Additional Projects to Accompany *Technically Write!* 6th Edition

Chapter 6: Formal Reports

Project A6.1 Researching a New Site

Vern Rogers telephones you from the local H L Winman and Associates's branch, where he is branch manager, and asks you to drop in. (You own a small business called Pro-Active Consultants Limited, which you operate from an office in your home.)

You visit his office the next day, on the third floor of the Connor building at 444 Main Street. The building was built around 1880 and has stood up well over the years, however it is aging and clearly needs some renovations.

"We need better and new accommodation," Vern says, "something more in line with the tenor of our engineering consulting business, and something a little bigger." He says no one on his staff has the time to research new accommodation, so he's asking you to do it. "I need your report by the end of next month, that's two months before our lease runs out: time for me to choose one of the sites you recommend, and for me to give a month's notice to the owners of this building."

Vern explains that over the years the centre of commerce has drifted away from the Connor building, toward the tree-lined Broadway area of the city. "Broadway doesn't have to be the chosen location, but it will give you some idea of the kind of area I think would be most suitable."

You ask some questions, and Vern offers detailed answers (see Table W6-1).

Table W6-1. HLW's Local Office Requirements.

Your questions:	***Vern Rogers's answers:***
1. How many people do you have on staff? And how much increase do you see over the next five years?	Currently, 42. Over the next five years I expect the number to increase about 10% per year, to a total of, say, 60 in five years.
2. How much space will you need?	We have 410 square metres right now, and frankly it's a bit tight. I'd say we need 480 sq m immediately, and 580 in five years.
3. What rent do you anticipate paying?	Good point. We're lucky here: it's only $14.50 per month per square metre; I guess I could go up to about $17.00.
4. How many parking stalls? And what will the staff be willing to pay for them?	Between 25 and 30. Currently they pay $30 per month in summer, and $50 in winter.
5. Should there be a cafeteria in the building?	Ideally, yes. Or a restaurant or two within easy walking distance.
6. Do any of your staff travel by bus?	About 20%. A bus route is important.
7. Anything else you can think of?	False ceilings! We're getting so dependent on computers, we need false ceilings so we can bring the cables in unseen. And make changes as the technology changes.

220 Broadway. You first look at Vern's preferred location, where there seems to be only one vacancy. You contact Camilla Loew, a sales representative with Modern Management Inc.

"The occupancy rate is very high on Broadway," Camilla says. "If you want this one, you'll have to move fast to close the deal."

As she drives you along the tree-lined avenue, she briefs you about the vacancy. "The property's in the Chancellor Building, fourth floor, 220 Broadway. Actually, it's occupied right now and will be for another two-and-a-half months. That would suit your client just about right, wouldn't it?"

You agree that it would.

"The present owners are ManSask Insurance Corporation. They're moving to larger premises in the old Ashton Warehouse."

The Chancellor building lives up to its name. There is a refined, almost old-world atmosphere about it: dark walnut panelling with gold trim, high ceilings, rich gold carpet, and spacious but rather slow, sturdy, panelled elevators. The offices themselves have a panelled foyer, but inside are businesslike with off-white painted walls bearing framed prints of well-known traditional Canadian artists. There is no false ceiling. ("But that could be installed without any problem," Camilla suggests. "The high ceilings will permit it.") The 12 rooms that make up the 500 square metre space are arranged along two walls that face north and east, and so overlook the old warehouse district and the railway yards.

"Five hundred square metres is barely enough," you murmur, more to yourself than to Camilla.

"Ah, but in five years one of the adjoining offices is bound to be freed up," she says optimistically. "One is 120 sq metres; the other 185 sq metres." She says the rent is $18.75 per square metre per month, and the rate is firm for the first two years. After that it has to be renegotiated every year.

"Inevitably, there's always an increase in the rental rate," you say, more as a statement of fact than a question. Camilla agrees that past history shows there is a modest increase "every year or so." And she say there are 22 parking spaces in an underground car park you can inherit from the present occupant. "The rent is $55 per month, and if you need more spaces, we have a waiting list."

"Cafeteria?" you ask.

"At the back of the building, on the second floor."

You don't have to ask about bus connections, because Broadway is a major thoroughfare served by several bus routes.

1650 Manor Road. Dana Wintersen calls from Provo Realty to say she has an excellent property for you, recently developed in the suburbs.

"In the suburbs?" you reply. "I don't think my client would appreciate that."

"It's worth a look," she says. "Don't 'nay say' it until you've seen it."

Dana is right: the accommodation would suit HLW perfectly—if it were only downtown. There are 750 square metres of space, available immediately; the rent is only $16.00 per sq m per

month, and the lease is for one year, but with a clause guaranteeing it can be renewed for one more year at the same rate.

"You don't need all that space?" Dana asks. "You can sublet what you don't need—I'll even help you find a tenant—and then you can call it back in when you eventually need it. That way, you maintain control."

The development is part of a new mall built where there once had been a supermarket. It forms a "U," with ample parking space both within the U and behind the centre block. The three sides are numbered 1640, 1650 (the one with a vacancy), and 1660. The lower level of each side of the U is occupied by small, mostly retail, businesses: stationers, a pet store, a medical clinic, a small restaurant and bake shop, and so on. The upper level is occupied by small-to-medium-size businesses: a specialty importer, a software developer, a social services consultant, an accounting firm, a legal firm, and Provo Realty. The ceilings are false, hung from cables. ("Your client will be able to design the place to suit his specific needs," Dana says. "They'll be the first tenant."

She says there will be no charge for parking. "We're setting aside special rows for the buildings' occupants, with other rows for visitors. We're also putting in a limited number of power plugs for the winter: $20 a month."

The interior has been painted only with an undercoat ("You can choose your decor," Dana explains), has large triple-pane windows ("Excellent natural light"), and central air heat and air conditioning. The walk-up to the second floor, via a central flight of stairs, is spacious and pleasingly decorated in a light green. There are wheelchair ramps, both from the street to the sidewalk and from the sidewalk into the building, and a small elevator beside the stair well. The building does not have a basement.

Manor Road skirts the southern edge of a residential area known as Silver Heights, which 80 years ago was the premium residential area of the city and still retains some of its early-century charm. The trees are fully grown and the boulevards are well developed with shrubs and flower beds. Manor Road has become a fast route from the city centre to a new, prestigious residential district known as Shaunessy Heights, at the edge of the city. It is reasonably well-served by a fast bus route from downtown that operates every 15 minutes.

100 Sheridan Street. The third location you visit is the old Ashton building, which by coincidence is the same building that ManSask Insurance Company is coming into, from 220 Broadway. (They are moving into suite 702 on the seventh floor. You are shown suites 404 and 405 on the fourth floor.) You are accompanied by Laurence DeWitt of Corisand Development Corporation.

"Our development of the Ashton building is part of a long-range plan to rejuvenate the old city centre, to reverse the drift out to the suburbs. You'll be blessed by a strong, warm building—warm both physically and aesthetically—that has large rooms and high ceilings."

When you enter the building's front door, you realize the late 1800's decor has been carefully retained: there are marble floors and steps, gilt-edged "picture frame" walls, a sweeping staircase leading up to a mezzanine with a lounge and coffee shop overlooking the entrance hall.

"Elegant," you say.

"Right!" Laurence replies. "And the office decor is equally interesting."

You take an old-fashioned but completely refurbished open-cage elevator with sliding concertina-style black metal doors. You step out into a six-sided foyer in the middle of the building,

with a double door set into each side. Laurence opens a solid oak door with a brass nameplate with "405" engraved on it, and you step into a "warehouse" past. The ceilings are a good 4 metres high, the walls are scrubbed *real* red brick, the pillars and beams are 30 cm square natural oak, and the floors are polished hardboard planks.

"Aren't those beams a fire hazard?" you ask.

"No way! They'll only smoulder and char slowly rather than burn. Far safer than metal beams that tend to buckle in extreme heat." Laurence reminds you that the whole building has been designated a no smoking area. (You wonder how Vern Rogers would like that: you have noticed he smokes.)

"Rent?" you ask.

"$17.50 per square meter per month. You'll have a three-year lease, so the rent is guaranteed for three years."

"How large is it?"

"This room's 410 square metres. Room 404, next door, is another 220 square metres. We'd cut a door to suit you. And if you need more space, room 505 directly above is available. We'd put in a circular staircase."

"Can we put in false ceilings?"

"No, but you can run suspended cable channels. No problem there."

"Parking?"

"A problem. There's nothing at the moment. We're converting the Carter building, diagonally across the back lane, into a car park. $50 per month summer and winter. It'll be ready in six months; until then, it's find what you can." (Later, you investigate: there are two car parks three blocks away: $65 per month.)

It's at this moment you realize the Ashton building is only two blocks from HLW's present location! Bus routes, you know, are frequent on Main Street, a three minute walk. The building has adequate wheelchair access.

Now you have a quandary: the two most promising sites are *not* in the area preferred by Vern Rogers.

You are to prepare him a formal report describing your findings (you are aware he will send a copy to HLW's head office in Calgary, for senior management approval), and to preface it with a cover letter/executive summary.

You may also, if you wish to add depth and realism to your report, research a real location in your city and include it as a fourth option. If you do, the information you present *must* be factual and provable.

(We recommend you start this project by creating a comparative analysis table similar to that prepared by Morley Wozniak as his attachment to the report in Figure 5-4 of *Technically-Write!* 6th edition, page 142. It will help you reach a decision and focus your writing.)

Project A6.2 Researching Computers

The Association of Small Business Operators (ASBO) is a major society with headquarters in Chicago, Illinois. Across Canada and the US there are individual branches of the Association, each of which operates independently. The executive director of the ASBO branch in your province is Milton Lajzieks, and the branch's office is in Suite 460 of the Dorfmann Building at 245 King Street of the province's principal city.

Two days ago you had a telephone call from Milton Lajzieks. "Do you have time to carry out a study for us?" he asked.

You said you could find the time.

"Good!" he continued. "Our members need someone who is *not* a computer salesperson to tell them what kind of computer they should buy. Not by brand name, but to focus on the features they should be looking for." He explained that the ASBO members in your province are confused: salespeople tout their products to the exclusion of others, and only the occasional salesperson seems willing or able to discuss which is the best type of computer for the individual's needs. "I want you to write a report that I can copy and send to all members, so they can go to a supplier and ask educated questions."

Milton asked what your fee would be (your hourly rate) and he accepted your proposal. Then he said he would write you a letter authorizing you to carry out the project. The letter arrived today:

> Dear *(your name)*
> I am confirming that the Association of Small Business Operators (ASBO) is engaging your company to investigate personal computers and identify what type of computer will best suit ASBO members' needs. Our members own a range of businesses, ranging from firms that provide "trade" services (i.e. electricians, pipefitters, carpenters, stonemasons) to people who offer personal services (i.e. accountants, hairdressers, day care operators, even engineering consultants). Some operate independently as single-operator business owners, while others employ up to 6 or 8 people.
>
> Here are 11 questions that ASBO members have asked most frequently, in their response to a questionnaire I sent out earlier this year:
>
> 1. Is it better to have a desktop computer or a portable computer?
> 2. Why is a portable computer more expensive than a desktop computer, even though both may have the same memory, speed, and peripherals?
> 3. How much memory will I need in my hard drive? What about RAM?
> 4. Do I need a 3.5 inch disk drive as well as the CD-ROM drive?
> 5. What provision should there be for accommodating future upgrades?
> 6. What speed should the modem have?

7. I'm a consultant who travels fairly frequently. Do I need both a desktop *and* a portable computer? Or is it safe to have my whole office in a portable computer and carry it with me? What are the risks? Do airport security systems pose a danger, maybe erase information?
8. How long can I expect my computer to last? (By which I mean how soon will it become too slow, or impossible to upgrade?)
9. What new technologies are on the horizon, that I don't know about yet but should be aware of?
10. What software should I look for, either bundled (built in) or as an add-on?
11. Where can I find training locally that will help me use my computer more efficiently?

Please provide me with a formal report which I can mail out to members.

Sincerely
Milton Lajzieks

You are going to have to do some personal research to complete this project. Your company name is Pro-Active Consultants Limited, and your office is in your home. (If you prefer, you can create your own company name.) In fact, you realize now that you are a small business operator, so after completing the study you plan to join ASBO.

Project A6.3 Stormwater Disposal, Cayman Flats

The Fairview Development Company wants to develop an area of virgin land known as Cayman Flats on the southern perimeter of Montrose, Alberta. The City of Montrose displays interest in the proposal and asks for a formal presentation of the company's development plans.

The land is flat, and Fairview Development Company soon realizes that it has a stormwater drainage problem to overcome before it can complete its presentation. It contracts with you to resolve the problem (you own a small private consulting company called ProActive Consultants Limited, which you operate from an office in your home). In a letter dated one week ago Frederick C. Magnusson, President of Fairview Development Company, wrote:

> Dear (you):
>
> We are preparing a feasibility study for the City of Montrose, in which we are proposing to develop the Cayman Flats areas to the south of the city as a new residential district. This low, flat land offers drainage problems because of its distance from the Wabagoon river. The storm sewers of the intervening developed areas cannot be used since they have insufficient capacity to handle the additional stormwater runoff that Cayman Flats will generate.
>
> We are asking you to conduct an engineering investigation into the stormwater disposal problem and to recommend an economical method that we can include in our presentation to the City of Montrose.
>
> Sincerely,

You start your investigation by examining Cayman Flats. It is generally flat, low-lying, and frequently waterlogged. The maximum variation in height is 2.75 metres; its area is 646 hectares. To the east is a railway line (Northern Railways) into Montrose centre, to the north there is a residential centre, and to the west and south lie arable land 70% cultivated (see the map in Figure A6.3).

You calculate the maximum stormwater runoff for the land in its present condition. (Stormwater is rainwater that must be drained from the land quickly to prevent flooding of low-lying areas and basements. Maximum stormwater runoff is the largest amount of water likely to occur; it is calculated on past records of maximum precipitation accumulated from the heaviest rainstorms. Using the *Rational Formula*, you calculate a 6.4 metre diameter culvert would be required to handle the heavies peaks.

Since such a large culvert would offer construction problems, use a lot of property, represent an eyesore, and be a source of danger to small children, you look for other methods. The most obvious is to construct storm sewers throughout Cayman Flats before development starts. Because the runoff would then be channeled, the stormwater would be "staged" (that is, reach the outfall, or disposal sewer system, as a series of peaks). You estimate that the largest peak could be handled by a 2.44 metre diameter storm sewer.

Your next step is to examine the territory between Cayman Flats and the Wabagoon River. The whole area has been developed; to build a sewer of the required size directly to the river would be phenomenally expensive, and you would likely have difficulty getting municipal approval. The distance is too great to build it around the southwest perimeter of the city. But there is a 12 metre wide belt of open land on the west side of the railway line. It is owned by Northern Railways and they agree to lease it to the city for $1800 a year, with a 20-year lease guarantee.

Some other factors you discover are listed below:

1. Storm sewers of the residential areas north of Cayman Flats are only 0.46 metre (18 inch) diameter in zones S-4 and S-6, and 0.60 metre (24 inch) diameter in zone S-5. Those in S-4 feed into 0.76 metre (30 inch) sewers in S-2; those in S-6 run directly down to the river, following the boundary line between S-2 and S-3; those from S-5 feed into the 0.91 metre (36 inch) sewers in S-3.
2. The municipality views with alarm your enquiries to find an easy route to the river for a 2.44 metre (96 inch) storm sewer through zones S-3, S-5, and S-6. They fear (rightly) that you could not excavate deeply enough to avoid interfering with the existing services. (Too deep an excavation would foil the natural flow into the Wabagoon River.)
3. Cayman Flats slopes very slightly downhill from the southwest corner to the northeast corner. The total drop is 2.43 metres.
4. Although zones S-15, S-17, and S-19 are all classed as “light industry,” S-17 has never been developed. It is a small zone of approximately 38 hectares, lower in elevation than the surrounding zones and so rather swampy. Undoubtedly the amount of fill needed to build it up has hindered its development.

At this point an idea occurs to you. If zone S-17 is already acting as a collection point for some of the stormwater from the surrounding zones (principally Cayman Flats), why not excavate it even further and use it as a quick runoff storage pond? If it were big enough, you could hold all the stormwater runoff from Cayman Flats and then pump it at a controlled rate into a smaller diameter outfall sewer from S-17, along the railway line, to the river. It would mean building a microprocessor-controlled pumping station and fencing the storage pond, but it would be feasible. You make some calculations:

Size of storage pond required:	450 000 kL.
Size of outfall sewer to river:	0.60 metre (24 inch) diameter

To evaluate the ideas, you work up some cost estimates:

1. Cost of installing a storm sewer system throughout Cayman Flats:	$1 480 500
2. Cost of 2.44 m diameter storm sewer along the railway line from Cayman Flats to Wabagoon River:	$1 908 000
3. Cost of 0.60 m diameter storm sewer over the same route :	$1 240 500
4. Cost of purchasing zone S-17, excavating the storage pond and fencing it, and building an automatic pumphouse and pump system:	$ 932 250
5. Pumphouse annual maintenance and operating cost:	$ 9 750

At this stage you feel your problem has been resolved and you have a reasonable proposal to offer Fairview Development Company. Your report is almost finished before another obvious and logical idea occurs to you: if you are going to *control* the flow of water into the outfall storm sewer, why not control it even further and pump the stored stormwater into the *existing* 0.60 metre (24 inch) storm sewers of zone S-5? It would mean waiting until the stormwaters from S-5 have been fed into the river, but this would be no problem because you have planned an oversize storage pond that could hold the water from the heaviest storms recorded during the past 30 years. All you would have to do is obtain municipal approval and build a 0.60 metre sewer from the pumphouse to one of the sewers in zone S-5.

You approach the City of Montrose with your unusual idea. The City Engineer hesitates briefly, and then gives approval in principal. You then calculate one more cost:

6. Cost of building a 0.60 m storm sewer from the pumphouse in zone S-17 to the southeast tip of zone S-5, and connecting it to the storm sewer in zone S-5: $ 243 000

When you are preparing your report, bear in mind how Fairview Development Company intends to use it. They will probably attach it to their proposal to the City of Montrose as evidence that they have researched and resolved the stormwater disposal problem. Consequently you must write with the knowledge that, although you are addressing your report to Fairview Development Company, the ultimate readers are likely to be the City Engineer and Councillors of the City of Montrose.

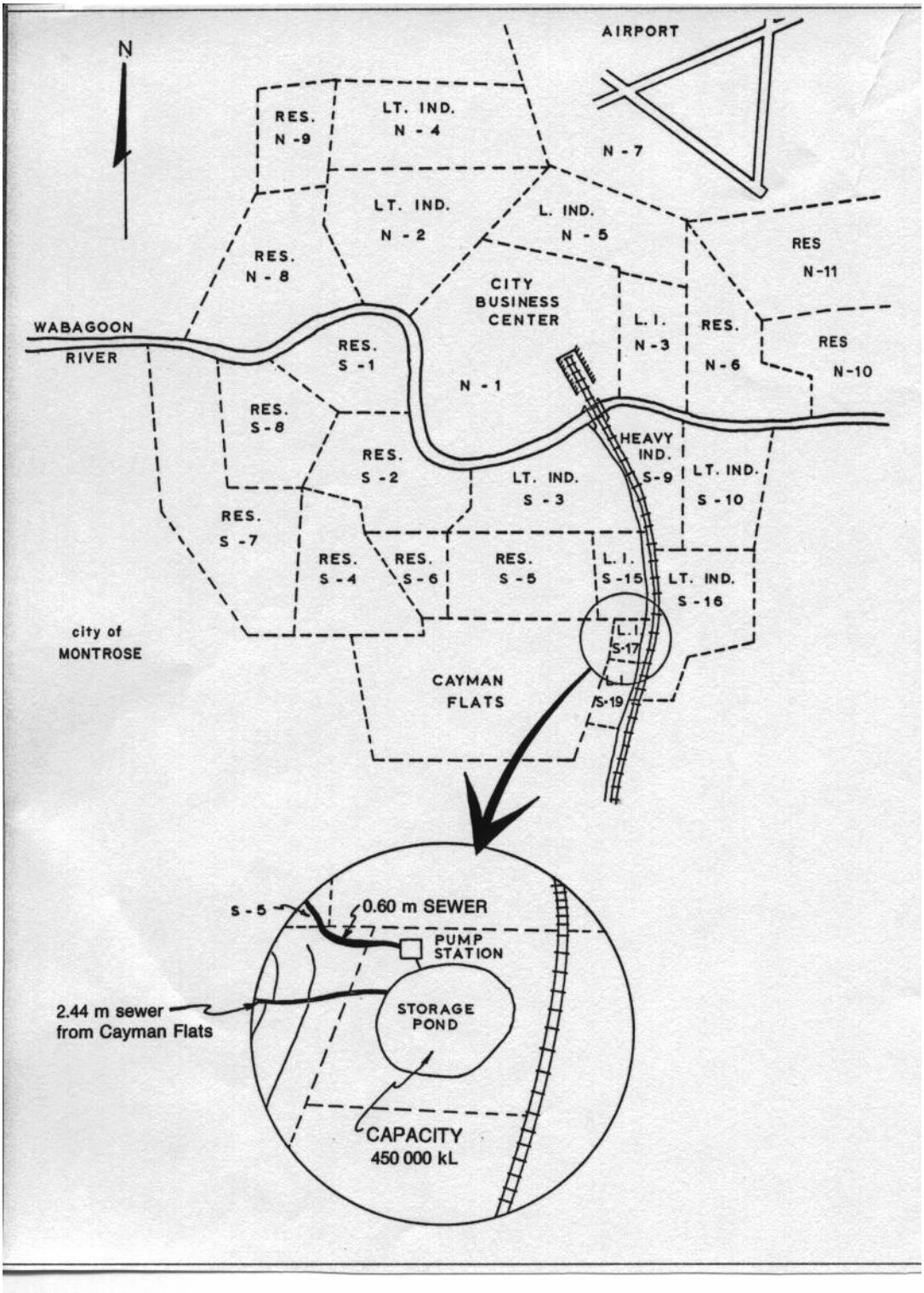

Figure A6.1 Sketch Map of City of Montrose