

Park City Village

Traffic and Parking Management Plan

This Traffic and Parking Management Plan forms the basis for maintaining existing or improved traffic conditions throughout the construction of the Park City Village Project and after the completion of the project.

**1. Project Construction Overview**

Each phase of the Park City Village project is planned to not decrease the total available parking at the ski area during construction of each phase and to accommodate the increase in parking required by improvements to the ski area.

Construction workers for each phase will vary by the trades required and stage of construction. Similar projects in the Park City area indicate that approximately 70 to 100 workers are anticipated during the peak construction periods.

Overall construction impacts will be minimized by :

- Place excavated material on site to eliminate the impacts of haul trucks to roads accessing the site.
- Set restricted construction delivery times and specific routes for each phase. No deliveries during morning and evening peak travel hours.
- Set limitation of work during special events - Park City Art Festival, America's Opening for the World Cup, etc.

*Need to place the following improvements in the Construction Phases listed below:*

*Improvements to Empire Avenue, Lowell Avenue and the intersection of Lowell Avenue/Empire Avenue/ Silver King Drive - These improvements will need to be considered as a package of improvements along with any utility improvements or relocations necessary. Although the realignment of Lowell is suggested as soon as possible in the project schedule the final curb, gutter, and sidewalk may not occur until the completion of the Lower Lot parking structure.*

Phase I planned start 1997 - completed winter 1997-1998. This phase will be the construction of the new lodging and ski facilities on Parcel A. The gondola building and gondola will be removed. The replacement skier facilities and the first phase of Parcel A lodging will be constructed. Excavation for all phases of the Parcel A building will be conducted the first year to accommodate material staging and construction employee parking. Construction traffic will use SR-224, Empire Avenue, Manor Way, and Lowell Avenue to the site.

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**Phase I option A** - planned start 1997 - complete 1998. This option considers the construction of the units and required parking proposed on Parcel D (Silver King Lot) with additional parking constructed on the North half of Parcel B (Main Lot). The units above the parking on Parcel B would be constructed in the later Phase. Construction traffic will use SR-224, both Empire Avenue and Silver King Drive to the site.

**Phase I option B** - planned start 1997 - complete 1998. In addition to the construction of Parcel A, this option considers the construction of the North half of the parking and one third of the lodging units of Parcel B. Parcel D would not be constructed and subsequent phases of Parcel B would be constructed as other phases develop. Construction traffic will use SR-224, and Empire Avenue to the site.

**Phase II** - planned start 1998 - complete winter 1999-2000. This phase consists of the construction of Parcel C - lodging and skier services. It is planned to construct this phase as one continuous construction. Construction traffic will use SR-224, Empire Avenue, Silver King Drive, Lowell Avenue to the site.

**Phase III** - planned start 1999 - complete winter 2000-2001. This phase completes the construction of Parcel E on the existing Lower Lot. Construction parking and staging could occur on Parcel D if Phase I option A does not occur, otherwise construction parking and staging will need to occur on Parcel E, utilizing the right-of-way during the summer. The new plaza and relocation of Lowell Avenue are completed during this phase. Lowell relocation should occur during the summer with traffic detouring on Empire Avenue and Shadow Ridge Drive. The plan anticipates that this phase will be completed for the Olympic Games. Construction traffic should be on SR-224, Empire Avenue, Silver King Drive, and Lowell Avenue to the site. Construction traffic will be restricted from Three Kings Drive. Continual access can be provided on Silver King Drive by widening out Silver King Drive to the north prior to the start of this phase as proposed for full buildout.

**Phase IV** - planned date - open. This phase will complete the unit construction of Parcel B and/or if either of the two Phase I options for development of Parcel B or D is exercised. As previously described, Parcel D would be an independent project with material storage and workers staged on site. Use of the right of way is anticipated during summer construction operations. Construction traffic will use SR-224, and Empire Avenue to the site.

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**2. Parking - accommodating existing parking requirements and new requirements as each phase is completed.**

Phase	I	Option IA	Option IB	II*	III*	IV*	Total
Existing stalls	1222			1542	1614	2541	2544
Skier stalls lost	0	563	256	243	244	246	0
Existing surface stalls remaining	1222	659	966	416	173	0	0
Stalls constructed							
Skier	0	400	336	214	990	228	1832
Commercial/ Residential	187	66	64	101	91	191	636
Employee					150		150
Subtotal	187	466	400	315	1231	419	2618
Temporary		230	60		-60	-170	0
Total skier stalls	1222	1289	1362	1260	1946	1758	1832
Total other stalls	187	253	251	354	595	786	786
Total stalls	1409	1542	1613	1614	2541	2544	2618

\* Option IA was assumed

\*\* Existing stalls do not include underground parking.

**Phase I.** Existing parking will not be impacted, site will be self contained, new parking structure (187 stalls) will be completed prior to completion of new dwelling units.

**Phase I option A.** The construction on Parcel D (Silver King Lot) is an independent phase, the construction workers will be accommodated on site with overflow worker parking on Parcel E (Lower Lot) during the summer operations. The completion of the remainder of parcel B will also provide on site parking on the south side.

The Silver King Lot currently accommodates 243 skier parking stalls, the development of Parcel D will replace these with the required 66 stalls for the units

developed. Skier parking will be accommodated in the other lots. For this phase, the skier parking will be accommodated in the structure on Parcel B.

The existing parking on Parcel B (current Main Lot) is 492 stalls. Construction of the north half of the proposed parking structure will provide 400 of the proposed 819 stalls. Approximately 1/3 of the existing remaining parking in the Main Lot will be taken up with material and construction parking leaving approximately 150 stalls of this parking available for skiers. ( $492/2=246$ ,  $246-74=172$  use 150 stalls)

The parking for skiers from Parcel D to be accommodated on Parcel B in this Phase is 243. Therefore the total parking for skiers required from the parking developed in this phase from Parcel B is  $243+246+74=563$  skier stalls. The new parking structure will accommodate 400 stalls. 170 stalls will be available for the skiers on the surface level deck of the new structure. 150 stalls will be available on the south third of the existing lot.

Prior to the completion of construction any temporary deficit in parking will be made up in the temporary construction and paving of available property at the north end of the Lower Lot and the east side of the Silver King Lot. This results in approximately 60 stalls.

**Phase I option B** construction parking will be maintained on site.

The existing parking on Parcel B is 492 stalls. Half of these stalls (246) would be lost and replaced in the new structure on the north half of the lot. Of the remaining 246 stalls 10 would be dedicated for construction staging for Parcels A and B (during the ski season the remaining 64 construction workers will park in the 64 residential stalls constructed during the summer of this phase). This results in approximately 150 surface stalls remaining available for skiers. The new structure will accommodate 380 stalls ( $780/2=390$  use 376).

This results in approximately 530 stalls ( $380+150$ ) available during this phase for a net increase of 38 skier stalls ( $530-492=38$ ).

64 (191 stalls required for all the units in Parcel B/3) stalls will be required for the new units constructed. The total of unit and skier parking required is 556 (492 existing stalls and 54 for the new units). Again, prior to the completion of construction any temporary deficit in parking will be made up in the temporary construction and paving of available property at the north end of the Lower Lot and the east side of the Silver King Lot. This results in approximately 60 stalls for a net increase of 34 stalls for the ski area.

**Phase II** Construction worker parking will be on the Lower Lot north during the summer construction of the parking structure. After the parking structure is completed the workers can use it for parking.

This phase will require approximately half of the existing Lower Lot parking (487 stalls total). The required half (243 stalls) are replaced by 315 new stalls in the structure. 101 of which will be used for employees and the new residential units. The net new stalls (72) will satisfy the parking requirement of the new dwelling units on this parcel also can be used for construction worker parking prior to completion of the residential units..

**Phase III.** Construction worker parking will be on the Silver King Lot during the summer construction of the structure (unless Phase I option A is constructed then construction workers will need to be accommodated on Parcel E or the southern half of Parcel B), the construction workers will use the parking structure upon completion.

The remaining 244 stalls on the Lower Lot will be replaced with 1231 parking stalls for a total of 1546 stalls including Parcel C. Net new stalls will be 1059 stalls (1546-487=1059). 192 stalls are required for the units and commercial to be constructed on this parcel.

**Phase IV.** Construction worker parking will be on site in the winter and in Parcel B skier parking in the summer.

This Phase would include the completion of the additional skier parking adding the remaining 419 stalls of the south half of the parking structure on Parcel B. The completed parking allocation would be: 819 stalls constructed, 492 surface stalls replaced and 191 stalls provided for the units on Parcel B. This results in an increase of 136 stalls for skier parking (819-492-191=136).

**3. Transit**

The existing transit routes can be maintained through construction of Phase II even if Lowell Avenue is made one-way in Phase I. However, in Phase III the relocation of Lowell Avenue and reconstruction of the Park City Transit transfer station will occur requiring some modifications to the Transit System. It is currently planned that the roadway work will occur during the summer when the Park City Transit has the flexibility to stage in alternate locations ( we have discussed this with representatives from Park City Transit and a location will be selected in the future).

As mentioned previously, transit use will be recommended to construction workers and ski area employees in the winter to maximize the stalls available for skiers. Provide a park and ride lot for the construction workers, most probably come from Salt Lake City.

**4. Traffic**

Below is a summary of forecasted traffic impacts by Phase. The proposed construction phasing and requirements for on site staging allows only minor increases in traffic until Phase III when the roadway improvements will be constructed and in place for the ski

season. Therefore, in Phases I and II existing traffic control methods can be used for peak skier traffic periods.

The changing of Lowell Avenue to one-way before the reconstruction (of Lowell Avenue) may want to be considered when Parcel B is constructed. This would improve the circulation for the existing site, reduce vehicle conflicts, may also provide additional staging area for construction or/ and additional drop-off/ pick-up.

**Trip Generation Table for new parking and existing surface stalls**

	Enter	Exit
Phase I	28	647
Phase IA	38	715
Phase IB	38	711
Phase II	53	651
Phase III	89	1047
Phase IV	127	881
Project Complete*	171	1004

\* includes 99 additional trips from commercial and commercial employees  
 This table includes cumulative trips by phase for the new surface and new stalls, it does not include drop-off/ pick-up trips, or trips associated with existing underground parking.

**Phase I** will increase the evening peak hour traffic volumes by approximately 28 vehicles (15% of 187) arriving, i.e. destination skiers coming back to their dwelling unit.

**Phase I option A** will increase the evening peak hour traffic volumes by approximately 10 vehicles (15% of 66) arriving, i.e. destination skiers coming back to their dwelling unit, and 68 vehicles (53% of 127) exiting day skiers leaving.

**Phase I option B** will increase the evening peak hour traffic volumes by approximately 74 vehicles (15% of 64 and 53% of 120). 10 arriving vehicles for the new dwelling units on Parcel B and 64 exiting vehicles for the net new skier stalls.

**Phase II** will increase the Phase I evening peak hour traffic volumes by approximately 15 vehicles (15% of 101) arriving, i.e. destination skiers coming back to the new dwelling units on Parcel C.

**Phase III** will increase the Phase II evening peak hour traffic volumes by approximately 440 vehicles (30 trips for employees, 15% of 91 and 53% of 747).

14 arriving vehicles for the new dwelling units on Parcel E and the 396 exiting vehicles for the net new skier stalls in the parking structure on Parcel E.

**Phase IV** will increase the Phase III evening peak hour traffic volumes by approximately 19 (15% of 125). 19 arriving vehicles for the new dwelling units on Parcel B.

### **Neighborhood mitigation strategies**

#### **Three Kings**

During Phase III of the construction it is recommended that construction traffic exiting out of the Parcel E parking structure towards Three Kings be restricted to right turns only, as well as improved signing to the ski area via Empire Avenue. Although these neighborhood traffic impact mitigation measures are recommended in Phase III they may also want to be considered in Phase I, with the proposed additional parking being constructed adjacent to the Lower Lot (west side).

The changing of existing Lowell Avenue to one-way may also want to be considered prior to the start of construction. This change will reduce the traffic exiting the ski area traveling towards Three Kings and also reduce the vehicle conflicts along Lowell Avenue.

After the completion of Parcel E with parking access onto Silver King Drive it is imperative that the following actions are incorporated:

- Sign at are placed at the driveways on Silver King Drive restricting left turn movements out (towards Three Kings Drive).
- Cones, and parking attendant restricting left turn movement out of driveways on Silver King Drive.
- Signs are placed on SR-224 that direct traffic to the Empire/ Lowell entrance into the Park City Village, away from access on Three Kings.

#### **Empire Avenue**

The Park City Ski Area has committed to keeping the ski visitors from parking on the shoulder of Empire Avenue during the peak ski periods. With the increased activity from the Park City Village, Empire Avenue will need to provide open lanes for vehicle travel. The ski area will use parking attendants, cones and signing (installed by the City) to prohibit the parking. Depending on the success of these strategies it may also be necessary to ticket and impound (repeat offenders).

### **Methods for monitoring compliance (regular traffic counts and publishing of data)**

UDOT should be encouraged to install permanent count stations on SR-224 to monitor overall traffic in and out of Park City.

Periodically publish number of actual skiers compared to forecasted numbers. This will either show that the proposed mitigation measures are sufficient or that other measures need to be taken, such as increased transit use, increased car pooling, and adjusting arrival and departure times for skiers - just to name a few possible solutions. This information is not only critical to the Park City public but also to the ski area so they can provide a quality experience to their visitors.

Perform annual parking lot counts, transit ridership inventory and turning movement counts at intersections adjacent to the ski area. This in combination with the skier counts will verify transit use, skiers per car, arrival times, and will enable the ski area to be proactive in maintaining smooth access to and from the site.

Although the circulation patterns will be improved there will still be a need for traffic attendants at the following locations and for the time periods listed:

- Silver King Driveways (AM peak hour) for assigning lanes into structure, and restricting left turns towards Three Kings (PM peak hour).
- Lowell Avenue and Silver King Drive (PM peak hour) to allow exit traffic from Silver King onto Lowell without blocking Lowell SB traffic.
- Millsite Way (Shadow Ridge Drive) and Empire Avenue (PM peak hour) to balance exiting resort traffic from Millsite and NB Empire, specifically the Transit on Empire.
- Off Duty Police Officers from the City or County should be used at the intersections of Empire Avenue and Millsite Way, and Lowell Avenue and Silver King Drive.

It is forecasted that the attendants will be needed only on weekends and holidays to improve the ingress and egress for people who are unfamiliar with the site.

**Summary**

The proposed Park City Village provides a layout that will accommodate the increased parking and traffic by improving the circulation and access patterns. The proposed one-way Lowell Avenue significantly reduces the vehicle conflicts with the majority of parking, drop-off/ pick-up being on the right side of the street. Access points to the new parking structures have been strategically located to provide efficient ingress and egress. The reduction in number of access points will also improve the circulation, the access point which are currently near unlimited for some parking lots are now restricted to driveways into the structures.

**Traffic Analysis Background Data**

ITE Trip Generation Rates are based on suburban applications and overestimate the trips generated in a mixed use residential/ commercial resort facility such as the Park City

Village. In order to provide the most accurate forecast of the projected growth the following assumptions were used for this traffic study:

- Evening peak hour traffic counts and inventory of parking stalls for daily skier parking indicate that approximately 53% of the daily skiers exit during the evening peak hour, the remaining 47% exit prior to or after this peak hour.
- During this same evening peak hour destination skiers are returning to their dwelling units, approximately 15% of the overnight visitor parking. These are people staying at the dwelling units on site and are returning to their dwelling units during the evening peak hour.
- ITE trip generation rates for commercial development were reduced by 40 percent to account for internal trips. The commercial development on site are primarily for the use of the destination skiers that come to the Park City Village resort overnight, therefore the development can be accessed by foot.
- Commercial employee trips are estimated at an additional 30 trips during the evening peak hour, most employee trips will occur after the peak hour.
- Ski area employee trips will also occur before and after the evening peak traffic volume hour.
- Distribution of the new trips was based on the existing trip distribution, the primary origin (Salt Lake City area) remains the same for the daily skier regardless the size of the area.

These assumptions were based on previous traffic counts and studies performed at the existing Park City Ski Area Resort and other ski areas throughout the country.

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Phase	I	Option IA	Option IB	II*	III*	IV*	Total
Existing stalls	1222			1602	1583	2571	2513
Skier stalls lost	0	503	256	334	243	247	0
Existing surface stalls remaining	1222	719	966	399	173	0	0
Stalls constructed							
Skier	0	400	376	214	990	228	0
Commercial/ Residential	187	66	64	101	91	191	0
Employee					150		0
Subtotal	187	466	440	315	1231	419	0
Temporary		230				-230	0
Total skier stalls	1222	1349	1342	1229	1976	1727	1875
Total other stalls	187	253	251	354	595	786	786
Total stalls	1409	1602	1593	1583	2571	2513	2661

\* Option IA was assumed

\*\* Existing stalls do not include underground parking.

**Phase I**

1222 stalls includes:

Lower Lot	487
Main Lot	492
Silver King Lot	243

165 Commercial/ Residential includes:

Parcel A new stalls	187
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1222 Total skier stalls, no additional constructed

165 Total other - stalls constructed for new residential units Parcel A

1409 Total skier plus total other stalls (1222+187)

**Phase IA**

503 skier lost stalls includes:

Silver King Lot	243	
North half of Main Lot	246	
Construction workers residential stalls)	74	(60 of the 74 can park in the Parcel D)

719 Remaining existing surface stalls (1222-503)

400 new skier includes:

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stalls under 1/2 of Parcel B 400

60 new commercial/ residential includes:

new units Parcel D 66 (used by construction workers)

1349 Total skier existing minus skiers stalls lost plus new skier stalls constructed (1222-503+400+230)

253 Total other stalls includes: 66 Parcel D and 187 Parcel A

1554 Total Stalls (1329+225)

**Phase IB**

256 skier lost stalls includes:

North half of Main Lot 246  
Construction workers 74 (64 of the 74 can park in the Parcel B residential stalls)

376 new skier includes:

stalls under 1/2 of Parcel B 316  
northwest of Lower lot 60

64 new commercial/ residential includes:

for units on Parcel B 64 (will be used for construction workers until project is complete)

1342 Total Skier Stalls (1222-320+376+64)

251 Total Other Stalls (187+64)

1593 Total Stalls (1342+251)

**Phase II**

1602 Existing stalls (1602 from Phase IA)

317 skier lost stalls includes:

South half of Lower Lot 243  
Construction workers 74 (Construction workers for Parcel C will use 74 residential stalls in Parcel C)  
Construction workers 74 (Construction workers for Parcel A will use surface stalls in south half of Main Lot)

399 Existing remaining surface stalls (719 from phase IA plus 14 from phase IA construction workers minus 74 for construction workers Parcel A minus 243)

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construction of Parcel C, the 14 stalls are gained from construction workers in phase IA)

214 new skier includes:  
stalls under Parcel C 214

101 new commercial/ residential includes:  
for units on Parcel C 57 (used by construction workers )

1246 Total Skier Stalls (1349-317+214), (1349 from Phase I option A total skier stalls)

354 Total other stalls (253+101)

1600 Total Stalls (1246+354)

**Phase III**

1600 Existing stalls (1520 from Phase II)

243 skier lost stalls includes:  
North half of Lower Lot 243  
Construction workers 80 (accommodated in the designated residential stalls under Parcel E)

173 Remaining existing surface stalls (416-243)

990 new skier stalls includes:  
stalls under Parcel E 990

91 new commercial/ residential stalls includes:  
for units on Parcel C 91

150 Employee parking

1564 Total skier stalls (1229-243+990), (1229 is the total skier stalls from Phase II)

595 Total Other Stalls (91+354+150)

2571 Total Stalls (1976+595)

**Phase IV**

2571 Existing stalls (from Phase III)

247 skier lost stalls includes:  
South half of Main Lot 247

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Construction workers 74 (park in the constructed residential/ commercial stalls)

In phase IV the 74 construction workers that have been accommodated in the south half of the Main Lot will need to be relocated into the Parcel B underground parking.

0 Remaining existing surface stalls (173+74-247)

228 new skier includes:

stalls under 1/2 Parcel B 228

191 new commercial/ residential includes:

for units on 2/3 Parcel B 191

completion of other residential units on parcel B assuming Option IA, 64 stalls currently being used for skiers will be required for residential

230 eliminating 230 temporary stalls

1663 Total skier stalls (1976-247+228-64)

850 Total Other Stalls (595+191+64)

2513 Total Stalls (1516+608)

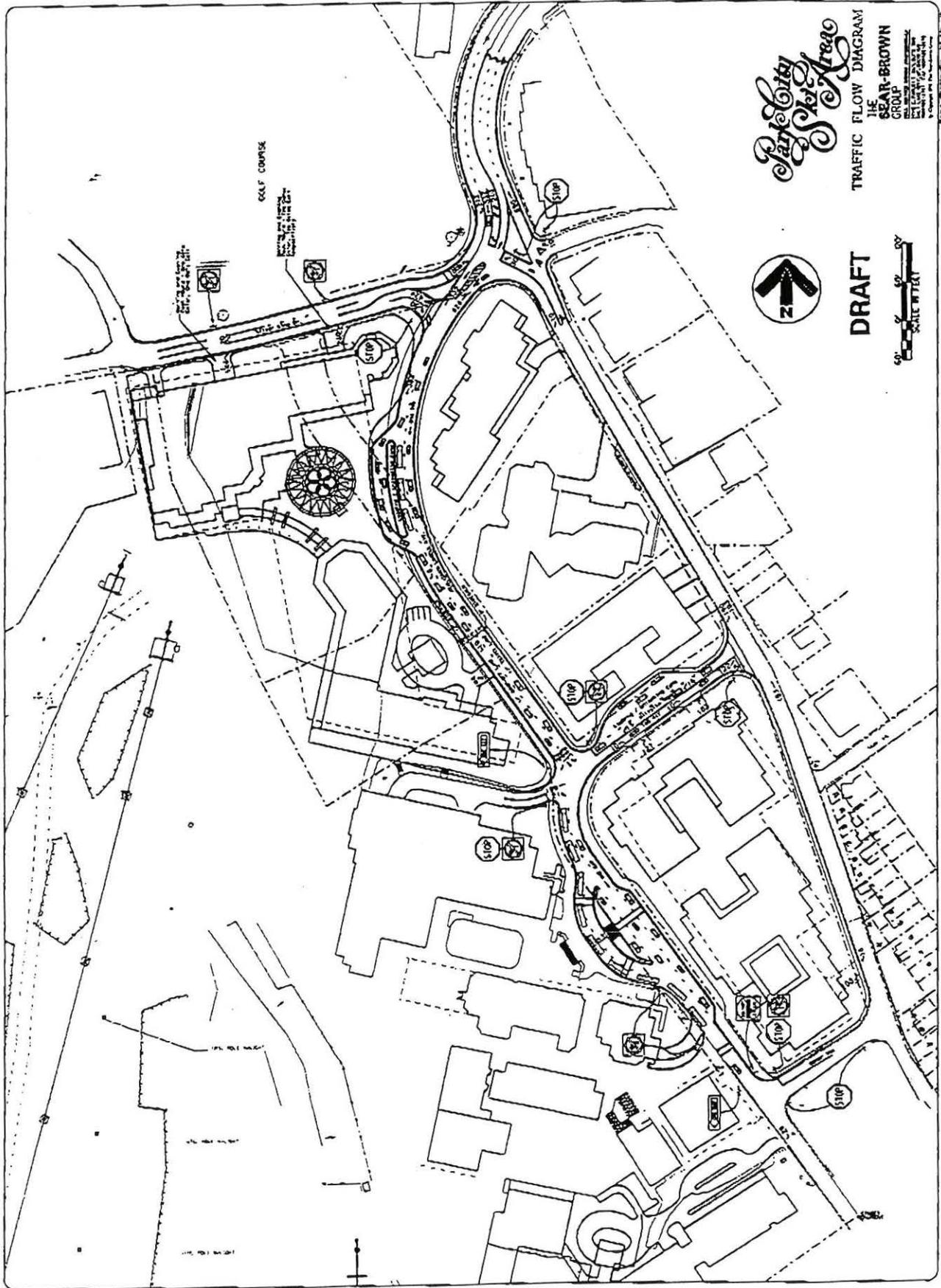
Upon completion 148 stalls are gained from construction to bring the total up to 2661.

**Trip Generation Table for new parking and existing surface stalls**

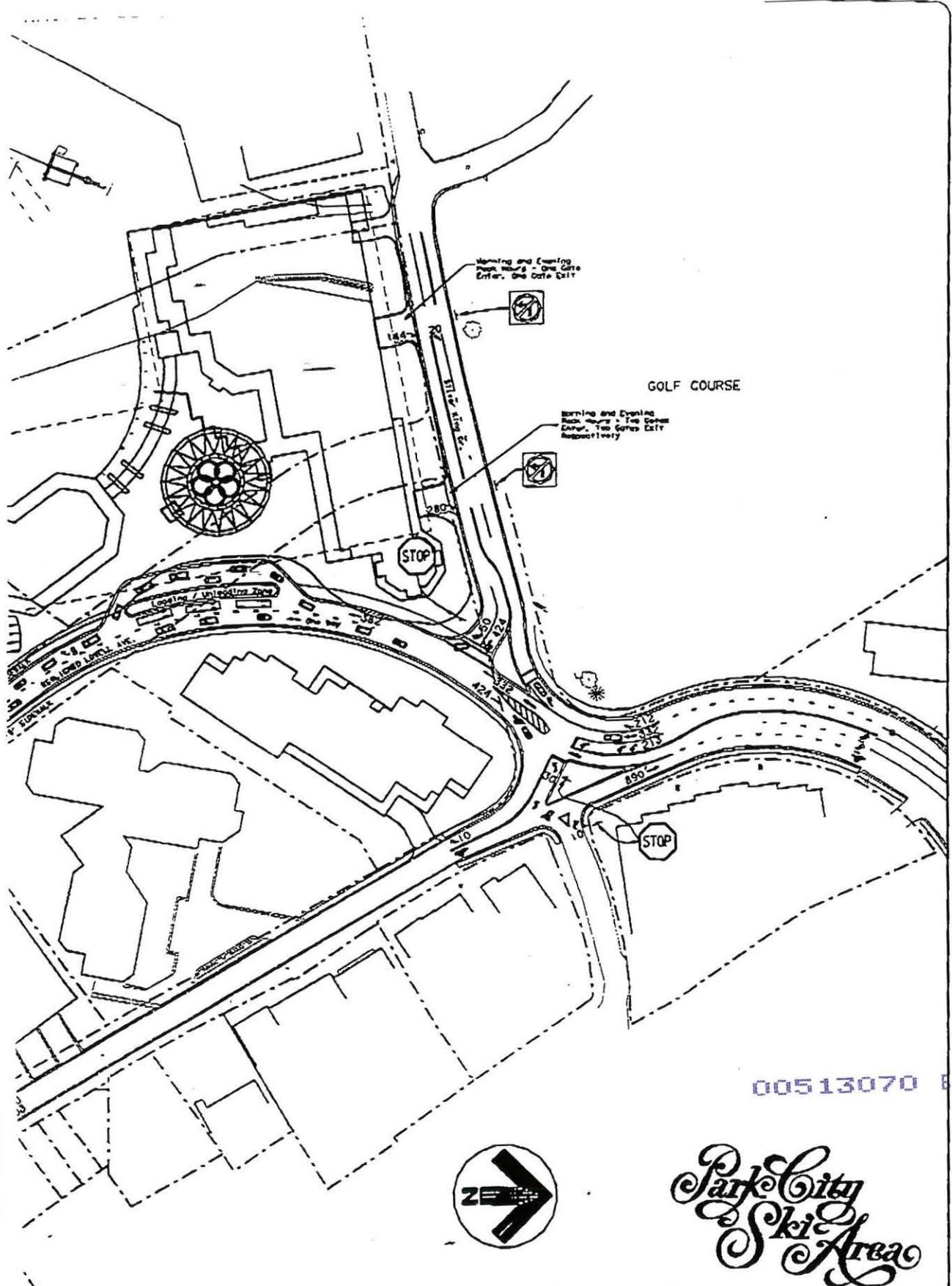
	Enter	Exit
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Phase II	53	651
Phase III	89	1047
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Project Complete*	171	1004

\* includes 99 additional trips from commercial and commercial employees

This table does not include drop-off/ pick-up trips, or trips associated with existing underground parking.



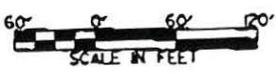




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**DRAFT**



*Park City  
Ski Area*

TRAFFIC FLOW DIAGRAM  
THE  
**SEAR-BROWN  
GROUP**

FULL SERVICE DESIGN ARCHITECTURE  
2749 S. HARRIS BLVD., SUITE 200  
SALT LAKE CITY, UT 84119  
PHONE: (801) 487-8200 FAX: (801) 487-8202  
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