					
Rectangular, opposed horizontal blade					
24" x 24"	EA	0.400	230.00	44.75	274.75
36" x 36"	EA	0.667	380.00	75.00	455.00
48" x 72"	EA	1.333	1,070.00	150.00	1,220.00
23211.36 EXPANSION TANKS					
EXPANSION TANKS					
Expansion tank, 125 psi, steel					
20 gallon	EA	1.000	910.00	110.00	1,020.00
80 gallon	EA	2.286	1,370.00	260.00	1,630.00
23211.37 STRAINERS					
STRAINERS					
Strainer, Y pattern, 125 psi, cast iron body, threaded					
3/4"	EA	0.286	19.25	32.00	51.25
1"	EA	0.320	24.75	35.75	60.50
1-1/4"	EA	0.400	31.25	44.75	76.00
1-1/2"	EA	0.400	39.75	44.75	84.50
2"	EA	0.500	59.00	56.00	115.00
250 psi, brass body, threaded					
3/4"	EA	0.320	36.00	35.75	71.75
1"	EA	0.320	50.00	35.75	85.75
1-1/4"	EA	0.400	63.00	44.75	107.75
1-1/2"	EA	0.400	88.00	44.75	132.75
2"	EA	0.500	150.00	56.00	206.00
Cast iron body, threaded					
3/4"	EA	0.320	29.50	35.75	65.25
1"	EA	0.320	37.50	35.75	73.25
1-1/4"	EA	0.400	49.75	44.75	94.50
1-1/2"	EA	0.400	66.00	44.75	110.75
2"	EA	0.500	84.00	56.00	140.00
23311.30 METAL DUCTWORK					
METAL DUCTWORK					
Rectangular duct					
Galvanized steel					
Minimum	LB	0.073	0.92	8.15	9.07
Average	LB	0.089	1.15	9.96	11.11
Maximum	LB	0.133	1.77	15.00	16.77
Aluminum					
Minimum	LB	0.160	2.40	18.00	20.40
Average	LB	0.200	3.21	22.50	25.71
Maximum	LB	0.267	3.98	30.00	33.98
Fittings					
Minimum	EA	0.267	9.91	30.00	39.91
Average	EA	0.400	14.75	44.75	59.50
Maximum	EA	0.800	21.75	90.00	111.75
For work					
10-20' high, add per pound	LB				0.66
30-50', add per pound	LB				1.10
23331.30 DAMPERS					
DAMPERS					
Horizontal parallel aluminum backdraft damper					
12" x 12"	EA	0.200	58.00	22.50	80.50
16" x 16"	EA	0.229	60.00	25.50	85.50
24" x 24"	EA	0.400	92.00	44.75	136.75
36" x 36"	EA	0.571	210.00	64.00	274.00
48" x 48"	EA	0.800	380.00	90.00	470.00
"Up", parallel dampers					
12" x 12"	EA	0.200	94.00	22.50	116.50
16" x 16"	EA	0.229	130.00	25.50	155.50
24" x 24"	EA	0.400	160.00	44.75	204.75
36" x 36"	EA	0.571	280.00	64.00	344.00
48" x 48"	EA	0.800	540.00	90.00	630.00
"Down", parallel dampers					
12" x 12"	EA	0.200	94.00	22.50	116.50

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	Unit	Man-Hrs	Material	Labor	Total
23331.30 DAMPERS (Cont.)					
"Down", parallel dampers					
16" x 16"	EA	0.229	130.00	25.50	155.50
24" x 24"	EA	0.400	160.00	44.75	204.75
36" x 36"	EA	0.571	280.00	64.00	344.00
48" x 48"	EA	0.800	540.00	90.00	630.00
Fire damper, 1.5 hr rating					
12" x 12"	EA	0.400	54.00	44.75	98.75
16" x 16"	EA	0.400	86.00	44.75	130.75
24" x 24"	EA	0.400	110.00	44.75	154.75
36" x 36"	EA	0.800	180.00	90.00	270.00
48" x 48"	EA	1.143	350.00	130.00	480.00
23334.60 FLEXIBLE DUCTWORK					
FLEXIBLE DUCTWORK					
Flexible duct, 1.25" fiberglass					
5" dia.	LF	0.040	3.47	4.48	7.95
6" dia.	LF	0.044	3.87	4.98	8.85
7" dia.	LF	0.047	4.77	5.27	10.04
8" dia.	LF	0.050	5.00	5.60	10.60
10" dia.	LF	0.057	6.66	6.40	13.06
12" dia.	LF	0.062	7.28	6.89	14.17
14" dia.	LF	0.067	9.13	7.47	16.60
16" dia.	LF	0.073	13.75	8.15	21.90
Flexible duct connector, 3" wide fabric	LF	0.133	2.43	15.00	17.43
23340.01 EXHAUST FANS					
EXHAUST FANS					
Belt drive roof exhaust fans					
640 cfm, 2618 fpm	EA	1.000	1,480.00	110.00	1,590.00
940 cfm, 2604 fpm	EA	1.000	1,920.00	110.00	2,030.00
1050 cfm, 3325 fpm	EA	1.000	1,720.00	110.00	1,830.00
1170 cfm, 2373 fpm	EA	1.000	2,490.00	110.00	2,600.00
2440 cfm, 4501 fpm	EA	1.000	1,950.00	110.00	2,060.00
2760 cfm, 4950 fpm	EA	1.000	2,160.00	110.00	2,270.00
3890 cfm, 6769 fpm	EA	1.000	2,460.00	110.00	2,570.00
2380 cfm, 3382 fpm	EA	1.000	2,730.00	110.00	2,840.00
2880 cfm, 3859 fpm	EA	1.000	2,850.00	110.00	2,960.00
3200 cfm, 4173 fpm	EA	1.333	2,890.00	150.00	3,040.00
3660 cfm, 3437 fpm	EA	1.333	2,930.00	150.00	3,080.00
Direct drive fans					
60 to 390 cfm	EA	1.000	930.00	110.00	1,040.00
145 to 590 cfm	EA	1.000	1,130.00	110.00	1,240.00
295 to 860 cfm	EA	1.000	1,370.00	110.00	1,480.00
235 to 1300 cfm	EA	1.000	1,470.00	110.00	1,580.00
415 to 1630 cfm	EA	1.000	1,660.00	110.00	1,770.00
590 to 2045 cfm	EA	1.000	1,920.00	110.00	2,030.00
23371.31 DIFFUSERS					
DIFFUSERS					
Ceiling diffusers, round, baked enamel finish					
6" dia.	EA	0.267	40.25	30.00	70.25
12" dia.	EA	0.333	69.00	37.25	106.25
16" dia.	EA	0.364	100.00	40.75	140.75
20" dia.	EA	0.400	140.00	44.75	184.75
Rectangular					
6x6"	EA	0.267	43.00	30.00	73.00
12x12"	EA	0.400	76.00	44.75	120.75
18x18"	EA	0.400	120.00	44.75	164.75
24x24"	EA	0.500	170.00	56.00	226.00
Lay in, flush mounted, perforated face, with grid					
6x6/24x24	EA	0.320	71.00	35.75	106.75
12x12/24x24	EA	0.320	83.00	35.75	118.75
18x18/24x24	EA	0.320	130.00	35.75	165.75

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	Unit	Man-Hrs	Material	Labor	Total
23371.31 DIFFUSERS (Cont.)					
Ceiling diffusers					
Two-way slot diffuser with balancing damper, 4'	EA	0.800	79.00	90.00	169.00
23371.34 REGISTERS AND GRILLES					
REGISTERS AND GRILLES					
Lay in flush mounted, perforated face, return					
6x6/24x24	EA	0.320	62.00	35.75	97.75
8x8/24x24	EA	0.320	62.00	35.75	97.75
9x9/24x24	EA	0.320	67.00	35.75	102.75
10x10/24x24	EA	0.320	72.00	35.75	107.75
12x12/24x24	EA	0.320	72.00	35.75	107.75
Rectangular, ceiling return, single deflection					
10x10	EA	0.400	32.25	44.75	77.00
12x12	EA	0.400	37.50	44.75	82.25
14x14	EA	0.400	45.75	44.75	90.50
16x8	EA	0.400	37.50	44.75	82.25
16x16	EA	0.400	37.50	44.75	82.25
24x12	EA	0.400	100.00	44.75	144.75
24x18	EA	0.400	130.00	44.75	174.75
36x24	EA	0.444	250.00	49.75	299.75
36x30	EA	0.444	370.00	49.75	419.75
Wall, return air register					
12x12	EA	0.200	53.00	22.50	75.50
16x16	EA	0.200	79.00	22.50	101.50
18x18	EA	0.200	93.00	22.50	115.50
20x20	EA	0.200	110.00	22.50	132.50
24x24	EA	0.200	150.00	22.50	172.50
Ceiling, return air grille					
6x6	EA	0.267	31.00	30.00	61.00
8x8	EA	0.320	38.50	35.75	74.25
10x10	EA	0.320	47.75	35.75	83.50
Ceiling, exhaust grille, aluminum egg crate					
6x6	EA	0.267	21.25	30.00	51.25
8x8	EA	0.320	21.25	35.75	57.00
10x10	EA	0.320	23.50	35.75	59.25
12x12	EA	0.400	29.00	44.75	73.75
14x14	EA	0.400	38.00	44.75	82.75
16x16	EA	0.400	44.75	44.75	89.50
18x18	EA	0.400	54.00	44.75	98.75
23372.32 RELIEF VENTILATORS					
RELIEF VENTILATORS					
Intake ventilator, aluminum, with screen, no curbs					
12" x 12"	EA	0.667	170.00	75.00	245.00
16" x 16"	EA	0.800	230.00	90.00	320.00
36" x 36"	EA	1.333	910.00	150.00	1,060.00
48" x 48"	EA	1.600	1,490.00	180.00	1,670.00
23372.38 PENTHOUSE LOUVERS					
PENTHOUSE LOUVERS					
Penthouse louvers					
12" high, extruded aluminum, 4" louver					
6' perimeter	EA	2.000	520.00	220.00	740.00
12' perimeter	EA	2.000	1,270.00	220.00	1,490.00
20' perimeter	EA	5.333	2,620.00	600.00	3,220.00
16" high x 4' perimeter	EA	2.000	430.00	220.00	650.00
6' perimeter	EA	2.000	610.00	220.00	830.00
12' perimeter	EA	2.000	1,420.00	220.00	1,640.00
20' perimeter	EA	5.333	3,060.00	600.00	3,660.00
20" high x 4' perimeter	EA	2.000	610.00	220.00	830.00
6' perimeter	EA	2.000	650.00	220.00	870.00
12' perimeter	EA	2.000	1,600.00	220.00	1,820.00
20' perimeter	EA	5.333	3,280.00	600.00	3,880.00
24" high x 4' perimeter	EA	2.000	610.00	220.00	830.00
6' perimeter	EA	2.000	740.00	220.00	960.00
12' perimeter	EA	2.000	1,780.00	220.00	2,000.00
20' perimeter	EA	5.333	3,700.00	600.00	4,300.00

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	Unit	Man-Hrs	Material	Labor	Total
23522.30 BOILERS					
BOILERS					
Cast iron, gas fired, hot water					
115 mbh	EA	20.000	3,150.00	2,930.00	6,080.00
175 mbh	EA	21.818	3,750.00	3,190.00	6,940.00
235 mbh	EA	24.000	4,800.00	3,510.00	8,310.00
940 mbh	EA	48.000	16,530.00	7,020.00	23,550.00
1600 mbh	EA	60.000	22,860.00	8,780.00	31,640.00
3000 mbh	EA	80.000	36,980.00	11,700.00	48,680.00
6000 mbh	EA	120.000	74,000.00	17,550.00	91,550.00
Steam					
115 mbh	EA	20.000	3,810.00	2,930.00	6,740.00
175 mbh	EA	21.818	4,590.00	3,190.00	7,780.00
235 mbh	EA	24.000	5,450.00	3,510.00	8,960.00
940 mbh	EA	48.000	19,010.00	7,020.00	26,030.00
1600 mbh	EA	60.000	24,600.00	8,780.00	33,380.00
3000 mbh	EA	80.000	36,630.00	11,700.00	48,330.00
6000 mbh	EA	120.000	77,300.00	17,550.00	94,850.00
Electric, hot water					
115 mbh	EA	12.000	5,630.00	1,760.00	7,390.00
175 mbh	EA	12.000	6,230.00	1,760.00	7,990.00
235 mbh	EA	12.000	7,110.00	1,760.00	8,870.00
940 mbh	EA	24.000	17,290.00	3,510.00	20,800.00
1600 mbh	EA	48.000	24,490.00	7,020.00	31,510.00
3000 mbh	EA	60.000	36,580.00	8,780.00	45,360.00
6000 mbh	EA	80.000	42,430.00	11,700.00	54,130.00
Steam					
115 mbh	EA	12.000	7,110.00	1,760.00	8,870.00
175 mbh	EA	12.000	8,700.00	1,760.00	10,460.00
235 mbh	EA	12.000	9,500.00	1,760.00	11,260.00
940 mbh	EA	24.000	18,910.00	3,510.00	22,420.00
1600 mbh	EA	48.000	31,700.00	7,020.00	38,720.00
3000 mbh	EA	60.000	45,040.00	8,780.00	53,820.00
6000 mbh	EA	80.000	46,800.00	11,700.00	58,500.00
Oil fired, hot water					
115 mbh	EA	16.000	4,150.00	2,340.00	6,490.00
175 mbh	EA	18.462	5,270.00	2,700.00	7,970.00
235 mbh	EA	21.818	7,280.00	3,190.00	10,470.00
940 mbh	EA	40.000	13,820.00	5,850.00	19,670.00
1600 mbh	EA	48.000	21,900.00	7,020.00	28,920.00
3000 mbh	EA	60.000	31,750.00	8,780.00	40,530.00
6000 mbh	EA	120.000	73,440.00	17,550.00	90,990.00
Steam					
115 mbh	EA	16.000	4,150.00	2,340.00	6,490.00
175 mbh	EA	18.462	5,270.00	2,700.00	7,970.00
235 mbh	EA	21.818	6,720.00	3,190.00	9,910.00
940 mbh	EA	40.000	13,420.00	5,850.00	19,270.00
1600 mbh	EA	48.000	21,900.00	7,020.00	28,920.00
3000 mbh	EA	60.000	29,550.00	8,780.00	38,330.00
6000 mbh	EA	120.000	73,440.00	17,550.00	90,990.00
23541.30 FURNACES					
FURNACES					
Electric, hot air					
40 mbh	EA	4.000	1,220.00	450.00	1,670.00
60 mbh	EA	4.211	1,320.00	470.00	1,790.00
80 mbh	EA	4.444	1,430.00	500.00	1,930.00
100 mbh	EA	4.706	1,610.00	530.00	2,140.00
125 mbh	EA	4.848	1,970.00	540.00	2,510.00
160 mbh	EA	5.000	2,710.00	560.00	3,270.00
200 mbh	EA	5.161	3,950.00	580.00	4,530.00
400 mbh	EA	5.333	6,990.00	600.00	7,590.00
Gas fired hot air					
40 mbh	EA	4.000	1,120.00	450.00	1,570.00
60 mbh	EA	4.211	1,200.00	470.00	1,670.00
80 mbh	EA	4.444	1,380.00	500.00	1,880.00

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	Unit	Man-Hrs	Material	Labor	Total
23541.30 FURNACES (Cont.)					
Gas fired hot air					
100 mbh	EA	4.706	1,440.00	530.00	1,970.00
125 mbh	EA	4.848	1,580.00	540.00	2,120.00
160 mbh	EA	5.000	1,880.00	560.00	2,440.00
200 mbh	EA	5.161	3,350.00	580.00	3,930.00
400 mbh	EA	5.333	5,990.00	600.00	6,590.00
Oil fired hot air					
40 mbh	EA	4.000	1,500.00	450.00	1,950.00
60 mbh	EA	4.211	2,490.00	470.00	2,960.00
80 mbh	EA	4.444	2,510.00	500.00	3,010.00
100 mbh	EA	4.706	2,550.00	530.00	3,080.00
125 mbh	EA	4.848	2,640.00	540.00	3,180.00
160 mbh	EA	5.000	3,040.00	560.00	3,600.00
200 mbh	EA	5.161	3,570.00	580.00	4,150.00
400 mbh	EA	5.333	5,920.00	600.00	6,520.00
23630.01 CONDENSING UNITS					
CONDENSING UNITS					
Air cooled condenser, single circuit					
3 ton	EA	1.333	1,990.00	150.00	2,140.00
5 ton	EA	1.333	3,000.00	150.00	3,150.00
7.5 ton	EA	3.810	4,890.00	430.00	5,320.00
20 ton	EA	4.000	14,540.00	450.00	14,990.00
25 ton	EA	4.000	21,920.00	450.00	22,370.00
30 ton	EA	4.000	24,980.00	450.00	25,430.00
40 ton	EA	5.714	32,300.00	640.00	32,940.00
50 ton	EA	5.714	39,290.00	640.00	39,930.00
60 ton	EA	5.000	45,230.00	560.00	45,790.00
With low ambient dampers					
3 ton	EA	2.000	2,180.00	220.00	2,400.00
5 ton	EA	2.000	3,430.00	220.00	3,650.00
7.5 ton	EA	4.000	5,270.00	450.00	5,720.00
20 ton	EA	5.333	14,590.00	600.00	15,190.00
25 ton	EA	5.333	22,210.00	600.00	22,810.00
30 ton	EA	5.333	25,510.00	600.00	26,110.00
40 ton	EA	6.667	33,850.00	750.00	34,600.00
50 ton	EA	7.273	40,840.00	820.00	41,660.00
60 ton	EA	7.273	46,830.00	820.00	47,650.00
Dual circuit					
10 ton	EA	4.000	4,660.00	450.00	5,110.00
15 ton	EA	5.714	6,820.00	640.00	7,460.00
20 ton	EA	5.714	13,950.00	640.00	14,590.00
25 ton	EA	5.714	22,220.00	640.00	22,860.00
30 ton	EA	5.714	25,850.00	640.00	26,490.00
40 ton	EA	6.667	36,970.00	750.00	37,720.00
50 ton	EA	6.667	40,840.00	750.00	41,590.00
60 ton	EA	6.667	42,390.00	750.00	43,140.00
80 ton	EA	8.889	52,990.00	1,000.00	53,990.00
100 ton	EA	8.889	62,040.00	1,000.00	63,040.00
120 ton	EA	8.889	73,670.00	1,000.00	74,670.00
With low ambient dampers					
15 ton	EA	5.714	7,600.00	640.00	8,240.00
20 ton	EA	5.714	14,830.00	640.00	15,470.00
25 ton	EA	5.714	23,520.00	640.00	24,160.00
30 ton	EA	5.714	26,520.00	640.00	27,160.00
40 ton	EA	6.667	38,250.00	750.00	39,000.00
50 ton	EA	6.667	42,140.00	750.00	42,890.00
60 ton	EA	6.667	43,690.00	750.00	44,440.00
80 ton	EA	8.889	55,560.00	1,000.00	56,560.00
100 ton	EA	8.889	64,620.00	1,000.00	65,620.00

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	Unit	Man-Hrs	Material	Labor	Total
23630.01 CONDENSING UNITS (Cont.)					
With low ambient dampers					
120 ton	EA	8.889	77,030.00	1,000.00	78,030.00
23640.01 CHILLERS					
CHILLERS					
Chiller, reciprocal					
Air cooled, remote condenser, starter					
20 ton	EA	8.000	34,610.00	1,170.00	35,780.00
25 ton	EA	8.000	39,060.00	1,170.00	40,230.00
30 ton	EA	8.000	41,290.00	1,170.00	42,460.00
40 ton	EA	12.000	45,800.00	1,760.00	47,560.00
50 ton	EA	13.333	50,840.00	1,950.00	52,790.00
100 ton	EA	24.000	83,440.00	3,510.00	86,950.00
200 ton	EA	40.000	152,050.00	5,850.00	157,900.00
Water cooled, with starter					
20 ton	EA	8.000	26,970.00	1,170.00	28,140.00
25 ton	EA	8.000	29,890.00	1,170.00	31,060.00
30 ton	EA	12.000	35,960.00	1,760.00	37,720.00
40 ton	EA	12.000	49,450.00	1,760.00	51,210.00
50 ton	EA	13.333	53,940.00	1,950.00	55,890.00
100 ton	EA	24.000	78,670.00	3,510.00	82,180.00
200 ton	EA	40.000	125,860.00	5,850.00	131,710.00
Packaged, air cooled, with starter					
20 ton	EA	6.000	30,120.00	880.00	31,000.00
25 ton	EA	6.000	32,590.00	880.00	33,470.00
30 ton	EA	6.000	37,990.00	880.00	38,870.00
40 ton	EA	6.000	43,600.00	880.00	44,480.00
Heat recovery, air cooled, with starter					
50 ton	EA	12.000	58,430.00	1,760.00	60,190.00
100 ton	EA	24.000	83,610.00	3,510.00	87,120.00
Water cooled, with starter					
40 ton	EA	12.000	49,900.00	1,760.00	51,660.00
100 ton	EA	26.667	90,120.00	3,900.00	94,020.00
Centrifugal, single bundle condenser, with starter					
80 ton	EA	34.286	117,990.00	5,010.00	123,000.00
230 ton	EA	53.333	135,930.00	7,800.00	143,730.00
460 ton	EA	80.000	205,960.00	11,700.00	217,660.00
670 ton	EA	96.000	274,660.00	14,040.00	288,700.00
23650.01 COOLING TOWERS					
COOLING TOWERS					
Cooling tower, propeller type					
100 ton	EA	8.000	16,220.00	1,170.00	17,390.00
400 ton	EA	24.000	54,190.00	3,510.00	57,700.00
1000 ton	EA	60.000	118,280.00	8,780.00	127,060.00
Centrifugal					
100 ton	EA	8.000	22,500.00	1,170.00	23,670.00
400 ton	EA	24.000	64,900.00	3,510.00	68,410.00
1000 ton	EA	60.000	151,840.00	8,780.00	160,620.00
23740.01 AIR HANDLING UNITS					
AIR HANDLING UNITS					
Air handling unit, medium pressure, single zone					
1500 cfm	EA	5.000	4,840.00	560.00	5,400.00
3000 cfm	EA	8.889	6,360.00	1,000.00	7,360.00
4000 cfm	EA	10.000	8,150.00	1,120.00	9,270.00
5000 cfm	EA	10.667	10,270.00	1,200.00	11,470.00
6000 cfm	EA	11.429	13,200.00	1,280.00	14,480.00
7000 cfm	EA	12.308	15,150.00	1,380.00	16,530.00
8500 cfm	EA	13.333	18,630.00	1,490.00	20,120.00
10,500 cfm	EA	16.000	20,460.00	1,790.00	22,250.00
12,500 cfm	EA	17.778	23,550.00	1,990.00	25,540.00
Rooftop air handling units					
4950 cfm	EA	8.889	13,910.00	1,000.00	14,910.00
7370 cfm	EA	11.429	17,640.00	1,280.00	18,920.00
9790 cfm	EA	13.333	18,770.00	1,490.00	20,260.00

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	Unit	Man-Hrs	Material	Labor	Total
23740.01 AIR HANDLING UNITS (Cont.)					
Rooftop air handling units					
14,300 cfm	EA	11.429	26,510.00	1,280.00	27,790.00
21,725 cfm	EA	11.429	37,550.00	1,280.00	38,830.00
33,000 cfm	EA	13.333	53,020.00	1,490.00	54,510.00
23740.09 ROOF CURBS					
ROOF CURBS					
8" high, insulated, with liner and raised can					
15" x 15"	EA	0.400	120.00	44.75	164.75
21" x 21"	EA	0.400	150.00	44.75	194.75
36" x 36"	EA	0.571	210.00	64.00	274.00
48" x 48"	EA	0.615	600.00	69.00	669.00
60" x 60"	EA	0.800	1,100.00	90.00	1,190.00
72" x 72"	EA	1.000	1,760.00	110.00	1,870.00
23811.32 ROOFTOP UNITS					
ROOFTOP UNITS					
Packaged, single zone rooftop unit, with roof curb					
2 ton	EA	8.000	4,950.00	900.00	5,850.00
3 ton	EA	8.000	5,200.00	900.00	6,100.00
4 ton	EA	10.000	5,680.00	1,120.00	6,800.00
5 ton	EA	13.333	6,160.00	1,490.00	7,650.00
7.5 ton	EA	16.000	8,960.00	1,790.00	10,750.00
10 ton	EA	20.000	11,090.00	2,070.00	13,160.00
15 ton	EA	21.333	20,200.00	2,210.00	22,410.00
20 ton	EA	24.615	24,020.00	2,550.00	26,570.00
25 ton	EA	26.667	26,400.00	2,760.00	29,160.00
30 ton	EA	32.000	29,040.00	3,310.00	32,350.00
For unit economizer add					
Minimum	EA				3,850.00
Average	EA				5,500.00
Maximum	EA				8,800.00
23812.30 COMPUTER ROOM A/C					
COMPUTER ROOM A/C					
Air cooled, alarm, high efficiency filter, elec. heat					
3 ton	EA	6.154	20,500.00	690.00	21,190.00
5 ton	EA	6.667	21,890.00	750.00	22,640.00
7.5 ton	EA	8.000	39,660.00	900.00	40,560.00
10 ton	EA	10.000	41,450.00	1,120.00	42,570.00
15 ton	EA	11.429	45,550.00	1,280.00	46,830.00
Steam heat					
3 ton	EA	6.154	18,130.00	690.00	18,820.00
5 ton	EA	6.667	19,290.00	750.00	20,040.00
7.5 ton	EA	8.000	30,720.00	900.00	31,620.00
10 ton	EA	10.000	31,650.00	1,120.00	32,770.00
15 ton	EA	11.429	35,000.00	1,280.00	36,280.00
Hot water heat					
3 ton	EA	6.154	18,130.00	690.00	18,820.00
5 ton	EA	6.667	19,290.00	750.00	20,040.00
7.5 ton	EA	8.000	30,720.00	900.00	31,620.00
10 ton	EA	10.000	31,650.00	1,120.00	32,770.00
15 ton	EA	11.429	35,110.00	1,280.00	36,390.00
Air cooled condenser, low ambient damper					
3 ton	EA	1.600	1,810.00	180.00	1,990.00
5 ton	EA	2.000	2,850.00	220.00	3,070.00
7.5 ton	EA	4.000	4,380.00	450.00	4,830.00
10 ton	EA	5.714	6,400.00	640.00	7,040.00
15 ton	EA	4.706	7,070.00	530.00	7,600.00
Water cooled, high efficiency filter, alarm, elec. heat					
3 ton	EA	5.714	18,800.00	640.00	19,440.00
5 ton	EA	6.667	20,250.00	750.00	21,000.00
7.5 ton	EA	10.000	32,260.00	1,120.00	33,380.00
10 ton	EA	11.429	33,470.00	1,280.00	34,750.00
15 ton	EA	13.333	39,170.00	1,490.00	40,660.00
Steam heat					
3 ton	EA	5.714	21,470.00	640.00	22,110.00

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	Unit	Man-Hrs	Material	Labor	Total
23812.30 COMPUTER ROOM A/C (Cont.)					
Steam heat					
5 ton	EA	6.667	24,500.00	750.00	25,250.00
7.5 ton	EA	10.000	34,560.00	1,120.00	35,680.00
10 ton	EA	11.429	35,780.00	1,280.00	37,060.00
15 ton	EA	13.333	41,600.00	1,490.00	43,090.00
Hot water heat					
3 ton	EA	5.714	21,470.00	640.00	22,110.00
5 ton	EA	6.667	22,920.00	750.00	23,670.00
7.5 ton	EA	10.000	34,560.00	1,120.00	35,680.00
10 ton	EA	11.429	35,780.00	1,280.00	37,060.00
15 ton	EA	13.333	41,600.00	1,490.00	43,090.00
23812.60 SPLIT SYSTEMS					
SPLIT SYSTEMS					
Air Conditioners					
18,000 BTU, 1.5 ton air conditioner, minimum	EA	5.333	1,190.00	550.00	1,740.00
Average	EA	5.333	1,430.00	550.00	1,980.00
Maximum	EA	5.333	1,660.00	550.00	2,210.00
24,000 BTU, 2 ton air conditioner, minimum	EA	5.926	1,450.00	610.00	2,060.00
Average	EA	5.926	1,740.00	610.00	2,350.00
Maximum	EA	5.926	2,030.00	610.00	2,640.00
30,000 BTU, 2.5 ton air conditioner, minimum	EA	6.504	2,050.00	670.00	2,720.00
Average	EA	6.504	2,460.00	670.00	3,130.00
Maximum	EA	6.504	2,860.00	670.00	3,530.00
36,000 BTU, 3 ton air conditioner, minimum	EA	7.111	2,440.00	740.00	3,180.00
Average	EA	7.111	2,930.00	740.00	3,670.00
Maximum	EA	7.111	3,420.00	740.00	4,160.00
42,000 BTU, 3.5 ton air conditioner, minimum	EA	7.619	3,040.00	790.00	3,830.00
Average	EA	7.619	3,640.00	790.00	4,430.00
Maximum	EA	7.619	4,250.00	790.00	5,040.00
48,000 BTU, 4 ton air conditioner, minimum	EA	8.205	3,500.00	850.00	4,350.00
Average	EA	8.205	4,200.00	850.00	5,050.00
Maximum	EA	8.205	4,900.00	850.00	5,750.00
60,000 BTU, 5 ton air conditioner, minimum	EA	8.602	4,880.00	890.00	5,770.00
Average	EA	8.602	5,860.00	890.00	6,750.00
Maximum	EA	8.602	6,840.00	890.00	7,730.00
Heat Pumps					
18,000 BTU, 1.5 ton heat pump, minimum	EA	5.333	1,320.00	550.00	1,870.00
Average	EA	5.333	1,580.00	550.00	2,130.00
Maximum	EA	5.333	1,850.00	550.00	2,400.00
24,000 BTU, 2 ton heat pump, minimum	EA	5.926	1,580.00	610.00	2,190.00
Average	EA	5.926	1,900.00	610.00	2,510.00
Maximum	EA	5.926	2,220.00	610.00	2,830.00
30,000 BTU, 2.5 ton heat pump, minimum	EA	6.504	2,240.00	670.00	2,910.00
Average	EA	6.504	2,690.00	670.00	3,360.00
Maximum	EA	6.504	3,140.00	670.00	3,810.00
36,000 BTU, 3 ton heat pump, minimum	EA	7.111	2,640.00	740.00	3,380.00
Average	EA	7.111	3,170.00	740.00	3,910.00
Maximum	EA	7.111	3,700.00	740.00	4,440.00
42,000 BTU, 3.5 ton heat pump, minimum	EA	7.619	3,300.00	790.00	4,090.00
Average	EA	7.619	3,960.00	790.00	4,750.00
Maximum	EA	7.619	4,620.00	790.00	5,410.00
48,000 BTU, 4 ton heat pump, minimum	EA	8.205	3,830.00	850.00	4,680.00
Average	EA	8.205	4,590.00	850.00	5,440.00
Maximum	EA	8.205	5,360.00	850.00	6,210.00
60,000 BTU, 5 ton heat pump, minimum	EA	8.602	5,150.00	890.00	6,040.00
Average	EA	8.602	6,180.00	890.00	7,070.00
Maximum	EA	8.602	7,210.00	890.00	8,100.00
23821.90 FAN COIL UNITS					
FAN COIL UNITS					
Fan coil unit, 2 pipe, complete					
200 cfm ceiling hung	EA	2.667	1,220.00	300.00	1,520.00
Floor mounted	EA	2.000	1,150.00	220.00	1,370.00
300 cfm, ceiling hung	EA	3.200	1,290.00	360.00	1,650.00

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	Unit	Man-Hrs	Material	Labor	Total
23821.90 FAN COIL UNITS (Cont.)					
300 cfm, ceiling hung					
Floor mounted	EA	2.667	1,230.00	300.00	1,530.00
400 cfm, ceiling hung	EA	3.810	1,360.00	430.00	1,790.00
Floor mounted	EA	2.667	1,310.00	300.00	1,610.00
500 cfm, ceiling hung	EA	4.000	1,580.00	450.00	2,030.00
Floor mounted	EA	3.077	1,520.00	340.00	1,860.00
600 cfm, ceiling hung	EA	4.420	2,000.00	500.00	2,500.00
Floor mounted	EA	3.636	1,860.00	410.00	2,270.00
23823.90 UNIT HEATERS					
UNIT HEATERS					
Steam unit heater, horizontal					
12,500 btuh, 200 cfm	EA	1.333	680.00	150.00	830.00
17,000 btuh, 300 cfm	EA	1.333	900.00	150.00	1,050.00
40,000 btuh, 500 cfm	EA	1.333	1,090.00	150.00	1,240.00
60,000 btuh, 700 cfm	EA	1.333	1,140.00	150.00	1,290.00
70,000 btuh, 1000 cfm	EA	2.000	1,180.00	220.00	1,400.00
Vertical					
12,500 btuh, 200 cfm	EA	1.333	680.00	150.00	830.00
17,000 btuh, 300 cfm	EA	1.333	1,120.00	150.00	1,270.00
40,000 btuh, 500 cfm	EA	1.333	1,090.00	150.00	1,240.00
60,000 btuh, 700 cfm	EA	1.333	1,140.00	150.00	1,290.00
70,000 btuh, 1000 cfm	EA	1.333	1,180.00	150.00	1,330.00
Gas unit heater, horizontal					
27,400 btuh	EA	3.200	1,040.00	360.00	1,400.00
38,000 btuh	EA	3.200	1,090.00	360.00	1,450.00
56,000 btuh	EA	3.200	1,140.00	360.00	1,500.00
82,200 btuh	EA	3.200	1,180.00	360.00	1,540.00
103,900 btuh	EA	5.000	1,310.00	560.00	1,870.00
125,700 btuh	EA	5.000	1,550.00	560.00	2,110.00
133,200 btuh	EA	5.000	1,680.00	560.00	2,240.00
149,000 btuh	EA	5.000	1,970.00	560.00	2,530.00
172,000 btuh	EA	5.000	2,120.00	560.00	2,680.00
190,000 btuh	EA	5.000	2,240.00	560.00	2,800.00
225,000 btuh	EA	5.000	2,460.00	560.00	3,020.00
Hot water unit heater, horizontal					
12,500 btuh, 200 cfm	EA	1.333	540.00	150.00	690.00
17,000 btuh, 300 cfm	EA	1.333	600.00	150.00	750.00
25,000 btuh, 500 cfm	EA	1.333	700.00	150.00	850.00
30,000 btuh, 700 cfm	EA	1.333	820.00	150.00	970.00
50,000 btuh, 1000 cfm	EA	2.000	900.00	220.00	1,120.00
60,000 btuh, 1300 cfm	EA	2.000	940.00	220.00	1,160.00
Vertical					
12,500 btuh, 200 cfm	EA	1.333	800.00	150.00	950.00
17,000 btuh, 300 cfm	EA	1.333	800.00	150.00	950.00
25,000 btuh, 500 cfm	EA	1.333	800.00	150.00	950.00
30,000 btuh, 700 cfm	EA	1.333	800.00	150.00	950.00
50,000 btuh, 1000 cfm	EA	1.333	840.00	150.00	990.00
60,000 btuh, 1300 cfm	EA	1.333	1,030.00	150.00	1,180.00
Cabinet unit heaters, ceiling, exposed, hot water					
200 cfm	EA	2.667	1,420.00	300.00	1,720.00
300 cfm	EA	3.200	1,520.00	360.00	1,880.00
400 cfm	EA	3.810	1,590.00	430.00	2,020.00
600 cfm	EA	4.211	1,630.00	470.00	2,100.00
800 cfm	EA	5.000	2,030.00	560.00	2,590.00
1000 cfm	EA	5.714	2,650.00	640.00	3,290.00
1200 cfm	EA	6.667	2,850.00	750.00	3,600.00
2000 cfm	EA	8.889	4,440.00	1,000.00	5,440.00
23833.30 ELECTRIC HEATING					
ELECTRIC HEATING					
Baseboard heater					
2', 375w	EA	1.000	53.00	100.00	153.00
3', 500w	EA	1.000	62.00	100.00	162.00
4', 750w	EA	1.143	69.00	120.00	189.00
5', 935w	EA	1.333	98.00	140.00	238.00

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	Unit	Man-Hrs	Material	Labor	Total
23833.30 ELECTRIC HEATING (Cont.)					
Baseboard heater					
6', 1125w	EA	1.600	120.00	170.00	290.00
7', 1310w	EA	1.818	130.00	190.00	320.00
8', 1500w	EA	2.000	150.00	210.00	360.00
9', 1680w	EA	2.222	160.00	230.00	390.00
10', 1875w	EA	2.286	220.00	240.00	460.00
Unit heater, wall mounted					
1500w	EA	1.667	280.00	170.00	450.00
2500w	EA	1.818	300.00	190.00	490.00
4000w	EA	2.286	410.00	240.00	650.00
Thermostat					
Integral	EA	0.500	47.25	52.00	99.25
Line voltage	EA	0.500	48.50	52.00	100.50
Electric heater connection	EA	0.250	2.07	26.00	28.07
23841.60 DEHUMIDIFIERS					
DEHUMIDIFIERS					
Desiccant dehumidifier, 1125 cfm	EA				36,990.00

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	Unit	Man-Hrs	Material	Labor	Total
26051.34 COPPER CONDUCTORS					
COPPER CONDUCTORS					
Copper conductors, type THW, solid					
#14	LF	0.004	0.20	0.41	0.61
#12	LF	0.005	0.31	0.52	0.83
#10	LF	0.006	0.48	0.62	1.10
Stranded					
#14	LF	0.004	0.22	0.41	0.63
#12	LF	0.005	0.27	0.52	0.79
#10	LF	0.006	0.42	0.62	1.04
#8	LF	0.008	0.70	0.83	1.53
#6	LF	0.009	1.13	0.93	2.06
#4	LF	0.010	1.76	1.04	2.80
#3	LF	0.010	2.23	1.04	3.27
#2	LF	0.012	2.80	1.25	4.05
#1	LF	0.014	3.55	1.46	5.01
1/0	LF	0.016	4.23	1.66	5.89
2/0	LF	0.020	5.31	2.08	7.39
3/0	LF	0.025	6.69	2.60	9.29
4/0	LF	0.028	8.36	2.92	11.28
250 MCM	LF	0.030	10.25	3.14	13.39
300 MCM	LF	0.033	12.25	3.47	15.72
350 MCM	LF	0.040	14.25	4.16	18.41
400 MCM	LF	0.044	16.25	4.62	20.87
500 MCM	LF	0.052	20.00	5.37	25.37
600 MCM	LF	0.059	26.50	6.17	32.67
750 MCM	LF	0.067	33.25	6.94	40.19
1000 MCM	LF	0.076	41.75	7.93	49.68
THHN-THWN, solid					
#14	LF	0.004	0.20	0.41	0.61
#12	LF	0.005	0.31	0.52	0.83
#10	LF	0.006	0.48	0.62	1.10
Stranded					
#14	LF	0.004	0.20	0.41	0.61
#12	LF	0.005	0.31	0.52	0.83
#10	LF	0.006	0.48	0.62	1.10
#8	LF	0.008	0.83	0.83	1.66
#6	LF	0.009	1.30	0.93	2.23
#4	LF	0.010	2.06	1.04	3.10
#2	LF	0.012	2.88	1.25	4.13
#1	LF	0.014	3.64	1.46	5.10
1/0	LF	0.016	4.48	1.66	6.14
2/0	LF	0.020	5.54	2.08	7.62
3/0	LF	0.025	6.95	2.60	9.55
4/0	LF	0.028	8.70	2.92	11.62
250 MCM	LF	0.030	10.75	3.14	13.89
350 MCM	LF	0.040	12.75	4.16	16.91
26051.35 SHEATHED CABLE					
SHEATHED CABLE					
Non-metallic sheathed cable					
Type NM cable with ground					
#14/2	LF	0.015	0.45	1.55	2.00
#12/2	LF	0.016	0.63	1.66	2.29
#10/2	LF	0.018	0.99	1.85	2.84
#8/2	LF	0.020	1.62	2.08	3.70
#6/2	LF	0.025	2.56	2.60	5.16
#14/3	LF	0.026	0.56	2.68	3.24
#12/3	LF	0.027	0.90	2.77	3.67
#10/3	LF	0.027	1.42	2.82	4.24
#8/3	LF	0.028	2.38	2.87	5.25
#6/3	LF	0.028	3.85	2.92	6.77
#4/3	LF	0.032	7.98	3.33	11.31
#2/3	LF	0.035	12.00	3.62	15.62

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	Unit	Man-Hrs	Material	Labor	Total
26051.35 SHEATHED CABLE (Cont.)					
Non-metallic sheathed cable					
Type UF cable with ground					
#14/2	LF	0.016	0.52	1.66	2.18
#12/2	LF	0.019	0.78	1.98	2.76
#10/2	LF	0.020	1.25	2.08	3.33
#8/2	LF	0.023	2.15	2.38	4.53
#6/2	LF	0.027	3.35	2.82	6.17
#14/3	LF	0.020	0.73	2.08	2.81
#12/3	LF	0.022	1.11	2.28	3.39
#10/3	LF	0.025	1.72	2.60	4.32
#8/3	LF	0.028	3.25	2.92	6.17
#6/3	LF	0.032	5.27	3.33	8.60
26052.61 GROUNDING					
GROUNDING					
Ground rods, copper clad, 1/2" x					
6'	EA	0.667	22.75	69.00	91.75
8'	EA	0.727	31.25	76.00	107.25
10'	EA	1.000	39.00	100.00	139.00
5/8" x					
5'	EA	0.615	27.75	64.00	91.75
6'	EA	0.727	29.75	76.00	105.75
8'	EA	1.000	38.50	100.00	138.50
10'	EA	1.250	47.50	130.00	177.50
3/4" x					
8'	EA	0.727	83.00	76.00	159.00
10'	EA	0.800	91.00	83.00	174.00
Ground rod clamp					
5/8"	EA	0.123	12.75	12.75	25.50
3/4"	EA	0.123	18.25	12.75	31.00
26052.92 CONDUIT SPECIALTIES					
CONDUIT SPECIALTIES					
Rod beam clamp, 1/2"	EA	0.050	9.72	5.20	14.92
Hanger rod					
3/8"	LF	0.040	2.35	4.16	6.51
1/2"	LF	0.050	5.88	5.20	11.08
All thread rod					
1/4"	LF	0.030	0.76	3.14	3.90
3/8"	LF	0.040	0.86	4.16	5.02
1/2"	LF	0.050	1.61	5.20	6.81
5/8"	LF	0.080	2.83	8.33	11.16
Hanger channel, 1-1/2"					
No holes	EA	0.030	6.47	3.14	9.61
Holes	EA	0.030	8.00	3.14	11.14
Channel strap					
1/2"	EA	0.050	2.01	5.20	7.21
3/4"	EA	0.050	2.71	5.20	7.91
1"	EA	0.050	3.46	5.20	8.66
1-1/4"	EA	0.080	2.79	8.33	11.12
1-1/2"	EA	0.080	3.36	8.33	11.69
2"	EA	0.080	3.63	8.33	11.96
2-1/2"	EA	0.123	6.96	12.75	19.71
3"	EA	0.123	7.58	12.75	20.33
3-1/2"	EA	0.123	9.44	12.75	22.19
4"	EA	0.145	10.75	15.25	26.00
5"	EA	0.145	17.25	15.25	32.50
6"	EA	0.145	19.50	15.25	34.75
Conduit penetrations, roof and wall, 8" thick					
1/2"	EA	0.615		64.00	64.00
3/4"	EA	0.615		64.00	64.00
1"	EA	0.800		83.00	83.00
1-1/4"	EA	0.800		83.00	83.00
1-1/2"	EA	0.800		83.00	83.00
2"	EA	1.600		170.00	170.00
2-1/2"	EA	1.600		170.00	170.00

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	Unit	Man-Hrs	Material	Labor	Total
26052.92 CONDUIT SPECIALTIES (Cont.)					
Conduit penetrations, roof and wall, 8" thick					
3"	EA	1.600		170.00	170.00
3-1/2"	EA	2.000		210.00	210.00
4"	EA	2.000		210.00	210.00
Fireproofing, for conduit penetrations					
1/2"	EA	0.500	4.20	52.00	56.20
3/4"	EA	0.500	4.36	52.00	56.36
1"	EA	0.500	4.45	52.00	56.45
1-1/4"	EA	0.727	10.50	82.00	92.50
1-1/2"	EA	0.727	6.18	76.00	82.18
2"	EA	0.727	6.34	76.00	82.34
2-1/2"	EA	0.899	12.00	94.00	106.00
3"	EA	0.899	12.50	100.00	112.50
3-1/2"	EA	1.250	14.50	130.00	144.50
4"	EA	1.509	17.75	160.00	177.75
26053.34 SURFACE MOUNTED RACEWAY					
SURFACE MOUNTED RACEWAY					
Single Raceway					
3/4" x 17/32" Conduit	LF	0.040	2.78	4.16	6.94
Mounting Strap	EA	0.053	0.75	5.55	6.30
Connector	EA	0.053	1.00	5.55	6.55
Elbow					
45 degree	EA	0.050	12.75	5.20	17.95
90 degree	EA	0.050	4.05	5.20	9.25
internal	EA	0.050	5.09	5.20	10.29
external	EA	0.050	4.71	5.20	9.91
Switch	EA	0.400	33.00	41.75	74.75
Utility Box	EA	0.400	22.25	41.75	64.00
Receptacle	EA	0.400	39.00	41.75	80.75
3/4" x 21/32" Conduit	LF	0.040	3.17	4.16	7.33
Mounting Strap	EA	0.053	1.17	5.55	6.72
Connector	EA	0.053	1.20	5.55	6.75
Elbow					
45 degree	EA	0.050	9.41	5.20	14.61
90 degree	EA	0.050	3.49	5.20	8.69
internal	EA	0.050	4.73	5.20	9.93
external	EA	0.050	4.73	5.20	9.93
Switch	EA	0.400	26.75	41.75	68.50
Utility Box	EA	0.400	18.00	41.75	59.75
Receptacle	EA	0.400	31.50	41.75	73.25
26053.35 PULL BOXES AND CABINETS					
PULL BOXES AND CABINETS					
Galvanized pull boxes, screw cover					
4x4x4	EA	0.190	16.00	19.75	35.75
4x6x4	EA	0.190	17.75	19.75	37.50
6x6x4	EA	0.190	22.50	19.75	42.25
6x8x4	EA	0.190	26.75	19.75	46.50
8x8x4	EA	0.250	33.25	26.00	59.25
8x10x4	EA	0.242	38.25	25.25	63.50
8x12x4	EA	0.250	42.00	26.00	68.00
Screw cover					
10x10x4	EA	0.308	42.25	32.00	74.25
12x12x6	EA	0.444	62.00	46.25	108.25
12x15x6	EA	0.444	74.00	46.25	120.25
12x18x6	EA	0.500	82.00	52.00	134.00
15x18x6	EA	0.571	91.00	60.00	151.00
18x24x6	EA	0.615	170.00	64.00	234.00
18x30x6	EA	0.727	190.00	76.00	266.00
24x36x6	EA	0.727	290.00	76.00	366.00

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	Unit	Man-Hrs	Material	Labor	Total
26053.37 WIREWAYS					
WIREWAYS					
Wireway, hinge cover type					
2-1/2" x 2-1/2"					
1' section	EA	0.154	30.75	16.00	46.75
2'	EA	0.190	43.75	19.75	63.50
3'	EA	0.250	59.00	26.00	85.00
5'	EA	0.381	100.00	39.75	139.75
10'	EA	0.667	200.00	69.00	269.00
4" x 4"					
1'	EA	0.250	28.50	26.00	54.50
2'	EA	0.250	41.75	26.00	67.75
3'	EA	0.308	62.00	32.00	94.00
4'	EA	0.308	85.00	32.00	117.00
10'	EA	0.800	260.00	83.00	343.00
26053.39 PULL AND JUNCTION BOXES					
PULL AND JUNCTION BOXES					
4"					
Octagon box	EA	0.114	5.67	12.00	17.67
Box extension	EA	0.059	9.55	6.17	15.72
Plaster ring	EA	0.059	5.24	6.17	11.41
Cover blank	EA	0.059	2.31	6.17	8.48
Square box	EA	0.114	8.16	12.00	20.16
Box extension	EA	0.059	8.00	6.17	14.17
Plaster ring	EA	0.059	4.38	6.17	10.55
Cover blank	EA	0.059	2.24	6.17	8.41
4-11/16"					
Square box	EA	0.114	16.50	12.00	28.50
Box extension	EA	0.059	18.00	6.17	24.17
Plaster ring	EA	0.059	11.00	6.17	17.17
Cover blank	EA	0.059	4.05	6.17	10.22
Switch and device boxes					
2 gang	EA	0.114	24.75	12.00	36.75
3 gang	EA	0.114	43.50	12.00	55.50
4 gang	EA	0.160	58.00	16.75	74.75
Device covers					
2 gang	EA	0.059	19.75	6.17	25.92
3 gang	EA	0.059	20.25	6.17	26.42
4 gang	EA	0.059	27.50	6.17	33.67
Handy box	EA	0.114	6.08	12.00	18.08
Extension	EA	0.059	5.73	6.17	11.90
Switch cover	EA	0.059	3.04	6.17	9.21
Switch box with knockout	EA	0.145	9.14	15.25	24.39
Weatherproof cover, spring type	EA	0.080	17.00	8.33	25.33
Cover plate, dryer receptacle 1 gang plastic	EA	0.100	2.59	10.50	13.09
For 4" receptacle, 2 gang	EA	0.100	4.63	10.50	15.13
Duplex receptacle cover plate, plastic	EA	0.059	1.14	6.17	7.31
4", vertical bracket box, 1-1/2" with					
RMX clamps	EA	0.145	11.75	15.25	27.00
BX clamps	EA	0.145	12.75	15.25	28.00
4", octagon device cover					
1 switch	EA	0.059	6.91	6.17	13.08
1 duplex recept	EA	0.059	6.91	6.17	13.08
4", square face bracket boxes, 1-1/2"					
RMX	EA	0.145	14.00	15.25	29.25
BX	EA	0.145	15.25	15.25	30.50
26053.41 ALUMINUM CONDUIT					
ALUMINUM CONDUIT					
Aluminum conduit					
1/2"	LF	0.030	2.80	3.14	5.94
3/4"	LF	0.040	3.59	4.16	7.75
1"	LF	0.050	5.03	5.20	10.23
1-1/4"	LF	0.059	6.73	6.17	12.90
1-1/2"	LF	0.080	8.35	8.33	16.68

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	Unit	Man-Hrs	Material	Labor	Total
26053.41 ALUMINUM CONDUIT (Cont.)					
Aluminum conduit					
2"	LF	0.089	11.25	9.25	20.50
2-1/2"	LF	0.100	17.75	10.50	28.25
3"	LF	0.107	23.00	11.00	34.00
3-1/2"	LF	0.123	27.75	12.75	40.50
4"	LF	0.145	32.75	15.25	48.00
5"	LF	0.182	47.00	19.00	66.00
6"	LF	0.200	62.00	20.75	82.75
26053.42 EMT CONDUIT					
EMT CONDUIT					
EMT conduit					
1/2"	LF	0.030	0.76	3.14	3.90
3/4"	LF	0.040	1.40	4.16	5.56
1"	LF	0.050	2.33	5.20	7.53
1-1/4"	LF	0.059	3.73	6.17	9.90
1-1/2"	LF	0.080	4.72	8.33	13.05
2"	LF	0.089	5.90	9.25	15.15
2-1/2"	LF	0.100	11.75	10.50	22.25
3"	LF	0.123	13.00	12.75	25.75
3-1/2"	LF	0.145	18.50	15.25	33.75
4"	LF	0.182	17.75	19.00	36.75
26053.43 FLEXIBLE CONDUIT					
FLEXIBLE CONDUIT					
Flexible conduit, steel					
3/8"	LF	0.030	0.96	3.14	4.10
1/2	LF	0.030	1.09	3.14	4.23
3/4"	LF	0.040	1.50	4.16	5.66
1"	LF	0.040	2.85	4.16	7.01
1-1/4"	LF	0.050	3.56	5.20	8.76
1-1/2"	LF	0.059	5.91	6.17	12.08
2"	LF	0.080	7.27	8.33	15.60
2-1/2"	LF	0.089	8.85	9.25	18.10
3"	LF	0.107	15.50	11.00	26.50
26053.44 GALVANIZED CONDUIT					
GALVANIZED CONDUIT					
Galvanized rigid steel conduit					
1/2"	LF	0.040	3.89	4.16	8.05
3/4"	LF	0.050	4.30	5.20	9.50
1"	LF	0.059	6.21	6.17	12.38
1-1/4"	LF	0.080	8.59	8.33	16.92
1-1/2"	LF	0.089	10.00	9.25	19.25
2"	LF	0.100	12.75	10.50	23.25
2-1/2"	LF	0.145	23.50	15.25	38.75
3"	LF	0.182	24.50	19.00	43.50
3-1/2"	LF	0.190	35.25	19.75	55.00
4"	LF	0.211	40.25	22.00	62.25
5"	LF	0.286	75.00	29.75	104.75
6"	LF	0.381	110.00	39.75	149.75
26053.45 PLASTIC COATED CONDUIT					
PLASTIC COATED CONDUIT					
Rigid steel conduit, plastic coated					
1/2"	LF	0.050	10.50	5.20	15.70
3/4"	LF	0.059	12.25	6.17	18.42
1"	LF	0.080	15.75	8.33	24.08
1-1/4"	LF	0.100	20.00	10.50	30.50
1-1/2"	LF	0.123	24.25	12.75	37.00
2"	LF	0.145	31.50	15.25	46.75
2-1/2"	LF	0.190	47.75	19.75	67.50
3"	LF	0.222	60.00	23.25	83.25
3-1/2"	LF	0.250	74.00	26.00	100.00
4"	LF	0.308	90.00	32.00	122.00
5"	LF	0.381	150.00	39.75	189.75

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	Unit	Man-Hrs	Material	Labor	Total
26053.47 STEEL CONDUIT					
STEEL CONDUIT					
Intermediate metal conduit (IMC)					
1/2"	LF	0.030	3.15	3.14	6.29
3/4"	LF	0.040	3.87	4.16	8.03
1"	LF	0.050	5.86	5.20	11.06
1-1/4"	LF	0.059	7.50	6.17	13.67
1-1/2"	LF	0.080	9.39	8.33	17.72
2"	LF	0.089	12.25	9.25	21.50
2-1/2"	LF	0.119	24.25	12.50	36.75
3"	LF	0.145	31.25	15.25	46.50
3-1/2"	LF	0.182	36.75	19.00	55.75
4"	LF	0.190	40.50	19.75	60.25
26053.61 CABLE TRAY					
CABLE TRAY					
Cable tray, 6"	LF	0.059	25.25	6.17	31.42
Ventilated cover	LF	0.030	10.25	3.14	13.39
Solid cover	LF	0.030	7.99	3.14	11.13
26120.01 MEDIUM-VOLTAGE TRANSFORMERS					
MEDIUM-VOLTAGE TRANSFORMERS					
Floor mtd, one phase, int. dry, 480v-120/240v					
3 kva	EA	1.818	930.00	190.00	1,120.00
5 kva	EA	3.077	1,230.00	320.00	1,550.00
7.5 kva	EA	3.478	1,660.00	360.00	2,020.00
10 kva	EA	3.810	2,070.00	400.00	2,470.00
15 kva	EA	4.301	2,770.00	450.00	3,220.00
100 kva	EA	11.594	11,150.00	1,210.00	12,360.00
Three phase, 480v-120/208v					
15 kva	EA	6.015	3,090.00	630.00	3,720.00
30 kva	EA	9.412	3,710.00	980.00	4,690.00
45 kva	EA	10.811	4,930.00	1,130.00	6,060.00
225 kva	EA	15.385	17,730.00	1,600.00	19,330.00
26241.30 SWITCHBOARDS					
SWITCHBOARDS					
Switchboard, 90" high, no main disconnect, 208/120v					
400a	EA	7.921	3,940.00	820.00	4,760.00
600a	EA	8.000	6,120.00	830.00	6,950.00
1000a	EA	8.000	7,700.00	830.00	8,530.00
1200a	EA	10.000	8,150.00	1,040.00	9,190.00
1600a	EA	11.940	8,960.00	1,240.00	10,200.00
2000a	EA	14.035	9,620.00	1,460.00	11,080.00
2500a	EA	16.000	9,730.00	1,670.00	11,400.00
277/480v					
600a	EA	8.163	7,030.00	850.00	7,880.00
800a	EA	8.163	7,700.00	850.00	8,550.00
1600a	EA	11.940	9,700.00	1,240.00	10,940.00
2000a	EA	14.035	10,370.00	1,460.00	11,830.00
2500a	EA	16.000	11,050.00	1,670.00	12,720.00
3000a	EA	27.586	12,720.00	2,870.00	15,590.00
4000a	EA	29.630	15,400.00	3,090.00	18,490.00
26241.60 PANELBOARDS					
PANELBOARDS					
3 phase, 480/277v, main lugs only, 120a, 30 circuits	EA	3.478	2,170.00	360.00	2,530.00
277/480v, 4 wire, flush surface					
225a, 30 circuits	EA	4.000	3,540.00	420.00	3,960.00
400a, 30 circuits	EA	5.000	4,790.00	520.00	5,310.00
600a, 42 circuits	EA	6.015	9,240.00	630.00	9,870.00
208/120v, main circuit breaker, 3 phase, 4 wire					
100a					
12 circuits	EA	5.096	1,870.00	530.00	2,400.00
20 circuits	EA	6.299	2,330.00	660.00	2,990.00
30 circuits	EA	7.018	3,420.00	730.00	4,150.00

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	Unit	Man-Hrs	Material	Labor	Total
26241.60 PANELBOARDS (Cont.)					
208/120v, main circuit breaker, 3 phase, 4 wire					
400a					
30 circuits	EA	14.815	7,210.00	1,540.00	8,750.00
42 circuits	EA	16.000	8,640.00	1,670.00	10,310.00
600a, 42 circuits	EA	18.182	16,810.00	1,890.00	18,700.00
120/208v, flush, 3 ph., 4 wire, main only					
100a					
12 circuits	EA	5.096	1,320.00	530.00	1,850.00
20 circuits	EA	6.299	1,820.00	660.00	2,480.00
30 circuits	EA	7.018	2,710.00	730.00	3,440.00
400a					
30 circuits	EA	14.815	5,290.00	1,540.00	6,830.00
42 circuits	EA	16.000	7,710.00	1,670.00	9,380.00
600a, 42 circuits	EA	18.182	12,020.00	1,890.00	13,910.00
26241.90 MOTOR CONTROLS					
MOTOR CONTROLS					
Motor generator set, 3 phase, 480/277v, w/controls					
10kw	EA	27.586	12,260.00	2,870.00	15,130.00
15kw	EA	30.769	15,990.00	3,200.00	19,190.00
20kw	EA	32.000	17,750.00	3,330.00	21,080.00
40kw	EA	38.095	24,980.00	3,970.00	28,950.00
100kw	EA	61.538	37,220.00	6,410.00	43,630.00
200kw	EA	72.727	85,080.00	7,570.00	92,650.00
300kw	EA	80.000	106,350.00	8,330.00	114,680.00
2 pole, 230 volt starter, w/NEMA-1					
1 hp, 9a, size 00	EA	1.000	210.00	100.00	310.00
2 hp, 18a, size 0	EA	1.000	240.00	100.00	340.00
3 hp, 27a, size 1	EA	1.000	350.00	100.00	450.00
5 hp, 45a, size 1p	EA	1.000	350.00	100.00	450.00
7-1/2 hp, 45a, size 2	EA	1.000	830.00	100.00	930.00
15 hp, 90a, size 3	EA	1.000	1,250.00	100.00	1,350.00
26272.68 RECEPTACLES					
RECEPTACLES					
Contractor grade duplex receptacles, 15a 120v					
Duplex	EA	0.200	2.35	20.75	23.10
125 volt, 20a, duplex, standard grade	EA	0.200	17.50	20.75	38.25
Ground fault interrupter type	EA	0.296	57.00	30.75	87.75
250 volt, 20a, 2 pole, single, grounding type	EA	0.200	29.25	20.75	50.00
120/208v, 4 pole, single receptacle, twist lock					
20a	EA	0.348	34.75	36.25	71.00
50a	EA	0.348	66.00	36.25	102.25
125/250v, 3 pole, flush receptacle					
30a	EA	0.296	35.25	30.75	66.00
50a	EA	0.296	43.50	30.75	74.25
60a	EA	0.348	110.00	36.25	146.25
277v, 20a, 2 pole, grounding type, twist lock	EA	0.200	19.00	20.75	39.75
Dryer receptacle, 250v, 30a/50a, 3 wire	EA	0.296	26.25	30.75	57.00
Clock receptacle, 2 pole, grounding type	EA	0.200	17.50	20.75	38.25
125v, 20a single recept. grounding type					
Standard grade	EA	0.200	19.00	20.75	39.75
Specification	EA	0.200	22.75	20.75	43.50
Hospital	EA	0.200	23.75	20.75	44.50
Isolated ground orange	EA	0.250	80.00	26.00	106.00
Duplex					
Specification grade	EA	0.200	19.00	20.75	39.75
Hospital	EA	0.200	39.00	20.75	59.75
Isolated ground orange	EA	0.250	80.00	26.00	106.00
GFI hospital grade recepts, 20a, 125v, duplex	EA	0.296	86.00	30.75	116.75
26281.30 FUSES					
FUSES					
Fuse, one-time, 250v					
30a	EA	0.050	4.23	5.20	9.43
60a	EA	0.050	7.16	5.20	12.36

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	Unit	Man-Hrs	Material	Labor	Total
26281.30 FUSES (Cont.)					
Fuse, one-time, 250v					
100a	EA	0.050	30.00	5.20	35.20
200a	EA	0.050	72.00	5.20	77.20
400a	EA	0.050	160.00	5.20	165.20
600a	EA	0.050	280.00	5.20	285.20
600v					
30a	EA	0.050	21.25	5.20	26.45
60a	EA	0.050	34.00	5.20	39.20
100a	EA	0.050	64.00	5.20	69.20
200a	EA	0.050	170.00	5.20	175.20
400a	EA	0.050	360.00	5.20	365.20
26281.61 CIRCUIT BREAKERS					
CIRCUIT BREAKERS					
Molded case, 240v, 15-60a, bolt-on					
1 pole	EA	0.250	36.75	26.00	62.75
2 pole	EA	0.348	78.00	36.25	114.25
70-100a, 2 pole	EA	0.533	220.00	56.00	276.00
15-60a, 3 pole	EA	0.400	270.00	41.75	311.75
70-100a, 3 pole	EA	0.615	450.00	64.00	514.00
480v, 2 pole					
15-60a	EA	0.296	560.00	30.75	590.75
70-100a	EA	0.400	720.00	41.75	761.75
3 pole					
15-60a	EA	0.400	720.00	41.75	761.75
70-100a	EA	0.444	860.00	46.25	906.25
70-225a	EA	0.615	1,770.00	64.00	1,834.00
Load center circuit breakers, 240v					
1 pole, 10-60a	EA	0.250	32.50	26.00	58.50
2 pole					
10-60a	EA	0.400	66.00	41.75	107.75
70-100a	EA	0.667	200.00	69.00	269.00
110-150a	EA	0.727	420.00	76.00	496.00
3 pole					
10-60a	EA	0.500	190.00	52.00	242.00
70-100a	EA	0.727	280.00	76.00	356.00
Load center, GFI breakers, 240v					
1 pole, 15-30a	EA	0.296	250.00	30.75	280.75
2 pole, 15-30a	EA	0.400	430.00	41.75	471.75
Key operated breakers, 240v, 1 pole, 10-30a	EA	0.296	150.00	30.75	180.75
Tandem breakers, 240v					
1 pole, 15-30a	EA	0.400	54.00	41.75	95.75
2 pole, 15-30a	EA	0.533	98.00	56.00	154.00
Bolt-on, GFI breakers, 240v, 1 pole, 15-30a	EA	0.348	230.00	36.25	266.25
26281.64 SWITCHES					
SWITCHES					
Fused interrupter load, 35kv, 20a					
1 pole	EA	16.000	39,770.00	1,670.00	41,440.00
2 pole	EA	17.021	43,090.00	1,770.00	44,860.00
Weatherproof switch, including box & cover, 20a					
1 pole	EA	16.000	43,070.00	1,670.00	44,740.00
2 pole	EA	17.021	46,400.00	1,770.00	48,170.00
Specification grade toggle switches, 20a, 120-277v					
Single pole	EA	0.200	8.42	20.75	29.17
Double pole	EA	0.296	20.25	30.75	51.00
3 way	EA	0.250	22.00	26.00	48.00
4 way	EA	0.296	66.00	30.75	96.75
Switch plates, plastic ivory					
1 gang	EA	0.080	0.92	8.33	9.25
2 gang	EA	0.100	2.16	10.50	12.66
3 gang	EA	0.119	3.38	12.50	15.88
4 gang	EA	0.145	8.66	15.25	23.91
5 gang	EA	0.160	9.07	16.75	25.82
6 gang	EA	0.182	10.75	19.00	29.75

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	Unit	Man-Hrs	Material	Labor	Total
26281.64 SWITCHES (Cont.)					
Switch plates, plastic ivory					
Stainless steel					
1 gang	EA	0.080	7.80	8.33	16.13
2 gang	EA	0.100	10.75	10.50	21.25
3 gang	EA	0.123	16.75	12.75	29.50
4 gang	EA	0.145	28.50	15.25	43.75
5 gang	EA	0.160	33.50	16.75	50.25
6 gang	EA	0.182	41.50	19.00	60.50
Brass					
1 gang	EA	0.080	14.50	8.33	22.83
2 gang	EA	0.100	31.25	10.50	41.75
3 gang	EA	0.123	48.25	12.75	61.00
4 gang	EA	0.145	56.00	15.25	71.25
5 gang	EA	0.160	69.00	16.75	85.75
6 gang	EA	0.182	83.00	19.00	102.00
26281.66 SAFETY SWITCHES					
SAFETY SWITCHES					
Fused, 3 phase, 30 amp, 600v, heavy duty					
NEMA 1	EA	1.143	360.00	120.00	480.00
NEMA 3r	EA	1.143	830.00	120.00	950.00
NEMA 4	EA	1.600	2,310.00	170.00	2,480.00
NEMA 12	EA	1.739	740.00	180.00	920.00
60a					
NEMA 1	EA	1.143	510.00	120.00	630.00
NEMA 3r	EA	1.143	970.00	120.00	1,090.00
NEMA 4	EA	1.600	2,550.00	170.00	2,720.00
NEMA 12	EA	1.739	880.00	180.00	1,060.00
100a					
NEMA 1	EA	1.739	870.00	180.00	1,050.00
NEMA 3r	EA	1.739	1,520.00	180.00	1,700.00
NEMA 4	EA	2.000	5,420.00	210.00	5,630.00
NEMA 12	EA	2.500	1,320.00	260.00	1,580.00
200a					
NEMA 1	EA	2.500	1,290.00	260.00	1,550.00
NEMA 3r	EA	2.500	2,100.00	260.00	2,360.00
NEMA 4	EA	2.759	7,130.00	290.00	7,420.00
NEMA 12	EA	3.478	1,950.00	360.00	2,310.00
Non-fused, 240-600v, heavy duty, 3 phase, 30 amp					
NEMA 1	EA	1.143	260.00	120.00	380.00
NEMA 3r	EA	1.143	410.00	120.00	530.00
NEMA 4	EA	1.739	1,630.00	180.00	1,810.00
NEMA 12	EA	1.739	490.00	180.00	670.00
60a					
NEMA1	EA	1.143	340.00	120.00	460.00
NEMA 3r	EA	1.143	620.00	120.00	740.00
NEMA 4	EA	1.739	1,770.00	180.00	1,950.00
NEMA 12	EA	1.739	590.00	180.00	770.00
100a					
NEMA 1	EA	1.739	550.00	180.00	730.00
NEMA 3r	EA	1.739	870.00	180.00	1,050.00
NEMA 4	EA	2.500	3,580.00	260.00	3,840.00
NEMA 12	EA	2.500	840.00	260.00	1,100.00
200a, NEMA 1	EA	2.500	850.00	260.00	1,110.00
600a, NEMA 12	EA	12.308	4,710.00	1,280.00	5,990.00
26281.68 SAFETY SWITCHES, HEAVY DUTY					
SAFETY SWITCHES, HEAVY DUTY					
Safety switch, 600v, 3 pole, heavy duty, NEMA-1					
30a	EA	1.000	310.00	100.00	410.00
60a	EA	1.143	420.00	120.00	540.00
100a	EA	1.600	800.00	170.00	970.00
200a	EA	2.500	1,260.00	260.00	1,520.00
400a	EA	5.517	3,240.00	570.00	3,810.00
600a	EA	8.000	5,760.00	830.00	6,590.00
800a	EA	10.526	13,040.00	1,100.00	14,140.00

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	Unit	Man-Hrs	Material	Labor	Total
26281.68 SAFETY SWITCHES, HEAVY DUTY (Cont.)					
Safety switch, 600v, 3 pole, heavy duty, NEMA-1					
1200a	EA	14.286	16,190.00	1,490.00	17,680.00
26281.69 TRANSFER SWITCHES					
TRANSFER SWITCHES					
Automatic transfer switch 600v, 3 pole					
30a	EA	3.478	3,070.00	360.00	3,430.00
100a	EA	4.762	4,070.00	500.00	4,570.00
400a	EA	10.000	9,190.00	1,040.00	10,230.00
800a	EA	18.182	16,910.00	1,890.00	18,800.00
1200a	EA	22.857	27,870.00	2,380.00	30,250.00
2600a	EA	42.105	73,040.00	4,380.00	77,420.00
26320.01 GENERATORS					
GENERATORS					
Diesel generator, with auto transfer switch					
50kw	EA	30.769	49,750.00	3,200.00	52,950.00
125kw	EA	50.000	74,920.00	5,210.00	80,130.00
300kw	EA	100.000	122,710.00	10,410.00	133,120.00
750kw	EA	200.000	357,790.00	20,830.00	378,620.00
26335.30 UNINTERRUPTIBLE POWER					
UNINTERRUPTIBLE POWER					
Uninterruptible power systems, (UPS), 3 kva	EA	8.000	11,630.00	830.00	12,460.00
5 kva	EA	11.004	13,040.00	1,150.00	14,190.00
7.5 kva	EA	16.000	15,650.00	1,670.00	17,320.00
10 kva	EA	21.978	19,560.00	2,290.00	21,850.00
15 kva	EA	22.857	23,470.00	2,380.00	25,850.00
20 kva	EA	24.024	32,600.00	2,500.00	35,100.00
25 kva	EA	25.000	41,730.00	2,600.00	44,330.00
30 kva	EA	25.974	43,030.00	2,700.00	45,730.00
35 kva	EA	27.027	45,650.00	2,810.00	48,460.00
40 kva	EA	27.972	49,560.00	2,910.00	52,470.00
45 kva	EA	28.986	52,160.00	3,020.00	55,180.00
50 kva	EA	29.963	56,080.00	3,120.00	59,200.00
62.5 kva	EA	32.000	66,510.00	3,330.00	69,840.00
75 kva	EA	34.934	76,940.00	3,640.00	80,580.00
100 kva	EA	36.036	103,030.00	3,750.00	106,780.00
150 kva	EA	50.000	156,500.00	5,210.00	161,710.00
200 kva	EA	55.172	208,660.00	5,750.00	214,410.00
300 kva	EA	74.766	312,990.00	7,790.00	320,780.00
400 kva	EA	89.888	468,240.00	9,360.00	477,600.00
500 kva	EA	109.589	585,290.00	11,410.00	596,700.00
26411.30 LIGHTNING PROTECTION					
LIGHTNING PROTECTION					
Lightning protection					
Copper point, nickel plated, 12'					
1/2" dia.	EA	1.000	69.00	100.00	169.00
5/8" dia.	EA	1.000	78.00	100.00	178.00
26511.01 INTERIOR LIGHTING					
INTERIOR LIGHTING					
Recessed fluorescent fixtures, 2'x2'					
2 lamp	EA	0.727	110.00	76.00	186.00
4 lamp	EA	0.727	150.00	76.00	226.00
2 lamp w/flange	EA	1.000	140.00	100.00	240.00
4 lamp w/flange	EA	1.000	170.00	100.00	270.00
1'x4'					
2 lamp	EA	0.667	110.00	69.00	179.00
3 lamp	EA	0.667	150.00	69.00	219.00
2 lamp w/flange	EA	0.727	140.00	76.00	216.00
3 lamp w/flange	EA	0.727	180.00	76.00	256.00
2'x4'					
2 lamp	EA	0.727	140.00	76.00	216.00
3 lamp	EA	0.727	170.00	76.00	246.00
4 lamp	EA	0.727	150.00	76.00	226.00

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26511.01 INTERIOR LIGHTING (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
2'x4'					
2 lamp w/flange	EA	1.000	170.00	100.00	270.00
3 lamp w/flange	EA	1.000	180.00	100.00	280.00
4 lamp w/flange	EA	1.000	180.00	100.00	280.00
4'x4'					
4 lamp	EA	1.000	530.00	100.00	630.00
6 lamp	EA	1.000	630.00	100.00	730.00
8 lamp	EA	1.000	680.00	100.00	780.00
4 lamp w/flange	EA	1.509	660.00	160.00	820.00
6 lamp w/flange	EA	1.509	820.00	160.00	980.00
8 lamp, w/flange	EA	1.509	910.00	160.00	1,070.00
4 lamp w/flange	EA	1.000	180.00	100.00	280.00
Recessed, prismatic					
1'x2'	EA	0.800	140.00	83.00	223.00
1'x4'	EA	0.800	150.00	83.00	233.00
2'x2'	EA	1.000	140.00	100.00	240.00
Volumetric					
1'x2'	EA	0.800	150.00	83.00	233.00
1'x4'	EA	0.800	160.00	83.00	243.00
2'x2'	EA	1.000	160.00	100.00	260.00
4 lamp	EA	1.000	550.00	100.00	650.00
2'x4'	EA	1.000	190.00	100.00	290.00
Architectural					
1'x2'	EA	0.800	170.00	83.00	253.00
1'x4'	EA	0.800	190.00	83.00	273.00
2'x2'	EA	1.000	190.00	100.00	290.00
2'x4'	EA	1.000	220.00	100.00	320.00
Low bay fixtures					
4' long, minimum	EA	0.800	160.00	83.00	243.00
Maximum	EA	1.000	280.00	100.00	380.00
8' long, minimum	EA	0.800	200.00	83.00	283.00
Maximum	EA	1.000	300.00	100.00	400.00
Average	EA	0.800	160.00	83.00	243.00
Maximum	EA	1.333	220.00	140.00	360.00
Add for power source/driver	EA	1.000	110.00	100.00	210.00
Surface mounted incandescent fixtures					
40w	EA	0.667	170.00	69.00	239.00
75w	EA	0.667	170.00	69.00	239.00
100w	EA	0.667	190.00	69.00	259.00
150w	EA	0.667	250.00	69.00	319.00
Pendant, LED, minimum	EA	0.667	110.00	69.00	179.00
Average	EA	0.800	160.00	83.00	243.00
Maximum	EA	1.000	280.00	100.00	380.00
Pendant					
40w	EA	0.800	140.00	83.00	223.00
75w	EA	0.800	150.00	83.00	233.00
100w	EA	0.800	170.00	83.00	253.00
150w	EA	0.800	190.00	83.00	273.00
Recessed incandescent fixtures					
40w	EA	1.509	230.00	160.00	390.00
75w	EA	1.509	250.00	160.00	410.00
100w	EA	1.509	270.00	160.00	430.00
150w	EA	1.509	280.00	160.00	440.00
Down lights, fluorescent, minimum	EA	0.667	27.50	69.00	96.50
Average	EA	0.800	38.50	83.00	121.50
Maximum	EA	1.000	66.00	100.00	166.00
LED Down lights, minimum	EA	0.667	44.00	69.00	113.00
Average	EA	0.800	83.00	83.00	166.00
Maximum	EA	1.000	160.00	100.00	260.00
For vandal resistant, add to material $400					
Exit lights, 120v					
Recessed	EA	1.250	77.00	130.00	207.00
Back mount	EA	0.727	120.00	76.00	196.00
Universal mount	EA	0.727	130.00	76.00	206.00

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	Unit	Man-Hrs	Material	Labor	Total
26511.01 INTERIOR LIGHTING (Cont.)					
Exit lights, 120v					
Single face	EA	0.667	130.00	69.00	199.00
With battery backup	EA	0.667	140.00	69.00	209.00
Double face	EA	0.667	140.00	69.00	209.00
With battery backup	EA	0.667	150.00	69.00	219.00
Emergency battery units, 6v-120v, 50 unit	EA	1.509	270.00	160.00	430.00
With 1 head	EA	1.509	310.00	160.00	470.00
With 2 heads	EA	1.509	340.00	160.00	500.00
LED lights with battery backup					
2 heads	EA	1.509	98.00	160.00	258.00
3 heads	EA	1.509	110.00	160.00	270.00
Light track single circuit					
2'	EA	0.500	67.00	52.00	119.00
4'	EA	0.500	79.00	52.00	131.00
8'	EA	1.000	110.00	100.00	210.00
12'	EA	1.509	150.00	160.00	310.00
Fixtures, square					
R-20	EA	0.145	68.00	15.25	83.25
R-30	EA	0.145	110.00	15.25	125.25
Mini spot	EA	0.145	65.00	15.25	80.25
26514.01 INDUSTRIAL LIGHTING					
INDUSTRIAL LIGHTING					
Surface mounted fluorescent, wrap around lens					
1 lamp	EA	0.800	140.00	83.00	223.00
2 lamps	EA	0.889	190.00	93.00	283.00
4 lamps	EA	1.000	210.00	100.00	310.00
Wall mounted fluorescent					
2-20w lamps	EA	0.500	140.00	52.00	192.00
2-30w lamps	EA	0.500	160.00	52.00	212.00
2-40w lamps	EA	0.667	160.00	69.00	229.00
Indirect, with wood shielding, 2049w lamps					
4'	EA	1.000	160.00	100.00	260.00
8'	EA	1.600	210.00	170.00	380.00
Industrial fluorescent, 2 lamp					
4'	EA	0.727	110.00	76.00	186.00
8'	EA	1.333	170.00	140.00	310.00
Strip fluorescent					
4'					
1 lamp	EA	0.667	69.00	69.00	138.00
2 lamps	EA	0.667	84.00	69.00	153.00
8'					
1 lamp	EA	0.727	100.00	76.00	176.00
2 lamps	EA	0.889	150.00	93.00	243.00
Wire guard for strip fixture, 4' long	EA	0.348	15.50	36.25	51.75
Strip fluorescent, 8' long, two 4' lamps	EA	1.333	210.00	140.00	350.00
With four 4' lamps	EA	1.600	260.00	170.00	430.00
Wet location fluorescent, plastic housing					
4' long					
1 lamp	EA	1.000	120.00	100.00	220.00
2 lamps	EA	1.333	180.00	140.00	320.00
8' long					
2 lamps	EA	1.600	310.00	170.00	480.00
4 lamps	EA	1.739	420.00	180.00	600.00
Parabolic troffer, 2'x2'					
With 2 U lamps	EA	1.000	140.00	100.00	240.00
With 3 U lamps	EA	1.143	170.00	120.00	290.00
2'x4'					
With 2 40w lamps	EA	1.143	170.00	120.00	290.00
With 3 40w lamps	EA	1.333	170.00	140.00	310.00
With 4 40w lamps	EA	1.333	180.00	140.00	320.00
1'x4'					
With 1 T-12 lamp, 9 cell	EA	0.727	89.00	76.00	165.00
With 2 T-12 lamps	EA	0.889	100.00	93.00	193.00
With 1 T-12 lamp, 20 cell	EA	0.727	100.00	76.00	176.00

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	Unit	Man-Hrs	Material	Labor	Total
26514.01 INDUSTRIAL LIGHTING (Cont.)					
1'x4'					
With 2 T-12 lamps	EA	0.889	110.00	93.00	203.00
Steel sided surface fluorescent, 2'x4'					
3 lamps	EA	1.333	170.00	140.00	310.00
4 lamps	EA	1.333	200.00	140.00	340.00
Outdoor sign fluor., 1 lamp, remote ballast					
4' long	EA	6.015	3,600.00	630.00	4,230.00
6' long	EA	8.000	4,320.00	830.00	5,150.00
Recess mounted, commercial, 2'x2', 13" high					
100w	EA	4.000	1,190.00	420.00	1,610.00
250w	EA	4.494	1,310.00	470.00	1,780.00
High pressure sodium, hi-bay open					
400w	EA	1.739	690.00	180.00	870.00
1000w	EA	2.424	1,190.00	250.00	1,440.00
Enclosed					
400w	EA	2.424	1,120.00	250.00	1,370.00
1000w	EA	2.963	1,560.00	310.00	1,870.00
Metal halide hi-bay, open					
400w	EA	1.739	430.00	180.00	610.00
1000w	EA	2.424	870.00	250.00	1,120.00
Enclosed					
400w	EA	2.424	970.00	250.00	1,220.00
1000w	EA	2.963	930.00	310.00	1,240.00
High pressure sodium, low-bay surface mounted					
100w	EA	1.000	350.00	100.00	450.00
150w	EA	1.143	390.00	120.00	510.00
250w	EA	1.333	430.00	140.00	570.00
400w	EA	1.600	550.00	170.00	720.00
Metal halide, low-bay, pendant mounted					
175w	EA	1.333	560.00	140.00	700.00
250w	EA	1.600	770.00	170.00	940.00
400w	EA	2.222	830.00	230.00	1,060.00
Indirect luminaire, square, metal halide, freestanding					
175w	EA	1.000	690.00	100.00	790.00
250w	EA	1.000	750.00	100.00	850.00
400w	EA	1.000	780.00	100.00	880.00
High pressure sodium					
150w	EA	1.000	760.00	100.00	860.00
250w	EA	1.000	810.00	100.00	910.00
400w	EA	1.000	890.00	100.00	990.00
Round, metal halide					
175w	EA	1.000	870.00	100.00	970.00
250w	EA	1.000	900.00	100.00	1,000.00
400w	EA	1.000	940.00	100.00	1,040.00
High pressure sodium					
150w	EA	1.000	830.00	100.00	930.00
250w	EA	1.000	970.00	100.00	1,070.00
400w	EA	1.000	1,010.00	100.00	1,110.00
Wall mounted, metal halide					
175w	EA	2.500	380.00	260.00	640.00
250w	EA	2.500	370.00	260.00	630.00
400w	EA	3.200	410.00	330.00	740.00
High pressure sodium					
150w	EA	2.500	350.00	260.00	610.00
250w	EA	2.500	370.00	260.00	630.00
400w	EA	3.200	390.00	330.00	720.00
Wall pack lithonia, high pressure sodium					
35w	EA	0.889	90.00	93.00	183.00
55w	EA	1.000	110.00	100.00	210.00
150w	EA	1.600	290.00	170.00	460.00
250w	EA	1.739	310.00	180.00	490.00
Low pressure sodium					
35w	EA	1.739	490.00	180.00	670.00
55w	EA	2.000	660.00	210.00	870.00

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	Unit	Man-Hrs	Material	Labor	Total
26514.01 INDUSTRIAL LIGHTING (Cont.)					
Indirect luminaire, square, metal halide, freestanding					
Wall pack hubbell, high pressure sodium					
35w	EA	0.889	400.00	93.00	493.00
150w	EA	1.600	510.00	170.00	680.00
250w	EA	1.739	650.00	180.00	830.00
Compact fluorescent					
2-7w	EA	1.000	49.00	100.00	149.00
2-13w	EA	1.333	56.00	140.00	196.00
1-18w	EA	1.333	66.00	140.00	206.00
Handball & racquet ball court, 2'x2', metal halide					
250w	EA	2.500	870.00	260.00	1,130.00
400w	EA	2.759	1,050.00	290.00	1,340.00
High pressure sodium					
250w	EA	2.500	960.00	260.00	1,220.00
400w	EA	2.759	1,050.00	290.00	1,340.00
Bollard light, 42" w/found., high pressure sodium					
70w	EA	2.581	1,470.00	270.00	1,740.00
100w	EA	2.581	1,500.00	270.00	1,770.00
150w	EA	2.581	1,520.00	270.00	1,790.00
Light fixture lamps					
Lamp					
20w med. bi-pin base, cool white, 24"	EA	0.145	11.75	15.25	27.00
30w cool white, rapid start, 36"	EA	0.145	15.00	15.25	30.25
40w cool white U, 3"	EA	0.145	32.75	15.25	48.00
40w cool white, rapid start, 48"	EA	0.145	14.00	15.25	29.25
70w high pressure sodium, mogul base	EA	0.200	110.00	20.75	130.75
75w slimline, 96"	EA	0.200	32.00	20.75	52.75
100w					
Incandescent, 100a, inside frost	EA	0.100	5.59	10.50	16.09
Mercury vapor, clear, mogul base	EA	0.200	97.00	20.75	117.75
High pressure sodium, mogul base	EA	0.200	150.00	20.75	170.75
150w					
Par 38 flood or spot, incandescent	EA	0.100	33.00	10.50	43.50
High pressure sodium, 1/2 mogul base	EA	0.200	130.00	20.75	150.75
175w					
Mercury vapor, clear, mogul base	EA	0.200	59.00	20.75	79.75
Metal halide, clear, mogul base	EA	0.200	120.00	20.75	140.75
High pressure sodium, mogul base	EA	0.200	130.00	20.75	150.75
250w					
Mercury vapor, clear, mogul base	EA	0.200	82.00	20.75	102.75
Metal halide, clear, mogul base	EA	0.200	120.00	20.75	140.75
High pressure sodium, mogul base	EA	0.200	140.00	20.75	160.75
400w					
Mercury vapor, clear, mogul base	EA	0.200	90.00	20.75	110.75
Metal halide, clear, mogul base	EA	0.200	120.00	20.75	140.75
High pressure sodium, mogul base	EA	0.200	140.00	20.75	160.75
1000w					
Mercury vapor, clear, mogul base	EA	0.250	210.00	26.00	236.00
High pressure sodium, mogul base	EA	0.250	380.00	26.00	406.00
26560.03 EXTERIOR LIGHTING					
EXTERIOR LIGHTING					
Exterior light fixtures					
Rectangle, high pressure sodium					
70w	EA	2.500	490.00	260.00	750.00
100w	EA	2.581	510.00	270.00	780.00
150w	EA	2.581	550.00	270.00	820.00
250w	EA	2.759	740.00	290.00	1,030.00
400w	EA	3.478	830.00	360.00	1,190.00
Flood, rectangular, high pressure sodium					
70w	EA	2.500	440.00	260.00	700.00
100w	EA	2.581	510.00	270.00	780.00
150w	EA	2.581	470.00	270.00	740.00
400w	EA	3.478	590.00	360.00	950.00
1000w	EA	4.494	980.00	470.00	1,450.00

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	Unit	Man-Hrs	Material	Labor	Total
26560.03 EXTERIOR LIGHTING (Cont.)					
Flood, high pressure sodium					
Round					
400w	EA	3.478	1,100.00	360.00	1,460.00
1000w	EA	4.494	1,720.00	470.00	2,190.00
Round, metal halide					
400w	EA	3.478	1,010.00	360.00	1,370.00
1000w	EA	4.494	1,500.00	470.00	1,970.00
Light fixture arms, cobra head, 6', high press. sodium					
100w	EA	2.000	550.00	210.00	760.00
150w	EA	2.500	870.00	260.00	1,130.00
250w	EA	2.500	910.00	260.00	1,170.00
400w	EA	2.963	930.00	310.00	1,240.00
Flood, metal halide					
400w	EA	3.478	910.00	360.00	1,270.00
1000w	EA	4.494	1,240.00	470.00	1,710.00
1500w	EA	6.015	1,560.00	630.00	2,190.00
Mercury vapor					
250w	EA	2.759	600.00	290.00	890.00
400w	EA	3.478	670.00	360.00	1,030.00
Incandescent					
300w	EA	1.739	140.00	180.00	320.00
500w	EA	2.000	250.00	210.00	460.00
1000w	EA	3.200	270.00	330.00	600.00
26560.04 ENERGY EFFICIENT EXTERIOR LIGHTING					
ENERGY EFFICIENT EXTERIOR LIGHTING					
Solar Powered, LED area light, 100 Watt, Zone 4					
Minimum	EA	1.333	1,790.00	140.00	1,930.00
Average	EA	1.600	2,000.00	170.00	2,170.00
Maximum	EA	2.000	2,180.00	210.00	2,390.00
Zone 2					
Minimum	EA	1.333	2,350.00	140.00	2,490.00
Average	EA	1.600	2,450.00	170.00	2,620.00
Maximum	EA	2.000	2,540.00	210.00	2,750.00
Zone 4DD					
Minimum	EA	1.333	2,700.00	140.00	2,840.00
Average	EA	1.600	2,890.00	170.00	3,060.00
Maximum	EA	2.000	3,090.00	210.00	3,300.00
Zone 2DD					
Minimum	EA	1.333	2,990.00	140.00	3,130.00
Average	EA	1.600	3,220.00	170.00	3,390.00
Maximum	EA	2.000	3,450.00	210.00	3,660.00

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	Unit	Man-Hrs	Material	Labor	Total
27320.01 TELEPHONE SYSTEMS					
TELEPHONE SYSTEMS					
Communication cable					
25 pair	LF	0.026	1.62	2.68	4.30
100 pair	LF	0.029	7.71	2.97	10.68
400 pair	LF	0.044	27.25	4.62	31.87
Cable tap in manhole or junction box					
25 pair cable	EA	3.810	11.25	400.00	411.25
100 pair cable	EA	15.094	45.25	1,570.00	1,615.25
400 pair cable	EA	61.538	180.00	6,410.00	6,590.00
Cable terminations, manhole or junction box					
25 pair cable	EA	3.756	11.25	390.00	401.25
100 pair cable	EA	15.094	45.25	1,570.00	1,615.25
400 pair cable	EA	61.538	140.00	6,410.00	6,550.00
27410.05 TELEVISION SYSTEMS					
TELEVISION SYSTEMS					
TV outlet, self terminating, w/cover plate	EA	0.308	8.94	32.00	40.94
Thru splitter	EA	1.600	19.50	170.00	189.50
End of line	EA	1.333	16.25	140.00	156.25
In line splitter multitap					
4 way	EA	1.818	32.50	190.00	222.50
2 way	EA	1.702	24.25	180.00	204.25
Equipment cabinet	EA	1.600	81.00	170.00	251.00
Antenna					
Broad band UHF	EA	3.478	160.00	360.00	520.00
Lightning arrester	EA	0.727	49.50	76.00	125.50
TV cable	LF	0.005	0.74	0.52	1.26

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28160.05 SECURITY SYSTEMS

	Unit	Man-Hrs	Material	Labor	Total
SECURITY SYSTEMS					
Sensors					
Balanced magnetic door switch, surface mounted	EA	0.500	270.00	52.00	322.00
With remote test	EA	1.000	340.00	100.00	440.00
Flush mounted	EA	1.860	250.00	190.00	440.00
Mounted bracket	EA	0.348	19.00	36.25	55.25
Mounted bracket spacer	EA	0.348	17.00	36.25	53.25
Photoelectric sensor, for fence					
6 beam	EA	2.759	280.00	290.00	570.00
9 beam	EA	4.255	340.00	440.00	780.00
Photoelectric sensor, 12 volt dc					
500' range	EA	1.600	410.00	170.00	580.00
800' range	EA	2.000	460.00	210.00	670.00
Capacitance wire grid kit					
Surface	EA	1.000	230.00	100.00	330.00
Duct	EA	1.600	170.00	170.00	340.00
Tube grid kit	EA	0.500	290.00	52.00	342.00
Vibration sensor, 30 max per zone	EA	0.500	340.00	52.00	392.00
Audio sensor, 30 max per zone	EA	0.500	360.00	52.00	412.00
Inertia sensor					
Outdoor	EA	0.727	270.00	76.00	346.00
Indoor	EA	0.500	170.00	52.00	222.00
Ultrasonic transmitter, 20 max per zone					
Omni-directional	EA	1.600	190.00	170.00	360.00
Directional	EA	1.333	210.00	140.00	350.00
Transceiver					
Omni-directional	EA	1.000	290.00	100.00	390.00
Directional	EA	1.000	320.00	100.00	420.00
Passive infrared sensor, 20 max per zone	EA	1.600	2,050.00	170.00	2,220.00
Access/secure unit, balanced magnetic switch	EA	1.600	1,280.00	170.00	1,450.00
Photoelectric sensor	EA	1.600	2,110.00	170.00	2,280.00
Photoelectric fence sensor	EA	1.600	2,160.00	170.00	2,330.00
Capacitance sensor	EA	1.739	2,510.00	180.00	2,690.00
Audio and vibration sensor	EA	1.600	2,210.00	170.00	2,380.00
Inertia sensor	EA	1.600	2,960.00	170.00	3,130.00
Ultrasonic sensor	EA	1.739	3,390.00	180.00	3,570.00
infrared sensor	EA	2.000	2,110.00	210.00	2,320.00
Monitor panel, with access/secure tone, standard	EA	1.739	1,440.00	180.00	1,620.00
High security	EA	2.000	2,110.00	210.00	2,320.00
Emergency power indicator	EA	0.500	850.00	52.00	902.00
Monitor rack with 115v power supply					
1 zone	EA	1.000	860.00	100.00	960.00
10 zone	EA	2.500	4,370.00	260.00	4,630.00
Monitor cabinet, wall mounted					
1 zone	EA	1.000	660.00	100.00	760.00
5 zone	EA	1.600	1,090.00	170.00	1,260.00
10 zone	EA	1.739	2,370.00	180.00	2,550.00
20 zone	EA	2.000	3,310.00	210.00	3,520.00
Floor mounted, 50 zone	EA	4.000	3,440.00	420.00	3,860.00
Security system accessories					
Tamper assembly for monitor cabinet	EA	0.444	170.00	46.25	216.25
Monitor panel blank	EA	0.348	22.75	36.25	59.00
Audible alarm	EA	0.500	190.00	52.00	242.00
Audible alarm control	EA	0.348	800.00	36.25	836.25
Termination screw, terminal cabinet					
25 pair	EA	1.600	340.00	170.00	510.00
50 pair	EA	2.500	550.00	260.00	810.00
150 pair	EA	5.000	890.00	520.00	1,410.00
Universal termination, cabinets & panel					
Remote test	EA	1.739	130.00	180.00	310.00
No remote test	EA	0.727	95.00	76.00	171.00
High security line supervision termination	EA	1.000	670.00	100.00	770.00
Door cord for capacitance sensor, 12"	EA	0.500	22.75	52.00	74.75
Insulation block kit for capacitance sensor	EA	0.348	110.00	36.25	146.25
Termination block for capacitance sensor	EA	0.348	23.25	36.25	59.50

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	Unit	Man-Hrs	Material	Labor	Total
28160.05 SECURITY SYSTEMS (Cont.)					
Sensors					
Guard alert display	EA	0.615	2,420.00	64.00	2,484.00
Uninterrupted power supply	EA	8.000	2,460.00	830.00	3,290.00
Plug-in 40kva transformer					
12 volt	EA	0.348	97.00	36.25	133.25
18 volt	EA	0.348	65.00	36.25	101.25
24 volt	EA	0.348	45.75	36.25	82.00
Test relay	EA	0.348	150.00	36.25	186.25
Coaxial cable, 50 ohm	LF	0.006	0.66	0.62	1.28
Door openers	EA	0.500	170.00	52.00	222.00
Push buttons					
Standard	EA	0.348	38.00	36.25	74.25
Weatherproof	EA	0.444	57.00	46.25	103.25
Bells	EA	0.727	140.00	76.00	216.00
Horns					
Standard	EA	1.000	150.00	100.00	250.00
Weatherproof	EA	1.250	290.00	130.00	420.00
Chimes	EA	0.667	230.00	69.00	299.00
Flasher	EA	0.615	160.00	64.00	224.00
Motion detectors	EA	1.509	670.00	160.00	830.00
Intercom units	EA	0.727	150.00	76.00	226.00
Remote annunciator	EA	5.000	5,180.00	520.00	5,700.00
28310.01 FIRE ALARM SYSTEMS					
FIRE ALARM SYSTEMS					
Master fire alarm box, pedestal mounted	EA	16.000	10,860.00	1,670.00	12,530.00
Master fire alarm box	EA	6.015	5,580.00	630.00	6,210.00
Box light	EA	0.500	200.00	52.00	252.00
Ground assembly for box	EA	0.667	160.00	69.00	229.00
Bracket for pole type box	EA	0.727	200.00	76.00	276.00
Pull station					
Waterproof	EA	0.500	99.00	52.00	151.00
Manual	EA	0.400	74.00	41.75	115.75
Horn, waterproof	EA	1.000	140.00	100.00	240.00
Interior alarm	EA	0.727	93.00	76.00	169.00
Coded transmitter, automatic	EA	2.000	1,430.00	210.00	1,640.00
Control panel, 8 zone	EA	8.000	3,280.00	830.00	4,110.00
Battery charger and cabinet	EA	2.000	1,090.00	210.00	1,300.00
Batteries, nickel cadmium or lead calcium	EA	5.000	820.00	520.00	1,340.00
CO2 pressure switch connection	EA	0.727	160.00	76.00	236.00
Annunciator panels					
Fire detection annunciator, remote type, 8 zone	EA	1.818	560.00	190.00	750.00
12 zone	EA	2.000	710.00	210.00	920.00
16 zone	EA	2.500	890.00	260.00	1,150.00
Fire alarm systems					
Bell	EA	0.615	170.00	64.00	234.00
Weatherproof bell	EA	0.667	110.00	69.00	179.00
Horn	EA	0.727	99.00	76.00	175.00
Siren	EA	2.000	1,010.00	210.00	1,220.00
Chime	EA	0.615	120.00	64.00	184.00
Audio/visual	EA	0.727	190.00	76.00	266.00
Strobe light	EA	0.727	170.00	76.00	246.00
Smoke detector	EA	0.667	270.00	69.00	339.00
Heat detector	EA	0.500	46.50	52.00	98.50
Thermal detector	EA	0.500	43.50	52.00	95.50
Ionization detector	EA	0.533	220.00	56.00	276.00
Duct detector	EA	2.759	720.00	290.00	1,010.00
Test switch	EA	0.500	120.00	52.00	172.00
Remote indicator	EA	0.571	77.00	60.00	137.00
Door holder	EA	0.727	270.00	76.00	346.00
Telephone jack	EA	0.296	5.04	30.75	35.79
Fireman phone	EA	1.000	660.00	100.00	760.00
Speaker	EA	0.800	130.00	83.00	213.00

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28310.01 FIRE ALARM SYSTEMS (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Fire alarm systems					
Remote fire alarm annunciator panel					
24 zone	EA	6.667	1,710.00	690.00	2,400.00
48 zone	EA	13.008	3,410.00	1,350.00	4,760.00
Control panel					
12 zone	EA	2.963	1,550.00	310.00	1,860.00
16 zone	EA	4.444	1,650.00	460.00	2,110.00
24 zone	EA	6.667	2,530.00	690.00	3,220.00
48 zone	EA	16.000	4,720.00	1,670.00	6,390.00
Power supply	EA	1.509	290.00	160.00	450.00
Status command	EA	5.000	8,000.00	520.00	8,520.00
Printer	EA	1.509	2,550.00	160.00	2,710.00
Transponder	EA	0.899	130.00	94.00	224.00
Transformer	EA	0.667	180.00	69.00	249.00
Transceiver	EA	0.727	260.00	76.00	336.00
Relays	EA	0.500	100.00	52.00	152.00
Flow switch	EA	2.000	330.00	210.00	540.00
Tamper switch	EA	2.963	200.00	310.00	510.00
End of line resistor	EA	0.348	14.25	36.25	50.50
Printed circuit card	EA	0.500	130.00	52.00	182.00
Central processing unit	EA	6.154	8,750.00	640.00	9,390.00
UPS backup to CPU	EA	8.999	16,010.00	940.00	16,950.00
Smoke detector, fixed temp. & rate of rise comb.	EA	1.600	260.00	170.00	430.00

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	Unit	Man-Hrs	Material	Labor	Total
31110.01 CLEAR WOODED AREAS					
CLEAR WOODED AREAS					
Clear wooded area					
Light density	ACRE	60.000		8,780.00	8,780.00
Medium density	ACRE	80.000		11,700.00	11,700.00
Heavy density	ACRE	96.000		14,040.00	14,040.00
31130.05 TREE CUTTING & CLEARING					
TREE CUTTING & CLEARING					
Cut trees and clear out stumps					
9" to 12" dia.	EA	4.800		700.00	700.00
To 24" dia.	EA	6.000		880.00	880.00
24" dia. and up	EA	8.000		1,170.00	1,170.00
Loading and trucking					
For machine load, per load, round trip					
1 mile	EA	0.960		140.00	140.00
3 mile	EA	1.091		160.00	160.00
5 mile	EA	1.200		180.00	180.00
10 mile	EA	1.600		230.00	230.00
20 mile	EA	2.400		350.00	350.00
Hand loaded, round trip					
1 mile	EA	2.000		340.00	340.00
3 mile	EA	2.286		390.00	390.00
5 mile	EA	2.667		450.00	450.00
10 mile	EA	3.200		540.00	540.00
20 mile	EA	4.000		680.00	680.00
Tree trimming for pole line construction					
Light cutting	LF	0.012		1.75	1.75
Medium cutting	LF	0.016		2.34	2.34
Heavy cutting	LF	0.024		3.51	3.51
31221.30 ROUGH GRADING					
ROUGH GRADING					
Site grading, cut & fill, sandy clay, 200' haul, 75 hp dozer	CY	0.032		5.44	5.44
Spread topsoil by equipment on site	CY	0.036		6.05	6.05
Site grading (cut and fill to 6") less than 1 acre					
75 hp dozer	CY	0.053		9.07	9.07
1.5 c.y. backhoe/loader	CY	0.080		13.50	13.50
31221.60 FINISH GRADING					
FINISH GRADING					
Finish grading, with small loader/dozer, 200' passes					
Minimum	SY	0.003		0.54	0.54
Average	SY	0.004		0.61	0.61
Maximum	SY	0.004		0.75	0.75
31231.31 BASE COURSE					
BASE COURSE					
Base course, crushed stone					
3" thick	SY	0.004	4.01	0.97	4.98
4" thick	SY	0.004	5.35	1.05	6.40
6" thick	SY	0.005	8.04	1.14	9.18
8" thick	SY	0.005	10.75	1.29	12.04
10" thick	SY	0.006	13.50	1.39	14.89
12" thick	SY	0.007	16.00	1.62	17.62
Base course, bank run gravel					
4" deep	SY	0.004	4.88	1.02	5.90
6" deep	SY	0.005	7.33	1.11	8.44
8" deep	SY	0.005	9.77	1.21	10.98
10" deep	SY	0.005	12.25	1.29	13.54
12" deep	SY	0.006	14.75	1.49	16.24
Prepare and roll sub-base					
Minimum	SY	0.004		0.97	0.97
Average	SY	0.005		1.21	1.21
Maximum	SY	0.007		1.62	1.62

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	Unit	Man-Hrs	Material	Labor	Total
31231.32 BORROW					
BORROW					
Borrow fill, FOB at pit					
Sand, haul to site, round trip					
10 mile	CY	0.080	36.25	19.50	55.75
20 mile	CY	0.133	36.25	32.50	68.75
30 mile	CY	0.200	36.25	48.75	85.00
Place borrow fill and compact					
Less than 1 in 4 slope	CY	0.040	46.00	9.73	55.73
Greater than 1 in 4 slope	CY	0.053	46.00	13.00	59.00
31231.37 GRAVEL AND STONE					
GRAVEL AND STONE					
FOB at plant, material only					
No. 21 crusher run stone	CY				49.50
No. 26 crusher run stone	CY				49.50
No. 57 stone	CY				49.50
No. 67 gravel	CY				49.50
No. 68 stone	CY				49.50
No. 78 stone	CY				49.50
No. 78 gravel, (pea gravel)	CY				49.50
No. 357 or B-3 stone	CY				49.50
Structural & foundation backfill					
No. 21 crusher run stone	TON				36.75
No. 26 crusher run stone	TON				36.75
No. 57 stone	TON				36.75
No. 67 gravel	TON				36.75
No. 68 stone	TON				36.75
No. 78 stone	TON				36.75
No. 78 gravel (pea gravel)	TON				36.75
No. 357 or B-3 stone	TON				36.75
31231.63 BULK EXCAVATION					
BULK EXCAVATION					
Excavation, by small dozer					
Large areas	CY	0.016		2.72	2.72
Small areas	CY	0.027		4.53	4.53
Trim banks	CY	0.040		6.80	6.80
Drag line					
1-1/2 c.y. bucket					
Sand or gravel	CY	0.040		5.85	5.85
Light clay	CY	0.053		7.80	7.80
Heavy clay	CY	0.060		8.77	8.77
Unclassified	CY	0.064		9.36	9.36
2 c.y. bucket					
Sand or gravel	CY	0.037		5.40	5.40
Light clay	CY	0.048		7.02	7.02
Heavy clay	CY	0.053		7.80	7.80
Unclassified	CY	0.056		8.25	8.25
2-1/2 c.y. bucket					
Sand or gravel	CY	0.034		5.01	5.01
Light clay	CY	0.044		6.38	6.38
Heavy clay	CY	0.048		7.02	7.02
Unclassified	CY	0.051		7.38	7.38
3 c.y. bucket					
Sand or gravel	CY	0.030		4.38	4.38
Light clay	CY	0.040		5.85	5.85
Heavy clay	CY	0.044		6.38	6.38
Unclassified	CY	0.046		6.68	6.68
Hydraulic excavator					
1 c.y. capacity					
Light material	CY	0.040		5.85	5.85
Medium material	CY	0.048		7.02	7.02
Wet material	CY	0.060		8.77	8.77
Blasted rock	CY	0.069		10.00	10.00

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	Unit	Man-Hrs	Material	Labor	Total
31231.63 BULK EXCAVATION (Cont.)					
Hydraulic excavator					
1-1/2 c.y. capacity					
Light material	CY	0.010		2.43	2.43
Medium material	CY	0.013		3.24	3.24
Wet material	CY	0.016		3.89	3.89
Blasted rock	CY	0.020		4.86	4.86
2 c.y. capacity					
Light material	CY	0.009		2.16	2.16
Medium material	CY	0.011		2.78	2.78
Wet material	CY	0.013		3.24	3.24
Blasted rock	CY	0.016		3.89	3.89
Wheel mounted front-end loader					
7/8 c.y. capacity					
Light material	CY	0.020		4.86	4.86
Medium material	CY	0.023		5.56	5.56
Wet material	CY	0.027		6.48	6.48
Blasted rock	CY	0.032		7.78	7.78
1-1/2 c.y. capacity					
Light material	CY	0.011		2.78	2.78
Medium material	CY	0.012		2.99	2.99
Wet material	CY	0.013		3.24	3.24
Blasted rock	CY	0.015		3.53	3.53
2-1/2 c.y. capacity					
Light material	CY	0.009		2.28	2.28
Medium material	CY	0.010		2.43	2.43
Wet material	CY	0.011		2.59	2.59
Blasted rock	CY	0.011		2.78	2.78
3-1/2 c.y. capacity					
Light material	CY	0.009		2.16	2.16
Medium material	CY	0.009		2.28	2.28
Wet material	CY	0.010		2.43	2.43
Blasted rock	CY	0.011		2.59	2.59
6 c.y. capacity					
Light material	CY	0.005		1.29	1.29
Medium material	CY	0.006		1.39	1.39
Wet material	CY	0.006		1.49	1.49
Blasted rock	CY	0.007		1.62	1.62
Track mounted front-end loader					
1-1/2 c.y. capacity					
Light material	CY	0.013		3.24	3.24
Medium material	CY	0.015		3.53	3.53
Wet material	CY	0.016		3.89	3.89
Blasted rock	CY	0.018		4.32	4.32
2-3/4 c.y. capacity					
Light material	CY	0.008		1.94	1.94
Medium material	CY	0.009		2.16	2.16
Wet material	CY	0.010		2.43	2.43
Blasted rock	CY	0.011		2.78	2.78
31231.64 BUILDING EXCAVATION					
BUILDING EXCAVATION					
Structural excavation, unclassified earth					
3/8 c.y. backhoe	CY	0.107		26.00	26.00
3/4 c.y. backhoe	CY	0.080		19.50	19.50
1 c.y. backhoe	CY	0.067		16.25	16.25
Foundation backfill and compaction by machine	CY	0.160		39.00	39.00
31231.65 HAND EXCAVATION					
HAND EXCAVATION					
Excavation					
To 2' deep					
Normal soil	CY	0.889		71.00	71.00
Sand and gravel	CY	0.800		64.00	64.00
Medium clay	CY	1.000		80.00	80.00
Heavy clay	CY	1.143		92.00	92.00
Loose rock	CY	1.333		110.00	110.00

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	Unit	Man-Hrs	Material	Labor	Total
31231.65 HAND EXCAVATION (Cont.)					
Excavation					
To 6' deep					
Normal soil	CY	1.143		92.00	92.00
Sand and gravel	CY	1.000		80.00	80.00
Medium clay	CY	1.333		110.00	110.00
Heavy clay	CY	1.600		130.00	130.00
Loose rock	CY	2.000		160.00	160.00
Backfilling foundation without compaction, 6" lifts	CY	0.500		40.00	40.00
Compaction of backfill around structures or in trench					
By hand with air tamper	CY	0.571		45.75	45.75
By hand with vibrating plate tamper	CY	0.533		42.75	42.75
1 ton roller	CY	0.400		68.00	68.00
Miscellaneous hand labor					
Trim slopes, sides of excavation	SF	0.001		0.10	0.10
Trim bottom of excavation	SF	0.002		0.12	0.12
Excavation around obstructions and services	CY	2.667		210.00	210.00
31231.67 UTILITY EXCAVATION					
UTILITY EXCAVATION					
Trencher, sandy clay, 8" wide trench					
18" deep	LF	0.018		3.02	3.02
24" deep	LF	0.020		3.40	3.40
36" deep	LF	0.023		3.89	3.89
Trench backfill, 95% compaction					
Tamp by hand	CY	0.500		40.00	40.00
Vibratory compaction	CY	0.400		32.00	32.00
Trench backfilling, with borrow sand, place & compact	CY	0.400	38.50	32.00	70.50
31231.68 ROADWAY EXCAVATION					
ROADWAY EXCAVATION					
Roadway excavation					
1/4 mile haul	CY	0.016		3.89	3.89
2 mile haul	CY	0.027		6.48	6.48
5 mile haul	CY	0.040		9.73	9.73
Excavation of open ditches	CY	0.011		2.78	2.78
Trim banks, swales or ditches	SY	0.013		3.24	3.24
Bulk swale excavation by dragline					
Small jobs	CY	0.060		8.77	8.77
Large jobs	CY	0.034		5.01	5.01
Spread base course	CY	0.020		4.86	4.86
Roll and compact	CY	0.027		6.48	6.48
31231.69 HAULING MATERIAL					
HAULING MATERIAL					
Haul material by 10 c.y. dump truck, round trip distance					
1 mile	CY	0.044		7.56	7.56
2 mile	CY	0.053		9.07	9.07
5 mile	CY	0.073		12.25	12.25
10 mile	CY	0.080		13.50	13.50
20 mile	CY	0.089		15.25	15.25
30 mile	CY	0.107		18.25	18.25
31231.95 WELLPOINT SYSTEMS					
WELLPOINT SYSTEMS					
Pumping, gas driven, 50' hose					
3" header pipe	DAY	8.000		1,360.00	1,360.00
6" header pipe	DAY	10.000		1,700.00	1,700.00
Wellpoint system per job; 150' length of PVC header					
6" header pipe, 2" wellpoints, 5' centers	LF	0.032	76.00	5.44	81.44
8" header pipe	LF	0.040	91.00	6.80	97.80
10" header pipe	LF	0.053	140.00	9.07	149.07
Jetting wellpoint system					
14' long	EA	0.533	100.00	91.00	191.00
18' long	EA	0.667	120.00	110.00	230.00
Sand filter for wellpoints	LF	0.013	4.96	2.26	7.22
Replacement of wellpoint components	EA	0.160		27.25	27.25

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31233.36 TRENCHING

	Unit	Man-Hrs	Material	Labor	Total
TRENCHING					
Trenching and continuous footing excavation					
By gradall					
1 c.y. capacity					
Light soil	CY	0.023		5.56	5.56
Medium soil	CY	0.025		5.98	5.98
Heavy/wet soil	CY	0.027		6.48	6.48
Loose rock	CY	0.029		7.07	7.07
Blasted rock	CY	0.031		7.48	7.48
By hydraulic excavator					
1/2 c.y. capacity					
Light soil	CY	0.027		6.48	6.48
Medium soil	CY	0.029		7.07	7.07
Heavy/wet soil	CY	0.032		7.78	7.78
Loose rock	CY	0.036		8.65	8.65
Blasted rock	CY	0.040		9.73	9.73
1 c.y. capacity					
Light soil	CY	0.019		4.57	4.57
Medium soil	CY	0.020		4.86	4.86
Heavy/wet soil	CY	0.021		5.19	5.19
Loose rock	CY	0.023		5.56	5.56
Blasted rock	CY	0.025		5.98	5.98
1-1/2 c.y. capacity					
Light soil	CY	0.017		4.09	4.09
Medium soil	CY	0.018		4.32	4.32
Heavy/wet soil	CY	0.019		4.57	4.57
Loose rock	CY	0.020		4.86	4.86
Blasted rock	CY	0.021		5.19	5.19
2 c.y. capacity					
Light soil	CY	0.016		3.89	3.89
Medium soil	CY	0.017		4.09	4.09
Heavy/wet soil	CY	0.018		4.32	4.32
Loose rock	CY	0.019		4.57	4.57
Blasted rock	CY	0.020		4.86	4.86
2-1/2 c.y. capacity					
Light soil	CY	0.015		3.53	3.53
Medium soil	CY	0.015		3.70	3.70
Heavy/wet soil	CY	0.016		3.89	3.89
Loose rock	CY	0.017		4.09	4.09
Blasted rock	CY	0.018		4.32	4.32
Trencher, chain, 1' wide to 4' deep					
Light soil	CY	0.020		3.40	3.40
Medium soil	CY	0.023		3.89	3.89
Heavy soil	CY	0.027		4.53	4.53
Hand excavation					
Bulk, wheeled 100'					
Normal soil	CY	0.889		71.00	71.00
Sand or gravel	CY	0.800		64.00	64.00
Medium clay	CY	1.143		92.00	92.00
Heavy clay	CY	1.600		130.00	130.00
Loose rock	CY	2.000		160.00	160.00
Trenches, up to 2' deep					
Normal soil	CY	1.000		80.00	80.00
Sand or gravel	CY	0.889		71.00	71.00
Medium clay	CY	1.333		110.00	110.00
Heavy clay	CY	2.000		160.00	160.00
Loose rock	CY	2.667		210.00	210.00
Trenches, to 6' deep					
Normal soil	CY	1.143		92.00	92.00
Sand or gravel	CY	1.000		80.00	80.00
Medium clay	CY	1.600		130.00	130.00
Heavy clay	CY	2.667		210.00	210.00
Loose rock	CY	4.000		320.00	320.00

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	Unit	Man-Hrs	Material	Labor	Total
31233.36 TRENCHING (Cont.)					
Backfill trenches					
With compaction					
By hand	CY	0.667		53.00	53.00
By 60 hp tracked dozer	CY	0.020		3.40	3.40
By 200 hp tracked dozer	CY	0.009		2.16	2.16
By small front-end loader	CY	0.023		3.89	3.89
Spread dumped fill or gravel, no compaction					
6" layers	SY	0.013		2.26	2.26
Add for compaction	SY	0.016		2.72	2.72
12" layers	SY	0.016		2.72	2.72
Add for compaction	SY	0.020		3.40	3.40
Compaction in 6" layers					
By hand with air tamper	SY	0.016		1.71	1.71
Backfill trenches, sand bedding, no compaction					
By hand	CY	0.667	38.50	53.00	91.50
By small front-end loader	CY	0.023	38.50	5.56	44.06
31311.60 SOIL TREATMENT					
SOIL TREATMENT					
Soil treatment, termite control pretreatment					
Under slabs	SF	0.004	0.77	0.35	1.12
By walls	SF	0.005	0.77	0.42	1.19
31320.03 GEOTEXTILE					
GEOTEXTILE					
Filter cloth, light reinforcement					
Woven					
12'-6" wide x 50' long	SF	0.001	0.34	0.09	0.43
Various lengths	SF	0.001	0.51	0.09	0.60
Non-woven					
14'-8" wide x 430' long	SF	0.001	0.18	0.09	0.27
Various lengths	SF	0.001	0.26	0.09	0.35
31320.05 SOIL STABILIZATION					
SOIL STABILIZATION					
Straw bale secured with rebar	LF	0.027	9.15	2.13	11.28
Filter barrier, 18" high filter fabric	LF	0.080	2.21	6.40	8.61
Sediment fence, 36" fabric with 6" mesh	LF	0.100	5.24	8.00	13.24
Soil stabilization with tar paper, burlap, straw and stakes	SF	0.001	0.44	0.09	0.53
31360.01 SLOPE PROTECTION					
SLOPE PROTECTION					
Gabions, stone filled					
6" deep	SY	0.200	36.50	34.00	70.50
9" deep	SY	0.229	44.75	39.00	83.75
12" deep	SY	0.267	59.00	45.50	104.50
18" deep	SY	0.320	76.00	54.00	130.00
36" deep	SY	0.533	130.00	91.00	221.00
31370.01 RIPRAP					
RIPRAP					
Riprap					
Crushed stone blanket, max size 2-1/2"	TON	0.533	44.25	100.00	144.25
Stone, quarry run, 300 lb. stones	TON	0.492	55.00	95.00	150.00
400 lb. stones	TON	0.457	58.00	88.00	146.00
500 lb. stones	TON	0.427	60.00	82.00	142.00
750 lb. stones	TON	0.400	62.00	77.00	139.00
Dry concrete riprap in bags 3" thick, 80 lb. per bag	BAG	0.027	7.45	5.13	12.58
31411.60 STEEL SHEET PILING					
STEEL SHEET PILING					
Steel sheet piling,12" wide					
20' long	SF	0.096	25.50	21.25	46.75
35' long	SF	0.069	25.50	15.25	40.75
50' long	SF	0.048	25.50	10.50	36.00
Over 50' long	SF	0.044	25.50	9.64	35.14

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	Unit	Man-Hrs	Material	Labor	Total
31413.30 TRENCH SHEETING					
TRENCH SHEETING					
Closed timber, including pull and salvage, excavation					
8' deep	SF	0.064	3.48	12.25	15.73
10' deep	SF	0.067	3.55	13.00	16.55
12' deep	SF	0.071	3.65	13.75	17.40
14' deep	SF	0.075	3.81	14.50	18.31
16' deep	SF	0.080	3.83	15.50	19.33
18' deep	SF	0.091	3.95	17.50	21.45
20' deep	SF	0.098	5.00	19.00	24.00
31500.01 TRENCH BOX					
TRENCH BOX					
10' x 10' Steel, 4" Wall, Rental Rate					
4 Hour	EA				220.00
Day	EA				220.00
Week	EA				560.00
Month	EA				1,680.00
10 x 24 Steel 6" Wall, Rental Rate					
4 Hour	EA				430.00
Day	EA				430.00
Week	EA				1,080.00
Month	EA				3,240.00
31520.01 COFFERDAMS					
COFFERDAMS					
Cofferdam, steel, driven from shore					
15' deep	SF	0.137	26.75	30.25	57.00
20' deep	SF	0.128	26.75	28.25	55.00
25' deep	SF	0.120	26.75	26.50	53.25
30' deep	SF	0.113	26.75	25.00	51.75
40' deep	SF	0.107	26.75	23.50	50.25
Driven from barge					
20' deep	SF	0.148	26.75	32.75	59.50
30' deep	SF	0.137	26.75	30.25	57.00
40' deep	SF	0.128	26.75	28.25	55.00
50' deep	SF	0.120	26.75	26.50	53.25
31620.01 PILE TESTING					
PILE TESTING					
Pile test					
50 ton to 100 ton	EA				20,680.00
To 200 ton	EA				29,210.00
To 300 ton	EA				33,770.00
To 400 ton	EA				39,600.00
To 600 ton	EA				49,390.00
31621.65 STEEL PILES					
STEEL PILES					
H-section piles					
8x8					
36 lb/ft					
30' long	LF	0.080	32.75	17.75	50.50
40' long	LF	0.064	32.75	14.25	47.00
50' long	LF	0.053	32.75	11.75	44.50
10x10					
42 lb/ft					
30' long	LF	0.080	38.00	17.75	55.75
40' long	LF	0.064	38.00	14.25	52.25
50' long	LF	0.053	38.00	11.75	49.75
57 lb/ft					
30' long	LF	0.080	52.00	17.75	69.75
40' long	LF	0.064	52.00	14.25	66.25
50' long	LF	0.053	52.00	11.75	63.75
12x12					
53 lb/ft					
30' long	LF	0.087	48.00	19.25	67.25
40' long	LF	0.069	48.00	15.25	63.25

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	Unit	Man-Hrs	Material	Labor	Total
31621.65 STEEL PILES (Cont.)					
53 lb/ft					
50' long	LF	0.053	48.00	11.75	59.75
74 lb/ft					
30' long	LF	0.087	67.00	19.25	86.25
40' long	LF	0.069	67.00	15.25	82.25
50' long	LF	0.053	67.00	11.75	78.75
14x14					
73 lb/ft					
40' long	LF	0.087	66.00	19.25	85.25
50' long	LF	0.069	66.00	15.25	81.25
60' long	LF	0.053	66.00	11.75	77.75
89 lb/ft					
40' long	LF	0.087	81.00	19.25	100.25
50' long	LF	0.069	81.00	15.25	96.25
60' long	LF	0.053	81.00	11.75	92.75
102 lb/ft					
40' long	LF	0.087	93.00	19.25	112.25
50' long	LF	0.069	93.00	15.25	108.25
60' long	LF	0.053	93.00	11.75	104.75
117 lb/ft					
40' long	LF	0.091	110.00	20.25	130.25
50' long	LF	0.071	110.00	15.75	125.75
60' long	LF	0.055	110.00	12.00	122.00
Splice					
8"	EA	1.333	110.00	110.00	220.00
10"	EA	1.600	120.00	130.00	250.00
12"	EA	1.600	160.00	130.00	290.00
14"	EA	2.000	200.00	160.00	360.00
Driving cap					
8"	EA	0.800	51.00	64.00	115.00
10"	EA	1.000	51.00	80.00	131.00
12"	EA	1.000	51.00	80.00	131.00
14"	EA	1.143	51.00	92.00	143.00
Standard point					
8"	EA	0.800	80.00	64.00	144.00
10"	EA	1.000	94.00	80.00	174.00
12"	EA	1.143	110.00	92.00	202.00
14"	EA	1.333	130.00	110.00	240.00
Heavy duty point					
8"	EA	0.889	67.00	71.00	138.00
10"	EA	1.143	79.00	92.00	171.00
12"	EA	1.333	100.00	110.00	210.00
14"	EA	1.600	130.00	130.00	260.00
Tapered friction piles, fluted casing, up to 50'					
With 4000 psi concrete no reinforcing					
12" dia.	LF	0.048	25.75	10.50	36.25
14" dia.	LF	0.049	29.75	11.00	40.75
16" dia.	LF	0.051	35.75	11.25	47.00
18" dia.	LF	0.056	40.25	12.50	52.75
31621.66 STEEL PIPE PILES					
STEEL PIPE PILES					
Concrete filled, 3000# concrete, up to 40'					
8" dia.	LF	0.069	32.50	15.25	47.75
10" dia.	LF	0.071	41.75	15.75	57.50
12" dia.	LF	0.074	48.25	16.25	64.50
14" dia.	LF	0.077	53.00	17.00	70.00
16" dia.	LF	0.080	61.00	17.75	78.75
18" dia.	LF	0.083	84.00	18.50	102.50
Pipe piles, non-filled					
8" dia.	LF	0.053	26.75	11.75	38.50
10" dia.	LF	0.055	33.75	12.00	45.75
12" dia.	LF	0.056	41.25	12.50	53.75
14" dia.	LF	0.060	43.25	13.25	56.50
16" dia.	LF	0.062	49.25	13.75	63.00

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	Unit	Man-Hrs	Material	Labor	Total
31621.66 STEEL PIPE PILES (Cont.)					
Pipe piles, non-filled					
18" dia.	LF	0.064	65.00	14.25	79.25
Splice					
8" dia.	EA	1.600	120.00	130.00	250.00
10" dia.	EA	1.600	130.00	130.00	260.00
12" dia.	EA	2.000	140.00	160.00	300.00
14" dia.	EA	2.000	170.00	160.00	330.00
16" dia.	EA	2.667	200.00	210.00	410.00
18" dia.	EA	2.667	260.00	210.00	470.00
Standard point					
8" dia.	EA	1.600	150.00	130.00	280.00
10" dia.	EA	1.600	190.00	130.00	320.00
12" dia.	EA	2.000	210.00	160.00	370.00
14" dia.	EA	2.000	220.00	160.00	380.00
16" dia.	EA	2.667	280.00	210.00	490.00
18" dia.	EA	2.667	400.00	210.00	610.00
Heavy duty point					
8" dia.	EA	2.000	260.00	160.00	420.00
10" dia.	EA	2.000	360.00	160.00	520.00
12" dia.	EA	2.667	390.00	210.00	600.00
14" dia.	EA	2.667	530.00	210.00	740.00
16" dia.	EA	3.200	530.00	260.00	790.00
18" dia.	EA	3.200	580.00	260.00	840.00
31621.90 WOOD AND TIMBER PILES					
WOOD AND TIMBER PILES					
Treated wood piles, 12" butt, 8" tip					
25' long	LF	0.096	18.00	21.25	39.25
30' long	LF	0.080	19.25	17.75	37.00
35' long	LF	0.069	19.25	15.25	34.50
40' long	LF	0.060	19.25	13.25	32.50
12" butt, 7" tip					
40' long	LF	0.060	21.75	13.25	35.00
45' long	LF	0.053	21.75	11.75	33.50
50' long	LF	0.048	24.75	10.50	35.25
55' long	LF	0.044	24.75	9.64	34.39
60' long	LF	0.040	24.75	8.84	33.59
31631.35 PRESTRESSED PILING					
PRESTRESSED PILING					
Prestressed concrete piling, less than 60' long					
10" sq.	LF	0.040	23.00	8.84	31.84
12" sq.	LF	0.042	32.00	9.22	41.22
14" sq.	LF	0.043	33.25	9.42	42.67
16" sq.	LF	0.044	41.00	9.64	50.64
18" sq.	LF	0.047	57.00	10.25	67.25
20" sq.	LF	0.048	77.00	10.50	87.50
24" sq.	LF	0.049	98.00	11.00	109.00
More than 60' long					
12" sq.	LF	0.034	32.75	7.57	40.32
14" sq.	LF	0.035	36.00	7.71	43.71
16" sq.	LF	0.036	43.25	7.85	51.10
18" sq.	LF	0.036	57.00	8.00	65.00
20" sq.	LF	0.037	77.00	8.16	85.16
24" sq.	LF	0.038	92.00	8.32	100.32
Straight cylinder, less than 60' long					
12" dia.	LF	0.044	29.75	9.64	39.39
14" dia.	LF	0.045	40.25	9.86	50.11
16" dia.	LF	0.046	49.00	10.00	59.00
18" dia.	LF	0.047	62.00	10.25	72.25
20" dia.	LF	0.048	73.00	10.50	83.50
24" dia.	LF	0.049	91.00	11.00	102.00
More than 60' long					
12" dia.	LF	0.035	29.75	7.71	37.46
14" dia.	LF	0.036	40.25	7.85	48.10
16" dia.	LF	0.036	49.00	8.00	57.00

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	Unit	Man-Hrs	Material	Labor	Total
31631.35 PRESTRESSED PILING (Cont.)					
More than 60' long					
18" dia.	LF	0.037	62.00	8.16	70.16
20" dia.	LF	0.038	73.00	8.32	81.32
24" dia.	LF	0.038	93.00	8.48	101.48
Concrete sheet piling					
12" thick x 20' long	SF	0.096	34.00	21.25	55.25
25' long	SF	0.087	34.00	19.25	53.25
30' long	SF	0.080	34.00	17.75	51.75
35' long	SF	0.074	34.00	16.25	50.25
40' long	SF	0.069	34.00	15.25	49.25
16" thick x 40' long	SF	0.053	46.50	11.75	58.25
45' long	SF	0.051	46.50	11.25	57.75
50' long	SF	0.048	46.50	10.50	57.00
55' long	SF	0.046	46.50	10.00	56.50
60' long	SF	0.044	46.50	9.64	56.14
31640.01 CAISSONS, INCLUDES CASING					
CAISSONS, INCLUDES CASING					
Caisson, 3000# conc., 60# reinf./CY, stable ground					
18" dia., 0.065 CY/ LF	LF	0.192	18.75	42.50	61.25
24" dia., 0.116 CY/ LF	LF	0.200	29.75	44.25	74.00
30" dia., 0.182 CY/ LF	LF	0.240	45.75	53.00	98.75
36" dia., 0.262 CY/ LF	LF	0.274	64.00	61.00	125.00
48" dia., 0.465 CY/ LF	LF	0.320	110.00	71.00	181.00
60" dia., 0.727 CY/ LF	LF	0.436	190.00	96.00	286.00
72" dia., 1.05 CY/ LF	LF	0.533	280.00	120.00	400.00
84" dia., 1.43 CY/ LF	LF	0.686	340.00	150.00	490.00
Wet ground, casing required but pulled					
18" dia.	LF	0.240	20.25	53.00	73.25
24" dia.	LF	0.267	32.50	59.00	91.50
30" dia.	LF	0.300	50.00	66.00	116.00
36" dia.	LF	0.320	69.00	71.00	140.00
48" dia.	LF	0.400	120.00	88.00	208.00
60" dia.	LF	0.533	210.00	120.00	330.00
72" dia.	LF	0.800	310.00	180.00	490.00
84" dia.	LF	1.200	370.00	270.00	640.00
Soft rock					
18" dia.	LF	0.686	20.25	150.00	170.25
24" dia.	LF	1.200	32.50	270.00	302.50
30" dia.	LF	1.600	50.00	350.00	400.00
36" dia.	LF	2.400	69.00	530.00	599.00
48" dia.	LF	3.200	120.00	710.00	830.00
60" dia.	LF	4.800	210.00	1,060.00	1,270.00
72" dia.	LF	5.333	310.00	1,180.00	1,490.00
84" dia.	LF	6.000	370.00	1,330.00	1,700.00

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	Unit	Man-Hrs	Material	Labor	Total
32111.71 ASPHALT REPAIR					
ASPHALT REPAIR					
Coal tar seal coat, rubber add., fuel resist.	SY	0.011	3.09	0.91	4.00
Bituminous surface treatment, single	SY	0.008	2.84	0.64	3.48
Double	SY	0.001	3.78	0.07	3.85
Bituminous prime coat	SY	0.001	1.91	0.08	1.99
Tack coat	SY	0.001	0.93	0.06	0.99
Crack sealing, concrete paving	LF	0.005	1.59	0.42	2.01
Bituminous paving for pipe trench, 4" thick	SY	0.160	18.25	23.50	41.75
Polypropylene, nonwoven paving fabric	SY	0.004	2.33	0.32	2.65
Rubberized asphalt	SY	0.073	3.78	5.82	9.60
Asphalt slurry seal	SY	0.047	9.33	3.76	13.09
32121.60 ASPHALT SURFACES					
ASPHALT SURFACES					
Asphalt wearing surface, flexible pavement					
1" thick	SY	0.016	5.07	3.53	8.60
1-1/2" thick	SY	0.019	7.61	4.24	11.85
2" thick	SY	0.024	10.25	5.30	15.55
3" thick	SY	0.032	15.25	7.07	22.32
Binder course					
1-1/2" thick	SY	0.018	7.42	3.92	11.34
2" thick	SY	0.022	9.90	4.82	14.72
3" thick	SY	0.029	14.75	6.42	21.17
4" thick	SY	0.032	19.75	7.07	26.82
5" thick	SY	0.036	24.75	7.85	32.60
6" thick	SY	0.040	29.75	8.84	38.59
Bituminous sidewalk, no base					
2" thick	SY	0.028	10.75	4.12	14.87
3" thick	SY	0.030	16.25	4.38	20.63
32131.30 CONCRETE PAVING					
CONCRETE PAVING					
Concrete paving, reinforced, 5000 psi concrete					
6" thick	SY	0.150	38.00	33.25	71.25
7" thick	SY	0.160	44.25	35.25	79.50
8" thick	SY	0.171	51.00	38.00	89.00
9" thick	SY	0.185	57.00	40.75	97.75
10" thick	SY	0.200	63.00	44.25	107.25
11" thick	SY	0.218	69.00	48.25	117.25
12" thick	SY	0.240	76.00	53.00	129.00
15" thick	SY	0.300	95.00	66.00	161.00
Concrete paving, for pipe trench, reinforced					
7" thick	SY	0.240	75.00	35.00	110.00
8" thick	SY	0.267	81.00	39.00	120.00
9" thick	SY	0.300	87.00	43.75	130.75
10" thick	SY	0.343	94.00	50.00	144.00
Fibrous concrete					
5" thick	SY	0.185	37.25	40.75	78.00
8" thick	SY	0.200	47.50	44.25	91.75
Roller compacted concrete (RCC)					
8" thick	SY	0.240	46.00	53.00	99.00
12" thick	SY	0.300	70.00	66.00	136.00
Steel edge forms up to					
12" deep	LF	0.027	1.31	2.13	3.44
15" deep	LF	0.032	1.68	2.56	4.24
Paving finishes					
Belt dragged	SY	0.040		3.20	3.20
Curing	SY	0.008	0.50	0.64	1.14
32131.31 SIDEWALKS, CONCRETE					
SIDEWALKS, CONCRETE					
Walks, with wire mesh, base not incl.					
4" thick	SF	0.027	2.89	2.13	5.02
5" thick	SF	0.032	3.90	2.56	6.46
6" thick	SF	0.040	4.80	3.20	8.00

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	Unit	Man-Hrs	Material	Labor	Total
32141.60 PAVERS, MASONRY					
PAVERS, MASONRY					
Brick walk laid on sand, sand joints					
Laid flat (4.5 per sf)	SF	0.089	4.73	8.67	13.40
Laid on edge (7.2 per sf)	SF	0.133	7.56	13.00	20.56
Precast concrete patio blocks					
2" thick					
Natural	SF	0.027	3.48	2.60	6.08
Colors	SF	0.027	4.86	2.60	7.46
Exposed aggregates, local aggregate					
Natural	SF	0.027	10.50	2.60	13.10
Colors	SF	0.027	10.50	2.60	13.10
Granite or limestone aggregate	SF	0.027	11.00	2.60	13.60
White tumblestone aggregate	SF	0.027	7.86	2.60	10.46
Stone pavers, set in mortar					
Bluestone					
1" thick					
Irregular	SF	0.200	7.99	19.50	27.49
Snapped rectangular	SF	0.160	12.25	15.50	27.75
1-1/2" thick, random rectangular	SF	0.200	14.00	19.50	33.50
2" thick, random rectangular	SF	0.229	16.50	22.25	38.75
Slate					
Natural cleft					
Irregular, 3/4" thick	SF	0.229	10.00	22.25	32.25
Random rectangular					
1-1/4" thick	SF	0.200	21.75	19.50	41.25
1-1/2" thick	SF	0.222	24.50	21.75	46.25
Granite blocks					
3" thick, 3" to 6" wide					
4" to 12" long	SF	0.267	14.25	26.00	40.25
6" to 15" long	SF	0.229	9.30	22.25	31.55
Crushed stone, white marble, 3" thick	SF	0.016	1.96	1.28	3.24
32170.02 CONCRETE CURBS AND GUTTERS					
Curb & Gutter, cast-in-place, by machine, concrete					
9” x 12”	LF	0.160	9.98	23.50	33.48
9” x 18”	LF	0.185	11.50	27.00	38.50
9” x 24”	LF	0.209	13.25	30.50	43.75
9” x 30”	LF	0.240	14.50	35.00	49.50
32170.03 GUARDRAILS					
GUARDRAILS					
Pipe bollard, steel pipe, concrete filled, painted					
6" dia.	EA	0.667	480.00	53.00	533.00
8" dia.	EA	1.000	630.00	80.00	710.00
12" dia.	EA	2.667	990.00	210.00	1,200.00
Corrugated steel, guardrail, galvanized	LF	0.040	36.75	5.85	42.60
End section, wrap around or flared	EA	0.800	98.00	64.00	162.00
Timber guardrail, 4" x 8"	LF	0.030	42.75	4.38	47.13
Guardrail, 3 cables, 3/4" dia.					
Steel posts	LF	0.120	21.00	17.50	38.50
Wood posts	LF	0.096	21.25	14.00	35.25
Steel box beam					
6" x 6"	LF	0.133	86.00	19.50	105.50
6" x 8"	LF	0.150	92.00	22.00	114.00
Concrete posts	EA	0.400	57.00	32.00	89.00
Barrel type impact barrier	EA	0.800	710.00	64.00	774.00
Light shield, 6' high	LF	0.160	46.75	12.75	59.50
32170.04 PARKING BARRIERS					
PARKING BARRIERS					
Timber, treated, 4' long					
4" x 4"	EA	0.667	18.50	53.00	71.50
6" x 6"	EA	0.800	34.50	64.00	98.50
Precast concrete, 6' long, with dowels					
12" x 6"	EA	0.400	68.00	32.00	100.00
12" x 8"	EA	0.444	80.00	35.50	115.50

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	Unit	Man-Hrs	Material	Labor	Total
32172.30 PAVEMENT MARKINGS					
PAVEMENT MARKINGS					
Pavement line marking, paint					
4" wide	LF	0.002	0.31	0.16	0.47
6" wide	LF	0.004	0.34	0.35	0.69
8" wide	LF	0.007	0.49	0.53	1.02
Reflective paint, 4" wide	LF	0.007	0.67	0.53	1.20
Airfield markings, retro-reflective					
White	LF	0.007	1.14	0.53	1.67
Yellow	LF	0.007	1.22	0.53	1.75
Preformed tape, 4" wide					
Inlaid reflective	LF	0.001	3.08	0.09	3.17
Reflective paint	LF	0.002	2.11	0.16	2.27
Thermoplastic					
White	LF	0.004	1.29	0.32	1.61
Yellow	LF	0.004	1.29	0.32	1.61
12" wide, thermoplastic, white	LF	0.011	3.67	0.91	4.58
Directional arrows, reflective preformed tape	EA	0.800	180.00	64.00	244.00
Messages, reflective preformed tape (per letter)	EA	0.400	92.00	32.00	124.00
Handicap symbol, preformed tape	EA	0.800	38.25	64.00	102.25
Parking stall painting	EA	0.160	8.80	12.75	21.55
32311.30 CHAIN LINK FENCE					
CHAIN LINK FENCE					
Chain link fence, 9 ga., galvanized, with posts 10' o.c.					
4' high	LF	0.057	8.52	4.57	13.09
5' high	LF	0.073	11.50	5.82	17.32
6' high	LF	0.100	13.00	8.00	21.00
7' high	LF	0.123	14.75	9.85	24.60
8' high	LF	0.160	17.00	12.75	29.75
For barbed wire with hangers, add					
3 strand	LF	0.040	3.11	3.20	6.31
6 strand	LF	0.067	5.27	5.33	10.60
Corner or gate post, 3" post					
4' high	EA	0.267	99.00	21.25	120.25
5' high	EA	0.296	110.00	23.75	133.75
6' high	EA	0.348	120.00	27.75	147.75
7' high	EA	0.400	150.00	32.00	182.00
8' high	EA	0.444	150.00	35.50	185.50
4" post					
4' high	EA	0.296	170.00	23.75	193.75
5' high	EA	0.348	200.00	27.75	227.75
6' high	EA	0.400	220.00	32.00	252.00
7' high	EA	0.444	240.00	35.50	275.50
8' high	EA	0.500	260.00	40.00	300.00
Gate with gate posts, galvanized, 3' wide					
4' high	EA	2.000	140.00	160.00	300.00
5' high	EA	2.667	180.00	210.00	390.00
6' high	EA	2.667	220.00	210.00	430.00
7' high	EA	4.000	260.00	320.00	580.00
8' high	EA	4.000	280.00	320.00	600.00
Fabric, galvanized chain link, 2" mesh, 9 ga.					
4' high	LF	0.027	5.56	2.13	7.69
5' high	LF	0.032	6.81	2.56	9.37
6' high	LF	0.040	9.52	3.20	12.72
8' high	LF	0.053	16.00	4.27	20.27
Line post, no rail fitting, galvanized, 2-1/2" dia.					
4' high	EA	0.229	32.25	18.25	50.50
5' high	EA	0.250	35.00	20.00	55.00
6' high	EA	0.267	38.50	21.25	59.75
7' high	EA	0.320	43.75	25.50	69.25
8' high	EA	0.400	48.75	32.00	80.75
1-7/8" H beam					
4' high	EA	0.229	40.25	18.25	58.50
5' high	EA	0.250	45.00	20.00	65.00
6' high	EA	0.267	54.00	21.25	75.25

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32311.30 CHAIN LINK FENCE (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
1-7/8" H beam					
7' high	EA	0.320	61.00	25.50	86.50
8' high	EA	0.400	66.00	32.00	98.00
2-1/4" H beam					
4' high	EA	0.229	29.25	18.25	47.50
5' high	EA	0.250	36.50	20.00	56.50
6' high	EA	0.267	42.00	21.25	63.25
7' high	EA	0.320	48.75	25.50	74.25
8' high	EA	0.400	57.00	32.00	89.00
Vinyl coated, 9 ga., with posts 10' o.c.					
4' high	LF	0.057	13.75	4.57	18.32
5' high	LF	0.073	16.50	5.82	22.32
6' high	LF	0.100	19.75	8.00	27.75
7' high	LF	0.123	21.50	9.85	31.35
8' high	LF	0.160	24.50	12.75	37.25
10' high	LF	0.021	20.50	1.68	22.18
12' high	LF	0.022	24.25	1.77	26.02
For barbed wire w/hangers, add					
3 strand	LF	0.040	3.35	3.20	6.55
6 Strand	LF	0.067	5.41	5.33	10.74
Corner, or gate post, 4' high					
3" dia.	EA	0.267	110.00	21.25	131.25
4" dia.	EA	0.267	180.00	21.25	201.25
6" dia.	EA	0.320	200.00	25.50	225.50
Gate, with posts, 3' wide					
4' high	EA	2.000	160.00	160.00	320.00
5' high	EA	2.667	190.00	210.00	400.00
6' high	EA	2.667	220.00	210.00	430.00
7' high	EA	4.000	260.00	320.00	580.00
8' high	EA	4.000	290.00	320.00	610.00
Line post, no rail fitting, 2-1/2" dia.					
4' high	EA	0.229	30.25	18.25	48.50
5' high	EA	0.250	33.00	20.00	53.00
6' high	EA	0.267	36.00	21.25	57.25
7' high	EA	0.320	41.00	25.50	66.50
8' high	EA	0.400	45.75	32.00	77.75
Corner post, no top rail fitting, 4" dia.					
4' high	EA	0.267	160.00	21.25	181.25
5' high	EA	0.296	190.00	23.75	213.75
6' high	EA	0.348	210.00	27.75	237.75
7' high	EA	0.400	230.00	32.00	262.00
8' high	EA	0.444	250.00	35.50	285.50
Fabric, vinyl, chain link, 2" mesh, 9 ga.					
4' high	LF	0.027	5.21	2.13	7.34
5' high	LF	0.032	6.37	2.56	8.93
6' high	LF	0.040	8.91	3.20	12.11
8' high	LF	0.053	15.00	4.27	19.27
Swing gates, galvanized, 4' high					
Single gate					
3' wide	EA	2.000	210.00	160.00	370.00
4' wide	EA	2.000	230.00	160.00	390.00
Double gate					
10' wide	EA	3.200	550.00	260.00	810.00
12' wide	EA	3.200	600.00	260.00	860.00
14' wide	EA	3.200	610.00	260.00	870.00
16' wide	EA	3.200	680.00	260.00	940.00
18' wide	EA	4.571	740.00	370.00	1,110.00
20' wide	EA	4.571	780.00	370.00	1,150.00
22' wide	EA	4.571	870.00	370.00	1,240.00
24' wide	EA	5.333	890.00	430.00	1,320.00
26' wide	EA	5.333	930.00	430.00	1,360.00
28' wide	EA	6.400	980.00	510.00	1,490.00
30' wide	EA	6.400	1,050.00	510.00	1,560.00

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32311.30 CHAIN LINK FENCE (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Swing gates, galvanized					
5' high					
Single gate					
3' wide	EA	2.667	220.00	210.00	430.00
4' wide	EA	2.667	260.00	210.00	470.00
Double gate, 5" high					
10' wide	EA	4.000	600.00	320.00	920.00
12' wide	EA	4.000	640.00	320.00	960.00
14' wide	EA	4.000	1,090.00	320.00	1,410.00
16' wide	EA	4.000	720.00	320.00	1,040.00
18' wide	EA	4.571	740.00	370.00	1,110.00
20' wide	EA	4.571	840.00	370.00	1,210.00
22' wide	EA	4.571	870.00	370.00	1,240.00
24' wide	EA	5.333	910.00	430.00	1,340.00
26' wide	EA	5.333	960.00	430.00	1,390.00
28' wide	EA	6.400	1,060.00	510.00	1,570.00
30' wide	EA	6.400	1,100.00	510.00	1,610.00
6' high					
Single gate					
3' wide	EA	2.667	280.00	210.00	490.00
4' wide	EA	2.667	300.00	210.00	510.00
Double gate					
10' wide	EA	4.000	680.00	320.00	1,000.00
12' wide	EA	4.000	770.00	320.00	1,090.00
14' wide	EA	4.000	810.00	320.00	1,130.00
16' wide	EA	4.000	870.00	320.00	1,190.00
18' wide	EA	4.571	940.00	370.00	1,310.00
20' wide	EA	4.571	970.00	370.00	1,340.00
22' wide	EA	4.571	1,040.00	370.00	1,410.00
24' wide	EA	5.333	1,120.00	430.00	1,550.00
26' wide	EA	5.333	1,150.00	430.00	1,580.00
28' wide	EA	6.400	1,250.00	510.00	1,760.00
30' wide	EA	6.400	1,310.00	510.00	1,820.00
7' high					
Single gate					
3' wide	EA	4.000	340.00	320.00	660.00
4' wide	EA	4.000	380.00	320.00	700.00
Double gate					
10' wide	EA	5.333	880.00	430.00	1,310.00
12' wide	EA	5.333	970.00	430.00	1,400.00
14' wide	EA	5.333	1,040.00	430.00	1,470.00
16' wide	EA	5.333	1,110.00	430.00	1,540.00
18' wide	EA	6.400	1,180.00	510.00	1,690.00
20' wide	EA	6.400	1,250.00	510.00	1,760.00
22' wide	EA	6.400	1,320.00	510.00	1,830.00
24' wide	EA	8.000	1,420.00	640.00	2,060.00
26' wide	EA	8.000	1,520.00	640.00	2,160.00
28' wide	EA	10.000	1,600.00	800.00	2,400.00
30' wide	EA	10.000	1,830.00	800.00	2,630.00
8' high					
Single gate					
3' wide	EA	4.000	380.00	320.00	700.00
4' wide	EA	4.000	410.00	320.00	730.00
Double gate					
10' wide	EA	5.333	1,010.00	430.00	1,440.00
12' wide	EA	5.333	1,070.00	430.00	1,500.00
14' wide	EA	5.333	1,150.00	430.00	1,580.00
16' wide	EA	5.333	1,260.00	430.00	1,690.00
18' wide	EA	6.400	1,310.00	510.00	1,820.00
20' wide	EA	6.400	1,360.00	510.00	1,870.00
22' wide	EA	6.400	1,430.00	510.00	1,940.00
24' wide	EA	8.000	1,590.00	640.00	2,230.00
26' wide	EA	8.000	1,640.00	640.00	2,280.00
28' wide	EA	10.000	1,740.00	800.00	2,540.00

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	Unit	Man-Hrs	Material	Labor	Total
32311.30 CHAIN LINK FENCE (Cont.)					
Double gate, 8' high					
30' wide	EA	10.000	1,920.00	800.00	2,720.00
Vinyl coated swing gates, 4' high					
Single gate					
3' wide	EA	2.000	320.00	160.00	480.00
4' wide	EA	2.000	350.00	160.00	510.00
Double gate					
10' wide	EA	3.200	830.00	260.00	1,090.00
12' wide	EA	3.200	900.00	260.00	1,160.00
14' wide	EA	3.200	920.00	260.00	1,180.00
16' wide	EA	3.200	1,030.00	260.00	1,290.00
18' wide	EA	4.571	1,100.00	370.00	1,470.00
20' wide	EA	4.571	1,160.00	370.00	1,530.00
22' wide	EA	4.571	1,300.00	370.00	1,670.00
24' wide	EA	5.333	1,330.00	430.00	1,760.00
26' wide	EA	5.333	1,390.00	430.00	1,820.00
28' wide	EA	6.400	1,480.00	510.00	1,990.00
30' wide	EA	6.400	1,570.00	510.00	2,080.00
5' high					
Single gate					
3' wide	EA	2.667	330.00	210.00	540.00
4' wide	EA	2.667	380.00	210.00	590.00
Double gate					
10' wide	EA	4.000	900.00	320.00	1,220.00
12' wide	EA	4.000	960.00	320.00	1,280.00
14' wide	EA	4.000	1,030.00	320.00	1,350.00
16' wide	EA	4.000	1,070.00	320.00	1,390.00
18' wide	EA	4.571	1,100.00	370.00	1,470.00
20' wide	EA	4.571	1,250.00	370.00	1,620.00
22' wide	EA	4.571	1,310.00	370.00	1,680.00
24' wide	EA	5.333	1,370.00	430.00	1,800.00
26' wide	EA	5.333	1,430.00	430.00	1,860.00
28' wide	EA	6.400	1,600.00	510.00	2,110.00
30' wide	EA	6.400	1,660.00	510.00	2,170.00
6' high					
Single gate					
3' wide	EA	2.667	420.00	210.00	630.00
4' wide	EA	2.667	460.00	210.00	670.00
Double gate					
10' wide	EA	4.000	1,020.00	320.00	1,340.00
12' wide	EA	4.000	1,150.00	320.00	1,470.00
14' wide	EA	4.000	1,220.00	320.00	1,540.00
16' wide	EA	4.000	1,310.00	320.00	1,630.00
18' wide	EA	4.571	1,400.00	370.00	1,770.00
20' wide	EA	4.571	1,450.00	370.00	1,820.00
22' wide	EA	4.571	1,560.00	370.00	1,930.00
24' wide	EA	5.333	1,670.00	430.00	2,100.00
26' wide	EA	5.333	1,720.00	430.00	2,150.00
28' wide	EA	6.400	1,870.00	510.00	2,380.00
30' wide	EA	6.400	1,970.00	510.00	2,480.00
7' high					
Single gate					
3' wide	EA	4.000	510.00	320.00	830.00
4' wide	EA	4.000	570.00	320.00	890.00
Double gate					
10' wide	EA	5.333	1,320.00	430.00	1,750.00
12' wide	EA	5.333	1,450.00	430.00	1,880.00
14' wide	EA	5.333	1,560.00	430.00	1,990.00
16' wide	EA	5.333	1,670.00	430.00	2,100.00
18' wide	EA	6.400	1,770.00	510.00	2,280.00
20' wide	EA	6.400	1,880.00	510.00	2,390.00
22' wide	EA	6.400	1,990.00	510.00	2,500.00
24' wide	EA	8.000	2,130.00	640.00	2,770.00
26' wide	EA	8.000	2,270.00	640.00	2,910.00

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	Unit	Man-Hrs	Material	Labor	Total
32311.30 CHAIN LINK FENCE (Cont.)					
Double gate, 7' high					
28' wide	EA	10.000	2,390.00	800.00	3,190.00
30' wide	EA	10.000	2,740.00	800.00	3,540.00
8' high					
Single gate					
3' wide	EA	4.000	580.00	320.00	900.00
4' wide	EA	4.000	620.00	320.00	940.00
Double gate					
10' wide	EA	5.333	1,510.00	430.00	1,940.00
12' wide	EA	5.333	1,600.00	430.00	2,030.00
14' wide	EA	5.333	1,720.00	430.00	2,150.00
16' wide	EA	5.333	1,880.00	430.00	2,310.00
18' wide	EA	6.400	1,960.00	510.00	2,470.00
20' wide	EA	6.400	2,030.00	510.00	2,540.00
22' wide	EA	6.400	2,150.00	510.00	2,660.00
24' wide	EA	8.000	2,380.00	640.00	3,020.00
26' wide	EA	8.000	2,460.00	640.00	3,100.00
28' wide	EA	10.000	2,620.00	800.00	3,420.00
30' wide	EA	10.000	2,880.00	800.00	3,680.00
Motor operator for gates, no wiring	EA				6,060.00
Privacy insert, vinyl plastic	SF	0.020	2.42	1.60	4.02
Powder coating metal fence					
Minimum	SF				6.05
Average	SF				7.86
Maximum	SF				9.68
For 1" mesh, add to material price 100%					
Drilling fence post holes					
In soil					
By hand	EA	0.400		32.00	32.00
By machine auger	EA	0.200		21.50	21.50
In rock					
By jackhammer	EA	2.667		290.00	290.00
By rock drill	EA	0.800		86.00	86.00
Privacy slats, installed vertically					
Vinyl plastic, 2" mesh	SF	0.020	2.42	1.60	4.02
1" mesh	SF	0.029	4.84	2.32	7.16
Aluminum privacy slats, installed vertically	SF	0.020	1.19	1.60	2.79
Post hole, dig by hand	EA	0.533		42.75	42.75
Set fence post in concrete	EA	0.400	11.75	32.00	43.75
32319.01 SHRUB & TREE MAINTENANCE					
SHRUB & TREE MAINTENANCE					
Moving shrubs on site					
12" ball	EA	1.000		80.00	80.00
24" ball	EA	1.333		110.00	110.00
3' high	EA	0.800		64.00	64.00
4' high	EA	0.889		71.00	71.00
5' high	EA	1.000		80.00	80.00
18" spread	EA	1.143		92.00	92.00
30" spread	EA	1.333		110.00	110.00
Moving trees on site					
24" ball	EA	1.200		180.00	180.00
48" ball	EA	1.600		230.00	230.00
Trees					
3' high	EA	0.480		70.00	70.00
6' high	EA	0.533		78.00	78.00
8' high	EA	0.600		88.00	88.00
10' high	EA	0.800		120.00	120.00
Palm trees					
7' high	EA	0.600		88.00	88.00
10' high	EA	0.800		120.00	120.00
20' high	EA	2.400		350.00	350.00
40' high	EA	4.800		700.00	700.00

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	Unit	Man-Hrs	Material	Labor	Total
32319.01 SHRUB & TREE MAINTENANCE (Cont.)					
Moving trees on site					
Guying trees					
4" dia.	EA	0.400	27.50	32.00	59.50
8" dia.	EA	0.500	49.50	40.00	89.50
32319.02 FERTILIZING					
FERTILIZING					
Fertilizing (23#/1000 sf)					
By square yard	SY	0.002	0.04	0.21	0.25
By acre	ACRE	10.000	210.00	1,070.00	1,280.00
Liming (70#/1000 sf)					
By square yard	SY	0.003	0.05	0.28	0.33
By acre	ACRE	13.333	220.00	1,430.00	1,650.00
32319.03 WEED CONTROL					
WEED CONTROL					
Weed control, bromicil, 15 lb./acre, wettable powder	ACRE	4.000	330.00	320.00	650.00
Vegetation control, by application of plant killer	SY	0.003	0.02	0.25	0.27
Weed killer, lawns and fields	SY	0.002	0.27	0.12	0.39
32840.04 LAWN IRRIGATION					
LAWN IRRIGATION					
Residential system, complete					
Minimum	ACRE				24,060.00
Maximum	ACRE				45,790.00
Commercial system, complete					
Minimum	ACRE				36,530.00
Maximum	ACRE				57,740.00
Components					
Pipe					
Schedule 40, PVC					
1/2"	LF	0.042	0.64	3.37	4.01
3/4"	LF	0.044	0.92	3.55	4.47
1"	LF	0.046	1.40	3.66	5.06
1-1/4"	LF	0.046	1.85	3.66	5.51
1-1/2"	LF	0.047	2.20	3.76	5.96
2"	LF	0.050	3.24	4.00	7.24
2-1/2"	LF	0.053	4.91	4.27	9.18
3"	LF	0.057	6.71	4.57	11.28
4"	LF	0.067	9.48	5.33	14.81
6"	LF	0.080	16.50	6.40	22.90
Fittings					
Tee					
1/2"	EA	0.133	0.66	10.75	11.41
3/4"	EA	0.133	0.73	10.75	11.48
1"	EA	0.133	1.13	10.75	11.88
1-1/4"	EA	0.145	1.90	11.75	13.65
1-1/2"	EA	0.160	2.26	12.75	15.01
2"	EA	0.178	3.30	14.25	17.55
2-1/2"	EA	0.200	11.50	16.00	27.50
3"	EA	0.229	12.50	18.25	30.75
4"	EA	0.267	24.75	21.25	46.00
6"	EA	0.320	81.00	25.50	106.50
Ell					
1/2"	EA	0.123	0.67	9.85	10.52
3/4"	EA	0.133	0.75	10.75	11.50
1"	EA	0.133	1.32	10.75	12.07
1-1/4"	EA	0.133	2.32	10.75	13.07
1-1/2"	EA	0.133	2.64	10.75	13.39
2"	EA	0.145	3.97	11.75	15.72
2-1/2"	EA	0.160	13.00	12.75	25.75
3"	EA	0.178	16.50	14.25	30.75
4"	EA	0.200	23.25	16.00	39.25
6"	EA	0.267	110.00	21.25	131.25
Coupling					
1/2"	EA	0.123	0.66	9.85	10.51
3/4"	EA	0.133	0.90	10.75	11.65

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32840.04 LAWN IRRIGATION (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Coupling					
1"	EA	0.133	1.56	10.75	12.31
1-1/4"	EA	0.133	1.97	10.75	12.72
1-1/2"	EA	0.133	2.08	10.75	12.83
2"	EA	0.145	3.30	11.75	15.05
2-1/2"	EA	0.160	7.49	12.75	20.24
3"	EA	0.178	13.25	14.25	27.50
4"	EA	0.200	14.00	16.00	30.00
6"	EA	0.267	60.00	21.25	81.25
45 Ell					
1/2"	EA	0.123	0.99	9.85	10.84
3/4"	EA	0.133	1.64	10.75	12.39
1"	EA	0.133	2.32	10.75	13.07
1-1/4"	EA	0.133	3.14	10.75	13.89
1-1/2"	EA	0.133	3.79	10.75	14.54
2"	EA	0.145	4.94	11.75	16.69
2-1/2"	EA	0.160	14.75	12.75	27.50
3"	EA	0.178	21.50	14.25	35.75
4"	EA	0.200	33.75	16.00	49.75
6"	EA	0.267	110.00	21.25	131.25
Riser, 1/2" diameter					
2" (close)	EA	0.200	0.75	16.00	16.75
3"	EA	0.200	0.90	16.00	16.90
4"	EA	0.229	1.10	18.25	19.35
5"	EA	0.229	1.21	18.25	19.46
6"	EA	0.229	1.56	18.25	19.81
3/4" diameter					
2" (close)	EA	0.200	0.75	16.00	16.75
3"	EA	0.200	0.90	16.00	16.90
4"	EA	0.229	1.01	18.25	19.26
5"	EA	0.229	1.32	18.25	19.57
6"	EA	0.229	1.42	18.25	19.67
1" diameter					
2" (close)	EA	0.200	1.10	16.00	17.10
3"	EA	0.200	1.42	16.00	17.42
4"	EA	0.229	1.66	18.25	19.91
5"	EA	0.229	2.08	18.25	20.33
6"	EA	0.229	2.16	18.25	20.41
Valve Box					
Concrete, Square					
12" x 22"	EA	1.000	100.00	80.00	180.00
18" x 20"	EA	1.143	130.00	92.00	222.00
24" x 13"	EA	1.333	120.00	110.00	230.00
Round					
12"	EA	0.800	52.00	64.00	116.00
Plastic					
Square					
12"	EA	1.000	40.00	80.00	120.00
18"	EA	1.000	100.00	80.00	180.00
Round					
6"	EA	1.000	9.99	80.00	89.99
10"	EA	1.000	22.00	80.00	102.00
12"	EA	1.143	32.00	92.00	124.00
Sprinkler, Pop-Up					
Spray					
2" high	EA	1.333	6.82	110.00	116.82
3" high	EA	1.333	7.48	110.00	117.48
4" high	EA	1.600	8.12	130.00	138.12
6" high	EA	1.600	17.00	130.00	147.00
12" high	EA	1.600	21.75	130.00	151.75
Rotor					
4" high	EA	1.333	30.75	110.00	140.75
6" high	EA	1.600	40.75	130.00	170.75

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32840.04 LAWN IRRIGATION (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Sprinkler, Pop-Up					
Impact					
Brass	EA	1.333	42.75	110.00	152.75
Plastic	EA	1.600	21.25	130.00	151.25
Shrub Head					
Spray	EA	1.333	12.75	110.00	122.75
Rotor	EA	1.600	32.00	130.00	162.00
Time Clocks					
Minimum	EA	2.000	180.00	160.00	340.00
Average	EA	2.667	350.00	210.00	560.00
Maximum	EA	4.000	3,180.00	320.00	3,500.00
Valves					
Anti-siphon					
Brass					
3/4"	EA	1.333	76.00	110.00	186.00
1"	EA	1.333	94.00	110.00	204.00
Plastic					
3/4"	EA	1.333	55.00	110.00	165.00
1"	EA	1.333	66.00	110.00	176.00
Ball Valve					
Plastic					
1/2"	EA	1.333	5.78	110.00	115.78
3/4"	EA	1.333	6.31	110.00	116.31
1"	EA	1.333	8.41	110.00	118.41
1-1/2"	EA	1.600	16.75	130.00	146.75
2"	EA	1.600	22.00	130.00	152.00
Brass					
1/2"	EA	1.333	14.25	110.00	124.25
3/4"	EA	1.333	22.75	110.00	132.75
1"	EA	1.333	35.25	110.00	145.25
1-1/2"	EA	1.600	67.00	130.00	197.00
2"	EA	1.600	100.00	130.00	230.00
Gate valves, Brass					
1/2"	EA	1.333	15.00	110.00	125.00
3/4"	EA	1.333	24.75	110.00	134.75
1"	EA	1.333	34.75	110.00	144.75
1-1/2"	EA	1.600	60.00	130.00	190.00
2"	EA	1.600	75.00	130.00	205.00
Vacuum Breakers					
Brass					
3/4"	EA	2.667	70.00	210.00	280.00
1"	EA	2.667	96.00	210.00	306.00
1-1/2"	EA	2.667	190.00	210.00	400.00
2"	EA	2.667	270.00	210.00	480.00
Plastic					
3/4"	EA	2.667	66.00	210.00	276.00
1"	EA	2.667	77.00	210.00	287.00
1-1/2"	EA	2.667	120.00	210.00	330.00
2"	EA	2.667	140.00	210.00	350.00
Backflow Preventors, Brass					
3/4"	EA	26.667	170.00	2,140.00	2,310.00
1"	EA	26.667	180.00	2,140.00	2,320.00
1-1/2"	EA	26.667	400.00	2,140.00	2,540.00
2"	EA	32.000	500.00	2,560.00	3,060.00
Pressure Regulators, Brass					
3/4"	EA	0.800	160.00	64.00	224.00
1"	EA	0.800	230.00	64.00	294.00
1-1/2"	EA	0.889	680.00	71.00	751.00
2"	EA	1.000	810.00	80.00	890.00
Quick Coupler Valve					
3/4"	EA	1.333	100.00	110.00	210.00
1"	EA	1.333	150.00	110.00	260.00

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	Unit	Man-Hrs	Material	Labor	Total
32911.91 TOPSOIL					
TOPSOIL					
Spread topsoil, with equipment					
Minimum	CY	0.080		19.50	19.50
Maximum	CY	0.100		24.25	24.25
By hand					
Minimum	CY	0.800		64.00	64.00
Maximum	CY	1.000		80.00	80.00
Area prep. seeding (grade, rake and clean)					
Square yard	SY	0.006		0.51	0.51
By acre	ACRE	32.000		2,560.00	2,560.00
Remove topsoil and stockpile on site					
4" deep	CY	0.067		16.25	16.25
6" deep	CY	0.062		15.00	15.00
Spreading topsoil from stock pile					
By loader	CY	0.073		17.75	17.75
By hand	CY	0.800		190.00	190.00
Top dress by hand	SY	0.008		1.94	1.94
Place imported top soil					
By loader					
4" deep	SY	0.008		1.94	1.94
6" deep	SY	0.009		2.16	2.16
By hand					
4" deep	SY	0.089		7.11	7.11
6" deep	SY	0.100		8.00	8.00
Plant bed preparation, 18" deep					
With backhoe/loader	SY	0.020		4.86	4.86
By hand	SY	0.133		10.75	10.75
32921.90 SEEDING					
SEEDING					
Mechanical seeding, 175 lb/acre					
By square yard	SY	0.002	0.25	0.17	0.42
By acre	ACRE	8.000	980.00	860.00	1,840.00
450 lb/acre					
By square yard	SY	0.002	0.62	0.21	0.83
By acre	ACRE	10.000	2,430.00	1,070.00	3,500.00
Synthetic turf, not including base					
Minimum	SF				1.45
Average	SF				2.40
Maximum	SF				4.23
Seeding by hand, 10 lb per 100 SY					
By square yard	SY	0.003	0.69	0.21	0.90
By acre	ACRE	13.333	2,710.00	1,070.00	3,780.00
Reseed disturbed areas	SF	0.004	0.06	0.32	0.38
32932.30 PLANTS					
PLANTS					
Euonymus coloratus, 18" (Purple Wintercreeper)	EA	0.133	3.65	10.75	14.40
Hedera Helix, 2-1/4" pot (English ivy)	EA	0.133	1.52	10.75	12.27
Liriope muscari, 2" clumps	EA	0.080	6.37	6.40	12.77
Santolina, 12"	EA	0.080	7.30	6.40	13.70
Vinca major or minor, 3" pot	EA	0.080	1.19	6.40	7.59
Cortaderia argentia, 2 gallon (Pampas Grass)	EA	0.080	23.00	6.40	29.40
Ophiopogan japonicus, 1 quart (4" pot)	EA	0.080	6.37	6.40	12.77
Ajuga reptans, 2-3/4" pot (carpet bugle)	EA	0.080	1.19	6.40	7.59
Pachysandra terminalis, 2-3/4" pot (Japanese Spurge)	EA	0.080	1.61	6.40	8.01
32933.30 SHRUBS					
SHRUBS					
Juniperus conferia litoralis, 18"-24" (Shore Juniper)	EA	0.320	51.00	25.50	76.50
Horizontalis plumosa, 18"-24" (Andorra Juniper)	EA	0.320	54.00	25.50	79.50
Sabina tamar-iscfolia-tamarix juniper, 18"-24"	EA	0.320	54.00	25.50	79.50
Chin San Jose, 18"-24" (San Jose Juniper)	EA	0.320	54.00	25.50	79.50
Sargenti, 18"-24" (Sargent's Juniper)	EA	0.320	51.00	25.50	76.50
Nandina domestica, 18"-24" (Heavenly Bamboo)	EA	0.320	34.25	25.50	59.75
Raphiolepis Indica Springtime, 18"-24"	EA	0.320	36.75	25.50	62.25

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	Unit	Man-Hrs	Material	Labor	Total
32933.30 SHRUBS (Cont.)					
Osmanthus Heterophyllus Gulftide, 18"-24"	EA	0.320	39.25	25.50	64.75
Ilex Cornuta Burfordi Nana, 18"-24"	EA	0.320	44.75	25.50	70.25
Glabra, 18"-24" (Inkberry Holly)	EA	0.320	42.25	25.50	67.75
Azalea, Indica types, 18"-24"	EA	0.320	47.50	25.50	73.00
Kurume types, 18"-24"	EA	0.320	53.00	25.50	78.50
Berberis Julianae, 18"-24" (Wintergreen Barberry)	EA	0.320	31.25	25.50	56.75
Pieris Japonica Japanese, 18"-24"	EA	0.320	31.25	25.50	56.75
Ilex Cornuta Rotunda, 18"-24"	EA	0.320	37.00	25.50	62.50
Juniperus Horiz. Plumosa, 24"-30"	EA	0.400	34.00	32.00	66.00
Rhodopendrow Hybrids, 24"-30"	EA	0.400	91.00	32.00	123.00
Aucuba Japonica Varigata, 24"-30"	EA	0.400	31.00	32.00	63.00
Ilex Crenata Willow Leaf, 24"-30"	EA	0.400	34.00	32.00	66.00
Cleyera Japonica, 30"-36"	EA	0.500	39.75	40.00	79.75
Pittosporum Tobira, 30"-36"	EA	0.500	46.50	40.00	86.50
Prumus Laurocerasus, 30"-36"	EA	0.500	86.00	40.00	126.00
Ilex Cornuta Burfordi, 30"-36" (Burford Holly)	EA	0.500	45.50	40.00	85.50
Abelia Grandiflora, 24"-36" (Yew Podocarpus)	EA	0.400	31.25	32.00	63.25
Podocarpos Macrophylla, 24"-36"	EA	0.400	51.00	32.00	83.00
Pyracantha Coccinea Lalandi, 3'-4' (Firethorn)	EA	0.500	29.00	40.00	69.00
Photinia Frazieri, 3'-4' (Red Photinia)	EA	0.500	46.25	40.00	86.25
Forsythia Suspensa, 3'-4' (Weeping Forsythia)	EA	0.500	29.00	40.00	69.00
Camellia Japonica, 3'-4' (Common Camellia)	EA	0.500	51.00	40.00	91.00
Juniperus Chin Torulosa, 3'-4' (Hollywood Juniper)	EA	0.500	54.00	40.00	94.00
Cupressocyparis Leylandii, 3'-4'	EA	0.500	45.75	40.00	85.75
Ilex Opaca Fosteri, 5'-6' (Foster's Holly)	EA	0.667	180.00	53.00	233.00
Opaca, 5'-6' (American Holly)	EA	0.667	270.00	53.00	323.00
Nyrica Cerifera, 4'-5' (Southern Wax Myrtles)	EA	0.571	58.00	45.75	103.75
Ligustrum Japonicum, 4'-5' (Japanese Privet)	EA	0.571	45.50	45.75	91.25
32934.30 TREES					
TREES					
Cornus Florida, 5'-6' (White flowering Dogwood)	EA	0.667	120.00	53.00	173.00
Prunus Serrulata Kwanzan, 6'-8' (Kwanzan Cherry)	EA	0.800	130.00	64.00	194.00
Caroliniana, 6'-8' (Carolina Cherry Laurel)	EA	0.800	160.00	64.00	224.00
Cercis Canadensis, 6'-8' (Eastern Redbud)	EA	0.800	110.00	64.00	174.00
Koelreuteria Paniculata, 8'-10' (Goldenrain Tree)	EA	1.000	190.00	80.00	270.00
Acer Platanoides, 1-3/4"-2" (11'-13')	EA	1.333	250.00	110.00	360.00
Rubrum, 1-3/4"-2" (11'-13') (Red Maple)	EA	1.333	190.00	110.00	300.00
Saccharum, 1-3/4"-2" (Sugar Maple)	EA	1.333	340.00	110.00	450.00
Fraxinus Pennsylvanica, 1-3/4"-2"	EA	1.333	160.00	110.00	270.00
Celtis Occidentalis, 1-3/4"-2"	EA	1.333	240.00	110.00	350.00
Glenditsia Triacantos Inermis, 2"	EA	1.333	220.00	110.00	330.00
Prunus Cerasifera "Thundercloud", 6'-8'	EA	0.800	130.00	64.00	194.00
Yeodensis, 6'-8' (Yoshino Cherry)	EA	0.800	140.00	64.00	204.00
Lagerstroemia Indica, 8'-10' (Crapemyrtle)	EA	1.000	220.00	80.00	300.00
Crataegus Phaenopyrum, 8'-10'	EA	1.000	340.00	80.00	420.00
Quercus Borealis, 1-3/4"-2" (Northern Red Oak)	EA	1.333	200.00	110.00	310.00
Quercus Acutissima, 1-3/4"-2" (8'-10')	EA	1.333	190.00	110.00	300.00
Saliz Babylonica, 1-3/4"-2" (Weeping Willow)	EA	1.333	94.00	110.00	204.00
Tilia Cordata Greenspire, 1-3/4"-2" (10'-12')	EA	1.333	420.00	110.00	530.00
Malus, 2"-2-1/2" (8'-10') (Flowering Crabapple)	EA	1.333	200.00	110.00	310.00
Platanus Occidentalis, (12'-14')	EA	1.600	310.00	130.00	440.00
Pyrus Calleryana Bradford, 2"-2-1/2"	EA	1.333	240.00	110.00	350.00
Quercus Palustris, 2"-2-1/2" (12'-14') (Pin Oak)	EA	1.333	270.00	110.00	380.00
Phellos, 2-1/2"-3" (Willow Oak)	EA	1.600	290.00	130.00	420.00
Nigra, 2"-2-1/2" (Water Oak)	EA	1.333	250.00	110.00	360.00
Magnolia Soulangeana, 4'-5' (Saucer Magnolia)	EA	0.667	150.00	53.00	203.00
Grandiflora, 6'-8' (Southern Magnolia)	EA	0.800	200.00	64.00	264.00
Cedrus Deodara, 10'-12' (Deodare Cedar)	EA	1.333	330.00	110.00	440.00
Gingko Biloba, 10'-12' (2"-2-1/2")	EA	1.333	310.00	110.00	420.00
Pinus Thunbergi, 5'-6' (Japanese Black Pine)	EA	0.667	120.00	53.00	173.00
Strobus, 6'-8' (White Pine)	EA	0.800	140.00	64.00	204.00
Taeda, 6'-8' (Loblolly Pine)	EA	0.800	120.00	64.00	184.00
Quercus Virginiana, 2"-2-1/2" (Live Oak)	EA	1.600	290.00	130.00	420.00

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	Unit	Man-Hrs	Material	Labor	Total
32940.02 LANDSCAPE ACCESSORIES					
LANDSCAPE ACCESSORIES					
Steel edging, 3/16" x 4"	LF	0.010	5.33	0.80	6.13
Landscaping stepping stones, 15"x15", white	EA	0.040	8.01	3.20	11.21
Wood chip mulch	CY	0.533	51.00	42.75	93.75
2" thick	SY	0.016	3.12	1.28	4.40
4" thick	SY	0.023	5.88	1.83	7.71
6" thick	SY	0.029	8.80	2.32	11.12
Gravel mulch, 3/4" stone	CY	0.800	40.25	64.00	104.25
White marble chips, 1" deep	SF	0.008	0.88	0.64	1.52
Peat moss					
2" thick	SY	0.018	5.47	1.42	6.89
4" thick	SY	0.027	10.50	2.13	12.63
6" thick	SY	0.033	16.00	2.66	18.66
Landscaping timbers, treated lumber					
4" x 4"	LF	0.027	4.48	2.13	6.61
6" x 6"	LF	0.029	10.50	2.28	12.78
8" x 8"	LF	0.033	12.75	2.66	15.41
32943.30 PREFABRICATED PLANTERS					
PREFABRICATED PLANTERS					
Concrete precast, circular					
24" dia., 18" high	EA	0.800	420.00	64.00	484.00
42" dia., 30" high	EA	1.000	560.00	80.00	640.00
Fiberglass, circular					
36" dia., 27" high	EA	0.400	710.00	32.00	742.00
60" dia., 39" high	EA	0.444	1,640.00	35.50	1,675.50
Tapered, circular					
24" dia., 36" high	EA	0.364	560.00	29.00	589.00
40" dia., 36" high	EA	0.400	930.00	32.00	962.00
Square					
2' by 2', 17" high	EA	0.364	480.00	29.00	509.00
4' by 4', 39" high	EA	0.444	1,640.00	35.50	1,675.50
Rectangular					
4' by 1', 18" high	EA	0.400	530.00	32.00	562.00

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	Unit	Man-Hrs	Material	Labor	Total
33011.01 PIPELINE RESTORATION					
PIPELINE RESTORATION					
Relining existing water main					
6" dia.	LF	0.240	10.50	53.00	63.50
8" dia.	LF	0.253	11.75	56.00	67.75
10" dia.	LF	0.267	13.25	59.00	72.25
12" dia.	LF	0.282	14.50	62.00	76.50
14" dia.	LF	0.300	15.50	66.00	81.50
16" dia.	LF	0.320	16.75	71.00	87.75
18" dia.	LF	0.343	18.00	76.00	94.00
20" dia.	LF	0.369	19.75	82.00	101.75
24" dia.	LF	0.400	21.25	88.00	109.25
36" dia.	LF	0.480	23.00	110.00	133.00
48" dia.	LF	0.533	25.75	120.00	145.75
72" dia.	LF	0.600	32.75	130.00	162.75
Replacing in-line gate valves					
6" valve	EA	3.200	1,180.00	710.00	1,890.00
8" valve	EA	4.000	1,840.00	880.00	2,720.00
10" valve	EA	4.800	2,770.00	1,060.00	3,830.00
12" valve	EA	6.000	4,810.00	1,330.00	6,140.00
16" valve	EA	6.857	10,920.00	1,520.00	12,440.00
18" valve	EA	8.000	16,530.00	1,770.00	18,300.00
20" valve	EA	9.600	22,730.00	2,120.00	24,850.00
24" valve	EA	12.000	32,470.00	2,650.00	35,120.00
36" valve	EA	16.000	88,950.00	3,540.00	92,490.00
33052.31 PIPE JACKING					
PIPE JACKING					
Pipe casing, horizontal jacking					
18" dia.	LF	0.711	120.00	140.00	260.00
21" dia.	LF	0.762	140.00	150.00	290.00
24" dia.	LF	0.800	150.00	150.00	300.00
27" dia.	LF	0.800	170.00	150.00	320.00
30" dia.	LF	0.842	180.00	160.00	340.00
36" dia.	LF	0.914	210.00	180.00	390.00
42" dia.	LF	1.000	240.00	190.00	430.00
48" dia.	LF	1.067	300.00	210.00	510.00
33110.03 CHILLED WATER SYSTEMS					
CHILLED WATER SYSTEMS					
Chilled water pipe, 2" thick insulation, w/casing					
Align and tack weld on sleepers					
1-1/2" dia.	LF	0.022	45.00	3.19	48.19
3" dia.	LF	0.034	72.00	5.01	77.01
4" dia.	LF	0.048	83.00	7.02	90.02
6" dia.	LF	0.060	95.00	8.77	103.77
8" dia.	LF	0.069	130.00	10.00	140.00
10" dia.	LF	0.080	170.00	11.75	181.75
12" dia.	LF	0.096	200.00	14.00	214.00
14" dia.	LF	0.104	270.00	15.25	285.25
16" dia.	LF	0.120	350.00	17.50	367.50
Align and tack weld on trench bottom					
18" dia.	LF	0.133	360.00	19.50	379.50
20" dia.	LF	0.150	470.00	22.00	492.00
Preinsulated fittings					
Align and tack weld on sleepers					
Elbows					
1-1/2"	EA	0.500	1,070.00	56.00	1,126.00
3"	EA	0.800	1,360.00	90.00	1,450.00
4"	EA	1.000	1,760.00	110.00	1,870.00
6"	EA	1.333	2,440.00	150.00	2,590.00
8"	EA	1.600	3,460.00	180.00	3,640.00
Tees					
1-1/2"	EA	0.533	1,650.00	60.00	1,710.00
3"	EA	0.889	2,320.00	100.00	2,420.00
4"	EA	1.143	1,760.00	130.00	1,890.00
6"	EA	1.600	3,800.00	180.00	3,980.00

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	Unit	Man-Hrs	Material	Labor	Total
33110.03 CHILLED WATER SYSTEMS (Cont.)					
Tees					
8"	EA	2.000	5,060.00	220.00	5,280.00
Reducers					
3"	EA	0.667	820.00	75.00	895.00
4"	EA	0.800	1,290.00	90.00	1,380.00
6"	EA	1.000	1,740.00	110.00	1,850.00
8"	EA	1.333	1,890.00	150.00	2,040.00
Anchors, not including concrete					
4"	EA	1.000	450.00	110.00	560.00
6"	EA	1.000	660.00	110.00	770.00
Align and tack weld on trench bottom					
Elbows					
10"	EA	1.500	3,960.00	220.00	4,180.00
12"	EA	1.714	4,740.00	250.00	4,990.00
14"	EA	1.846	5,970.00	270.00	6,240.00
16"	EA	2.000	6,420.00	290.00	6,710.00
18"	EA	2.182	7,160.00	320.00	7,480.00
20"	EA	2.400	8,640.00	350.00	8,990.00
Tees					
10"	EA	1.500	6,420.00	220.00	6,640.00
12"	EA	1.714	8,150.00	250.00	8,400.00
14"	EA	1.846	8,640.00	270.00	8,910.00
16"	EA	2.000	9,140.00	290.00	9,430.00
18"	EA	2.182	10,370.00	320.00	10,690.00
20"	EA	2.400	11,850.00	350.00	12,200.00
Reducers					
10"	EA	1.000	3,050.00	150.00	3,200.00
12"	EA	1.091	3,700.00	160.00	3,860.00
14"	EA	1.200	4,010.00	180.00	4,190.00
16"	EA	1.333	4,940.00	200.00	5,140.00
18"	EA	1.500	5,400.00	220.00	5,620.00
20"	EA	1.714	5,710.00	250.00	5,960.00
Anchors, not including concrete					
10"	EA	1.000	860.00	150.00	1,010.00
12"	EA	1.091	950.00	160.00	1,110.00
14"	EA	1.200	1,090.00	180.00	1,270.00
16"	EA	1.333	1,530.00	200.00	1,730.00
18"	EA	1.500	2,130.00	220.00	2,350.00
20"	EA	1.714	2,880.00	250.00	3,130.00
33110.04 DUCTILE IRON PIPE					
DUCTILE IRON PIPE					
Ductile iron pipe, cement lined, slip-on joints					
4"	LF	0.067	21.25	9.75	31.00
6"	LF	0.071	24.50	10.25	34.75
8"	LF	0.075	32.00	11.00	43.00
10"	LF	0.080	44.00	11.75	55.75
12"	LF	0.096	54.00	14.00	68.00
14"	LF	0.120	68.00	17.50	85.50
16"	LF	0.133	84.00	19.50	103.50
18"	LF	0.150	94.00	22.00	116.00
20"	LF	0.171	110.00	25.00	135.00
Mechanical joint pipe					
4"	LF	0.092	49.00	13.50	62.50
6"	LF	0.100	58.00	14.50	72.50
8"	LF	0.109	77.00	16.00	93.00
10"	LF	0.120	100.00	17.50	117.50
12"	LF	0.160	130.00	23.50	153.50
14"	LF	0.185	160.00	27.00	187.00
16"	LF	0.218	180.00	32.00	212.00
18"	LF	0.240	200.00	35.00	235.00
20"	LF	0.267	230.00	39.00	269.00

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33110.04 DUCTILE IRON PIPE (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Ductile iron pipe, cement lined, slip-on joints					
Fittings, mechanical joint					
90 degree elbow					
4"	EA	0.533	230.00	42.75	272.75
6"	EA	0.615	370.00	49.25	419.25
8"	EA	0.800	530.00	64.00	594.00
10"	EA	1.143	770.00	92.00	862.00
12"	EA	1.600	1,030.00	130.00	1,160.00
14"	EA	2.000	1,600.00	160.00	1,760.00
16"	EA	2.667	2,000.00	210.00	2,210.00
18"	EA	3.200	3,000.00	260.00	3,260.00
20"	EA	4.000	3,340.00	320.00	3,660.00
45 degree elbow					
4"	EA	0.533	240.00	42.75	282.75
6"	EA	0.615	330.00	49.25	379.25
8"	EA	0.800	470.00	64.00	534.00
10"	EA	1.143	660.00	92.00	752.00
12"	EA	1.600	810.00	130.00	940.00
14"	EA	2.000	1,330.00	160.00	1,490.00
16"	EA	2.667	1,600.00	210.00	1,810.00
18"	EA	4.000	2,330.00	320.00	2,650.00
20"	EA	4.000	2,770.00	320.00	3,090.00
Tee					
4"x3"	EA	1.000	470.00	80.00	550.00
4"x4"	EA	1.000	510.00	80.00	590.00
6"x3"	EA	1.143	590.00	92.00	682.00
6"x4"	EA	1.143	610.00	92.00	702.00
6"x6"	EA	1.143	670.00	92.00	762.00
8"x4"	EA	1.333	820.00	110.00	930.00
8"x6"	EA	1.333	940.00	110.00	1,050.00
8"x8"	EA	1.333	880.00	110.00	990.00
10"x4"	EA	1.600	1,100.00	130.00	1,230.00
10"x6"	EA	1.600	1,220.00	130.00	1,350.00
10"x8"	EA	1.600	1,260.00	130.00	1,390.00
10"x10"	EA	1.600	1,410.00	130.00	1,540.00
12"x4"	EA	2.000	1,240.00	160.00	1,400.00
12"x6"	EA	2.000	1,340.00	160.00	1,500.00
12"x8"	EA	2.000	1,460.00	160.00	1,620.00
12"x10"	EA	2.000	1,650.00	160.00	1,810.00
12"x12"	EA	2.133	1,770.00	170.00	1,940.00
14"x4"	EA	2.286	2,170.00	180.00	2,350.00
14"x6"	EA	2.286	2,300.00	180.00	2,480.00
14"x8"	EA	2.286	2,350.00	180.00	2,530.00
14"x10"	EA	2.286	2,420.00	180.00	2,600.00
14"x12"	EA	2.462	2,480.00	200.00	2,680.00
14"x14"	EA	2.462	2,460.00	200.00	2,660.00
16"x4"	EA	2.667	2,800.00	210.00	3,010.00
16"x6"	EA	2.667	2,860.00	210.00	3,070.00
16"x8"	EA	2.667	2,540.00	210.00	2,750.00
16"x10"	EA	2.667	2,580.00	210.00	2,790.00
16"x12"	EA	2.667	2,520.00	210.00	2,730.00
16"x14"	EA	2.667	2,660.00	210.00	2,870.00
16"x16"	EA	2.667	2,720.00	210.00	2,930.00
18"x6"	EA	2.909	3,250.00	230.00	3,480.00
18"x8"	EA	2.909	3,310.00	230.00	3,540.00
18"x10"	EA	2.909	3,370.00	230.00	3,600.00
18"x12"	EA	2.909	3,430.00	230.00	3,660.00
18"x14"	EA	2.909	3,830.00	230.00	4,060.00
18"x16"	EA	2.909	3,790.00	230.00	4,020.00
18"x18"	EA	2.909	4,300.00	230.00	4,530.00
20"x6"	EA	3.200	4,140.00	260.00	4,400.00
20"x8"	EA	3.200	4,180.00	260.00	4,440.00
20"x10"	EA	3.200	4,260.00	260.00	4,520.00
20"x12"	EA	3.200	4,340.00	260.00	4,600.00

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	Unit	Man-Hrs	Material	Labor	Total
33110.04 DUCTILE IRON PIPE (Cont.)					
Tee					
20"x14"	EA	3.200	4,460.00	260.00	4,720.00
20"x16"	EA	3.200	5,210.00	260.00	5,470.00
20"x18"	EA	3.200	5,450.00	260.00	5,710.00
20"x20"	EA	3.200	5,560.00	260.00	5,820.00
Cross					
4"x3"	EA	1.333	440.00	110.00	550.00
4"x4"	EA	1.333	480.00	110.00	590.00
6"x3"	EA	1.600	490.00	130.00	620.00
6"x4"	EA	1.600	520.00	130.00	650.00
6"x6"	EA	1.600	580.00	130.00	710.00
8"x4"	EA	1.778	800.00	140.00	940.00
8"x6"	EA	1.778	870.00	140.00	1,010.00
8"x8"	EA	1.778	950.00	140.00	1,090.00
10"x4"	EA	2.000	1,110.00	160.00	1,270.00
10"x6"	EA	2.000	1,180.00	160.00	1,340.00
10"x8"	EA	2.000	1,290.00	160.00	1,450.00
10"x10"	EA	2.000	1,530.00	160.00	1,690.00
12"x4"	EA	2.286	1,430.00	180.00	1,610.00
12"x6"	EA	2.286	1,610.00	180.00	1,790.00
12"x8"	EA	2.286	1,570.00	180.00	1,750.00
12"x10"	EA	2.462	1,810.00	200.00	2,010.00
12"x12"	EA	2.462	1,950.00	200.00	2,150.00
14"x4"	EA	2.667	1,850.00	210.00	2,060.00
14"x6"	EA	2.667	2,090.00	210.00	2,300.00
14"x8"	EA	2.667	2,180.00	210.00	2,390.00
14"x10"	EA	2.667	2,340.00	210.00	2,550.00
14"x12"	EA	2.909	2,510.00	230.00	2,740.00
14"x14"	EA	2.909	2,760.00	230.00	2,990.00
16"x4"	EA	3.200	2,410.00	260.00	2,670.00
16"x6"	EA	3.200	2,480.00	260.00	2,740.00
16"x8"	EA	3.200	2,610.00	260.00	2,870.00
16"x10"	EA	3.200	2,790.00	260.00	3,050.00
16"x12"	EA	3.200	2,920.00	260.00	3,180.00
16"x14"	EA	3.200	3,160.00	260.00	3,420.00
16"x16"	EA	3.200	3,350.00	260.00	3,610.00
18"x6"	EA	3.556	3,110.00	280.00	3,390.00
18"x8"	EA	3.556	3,210.00	280.00	3,490.00
18"x10"	EA	3.556	3,350.00	280.00	3,630.00
18"x12"	EA	3.556	3,520.00	280.00	3,800.00
18"x14"	EA	3.556	4,190.00	280.00	4,470.00
18"x16"	EA	3.556	4,470.00	280.00	4,750.00
18"x18"	EA	3.556	4,720.00	280.00	5,000.00
20"x6"	EA	3.810	3,730.00	310.00	4,040.00
20"x8"	EA	3.810	3,830.00	310.00	4,140.00
20"x10"	EA	3.810	4,010.00	310.00	4,320.00
20"x12"	EA	3.810	4,190.00	310.00	4,500.00
20"x14"	EA	3.810	4,400.00	310.00	4,710.00
20"x16"	EA	3.810	5,100.00	310.00	5,410.00
20"x18"	EA	4.000	5,440.00	320.00	5,760.00
20"x20"	EA	4.000	5,760.00	320.00	6,080.00
33110.06 PLASTIC PIPE					
PLASTIC PIPE					
PVC, class 150 pipe					
4" dia.	LF	0.060	8.30	8.77	17.07
6" dia.	LF	0.065	15.75	9.48	25.23
8" dia.	LF	0.069	25.00	10.00	35.00
10" dia.	LF	0.075	35.50	11.00	46.50
12" dia.	LF	0.080	52.00	11.75	63.75
Schedule 40 pipe					
1-1/2" dia.	LF	0.047	2.43	3.76	6.19
2" dia.	LF	0.050	3.08	4.00	7.08
2-1/2" dia.	LF	0.053	4.98	4.27	9.25
3" dia.	LF	0.057	6.34	4.57	10.91

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33110.06 PLASTIC PIPE (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Schedule 40 pipe					
4" dia.	LF	0.067	9.06	5.33	14.39
6" dia.	LF	0.080	16.25	6.40	22.65
90 degree elbows					
1"	EA	0.133	1.40	10.75	12.15
1-1/2"	EA	0.133	2.68	10.75	13.43
2"	EA	0.145	4.19	11.75	15.94
2-1/2"	EA	0.160	12.75	12.75	25.50
3"	EA	0.178	15.25	14.25	29.50
4"	EA	0.200	24.50	16.00	40.50
6"	EA	0.267	78.00	21.25	99.25
45 degree elbows					
1"	EA	0.133	2.15	10.75	12.90
1-1/2"	EA	0.133	3.76	10.75	14.51
2"	EA	0.145	4.89	11.75	16.64
2-1/2"	EA	0.160	12.75	12.75	25.50
3"	EA	0.178	19.75	14.25	34.00
4"	EA	0.200	32.00	16.00	48.00
6"	EA	0.267	79.00	21.25	100.25
Tees					
1"	EA	0.160	2.32	12.75	15.07
1-1/2"	EA	0.160	4.46	12.75	17.21
2"	EA	0.178	6.44	14.25	20.69
2-1/2"	EA	0.200	21.25	16.00	37.25
3"	EA	0.229	28.00	18.25	46.25
4"	EA	0.267	45.50	21.25	66.75
6"	EA	0.320	150.00	25.50	175.50
Couplings					
1"	EA	0.133	1.42	10.75	12.17
1-1/2"	EA	0.133	2.04	10.75	12.79
2"	EA	0.145	3.14	11.75	14.89
2-1/2"	EA	0.160	6.90	12.75	19.65
3"	EA	0.178	10.75	14.25	25.00
4"	EA	0.200	14.00	16.00	30.00
6"	EA	0.267	44.50	21.25	65.75
Drainage pipe					
ABS					
1-1/4" dia.	LF	0.047	2.03	3.76	5.79
1-1/2" dia.	LF	0.047	2.46	3.76	6.22
2" dia.	LF	0.050	3.14	4.00	7.14
2-1/2" dia.	LF	0.053	4.47	4.27	8.74
3" dia.	LF	0.057	5.26	4.57	9.83
4" dia.	LF	0.067	7.17	5.33	12.50
6" dia.	LF	0.080	12.00	6.40	18.40
90 degree elbows					
1-1/4"	EA	0.133	3.38	10.75	14.13
1-1/2"	EA	0.133	4.22	10.75	14.97
2"	EA	0.145	5.09	11.75	16.84
2-1/2"	EA	0.160	12.25	12.75	25.00
3"	EA	0.178	12.50	14.25	26.75
4"	EA	0.200	22.25	16.00	38.25
6"	EA	0.267	48.75	21.25	70.00
45 degree elbows					
1-1/4"	EA	0.133	5.50	10.75	16.25
1-1/2"	EA	0.133	6.99	10.75	17.74
2"	EA	0.145	8.66	11.75	20.41
2-1/2"	EA	0.160	16.25	12.75	29.00
3"	EA	0.178	17.25	14.25	31.50
4"	EA	0.200	32.75	16.00	48.75
6"	EA	0.267	76.00	21.25	97.25
Tees					
1-1/4"	EA	0.160	3.57	12.75	16.32
1-1/2"	EA	0.160	11.50	12.75	24.25
2"	EA	0.178	14.00	14.25	28.25

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33110.06 PLASTIC PIPE (Cont.)

	Unit	Man-Hrs	Material	Labor	Total
Tees					
2-1/2"	EA	0.200	16.25	16.00	32.25
3"	EA	0.229	17.75	18.25	36.00
4"	EA	0.267	33.75	21.25	55.00
6"	EA	0.320	67.00	25.50	92.50
Couplings					
1-1/4"	EA	0.133	2.98	10.75	13.73
1-1/2"	EA	0.133	5.09	10.75	15.84
2"	EA	0.145	7.50	11.75	19.25
2-1/2"	EA	0.160	15.75	12.75	28.50
3"	EA	0.178	16.25	14.25	30.50
4"	EA	0.200	17.00	16.00	33.00
6"	EA	0.267	28.50	21.25	49.75
Pressure pipe					
PVC, class 200 pipe					
3/4"	LF	0.040	0.42	3.20	3.62
1"	LF	0.042	0.62	3.37	3.99
1-1/4"	LF	0.044	1.05	3.55	4.60
1-1/2"	LF	0.047	1.25	3.76	5.01
2"	LF	0.050	2.05	4.00	6.05
2-1/2"	LF	0.053	3.11	4.27	7.38
3"	LF	0.057	4.75	4.57	9.32
4"	LF	0.067	8.27	5.33	13.60
6"	LF	0.080	16.50	6.40	22.90
8"	LF	0.069	32.00	10.00	42.00
90 degree elbows					
3/4"	EA	0.133	1.05	10.75	11.80
1"	EA	0.133	1.16	10.75	11.91
1-1/4"	EA	0.133	1.74	10.75	12.49
1-1/2"	EA	0.133	2.21	10.75	12.96
2"	EA	0.145	3.46	11.75	15.21
2-1/2"	EA	0.160	10.50	12.75	23.25
3"	EA	0.178	16.50	14.25	30.75
4"	EA	0.200	29.25	16.00	45.25
6"	EA	0.267	62.00	21.25	83.25
8"	EA	0.400	100.00	32.00	132.00
45 degree elbows					
3/4"	EA	0.133	1.19	10.75	11.94
1"	EA	0.133	1.52	10.75	12.27
1-1/4"	EA	0.133	2.20	10.75	12.95
1-1/2"	EA	0.133	2.66	10.75	13.41
2"	EA	0.145	3.75	11.75	15.50
2-1/2"	EA	0.160	6.16	12.75	18.91
3"	EA	0.178	14.25	14.25	28.50
4"	EA	0.200	26.50	16.00	42.50
6"	EA	0.267	55.00	21.25	76.25
8"	EA	0.400	110.00	32.00	142.00
Tees					
3/4"	EA	0.160	1.00	12.75	13.75
1"	EA	0.160	1.32	12.75	14.07
1-1/4"	EA	0.160	1.89	12.75	14.64
1-1/2"	EA	0.160	2.62	12.75	15.37
2"	EA	0.178	3.86	14.25	18.11
2-1/2"	EA	0.200	6.07	16.00	22.07
3"	EA	0.229	18.75	18.25	37.00
4"	EA	0.267	26.75	21.25	48.00
6"	EA	0.320	79.00	25.50	104.50
8"	EA	0.444	160.00	35.50	195.50
Couplings					
3/4"	EA	0.133	0.61	10.75	11.36
1"	EA	0.133	0.92	10.75	11.67
1-1/4"	EA	0.133	1.19	10.75	11.94
1-1/2"	EA	0.133	1.30	10.75	12.05
2"	EA	0.145	1.82	11.75	13.57

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	Unit	Man-Hrs	Material	Labor	Total
33110.06 PLASTIC PIPE (Cont.)					
Couplings					
2-1/2"	EA	0.160	3.86	12.75	16.61
3"	EA	0.178	6.07	14.25	20.32
4"	EA	0.178	8.53	14.25	22.78
6"	EA	0.200	22.75	16.00	38.75
8"	EA	0.267	40.50	21.25	61.75
33121.31 CORPORATION STOPS					
CORPORATION STOPS					
Stop for flared copper service pipe					
3/4"	EA	0.400	56.00	44.75	100.75
1"	EA	0.444	76.00	49.75	125.75
1-1/4"	EA	0.533	200.00	60.00	260.00
1-1/2"	EA	0.667	240.00	75.00	315.00
2"	EA	0.800	340.00	90.00	430.00
33121.32 THRUST BLOCKS					
THRUST BLOCKS					
Thrust block, 3000# concrete					
1/4 c.y.	EA	1.333	140.00	140.00	280.00
1/2 c.y.	EA	1.600	210.00	160.00	370.00
3/4 c.y.	EA	2.667	260.00	270.00	530.00
1 c.y.	EA	5.333	350.00	550.00	900.00
33121.33 TAPPING SADDLES & SLEEVES					
TAPPING SADDLES & SLEEVES					
Tapping saddle, tap size to 2"					
4" saddle	EA	0.400	78.00	32.00	110.00
6" saddle	EA	0.500	91.00	40.00	131.00
8" saddle	EA	0.667	110.00	53.00	163.00
10" saddle	EA	0.800	120.00	64.00	184.00
12" saddle	EA	1.143	150.00	92.00	242.00
14" saddle	EA	1.600	160.00	130.00	290.00
Tapping sleeve					
4x4	EA	0.533	990.00	42.75	1,032.75
6x4	EA	0.615	1,280.00	49.25	1,329.25
6x6	EA	0.615	1,300.00	49.25	1,349.25
8x4	EA	0.800	1,330.00	64.00	1,394.00
8x6	EA	0.800	1,360.00	64.00	1,424.00
10x4	EA	0.960	2,160.00	140.00	2,300.00
10x6	EA	0.960	3,130.00	140.00	3,270.00
10x8	EA	0.960	3,260.00	140.00	3,400.00
10x10	EA	1.000	3,340.00	150.00	3,490.00
12x4	EA	1.000	3,360.00	150.00	3,510.00
12x6	EA	1.091	3,390.00	160.00	3,550.00
12x8	EA	1.200	3,470.00	180.00	3,650.00
12x10	EA	1.333	3,660.00	200.00	3,860.00
12x12	EA	1.500	3,780.00	220.00	4,000.00
Tapping valve, mechanical joint					
4" valve	EA	3.000	850.00	440.00	1,290.00
6" valve	EA	4.000	1,020.00	590.00	1,610.00
8" valve	EA	6.000	1,520.00	880.00	2,400.00
10" valve	EA	8.000	2,420.00	1,170.00	3,590.00
12" valve	EA	12.000	4,280.00	1,760.00	6,040.00
Tap hole in pipe					
4" hole	EA	1.000		80.00	80.00
6" hole	EA	1.600		130.00	130.00
8" hole	EA	2.667		210.00	210.00
10" hole	EA	3.200		260.00	260.00
12" hole	EA	4.000		320.00	320.00
33121.35 VALVE BOXES					
VALVE BOXES					
Valve box, adjustable, for valves up to 20"					
3' deep	EA	0.267	320.00	21.25	341.25
4' deep	EA	0.320	380.00	25.50	405.50
5' deep	EA	0.400	440.00	32.00	472.00

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	Unit	Man-Hrs	Material	Labor	Total
33121.61 GATE VALVES					
GATE VALVES					
Gate valve (AWWA) mechanical joint, with adjustable box					
4" valve	EA	0.800	1,620.00	120.00	1,740.00
6" valve	EA	0.960	1,840.00	140.00	1,980.00
8" valve	EA	1.200	2,440.00	180.00	2,620.00
10" valve	EA	1.412	3,670.00	210.00	3,880.00
12" valve	EA	1.714	4,890.00	250.00	5,140.00
14" valve	EA	2.000	12,240.00	290.00	12,530.00
16" valve	EA	2.182	16,330.00	320.00	16,650.00
18" valve	EA	2.400	20,400.00	350.00	20,750.00
Flanged, with box, post indicator (AWWA)					
4" valve	EA	0.960	1,460.00	140.00	1,600.00
6" valve	EA	1.091	1,720.00	160.00	1,880.00
8" valve	EA	1.333	2,440.00	200.00	2,640.00
10" valve	EA	1.600	3,670.00	230.00	3,900.00
12" valve	EA	2.000	5,330.00	290.00	5,620.00
14" valve	EA	2.400	12,240.00	350.00	12,590.00
16" valve	EA	3.000	16,320.00	440.00	16,760.00
33121.93 FIRE HYDRANTS					
FIRE HYDRANTS					
Standard, 3 way post, 6" mechanical joint					
2' deep	EA	8.000	3,410.00	1,170.00	4,580.00
4' deep	EA	9.600	3,670.00	1,400.00	5,070.00
6' deep	EA	12.000	4,080.00	1,760.00	5,840.00
8' deep	EA	13.714	4,580.00	2,010.00	6,590.00
33123.31 WATER METERS					
WATER METERS					
Water meter, displacement type					
1"	EA	0.800	240.00	90.00	330.00
1-1/2"	EA	0.889	830.00	100.00	930.00
2"	EA	1.000	1,250.00	110.00	1,360.00
33211.30 WELLS					
WELLS					
Domestic water, drilled and cased					
4" dia.	LF	0.480	32.00	110.00	142.00
6" dia.	LF	0.533	35.25	120.00	155.25
8" dia.	LF	0.600	41.50	130.00	171.50
33310.01 CAST IRON FLANGED PIPE					
CAST IRON FLANGED PIPE					
Cast iron flanged sections					
4" pipe, with one bolt set					
3' section	EA	0.218	78.00	32.00	110.00
4' section	EA	0.240	110.00	35.00	145.00
5' section	EA	0.267	140.00	39.00	179.00
6' section	EA	0.300	160.00	43.75	203.75
8' section	EA	0.343	210.00	50.00	260.00
10' section	EA	0.480	300.00	70.00	370.00
12' section	EA	0.800	320.00	120.00	440.00
15' section	EA	1.200	400.00	180.00	580.00
18' section	EA	1.600	480.00	230.00	710.00
6" pipe, with one bolt set					
3' section	EA	0.240	140.00	35.00	175.00
4' section	EA	0.282	200.00	41.25	241.25
5' section	EA	0.320	250.00	46.75	296.75
6' section	EA	0.369	300.00	54.00	354.00
8' section	EA	0.533	350.00	78.00	428.00
10' section	EA	0.600	500.00	88.00	588.00
12' section	EA	0.800	550.00	120.00	670.00
15' section	EA	1.200	680.00	180.00	860.00
18' section	EA	1.714	820.00	250.00	1,070.00
8" pipe, with one bolt set					
3' section	EA	0.300	210.00	43.75	253.75
4' section	EA	0.343	300.00	50.00	350.00

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	Unit	Man-Hrs	Material	Labor	Total
33310.01 CAST IRON FLANGED PIPE (Cont.)					
8" pipe, with one bolt set					
5' section	EA	0.400	370.00	59.00	429.00
6' section	EA	0.480	440.00	70.00	510.00
8' section	EA	0.686	570.00	100.00	670.00
10' section	EA	0.800	780.00	120.00	900.00
12' section	EA	1.200	850.00	180.00	1,030.00
15' section	EA	1.600	1,060.00	230.00	1,290.00
18' section	EA	2.000	1,280.00	290.00	1,570.00
10" pipe, with one bolt set					
3' section	EA	0.308	400.00	45.00	445.00
4' section	EA	0.353	640.00	52.00	692.00
5' section	EA	0.414	750.00	61.00	811.00
6' section	EA	0.500	900.00	73.00	973.00
8' section	EA	0.727	1,200.00	110.00	1,310.00
10' section	EA	0.857	1,300.00	130.00	1,430.00
12' section	EA	1.333	1,410.00	200.00	1,610.00
15' section	EA	1.714	1,770.00	250.00	2,020.00
18' section	EA	2.400	2,120.00	350.00	2,470.00
12" pipe, with one bolt set					
3' section	EA	0.333	480.00	48.75	528.75
4' section	EA	0.387	720.00	57.00	777.00
5' section	EA	0.462	900.00	68.00	968.00
6' section	EA	0.545	1,070.00	80.00	1,150.00
8' section	EA	0.800	1,430.00	120.00	1,550.00
10' section	EA	0.923	1,660.00	140.00	1,800.00
12' section	EA	1.500	2,100.00	220.00	2,320.00
15' section	EA	2.000	2,380.00	290.00	2,670.00
18' section	EA	2.667	2,730.00	390.00	3,120.00
33310.02 CAST IRON FITTINGS					
CAST IRON FITTINGS					
Mechanical joint, with 2 bolt kits					
90 deg bend					
4"	EA	0.533	140.00	42.75	182.75
6"	EA	0.615	230.00	49.25	279.25
8"	EA	0.800	520.00	64.00	584.00
10"	EA	1.143	790.00	92.00	882.00
12"	EA	1.600	1,190.00	130.00	1,320.00
14"	EA	2.000	1,630.00	160.00	1,790.00
16"	EA	2.667	1,880.00	210.00	2,090.00
45 deg bend					
4"	EA	0.533	110.00	42.75	152.75
6"	EA	0.615	180.00	49.25	229.25
8"	EA	0.800	410.00	64.00	474.00
10"	EA	1.143	600.00	92.00	692.00
12"	EA	1.600	1,040.00	130.00	1,170.00
14"	EA	2.000	1,270.00	160.00	1,430.00
16"	EA	2.667	1,660.00	210.00	1,870.00
Tee, with 3 bolt kits					
4" x 4"	EA	0.800	240.00	64.00	304.00
6" x 6"	EA	1.000	400.00	80.00	480.00
8" x 8"	EA	1.333	1,140.00	110.00	1,250.00
10" x 10"	EA	2.000	1,420.00	160.00	1,580.00
12" x 12"	EA	2.667	2,530.00	210.00	2,740.00
Wye, with 3 bolt kits					
6" x 6"	EA	1.000	500.00	80.00	580.00
8" x 8"	EA	1.333	1,040.00	110.00	1,150.00
10" x 10"	EA	2.000	1,500.00	160.00	1,660.00
12" x 12"	EA	2.667	2,940.00	210.00	3,150.00
Reducer, with 2 bolt kits					
6" x 4"	EA	1.000	220.00	80.00	300.00
8" x 6"	EA	1.333	360.00	110.00	470.00
10" x 8"	EA	2.000	990.00	160.00	1,150.00
12" x 10"	EA	2.667	1,210.00	210.00	1,420.00

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	Unit	Man-Hrs	Material	Labor	Total
33310.02 CAST IRON FITTINGS (Cont.)					
Flanged, 90 deg bend, 125 lb.					
4"	EA	0.667	290.00	53.00	343.00
6"	EA	0.800	340.00	64.00	404.00
8"	EA	1.000	480.00	80.00	560.00
10"	EA	1.333	860.00	110.00	970.00
12"	EA	2.000	1,200.00	160.00	1,360.00
14"	EA	2.667	2,380.00	210.00	2,590.00
16"	EA	2.667	3,540.00	210.00	3,750.00
Tee					
4"	EA	1.000	430.00	80.00	510.00
6"	EA	1.143	600.00	92.00	692.00
8"	EA	1.333	930.00	110.00	1,040.00
10"	EA	1.600	1,710.00	130.00	1,840.00
12"	EA	2.000	2,320.00	160.00	2,480.00
14"	EA	2.667	5,150.00	210.00	5,360.00
16"	EA	4.000	7,750.00	320.00	8,070.00
33310.03 VITRIFIED CLAY PIPE					
VITRIFIED CLAY PIPE					
Vitrified clay pipe, extra strength					
6" dia.	LF	0.109	7.16	16.00	23.16
8" dia.	LF	0.114	8.59	16.75	25.34
10" dia.	LF	0.120	13.25	17.50	30.75
12" dia.	LF	0.160	18.75	23.50	42.25
15" dia.	LF	0.240	34.25	35.00	69.25
18" dia.	LF	0.267	51.00	39.00	90.00
24" dia.	LF	0.343	94.00	50.00	144.00
30" dia.	LF	0.480	160.00	70.00	230.00
36" dia.	LF	0.686	230.00	100.00	330.00
33310.04 SANITARY SEWERS					
SANITARY SEWERS					
Clay					
6" pipe	LF	0.080	9.41	11.75	21.16
8" pipe	LF	0.086	12.50	12.50	25.00
10" pipe	LF	0.092	15.75	13.50	29.25
12" pipe	LF	0.100	25.00	14.50	39.50
PVC					
4" pipe	LF	0.060	4.05	8.77	12.82
6" pipe	LF	0.063	8.11	9.23	17.34
8" pipe	LF	0.067	12.25	9.75	22.00
10" pipe	LF	0.071	16.25	10.25	26.50
12" pipe	LF	0.075	24.25	11.00	35.25
Cleanout					
4" pipe	EA	1.000	22.50	80.00	102.50
6" pipe	EA	1.000	49.50	80.00	129.50
8" pipe	EA	1.000	150.00	80.00	230.00
Connect new sewer line					
To existing manhole	EA	2.667	100.00	210.00	310.00
To new manhole	EA	1.600	75.00	130.00	205.00
Video inspection					
Minimum	EA	8.000		1,950.00	1,950.00
Average	EA	10.667		2,600.00	2,600.00
Maximum	EA	24.242		5,900.00	5,900.00
33360.01 DRAINAGE FIELDS					
DRAINAGE FIELDS					
Perforated PVC pipe, for drain field					
4" pipe	LF	0.053	2.70	7.80	10.50
6" pipe	LF	0.057	5.08	8.35	13.43
33360.05 SEPTIC TANKS					
SEPTIC TANKS					
Septic tank, precast concrete					
1000 gals	EA	4.000	1,230.00	590.00	1,820.00
2000 gals	EA	6.000	3,320.00	880.00	4,200.00
5000 gals	EA	12.000	11,310.00	1,760.00	13,070.00

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	Unit	Man-Hrs	Material	Labor	Total
33360.05 SEPTIC TANKS (Cont.)					
Septic tank, precast concrete					
25,000 gals	EA	48.000	64,840.00	7,020.00	71,860.00
40,000 gals	EA	80.000	76,910.00	11,700.00	88,610.00
Leaching pit, precast concrete, 72" diameter					
3' deep	EA	3.000	940.00	440.00	1,380.00
6' deep	EA	3.429	1,660.00	500.00	2,160.00
8' deep	EA	4.000	2,110.00	590.00	2,700.00
33391.33 MANHOLES					
MANHOLES					
Precast sections, 48" dia.					
Base section	EA	2.000	450.00	290.00	740.00
1'0" riser	EA	1.600	130.00	230.00	360.00
1'4" riser	EA	1.714	160.00	250.00	410.00
2'8" riser	EA	1.846	230.00	270.00	500.00
4'0" riser	EA	2.000	430.00	290.00	720.00
2'8" cone top	EA	2.400	280.00	350.00	630.00
Precast manholes, 48" dia.					
4' deep	EA	4.800	920.00	700.00	1,620.00
6' deep	EA	6.000	1,410.00	880.00	2,290.00
7' deep	EA	6.857	1,610.00	1,000.00	2,610.00
8' deep	EA	8.000	1,810.00	1,170.00	2,980.00
10' deep	EA	9.600	2,030.00	1,400.00	3,430.00
Cast-in-place, 48" dia., with frame and cover					
5' deep	EA	12.000	780.00	1,760.00	2,540.00
6' deep	EA	13.714	1,030.00	2,010.00	3,040.00
8' deep	EA	16.000	1,510.00	2,340.00	3,850.00
10' deep	EA	19.200	1,760.00	2,810.00	4,570.00
Brick manholes, 48" dia. with cover, 8" thick					
4' deep	EA	8.000	830.00	780.00	1,610.00
6' deep	EA	8.889	1,050.00	870.00	1,920.00
8' deep	EA	10.000	1,340.00	980.00	2,320.00
10' deep	EA	11.429	1,670.00	1,110.00	2,780.00
12' deep	EA	13.333	2,100.00	1,300.00	3,400.00
14' deep	EA	16.000	2,550.00	1,560.00	4,110.00
Inverts for manholes					
Single channel	EA	3.200	140.00	310.00	450.00
Triple channel	EA	4.000	160.00	390.00	550.00
Frames and covers, 24" diameter					
300 lb	EA	0.800	470.00	64.00	534.00
400 lb	EA	0.889	500.00	71.00	571.00
500 lb	EA	1.143	570.00	92.00	662.00
Watertight, 350 lb	EA	2.667	600.00	210.00	810.00
For heavy equipment, 1200 lb	EA	4.000	1,300.00	320.00	1,620.00
Steps for manholes					
7" x 9"	EA	0.160	20.00	12.75	32.75
8" x 9"	EA	0.178	25.25	14.25	39.50
Curb inlet, 4' throat, cast-in-place					
12"-30" pipe	EA	12.000	420.00	1,760.00	2,180.00
36"-48" pipe	EA	13.714	460.00	2,010.00	2,470.00
Raise existing frame and cover, when repaving	EA	4.800		700.00	700.00
33410.04 PIPE					
PIPE					
Concrete pipe					
Plain, bell and spigot joint, Class II					
6" pipe	LF	0.109	12.75	16.00	28.75
8" pipe	LF	0.120	13.25	17.50	30.75
10" pipe	LF	0.126	13.50	18.50	32.00
12" pipe	LF	0.133	18.00	19.50	37.50
15" pipe	LF	0.141	24.50	20.75	45.25
18" pipe	LF	0.150	30.25	22.00	52.25
21" pipe	LF	0.160	36.75	23.50	60.25
24" pipe	LF	0.171	46.25	25.00	71.25

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	Unit	Man-Hrs	Material	Labor	Total
33410.04 PIPE (Cont.)					
Concrete pipe					
Reinforced, class III, tongue and groove joint					
12" pipe	LF	0.133	26.00	19.50	45.50
15" pipe	LF	0.141	29.25	20.75	50.00
18" pipe	LF	0.150	32.50	22.00	54.50
21" pipe	LF	0.160	42.25	23.50	65.75
24" pipe	LF	0.171	55.00	25.00	80.00
27" pipe	LF	0.185	65.00	27.00	92.00
30" pipe	LF	0.200	71.00	29.25	100.25
36" pipe	LF	0.218	110.00	32.00	142.00
42" pipe	LF	0.240	150.00	35.00	185.00
48" pipe	LF	0.267	200.00	39.00	239.00
54" pipe	LF	0.300	220.00	43.75	263.75
60" pipe	LF	0.343	290.00	50.00	340.00
66" pipe	LF	0.400	370.00	59.00	429.00
72" pipe	LF	0.480	400.00	70.00	470.00
Flared end-section, concrete					
12" pipe	LF	0.133	98.00	19.50	117.50
15" pipe	LF	0.141	120.00	20.75	140.75
18" pipe	LF	0.150	140.00	22.00	162.00
24" pipe	LF	0.171	160.00	25.00	185.00
30" pipe	LF	0.200	200.00	29.25	229.25
36" pipe	LF	0.218	270.00	32.00	302.00
42" pipe	LF	0.240	290.00	35.00	325.00
48" pipe	LF	0.267	320.00	39.00	359.00
54" pipe	LF	0.300	350.00	43.75	393.75
Corrugated metal pipe, coated, paved invert					
16 ga.					
8" pipe	LF	0.080	20.00	11.75	31.75
10" pipe	LF	0.083	26.50	12.00	38.50
12" pipe	LF	0.086	30.00	12.50	42.50
15" pipe	LF	0.092	36.50	13.50	50.00
18" pipe	LF	0.100	43.25	14.50	57.75
21" pipe	LF	0.109	53.00	16.00	69.00
24" pipe	LF	0.120	63.00	17.50	80.50
30" pipe	LF	0.133	83.00	19.50	102.50
36" pipe	LF	0.150	110.00	22.00	132.00
12 ga., 48" pipe	LF	0.171	200.00	25.00	225.00
10 ga.					
60" pipe	LF	0.200	210.00	29.25	239.25
72" pipe	LF	0.240	280.00	35.00	315.00
Galvanized or aluminum, plain					
16 ga.					
8" pipe	LF	0.080	13.75	11.75	25.50
10" pipe	LF	0.083	19.50	12.00	31.50
12" pipe	LF	0.086	22.00	12.50	34.50
15" pipe	LF	0.092	27.75	13.50	41.25
18" pipe	LF	0.100	33.25	14.50	47.75
24" pipe	LF	0.120	49.75	17.50	67.25
30" pipe	LF	0.133	66.00	19.50	85.50
36" pipe	LF	0.150	83.00	22.00	105.00
12 ga., 48" pipe	LF	0.171	150.00	25.00	175.00
10 ga., 60" pipe	LF	0.200	210.00	29.25	239.25
Galvanized or aluminum, coated oval arch					
16 ga.					
17" x 13"	LF	0.109	32.75	16.00	48.75
21" x 15"	LF	0.120	43.75	17.50	61.25
14 ga.					
28" x 20"	LF	0.133	62.00	19.50	81.50
35" x 24"	LF	0.171	92.00	25.00	117.00
12 ga.					
42" x 29"	LF	0.200	110.00	29.25	139.25
57" x 38"	LF	0.240	160.00	35.00	195.00
64" x 43"	LF	0.253	200.00	37.00	237.00

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	Unit	Man-Hrs	Material	Labor	Total
33410.04 PIPE (Cont.)					
Oval arch culverts, plain					
16 ga.					
17" x 13"	LF	0.109	19.25	16.00	35.25
21" x 15"	LF	0.120	27.75	17.50	45.25
14 ga.					
28" x 20"	LF	0.133	51.00	19.50	70.50
35" x 24"	LF	0.171	65.00	25.00	90.00
12 ga.					
57" x 38"	LF	0.200	100.00	29.25	129.25
64" x 43"	LF	0.240	130.00	35.00	165.00
71" x 47"	LF	0.253	180.00	37.00	217.00
Nestable corrugated metal pipe					
16 ga.					
10" pipe	LF	0.083	19.25	12.00	31.25
12" pipe	LF	0.086	24.00	12.50	36.50
15" pipe	LF	0.092	31.25	13.50	44.75
18" pipe	LF	0.100	36.00	14.50	50.50
24" pipe	LF	0.120	50.00	17.50	67.50
30" pipe	LF	0.133	62.00	19.50	81.50
14 ga., 36" pipe	LF	0.150	72.00	22.00	94.00
Headwalls, cast-in-place, 30 deg wingwall					
12" pipe	EA	2.000	460.00	200.00	660.00
15" pipe	EA	2.000	560.00	200.00	760.00
18" pipe	EA	2.286	680.00	230.00	910.00
24" pipe	EA	2.286	1,010.00	230.00	1,240.00
30" pipe	EA	2.667	1,220.00	270.00	1,490.00
36" pipe	EA	4.000	1,320.00	410.00	1,730.00
42" pipe	EA	4.000	1,650.00	410.00	2,060.00
48" pipe	EA	5.333	1,750.00	550.00	2,300.00
54" pipe	EA	6.667	1,980.00	680.00	2,660.00
60" pipe	EA	8.000	2,370.00	820.00	3,190.00
4" cleanout for storm drain					
4" pipe	EA	1.000	800.00	80.00	880.00
6" pipe	EA	1.000	970.00	80.00	1,050.00
8" pipe	EA	1.000	1,350.00	80.00	1,430.00
Connect new drain line					
To existing manhole	EA	2.667	140.00	210.00	350.00
To new manhole	EA	1.600	120.00	130.00	250.00
33441.31 CATCH BASINS					
CATCH BASINS					
Standard concrete catch basin					
Cast-in-place, 3'8" x 3'8", 6" thick wall					
2' deep	EA	6.000	600.00	880.00	1,480.00
3' deep	EA	6.000	800.00	880.00	1,680.00
4' deep	EA	8.000	1,040.00	1,170.00	2,210.00
5' deep	EA	8.000	1,230.00	1,170.00	2,400.00
6' deep	EA	9.600	1,370.00	1,400.00	2,770.00
4'x4', 8" thick wall, cast-in-place					
2' deep	EA	6.000	630.00	880.00	1,510.00
3' deep	EA	6.000	890.00	880.00	1,770.00
4' deep	EA	8.000	1,180.00	1,170.00	2,350.00
5' deep	EA	8.000	1,370.00	1,170.00	2,540.00
6' deep	EA	9.600	1,500.00	1,400.00	2,900.00
Frames and covers, cast iron					
Round					
24" dia.	EA	2.000	480.00	160.00	640.00
26" dia.	EA	2.000	520.00	160.00	680.00
28" dia.	EA	2.000	630.00	160.00	790.00
Rectangular					
23"x23"	EA	2.000	420.00	160.00	580.00
27"x20"	EA	2.000	510.00	160.00	670.00
24"x24"	EA	2.000	490.00	160.00	650.00
26"x26"	EA	2.000	540.00	160.00	700.00

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	Unit	Man-Hrs	Material	Labor	Total
33441.31 CATCH BASINS (Cont.)					
Standard concrete catch basin					
Curb inlet frames and covers					
27"x27"	EA	2.000	840.00	160.00	1,000.00
24"x36"	EA	2.000	610.00	160.00	770.00
24"x25"	EA	2.000	570.00	160.00	730.00
24"x22"	EA	2.000	490.00	160.00	650.00
20"x22"	EA	2.000	640.00	160.00	800.00
Airfield catch basin frame and grating, galvanized					
2'x4'	EA	2.000	860.00	160.00	1,020.00
2'x2'	EA	2.000	610.00	160.00	770.00
33461.90 UNDERDRAIN					
UNDERDRAIN					
Drain tile, clay					
6" pipe	LF	0.053	5.71	7.80	13.51
8" pipe	LF	0.056	9.12	8.16	17.28
12" pipe	LF	0.060	18.50	8.77	27.27
Porous concrete, standard strength					
6" pipe	LF	0.053	8.88	7.80	16.68
8" pipe	LF	0.056	9.60	8.16	17.76
12" pipe	LF	0.060	12.75	8.77	21.52
15" pipe	LF	0.067	23.00	9.75	32.75
18" pipe	LF	0.080	30.75	11.75	42.50
Corrugated metal pipe, perforated type					
6" pipe	LF	0.060	8.62	8.77	17.39
8" pipe	LF	0.063	10.25	9.23	19.48
10" pipe	LF	0.067	12.25	9.75	22.00
12" pipe	LF	0.071	17.50	10.25	27.75
18" pipe	LF	0.075	21.50	11.00	32.50
Perforated clay pipe					
6" pipe	LF	0.069	6.88	10.00	16.88
8" pipe	LF	0.071	8.01	10.25	18.26
12" pipe	LF	0.073	16.00	10.75	26.75
Drain tile, concrete					
6" pipe	LF	0.053	4.70	7.80	12.50
8" pipe	LF	0.056	7.30	8.16	15.46
12" pipe	LF	0.060	14.75	8.77	23.52
Perforated rigid PVC underdrain pipe					
4" pipe	LF	0.040	2.42	5.85	8.27
6" pipe	LF	0.048	4.64	7.02	11.66
8" pipe	LF	0.053	7.09	7.80	14.89
10" pipe	LF	0.060	10.75	8.77	19.52
12" pipe	LF	0.069	16.75	10.00	26.75
Underslab drainage, crushed stone					
3" thick	SF	0.008	0.36	1.17	1.53
4" thick	SF	0.009	0.49	1.35	1.84
6" thick	SF	0.010	0.75	1.46	2.21
8" thick	SF	0.010	0.99	1.52	2.51
Plastic filter fabric for drain lines	SF	0.008	0.55	0.64	1.19
Gravel fill in trench, crushed or bank run, 1/2" to 3/4"	CY	0.600	40.00	88.00	128.00
33510.01 GAS DISTRIBUTION					
GAS DISTRIBUTION					
Gas distribution lines					
Polyethylene, 60 psi coils					
1-1/4" dia.	LF	0.053	2.11	5.97	8.08
1-1/2" dia.	LF	0.057	2.87	6.40	9.27
2" dia.	LF	0.067	3.63	7.47	11.10
3" dia.	LF	0.080	7.69	8.96	16.65
30' pipe lengths					
3" dia.	LF	0.089	6.93	9.96	16.89
4" dia.	LF	0.100	10.75	11.25	22.00
6" dia.	LF	0.133	17.25	15.00	32.25
8" dia.	LF	0.160	31.75	18.00	49.75

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	Unit	Man-Hrs	Material	Labor	Total
33510.01 GAS DISTRIBUTION (Cont.)					
Gas distribution lines					
Steel, schedule 40, plain end					
1" dia.	LF	0.067	5.97	7.47	13.44
2" dia.	LF	0.073	9.92	8.15	18.07
3" dia.	LF	0.080	14.25	8.96	23.21
4" dia.	LF	0.160	17.50	23.50	41.00
5" dia.	LF	0.171	32.75	25.00	57.75
6" dia.	LF	0.200	43.75	29.25	73.00
8" dia.	LF	0.218	55.00	32.00	87.00
Natural gas meters, direct digital reading, threaded					
250 cfh 5 lbs	EA	1.600	210.00	180.00	390.00
425 cfh 10 lbs	EA	1.600	530.00	180.00	710.00
800 cfh 20 lbs	EA	2.000	740.00	220.00	960.00
1,000 cfh 25 lbs	EA	2.000	2,200.00	220.00	2,420.00
1,400 cfh 100 lbs	EA	2.667	5,090.00	300.00	5,390.00
2,300 cfh 100 lbs	EA	4.000	7,090.00	450.00	7,540.00
5,000 cfh 100 lbs	EA	8.000	10,410.00	900.00	11,310.00
Gas pressure regulators					
Threaded					
3/4"	EA	1.000	74.00	110.00	184.00
1"	EA	1.333	78.00	150.00	228.00
1-1/4"	EA	1.333	81.00	150.00	231.00
1-1/2"	EA	1.333	530.00	150.00	680.00
2"	EA	1.600	550.00	180.00	730.00
Flanged					
3"	EA	2.000	2,310.00	220.00	2,530.00
4"	EA	2.667	3,450.00	300.00	3,750.00
33560.01 STORAGE TANKS					
STORAGE TANKS					
Oil storage tank, underground, single wall, no excv.					
Steel					
500 gals	EA	3.000	5,260.00	440.00	5,700.00
1,000 gals	EA	4.000	7,150.00	590.00	7,740.00
4,000 gals	EA	8.000	10,950.00	1,170.00	12,120.00
5,000 gals	EA	12.000	12,840.00	1,760.00	14,600.00
10,000 gals	EA	24.000	22,870.00	3,510.00	26,380.00
Fiberglass, double wall					
550 gals	EA	4.000	14,870.00	590.00	15,460.00
1,000 gals	EA	4.000	19,120.00	590.00	19,710.00
2,000 gals	EA	6.000	20,760.00	880.00	21,640.00
4,000 gals	EA	12.000	24,100.00	1,760.00	25,860.00
6,000 gals	EA	16.000	26,300.00	2,340.00	28,640.00
8,000 gals	EA	24.000	29,510.00	3,510.00	33,020.00
10,000 gals	EA	30.000	30,260.00	4,390.00	34,650.00
12,000 gals	EA	40.000	32,810.00	5,850.00	38,660.00
15,000 gals	EA	53.333	35,190.00	7,800.00	42,990.00
20,000 gals	EA	60.000	43,100.00	8,780.00	51,880.00
Above ground					
Steel, single wall					
275 gals	EA	2.400	2,990.00	350.00	3,340.00
500 gals	EA	4.000	7,480.00	590.00	8,070.00
1,000 gals	EA	4.800	10,200.00	700.00	10,900.00
1,500 gals	EA	6.000	13,020.00	880.00	13,900.00
2,000 gals	EA	8.000	16,100.00	1,170.00	17,270.00
5,000 gals	EA	12.000	18,910.00	1,760.00	20,670.00
Fill cap	EA	0.800	180.00	90.00	270.00
Vent cap	EA	0.800	180.00	90.00	270.00
Level indicator	EA	0.800	280.00	90.00	370.00
33633.30 STEAM METERS					
STEAM METERS					
In-line turbine, direct reading, 300 lb, flanged					
2"	EA	1.000	4,710.00	110.00	4,820.00
3"	EA	1.333	5,040.00	150.00	5,190.00
4"	EA	1.600	5,550.00	180.00	5,730.00

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	Unit	Man-Hrs	Material	Labor	Total
33633.30 STEAM METERS (Cont.)					
In-line turbine, direct reading, 300 lb					
Threaded, 2"					
5" line	EA	8.000	8,910.00	900.00	9,810.00
6" line	EA	8.000	9,080.00	900.00	9,980.00
8" line	EA	8.000	9,250.00	900.00	10,150.00
10" line	EA	8.000	9,750.00	900.00	10,650.00
12" line	EA	8.000	9,920.00	900.00	10,820.00
14" line	EA	8.000	10,250.00	900.00	11,150.00
16" line	EA	8.000	10,930.00	900.00	11,830.00
33711.60 UTILITY POLES & FITTINGS					
UTILITY POLES & FITTINGS					
Wood pole, creosoted					
25'	EA	2.353	460.00	250.00	710.00
40'	EA	3.791	870.00	390.00	1,260.00
55'	EA	7.547	1,370.00	790.00	2,160.00
Treated, wood preservative, 6"x6"					
8'	EA	0.500	82.00	52.00	134.00
16'	EA	1.600	190.00	170.00	360.00
20'	EA	2.000	280.00	210.00	490.00
Aluminum, brushed, no base					
8'	EA	2.000	720.00	210.00	930.00
20'	EA	3.200	1,130.00	330.00	1,460.00
40'	EA	6.250	3,390.00	650.00	4,040.00
Steel, no base					
10'	EA	2.500	1,030.00	260.00	1,290.00
20'	EA	3.810	1,510.00	400.00	1,910.00
35'	EA	6.250	2,540.00	650.00	3,190.00
Concrete, no base					
13'	EA	5.517	1,260.00	570.00	1,830.00
30'	EA	12.121	3,450.00	1,260.00	4,710.00
50'	EA	18.182	7,650.00	1,890.00	9,540.00
60'	EA	20.000	9,750.00	2,080.00	11,830.00
33711.90 ELECTRIC MANHOLES					
ELECTRIC MANHOLES					
Precast, handhole, 4' deep					
2'x2'	EA	3.478	610.00	360.00	970.00
3'x3'	EA	5.556	810.00	580.00	1,390.00
4'x4'	EA	10.256	1,750.00	1,070.00	2,820.00
Power manhole, complete, precast, 8' deep					
4'x4'	EA	14.035	2,510.00	1,460.00	3,970.00
6'x6'	EA	20.000	3,350.00	2,080.00	5,430.00
8'x8'	EA	21.053	3,970.00	2,190.00	6,160.00
6' deep, 9' x 12'	EA	25.000	4,380.00	2,600.00	6,980.00
Cast-in-place, power manhole, 8' deep					
4'x4'	EA	14.035	2,970.00	1,460.00	4,430.00
6'x6'	EA	20.000	3,830.00	2,080.00	5,910.00
8'x8'	EA	21.053	4,260.00	2,190.00	6,450.00

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34111.30 RAILROAD BALLAST, RAIL, APPURTENANCES

	Unit	Man-Hrs	Material	Labor	Total
RAILROAD BALLAST, RAIL, APPURTENANCES					
Rail					
90 lb	LF	0.010	38.25	1.40	39.65
100 lb	LF	0.010	43.75	1.40	45.15
115 lb	LF	0.010	49.25	1.40	50.65
132 lb	LF	0.010	55.00	1.40	56.40
Rail relay					
90 lb	LF	0.010	17.75	1.40	19.15
100 lb	LF	0.010	19.50	1.40	20.90
115 lb	LF	0.010	23.75	1.40	25.15
132 lb	LF	0.010	28.75	1.40	30.15
New angle bars, per pair					
90 lb	EA	0.012	140.00	1.75	141.75
100 lb	EA	0.012	150.00	1.75	151.75
115 lb	EA	0.012	200.00	1.75	201.75
132 lb	EA	0.012	230.00	1.75	231.75
Angle bar relay					
90 lb	EA	0.012	59.00	1.75	60.75
100 lb	EA	0.012	60.00	1.75	61.75
115 lb	EA	0.012	63.00	1.75	64.75
132 lb	EA	0.012	67.00	1.75	68.75
New tie plates					
90 lb	EA	0.009	19.25	1.25	20.50
100 lb	EA	0.009	20.00	1.25	21.25
115 lb	EA	0.009	22.00	1.25	23.25
132 lb	EA	0.009	23.25	1.25	24.50
Tie plate relay					
90 lb	EA	0.009	6.02	1.25	7.27
100 lb	EA	0.009	8.46	1.25	9.71
115 lb	EA	0.009	8.46	1.25	9.71
132 lb	EA	0.009	10.50	1.25	11.75
Track accessories					
Wooden cross ties, 8'	EA	0.060	74.00	8.77	82.77
Concrete cross ties, 8'	EA	0.120	180.00	17.50	197.50
Tie plugs, 5"	EA	0.006	9.04	0.87	9.91
Track bolts and nuts, 1"	EA	0.006	7.39	0.87	8.26
Lockwashers, 1"	EA	0.004	1.93	0.58	2.51
Track spikes, 6"	EA	0.024	1.82	3.51	5.33
Wooden switch ties	BF	0.006	3.13	0.87	4.00
Rail anchors	EA	0.022	7.50	3.19	10.69
Ballast	TON	0.120	23.50	17.50	41.00
Gauge rods	EA	0.096	57.00	14.00	71.00
Compromise splice bars	EA	0.160	720.00	23.50	743.50
Turnout					
90 lb	EA	24.000	22,360.00	3,510.00	25,870.00
100 lb	EA	24.000	23,560.00	3,510.00	27,070.00
110 lb	EA	24.000	25,350.00	3,510.00	28,860.00
115 lb	EA	24.000	25,940.00	3,510.00	29,450.00
132 lb	EA	24.000	28,330.00	3,510.00	31,840.00
Turnout relay					
90 lb	EA	24.000	14,310.00	3,510.00	17,820.00
100 lb	EA	24.000	15,800.00	3,510.00	19,310.00
110 lb	EA	24.000	16,400.00	3,510.00	19,910.00
115 lb	EA	24.000	17,290.00	3,510.00	20,800.00
132 lb	EA	24.000	18,780.00	3,510.00	22,290.00
Railroad track in place, complete					
New rail					
90 lb	LF	0.240	280.00	35.00	315.00
100 lb	LF	0.240	280.00	35.00	315.00
110 lb	LF	0.240	280.00	35.00	315.00
115 lb	LF	0.240	300.00	35.00	335.00
132 lb	LF	0.240	300.00	35.00	335.00
Rail relay					
90 lb	LF	0.240	160.00	35.00	195.00
100 lb	LF	0.240	170.00	35.00	205.00

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34111.30 RAILROAD BALLAST, RAIL, APPURTENANCES

	Unit	Man-Hrs	Material	Labor	Total
Rail relay					
110 lb	LF	0.240	170.00	35.00	205.00
115 lb	LF	0.240	190.00	35.00	225.00
132 lb	LF	0.240	200.00	35.00	235.00
No. 8 turnout					
90 lb	EA	32.000	53,520.00	4,680.00	58,200.00
100 lb	EA	32.000	59,490.00	4,680.00	64,170.00
110 lb	EA	32.000	65,190.00	4,680.00	69,870.00
115 lb	EA	32.000	66,610.00	4,680.00	71,290.00
132 lb	EA	32.000	68,040.00	4,680.00	72,720.00
No. 8 turnout relay					
90 lb	EA	32.000	38,910.00	4,680.00	43,590.00
100 lb	EA	32.000	40,920.00	4,680.00	45,600.00
110 lb	EA	32.000	43,000.00	4,680.00	47,680.00
115 lb	EA	32.000	47,840.00	4,680.00	52,520.00
132 lb	EA	32.000	50,890.00	4,680.00	55,570.00
Railroad crossings, asphalt, based on 8" thick x 20'					
Including track and approach					
12' roadway	EA	6.000	1,270.00	880.00	2,150.00
15' roadway	EA	6.857	1,490.00	1,000.00	2,490.00
18' roadway	EA	8.000	1,740.00	1,170.00	2,910.00
21' roadway	EA	9.600	1,940.00	1,400.00	3,340.00
24' roadway	EA	12.000	2,190.00	1,760.00	3,950.00
Precast concrete inserts					
12' roadway	EA	2.400	2,010.00	350.00	2,360.00
15' roadway	EA	3.000	2,410.00	440.00	2,850.00
18' roadway	EA	4.000	2,880.00	590.00	3,470.00
21' roadway	EA	4.800	3,720.00	700.00	4,420.00
24' roadway	EA	5.333	4,500.00	780.00	5,280.00
Molded rubber, with headers					
12' roadway	EA	2.400	11,570.00	350.00	11,920.00
15' roadway	EA	3.000	14,460.00	440.00	14,900.00
18' roadway	EA	4.000	17,130.00	590.00	17,720.00
21' roadway	EA	4.800	18,890.00	700.00	19,590.00
24' roadway	EA	5.333	23,030.00	780.00	23,810.00

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41221.33 INDUSTRIAL HOISTS

	Unit	Man-Hrs	Material	Labor	Total
INDUSTRIAL HOISTS					
Industrial hoists, electric, light to medium duty					
500 lb	EA	4.000	6,280.00	420.00	6,700.00
1000 lb	EA	4.211	9,930.00	440.00	10,370.00
2000 lb	EA	4.444	10,270.00	460.00	10,730.00
3000 lb	EA	4.706	12,250.00	490.00	12,740.00
4000 lb	EA	5.000	12,540.00	520.00	13,060.00
5000 lb	EA	5.333	13,530.00	560.00	14,090.00
6000 lb	EA	5.517	17,210.00	570.00	17,780.00
7500 lb	EA	5.714	19,290.00	600.00	19,890.00
10,000 lb	EA	5.926	50,080.00	620.00	50,700.00
15,000 lb	EA	6.154	62,830.00	640.00	63,470.00
20,000 lb	EA	6.667	74,340.00	690.00	75,030.00
25,000 lb	EA	7.273	75,300.00	760.00	76,060.00
30,000 lb	EA	8.000	77,030.00	830.00	77,860.00
Heavy duty					
500 lb	EA	4.000	12,450.00	420.00	12,870.00
1000 lb	EA	4.211	17,430.00	440.00	17,870.00
2000 lb	EA	4.444	19,260.00	460.00	19,720.00
3000 lb	EA	4.706	19,970.00	490.00	20,460.00
4000 lb	EA	5.000	20,850.00	520.00	21,370.00
5000 lb	EA	5.333	21,270.00	560.00	21,830.00
6000 lb	EA	5.517	23,040.00	570.00	23,610.00
7500 lb	EA	5.714	26,460.00	600.00	27,060.00
10,000 lb	EA	5.926	28,240.00	620.00	28,860.00
15,000 lb	EA	6.154	34,260.00	640.00	34,900.00
20,000 lb	EA	6.667	41,590.00	690.00	42,280.00
25,000 lb	EA	7.273	46,670.00	760.00	47,430.00
30,000 lb	EA	8.000	51,860.00	830.00	52,690.00
Air powered hoists					
500 lb	EA	4.000	7,210.00	420.00	7,630.00
1000 lb	EA	4.000	7,560.00	420.00	7,980.00
2000 lb	EA	4.211	7,680.00	440.00	8,120.00
4000 lb	EA	4.706	8,390.00	490.00	8,880.00
6000 lb	EA	6.154	9,040.00	640.00	9,680.00
Overhead traveling bridge crane					
Single girder, 20' span					
3 ton	EA	12.000	23,150.00	1,760.00	24,910.00
5 ton	EA	12.000	26,580.00	1,760.00	28,340.00
7.5 ton	EA	12.000	33,390.00	1,760.00	35,150.00
10 ton	EA	15.000	33,670.00	2,190.00	35,860.00
15 ton	EA	15.000	41,530.00	2,190.00	43,720.00
30' span					
3 ton	EA	12.000	28,620.00	1,760.00	30,380.00
5 ton	EA	12.000	34,650.00	1,760.00	36,410.00
10 ton	EA	15.000	48,260.00	2,190.00	50,450.00
15 ton	EA	15.000	54,570.00	2,190.00	56,760.00
Double girder, 40' span					
3 ton	EA	26.667	45,050.00	3,900.00	48,950.00
5 ton	EA	26.667	47,420.00	3,900.00	51,320.00
7.5 ton	EA	26.667	46,930.00	3,900.00	50,830.00
10 ton	EA	34.286	58,850.00	5,010.00	63,860.00
15 ton	EA	34.286	64,670.00	5,010.00	69,680.00
25 ton	EA	34.286	112,020.00	5,010.00	117,030.00
50' span					
3 ton	EA	26.667	53,590.00	3,900.00	57,490.00
5 ton	EA	26.667	54,710.00	3,900.00	58,610.00
7.5 ton	EA	26.667	56,260.00	3,900.00	60,160.00
10 ton	EA	34.286	61,590.00	5,010.00	66,600.00
15 ton	EA	34.286	75,760.00	5,010.00	80,770.00
25 ton	EA	34.286	99,960.00	5,010.00	104,970.00

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	Unit	Man-Hrs	Material	Labor	Total
41221.35 JIB CRANES					
JIB CRANES					
Self supporting, swinging 8' boom, 200 deg rotation					
1000 lb	EA	6.667	5,740.00	690.00	6,430.00
2000 lb	EA	6.667	6,300.00	690.00	6,990.00
3000 lb	EA	13.333	6,760.00	1,380.00	8,140.00
4000 lb	EA	13.333	7,410.00	1,380.00	8,790.00
6000 lb	EA	13.333	8,990.00	1,380.00	10,370.00
10,000 lb	EA	13.333	12,690.00	1,380.00	14,070.00
Wall mounted, 180 deg rotation					
2000 lb	EA	6.667	3,060.00	690.00	3,750.00
3000 lb	EA	6.667	3,710.00	690.00	4,400.00
4000 lb	EA	13.333	2,320.00	1,380.00	3,700.00
6000 lb	EA	13.333	4,630.00	1,380.00	6,010.00
10,000 lb	EA	13.333	8,800.00	1,380.00	10,180.00

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BNi DATA

Construction Data You Can Trust

Assemblies

The following Assemblies Tables list dozens of commonly specified types of construction systems, each with all of the details that make up its costs. These assemblies are developed by using the unit price data from the front of this manual, provide a bridge between unit prices and square foot costs, and can be used in conjunction with either. The data has been updated to reflect current construction costs.

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A SUBSTRUCTURE

BNiDATA
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All prices are updated to January 1, 2025 and are national averages.
For more in-depth information contact Design Cost and Data at 800-533-5680, or go to www.DCD.com

A SUBSTRUCTURE

A1010 FOUNDATIONS

A1010.15 FOOTINGS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
A1010.15.10	**Strip Footing, 1' thick 2' wide**						**Unit: LF**
031113602090	Job built, wall footing forms, continuous, 5 uses	2	SF	$2.79	$13.63	$0.00	$16.42
031124201220	Keyway forms (5 uses), 2x4	1	LF	$0.43	$4.09	$0.00	$4.52
032100605000	Reinforcing, straight dowels, 24" long, 1" dia	1	EA	$5.83	$2.09	$0.00	$7.92
032100701020	Reinforcing, foundations, #5-#6	0.005	TON	$8.25	$5.97	$0.00	$14.22
033100502000	Place concrete, footing, 3500# or 4000#, by chute	0.07	CY	$14.25	$1.50	$0.00	$15.75
033500101040	Concrete finish, broom, darby	2	SF	$0.00	$1.60	$0.00	$1.60
312316502220	Hand compaction of backfill, with air tamper	0.2	CY	$0.00	$9.15	$0.00	$9.15
312333601140	Trenching, hydraulic excavator, 1/2 cy, medium soil	0.75	CY	$0.00	$2.31	$3.00	$5.31
				$31.55	**$40.34**	**$3.00**	**$74.89**
A1010.15.15	**Strip Footing, 18" thick 3' wide**						**Unit: LF**
031113602090	Job built, wall footing forms, continuous, 5 uses	3	SF	$4.18	$20.45	$0.00	$24.63
031124201220	Keyway forms (5 uses), 2x4	1	LF	$0.43	$4.09	$0.00	$4.52
032100605000	Reinforcing, straight dowels, 24" long, 1" dia	1	EA	$5.83	$2.09	$0.00	$7.92
032100701020	Reinforcing, foundations, #5-#6	0.01	TON	$16.50	$11.93	$0.00	$28.43
033100502000	Place concrete, footing, 3500# or 4000#, by chute	0.15	CY	$30.54	$3.20	$0.00	$33.74
033500101040	Concrete finish, broom, darby	3	SF	$0.00	$2.40	$0.00	$2.40
312316502220	Hand compaction of backfill, with air tamper	0.4	CY	$0.00	$18.31	$0.00	$18.31
312333601140	Trenching, hydraulic excavator, 1/2 cy, medium soil	1.125	CY	$0.00	$3.46	$4.50	$7.96
				$57.48	**$65.93**	**$4.50**	**$127.91**

A1010.20 FOUNDATION WALLS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
A1010.20.10	**Foundation Wall 6' high, 1' thick**						**Unit: SF**
031003004030	Snap ties, long-end with washers, 12" long	1	EA	$2.49	$0.00	$0.00	$2.49
031114103190	Job built, ext wall forms, 8' high, 5 uses	2	SF	$3.87	$13.63	$0.00	$17.50
032101101040	Reinforcing, wall, #7-#8	0.003	TON	$4.82	$2.78	$0.00	$7.60
033100901040	Place wall conc, 2500# or 3000#, to 8', by pump	0.037	CY	$7.13	$2.37	$1.60	$11.10
033500104020	Wall finishes, burlap rub, w/cement paste	2	SF	$0.33	$2.14	$0.00	$2.47
033500104160	Break ties and patch holes	2	SF	$0.00	$2.56	$0.00	$2.56
071113101020	Damproofing, asphalt, troweled, 1 coat	2	SF	$1.50	$4.27	$0.00	$5.77
				$20.14	**$27.75**	**$1.60**	**$49.49**
A1010.20.15	**Foundation Wall 10' high, 18" thick**						**Unit: SF**
031003004030	Snap ties, long-end with washers, 12" long	1	EA	$2.49	$0.00	$0.00	$2.49
031114103290	Wall forms, ext, job built, over 8' high wall, 5 uses	2	SF	$4.75	$16.36	$0.00	$21.11
032101101040	Reinforcing, wall, #7-#8	0.005	TON	$8.03	$4.64	$0.00	$12.67
033100901040	Place wall conc, 2500# or 3000#, to 8', by pump	0.055	CY	$10.60	$3.52	$2.38	$16.50
033500104020	Wall finishes, burlap rub, w/cement paste	2	SF	$0.33	$2.14	$0.00	$2.47
033500104160	Break ties and patch holes	2	SF	$0.00	$2.56	$0.00	$2.56
071113101020	Damproofing, asphalt, troweled, 1 coat	2	SF	$1.50	$4.27	$0.00	$5.77
				$27.70	**$33.49**	**$2.38**	**$63.57**

A SUBSTRUCTURE

A1010 FOUNDATIONS

A1010.25 SPREAD FOOTINGS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
A1010.25.10	**Spread Footing 6' by 6' by 2' thick**						**Unit: EA**
031113903100	Job built, mat foundation forms, 5 uses	48	SF	$67.88	$392.68	$0.00	$460.56
032100605000	Reinforcing, straight dowels, 24" long, 1" dia	4	EA	$23.32	$8.35	$0.00	$31.67
032100901040	Reinforcing, slab, bars, #7-#8	0.147	TON	$236.08	$153.45	$0.00	$389.53
033100805060	Foundation mat, 2500#-3000# conc, over 20 cy, pump	2.677	CY	$516.09	$64.32	$43.50	$623.91
033500101040	Concrete finish, broom, darby	36	SF	$0.00	$28.83	$0.00	$28.83
				$843.37	**$647.63**	**$43.50**	**$1,534.50**
A1010.25.15	**Spread Footing 8' by 8' by 2' thick**						**Unit: EA**
031113903100	Job built, mat foundation forms, 5 uses	64	SF	$90.51	$523.57	$0.00	$614.08
032100605000	Reinforcing, straight dowels, 24" long, 1" dia	4	EA	$23.32	$8.35	$0.00	$31.67
032100901040	Reinforcing, slab, bars, #7-#8	0.196	TON	$314.78	$204.60	$0.00	$519.38
033100805060	Foundation mat, 2500#-3000# conc, over 20 cy, pump	4.74	CY	$913.80	$113.89	$77.03	$1,104.72
033500101040	Concrete finish, broom, darby	64	SF	$0.00	$51.26	$0.00	$51.26
				$1,342.41	**$901.67**	**$77.03**	**$2,321.11**
A1010.25.20	**Spread Footing 12' by 12' by 3' thick**						**Unit: EA**
031113903100	Job built, mat foundation forms, 5 uses	144	SF	$203.65	$1,178.04	$0.00	$1,381.69
032100605000	Reinforcing, straight dowels, 24" long, 1" dia	4	EA	$23.32	$8.35	$0.00	$31.67
032100901040	Reinforcing, slab, bars, #7-#8	0.588	TON	$944.33	$613.81	$0.00	$1,558.14
033100805060	Foundation mat, 2500#-3000# conc, over 20 cy, pump	16	CY	$3,084.56	$384.43	$260.00	$3,728.99
033500101040	Concrete finish, broom, darby	144	SF	$0.00	$115.33	$0.00	$115.33
				$4,255.86	**$2,299.96**	**$260.00**	**$6,815.82**

A1010.30 PILE CAPS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
A1010.30.20	**Pile Cap 4' by 4' by 2' thick**						**Unit: EA**
031113801600	Pile cap forms, job built, square/rect, 5 uses	32	SF	$60.13	$261.79	$0.00	$321.92
032100605000	Reinforcing, straight dowels, 24" long, 1" dia	4	EA	$23.32	$8.35	$0.00	$31.67
032101601060	Reinforcing, pile caps, #9-#10	0.09	TON	$144.54	$136.66	$0.00	$281.20
033100702020	Pile cap concrete, 3500# or 4000#, by pump	1.18	CY	$240.24	$64.80	$43.83	$348.87
033500101040	Concrete finish, broom, darby	16	SF	$0.00	$12.81	$0.00	$12.81
				$468.23	**$484.41**	**$43.83**	**$996.47**
A1010.30.25	**Pile Cap 4' by 8' by 18" thick**						**Unit: EA**
031113801600	Pile cap forms, job built, square/rect, 5 uses	36	SF	$67.64	$294.51	$0.00	$362.15
032100605000	Reinforcing, straight dowels, 24" long, 1" dia	4	EA	$23.32	$8.35	$0.00	$31.67
032101601060	Reinforcing, pile caps, #9-#10	0.09	TON	$144.54	$136.66	$0.00	$281.20
033100702020	Pile cap concrete, 3500# or 4000#, by pump	1.77	CY	$360.36	$97.21	$65.74	$523.31
033500101040	Concrete finish, broom, darby	32	SF	$0.00	$25.63	$0.00	$25.63
				$595.86	**$562.36**	**$65.74**	**$1,223.96**

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A SUBSTRUCTURE

A1020 SPECIAL FOUNDATIONS

A1020.10 PILES, CONCRETE

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
A1020.10.10	**Prestressed Concrete Piling, less than 60', 12" square**						**Unit: LF**
316313501002	Prestressed concrete piling, less than 60', 12" sq	1	LF	$31.99	$4.27	$4.96	$41.22
A1020.10.15	**Prestressed Concrete Piling, less than 60', 18" square**						**Unit: LF**
316313501008	Prestressed concrete piling, less than 60', 18" sq	1	LF	$56.64	$4.79	$5.56	$66.99
A1020.10.20	**Prestressed Concrete Piling, less than 60', 24" square**						**Unit: LF**
316313501012	Prestressed concrete piling, less than 60', 24" sq	1	LF	$97.99	$5.03	$5.85	$108.87
A1020.10.25	**Prestressed Concrete Piling, more than 60' long, 12" square**						**Unit: LF**
316313501120	Prestressed conc piling, more than 60' long, 12" sq	1	LF	$32.63	$3.51	$4.07	$40.21
A1020.10.30	**Prestressed Concrete Piling, more than 60' long, 18" square**						**Unit: LF**
316313501180	Prestressed conc piling, more than 60' long, 18" sq	1	LF	$56.86	$3.70	$4.30	$64.86
A1020.10.35	**Prestressed Concrete Piling, more than 60' long, 24" square**						**Unit: LF**
316313501220	Prestressed conc piling, more than 60' long, 24" sq	1	LF	$91.62	$3.85	$4.47	$99.94
A1020.10.40	**Prestressed, Straight Cylinder, less than 60', 12" diameter**						**Unit: LF**
316313501500	Prestressed, strt cyl, less than 60', 12" dia	1	LF	$29.75	$4.46	$5.18	$39.39
A1020.10.45	**Prestressed, Straight Cylinder, less than 60', 18" diameter**						**Unit: LF**
316313501580	Prestressed, strt cyl, less than 60', 18" dia	1	LF	$62.06	$4.79	$5.56	$72.41
A1020.10.50	**Prestressed, Straight Cylinder, less than 60', 24" diameter**						**Unit: LF**
316313501620	Prestressed, strt cyl, less than 60', 24" dia	1	LF	$90.97	$5.03	$5.85	$101.85
A1020.10.55	**Prestressed Straight Cylinder, more than 60' long, 12" diameter**						**Unit: LF**
316313501700	Prestressed strt cyl, more than 60' long, 12" dia	1	LF	$29.75	$3.57	$4.15	$37.47
A1020.10.60	**Prestressed Straight Cylinder, more than 60' long, 18" diameter**						**Unit: LF**
316313501760	Prestressed strt cyl, more than 60' long, 18" dia	1	LF	$62.06	$3.78	$4.38	$70.22
A1020.10.65	**Prestressed Straight Cylinder, more than 60' long, 24" diameter**						**Unit: LF**
316313501800	Prestressed strt cyl, more than 60' long, 24" dia	1	LF	$92.78	$3.93	$4.56	$101.27

A1020.15 PILES, STEEL

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
A1020.15.10	**Friction Piles, Steel Casing, w/4000 psi conc, 12" diameter**						**Unit: LF**
316216505040	Friction piles, stl casing, w/4000 psi conc, 12" dia	1	LF	$25.83	$4.91	$5.70	$36.44
A1020.15.15	**Friction Piles, Steel Casing, w/4000 psi conc, 18" diameter**						**Unit: LF**
316216505100	Friction piles, stl casing, w/4000 psi conc, 18" dia	1	LF	$40.14	$5.77	$6.71	$52.62
A1020.15.20	**Concrete Filled, 3000#, up to 40', 12" diameter**						**Unit: LF**
316216601140	Concrete filled, 3000#, up to 40', 12" dia	1	LF	$48.34	$7.55	$8.77	$64.66
A1020.15.25	**Concrete Filled, 3000#, up to 40', 18" diameter**						**Unit: LF**
316216601200	Concrete filled, 3000#, up to 40', 18" dia	1	LF	$83.69	$8.54	$9.91	$102.14
A1020.15.40	**Pipe piles, Standard Point, 12" diameter**						**Unit: EA**
316216602760	Pipe piles, standard point, 12" dia	1	EA	$206.36	$160.18	$0.00	$366.54
A1020.15.45	**Pipe piles, Standard Point, 18" diameter**						**Unit: EA**
316216602820	Pipe piles, standard point, 18" dia	1	EA	$373.47	$216.13	$0.00	$589.60

A SUBSTRUCTURE

A1020 SPECIAL FOUNDATIONS

A1020.20 PILES, WOOD

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
A1020.20.10	**Treated Wood Piles, 12" butt, 8" tip, 25' long Unit: LF**						
316219000100	Treated wood piles, 12" butt, 8" tip, 25' long	1	LF	$18.10	$9.82	$11.40	$39.32
A1020.20.15	**Treated Wood Piles, 12" butt, 8" tip, 40' long Unit: LF**						
316219000125	Treated wood piles, 12" butt, 8" tip, 40' long	1	LF	$19.28	$6.14	$7.12	$32.54
A1020.20.20	**Treated Wood Piles, 12" butt, 7" tip, 40' long Unit: LF**						
316219000130	Treated wood piles, 12" butt, 7" tip, 40' long	1	LF	$21.74	$6.14	$7.12	$35.00
A1020.20.25	**Treated Wood Piles, 12" butt, 7" tip, 60' long Unit: LF**						
316219000160	Treated wood piles, 12" butt, 7" tip, 60' long	1	LF	$24.79	$4.09	$4.75	$33.63

A1020.25 CAISSONS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
A1020.25.10	**Caisson, Including 3000# Concrete, In Stable Ground, 18" diameter Unit: LF**						
316400101020	Caisson, incl 3000# conc, in stable ground, 18" dia	1	LF	$18.66	$19.63	$22.80	$61.09
A1020.25.15	**Caisson, Including 3000# Concrete, In Stable Ground, 24" diameter Unit: LF**						
316400101040	Caisson, incl 3000# conc, in stable ground, 24" dia	1	LF	$29.84	$20.45	$23.75	$74.04
A1020.25.20	**Caisson, Including 3000# Concrete, In Stable Ground, 36" diameter Unit: LF**						
316400101080	Caisson, incl 3000# conc, in stable ground, 36" dia	1	LF	$63.60	$28.05	$32.57	$124.22
A1020.25.25	**Caisson, Including 3000# Concrete, In Stable Ground, 48" diameter Unit: LF**						
316400101100	Caisson, incl 3000# conc, in stable ground, 48" dia	1	LF	$113.61	$32.72	$38.00	$184.33

A1020 ADDITIONAL PILING COSTS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
A1020.12.10	**Mobilization, equip, pile driving rig, minimum ..... EA**						
015400801360	Mobilization, equip, pile driving rig, minimum	1	EA	$14,880	$0.00	$0.00	$14,880
A1020.12.15	**Mobilization, equip, pile driving rig, average ..... EA**						
015400801380	Mobilization Mobilization, equip, pile driving rig, average	1	EA	$29,800	$0.00	$0.00	$29,800
A1020.12.20	**Mobilization, equip, pile driving rig, maximum ..... EA**						
015400801400	Mobilization Mobilization, equip, pile driving rig, maximum	1	EA	$53,600	$0.00	$0.00	$53,600
A1020.14.10	**Pile test, 50 ton to 100 ton ..... EA**						
316200101020	Pile test, 50 ton to 100 ton	1.000	EA	$20,680	$0.00	$0.00	$20,680
A1020.14.15	**Pile test, 50 ton to 300 ton ..... EA**						
316200101060	Pile test, 50 ton to 300 ton	1.000	EA	$34,000	$0.00	$0.00	$34,000
A1020.14.20	**Pile test, 50 ton to 600 ton ..... EA**						
316200101100	Pile test, 50 ton to 600 ton	1	EA	$49,400	$0.00	$0.00	$49,400

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A SUBSTRUCTURE

A1020 SPECIAL FOUNDATIONS

A1020.30 GRADE BEAMS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
A1020.30.10	**GRADE BEAM, 1' Wide x 2' High**						**Unit: LF**
031003004030	Snap ties, long-end with washers, 12" long	2	EA	$4.98	$0.00	$0.00	$4.98
031113701100	Job built, grade beam forms, 5 uses	4	SF	$5.98	$27.27	$0.00	$33.25
032100801040	Reinforcing, grade beams, #7-#8	0.05	TON	$80.30	$49.12	$0.00	$129.42
033100601120	Place conc, grade beam, 3000# or 4000#, by pump	0.07	CY	$14.25	$3.36	$2.28	$19.89
033500104020	Wall finishes, burlap rub, w/cement paste	4	SF	$0.66	$4.27	$0.00	$4.93
033500104160	Break ties and patch holes	4	SF	$0.00	$5.13	$0.00	$5.13
312333601140	Trenching, hydraulic excavator, 1/2 cy, medium soil	0.75	CY	$0.00	$2.31	$3.00	$5.31
312333603740	Spread dumped fill or gravel, no comp, 6" layers	2	SY	$0.00	$2.12	$2.42	$4.54
312333603820	Spread dumped fill or gravel, by hand w/air tamp	6	SY	$0.00	$7.69	$2.58	$10.27
				$106.17	**$101.27**	**$10.28**	**$217.72**
A1020.30.25	**GRADE BEAM, 18" Wide x 3' High**						**Unit: LF**
031003004030	Snap ties, long-end with washers, 12" long	3	EA	$7.47	$0.00	$0.00	$7.47
031113701100	Job built, grade beam forms, 5 uses	6	SF	$8.97	$40.90	$0.00	$49.87
032100801040	Reinforcing, grade beams, #7-#8	0.12	TON	$192.72	$117.90	$0.00	$310.62
033100601120	Place conc, grade beam, 3000# or 4000#, by pump	0.18	CY	$36.65	$8.65	$5.85	$51.15
033500104020	Wall finishes, burlap rub, w/cement paste	6	SF	$0.99	$6.41	$0.00	$7.40
033500104160	Break ties and patch holes	6	SF	$0.00	$7.69	$0.00	$7.69
312333601140	Trenching, hydraulic excavator, 1/2 cy, medium soil	1.8	CY	$0.00	$5.54	$7.20	$12.74
312333603740	Spread dumped fill or gravel, no comp, 6" layers	2	SY	$0.00	$2.12	$2.42	$4.54
312333603820	Spread dumped fill or gravel, by hand w/air tamp	6	SY	$0.00	$7.69	$2.58	$10.27
				$246.80	**$196.90**	**$18.05**	**$461.75**
A1020.30.30	**GRADE BEAM, 24" Wide x 4' High**						**Unit: LF**
031003004030	Snap ties, long-end with washers, 12" long	4	EA	$9.96	$0.00	$0.00	$9.96
031113701100	Job built, grade beam forms, 5 uses	8	SF	$11.96	$54.54	$0.00	$66.50
032100801040	Reinforcing, grade beams, #7-#8	0.2	TON	$321.20	$196.50	$0.00	$517.70
033100601120	Place conc, grade beam, 3000# or 4000#, by pump	0.28	CY	$57.01	$13.46	$9.10	$79.57
033500104020	Wall finishes, burlap rub, w/cement paste	8	SF	$1.32	$8.54	$0.00	$9.86
033500104160	Break ties and patch holes	8	SF	$0.00	$10.25	$0.00	$10.25
312333601140	Trenching, hydraulic excavator, 1/2 cy, medium soil	3	CY	$0.00	$9.23	$12.00	$21.23
312333603740	Spread dumped fill or gravel, no comp, 6" layers	4	SY	$0.00	$4.24	$4.83	$9.07
312333603820	Spread dumped fill or gravel, by hand w/air tamp	8	SY	$0.00	$10.25	$3.44	$13.69
				$401.45	**$307.01**	**$29.37**	**$737.83**

A SUBSTRUCTURE

A1030 SLAB ON GRADE

A1030.10 SLAB ON GRADE

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
A1030.10.05	**SLAB ON GRADE, 4" thick, 20' by 20' ..... Unit: SF**						
031124205040	Metal formwork, straight edge, 4" high	0.1	LF	$2.47	$0.51	$0.00	$2.98
032100901000	Reinforcing, slab, bars, #3-#4	0.001	TON	$1.88	$1.39	$0.00	$3.27
033100802040	Place conc, slab/mat, 3500# or 4000#, by pump	0.013	CY	$2.65	$0.36	$0.24	$3.25
033500101020	Concrete finish, broom, screed	1	SF	$0.00	$0.80	$0.00	$0.80
033500101060	Concrete finish, float	1	SF	$0.00	$1.07	$0.00	$1.07
072600101010	Vapor barrier, polyethylene, 6 mil	1	SF	$0.09	$0.32	$0.00	$0.41
312313103020	Base course, bank run gravel, 4" deep	0.111	SY	$0.54	$0.05	$0.06	$0.65
312313104030	Prepare and roll subbase, average	0.111	SY	$0.00	$0.06	$0.08	$0.14
				$7.63	**$4.56**	**$0.38**	**$12.57**
A1030.10.10	**SLAB ON GRADE, 6" thick, 20' by 20' ..... Unit: SF**						
031113904004	Mat foundation form, job built, edge, 6" high, 5 use	0.1	LF	$0.14	$0.63	$0.00	$0.77
032100901020	Reinforcing, slab, bars, #5-#6	0.002	TON	$3.30	$2.39	$0.00	$5.69
033100802040	Place conc, slab/mat, 3500# or 4000#, by pump	0.019	CY	$3.87	$0.52	$0.35	$4.74
033500101020	Concrete finish, broom, screed	1	SF	$0.00	$0.80	$0.00	$0.80
033500101060	Concrete finish, float	1	SF	$0.00	$1.07	$0.00	$1.07
072600101010	Vapor barrier, polyethylene, 6 mil	1	SF	$0.09	$0.32	$0.00	$0.41
312313103020	Base course, bank run gravel, 4" deep	0.111	SY	$0.54	$0.05	$0.06	$0.65
312313104030	Prepare and roll subbase, average	0.111	SY	$0.00	$0.06	$0.08	$0.14
				$7.94	**$5.84**	**$0.49**	**$14.27**
A1030.10.20	**SLAB ON GRADE, 8" thick, 20' by 20' ..... Unit: SF**						
031113904014	Mat foundation form, job built, edge, 12" high, 5 use	0.1	LF	$0.13	$0.68	$0.00	$0.81
032100901020	Reinforcing, slab, bars, #5-#6	0.003	TON	$4.95	$3.58	$0.00	$8.53
033100802040	Place conc, slab/mat, 3500# or 4000#, by pump	0.025	CY	$5.09	$0.69	$0.46	$6.24
033500101020	Concrete finish, broom, screed	1	SF	$0.00	$0.80	$0.00	$0.80
033500101060	Concrete finish, float	1	SF	$0.00	$1.07	$0.00	$1.07
072600101010	Vapor barrier, polyethylene, 6 mil	1	SF	$0.09	$0.32	$0.00	$0.41
312313103020	Base course, bank run gravel, 4" deep	0.111	SY	$0.54	$0.05	$0.06	$0.65
312313104030	Prepare and roll subbase, average	0.111	SY	$0.00	$0.06	$0.08	$0.14
				$10.80	**$7.25**	**$0.60**	**$18.65**

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B SHELL

B1010 FLOOR CONSTRUCTION

B1010.10 COLUMNS, CONCRETE

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B1010.10.10	**C.I.P. COLUMNS, SQUARE, 12" by 12", 10' high ..... Unit: EA**						
031113201290	Job built, column forms, 12"x 12", 5 uses	40	SF	$67.06	$519.42	$0.00	$586.48
031124202070	Chamfer strips, wood, 1" wide	40	LF	$20.21	$72.72	$0.00	$92.93
032100301020	Reinforcing, columns, #9-#10	0.086	TON	$138.12	$130.58	$0.00	$268.70
033100202020	Place concrete, columns, 2500#-3500#, by pump	0.37	CY	$75.33	$23.71	$16.03	$115.07
033500104020	Wall finishes, burlap rub, w/cement paste	40	SF	$6.58	$42.71	$0.00	$49.29
				$307.30	**$789.14**	**$16.03**	**$1,112.47**
B1010.10.11	**C.I.P. COLUMNS, SQUARE, 16" by 16", 10' high ..... Unit: EA**						
031113201390	Column, square forms, job built, 16"x 16", 5 uses	54	SF	$83.79	$649.65	$0.00	$733.44
031124202070	Chamfer strips, wood, 1" wide	40	LF	$20.21	$72.72	$0.00	$92.93
032100301020	Reinforcing, columns, #9-#10	0.152	TON	$244.11	$230.80	$0.00	$474.91
033100202020	Place concrete, columns, 2500#-3500#, by pump	0.65	CY	$132.34	$41.65	$28.17	$202.16
033500104020	Wall finishes, burlap rub, w/cement paste	54	SF	$8.88	$57.66	$0.00	$66.54
				$489.33	**$1,052.48**	**$28.17**	**$1,569.98**
B1010.10.12	**C.I.P. COLUMNS, SQUARE, 24" by 24", 10' high ..... Unit: EA**						
031113201490	Column, square forms, job built, 24"x 24", 5 uses	80	SF	$114.14	$896.53	$0.00	$1,010.67
031124202070	Chamfer strips, wood, 1" wide	40	LF	$20.21	$72.72	$0.00	$92.93
032100301020	Reinforcing, columns, #9-#10	0.344	TON	$552.46	$522.33	$0.00	$1,074.79
033100202020	Place concrete, columns, 2500#-3500#, by pump	1.48	CY	$301.32	$94.83	$64.13	$460.28
033500104020	Wall finishes, burlap rub, w/cement paste	80	SF	$13.16	$85.43	$0.00	$98.59
				$1,001.29	**$1,671.84**	**$64.13**	**$2,737.26**
B1010.10.15	**C.I.P. COLUMNS, ROUND, 12" diameter, 10' high ..... Unit: EA**						
031113202060	Column, round fiber form, 1 use, 12" dia	10	LF	$71.32	$166.96	$0.00	$238.28
032100301020	Reinforcing, columns, #9-#10	0.086	TON	$138.12	$130.58	$0.00	$268.70
033100202020	Place concrete, columns, 2500#-3500#, by pump	0.291	CY	$59.25	$18.64	$12.61	$90.50
033500104020	Wall finishes, burlap rub, w/cement paste	31.4	SF	$5.16	$33.53	$0.00	$38.69
				$273.85	**$349.71**	**$12.61**	**$636.17**
B1010.10.16	**C.I.P. COLUMNS, ROUND, 16" diameter, 10' high ..... Unit: EA**						
031113202100	Column, round fiber form, 1 use, 16" dia	10	LF	$122.66	$181.80	$0.00	$304.46
032100301020	Reinforcing, columns, #9-#10	0.154	TON	$247.32	$233.83	$0.00	$481.15
033100202020	Place concrete, columns, 2500#-3500#, by pump	0.523	CY	$106.48	$33.51	$22.66	$162.65
033500104020	Wall finishes, burlap rub, w/cement paste	41.7	SF	$6.86	$44.53	$0.00	$51.39
				$483.32	**$493.67**	**$22.66**	**$999.65**
B1010.10.17	**C.I.P. COLUMNS, ROUND, 24" diameter, 10' high ..... Unit: EA**						
031113202140	Column, round fiber form, 1 use, 24" dia	10	LF	$245.33	$209.76	$0.00	$455.09
032100301020	Reinforcing, columns, #9-#10	0.344	TON	$552.46	$522.33	$0.00	$1,074.79
033100202020	Place concrete, columns, 2500#-3500#, by pump	1.164	CY	$236.98	$74.58	$50.44	$362.00
033500104020	Wall finishes, burlap rub, w/cement paste	62.8	SF	$10.33	$67.06	$0.00	$77.39
				$1,045.10	**$873.73**	**$50.44**	**$1,969.27**

B1010 FLOOR CONSTRUCTION

B1010.20 COLUMNS, STEEL

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B1010.20.10	**COLUMNS, Steel, W Series (Wide Flange), 8" by 8", 10' high ..... Unit: EA**						
051200100140	Beams and girders, A-36, bolted	0.15	TON	$611.06	$66.93	$77.73	$755.72
051200101040	Column base plates, over 150 lb each	150	LB	$310.45	$103.51	$0.00	$413.96
078100101040	Fireproofing, sprayed on, 1" thick, on columns	33.3	SF	$30.40	$42.67	$0.00	$73.07
				$951.91	**$213.11**	**$77.73**	**$1,242.75**
B1010.20.15	**COLUMNS, Steel, W Series (Wide Flange), 12" by 12", 10' high ..... Unit: EA**						
051200100140	Beams and girders, A-36, bolted	0.225	TON	$916.59	$100.40	$116.59	$1,133.58
051200101040	Column base plates, over 150 lb each	150	LB	$310.45	$103.51	$0.00	$413.96
078100101040	Fireproofing, sprayed on, 1" thick, on columns	50	SF	$45.65	$64.07	$0.00	$109.72
				$1,272.69	**$267.98**	**$116.59**	**$1,657.26**
B1010.20.20	**COLUMNS, Steel, W Series (Wide Flange), 16" by 16", 10' high ..... Unit: EA**						
051200100140	Beams and girders, A-36, bolted	0.5	TON	$2,036.86	$223.11	$259.09	$2,519.06
051200101040	Column base plates, over 150 lb each	150	LB	$310.45	$103.51	$0.00	$413.96
078100101040	Fireproofing, sprayed on, 1" thick, on columns	6.25	SF	$5.71	$8.01	$0.00	$13.72
				$2,353.02	**$334.63**	**$259.09**	**$2,946.74**

B1010.25 COLUMNS, WOOD

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B1010.25.10	**COLUMNS, Wood, 8" by 8", 10' high ..... Unit: EA**						
051200101020	Column base plates, up to 150 lb each	50	LB	$126.80	$27.60	$0.00	$154.40
060523101100	Anchor bolts, threaded, incl nuts, 3/4" D, 15" L	2	EA	$22.26	$10.23	$0.00	$32.49
061300101440	Mill framing, column, douglas fir, 8 x 8	10	LF	$177.21	$96.11	$65.00	$338.32
				$326.27	**$133.94**	**$65.00**	**$525.21**
B1010.25.15	**COLUMNS, Wood, 12" by 12", 10' high ..... Unit: EA**						
051200101020	Column base plates, up to 150 lb each	50	LB	$126.80	$27.60	$0.00	$154.40
060523101100	Anchor bolts, threaded, incl nuts, 3/4" D, 15" L	2	EA	$22.26	$10.23	$0.00	$32.49
061300101480	Mill framing, column, douglas fir, 12 x 12	10	LF	$383.68	$106.79	$72.22	$562.69
				$532.74	**$144.62**	**$72.22**	**$749.58**

B1010.30 COLUMNS, PRECAST

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B1010.30.10	**COLUMNS, Precast, 10" by 10", 10' high ..... Unit: EA**						
034100200100	Prestressed concrete columns, 10"x 10", 10' long	1	EA	$365.19	$98.17	$114.00	$577.36
051200101020	Column base plates, up to 150 lb each	50	LB	$126.80	$27.60	$0.00	$154.40
				$491.99	**$125.77**	**$114.00**	**$731.76**
B1010.30.20	**COLUMNS, Precast, 24" by 24", 20' high ..... Unit: EA**						
034100201040	Prestressed concrete columns, 24"x 24", 20' long	1	EA	$4,293.89	$136.35	$158.33	$4,588.57
051200101020	Column base plates, up to 150 lb each	50	LB	$126.80	$27.60	$0.00	$154.40
				$4,420.69	**$163.95**	**$158.33**	**$4,742.97**

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B1010 FLOOR CONSTRUCTION

B1010.50 FLOOR, CONCRETE

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B1010.50.10	**FLOOR SYSTEM, C.I.P. Beams & Slab 20' by 20' Bay Size ..... Unit: SF**						
015400101180	Staging/scaffolding, measured by SF surface, ave	1	SF	$1.38	$0.00	$0.00	$1.38
031113001120	Job built, beam bottom forms, 5 uses	0.2	SF	$0.46	$2.34	$0.00	$2.80
031113002100	Job built, beam side forms, 5 uses	0.6	SF	$1.22	$4.46	$0.00	$5.68
031113401100	Job built, slab forms, drop panel, 5 uses	0.81	SF	$1.92	$4.57	$0.00	$6.49
031500106220	Reinf access, chairs, 2" high, plain	2	EA	$3.41	$4.18	$0.00	$7.59
032100101012	Reinforcing, beams-girders, #9-#10	0.003	TON	$4.82	$3.58	$0.00	$8.40
032100401060	Reinforcing, elevated slab, #9-#10	0.007	TON	$11.24	$5.31	$0.00	$16.55
033100302020	Place elev slab conc, 3500# or 4000#, by pump	0.031	CY	$6.31	$0.92	$0.62	$7.85
033500101020	Concrete finish, broom, screed	1	SF	$0.00	$0.80	$0.00	$0.80
033500101060	Concrete finish, float	1	SF	$0.00	$1.07	$0.00	$1.07
				$30.76	**$27.23**	**$0.62**	**$58.61**

B1010.60 FLOOR, PRECAST

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B1010.60.10	**FLOOR SYSTEM, Precast Beam & Slab with Topping 20' by 20' Bay Size ..... Unit: SF**						
031113301080	Job built curb forms, 6" high, 5 uses	0.2	LF	$0.25	$1.36	$0.00	$1.61
031500106220	Reinf access, chairs, 2" high, plain	1	EA	$1.71	$2.09	$0.00	$3.80
032100905080	Reinforcing, slab, galv mesh, 4x4, w4.0xw4.0	1.1	SF	$2.00	$0.77	$0.00	$2.77
033100302020	Place elev slab conc, 3500# or 4000#, by pump	0.012	CY	$2.44	$0.35	$0.24	$3.03
033500101040	Concrete finish, broom, darby	1	SF	$0.00	$0.80	$0.00	$0.80
033500101060	Concrete finish, float	1	SF	$0.00	$1.07	$0.00	$1.07
034100103340	Precast beams, girder, joists, 5000 lb/lf LL, 20' span	0.1	LF	$24.18	$0.98	$1.14	$26.30
034100300110	Prestr flat slab, 6" thk, 4' w, 20' span, 110 psf	1	SF	$25.57	$2.05	$2.38	$30.00
				$56.15	**$9.47**	**$3.76**	**$69.38**

B1010.70 FLOOR, CONCRETE & OPEN WEB JOISTS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B1010.70.10	**FLOOR SYSTEM, Concrete Deck on Open Web Joists on Wall System 30' Span ..... Unit: SF**						
031500106220	Reinf access, chairs, 2" high, plain	1	EA	$1.71	$2.09	$0.00	$3.80
032100905080	Reinforcing, slab, galv mesh, 4x4, w4.0xw4.0	1.05	SF	$1.91	$0.73	$0.00	$2.64
033100302020	Place elev slab conc, 3500# or 4000#, by pump	0.012	CY	$2.44	$0.35	$0.24	$3.03
033500101040	Concrete finish, broom, darby	1	SF	$0.00	$0.80	$0.00	$0.80
033500101060	Concrete finish, float	1	SF	$0.00	$1.07	$0.00	$1.07
052100100120	Joist, K series	0.005	TON	$14.84	$1.64	$1.90	$18.38
053100101020	Open type decking, galv, 1-1/2" d, 18 ga	1.05	SF	$4.78	$0.86	$1.00	$6.64
				$25.68	**$7.54**	**$3.14**	**$36.36**

B SHELL

B1010 FLOOR CONSTRUCTION

B1010.75 FLOOR, CONCRETE & W SERIES STRUCTURAL STEEL

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B1010.75.10	**FLOOR SYSTEM, Concrete on W (Wide Flange) System 20' by 20' Bay Size ..... Unit: SF**						
031113301080	Job built curb forms, 6" high, 5 uses	0.2	LF	$0.25	$1.36	$0.00	$1.61
031500106220	Reinf access, chairs, 2" high, plain	1	EA	$1.71	$2.09	$0.00	$3.80
032100401020	Reinforcing, elevated slab, #5-#6	0.002	TON	$3.30	$1.86	$0.00	$5.16
033100302020	Place elev slab conc, 3500# or 4000#, by pump	0.012	CY	$2.44	$0.35	$0.24	$3.03
033500101040	Concrete finish, broom, darby	1	SF	$0.00	$0.80	$0.00	$0.80
033500101060	Concrete finish, float	1	SF	$0.00	$1.07	$0.00	$1.07
051200100140	Beams and girders, A-36, bolted	0.006	TON	$24.44	$2.68	$3.11	$30.23
053100101020	Open type decking, galv, 1-1/2" d, 18 ga	1	SF	$4.55	$0.82	$0.95	$6.32
078100101120	Fireproofing, 1-1/2" thick, on beams	1.93	SF	$3.10	$3.53	$0.00	$6.63
				$39.79	**$14.56**	**$4.30**	**$58.65**

B1010.80 FLOOR, LAMINATED WOOD

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B1010.80.10	**FLOOR SYSTEM, Laminated Wood System 20' by 20' Bay Size ..... Unit: SF**						
060523101284	Joist and beam hangers, 18 ga, 2 x 10	0.2	EA	$0.48	$1.82	$0.00	$2.30
061100301220	Floor joists, 16" oc, 2x10	1	SF	$1.99	$1.41	$0.00	$3.40
061600102080	Sub-flooring, plywood, CDX, 3/4" thick	1	SF	$1.10	$1.36	$0.00	$2.46
061813103280	Laminated beams, gluelam beam, 7-1/2" wide x 18"	0.15	LF	$9.47	$0.77	$0.52	$10.76
061813103550	Laminated beams, gluelam beam, 9-1/2" wide x 30"	0.1	LF	$13.32	$0.59	$0.40	$14.31
				$26.36	**$5.95**	**$0.92**	**$33.23**

B1010.85 FLOOR, WOOD BEAMS & JOISTS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B1010.85.10	**FLOOR SYSTEM, Wooden Beams & Joists 16' by 16' Bay Size ..... Unit: SF**						
060523101284	Joist and beam hangers, 18 ga, 2 x 10	0.25	EA	$0.61	$2.27	$0.00	$2.88
061100301220	Floor joists, 16" oc, 2x10	1	SF	$1.99	$1.41	$0.00	$3.40
061300101044	Mill framing, beam, douglas fir, 6 x 12	0.188	LF	$3.85	$1.34	$0.91	$6.10
061300101090	Mill framing, beam, douglas fir, 8 x 16	0.125	LF	$4.55	$0.96	$0.65	$6.16
061600102080	Sub-flooring, plywood, CDX, 3/4" thick	1	SF	$1.10	$1.36	$0.00	$2.46
				$12.10	**$7.34**	**$1.56**	**$21.00**

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B1020 ROOF SYSTEMS

B1020.15 ROOF, CONCRETE & W SERIES STRUCTURAL STEEL

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B1020.15.10	**ROOF SYSTEM, W Series (Wide Flange) System, Conc. Deck, 20' by 20' Bay Size ..... Unit: SF**						
031113301080	Job built curb forms, 6" high, 5 uses	1	LF	$1.23	$6.82	$0.00	$8.05
031500106220	Reinf access, chairs, 2" high, plain	1	EA	$1.71	$2.09	$0.00	$3.80
032100905080	Reinforcing, slab, galv mesh, 4x4, w4.0xw4.0	1	SF	$1.82	$0.70	$0.00	$2.52
033100302020	Place elev slab conc, 3500# or 4000#, by pump	0.01	CY	$2.04	$0.30	$0.20	$2.54
033500101040	Concrete finish, broom, darby	1	SF	$0.00	$0.80	$0.00	$0.80
051200100140	Beams and girders, A-36, bolted	0.005	TON	$20.37	$2.23	$2.59	$25.19
053100101020	Open type decking, galv, 1-1/2" d, 18 ga	1	SF	$4.55	$0.82	$0.95	$6.32
078100101120	Fireproofing, 1-1/2" thick, on beams	1.7	SF	$2.73	$3.11	$0.00	$5.84
				$34.45	**$16.87**	**$3.74**	**$55.06**

B1020.20 ROOF, CONCRETE & OPEN WEB JOISTS, ON WALLS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B1020.20.10	**ROOF SYSTEM, Concrete Deck on Open Web Joists on Wall System 30' Span ..... Unit: SF**						
031500106220	Reinf access, chairs, 2" high, plain	1	EA	$1.71	$2.09	$0.00	$3.80
032100905080	Reinforcing, slab, galv mesh, 4x4, w4.0xw4.0	1.05	SF	$1.91	$0.73	$0.00	$2.64
033100302020	Place elev slab conc, 3500# or 4000#, by pump	0.012	CY	$2.44	$0.35	$0.24	$3.03
033500101040	Concrete finish, broom, darby	1	SF	$0.00	$0.80	$0.00	$0.80
052100100120	Joist, K series	0.003	TON	$8.90	$0.98	$1.14	$11.02
053100101020	Open type decking, galv, 1-1/2" d, 18 ga	1.05	SF	$4.78	$0.86	$1.00	$6.64
				$19.74	**$5.81**	**$2.38**	**$27.93**

B1020.25 ROOF, CONCRETE & OPEN WEB JOISTS & GIRDERS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B1020.25.10	**ROOF SYSTEM, Conc. Deck on Open Web Joists & Girders 20' by 20' Bay Size ..... Unit: SF**						
031113301080	Job built curb forms, 6" high, 5 uses	0.2	LF	$0.25	$1.36	$0.00	$1.61
031500106220	Reinf access, chairs, 2" high, plain	1	EA	$1.71	$2.09	$0.00	$3.80
032100905080	Reinforcing, slab, galv mesh, 4x4, w4.0xw4.0	1.05	SF	$1.91	$0.73	$0.00	$2.64
033100302020	Place elev slab conc, 3500# or 4000#, by pump	0.012	CY	$2.44	$0.35	$0.24	$3.03
033500101040	Concrete finish, broom, darby	1	SF	$0.00	$0.80	$0.00	$0.80
051200100140	Beams and girders, A-36, bolted	0.003	TON	$12.22	$1.34	$1.55	$15.11
052100100120	Joist, K series	0.004	TON	$11.87	$1.31	$1.52	$14.70
053100101020	Open type decking, galv, 1-1/2" d, 18 ga	1.05	SF	$4.78	$0.86	$1.00	$6.64
				$35.18	**$8.84**	**$4.31**	**$48.33**

B1020.30 ROOF, WOOD TRUSS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B1020.30.10	**ROOF SYSTEM, Wood Truss, 5/12 Pitch, 24" O.C., 30' Span, CDX Sheathing .... Unit: SF**						
061100505080	Fascia board, 2 x 8	0.067	LF	$0.16	$0.30	$0.00	$0.46
061600201020	Roof sheathing, plywood, CDX, 1/2" thick	1	SF	$0.82	$1.09	$0.00	$1.91
061753101055	Truss, fink, 2 x 4 members, 5 pitch, 30' span	0.017	EA	$4.66	$1.02	$0.69	$6.37
071113100120	Building paper, 15# felt	1	SF	$0.22	$2.56	$0.00	$2.78
072116102120	Batt Insul, wall, foil back, 3", R11	1	SF	$0.75	$0.71	$0.00	$1.46
073113101120	Shingles, asphalt strip, 385 lb/square	0.01	SQ	$3.07	$1.56	$0.00	$4.63
077123103260	Gutter, aluminum, stock, 4" wide	0.07	LF	$0.18	$0.58	$0.00	$0.76
				$9.86	**$7.82**	**$0.69**	**$18.37**

B SHELL

B2010 EXTERIOR WALLS

B2010.10 WALL SYSTEMS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B2010.10.10	**WALL SYSTEM, Brick Veneer on 8" Concrete Backup Block, 10 ' high ..... Unit: SF**						
040523101120	Horizontal joint reinf, truss type, 6" wide, 8" wall	1	LF	$0.21	$0.33	$0.00	$0.54
040523103440	Brick anchor, corrugated, 3-1/2" long, 16 ga	1	EA	$0.23	$1.30	$0.00	$1.53
040523501020	Masonry flashing, 0.030" elastomeric	0.1	SF	$0.11	$0.52	$0.00	$0.63
042113101020	Standard brick, red (6.4/sf), veneer	1	SF	$5.66	$13.01	$0.00	$18.67
042200100160	CMU, lightweight block, hollow, load bearing, 8"	1	SF	$2.74	$6.50	$0.00	$9.24
				$8.95	**$21.66**	**$0.00**	**$30.61**
B2010.10.15	**WALL SYSTEM, Brick Veneer on 6" Metal Stud Wall, 10 ' high ..... Unit: SF**						
040523103440	Brick anchor, corrugated, 3-1/2" long, 16 ga	1	EA	$0.23	$1.30	$0.00	$1.53
040523501020	Masonry flashing, 0.030" elastomeric	0.1	SF	$0.11	$0.52	$0.00	$0.63
042113101020	Standard brick, red (6.4/sf), veneer	1	SF	$5.66	$13.01	$0.00	$18.67
061600307000	Wall sheathing, gypsum, 1/2" thick	1	SF	$0.62	$1.26	$0.00	$1.88
071100101140	Silicone damproofing, spray on, brick, 2 coats	1	SF	$1.21	$0.64	$0.00	$1.85
072116102160	Batt insul, wall, foil backed, 1 side, 6" thick, R19	1	SF	$1.03	$0.80	$0.00	$1.83
092116100224	Metal stud, 20 ga, 6", 24" oc	1	SF	$0.85	$1.70	$0.00	$2.55
				$9.71	**$19.23**	**$0.00**	**$28.94**
B2010.10.20	**WALL SYSTEM, Stucco on 6" Metal Stud Wall, 10 ' high ..... Unit: SF**						
040523501020	Masonry flashing, 0.030" elastomeric	0.1	SF	$0.11	$0.52	$0.00	$0.63
061600307000	Wall sheathing, gypsum, 1/2" thick	1	SF	$0.62	$1.26	$0.00	$1.88
071113100120	Building paper, 15# felt	1	SF	$0.22	$2.56	$0.00	$2.78
072116102160	Batt insul, wall, foil backed, 1 side, 6" thick, R19	1	SF	$1.03	$0.80	$0.00	$1.83
092116100224	Metal stud, 20 ga, 6", 24" oc	1	SF	$0.85	$1.70	$0.00	$2.55
092236202400	Stucco lath, paper backed, max	0.11	SY	$1.07	$1.29	$0.00	$2.36
092400103000	Stucco, portland, 3 coats, 1" thick, sand finish	0.11	SY	$1.35	$3.65	$0.00	$5.00
				$5.25	**$11.78**	**$0.00**	**$17.03**
B2010.10.25	**WALL SYSTEM, C.I.P. Concrete, 12" thick, 10 ' high ..... Unit: SF**						
031003004030	Snap ties, long-end with washers, 12" long	1	EA	$2.49	$0.00	$0.00	$2.49
031114103290	Wall forms, ext, job built, over 8' high wall, 5 uses	2	SF	$4.75	$16.36	$0.00	$21.11
032101101040	Reinforcing, wall, #7-#8	0.005	TON	$8.03	$4.64	$0.00	$12.67
033100901040	Place wall conc, 2500# or 3000#, to 8', by pump	0.037	CY	$7.13	$2.37	$1.60	$11.10
033500104020	Wall finishes, burlap rub, w/cement paste	2	SF	$0.33	$2.14	$0.00	$2.47
033500104160	Break ties and patch holes	2	SF	$0.00	$2.56	$0.00	$2.56
				$22.73	**$28.07**	**$1.60**	**$52.40**

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B SHELL

B2010 EXTERIOR WALLS

B2010.10 WALL SYSTEMS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B2010.10.30	**WALL SYSTEM, Precast, 8'x 20', Gray Cement - Liner Finish, 8" thick ..... Unit: SF**						
034500100160	Precast wall, 8'x 20', gray cem, liner fin, 8" wall	1	SF	$43.72	$1.53	$1.78	$47.03
				$43.72	**$1.53**	**$1.78**	**$47.03**
B2010.10.35	**WALL SYSTEM, Tilt-up Concrete, 8" thick wall, 20' wide by 20' high ..... Unit: SF**						
031113904014	Mat foundation form, job built, edge, 12" high, 5 use	0.2	LF	$0.26	$1.36	$0.00	$1.62
031113905100	Formwork for openings, 5 uses	0.16	SF	$0.33	$1.87	$0.00	$2.20
032100901040	Reinforcing, slab, bars, #7-#8	0.002	TON	$3.21	$2.09	$0.00	$5.30
033100802060	Place conc, slab/mat, 3500# or 4000#, by hand buggy	0.025	CY	$5.09	$1.07	$0.00	$6.16
033500101040	Concrete finish, broom, darby	1	SF	$0.00	$0.80	$0.00	$0.80
033500101060	Concrete finish, float	1	SF	$0.00	$1.07	$0.00	$1.07
				$8.89	**$8.26**	**$0.00**	**$17.15**
B2010.10.40	**WALL SYSTEM, 12" Concrete Block, 10 ' high ..... Unit: SF**						
040516103060	Grouting concrete block, 12"	1	SF	$2.26	$2.01	$1.68	$5.95
040523101020	Standard steel bar reinforcing, horizontal, #3 - #4	2	LB	$1.27	$6.24	$0.00	$7.51
040523501020	Masonry flashing, 0.030" elastomeric	0.1	SF	$0.11	$0.52	$0.00	$0.63
042200104100	CMU, hollow, split ground face, 12"	1	SF	$5.28	$7.80	$0.00	$13.08
				$8.92	**$16.57**	**$1.68**	**$27.17**
B2010.10.50	**WALL SYSTEM, Wood, 2x6 Wood Stud Wall With Siding, 10" High ..... Unit: SF**						
061100801150	Framing, wall studs, 16" oc, 2 x 6	1	SF	$1.20	$1.36	$0.00	$2.56
061600301020	Wall sheathing, plywood, CDX, 1/2" thick	1	SF	$0.82	$1.26	$0.00	$2.08
071113100120	Building paper, 15# felt	1	SF	$0.22	$2.56	$0.00	$2.78
072116102160	Batt insul, wall, foil backed, 1 side, 6" thick, R19	1	SF	$1.03	$0.80	$0.00	$1.83
074646101000	Wood Fiber Lap siding 5/16" x 8.25 x 12', 7" exposure	1	SF	$1.83	$3.15	$0.00	$4.98
092900101270	Standard drywall, 1/2" thick, nailed or screwed, walls	1	SF	$0.43	$0.74	$0.00	$1.17
092900106060	Drywall, taping & finishing joints, level 3	1	SF	$0.08	$0.68	$0.00	$0.76
096516101020	Vinyl cove molding, 6" high	0.1	LF	$0.51	$0.16	$0.00	$0.67
099123304180	Int painting, walls, roller, first coat, avg	1	SF	$0.18	$0.25	$0.00	$0.43
099123304260	Int painting, walls, roller, second coat, avg	1	SF	$0.18	$0.23	$0.00	$0.41
				$6.48	**$11.19**	**$0.00**	**$17.67**

B2020 EXTERIOR WINDOWS

B2020.10 STEEL WINDOWS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B2020.10.10	**Steel Windows, primed, casements, operable, minimum**						**Unit: SF**
085123101020	Steel windows, primed, casements, operable, minimum	1	SF	$56.07	$4.87	$0.00	$60.94
B2020.10.15	**Steel Windows, primed, casements, operable, maximum**						**Unit: SF**
085123101040	Steel windows, primed, casements, operable, maximum	1	SF	$84.04	$5.52	$0.00	$89.56
B2020.10.20	**Steel Windows, primed, casements, fixed sash**						**Unit: SF**
085123101060	Steel windows, primed, casements, fixed sash	1	SF	$44.81	$4.14	$0.00	$48.95
B2020.10.25	**Steel Windows, primed, double hung**						**Unit: SF**
085123101080	Steel windows, primed, double hung	1	SF	$84.04	$4.60	$0.00	$88.64
B2020.10.30	**Industrial Windows, horizontally pivoted sash**						**Unit: SF**
085123101120	Industrial windows, horizontally pivoted sash	1	SF	$78.45	$5.52	$0.00	$83.97
B2020.10.35	**Industrial Windows, fixed sash**						**Unit: SF**
085123101130	Industrial windows, fixed sash	1	SF	$56.07	$4.60	$0.00	$60.67
B2020.10.40	**Industrial Windows, security sash, operable**						**Unit: SF**
085123101140	Industrial windows, security sash, operable	1	SF	$89.07	$5.52	$0.00	$94.59
B2020.10.45	**Industrial Windows, security sash, fixed**						**Unit: SF**
085123101150	Industrial windows, security sash, fixed	1	SF	$78.98	$4.60	$0.00	$83.58
B2020.10.50	**Picture Window**						**Unit: SF**
085123101155	Picture window	1	SF	$38.23	$4.60	$0.00	$42.83
B2020.10.55	**Projecting Sash Window, minimum**						**Unit: SF**
085123101170	Projecting sash window, minimum	1	SF	$66.23	$5.18	$0.00	$71.41
B2020.10.60	**Projecting Sash Window, maximum**						**Unit: SF**
085123101180	Projecting sash window, maximum	1	SF	$81.47	$5.18	$0.00	$86.65
B2020.10.65	**Mullions**						**Unit: SF**
085123101930	Mullions	1	LF	$17.45	$4.14	$0.00	$21.59

B2020.15 ALUMINUM WINDOWS

B2020.15.10	**Aluminum Window, fixed, 6 Sf to 8 Sf**						**Unit: SF**
085113100240	Aluminum window, fixed, 6 Sf to 8 Sf	1	SF	$19.87	$11.83	$0.00	$31.70
B2020.15.15	**Aluminum Window, fixed 12 Sf to 16 Sf**						**Unit: SF**
085113100250	Aluminum window, fixed 12 Sf to 16 Sf	1	SF	$17.65	$9.20	$0.00	$26.85
B2020.15.20	**Aluminum Window, projecting, 6 Sf to 8 Sf**						**Unit: SF**
085113100260	Aluminum window, projecting, 6 Sf to 8 Sf	1	SF	$44.00	$20.70	$0.00	$64.70
B2020.15.25	**Aluminum Window, projecting, 12 Sf to 16 Sf**						**Unit: SF**
085113100270	Aluminum window, projecting, 12 Sf to 16 Sf	1	SF	$39.66	$13.80	$0.00	$53.46
B2020.15.30	**Aluminum Window, horizontal sliding, 6 Sf to 8 Sf**						**Unit: SF**
085113100280	Aluminum window, horiz sliding, 6 Sf to 8 Sf	1	SF	$28.63	$10.35	$0.00	$38.98
B2020.15.35	**Aluminum Window, horizontal sliding, 12 Sf to 16 Sf**						**Unit: SF**
085113100290	Aluminum window, horiz sliding, 12 Sf to 16 Sf	1	SF	$26.41	$8.28	$0.00	$34.69
B2020.15.40	**Aluminum Window, double hung, 6 Sf to 8 Sf**						**Unit: SF**
085113101160	Aluminum window, double hung, 6 Sf to 8 Sf	1	SF	$39.66	$16.56	$0.00	$56.22
B2020.15.45	**Aluminum Window, double hung, 10 Sf to 12 Sf**						**Unit: SF**
085113101180	Aluminum window, double hung, 10 Sf to 12 Sf	1	SF	$35.24	$13.80	$0.00	$49.04

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B2020 EXTERIOR WINDOWS

B2020.30 STOREFRONT

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B2020.30.10	**Storefront, aluminum & glass, minimum**						**Unit: SF**
084100100140	Storefront, aluminum & glass, minimum	1	SF	$35.86	$10.35	$0.00	$46.21
B2020.30.15	**Storefront, aluminum & glass, average**						**Unit: SF**
084100100150	Storefront, aluminum & glass, average	1	SF	$53.35	$11.83	$0.00	$65.18
B2020.30.20	**Storefront, aluminum & glass, maximum**						**Unit: SF**
084100100160	Storefront, aluminum & glass, maximum	1	SF	$106.68	$13.80	$0.00	$120.48

B2020.35 CURTAIN WALLS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B2020.35.10	**Window Wall System, complete, minimum**						**Unit: SF**
084400103010	Window wall system, complete, minimum	1	SF	$51.93	$8.28	$0.00	$60.21
B2020.35.15	**Window Wall System, complete, average**						**Unit: SF**
084400103030	Window wall system, complete, average	1	SF	$83.07	$9.20	$0.00	$92.27
B2020.35.20	**Window Wall System, complete, maximum**						**Unit: SF**
084400103050	Window wall system, complete, maximum	1	SF	$192.15	$11.83	$0.00	$203.98

For bronze, add 20% to material
For stainless steel, add 50% to material

B SHELL

B2030 EXTERIOR DOORS

B2030.15 WOOD DOORS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B2030.15.10	**Wood Doors**						**Unit: EA**
062023101070	Molding, casing, wood, 11/16 x 3-1/2	40	LF	$120.33	$155.82	$0.00	$276.15
081400101970	Door, flush, solid core, 1-3/4", birch, 3-0 x 7-0	1	EA	$265.77	$102.26	$0.00	$368.03
081400900260	Door frame, pine, interior, 3-0 x 7-0	1	EA	$110.77	$116.87	$0.00	$227.64
087100101260	Hinges, 4 x 4 butts, steel, standard	1.5	PAIR	$46.56	$0.00	$0.00	$46.56
087100201300	Latchset, heavy duty, cylindrical	1	EA	$194.27	$51.13	$0.00	$245.40
099123302600	Int painting, doors, wood, brush, first coat, avg	42	SF	$9.45	$52.12	$0.00	$61.57
099123302680	Int painting, doors, wood, brush, second coat, avg	42	SF	$7.09	$35.83	$0.00	$42.92
099123303980	Int painting, trim, brush, first coat, avg	40	LF	$9.00	$12.41	$0.00	$21.41
099123304060	Int painting, trim, brush, second coat, avg	40	LF	$9.00	$10.50	$0.00	$19.50
				$772.24	**$536.94**	**$0.00**	**$1,309.18**

B2030.20 STEEL DOORS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B2030.20.10	**Steel Doors**						**Unit: EA**
081113101240	Door, metal, flush hollow, 20 ga, 1-3/4", 3-0 x 7-0	1	EA	$697.62	$90.90	$0.00	$788.52
081113401550	Door frames, mtl, stk, 16 ga, 6-3/4"x 1-3/4", 3-0 x 7-0	1	EA	$192.59	$103.51	$0.00	$296.10
087100101260	Hinges, 4 x 4 butts, steel, standard	1.5	PAIR	$46.56	$0.00	$0.00	$46.56
087100201300	Latchset, heavy duty, cylindrical	1	EA	$194.27	$51.13	$0.00	$245.40
099113101840	Ext painting, doors, metal, roller, first coat, avg	42	SF	$7.68	$23.89	$0.00	$31.57
099113101920	Ext painting, doors, metal, roller, second coat, avg	42	SF	$7.68	$15.93	$0.00	$23.61
099113102220	Ext painting, door frames, metal, brush, first coat, avg	20	LF	$4.50	$21.33	$0.00	$25.83
099113102300	Ext painting, door frames, metal, brush, second coat, avg	20	LF	$4.50	$11.38	$0.00	$15.88
				$1,155.40	**$318.07**	**$0.00**	**$1,473.47**

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B2030 EXTERIOR DOORS

B2030.25 ALUMINUM DOORS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B2030.25.10	**Aluminum Door, narrow stile, single, 2-6 x 7-0**						**Unit: EA**
081116101520	Alum door, narrow stile, single, 2-6 x 7-0	1	EA	$924.95	$414.04	$0.00	$1,338.99
B2030.25.15	**Aluminum Door, narrow stile, single, 3-0 x 7-0**						**Unit: EA**
081116101540	Alum door, narrow stile, single, 3-0 x 7-0	1	EA	$972.84	$414.04	$0.00	$1,386.88
B2030.25.20	**Aluminum Door, narrow stile, single, 3-6 x 7-0**						**Unit: EA**
081116101560	Alum door, narrow stile, single, 3-6 x 7-0	1	EA	$996.79	$414.04	$0.00	$1,410.83
B2030.25.25	**Aluminum Door, narrow stile, double, 5-0 x 7-0**						**Unit: EA**
081116101580	Alum door, narrow stile, double, 5-0 x 7-0	1	EA	$1,543.07	$828.08	$0.00	$2,371.15
B2030.25.30	**Aluminum Door, narrow stile, double, 6-0 x 7-0**						**Unit: EA**
081116101600	Alum door, narrow stile, double, 6-0 x 7-0	1	EA	$1,567.00	$828.08	$0.00	$2,395.08
B2030.25.35	**Aluminum Door, narrow stile, double, 7-0 x 7-0**						**Unit: EA**
081116101620	Alum door, narrow stile, double, 7-0 x 7-0	1	EA	$1,636.65	$828.08	$0.00	$2,464.73
B2030.25.40	**Aluminum Door, wide stile, single, 2-6 x 7-0**						**Unit: EA**
081116101720	Alum door, wide stile, single, 2-6 x 7-0	1	EA	$1,295.95	$414.04	$0.00	$1,709.99
B2030.25.45	**Aluminum Door, wide stile, single, 3-0 x 7-0**						**Unit: EA**
081116101740	Alum door, wide stile, single, 3-0 x 7-0	1	EA	$1,339.47	$414.04	$0.00	$1,753.51
B2030.25.50	**Aluminum Door, wide stile, single, 3-6 x 7-0**						**Unit: EA**
081116101760	Alum door, wide stile, single, 3-6 x 7-0	1	EA	$1,381.03	$414.04	$0.00	$1,795.07
B2030.25.55	**Aluminum Door, wide stile, double, 5-0 x 7-0**						**Unit: EA**
081116101780	Alum door, wide stile, double, 5-0 x 7-0	1	EA	$2,376.23	$828.08	$0.00	$3,204.31
B2030.25.60	**Aluminum Door, wide stile, double, 6-0 x 7-0**						**Unit: EA**
081116101800	Alum door, wide stile, double, 6-0 x 7-0	1	EA	$2,485.05	$828.08	$0.00	$3,313.13
B2030.25.70	**Aluminum Door, wide stile, double, 7-0 x 7-0**						**Unit: EA**
081116101820	Alum door, wide stile, double, 7-0 x 7-0	1	EA	$2,528.58	$828.08	$0.00	$3,356.66

B SHELL

B3010 ROOFING

B3010.10 BUILT-UP

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B3010.10.10	**Built-Up Roofing, 20' by 20' Bay size ..... Unit: SF**						
072113101080	Insul, rigid, glass board, roof, 1.63" thick, R6.67	1	SF	$1.47	$0.67	$0.00	$2.14
075113101500	Roofing, built-up, felt incl gravel, 3-ply	0.011	SQ	$1.75	$2.86	$0.00	$4.61
075113102110	Roofing, walkway, built-up, 3'x 3'x 3/4" thick	0.1	SF	$0.50	$0.26	$0.00	$0.76
075113102280	Cant strip, 4"x 4", mineral fiber	0.15	LF	$0.09	$0.29	$0.00	$0.38
076200108640	Gravel stop, aluminum, 0.032", 8"	0.15	LF	$0.91	$0.45	$0.00	$1.36
				$4.72	**$4.53**	**$0.00**	**$9.25**

B3010.15 MEMBRANE

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
B3010.15.10	**Membrane Roofing, 20' by 20' Bay size ..... Unit: SF**						
072113101080	Insul, rigid, glass board, roof, 1.63" thick, R6.67	1	SF	$1.47	$0.67	$0.00	$2.14
075113102280	Cant strip, 4"x 4", mineral fiber	0.15	LF	$0.09	$0.29	$0.00	$0.38
075300102110	Elastic sheet roofing, EPDM rubber, 60 mil	1	SF	$2.44	$0.98	$0.00	$3.42
075300108000	Ballast, 3/4" through 1-1/2" dia. river gravel,	1	SF	$0.52	$0.78	$0.00	$1.30
075300108100	Walkway for membrane roofs, 1/2" thick	0.1	SF	$0.27	$0.26	$0.00	$0.53
076200108640	Gravel stop, aluminum, 0.032", 8"	0.15	LF	$0.91	$0.45	$0.00	$1.36
				$5.70	**$3.43**	**$0.00**	**$9.13**

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C INTERIORS

C1010 PARTITIONS

C1010.10 CONCRETE BLOCK

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
C1010.10.10	**Concrete Block Partitions** ..... **Unit: SF**						
040523101120	Horizontal joint reinf, truss type, 6" wide, 8" wall	1	LF	$0.21	$0.33	$0.00	$0.54
042200100160	CMU, lightweight block, hollow, load bearing, 8"	1	SF	$2.74	$6.50	$0.00	$9.24
092300101020	Gypsum plaster, trowel finish, 2 coats, walls	0.22	SY	$1.48	$4.93	$0.00	$6.41
096516101020	Vinyl cove molding, 6" high	0.2	LF	$1.03	$0.33	$0.00	$1.36
099123304180	Int painting, walls, roller, first coat, avg	2	SF	$0.37	$0.51	$0.00	$0.88
099123304260	Int painting, walls, roller, second coat, avg	2	SF	$0.37	$0.46	$0.00	$0.83
				$6.20	**$13.06**	**$0.00**	**$19.26**

C1010.15 DRYWALL

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
C1010.15.10	**Drywall Partitions/Metal Stud Framing** ..... **Unit: SF**						
092116100142	Metal stud, 20 ga, 3-5/8", 16" oc	1	SF	$1.43	$1.64	$0.00	$3.07
092900101270	Standard drywall, 1/2" thick, nailed or screwed, walls	2	SF	$0.87	$1.49	$0.00	$2.36
092900106060	Drywall, taping & finishing joints, level 3	2	SF	$0.15	$1.36	$0.00	$1.51
096516101020	Vinyl cove molding, 6" high	0.2	LF	$1.03	$0.33	$0.00	$1.36
099123304180	Int painting, walls, roller, first coat, avg	2	SF	$0.37	$0.51	$0.00	$0.88
099123304260	Int painting, walls, roller, second coat, avg	2	SF	$0.37	$0.46	$0.00	$0.83
				$4.22	**$5.79**	**$0.00**	**$10.01**

C1010.20 PLASTER

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
C1010.20.10	**Plaster Partitions/Metal Stud Framing** ..... **Unit: SF**						
092116100142	Metal stud, 20 ga, 3-5/8", 16" oc	1	SF	$1.43	$1.64	$0.00	$3.07
092236101090	Gypsum lath, plain, 1/2" thick, clipped	0.22	SY	$1.13	$1.00	$0.00	$2.13
092300101020	Gypsum plaster, trowel finish, 2 coats, walls	0.22	SY	$1.48	$4.93	$0.00	$6.41
096516101020	Vinyl cove molding, 6" high	0.2	LF	$1.03	$0.33	$0.00	$1.36
099123304180	Int painting, walls, roller, first coat, avg	2	SF	$0.37	$0.51	$0.00	$0.88
099123304260	Int painting, walls, roller, second coat, avg	2	SF	$0.37	$0.46	$0.00	$0.83
				$5.81	**$8.87**	**$0.00**	**$14.68**

C INTERIORS

C1020 INTERIOR DOORS

C1020.10 METAL

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
C1020.10.10	**Metal Door/Metal Frame ..... Unit: SF**						
081113101240	Door, metal, flush hollow, 20 ga, 1-3/4", 3-0 x 7-0	1	EA	$697.62	$90.90	$0.00	$788.52
081113401550	Door frames, mtl, stk, 16 ga, 6-3/4"x 1-3/4", 3-0 x 7-0	1	EA	$192.59	$103.51	$0.00	$296.10
087100101260	Hinges, 4 x 4 butts, steel, standard	1.5	PAIR	$46.56	$0.00	$0.00	$46.56
087100201300	Latchset, heavy duty, cylindrical	1	EA	$194.27	$51.13	$0.00	$245.40
099123302220	Int painting, doors, metal, roller, first coat, avg	42	SF	$9.45	$22.05	$0.00	$31.50
099123302300	Int painting, doors, metal, roller, second coat, avg	42	SF	$9.45	$15.09	$0.00	$24.54
				$1,149.94	**$282.68**	**$0.00**	**$1,432.62**

C1020.20 WOOD

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
C1020.20.10	**Wood Door/Wood Frame ..... Unit: SF**						
062023101070	Molding, casing, wood, 11/16 x 3-1/2	40	LF	$120.33	$155.82	$0.00	$276.15
081400101970	Door, flush, solid core, 1-3/4", birch, 3-0 x 7-0	1	EA	$265.77	$102.26	$0.00	$368.03
081400900260	Door frame, pine, interior, 3-0 x 7-0	1	EA	$110.77	$116.87	$0.00	$227.64
087100101260	Hinges, 4 x 4 butts, steel, standard	1.5	PAIR	$46.56	$0.00	$0.00	$46.56
087100201300	Latchset, heavy duty, cylindrical	1	EA	$194.27	$51.13	$0.00	$245.40
099123302600	Int painting, doors, wood, brush, first coat, avg	42	SF	$9.45	$52.12	$0.00	$61.57
099123302680	Int painting, doors, wood, brush, second coat, avg	42	SF	$7.09	$35.83	$0.00	$42.92
099123303980	Int painting, trim, brush, first coat, avg	40	LF	$9.00	$12.41	$0.00	$21.41
099123304060	Int painting, trim, brush, second coat, avg	40	LF	$9.00	$10.50	$0.00	$19.50
				$772.24	**$536.94**	**$0.00**	**$1,309.18**

C1020.25 WOOD/METAL

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
C1020.25.10	**Wood Door/Metal Frame ..... Unit: SF**						
081113401550	Door frames, mtl, stk, 16 ga, 6-3/4"x 1-3/4", 3-0 x 7-0	1	EA	$192.59	$103.51	$0.00	$296.10
081400101970	Door, flush, solid core, 1-3/4", birch, 3-0 x 7-0	1	EA	$265.77	$102.26	$0.00	$368.03
087100101260	Hinges, 4 x 4 butts, steel, standard	1.5	PAIR	$46.56	$0.00	$0.00	$46.56
087100201300	Latchset, heavy duty, cylindrical	1	EA	$194.27	$51.13	$0.00	$245.40
099123302600	Int painting, doors, wood, brush, first coat, avg	42	SF	$9.45	$52.12	$0.00	$61.57
099123302680	Int painting, doors, wood, brush, second coat, avg	42	SF	$7.09	$35.83	$0.00	$42.92
				$715.73	**$344.85**	**$0.00**	**$1,060.58**

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C INTERIORS

C1030 FITTINGS

C1030.10 WASHROOM PARTITIONS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
C1030.10.10	**Toilet Partition, plastic laminate, ceiling mount**						**Unit: EA**
102113000120	Toilet partition, plastic lam, ceiling mount	1	EA	$1,476.25	$272.69	$0.00	$1,748.94
C1030.10.12	**Toilet Partition, plastic laminate, floor mount**						**Unit: EA**
102113000140	Toilet partition, plastic lam, floor mount	1	EA	$973.35	$204.52	$0.00	$1,177.87
C1030.10.14	**Toilet Partition, metal, ceiling mount**						**Unit: EA**
102113000160	Toilet partition, metal, ceiling mount	1	EA	$1,007.71	$272.69	$0.00	$1,280.40
C1030.10.16	**Toilet Partition, metal, floor mount**						**Unit: EA**
102113000180	Toilet partition, metal, floor mount	1	EA	$960.47	$204.52	$0.00	$1,164.99
C1030.10.20	**Wheel Chair partition, plastic laminate, ceiling mount**						**Unit: EA**
102113000200	Wheel chair partition, plastic lam, ceiling mount	1	EA	$2,204.36	$272.69	$0.00	$2,477.05
C1030.10.22	**Wheel Chair partition, plastic laminate, floor mount**						**Unit: EA**
102113000210	Wheel chair partition, plastic lam, floor mount	1	EA	$1,933.54	$204.52	$0.00	$2,138.06
C1030.10.25	**Wheel Chair partition, painted metal, ceiling mount**						**Unit: EA**
102113000240	Wheel chair partition, painted metal, ceiling mount	1	EA	$1,574.54	$272.69	$0.00	$1,847.23
C1030.10.27	**Wheel Chair partition, painted metal, floor mount**						**Unit: EA**
102113000260	Wheel chair partition, painted metal, floor mount	1	EA	$1,429.69	$204.52	$0.00	$1,634.21
C1030.10.30	**Urinal Screen, plastic laminate, wall hung**						**Unit: EA**
102113002000	Urinal screen, plastic lam, wall hung	1	EA	$680.21	$102.26	$0.00	$782.47
C1030.10.32	**Urinal Screen, plastic laminate, floor mount**						**Unit: EA**
102113002100	Urinal screen, plastic lam, floor mount	1	EA	$614.07	$102.26	$0.00	$716.33
C1030.10.34	**Urinal Screen, porcelain enamel st, floor mount**						**Unit: EA**
102113002120	Urinal screen, porcelain enamel st, floor mount	1	EA	$787.27	$102.26	$0.00	$889.53
C1030.10.36	**Urinal Screen, painted metal, floor mount**						**Unit: EA**
102113002140	Urinal screen, painted metal, floor mount	1	EA	$519.60	$102.26	$0.00	$621.86
C1030.10.38	**Urinal Screen, stainless steel, floor mount**						**Unit: EA**
102113002160	Urinal screen, stainless steel, floor mount	1	EA	$991.97	$102.26	$0.00	$1,094.23
C1030.10.40	**Toilet Partition, front door/side divider, porcelain enamel steel**						**Unit: EA**
102113005040	Toilet partn, front door/side divider, porc enl stl	1	EA	$1,621.78	$204.52	$0.00	$1,826.30
C1030.10.42	**Toilet Partition, front door/side divider, painted steel**						**Unit: EA**
102113005060	Toilet partn, front door/side divider, painted steel	1	EA	$952.60	$204.52	$0.00	$1,157.12
C1030.10.44	**Toilet Partition, front door/side divider, stainless steel**						**Unit: EA**
102113005080	Toilet partn, front door/side divider, stnls stl	1	EA	$2,350.40	$204.52	$0.00	$2,554.92

C INTERIORS

C1030 FITTINGS

C1030.15 TOILET ACCESSORIES

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
C1030.15.10	**Bath Accessory, ash receiver, wall mounted, aluminum**						**Unit: EA**
102816001040	Bath accessory, ash receiver, wall mounted, alum	1	EA	$255.35	$40.90	$0.00	$296.25
C1030.15.12	**Commercial Hand Dryer, surface mounted, 110 volt**						**Unit: EA**
102816001300	Commercial hand dryer, surface mounted, 110 volt	1	EA	$1,304.08	$102.26	$0.00	$1,406.34
C1030.15.14	**Mirror, 1/4" plate glass, up to 10 Sf**						**Unit: SF**
102816001420	Mirror, 1/4" plate glass, up to 10 Sf	1	SF	$19.95	$8.18	$0.00	$28.13
C1030.15.16	**Mirror, stainless steel frame, 18"x 24"**						**Unit: EA**
102816001440	Mirror, SS frame, 18"x 24"	1	EA	$152.65	$27.27	$0.00	$179.92
C1030.15.18	**Mirror, stainless steel frame, 24"x36"**						**Unit: EA**
102816001510	Mirror, SS frame, 24"x36"	1	EA	$197.36	$45.45	$0.00	$242.81
C1030.15.20	**Mirror, stainless steel frame, 30"x30"**						**Unit: EA**
102816001560	Mirror, SS frame, 30"x30"	1	EA	$606.24	$81.81	$0.00	$688.05
C1030.15.22	**Mirror, stainless steel frame, 48"x72"**						**Unit: EA**
102816001600	Mirror, SS frame, 48"x72"	1	EA	$1,188.50	$136.35	$0.00	$1,324.85
C1030.15.24	**Mirror, stainless steel frame, 18"x 24", w/shelf**						**Unit: EA**
102816001640	Mirror, SS frame, 18"x 24", w/shelf	1	EA	$469.95	$32.72	$0.00	$502.67
C1030.15.26	**Sanitary Napkin Dispenser, stainless steel, wall mounted**						**Unit: EA**
102816001820	Sanitary napkin dispenser, SS, wall mounted	1	EA	$1,133.98	$54.54	$0.00	$1,188.52
C1030.15.28	**Toilet Tissue Dispenser, stainless steel, wall mounted, single**						**Unit: EA**
102816001920	Toilet tissue disp, SS, wall mounted, single	1	EA	$127.66	$20.45	$0.00	$148.11
C1030.15.30	**Toilet Tissue Dispenser, stainless steel, wall mounted, double**						**Unit: EA**
102816001940	Toilet tissue disp, SS, wall mounted, double	1	EA	$245.01	$23.37	$0.00	$268.38
C1030.15.32	**Towel Dispenser, stainless steel, flush mounted**						**Unit: EA**
102816001950	Towel dispenser, SS, flush mounted	1	EA	$490.01	$45.45	$0.00	$535.46
C1030.15.34	**Towel Dispenser, stainless steel, surface**						**Unit: EA**
102816001960	Towel dispenser, SS, surface	1	EA	$698.38	$40.90	$0.00	$739.28
C1030.15.36	**Combination Towel Dispenser & Waste Receptacle**						**Unit: EA**
102816001970	Combination towel dispenser & waste receptacle	1	EA	$1,062.45	$54.54	$0.00	$1,116.99
C1030.15.38	**Waste Receptacle, stainless steel, wall mounted**						**Unit: EA**
102816002100	Waste receptacle, SS, wall mounted	1	EA	$802.86	$68.17	$0.00	$871.03

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C INTERIORS

C2010 STAIRS

C2010.10 INTERIOR STAIRS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
C2010.10.10	**Stair, Reinforced Concrete, 4' wide by 12' high**						**Unit: EA**
031114001060	Job built, stairway forms, 5 uses	80	SF	$206.32	$934.95	$0.00	$1,141.27
032101001040	Reinforcing, stairs, #7-#8	0.25	TON	$401.50	$298.26	$0.00	$699.76
032101004210	Stair nosing, galv steel, 4' long	20	EA	$742.50	$111.35	$0.00	$853.85
033101102160	Place concrete, stairs, 3500# or 4000#, by pump	3	CY	$610.78	$164.76	$111.43	$886.97
055213100140	Railing, pipe, 1-1/4" D, welded, 3 rail, primed	20	LF	$1,120.18	$414.04	$0.00	$1,534.22
055213100180	Railing, 1-1/4" D, wall mounted, welded, primed	20	LF	$584.49	$254.79	$0.00	$839.28
				$3,665.77	**$2,178.15**	**$111.43**	**$5,955.35**

C3010 WALL FINISHES

C3010.10 PLASTER

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
C3010.10.10	**Plaster, on concrete or masonry**						**Unit: SF**
092116105100	Furring, on walls, 3/4" channel, 16" oc	1	SF	$0.34	$2.56	$0.00	$2.90
092236101090	Gypsum lath, plain, 1/2" thick, clipped	0.11	SY	$0.56	$0.50	$0.00	$1.06
092300101020	Gypsum plaster, trowel finish, 2 coats, walls	0.11	SY	$0.74	$2.47	$0.00	$3.21
099123304180	Int painting, walls, roller, first coat, avg	1	SF	$0.18	$0.25	$0.00	$0.43
099123304260	Int painting, walls, roller, second coat, avg	1	SF	$0.18	$0.23	$0.00	$0.41
				$2.00	**$6.01**	**$0.00**	**$8.01**

C3010.30 GYPSUM WALLBOARD

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
C3010.30.10	**Gypsum Wallboard, on concrete or masonry**						**Unit: SF**
092116105100	Furring, on walls, 3/4" channel, 16" oc	1	SF	$0.34	$2.56	$0.00	$2.90
092900101270	Standard drywall, 1/2" thick, nailed or screwed, walls	1	SF	$0.43	$0.74	$0.00	$1.17
092900106060	Drywall, taping & finishing joints, level 3	1	SF	$0.08	$0.68	$0.00	$0.76
099123304180	Int painting, walls, roller, first coat, avg	1	SF	$0.18	$0.25	$0.00	$0.43
099123304260	Int painting, walls, roller, second coat, avg	1	SF	$0.18	$0.23	$0.00	$0.41
				$1.21	**$4.46**	**$0.00**	**$5.67**

C INTERIORS

C3010 WALL FINISHES

C3010.80 PAINTING WALLS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
C3010.80.10	**Interior Painting, walls, roller, first coat, minimum**						**Unit: SF**
099123304160	Int painting, walls, roller, first coat, min	1	SF	$0.17	$0.24	$0.00	$0.41
C3010.80.12	**Interior Painting, walls, roller, first coat, average**						**Unit: SF**
099123304180	Int painting, walls, roller, first coat, avg	1	SF	$0.18	$0.25	$0.00	$0.43
C3010.80.14	**Interior Painting, walls, roller, first coat, maximum**						**Unit: SF**
099123304200	Int painting, walls, roller, first coat, max	1	SF	$0.20	$0.28	$0.00	$0.48
C3010.80.20	**Interior Painting, walls, roller, second coat, minimum**						**Unit: SF**
099123304240	Int painting, walls, roller, second coat, min	1	SF	$0.17	$0.21	$0.00	$0.38
C3010.80.22	**Interior Painting, walls, roller, second coat, average**						**Unit: SF**
099123304260	Int painting, walls, roller, second coat, avg	1	SF	$0.18	$0.23	$0.00	$0.41
C3010.80.24	**Interior Painting, walls, roller, second coat, maximum**						**Unit: SF**
099123304280	Int painting, walls, roller, second coat, max	1	SF	$0.20	$0.26	$0.00	$0.46
C3010.80.40	**Interior Painting, walls, spray, first coat, minimum**						**Unit: SF**
099123304340	Int painting, walls, spray, first coat, min	1	SF	$0.14	$0.11	$0.00	$0.25
C3010.80.42	**Interior Painting, walls, spray, first coat, average**						**Unit: SF**
099123304360	Int painting, walls, spray, first coat, avg	1	SF	$0.15	$0.13	$0.00	$0.28
C3010.80.44	**Interior Painting, walls, spray, first coat, maximum**						**Unit: SF**
099123304380	Int painting, walls, spray, first coat, max	1	SF	$0.17	$0.17	$0.00	$0.34
C3010.80.50	**Interior Painting, walls, spray, second coat, minimum**						**Unit: SF**
099123304420	Int painting, walls, spray, second coat, min	1	SF	$0.14	$0.09	$0.00	$0.23
C3010.80.52	**Interior Painting, walls, spray, second coat, average**						**Unit: SF**
099123304440	Int painting, walls, spray, second coat, avg	1	SF	$0.15	$0.12	$0.00	$0.27
C3010.80.54	**Interior Painting, walls, spray, second coat, maximum**						**Unit: SF**
099123304460	Int painting, walls, spray, second coat, max	1	SF	$0.17	$0.16	$0.00	$0.33

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C INTERIORS

C3020 INTERIOR FINISHES

C3020.20 CERAMIC TILE

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
C3020.20.10	**Unglazed Tile, cement bed, face mount, 2"x 2"**						**Unit: SF**
093013106150	Unglazed tile, cement bed, face mount, 2"x 2"	1	SF	$18.81	$6.50	$0.00	$25.31
C3020.20.12	**Unglazed Tile, cement bed, face mount, 6"x 6"**						**Unit: SF**
093013106164	Unglazed tile, cement bed, face mount, 6"x 6"	1	SF	$6.26	$5.57	$0.00	$11.83
C3020.20.14	**Unglazed Tile, cement bed, face mount, 12"x 12"**						**Unit: SF**
093013106166	Unglazed tile, cement bed, face mount, 12"x 12"	1	SF	$5.51	$4.88	$0.00	$10.39
C3020.20.16	**Unglazed Tile, adhesive, white grout, 2"x 2"**						**Unit: SF**
093013106230	Unglazed tile, adhesive, white grout, 2"x 2"	1	SF	$15.66	$6.50	$0.00	$22.16
C3020.20.18	**Unglazed Tile, adhesive, white grout, 6"x 6"**						**Unit: SF**
093013106262	Unglazed tile, adhesive, white grout, 6"x 6"	1	SF	$5.23	$5.57	$0.00	$10.80
C3020.20.20	**Unglazed Tile, adhesive, white grout, 12"x 12"**						**Unit: SF**
093013106264	Unglazed tile, adhesive, white grout, 12"x 12"	1	SF	$4.59	$4.88	$0.00	$9.47

C3020.25 CARPET

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
C3020.25.10	**Carpet, acrylic, 28 oz, medium**						**Unit: SF**
096800201000	Carpet, acrylic, 28 oz, medium	0.11	SY	$2.11	$1.00	$0.00	$3.11
C3020.25.12	**Carpet, acrylic, 28 oz, heavy**						**Unit: SF**
096800201020	Carpet, acrylic, 28 oz, heavy	0.11	SY	$2.53	$1.00	$0.00	$3.53
C3020.25.14	**Commercial Carpet, nylon, 28 oz, medium**						**Unit: SF**
096800202120	Commercial carpet, nylon, 28 oz, medium	0.11	SY	$3.66	$1.00	$0.00	$4.66
C3020.25.16	**Commercial Carpet, nylon, 32 oz, heavy**						**Unit: SF**
096800202140	Commercial carpet, nylon, 32 oz, heavy	0.11	SY	$4.46	$1.00	$0.00	$5.46
C3020.25.18	**Commercial Carpet, wool, 30 oz, medium**						**Unit: SF**
096800202150	Commercial carpet, wool, 30 oz, medium	0.11	SY	$9.07	$1.00	$0.00	$10.07
C3020.25.20	**Commercial Carpet, wool, 36 oz, medium**						**Unit: SF**
096800202160	Commercial carpet, wool, 36 oz, medium	0.11	SY	$9.55	$1.00	$0.00	$10.55
C3020.25.22	**Commercial carpet, wool, 42 oz, heavy**						**Unit: SF**
096800202180	Commercial carpet, wool, 42 oz, heavy	0.11	SY	$12.65	$1.00	$0.00	$13.65
C3020.25.24	**Carpet Tile, foam back, needle punch, minimum**						**Unit: SF**
096800203022	Carpet tile, foam back, needle punch, minimum	1	SF	$4.43	$1.64	$0.00	$6.07
C3020.25.26	**Carpet Tile, foam back, needle punch, average**						**Unit: SF**
096800203024	Carpet tile, foam back, needle punch, average	1	SF	$5.13	$1.82	$0.00	$6.95
C3020.25.28	**Carpet Tile, foam back, needle punch, maximum**						**Unit: SF**
096800203026	Carpet tile, foam back, needle punch, maximum	1	SF	$8.13	$2.05	$0.00	$10.18

C INTERIORS

C3020 INTERIOR FINISHES

C3020.30 CARPET PADDING

C3020.30.10	**Carpet pad, jute, minimum**						**Unit: SF**
096800101020	Carpet pad, jute, minimum	0.11	SY	$0.65	$0.41	$0.00	$1.06
C3020.30.12	**Carpet Pad, jute, average**						**Unit: SF**
096800101022	Carpet pad, jute, average	0.11	SY	$0.85	$0.45	$0.00	$1.30
C3020.30.14	**Carpet Pad, jute, maximum**						**Unit: SF**
096800101024	Carpet pad, jute, maximum	0.11	SY	$1.28	$0.50	$0.00	$1.78
C3020.30.20	**Carpet Pad, sponge rubber, minimum**						**Unit: SF**
096800101040	Carpet pad, sponge rubber, minimum	0.11	SY	$0.62	$0.41	$0.00	$1.03
C3020.30.22	**Carpet Pad, sponge rubber, average**						**Unit: SF**
096800101042	Carpet pad, sponge rubber, average	0.11	SY	$0.82	$0.45	$0.00	$1.27
C3020.30.24	**Carpet Pad, sponge rubber, maximum**						**Unit: SF**
096800101044	Carpet pad, sponge rubber, maximum	0.11	SY	$1.17	$0.50	$0.00	$1.67
C3020.30.30	**Carpet Pad, urethane, 3/8", minimum**						**Unit: SF**
096800101060	Carpet pad, urethane, 3/8", minimum	0.11	SY	$0.62	$0.41	$0.00	$1.03
C3020.30.32	**Carpet Pad, urethane, 3/8", average**						**Unit: SF**
096800101062	Carpet pad, urethane, 3/8", average	0.11	SY	$0.72	$0.45	$0.00	$1.17
C3020.30.34	**Carpet Pad, urethane, 3/8", maximum**						**Unit: SF**
096800101064	Carpet pad, urethane, 3/8", maximum	0.11	SY	$0.94	$0.50	$0.00	$1.44

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C INTERIORS

C3030 CEILING FINISHES

C3030.10 PLASTER

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
C3030.10.10	**Plaster Ceilings** ..... Unit: SF						
092116104540	Furring, on ceilings, 1-1/2" channel, 16" oc	1	SF	$0.58	$3.41	$0.00	$3.99
092236201050	Lath, metal, diamond expd, galv, 2.5 lb, ceiling, nailed	0.11	SY	$0.72	$1.29	$0.00	$2.01
092300101000	Gypsum plaster, trowel finish, 2 coats, ceilings	0.11	SY	$0.74	$2.62	$0.00	$3.36
099123301840	Int painting, ceilings, roller, first coat, avg	1	SF	$0.18	$0.31	$0.00	$0.49
099123301920	Int painting, ceilings, roller, second coat, avg	1	SF	$0.18	$0.26	$0.00	$0.44
				$2.40	**$7.89**	**$0.00**	**$10.29**

C3030.15 GYPSUM WALLBOARD

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
C3030.15.10	**Drywall Ceilings** ..... Unit: SF						
092116104540	Furring, on ceilings, 1-1/2" channel, 16" oc	1	SF	$0.58	$3.41	$0.00	$3.99
092900101216	Regular drywall, 3/8" thick, nailed or screwed, ceilings	1	SF	$0.47	$0.82	$0.00	$1.29
092900106100	Drywall, taping & finishing joints, level 5	1	SF	$0.11	$0.82	$0.00	$0.93
099123301840	Int painting, ceilings, roller, first coat, avg	1	SF	$0.18	$0.31	$0.00	$0.49
099123301920	Int painting, ceilings, roller, second coat, avg	1	SF	$0.18	$0.26	$0.00	$0.44
				$1.52	**$5.62**	**$0.00**	**$7.14**

C3030.25 ACCOUSTICAL CEILINGS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
C3030.25.10	**Acoustical Ceilings** ..... Unit: SF						
095100103060	Acoustic tile, fiberglass, 12"x 12", 3/4" thick	1	SF	$2.45	$1.82	$0.00	$4.27
095100105520	Ceiling suspension system, T-bar, 2'x 2'	1	SF	$1.45	$0.91	$0.00	$2.36
				$3.90	**$2.73**	**$0.00**	**$6.63**

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D SERVICES

D1010 ELEVATORS AND LIFTS

D1010.10 HYDRAULIC ELEVATORS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
D1010.10.10	**Elevator, hydraulic, 3 stops, 3 openings, 50 fpm, 2000 lb ..... Unit: EA**						
142100101500	Elevator, hydraulic, 3 stops, 3 op, 50 fpm, 2000 lb	1	EA	$112,344	$1,591	$1,333	$115,269
D1010.10.15	**Elevator, hydraulic, 3 stops, 3 openings, 50 fpm, 3000 lb ..... Unit: EA**						
142100101520	Elevator, hydraulic, 3 stops, 3 op, 50 fpm, 3000 lb	1	EA	$126,781	$1,661	$1,391	$129,834
D1010.10.20	**Elevator, hydraulic, 3 stops, 3 openings, 100 fpm, 2000 lb ..... Unit: EA**						
142100101540	Elevator, hydraulic, 3 stops, 3 op, 100 fpm, 2000 lb	1	EA	$123,073	$1,591	$1,333	$125,998
D1010.10.25	**Elevator, hydraulic, 3 stops, 3 openings, 100 fpm, 3000 lb ..... Unit: EA**						
142100101560	Elevator, hydraulic, 3 stops, 3 op, 100 fpm, 3000 lb	1	EA	$138,852	$1,736	$1,454	$142,043
D1010.10.30	**Elevator, hydraulic, 3 stops, 3 openings, 150 fpm, 2000 lb ..... Unit: EA**						
142100101580	Elevator, hydraulic, 3 stops, 3 op, 150 fpm, 2000 lb	1	EA	$133,329	$1,591	$1,333	$136,255
D1010.10.32	**Elevator, hydraulic, 3 stops, 3 openings, 150 fpm, 3000 lb ..... Unit: EA**						
142100101600	Elevator, hydraulic, 3 stops, 3 op, 150 fpm, 3000 lb	1	EA	$156,209	$1,819	$1,523	$159,552
ADDITIONALS							
D1010.10.34	**For each additional; 50 fpm add per stop ..... Unit: EA**						
142100101610	Elevator, hyd, 3 stops, 3 op, additional 50 fpm, add per stop	1	EA	$8,376	$0.00	$0.00	$8,376
D1010.10.36	**For each additional; 500 lb, add per stop ..... Unit: EA**						
142100101620	Elevator, hyd, 3 stops, 3 op, additional 500 lb, add per stop	1	EA	$8,376	$0.00	$0.00	$8,376
D1010.10.38	**For each additional; Opening, add ..... Unit: EA**						
142100101630	Elevator, hyd, 3 stops, 3 op, additional op, add	1	EA	$10,171	$0.00	$0.00	$10,171
D1010.10.40	**For each additional; Stop, add per stop ..... Unit: EA**						
142100101640	Elevator, hyd, 3 stops, 3 op, additional stop, add	1	EA	$12,564	$0.00	$0.00	$12,564
D1010.10.42	**For each additional; Bonderized steel door, add per opening ..... Unit: EA**						
142100101650	Elevator, hyd, 3 stops, 3 op, add'l steel door, add per op	1	EA	$957	$0.00	$0.00	$957
D1010.10.44	**For each additional; Colored aluminum door, add per opening ..... Unit: EA**						
142100101660	Elevator, hyd, 3 stops, 3 op, add'l alum door, add per op	1	EA	$3,589	$0.00	$0.00	$3,589
D1010.10.46	**For each additional; Stainless steel door, add per opening ..... Unit: EA**						
142100101670	Elevator, hyd, 3 stops, 3 op, add'l s steel door, add per op	1	EA	$1,555	$0.00	$0.00	$1,555

D SERVICES

D1010 ELEVATORS AND LIFTS

D1010.15 ELECTRIC ELEVATORS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
D1010.15.10	**Elevator, electric, 8 stop, 8 openings, 300 fpm, 3000 lb**						**Unit: EA**
142100101020	Elevator, electric, 8 stop, 8 op, 300 fpm, 3000 lb	1	EA	$299,795	$3,820	$3,200	$306,815
D1010.15.15	**Elevator, electric, 8 stop, 8 openings, 300 fpm, 4000 lb**						**Unit: EA**
142100101060	Elevator, electric, 8 stop, 8 op, 300 fpm, 4000 lb	1	EA	$319,518	$4,244	$3,555	$327,318
D1010.15.20	**Elevator, electric, 8 stop, 8 openings, 300 fpm, 5000 lb**						**Unit: EA**
142100101070	Elevator, electric, 8 stop, 8 op, 300 fpm, 5000 lb	1	EA	$355,020	$4,548	$3,809	$363,378
D1010.15.25	**Elevator, electric, 8 stop, 8 openings, 400 fpm, 3000 lb**						**Unit: EA**
142100101090	Elevator, electric, 8 stop, 8 op, 400 fpm, 3000 lb	1	EA	$314,074	$3,820	$3,200	$321,095
D1010.15.30	**Elevator, electric, 8 stop, 8 openings, 400 fpm, 4000 lb**						**Unit: EA**
142100101120	Elevator, electric, 8 stop, 8 op, 400 fpm, 4000 lb	1	EA	$341,608	$4,244	$3,555	$349,409
D1010.15.35	**Elevator, electric, 8 stop, 8 openings, 400 fpm, 5000 lb**						**Unit: EA**
142100101140	Elevator, electric, 8 stop, 8 op, 400 fpm, 5000 lb	1	EA	$388,944	$4,548	$3,809	$397,302
D1010.15.40	**Elevator, electric, 8 stop, 8 openings, 600 fpm, 3000 lb**						**Unit: EA**
142100101160	Elevator, electric, 8 stop, 8 op, 600 fpm, 3000 lb	1	EA	$442,355	$4,244	$3,555	$450,155
D1010.15.45	**Elevator, electric, 8 stop, 8 openings, 600 fpm, 4000 lb**						**Unit: EA**
142100101190	Elevator, electric, 8 stop, 8 op, 600 fpm, 4000 lb	1	EA	$457,582	$4,658	$3,902	$466,143
D1010.15.50	**Elevator, electric, 8 stop, 8 openings, 600 fpm, 5000 lb**						**Unit: EA**
142100101200	Elevator, electric, 8 stop, 8 op, 600 fpm, 5000 lb	1	EA	$470,205	$4,775	$4,000	$478,980
D1010.15.60	**Elevator, electric, 8 stop, 8 openings, 800 fpm, 3000 lb**						**Unit: EA**
142100101220	Elevator, electric, 8 stop, 8 op, 800 fpm, 3000 lb	1	EA	$524,641	$4,244	$3,555	$532,441
D1010.15.62	**Elevator, electric, 8 stop, 8 openings, 800 fpm, 4000 lb**						**Unit: EA**
142100101260	Elevator, electric, 8 stop, 8 op, 800 fpm, 4000 lb	1	EA	$536,475	$4,658	$3,902	$545,036
D1010.15.64	**Elevator, electric, 8 stop, 8 openings, 800 fpm, 5000 lb**						**Unit: EA**
142100101280	Elevator, electric, 8 stop, 8 op, 800 fpm, 5000 lb	1	EA	$540,025	$4,775	$4,000	$548,801
ADDITIONALS							
D1010.15.66	**For each additional; 100 fpm add per stop**						**Unit: EA**
142100101300	Elevator, electric, 8 stop, 8 op, additional 100 fpm, per stop	1	EA	$29,915	$0.00	$0.00	$29,915
D1010.15.68	**For each additional; 500 lb, add per stop**						**Unit: EA**
142100101310	Elevator, electric, 8 stop, 8 op, additional 500 lb, add per stop	1	EA	$15,5558	$0.00	$0.00	$15,555
D1010.15.70	**For each additional; Opening add per stop**						**Unit: EA**
142100101320	Elevator, electric, 8 stop, 8 op, additional opening, add	1	EA	$23,932	$0.00	$0.00	$23,932
D1010.15.72	**For each additional; Stop add per stop**						**Unit: EA**
142100101330	Elevator, electric, 8 stop, 8 op, additional stop, add	1	EA	$10,769	$0.00	$0.00	$10,769
D1010.15.74	**For each additional; Bypass floor, add per each**						**Unit: EA**
142100101340	Elevator, electric, 8 stop, 8 op, additional bypass floor, add	1	EA	$4,786.43	$0.00	$0.00	$4,786
D1010.15.76	**For each additional; Bonderized steel door, add per opening**						**Unit: EA**
142100101350	Elevator, electric, 8 stop, 8 op, additional steel door, add	1	EA	$358	$0.00	$0.00	$358
D1010.15.78	**For each additional; Colored aluminum door, add per opening**						**Unit: EA**
142100101360	Elevator, electric, 8 stop, 8 op, additional alum door, add	1	EA	$2,153	$0.00	$0.00	$2,153
D1010.15.80	**For each additional; Stainless steel door, add per opening**						**Unit: EA**
142100101370	Elevator, electric, 8 stop, 8 op, additional s-steel door, add	1	EA	$1,435	$0.00	$0.00	$1,435

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D SERVICES

D1020 ESCALATORS AND MOVING WALKS

D1020.30 ESCALATORS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
D1020.30.10	**Escalators, 32" wide, floor to floor, 12' high**						**Unit: EA**
143100101040	Escalators, 32" wide, floor to floor, 12' high	1	EA	$199,8911	$3,183	$2,666	$205,741
D1020.30.15	**Escalators, 32" wide, floor to floor, 18' high**						**Unit: EA**
143100101060	Escalators, 32" wide, floor to floor, 18' high	1	EA	$235,215	$4,775	$4,000	$243,991
D1020.30.20	**Escalators, 32" wide, floor to floor, 25' high**						**Unit: EA**
143100101080	Escalators, 32" wide, floor to floor, 25' high	1	EA	$264,499	$7,640	$6,400	$278,540
D1020.30.25	**Escalators, 48" wide, floor to floor, 12' high**						**Unit: EA**
143100101090	Escalators, 48" wide, floor to floor, 12' high	1	EA	$222,698	$3,293	$2,758	$228,750
D1020.30.30	**Escalators, 48" wide, floor to floor, 18' high**						**Unit: EA**
143100101120	Escalators, 48" wide, floor to floor, 18' high	1	EA	$261,094	$5,026	$4,210	$270,332
D1020.30.35	**Escalators, 48" wide, floor to floor, 25' high**						**Unit: EA**
143100101140	Escalators, 48" wide, floor to floor, 25' high	1	EA	$312,085	$7,640	$6,400	$326,125

D SERVICES

D2010 PLUMBING FIXTURES

D2010.10 WATER CLOSETS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
D2010.10.12	**Water Closet, flush tank, floor mounted**						**Unit: EA**
224200901600	Toilets, floor support, average	1	EA	$181.50	$89.69	$0.00	$271.19
224213601010	Water closet, flush tank, floor mounted, average	1	EA	$628.23	$298.96	$0.00	$927.19
224213609040	Water closet, for trim and rough-in, maximum	1	EA	$399.30	$448.44	$0.00	$847.74
				$1,209.03	**$837.09**	**$0.00**	**$2,046.12**
D2010.10.18	**Water Closet, flush tank, floor mount, handicap**						**Unit: EA**
224200901600	Toilets, floor support, average	1	EA	$181.50	$89.69	$0.00	$271.19
224213601050	Water closet, flush tank, floor mount, handicap, avrg	1	EA	$974.29	$448.44	$0.00	$1,422.73
224213609040	Water closet, for trim and rough-in, maximum	1	EA	$399.30	$448.44	$0.00	$847.74
				$1,555.09	**$986.57**	**$0.00**	**$2,541.66**
D2010.10.24	**Water Closet, bowl, flush valve, floor mount**						**Unit: EA**
224200901600	Toilets, floor support, average	1	EA	$181.50	$89.69	$0.00	$271.19
224213601220	Water closet, bowl, w/flush valve, floor mount, avrg	1	EA	$612.26	$298.96	$0.00	$911.22
224213609040	Water closet, for trim and rough-in, maximum	1	EA	$399.30	$448.44	$0.00	$847.74
				$1,193.06	**$837.09**	**$0.00**	**$2,030.15**
D2010.10.30	**Water Closet, bowl, flush valve, wall mounted**						**Unit: EA**
224200901540	Toilets, water closets, wall carrier, average	1	EA	$363.00	$112.11	$0.00	$475.11
224213601280	Water closet, bowl, w/flush valve, wall mounted, avrg	1	EA	$652.19	$298.96	$0.00	$951.15
224213609040	Water closet, for trim and rough-in, maximum	1	EA	$399.30	$448.44	$0.00	$847.74
				$1,414.49	**$859.51**	**$0.00**	**$2,274.00**

D2010.15 URINALS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
D2010.15.12	**Urinal, flush valve, floor mounted**						**Unit: EA**
224200901720	Urinals, floor support, average	1	EA	$193.60	$89.69	$0.00	$283.29
224213501010	Urinal, flush valve, floor mounted, average	1	EA	$775.97	$298.96	$0.00	$1,074.93
224213509040	Urinal, for trim and rough-in, maximum	1	EA	$432.58	$597.92	$0.00	$1,030.50
				$1,402.15	**$986.57**	**$0.00**	**$2,388.72**
D2010.15.18	**Urinal, flush valve, wall mounted**						**Unit: EA**
224200901660	Urinals, wall carrier, average	1	EA	$315.70	$112.11	$0.00	$427.81
224213501080	Urinal, flush valve, wall mounted, average	1	EA	$678.81	$298.96	$0.00	$977.77
224213509040	Urinal, for trim and rough-in, maximum	1	EA	$432.58	$597.92	$0.00	$1,030.50
				$1,427.09	**$1,008.99**	**$0.00**	**$2,436.08**

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D2010 PLUMBING FIXTURES

D2010.20 LAVATORIES

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
D2010.20.12	**Lavatory, counter top, porcelain on cast iron ..... Unit: EA**						
224216202010	Lavatory, counter top, porcelain enamel on CI, avrg	1	EA	$352.72	$224.22	$0.00	$576.94
224216209040	Lavatory, for trim and rough-in, maximum	1	EA	$559.02	$448.44	$0.00	$1,007.46
				$911.74	**$672.66**	**$0.00**	**$1,584.40**
D2010.20.17	**Lavatory, wall hung, china ..... Unit: EA**						
224200901140	Lavatory, wall carrier, average	1	EA	$275.88	$112.11	$0.00	$387.99
224216202110	Lavatory, wall hung, china, average	1	EA	$372.68	$224.22	$0.00	$596.90
224216209040	Lavatory, for trim and rough-in, maximum	1	EA	$559.02	$448.44	$0.00	$1,007.46
				$1,207.58	**$784.77**	**$0.00**	**$1,992.35**
D2010.20.22	**Lavatory, wall hung, china, handicapped ..... Unit: EA**						
224200901140	Lavatory, wall carrier, average	1	EA	$275.88	$112.11	$0.00	$387.99
224216202310	Lavatory, wall hung, china, handicapped, average	1	EA	$598.95	$298.96	$0.00	$897.91
224216209040	Lavatory, for trim and rough-in, maximum	1	EA	$559.02	$448.44	$0.00	$1,007.46
				$1,433.85	**$859.51**	**$0.00**	**$2,293.36**

D2010.25 BATHTUBS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
D2010.25.12	**Bath Tub, 5' long ..... Unit: EA**						
224219001020	Bath tub, 5' long, average	1	EA	$1,397.55	$448.44	$0.00	$1,845.99
224219009020	Bath tub, for trim and rough-in, average	1	EA	$332.75	$448.44	$0.00	$781.19
				$1,730.30	**$896.88**	**$0.00**	**$2,627.18**
D2010.25.22	**Bath Tub, 6' long ..... Unit: EA**						
224219001080	Bath tub, 6' long, average	1	EA	$1,464.10	$448.44	$0.00	$1,912.54
224219009020	Bath tub, for trim and rough-in, average	1	EA	$332.75	$448.44	$0.00	$781.19
				$1,796.85	**$896.88**	**$0.00**	**$2,693.73**
D2010.25.32	**Bath Tub, square, whirlpool, 4'x 4' ..... Unit: EA**						
224219001140	Bath tub, square, whirlpool, 4'x 4', average	1	EA	$3,114.54	$896.88	$0.00	$4,011.42
224219009040	Bath tub, for trim and rough-in, maximum	1	EA	$945.01	$896.88	$0.00	$1,841.89
				$4,059.55	**$1,793.76**	**$0.00**	**$5,853.31**

D SERVICES

D2010 PLUMBING FIXTURES

D2010.30 KITCHEN SINKS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
D2010.30.22	**Kitchen Sink, single, stainless steel, double bowl**						**Unit: EA**
224216402100	Kitchen sink, single, stnls stl, double bowl, avrg	1	EA	$432.58	$298.96	$0.00	$731.54
224216409020	Sink, for trim and rough-in, average	1	EA	$532.40	$448.44	$0.00	$980.84
				$964.98	**$747.40**	**$0.00**	**$1,712.38**
D2010.30.42	**Kitchen Sink, porcelain on cast iron, double bowl**						**Unit: EA**
224216402280	Kitchen sink, porcelain enamel, CI, double bowl, avrg	1	EA	$512.44	$298.96	$0.00	$811.40
224216409020	Sink, for trim and rough-in, average	1	EA	$532.40	$448.44	$0.00	$980.84
				$1,044.84	**$747.40**	**$0.00**	**$1,792.24**

D2010.35 SERVICE SINKS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
D2010.35.12	**Service Sink, 24"x29"**						**Unit: EA**
224200901420	Sink, industrial, wall carrier, average	1	EA	$242.00	$112.11	$0.00	$354.11
224216401020	Service sink, 24"x29", average	1	EA	$958.32	$298.96	$0.00	$1,257.28
224216409040	Sink, for trim and rough-in, maximum	1	EA	$678.81	$597.92	$0.00	$1,276.73
				$1,879.13	**$1,008.99**	**$0.00**	**$2,888.12**
D2010.35.22	**Mop Sink, 24"x 36"x 10", average**						**Unit: EA**
224200901420	Sink, industrial, wall carrier, average	1	EA	$242.00	$112.11	$0.00	$354.11
224216403020	Mop sink, 24"x36"x10", average	1	EA	$705.43	$224.22	$0.00	$929.65
224216409040	Sink, for trim and rough-in, maximum	1	EA	$678.81	$597.92	$0.00	$1,276.73
				$1,626.24	**$934.25**	**$0.00**	**$2,560.49**

D2010.40 DRINKING FOUNTAINS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
D2010.40.10	**Water Cooler**						**Unit: EA**
224200901040	Water fountain, wall carrier, maximum	1	EA	$195.15	$149.48	$0.00	$344.63
224216409020	Sink, for trim and rough-in, average	1	EA	$532.40	$448.44	$0.00	$980.84
224700101020	Electric water cooler, wall mounted	1	EA	$1,040.60	$298.96	$0.00	$1,339.56
				$1,768.15	**$896.88**	**$0.00**	**$2,665.03**

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D SERVICES

D2020 WATER DISTRIBUTION

D2020.05 SUPPLY PIPING, COPPER

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
D2020.05.05	**Pipe, 3/4" L Copper, Including Hangers & Fittings, 100' Runs ..... Unit: LF**						
220629100150	A band, copper, 3/4"	0.1	EA	$0.19	$0.66	$0.00	$0.85
221116106190	Copper piping, L tube, 3/4"	1	LF	$4.76	$2.99	$0.00	$7.75
221116200880	Copper fittings, reducing slip coupling, 3/4"	0.08	EA	$0.22	$3.59	$0.00	$3.81
221116202374	Copper, 90 ells, 3/4"	0.02	EA	$0.05	$0.94	$0.00	$0.99
				$5.22	**$8.18**	**$0.00**	**$13.40**
D2020.05.07	**Pipe, 1" L Copper, Including Hangers & Fittings, 100' Runs ..... Unit: LF**						
220629100160	A band, copper, 1"	0.1	EA	$0.19	$0.66	$0.00	$0.85
221116106240	Copper piping, L tube, 1"	1	LF	$7.16	$3.20	$0.00	$10.36
221116200890	Copper fittings, reducing slip coupling, 1"	0.08	EA	$0.47	$3.99	$0.00	$4.46
221116202376	Copper, 90 ells, 1"	0.02	EA	$0.12	$1.00	$0.00	$1.12
				$7.94	**$8.85**	**$0.00**	**$16.79**
D2020.05.09	**Pipe, 1-1/2" L Copper, Including Hangers & Fittings, 100' Runs ..... Unit: LF**						
220629100180	A band, copper, 1-1/2"	0.1	EA	$0.22	$0.75	$0.00	$0.97
221116106360	Copper piping, L tube, 1-1/2"	1	LF	$13.20	$3.74	$0.00	$16.94
221116201000	Copper fittings, reducing slip coupling, 1-1/2"	0.02	EA	$0.24	$1.20	$0.00	$1.44
221116202379	Copper, 90 ells, 1-1/2"	0.08	EA	$1.12	$4.48	$0.00	$5.60
				$14.78	**$10.17**	**$0.00**	**$24.95**
D2020.05.15	**Pipe, 2" L Copper, Including Hangers & Fittings, 100' Runs ..... Unit: LF**						
220629100190	A band, copper, 2"	0.1	EA	$0.24	$0.82	$0.00	$1.06
221116106400	Copper piping, L tube, 2"	1	LF	$20.60	$4.08	$0.00	$24.68
221116201020	Copper fittings, reducing slip coupling, 2"	0.02	EA	$0.40	$1.49	$0.00	$1.89
221116202381	Copper, 90 ells, 2"	0.08	EA	$2.02	$4.78	$0.00	$6.80
				$23.26	**$11.17**	**$0.00**	**$34.43**
D2020.05.17	**Pipe, 4" L Copper, Including Hangers & Fittings, 100' Runs ..... Unit: LF**						
220629100220	A band, copper, 4"	0.1	EA	$0.55	$1.12	$0.00	$1.67
221116106520	Copper piping, L tube, 4"	1	LF	$67.93	$4.98	$0.00	$72.91
221116201050	Copper fittings, reducing slip coupling, 4"	0.02	EA	$1.86	$2.24	$0.00	$4.10
221116202390	Copper, 90 ells, 4"	0.08	EA	$13.89	$7.18	$0.00	$21.07
				$84.23	**$15.52**	**$0.00**	**$99.75**

D SERVICES

D2020 WATER DISTRIBUTION

D2020.05 SUPPLY PIPING, STEEL

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
D2020.05.30	**Pipe, 3/4" Black Steel, Schedule 40, Including Hangers & Fittings, 100' Runs .... Unit: LF**						
220529100300	Hanger, 3/4" pipe, clevis pipe hanger, black steel	0.1	EA	$0.19	$2.99	$0.00	$3.18
221116901100	Black steel, extra heavy pipe, threaded, 3/4" pipe	1	LF	$3.64	$3.59	$0.00	$7.23
221116904090	Malleable iron, threaded, 3/4", 90 deg ell	0.02	EA	$0.08	$0.60	$0.00	$0.68
221116904160	Malleable iron, threaded, 3/4", coupling	0.08	EA	$0.36	$2.39	$0.00	$2.75
				$4.27	**$9.57**	**$0.00**	**$13.84**
D2020.05.35	**Pipe, 1" Black Steel, Schedule 40, Including Hangers & Fittings, 100' Runs ..... Unit: LF**						
220529100400	Hanger, 1" pipe, clevis pipe hanger, black steel	0.1	EA	$0.20	$2.99	$0.00	$3.19
221116901200	Black steel, extra heavy, threaded, 1" pipe	1	LF	$4.68	$4.48	$0.00	$9.16
221116904180	Malleable iron, threaded, 1", 90 deg ell	0.02	EA	$0.12	$0.72	$0.00	$0.84
221116904240	Malleable iron, threaded, 1", coupling	0.08	EA	$0.53	$2.87	$0.00	$3.40
				$5.53	**$11.06**	**$0.00**	**$16.59**
D2020.05.40	**Pipe, 1-1/2" Black Steel, Schedule 40, Including Hangers & Fittings, 100' Runs . Unit: LF**						
220529100600	Hanger, 1-1/2" pipe, clevis pipe hanger, black steel	0.1	EA	$0.22	$2.99	$0.00	$3.21
221116901400	Black steel, extra heavy, threaded, 1-1/2" pipe	1	LF	$7.03	$4.98	$0.00	$12.01
221116904270	Malleable iron, threaded, 1-1/2", 90 deg ell	0.02	EA	$0.25	$0.90	$0.00	$1.15
221116904340	Malleable iron, threaded, 1-1/2", coupling	0.08	EA	$0.94	$3.59	$0.00	$4.53
				$8.44	**$12.46**	**$0.00**	**$20.90**
D2020.05.45	**Pipe, 2-1/2" Black Steel, Schedule 40, Including Hangers & Fittings, 100' Runs . Unit: LF**						
220529100800	Hanger, 2-1/2" pipe, clevis pipe hanger, black steel	0.1	EA	$0.42	$2.99	$0.00	$3.41
221116901500	Black steel, extra heavy, threaded, 2-1/2" pipe	1	LF	$14.06	$11.21	$0.00	$25.27
221116904370	Malleable iron, threaded, 2-1/2", 90 deg ell	0.02	EA	$0.96	$2.24	$0.00	$3.20
221116904430	Malleable iron, threaded, 2-1/2", coupling	0.08	EA	$3.84	$11.96	$0.00	$15.80
				$19.28	**$28.40**	**$0.00**	**$47.68**
D2020.05.50	**Pipe, 4" Black Steel, Schedule 40, Including Hangers & Fittings, 100' Runs ..... Unit: LF**						
220529101100	Hanger, 4" pipe, clevis pipe hanger, black steel	0.1	EA	$0.64	$2.99	$0.00	$3.63
221116901700	Black steel, extra heavy, threaded, 4" pipe	1	LF	$28.37	$17.94	$0.00	$46.31
221116904540	Malleable iron, threaded, 4", 90 deg ell	0.02	EA	$3.04	$3.59	$0.00	$6.63
221116904590	Malleable iron, threaded, 4", coupling	0.08	EA	$10.43	$7.18	$0.00	$17.61
				$42.48	**$31.70**	**$0.00**	**$74.18**

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D SERVICES

D2020 WATER DISTRIBUTION

D2020.10 ELECTRIC WATER HEATERS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
D2020.10.10	**Electric Water Heaters ..... Unit: EA**						
223300101120	Water heater, electric, 120 gal	1	EA	$2,504.70	$298.96	$0.00	$2,803.66
223300108200	Water heater, rough-in, Maximum	1	EA	$859.10	$896.88	$0.00	$1,755.98
337116005810	Utility pole, perforated strap for conduit, 1-1/2"	6	LF	$23.05	$90.88	$0.00	$113.93
				$3,386.85	**$1,286.72**	**$0.00**	**$4,673.57**

D2020.25 SOLAR WATER HEATERS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
D2020.25.11	**Solar Hot Water heater, hydronic, 100-120 Gallons, minimum ..... Unit: EA**						
223300201010	Solar Hot Water heater, hydronic, 100-120 Gallons, minimum	1	EA	$14,356.65	$0.00	$0.00	$14,356.65
D2020.25.12	**Solar Hot Water heater, hydronic, 100-120 Gallons, average ..... Unit: EA**						
223300201020	Solar Hot Water heater, hydronic, 100-120 Gallons, average	1	EA	$15,118.95	$0.00	$0.00	$15,118.95
D2020.25.14	**Solar Hot Water heater, hydronic, 100-120 Gallons, maximum ..... Unit: EA**						
223300201030	Solar Hot Water heater, hydronic, 100-120 Gallons, maximum	1	EA	$15,881.25	$0.00	$0.00	$15,881.25
D2020.25.20	**Solar Hot Water heater, direct-solar, 100-120 Gallons, minimum ..... Unit: EA**						
223300201050	Solar Hot Water heater, direct-solar, 100-120 Gallons, min	1	EA	$9,528.75	$0.00	$0.00	$9,528.75
D2020.25.25	**Solar Hot Water heater, direct-solar, 100-120 Gallons, average ..... Unit: EA**						
223300201060	Solar Hot Water heater, direct-solar, 100-120 Gallons, avg	1	EA	$9,973.43	$0.00	$0.00	$9,973.43
D2020.25.28	**Solar Hot Water heater, direct-solar, 100-120 Gallons, maximum ..... Unit: EA**						
223300201070	Solar Hot Water heater, direct-solar, 100-120 Gallons, max	1	EA	$10,418.10	$0.00	$0.00	$10,418.10

D SERVICES

D2030 SANITARY WASTE

D2030.10 SANITARY PIPING, PLASTIC

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
D2030.10.05	**Drainage, 1-1/2" Plastic, PVC, DWV, Sch 40, Incl Hangers & Fittings, 100' Runs .....Unit: LF**						
220629100180	A band, copper, 1-1/2"	0.1	EA	$0.22	$0.75	$0.00	$0.97
221116801080	PVC pipe, sch 40, 1-1/2" pipe	1	LF	$2.12	$5.61	$0.00	$7.73
221116802460	PVC pipe, sch 40, 1-1/2", 90 deg elbow	0.02	EA	$0.04	$0.51	$0.00	$0.55
221116802530	PVC pipe, sch 40, 1-1/2", coupling	0.08	EA	$0.10	$2.39	$0.00	$2.49
				$2.48	**$9.26**	**$0.00**	**$11.74**
D2030.10.07	**Drainage, 2" Plastic, PVC, DWV, Sch 40, Incl Hangers & Fittings, 100' Runs ..... Unit: LF**						
220629100190	A band, copper, 2"	0.1	EA	$0.24	$0.82	$0.00	$1.06
221116801100	PVC pipe, sch 40, 2" pipe	1	LF	$2.68	$6.41	$0.00	$9.09
221116802570	PVC pipe, sch 40, 2", 90 deg elbow	0.02	EA	$0.06	$0.60	$0.00	$0.66
221116802640	PVC pipe, sch 40, 2", coupling	0.08	EA	$0.14	$2.87	$0.00	$3.01
				$3.12	**$10.70**	**$0.00**	**$13.82**
D2030.10.10	**Drainage, 3" Plastic, PVC, DWV, Sch 40, Incl Hangers & Fittings, 100' Runs ..... Unit: LF**						
220629100220	A band, copper, 4"	0.1	EA	$0.55	$1.12	$0.00	$1.67
221116801120	PVC pipe, sch 40, 3" pipe	1	LF	$5.51	$8.97	$0.00	$14.48
221116802780	PVC pipe, sch 40, 3", 90 deg elbow	0.02	EA	$0.20	$1.49	$0.00	$1.69
221116802830	PVC pipe, sch 40, 3", coupling	0.08	EA	$0.45	$5.98	$0.00	$6.43
				$6.71	**$17.56**	**$0.00**	**$24.27**
D2030.10.13	**Drainage, 4" Plastic, PVC, DWV, Sch 40, Incl Hangers & Fittings, 100' Runs ..... Unit: LF**						
220629100220	A band, copper, 4"	0.1	EA	$0.55	$1.12	$0.00	$1.67
221116801130	PVC pipe, sch 40, 4" pipe	1	LF	$7.88	$11.21	$0.00	$19.09
221116802870	PVC pipe, sch 40, 4", 90 deg elbow	0.02	EA	$0.35	$1.79	$0.00	$2.14
221116802930	PVC pipe, sch 40, 4", coupling	0.08	EA	$0.65	$7.18	$0.00	$7.83
				$9.43	**$21.30**	**$0.00**	**$30.73**

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D SERVICES

D2030 SANITARY WASTE

D2030.10 SANITARY PIPING, CAST IRON

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
D2030.10.50	**Drainage, 1-1/2" Cast Iron, No-Hub, Including Hangers & Fittings, 100' Runs ..... Unit: LF**						
220529100600	Hanger, 1-1/2" pipe, clevis pipe hanger, black steel	0.1	EA	$0.22	$2.99	$0.00	$3.21
221316001000	CI Pipe, Abv Gr, no hub, 1-1/2" pipe	1	LF	$12.27	$6.41	$0.00	$18.68
221316005000	CI Pipe, Abv Gr, no hub, 1-1/2", 1/4 bend	0.08	EA	$1.09	$2.39	$0.00	$3.48
221316005180	CI Pipe, Abv Gr, no hub, 1-1/2", coupling	0.02	EA	$0.54	$0.00	$0.00	$0.54
				$14.12	**$11.79**	**$0.00**	**$25.91**
D2030.10.55	**Drainage, 4" Cast Iron, No-Hub, Including Hangers & Fittings, 100' Runs ..... Unit: LF**						
220529101100	Hanger, 4" pipe, clevis pipe hanger, black steel	0.1	EA	$0.64	$2.99	$0.00	$3.63
221316001200	CI Pipe, Abv Gr, no hub, 4" pipe	1	LF	$19.57	$14.95	$0.00	$34.52
221316006820	CI Pipe, Abv Gr, no hub, 4", 1/4 bend	0.08	EA	$2.70	$3.59	$0.00	$6.29
221316007100	CI Pipe, Abv Gr, no hub, 4", coupling	0.02	EA	$0.57	$0.00	$0.00	$0.57
				$23.48	**$21.53**	**$0.00**	**$45.01**
D2030.10.57	**Drainage, 6" Cast Iron, No-Hub, Including Hangers & Fittings, 100' Runs ..... Unit: LF**						
220529101320	Hanger, 6" pipe, clevis pipe hanger, black steel	0.1	EA	$1.02	$3.59	$0.00	$4.61
221316001300	CI Pipe, Abv Gr, no hub, 6" pipe	1	LF	$34.50	$17.94	$0.00	$52.44
221316007600	CI Pipe, Abv Gr, no hub, 6", 1/4 bend	0.08	EA	$6.81	$5.98	$0.00	$12.79
221316007700	CI Pipe, Abv Gr, no hub, 6", coupling	0.02	EA	$1.45	$0.00	$0.00	$1.45
				$43.78	**$27.51**	**$0.00**	**$71.29**
D2030.10.60	**Drainage, 8" Cast Iron, No-Hub, Including Hangers & Fittings, 100' Runs ..... Unit: LF**						
220529101420	Hanger, 8" pipe, clevis pipe hanger, black steel	0.1	EA	$1.34	$3.59	$0.00	$4.93
221316001400	CI Pipe, Abv Gr, no hub, 8" pipe	1	LF	$55.45	$29.90	$0.00	$85.35
221316007990	CI Pipe, Abv Gr, no hub, 8", 1/4 bend	0.08	EA	$11.82	$5.98	$0.00	$17.80
221316008090	CI Pipe, Abv Gr, no hub, 8", coupling	0.02	EA	$2.74	$0.00	$0.00	$2.74
				$71.35	**$39.47**	**$0.00**	**$110.82**
D2030.10.62	**Drainage, 10" Cast Iron, No-Hub, Including Hangers & Fittings, 100' Runs ..... Unit: LF**						
220529101500	Hanger, 10" clevis pipe hanger, black steel	0.1	EA	$3.03	$3.59	$0.00	$6.62
221316001500	CI Pipe, Abv Gr, no hub, 10" pipe	1	LF	$87.00	$35.88	$0.00	$122.88
221316008360	CI Pipe, Abv Gr, no hub, 10", 1/4 bend	0.08	EA	$23.63	$5.98	$0.00	$29.61
221316008420	CI Pipe, Abv Gr, no hub, 10", coupling	0.02	EA	$3.62	$0.00	$0.00	$3.62
				$117.28	**$45.45**	**$0.00**	**$162.73**

D SERVICES

D3010 HVAC

D3010.10 HVAC QUICK COSTS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
D3010.10.10	**HVAC, per building, minimum**						**Unit: SF**
019980103030	HVAC, per building, minimum	1	SF	$27.76	$0.00	$0.00	$27.76
D3010.10.12	**HVAC, per building, average**						**Unit: SF**
019980103050	HVAC, per building, average	1	SF	$38.84	$0.00	$0.00	$38.84
D3010.10.14	**HVAC, per building, maximum**						**Unit: SF**
019980103070	HVAC, per building, maximum	1	SF	$41.70	$0.00	$0.00	$41.70
D3010.10.20	**HVAC, controls, minimum**						**Unit: SF**
019980103210	HVAC Controls, minimum	1	SF	$5.26	$0.00	$0.00	$5.26
D3010.10.21	**HVAC, controls, average**						**Unit: SF**
019980103230	HVAC Controls, average	1	SF	$5.78	$0.00	$0.00	$5.78
D3010.10.23	**HVAC, controls, maximum**						**Unit: SF**
019980103250	HVAC Controls, maximum	1	SF	$6.98	$0.00	$0.00	$6.98
D3010.10.30	**HVAC, ductwork, minimum**						**Unit: SF**
019980103410	HVAC Ductwork, minimum	1	SF	$2.99	$0.00	$0.00	$2.99
D3010.10.31	**HVAC, ductwork, average**						**Unit: SF**
019980103430	HVAC Ductwork, average	1	SF	$5.97	$0.00	$0.00	$5.97
D3010.10.32	**HVAC, ductwork, maximum**						**Unit: SF**
019980103450	HVAC Ductwork, maximum	1	SF	$6.08	$0.00	$0.00	$6.08

D4010 FIRE PROTECTION

D4010.10 SPRINKLER QUICK COSTS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
D4010.10.10	**Sprinklers, per building, minimum**						**Unit: SF**
019980102030	Fire Suppress., per building, minimum	1	SF	$1.99	$0.00	$0.00	$1.99
D4010.10.12	**Sprinklers, per building, average**						**Unit: SF**
019980102050	Fire Suppress., per building, average	1	SF	$4.56	$0.00	$0.00	$4.56
D4010.10.14	**Sprinklers, per building, maximum**						**Unit: SF**
019980102070	Fire Suppress., per building, maximum	1	SF	$6.58	$0.00	$0.00	$6.58

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D SERVICES

D5010 ELECTRICAL

D5010.10 ELECTRICAL QUICK COSTS

		QTY	UNIT	MATL	LABOR	EQUIP	TOTAL
D5010.10.10	**Electrical, per building, minimum**						**Unit: SF**
019980104030	Electrical, per building, minimum	1	SF	$34.27	$0.00	$0.00	$34.27
D5010.10.12	**Electrical, per building, average**						**Unit: SF**
019980104050	Electrical, per building, average	1	SF	$47.37	$0.00	$0.00	$47.37
D5010.10.14	**Electrical, per building, maximum**						**Unit: SF**
019980104070	Electrical, per building, maximum	1	SF	$70.98	$0.00	$0.00	$70.98
D5010.10.30	**Electrical, rough-in, minimum**						**Unit: SF**
019980104210	Electrical Rough-in, minimum	1	SF	$3.38	$0.00	$0.00	$3.38
D5010.10.32	**Electrical, rough-in, average**						**Unit: SF**
019980104230	Electrical Rough-in, average	1	SF	$6.05	$0.00	$0.00	$6.05
D5010.10.34	**Electrical, rough-in, maximum**						**Unit: SF**
019980104250	Electrical Rough-in, maximum	1	SF	$11.75	$0.00	$0.00	$11.75
D5010.10.50	**Electrical, lighting, minimum**						**Unit: SF**
019980104410	Electrical Lighting, minimum	1	SF	$4.55	$0.00	$0.00	$4.55
D5010.10.52	**Electrical, lighting, average**						**Unit: SF**
019980104430	Electrical Lighting, average	1	SF	$10.86	$0.00	$0.00	$10.86
D5010.10.54	**Electrical, lighting, maximum**						**Unit: SF**
019980104450	Electrical Lighting, maximum	1	SF	$12.55	$0.00	$0.00	$12.55
D5010.10.60	**Electrical, switchgear, minimum**						**Unit: SF**
019980104510	Electrical Switchgear, minimum	1	SF	$2.37	$0.00	$0.00	$2.37
D5010.10.62	**Electrical, switchgear, average**						**Unit: SF**
019980104530	Electrical Switchgear, average	1	SF	$3.57	$0.00	$0.00	$3.57
D5010.10.64	**Electrical, switchgear, maximum**						**Unit: SF**
019980104550	Electrical Switchgear, maximum	1	SF	$4.57	$0.00	$0.00	$4.57

BNi DATA

Construction Data You Can Trust

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Square Foot Tables

The following Square Foot Tables list hundreds of actual projects for ten building types, each with associated building size, total square foot building cost and percentage of project costs for total mechanical and electrical components. This data provides an overview of construction costs by building type. These costs are for actual projects. The variations within similar building types may be due, among other factors, to size, location, quality and specified components, materials and processes. Depending upon all such factors, specific building costs can vary significantly and may not necessarily fall within the range of costs as presented. The data has been updated to reflect current construction costs.

BUILDING CATEGORY	***PAGE***
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SQUARE FOOT TABLES

PROJECT	DESCRIPTION	CITY	STATE	SIZE	$/SF	NOTES
Commercial						
Bank	School Credit Union Administration Building	Katy	TX	30,700	$306.18	New
	FineMark National Bank & Trust	Fort Myers	FL	20,039	$577.62	New
	Florida Shores Bank	Pompano Beach	FL	11,697	$735.16	New
	Mobiloil Credit Union	Vidor	TX	9,252	$515.57	New
	Beaumont Community Credit Union	Beaumont	TX	3,267	$584.49	New
Office	Allendale Town Center	Allendale	NJ	80,226	$53.96	Addition/Renovation
	Roanoke Electric Cooperative	Ahoskie	NC	52,752	$307.79	New
	Regional Aviation & Training Center	Currituck	NC	39,930	$390.44	New
	Transportation/Warehouse Facility	Monroe	GA	32,400	$271.04	New
	Collection System Operations Facility	Walnut Creek	CA	27,179	$535.45	New
	ULTA - (Shell Only)	Pensacola	FL	10,850	$138.54	Renovation
	Daycare Center	Clawson	MI	4,270	$219.38	Adaptive Reuse
	Campgrounds Office & Retail	Cincinnati	OH	2,300	$480.59	New
Parking	Palm Avenue Parking Garage	Sarasota	FL	287,040	$82.11	New
	Reynolds Street Parking Deck	Augusta	GA	214,000	$97.67	New
	Awty Int. School Parking Structure	Houston	TX	174,582	$86.47	New
Retail	SNG Center - Mixed-Use	Fargo	ND	143,860	$145.31	New
	Roof & Lifeway/Steinmart Renovation	Pensacola	FL	88,299	$51.04	Renovation
	No Frills Supermarket	Omaha	NE	61,000	$155.47	New
	West Oaks Mall Redevelopment	Houston	TX	49,800	$276.68	Renovation
	World of Decor	Deerfield Beach	FL	47,500	$211.17	New
	Sarasota Yacht Club	Sarasota	FL	41,332	$620.42	New
	Karschs Village Market	Barnhart	MO	35,384	$121.18	New
	Fresh Thyme Farmers Market	Fishers	IN	28,784	$265.71	New
	Nashville Hangar Inc.	Nashville	TN	28,702	$278.61	New
	Party Time Plus	Billings	MT	26,000	$141.36	New
	Marshalls - (Shell Only)	Pensacola	FL	25,990	$67.63	Renovation
	Ed Hicks Mercedes-Benz USA	Corpus Christi	TX	25,273	$369.71	New
	Montana Honda & Marine	Billings	MT	22,963	$160.66	Addition
	Fresh Market - (Shell Only)	Pensacola	FL	21,000	$116.27	Renovation
	Theatre Exchange Interior Fit Up	Manitoba	CA	19,344	$187.53	Renovation
	DSW Shoes Renovation	Pensacola	FL	18,000	$130.17	Renovation
	Dormans Lighting & Design	Lutherville	MD	15,220	$176.46	Addition
	The Groves Exterior Renovation	Farmington	MI	15,137	$99.76	Renovation
	Don Gibson Theatre	Shelby	NC	13,386	$525.97	Renovation
	Tri Ford Showroom Expansion	Highland	IL	12,881	$172.02	Addition/Renovation
	Fiat of LeHigh Valley	Easton	PA	11,905	$220.30	New
	Sicardi Art Gallery	Houston	TX	6,175	$346.53	New
	Childrens Mercy Hospital Gift Shop	Kansas City	MO	5,010	$436.75	Tenant Build-out
Restaurant	LaMar Cebicheria Peruana Restaurant	San Francisco	CA	11,000	$446.53	Tenant Build-out
	Ulele Restaurant	Tampa	FL	8,905	$1,082.27	Adaptive Reuse
	Youells Oyster House	Allentown	PA	6,107	$355.28	New
	Mellow Mushroom Highlands Shell	Louisville	KY	5,802	$144.01	New
	Mellow Mushroom Highlands TBO	Louisville	KY	5,802	$238.84	Tenant Build-out
	Mellow Mushroom Pizza	Wilder	KY	5,500	$341.61	New
	Liberty Microbrewery	Plymouth	MI	3,425	$245.77	Addition
	700 South Deli	Linthicum	MD	3,200	$302.84	Tenant Build-out
	New York Pizza Department (NYPD)	Tempe	AZ	2,338	$463.32	Tenant Build-out
	Airport Restaurant Build Out	Eglin Air Force Base	FL	2,320	$398.86	Tenant Build-out

SQUARE FOOT TABLES

PROJECT	DESCRIPTION	CITY	STATE	SIZE	$/SF	NOTES
Civic/Government						
Civic Center	Lincoln Center	Fort Collins	CO	38,160	$305.48	Addition/Renovation
	Rockport City Services Building	Rockport	TX	20,062	$316.02	New
	Sinclair Park Community Centre	Manitoba	CA	17,007	$447.45	Addition/Renovation
	Mt. Olive City Hall Complex	Mount Olive	IL	14,360	$171.58	New
	Teaneck Municipal Complex	Teaneck	NJ	12,870	$328.81	Addition/Renovation
	Cobb Community Center Additions	Pensacola	FL	5,200	$457.62	Addition/Renovation
	Newtown Municipal Center	Newtown	OH	5,077	$238.12	Adaptive Reuse
	Nederland City Hall	Nederland	TX	4,983	$529.78	New
Correctional	County Sheriffs Office	Morgantown	WV	31,645	$419.86	New
	Nederland Public Safety Complex	Nederland	TX	21,189	$306.90	Adaptive Reuse
	Detention Center & Sheriffs Office	Spencer	IA	16,983	$595.18	New
	Ogle City Sheriff & Coroner Admin	Oregon	IL	15,377	$401.05	New
	Chautauqua City Jail & Sheriff	Sedan	KS	12,257	$422.96	New
Courthouse	Courthouse HVAC System Replacement	Gainesville	FL	101,000	$61.01	Renovation
	Courthouse Renovation & Restoration	Springfield	IL	47,720	$260.77	Renovation
Fire Department	College Station Fire Station #6	College Station	TX	25,133	$494.55	New
	Mt. Orab Fire Station	Village of Mt. Orab	OH	18,170	$255.18	New
	Richardson Fire Station No. 4	Richardson	TX	14,090	$580.66	New
	Willowfork Fire Station No. 2	Katy	TX	13,358	$426.80	New
	Joint Fire & Rescue Station	Newtown	OH	13,125	$275.11	Addition/Renovation
	Little Miami Fire & Rescue	Fairfax	OH	12,316	$326.68	New
	Fire Station No. 11	Fort Smith	AR	12,155	$494.84	New
	Pearisburg Fire Station	Pearisburg	VA	11,818	$318.49	New
	Ponderosa Fire Station No. 62	Spring	TX	11,163	$427.30	New
	El Dorado Hills Fire Station 84	El Dorado Hills	CA	10,869	$643.41	New
	Wayne Fire Department	Goshen	OH	10,000	$140.05	New
	Fire Station No. 40	Jacksonville	FL	9,703	$564.60	New
	Rosenberg Fire Station No. 3	Rosenberg	TX	8,479	$535.22	New
	Little Rock Fire Station No. 23	Little Rock	AR	8,291	$688.57	New
	Cleveland Volunteer Fire Station	Cleveland	MS	6,910	$481.34	New
Government	Council Center For Scouting	Fargo	ND	20,466	$288.69	New
	Camp Crook Ranger Station	Camp Crook	SD	4,880	$713.01	New
	Beaumont Municipal Tennis Center	Beaumont	TX	4,460	$521.72	Addition
	Florence Transit Hub	Florence	KY	3,115	$745.23	New
	Knox Area Rescue Ministries	Knoxville	TN	1,762	$981.46	New
	Entrance Station Lake Mead	Clark County	NV	480	$3,981.92	New
	Vehicle Charging Stations	Denton	TX	6 spaces	$10,216.45	New
Library	Dover Public Library	Dover	DE	46,424	$625.96	New
	Clinton-Macomb Public Library	Clinton Township	MI	24,723	$182.90	Adaptive Reuse
	Crozet Western Albemarle Library	Crozet	VA	23,199	$508.17	New
	Upper Tampa Bay Regional Library	Tampa	FL	13,630	$351.71	Addition/Renovation
	Palmetto Branch Library	Palmetto	GA	11,200	$701.90	New
	Regional Library Expansion	Valrico	FL	10,970	$431.15	Addition/Renovation
Miscellaneous	City of Pampa Animal Welfare	Pampa	TX	13,578	$408.45	New
	Royal Winnipeg Ballet Renovations	Manitoba	CA	13,237	$110.20	Renovation
	Senior Services - Kitchen Facility	Batavia	OH	6,000	$174.43	New
	Historical Site Locomotive Shelter	Bismarck	ND	2,100	$233.11	New
Office	Federal Building & Courthouse Modernization	Denver	CO	41,600	$505.48	Renovation
	Brazos County Tax Office	Bryan	TX	13,143	$434.91	New
	Illinois Water District Office	Lincoln	IL	8,974	$226.35	New
	Arkansas River Resource Center	Little Rock	AR	4,926	$831.04	New

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SQUARE FOOT TABLES

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Educational						
Athletic Facility	Physical Activity/Sports Science	Morgantown	WV	117,344	$345.09	New
	Indoor Football Practice Facility	Clemson	SC	81,992	$266.28	New
	Jesuit College Locker Room Addition	Dallas	TX	41,673	$318.38	Addition
	Multi-Purpose Gymnasium	Jacksonville	FL	22,844	$422.48	New
College Classroom	New Mexico Tech Geology Building	Socorro	NM	86,813	$460.25	New
	CSU Concourse & Training Room	Fort Collins	CO	53,050	$214.98	Addition/Renovation
	Jack Williamson Liberal Arts Center	Portales	NM	52,480	$345.44	Renovation
	UNLV Literature & Law Building	Las Vegas	NV	44,830	$287.21	Renovation
	Southern State Community College	Mount Orab	OH	43,833	$276.33	New
	SERT Building Iowa Lakes College	Estherville	IA	42,940	$189.39	Adaptive Reuse
Elementary	Cibolo Valley Elementary School	Cibolo	TX	153,130	$374.08	New
	Hill Farm Elementary School	Bryant	AR	88,800	$447.48	New
	CREC International Magnet School	South Windsor	CT	63,923	$615.04	New
	Pineville Elementary School	Pineville	WV	51,650	$327.52	New
	Crownpoint Elementary School	Crownpoint	NM	48,592	$610.25	New
	Janney Elementary School Addition	Washington	DC	10,000	$901.96	Addition
High School	Hmong College Prep Academy	Saint Paul	MN	154,434	$128.07	Addition/Renovation
	HFC High School North Building	Flossmoor	IL	136,555	$313.49	Addition/Renovation
	Somerset High School	Von Ormy	TX	125,800	$272.27	New
	Takoma Education Campus	Washington	DC	119,000	$336.75	Renovation
	High School Addition & Renovation	Decatur	GA	83,816	$390.99	Addition/Renovation
	Palmer Catholic Academy	Ponte Vedra Beach	FL	34,209	$211.86	New
	Elmwood High School Addition	Elmwood Park	IL	31,630	$524.58	Addition/Renovation
	High School Fine Arts Building	Heber Springs	AR	30,505	$612.68	New
	Alamo Heights High School Fine Arts	San Antonio	TX	25,536	$492.36	Addition/Renovation
	St. Patrick Catholic School	Jacksonville	FL	23,227	$451.91	New
	Springdale School Alteration	Corbett	OR	13,680	$192.80	Renovation
	Goddard School Addition Renovation	Anderson Township	OH	12,489	$128.47	Addition/Renovation
	ISD Outdoor Education Center	Sabine Pass	TX	10,193	$488.23	New
	Indian Mountain School Student Center	Lakeville	CT	9,335	$468.71	Addition
	First Impressions Academy	Fayetteville	NC	7,752	$269.68	New
	High School South Campus Field	Cincinnati	OH	5,580	$361.69	New
Middle School	Timberline Middle School	Waukee	IA	187,375	$242.75	New
	Red Bank Middle School	Chattanooga	TN	158,637	$401.94	New
	Jaime Escalante Middle School	Pharr	TX	156,538	$300.96	New
	Conservatory Green ECE-8 School	Denver	CO	113,616	$268.40	New
	Midland School Addition	Floral	AR	30,150	$360.92	Addition
Laboratory/Research	Science & Technology Building	Fayetteville	NC	65,048	$761.44	New
	NSU/US Geological Survey	Davie	FL	24,000	$158.22	Tenant Build-out
	Northeast Technology Center	Pryor	OK	11,909	$474.63	New
	Environmental Education Center	Bushkill Township	PA	9,275	$822.91	New
	Research & Education Center	Homestead	FL	5,760	$1,038.46	New
Multi-Purpose	BGSU Student Rec Center	Bowling Green	OH	179,549	$99.74	Renovation
	Kennedy Center Theatre/Studio Arts	Clinton	NY	96,100	$503.72	New
	Classroom & Administration Building	Houston	TX	65,234	$325.62	New
	NM State U Pete Domenici Building	Las Cruces	NM	53,341	$410.43	Addition/Renovation
	Widener University Freedom Hall	Chester	PA	36,700	$485.84	New
	Alumni Hall, Lincoln Park	Midland	PA	29,027	$396.18	New
	GSU Piedmont North Dining Hall	Atlanta	GA	12,300	$556.25	Addition
	NAU Dining Hall Expansion Phase II	Flagstaff	AZ	10,096	$709.38	New
	Neighborhood Resource Center	Richmond	TX	6,935	$306.23	New
	Heber Springs Cafeteria Remodel	Heber Springs	AR	5,585	$345.09	Renovation

PROJECT	DESCRIPTION	CITY	STATE	SIZE	$/SF	NOTES
Hotels						
Hotels	Omni Dallas Hotel	Dallas	TX	1,161,450	$626.82	New
	John Ascuagas Nugget Hotel/Casino	Sparks	NV	449,820	$213.84	Addition
	Le Centre On Fourth Embassy Suites	Louisville	KY	408,229	$169.23	Adaptive Reuse
	Minneapolis Marriott West	Minneapolis	MN	237,362	$244.27	New
	Sheraton Centre Park Hotel	Dallas	TX	231,031	$349.58	New
	AmeriSuites	Chicago	IL	191,600	$221.04	Addition/Renovation
	Hampton Inn & Suites Hotel	Chicago	IL	162,000	$241.38	New
	Sheraton Harbor Island Hotel Tower	San Diego	CA	144,126	$294.30	Addition
	Compri Hotel	Los Angeles	CA	110,150	$260.64	New
	Best Western Columbia Hotel	San Diego	CA	108,040	$201.63	New
	Spooky Nook Warehouse Hotel	Manheim	PA	92,726	$192.01	Adaptive Reuse
	The Atrium Motel	Norfolk	VA	75,889	$206.20	New
	Staybridge Hotel At Preston Ridge	Alpharetta	GA	74,607	$264.39	New
	Hampton Inn & Suites	Allentown	PA	71,686	$220.50	New
	Hampton Inn Hotel	Carol Stream	IL	71,000	$270.78	New
	The Inn On Lake Superior	Duluth	MN	65,345	$217.82	New
	The Lancaster Hotel	Houston	TX	64,310	$455.82	Renovation
	Fairfield Inn	Helena	MT	31,009	$212.86	New
	The Edison Hotel	Miami	FL	28,875	$176.46	Renovation
	Western Executive Inn	Billings	MT	21,984	$157.55	New
	Country Hearth Inn	Preston	MN	21,028	$184.99	New
	Lawrence Welk Resort Hotel	Escondido	CA	19,874	$211.00	Addition
	Hanalei Hotel Conference Center	San Diego	CA	8,587	$335.06	Addition
	Summit At Vail, Multi-Purpose Lodge	Vail	CO	6,000	$400.03	New

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Industrial						
Manufacturing	Brentwood Industries Manufacturing	Reading	PA	205,000	$62.12	New
	Lee Steel Corporate Plant	Romulus	MI	200,625	$135.10	New
	Siemens Westinghouse Fuel Cell Facility	Munhall	PA	191,090	$147.12	New
	Manufacturing Plant & Headquarters	Lansing	MI	188,975	$142.64	Addition
	Concepts Direct	Longmont	CO	117,900	$173.97	New
	Nypro Inc.	Clinton	MA	102,475	$178.47	Addition
	SWF Industrial	Wrightsville	PA	76,218	$109.96	New
	Headquarters & Manufacturing Facility	Lower Nazareth Township	PA	62,980	$52.66	Renovation
	Aerzen USA (Office/Manufacturing)	Coatesville	PA	40,000	$268.73	New
	Lee Steel Corporate Expansion	Wyoming	MI	34,821	$114.17	New
	Prescott Aerospace	Prescott	AZ	31,400	$164.48	New
	Battery Innovation Center	Newberry	IN	30,080	$641.71	New
	American Steel	Billings	MT	25,957	$119.29	New
	Phillip S. Luttazi Town Garage	Dover	MA	21,913	$205.26	New
	ITT Flygt - Industrial Facility	Milford	OH	16,991	$194.64	New
	Broadmoor Golf Maintenance	Colorado Springs	CO	16,064	$352.84	New
	Cooper B-Line Expansion	Highland	IL	15,290	$249.29	Addition/Renovation
	Robberson Ford Collision Center	Bend	OR	15,089	$204.63	New
	Brown Industrial Building	Truckee	CA	13,345	$202.16	New
	CTC Vehicle Maintenance Shops	Killeen	TX	11,250	$191.15	New
	Storage & Shop Facility	Billings	MT	8,763	$131.91	New
	Central Plant with Equipment Bay	Mesa	AZ	8,500	$1,360.10	New
Office	Woodlands Business Center	Richmond	VA	48,000	$118.16	New
	Wiregrass Research Center	Headland	AL	9,740	$364.92	New
Office/Warehouse	American Superconductor	Devens	MA	354,000	$251.11	New
	Castcon Stone Inc.	Saxonburg	PA	47,000	$168.19	New
	Minnesota DNR Headquarters	Tower	MN	37,802	$249.08	New
	Office & Warehouse	Miami	FL	14,815	$204.06	New
	DOT Office & Maintenance Building	Hillsboro	OH	10,876	$359.97	New
Warehouse	Distribution Center	Windsor	CT	303,750	$51.20	New
	Zany Brainy Distribution Center	Bridgeport	NJ	250,000	$61.14	New
	Galderma - Warehouse	Fort Worth	TX	70,000	$131.72	New
	Manzana Products Warehouse	Sebastopol	CA	41,395	$98.10	New
	Tactical Equip Maintenance Facility	Fort Campbell	KY	35,290	$353.96	New
	Sonoma Wine Company Canopy	Graton	CA	26,000	$83.28	New
	Administration/Chemical Storage Building	Killeen	TX	23,837	$503.51	New
	DOT Truck Storage Building	Hillsboro	OH	18,400	$137.37	New
	F.I. Storage Facility	Kentwood	MI	13,125	$101.01	New
	50 Columbia Drive Warehouse	Pooler	GA	10,000	$126.78	New
	DOT Salt Storage Building	Hillsboro	OH	9,100	$138.50	New
	Organizational Storage Facility	Fort Campbell	KY	8,040	$210.14	New
	Dwan Maintenance Building	Bloomington	MN	7,240	$283.80	Addition/Renovation
	Maintenance/Storage Building	Batavia	OH	7,200	$122.07	New
	DOT Cold Storage Building	Hillsboro	OH	5,040	$147.67	New
	Job Corp Warehouse	Hartford	CT	3,800	$700.13	New
	DOT Materials Storage Building	Hillsboro	OH	1,920	$165.11	New
	Aerial Vehicle Storage	Fort Campbell	KY	1,800	$315.54	New
	Petro, Oil, Lubricant Storage	Fort Campbell	KY	640	$441.09	New
	Hazardous Waste Storage Building	Fort Campbell	KY	640	$471.40	New

PROJECT	DESCRIPTION	CITY	STATE	SIZE	$/SF	NOTES
		Medical				
Clinic	HealthCare Emergency/Trauma Center	Topeka	KS	115,000	$594.93	Addition
	Sadler Clinic (Shell Only)	Conroe	TX	61,599	$185.21	New
	Pinellas County Health Department	Largo	FL	54,965	$385.94	Retrofit
	Sanford Moorhead Clinic	Moorhead	MN	49,250	$378.21	New
	County Health Department	Port Charlotte	FL	47,564	$428.84	New
	Sadler Clinic	Conroe	TX	41,066	$175.46	Tenant Build-out
	PineMed Medical Plaza	The Woodlands	TX	30,398	$195.67	New
	Outpatient Specialty Clinic	Vancouver	WA	20,139	$486.84	New
	Ambulatory Surgery Center	Stroudsburg	PA	19,929	$522.52	Addition/Renovation
	Thundermist Health Center	West Warwick	RI	18,217	$301.27	Adaptive Reuse
	E Texas Community Health Services	Nacogdoches	TX	12,500	$142.67	Retrofit
	North Mobile Health Center	Mt. Vernon	AL	6,765	$425.63	New
Dental Office	Construct Dental Clinic Roseburg	Roseburg	OR	7,750	$740.64	New
	Kitchens Pediatric Dental Clinic	Little Rock	AR	6,068	$445.84	New
	Dental Office Shell & Parking	Olympia	WA	5,302	$252.97	New
	Evans Family Dental	Austin	TX	2,354	$310.03	Tenant Build-out
Hospital	Union Hospital Addition	Terre Haute	IN	492,348	$465.96	Addition
	Regional Medical Center	Lafayette	LA	410,273	$779.86	New
	Houston Medical Pavilion	Warner Robins	GA	180,000	$91.86	Adaptive Reuse
	Langley AFB Hospital Renovation	Langley Air Force Base	VA	160,000	$778.59	Renovation
	Cass Regional Medical Center	Harrisonville	MO	137,524	$547.47	New
	Texas Spine & Joint Hospital	Tyler	TX	115,789	$362.60	Addition/Renovation
	Oktibbeha County Hospital Expansion	Starkville	MS	87,116	$475.13	New
	Childrens Mercy Hospital	Independence	MO	54,682	$457.78	New
	Oktibbeha County Hospital Renovation	Starkville	MS	30,263	$237.15	Renovation
	El Rio Community Health Center	Tucson	AZ	26,998	$349.64	New
	Pondella Public Health Center	Fort Myers	FL	26,400	$435.51	Renovation
	Topeka Ear Nose & Throat	Topeka	KS	24,073	$451.54	New
	Rapha Primary Care	Fayetteville	NC	19,907	$193.85	Renovation
	UNM Hospitals North Valley Center	Albuquerque	NM	16,500	$456.55	New
	El Rio Community Health Center	Tucson	AZ	14,000	$396.95	New
	VA Medical Center Area G Renovation	Houston	TX	12,000	$483.01	Renovation
	Surgical Suite Expansion	Dobbs Ferry	NY	9,000	$551.31	Renovation
	Legacy Emergency Room	Allen	TX	8,432	$914.38	New
	Oral & Maxillofacial Surgery Center	Fayetteville	NC	2,214	$778.03	Renovation
Nursing Home/Rehab	Senior Living Community	Hoschton	GA	56,251	$202.76	New
	Retirement Community	Carlisle	PA	47,075	$228.32	Addition/Renovation
	Assisted Living & Memory Center	Dacula	GA	38,221	$235.84	New
	Homestead Village Nursing Care	Lancaster	PA	28,149	$154.42	Renovation
	Jewish Services For The Aging	Tucson	AZ	24,993	$287.47	New
	Short-Term Rehabilitation	Olathe	KS	13,800	$386.72	Addition
	St. Katharine Retirement Center	El Reno	OK	12,000	$457.05	New/Addition
Office	Orthopedic Hospital/Medical Office	Allentown	PA	79,807	$289.68	Renovation
	Tomball Medical Office Building	Tomball	TX	54,380	$196.97	New
	Olathe Health Education Center	Olathe	KS	50,258	$440.46	New
	Home & Hospice Care	Providence	RI	47,734	$277.84	Renovation
	NE Georgia Medical Plaza 400	Dawsonville	GA	26,997	$387.65	Adaptive Reuse
	VA Medical Center/Pharmacy	Waco	TX	19,171	$225.70	Renovation
	Cancer Specialists of North Florida	Jacksonville	FL	18,654	$411.72	New
	MJHS Hospice Residence	N.Y.C.	NY	12,500	$213.05	Renovation
	Medical Office Building	Pelham	NH	8,399	$383.41	New
	Podiatry Group	Marietta	GA	6,768	$77.97	Renovation
	Marietta Podiatry Group	Marietta	GA	4,400	$356.08	New

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			Office			
Office	Restaurant Support Center	Lenexa	KS	186,465	$376.99	New
	5000 NASA Boulevard	Fairmont	WY	132,000	$401.98	New
	Rockford Construction Office	Grand Rapids	MI	71,144	$160.62	Adaptive Reuse
	Woodlawn Office Bldg. (Shell Only)	Louisville	KY	60,000	$203.19	New
	Rosecrance Ware Center	Rockford	IL	44,800	$200.53	Adaptive Reuse
	Professional Center (Shell)	White Marsh	MD	43,025	$255.62	New
	Swan Skyline Office Plaza (Shell)	Tucson	AZ	37,200	$172.41	New
	Infinite Energy Phase IV	Gainesville	FL	36,500	$451.92	New
	Freedom Plaza Building	Cookeville	TN	28,488	$353.33	New
	Landmark Professional Building	Clayton	NC	27,231	$335.03	New
	FC Gulf Freeway Building (Shell)	Houston	TX	24,084	$381.40	New
	White Street Building (Shell Only)	Marietta	GA	23,809	$311.25	New
	Columbia Shores Office Condo	Vancouver	WA	22,574	$258.31	New
	Office & Design Studio	Chicago	IL	20,244	$181.36	Tenant Build-out
	Pinnacle III Office Tenant Finish	Leawood	KS	18,409	$86.34	Tenant Build-out
	Commerce Park (Shell)	Suwanee	GA	17,097	$177.07	New
	PCWA Business Center Interior	Auburn	CA	12,085	$89.82	Renovation
	Tenth Avenue Holdings Offices	N.Y.C.	NY	11,000	$126.06	Tenant Build-out
	Office Park - Building A (Shell)	Fort Collins	CO	10,000	$387.15	New
	Longshoremens Welfare Fund Building	Savannah	GA	8,160	$568.42	New
	Garry Street Office Building	Manitoba	CA	7,506	$226.80	Renovation
	Reserve Advisors	Milwaukee	WI	5,300	$72.71	Tenant Build-out
	510 Armory Street Office	Boston	MA	5,100	$139.22	Renovation
	Offices of Bonsall Shafferman	Bethlehem	PA	4,950	$102.97	Tenant Build-out
	FCT Capital Partners	Houston	TX	4,100	$120.47	Tenant Build-out
	Martin Rogers Associates Office	Wilkes-Barre	PA	4,000	$192.76	Addition/Renovation
	Cowan & Kohne Financial	Suwanee	GA	3,713	$181.51	Tenant Build-out
	212 Archer Street Office	Bel Air	MD	3,600	$256.77	New
	Utilities Analyses Inc.	Suwanee	GA	3,513	$168.38	Tenant Build-out
	Visual Lizard Interior Fit-Up	Manitoba	CA	2,430	$135.09	Tenant Build-out
	Richardson State Farm	Houston	TX	2,200	$163.34	Tenant Build-out
Mixed-Use	Office/Retail/Parking Mixed-Use	Jackson	MS	228,407	$370.62	New
	Korte & Luitjohan Office & Shop	Highland	IL	26,000	$178.09	New
Medical Office	Evanston Medical Office Building	Evanston	WY	9,157	$408.20	New
	Advanced Medical Group	Suwanee	GA	4,433	$173.33	Tenant Build-out
	Bothell Dental Office Build Out	Bothell	WA	2,203	$287.82	Tenant Build-out
Headquarters	CONSUL Energy Corporation Headquarters	Southpointe, Canonsburg	PA	317,500	$343.77	New
	Fairmont Supply Corporate Headquarters	Southpointe, Canonsburg	PA	75,255	$227.18	New
	Practice Velocity Corporate Headquarters	Machesney Park	IL	64,318	$142.75	Adaptive Reuse
	Enterprise Integration Headquarters	Jacksonville	FL	57,723	$88.81	Renovation
	Linear Technology	Cary	NC	20,000	$461.35	New
	PIPS Technology Inc.	Knoxville	TN	19,884	$366.72	New
	Lee Steel Corporate Offices	Novi	MI	15,781	$243.75	Renovation
	Weaver Cooke Headquarters	Goldsboro	NC	15,464	$438.59	New
	In Capital Holdings	Boca Raton	FL	13,000	$246.49	Tenant Build-out
	ACCION Regional Headquarters	Albuquerque	NM	7,580	$471.86	New
Civic Office	Miss Department of Environmental Quality	Jackson	MS	121,170	$137.46	Renovation
	County Central Office Complex	Pensacola	FL	74,630	$416.60	New
	State of WV Office Building	Fairmont	WV	70,442	$371.19	New
	JAX Chamber of Commerce Renovation	Jacksonville	FL	20,110	$306.46	Renovation

PROJECT	DESCRIPTION	CITY	STATE	SIZE	$/SF	NOTES
Recreational						
Educational	The Pavilion at Ole Miss	Oxford	MS	235,301	$652.46	New
	University Laker Turf Building	Allendale	MI	137,662	$216.33	New
	CSU Recreation Center	Chico	CA	110,245	$673.18	New
	Intramural Recreation Penn State	State College	PA	59,303	$597.16	Addition/Renovation
	Center For Women's Athletics	Fayetteville	AR	39,183	$531.74	New
	Pickens Recreation Center	Pickens	SC	20,400	$265.45	New
	High School Concessions & Press Box	Loganville	GA	1,506	$682.00	New
Health Club	Brooklyn Yard Fitness Club (Shell)	Portland	OR	63,987	$167.12	New
	Title Boxing Club	Cedar Hill	TX	4,330	$103.59	Tenant Build-out
Recreational	Community Recreation Center	Williston	ND	223,787	$649.50	New
	Spirit Lake Casino & Resort	St. Michael	ND	112,277	$88.10	Renovation
	Phipps Tropical Forest	Pittsburgh	PA	80,000	$474.04	New
	Family Recreation Center	Colonie	NY	70,256	$346.46	New
	Youth Activity Center	Joplin	MO	62,056	$146.72	New
	New Holland Recreational Center	New Holland	PA	51,256	$191.31	Renovation
	Community College Recreation Center	Cedar Rapids	IA	43,500	$241.41	New
	Anderson Recreation Center	Anderson	SC	34,282	$541.30	New
	East Park Community Center	Nashville	TN	33,000	$434.20	New
	Church Family Life Center	Clemson	SC	31,509	$468.55	New/Renovation
	C.K. Ray Recreation Center	Conroe	TX	30,380	$221.14	Addition/Renovation
	St. Raphael Athletic & Wellness Center	Pawtucket	RI	30,268	$382.85	New
	The Forge For Families	Houston	TX	29,860	$360.97	New
	Christian Life Center	Birmingham	MI	26,966	$494.06	Addition
	Children's Sports Center	Woodbury	MN	26,219	$176.69	New
	Trinity River Audubon Center	Dallas	TX	20,791	$1,362.39	New
	Baptist Church Activity Center	Indianapolis	IN	16,636	$218.44	New
	Boys & Girls Club Syracuse	Syracuse	NY	12,107	$266.98	Addition
	Job Corp Recreational Building	Hartford	CT	11,300	$299.59	New
	Presbyterian Family Life Center	Strawberry Plains	TN	11,236	$243.43	New
	McDaniel Yacht Basin	North East	MD	7,620	$274.16	New
	Bicentennial Park	Cincinnati	OH	4,050	$1,284.29	New
	Bahosky Softball Complex	Bronx	NY	3,800	$694.53	New
Swimming Center	Resort & Indoor Waterpark	Cortland	NY	175,060	$388.02	New
	The Aquatic Center	Tunica	MS	45,008	$462.33	New
	Spirit Lake Phase 4	St. Michael	ND	26,630	$528.58	Addition/Renovation
	Family Aquatic Center	Beachwood	OH	7,500	$1,717.79	New
	Community Aquatic Park & Center	Billings	MT	6,730	$1,080.36	New
Theater	Cinema & IMAX Theatre	Lansing	MI	13,750	$326.57	New
	Academy Theater	N.Y.C.	NY	4,593	$331.78	Renovation
YMCA	David D. Hunting YMCA	Grand Rapids	MI	162,966	$297.60	New
	YMCA Recreational Center	Ann Arbor	MI	83,377	$405.07	New
	Floyd Co. YMCA & Aquatic Center	New Albany	IN	82,324	$493.21	New
	Wade Walker Park Family YMCA	Stone Mountain	GA	59,134	$514.78	New
	Alexandria YMCA	Alexandria	MN	55,150	$249.08	New
	Greater Nashua YMCA	Nashua	NH	49,980	$306.56	New
	Lancaster YMCA Harrisburg Ave.	Lancaster	PA	42,502	$521.35	New
	Greater Kingsport Family YMCA	Kingsport	TN	40,007	$372.39	New
	Eastside YMCA	Knoxville	TN	39,984	$370.00	New
	Highland County Family YMCA	Hillsboro	OH	33,228	$220.47	New
	Houston Texans YMCA	Houston	TX	31,628	$523.13	New
	Cypress Creek YMCA	Houston	TX	25,699	$220.65	Addition/Renovation

All prices are updated to January 1, 2025 and are national averages.
For more in-depth information contact Design Cost and Data at 800-533-5680, or go to www.DCD.com

PROJECT	DESCRIPTION	CITY	STATE	SIZE	$/SF	NOTES
		Religious				
Church	First United Methodist Church	Orlando	FL	121,536	$411.81	New
	Beautiful Savior Lutheran Church	Plymouth	MN	69,700	$168.42	New
	Solid Rock Baptist Church	Berlin	NJ	58,359	$152.29	New
	North Side Baptist Church	Greenville	SC	48,087	$388.90	New
	St. Martha Catholic Church	Porter	TX	46,748	$768.40	New
	Gracepoint Gospel Fellowship Church	Ramapo	NY	46,595	$285.81	New
	Good Shepherd Methodist Church	Odessa	TX	41,003	$455.21	New
	Davisville Church Addition	Southampton	PA	36,090	$269.13	Addition
	Immaculate Catholic Church	Columbia	IL	34,000	$376.33	New
	Keystone Community Church	Ada	MI	29,775	$221.59	New
	Grace Church	Des Moines	IA	29,296	$300.64	New
	Good Shepherd Church	Naperville	IL	27,869	$297.80	Addition/Renovation
	River Hills Baptist Church	Corpus Christi	TX	27,404	$450.86	New
	Good Shepherd Catholic Church	Smithville	MO	24,810	$309.73	New
	Prince of Peace Catholic Church	Chesapeake	VA	24,740	$388.08	Addition/Renovation
	Sanctuary Addition Christian Church	Oklahoma City	OK	23,820	$232.62	Addition
	St. Sylvester Catholic Church	Gulf Breeze	FL	22,000	$609.95	New
	St. Peters Catholic Sanctuary	Fallbrook	CA	20,764	$672.08	New
	Notre Dame Catholic Church	Houston	TX	20,280	$620.01	New
	St Eugene Catholic Church	Oklahoma City	OK	20,000	$679.57	New
	Chapin Presbyterian Church	Chapin	SC	19,900	$495.50	New
	St. Michaels Catholic Church	Glen Allen	VA	19,770	$531.58	New
	Shrine of Holy Spirit	Branson	MO	19,200	$505.88	New
	Wildwood United Methodist Church	Magnolia	TX	19,000	$361.46	New
	Episcopal Church of the Nativity	Scottsdale	AZ	18,288	$180.78	Adaptive Reuse
	Hardin Church of Christ	Knoxville	TN	17,149	$181.73	New
	First United Methodist Church	Crossville	TN	15,816	$711.32	New
	Good Shepherd Episcopal Church	Silver Spring	MD	15,200	$424.43	Addition/Renovation
	Ascension Catholic Church	LaPlace	LA	15,057	$560.28	New
	St. Patrick Catholic Church	Jacksonville	FL	14,139	$400.47	New
	Our Lady of Guadalupe Catholic Church	Rosenberg	TX	12,910	$617.70	New
	St. Timothy's Episcopal Church	Creve Coeur	MO	12,682	$307.94	New/Renovation
	St. Paul Lutheran Church	Pomaria	SC	12,072	$504.19	New
	Covenant Baptist Church	Florida City	FL	10,725	$376.20	New
	First United Methodist Church	Katy	TX	10,503	$456.92	Addition/Renovation
	Lake Ann United Methodist Church	Lake Ann	MI	9,975	$315.72	New
	United Methodist Church	Odenton	MD	8,783	$493.33	New
	Kent R. Hance Chapel at Texas Tech	Lubbock	TX	6,530	$895.48	New
	Haven for Hope Chapel	San Antonio	TX	2,232	$672.62	New
Multi-Purpose	Baptist Church Multi-Purpose Bldg	Maryville	TN	41,656	$167.83	New
	Good Shepherd Parish Center	San Diego	CA	28,752	$231.47	New
	Christian Life Center	Kansas City	MO	26,320	$449.57	New
	Baptist Church Outreach Center	Fort Smith	AR	25,000	$394.74	New
	St Rafael Administration Building	San Diego	CA	24,276	$249.30	New
	Catholic Church Social Hall	Chula Vista	CA	23,596	$414.80	New
	United Methodist Church	West Chester	PA	11,935	$362.73	Addition/Renovation
	Student Ministry Center	Knoxville	TN	11,700	$449.39	New
	Catholic Pastoral Ministries Center	Spring	TX	10,135	$576.95	New
	Christian Renewal Center	Dickinson	TX	8,500	$317.19	New
	Holy Family St Lawrence Parish Center	Essex Junction	VT	7,900	$332.65	New
	Presbyterian Church Addition	Gap	PA	7,414	$381.85	Addition/Renovation
	New Hope Church Addition/Alteration	Saint Louis	MO	5,564	$292.38	Renovation

SQUARE FOOT TABLES

PROJECT	DESCRIPTION	CITY	STATE	SIZE	$/SF	NOTES
Residential						
Apartment	Solace Apartments	Virginia Beach	VA	331,681	$148.00	New
	1221 Broadway Lofts	San Antonio	TX	205,137	$209.02	Adaptive Reuse
	Sustainable Fellwood Phase I	Savannah	GA	124,037	$195.54	New
	Kelly Cullen Community	San Francisco	CA	98,385	$810.22	Adaptive Reuse
	Bachelors Enlisted Quarters	Camp Williams	UT	76,253	$368.40	New
	Mockingbird Terrace Homes	Louisville	KY	71,110	$234.14	New
	Homeless Men's Residential	San Antonio	TX	67,908	$388.11	New
	Homeless Women's/Family Residence	San Antonio	TX	60,182	$373.99	New
	Magnolia Place	Lancaster	PA	39,714	$235.86	New
	Elkins First Ward Apartments	Elkins	WV	27,000	$169.31	Adaptive Reuse
	Young Burlington Apartments	Los Angeles	CA	24,399	$303.44	New
	The Lofts at 300 Bowman	Dickson City	PA	23,900	$126.48	Adaptive Reuse
	Peaceful Paths Emergency Svc Campus	Gainesville	FL	22,535	$217.13	New
	Wylie House - Ronald McDonald House	Kansas City	MO	21,885	$275.40	New
	Dogwood Manor Apartments	Oak Ridge	TN	19,975	$249.77	New
	Anderson Village Multi-Family	Austin	TX	12,500	$416.99	New
	Salvation Army Sally's House	Houston	TX	7,812	$363.89	Addition
	Stones River Apartment Complex	Murfreesboro	TN	7,548	$336.51	Addition
	Sunshine Park Apartments Renovation	Gainesville	FL	2,252	$178.36	Renovation
Assisted Living	Kenmore Apartments Senior Housing	Chicago	IL	90,528	$312.01	Renovation
	Country Meadows Retirement	Allentown	PA	53,237	$238.73	New
	Creekside Village Assisted Living	Harrisburg	PA	16,150	$207.48	New
	Landis Homes Retirement Community	Lititz	PA	14,255	$98.06	Renovation
Dormitory	NSU Graduate Student Housing	Davie	FL	203,500	$320.55	Renovation
	Rider University Student Housing	Lawrenceville	NJ	50,500	$344.79	New
	JWU Biscayne Commons Dormitory	Miami	FL	40,048	$378.20	New
	College Residence Dorm	Bloomfield	NJ	25,980	$465.70	Renovation
Single-Family Home	Island Residence	Grosse Ile	MI	19,237	$1,024.84	New
	MG Residence Restoration	Williamston	MI	9,768	$110.03	Renovation
	Concepcion House	Coral Gables	FL	6,067	$538.03	New
	Leal House	Miami	FL	5,935	$377.79	New/Renovation
	Monserrate Street Residence	Coral Gables	FL	5,885	$667.37	New
	Private Residence	Newburgh	IN	5,566	$536.03	New
	Private Residence	Austin	MN	5,489	$232.38	New
	Private Residence	Lake Wallenpaupack	PA	4,845	$485.57	New
	Island in the Grove	Boca Raton	FL	4,701	$552.28	New
	Private Residence	Benson	AZ	3,660	$279.44	New
	Fairhope Green Home	Fairhope	AL	3,610	$315.43	New
	PATH Concept House	Omaha	NE	3,490	$132.93	New
	Private Residence	La Jolla	CA	3,420	$542.48	New
	Solar House - Private Residence	Fly Creek	NY	3,304	$281.28	New
	Elliott Residence	Fort Collins	CO	3,300	$414.20	New
	Renfrew House	Manitoba	CA	3,206	$302.01	New
	Rosado l Hansen Residence	Tucson	AZ	3,175	$216.60	New
	306 W. Waldburg Residence	Savannah	GA	2,588	$266.64	New
	Nutter Green Home	Milford	OH	2,289	$255.17	New
	Guest House Residence	Ahwatuckee	AZ	1,913	$594.60	New
	Kiwi House	Baton Rouge	LA	1,515	$249.25	New
	Private Residence Renovation	Shavertown	PA	810	$258.29	Renovation

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Metro Area Multipliers

The costs as presented in this book attempt to represent national averages. Costs, however, vary among regions, states and even between adjacent localities.

In order to more closely approximate the probable costs for specific locations throughout the U.S., this table of Metro Area Multipliers is provided. These adjustment factors can be used to modify costs obtained from this book to help account for regional variations of construction costs and to provide a more accurate estimate for specific areas. The factors are formulated by comparing costs in a specific area to the costs presented in this Costbook. An example of how to use these factors is shown below. Whenever local current costs are known, whether material prices or labor rates, they should be used when more accuracy is required.

Cost from Costbook Pages	**X**	**Metro Area Multiplier**	**=**	**Adjusted Cost**

For example, a project estimated to cost $1,000,000 using the Costbook pages can be adjusted to more closely approximate the cost in Los Angeles:

$1,000,000	**X**	**1.20**	**=**	**$1,200,000**

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METRO AREA MULTIPLIERS

State	Metropolitan Area	Multiplier
AK	ANCHORAGE	1.09
	FAIRBANKS	1.09
	JUNEAU	1.09
	KETCHIKAN	1.09
	KODIAK	1.09
	NOME	1.09
	OTHER	1.09
	SITKA	1.09
AL	ANNISTON	0.83
	AUBURN	0.83
	BIRMINGHAM	0.84
	DECATUR	0.84
	DOTHAN	0.81
	FLORENCE	0.84
	GASDEN	0.83
	HUNTSVILLE	0.82
	MOBILE	0.83
	MONTGOMERY	0.83
	OPELIKA	0.83
	OTHER	0.83
	PRATTVILLE	0.83
	SELMA	0.83
	TUSCALOOSA	0.84
AR	BATESVILLE	0.80
	CONWAY	0.80
	EL DORADO	0.80
	FAYETTEVILLE	0.80
	FORT SMITH	0.80
	HOT SPRINGS	0.80
	JONESBORO	0.79
	LITTLE ROCK	0.82
	NORTH LITTLE ROCK	0.82
	OTHER	0.80
	PINE BLUFF	0.80
	ROGERS	0.78
	SPRINGDALE	0.80
	TEXARKANA	0.80

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METRO AREA MULTIPLIERS

State	Metropolitan Area	Multiplier
AZ	CASA GRANDE	0.83
	CLIFTON	0.83
	FLAGSTAFF	0.84
	LAKE HAVASU CITY	0.83
	MESA	0.85
	OTHER	0.83
	PHOENIX	0.85
	SIERRA VISTA	0.83
	TUCSON	0.82
	YUMA	0.81
CA	ANAHEIM	1.21
	BAKERSFIELD	1.20
	CHICO	1.17
	EUREKA	1.17
	FAIRFIELD	1.17
	FRESNO	1.21
	LODI	1.21
	LONG BEACH	1.20
	LOS ANGELES	1.20
	MERCED	1.21
	MODESTO	1.21
	NAPA	1.17
	OAKLAND	1.21
	ORANGE COUNTY	1.21
	OTHER	1.20
	PARADISE	1.17
	PORTERVILLE	1.07
	REDDING	1.17
	RIVERSIDE	1.20
	SACRAMENTO	1.17
	SALINAS	1.21
	SAN BERNARDINO	1.21
	SAN DIEGO	1.18
	SAN FRANCISCO	1.21
	SAN JOSE	1.21
	SAN LUIS OBISPO	1.20
	SANTA BARBARA	1.20
	SANTA CRUZ	1.21
	SANTA ROSA	1.17

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METRO AREA MULTIPLIERS

State	Metropolitan Area	Multiplier
CA	STOCKTON	1.21
	TULARE	1.07
	VALLEJO-FAIRFIELD-NAPA	1.17
	VENTURA	1.20
	VISALIA	1.07
	WATSONVILLE	1.21
	YOLO	1.17
	YUBA CITY	1.17
CO	BOULDER	0.91
	COLORADO SPRINGS	0.90
	DENVER	0.90
	DURANGO	0.90
	FORT COLLINS	0.88
	GRAND JUNCTION	0.88
	GREELEY	0.89
	LONGMONT	0.91
	LOVELAND	0.88
	OTHER	0.90
	PUEBLO	0.89
	STERLING	0.90
CT	BRIDGEPORT	1.11
	DANBURY	1.11
	HARTFORD	1.11
	MANCHESTER	1.11
	MERIDEN	1.10
	MIDDLETOWN	1.11
	NEW HAVEN	1.10
	NEW LONDON	1.10
	NORWALK	1.11
	NORWICH	1.10
	OTHER	1.10
	STAMFORD	1.11
	TORRINGTON	1.10
	WATERBURY	1.10
DC	WASHINGTON DC	1.00
DE	DOVER	1.08
	NEWARK	1.07
	OTHER	1.07
	WILMINGTON	1.07

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METRO AREA MULTIPLIERS

State	Metropolitan Area	Multiplier
FL	BLOUNTSTOWN	0.86
	BOCA RATON	0.86
	BOSTWICK	0.90
	BRADENTON	0.87
	CAPE CORAL	0.86
	CLEARWATER	0.86
	DAYTONA BEACH	0.85
	FORT LAUDERDALE	0.88
	FORT MYERS	0.86
	FORT PIERCE	0.86
	FORT WALTON BEACH	0.85
	GAINESVILLE	0.85
	JACKSONVILLE	0.87
	LAKELAND	0.84
	MELBOURNE	0.91
	MIAMI	0.87
	NAPLES	0.86
	OCALA	0.85
	ORLANDO	0.84
	OTHER	0.86
	PALM BAY	0.91
	PANAMA CITY	0.86
	PENSACOLA	0.84
	PORT ST. LUCIE	0.86
	PUNTA GORDA	0.86
	SARASOTA	0.86
	ST PETERSBURG	0.86
	TALLAHASSEE	0.84
	TAMPA	0.85
	TITUSVILLE	0.91
	WEST PALM BEACH	0.86
	WINTER HAVEN	0.84
GA	ALBANY	0.86
	ATHENS	0.84
	ATLANTA	0.84
	AUGUSTA	0.84
	COLUMBUS	0.82
	MACON	0.84
	MARIETTA	0.84

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METRO AREA MULTIPLIERS

State	Metropolitan Area	Multiplier
GA	OTHER	0.84
	ROME	0.84
	SAVANNAH	0.85
	VALDOSTA	0.84
HI	HILO	1.16
	HONOLULU	1.16
	MAUI	1.16
	OTHER	1.16
IA	BURLINGTON	0.93
	CEDAR FALLS	0.89
	CEDAR RAPIDS	0.92
	COUNCIL BLUFFS	0.93
	DAVENPORT	0.96
	DES MOINES	0.96
	DUBUQUE	0.94
	FT. DODGE	0.93
	IOWA CITY	0.93
	MARSHALLTOWN	0.93
	MASON CITY	0.93
	OTHER	0.93
	OTTUMWA	0.93
	SIOUX CITY	0.92
	WATERLOO	0.89
ID	BOISE CITY	0.87
	LEWISTON	0.88
	OTHER	0.88
	POCATELLO	0.89
	SALMON	0.88
	ST. ANTHONY	0.88
	ST. MARIES	0.88
	TWIN FALLS	0.88
IL	ALTON	1.05
	BLOOMINGTON	1.04
	CHAMPAIGN	1.02
	CHICAGO	1.19
	DE KALB	1.04
	DECATUR	1.00
	EAST ST. LOUIS	1.05
	FREEPORT	1.04
	HARRISBURG	1.02

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METRO AREA MULTIPLIERS

State	Metropolitan Area	Multiplier
IL	KANKAKEE	1.18
	MOLINE	1.04
	NORMAL	1.04
	OTHER	1.05
	PEKIN	1.01
	PEORIA	1.01
	ROCKFORD	1.04
	SPRINGFIELD	1.00
	URBANA	1.02
IN	BLOOMINGTON	0.94
	COLUMBUS	0.94
	ELKHART	1.00
	EVANSVILLE	0.95
	FORT WAYNE	0.94
	GARY	1.02
	GOSHEN	1.00
	INDIANAPOLIS	0.94
	KOKOMO	0.94
	LAFAYETTE	0.94
	MUNCIE	0.94
	NEW ALBANY	0.97
	OTHER	0.97
	SOUTH BEND	1.02
	TERRE HAUTE	0.95
KS	DODGE CITY	1.01
	HUTCHINSON	1.01
	KANSAS CITY	1.04
	LAWRENCE	1.02
	MANHATTAN	1.01
	OLATHE	1.01
	OTHER	1.01
	SALINA	1.01
	TOPEKA	1.00
	WICHITA	0.95
KY	BOWLING GREEN	0.92
	HOPKINSVILLE	0.92
	LEXINGTON	0.93
	LOUISVILLE	0.91
	MAYFIELD	0.92
	MAYSVILLE	0.92

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METRO AREA MULTIPLIERS

State	Metropolitan Area	Multiplier
KY	OTHER	0.92
	OWENSBORO	0.92
	PADUCAH	0.92
LA	ALEXANDRIA	0.84
	BATON ROUGE	0.85
	BOSSIER CITY	0.84
	HOUMA	0.85
	LAFAYETTE	0.84
	LAKE CHARLES	0.84
	MONROE	0.83
	NEW IBERIA	0.84
	NEW ORLEANS	0.85
	OTHER	0.84
	SHREVEPORT	0.85
MA	ATTLEBORO	1.17
	BARNSTABLE	1.17
	BOSTON	1.17
	BROCKTON	1.21
	FALL RIVER	1.17
	FITCHBURG	1.18
	FRAMINGHAM	1.17
	HAVERHILL	1.17
	LAWRENCE	1.17
	LEOMINSTER	1.18
	LOWELL	1.17
	NEW BEDFORD	1.17
	NORTHAMPTON	1.06
	OTHER	1.14
	PITTSFIELD	1.06
	SPRINGFIELD	1.06
	WORCESTER	1.18
	YARMOUTH	1.17
MD	ABERDEEN	0.89
	ANNAPOLIS	0.89
	BALTIMORE	0.91
	CUMBERLAND	0.87
	FREDERICK	0.89
	HAGERSTOWN	0.89
	LEXINGTON PARK	0.89
	OTHER	0.89

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METRO AREA MULTIPLIERS

State	Metropolitan Area	Multiplier
MD	ROCKVILLE	0.89
	SALISBURY	0.89
ME	AUBURN	0.84
	AUGUSTA	0.83
	BANGOR	0.82
	BIDDEFORD	0.83
	FARMINGTON	0.83
	LEWISTOWN	0.84
	OTHER	0.83
	PORTLAND	0.84
	SANFORD	0.83
MI	ANN ARBOR	1.03
	BATTLE CREEK	0.94
	BAY CITY	0.93
	BENTON HARBOR	0.95
	CHEBOYGAN	0.94
	DETROIT	1.02
	EAST LANSING	0.96
	FLINT	0.98
	GRAND RAPIDS	0.84
	HOLLAND	0.88
	JACKSON	0.97
	KALAMAZOO	0.94
	LANSING	0.96
	MARQUETTE	0.94
	MIDLAND	0.92
	MUSKEGON	0.87
	OTHER	0.94
	SAGINAW	0.92
MN	AUSTIN	1.07
	DULUTH	1.05
	GRAND FORKS	1.07
	GRAND RAPIDS	1.07
	MANKATO	1.07
	MINNEAPOLIS	1.09
	MOORHEAD	1.07
	OTHER	1.07
	ROCHESTER	1.05
	ST CLOUD	1.05
	ST PAUL	1.09

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METRO AREA MULTIPLIERS

State	Metropolitan Area	Multiplier
MO	COLUMBIA	1.00
	FARMINGTON	1.00
	JEFFERSON CITY	1.00
	JOPLIN	0.91
	KANSAS CITY	1.06
	OTHER	1.00
	POPLAR BLUFF	1.00
	SAINT JOSEPH	1.05
	SAINT LOUIS	1.02
	SPRINGFIELD	0.90
MS	BILOXI	0.82
	COLUMBUS	0.82
	GREENVILLE	0.82
	GULFPORT	0.82
	HATTIESBURG	0.83
	HELENA	0.84
	JACKSON	0.80
	MERIDIAN	0.82
	OTHER	0.82
	PASCAGOULA	0.84
	VICKSBURG	0.82
MT	BILLINGS	0.91
	BUTTE	0.92
	GLASGOW	0.92
	GREAT FALLS	0.92
	HAVRE	0.92
	HELENA	0.92
	KALISPELL	0.92
	MILES CITY	0.92
	MISSOULA	0.92
	OTHER	0.92
NC	ASHEVILLE	0.79
	CHAPEL HILL	0.78
	CHARLOTTE	0.79
	DURHAM	0.78
	FAYETTEVILLE	0.79
	GASTONIA	0.79
	GOLDSBORO	0.79
	GREENSBORO	0.78
	GREENVILLE	0.78

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State	Metropolitan Area	Multiplier
NC	HICKORY	0.79
	HIGH POINT	0.78
	JACKSONVILLE	0.79
	KANNAPOLIS	0.79
	LENOIR	0.80
	MORGANTON	0.80
	OTHER	0.79
	RALEIGH	0.79
	ROCKY MOUNT	0.78
	WILMINGTON	0.78
	WINSTON-SALEM	0.78
ND	BISMARCK	0.89
	DICKINSON	0.91
	FARGO	0.92
	GRAND FORKS	0.90
	JAMESTOWN	0.91
	MINOT	0.91
	OTHER	0.91
	WILLISTON	0.91
NE	BEATRICE	0.91
	CHADRON	0.91
	COLUMBUS	0.91
	GRAND ISLAND	0.91
	LINCOLN	0.89
	NORFOLK	0.91
	NORTH PLATTE	0.91
	OMAHA	0.93
	OTHER	0.91
	SCOTTSBLUFF	0.91
	VALENTINE	0.91
NH	BERLIN	0.89
	CLAREMONT	0.89
	CONCORD	0.89
	KEENE	0.89
	LACONIA	0.89
	MANCHESTER	0.89
	NASHUA	0.89
	OTHER	0.89
	PORTSMOUTH	0.90
	ROCHESTER	0.89

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State	Metropolitan Area	Multiplier
NJ	ATLANTIC CITY	1.20
	BERGEN	1.24
	BRIDGETON	1.19
	CAMDEN	1.21
	CAPE MAY	1.18
	FLANDERS	1.21
	HAMMONTON	1.20
	HUNTERDON	1.20
	JERSEY CITY	1.23
	LAKEWOOD	1.21
	MIDDLESEX	1.20
	MILLVILLE	1.19
	MONMOUTH	1.19
	NEW BRUNSWICK	1.21
	NEWARK	1.22
	OCEAN	1.18
	OTHER	1.21
	PASSAIC	1.23
	PATERSON	1.23
	SOMERSET	1.22
	TRENTON	1.20
	VINELAND	1.19
	WASHINGTON	1.21
	WILLINGBORO	1.21
NM	ALAMOGORDO	0.88
	ALBUQUERQUE	0.88
	CARLSBAD	0.88
	FARMINGTON	0.88
	GALLUP	0.88
	LAS CRUCES	0.87
	LAS VEGAS	0.88
	OTHER	0.88
	SANTA FE	0.88
NV	CARSON CITY	1.14
	ELY	1.14
	HAWTHORNE	1.14
	HENDERSON	1.15
	LAS VEGAS	1.15
	OTHER	1.14
	RENO	1.14

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State	Metropolitan Area	Multiplier
NV	SPARKS	1.14
	WINNEMUCCA	1.14
NY	ALBANY	1.06
	AMSTERDAM	1.06
	BINGHAMTON	1.06
	BUFFALO	1.04
	DUTCHESS COUNTY	1.18
	ELMIRA	1.04
	GLENS FALLS	1.08
	ITHACA	1.11
	JAMESTOWN	1.11
	KINGSTON	1.18
	LOCKPORT	0.97
	LONG ISLAND	1.27
	MALONE	1.11
	NASSAU	1.27
	NEW YORK CITY	1.38
	NEWBURGH	1.18
	NIAGARA FALLS	0.97
	OTHER	1.11
	ROCHESTER	1.04
	ROME	0.94
	SCHENECTADY	1.06
	SUFFOLK	1.27
	SYRACUSE	0.96
	TROY	1.06
	UTICA	0.94
	WATERTOWN	1.11
	WHITE PLAINS	1.11
OH	AKRON	0.97
	CANTON	0.94
	CINCINNATI	0.94
	CLEVELAND	0.99
	COLUMBUS	0.95
	DAYTON	0.93
	ELYRIA	0.99
	FINDLAY	0.95
	HAMILTON	0.95
	LIMA	0.93
	LORAIN	0.99

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State	Metropolitan Area	Multiplier
OH	MANSFIELD	0.95
	MARION	0.95
	MASSILLON	0.94
	MIDDLETOWN	0.95
	OTHER	0.95
	PORTSMOUTH	0.95
	SPRINGFIELD	0.94
	STEUBENVILLE	0.94
	TOLEDO	0.97
	WARREN	0.94
	YOUNGSTOWN	0.94
OK	BARTLESVILLE	0.87
	ENID	0.85
	LAWTON	0.86
	MUSKOGEE	0.87
	NORMAN	0.87
	OKLAHOMA CITY	0.87
	OTHER	0.87
	PONCA CITY	0.87
	TULSA	0.87
OR	ASHLAND	1.00
	BEND	1.05
	CORVALLIS	1.05
	EUGENE	1.05
	MEDFORD	1.00
	OTHER	1.05
	PENDLETON	1.05
	PORTLAND	1.08
	SALEM	1.06
	SPRINGFIELD	1.05
	THE DALLES	1.05
PA	ALLENTOWN	1.00
	ALTOONA	0.97
	BETHLEHEM	1.02
	CARLISLE	0.97
	EASTON	1.02
	ERIE	0.97
	HARRISBURG	0.98
	HAZLETON	0.99
	JOHNSTOWN	0.97

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State	Metropolitan Area	Multiplier
PA	LANCASTER	0.97
	LEBANON	0.97
	NEW CASTLE	1.00
	OTHER	1.00
	PHILADELPHIA	1.14
	PITTSBURGH	1.02
	READING	1.02
	SCRANTON	0.99
	SHARON	0.99
	STATE COLLEGE	0.98
	WILKES-BARRE	0.99
	WILLIAMSPORT	0.99
	YORK	0.97
PR	MAYAGUEZ	0.73
	OTHER	0.73
	PONCE	0.73
	SAN JUAN	0.73
RI	NEWPORT	1.07
	OTHER	1.07
	PAWTUCKET	1.07
	PROVIDENCE	1.07
	WARWICK	1.07
	WESTERLY	1.07
	WOONSOCKET	1.07
SC	AIKEN	0.90
	ANDERSON	0.78
	CHARLESTON	0.79
	COLUMBIA	0.78
	FLORENCE	0.80
	GREENVILLE	0.78
	MYRTLE BEACH	0.77
	NORTH CHARLESTON	0.79
	OTHER	0.81
	ROCK HILL	0.81
	SPARTANBURG	0.79
	SUMTER	0.78
SD	ABERDEEN	0.84
	BROOKINGS	0.84
	MITCHELL	0.84
	OTHER	0.84

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State	Metropolitan Area	Multiplier
SD	PIERRE	0.84
	RAPID CITY	0.84
	SIOUX FALLS	0.84
	WATERTOWN	0.84
TN	CHATTANOOGA	0.86
	CLARKSVILLE	0.86
	JACKSON	0.86
	JOHNSON CITY	0.84
	KNOXVILLE	0.87
	MEMPHIS	0.87
	NASHVILLE	0.85
	OTHER	0.86
TX	ABILENE	0.84
	AMARILLO	0.84
	ARLINGTON	0.82
	AUSTIN	0.86
	BEAUMONT	0.85
	BRAZORIA	0.84
	BROWNSVILLE	0.83
	BRYAN	0.87
	COLLEGE STATION	0.87
	CORPUS CHRISTI	0.84
	DALLAS	0.84
	DENISON	0.85
	EDINBURG	0.84
	EL PASO	0.83
	FORT WORTH	0.82
	GALVESTON	0.84
	HARLINGEN	0.83
	HOUSTON	0.86
	KILLEEN	0.81
	LAREDO	0.84
	LONGVIEW	0.84
	LUBBOCK	0.85
	MARSHALL	0.81
	MCALLEN	0.84
	MIDLAND	0.84
	MISSION	0.84
	ODESSA	0.84
	OTHER	0.84

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State	Metropolitan Area	Multiplier
TX	PORT ARTHUR	0.85
	SAN ANGELO	0.83
	SAN ANTONIO	0.88
	SAN BENITO	0.83
	SAN MARCOS	0.85
	SHERMAN	0.85
	TEMPLE	0.81
	TEXARKANA	0.83
	TEXAS CITY	0.84
	TYLER	0.82
	VICTORIA	0.84
	WACO	0.84
	WICHITA FALLS	0.85
UT	LOGAN	0.86
	OGDEN	0.86
	OREM	0.85
	OTHER	0.86
	PROVO	0.85
	SALT LAKE CITY	0.87
VA	ALEXANDRIA	0.85
	ARLINGTON	0.85
	CHARLOTTESVILLE	0.85
	LYNCHBURG	0.84
	NEWPORT NEWS	0.86
	NORFOLK	0.85
	OTHER	0.85
	PETERSBURG	0.85
	RICHMOND	0.85
	ROANOKE	0.84
	VIRGINIA BEACH	0.85
VT	BARRE	0.83
	BRATTLEBORO	0.83
	BURLINGTON	0.83
	NEWPORT	0.83
	OTHER	0.83
	RUTLAND	0.83
	SPRINGFIELD	0.83
	ST. ALBANS	0.83
	ST. JOHNSBURY	0.83

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State	Metropolitan Area	Multiplier
WA	BELLEVUE	1.15
	BELLINGHAM	1.09
	BREMERTON	1.11
	EVERETT	1.13
	KENNEWICK	0.97
	OLYMPIA	1.12
	OTHER	1.06
	PASCO	0.97
	RICHLAND	0.97
	SEATTLE	1.15
	SPOKANE	0.92
	TACOMA	1.14
	VANCOUVER	1.06
	YAKIMA	0.98
WI	APPLETON	1.03
	BELOIT	1.05
	EAU CLAIRE	1.03
	FOND DU LAC	1.05
	GREEN BAY	1.03
	JANESVILLE	1.05
	KENOSHA	1.06
	LA CROSSE	1.03
	MADISON	1.05
	MILWAUKEE	1.08
	NEENAH	1.03
	OSHKOSH	1.03
	OTHER	1.05
	RACINE	1.06
	SHEBOYGAN	1.03
	SUPERIOR	1.05
	WAUKESHA	1.08
	WAUSAU	1.03

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METRO AREA MULTIPLIERS

State	Metropolitan Area	Multiplier
WV	BECKLEY	0.97
	CHARLESTON	0.98
	CLARKSBURG	0.97
	HUNTINGTON	0.99
	MORGANTOWN	0.97
	OTHER	0.97
	PARKERSBURG	0.98
	WHEELING	0.94
WY	CASPER	0.86
	CHEYENNE	0.86
	LARAMIE	0.86
	OTHER	0.86
	ROCK SPRINGS	0.86
	SHERIDAN	0.86

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