

MEMORANDUM TO: Jeff Hatch, AIA Leed AP  
Hatch Design Architecture

FROM: Brendan S. May, PE, PTOE  
Senior Consultant

Luay R. Aboona, PE, PTOE  
Principal

DATE: September 19, 2024

SUBJECT: Traffic Impact Statement  
Starbucks Coffee Shop  
Garden City, Idaho

This memorandum summarizes the findings of a traffic impact evaluation prepared for the proposed Starbucks coffee shop to be located at 5200 W. Chinden Boulevard in Garden City, Idaho. As proposed, the site will contain approximately 2,456 square feet of building space with a drive-through. Primary access to the parking lot serving the site and drive-through will be provided via a full movement access drive on 52<sup>nd</sup> Street. Secondary access to the site, including the drive-through entrance and trash enclosure, will be provided via a second full movement access drive on 52<sup>nd</sup> Street. Outbound access from the proposed drive-through will be provided via a full movement access drive on Chinden Boulevard that is shared with the Chinden Business Center to the west via an established cross-access agreement.

The purpose of this memorandum was to document the existing roadway conditions, estimate the traffic projected to be generated by the Starbucks coffee shop, provide a general assessment of the impact the traffic will have on the adjacent roadway system, and review the proposed access configuration.

## Existing Roadway Characteristics

*Chinden Boulevard (US 20/26)* is generally an east-west other principal arterial roadway that in the vicinity of the site provides two travel lanes in each direction separated by a two-way left-turn lane. At its unsignalized intersection with 52<sup>nd</sup> Street, Chinden Boulevard provides a through lane and as shared through/right-turn lane in both directions. It should be noted that there is an approximately 16-foot paved shoulder on Chinden Boulevard that can accommodate right-turn movements from Chinden Boulevard onto 52<sup>nd</sup> Street. Chinden Boulevard is under the jurisdiction of the Idaho Transportation Department (ITD), has an average annual daily traffic (AADT) volume of 29,000 vehicles and has a posted speed limit of 35 miles per hour.

52<sup>nd</sup> Street is generally a north-south local roadway that in the vicinity of the site provides one travel lane in each direction and extends from Chinden Boulevard to Sawyer Avenue. At its unsignalized intersection with Chinden Boulevard, 52<sup>nd</sup> Street provides a shared left/right-turn lane that is under stop-sign control. 52<sup>nd</sup> Street is under local jurisdiction.

## Site Characteristics

The site is located in the northwest corner of the intersection of Chinden Boulevard with 52<sup>nd</sup> Street. Primary access to the parking lot serving the site and drive-through will be provided via a full movement access drive on 52<sup>nd</sup> Street. Secondary access to the site, including the drive-through entrance and trash enclosure, will be provided via a second full movement access drive on 52<sup>nd</sup> Street. Outbound access from the proposed drive-through will be provided via a full movement access drive on Chinden Boulevard that is shared with the commercial properties to the west. The building will be located on the south side of the site with a counterclockwise drive-through located on west and north sides of the site and the drive-through will provide a by-pass lane. The drive-through can be accessed via either of the proposed access drives on 52<sup>nd</sup> Street. The proposed site plan is included in the Appendix of this memorandum.

## Estimated Vehicle Trip Generation

The volume of traffic estimated to be generated by the proposed Starbucks coffee shop was based on information published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11<sup>th</sup> Edition. **Table 1** summarizes the estimated vehicle trip generation. As can be seen from Table 1, the proposed coffee shop is estimated to generate a total of 211 trips (108 inbound and 103 outbound) during the weekday morning peak hour and 96 trips (48 inbound and 48 outbound) during the weekday evening peak hour. Furthermore, the proposed coffee shop is estimated to generate approximately 565 trips in and out daily. It should be noted that surveys conducted by ITE have indicated that approximately 85 percent of trips made to coffee shops with drive-throughs consist of pass-by traffic or existing traffic already on the area roadway system. However, in order to provide a conservative evaluation, a 70 percent pass-by reduction is assumed.

Table 1  
ESTIMATED SITE-GENERATED TRAFFIC VOLUMES

ITE Land Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Daily Two-Way Trips		
		In	Out	Total	In	Out	Total	In	Out	Total
937	Coffee Shop with Drive-Through (2,456 s.f.)	108	103	211	48	48	96	656	656	1,312
	<i>85% Pass-By Reduction</i>	<i>-74</i>	<i>-74</i>	<i>-148</i>	<i>-34</i>	<i>-34</i>	<i>-68</i>	<i>-459</i>	<i>-459</i>	<i>-918</i>
	<b>Total New Trips</b>	<b>34</b>	<b>29</b>	<b>63</b>	<b>14</b>	<b>14</b>	<b>28</b>	<b>197</b>	<b>197</b>	<b>394</b>

## Traffic Distribution

As previously indicated, Chinden Boulevard has an AADT volume of 29,000 vehicles. Given that 52<sup>nd</sup> Street is not a through street, it is anticipated that approximately 50 percent of the traffic will travel to/from the west on Chinden Boulevard and 50 percent of the traffic will travel to/from the east on Chinden Boulevard.

As such, when taking into consideration that at least 70 percent of trips made to the Starbucks will be existing trips on the area roadway network, the proposed Starbucks is expected to increase the daily traffic volumes on Chinden Boulevard by less than one percent.

## Proposed Access Evaluation

As previously indicated, access to the Starbucks parking lot and drive-through entrance will be provided via two full movement access drives on 52<sup>nd</sup> Street. Therefore, all inbound traffic will traverse the intersection of Chinden Boulevard with 52<sup>nd</sup> Street which as previously indicated is served by a center two-way left-turn lane.

Outbound access from the drive-through will be provided via a connection to an existing full-move access drive on Chinden Boulevard that serves the existing Chinden Business Center to the west. The drive-through is designed to accommodate stacking for 11 to 12 vehicles with additional vehicles able to be accommodated on site before extending onto 52<sup>nd</sup> Street.

Based on KLOA's experience with Starbucks coffee shops, approximately 65 percent of patrons utilize the drive-through. Therefore, there will be approximately 67 outbound vehicles during the weekday morning peak hours and 31 outbound vehicles during the weekday evening peak hours resulting in one outbound vehicle at the shared access drive approximately every one and two minutes, respectively.

Additionally, based on information provided from Starbucks for Chicagoland locations, it takes an average of 48 seconds to serve a customer, which equates to approximately 75 customers served per hour. This information is consistent with the volume of traffic anticipated to utilize the drive-through during the critical weekday morning peak hour.

Furthermore, the average drive-through queue was six vehicles during the weekday morning peak hour with a peak queue of 11 vehicles which can be accommodated within the proposed drive-through lane. In order to provide efficient and orderly internal traffic flow, the following is recommended:

- Wayfinding signs directing traffic to the drive-through lane should be provided at the entrance of the drive-through lane.
- A "Do Not Enter" sign should be posted at the exit of the drive-through, facing west, to deter opposing traffic entering the drive-through lane in the wrong direction of the one-way system.

- Exiting movements from the drive-through lane should be under stop sign control. Furthermore, to provide metering of traffic exiting the Chinden Business Center, the eastbound movements through the parking lot should be under stop-sign control at the access drive.
- Clear lines of sight to the west and south for vehicles exiting the drive-through lane should be maintained.

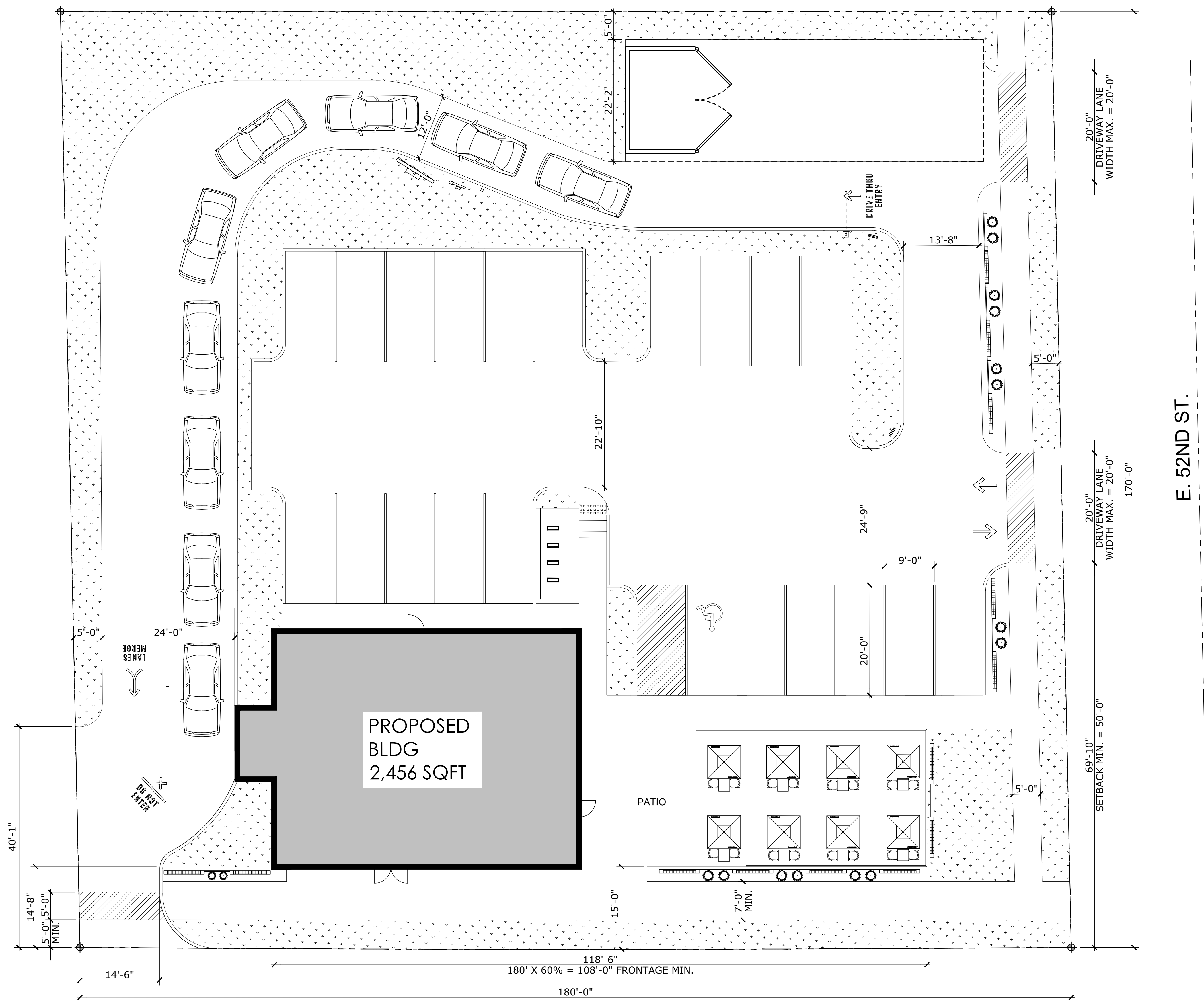
As such, the proposed drive-through is anticipated to be adequate in accommodating the trips estimated to be generated by the drive-through and will distribute outbound traffic at two locations, the shared access drive for drive-through traffic and 52<sup>nd</sup> Street for the in-store patrons.

## Conclusions

Based on the preceding evaluation and recommendations, the following conclusions have been made:

- The majority of trips that will be generated by the coffee shop will be diverted trips from existing traffic on Chinden Boulevard
- Primary access to the parking lot serving the site and drive-through will be provided via a full movement access drive on 52<sup>nd</sup> Street. Secondary access to the site, including the drive-through entrance and trash enclosure, will be provided via a second full movement access drive on 52<sup>nd</sup> Street.
- Outbound access from the proposed drive-through will be provided via a full movement access drive on Chinden Boulevard that is shared with the Chinden Business Center to the west
- The proposed Starbucks will increase the daily traffic volumes along the area roadway network by less than one percent.
- Chinden Boulevard currently provides a center two-way left-turn lane that can accommodate left-turn movements and provides a 16-foot paved shoulder that can accommodate right-turning vehicles from Chinden Boulevard onto 52<sup>nd</sup> Street.
- The proposed drive-through will provide sufficient stacking to accommodate the peak drive-through queue, with additional on-site storage available.

# Appendix

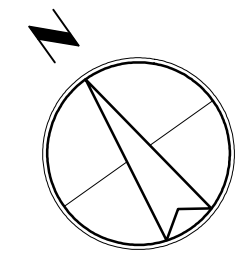


CHINDEN BLVD. / HIGHWAY 20/26

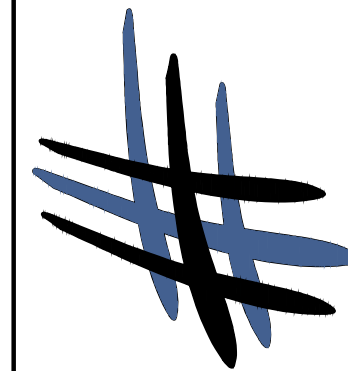
E. 52ND ST.

PROPOSED SITE PLAN

SCALE: 1"=10'-0"



HATCH DESIGN  
ARCHITECTURE  
BOISE, IDAHO 83714  
OFFICE: (208) 475-3204  
FAX: (208) 475-3205  
COPYRIGHT 2024  
HATCH DESIGN  
ARCHITECTURE



THIS PLAN AND/OR DESIGN ARE NOT TO BE CHANGED OR  
COPIED IN ANY FORM NOR ARE THE DOCUMENTS TO BE  
REPRODUCED OR TRANSMITTED IN ANY FORM OR BY  
ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT  
THE WRITTEN PERMISSION OF HATCH DESIGN  
ARCHITECTURE.  
THE DESIGNER HAS CONDUCTED VISUAL SURVEY OF THE  
ORIGINAL SITE FOR WHICH THEY WERE PREPARED.  
DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS,  
INCLUDING THIS ONE, ARE THE PROPERTY OF HATCH  
DESIGN AND THE DESIGNER'S CONSULTANTS ARE NOT  
TO BE REPRODUCED OR TRANSMITTED IN ANY FORM  
OR BY ANY MEANS, ELECTRONIC OR MECHANICAL,  
WITHOUT THE WRITTEN PERMISSION OF HATCH DESIGN  
ARCHITECTURE AND/OR ITS CONSULTANTS.

NEW CONSTRUCTION FOR:

**STARBUCKS**

5200 W CHINDEN BLVD, GARDEN CITY, IDAHO 83714

DATE	DESCRIPTION/COMMENTS

DATE: MAR 2024  
DRAWN BY: SK, LL  
CHECKED BY: JLH  
JOB NUMBER: MKT24

SHEET TITLE

SITE PLAN

SHEET NUMBER

A-1.4

SHEET