HIGHLAND CITY
IMPACT FEE FACILITIES PLAN

Project Number 140378

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InterPlan
Transportation Planning

7719 South Main Street
Midvale, Utah 84047
801-307-3400

TABLE OF CONTENTS

Introduction

The purpose of an Impact Fee Facilities Plan (IFFP) is to use projected system demands to identify public facilities that are needed to serve growth associated with new development activity within the service area. The service area for this IFFP is the Highland City Boundary (see Figure 2). An IFFP should also identify capital facilities projects, which may be funded through impact fees. An IFFP generally serves as the basis of performing an Impact Fee Analysis (IFA) where impact fees are calculated. The Highland City Transportation Impact Fee Analysis will be performed by Zions Bank Public Finance and is presented in a separate document.

The IFFP and IFA documents should be updated on a regular basis, as needed, depending on how actual development and population growth occurs and to stay consistent with any updates to the city's Transportation Master Plan.

Requirements for the preparation of an IFFP are outlined in Title 11, Chapter 36 of the Utah Code (Impact Fees Act). Under these requirements, an IFFP shall accomplish the following:

1. Identify the existing level of service
2. Establish a proposed level of service
3. Identify excess capacity to accommodate future growth at the proposed level of service
4. Identify demands placed upon existing public facilities by new development activity at the proposed level of service
5. Identify the means by which city or developer will meet those growth demands
6. Consider the following additional issues:
    a. Revenue sources to finance required system improvements
    b. Necessity of improvements to maintain the proposed level of service
    c. Need for facilities relative to planned locations of schools

The following sections of this report have been organized to address each of these requirements.

Section 1: Existing Level of Service (11-36A-302.1.A.I)

Level of service (LOS) is defined in the Impact Fees Act as “the defined performance standard or unit of demand for each capital component of a public facility within a service area.” Level of service standards for transportation are defined in the American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets, 2011 (6th Edition). Highland City presently maintains a road system which is currently below capacity at a level of service (LOS) D threshold. According the AASHTO standards, LOS D is defined as "approaching unstable flow." A LOS D threshold is commonly used as a standard within urban areas. This level can be measured by methods included in the Transportation Research Board (TRB), Highway Capacity Manual (HCM), 2010.

LOS calculations can be complex and data intensive but simplified planning methods are reasonably accurate. LOS calculations according to the HCM2010 depend on the following factors:

1. Number of travel lanes
2. Number of turn lanes
3. Number of trucks in the travel flow
4. The level of "platooning" of vehicles approaching each intersection
5. The timing of traffic signals and the coordination of multiple traffic signals
6. The number of turning vehicles
7. The vertical grade of the roadway and other horizontal alignment factors
8. The familiarity of drivers to local conditions
9. The availability of shoulders and lateral clearances
10. Various natural environmental conditions

To simplify the analysis, the IFFP in Highland City relied on the use of the Mountainland Association of Governments (MAG) travel demand model 7.0. The MAG travel model is maintained at a regional level and was modified and calibrated for use in Highland City as part of the IFFP. The travel models use a link-based capacity (even though much of the actual delay is manifested at intersections). Algorithms exist in the travel model to estimate the delay associated with increased traffic volume, with the primary input being the travel link number of lanes, functional classification of the road, and area type (urban, suburban, rural, etc.). These simplifications are necessary since detailed data may not be available for forecasting future conditions and the travel model is developed at a regional (metropolitan area) scale.

Traffic capacities are defined in the regional travel models for the hourly level. For application in Highland City, capacities were adjusted to daily maximums based on various factors consistent with the Highway Capacity Manual. Table 1 summarizes the daily maximum capacities used in

Highland City at the acceptable LOS.

Table 1: Daily Level of Service D Capacity in Highland City

Maximum Daily Traffic Capacity Estimates		
Number of Lanes	**Arterial**	**Collector**
2	12,500	11,200
3	19,100	17.500
4	38,300	30,900
5	41,000	37,200
6	52,800	
7	57,000	

Source: InterPlan

Intersection Standards

Delays at intersections are a major determinant in the LOS provided on the roadway system. Intersection LOS is determined by the type of intersection control including no control, stop signs, roundabouts, traffic signals, or other control (interchanges, etc.). Intersection improvements are difficult to predict even a few years into the future, since they depend on specific turn movements at each intersection. While the specific timing or phasing of traffic signals, for example, cannot be forecast, the need for capital improvements such as traffic signals can reasonably be estimated. The cost of intersection improvements can be mitigated with advanced planning such that signal foundations, signal wiring conduit, and other improvements can be implemented concurrent with roadway construction in advance of the actual placement of signal mast arms, signal controllers, and traffic signals. The cost of intersection improvements are included in the estimated cost of each roadway, although the full installation of all intersection improvements may be deferred as needed, based on on-going intersection specific traffic counts.

Unit of Demand

The impact of new development is driven by "trip generation" associated with various land use types. The more trips that are associated with a particular land use or development, the greater its impact on the street system. The number of trips can be estimated based on national guidelines developed by the Institute of Transportation Engineers (ITE) documented in their Trip Generation Manual. ITE trip rates are based on national research in the transportation industry.

The use of ITE trip rates allows for consistency of analysis across different areas and market segments, but has also been the source of confusion due to the definition of a "trip." Road capacity analyses in Highland City are based on a trip defined by a count on a road during a pre-defined period (daily). ITE trips are defined by extensive national studies of driveway counts. Therefore a typical trip from a home to a job should be counted as a single trip in the Highland City IFFP and is counted once based on the travel model estimate of average daily traffic. However, ITE trip rates for the same home to work travel path count a "trip" crossing the residential

driveway and a second "trip" crossing the workplace driveway. To correct for this semantic inconsistency, ITE trip rates have been divided by two in all cases.

In addition, many developments claim that their source of trips is drawn from traffic already on the road so that they do not generate new trips. To account for this issue, ITE trips have been reduced further in various non-residential cases by a "primary trip factor," which accounts for opportunistic driveway counts of drivers already on the road. The ITE Trip Generation Manual provides insight for estimating the primary trip factor. Trip generation by land use in Highland City is based on the Ninth Edition ITE Trip Generation Manual, 2012.

System Improvements and Project Improvements

For the purposes of this study, roadway functional classifications include arterials, collectors, and local streets. Local streets are considered “project improvements” as defined in Utah Impact Fee Law, and are not included in this IFFP nor are they eligible to be paid for using impact fees. Arterial and collector streets generally serve occupants or users from multiple developments and are considered “system improvements” as defined in Utah Impact Fee Law. The capital facility projects discussed in Section 4 of this report are system improvements and are eligible to be partially funded with transportation impact fees.

Proposed Level of Service (11-36A-302.1.A.II)

The proposed level of service is the performance standard used to evaluate system needs in the future. The Impact Fee Act indicates that the proposed level of service may:

1. diminish or equal the existing level of service; or
2. exceed the existing level of service if, independent of the use of impact fees, the city implements and maintains the means to increase the level of service for existing demand within six years of the date on which new growth is charged for the proposed level of service.

In the case of this IFFP, no changes are proposed to the existing level of service standard. Future growth will be evaluated based on LOS D, the same level of service as identified above.

Section 2: Excess Capacity to Accommodate Future Growth (11-36A-302.1.A.III)

In an effort to assist in the development of the IFA, the percentage of the excess capacity of the existing transportation system that is eligible for reimbursement through impact fees was identified. In this report, the term "excess" capacity will be used interchangeably with "available" capacity. Available capacity, or excess capacity, is defined as the capacity in an existing transportation system that is available for additional trips from anticipated future development.

Figure 1: Existing Roads with Excess Capacity Available for Future Development

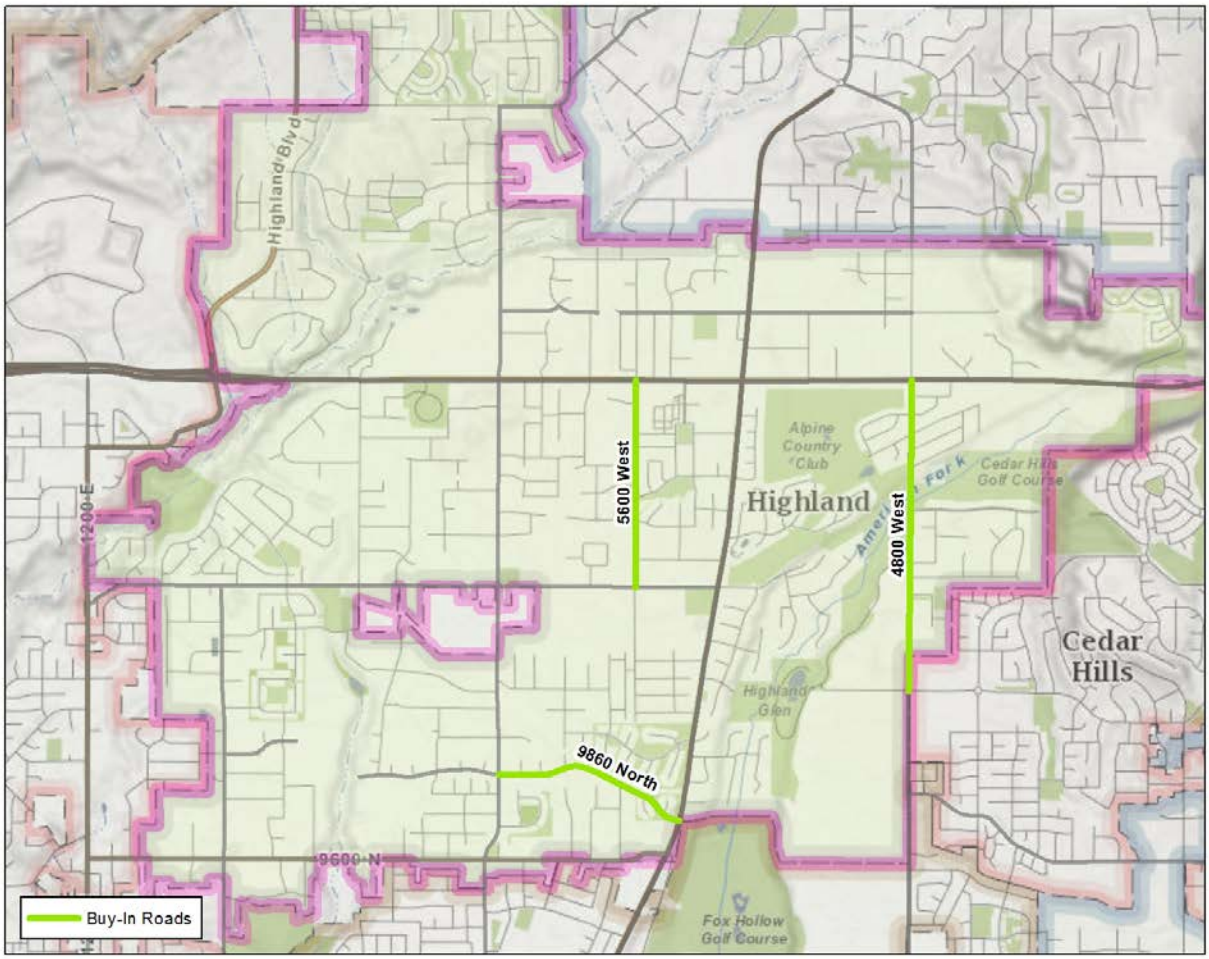


Figure 1 shows the roads in Highland City with existing available capacity that is eligible for new development to buy into through impact fees, referred to as "buy-in" roads. Roads with unknown construction costs or that were not constructed with any city funds cannot be included in the excess capacity inventory. The steps to estimate the excess capacity and the buy-in eligible cost are summarized below:

1. Estimate Capacities of Existing Roads – The capacities of the existing system roads shown in Figure 1 were estimated based on the LOS D.
2. Estimate Existing and 2025 Traffic Volumes – The traffic volumes for each road in Figure 1 were estimated using the travel demand model (See Sections 2 and 3) for existing and 2025 development conditions. Because the proposed impact fee will only address growth over the next ten years, the difference between the existing traffic volume and the estimated 2025 traffic volume was used in the calculation.
3. Calculate the percent of capacity consumed by the ten year growth – The percent of existing excess capacity that will be used by development over the next ten years was calculated by dividing the projected ten year trip growth, due to anticipated development, by the total capacity of the road, , then multiplying by one hundred to convert to a percentage.
4. Calculate the buy-in eligible cost – Multiply the percent of capacity consumed by the ten year growth by the portion of the total cost contributed by the city. This buy-in cost represents the amount of funds which are eligible to be recouped by the city from new development through impact fees.

Table 2 summarizes the calculations associated with the percent of excess capacity that can be used by future development over the next ten years.

Table 2: Existing Excess Capacity Buy-In

Street	From	To	Capacity	Existing Volume	2025 Volume	Growth in Utilization	Total Cost	IFFP Cost
9860 North	6000 West	S.R. 74	11,200	1,910	3,240	11.88%	$768,135.16	$91,216.05
Highland Blvd	North City Boundary	SR-92	17,500	3,810	9,830	34.40%	$274,600.00	$94,462.40
5600 West	S.R. 92	10400 North	11,200	3,110	4,020	8.13%	$396,995.00	$32,255.84
4800 West	S.R. 92	Cedar Hills Dr.	41000	9,025	26,620	42.91%	$573,232	$246,000.42
						Total Road Costs	$2,012,962.16	$463,934.71

Section 3: Demands Placed on Facilities by New Development (11-36A-302.1.A.IV)

To satisfy the requirements of state law, demand placed upon existing system facilities by future development was projected using the process outlined below.

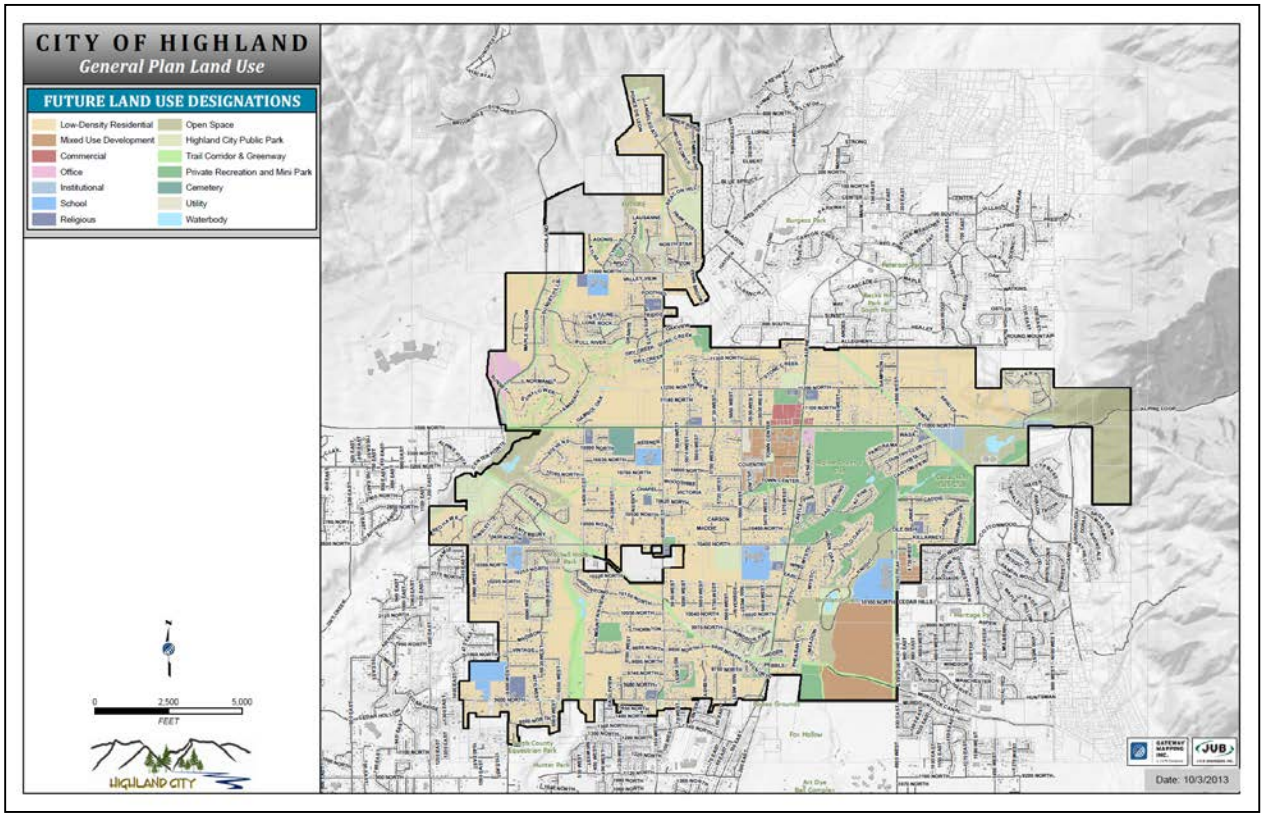
1. Existing Demand – The traffic demand associated with existing development on the city's system roadways was estimated using traffic counts and population estimates.
2. Existing Capacity – The capacities of existing system facilities were estimated using LOS.
3. Existing Deficiencies – Existing deficiencies in the system were identified by comparing defined LOS against calculated capacities. No existing capacity deficiencies were identified in this study.
4. Future Demand – The demand future development will place on the system was estimated based on development projections for both 2025 and 2040.
5. Future Deficiencies – Future deficiencies in the transportation system were identified using defined level of service and results from the travel demand model for the years 2025 and 2040.
6. Recommended Improvements – Needed system improvements were identified to meet demands associated with future development.

The steps listed above describe the "demands placed upon existing public facilities by new development activity at the proposed level of service; and… the means by which the political subdivision or private entity will meet those growth demands" (Section 11-36a-302-1.a of the Utah Code).

Conversion of Growth and Development Projections to Trip Generations

Future traffic conditions were forecasted using the MAG travel demand model version 7.0. The model forecasts trips to and from destinations along an established network, based on smaller regions known as traffic analysis zones (TAZs). The TAZs are geographically smaller than a municipality and are similar in size to census block groups. Socioeconomic estimates of future households, population, and employment by TAZ were created by MAG as inputs to the model to generate future trip forecasts for Highland City.

Figure 2: Highland City Future Land Use



Source: Highland City

Growth

If Highland City "builds out" by 2040, based on the land use plan in Figure 2, the city will have a population of approximately 24,769 people living in 6,943 households. New resident population is expected to occur primarily on currently vacant or agricultural land. This 18 percent increase in population and 26 percent increase in households will require some additional road infrastructure to serve the new development. This anticipated growth in households and resident population would be accompanied by an increase in commercial and industrial development.

For purposes of calculating an impact fee in the state of Utah a ten year growth horizon is used to ensure that the projects identified and the fee imposed will be encumbered within the statutorily required six year period. Table 3 provides actual change in population and households between the 2000 and 2010 census, current estimates and projections for the IFFP ten year window (2025) and 2040 based on the general plan land use map.

Table 3: Growth 2000 to 2040

	U.S. Census		Projections		
	2000	2010	2015	2025	2040
Population	8,175	15,523	19,223	22,618	24,769
Households	1,804	3,547	4,429	5,597	6,943
Persons per Household	4.53	4.38	4.34	4.04	3.57
Employment	NA			4,420	5,065

Source; U.S. Bureau of the Census, Governor's Office of Management and Budget, and MAG

Within this ten-year horizon, Highland City is projected to grow by 3,395 people and 1,168 households between 2015 and 2025. This residential growth represents an 18 percent increase in population and a 26 percent increase in households. At the same time, employment is projected to grow by nine percent. The majority of population and household growth is anticipated in two areas of Highland City; along the western boundary, and in the area bordered by S.R. 92, S.R. 74 and 4800 West (see Figures 3 and 4). The highest growth in employment occurs in the center of the city, south of S.R. 92 (see Figure 5).

Figure 3: Projected Population Growth through 2025

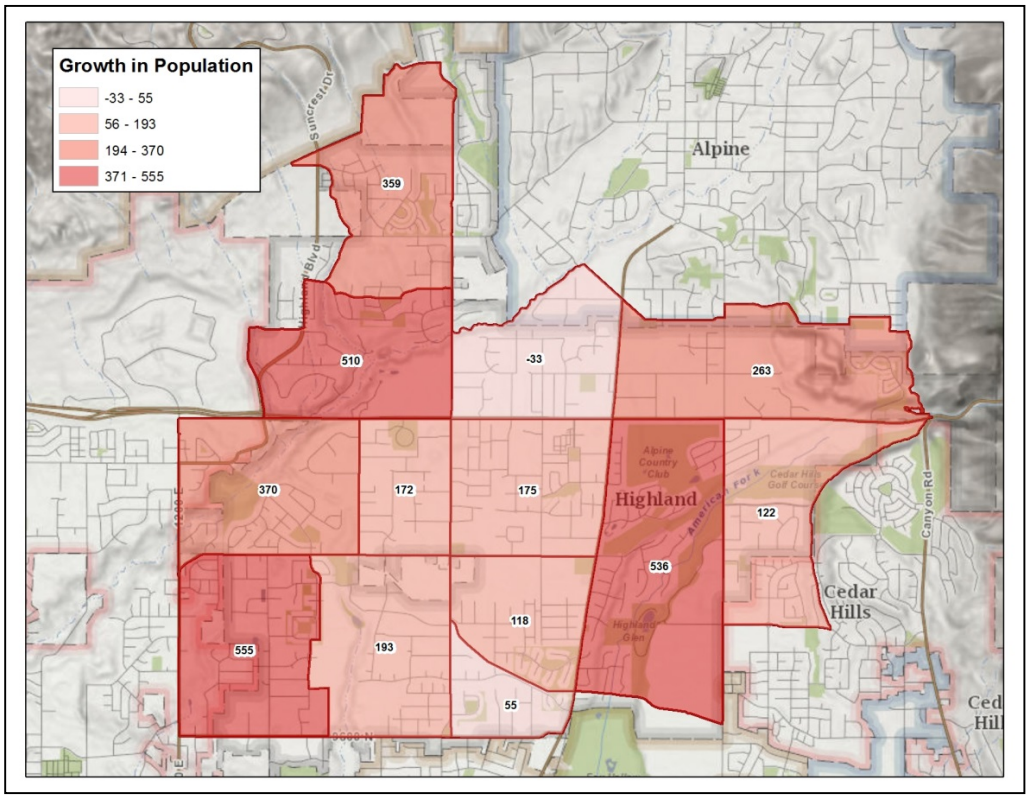


Figure 4: Projected Household Growth through 2025

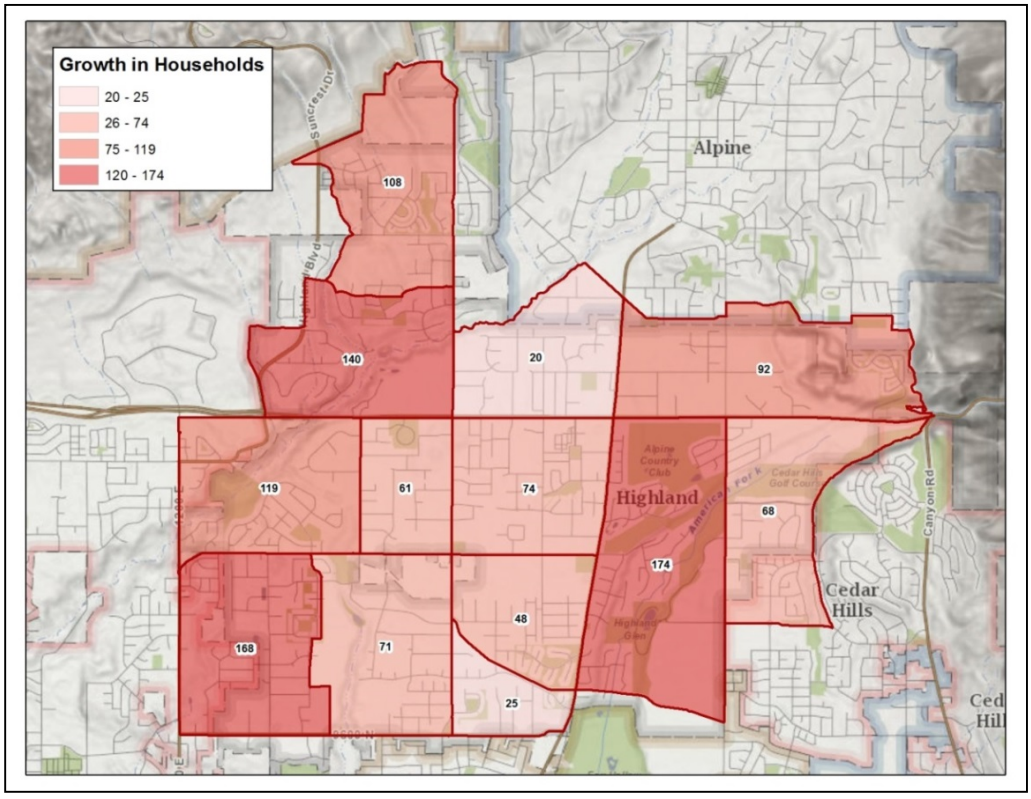
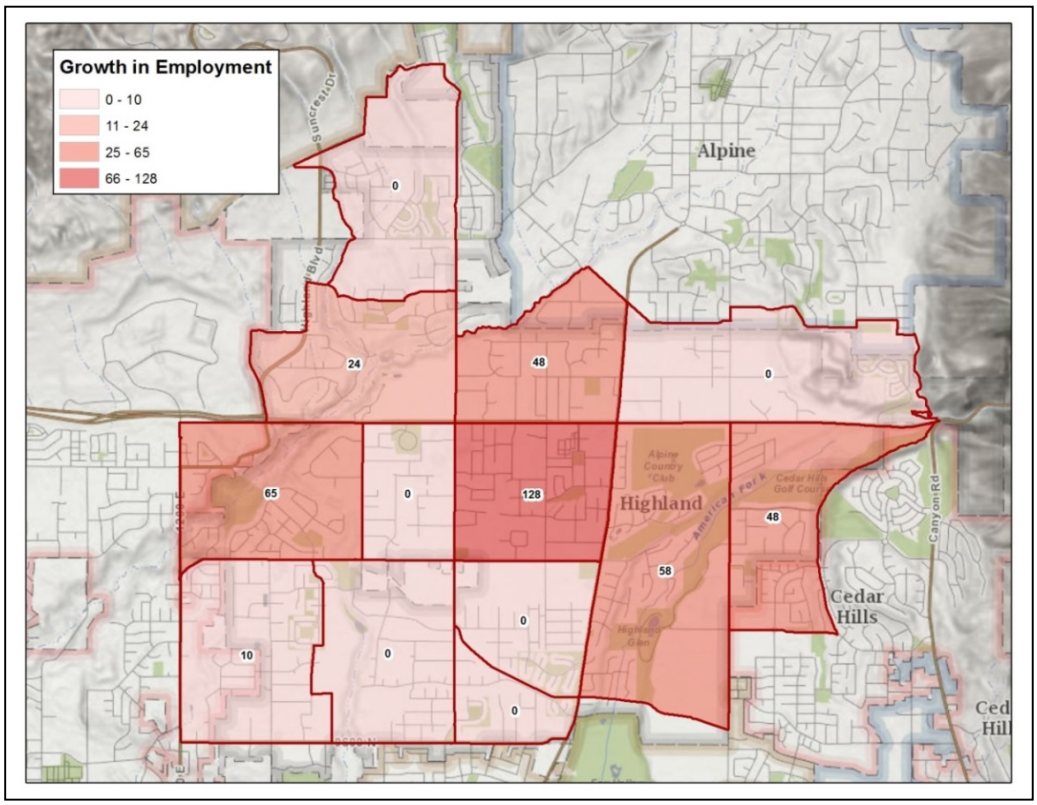


Figure 5: Projected Employment Growth through 2025



Impact of Growth

The travel demand model was also used to estimate the impact of the anticipated 3,395 new residents and 381 new jobs in 2025. InterPlan worked with Highland City staff to develop a capital improvement program represented by a first phase that would encompass the period from 2015 to 2025 and subsequent phases beyond the year 2025, as needed. Traffic volume estimates were developed by road segment. Traffic volumes were estimated based on the existing conditions, modeled conditions in the year 2025 based on planned improvements to be completed by 2025, and modeled conditions in the year 2040 based on planned improvements. The results show a growth of 18,839 total trips between 2015 and 2025 within the TAZs which comprise Highland City. Because the TAZ boundaries do not exactly match the city boundary and covers a slightly larger geographic extent, the 18,839 was reduced to 17,008 for the purposes of calculating the impact fee. This reduction was based on the difference between the TAZ population and the projected GOMB population for Highland City, as well as looking to the development intensity of the areas that were within the TAZ boundaries but outside the city.

Although improvements to the State Highway System are not eligible for impact fees, improvements included in the Mountainland Association of Government's Regional Transportation Plan (2011-2040) were assumed in the modeling, allowing the most accurate representation of future conditions possible with the available information.

- InterPlan and Highland City staff worked to develop capital improvement projects on the road segments that reflect the priorities of the city,
- Will directly benefit expected new development, and
- Relieve capacity deficiencies in the year 2025.

Since it is difficult to balance the IFFP to the precise capacity needed to serve new development in Highland City, a "capacity utilization factor" was estimated based on the net new capacity planned in the IFFP. This capacity utilization factor reflects the equivalent lane miles of needed capacity of the IFFP to balance the capacity needed by new development. This factor is based on forecasted system-wide vehicle miles traveled (VMT), and planned vehicle miles of capacity (VMC).

Table 4: Capacity Utilization Factor Formula

$$\frac{\text{2025 Total system VMT /2025 Total System VMC}}{\text{2040 Total system VMT /2040 Total System VMC}} = \text{Capacity Utilization Factor (0.943)}$$

The capacity utilization factor of the IFFP is 0.943, indicating that only 94 percent of the capacity shown in the IFFP may actually be constructed. Since it is cost effective to build complete road segments, as opposed to partial road construction, it is impossible to determine which six percent of road capacity of the IFFP may be deferred until beyond the year 2025, depending on the exact location and magnitude of new growth.

The capacity utilization factor has been proposed by InterPlan in response to the 2011 (and 2013) General Legislative session modifications of the Utah Impact Fees Act. Specifically, the act calls for impact fees to be expended within six years after collection and requires that each IFFP does not raise the level of service of existing residents through impact fees. Since the Act implies that IFFPs and IFAs will be updated every three to six years, the capacity utilization factor allows for an approximate balance of capacity added against the development need. The capacity utilization factor of 0.943 in Highland City indicates that 94 percent of the capacity identified in the IFFP is needed by new development in Highland City and will be fully funded based on anticipated development. The remaining six percent of the capacity proposed in the IFFP will either be built and included in future Impact Fees as Existing Excess Capacity (discussed later in this report) or deferred until future IFFPs. The use of this capacity utilization factor results in a lower impact fee since new development is paying for a fraction, in this case 94 percent, of the development attributable cost of the IFFP.

Section 4: Infrastructure Required to Meet Demands of New Development (11-36A-302.1.A.V)

Ten-Year Improvement Plan

Only infrastructure to be constructed within ten years will be considered in the calculation of impact fees to avoid uncertainty surrounding improvements further into the future. Figure 6 shows the projects that the city plans to construct over the next ten years and are included in the IFFP. Table 5 provides a brief description and the estimated construction cost for the projects shown in Figure 6.

Figure 6: Ten-Year Improvement Plan Map

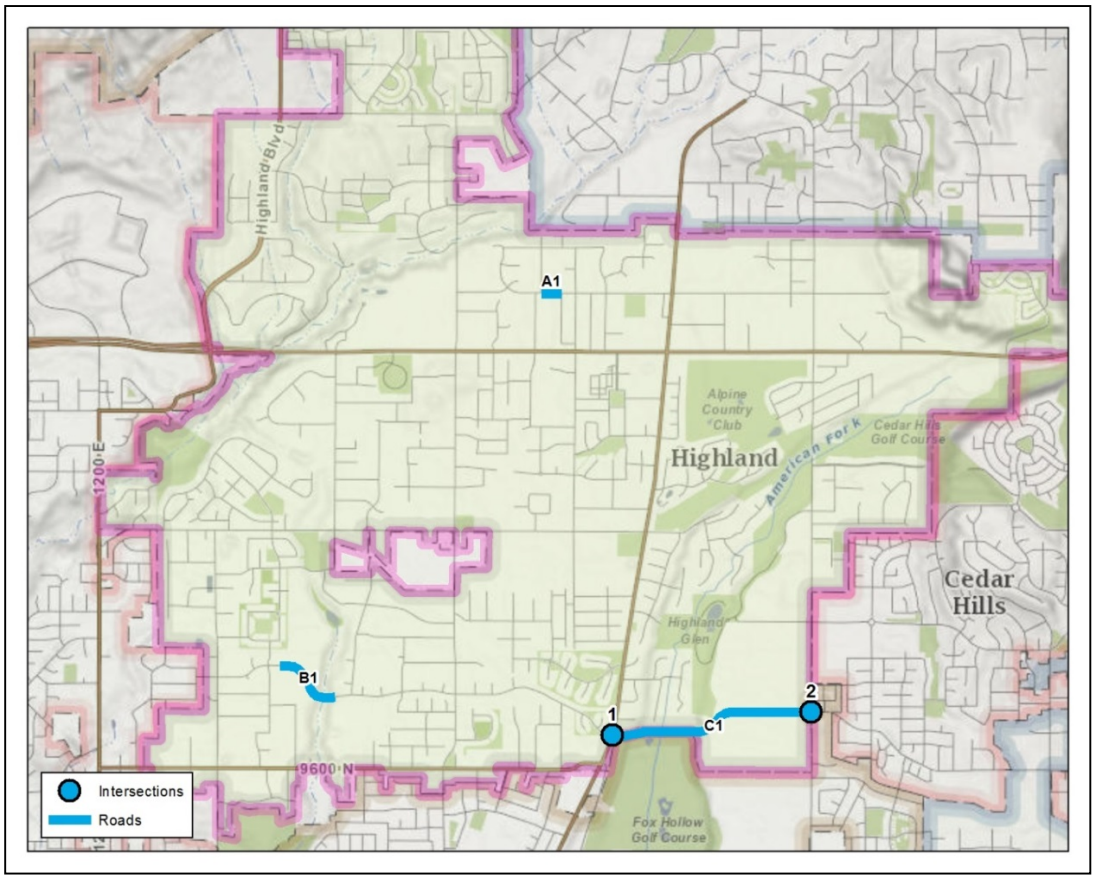


Table 5: Transportation Impact Fee Facilities Plan

Roads					
ID	**Street**	**From**	**To**	**Cost Estimate**	**IFFP Cost**
A1	11200 North	5710 West	5650 West	$324,850	$319,882
B1	Madison Avenue/9860 North	6600 West	Mountain View Drive	$1,129,819	$1,112,543
C1	Murdock Connector	S.R. 74	4800 West	$6,000,000	$5,100,000
			Total Road Costs	$7,507,816	$6,532,425
Intersections					
1	Murdock Connector and S.R. 74			$300,000	$127,500
2	Murdock Connector and SR 129			$300,000	$127,500
			Total Intersection Costs	$600,000	$255,000

Source: InterPlan. See Appendix A for cost estimates

Project Cost Attributable to Future Growth

For all capacity related transportation system improvements, the costs were apportioned based on the relative share of traffic growth amongst the cost to serve through traffic and the cost to serve traffic generated by new development in Highland City directly. In Highland City, there are no existing, major transportation deficiencies. The future 2025 rate of through traffic was estimated for each project based upon traffic model outputs, functional type, and geographic location. The project cost attributable to future growth has been reflected in the total cost available to be recovered through impact fees.

Project Cost Attributable to Ten-Year Growth

The projects that will be constructed within the next ten years will serve development through the year 2040. To estimate the percent of the capital facility projects that future development will use over the next ten years, the "capacity utilization factor" was developed. The capacity utilization factor is based on a comparison of the system-wide use of capacity including the capital improvement projects for road capacity, against the use of capacity in the IFFP. In other words, the capacity utilization factor has the effect of lowering the transportation impact fee to ensure that growth in the next ten years is not disproportionately paying for capacity that future growth may use. At the same time, this factor allows the city to identify a slightly larger subset of capital improvement projects in the IFFP than what would be represented by their full cost estimates.

Section 5: Additional Considerations

Manner of Financing (11-36A-302.2)

The city may fund the infrastructure identified in this IFFP through a combination of different revenue sources.

Federal and State Grants and Donations

Impact fees cannot reimburse costs funded or expected to be funded through federal grants and other funds that the city has received for capital improvements without an obligation to repay. Grants and donations are not currently contemplated in this analysis. If grants become available for constructing facilities, impact fees will need to be recalculated and an appropriate credit given.

Bonds

Construction cost estimates contained in this IFFP do not include the cost of bonding. The cost of bonding required to finance impact fee eligible improvements identified in the IFPP may be added to the calculation of the impact fee. This should be considered in the impact fee analysis.

Interfund Loans

Because infrastructure must generally be built ahead of growth, there often arise situations in which projects must be funded ahead of expected impact fee revenues. In some cases, the solution to this issue will be borrowing. In others, funds from existing user rate revenue will be loaned to the impact fee fund to complete initial construction of the project and will be reimbursed later as impact fees are received. Consideration of potential interfund loans will be included in the IFA and should be considered in subsequent accounting of impact fee expenditures.

Impact Fees

It is recommended that impact fees be used to fund growth-related capital projects as they help to maintain the proposed LOS and prevent existing users from subsidizing the capital needs for new growth. Based on this IFFP, an IFA will be able to calculate a fair and reasonable fee that new growth should pay to fund the portion of the existing and new facilities that will benefit new development.

Developer Dedications and Exactions

Developer exactions are not the same as grants (which should be credited from the impact fee). Developer exactions may be considered in the inventory of current and future public safety infrastructure. If a developer constructs facility improvements or dedicates land within the development, the value of the dedication is credited against that particular developer's impact fee liability.

If the value of the dedication/exaction is less than the development's impact fee liability, the developer will owe the balance of the liability to the city. If the value of the improvements

dedicated is worth more than the development's impact fee liability, the city must reimburse the difference to the developer from impact fee revenues collected from other developments.

It should be emphasized that the concept of impact fee credits pertains to system level improvements only. For project level improvement (i.e. projects not identified in the IFFP), developers will be responsible for the construction of the improvements without credit against the impact fee.

Necessity of Improvements to Maintain Level of Service (11-36A-302.3)

According to Utah Code, impact fees cannot be used to correct deficiencies in the system and must be necessary to maintain the proposed level of service established for all users. Only those projects or portions of projects that are required to maintain the proposed LOS for future growth have been included in this IFFP. This will result in an equitable fee as future users will not be expected to fund any portion of the projects that will benefit existing residents.

Noticing and Adoption Requirements (11-36A-502)

The Impact Fees Act requires that entities must publish a notice of intent to prepare or modify any IFFP. If an entity prepares an independent IFFP, rather than include a capital facilities element in the general plan, the actual IFFP must be adopted by enactment. Before the IFFP can be adopted, a reasonable notice of the public hearing must be published in a local newspaper at least ten days before the actual hearing. A copy of the proposed IFFP must be made available in each public library within the city during the ten-day noticing period for public review and inspection. Utah Code requires that the city must post a copy of the ordinance in at least three public places. These places may include the city offices and the public libraries within the city's jurisdiction. Following the ten-day noticing period, a public hearing will be held, after which the city may adopt, amend and adopt, or reject the proposed IFFP.

Section 6: Impact Fee Certification (11-36A-306.1)

This report has been prepared in accordance with Utah Code Title 11 Chapter 36a (the "Impact Fees Act"), which prescribes the laws pertaining to Utah municipal capital facilities plans and impact fee analyses. The accuracy of this report relies upon the planning, engineering, and other source data, which was provided by the city and their designees. In accordance with Utah Code Annotated, 11-36a-306(1), InterPlan, certifies that this Impact Fee Facilities Plan (IFFP):

1. Includes only the cost of public facilities that are:
    a. allowed under the Impact Fees Act; and
    b. actually incurred; or
    c. projected to be incurred or encumbered within six years after the day on which each impact fee is paid;
2. Does not include:
    a. costs of operation and maintenance of public facilities;
    b. cost of qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents;
    c. an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement; and
3. Complies in each and every relevant respect with the Impact Fees Act.

This certification is made with the following caveats:

1. All of the recommendations for implementations of the IFFP made in the IFFP or in the impact fee analysis are followed in their entirety by the city.
2. If all or a portion of the IFFP or impact fee analysis is modified or amended, this certification is no longer valid.
3. All information provided in the preparation of this IFFP is assumed correct, complete, and accurate. This includes information provided by the city and outside sources.

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(Vern Keeslar, InterPlan)

InterPlan
Transportation Planning

Appendix A: Cost Estimates

66' Minor Collector					
ITEM	**COST**	**UNIT**	**Quantity**		**COST**
Roadway Excavation (18" depth)	$0.34	ft^3	42 x 1 x 1.5 = 63 ft^3		$21.42
Clearing and Grubbing	$1,036.00	Acres	(66 x 1)/43,560 = 0.0015 ft^2		$1.55
Subgrade Finishing	$0.18	ft^2	42 x 1 = 42 ft^2		$7.56
Untreated Base Course (10" thick)	$0.79	ft^3	42 x 1 x 0.83 = 34.86 ft^3		$27.67
Bituminous Surface Course (8" thick)*	$4.72	ft^3	42 x 1 x 0.67 = 28.14 ft^3		$132.77
Concrete Curb and Gutter Type B1	$6.23	ft	2.5 ft		$15.58
Pavement Marking Paint	$1.83	ft	2 ft		$3.66
Parkstrip	$6.00	ft^2	10 ft		$60.00
Clearing and Grubbing for Sidewalk	$0.22	ft^2	10 ft		$2.20
Excavation	$0.29	ft^3	10 x 1 x 0.67 = 6.7 ft^3		$1.92
Concrete Base Course, 4" inch thick.	$2.06	ft^2	10 ft		$20.57
8' Concrete Sidewalk, 4" Thick	$4.47	ft^2	10 ft		$44.70
			Subtotal		$339.59
Signage	calculated @ 5% of subtotal				$16.98
Drainage (Inc. Structures)	calculated @ 15% of subtotal				$50.94
Environmental & Design	calculated @ 20% of subtotal				$67.92
			Subtotal		$475.43
Mobilization and Traffic Control	calculated @ 10% of subtotal				$47.54
Contingency	calculated @ 20% of subtotal				$95.09
			Subtotal		$618.06
Contingency for Price Increases	calculated @ 20% of subtotal				$123.61
TOTAL COST / FOOT					$741.67
* Assumes UDOT Bid of $69.90 per ton and in place density of 135 lbs per ft^3					

Appendix B: Land Use Trip Generation Categories

Land Use	Code	Unit	ITE Trip Generation Rate	Daily Trip Rate (1/2 ITE Rate)	Primary Trips	Daily REU
Residential						
Single-Family	210	Dwelling Unit	9.55	4.76	100%	1.0
Attached 6-8 Units per Acre	230	Dwelling Unit	5.81	2.91	100%	0.6
Multi-Family >8 Units	220	Dwelling Unit	6.65	3.33	100%	0.7
Retail / Commercial						
General Commercial	820	1000 sq	42.7	21.35	43%	1.9
Hotel / Motel	603	Rooms	8.17	4.09	100%	0.9
Office / Institutional						
General Office	710	1000 sq	11.03	5.52	100%	1.2
Medical Office	720	1000 sq	36.13	18.07	100%	3.8
Assisted Living	254	Occupied Bed	2.74	1.37	100%	0.3
Church / Synagogue	560	1000 sq	9.11	4.56	100%	1.0
Day Care Center	565	1000 sq	74.06	37.03	10%	0.8
Business Park	770	1000 sq	12.44	6.22	100%	1.3