



Chinden: A Corridor for All

"Mobility in an effective transportation system means the ability to move freely in order to be successful in life, whether attending school, shopping, playing, moving goods and services, or sharing information." - Idaho Transportation Department



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A Chinden for All People

Residents of Garden City are more likely to die while walking than residents of Ada County as a whole. They are also more likely to be hit by a motorist while walking, as Figure 1 shows. This isn't because they are doing anything different than others in Ada County. It's because the primary roadway network consists of high-speed, high-volume arterials designed to prioritize motorist throughput. The lack of sidewalks on main roads like Chinden, Glenwood, and State Street, combined with a lack of frequent, safe crossing opportunities, expose people to more traffic hazards.

This report looks specifically at Chinden Boulevard, which is designated as US Highway 20/26 and is managed by the Idaho Transportation Department (ITD). Chinden is as much of a principal arterial for pedestrians and Garden City as it is a principal arterial for motorists of Ada County. The destinations that people seek along Chinden are grocery stores, convenience stores, restaurants, employers, and civic uses. Garden City residents also attempt to cross Chinden to access these destinations on the other side of the road as well as recreational features like parks and the Boise River Greenbelt—a vital transportation and recreational facility for people who walk and bike.

Much of Chinden Boulevard west of 43rd Street lacks sidewalks. The section that has sidewalks dates from the early 1970s, when the Idaho Transportation Department widened lanes on Chinden, constructed these sidewalks, and even built protected bike lanes in this segment.

Today, the pedestrian facilities along Chinden are in disrepair or suffer from maintenance neglect. Crosswalks across Chinden at Glenwood have faded to the point they barely exist. Attempts to protect pedestrians at street corners with extruded curbing have seen motorists obliterate that curbing and it has yet to be replaced.



Much of Chinden within Garden City lacks sidewalks. Safe crossing opportunities are limited and force people to cross at uncontrolled locations (left). Existing crossings (below) are often left in disrepair with dilapidated protections for pedestrians and crosswalks that are faded away completely at Glenwood.



Figure 1: Pedestrian Fatality and Crash Rates per 10,000 people in Garden City compared to Ada County

	Pedestrian	
	Fatality Rate	Crash Rate
Garden City	3.6	41.5
Ada County	1.3	33.8
Garden City Rate Compared to Ada Co.	2.7 x higher	1.4 x higher

Sources:
 ITD crash data, 1997-2015
 Census population estimates, 1997-2015

Efforts to require sidewalks from developers results in scattered application instead of a linked network of safe walking facilities. Whereas the road network has no such gaps and lack of connectivity, the sidewalk system as not been subject to the same connection-based emphasis.

The responsibility for the roughly \$12 million it would take for Chinden to provide for the basic safety and mobility needs of Idahoans who walk along it should not rest squarely on the shoulders of the 12,000 people of Garden City, where 41% of households make less than \$35,000 a year.

Chinden is a state-designed and state-maintained facility managed by a state agency that exists for the safety, mobility, and economic opportunity of all Idahoans, including people in Garden City. The ITD’s mission statement does not stipulate their goals for safety, mobility, and economic opportunity are reserved exclusively for people operating cars and trucks along routes like Chinden.

While previous efforts to evaluate Chinden provided guidance on strategies to make Chinden safer, they represented more of a piecemeal approach. This document, by contrast, is intended to make the technical and contextual case for a safe Chinden by basing recommendations on prevailing federal guidance that aligns with the Idaho Transportation Department’s (ITD) own references to justify the need for sidewalks on both sides of Chinden within Garden City limits (Figure 2) and frequent, safe crossings along the route.

Avoid Victim-Blaming

There is a tendency to scoff at the person walking or rolling when we see them crossing between signals or using a center turn lane rather than a shoulder. This is commonly referred to as “windshield bias,” where the perspective we’ve developed from viewing a world from inside a motor vehicle influences our view of those who must move about their city outside of a car. Media and



Figure 2: Recommended Guidelines for New Sidewalk/Walkway Installation

Roadway Classification and Land Use	Sidewalk/Walkway
Rural Highways (< 400 ADT)	Shoulders preferred, with minimum of 0.9 m (3 ft).
Rural Highways (400 to 2,000 ADT)	1.5-m (5-ft) shoulders preferred, minimum of 1.2 m (4 ft) required.
Rural/Suburban Highway (ADT > 2,000 and less than 1 dwelling unit (d.u.) / .4 hectares (ha) [1 d.u. / acre])	Sidewalks or side paths preferred. Minimum of 1.8-m (6-ft) shoulders required.
Suburban Highway (1 to 4 d.u. / .4 ha [1 to 4 d.u. / acre])	Sidewalks on both sides required.
Major Arterial (residential)	Sidewalks on both sides required.
Urban Collector and Minor Arterial (residential)	Sidewalks on both sides required.
Urban Local Street (residential – less than 1 d.u. / .4 ha [1 d.u. / acre])	Sidewalks on both sides preferred. Minimum of 1.5-m (5-ft) shoulders required.
Urban Local Street (residential – 1 to 4 d.u. / .4 ha [1 to 4 d.u. / acre])	Both sides preferred.
Local Street (residential – more than 4 d.u. / .4 ha [4 d.u. / acre])	Sidewalks on both sides required.
All Commercial Urban Streets	Sidewalks on both sides required.
All Streets in Industrial Areas	Sidewalks on both sides preferred. Minimum of 1.5-m (5-ft) shoulders required.

1 acre=0.4 hectares (ha)

Source: Federal Highway Administration, PEDSAFE Countermeasures Selection System.

police reports are often subject of this bias, defaulting to blaming the victims in pedestrian crashes because of where they crossed or what color clothing they wore that day.

Rarely do the media and police reports examine the road design that may have influenced their decision or the severity of the crash. Even rarer is an examination of the adequacy of the motorist’s vehicle, its headlights, or the maintenance records of things like the vehicle’s braking system.

A sympathetic approach to examining people’s individual conditions reveals they are just trying to get somewhere and expect to do it safely and independently, regardless of their mode of travel. Government agencies must apply their same constitutional duties to protect the health, safety, and general welfare of people for those who walk just as they do those who move by motor vehicle. That person using the center turn lane in a wheelchair along Chinden doesn’t have the basic sidewalk infrastructure. That person walking at night in dark clothing may have a completely different story. Many service sector jobs require employees to wear black clothing.

Service sector jobs, such as hotels and restaurants, do not provide the luxury of a 9 to 5 work schedule, which forces people—who are also often low income and have limited vehicle access—to walk, bike, or access transit at all hours of the day.

The people who use Chinden

The data show people of Garden City are more likely to walk for work and other transportation trips. Figure 2 includes key indicators that show a higher reliance on a safe walking (and bicycling) network to access jobs, transit, grocery stores, and other community destinations. When compared to Ada County’s population, Garden City has higher rates of house-



Figure 3: Demographic Indicators for Garden City compared to Ada County’s population

Indicator	Garden City	Ada County	Garden City...
Median Income	\$43,356	\$60,151	...has less household income
Median Age	45.9	36.4	...is 9.5 years older per person
Population over 65 years old	23%	13%	...has more residents over age 65
Bachelors Degree	33.5%	37.6%	...has fewer college graduates
No Vehicle	6.0%	4.0%	...has more households without a car
Median Home Value	\$198,500	\$219,900	...homes are worth \$21,400 less
Walked to Work	2.2%	1.5%	...has more walking trips to work
People with disabilities	13.9%	9.9%	...has a higher percentage of people with disabilities.

Source: US Census, American Community Survey, 2017

holds without a vehicle, lower rates of median income and home values, and a higher percentage of people who don't use a car as their primary transportation mode to get to work.

There is ample support from the common federal agencies and design guides that ITD references throughout their design manuals for motor vehicle accommodations on the state highway system. The Federal Highway Administration (FHWA), the American Association of State Highway and Transportation Officials (AASHTO), and the Institute for Transportation Engineers (ITE) all have stated explicit support for a completed sidewalk network and more frequent pedestrian crossings along Chinden.

Safety. As noted previously, Garden City residents are much more likely to be involved in a crash and perhaps die while walking when compared to Ada County residents as a whole.

From 2012 through 2017, there have been 11 pedestrian crashes on Chinden between the Connector to the east and Five Mile to the west. Of the 11 crashes, 6 or 55% of the crashes were either fatal or serious injuries. This means the majority of pedestrian and vehicle crashes were either killed or suffered a disabling injury. The total estimated economic impacts of five years of pedestrian crashes on Chinden is \$3.2 million, according to ITD crash cost figures.

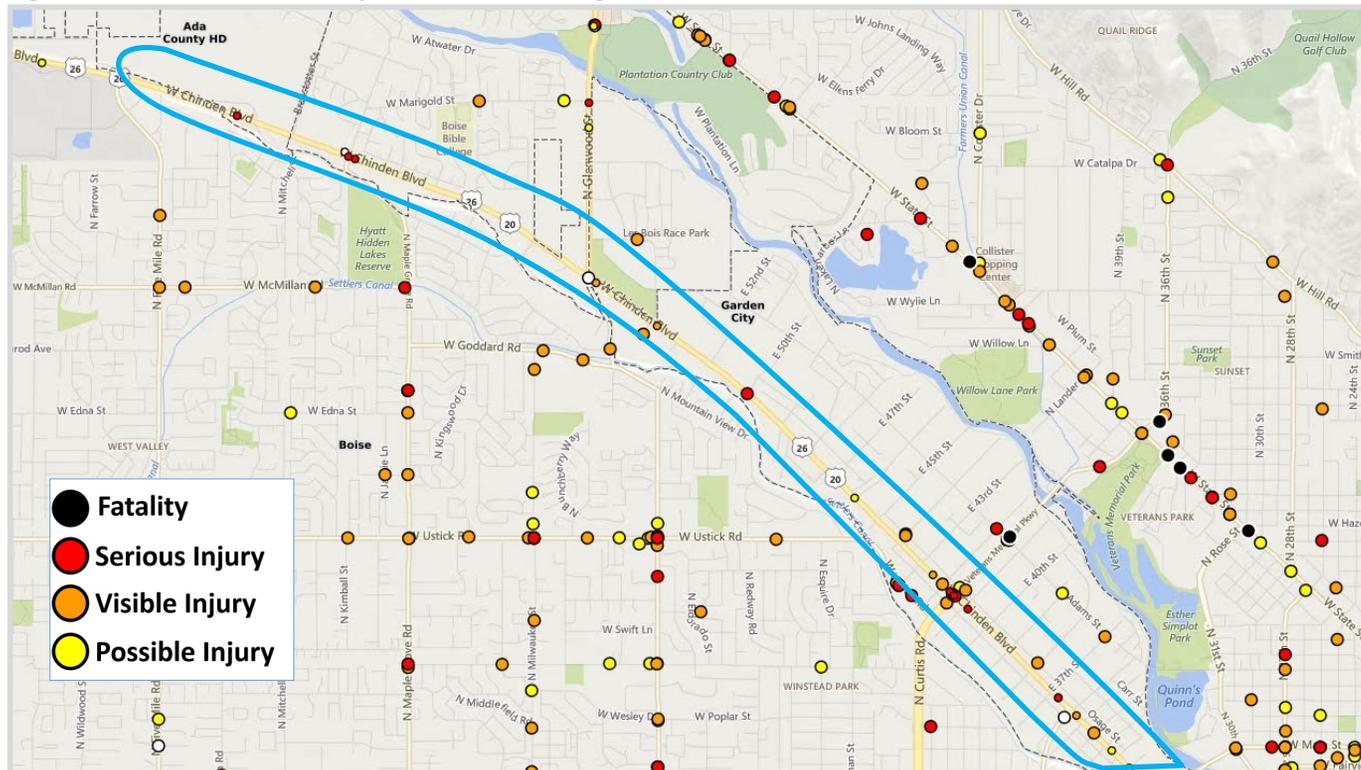
Many of the total crashes occurred in the proximity of the Chinden and Veterans Memorial Parkway/Curtis Road intersection towards the Connector. This segment of Chinden has a

Figure 4: Pedestrian & Bicyclist Crashes along Chinden (2012-2017)

Chinden Crashes	Pedestrians	Bicyclists	Total
Overall (2012-2017)	11	10	21
Fatal & Serious Injury	6	3	9
% of Fatal/Serious	55%	30%	43%
Economic Cost of Crashes	\$3.2 million	\$1.8 million	\$5.0 million

Source: LHTAC Online Crash Map
Idaho Transportation Department. *Idaho Traffic Crashes, 2017.*

Figure 5: Pedestrian and Bicyclist Crashes Along Chinden, 2012-2017



Source: LHTAC Online Crash Map

higher population of lower income residents without access to a vehicle. This portion of Chinden includes 13 blocks and intersections and two dedicated marked signalized crossings at Chinden/VMP and Chinden/36th Street.

Bicyclist crashes from the same period of time resulted in 10 total events. Severity of crashes for bicyclists has resulted in three of the ten being either Type A or fatal in nature. Chinden is without dedicated bicycle facilities though for portions, a remnant elevated bikeway still exists from the 1970s. However, many portions of the facility have been compromised due to lack of maintenance, signage or other impediments.

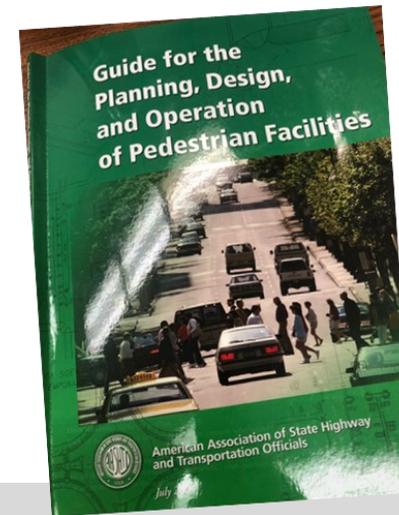
The design of Chinden west of 43rd Street is inconsistent with prevailing guidance by the Federal Highway Administration due to its lack of sidewalks. Figure 3 includes a table from FHWA's PEDSAFE Countermeasures Selection System, which states "sidewalks on both sides required" for routes with a transportation function and land use context like Chinden.

Further, the safety of people moving along Chinden on foot are likely to be influenced even more when Chinden is widened west of Eagle Road, as COMPASS traffic projections suggest the widening in west Ada County will induce even more motor vehicle trips on Chinden through Garden City. This will increase exposure of pedestrians to motor vehicles and likely make conditions even worse for them.

Mobility. The lack of sidewalks and frequent crossings on Chinden limit people's mobility. ITD's *Context Sensitive Solutions Guide* states "Mobility in an effective transportation system means the ability to move freely in order to be successful in life, whether attending school, shopping, playing, moving goods and services, or sharing information."



Figure 6: What does AASHTO say about pedestrian facilities?



- **Assumptions:** Assume that pedestrians want and need safe access to all destinations that are accessible to motorists. Additionally, pedestrians will want to have access to destinations not accessible to motorists, such as trails and parks.
- **Generators and Destinations:** All transit stops require that pedestrians be able to cross the street.
- **Frequency:** Pedestrians must be able to cross streets and highways at regular intervals. Unlike motor vehicles, pedestrians cannot be expected to go a quarter mile or more out of their way to take advantage of a controlled intersection.

Sources: American Association of State Highway and Transportation Officials. *Guide for the Planning, Design, and Operation of Pedestrian Facilities*. 2004.

Additional Support: ITD Manuals & Design Guides reference the AASHTO Pedestrian Guide cited above.
https://itd.idaho.gov/wp-content/Bike/Manuals_Design_Guides.pdf

The lack of frequent, safe crossings also limits their ability to access destinations in the same manner afforded motorists along the route. Based on prevailing guidance from AASHTO (Figure 6) and the Institute of Transportation Engineers, there is justification for an additional 7 pedestrian crossings in between already-signalized intersections. There is a planned Pedestrian Hybrid Beacon at 43rd Street, which is one location that is justified based on the crossing spacing guidance. Figure 4 (previous page) includes references from AASHTO’s pedestrian guide on frequency of crossings needed for pedestrians. It also states that pedestrian mobility is on equal footing with motorist mobility as people who walk “want and need safe access to all destinations that are accessible to motorists.”

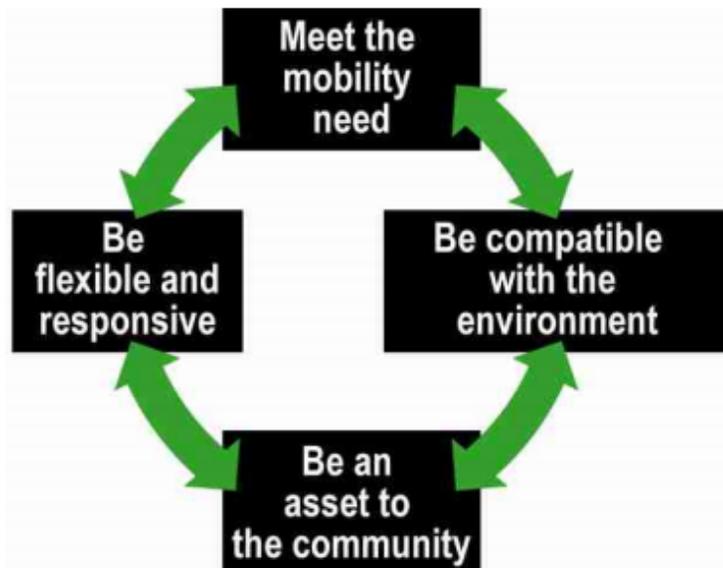
Economic Opportunity. Sidewalks and safe crossings are vital to job access. They provide a lifeline for access to transit. They are infrastructure that makes it easier for people to access healthcare, grocery stores, schools, parks, and the Boise River Greenbelt. Business benefits from people who walk and bike to them as much, and sometimes more, than people who drive to them.

People’s Willingness to Find the Next Crosswalk

To address people’s needs, agencies must be responsive to the context of their needs—an approach endorsed more than a decade ago by ITD (Figures 7 and 8). Instead of questioning a person’s motives for crossing the street where they did or saying “Just go to the nearest crosswalk,” we must design for their needs and understand why they desire to cross where they do.

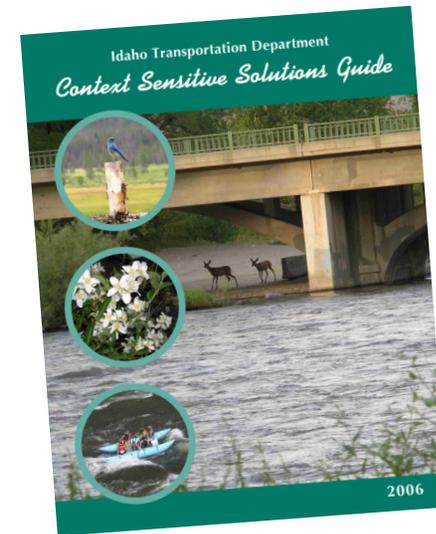
We tend to equate motorist and pedestrian distance but it’s better to look at it from a time perspective to better understand rational expectations of people’s mobility needs. As motorists travel Chinden they come across signalized intersections with crosswalks roughly once every 70 seconds of driving time, with a spacing of one signal every 3,600 feet. That’s a walking distance of 17 minutes.

Figure 7: ITD’s Context Sensitive Solutions Approach



Sources: Idaho Transportation Department. *Context Sensitive Solutions Guide*. 2006. https://apps.itd.idaho.gov/apps/manuals/CSS/CSS_Guide.pdf

Figure 8: What does ITD say about meeting Garden City’s needs?



Integrate the transportation system: A balanced transportation system where modal choices exist beyond private vehicles embodies the notion of meeting all the varied needs of a community.

Support quality of life through endorsement and acceptance: This priority recognizes the importance of transportation to the economic, social, and environmental health of the state.

Provide flexible funding: The notion that communities need support for expanding available funding to address transportation solutions needed for economic vitality and livable communities underscores the importance of utilizing a Context Sensitive Solutions approach. Having flexibility in funding solutions outside traditional grant programs enhances a community’s ability to meet their diverse objectives.

Sources: Idaho Transportation Department. *Context Sensitive Solutions Guide*. 2006.

https://apps.itd.idaho.gov/apps/manuals/CSS/CSS_Guide.pdf

Additional Support: Federal Highway Administration Context Sensitive Solution and Design.

<https://www.fhwa.dot.gov/planning/css/>

If we reversed that thinking and expected a motorist to go 17 minutes out of their way to reach the next signal (using MUTCD walk rates of 3.5 feet per second), that would equate to drivers being forced to go 10 miles out of their way. That 17-minute walk just to cross a street is what is expected of people who walk just to get a signal on Chinden, even if they just want to cross the street.

AASHTO's *Guide for the Planning, Design, and Operations of Pedestrian Facilities*, highlighted in Figure 6 (previous page) and referenced by ITD, supports more frequent spacing of pedestrian crossings along Chinden, as does the Institute for Transportation Engineers (Figure 8).

Imagine a person who lives south of Chinden in the area of 38th Street who wishes to access the convenience store or the new grocery market on the north side near 38th Street. The default recommendation many have is to just ask them to walk to the Orchard/36th Street intersection and cross there ("the nearest crosswalk.")

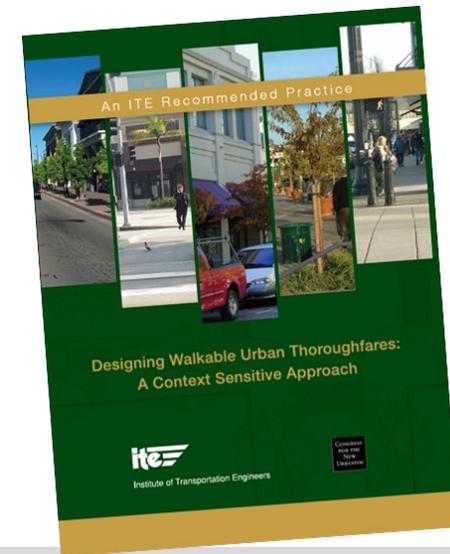
That seemingly innocuous request does not account for the pedestrian's time, safety or experience. While we may view that signalized intersection at 36th/Orchard as a safe place because it has crosswalks, we fail to understand the other geometry of the intersection or what that expectation entails. Figure 9 shows the differences in this journey based on the desired straight path versus what is expected of a pedestrian.

The desired journey if there were a signal at 38th would be 3 to 4 minutes. Instead, the expectation is they walk to Orchard and wait to cross there. That journey could be 13 to 15 minutes, not counting the wait time they may encounter to get the WALK signal. Additionally, in making that request of the pedestrian to use the Orchard signal we add 21 additional street and driveway crossings where turning motorists could conflict with their movement.

Figure 9: Getting from home to the store across Chinden at 38th Street



Figure 8: What does the Institute of Transportation Engineers (ITE) say about context and crossings on urban thoroughfares?



"Pedestrian facilities should be spaced on blocks so block lengths in less dense areas (suburban or general urban) do not exceed 600 feet (preferably 200 to 400 feet) and relatively direct routes are available.

Generally, however, consider providing a marked mid-block crossing when protected intersection crossings are spaced greater than 400 feet or so that crosswalks are located no greater than 200 to 300 feet apart in high pedestrian volume locations."

Source: Institute of Transportation Engineers. *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach*. 2010.

Additional Support: ITD Context Sensitive Solutions Guide. https://apps.itd.idaho.gov/apps/manuals/CSS/CSS_Guide.pdf

A Chinden Boulevard for People's Safety and Mobility

Garden City continues its steady march towards changes largely unseen for several years. However, recently the community is gaining the attention of developers and businesses as a number of projects have occurred and are planned in the coming years.

Towards the east, the Riverside Hotel has remodeled and expanded, see regular events and conferences on a regular basis. In the Live Work Create District housing units have increased, eateries and a winery have been built, and in the Riverfront District, additional phases of housing and a new restaurant have been constructed.

Along the Chinden corridor east, a new organic grocery store, nursery, cross fit gym, and small charter school have begun operations. The VMP corridor continues to change as well which influences activities along Chinden. Numerous housing complexes have been built often replacing less dense housing meaning more people and potential pedestrians.

Towards the central part of the Chinden corridor, many small businesses have begun operations including more wineries, breweries, the Dutch Brothers head quarters, and more. Meanwhile, the western part of the corridor remains a stable mix of housing, Fred Meyer shopping center, the Greenwood corridor and the Ada County Fairgrounds, as well as eventually linking with the HP campus and State facilities.

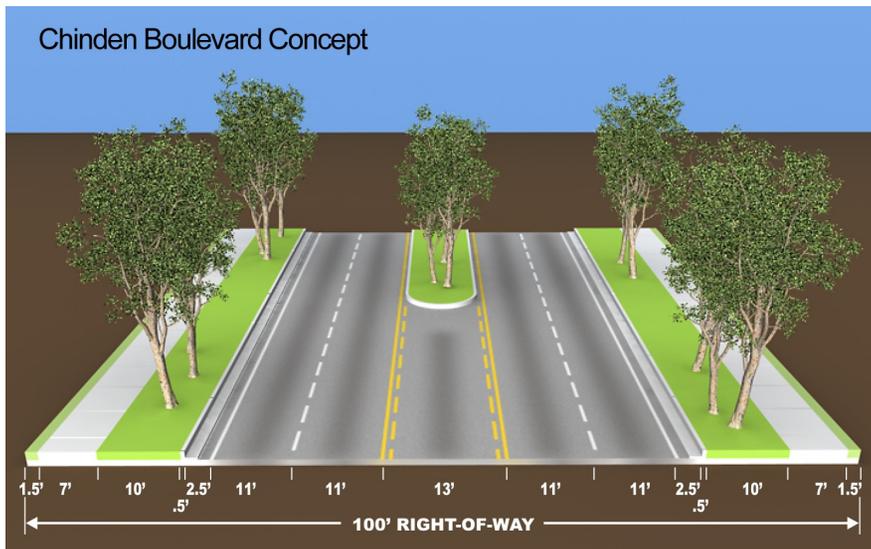
Access Control

Part of an overall plan for the Chinden corridor is to complete an access control plan that finally deals with the plethora of driveway approaches. The 4-mile section has numerous properties per block with each property having at least one driveway and in many cases multiple driveways. In some blocks, as many as 14 driveways exist in a 650 foot section (image at right). With each driveway comes a potential for vehicle/pedestrian conflict. The City of Garden City has expressed a vision to consolidate the driveways with willing property owners over time which would eliminate possi-



Driveway cuts along Chinden contribute an even greater threat to pedestrian safety as people walking across the driveway cuts are subject to turning motorists from multiple directions. The red dots show how many exist in a short section of the street. The long-range plan for a landscaped median would, as well as consolidation of driveways through redevelopment, would dramatically reduce these conflicts.

Figure 10: Chinden Cross Section Concepts from Garden City's Plan



ble threats to walkers, especially given that drivers are often entering the driveways at a high rate of speed. This is particularly true when drivers make right hand turns from the travel lanes accessing the property where they slow from 35 miles per hour but with the pressures of heavy traffic behind them. The nature of drivers in these instances is to enter the property driveway in an expedited fashion to avoid the potential of a rear end collision.

An overview of the corridor shows Chinden littered with driveways and intersections. Currently, there are 113 total curb cuts on the north side and 104 total curb cuts on the south side of Chinden between the Connector and Glenwood Street. With this section of the corridor alone being 3.05 miles, a curb cut exists about every 140' per side, or about every 75' overall.

Beyond the driveways and intersection frequency, the City also seeks to add landscaped medians along Chinden. The purpose of this treatment is to define the space for drivers using design treatments to help prompt driver behavior and more appropriate speeds, but also to enhance the corridor and add beautification elements to break up the existing conditions which are largely absent any form of soft scape treatments.

To accomplish such an approach, there would need to be further exploration of even more restrictive access control including the potential for allowing full turning movements only at every other numbered street intersection which would consolidate turning movements and eliminate certain conflicts such as left in/left out turns with pedestrians using the sidewalks.

Pedestrian Crossings

Figures 11 through 14 illustrate how a Chinden focused on a goal to balance mobility and safety for all road users would look if the prevailing AASHTO and ITE guidance for frequency of safe pedestrian crossings were applied. Existing traffic signals are marked with the traditional three-color signal icons, while guidance-suggested pedestrian crossings are denoted with the pedestrian signal icons. These are meant to be illustrative for planning purposes and may be refined as land uses evolve.

Figure 11: Chinden, from Veterans Memorial Parkway to Fairview Avenue

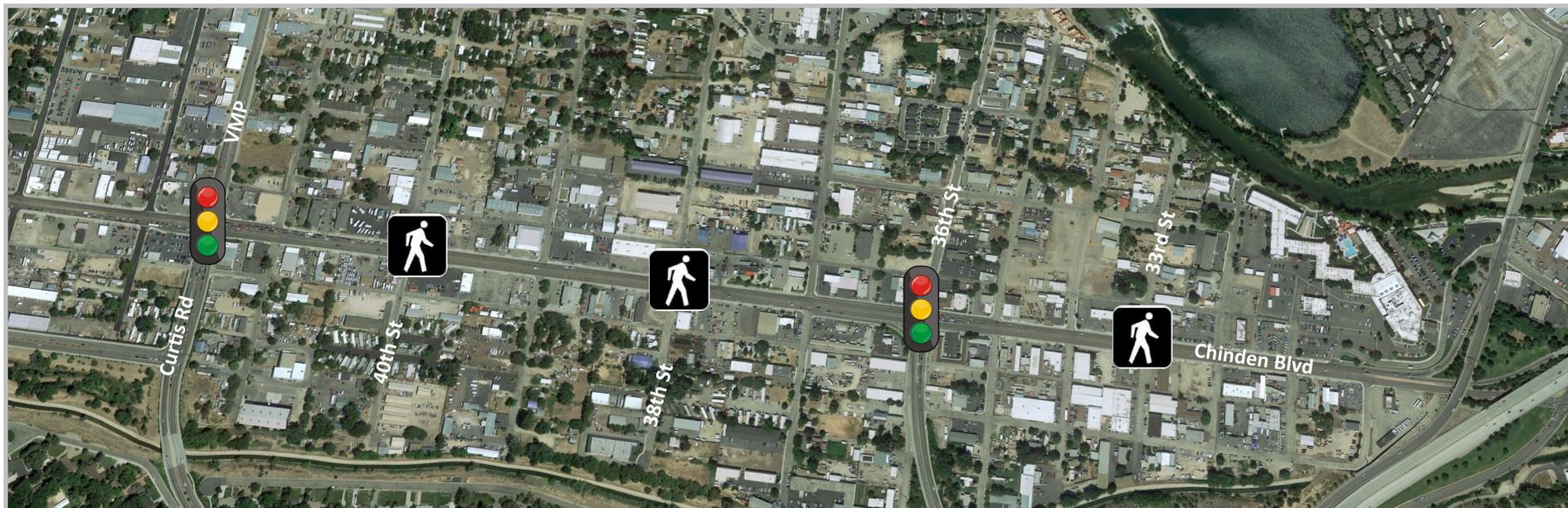


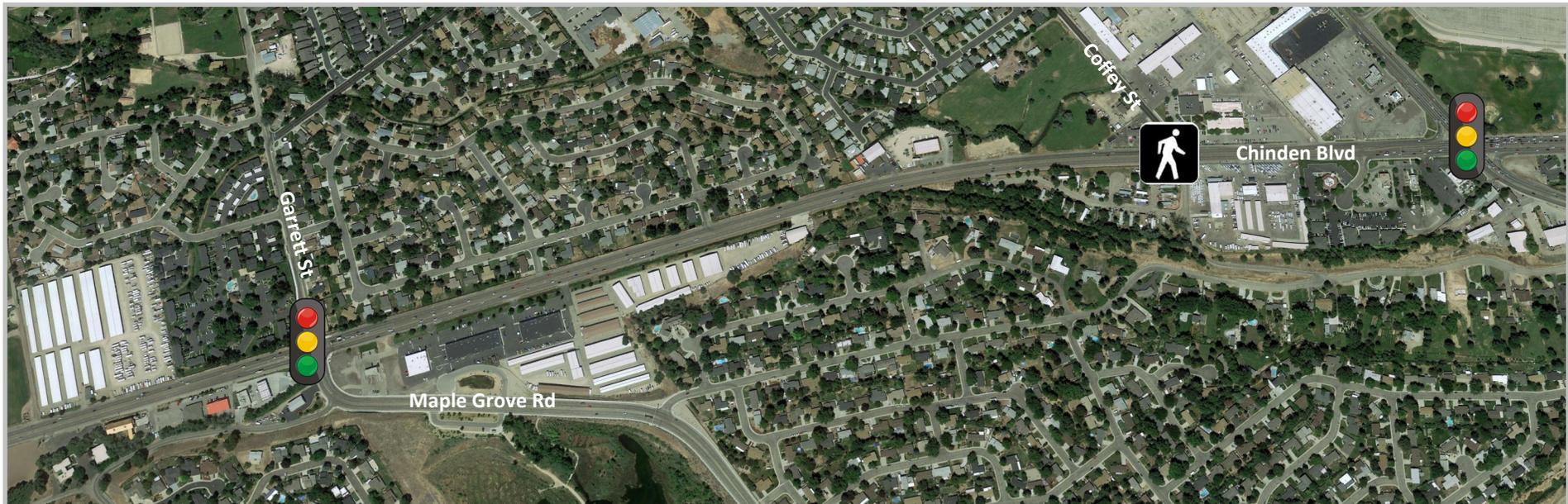
Figure 12: Chinden, from 50th Street to Veterans Memorial Parkway



Figure 13: Chinden, from Coffey Street to 50th Street



Figure 14: Chinden, from Veterans Memorial Parkway to Fairview Avenue



Traffic Volumes

Traffic along the corridor has continued to change over time, though not in ways most officials may anticipate. ITD has kept traffic volume records dating back to 1999 and as recent as 2018 (Figure 15). The year by year counts show trends along Chinden that include both a decrease and increase in volumes. Between the Connector off/on ramp and the Veterans Memorial Parkway counter, traffic volumes have decreased.

In fact, at the Chinden/37th Street intersection, volumes have dropped from 42,000 to 30,000 vehicles per day. West of VMP, traffic volumes through Garden City have increased. However, over the near 20 year period of time, volumes have grown less than 1% annually.

Despite the changes to traffic volumes both west and east of Veterans Memorial Parkway, the corridor has remained a five lane section for over 30 years and will likely never see a seven lane configuration as to construct the corridor in such a way would irrevocably change Garden City as numerous buildings and properties would be impacted if not eliminated.

Without a change in the number of lanes, the corridor will remain without sidewalk unless a different approach is taken. Such a circumstance means placing the entirety of the cost burden on Garden City as ITD has continually stated that they do not have the authority nor funds to build a standalone project without capacity expansion.

Figure 15: ITD Traffic Counts Along Chinden

Intersection	1999	2018	ADT Change	% Change
Chinden/34th	31,000	27,000	-4,000	-13%
Chinden/37th	42,000	30,000	-12,000	-29%
Chinden/VMP	38,000	36,500	-1,500	-4%
Chinden/50th	36,000	36,500	+500	+1.4%
Chinden/Glenwood	29,000	34,000	+5,000	+15%
Chinden/Garrett	25,000	30,000	+5,000	+17%

Final Thoughts

The responsibility for providing a safe Chinden for all people doesn't fall on the shoulders of Garden City alone. Past efforts to look at Chinden have addressed some of the more typical, specialized transportation funding sources. This has primarily focused on Transportation Alternatives Program funding and money directly allocated to COMPASS for distribution within the region.

There are other sources available with enough flexibility to allocated funding for completion of sidewalks and crossings along Chinden. This should be a focus for ITD, COMPASS, Garden City, and other regional cities and highway districts, to fund via COMPASS and ITD to be completed with or before widening of Chinden west of Garden City begins in earnest.

ITD has flexibility within its overall Surface Transportation Block Grant (STBG) funding, for example. In fiscal year 2019, Idaho received more than \$88 million through STBG. According to FHWA, roughly 46% of that funding is flexible for allocation anywhere in the state and funding of sidewalks is an eligible expense. This would be over and above already-guaranteed STBG funding that comes to COMPASS. Additionally, ITD is a regular recipient of annual FHWA redistribution funds, which are generated from unobligated federal fund balances across the country. At the end of fiscal year 2019, ITD received more than \$25 million additional funding from this effort.

These are the types of large-scale chunks of funding required to complete Chinden correctly. Programs such as the end of year redistribution could be used to fund the full-scale design work on Chinden and portions could be funded in future years or the full construction through something like STPG.

Additional efforts will be needed to fully assess crossing treatments. There is ample justification from AASHTO on the need for more frequent crossings and signal applications like the Pedestrian Hybrid Beacon planned at 43rd is the most likely choice for pedestrian-only crossings along Chinden. These could be funded independently of sidewalks in sections east of 43rd where sidewalks already exist. Sections without sidewalks should be designed to include these crossings.

