2002 Old Town Improvement Study
Summary Report

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I. Executive Summary

The following report summarizes the findings of the 2002 Old Town Improvement Study. This document reviews the study approach, lists and highlights research on suggested capital improvement projects, and sets up a framework for additional discussions on setting project funding priorities.

As this study has endeavored to provide an objective and unrestricted approach to reviewing all constituent ideas, the collective project listing is very extensive. The end result is a thorough analysis of numerous Old Town capital improvement projects. As a tool to assist the City Council, Staff, and interested citizens to formulate their respective opinions, the enclosed materials provide both qualitative and quantitative details on suggested infrastructure projects.

Below is a summary of the project categories and their cumulative budget forecasts:

1. Street Reconstruction Projects …… $ 19,350,000
2. Street Project Add-Ons
    a. Water Line Replacements …… $ 1,333,241
    b. Relocating Overhead Utilities …… $ 7,554,000
3. Parking Enhancements
    a. Option AA – Reconfigure surface lot use (gain 20-45 spaces) …… $ 16k-$80,000
    b. Option A – Parking Ramp – Improved access (gain 165 spaces) ……. $ 2,900,000
    c. Option A1 – Parking Ramp w/ Retail/Civic space (gain 147 spaces) …… $ 3,200,000
    d. Option B – Structured parking (gain 247 spaces) ……. $ 4,300,000
    e. Option B1 – Structured parking w/ Retail/Civic space (gain 247 spaces) ….. $ 4,700,000
    f. Option C1 – Structured parking w/ Retail/Civic space (gain 387 spaces) …. $ 5,900,000
4. Pedestrian Friendly Enhancements ……. $ 2,035,200
5. Mixed Bag …….. $ 4,871,000

Those involved with the study, from residents to business operators, all appreciated the opportunity to discuss their ideas. Many of the creative thoughts and suggestions were derived from the mere fact that a forum was created to hear their ideas. The following pages contain numerous details and budget figures generated on each of the researched project ideas. Also included are opinions and constituent sentiments captured throughout the study period.

Priorities within certain project categories (Street and Water projects) have already been listed. What needs further discussion and direction from City Council is priorities between the project categories. There are varying degrees of support behind the proposed projects. Not surprisingly, most people would like to see action taken on the majority of the listed projects, but are wary of paying for it. Parking and relocating overhead utilities received the most attention and remain the most divided in support.

Upon a review of the attached report, it is recommended that the following next steps be taken:

1. Promote a period of additional review and discussion over the researched projects. Actions taken to further stimulate additional debate and discussion will ultimately allow opinions to form on which category priorities are best suited for funding appropriations.

2. City Council should provide staff direction on whether certain project categories are worthy of further research and fund appropriation considerations.

3. Given a "big picture" view of suggested project priorities from City Council, City Staff can then put together a series of funding strategies ranging from conservative to aggressive.

4. Discussions on capital projects within Old Town should be incorporated into the 5 year CIP planning process. Preparations for the next 2 year budget cycle would utilize the outcomes of the CIP prioritization process.

From the information contained within this document, those seeking to formulate opinions on what subsequent actions are prudent will be encouraged to consider the following questions:

- Given that improvements to Old Town is a City priority, what types of infrastructure projects would best serve this City goal?
- Should street reconstruction projects follow the same funding and scope routines as in the past? Or should considerations be made to incorporate additional street features and characteristics such as added sidewalks, traffic calming features, stairways, and relocated utilities?
- Given the emphasis on water quality and supply, will the water fund need to be increased to ensure replacement lines in Old Town can be replaced as street reconstruction projects are planned?
- Can the relocation of overhead utilities be a financially "do-able" project?
- What option for parking supply enhancements makes the most sense at this time?
- Where do "pedestrian-friendly" enhancements fit into the overall plan for appropriating capital funds within Old Town?

These questions will undoubtedly unfold as you review and discuss the following material.

Insert OTIS Project Map

II. Introduction

At the request of the City Council, the 2002 Old Town Improvement Study (a.k.a. "OTIS") was initiated in July of 2002 to review and research a vast array of suggested infrastructure projects within Park City's Old Town. Its purpose identified a desire to see City Staff research, publicly discuss, and prioritize capital projects within Old Town.

Over the course of four months, the information that has been gathered and publicly discussed is now summarized in this report.

Park City Vision and Priority Goals

Important to the discussion on improvements to Old Town is the need to understand the recent priorities set by the current City Council. Park City's vision states a desire to:

> "Be a World Class, Multi-Seasonal Destination Resort Community"

Old Town is recognized as the "spirit of Park City" and under the recent goal setting exercise, a High Priority Goal of the City Council is:

> "Improving Historic Park City"

As several constituents have lobbied the City for individual infrastructure projects, an approach to review in detail all of the suggested projects was desired.

Throughout the gathering of information, it became apparent that infrastructure projects gradually fell into the following categories:

A. Street Reconstruction Projects
B. Parking Supply Considerations
C. Pedestrian-Friendly Enhancements
D. Mixed Bag

The intended result of the study was to put together a comprehensive project list that detailed cost estimates, analysis, envisioned scheduling time frames, constituent preferences, professional recommendations, funding and financing options, and proposed policies for assessing and implementing capital projects.

III. Study Approach

As Park City has commissioned several previous studies within the Old Town area, the OTIS Study took a position not to redo or duplicate any previous work. Instead, a thorough review of the key highlights and recommendations from the past studies helped formulate how OTIS study approach would go. Using information and analysis from previous studies allowed for a more efficient use of staff time and reduced the need for outside professional resources to conduct the study.

City staff collected the majority of the OTIS Study data and only engaged the services of outside resources to assist in areas where the Staff did not have technical expertise. The boundaries of the Study were limited to the historical zoned property commonly called "Old Town."

Careful consideration was made to not rush into researching projects without first allowing for all interested parties to first have a say on which projects the City should further research. Starting with a mailed questionnaire to all Old Town residents and businesses in late July, creative ideas were solicited on suggested infrastructure projects. The questionnaire outlined the intentions behind the OTIS Study and encouraged involvement in one of three August public meetings.

The August public meetings fueled initial interest in discussions about possible infrastructure projects. Discussions here along with questionnaire responses, Park City Municipal staff input, local agency ideas, and a variety of individual meetings helped formulate a project list needing more details to the following:

- Accurate budget forecasts
- Time frames to complete the desired projects
- More technical or detailed analysis of the ideas
- Possible funding sources
- Gathering of constituent preferences

This initiated a 2nd phase of research that now had a targeted project list, but lacked the above details.

For the majority of the "Pedestrian-Friendly," "Mixed Bag," standard street, and water project categories, those details were derived with internal staff research. For the engineering needs of further exploring the concept of "relocating the overhead utilities" and "parking enhancements," outside professionals were obtained.

These details were then brought back to a public forum for a follow-up review of the targeted project list. This late October public meeting went over the initial OTIS Study findings with an intent to gather a snapshot of sentiments from those who attended.

In reviewing the options for suggested infrastructure projects, the OTIS Study and this summary report have taken great efforts to present the material without a perceived bias. The intended hope is to spur additional discussion that can draw upon the details presented in this report. With this outlined approach, the following findings provide the analysis, project specifics and recommendations on suggested next steps.

IV. Findings

A. Review of Past Studies

Park City has made significant improvements to Old Town since the mid 1980's. Through a variety of funding mechanisms, both publicly and privately financed, the area has steadily been improved upon in many ways.

A large part of the City sponsored projects have been stimulated by suggestions made from previous area wide studies. From core street improvements of storm drains and street re-surfacing to the creation of a transit center, stairway connections and "street furniture," the improvements have had a positive impact. Many of the "new" ideas requested of the City have been around for awhile. A quick recap of the past study recommendations and outcomes is useful to understand.

1993 Sear Brown Study - Street and Utility Improvements

This review of existing street and utility infrastructure outlined a item by item priority list of street repairs to make within Old Town. This prioritization of street projects allowed the City staff to address 1 by 1, the required improvements necessary to handle problematic storm drain, street conditions, and utility capacity concerns. Over the course of eight years, the majority of the outlined projects were completed.

The element helpful to the OTIS study is in the value of forecasting the street reconstruction priorities in 1-5, 6-10, and 11-15 year category periods. This is a basic city service that consumes a large amount of available capital funds and has several possible "add-on" elements that will later be discussed.

1993 Lower Park Avenue Study – Pedestrian and Transportation Improvements

The timing of this study signifies an interesting shift in emphasis towards pursuing a balance of transportation improvements with neighborhood and pedestrian enhancements. A key element introduced as a part of this study was the desire to see traffic calming features added to the entrance of Lower Park Avenue. The "box of rocks" that now sits at the entrance of Lower Park Avenue was seen as a means to subtly divert the majority of through traffic to Main Street via Deer Valley Drive. Elements reviewed in the study began an initiative to create more "pedestrian-friendly" enhancements to this area. The concepts of "bump-outs" – later called "bulb-outs" - were introduced here.

There is a continued desire to see additional traffic calming features and "street furniture" along this corridor. Any project that might move ahead in this area would value from reviewing the concepts discussed in this study.

1996 Wilbur Smith Associates Study – Transportation Systems and Parking Analysis

From early 1995 and into 1996, a very extensive review of the Park City area transportation and parking system was reviewed. This included an analysis of the future options the City had to address a perceived steady increase in the traffic volumes. Those options included:

- Ideas on enhancing the Park City Transit System
- Locations / Concepts to augment the supply of surface parking
- A review of a park-n-ride system
- Identification of the best locations to add structured parking
- A review of traffic management systems and a variety of possible options

Much of the study remains a valuable reference tool for continuing discussions on the topic of parking and transportation systems. Outcomes include:

- City steps to enhance and add to the Park City Transit System
- Upgrades to surface lots in Swede Alley and the Sandridge Lots responding to the demand for more parking capacity.
- A system for tracking parking lot utilization has been in effect since the completion of this study.

The OTIS Study re-engaged the same firm who did the initial study to update their data on the existing supply and perceived demand for parking space in the Main and surrounding street areas. Additionally, several of the original long term parking options discussed in 1996 were updated to apply 2002 dollars to.

<u>1998 Downtown Action Plan – Main Street and Swede Alley Improvement Concepts</u>

The intended purpose was a "Revitalization of Main Street and Swede Alley." Highlights include:

- The recommendation to add more "pedestrian-friendly" enhancements to the corridors leading up to and on Main Street.
- The idea of creating areas for bulb-outs / widening of sidewalks to promote abilities to stop, rest, socialize, and safely cross streets in designated areas.
- Promoted added landscaping and interactive displays
- Suggested an investment in a comprehensive signage program
- Encouraged outdoor events, activities, and outdoor dining

It was suggested that parking improvements be a blend of strategies – both from a supply perspective and a management one. Any corridor enhancements that lost parking space were suggested to be replaced in a 3 to 1 ratio. The China Bridge garage was recommended to have a face lift while any discussions over building an added structure suggested a minimum of 300 spaces be located adjacent to a proposed transit center. Furthermore, any concepts to add a parking structure saw a positive in having access come off of Marsac Avenue and might want to consider space for City Hall expansion needs. The concept of adding a central transit center was envisioned and eventually fulfilled.

The report suggested incorporating public art into improvement projects, suggesting these categories:

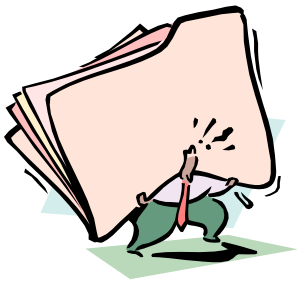
- Visual focal points
- Gathering sites
- Enhance existing opportunities
- Street furniture / fixtures

From these recommendations, several street bulb-outs and corridor improvements have been made. Current discussions relating to the Old Town Improvement Study draw from many of the initial concepts brought up during this area review.

B. Phase I – Information Gathering

From July – August 2002, information related to project ideas for Old Town improvements was collected into a discussion list. Through a series of meetings with the following constituents, a targeted project list for further research was developed:

- Historic Main Street Business Alliance (HMBA)
- Residents – via (3) public meetings and many individual meetings
- Internal PCMC staff – City Engineer, Public Works Director, Water, Transportation, Planning, Building, OCMB Departments
- Snyderville Basin Water Reclaimation District (SBWRD)
- Park City Fire Department (PCFD)



As Park City has a diverse and wide ranging spectrum of individual opinion, project ideas were numerous. The HMBA outlined its top priorities as 1) parking enhancements and 2) sidewalk improvements. In a letter to the City Staff, the HMBA requested the City consider looking into these two areas in greater detail.

Old Town residents responded to the Phase I questionnaire and public meetings with numerous ideas on how to improve neighborhood features. Much of the discussion centered on street improvements and pedestrian amenities such as sidewalk widths, lighting needs, and corridor enhancements. These ideas were captured and placed onto the targeted project list. This notable statement was enthusiastically supported – “there is no cookie-cutter look for streets within Old Town” and “with any pending street project, neighborhoods should have a chance to add input on the street design characteristics.” In other words, not every neighborhood desires a sidewalk or added lighting elements and residents should meet to discuss such things prior to the streets being re-done.

Additional themes that arose included an overwhelming desire to see the City further research the options to address the perceived parking shortage, but not to rush into building a large parking structure. 97% of Phase I respondents supported that statement on this topic that proved to be the most controversial.

The concept of burying (or relocating) overhead utilities was also well supported. 88% of those polled stated that the City should at least further research the concept to obtain more detailed cost projections and analysis.

All those who participated in the gathering of this information believed that in order to properly evaluate and weigh which projects should receive funding or not, needed the second step of adding more details and accurate cost projections.

C. Phase II – Detailed Analysis of Researched Projects

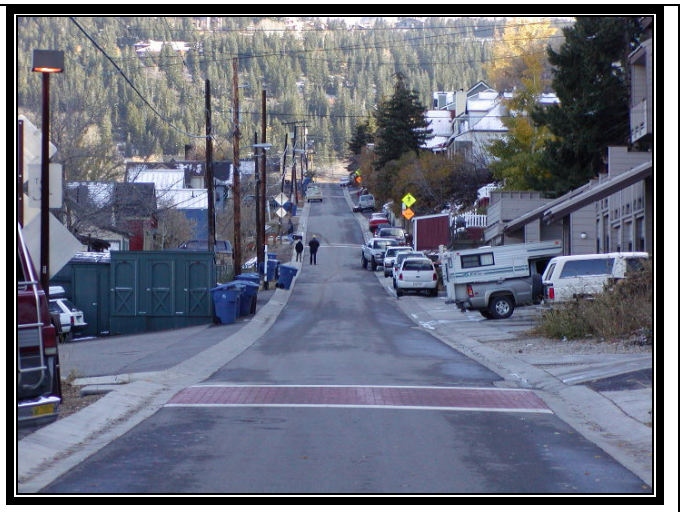
1. Street Reconstruction Projects

a. Street Reconstruction Projects – Base Level

Over the course of the next fifteen years, the City Engineer forecasts the need to tackle (16) street reconstruction projects throughout the Old Town area. This alone is forecasted to cost over 19 million dollars.

Traditionally, Park City Municipal Corporation tackles about (1) street reconstruction project every (2-3) years as both funding limitations and neighborhood impacts are considered. Looking at the projected needs, either the timeframe will have to be extended or additional funding sources found to cover the forecasted timeframe needs.

As a core City project, it is important that this category of infrastructure project be discussed. As the regular consumer of the bulk of the City's Capital Improvement Fund (CIP), street projects also relate to many of the subsequent OTIS project ideas.



Impacts of any street reconstruction project are high. Most require a 2-4 month period to complete storm drain installation, any "wet" utilities, road base, paving and curb / gutter placements.

Maintaining resident and public safety access is a challenge requiring coordinated street closures and good communications with the contractor and street residents.

The following breakdown prioritizes the street segments with the listed budget needs, funding options, and scope of work highlights.

Category & Project Listing	Priority or Suggested Period	Projected Budget Need	Funding Source Options	Comments & Analysis Highlights
Street Reconstruction Projects				
Prospect Ave	1 (1-5 years)	$ 1,100,000	CIP / Operating	Storm drains, sewer, gutters, paving, landscaping, and relocation of fire hydrant
Lower Norfolk (8th-13th)	1 (1-5 years)	$ 1,500,000	CIP / Operating	Storm drains, sewer, gutters, sidewalk, paving, conduit
Upper Park Ave.(Heber to King)	1 (1-5 years)	$ 2,000,000	CIP / Operating	Storm drains, sewer, gutters, conduits, sidewalk, paving
Intersection - Marsac & Hillside	1 (1-5 years)	$ 600,000	CIP / Operating	Sidewalks, gutter, landscaping, paving, public art, utility conduits
Woodside - north of 13th	1 (1-5 years)	$ 900,000	CIP / Operating	Gutter, paving, storm drains, sidewalk, utility conduits
	Sub total	$ 6,100,000		
Sandridge	2 (6-10 years)	$ 700,000	CIP / Operating	Gutters, storm drain, paving, landscaping, right of way
Hillside	2 (6-10 years)	$ 550,000	CIP / Operating	Retaining walls, storm drain, sewer, sidewalk, paving, guardrails
Empire & Upper Lowell	2 (6-10 years)	$ 1,900,000	CIP / Operating	Gutters, paving, storm drains, sidewalks, conduits
Sullivan Road	2 (6-10 years)	$ 1,100,000	CIP / Operating	Sidewalks, storm drains, parking, landscaping, paving, public art, utility conduits
Rossi Hill Drive	2 (6-10 years)	$ 1,800,000	CIP / Operating	Sidewalks, gutter, right-of-way, paving, utility conduits
Swede Alley	2 (6-10 years)	$ 1,900,000	CIP / Operating	Sidewalks, landscaping, bringing the stream to surface, public art, paving, utility conduits
	Sub total	$ 7,950,000		
8th, 9th, 10th, 11th, 12th streets	3 (11-15 years)	$ 1,400,000	CIP / Operating	Storm drains, sidewalks, stairs, sewer, paving, conduits
13th, 14th, 15th streets	3 (11-15 years)	$ 600,000	CIP / Operating	Storm drains, sidewalks, stairs, sewer, paving, conduits
Silver King	3 (11-15 years)	$ 500,000	CIP / Operating	Sidewalk, paving, public art
Ridge Ave	3 (11-15 years)	$ 1,200,000	CIP / Operating	Right-of-way, gutter, storm drain, paving
McHenry Drive	3 (11-15 years)	$ 1,600,000	CIP / Operating	Right-of-way, gutter, paving
	Sub total	$ 5,300,000		

b. Street Reconstruction Project "Add-ons" – Water Line Replacement Projects

Water lines throughout Old Town are on average 30-35 years old (a large number installed in the late 60's into the early 70's). The Water Department routinely services areas where corrosion problems have caused leaks during all times of the year. It is a challenge to maintain proper pressure zones and in some specific areas there is concern over maintaining adequate fire flow.

Replacement of water lines as a part of all street reconstruction projects has been the normal practice and remains the preferable course of action. With the installation of new composites of replacement pipe, the investment would extend the normal life of the service area to over 40-50 years. A key desire would also see 6 inch mains be upsized to 8 inch in order to provide better service. Old service laterals could also be upgraded and upsized as streets are reconstructed. Fire hydrants would be replaced as the current variety do not have replacement parts.

In reviewing the priority areas with the Public Works team, the following were identified as the current priorities:

Category & Project Listing	Priority or Suggested Period	Projected Budget Need	Funding Source Options	Comments & Analysis Highlights
Street Reconstruction - Possible "Add-on's"				
Water Line Replacements				
Hillside,Ontario,McHenry,Rossi	1 (1-5 years)	$ 242,788	Water Fund	Required: 2320' of 8" DIP. Existing: Maintainence problems, age, and inadequate fire flow
Upper Park Ave. - Heber to King	2 (6-10 years)	$ 272,090	Water Fund	Required: 2600' of 8" DIP. Existing: Maintainence problems, age, and inadequate fire flow
Empire Avenue - 9th to 13th	2 (6-10 years)	$ 209,300	Water Fund	Required: 2000' of 8" DIP. Existing: Maintainence problems, age, and inadequate fire flow
Deer Valley Loop Road – All	2 (6-10 years)	$ 161,161	Water Fund	Required: 1540' of 8" DIP. Existing: Maintainence problems, age, and inadequate fire flow
Lower Norfolk - 13th to 7th	2 (6-10 years)	$ 246,974	Water Fund	Required: 2360' of 8" DIP. Existing: Maintainence problems, age, and inadequate fire flow
Prospect Ave. – All	2 (6-10 years)	$ 89,999	Water Fund	Required: 860' of 8" DIP. Existing: Age, and inadequate fire flow
Sandridge Ave. – All	2 (6-10 years)	$ 62,790	Water Fund	Required: 600' of 8" DIP. Existing: Age, and inadequate fire flow
Chamber Ave. – All	2 (6-10 years)	$ 48,139	Water Fund	Required: 460' of 8" DIP. Existing: Age, and inadequate fire flow
	Sub total	$ 1,333,241		

c. Street Reconstruction "Add-Ons" – Concept of Relocating Overhead Utilities

Although possible to construct as a stand alone project, "relocating" or burying overhead utilities sees a significant advantage to doing it as a part of a street reconstruction project. For this purpose, we list this concept under the heading of a street reconstruction project "Add-On."

The City staff and residents have discussed this topic for many years. Within the past year, a major street reconstruction project was even put "on hold" at the request of the majority of the street residents on Upper Park Avenue. The sentiment was a desire to see that the City consider making the relocation of utilities an added element to the reconstruction project – even on a cost sharing program. Prior to this study, the only available cost projection on the concept of "relocating overhead utilities," came from an estimate given on Upper Park Avenue area of town. In light of the City Council, staff, and resident support to at least further explore this concept, the OTIS Study engaged the professional services of Tasco Engineering to look at this concept as a whole in Old Town.

Tasco divided up Old Town into (16) separate project areas in order to provide a framework for the conceptual design and cost estimates. The sixteen (16) projects are divided up as follows: ***(The sequence bears no relevance of construction priority).***

Project 1:	Lower (north) Woodside Avenue from 8th to 12th Street
Project 2:	Upper (south) Park Avenue from Heber to King Road
Project 3:	Lower Norfolk Avenue from approximately 8th to 13th Street
Project 4	Upper (south) Empire Avenue from approximately 8th to 12th Street
Project 5:	Upper (south) Lowell Avenue from approximately 9th Street to 13th Street
Project 6:	Prospect Avenue from Hillside Street/Sandridge
Project 7:	Ontario, McHenry, Swift, Provo, Rossi, and Deer Valley Drive
Project 8:	Marsac Avenue from Ontario North to Ontario South
Project 9:	Swede Alley from 5th Street to Main Street
Project 10:	Upper (south) Woodside Avenue from 7th to King Road
Project 11:	Norfolk Avenue from approximately 4th Street to King Road, King Road, and Sampson Avenue
Project 12:	Daly Avenue from King Road to end
Project 13:	Lower (north) Woodside Avenue from 13th Street to 15th Street
Project 14:	Empire Avenue from 13th Street to 15th Street
Project 15:	Lower Park Avenue from Sullivan to 15th Street and Sullivan Road
Project 16:	Central Park Avenue from 10th Street to 15th Street

Each project has been evaluated separately, and drawings have been prepared on an individual project basis. Tasco coordinated their research with all the "dry utility stakeholders" – PacifiCorp - Utah Power & Light (UP&L), Qwest, and AT&T. They reviewed their concept and overall analysis with the City Staff and provided the following cost estimates.

Projected Costs of Relocating "Dry Utilities" throughout all of Old Town

Street Reconstruction Possible "Add-on's"				
Burying Overhead Utilities				
Street Project	Assoc. Street Project Period	Budget as Part of a Street Reconstruction	Stand-alone Budget need	Comments
Prospect Ave / Hillside / Sandridge	1 (1-5 years) + 2 (6-10years)	$ 215,000	$ 270,000	All projects listed here do not reflect any costs to obtain right of ways
Lower Norfolk (8th-13th)	1 (1-5 years)	$ 744,000	$ 880,000	Higher cost reflects relocating a main distribution line serving a bigger area
Upper Park Ave.(Heber to King)	1 (1-5 years)	$ 1,227,000	$ 1,463,000	Higher cost reflects relocating a main distribution line serving a bigger area
Woodside - north of 13th	1 (1-5 years)	$ 626,000	$ 724,000	
Upper Lowell (9-13th)	2 (6-10 years)	$ 219,000	$ 294,000	
Ontario, McHenry, Swift, Provo, Rossi, & DV Drive	2 (6-10 years) *	$ 406,000	$ 543,000	
Swede Alley	2 (6-10 years)	$ 362,000	$ 420,000	
Empire (8-12th)	2 (6-10 years)	$ 308,000	$ 415,000	
Empire (13th-15th)	2 (6-10 years)	$ 299,000	$ 340,000	
8th-15th Streets, Park Ave (8th-15th)	3 (11-15 years)	$ 184,000	$ 198,000	
Lower Park Ave (Sullivan to 15th) & Sullivan Rd	Stand-Alone *	$ 149,000	$ 180,000	Street Reconstruction already completed for Lower Park Ave
Marsac (Ontario N to S)	Stand-alone	$ 146,000	$ 146,000	Currently a State Road
Upper Woodside - (7th to King)	Stand-alone	$ 526,000	$ 526,000	Street Reconstruaction already completed – has installed conduit for consideration of relocating utilities
Woodside (8th-12th)	Stand-alone	$ 625,000	$ 625,000	Street Reconstruaction already completed – has installed conduit for consideration of relocating utilities
Upper Norfolk(4th to King) & Sampson	Stand-alone	$ 963,000	$ 963,000	Street in L-T good shape
Daly	Stand-alone	$ 555,000	$ 555,000	Street in L-T good shape
	Subtotal:	$ 7,554,000	$ 8,542,000	

Tasco's total cost estimate for all of Old Town – assuming the work was performed as an "Add-On" to street reconstruction projects, is **$7,554,000.** If done as stand-alone projects, the totals rise to **$8,542,000**.

Cost Analysis

Their projected budget figures come as a result of over 5 weeks of producing a (3) layer set (electrical, CATV, and Telephone) of conceptual design drawings for each of the (16) project areas and application of itemized unit costs. The overall costs include both "hard costs" and "soft costs." As outlined by Tasco:

"Hard costs are the costs for providing and installing the actual infrastructure. These include estimates of material, labor, and equipment. Soft costs are those costs associated with a project that are in additional to the actual infrastructure, and may be considered more of an overhead cost. These costs include such things as engineering costs, Park City staff costs, costs associated with financing, contingency costs, etc. The soft costs are not fixed, and can only be estimated during the conceptual phase of a project. Once a decision is made for funding and to move ahead with a project, then these costs can be more closely defined."

Tasco emphasizes the benefits of doing the relocation as a part of an overall street reconstruction project:

The relocation costs of the dry utility systems to an underground location can best be accomplished by relocating these systems in conjunction with a major road or system improvement. This would assume that the road will be replaced with the improvement and therefore not be part of the dry systems relocation costs. The primary reasons for waiting to do the relocation are as follows:

1. *Funding for the major improvement could feasibly provide for the excavation and placement of conduit systems for the dry utilities at a small incremental cost to the major improvement. This would make the dry utility costs be significantly less because the pavement costs will be included in the roadway replacement, and the excavation can be accomplished without cutting or replacing the pavement. Placing the conduit system is fairly simple once the trench is in place.*
2. *The dry utility systems can be located in such a fashion that they will conform to the new improvement and thus save in the attempt to avoid existing obstacles that will be removed with the roadway improvement.*
3. *In some instances, the Park City rights-of-way (ROW) are wider than the existing roadway, and when utilized in widening the roadway for planter areas, this will create an enhanced area to place the dry utility systems and related equipment.*
4. *Roadway construction will be disturbing the general area; therefore, the relocation impacts of the dry utility system could be minimized if performed at the same time.*

Tasco contacted the affected utilities, i.e., PacifiCorp, AT&T, and Qwest and evaluated their current posture for underground utilities. They found the following to be a guideline that was used in the cost estimates:

> *PacifiCorp: PacifiCorp will relocate (underground) the electrical system in each project area at a cost that they will estimate from a design that they will prepare. The design costs are to be paid in advance. They will estimate the costs from their design and require that these costs be paid in advance of the construction. They will coordinate with the City before and during the construction period to assure compliance with the proposed schedule. All costs relevant to the relocation must be born by a Park City funding program*

Qwest and AT&T: Qwest has a policy similar to PacifiCorp on relocation, but if the relocation is part of a larger improvement, i.e., roadway, water, wastewater, or storm drain, then much of the relocation expense will be born by the company. This is not a stated or written policy, but has precedent in many other Utah cities. Of course, if all of the relocation and roadway improvements were to be done in a single season, then both of these utilities would have a hard time bearing the costs. AT&T has stated that AT&T generally will install the cable and related equipment if the City will provide the raceways (conduits). Tasco has the capability to negotiate this endeavor as a result of the deregulation and competitive nature of the telephone industry, and our experience in this area. In the Old Town area of Park City, nearly all of the telephone and cable TV systems are installed on a PacifiCorp pole. Qwest and AT&T have joint pole agreements with PacifiCorp. If the poles are removed, these companies no longer have a place to install their respective systems, and therefore need a replacement (raceway – PVC conduit) to relocate their cable and equipment. This being the case, they (Qwest/AT&T) then have to provide the underground raceways. They will, generally, provide the installation of the raceway and cable, and then pay a portion of the trenching costs.

Tasco believes their estimates present a realistic picture of the requirements.

Within the detailed report on utilities in Appendix 1, a breakdown of projected costs for all (16) studied street sections is included. Additional assumptions and details behind the numbers can also be reviewed there.

Funding Options / Legislation examples

Tasco provided Park City Municipal Corporation with a series of funding options available for consideration.

If the mayor and city council, along with the majority of the property owners, favor such an endeavor as described, then Tasco strongly encourages the city council to pass an ordinance requiring all new dry utility services to be constructed utilizing underground procedures and techniques The passage of such a law could be just for the Old Town boundary, or could be for the entire city. If this law is first passed, then the funding mechanisms and the cooperation from the utilities is much more effective. We have reviewed the possibility of using one or more of the following funding mechanisms:

- *Special Improvement District (SID):*

  This method of financing can be used for utility system relocation, but cannot be used for new construction of utility systems. Using the boundaries of the different project areas can form each district. A vote is required of those landowners that are affected by the proposition, and if the vote tabulation is favorable (51%) then funding can be obtained. The funding would represent the total costs of the relocation and be assessed to each property owner according to the amount of property, or simply by dividing the total cost by the number of property owners. Each parcel of property is then liened until the amount of the assessment is repaid. The repayment is generally done on a yearly basis, and the financing can run from fifteen (15) to thirty (30) years.

  As an example of SID funding, Project 3: Lower Norfolk Avenue from approximately 8th to 13th Street has an estimated cost of about $880,000, with approximately 69 services in

the project. If we assume a 15 year repayment time with a 6% interest rate on the SID loan, $90,607 would have to be paid each year. If we assume minimal contribution from Park City, then each of the 69 residences would be responsible for a payment of $1,313 each year for 15 years. If we assume a 25% contribution from Park City, then each residence would be responsible for a payment of $985 each year for 15 years. If Park City contributed 50%, then each residence would still be responsible for a payment of $657 each year for 15 years, or about $55 each month.

- *Sales Tax Revenue Bond:*

  This method of financing is used by cities to finance project work, but it requires a pledge of an incremental amount, generally a percentage of the total sales tax collected over the number of years required by the total cost and estimated repayment schedule. This method is available to the mayor and city council, but generally causes a decrease of project work or general fund allocation. No voting by the general public is required, but the city council voting must be favorable.

- *Redevelopment Agency Funding (RDA):*

  The Redevelopment Agency Funding methodology has been used in Park City to fund the improvements on Main Street. This method is generally used when the improvement or project will create an increased property value from the existing state. This could be a controversial method because there is definitely an aesthetic improvement in the minds of most, but not all, and property values may or may not be increased as a result of the improvement. The repayment mechanism is the differential tax assessment between the existing and the new improvements, which are pledged for repayment. There is possibility of obtaining Utah State matching funds, or in some cases an outright grant. This method of financing is tax exempt. This method is also controversial in that it could feasibly reduce the amount of funding going to the public school sector.

- *Economic Development Agency Funding (EDA):*

  This method of financing is similar to the RDA noted above, but is generally used when the economy of an area is enhanced by the project construction.

- *Creative Financing:*

  There are methods of financing that can be used that utilize a contribution from property owners involved with the improvement mixed with borrowed or financed funds, and possibly city funds from one of the previous methods, or directly as a result of the total improvement.

  A monthly assessment for the improvements in the entire district could be levied and raise the money necessary to do the improvements over a period of time.

  A user fee could be assessed to all Park City residents. This may seem unfair to the people outside of Old Town, but many of those people are served directly or have the redundant service provided by these utilities through Old Town.

A mix of the above could be utilized to create a more acceptable means of financing.

- *Municipalization:*

  Although the process required to municipalize the dry utility systems is cumbersome and quite expensive, this is an alternative to the other funding mechanisms. Tasco has provided the services necessary to municipalize electrical power, natural gas, and telephone systems to other cities. Because of the expenses born by the City and the residents, this may be an option to recover the initial investment and provide a revenue source for the future.

Identified Pros and Cons

The relocation of the dry utility systems to underground in the Old Town area of Park City consists of a series of internal projects that can definitely be completed. There are many cities that have undertaken the same endeavor and completed it successfully. Tasco has been able to learn of the positive aspects of the endeavor as well as the negative aspects of the endeavor. Any construction project has pitfalls and positive aspects before, during, and after the process is completed. Conceptual pros and cons for performing the project work include the following:

- *Pros*

  Reliability: An underground dry utility system will be more reliable. Weather conditions such as ice and snow will not be a factor in maintaining suitable system service. An overhead distribution system for electrical power, telephone, and cable TV is more exposed to hazards such as automobile collisions.

  Aesthetics: The underground system will definitely be more aesthetically pleasing for both residents and visitors. Although this may not be an issue for some, the large majority will enjoy the unobstructed views enhanced by undergrounding the existing overhead utilities.

  Single Phase Electrical Power Distribution System: Much of the electrical power distribution system to be undergrounded is a simple single-phase electrical power distribution system. This means for most of the projects, the cost to place this system underground is one-third (1/3) of the cost on the streets requiring three-phase service.

  Telephones and Cable TV: Telephones and cable TV systems are fairly inexpensive to place in a raceway, once a trench is in place. Much of the cost to underground this system is in the excavation and asphalt repair costs. To add to this positive feature, Tasco believes that these systems will be relocated underground at no expense to the project if the poles are all removed and the City passes an ordinance requiring the utilities to be constructed or relocated to an underground position.

- *Cons*

  Electrical Power Transmission Lines: Most lines in the affected area are distribution lines, although there is one transmission line running east and west near 9th Street. This line has not been considered for relocating underground. The financial burden to place this portion of the

system underground would be prohibitive.

Three Phase Power System: A portion of the distribution is a three-phase main trunk feeder. There are projects areas where there is an existing overhead main trunk feeder, and thus will be expensive to relocate. It has been recommended that Tasco review the concept of leaving these major trunk feeders in place, and all other utilities relocated underground. Tasco believes that the total improvement is worth the expenditure.

Cost: Either the $8,487,000 as a stand-alone project or even the $7,498,000 when the dry utilities are relocated with major street improvements constitute a major expenditure.

Funding. A funding mechanism needs to be determined. This can represent a political separation between neighbors. The funding may or may not be supported by the city council. Even if the utilities are to be relocated underground with a standard street construction project, these street projects also need funding.

Historical Features: Avoiding the historical features with excavation and resultant installation of the utilities in the Old Town area could feasibly be a problem. The features will need to be identified in the design process. Coordination with the Historical District Commission will be needed and will undoubtedly add time to the project.

Equipment Placement: The placement of equipment with limited space or small road widths will be a challenge. When buildings are constructed on the roadway, finding a place to put transformers and j-boxes will be a challenge.

Individual Service Replacement: When new service is brought to an older residence or commercial building, the City will require the individuals to replace sub-standard wiring and bring the electrical system up to meet the most recent publication of the National Electrical Code.

Construction Process: The construction process and limited access to the properties, and in some cases the width of the street, will present some challenges to the contractor in the process of relocating the utility systems. Effects may include delays to traffic, difficulties to public safety services to reach those areas, temporary loss of parking for residents, etc.

2. Parking Supply Considerations

While this topic has received a great deal of attention over the past eight years, the discussions about making modifications to the current infrastructure supply and parking control systems continue. Concerns over both were heard throughout the summer.

The parking study set out to obtain the following information:

1. Updated inventory of parking spaces

2. A review and update of the forecasted parking demand

3. Evaluate options to add additional parking without building a structure

4. Provide conceptual drawings of a possible new structured parking facility

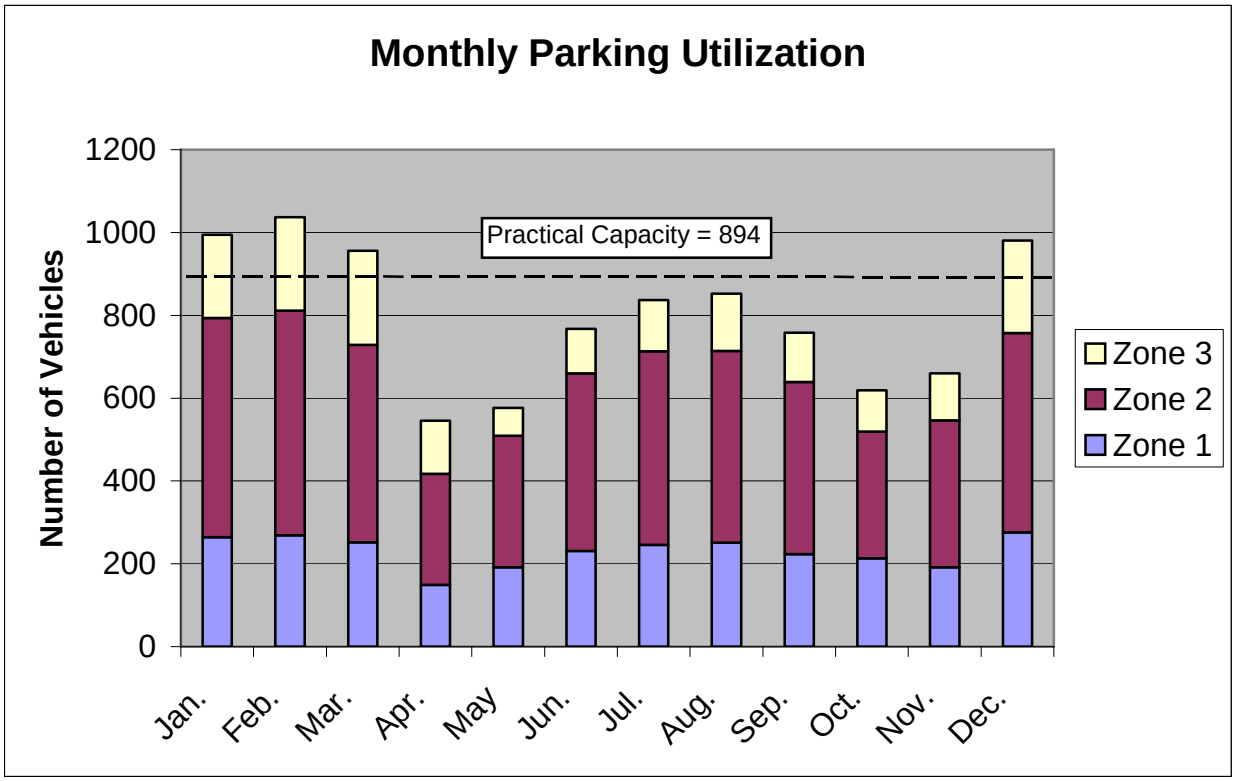
While the issue of the current "paid parking" control system has been widely discussed, this study will serve only as a precursor to any discussions about paid parking. The direction of the OTIS study is to set up a framework that allows for a possible two-step process in discussing parking within Old Town. The results of the OTIS study will provide a list of infrastructure ideas and analysis. This will serve as the initial step towards any added considerations on parking control systems. Should the City Council desire to bring up those considerations, a new inventory of supply options will now be available.

Wilbur Smith Associates were asked by Park City Municipal Corporation to update the parking data collected in the 1996 Transportation & Parking Study and to provide the requested information outlined above. Their detailed report can be found in its entirety in Appendix 2.

Supply & Demand

Wilbur Smith Associates reported that the Main Street businesses are supported by 1,819 parking spaces. Of that number, 1,016 are estimated as available for public use. It is projected that the practical capacity of parking space is 894 – using a 88% industry capacity figure of the available public parking spaces.

In reviewing data collected by the PCMC Transportation Department on current parking utilization, Wilbur Smith produced the following chart reflecting the practical capacity and current estimates on use:



As shown in the chart, there are four months during the year when utilization exceeds practical capacity.

Based on the utilization data, it appears that there is a parking problem during the four winter months of December through March. The parking problem occurs during the evening hours on both weekdays and weekends. There does not appear to be a parking problem during the other eight months of the year.

Needed as a next step, was the interest to figure out the projected demand – based not just on recorded utilization, but also on estimates of typical industry averages and a perceived latent demand (latent demand being the defined as those who are turned away because of either space not being available or failures to even to attempt because of perceived inability to park).

Several models and methodologies were used to estimate the demand. As described by Wilbur Smith:

Methodology

The approach used to determine existing parking demand had multiple steps. The first step involved assessing the city inventory of land uses and summarizing these in fairly homogeneous categories. Two sources were used to determine existing land uses in Old Town: 1) those obtained from the database of city business licenses, which list the size and nature of the business, and 2) a similar categorization performed by the waste removal firm BFI. Both sources were very close in the tally of business types and sizes. The table on the following page shows the various land uses and their corresponding square footage. The table shows the city broken into three land use zones: north of Heber Avenue, between 5th Street and Heber Avenue, and south of 5th Street. This was done in an effort to determine where the parking shortage was most critical.

Land Use Summary

Land Use	South of 5th Street	%	Between 5th & Heber	%	North of Heber Ave.	%	Total
Bank	0	0%	914	35%	1,700	65%	2,614
Hotel	61,100	23%	37,700	14%	169,000	63%	267,800
Medical Office	550	25%	0	0%	1,660	75%	2,210
Office	72,100	68%	26,292	25%	7,680	7%	106,072
Restaurant	86,137	52%	42,458	26%	36,990	22%	165,585
Retail	79,681	48%	54,287	33%	31,516	19%	165,484
Warehouse	1,970	88%	267	12%	0	0%	2,237
Total Square Feet	301,538	42%	161,918	23%	248,546	35%	712,001

The second step was iterative in nature and involved determining parking generation rates that could be applied to the land uses determined in the first step. Since data were available on parking utilization for public facilities, it was possible to use the parking utilization as a partial check on the parking demand calculations. (Parking utilization values show the met parking demand, but don't indicate the latent demand, i.e., those that would park if parking were available. Furthermore, data was not available on private parking spaces that account for approximately 44 percent of the Old Town parking supply. Thus, the data provided only a partial check.) It was assumed that private parking utilization was similar to public parking utilization.

Peak parking generation rates were derived from the Institute of Transportation Engineers (ITE) publication, Parking Generation; the Urban Land Institute (ULI) publication, Shared Parking; and from other studies performed by Wilbur Smith Associates in other resorts communities. Because of the mix of land uses and relatively dense development in Old Town, adjustments were made to the parking demand calculations to account for use of transit, walking trips, trips that had multiple purposes (e.g., restaurant trip that also involved shopping), and captive market trips (e.g., employee having lunch at a restaurant or shopping during the lunch hour, hotel patron walking down the street for dinner, etc.).

Using the above rates and factors, peak parking demand was determined. In general, peak parking demand represents the demand during winter weekend evenings (say Friday and Saturday nights).

The parking generation rates and other factors derived in the above work are useful from three primary perspectives:

1. *The methodology of using parking generation rates enables further analysis of parking demand for future land uses and thus is an excellent planning tool;*
2. *Similarly, the use of parking generation rates allows analysis of various subdivisions of Old Town; and*
3. *The methodology provides insight to what type of parking is needed such as long-term employee*

parking, short-term retail parking, etc.

Calculated Parking Shortage

Using the above methodology, the existing parking shortage in Old Town is in the range of 324 to 412 spaces. Virtually all of this unmet demand is south (up hill) of Heber Avenue. The unmet demand is fairly homogeneous block-by-block south of Heber Avenue. This shows that the newer developments north of Heber Avenue have done a good job of meeting their own demand. The table below shows the number of parking spaces compared to the range of estimated demand for parking and the resulting range of parking spaces shortage.

Estimated Parking Demand and Shortage

	Public Spaces	*Private Spaces*	*Total Spaces*	*Estimated Demand[1]*	*Estimated Parking Shortage*
North of Heber	*24*	*579*	*603*	*592 - 616*	*-11 - 13*
Between 5th & Heber	*288*	*99*	*387*	*542 - 564*	*155 - 177*
South of 5th	*704*	*125*	*829*	*1,009 - 1,051*	*180 - 222*
Total	*1,016*	*803*	*1,819*	*2,143 - 2,231*	*324 - 412*

[1]*Estimated demand has been adjusted up to take into account the 88% practical capacity.*

a. Parking Enhancements – Limited Capital Investment

As requested by Park City Municipal Corporation, Wilbur Smith Associates was asked to look into options to increase parking supply without first rushing into the thought of building a parking structure. The results of their study reflect a difficulty to add parking capacity through means of re-striping existing surface parking or the idea of angled parking on Main Street.

Where some increase could be found, was in adding parallel parking space to wide side streets and the development of some City properties for parking use. Cumulatively, this added up to approximately 33 additional spaces for a nominal investment.

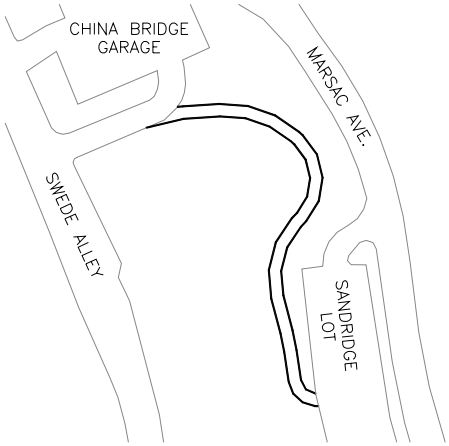
Additional ideas included the possible enhancement of vehicular and pedestrian access to underutilized parking spaces such as the Sandridge lots and some private parking areas. Wilbur Smith offered these sentiments on enhancing the accessibility to the Upper Marsac avenue surface lots:

b. Parking Enhancements – Accessibility Improvements

ACCESS ENHANCEMENTS

The Sandridge Lots on upper Marsac Avenue are under utilized. This is primarily because of their distance from Main Street and their relative inaccessibility from Swede Alley.

Vehicular Access



It is very difficult to gain vehicular access to the Sandridge Lots from Swede Alley. There is approximately 40 feet of elevation difference between the lower Sandridge Lot and upper Swede Alley. It is possible to design a narrow one-way road that would provide direct access from Swede Alley to the lower Sandridge Lot as shown in the figure to the right. This road is about 380 feet long, which means that the average grade on the road would be about 10.5%, which is quite steep, particularly considering the winter conditions when the road would be most heavily utilized. The road would require extensive retaining walls and guardrails for safety. The road would also displace the existing walkway through the area, which could either be replaced or the road could also function as the walkway, which would obviously present a challenge when ascending vehicles cross descending pedestrians. The roadway could also be made wide enough to accommodate pedestrians. This would increase the construction cost of the road since larger retaining walls would be required. It would also be possible to build a shorter walkway using more stairs and fewer ramps.

It is difficult to estimate the costs for such a roadway without accurate survey information. A rough guess would be about $300,000, which is more than the Sandridge Lots themselves cost to build. Presumably, this money could be better spent on additional parking and enhancing pedestrian access.

Pedestrian Access

There is currently a pedestrian path from each of the Sandridge Lots to Swede Alley. While these paths are adequate, it is possible to improve each to make them more attractive to users. A big issue for these paths is improving the lighting along the path. Additional lighting increases the safety and attractiveness of the pathway. There is some lighting along both paths, but it is generally widely spaced and mounted quite high in the air. Some of the lights on the path from the upper lot are actually above the trees, which means that little light actually gets down to the path. It may be desirable to provide new lighting. This lighting could have a closer spacing between lights with shorter pole lengths, which would keep the light below the trees. These new lights could be in the same historic style as those currently in use in the Sandridge Lots.

Another way to improve the character of the pedestrian paths may be to add some street furniture to the route. This is a bit of a challenge given the slopes along the paths, but it is possible. Adding a bench or two could be of value to those who lack the stamina for the climb up to the lots, while creating a comfortable atmosphere for all users. In addition to benches it may be possible to incorporate some public art into these "rest areas."

The path to the lower lot is difficult to walk due to the spacing of the steps. Some of the steps are spaced in such a way that it is difficult to traverse them using a natural gait. One must take smaller or larger steps, which is awkward and uncomfortable. These same steps are made from wood boxes filled in with road base. Over time some of this road base has washed away creating lips on each step. These lips present a safety hazard as they may cause tripping. They also add to the difficulty in traversing the

pathway. It would be desirable to replace these steps with concrete ones and to construct them in such a way that they are much more comfortable to use.

The path to the upper lot has the challenge of going through dense trees and bushes. This foliage encroaches on the path creating a tunnel-like feel, which is not a real safe feeling. It is important to keep trees and bushes out of the path and to ensure that there is adequate visibility both to and from the path. For example, there is currently a large tree growing right across the path that causes users to have to duck to get past it, as shown in the photo to the left. Presumably, this tree is very important to somebody, but it creates a hazard is difficult to pass, and should be removed. The pathway should probably be trimmed so that it is possible to see both the sky and the street from the path. This, in conjunction with improved lighting should create a better feeling of safety and comfort for the users.

c. Structured Parking Options – Large Capital Investment

Those who participated in the OTIS Study debated various reasons for supporting or downplaying the need to do so. Some argued that a parking structure is a long term need for the area even though the data shows a shortage only four months of the year. Others wanted to see a better argument put forth prior to investing such a large amount of money.

Most liked the idea of consolidating the parking to Swede Alley and simplifying the message on where to park. Not all felt that parking was a problem in their respective business or residential areas. Lower Main Street residents generally felt that there is not a shortage of space. That is supported by the Wilbur Smith supply and demand data. However, as you move up Main Street, both business owners and residents tell a story of compounding parking problems. Residents along Upper Park Avenue report a challenge to find enough parking for even street residents. Many reported that the challenges for parking on upper Main Street spill onto their residential street when both customers and business employees look for the easiest and cheapest place to park, which is usually onto the residential streets.

As discussed in the 1998 Downtown Action Plan, the best solution is most likely a blend of parking strategies that includes infrastructure improvements along with strategies on addressing employee parking and enforcement needs. The discussed options for infrastructure improvements through the summer public meetings helped shape ideas put forth by the combined team of Wilbur Smith and EDA Architects. Below are their highlighted ideas on structured parking options:

PARKING GARAGE CONCEPTS

In the Historic Park City Transportation and Parking Plan performed by Wilbur Smith Associates in 1995-1996, a potential parking garage site was identified just north of the existing China Bridge Garage on Swede Alley. The rational was that a new structure that joined with the existing structure would be able to provide the internal circulation that the current garage lacks. This study examines in more detail the different types and sizes of potential parking structures and ramping systems.

Three parking structure concepts were developed as three separate phases that could each build on the prior phase. This system allows for the construction of smaller pieces spreading the total cost out over time. Each alternative is discussed in more detail in the subsequent sections followed by information regarding architectural concepts and cost estimates.

SCHEME A

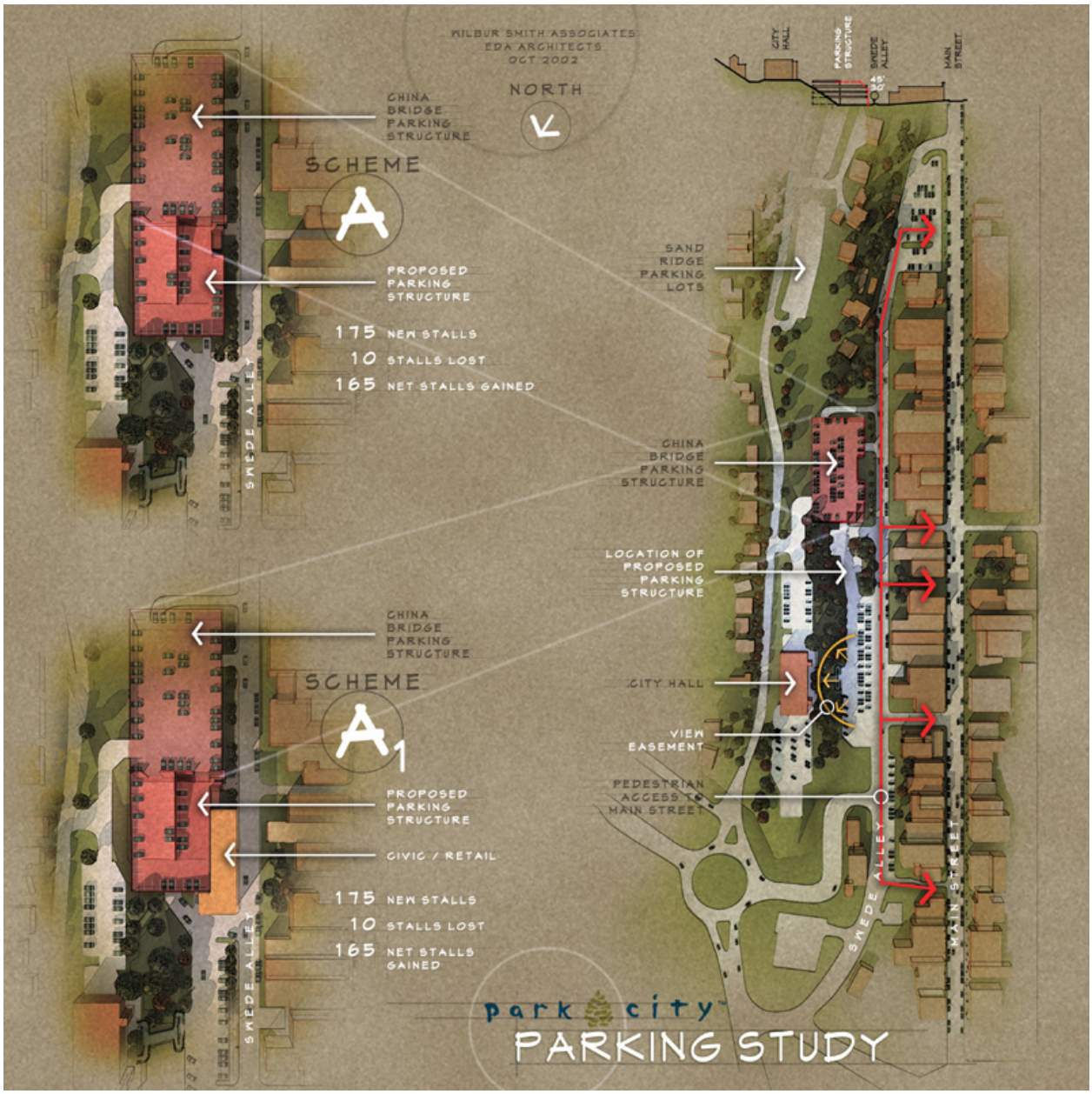
Scheme A represents the minimum structure that can be built on the proposed site. This alternative provides the necessary ramping for circulation within the combined structure. The proposed structure would be a rectangular helix with sloping floors that would rise one-half story on each side requiring 3½ complete revolutions to reach the top. The garage would be entered from the north side into the back half of the garage. The sloping floor would travel upwards at a 5% slope to meet the first floor of the existing garage. A vehicle would then make a 180° right turn to enter the sloping floor on the front half of the garage. This floor would then rise another half story at a 5% slope before another 180° would be necessary. The garage would continue in this pattern, servicing each floor, until reaching the fourth level of the existing garage. Each floor would have perpendicular parking on both sides of the travel aisle. This concept creates three levels in the front half of the garage and four levels in the back half.

A benefit to constructing a ramping system is that it allows vehicles to enter the garage from Swede Alley and exit onto Marsac Avenue. This means that if a vehicle enters the garage only to find that it is full, they can be directed to the nearby Sandridge Lots by exiting onto Marsac Avenue. This makes it easy for the Sandridge Lots to serve as an overflow for the parking garage, thereby increasing the utilization of those lots.

The advantage to this scheme is that it provides internal circulation to the China Bridge Garage, thereby making it more efficient, while providing new parking spaces at the same time. This scheme results in a net addition of approximately 165 spaces. The figure on the following page illustrates the Scheme A and A_1 concepts.

Scheme A_1

This alternative is a variation on Scheme A with the difference being the addition of approximately 10,000 square feet of space on two stories to be used for retail or civic uses. This space would be located in the front of the garage and wrap around the corner to the north side. The first row of parking on two levels would be lost. The space would also extend further out towards the street, breaking up the front of the garage.

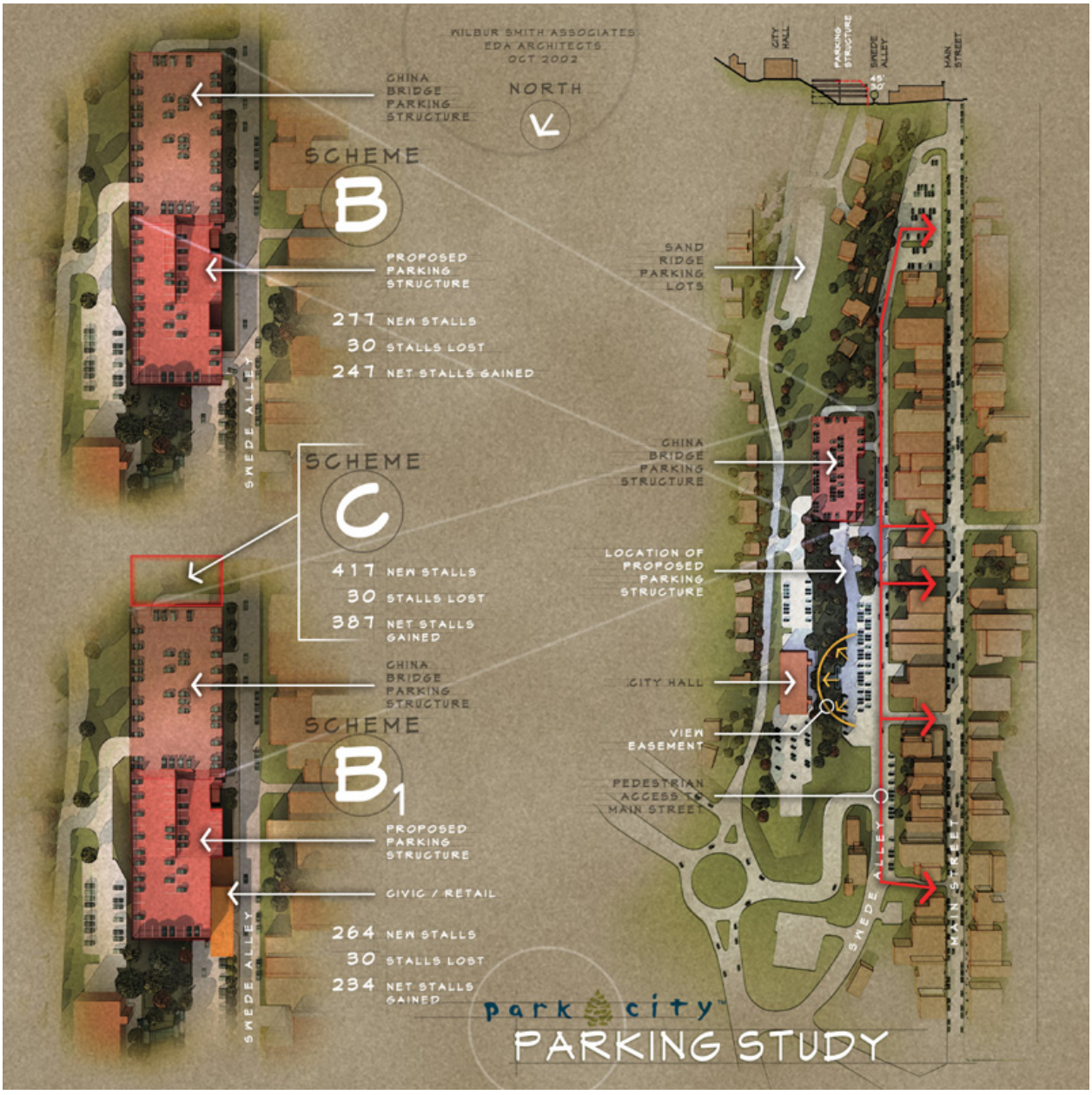


This retail/civic space serves two purposes. First, it can help break up the building architecturally and serves to conceal some of the large mass that is a parking garage. Second, the space can serve as a source of additional revenue for the construction and operation of the parking garage. The fire department is in need of additional office space, a need that could be filled through this structure. They also have impact fees that they have collected that could be used to pay for their portion of the structure. Retail space would collect rent that could be used to pay off bonds or to finance ongoing maintenance. Either option or a combination of the two would be of benefit to the city.

This scheme would result in a reduction of new parking spaces compared to Scheme A with the new total net addition being about 152 spaces.

SCHEME B

Scheme B is an addition to Scheme A. It proposes to add on to the new ramping system developed in Scheme A with four flat parking levels extending out to the north. The elevation of these new floors would all be half a story lower than the corresponding floor in the existing China Bridge Garage. Theoretically, this new garage could extend to the north for hundreds of feet, but that is inadvisable due to the impact on the view of City Hall on Marsac Avenue. For this reason, the proposed structure would



end approximately 50 feet from the south end of City Hall. This would preserve the view of this historic building.

This scheme simply adds more parking to that in Scheme A and may be done in junction with Scheme A or at a later date. This scheme results in a net addition of approximately 247 spaces including those

developed in Scheme A. The net parking addition due to Scheme B alone is approximately 82 spaces. The figure on the previous page illustrates the Scheme B, B_1, and C concepts.

Scheme B_1

This alternative is identical to Scheme A_1 in that approximately 10,000 square feet of retail/civic spaces would be added to the structure to break up the box of the garage, to hide the mass of the garage, and to provide revenue for the construction and maintenance of the garage. This scheme could be done with Scheme A_1 if Scheme A_1 was done first and Scheme B_1 was to follow several years later. This would result in a total of approximately 15,000 square feet of retail/civic space and would require the demolition of some of the retail/civic space in A_1 during construction.

This scheme would result in a reduction of new parking spaces compared to Scheme B with the new total net addition being about 234 spaces. The net parking addition due to Scheme B_1 alone is approximately 69 spaces.

SCHEME C

This scheme was developed to provide the total number of parking spaces that were estimated to be required as described in Chapter 1. This scheme calls for the addition of a structure on the south side of the China Bridge. This structure would have four flat levels that would match those on the existing garage. This scheme would need to be built after or in conjunction with Scheme A, but could be done before Scheme B. This scheme would result in a net new addition of approximately 387 spaces including those from Schemes A and B. The net parking addition due to Scheme C alone is approximately 140 spaces.

ARCHITECTURAL CONCEPTS

The proposed location of the parking additions to the China Bridge structure will be subject to the design guidelines that are included in the HCB district. The parking schemes described above can and should follow those guidelines.

The guidelines identify a building "envelope" that limits building heights along Swede Alley. The guidelines also deal with building massing, materials and architectural character. The inclusion of retail/civic type space as identified in the options discussed earlier creates a better opportunity to architecturally respond to the otherwise cumbersome massing often associated with parking structures. That is not to say that the parking schemes with no retail frontage could not comply with HCB district design guidelines, it's just that they will have to be approached skillfully and thoughtfully. The parking structure with the adjoined retail arguably establishes a more pedestrian friendly "streetwall" and contributes more to the overall experience of Main Street and it's surrounds. Additionally, thought should be given to a modest architectural façade upgrade to China Bridge. If any of the parking structure options are initiated it would be relatively simple to "borrow" some of the new design elements and incorporate them into China Bridge.

For the residents that live on the east side of Marsac Avenue, on the hill, the view looking down onto the top floor of any parking structure is somewhat problematic. Consideration could be given to creating some paving and or paving patterns on the parking surface of the top parking level. Landscaping, including small trees could also be integrated into a "plaza" like parking surface on the top floor of

China Bridge and to any additions to it as well.

Summary of Projected Costs for the Outlined Options

Category & Project Listing	Option	Projected Budget Need	Funding Source Options	Comments & Analysis Highlights
Parking Enhancements				
Re-Configured Parking & Added Parking - No structure	Option AA	$16-80,000	CIP / Revenue Bond / Other	Re-configure the surface parking for expanded quantities within Swede Alley and Main Street
Intermediate Solution - Enhancing Access & Increasing parking by 165 spaces	Option A	$ 2,900,000	CIP / Revenue Bond / Other	Improves the access to the China Bridge & Upper Marasac lots while adding parking
Intermediate Solution - Enhancing Access & Increasing parking by 147 spaces - 10k sq' civic &/or retail space	Option A1	$ 3,200,000	CIP / Revenue Bond / Other	Improves the access to the China Bridge & Upper Marasac lots while adding parking
Build a structured parking facility - adding 247 spaces	Option B	$ 4,300,000	CIP / Revenue Bond / Other	Locate north of the existing China Bridge parking lot
Build a structured parking facility - adding 234 spaces - 10k sq' civic &/or retail space	Option B1	$ 4,700,000	CIP / Revenue Bond / Other	Locate north of the existing China Bridge parking lot
Build a structured parking facility – w/ 10k sq' of Civic / Retail space adding 387 spaces	Option C1	$ 5,900,000	CIP / Revenue Bond / Other	Locate north and south of the existing China Bridge parking lot

For discussion purposes, a $5 million dollar loan over a 20 year period with a 4.5% annual rate shows an annual payment being $354,716/year.

Public safety impact fees, retail space lease revenues, and projected parking revenues could reduce the payment figure by anywhere from 20% to 75% depending on numerous planning assumptions.

3. Pedestrian Friendly Enhancements

Within historic Old Town, there has been a decade long trend towards enhancing public amenities for pedestrians. As the review of past studies pointed out, the addition of stairways, improved side walks, added street "furniture," lighting and pedestrian signage has enhanced the attractiveness of the Main Street and surrounding areas. Through this past summer, an even greater call for additional "pedestrian friendly" enhancements was articulated.

Residents and business operators alike stated a desire to see the City look into many of the following ideas:

Category & Project Listing	Priority or Suggested Period	Projected Budget Need	Funding Source Options	Comments & Analysis Highlights
Pedestrian Friendly Enhancements				
Sidewalk & Gutter repair-Main St,Heber,Swede, Lower Park	1 (1-5 years)	$ 28,950	CIP / Operating	300 linear feet of Level #4 sidewalks at 10' wide. 225 linear feet of Level #4 curb/gutter. Level #4 equates to areas in the most dire repair need
Sidewalk & Gutter repair - All other sections of Old Town	1 (1-5 years)	$ 16,250	CIP / Operating	100 linear feet of Level #4 sidewalks at 10' wide. 375 linear feet of Level #4 curb/gutter
Widen sidewalks on and leading up to the Main Street corridor	1 (1-5 years)	$ 225,000	CIP / Operating	Main Street, Heber Ave, others ?
Add additional pedestrian wayfinding and parking signage	1 (1-5 years)	$ 80,000	CIP / Operating	Include an artistic element to plan as option
Post Office Pedestrian Corridor Improvements	1 (1-5 years)	$ 250,000	CIP / Operating	Meetings have occurred with Post Master
Mawhinney Lot / Lower Park Ave Bulb out/Road narrowing	1 (1-5 years)	$ 250,000	CIP / Operating	Sidewalks, gutter, parking lot, paving, storm drains, trees, landscaping, public art, conduits.
Lower Park Ave enhancements-DV Drive to Heber	1 (1-5 years)	$ 600,000	CIP / Operating	Add urban design elements - possibilities: sitting areas, public drinking fountains, decorative street lighting, possible traffic calming elements
Upgrade "Crescent Tramway"	1 (1-5 years)	$ 95,000	CIP / Operating	Location: Park Avenue to 8th Street & Norfolk. Type of Improvements: asphalt and concrete surface upgrades, lighting
Decorative concrete pavers for intersections	2 (6-10 years)	$ 50,000	CIP / Operating	For enhancements on up to (6) crosswalks - locations tbd
Decorative street lighting - top of Main to King Ave	2 (6-10 years)	$ 40,000	CIP / Operating	added light poles, fixtures, electrical work
Add a 9th Street stairway	2 (6-10 years)	$ 400,000	CIP / Operating	Connection to be made between Park Ave & Lowell (4 blocks)
	Sub total	$ 2,035,200		

4. Mixed Bag

This last section outlines capital projects that did not categorize into any of the above:

Category & Project Listing	Priority or Suggested Period	Projected Budget Need	Funding Source Options	Comments & Analysis Highlights
Mixed Bag - Other				
Sr. Citizen Center - enhance parking lot & landscaping	1 (1-5 years)	$ 300,000		Paving, fencing, drainage, and landscaping
Marsac Building - upgrades	1 (1-5 yaers)	$ 1,671,000		Current building needs to address seismic & accessibility improvements
Acquire open space either side of new ski bridge	2 (6-10 years)	$ 2,400,000	Parks Bond or Open Space Bond	Desire to see this area undeveloped and available to local residents / visitors as open space. Cost is for land acquisition only. It would be necssary to rewrite the encroachment agreement
Spruce up historic "white house" top of Main St - Hillside	2 (6-10 years)	$ 500,000	CIP / Operating	Can't get to it w/o purchase of vacant lots
Hiding areas for garbage cans				Desire to see something done to hide cans
	Subtotal:	$ 4,871,000		

Between Pedestrian Friendly Enhancements and the Mixed Bag category, the stated reasons by those who proposed these ideas were to ensure that improvements in Old Town took into consideration all types of projects.

Many of the ideas show a real desire to see more people walk instead of drive; make streets more safe and attractive; or to highlight a historic space in town.

V. Constituent Sentiments

It would be naive to think that even one of the proposed project ideas could have unanimous support. Simply put, Park City maintains a unique mix of people and ideas. Some are vocal about their opinions, the majority is not.

In attempts to gather constituent sentiments regarding the variety of proposed projects, several requests for input were done. As outlined in the study approach, a questionnaire to all of the post office boxes in Old Town requested input. Three public forums in August and one in late October were held. City staff and local agency input netted many ideas and data. All said, for a town of over 9000 residents, the "study group" that spoke up with their ideas and sentiments numbered no more than 250. In recognition of that fact, the following should be viewed as more of a "snapshot" of constituent sentiments rather than the notion that this is a collection of "representative" opinions.

Old Town Residents

In a general sense, residents here are very glad to see that the City is "turning its attention towards improving historic Old Town." Many were eager to see the City expand their funding to include more projects in the actual Old Town neighborhoods. The following gives a sampling of some notable resident responses to requests on their thoughts about Old Town:

"First priority consideration should be the needs and welfare of permanent residents."

"… my street is crumbling, has no drainage, and is not pedestrian friendly."

"Contrary to public opinion, Old Town is full of families and kids."

"Overhead lines are very unsightly. Why are new homes required to bury?"

"Please install more drinking fountains in town and at the stairways."

"Great vision is in the eye of the beholder. Please work hard to preserve what beauty is left."

"Neighborhood parties and pedestrian friendly enhancements may bring families back into Old Town instead of turning it into a nightly ghost town."

"We want to live in the country, not a big City!"

"Senior and disability access is long overdue. More senior / disabled housing is needed."

"Rebuilding of the Crescent Tramway would be terrific!"

"Pedestrian elements bring people together …."

Many spoke of their appreciation of what the City has done to enhance the transit system and view any efforts to minimize traffic a good thing. Residents stated a desire to see more traffic calming features on

Lower Park Avenue and a hope to see more commercial traffic use Deer Valley Drive. Residents stated that they would like to have a say in how their respective street would be reconstructed … and would rather see it done sooner rather than later.

Standard street reconstruction projects and pedestrian friendly enhancements are viewed as appropriate projects to pursue. Many highlighted their respective streets as ones that needed attention. Within the pedestrian enhancement category, sidewalk improvements, added signage, and road narrowing features on Lower Park Avenue received a lot of positive discussion.

Most are not supportive of a parking structure when given the details about the actual parking shortage period. Additionally, very against the idea if there would be the expense of seeing higher taxes or funding being taken away from street improvements and pedestrian enhancements. The majority of the resident participants in the OTIS study thought that the amount of investment for such a small amount of shortage was unnecessary given the big expense. However, would be supportive of a consolidation of parking space (to include a new structure), if the financing was done with little or no effect on their pocket books.

Upon reviewing the analysis and costs associated with "relocating overhead utilities," those responding to a questionnaire and attending the public meeting see this as a project worth doing. Most desired to see the City contribute the majority of the funding to do so during a planned street reconstruction project. Much of the interest in this concept started with the Upper Park Avenue Property Association. However, interest in this concept is strong across all of Old Town. The cost sharing details are still the limiting and unresolved factors as opinions vary when the funding allocation shifts emphasis.

Many believe there has been too much of an emphasis on funding Main Street improvement projects and not enough in the neighborhoods. Sentiments were hopeful the City would look to include projects in the resident neighborhoods.

Business Operators

Discussions with the business owners and operators re-affirmed a Spring-time survey prioritizing these projects:

1. Parking enhancements
2. Sidewalk Improvements / Widening

Many viewed any capital investment to Main Street as an appropriate step to bring additional consumers to their businesses. Most focused their comments on parking and a desire to "solve the parking situation once and for all." Several operators pointed to the frustration expressed by their customers during peak season over finding a parking space. Concerns were also stated about how many consumers now didn't even try to come to Main Street because of their perception about how tough it was to do so.

It was challenging for the participants in the OTIS study to not get into discussions about the current concerns over the commercial mix of businesses and the reasons behind a perceived decline in gross revenues. Although the OTIS study was focused on capital infrastructure projects, much discussion amongst business operators surrounded ideas to improve the "off season" consumer volume. Those sentiments drive the desire to enhance and widen sidewalks to allow for more "outdoor atmosphere,"

like outdoor dining.

Ease in access to the respective businesses is a key concern. Having adequate parking for customers within a short walk was viewed as imperative. Some operators expressed a desire to see the City simplify the parking by consolidating it to a larger parking structure in Swede Alley. The benefits being:

- Location – A Swede Alley location sits in the middle of Main Street
- Simplified Message – all parking signage could direct visitors to the consolidated parking structure … similar to the Olympic wayfinding and parking scheme.
- Funding – "The City could then sell off the Brew Pub lot and even the Sandridge lots for a premium amount and use that as the initial parking structure investment."

Others desired to see an attempt at angled parking on Main Street or better use of a trolley system to move people along the street. Discussions on financing showed an aversion to seeing a funding mechanism come from a "parking improvement district" or other such funding mechanisms. Many were interested in revisiting discussions on the current parking control system.

City Staff

The City staff helped shape the priorities in the categories of Street and Water projects. Additionally, their analysis and historical data in the areas of parking, pedestrian projects, and the "Mixed Bag" category was invaluable in facilitating the public discussions and consultant recommendations. The Staff's level of knowledge and understanding of these areas is impeccable.

Local Agency Input

The Park City Fire Department desired to see any new street reconstruction projects within Old Town keep in mind their vehicle turning radius and access needs. Many of the existing Old Town streets require the PCFD to maintain a smaller fire truck to allow for access into the tight areas of upper Old Town. Simple adjustments to intersection corners and parking layouts would facilitate better service. Additionally, any water line improvements – both replacements and upsizing of the lines – would definitely improve the existing fire flow.

The Snyderville Basin Water Reclaimation District (SBWRD) already routinely coordinated their project improvements with the City Engineer – therefore consolidating as much as possible, any construction needs.

Both the Fire Department and PC Police Departments are considering options for new facilities. Some of the proposed locations may show a benefit in jointly working with a proposed OTIS projects such as a Swede Alley Parking structure. Economies of scale in overall project costs may be available.

"Snapshot" of Sentiments - Questionnaire Responses from October Open House

In presenting the initial findings of the Old Town Improvement Study to those attending an October 29th public meeting, the following summarizes the opinions expressed by those who completed a questionnaire (45 in attendance – 15 respondents):

Rank Project Categories
1. Pedestrian Friendly Enhancements
2. Improved Streets
3. Bury Overhead Utilities
4. Parking Enhancements
5. Improve the Water Lines

Top Three Pedestrian Friendly Enhancements
1. Sidewalk Improvements
2. Add additional wayfinding & parking signage
3t. Refurbish the Crescent Tramway
3t. Narrow Lower Park Avenue at the Malwhinney Lot

Parking Category Preference
1(tied)- Construct a 250 car space parking garage
1(tied)- Do nothing

Relocating Overhead Utilities – Cost Sharing Preference
- Half the respondents said the City should fund 50-100% of the cost to do so
- Half said it should be either < 25% or nothing at all

The Upper Park Avenue Property Association (UPAPA)

The steering committee of this active homeowners association met several times with representatives of the OTIS Study. Their keen interest in the street reconstruction process and the concept of relocating overhead utilities has provided valuable insight and input on many project details.

In a past street petition done by the UPAPA steering committee, 57 property owners, who own 45 out of the 64 residential properties on Upper Park Avenue (70%) signed a petition discussing the concept of underground the utilities and adding a west side sidewalk. 56 signers wanted underground utilities were willing to pay a connection fee (estimated at the time at $11,000 per property). One petition signer did not want underground utilities and no responses were had from 19 properties (30%).

The key desires of the Upper Park Avenue residents remain in seeing that street characteristics, like sidewalk placements and landscape features, be captured in the street reconstruction process. They would also like the City to consider some form of cost sharing efforts in the concept of relocating overhead utilities.

Several key issues remain for the UPAPA steering committee:

1. Main Street "Unfinished Relocation Costs" – They have requested that a separate project listing be captured to reflect the unfinished cost of relocating the Main Street utilities. In a past project to remove the overhead utilities from Main Street, the power lines were added to the Upper Park Avenue distribution system. They would like consideration be given to reducing the Upper Park Avenue project cost by an amount estimated for the impacts of the Main Street power being routed that way.

2. Cost Sharing Funding Options – They would like any options being discussed to reflect not just worst case cost scenarios, but also ones that reflect probable savings.

3. Individual Property Connections – Previously estimated at $11,000 per property, they would like to point out that the Tasco estimates are significantly less for this portion of the cost estimates. Therefore, any cost sharing program needs to divide out the funding responsibilities in an understandable way.

Marsac / Prospect Avenue Homeowners

In discussions with this group, their collective desires fall into the following priorities:

1. Re-configuration of the Marsac / Hillside intersection is extremely important
2. Reconstruction of Prospect should take into consideration the need to relocate the fire hydrant at the top of the street.

VI. Summary & Recommended Next Steps

All said, this targeted project list outlines well over $40 million dollars worth of proposed projects. Most of those constituents who participated in the OTIS study understand the fact that this is an enormous project list that will eventually be prioritized to fit within the City budget limitations.

For a healthy discussion, the full list of projects will hopefully stimulate necessary debate over the merits of one project over another. Budget considerations traditionally limit the "approved" capital improvement projects to approximately 4-6 million dollars over the traditional 2-year City Budget cycle. Arguments for adjustments to this standard practice will certainly be brought up.

The PCMC Capital Improvement Project fund has steadily amassed a sizable amount. The rationale for assembling the current pool of CIP dollars was over the anticipation of future growth diminishing within the City limits and the desire to have a fund to maintain the ongoing and future project needs. Additional discussion about the strategies to implement the CIP funding will now have a thorough project inventory to review.

The findings of the Old Town Improvement Study prompt these suggested next steps:

1. Set a one month goal of additional public discussions on the researched OTIS projects. Actions taken to further stimulate additional debate and discussion will ultimately allow opinions to form on which category priorities are best suited for funding appropriations.

2. City Council should provide staff direction on whether certain project categories have support and can be considered in a budget prioritization process.

3. Given a "big picture" set of project priorities, City Staff should put together a series of funding strategies ranging from conservative to aggressive. Council will need to provide direction on the degree of funding alternatives deemed appropriate.

4. Discussions on the envisioned capital projects within Old Town would then enter into the 5 year CIP planning process. Preparations for the next 2 year budget cycle would utilize the outcomes of the CIP prioritization process.

5. As discussions evolve, policy guidelines will be updated and/or created relating to the prioritization process for capital projects.

VII. Appendices

Appendix 1 - Tasco Engineering – Relocation of Overhead Utility Study Report

Appendix 2 - Wilbur Smith Associates – Parking Study Report

Appendix 3 - Consolidated project list

Appendix 1 - Tasco Engineering – Relocation of Overhead Utility Study Report

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INTRODUCTION

Tasco Engineering, Inc. (Tasco) has been engaged by Park City to study the design features and costs of relocating the dry utility systems, i.e., electrical power distribution, telephone, and cable TV to an underground location in the area of Park City called "Old Town."

We have coordinated our efforts with each of the affected utilities and the Park City staff. Mr. Colin Hilton, and Mr. Eric DeHaan have been very helpful and informative in helping us complete this study.

Old Town Park City (OTPC) is the area of Park City that is historical in both age and in the preserved features in the area. Main Street was completely renovated in 1985 and the dry utility systems serving the buildings on the east side and west side of Main Street were relocated to Upper Park Avenue and Swede Alley in an effort to aesthetically clean-up the Main Street area from 8th Street to the intersection of Swede Alley on the south. This renovation was completed with re-development funds from a Redevelopment Agency formed for the project.

In 2002, the City and interested citizens began study to evaluate the need and the desire for improvements in OTPC. Questionnaires were received by the City and tabulated to provide a basis for the "Old Town Improvement Study" – OTIS. 88% of the tabulated responses wanted a review of the costs to underground the dry utilities.

Another organization was formed by residents on the west side of Upper Park Avenue to request and research the costs of similar renovations to their street, from 7th Street to King Road. This organization has indicated that they would be willing to pay a portion of the costs to do so.

The boundary for this study is illustrated in Exhibit 1 – Old Town Boundaries. There are two large areas in the outlined project area that do not require additional project money to relocate, as the dry utility system utilities are presently underground. This is noted in Exhibit 1.

The relocation costs of the dry utility systems to an underground location can best be accomplished by relocating these systems in conjunction with a major road or system improvement. This would assume that the road will be replaced with the improvement and therefore not be part of the dry systems relocation costs. The primary reasons for waiting to do the relocation are as follows:

5. Funding for the major improvement could feasibly provide for the excavation and placement of conduit systems for the dry utilities at a small incremental cost to the major improvement. This would make the dry utility costs be significantly less because the pavement costs will be included in the roadway replacement, and the excavation can be accomplished without cutting or replacing the pavement. Placing the conduit system is fairly simple once the trench is in place.

6. The dry utility systems can be located in such a fashion that they will conform to the new improvement and thus save in the attempt to avoid existing obstacles that will be removed with the roadway improvement.
7. In some instances, the Park City rights-of-way (ROW) are wider than the existing roadway, and when utilized in widening the roadway for planter areas, this will create an enhanced area to place the dry utility systems and related equipment.
8. Roadway construction will be disturbing the general area; therefore, the relocation impacts of the dry utility system could be minimized if performed at the same time.

Tasco has attempted to estimate and present all of the associated costs in the relocation of the dry utility systems, but soft costs (engineering, administration, financing costs, and contingencies) are presented in such a manner as to easily integrate or deduct to the over-all cost estimates.

Tasco is pleased to submit to Park City this report, together with associated exhibits and attachments that contain the conceptual drawing package, and cost estimates of each of the sixteen (16) projects within the Old Town Park City Boundary. Also included as an attachment are the Sandy City Underground Ordinance, and the Utah State Law regarding the "Underground Conversion of Utilities."

The following report details our approach and provides the estimated costs for each separate project. Exhibit 2 contains the details of the cost estimates assuming each project is constructed as a stand-alone project. The total of all project costs is estimated to be ***$8,487,000***. Exhibit 3 contains the details of the cost estimates assuming each project is a part of a street reconstruction project where the excavation and conduit systems are a part of the larger project. The total of project costs is estimated to be ***$7,498,000***.

The costs include both *hard costs* and *soft costs*. Hard costs are the costs for providing and installing the actual infrastructure. These include estimates of material, labor, and equipment. These costs are detailed in Attachments 1-16. Soft costs are those costs associated with a project that are in addition to the actual infrastructure, and may be considered more of an overhead cost. These costs include such things as engineering costs, Park City staff costs, costs associated with financing, contingency costs, etc. The soft costs are not fixed, and can only be estimated during the conceptual phase of a project. Once a decision is made for funding and to move forward with each project, then these costs can be more closely defined.

Tasco has performed the required work and summarizes each of the tasks as noted below:

- **Research**
- **Provide Underground System Design**
- **Provide Itemized Cost Estimates**
- **Funding Alternatives**
- **Pro's and Con's of Relocating the Dry Utility Systems t Underground**

RESEARCH

Tasco has located the existing overhead utilities in the defined project area of the Old Town Park City. Most of the utility lines have been identified with drawings submitted by the serving utility, i.e., PacifiCorp and AT&T. The Qwest system lines were identified by site visits, an estimate of the overhead cables, and our knowledge of telephone system design.

We were instructed by the Park City staff to separate the Old Town Park City into sixteen (16) different projects, basically designated by the roadways. The dry utility systems relocation to an underground location can be much more economical when a major improvement such as roadway, water, wastewater, storm drain, or all four improvements are funded and prioritized by the City Council. The sixteen (16) projects are designated on the drawings and related to the following roads: ***(The sequence bears no relevance of construction priority).***

Project 1: Lower (north) Woodside Avenue from 8th to 12th Street
Project 2: Upper (south) Park Avenue from Heber to King Road
Project 3: Lower Norfolk Avenue from approximately 8th to 13th Street
Project 4 Upper (south) Empire Avenue from approximately 8th to 12th Street
Project 5: Upper (south) Lowell Avenue from approximately 9th Street to 13th Street
Project 6: Prospect Avenue from Hillside Street/Sandridge
Project 7: Ontario, McHenry, Swift, Provo, Rossi, and Deer Valley Drive
Project 8: Marsac Avenue from Ontario North to Ontario South
Project 9: Swede Alley from 5th Street to Main Street
Project 10: Upper (south) Woodside Avenue from 7th to King Road
Project 11: Norfolk Avenue from approximately 4th Street to King Road, King Road, and Sampson Avenue
Project 12: Daly Avenue from King Road to end
Project 13: Lower (north) Woodside Avenue from 13th Street to 15th Street
Project 14: Empire Avenue from 13th Street to 15th Street
Project 15: Lower Park Avenue from Sullivan to 15th Street and Sullivan Road
Project 16: Central Park Avenue from 10th Street to 15th Street

Each project has been evaluated separately, and drawings have been prepared on an individual project basis. The cost estimates are also related to the individual projects. The majority of the projects could feasibly be constructed during a scheduled roadway, water, wastewater, or storm drain improvement.

Tasco has contacted the affected utilities, i.e., PacifiCorp, AT&T, and Qwest. We have evaluated their current posture for undergrounding the utilities, and found the following to be a guideline that was used in the cost estimates: (A key for Park City to remember, and that Tasco will emphasize throughout this project, is that Park City does not have to accept prices quoted by PacifiCorp, Qwest, and AT&T. Park City has the capability for obtaining independent bids and having input on specifications of the construction parameters.)

PacifiCorp: PacifiCorp will relocate (underground) the electrical system in each project area at a cost that they will estimate from a design that they will prepare. The design costs are to be paid in advance. They will estimate the costs from their design and require that these costs be paid in advance of the construction. They will coordinate with the City before and during the construction period to assure compliance with the proposed schedule. All costs relevant to the relocation must be born by a Park City funding program

Qwest and AT&T: Qwest has a policy similar to PacifiCorp on relocation, but if the relocation is part of a larger improvement, i.e., roadway, water, wastewater, or storm drain, then much of the relocation expense will be born by the company. This is not a stated or written policy, but has precedent in many other Utah cities. Of course, if all of the relocation and roadway improvements were to be done in a single season, then both of these utilities would have a hard time bearing the costs. AT&T has stated (Mr. Stewart Sehah, 801-401-3024) that AT&T generally will install the cable and related equipment if the City will provide the raceways (conduits). Tasco has the capability to negotiate this endeavor as a result of the deregulation and competitive nature of the telephone industry, and our experience in this area. In the Old Town area of Park City, nearly all of the telephone and cable TV systems are installed on a PacifiCorp pole. Qwest and AT&T have joint pole agreements with PacifiCorp. If the poles are removed, these companies no longer have a place to install their respective systems, and therefore need a replacement (raceway – PVC conduit) to relocate their cable and equipment. This being the case, they (Qwest/AT&T) then have to provide the underground raceways. They will, generally, provide the installation of the raceway and cable, and then pay a portion of the trenching costs.

Unlike other engineering companies, Tasco does turnkey work with our construction arm. When we estimate a price, it is based on actual experience on the labor, equipment, and material costs. Tasco is not dependent on book estimates. Therefore, when costs are quoted by the utilities, Tasco can make a comparison and represent Park City to obtain the best price available to do the work. We believe our estimates present a realistic picture of the requirements. Tasco is certain that this price is accurate because we would actually be willing to perform the work at the estimated price taken from the detailed construction drawings.

PROVIDE UNDERGROUND SYSTEM DESIGN

Tasco is providing a conceptual layout for the relocation of the dry utility systems to underground (electrical power, telephone, and cable TV). The conceptual design package includes the following and is located in the report as Attachments 1 thru16 that are indicative of the project number, as follows:

Project 1: Lower (north) Woodside Avenue from 8th to 12th Street
- E1: Electrical Power Distribution System
- T1: Telephone System
- C1: Cable TV System

Project 2: Upper (south) Park Avenue from Heber to King Road
- E2: Electrical Power Distribution System
- T2: Telephone System
- C2: Cable TV System

Project 3: Lower Norfolk Avenue from approximately 8th to 13th Street
- E3: Electrical Power Distribution System
- T3: Telephone System
- C3: Cable TV System

Project 4 Upper (south) Empire Avenue from approximately 8th to 12th Street
- E4: Electrical Power Distribution System
- T4: Telephone System
- C4: Cable TV System

Project 5: Upper (south) Lowell Avenue from approximately 9th Street to 13th Street
- E5: Electrical Power Distribution System
- T5: Telephone System
- C5: Cable TV System

Project 6: Prospect Avenue Hillside Street/Sandridge
- E6: Electrical Power Distribution System
- T6: Telephone System
- C6: Cable TV System

Project 7: Ontario, McHenry, Swift, Provo, Rossi, and Deer Valley Drive
- E7: Electrical Power Distribution System
- T7: Telephone System
- C7: Cable TV System

Project 8: Marsac Avenue from Ontario North to Ontario South
- E8: Electrical Power Distribution System

T8: Telephone System
C8: Cable TV System

Project 9: Swede Alley from 5th Street to Main Street
E9: Electrical Power Distribution System
T9: Telephone System
C9: Cable TV System

Project 10: Upper (south) Woodside Avenue from 7th to King Road
E10: Electrical Power Distribution System
T10: Telephone System
C10: Cable TV System

Project 11: Upper Norfolk Avenue from approximately 4th Street to King Road, King Road, and Sampson Avenue
E11: Electrical Power Distribution System
T11: Telephone System
C11: Cable TV System

Project 12: Daly Avenue from King Road to end
E12: Electrical Power Distribution System
T12: Telephone System
C12: Cable TV System

Project 13: Lower (north) Woodside Avenue from 13th Street to 15th Street
E13: Electrical Power Distribution System
T13: Telephone System
C13: Cable TV System

Project 14: Empire Avenue from 13th Street to 15th Street
E14: Electrical Power Distribution System
T14: Telephone System
C14: Cable TV System

Project 15: Lower Park Avenue from Sullivan to 15th Street
E15: Electrical Power Distribution System
T15: Telephone System
C15: Cable TV System

Project 16: Central Park Avenue from 10th Street to 15th Street
E15: Electrical Power Distribution System
T15: Telephone System
C15: Cable TV System

The legend and symbols are shown on the individual drawings to make the component designation easily readable. These drawings are conceptual in nature and are not designed for actual construction.

PROVIDE ITEMIZED COST ESTIMATES

Tasco is providing herein itemized costs to Park City based on the conceptual design and layout. Costs include unit estimates based on each project. The itemized details of each project are included as Attachments 1-16, and are summarized below:

Project 1: Lower (north) Woodside Avenue from 8th to 12th Street
(The raceways have been installed to accommodate the dry utility systems, and therefore have reduced the costs of the relocation).

a. Electrical Power Distribution System Relocation:	$215,000
Soft Costs:	$85,000
b. Telephone System Relocation:	$106,000
Soft Costs:	$42,000
c. Cable TV System Relocation:	$36,000
Soft Costs:	$14,000
d. Excavation:	$70,000
Subtotal:	**$568,000**

Project 2: Upper (south) Park Avenue from 7th Street to King Road.

Estimated Costs Assuming a Street Reconstruction Project:

a. Electrical Power Distribution System Relocation:	$667,000
Soft Costs:	$255,000
b. Telephone System Relocation:	$146,000
Soft Costs:	$56,000
c. Cable TV System Relocation:	$63,000
Soft Costs:	$24,000
d. Excavation:	$16,000
Subtotal:	**$1,227,000**

Estimated Costs Assuming a Stand-alone Project:

a. Electrical Power Distribution System Relocation:	$685,000
Soft Costs:	$261,000
b. Telephone System Relocation:	$190,000
Soft Costs:	$72,000
c. Cable TV System Relocation:	$76,000
Soft Costs:	$29,000
d. Excavation:	$150,000
Subtotal:	**$1,463,000**

Project 3: Norfolk Avenue from approximately 8th to 13th Street

Estimated Costs Assuming a Street Reconstruction Project:

a. Electrical Power Distribution System Relocation:	$434,000
Soft Costs:	$169,000
b. Telephone System Relocation:	$46,000
Soft Costs:	$18,000
c. Cable TV System Relocation:	$45,000
Soft Costs:	$17,000
d. Excavation:	$15,000
Subtotal:	**$744,000**

Estimated Costs Assuming a Stand-alone Project:

a. Electrical Power Distribution System Relocation:	$443,000
Soft Costs:	$172,000
b. Telephone System Relocation:	$58,000
Soft Costs:	$22,000
c. Cable TV System Relocation:	$57,000
Soft Costs:	$22,000
d. Excavation:	$106,000
Subtotal:	**$880,000**

Project 4: Upper (south) Empire Avenue from approximately 8th to 12th Street

Estimated Costs Assuming a Street Reconstruction Project:

a. Electrical Power Distribution System Relocation:	$140,000
Soft Costs:	$59,000
b. Telephone System Relocation:	$40,000
Soft Costs:	$17,000
c. Cable TV System Relocation:	$28,000
Soft Costs:	$12,000
d. Excavation:	$13,000
Subtotal:	**$308,000**

Estimated Costs Assuming a Stand-alone Project:

a. Electrical Power Distribution System Relocation:	$143,000
Soft Costs:	$59,000
b. Telephone System Relocation:	$50,000
Soft Costs:	$21,000
c. Cable TV System Relocation:	$36,000
Soft Costs:	$15,000
d. Excavation:	$92,000
Subtotal:	**$415,000**

Project 5: Upper (south) Lowell Avenue from approximately 9th Street to 13th Street

Estimated Costs Assuming a Street Reconstruction Project:

a. Electrical Power Distribution System Relocation:	$92,000
Soft Costs:	$40,000
b. Telephone System Relocation:	$27,000

Soft Costs:	$12,000
c. Cable TV System Relocation:	$27,000
Soft Costs:	$12,000
d. Excavation:	$10,000
Subtotal:	**$219,000**

Estimated Costs Assuming a Stand-alone Project:

a. Electrical Power Distribution System Relocation:	$92,000
Soft Costs:	$40,000
b. Telephone System Relocation:	$34,000
Soft Costs:	$15,000
c. Cable TV System Relocation:	$37,000
Soft Costs:	$16,000
d. Excavation:	$60,000
Subtotal:	**$294,000**

Project 6: Prospect Avenue from Hillside Street to the end

Estimated Costs Assuming a Street Reconstruction Project:

a. Electrical Power Distribution System Relocation:	$106,000
Soft Costs:	$47,000
b. Telephone System Relocation:	$22,000
Soft Costs:	$10,000
c. Cable TV System Relocation:	$14,000
Soft Costs:	$6,000
d. Excavation:	$10,000
Subtotal:	**$215,000**

Estimated Costs Assuming a Stand-alone Project:

a. Electrical Power Distribution System Relocation:	$107,000
Soft Costs:	$47,000
b. Telephone System Relocation:	$27,000
Soft Costs:	$12,000
c. Cable TV System Relocation:	$17,000
Soft Costs:	$7,000
d. Excavation:	$54,000
Subtotal:	**$270,000**

Project 7: Ontario, McHenry, Swift, Provo, and Deer Valley Drive

Estimated Costs Assuming a Street Reconstruction Project:

a. Electrical Power Distribution System Relocation:	$186,000
Soft Costs:	$75,000
b. Telephone System Relocation:	$53,000
Soft Costs:	$21,000
c. Cable TV System Relocation:	$43,000
Soft Costs:	$17,000

d. Excavation:	$11,000
Subtotal:	**$406,000**
Estimated Costs Assuming a Stand-alone Project:	
a. Electrical Power Distribution System Relocation:	$189,000
Soft Costs:	$76,000
b. Telephone System Relocation:	$69,000
Soft Costs:	$28,000
c. Cable TV System Relocation:	$53,000
Soft Costs:	$21,000
d. Excavation:	$106,000
Subtotal:	**$543,000**

Project 8: Marsac Avenue from Ontario North to Ontario South

Estimated Costs Assuming a Street Reconstruction Project:	
a. Electrical Power Distribution System Relocation:	$42,000
Soft Costs:	$22,000
b. Telephone System Relocation:	$16,000
Soft Costs:	$8,000
c. Cable TV System Relocation:	$9,000
Soft Costs:	$5,000
d. Excavation:	$44,000
Subtotal:	**$146,000**
Estimated Costs Assuming a Stand-alone Project:	
a. Electrical Power Distribution System Relocation:	$42,000
Soft Costs:	$22,000
b. Telephone System Relocation:	$16,000
Soft Costs:	$8,000
c. Cable TV System Relocation:	$9,000
Soft Costs:	$5,000
d. Excavation:	$44,000
Subtotal:	**$146,000**

Project 9: Swede Alley from 5th Street to Main Street

Estimated Costs Assuming a Street Reconstruction Project:	
a. Electrical Power Distribution System Relocation:	$205,000
Soft Costs:	$84,000
b. Telephone System Relocation:	$27,000
Soft Costs:	$11,000
c. Cable TV System Relocation:	$20,000
Soft Costs:	$8,000
d. Excavation:	$7,000
Subtotal:	**$362,000**
Estimated Costs Assuming a Stand-alone Project:	
a. Electrical Power Distribution System Relocation:	$210,000
Soft Costs:	$85,000

b.	Telephone System Relocation:	$33,000
	Soft Costs:	$13,000
c.	Cable TV System Relocation:	$26,000
	Soft Costs:	$11,000
d.	Excavation:	$42,000
	Subtotal:	**$420,000**

Project 10: Upper (south) Woodside Avenue from Heber Avenue to King Road

Estimated Costs Assuming a Street Reconstruction Project:

a.	Electrical Power Distribution System Relocation:	$132,000
	Soft Costs:	$55,000
b.	Telephone System Relocation:	$58,000
	Soft Costs:	$24,000
c.	Cable TV System Relocation:	$42,000
	Soft Costs:	$17,000
d.	Excavation:	$198,000
	Subtotal:	**$526,000**

Estimated Costs Assuming a Stand-alone Project:

a.	Electrical Power Distribution System Relocation:	$132,000
	Soft Costs:	$55,000
b.	Telephone System Relocation:	$58,000
	Soft Costs:	$24,000
c.	Cable TV System Relocation:	$42,000
	Soft Costs:	$17,000
d.	Excavation:	$198,000
	Subtotal:	**$526,000**

Project 11: Norfolk Avenue from approximately 4th Street to King Road, King Road, and Sampson Avenue

Estimated Costs Assuming a Street Reconstruction Project:

a.	Electrical Power Distribution System Relocation:	$277,000
	Soft Costs:	$109,000
b.	Telephone System Relocation:	$77,000
	Soft Costs:	$30,000
c.	Cable TV System Relocation:	$46,000
	Soft Costs:	$18,000
d.	Excavation:	$404,000
	Subtotal:	**$963,000**

Estimated Costs Assuming a Stand-alone Project:

a.	Electrical Power Distribution System Relocation:	$277,000
	Soft Costs:	$109,000
b.	Telephone System Relocation:	$77,000
	Soft Costs:	$30,000
c.	Cable TV System Relocation:	$46,000
	Soft Costs:	$18,000

d. Excavation:	$404,000
Subtotal:	**$963,000**

Project 12: Daly Avenue from King Road to end

Estimated Costs Assuming a Street Reconstruction Project:

a. Electrical Power Distribution System Relocation:	$144,000
Soft Costs:	$60,000
b. Telephone System Relocation:	$45,000
Soft Costs:	$19,000
c. Cable TV System Relocation:	$30,000
Soft Costs:	$12,000
d. Excavation:	$246,000
Subtotal:	**$555,000**

Estimated Costs Assuming a Stand-alone Project:

a. Electrical Power Distribution System Relocation:	$144,000
Soft Costs:	$60,000
b. Telephone System Relocation:	$45,000
Soft Costs:	$19,000
c. Cable TV System Relocation:	$30,000
Soft Costs:	$12,000
d. Excavation:	$246,000
Subtotal:	**$555,000**

Project 13: Lower (north) Woodside Avenue from 13th Street to 15th Street

Estimated Costs Assuming a Street Reconstruction Project:

a. Electrical Power Distribution System Relocation:	$363,000
Soft Costs:	$142,000
b. Telephone System Relocation:	$32,000
Soft Costs:	$13,000
c. Cable TV System Relocation:	$45,000
Soft Costs:	$18,000
d. Excavation:	$12,000
Subtotal:	**$626,000**

Estimated Costs Assuming a Stand-alone Project:

a. Electrical Power Distribution System Relocation:	$367,000
Soft Costs:	$144,000
b. Telephone System Relocation:	$40,000
Soft Costs:	$16,000
c. Cable TV System Relocation:	$57,000
Soft Costs:	$22,000
d. Excavation:	$78,000
Subtotal:	**$724,000**

Project 14: Empire Avenue from 13th Street to 15th Street

Estimated Costs Assuming a Street Reconstruction Project:

a. Electrical Power Distribution System Relocation:	$152,000
Soft Costs:	$63,000

b. Telephone System Relocation:	$17,000
Soft Costs:	$7,000
c. Cable TV System Relocation:	$37,000
Soft Costs:	$15,000
d. Excavation:	$7,000
Subtotal:	**$299,000**

Estimated Costs Assuming a Stand-alone Project:

a. Electrical Power Distribution System Relocation:	$151,000
Soft Costs:	$63,000
b. Telephone System Relocation:	$20,000
Soft Costs:	$8,000
c. Cable TV System Relocation:	$48,000
Soft Costs:	$20,000
d. Excavation:	$29,000
Subtotal:	**$340,000**

Project 15: Lower Park Avenue from Sullivan to 15th Street

Estimated Costs Assuming a Street Reconstruction Project:

a. Electrical Power Distribution System Relocation:	$67,000
Soft Costs:	$32,000
b. Telephone System Relocation:	$14,000
Soft Costs:	$7,000
c. Cable TV System Relocation:	$14,000
Soft Costs:	$7,000
d. Excavation:	$8,000
Subtotal:	**$149,000**

Estimated Costs Assuming a Stand-alone Project:

a. Electrical Power Distribution System Relocation:	$67,000
Soft Costs:	$31,000
b. Telephone System Relocation:	$15,000
Soft Costs:	$7,000
c. Cable TV System Relocation:	$18,000
Soft Costs:	$8,000
d. Excavation:	$33,000
Subtotal:	**$180,000**

Project 16: Central Park Avenue from 10th Street to 15th Street

Estimated Costs Assuming a Street Reconstruction Project:

a. Electrical Power Distribution System Relocation:	$102,000
Soft Costs:	$46,000
b. Telephone System Relocation:	$12,000
Soft Costs:	$6,000
c. Cable TV System Relocation:	$7,000
Soft Costs:	$3,000
d. Excavation:	$8,000
Subtotal:	**$184,000**

Estimated Costs Assuming a Stand-alone Project:

a. Electrical Power Distribution System Relocation:	$100,000

	Soft Costs:	$45,000
b.	Telephone System Relocation:	$14,000
	Soft Costs:	$6,000
c.	Cable TV System Relocation:	$8,000
	Soft Costs:	$4,000
d.	Excavation:	$21,000
	Subtotal:	**$198,000**

Project 1-16 Grand Total with Street Reconstruction: ***$7,498,000***

Project 1-16 Grand Total with Stand-alone Project Construction: ***$8,487,000***

FUNDING ALTERNATIVES

Tasco is experienced in working with municipalities on funding options for utility improvements and/or relocations. If the mayor and city council, along with the majority of the property owners, favor such an endeavor as described, then Tasco strongly encourages the city council to pass an ordinance requiring all new dry utility services to be constructed utilizing underground procedures and techniques (See Attachment 17 – Sandy City Ordinance). The passage of such a law could be just for the Old Town boundary, or could be for the entire city. If this law is first passed, then the funding mechanisms and the cooperation from the utilities is much more effective. We have reviewed the possibility of using one or more of the following funding mechanisms:

- Special Improvement District (SID) (Reference Attachment 18, Utah State Law Section 54-8, Utah Underground Conversion of Utilities Law):
  This method of financing can be used for utility system relocation, but cannot be used for new construction of utility systems. Using the boundaries of the different project areas can form each district. A vote is required of those landowners that are affected by the proposition, and if the vote tabulation is favorable (51%) then funding can be obtained. The funding would represent the total costs of the relocation and be assessed to each property owner according to the amount of property, or simply by dividing the total cost by the number of property owners. Each parcel of property is then liened until the amount of the assessment is repaid. The repayment is generally done on a yearly basis, and the financing can run from fifteen (15) to thirty (30) years.

  As an example of SID funding, *Project 3: Lower Norfolk Avenue from approximately 8th to 13th Street* has an estimated cost of about $880,000, with approximately 69 services in the project. If we assume a 15 year repayment time with a 6% interest rate on the SID loan, $90,607 would have to be paid each year. If we assume minimal contribution from Park City, then each of the 69 residences would be responsible for a payment of $1,313 each year for 15 years. If we assume a 25% contribution from Park City, then each residence would be responsible for a payment of $985 each year for 15 years. If Park City contributed 50%, then each residence would still be responsible for a payment of $657 each year for 15 years, or about $55 each month.

- Sales Tax Revenue Bond:
  This method of financing is used by cities to finance project work, but it requires a pledge of an incremental amount, generally a percentage of the total sales tax collected over the number of years required by the total cost and estimated repayment schedule. This method is available to the mayor and city council, but generally causes a decrease of project work or general fund allocation. No voting by the general public is required, but the city council voting must be favorable.

- Redevelopment Agency Funding (RDA):
  The Redevelopment Agency Funding methodology has been used in Park City to fund the improvements on Main Street. This method is generally used when the improvement or project will create an increased property value from the existing state. This could be a controversial method because there is definitely an aesthetic improvement in the minds of most, but not all, and property values may or may not be increased as a result of the improvement. The repayment mechanism is the differential tax assessment between the existing and the new improvements, which are pledged for repayment. There is possibility of obtaining Utah State matching funds, or in some cases an outright grant. This method of financing is tax exempt. This method is also controversial in that it could feasibly reduce the amount of funding going to the public school sector.

- Economic Development Agency Funding (EDA):
  This method of financing is similar to the RDA noted above, but is generally used when the economy of an area is enhanced by the project construction.

- Creative Financing:
  There are methods of financing that can be used that utilize a contribution from property owners involved with the improvement mixed with borrowed or financed funds, and possibly city funds from one of the previous methods, or directly as a result of the total improvement.

  A monthly assessment for the improvements in the entire district could be levied and raise the money necessary to do the improvements over a period of time.

  A user fee could be assessed to all Park City residents. This may seem unfair to the people outside of Old Town, but many of those people are served directly or have the redundant service provided by these utilities through Old Town.

  A mix of the above could be utilized to create a more acceptable means of financing.

- Municipalization:
  Although the process required to municipalize the dry utility systems is cumbersome and quite expensive, this is an alternative to the other funding mechanisms. Tasco has provided the services necessary to municipalize electrical power, natural gas, and telephone systems to other cities. Because of the expenses born by the City and the residents, this may be an option to recover the initial investment and provide a revenue source for the future.

PRO'S AND CON'S OF RELOCATING THE DRY UTILITY SYSTEMS TO UNDERGROUND

The relocation of the dry utility systems to underground in the Old Town area of Park City consists of a series of internal projects that can definitely be completed. There are many cities that have undertaken the same endeavor and completed it successfully. Tasco has been able to learn of the positive aspects of the endeavor as well as the negative aspects of the endeavor. Any construction project has pitfalls and positive aspects before, during, and after the process is completed. Conceptual pros and cons for performing the project work include the following:

- Pros

  Reliability: An underground dry utility system will be more reliable. Weather conditions such as ice and snow will not be a factor in maintaining suitable system service. An overhead distribution system for electrical power, telephone, and cable TV is more exposed to hazards such as automobile collisions.

  Aesthetics: The underground system will definitely be more aesthetically pleasing for both residents and visitors. Although this may not be an issue for some, the large majority will enjoy the unobstructed views enhanced by undergrounding the existing overhead utilities.

  Single Phase Electrical Power Distribution System: Much of the electrical power distribution system to be undergrounded is a simple single-phase electrical power distribution system. This means for most of the projects, the cost to place this system underground is one-third (1/3) of the cost on the streets requiring three-phase service.

  Telephones and Cable *TV:* Telephones and cable TV systems are fairly inexpensive to place in a raceway, once a trench is in place. Much of the cost to underground this system is in the excavation and asphalt repair costs. To add to this positive feature, Tasco believes that these systems will be relocated underground at no expense to the project if the poles are all removed and the City passes an ordinance requiring the utilities to be constructed or relocated to an underground position.

- Cons

  Electrical Power Transmission Lines: Most lines in the affected area are distribution lines, although there is one transmission line running east and west near 9th Street. This line has not been considered for relocating underground. The financial burden to place this portion of the system underground would be prohibitive.

Three Phase Power System: A portion of the distribution is a three-phase main trunk feeder. There are projects areas where there is an existing overhead main trunk feeder, and thus will be expensive to relocate. It has been recommended that Tasco review the concept of leaving these major trunk feeders in place, and all other utilities relocated underground. Tasco believes that the total improvement is worth the expenditure.

Cost: Either the $8,487,000 as a stand-alone project or even the $7,498,000 when the dry utilities are relocated with major street improvements constitute a major expenditure.

Funding. A funding mechanism needs to be determined. This can represent a political separation between neighbors. The funding may or may not be supported by the city council. Even if the utilities are to be relocated underground with a standard street construction project, these street projects also need funding.

Historical Features: Avoiding the historical features with excavation and resultant installation of the utilities in the Old Town area could feasibly be a problem. The features will need to be identified in the design process. Coordination with the Historical District Commission will be needed and will undoubtedly add time to the project.

Equipment Placement: The placement of equipment with limited space or small road widths will be a challenge. When buildings are constructed on the roadway, finding a place to put transformers and j-boxes will be a challenge.

Individual Service Replacement: When new service is brought to an older residence or commercial building, the City will require the individuals to replace sub-standard wiring and bring the electrical system up to meet the most recent publication of the National Electrical Code.

Construction Process: The construction process and limited access to the properties, and in some cases the width of the street, will present some challenges to the contractor in the process of relocating the utility systems. Effects may include delays to traffic, difficulties to public safety services to reach those areas, temporary loss of parking for residents, etc.

SUMMARY

Tasco has presented a conceptual design and an evaluation of costs for each of sixteen (16) separates projects within the project area of Old Town Park City. These costs have been added to give two numbers: $8,487,000 if the projects were constructed as individual projects on a stand-alone basis, or $7,498,000 if the projects are constructed with major street improvements. We have prepared an honest and unbiased estimate of the individual project areas. We have created a practical design for the dry utility systems, and created conceptual placement of equipment to serve the given areas.

Although there are obstacles in completing the process of relocation of the dry utilities, if a funding mechanism can be provided that the property owners, mayor, and city council agree to, then the financial, technological, and administrative obstacles can be resolved quite easily over time.

Tasco Engineering will be available to aid in the process of evaluation, funding, design, and construction if we are needed. As you move ahead, we look forward to the opportunity of continuing to work with Park City on the OTIS and other related projects.

Appendix 2 - Wilbur Smith Associates – Parking Study

Chapter 1
PARKING SUPPLY AND DEMAND

The study area for the Parking Component of the Old Town Improvement Study consisted of the historic downtown area, which is shown in the figure to the right and bordered by the following streets:

- 9th Street
- Marsac Avenue
- Hillside Avenue
- Park Avenue

Parking supply, utilization, and demand were all analyzed as part of this study. Each of these items is discussed in more detail in the following sections.

PARKING SUPPLY

The parking supply in Park City is made up of both public and private spaces. City staff was extremely helpful in obtaining existing inventory data while field observations were utilized in assembling private parking data. Each is discussed in more detail below.

Public Parking

Public parking spaces in Park City are divided into three zones:

- **Zone 1** – Comprised of Main Street and the Brew Pub Lot for a total of 231 spaces all of which are paid spaces year-round;
- **Zone 2** – Comprised of Swede Alley, China Bridge Garage levels 1-3, and the Flagpole and Gateway Lots for a total of 514 spaces which are paid spaces during the peak period from December 15 to April 15; and
- **Zone 3** – Comprised of China Bridge Garage level 4, the Marsac North and South Lots, and the Sandridge Lots for a total of 271 spaces, which are free spaces year-round.

There are a total of 1,016 public spaces within the project study area. The table on the following page itemizes each of the public spaces by location, type, and parking time limit.

Public Parking Inventory

Location	Type of Parking	15-Minute Limit	30-Minute Limit	1-Hour Limit	2-Hour Limit	3-Hour Limit	4-Hour Limit	24-Hour Limit	Disabled	Reserved	
Main Street											
West Side											8
S of 5th	P					44					
5th to Heber	P					32					
N of Heber	P					5					
East Side											1
S of 5th	P					56					
5th to Heber	P					33					
N of Heber	P					12					
Brew Pub Lot	90					49					4
Swede Alley Surface and Head-In Parking											
Historic Wall Lot	90						24				2
Below 5th Street	90		6				20		3		2
North of China Bridge	90						75		1		7
Galeria Lot					8				1		9
5th Street On-Street			7						1		8
Flag Pole Lot	90						55		2		5
Heber Ave On-Street	P		2		5						7
Gateway Center	90			4			32		2		3
China Bridge Garage											
1st Level	90						89				8
2nd Level	90						84		2		8
3rd Level	90						89		2		9
4th Level	90				18			59			7
Marsac South Lot	90		6		20				1		2
Marsac North Lot	90						64		2		6
Sandridge Lots											
Upper	90							45	1		4
Lower	90							55			5
Total											1

Private Parking

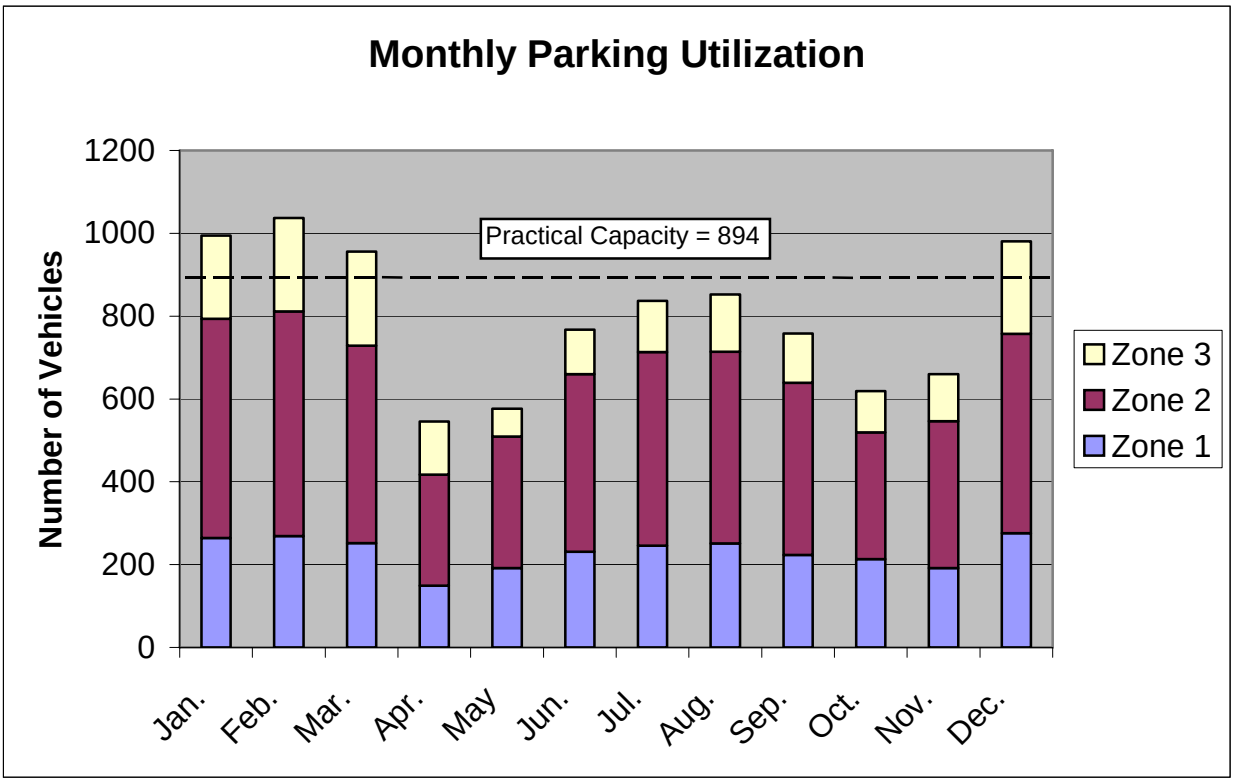
The private parking inventory was developed through a field review by Wilbur Smith Associates personnel in September 2002. WSA staff walked along Park Avenue, Main Street, and Swede

Alley and counted the business and private parking spaces. These private parking areas were itemized individually and listed by the name of the adjacent business that uses them. In most cases these areas do not have marked parking stalls so an estimate was made as to the number of effective spaces at each location. This list was reviewed by Park City staff and a few minor changes were made to these estimates.

A total of 803 private parking spaces were observed within the study area. The figure on the following page illustrates the approximate location of these spaces, the number of spaces in each location, and for whom the spaces are intended. Between both public and private spaces there are approximately 1,819 parking spaces available for businesses, employees, and customers.

PARKING UTILIZATION

For the past several years city staff has collected utilization data for public spaces. On the last Wednesday and Saturday of each month, the number of vehicles parking in public spaces is counted. This data shows the monthly parking trends for the city. The chart below shows the maximum recorded parking utilization for each month by zone. Maximum parking utilization typically occurs in the evening between the hours of 6 and 10



Also shown on the chart is a line representing the practical capacity of the public spaces. Practical capacity refers to the level at which an area can be considered full and is generally when 85% to 95% of the total number of spaces are occupied, depending on the number of parking spaces and their concentration in an area. In Park City the practical capacity has been

estimated at 88%. This allows for the typical under utilization of the Sandridge Lots and the relatively large study area. Since there are 1,016 public parking spaces the practical capacity of these spaces is 894. This means that when there are more than 894 vehicles parking in public

spaces it becomes increasingly difficult to find a space and may require searching 2 or 3 lots before a space is found. This also results is driver frustration and dissatisfaction.

As shown in the chart, there are four months during the year when utilization exceeds practical capacity. The table below shows in more detail the monthly utilization compared to the capacity for each of the zones.

Monthly Parking Utilization by Zone

	Zone 1		Zone 2		Zone 3	
	Occupied	% Capacity	Occupied	% Capacity	Occupied	% Capacity
Capacity	231	-	514	-	271	-
January	264	114%	530	103%	201	74%
February	269	116%	542	105%	226	83%
March	252	109%	477	93%	227	84%
April	149	65%	269	52%	128	47%
May	192	83%	318	62%	67	25%
June	231	100%	429	83%	108	40%
July	246	106%	467	91%	124	46%
August	251	109%	463	90%	138	51%
September	223	97%	416	81%	119	44%
October	213	92%	306	60%	100	37%
November	192	83%	354	69%	114	42%
December	276	119%	482	94%	223	82%

Main Street and the Brew Pub Lot routinely meet or exceeds their total capacity, while the Zone 2 lots are only at capacity during the peak winter season. The Zone 3 lots do not typically reach capacity at any time during the year.

Based on the utilization data, it appears that there is a parking problem during the four winter months of December through March. The parking problem occurs during the evening hours on both weekdays and weekends. There does not appear to be a parking problem during the other eight months of the year.

PARKING DEMAND

Assessing the magnitude of existing parking demand in Old Town was a primary objective of this study. Parking needs depend on the magnitude of parking demand generated by employees, visitors, shoppers, and residents; the proportion of trips made by automobile vs. other modes of transportation; the extent of a captive-market environment; and the parking supply available to accommodate the demand.

The city has collected extensive data on parking occupancy for both midweek and weekend use of public parking facilities in Old Town. It is important to note that parking occupancy is not synonymous with parking demand. Parking occupancy is simply an indicator of how the existing parking supply is utilized. Parking demand, on the other hand, indicates how many patrons would like to park at a given location and time if there were sufficient supply. If spaces are not available nearby, people may park at a distance, use transit/bicycle as an alternative, conduct business elsewhere, or forego the trip entirely.

Parking policy and availability of transit can influence parking demand. Strictly enforcing parking limits can increase turnover making more parking available during a given time period. While the city did not have data on turnover to accompany the occupancy data, the city has made great strides in enforcing parking limits over the past five years. Additionally, Park City has a very good transit system that is operated free of charge for all patrons. During winter months in particular, when demand for goods and services in Old Town are at a peak, transit is heavily utilized.

Managing the balance between parking demand and parking supply can be very complex. In Park City, the demand is greatest during the winter months of December through March,. Much of the need for parking is during evening hours related to high use of restaurants and lounges. Supplying enough spaces to accommodate peak parking demand could result in a surplus of parking during non-tourist months. Since construction of parking facilities is an expensive proposition, parking demand needs to be very carefully scrutinized.

Methodology

The approach used to determine existing parking demand had multiple steps. The first step involved assessing the city inventory of land uses and summarizing these in fairly homogeneous categories. Two sources were used to determine existing land uses in Old Town: 1) those obtained from the database of city business licenses, which list the size and nature of the business, and 2) a similar categorization performed by the waste removal firm BFI. Both sources were very close in the tally of business types and sizes. The table on the following page shows the various land uses and their corresponding square footage. The table shows the city broken into three land use zones: north of Heber Avenue, between 5th Street and Heber Avenue, and south of 5th Street. This was done in an effort to determine where the parking shortage was most critical.

Land Use Summary

Land Use	South of 5th Street	%	Between 5th & Heber	%	North of Heber Ave.	%	Total
Bank	0	0%	914	35%	1,700	65%	2,614
Hotel	61,100	23%	37,700	14%	169,000	63%	267,800
Medical Office	550	25%	0	0%	1,660	75%	2,210
Office	72,100	68%	26,292	25%	7,680	7%	106,072
Restaurant	86,137	52%	42,458	26%	36,990	22%	165,585
Retail	79,681	48%	54,287	33%	31,516	19%	165,484
Warehouse	1,970	88%	267	12%	0	0%	2,237
Total Square Feet	301,538	42%	161,918	23%	248,546	35%	712,001

The second step was iterative in nature and involved determining parking generation rates that could be applied to the land uses determined in the first step. Since data were available on parking utilization for public facilities, it was possible to use the parking utilization as a partial check on the parking demand calculations. (Parking utilization values show the met parking demand, but don't indicate the latent demand, i.e., those that would park if parking were available. Furthermore, data was not available on private parking spaces that account for approximately 44 percent of the Old Town parking supply. Thus, the data provided only a partial check.) It was assumed that private parking utilization was similar to public parking utilization.

Peak parking generation rates were derived from the Institute of Transportation Engineers (ITE) publication, *Parking Generation*; the Urban Land Institute (ULI) publication, *Shared Parking*; and from other studies performed by Wilbur Smith Associates in other resorts communities. Because of the mix of land uses and relatively dense development in Old Town, adjustments were made to the parking demand calculations to account for use of transit, walking trips, trips that had multiple purposes (e.g., restaurant trip that also involved shopping), and captive market trips (e.g., employee having lunch at a restaurant or shopping during the lunch hour, hotel patron walking down the street for dinner, etc.).

Using the above rates and factors, peak parking demand was determined. In general, peak parking demand represents the demand during winter weekend evenings (say Friday and Saturday nights).

The parking generation rates and other factors derived in the above work are useful from three primary perspectives:

1. The methodology of using parking generation rates enables further analysis of parking demand for future land uses and thus is an excellent planning tool;

2. Similarly, the use of parking generation rates allows analysis of various subdivisions of Old Town; and
3. The methodology provides insight to what type of parking is needed such as long-term employee parking, short-term retail parking, etc.

Calculated Parking Shortage

Using the above methodology, the existing parking shortage in Old Town is in the range of 324 to 412 spaces. Virtually all of this unmet demand is south (up hill) of Heber Avenue. The unmet demand is fairly homogeneous block-by-block south of Heber Avenue. This shows that the newer developments north of Heber Avenue have done a good job of meeting their own demand. The table below shows the number of parking spaces compared to the range of estimated demand for parking and the resulting range of parking spaces shortage.

Estimated Parking Demand and Shortage

	Public Spaces	Private Spaces	Total Spaces	Estimated Demand[1]	Estimated Parking Shortage
North of Heber	24	579	603	592 - 616	-11 - 13
Between 5th & Heber	288	99	387	542 - 564	155 - 177
South of 5th	704	125	829	1,009 - 1,051	180 - 222
Total	1,016	803	1,819	2,143 - 2,231	324 - 412

[1] *Estimated demand has been adjusted up to take into account the 88% practical capacity.*

Chapter 2
PARKING SUPPLY ENHANCEMENTS

It is desirable to explore all of the low cost parking improvements before making a large financial commitment to a parking structure. There are several parking enhancements possible to the existing parking supply within the Park City Historic District for relatively low cost. These enhancements can be separated into three types of changes: on-street, off-street, and access. The figure on the following page shows the approximate location of the on and off-street enhancements. Each of these is discussed in more detail in the following sections.

For any new spaces added, it will be important to decide whether or not they will be metered. If the new spaces are not metered they will presumably be signed as a two-hour zone. This decision has a large impact on the cost of the spaces. Additional "Pay and Display" meters cost about $9,000 each. In the descriptions of the individual enhancements that follow, estimated costs will be presented both with and without parking meters.

ON-STREET ENHANCEMENTS

The on-street enhancements are generally the addition of on-street parking where it is currently prohibited. There is also a discussion of modifying the spaces on Main Street from parallel to angle parking. Each individual location is described in below.

Upper Swede Alley (South End)

There is currently no on-street parking on upper Swede Alley and there may be an opportunity to add a few spaces in this location. Generally, on-street parking on Swede Alley is probably not a good idea with the heavy traffic volumes, particularly between the China Bridge Parking Garage and SR-224. However, between China Bridge and the Brew Pub Lot there may be an opportunity for 5-6 spaces on the west side of the street.

The street is about 32 feet wide in this location plus gutters. This means that a parked vehicle would take up no more than seven feet of this width leaving at least 25 feet for traveling vehicles. These spaces would also be against the buildings so they might need to be signed as delivery spaces during the morning and early afternoon and public spaces in the late afternoon and evening. The base cost would be low for this option with the simple items being the repainting of the curb and the changing of signs. The majority of the cost would be in the installation of a "Pay and Display" meter to service this area, since there no other ones close by. Obviously, the cost for these spaces would be significantly reduced if the city were to make these free spaces.

Parking Space Gain: 5-6
Cost (w/ Meter): $9,500
Cost (w/o Meter): $500

Heber Avenue

Currently there are seven on-street parking spaces on Heber Avenue. They are all located on the block between Main Street and Swede Alley. Five of the spaces are on the north side of street in a section of the street that has been widened to accommodate them, while the other two are on the south side of the street and are signed as delivery spaces during the day. The five spaces on the north side are signed as free two hour parking. There may be an opportunity to provide an additional 3-4 spaces to the east of the existing spaces on the south side of this same block as well as 4-5 spaces on the block between Park Avenue and Main Street.

The street is about 32 feet wide in this location plus gutters. This means that a parked vehicle would take up no more than seven feet of this width leaving at least 25 feet for traveling vehicles. On the block between Park Avenue and Main Street the new parking could be on either side of the street, depending on which the city prefers. If it were on the north side it would generally be easier to access for vehicles entering downtown from SR-224 while parking on the south side would be more consistent with the block between Main Street and Swede Alley. On both blocks it would be important to end the parking zone about 30 feet in front of the stop sign to allow for adequate sight distance. The base cost would be low for this option with the simple items being the repainting of the curb and the changing of signs. The majority of the cost would be in the installation of up to two "Pay and Display" meters to service this area. This would also allow the existing free spaces to be converted to pay spaces, which is more in character with their proximity to Main Street. Obviously, the cost for these spaces would be significantly reduced if the city were to continue to have free parking on Heber Avenue.

Parking Space Gain: 7-9
Cost (w/ Meter): $18,700
Cost (w/o Meter): $700

Lower Main Street (North End)

There is a section of Main Street between 7th Street and Heber Avenue that does not have any on-street parking. The road is narrower through this segment that it is along the rest of the road, however it would be possible to provide 6-7 spaces of on-street parking along one side of the road.

The street is about 32 feet wide in this location plus gutters. This means that a parked vehicle would take up no more than seven feet of this width leaving at least 25 feet for traveling vehicles. The new parking could be on either side of the street, depending on which the city prefers. Each side has one driveway to be worked around, although parking on the east side would more easily line up with existing parking north of this location. The base cost would be fairly low for this option with the simple items being the repainting of the curb and the changing of signs. The majority of the cost would be in the installation of a "Pay and Display" meter to service this area. Obviously, the cost for these spaces would be significantly reduced if the city were to make these free spaces.

Parking Space Gain: 6-7
Cost (w/ Meter): $9,500
Cost (w/o Meter): $500

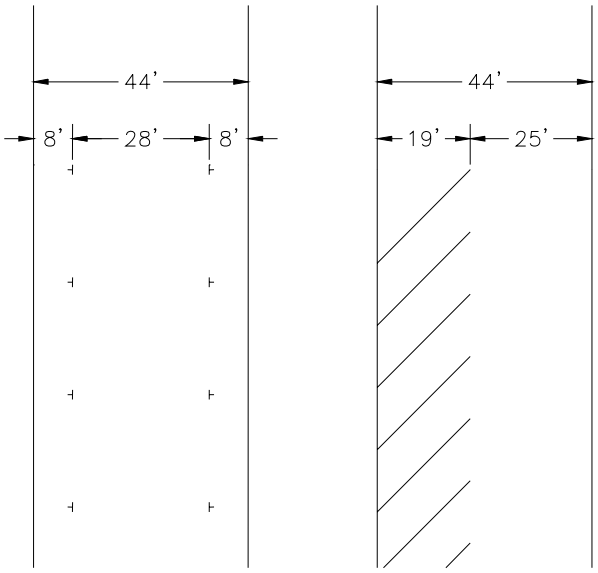
Lower Park Avenue

On the east side of Park Avenue just north of 7th Street there is a section of the road where on-street parking is prohibited. It may be possible to install 4-5 spaces in this area. There is already on-street parking north of this location so it would simply be a matter of extending the parking zone past the existing to the south closer to the intersection. It is important to keep a clear zone near the intersection since buses regularly make the right turn from Heber Avenue to Park Avenue and need some extra space to safely complete their maneuver.

Since on-street parking on Park Avenue in this area is free for two hours, it makes sense that any additional spaces also be free. This makes this a very low cost option since there is no need to install a "Pay and Display" meter. The only costs would be for the repainting of the curb and installation of some signs.

Parking Space Gain: 4-5
Cost: $400

Main Street Angle Parking



There has been a great deal of discussion regarding the conversion of the parallel parking spaces on Main Street to angle parking spaces. The reasoning is that since angles parking spaces take up less length than parallel spaces more of them can fit into the same space. While this is true, the problem on Main Street has always been the width of the road. As shown in the figure to the right, Main Street is generally 40 feet wide plus 4 feet for the gutter pans. Parallel parking typically takes up about 8 feet on either side of the road leaving 28 feet for travel lanes. When angle parking is added to one side of the road it requires about 19 feet, which leaves about 25 feet for travel lanes, reducing their width by a total of 3 feet. Typical travel lanes are 12 feet wide, which means that 24 feet are required as a minimum to accommodate traffic.

The difficulty arises when trying to accommodate freight delivery on Main Street. Currently it is common practice for delivery vehicles to double park on Main Street while making deliveries. The current configuration provides a little extra room that allows traveling vehicles to move around the parked vehicle without encroaching too much into oncoming traffic. With the reduced travel lane widths of angle parking there would be less room to make this maneuver, which increases the encroachment and the corresponding safety hazard.

The primary reason why angle parking has never been implemented on Main Street is because it actually results in a net loss of parking spaces. Currently there are 182 spaces on Main Street, 81 on the west side and 101 on the east side. If angle parking were to be installed, it would be possible to get between 126 to 140 spaces on the street. This results in an actual loss of at least 42 spaces.

The only way by which there is an increase in spaces is if Main Street is converted to a one-way street with parallel parking on one side and angle parking on the other. However, businesses are generally reluctant to accept one-way streets since the sentiment is that it reduces visibility and increases frustration. A one-way street would also exacerbate the safety concerns with freight vehicles blocking the road, since there would not be an oncoming lane to utilize for passing.

OFF-STREET ENHANCEMENTS

There are a few possible enhancements to off-street parking that are available, although not many, since similar recommendations from previous studies have already been implemented. It is important to remember that property easement costs are not included in cost estimates for new parking and may have a significant impact in project costs. Individual enhancements are described below.

Upper Main Street Lot

On the south end of Main Street there is a vacant lot that is fairly level on the Main Street side. It may be possible to allow perpendicular parking in this location. The area would probably accommodate 10 parking spaces.

There would be some costs associated with developing these spaces. The curb, gutter, and sidewalk in this location would need to be reconstructed to allow vehicle access along the length of the site. The site itself would also need to be graded so that it is level enough for vehicle parking. It would also need to be either paved or covered with road base to provide a decent parking surface. The cost estimate assumes that the lot is paved. The unknown cost is the obtaining of an easement to use the property from the current property owner. It is also likely that a "Pay and Display" meter would be necessary in this location. There is an existing meter across the street, but it may not be feasible to require people to cross the street twice to pay for their parking. Obviously, the cost for these spaces would be significantly reduced if the city were to make these free spaces.

Parking Space Gain: 10
Cost (w/ Meter): $18,800
Cost (w/o Meter): $9,800

Upper Swede Alley Lot

There is a narrow vacant lot between Main Street and Swede Alley that is accessible from Swede Alley. The possibility exists to grade this lot and allow parking. However, this lot presents some challenges. Because it is so narrow the spaces would probably need to be for angle parking. This means that vehicles would need to back out all of the way out of the lot and onto Swede Alley, which is a safety concern. The lot could probably accommodate 7 vehicles, however there is currently room for 3 vehicles to park across the entrance to the lot, which results in a net addition of 4 spaces.

There would be some costs associated with developing these spaces. There is a need for a minimal amount of grading to ensure that the site is level enough for parking. It would also need

to be either paved or covered with road base to provide a decent parking surface. The cost estimate assumes that the lot is paved. It may also be advisable to build some stairs next to Main Street to allow people to immediately access Main Street without having to go out to Swede Alley. The unknown cost is the obtaining of an easement to use the property from the current property owner. It may be necessary to provide a "Pay and Display" meter in this location. There are existing meters up on Main Street that may be utilized or if the Upper Swede Alley on-street spaces that were mentioned in the previous section were installed there may be a meter associated with them that could also service this lot. Obviously, the cost for these spaces would be significantly reduced if the city were to make these free spaces.

Parking Space Gain: 4
Cost (w/ Meter): $18,800
Cost (w/o Meter): $9,800

Narrower Parking Stall Widths

Parking stalls in the city are typically are typically 9 feet wide. In certain locations it is possible to reduce the width of the stalls to 8½ feet, which can result in additional spaces. The limiting factor to its applicability is that it is necessary that there be 17 spaces in a row that can all be modified to pick up an 18^{th} space. This condition only exists in two locations within the city. The first is along Swede Alley and in the Swede Alley lots. It is possible to gain 4 additional spaces in this area. The second is in the Sandridge Lots. It is also possible to gain 4 spaces here as well. Only the 17 current spaces in each location need be changed, while all other spaces can remain at 9 feet. One of the drawbacks to these spaces is that it is more difficult to park the larger SUV vehicles in the smaller spaces, which may result in more accidents or "door dings." While these narrower spaces could be signed for smaller vehicles, it probably wouldn't make much difference in what type of vehicle parked there.

Another option may be taking these locations and just adding one more space to the entire length of the row. By adjusting all of the spaces, the average space width can be increased. For example, if there are currently 27 spaces in a row at an average width of 9 feet, they can all be narrowed to allow 28 spaces at an average width of 8 feet 8 inches. This provides a slightly wider space than just adjusting the minimum 17 spaces.

The cost for this option would be quite low. It is simply a matter of removing or painting over the existing striping and then restriping at the new width.

Parking Space Gain: 8
Cost: $3,800

Town Lift Garage Sharing

The Town Lift parking garage has about 164 total spaces. Of these spaces, 23 are in a gated area reserved for residents, 27 are reserved for customers of Town Lift businesses, and 114 are available to the public. Based on Wilbur Smith Associates field observations, the Town Lift garage seems to be under utilized. Granted, WSA observations took place in the early fall and the garage may be more fully utilized during the peak season. If it is determined that the garage

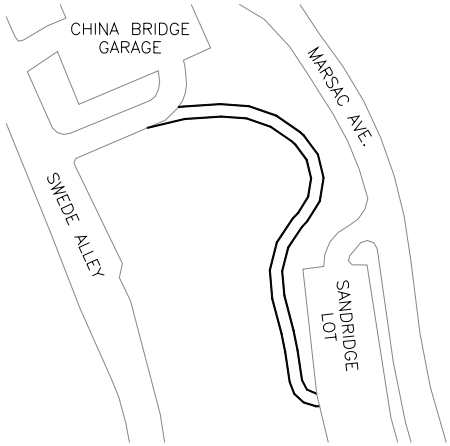
is routinely under utilized, Park City may wish to make an arrangement with the garage owners to operate the spaces. This would be similar to the arrangement in the Gateway Center, where about half of the parking spaces are operated by the city. If the city were to manage these spaces they may be able to more effectively market them by including them on city parking maps and on the city web site.

The costs associated with the management of these spaces would primarily consist of purchasing additional "Pay and Display" meters for the garage, which would probably require 3 or 4 meters or $27,000 to 36,000. Unknown costs would be those necessary to work out an arrangement with the garage owners.

ACCESS ENHANCEMENTS

The Sandridge Lots on upper Marsac Avenue are under utilized. This is primarily because of their distance from Main Street and their relative inaccessibility from Swede Alley. This section looks at improving both vehicular and pedestrian access to these lots.

Vehicular Access



It is very difficult to gain vehicular access to the Sandridge Lots from Swede Alley. There is approximately 40 feet of elevation difference between the lower Sandridge Lot and upper Swede Alley. It is possible to design a narrow one-way road that would provide direct access from Swede Alley to the lower Sandridge Lot as shown in the figure to the right. This road is about 380 feet long, which means that the average grade on the road would be about 10.5%, which is quite steep, particularly considering the winter conditions when the road would be most heavily utilized. The road would require extensive retaining walls and guardrails for safety. The road would also displace the existing walkway through the area, which could either be replaced or the road could also function as the walkway, which would obviously present a challenge when ascending vehicles cross descending pedestrians. The roadway could also be made wide enough to accommodate pedestrians. This would increase the construction cost of the road since larger retaining walls would be required. It would also be possible to build a shorter walkway using more stairs and fewer ramps.

It is difficult to estimate the costs for such a roadway without accurate survey information. A rough guess would be about $300,000, which is more than the Sandridge Lots themselves cost to

build. Presumably, this money could be better spent on additional parking and enhancing pedestrian access. Additional information on vehicular access to the Sandridge Lots can be found in Chapter 3 – Parking Garage Concepts.

Pedestrian Access

There is currently a pedestrian path from each of the Sandridge Lots to Swede Alley. While these paths are adequate, it is possible to improve each to make them more attractive to users. A big issue for these paths is improving the lighting along the path. Additional lighting increases the safety and attractiveness of the pathway. There is some lighting along both paths, but it is generally widely spaced and mounted quite high in the air. Some of the lights on the path from the upper lot are actually above the trees, as shown in the photo to the right, which means that little light actually gets down to the path. It may be desirable to provide new lighting. This lighting could have a closer spacing between lights with shorter pole lengths, which would keep the light below the trees. These new lights could be in the same historic style as those currently in use in the Sandridge Lots, as shown in the photo to the left.

Another way to improve the character of the pedestrian paths may be to add some street furniture to the route. This is a bit of a challenge given the slopes along the paths, but it is possible. Adding a bench or two could be of value to those who lack the stamina for the climb up to the lots, while creating a comfortable atmosphere for all users. In addition to benches it may be possible to incorporate some public art into these "rest areas."

The path to the lower lot is difficult to walk due to the spacing of the steps. Some of the steps are spaced in such a way that it is difficult to traverse them using a natural gait. One must take smaller or larger steps, which is awkward and uncomfortable. These same steps are made from wood boxes filled in with road base. Over time some of this road base has washed away creating lips on each step. These lips present a safety hazard as they may cause tripping. They also add to the difficulty in traversing the pathway. It would be desirable to replace these steps with concrete ones and to construct them in such a way that they are much more comfortable to use.

The path to the upper lot has the challenge of going through dense trees and bushes. This foliage encroaches on the path creating a tunnel-like feel, which is not a real safe feeling. It is important to keep trees and bushes out of the path and to ensure that there is adequate visibility both to and

from the path. For example, there is currently a large tree growing right across the path that causes users to have to duck to get past it, as shown in the photo to the left. Presumably, this tree is very important to somebody, but it creates a hazard is difficult to pass, and should be removed. The pathway should probably be trimmed so that it is possible to see both the sky and the street from the path. This, in conjunction with improved lighting should create a better feeling of safety and comfort for the users.

Chapter 3
PARKING GARAGE CONCEPTS

In the Historic Park City Transportation and Parking Plan performed by Wilbur Smith Associates in 1995-1996, a potential parking garage site was identified just north of the existing China Bridge Garage on Swede Alley. The rational was that a new structure that joined with the existing structure would be able to provide the internal circulation that the current garage lacks. This study examines in more detail the different types and sizes of potential parking structures and ramping systems.

Three parking structure concepts were developed as three separate phases that could each build on the prior phase. This system allows for the construction of smaller pieces spreading the total cost out over time. Each alternative is discussed in more detail in the subsequent sections followed by information regarding architectural concepts and cost estimates.

SCHEME A

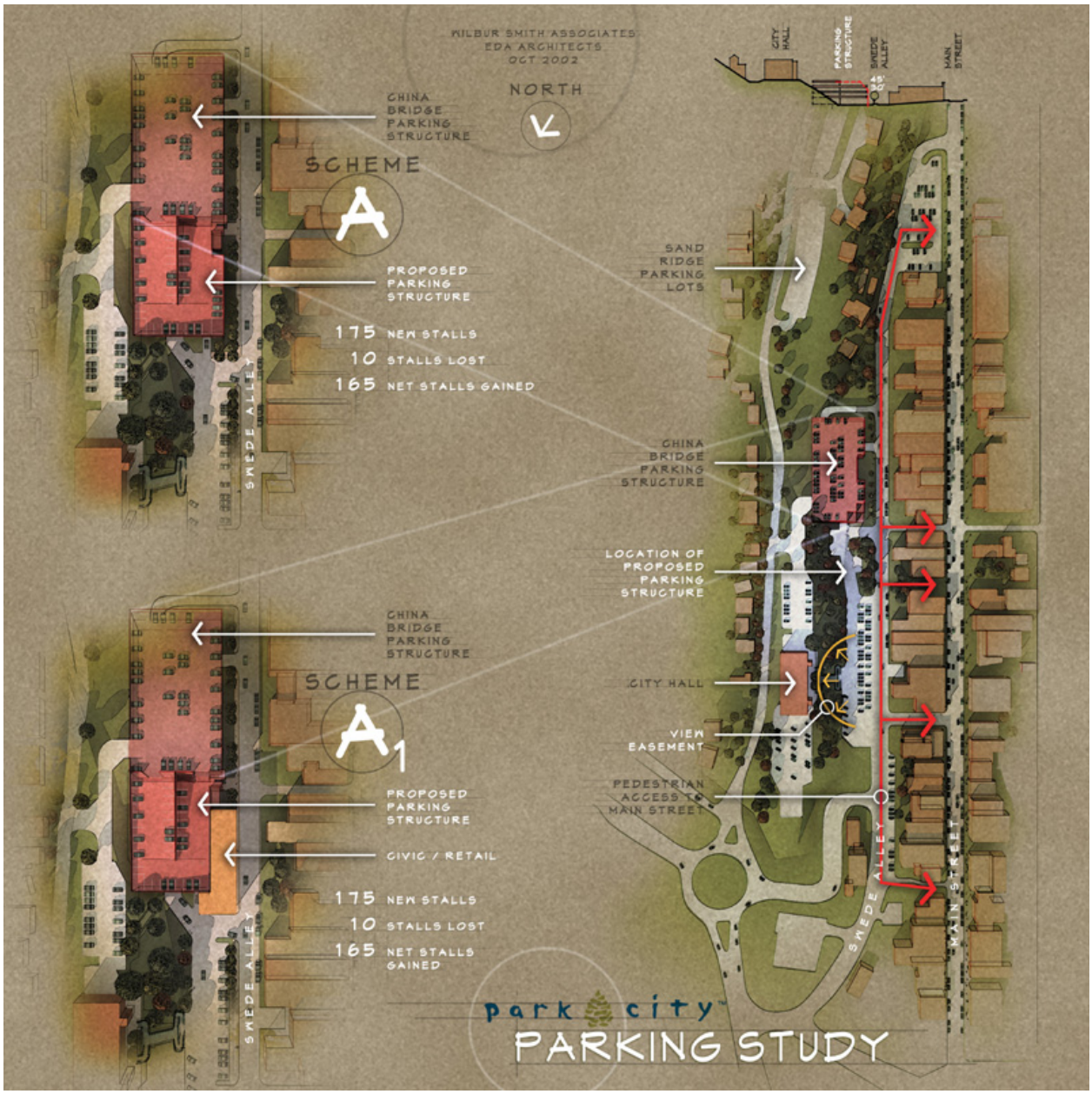
Scheme A represents the minimum structure that can be built on the proposed site. This alternative provides the necessary ramping for circulation within the combined structure. The proposed structure would be a rectangular helix with sloping floors that would rise one-half story on each side requiring 3½ complete revolutions to reach the top. The garage would be entered from the north side into the back half of the garage. The sloping floor would travel upwards at a 5% slope to meet the first floor of the existing garage. A vehicle would then make a 180° right turn to enter the sloping floor on the front half of the garage. This floor would then rise another half story at a 5% slope before another 180° would be necessary. The garage would continue in this pattern, servicing each floor, until reaching the fourth level of the existing garage. Each floor would have perpendicular parking on both sides of the travel aisle. This concept creates three levels in the front half of the garage and four levels in the back half.

A benefit to constructing a ramping system is that it allows vehicles to enter the garage from Swede Alley and exit onto Marsac Avenue. This means that if a vehicle enters the garage only to find that it is full, they can be directed to the nearby Sandridge Lots by exiting onto Marsac Avenue. This makes it easy for the Sandridge Lots to serve as an overflow for the parking garage, thereby increasing the utilization of those lots.

The advantage to this scheme is that it provides internal circulation to the China Bridge Garage, thereby making it more efficient, while providing new parking spaces at the same time. This scheme results in a net addition of approximately 165 spaces. The figure on the following page illustrates the Scheme A and A_1 concepts.

Scheme A_1

This alternative is a variation on Scheme A with the difference being the addition of approximately 10,000 square feet of space on two stories to be used for retail or civic uses. This



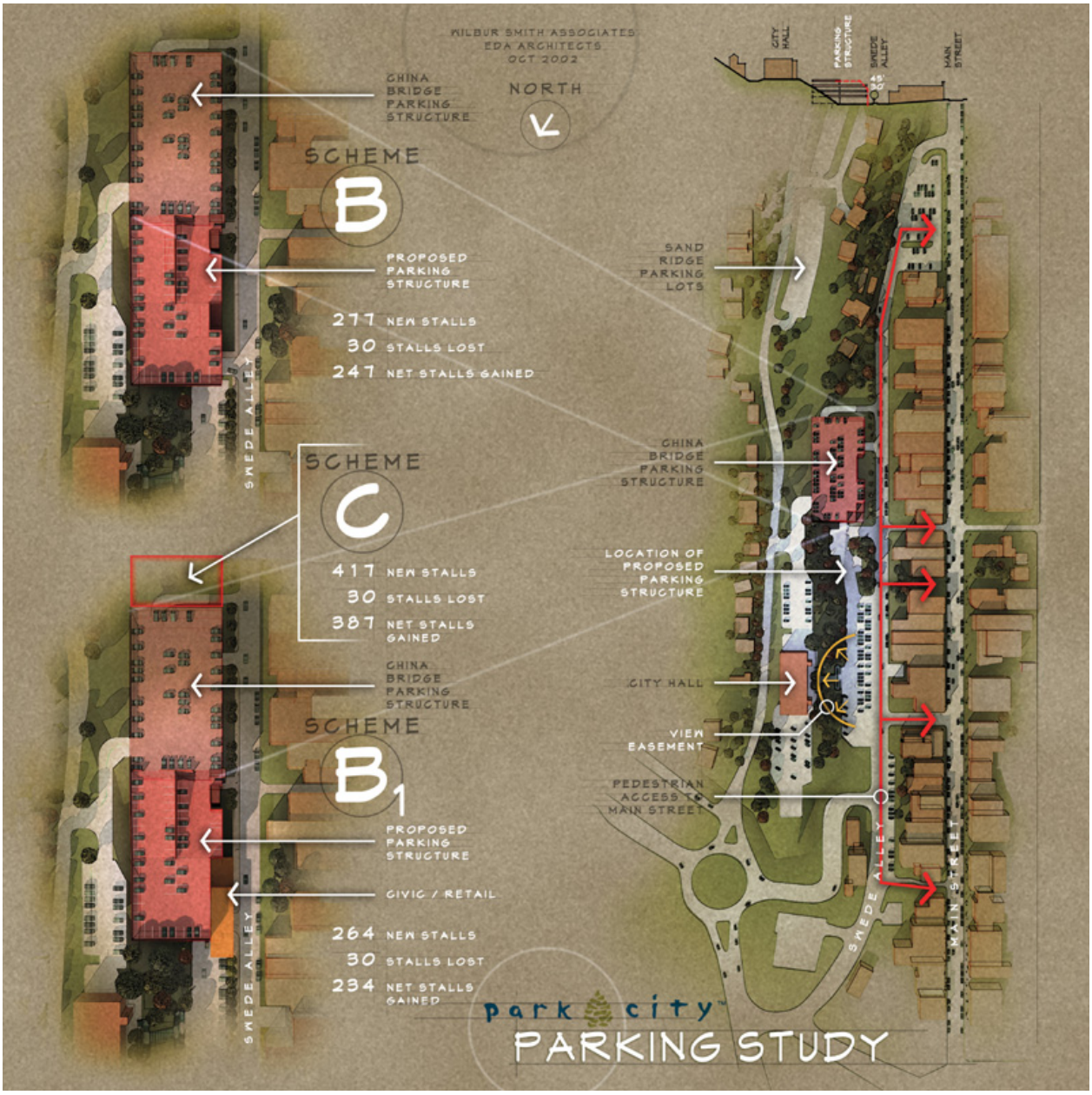
space would be located in the front of the garage and wrap around the corner to the north side. The first row of parking on two levels would be lost. The space would also extend further out towards the street, breaking up the front of the garage.

This retail/civic space serves two purposes. First, it can help break up the building architecturally and serves to conceal some of the large mass that is a parking garage. Second, the space can serve as a source of additional revenue for the construction and operation of the parking garage. The fire department is in need of additional office space, a need that could be filled through this structure. They also have impact fees that they have collected that could be used to pay for their portion of the structure. Retail space would collect rent that could be used to pay off bonds or to finance ongoing maintenance. Either option or a combination of the two would be of benefit to the city.

This scheme would result in a reduction of new parking spaces compared to Scheme A with the new total net addition being about 152 spaces.

SCHEME B

Scheme B is an addition to Scheme A. It proposes to add on to the new ramping system developed in Scheme A with four flat parking levels extending out to the north. The elevation of these new floors would all be half a story lower than the corresponding floor in the existing China Bridge Garage. Theoretically, this new garage could extend to the north for hundreds of feet, but that is inadvisable due to the impact on the view of City Hall on Marsac Avenue. For



this reason, the proposed structure would end approximately 50 feet from the south end of City Hall. This would preserve the view of this historic building.

This scheme simply adds more parking to that in Scheme A and may be done in junction with Scheme A or at a later date. This scheme results in a net addition of approximately 247 spaces including those developed in Scheme A. The net parking addition due to Scheme B alone is approximately 82 spaces. The figure on the previous page illustrates the Scheme B, B_1, and C concepts.

Scheme B_1

This alternative is identical to Scheme A_1 in that approximately 10,000 square feet of retail/civic spaces would be added to the structure to break up the box of the garage, to hide the mass of the garage, and to provide revenue for the construction and maintenance of the garage. This scheme could be done with Scheme A_1 if Scheme A_1 was done first and Scheme B_1 was to follow several years later. This would result in a total of approximately 15,000 square feet of retail/civic space and would require the demolition of some of the retail/civic space in A_1 during construction.

This scheme would result in a reduction of new parking spaces compared to Scheme B with the new total net addition being about 234 spaces. The net parking addition due to Scheme B_1 alone is approximately 69 spaces.

SCHEME C

This scheme was developed to provide the total number of parking spaces that were estimated to be required as described in Chapter 1. This scheme calls for the addition of a structure on the south side of the China Bridge. This structure would have four flat levels that would match those on the existing garage. This scheme would need to be built after or in conjunction with Scheme A, but could be done before Scheme B. This scheme would result in a net new addition of approximately 387 spaces including those from Schemes A and B. The net parking addition due to Scheme C alone is approximately 140 spaces.

ARCHITECTURAL CONCEPTS

The proposed location of the parking additions to the China Bridge structure will be subject to the design guidelines that are included in the HCB district. The parking schemes described above can and should follow those guidelines.

The guidelines identify a building “envelope” that limits building heights along Swede Alley. The guidelines also deal with building massing, materials and architectural character. The inclusion of retail/civic type space as identified in the options discussed earlier creates a better opportunity to architecturally respond to the otherwise cumbersome massing often associated with parking structures. That is not to say that the parking schemes with no retail frontage could not comply with HCB district design guidelines, it’s just that they will have to be approached skillfully and thoughtfully. The parking structure with the adjoined retail arguably establishes a more pedestrian friendly “streetwall” and contributes more to the overall experience of Main Street and it’s surrounds. Additionally, thought should be given to a modest architectural façade

upgrade to China Bridge. If any of the parking structure options are initiated it would be relatively simple to "borrow" some of the new design elements and incorporate them into China Bridge.

For the residents that live on the east side of Marsac Avenue, on the hill, the view looking down onto the top floor of any parking structure is somewhat problematic. Consideration could be given to creating some paving and or paving patterns on the parking surface of the top parking level. Landscaping, including small trees could also be integrated into a "plaza" like parking surface on the top floor of China Bridge and to any additions to it as well.

ESTIMATED COSTS

The construction of any of the parking garage concepts is an expensive undertaking. Each requires the excavation of a significant quantity of soil, which will be contaminated and need to be treated. The table below shows the estimated construction cost for each of the parking garage schemes. It is important to note that each of the prices is stand alone and not cumulative.

Estimated Construction Costs

	Base	Retail/Civic
Scheme A	$2,705,556	$3,071,228
Scheme B	$1,432,715	$1,798,387
Scheme C	$978,879	

CONCLUSION

There is a parking shortage of an estimated 324 to 412 spaces within the Old Town Park City area. This shortage occurs during the evening hours from December to March. The potential enhancements to the existing parking supply are not enough to meet this need. If it is determined that the need should be met, an additional parking structure will be required. The Scheme A or A_1 scenario provides a great deal of benefit.

Before making a large financial commitment, it would be wise to make absolutely certain that the garage is needed. There are two things that can be done in an effort to ensure that this is really the case. First, conduct a small utilization study of the private spaces. This study has assumed that the utilization of private spaces mirrors that of the public spaces, but that may not be entirely true. It is a fairly simple exercise to monitor the occupancy of these facilities during a couple of evenings in the peak winter season. If these spaces are not fully utilized, there may be things that can be done to improve that. Second, conduct a statistically valid parking survey of both residents and guests to find out what the actual latent demand may be and to gauge the impact of paid parking. This will allow the city to find out how many people are being kept away by lack of parking or paid parking. These two surveys will allow the city to quantify the actual need for a parking structure.

Appendix 3 – Consolidated Project Listing