DOUGLAS COUNTY
COLORADO

Minor Development Final Plat Staff Report

Date:	May 28, 2026
To:	Douglas County Board of County Commissioners
Through:	Douglas J. Debord, County Manager
From:	Kati Carter, AICP, Director of Community Development
CC:	Eric Pavlinek, Principal Planner Jeanette Bare, AICP, Planning Manager Steve Koster, AICP, Deputy Director of Community Development
Subject:	**Redemption Church – Minor Development Final Plat**
Project File:	**SB2026-005**

Planning Commission Hearing:	**June 1, 2026 @ 6:00 p.m.**
Board of County Commissioners Hearing:	**June 9, 2026 @ 2:30 p.m.**

I. EXECUTIVE SUMMARY

The request is for approval of a minor development final plat to establish one nonresidential lot on 4.5 acres. The site is located at the northeast intersection of Hess Road and Heirloom Parkway, and is part of a larger, 549-acre metes and bounds parcel owned by Parker Water and Sanitation District (PWSD). The lot is proposed to be developed for church use.

The property is zoned Agricultural One (A-1) and is within the Parker Municipal Planning Area as identified by the 2040 Comprehensive Master Plan (CMP). The District will provide water and sewer services to the development.

The Planning Commission will consider the request at its June 1st public hearing. Staff will provide an update on the Planning Commission's recommendation during its presentation to the Board of County Commissioners on June 9.

II. APPLICATION INFORMATION

A. Applicant

Parker Water & Sanitation District
13939 Ancestry Drive
Parker, CO 80134

B. Request

The request is for approval of a minor development final plat to establish one lot for church use.

C. Process

A nonresidential minor development application is processed pursuant to Article 6A of the Douglas County Subdivision Resolution (DCSR). Article 6A states the intent of the process is "to provide a streamlined review process for nonresidential and multifamily subdivisions."

Per Section 604A.08 of the DCSR, "The Board shall evaluate the minor development final plat application, staff report, referral agency comments, applicant responses, the Planning Commission recommendation, and public comment and testimony, and shall approve, approve with conditions, continue, table for further study, remand to the Planning Commission, or deny the minor development final plat. The Board's action shall be based on the evidence presented; compliance with adopted County standards, regulations, and policies; and other guidelines."

D. Location

The project site is located at the intersection of Heirloom Parkway and Hess Road, north of the Rueter-Hess Reservoir and east of the District's headquarters and maintenance operation facility building. Vicinity, zoning, and aerial maps are included as an attachment to the staff report to highlight site location and existing conditions.

E. Project Description

The applicant is requesting approval of minor development final plat to establish one 4.5-acre lot for construction of a church. The property is zoned A-1, but due to the size of the parcel, it conforms to Rural Residential (RR) zoning and is limited to the uses allowed in the RR zone district. Church use is permitted in all of the County's residential zone districts.

III. CONTEXT

A. Background

The property is part of a 549-acre parcel owned by PWSD. The 4.5-acre portion of the property which is proposed for the minor development plat was physically separated from the larger parcel when Heirloom Parkway was dedicated as right-of-way for the Parker Homestead subdivision within the Town of Parker. This Town-owned roadway now bisects the PWSD property. Once the minor development plat establishes the 4.5-acre parcel as a separate lot, the District intends to sell the lot to be developed as a church. A Site Improvement Plan (SIP) application is being processed concurrently with this subdivision request for a 1-story, 19,400 S.F. church building and related site improvements.

B. Adjacent Land Uses and Zoning

The subject property is surrounded by other PWSD-owned A-1 parcels to the south and west. Directly to the east is a residential subdivision, Parker Homestead, within the Town of Parker.

Zoning and Land Use

	Zoning	Land Use
North	A-1 – Parcel owned by PWSD Planned Development – Stepping Stone	Rueter-Hess Reservoir Water Purification Facility Single-Family Residential
South	A-1 – Parcel owned by PWSD	Rueter-Hess Reservoir
East	Town of Parker – Parker Homestead	Single-Family Residential
West	A-1 – Parcel owned by PWSD	PWSD Headquarters Building Recreation Incline

IV. PHYSICAL SITE CHARACTERISTICS

A. Site Characteristics and Constraints

The site is located at the northeast corner of Hess Road and Heirloom Parkway. The parcel is vacant and vegetated with grasses and weeds. A weed management plan will be prepared by the applicant and approved prior to approval of the SIP. The site includes existing easements and two water transmission mains owned by PWSD.

B. Access

Access to the project site is from Heirloom Parkway. Heirloom Parkway is a collector road owned and maintained by the Town of Parker. The applicant has been coordinating with the Town of Parker on required access permits for the proposed church use. A traffic impact study (TIS) was included with the SIP submittal and has been accepted by Public Works Engineering (Engineering).

C. Soils and Geology

The Douglas County CMP Class 3 Hazards and Environmental Constraints map does not identify any Class 3 Hazards on the subject property. Colorado Geologic Survey (CGS) responded to the referral request with "no comment." Site specific geologic conditions and soils will be evaluated during building permit process.

D. Drainage and Erosion

Engineering is reviewing the applicant's Phase III Drainage Report, Grading, Erosion, Sediment, Control (GESC) Plan; and construction plans for the SIP application. The drainage report and related plans will be accepted and/or approved prior to approval of the SIP for development of a church facility.

One detention pond will be constructed in the southwest corner of the site. Douglas County will accept a blanket access and back-up maintenance easement for the detention pond on the minor development plat.

E. Floodplain

The project site is located outside of any 100-year floodplain.

F. Wildlife

The CMP Wildlife resources map identifies the site as having low habitat value. The site is not located within an overland connection, wildlife movement corridor, or wildlife crossing area. Colorado Parks and Wildlife (CPW) did not respond to the referral request.

G. Historic Preservation

Douglas County Historic Preservation responded to the referral request with a recommendation of a Class III survey to resurvey the property since the property was previously surveyed 3 times and each survey located new sites. The applicant provided a cultural resource evaluation completed by ERO Resource Corporation in 2019 and found that the parcel has been heavily disturbed on the surface and no prerecorded sites are eligible to be listed on the National Register of Historic Places. The information provided satisfies the survey request.

V. PROVISION OF SERVICES

A. Schools

No demand for schools will be generated by this minor development final plat request.

B. Fire Protection

South Metro Fire Rescue (SMFR) provides fire and emergency medical services to the site. SMFR responded to the referral request with no objection.

C. Sheriff Services

The Douglas County Sheriff's Office (DCSO) provides emergency services to the site. The Office of Emergency Management responded to the referral request with no comment. Responses were not received from DCSO or DCSO E911.

D. Water

The property is served by the District who will extend central water services to the church. The Colorado Division of Water Resources (CDWR) reviewed the request and noted that the proposed water supply is adequate and will not cause material injury to decreed water rights.

E. Sanitation

Permanent wastewater treatment services will be provided by the District. The Douglas County Health Department (DCHD) responded to the referral request with a favorable recommendation regarding the proposed method of wastewater treatment.

F. Utilities

Utility service providers include AT&T, Black Hills Energy, CORE Electric Cooperative (CORE), Comcast, CenturyLink, and Xcel Energy. AT&T does not have any conflicts with the subdivision request. CORE noted that the property is not within its service

area, but provided comments related to existing underground electric facilities and streetlights along Heirloom Parkway. Xcel Energy has no apparent conflict with the request. Black Hills Energy, CenturyLink, or Comcast did not provide a referral response to the subdivision request.

G. Dedications

A 10-foot general-purpose utility easement along the property boundary will be dedicated with the minor development plat. A back-up easement over the subdivision is also granted to Douglas County for the purpose of accessing and maintaining the drainage and stormwater facilities should maintenance not be provided by the District or future property owner. At the request of the Town of Parker, a sight-distance easement is proposed along portions of Heirloom Parkway to restrict landscaping and other types of visual intrusions.

H. Parks, Trails, and Open Space

Per Article 10, Section 1003.02, nonresidential development is required to dedicate a minimum of 3 percent of the gross site for park purposes. The applicant has provided a response to this park land dedication requirement citing that the District has provided sufficient recreation facilities on its property which serves the public within the surrounding area and County at large. Improvements include those associated with Rueter-Hess Reservoir, various trails, the incline facility, and community gathering spaces at the new PWSD headquarters campus.

I. Subdivision Improvements

No Subdivision Improvements Agreement (SIA) is required for this project as no public improvements are proposed with this subdivision. The construction plans are being reviewed by Engineering as part of the concurrent SIP application. Improvements will be included in the Site Improvement Plan Improvements Agreement (SIPIA) for the project. No off-site improvements are anticipated.

VI. PUBLIC NOTICE AND INPUT

In accordance with Section 608A of the DCSR, public notice is required to be published in the Douglas County News-Press and posted on the site by the applicant. Abutting landowners were also mailed a courtesy notice of an application in process at the beginning of the referral period.

Public comment was received from adjacent property owners within the Parker Homestead residential subdivision east of the site. In general, public comments focused on drainage impacts, traffic impacts, compatibility, and safety. The public comments received as the writing of the staff report is included as an attachment. The applicant received a copy of the public comments and submitted a written response. All referral agency comments are outlined in the Referral Agency Response Report, as well as the Referral Response letters attached to the staff report.

VII. PLANNING COMMISSION

The Planning Commission will consider the minor development final plat request at its June 1st public hearing. Staff will report on the outcome of the Planning Commission public hearing during its presentation to the Board on June 9.

VIII. STAFF ANALYSIS

A minor development final plat may be approved upon the finding by the Board that the minor development final plat:

603A.01: Conforms with the goals, objectives, and policies of the Master Plan.
Staff Comment: The subject property is located within the Parker Municipal Planning Area as identified by the CMP urban area Map 2.6. The 2040 CMP states that while approval criteria for land use applications require a finding of compliance with the 2040 CMP, "…the competing values of the Plan must be balanced through the public review process to achieve larger vision of the community." As such, the 2040 CMP acknowledges its own competing values and that implementation can only be achieved through the balancing of community values during the review process. The proposed minor development final plat is consistent, on balance, with the goals and objectives of the 2040 CMP for urban development. The applicant believes that church use provides religious options for the area and provides public spaces for gathering. In addition to the church use, the applicant believes that the church design will be compatible with the surrounding residential neighborhood within the Town of Parker with the architecture consisting of one-story elevation, pitched roofs, wood siding, and stone accents.

603A.02: Addresses the design elements established in Article 4, Section 404.
Staff Comment: The minor development is in conformance with the design elements.

Per Section 404.01 – The proposed lot is capable of meeting minimum zone district standards such as setbacks and off-street parking.

Per Section 404.02 – Geotechnical conditions have been reviewed and there are no geologic hazards, or unusual geotechnical constraints present that would preclude the proposed development. CGS reviewed the proposal and had no comment.

Per Section 404.03 – Landscape design is being reviewed and evaluated with the SIP application.

Per Section 404.04 – No roadway improvements are necessary as site access is from public roads. The applicant has been coordinating with the Town of Parker for a required access permit from Heirloom Parkway.

Per Section 404.05 – Site layout and design is being reviewed and evaluated with the SIP application.

Per Section 404.06 – Douglas County Historic Preservation responded to the referral request with no further recommendations at this time. The developer will notify Douglas County in the event of a discovery during construction activities.

Per Section 404.07 – No new roads are needed for the project. Access to the project is provided by existing public roads. An existing sidewalk is provided along Hierloom Parkway that connects to the Parker Homestead subdivision to the north.

Section 404.08 – Recommendations within technical studies will be implemented through the SIP and building permit process, site specific soil investigations, and foundation design.

603A.03: Conforms with Section 18A, Water Supply Overlay District, of the Zoning Resolution.
Staff Comment: DCZR Section 1803A establishes approval standards to be used in the evaluation of land use applications reviewed under Section 18A. The CDWR reviewed the minor development request and required water documentation and has determined that the supply is adequate to serve the proposed subdivision.

> **1803A.01: The applicant has demonstrated that the water rights can be used for the proposed uses.**
> *Staff Comment: The District will serve the development and provided water documentation for its water supply. The CDWR reviewed the application and states the proposed water supply is adequate and can be provided without causing material injury to existing water rights. The Douglas County Water Commission reviewed the proposal at the February 23, 2026, meeting and had no comment on the project.*
>
> **1803A.02: The reliability of a renewable right has been analyzed and is deemed sufficient by the County based on its priority dates within the Colorado System of Water Rights Administration.**
> *Staff Comment: The District provided all required water documentation relating to its existing water portfolio to serve the development.*
>
> **1803A.03: The Water Plan is deemed adequate and feasible by the County to ensure that water supply shortage will not occur due to variations in the hydrologic cycle.**
> *Staff Comment: A water plan is not required for projects served by a district.*
>
> **1803A.04: The Water Plan is sufficient to meet the demand applicable to the project based on the minimum water demand standards in Section 1805A herein.**
> *Staff Comment: A water plan is not required for projects served by a district.*

603A.04: Provides for a public wastewater collection and treatment system and, if other methods of wastewater collection and treatment are proposed, such systems comply with State and local laws and regulations.

Staff Comment: The District will provide wastewater services for the property. Douglas County Health Department provided a favorable recommendation regarding proposed sanitary service.

603A.05 Identifies all areas of the proposed subdivision, which may involve soil or topographical conditions presenting hazards or requiring special precautions and the proposed uses of these areas are compatible with such conditions.
Staff Comment: The CGS reviewed the proposed subdivision and responded with no comment. Standard geotechnical explorations of individual building sites will be required as part of the building permit process.

603A.06 Provides adequate drainage improvements.
Staff Comment: Drainage is being evaluated with the development plans for the church. A Phase III Drainage Report was submitted by the applicant and is being reviewed by Engineering. Acceptance of the drainage report is required prior to final approval of SIP.

603A.07 Provides adequate transportation improvements.
Staff Comment: Engineering has reviewed and accepted the Traffic Impact Study for the plat.

603A.08 Protects significant cultural, archaeological, natural, and historical resources and unique landforms.
Staff Comment: No unique landforms are associated with the property. The applicant will take care to look for any such items during development and construction of the site.

603A.09 Demonstrates the extraction of any known commercial mining deposit shall not be impeded.
Staff Comment: There are no known commercial mining deposits on this property.

603A.10 Has available all necessary services, including fire and police protection, recreation facilities, utility service facilities, streets, and open space to serve the proposed subdivision.
Staff Comment: All such services are available to the lot. Fire protection is provided by SMFR, and DCSO provides police protection. Utility service facilities are available.

IX. STAFF ASSESSMENT

Staff has evaluated the minor development final plat request in accordance with Article 6A of the DCSR. Should the Board find that the approval standards for the minor development final plat are met, the following proposed conditions should be considered for inclusion in the motion.

1. During construction activity within the development, the applicant, its successors and assigns shall take all reasonable care to watch for historic resources, paleontological

resources, and other cultural history resources and shall immediately notify Douglas County in the event of such a discovery.

2. Prior to recordation of the minor development final plat, technical corrections to the plat exhibit shall be made to the satisfaction of Douglas County.

3. All commitments and promises made by the applicant or the applicant's representative during the public hearing and/or agreed to in writing and included in the public record have been relied upon by the Board of County Commissioners in approving the application; therefore, such approval is conditioned upon the applicant's full satisfaction of all such commitments and promises.

ATTACHMENTS **PAGE**

LAND USE APPLICATION

Please complete, sign, and date this application. Return it with the required items listed on the Submittal Checklist to planningsubmittals@douglas.co.us. Submittals may also be mailed or submitted in person to Planning Services. *NOTE: The Planning Commission or the Board of County Commissioners should not be contacted regarding an open application.*

OFFICE USE ONLY
PROJECT TITLE:
PROJECT NUMBER:

PROJECT TYPE: Place of Worship

MARKETING NAME: Redemption Church

PRESUBMITTAL REVIEW PROJECT NUMBER: PS2024-302-00-001

PROJECT SITE:

Address: Northeast corner of Heirloom Parkway and Hess Road

State Parcel Number(s): 2233-302-00-001

Subdivision/Block#/Lot# *(if platted)*:

PROPERTY OWNER(S):

Name(s): Parker Water & Sanitation District, by Ron Redd; District Manager

Address: 13939 Ancestry Drive, Parker, CO 80134

Phone: 303-841-4627

Email: [redacted]

AUTHORIZED REPRESENTATIVE: *(Notarized Letter of Authorization is required from the property owner, unless the owner is acting as the representative)*

Name: Joe Coco - President CKE Engineering Inc.

Address: 14257 W Evans Circle, Lakewood, CO 80228

Phone: 303-917-1757

Email: [redacted]

To the best of my knowledge, the information contained on this application is true and correct. I have received the County's information sheet regarding the *Preble's Meadow Jumping Mouse*.

Applicant Signature

7/28/25

Date

Redemption Church Plat – Project Narrative

Owner:
Parker Water and Sanitation District
13939 Ancestry Drive
Parker, Colorado 80134
(303) 941-4627
Mr. Ron Redd, District Manager

Developer:
Redemption Church
11072 Endeavor Drive
Parker, Colorado 80134
(720) 233-5427
Mr. Mark Oshman

Property Location, Zoning and Uses:
The subject parcel is owned by Parker Water and Sanitation District and is part of their 549 acre site north of Hess Road. The subject parcel being platted is approximately 4.526 acres in size and is located at the northeast corner of Hess Road and Heirloom Parkway. The property is located in the W1/2 of Section 30, Township 6 South, Range 66 of the 6th P.M.

Proposed Project:
The proposed application is to plat the site into a single 4.526 acre lot, for the sale and development of the Redemption Church project. The project is currently under review for a Site Plan application with Douglas County titled 11866 Heirloom Parkway (SP-2025-065). The application consists of a 19,452+/- sf church facility with associated parking, drives and a stormwater detention facility.

All construction plans and reports have been submitted under the Site Plan application. Please refer to this application for these documents to prevent duplication of documents currently under review. Please note the following regarding the Site Plan application.

The floor area ratio for the project is 0.0987.

The proposed application has a planted area of 3.32 acres, and there is no dedicated open space for this property.

There are no roads or tracts being dedicated on the property. Existing easements include a 20' PSCO easement crossing through the property. Proposed easements include the dedication of a drainage easement and sight distance easement to Douglas County, and a utility easement for dry utilities. As part of the development process, water and/or sanitary sewer easements will eventually be dedicated to Parker Water and Sanitation District to serve the property for water and sanitary sewer. Maintenance of all easements are the responsibility of the property owner.

There are no dedications for parks or schools as part of this application.

Water is being provided by Parker Water and Sanitation District. Fire services are provided by South Metro Fire Rescue. PSCO has an existing easement through the site and infrastructure in the surrounding area, and the property is in the service area of X-cel Energy.

The project is in Compliance with Comprehensive Master Plan.

The site is located at the westerly edge of the Parker Municipal Planning Area of the Douglas County Comprehensive Plan. The site is unincorporated. However, the residential sub-division to the east and Heirloom Parkway west of the site is part of the Town of Parker.

The Comprehensive Master Plan has goals to achieve for proposed development. The proposed religious use for this property enhances the Planning Area by promoting healthy living and provides a religious option for the local citizens. It establishes a public space for gathering and improves the infrastructure of the area.

The proposed religious use will act as a buffer between the commercial use located on the west side of Heirloom Parkway and the existing residential subdivision to the east.

The church design is compatible to the surrounding residential neighborhood with complimentary architecture consisting of pitched roofs, residential building materials including wood siding and stone accents.

The proposed project has a low impact compared to commercial and industrial sites with over 50% of the site landscaped (56% landscape). Parking is set back from adjacent roadways and a landscape buffer is being provided adjacent to the residential properties to the east. The landscape design for the property is thoughtfully designed and will complement the neighborhood with trees, bushes, and flowers.

One goal of the Comprehensive Master Plan is to encourage coordinated development between Douglas County and Municipalities. Redemption Church is working with the Town of Parker as the site access is located off of Heirloom Parkway to the west. Additionally, a representative of the Town of Parker attended the Pre-Application Meeting for this project and provided input on the project. We will continue to work with the Town of Parker throughout the design process.

ParkerWater
& SANITATION DISTRICT

June 25, 2025

Pastor Mark Oshman
Redemption Church Parker
11072 Endeavor Drive
Parker, Co 80134

RE: Will Serve Letter
Redemption Church Parker – Hess Road and Heirloom Parkway
Total of 4.526 Acres, Part of the west ½ Section 30,
Township 6, Range 66 west of the 6th P.M.
Town of Parker, County of Douglas, State of Colorado.

Dear Pastor Oshman:

The Parker Water & Sanitation District (PWSD) acknowledges its willingness and ability to serve Redemption Church Parker as described above.

COMMITMENT TO SERVE

PWSD is committed to providing service to all future developments within its service area, based on the water supply sources available within the PWSD's water rights portfolio. Such commitment to provide service is conditioned upon compliance with all PWSD Rules and Regulations, Standard and Specifications, and/or conditions specific to the property; including payment of the appropriate fees and any charges related to water and/or sanitation service, as established from time to time by PWSD Directors.

DISTRICT WATER DEMAND

The current PWSD water demand is approximately 7,700 acre-feet per year (Acre Feet/yr), while at build out, the total of 23,500 Acre Feet/yr. The proposed development of Redemption Church Parker will be included in our future projections.

PROPOSED DEMAND

The projected demand you have submitted is a tap size of 1inch, with a 1 1/2inch distribution for the building Water and Sewer and a 1 1/2inch Irrigation tap for the exterior property. The preliminary demand equates to 5 SFE's. This will be refined as the plans are defined and follow landscape codes. The property is assigned 4.91 SFE's. The districts demand calculation of 1.1 Acre Feet/yr. Per SFE plus additional irrigation requirements require a higher standard than the Douglas County's 1805A of 0.75 Acre Feet/Yr per residence.

DISTRICT WATER SUPPLY

PWSD has an extensive water rights portfolio of adjudicated Denver Basin aquifer groundwater rights, both junior and senior tributary water rights, storage rights in Rueter-Hess Reservoir of 71,920 AF, return flows from effluent and lawn irrigation for use in the PWSD augmentation plan.

The attached Table 1 summarizes PWSD's adjudicated first-use rights, which indicates a total of 41,134 AF/yr (the anticipated yield of these rights in both an average and dry year (Section 1805A.01.2(2)b. of the DCZR). Not included in Table 1 are the rights associated with storage in

Rueter-Hess Reservoir or any of PWSD's reuse rights, which will provide significant additional supplies to PWSD.

In summary, PWSD has significant excess water supplies which can serve Redemption Church Parker, and all future planned buildout within PWSD.

WATERQUALITY

PWSD is in compliance with the Colorado Department of Public Health and Environment testing and quality requirements and provides a high-quality water supply to all customers.

SANITARY SERVICE

PWSD shall provide sanitary service for all water taps requested for Redemption Church Parker.

FEASIBILITY OF SERVICE

It is physically and economically feasible for PWSD to provide service to the proposed development of Redemption Church Parker.

If you have any questions regarding any of the information provided or PWSD's ability to provide service to the proposed development, please do not hesitate to call us.

Sincerely,
Parker Water & Sanitation District
Heather Justus
Water Resource Manager

Attachments and Links:

Exhibit Plan
Table 1 Summary of PWSD Water Rights
Map of the existing PWSD's service area (Section 1805A.01.2(2)f. of the DCZR)
2022 Evidence of potability of PWSD's water supply for the subdivision (Section 1805A.01.2(3) of the DCZR). 2022
https://www.pwsd.org/DocumentCenter/View/3584/2022-Consumer- Confidence-Report-PDF?bidId=
2023 Consumer Confidence Report
https://www.pwsd.org/DocumentCenter/View/3763/2023- PWSD-Consumer-Confidence-Report-PDF

TABLE 1
SUMMARY OF PWSD WATER RIGHTS

DECREED WATER AVAILABLE FOR PWSD USE

SOURCE	Volume (ac-ft/yr) Decreed in Case No.												
	83CW348(A)	95CW039	87CW104(A) [2]	87CW104(B) [2]	95CW089 [2]	99CW006 [2]	06CW179 [2]	02CW227 [3]	94CW042 [4]	03CW258, et al [5]	82CW434 [6]	85CW448, 04CW348 [7]	TOTAL
Cherry Creek alluvium [1]	726.7	132.3										24,130	859.0
Lower Dawson-NT			742.6	631.8	391.8	430.2	868.6	30.6	178.3	821.0	364.0		4,458.9
Lower Dawson-NNT			219.4	0.0	79.5	380.8	807.6						1,487.3
Denver-NT			430.1	908.6	272.6	611.9	235.6	94.4	104.0	1258.0	422.0		4,337.2
Denver-NNT			1016.2	9.0	377.9	616.1	1980.6						3,999.8
Arapahoe-NT			1161.7	627.0	698.3	1945.7	2447.1	64.5	547.3	2954.0	487.0		10,932.6
Laramie-Fox Hills-NT			1044.1	625.3	419.2	700.8	1350.0	49.4	16.0	980.0	310.0		5,494.8
												TOTAL [8] =	**31,569.6**

DENVER BASIN WATER DEEDED AS PART OF INCLUSION (NOT CURRENTLY PART OF PWSD WELL FIELDS)

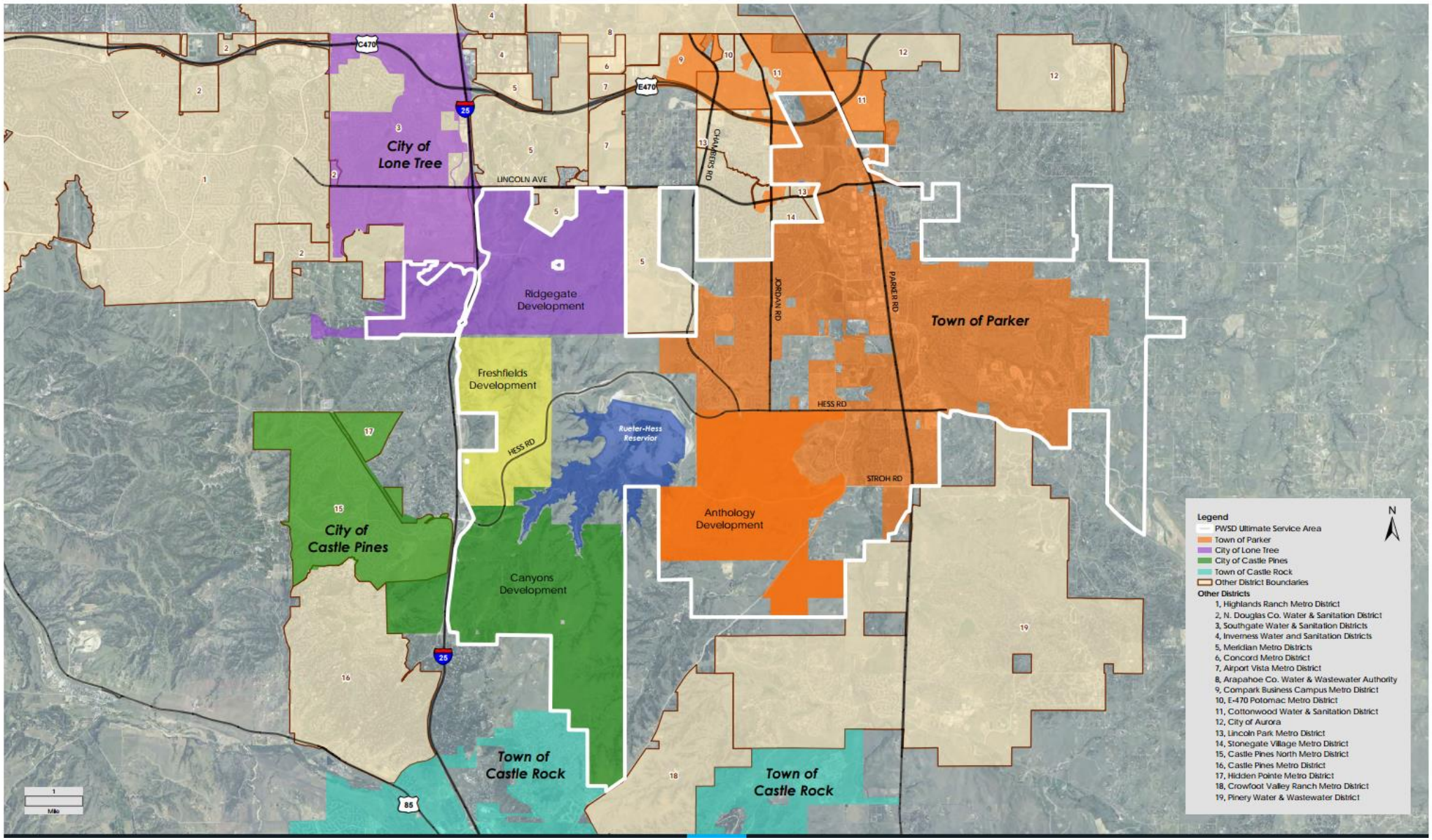
SOURCE	Annual Volume (ac-ft) Dedicated as Part of PWSD Inclusion [9]												
	Carousel Farms	Cielo	Developmental Pathways	Dransfeldt Place	Gregg East	Harvie Park	Hess Ranch	Hess Road Gailen Buck	Hess Road Town of Parker	Meadowlark	Miller Creek	Parker Parcel	Parker Homestead Parcel A
Upper Dawson - NNT		13.8				4.1	38.4						
Lower Dawson-NT		41.8	0.4	1.7	1.7	20.0	457.6	6.0	4.7	19.4	5.7	14.5	
Lower Dawson-NNT	11.2												51.0
Denver-NT		73.4			3.1	24.6	655.0	7.5	6.1	89.1	7.9	20.4	
Denver-NNT	18.1		0.5	9.1			164.6						71.0
Arapahoe-NT	17.6	75.2	0.5	8.1	3.1	0.0	780.7	8.3	6.6	108.4	7.0	21.4	75.3
Laramie-Fox Hills-NT	11.3	47.4	0.3	6.3	2.3	22.6	474.7	5.1	4.0	65.0	5.7	14.2	45.9

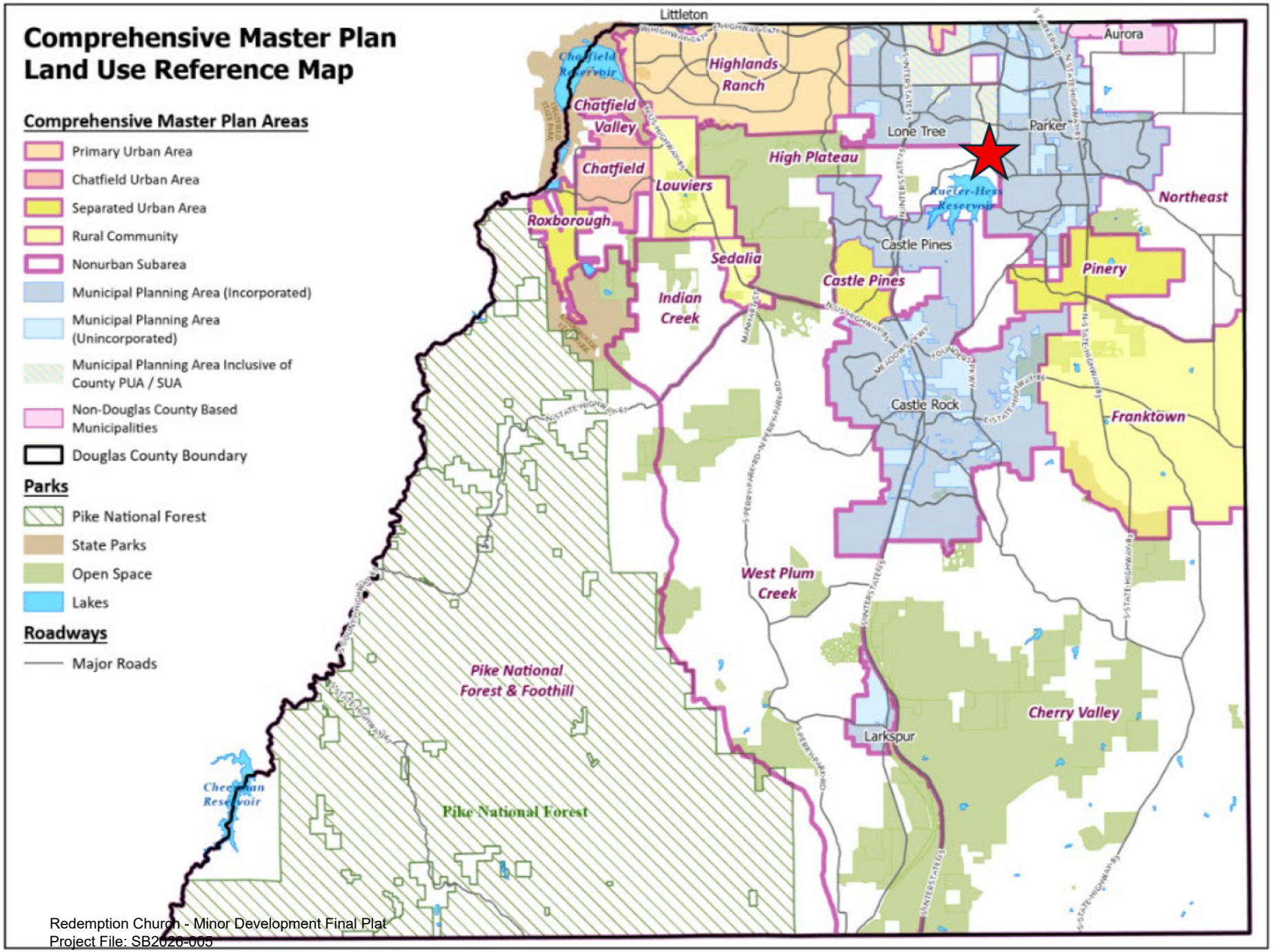
SOURCE	Annual Volume (ac-ft) Dedicated as Part of PWSD Inclusion [9]										
	Parker Point	Public Service CO Sec 20	Public Service CO Sec 21	Public Service CO Sec 22	Reata Ridge Parcel	Salisbury Heights	Sierra Ridge	Steven's Ranch	Stroh Ranch Parcel	Twenty Mile Town Center II	TOTAL
Upper Dawson - NNT								43.8			100.1
Lower Dawson-NT	4.2		3.7		15.4	4.1		442.8	595.9	0.9	1640.5
Lower Dawson-NNT		4.4		6.4			77.9				150.9
Denver-NT	5.8			10.4	21.4	5.1		318.4	855.7	1.3	2105.1
Denver-NNT		6.6	4.8				132.5	387.2			794.4
Arapahoe-NT	7.4	6.6	4.9	9.4	26.4	5.4	143.1	724.0	920.3	1.2	2960.8
Laramie-Fox Hills-NT	4.6	4.0	3.2	7.3	16.5	3.5	89.6	431.5	546.7	0.9	1812.6
										TOTAL =	**9,564.4**

GRAND TOTAL (DENVER BASIN AND CHERRY CREEK WATER RIGHTS) [10] =	41,134.0

1) Water rights changed to municipal use. All of this water is fully consumable and reusable.
2) PWSD well field decree.
3) Hover parcel.
4) Well field established between PWSD and Stroh Ranch for full Stroh Ranch water supply, but water availability limited to volume of water deeded to PWSD from Stroh Ranch.
5) Rights also include water decreed in 82CW116, W-8033, 81CW403, 83CW333, and 98CW459. Water deeded to PWSD from RidgeGate property but not part of the PWSD well fields.
6) Water deeded to PWSD from Freshfields property but not part of the PWSD well fields.
7) Combined RHR and Lake Gulch storage rights - RHR as alternate place of storage, not included in totals
8) Total potential yield of these rights
9) All wellfield inclusion volumes are preliminary and subject to change
10) Updated March, 2019

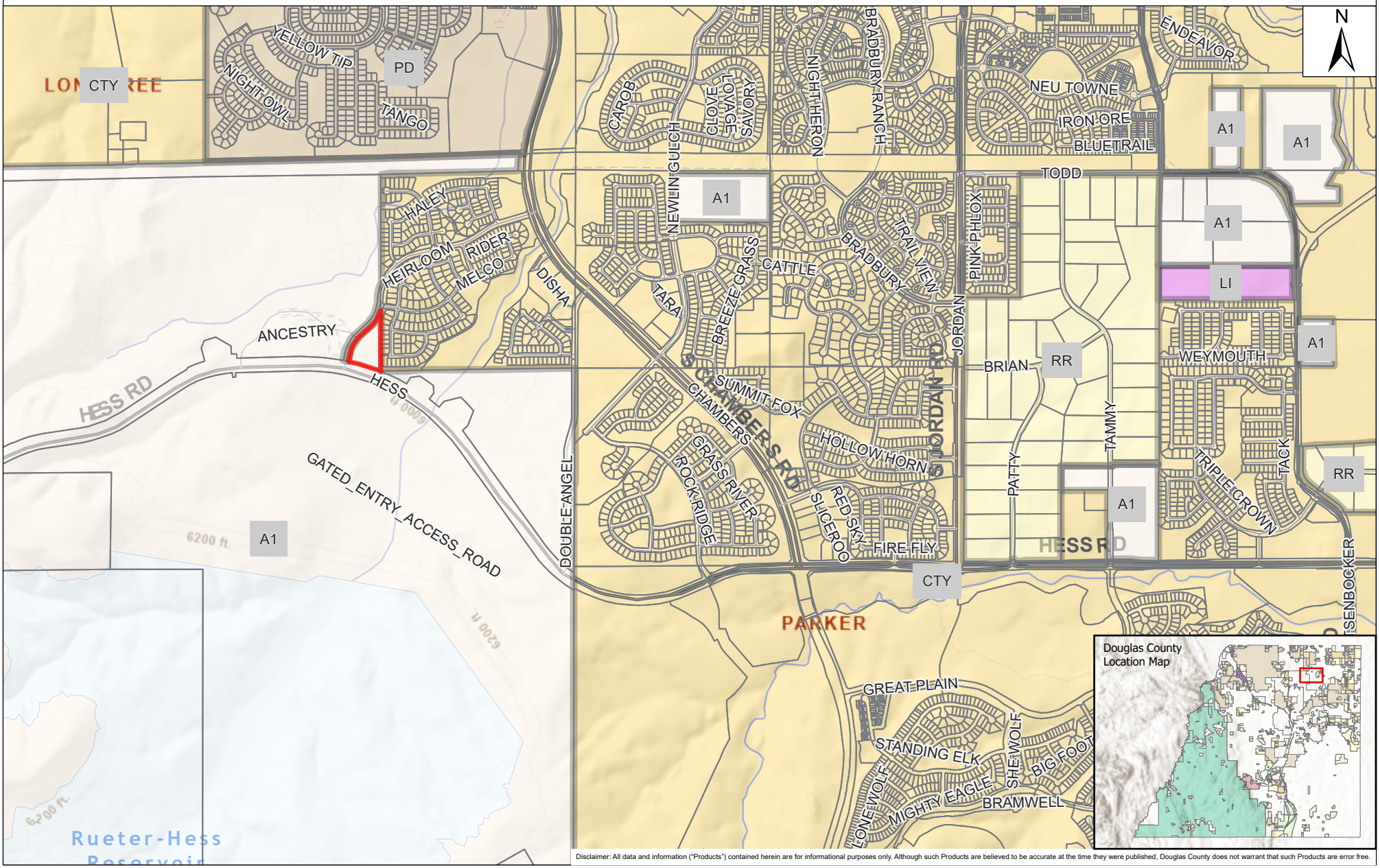
PWSD Service Area




Comprehensive Master Plan
Land Use Reference Map
Comprehensive Master Plan Areas
Primary Urban Area
Chatfield Urban Area
Separated Urban Area
Rural Community
Nonurban Subarea
Municipal Planning Area (Incorporated)
Municipal Planning Area (Unincorporated)
Municipal Planning Area Inclusive of County PUA / SUA
Non-Douglas County Based Municipalities
Douglas County Boundary
Parks
Pike National Forest
State Parks
Open Space
Lakes
Roadways
Major Roads
Littleton
Aurora
Lone Tree
Parker
Castle Pines
Castle Rock
Larkspur
Highlands Ranch
Chatfield Reservoir
Chatfield Valley
Chatfield
Louviers
Roxborough
High Plateau
Ruetter-Hess Reservoir
Northeast
Sedalia
Indian Creek
Castle Pines
Pinery
Franktown
West Plum Creek
Cherry Valley
Pike National Forest & Foothill
Pike National Forest
Cheesman Reservoir

Redemption Church - Minor Development Final Plat SB2026-005

DOUGLAS COUNTY COLORADO



Date Saved: 5/27/2026 8:02 AM

LI - LIGHT INDUSTRIAL
A1 - AGRICULTURAL ONE
PD - PLANNED DEVELOPMENT
RR - RURAL RESIDENTIAL

Redemption Church - Minor Development Final Plat - SB2026-005

DOUGLAS COUNTY COLORADO

Disclaimer: All data and information ("Products") contained herein are for informational purposes only. Although such Products are believed to be accurate at the time they were published, Douglas County does not warrant that such Products are error free.

Date Saved: 5/20/2026 7:38 AM

A1 - AGRICULTURAL ONE

Project Name: Redemption Church
Project File #: SB2026-005
Date Sent: 02/02/2026 **Date Due:** 03/02/2026

Agency	Date Received	Agency Response	Response Resolution
Addressing Analyst	02/12/2026	**Verbatim Response:** No Comment.	No action required.
Arapahoe County Public Airport Authority-Centennial	02/02/2026	**Summary of Response:** Comments were provided regarding any object on the site that penetrate a 100: 1 slope from the nearest point of the nearest runway and providing FAA Form 7460-1.	Applicant confirmed that the project does not fall within the 100:1 slope. If cranes are used to construct the proposed project, the proper form and notifications will be completed.
Assessor	03/03/2026	**Verbatim Response:** No Comment.	No action required.
AT&T Long Distance - ROW	02/12/2026	**Summary of Response:** There should be no conflicts with AT&T Long Lines.	No action required.
Building Services	02/09/2026	**Verbatim Response:** Permit is required, please visit Douglas County's web site for requirements and contact 303-660-7497 if you have any questions.	Applicant will obtain building and electrical permits for the project.
Castle Park Ranch Property Owners Association		No Response Received.	
CenturyLink		No Response Received.	
Cherry Creek Highlands HOA		No Response Received.	
City of Lone Tree	02/02/2026	**Verbatim Response:** No Comment.	No action required.
Colorado Division of Water Resources	03/05/2026	**Summary of Response:** The water supply is adequate and can be provided without causing injury to decreed water rights.	No action required.
Colorado Geological Survey	03/02/2026	**Verbatim Response:** No Comment.	No action required.
Colorado Parks and Wildlife (Northcentral DC - Dist 541)		No Response Received.	
Comcast		No Response Received.	

Project Name: Redemption Church
Project File #: SB2026-005
Date Sent: 02/02/2026 **Date Due:** 03/02/2026

Agency	Date Received	Agency Response	Response Resolution
CORE Electric Cooperative	02/27/2026	**Verbatim Response:** CORE Electric Cooperative has reviewed the contents of the referenced referral response packet. Our review included evaluation of existing CORE facilities, utility easements, electric loading, and service requirements. Based on this review, we offer the following comments: CORE has existing underground electric facilities and streetlights along Heirloom Street. These utility easements and facilities will be maintained by CORE unless the applicant requests modifications in accordance with CORE's current extension policies. After reviewing our service territory records, we have determined that this property is not within CORE Electric Cooperative's service area. No further comments or conditions apply from CORE for this referral. If you have any questions or need additional clarification, please feel free to contact us.	Applicant confirmed that no modifications are proposed to CORE's infrastructure along Hierloom Parkway.
Douglas County Health Department	02/24/2026	**Summary of Response:** A favorable recommendation was provided regarding the method of sewage disposal.	No action required.
Douglas County Historic Preservation	03/02/2026	**Summary of Response:** A recommendation was provided to perform a Class III survey to resurvey the parcel since the property was previously surveyed 3 times and each survey located 3 sites.	Applicant provided a cultural resource evaluation completed by ERO Resource Corporation in 2019 and found that the parcel has been heavily disturbed on the surface and no prerecorded sites are eligible to be listed on the National Register or Historic Places. The information provided satisfies the survey request.

Project Name: Redemption Church
Project File #: SB2026-005
Date Sent: 02/02/2026 **Date Due:** 03/02/2026

Agency	Date Received	Agency Response	Response Resolution
Douglas County Parks and Trails	03/03/2026	**Verbatim Response:** Applicant would be responsible for meeting park land dedication as outlined in Article 10 of the Douglas County Subdivision Resolution	Applicant provided a letter, dated, May 18, 2026, in response to the requirement for park land dedication for this subdivision citing previous outdoor and recreation amenities have been provided by the District for the general public.
Douglas County Water Commission	02/23/2026	**Verbatim Response:** No Comment.	No action required.
Engineering Services	03/02/2026	**Summary of Response:** Comments were provided on the plat exhibit and project narrative.	Applicant addressed the comments.
Mile High Flood District	02/11/2026	**Verbatim Response:** No comments.	No action required.
Office of Emergency Management	02/02/2026	**Verbatim Response:** No Comment.	No action required.
Open Space and Natural Resources	02/17/2026	**Verbatim Response:** No Comment.	No action required.
Parker Water & Sanitation District	02/09/2026	**Verbatim Response:** Provide a PWSD utility Plan set for review.	Applicant will coordinate with the District on review and approval of utility plans for development of the church.
Rural Water Authority of Douglas County		No Response Received.	
Sheriff's Office		No Response Received.	
Sheriff's Office E911		No Response Received.	
South Metro Fire Rescue	02/06/2026	**Verbatim Response:** South Metro Fire Rescue (SMFR) has reviewed the provided documents and has no objection to the proposed Minor Development Final Plat.	No action required.
Stonegate Village Owners Association Inc		No Response Received.	
Town of Parker Development Review	02/20/2026	**Verbatim Response:** No Comment.	No action required.
Town of Parker Public Works		No Response Received.	
Wildfire Mitigation	02/09/2026	**Verbatim Response:** Due to low Fire hazard and minimal vegetation present. Wildfire mitigation has no comment at this time.	No action required.

Project Name: Redemption Church
Project File #: SB2026-005
Date Sent: 02/02/2026 **Date Due:** 03/02/2026

Agency	Date Received	Agency Response	Response Resolution
Xcel Energy-Right of Way & Permits	02/20/2026	**Summary of Response:** No apparent conflict with the request.	The applicant confirmed that existing facilities along Hierloom Parkway will not be modified and that the developer will coordinate with Xcel on the acquisition on any new easements.

REFERRAL RESPONSE REQUEST

Date sent: February 2, 2026 Comments due by: March 2, 2026

Project Name:	Redemption Church
Project File #:	SB2026-005
Project Summary:	Minor Development Final Plat to establish one nonresidential lot for construction of a church. The Site Improvement Plan (SIP) for the church is being processed concurrently with this subdivision request. The project number for the SIP is SP2025-065.

Information on the identified development proposal located in Douglas County is enclosed. Please review and comment in the space provided.

☐ No Comment	
☐ Please be advised of the following concerns:	
☑ See letter attached for detail.	
Agency: Arapahoe County Public Airport Authority	**Phone #:** 303-218-2919
Your Name: Zachary Gabehart *(please print)*	**Your Signature:** Zachary Gabehart
	Date: 02/02/2026

Agencies should be advised that failure to submit written comments prior to the due date, or to obtain the applicant's written approval of an extension, will result in written comments being accepted for informational purposes only.

Sincerely,
Eric Pavlinek
Eric Pavlinek, Principal Planner
Enclosure

CENTENNIAL AIRPORT
ARAPAHOE COUNTY AIRPORT AUTHORITY

7565 South Peoria Street, Unit D9
Englewood, Colorado 80112
main: 303-790-0598 | fax: 303-790-2129
www.centennialairport.com

February 2, 2026

Eric Pavlinek
Douglas County Community Development Department
100 Third St.
Castle Rock, CO 80104

Re: SB2026-005 – Redemption Church

Dear Mr. Pavlinek,

Thank you for the opportunity to review the site plan. The Arapahoe County Public Airport Authority has reviewed the documents and has no objection to the proposed development. We have the following comments to make on the project:

- Any objects on the site (including cranes used during construction) that penetrate a 100:1 slope from the nearest point of the nearest runway, penetrates the FAA Part 77 airspace surfaces, impede signals associated with navigational equipment or any other reason the FAA deems necessary will require the filing and approval of FAA Form 7460-1. This form may take 90 days or more for approval. Please visit *https://oeaaa.faa.gov* to utilize the notice criteria tool to confirm filing requirements and to file the FAA Form 7460-1. **Please note that this is a State and Federal regulatory requirement.** Runway endpoint data is available from the Airport for engineering calculations. In addition, please have crane operators advise Airport Operations (303-877-7307) prior to erecting any cranes.

Please feel free to call me if you have any questions.

Sincerely,

Zachary Gabehart
Senior Planner - Noise & Environmental
303-218-2919

From:	annb cwc64.com
To:	Eric Pavlinek
Cc:	LANA SCARLETT-ROWELL (ls1762@att.com); duanew cwc64.com; jt cwc64.com
Subject:	Hess Road Parker, Colorado Douglas County eReferral #SB2026-005
Date:	Thursday, February 12, 2026 10:45:43 AM

Caution: This email originated outside the organization. Be cautious with links and attachments.

Hi Eric,

This is in response to your eReferral with a utility map showing any buried AT&T Long Line Fiber Optics near Hess Road Parker, Colorado. The Earth map shows the project area in red. Based on the address and/or map you provided, there should be NO conflicts with the AT&T Long Lines, as we do not have facilities in that area.

Please feel free to contact us with any questions or concerns.

Ann Barnowski
Clearwater Consulting Group Inc
120 9th Avenue South
Suite 140
Nampa, ID 83651
Annb@cwc64.com

The attached google earth maps are intended to show approximate locations of the buried AT&T long line fiber optic cable. The maps are provided for informational purposes only. In no way should the maps be used for anything other than general guidelines as to where the fiber is or is not and any other use of these maps is strictly prohibited.

-----Original Message-----
From: epavlinek@douglas.co.us <epavlinek@douglas.co.us>
Sent: Monday, February 2, 2026 10:18 AM
To: annb cwc64.com <annb@cwc64.com>
Subject: Douglas County eReferral (SB2026-005) Is Ready For Review

There is an eReferral for your review. Please use the following link to log on to your account:
https://apps.douglas.co.us/planning/projects/Login.aspx

Project Number: SB2026-005

Project Title: Redemption Church

Project Summary: Request for a Minor Development Non-Residential Final Plat for Redemption Church. The subject property totals approximately 4.5 acres in size and is located within the Agricultural One zone district.

This referral will close on March 2, 2026.

If you have any questions, please contact me.

Sincerely,

Eric Pavlinek

Planning Services
100 Third Street
Castle Rock, CO 80104


PROJECT AREA
Hess Rd
Rueter-Hess Reservoir
Parker Water & Sanitation District
HEIRLOOM
REGENCY
NEWLIN MEADOWS
ANTELOPE HEIGHTS
Looking Glass Community Park
Bradbury Hills Pool
Auburn Hills Community
Prairie Crossing Elem
Kiddie Academy of Parker
EchoPark Stadium
Hit4Power
Gold Rush Elementary School
Empire Gifts and Antiques
McDonald's
Lennar at
East West Trail
The Concrete Company
HashtagHyderabad Entertainment
DKM2
CMP+
Double Angel Rd
S Chambers Rd
E Hess Rd
Heirloom Pkwy
Estonian Ave
Mercia Ave
Echo St
Aurora St
Newlin Circle Blvd
E Copper Creek Cir
S Cheat Pan Way
S Cross River Trail
S Rockridge Trail
E Black Horn Dr
E Taylor Horn Ave
S Bradbury Pkwy
Rueter-Hess Pipeline
Google Earth
Redemption Church - Minor Development Final Plat
Project File: SR2026-005
Board of County Commissioners Staff Report - Page 27 of 204
Image Landsat / Copernicus

REFERRAL RESPONSE REQUEST

Date sent: February 2, 2026 Comments due by: March 2, 2026

Project Name:	Redemption Church
Project File #:	SB2026-005
Project Summary:	Minor Development Final Plat to establish one nonresidential lot for construction of a church. The Site Improvement Plan (SIP) for the church is being processed concurrently with this subdivision request. The project number for the SIP is SP2025-065.

Information on the identified development proposal located in Douglas County is enclosed. Please review and comment in the space provided.

[X]	No Comment	
[ ]	Please be advised of the following concerns:	
[ ]	See letter attached for detail.	
Agency: City of Lone Tree		**Phone #:** 720-509-1275
Your Name: Maureen Welsh *(please print)*		**Your Signature:** Maureen Welsh **Date:** 02-02-2026

Agencies should be advised that failure to submit written comments prior to the due date, or to obtain the applicant's written approval of an extension, will result in written comments being accepted for informational purposes only.

Sincerely,
Eric Pavlinek
Eric Pavlinek, Principal Planner
Enclosure

COLORADO
Division of Water Resources
Department of Natural Resources

March 5, 2026

Eric Pavlinek, Principal Planner
Douglas County Planning Services
Transmission via email: epavlinek@douglas.co.us

Re: Redemption Church
Project File # SB2026-005
Part of the SE ¼ of the NW ¼ of Sec. 30, Twp. 6S, Rng. 66W, 6th P.M.
Water Division 1, Water District 8
CDWR Assigned Referral No. 34583

Dear Eric Pavlinek:

We have reviewed the referral concerning the proposal for a 19,400 square foot church with associated parking, drives, and stormwater detention facility on an approximately 4.526 acre parcel.

Water Supply Demand

According to the letter dated June 25, 2025 ("Letter") from the Parker Water and Sanitation District ("District"), the estimated preliminary water demand is five (5) single family equivalents ("SFE"), with the District's demand calculation being 1.1 acre-feet/year/SFE plus additional irrigation requirements above Douglas County's 0.75 acre-feet/year/residence.

Source of Water Supply

The proposed water supply for the subdivision is service provided by the District. According to the Letter, the District is willing and able to serve the proposed subdivision subject to the conditions set forth in that letter.

According to the Table 1 "Summary of PWSD Water Rights" contained in the Letter, the District has a total of 41,134 acre-feet per year of water rights as a supply. This amount consists of 31,569.6 acre-feet per year of decreed nontributary, not nontributary, and alluvial sources tributary to Cherry Creek, along with 9,564.4 acre-feet per year of nontributary and not nontributary sources dedicated as part of inclusion within the District.

According to the Letter, the District annual water demand is currently 7,700 acre-feet/year, with an estimated future demand of 23,500 acre-feet/year at full buildout.

The majority of the Parker Water and Sanitation District's water supply is water from bedrock aquifers in the Denver Basin. The State Engineer's Office does not have evidence regarding the length of time for which this source will be a physically and economically viable source of water. According to section 37-90-137(4)(b)(I), C.R.S., "Permits issued pursuant to this subsection (4) shall allow withdrawals on the basis of an aquifer life of one hundred years." Based on this **allocation** approach, the annual amounts of water decreed are equal to one percent of the total amount, as determined by rules 8.A and 8.B of the Statewide Nontributary Ground Water Rules, 2 CCR 402-7. Therefore, the water may be withdrawn in those annual amounts for a maximum of 100 years.

State Engineer's Office Opinion

Based upon the above and pursuant to section 30-28-136(1)(h)(I) and 30-28-136(1)(h)(II), C.R.S., it is our opinion that the proposed water supply is adequate and can be provided without causing injury to decreed water rights.

Our opinion that the water supply is **adequate** is based on our determination that the amount of water required annually to serve the subdivision is currently physically available, based on current estimated aquifer conditions.

Our opinion that the water supply can be **provided without causing injury** is based on our determination that the amount of water that is legally available on an annual basis, according to the statutory **allocation** approach, for the proposed uses is greater than the

annual amount of water required to supply existing water commitments and the demands of the proposed subdivision.

Our opinion is qualified by the following:

The Division 1 Water Court has retained jurisdiction over the final amount of water available pursuant to the above-referenced decree, pending actual geophysical data from the aquifer.

The amounts of water in the Denver Basin aquifer, and identified in this letter, are calculated based on estimated current aquifer conditions. The source of water is from a non-renewable aquifer, the allocations of which are based on a 100-year aquifer life. The county should be aware that the economic life of a water supply based on wells in a given Denver Basin aquifer may be less than the 100 years used for allocation due to anticipated water level declines. We recommend that the county determine whether it is appropriate to require development of renewable water resources for this subdivision to provide for a long-term water supply.

Additional Comments

The application materials indicate that a stormwater detention structure may be a part of this project. The applicant should be aware that unless the structure can meet the requirements of a "storm water detention and infiltration facility" as defined in section 37-92-602(8), C.R.S., the structure may be subject to administration by this office. The applicant should review DWR's Administrative Statement Regarding the Management of Storm Water Detention Facilities and Post-Wildland Fire Facilities in Colorado to ensure that the notification, construction and operation of the proposed structure meets statutory and administrative requirements. The Applicant is encouraged to use the Colorado Stormwater Detention and Infiltration Facility Notification Portal to meet the notification requirements.

Please contact Michael.Matz@state.co.us or (303) 866-3581 x8241 with any questions.

Sincerely,

Javier Vargas-Johnson, P.E.

Chief of Water Supply

Ec: Parker Water and Sanitation District file

DOUGLAS COUNTY
HEALTH DEPARTMENT COLORADO

February 24, 2026

Eric Pavlinek
Douglas County Planning Services
100 Third Street
Castle Rock, CO 80104

RE: SB2026-005

Dear Eric,

Thank you for the opportunity to review and comment on the referenced Request for a Minor Development Non-Residential Final Plat for Redemption Church application. Douglas County Health Department (DCHD) staff have reviewed the application for compliance with pertinent environmental and public health regulations. After reviewing the application, DCHD has the following comment(s):

Water and Sewer Service
A will-serve letter, dated June 25, 2025, has been provided by Parker Water and Sanitation District. Based on this letter, DCHD is providing a favorable recommendation regarding the proposed method of sewage disposal.

Please feel free to contact me at 720-907-4887 or KHochstetler@douglas.co.us if you have any questions about our comments.

Sincerely,

Kristin Hochstetler
Environmental Health Specialist I
Douglas County Health Department

March 2, 2026

Eric Pavlinek
100 Third Street
Castle Rock, CO 80104

Re: SB2026-005 Redemption Church

Dear Mr. Pavlinek:

The letter provides comments regarding the applicants request for a Minor Development Non-Residential Final Plat for Redemption Church. The subject property totals approximately 4.5 acres in size and is located within the Agricultural One zone district.

The Curator recommends a Class III survey to resurvey the property. The property was previously surveyed 3 times and each survey located new sites. In 1994 site 5DA.1994, in 2005 site 5DA.2161, and in 2007 site 5DA.2315. It is best practice to resurvey if 10 years have passed. This property is also near Rueter Hess where many significant cultural sites where located, so there is potential for buried archaeological resources related to prehistoric activities and potential for the discovery of subsurface cultural deposits during ground moving activities.

Should buried artifacts and features be discovered, we recommend the completion of the appropriate Colorado Office of Archaeology and Historic Preservation (OAHP) Data Management and Historic and/or Prehistoric Component forms, following OAHP guidelines, with accompanying sketch maps and photographs. Completed forms are submitted to OAHP to ensure that Douglas County's historic or prehistoric data is included in the Colorado OAHP state-wide database of cultural resources.

Thank you in advance for your attention to the preservation and protection of Douglas County's cultural resources for future generations.

Sincerely,

Brittany Cassell

Brittany Cassell, Curator

From: Brittany Cassell
To: Eric Pavlinek
Subject: Redemption Church Cultural Resources
Date: Thursday, April 9, 2026 1:26:57 PM

Hi Eric,

I reviewed the cultural letter completed by ERO Resource Corporation in 2019. ERO found that the parcel has been heavily disturbed on the surface and no prerecorded sites are eligible to be listed on the National Register of Historic Places. This information satisfies the survey request from my previous referral response.

This site still has potential to have cultural resources below the surface. Should buried artifacts and features be discovered, we recommend the completion of the appropriate Colorado Office of Archaeology and Historic Preservation (OAHP) Data Management and Historic and/or Prehistoric Component forms, following OAHP guidelines, with accompanying sketch maps and photographs. Completed forms are submitted to OAHP to ensure that Douglas County's historic or prehistoric data is included in the Colorado OAHP state-wide database of cultural resources. The letter from the State Archaeologist Holly Norton dated 08-15-19 also provides recommendations for the discovery of unidentified archaeological resources.

Thank you,

Brittany Cassell | Curator
Douglas County Department of Community Development
Address | 100 Third St., Castle Rock, CO 80104
Direct | 720-733-6905 **Main** | 303-660-7460
Work Cell | 720-661-9103
Email | bcassell@douglas.co.us

HISTORY Colorado

AUG 15 2019

Sean Larmore
Cultural Resource Coordinator
ERO Resources Corporation
1842 Clarkson Street
Denver, Colorado 80218

Re: Reuter-Hess Reservoir: Notice and Review of Undertaking—Parcel Sale (HC#76317)

Dear M. Larmore:

Thank you for your correspondence dated 18 July 2019 which was received by our office on 24 July 2019 regarding the review of the above referenced project under Section 106 of the National Historic Preservation Act.

After review of the documentation provided, we *concur* that site 5DA.2315 is *not eligible* for listing to the National Register of Historic Places (NRHP). We also *concur* that the recommended finding of *no historic properties affected* [36 CFR 800.4(d)(1)] under Section 106 is appropriate for the sale of this 4.52 acre parcel within Section 30, Township 6 South, Range 66 West of the 6th Principal Meridian in Douglas County.

Regarding your request for comment concerning adding "parcel sales" as a listed activity under the Historic Properties Management Plan (HPMP), we agree that parcel sales may be appropriate to add to the list of potential or anticipated District Activities, but we are uncertain as to the utility of listing them. Parcel sales have a high potential to affect historic properties as the sale transfers any historic properties within the parcel out of the area for which the HPMP applies. As such, we suggest that a Level 3 Review (Consultation) under the HPMP is appropriate for all sales as Parker Water and Sanitation District (PWSD) will not be able to establish or enforce requirements for monitoring and avoidance methods (Level 2 Review) on areas not within the HPMP.

Should unidentified archaeological resources be discovered in the course of the project, work must be interrupted until the resources have been evaluated in terms of the National Register eligibility criteria (36 CFR 60.4) in consultation with our office pursuant to 36 CFR 800.13. Also, should the consulted-upon scope of the work change, please contact our office for continued consultation under Section 106 of the National Historic Preservation Act.

We request being involved in the consultation process with the local government, which as stipulated in 36 CFR 800.3 is required to be notified of the undertaking, and with other consulting parties. Additional information provided by the local government or consulting parties might cause our office to re-evaluate our eligibility and potential effect findings. Please note that our compliance letter does not end the 30-day review period provided to other consulting parties.

Thank you for the opportunity to comment. If we may be of further assistance, please contact Lindsay Johansson, Section 106 Compliance Manager, at (303) 866-4678 or lindsay.johansson@state.co.us.

Sincerely,

Kelly K. Norton

for Steve Turner, AIA
State Historic Preservation Officer

REFERRAL RESPONSE REQUEST

Date sent: February 2, 2026 Comments due by: March 2, 2026

Project Name:	Redemption Church
Project File #:	SB2026-005
Project Summary:	Minor Development Final Plat to establish one nonresidential lot for construction of a church. The Site Improvement Plan (SIP) for the church is being processed concurrently with this subdivision request. The project number for the SIP is SP2025-065.

Information on the identified development proposal located in Douglas County is enclosed. Please review and comment in the space provided.

☐	No Comment	
☐	Please be advised of the following concerns:	
☒	See letter attached for detail.	
Agency:	Douglas County PW Eng	**Phone #:** 303-660-7490
Your Name:	Jake Tolbert	**Your Signature:** Jake Tolbert
	(please print)	**Date:** 3/2/2026

Agencies should be advised that failure to submit written comments prior to the due date, or to obtain the applicant's written approval of an extension, will result in written comments being accepted for informational purposes only.

Sincerely,
Eric Pavlinek
Eric Pavlinek, Principal Planner
Enclosure

March 2, 2026

File No.: SB2026-005 (DV2026-107)

Eric Pavlinek
Douglas County Department of Community Development
Planning Services
100 Third St
Castle Rock, CO 80104

Subject: Redemption Church – Minor Development Final Plat

Dear Eric:

Douglas County Public Works Engineering has reviewed the documents submitted for the referenced project and has the following comments.

Plat Exhibit

- Comments regarding modifications to the drainage easement were provided to the applicant following review of the construction plans. The easement as shown on the plat needs to be revised accordingly.

Plat Narrative

- The narrative indicates that, "water and/or sanitary sewer easements will eventually be dedicated to Parker Water and Sanitation District." Please clarify the timeline for the additional easement dedications as the easements in question must be dedicated prior to approval of the construction plans that are part of the concurrent Site Plan process.

Please let me know if you have any questions regarding these items.

Respectfully,

Jake Tolbert

Jake Tolbert
Development Review Engineer

MILE HIGH FLOOD DISTRICT

2480 W. 26th Ave Suite 156-B | Denver, CO 80211
TEL 303 455 6277 | FAX 303 455 7880

www.mhfd.org

For MHFD staff use only.	
Project ID:	106644
Submittal ID:	10014020

February 11, 2026

To: Douglas County
Via email

Subject: MHFD Review Comments

Re: Redemption Church (Partner Case No. SB2026-005)

This letter is in response to the request for our comments concerning the referenced project. We have reviewed this referral only as it relates to an MHFD drainageway and for maintenance eligibility of storm drainage features, in this case:

- Outfall to Newlin Gulch

We have no comments to the referenced project and do not need to see future submittals.

Please feel free to contact me with any questions.

Sincerely,

Laura Hinds, P.E.
Project Manager, Mile High Flood District
lhinds@mhfd.org

SOUTH METRO FIRE RESCUE
FIRE MARSHAL'S OFFICE

Eric Pavlinek, Principal Planner
Douglas County Department of Community Development, Planning Services
100 Third St
Castle Rock Co 80104
303.660.7460
303.660.9550 Fax

Project Name:	Redemption Church
Project File #:	**SB2026-005**
S Metro Review #	REFRP26-00030
Review date:	February 6, 2026
Plan reviewer:	Aaron Miller 720.989.2246 aaron.miller@southmetro.org
Project Summary:	Minor Development Final Plat to establish one nonresidential lot for construction of a church. The Site Improvement Plan (SIP) for the church is being processed concurrently with this subdivision request. The project number for the SIP is SP2025-065
Code Reference:	Douglas County Fire Code, 2018 International Fire Code, and 2021 International Building Code with amendments as adopted by Douglas County.

South Metro Fire Rescue (SMFR) has reviewed the provided documents and has no objection to the proposed Minor Development Final Plat.

Right of Way & Permits

1123 West 3rd Avenue
Denver, Colorado 80223
Telephone: 303.285.6612
violeta.ciocanu@xcelenergy.com

February 20, 2026

Douglas County Planning Services
100 Third Street
Castle Rock, CO 80104

Attn: Eric Pavlinek

RE: Redemption Church, Case # SB2026-005

Public Service Company of Colorado's (PSCo) Right of Way & Permits Referral Desk has reviewed the above-mentioned Minor Development Non-Residential Final Plat for Redemption Church and currently has no apparent conflict. Please be aware PSCo owns and operates existing natural gas distribution facilities along Heirloom Parkway.

The property owner/developer/contractor must complete the application process for any new natural gas service, or modification to existing facilities via xcelenergy.com/InstallAndConnect. It is then the responsibility of the developer to contact the Xcel Designer assigned to the project for approval of design details.

If additional easements need to be acquired by separate PSCo document, a Right-of-Way Agent will need to be contacted by the Designer.

As a safety precaution, PSCo would like to remind the developer to call the Utility Notification Center by dialing 811 for utility locates prior to construction.

Violeta Ciocanu (Chokanu)
Right of Way and Permits
Public Service Company of Colorado dba Xcel Energy
Office: 303-285-6612 – Email: violeta.ciocanu@xcelenergy.com

From: June Allen Morein
To: Eric Pavlinek
Subject: Public comment Redemption Church SB 2026-005
Date: Tuesday, March 3, 2026 11:03:41 PM

Hello Eric,

I want to express my concern about a proposed utility easement that is being pursued by Parker Water and Sanitation District, represented by Joe Coco of Patriot Construction on behalf of Redemption Church Parker.

The site maps provided by Mr. Coco indicate an easement to be used to install twelve inch wastewater disposal lines, running from the property to be developed by the Church, downhill into the Heirloom community, and ultimately connecting with the Heirloom community's wastewater disposal network. The site maps show the easement extending through some common areas, but also five or more feet across individual properties owned by Heirloom residents.

The slope from the property to be developed downhill into the neighborhood, is significant. There are already drainage issues in this very location. We have planted trees in the five foot easement area, and they have failed due to having 6-8 inches of groundwater sitting at root level underground. Some neighbors have reported impacts of groundwater to their foundation; they have installed multiple French drains to mitigate that. I fear that directing additional wastewater to this location will very possibly exacerbate these problems. I also fear that property values will be negatively affected for those homeowners who will have an easement in place on their property.

It seems as if the alternative approach, which is to install and direct the wastewater disposal system in the opposite direction, to the west, perhaps under Heirloom Parkway, and then connecting it with the much more robust infrastructure owned and maintained by Parker Water and Sanitation District, is a feasible and preferable one.

I strongly encourage Douglas County Planning Department to consider this information as the application process for the project proceeds.

Thank you for your attention and your consideration of this matter.

June Morein
11885 Deorio Street
Parker CO 80134
Lot 141, Heirloom Community

From: Darnesha
To: Eric Pavlinek
Subject: Concern and Opposition to Proposed Church Development Adjacent to Residence
Date: Sunday, February 8, 2026 1:22:30 PM

I am writing to formally express my concern and opposition regarding the proposed construction of a church directly behind my residence.

I work night shifts and rely on the ability to sleep during daytime hours. The placement of a church immediately adjacent to my home raises serious concerns regarding noise, traffic, and activity levels that would directly interfere with my ability to rest and maintain my health and employment. Church operations often include daytime services, events, amplified sound, increased vehicle traffic, and outdoor gatherings, all of which would significantly disrupt the quiet enjoyment of my home.

In addition, this development would substantially impact my privacy. A large institutional structure built directly behind an existing residence is incompatible with residential use and would eliminate any reasonable expectation of privacy in my backyard. This type of development appears inconsistent with appropriate land-use planning, especially when placed immediately adjacent to homes that were already established.

I believe residents should have meaningful recourse when proposed developments fundamentally alter livability, privacy, and compatibility with existing neighborhoods. I respectfully request clarification on the zoning approvals, variance requests, and public input opportunities associated with this project. I also ask that decision-makers carefully consider alternative locations or buffering requirements that would mitigate the impact on nearby residents.

Please advise me on the formal steps I may take to oppose or appeal this development, including public hearings, written objections, or zoning review processes. I appreciate your attention to this matter and look forward to your response.

Project Name: Redemption Church
Project number SP2025-065

Respectfully
Darnesha Montgomery
11877 Deorio St Parker CO 80134
949-289-1828

Sent from my iPhone

Eric Pavlinek

Subject: RE: Noise Concerns – Redemption Church SIP SP2025-065

From: Darnesha <lahighjump@comcast.net>
Sent: Thursday, May 7, 2026 11:10 AM
To: Planning <Planning@douglasco.gov>; commissioners@douglas.co.us; Planning Commission <PlanningCommission@douglasco.gov>
Subject: Noise Concerns – Redemption Church SIP SP2025-065

Good afternoon,

I am writing regarding the proposed Redemption Church development associated with SIP SP2025-065 near Heirloom Parkway and Hess Road.

As a nearby resident/community member, I would like to express concerns specifically related to potential noise impacts on the surrounding residential area.

My concerns include:

- Outdoor amplified music, speakers, or events
- Noise from large gatherings entering and exiting the property
- Traffic-related noise during services and special events
- Noise carrying from within the church building itself, particularly during evening events or high-attendance services
- Potential late-night activities, concerts, youth events, or special events that may increase sustained noise levels
- The cumulative impact of recurring weekly and large-scale events in close proximity to residential homes

Given the size and nature of the proposed development, I respectfully request that the County consider appropriate noise mitigation measures during the review and approval process. This may include restrictions or conditions related to outdoor amplification, event hours, building sound mitigation, parking lot management, and buffering between the property and nearby residences.

I would also appreciate information regarding any upcoming public meetings, hearings, or opportunities for public comment related to this project.

Thank you for your time and consideration.

Respectfully,

Darnesha Montgomery

Sent from my iPhone

From:	jay Morein
To:	Eric Pavlinek; Planning
Cc:	commissioners@douglas.co.us; publicworks@douglas.co.us
Subject:	Response to Redemption Church Proposal for Construction of Site on Heirloom Parkway
Date:	Thursday, February 12, 2026 2:14:46 PM

Good afternoon, Eric,

I would like to express my concerns and opposition to the construction of Redemption Church currently under consideration directly to the west of Heirloom Parkway, near the intersection of Heirloom and Hess Road. Those concerns fall into three general areas: Safety for those living in or nearby Heirloom (both the road and the neighborhood); property risk; and personal enjoyment of my owned property, which is located at 11885 Deloris St., directly to the east of the proposed church site. The site plans indicate that the building is to be constructed just a few feet from my backyard fence.

Safety – Heirloom Parkway, on which the proposed church site is planned has, observationally, experienced an increase in traffic. I believe this to be the result of three contributing factors: first, the more recent opening of the large Parker Water District main offices located at the northwest corner of Heirloom Parkway and Hess Road; second, the increased use of the Reuter-Hess Incline, located directly adjacent to the Water District facility; and third, the increased use of Heirloom Parkway as a shortcut between Chambers Road and Hess Road. I believe an updated traffic study will affirm my observations; the Town of Parker's Engineering Department should complete an updated traffic study, overlaying the projected traffic impacts should the proposed church be constructed.

I have noted an increase in foot traffic along Heirloom Parkway as neighborhood residents access the Reuter-Hess Incline. With both the proposed location of the church and the neighborhood itself primarily being on the eastside of Heirloom, I fear it only being a matter of time before pedestrians will be subject to vehicular danger, a fear only exacerbated by the topography of the proposed location of the church, in close proximity to a hilltop creating blind spots on Heirloom Parkway. The placement of a traffic light at the intersection of Heirloom Parkway and Hess Road may already be under consideration and will be even more greatly needed should the church be located where it is proposed. A controlled intersection may invite even greater traffic volume.

Property Risk – As proposed, the church has requested that it be granted an easement to allow for water runoff from the church's ground to enter the neighborhood's drainage system. The developer has assured interested/concerned parties that the drainage system is more than capable of handling the increased waterflow. Should the project move forward as proposed, that assurance should be captured in writing, with corresponding requirements that the landowners carry surety bonds to cover any unanticipated damage that might be created as a result of any increased waterflows that might overwhelm the drainable system.

Personal Enjoyment – When we bought our house at 11885 Deorio St. nearly five years

ago, one of the attractions that drew us to the location was the sublime, unimpeded views we had of the Parker Incline and its surroundings. The construction of the Parker Water Department's offices somewhat impeded that view; the proposed placement of the church, *directly behind our house*, will entirely block our view. Of all of the houses we considered buying in the Parker area, the one we purchased met the most needs, particularly as we age in place, both of us being senior citizens. We had envisioned our house as being the last one we'd need to purchase; we customized it to best fit our lifestyle, investing tens of thousands of dollars in the process. We now find ourselves having to consider whether placing our house on the market, fully expecting the house's value to drop as a result of its adjacency to the proposed church. With the proposed placement of the church, a number of blind spots will be created between Heirloom Parkway and our backyard fenceline, concealing any vandals intent on causing damage to our house and those of our neighbors. While the use of surveillance cameras has proven effective in reducing *some* theft and property-related crimes, they haven't proven effective in reducing violent crimes.

For the reasons as stated above, I oppose Redemption Church's proposed use of the site.

Thanks for your consideration. Should you wish to discuss this further, I can be reached at jayw.morein@outlook.com

Respectfully,

Jay Morein

From:	sina0saboktakin@gmail.com
To:	Eric Pavlinek; Planning
Cc:	commissioners@douglas.co.us; publicworks@douglas.co.us; dentalproco@gmail.com; lahighjump@comcast.net
Subject:	Formal Demand for Denial or Strict Conditional Approval - Redemption Church (SP2025-065 / SB2026-005)
Date:	Wednesday, February 11, 2026 6:30:48 AM

Good morning, Eric,

I am the owner of 11869 Deorio Street, Parker, CO 80134, immediately adjacent to and downslope of the proposed Redemption Church development under applications SP2025-065 (SIP) and SB2026-005 (Minor Development Final Plat).
This correspondence constitutes a formal objection and demand that Douglas County strictly apply all applicable statutory, regulatory, engineering, and procedural standards before considering any approval.
Given the topographic relationship between the subject parcel and the Deorio Street residential neighborhood, any failure to require full technical compliance exposes both adjacent property owners and the County to foreseeable risk.

1. Zoning Authority and Permitted Use Determination
For SPN 2233-302-00-001 (Account R0481437), provide written confirmation of:
• The current zoning district
• Whether a church use is permitted by-right
• Whether additional land-use approvals are required beyond SP2025-065 and SB2026-005
If the use is not clearly permitted within the zoning district, Douglas County must deny the application or require all additional approvals before proceeding.
Any ambiguity regarding use classification or approval authority must be resolved prior to further action.

2. Drainage Liability and Colorado Surface Water Law
The project site sits materially elevated above my property. Grading and increased impervious surface area will alter drainage characteristics.
Under Colorado law, an upstream landowner may not alter drainage in a manner or quantity that causes greater harm than previously existed. The governing principle often summarized as “no more harm than formerly” imposes liability when upstream development increases runoff, redirects flow, or causes seepage or foundation impacts.
Douglas County’s Storm Drainage Design and Technical Criteria Manual and SIP requirements mandate a Phase III Drainage Report for developments of this scale.
Douglas County must deny or strictly condition approval unless the applicant produces:
• A stamped Phase III Drainage Report
• Hydrologic modeling demonstrating no increase in discharge rate or volume toward Deorio Street properties

• Documentation of downstream flow paths and detention performance
• Engineered confirmation that no increased seepage or saturation risk exists for downslope residential foundations
• As-built certification prior to issuance of certificate of occupancy
Approval without these findings would be inconsistent with County standards and Colorado drainage law.

3. Slope Stability, Retaining Structures, and Geotechnical Risk
Douglas County grading standards limit slopes to 3:1 and impose retaining wall restrictions. Minor Development standards require identification of soil hazards and allow requiring geotechnical reports.
Given the significant elevation differential and adjacency to residential lots, Douglas County must deny or condition approval unless the applicant provides:
• A stamped geotechnical / geological hazards report
• Slope stability calculations
• Retaining wall structural engineering (if walls exceed allowable thresholds)
• Documentation that grading transitions will not compromise adjacent property stability
Unmitigated slope failure, soil migration, or foundation destabilization creates foreseeable harm. Approval without documented stability compliance would be arbitrary and inconsistent with County engineering criteria.

4. Traffic Impact, Assembly Use, and Residential Safety
Church assembly uses generate concentrated peak traffic volumes during limited time intervals. Douglas County roadway standards require a Traffic Impact Study when peak-hour trip thresholds are exceeded. Minor Development standards require traffic impact analysis.
Douglas County must deny or condition approval unless the applicant provides:
• A full Traffic Impact Study including weekend and event peak modeling
• Queueing and stacking analysis
• Intersection turning movement counts
• Parking demand modeling for maximum assembly occupancy
• A binding mitigation plan preventing overflow parking onto Deorio Street
Failure to address peak assembly impacts constitutes inadequate review under County roadway standards.

5. Noise Compliance and Enforceable Operational Restrictions
Douglas County's Noise Overlay establishes measurable decibel limits and construction hour restrictions. SIP authority allows operational limits when necessary to ensure compliance.
Douglas County must deny or condition approval unless enforceable conditions are imposed requiring:
• Prohibition of outdoor amplified sound impacting residential properties
• Defined hours for outdoor activities and events
• Construction-hour compliance monitoring
• Compliance with maximum permissible decibel levels

Approval without enforceable operational safeguards would fail to protect adjacent residential properties.

6. Lighting Compliance and Glare Prevention

Douglas County lighting standards require full cutoff fixtures and restrict pole heights near property boundaries. SIP review requires photometric plans and permits remedial action for glare.
Douglas County must deny or condition approval unless:

- A full lighting photometric study is provided
- Luminaire specifications demonstrate full cutoff compliance
- Evening field verification is conducted prior to certificate of occupancy
- Remediation provisions are imposed for noncompliance

Lighting spillover and glare into residential properties constitute measurable impact.

7. Formal Records and Technical Submittal Demand

Provide complete public access to:

1. Phase III Drainage Report and construction drawings
2. GESC plan
3. Geotechnical report
4. Grading plan sheets with contours and slopes
5. Retaining wall structural documentation
6. Traffic Impact Study / TIS
7. Lighting photometrics and luminaire schedules
8. Landscape buffering details
9. Referral comments and responses
10. Written zoning determination

If any required report has been waived or deferred, provide the written justification.

8. Formal Demand for Denial Absent Full Compliance

Douglas County must deny or strictly condition SP2025-065 and SB2026-005 unless and until the applicant demonstrates through stamped Phase III drainage, geotechnical/slope stability, traffic, lighting, and noise compliance documentation that the project fully complies with all applicable County standards and will not create adverse drainage, slope stability, traffic, noise, or lighting impacts to the adjacent Deorio Street residential neighborhood.
Approval without these findings would be inconsistent with County regulations and could constitute arbitrary administrative action.
Please confirm that this objection is entered into the official project record and include this correspondence in the official public record for SP2025-065 and SB2026-005 and confirm distribution to the Planning Commission and Board of County Commissioners.

Respectfully,
Sina Saboktakin, PE
Licensed Professional Engineer

11869 Deorio Street
Parker, CO 80134

Eric Pavlinek

From: Ava Khoda <khodadds@gmail.com>
Sent: Tuesday, May 26, 2026 9:42 PM
To: Eric Pavlinek
Subject: Re: Redemption Church MDP and SIP

Greetings Sir,

Thank you so very much for taking the time to call me. Please make sure you kindly document and evaluate the possible loud noises, light disturbances and also the very close and unusual proximity of the proposed redemption church with its possible request to more expansion in near future, causing all the mentioned concerns to all the properties on Deorio street. The Amount of traffic to the Heirloom and all the valid concerns that this proposed property is bringing in to our currently great community.

I appreciate your attention to this!

Kind Regards,
Ava Khoda
Owner of property located @11869 Deorio Street Parker CO 80134.

On May 26, 2026, at 4:49 PM, Eric Pavlinek <epavlinek@douglasco.gov> wrote:

Hi Ava,

Thank you for taking my call earlier today. Below are two links to view the project files related to the Minor Development Final Plat and Site Improvement Plan (SIP) for the Redemption Church.

Planning Pro - Subdivision - Minor Development Non-Residential (SB2026-005)

Planning Pro - Site Improvement Plan - Site Improvement Plan (SP2025-065)

Regards,

Eric Pavlinek | Principal Planner
Douglas County Department of Community Development
Planning Services Division
Address | 100 Third St., Castle Rock, CO 80104
Direct | 303.814.4377 **Main** | 303.660.7460
Email epavlinek@douglasco.gov

From: jcocowork@comcast.net
To: Eric Pavlinek
Cc: Jake Tolbert
Subject: RE: SB 2026-005
Date: Wednesday, March 25, 2026 1:18:46 PM

Hi Eric-

In response to June's e-mail below, the surveyor is in the process of preparing a legal description and exhibit for the easement area described below.

I hope this helps. Let me know if you have any questions.

Thanks,

Joe
Joe Coco

CKE Engineering INC
14257 W. Evans Circle
Lakewood, Colorado 80228
Ph: (303) 917-1757

From: Eric Pavlinek <epavlinek@douglas.co.us>
Sent: Friday, March 13, 2026 4:15 PM
To: jcocowork@comcast.net
Cc: Jake Tolbert <jtolbert@douglas.co.us>
Subject: FW: SB 2026-005

Good afternoon, Joe,

Please see the additional comments provide below regarding the proposed easement.

Thank you,

Eric Pavlinek | Principal Planner
Douglas County Department of Community Development
Planning Services Division
Address | 100 Third St., Castle Rock, CO 80104
Direct | 303.814.4377 **Main** | 303.660.7460
Email epavlinek@douglas.co.us

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From: Eric Pavlinek
Sent: Friday, March 13, 2026 4:13 PM
To: 'June Allen Morein' <juneamorein@gmail.com>
Cc: JayW.morein@outlook.com; Darnesha <lahighjump@comcast.net>; Ava K. <dentalproco@gmail.com>; Jake Tolbert <jtolbert@douglas.co.us>
Subject: RE: SB 2026-005

Hi June,

I will forward your comments to Joe to clarify his response about the proposed easement. Once I have a response, I will send it over.

Thank you,

Eric Pavlinek | Principal Planner
Douglas County Department of Community Development
Planning Services Division
Address | 100 Third St., Castle Rock, CO 80104
Direct | 303.814.4377 **Main** | 303.660.7460
Email epavlinek@douglas.co.us

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From: June Allen Morein <juneamorein@gmail.com>
Sent: Friday, March 13, 2026 3:22 PM
To: Eric Pavlinek <epavlinek@douglas.co.us>
Cc: JayW.morein@outlook.com; Darnesha <lahighjump@comcast.net>; Ava K. <dentalproco@gmail.com>
Subject: SB 2026-005

> **Caution:** This email originated outside the organization. Be cautious with links and attachments.

Hi Eric,
In the letter from Joe Coco, he states:
“There is a proposed utility easement in consideration for utility connections tying onto existing utility mains in Haflinger Avenue east of the property. The proposed easement is contained within Tract E of the existing sub-division, and does not extend into any of the adjacent residential lots/properties.”
In the Referral Agency Response Report, Engineering Services item, Mr. Coco states:
“Drainage easement modified. Water and Sanitary easements are in process to be obtained.”

Today, I received a written communication from MSI, the property management company which handles communications from the Heirloom HOA Board. It states:
“The Board has not received any formal request or proposal from Parker Water or Redemption Church regarding an easement. The recent meeting was held at the request of a homeowner, but at this time the Board does not have any involvement or additional information to share.”

Somehow, these statements are not in alignment. I would like to be able to clarify the statements made by Mr. Coco, to be sure that i am receiving accurate and timely information. Please advise on the best way for me to do that.

Thank you.
June Morein
11885 Deorio Street

CKE ENGINEERING INC.

March 13, 2026

Eric Pavlinek
Douglas County
Department of Community Development
100 Third Street
Castle Rock, CO 80104

RE: 11866 Heirloom Parkway SB2026-005 Referral Comment Responses

Dear Eric:

Below are comments provided by referral agencies in regards to the Subdivision Plat for 11866 Heirloom Parkway. Our responses are provided in red text on the following pages. We did not provide responses for any referral agency that did not provide comment during the referral period.

In response to public comment, the project is complying with the regulations of Douglas County for Zoning, Permitted Use, Drainage, Slope Stability, Traffic, and Noise considerations. Also note per Phase III Drainage Study for the proposed development, there will be a reduction in runoff draining to the existing residential subdivision to the east of the subject property.

There is a proposed utility easement in consideration for utility connections tying onto existing utility mains in Haflinger Avenue east of the property. The proposed easement is contained within Tract E of the existing sub-division, and does not extend into any of the adjacent residential lots/properties.

If you have any questions or concerns, please do not hesitate to contact us at your earliest convenience.

Joe Coco
CKE Engineering Inc.

14257 W. Evans Circle • Lakewood, CO 80228 • Phone: (303) 917-1757

Arapahoe County Public Airport Authority- Centennial
Any objects on the site (including cranes used during construction) that penetrate a 100:1 slope from the nearest point of the nearest runway, penetrates the FAA Part 77 airspace surfaces, impede signals associated with navigational equipment or any other reason the FAA deems necessary will require the filing and approval of FAA Form 7460-1. This form may take 90 days or more for approval. Please visit *https://oeaaa.faa.gov* to utilize the notice criteria tool to confirm filing requirements and to file the FAA Form 7460-1. **Please note that this is a State and Federal regulatory requirement.**
Runway endpoint data is available from the Airport for engineering calculations. In addition, please have crane operators advise Airport Operations (303-877-7307) prior to erecting any cranes.
Comment noted and the project does not fall within the 100:1 slope. If cranes are used to construct the proposed project, the proper forms and notifications will be provided.

AT&T
This is in response to your eReferral with a utility map showing any buried AT&T Long Line Fiber Optics near Hess Road Parker, Colorado. The Earth map shows the project area in red. Based on the address and/or map you provided, there should be NO conflicts with the AT&T Long Lines, as we do not have facilities in that area.
Comment noted.

Colorado Division of Water Resources
State Engineer's Office Opinion
Based upon the above and pursuant to section 30-28-136(1)(h)(I) and 30-28-136(1)(h)(II), C.R.S., it is our opinion that the proposed water supply is adequate and can be provided without causing injury to decreed water rights.
Our opinion that the water supply is **adequate** is based on our determination that the amount of water required annually to serve the subdivision is currently physically available, based on current estimated aquifer conditions.
Our opinion that the water supply can be **provided without causing injury** is based on our determination that the amount of water that is legally available on an annual basis, according to the statutory **allocation** approach, for the proposed uses is greater than the annual amount of water required to supply existing water commitments and the demands of the proposed subdivision.
Comment noted.

Additional Comments
The application materials indicate that a stormwater detention structure may be a part of this project. The applicant should be aware that unless the structure can meet the requirements of a "storm water detention and infiltration facility" as defined in section 37-92-602(8), C.R.S., the structure may be subject to administration by this office. The applicant should review DWR's Administrative Statement Regarding the Management of Storm Water Detention Facilities and Post-Wildland Fire Facilities in Colorado to ensure that the notification, construction and operation of the proposed structure meets statutory and administrative requirements. The Applicant is encouraged to use the Colorado Stormwater Detention and Infiltration Facility Notification Portal to meet the notification requirements. Please contact Michael.Matz@state.co.us or (303) 866-3581 x8241 with any questions.

The detention facility has been designed to meet the requirement of a "stormwater and infiltration facility" per Colorado State Statues.

Douglas County Health Department
Water and Sewer Service
A will-serve letter, dated June 25, 2025, has been provided by Parker Water and Sanitation District. Based on this letter, DCHD is providing a favorable recommendation regarding the proposed method of sewage disposal.
Comment noted.

Douglas County Historic Preservation
The Curator recommends a Class III survey to resurvey the property. The property was previously surveyed 3 times and each survey located new sites. In 1994 site 5DA.1994, in 2005 site 5DA.2161, and in 2007 site 5DA.2315. It is best practice to resurvey if 10 years have passed. This property is also near Rueter Hess where many significant cultural sites where located, so there is potential for buried archaeological resources related to prehistoric activities and potential for the discovery of subsurface cultural deposits during ground moving activities. Should buried artifacts and features be discovered, we recommend the completion of the appropriate Colorado Office of Archaeology and Historic Preservation (OAHP) Data Management and Historic and/or Prehistoric Component forms, following OAHP guidelines, with accompanying sketch maps and photographs. Completed forms are submitted to OAHP to ensure that Douglas County's historic or prehistoric data is included in the Colorado OAHP state-wide database of cultural resources.
We are working directly with the Historic Preservation Department. At a minimum, if any archaeological resources or artifacts are found, Sketch maps, forms, and photographs will be prepared and submitted per OAHP guidelines.

Douglas County Public Works Engineering
Douglas County Health Department
The Drainage Easement need to be revised per the CD comments.
The easement has been revised per comments.

Water and/or sanitary sewer easements need to be dedicated for the proposed project. Please clarify the timeline for these easements.
Parker Water and Sanitation District currently owns the property and is selling the property to the church. The required easements are a condition of service and sale of the property. Acquisition of the necessary easements are in process.

South Metro Fire Rescue
South Metro Fire Rescue (SMFR) has reviewed the provided documents and has no objection to the proposed Minor Development Final Plat.
Noted.

Xcel Energy
Public Service Company of Colorado's (PSCo) Right of Way & Permits Referral Desk has reviewed the above-mentioned Minor Development Non-Residential Final Plat for Redemption Church and currently has no apparent conflict. Please be aware PSCo owns and operates existing natural gas distribution facilities along Heirloom Parkway.
Noted and the existing facilities in Heirloom will not be modified as part of the proposed project.

The property owner/developer/contractor must complete the application process for any new natural gas service, or modification to existing facilities via xcelenergy.com/InstallAndConnect. It is then the responsibility of the developer to contact the Xcel Designer assigned to the project for approval of design details.
The application process will be completed for proposed service for the project.

If additional easements need to be acquired by separate PSCo document, a Right-of-Way Agent will need to be contacted by the Designer.
The developer will work with Xcel Energy for any new easements that need to be acquired.

Redemption Parker

Traffic Impact Analysis

Submitted to: Douglas County

(Ref: SP2025-065)

Prepared for:

Redemption Parker
c/o: Lee Architects | Interior Designers
Keith Zahller
2525 S. Wadsworth Blvd., Suite 21
Denver, Colorado 80227

Prepared by:

Platinum Traffic Engineering
2876 Amyvale Court
Castle Rock, CO 80109
303.210.9984
alex@pte-pc.com

(PTE Ref # 25003)

02/27/2026

February 27, 2026

Contents

Appendix

- Parker Municipal Planning Area and Annexations
- Traffic Count Data
- Parker Truck Routes
- Intersection Analysis Methodology
- ITE Trip Generation Land Uses
- Background Traffic Volumes
- Preliminary Access Lines of Sight
- Potential Site Circulation & Operations Strategies
- Traffic Analysis Reports

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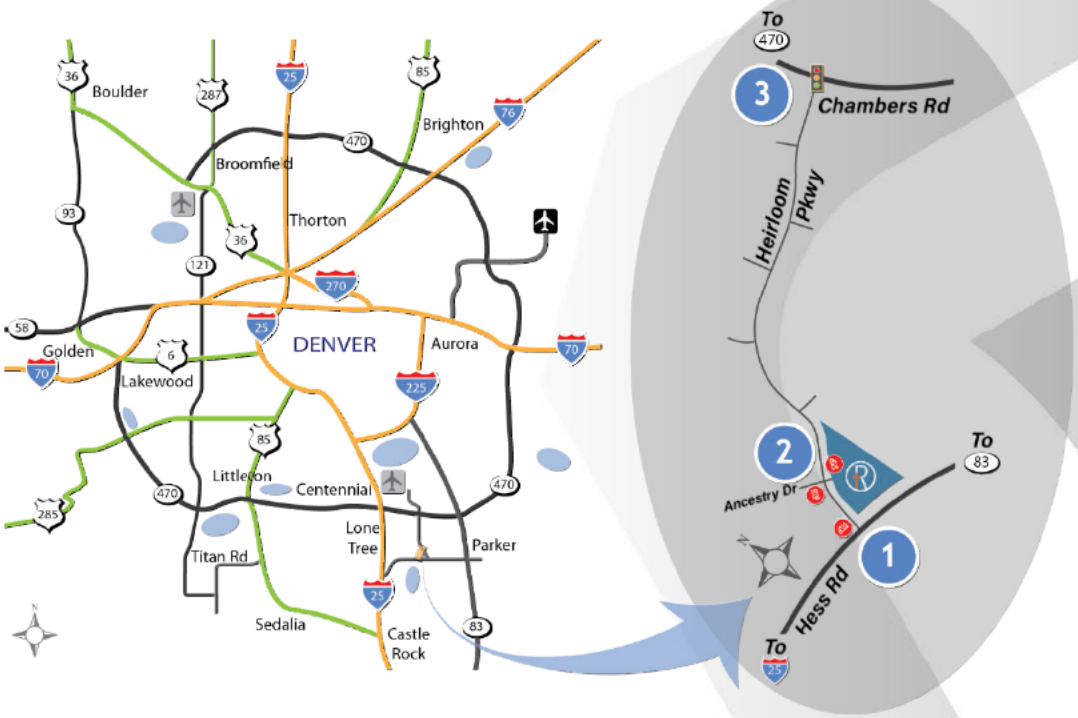
Revision History

Submittal Date	Notes
March 31, 2025	Draft TIA 1.0 – for Douglas County Review
February 27, 2026	Revised TIA 2.0 to address: *Douglas County comments (Oct 31, 2025)* *Town of Parker comments (Oct 3, 2025)*

1 Introduction

The purpose of this Traffic Impact Analysis (TIA) is to meet the requirements established by Douglas County (the "County") to estimate the traffic impacts on adjacent roadways and intersections associated with a proposed development. Recommendations are provided to mitigate impacts that cause the roadway network to fall outside of the County's acceptable levels of service limits.

Figure 1-a: Project Vicinity Map



1.1 PROPOSED DEVELOPMENT

The Redemption Parker (Project) consists of the proposed construction of a new church building on a vacant parcel in unincorporated Douglas County, Colorado, located at 11866 Heirloom Pkwy. The Project is adjacent to the incorporated Town of Parker and lies within the Parker municipal planning area, as shown in ***Figure A-1*** in the Appendix. The project vicinity is illustrated in ***Figure 1-a***, and the site plan is shown in ***Figure 1-b***.

The site plan illustrates the proposed *19,400 square foot (SF) church building* that will accommodate *349 seats* for its weekly worship services, along with internal circulation, off-street parking, associated landscaping, and other site design features. The site plan indicates a future expansion of up to 6,000 SF, but *the analysis of that expansion is not included in this TIA*.

The Project will be used for religious services, community gatherings, and other activities typical of a church. For example, aside from church employee travel, weekday activities such as group study and mentorship sessions typically begin and end during mid-morning and/or evening times, avoiding typical weekday commuter peak hours.

It should be noted that the church does not include any weekday education services, such as private or public pre-kindergarten or grades K-12. As a result, school-related traffic, queueing, or transportation needs are not anticipated.

Project Timing and Scale. This TIA anticipates the Project will be constructed and opened in 2026.

Proposed Parking. The proposed site plan indicates on-site parking will consist of 147 proposed parking spaces, as shown in ***Figure 1-b***.

Proposed Vehicular Access. A new full-movement vehicular access is proposed along Heirloom Pkwy.

Proposed Emergency Access. A review of the Project led to the conclusion that a single point of access meets the requirements of the South Metro Fire Rescue (SMFR) [1], based on an email to the Project A&E team dated March 26, 2025.

Proposed Non-Vehicular Access. The Project will provide access to the Project site via a proposed accessible link to the existing sidewalks along Heirloom Pkwy (not shown in ***Figure 1-b***). Hess Rd is of a rural character in the area with ditches for drainage and no curb, gutter, or sidewalk within ¾-mile of the Project.

Figure 1-b: Proposed Project Site Plan (No Scale)

1.2 TIA SCOPE

The scope of this TIA was established through a review of the County's TIA criteria [2] and discussion with the County on January 30, 2025. In addition to the typical impact analysis performed in a TIA as outlined in the Base Assumptions in ***Figure 1-c***, a comment from the Project's County Pre-Application meeting held December 12, 2024 (County reference # PS2024-251) and the follow-up TIA scoping discussion with the County identified the following key issue that should be addressed in this TIA. A summary of resolutions to the following items that warranted specific discussions is included in ***Table 7-A***.

Planning Pre-Submittal Comment. *"Contact the South Metro Fire Protection District to discuss fire access, fire suppression systems, and building code requirements."* (Refer to the discussion in this section, above.)

1.3 REVIEW COMMENTS

This section summarizes several review comments received regarding prior versions of this TIA.

Douglas County Engineering Comments (Oct 31, 2025). Several comments related to the March 2025 version of this TIA were received and addressed. Douglas County Engineering requested revisions to clarify and more explicitly document safety findings and recommended access improvements associated with the site access on Heirloom Parkway. Sections of this TIA updated in response to these comments include *5 Analysis of Future Conditions*, *6 Recommended Mitigation Measures*, and *7 Conclusions & Recommendations*.

Town of Parker Engineering Referral Comments (Oct 3, 2025). Several referral comments related to the March 2025 version of this TIA were also received. The Town of Parker requested revisions to ensure consistency with Town roadway classifications, parking regulations, and current network conditions, and to provide additional discussion of weekday church programming. The town also noted the Project's potential to impact on neighboring communities. TIA sections updated in response to these comments include *2 Existing Conditions*, *5 Analysis of Future Conditions*, and the Appendix.

Study Locations. The locations evaluated in this TIA.

Table 1-A: TIA Study Locations

Location	Status	Movements	Traffic Control
Hess Rd & Heirloom Pkwy (#1)	Existing	Full Movement	Two-Way Stop Control (2WSC)
Heirloom Pkwy & Ancestry Dr / Project Access (#2)	Existing	Full Movement	2WSC
Chambers Rd & Heirloom Pkwy (#3)	Existing	Full Movement	Signalized

Study Periods. The peak period during which data was gathered and for which analysis was performed (Study Period) is summarized in ***Table 1-B***.

Table 1-B: TIA Study Periods

Study Period	Description	Time Period
Sun	Peak One-Hour Period on a typical Sunday	7:00 AM – 9:00 AM

Study Years. The following Horizon Year(s) will be evaluated in this TIA.

- **Short Term Horizon - 2026.** Based on the estimated construction completion of the proposed Project, 2026 is the Short-Term Horizon Year.
- **Long Term Horizon - 2046.** The year 2046 was selected with the County as the Long-Term Horizon Year for the evaluation of future traffic conditions.

Figure 1-c: TIA Base Assumptions

Platinum Traffic Engineering

TECHNICAL MEMORANDUM

TO: Chris Martin, Douglas County

FROM: Alexander E. Larson, PE

DATE: March 27, 2025

SUBJECT: **TIA Base Assumptions - Redemption Parker**

Table 1 summarizes the base assumptions to be used for a proposed Traffic Impact Analysis (TIA) for the subject project. Additional reference materials are attached.

Table 1 TIS Base Assumptions

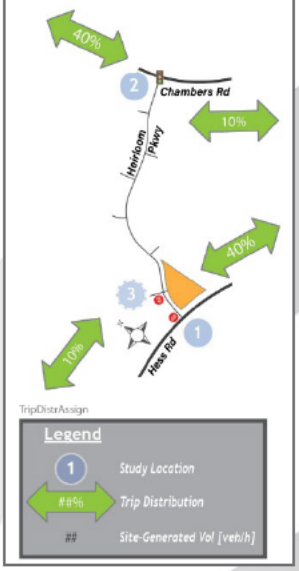
Project Name	Redemption Church Parker (Pre-App *PS2024-251* review findings attached for more info)
Project Location	Heirloom Pkwy at Hess Rd (parcel NW of intersection)
Study Intersection(s)	1. Hess Rd & Heirloom Pkwy 2. Heirloom Pkwy & PWSD/Proposed Access 3. Chambers Rd & Heirloom Pkwy (See Figure 1.)
Study Year(s)	• Existing: 2025 • Short-Term: 2026 • Long-Term: 2046
Future Traffic Growth	• Heirloom Pkwy: @ 1.5%/year avg annual growth • Chambers+Hess: Parker 2020 Arterial Plan update + Engineering Judgment (No DC TMP Vols)
Time Period(s) for Study	• Sun
Trip Generation	• ITE 560, 19.4 KSF, 349 Seats, No weekday school ○ Sun PHOG: 163 veh/h || n/a veh/d
Trip Adjustments Factors	None
Overall Trip Distribution	See *Figure 1.*
Target LOS for Mitigations	Intersection LOS Better Than LOS E
Committed Roadway Improvements	None (Chambers Road extension outside study area)
Other In-Progress Development	None
Areas Requiring Special Study	None

Alex Larson, PE
Transportation Engineer

Douglas County - Concurrence

Castle Rock, CO | www.PlatinumTrafficEngineering.com | 303.210.9984

Figure 1 Site Trip Distribution



2 Existing Conditions

This section discusses the current conditions regarding traffic and roadway in the study area.

Traffic Data. This TIA gathered intersection peak hour turning movement counts at the two Study Locations during the Study Period. Volumes to and from Ancestry Dr were estimated. Additionally, 24-hour bi-directional midblock traffic counts were recorded along Heirloom Pkwy at a midblock location between *Hess Rd & Heirloom Pkwy (#1)* and *Heirloom Pkwy & Ancestry Dr (#2)*. The existing traffic volumes are illustrated in ***Figure 2-a***. Data collection equipment installed on a Sunday in February 2025 for this TIA captured nearly 1,500 vehicles per day in both directions along Heirloom Pkwy (approximately 800 northbound vehicles per day and 700 vehicles per day in the southbound direction). Traffic data collection reports for the counts recorded for this TIA are included in the Appendix.

Other available historic weekday traffic volume data was gathered from online resources and summarized in the Appendix in ***Table A-3***.

Roadway Network. The study area includes three roadways, Hess Rd, Chambers Rd and Heirloom Pkwy, as described further below and illustrated in ***Figure 2-a***.

- **Hess Road.** Hess Rd is a 2-lane roadway that runs east/west, providing access from I-25 in the incorporated City of Castle Pines through unincorporated Douglas County, and into the Town of Parker to Parker Rd (State Highway 83). Near I-25, Hess Rd changes name to/from Castle Pines Parkway. Further east, it is renamed again into Hilltop Rd past Parker Rd extending again into unincorporated Dougla County as it continues southeast. Hess Rd is classified as a major arterial roadway near the Project, according to the Douglas County 2040 TMP, where it is anticipated to widen to 4 lanes in 2040. Hess Rd features deceleration and acceleration lanes for most right and left turns, including at the Study Location of *Hess Rd & Heirloom Pkwy (#1)*. The road is undivided with a painted centerline stripe and passing zones are marked west of the Project's study area. It has a rural context, lacking roadway lighting and sidewalks. The roadway features drainage ditches in lieu of curb and gutter. The terrain Hess Rd traverses west of the site is hilly, with an approximately 1½ -mile-long segment at an average grade of 6% west of the study area. The posted speed limit is 50 MPH and marked bike lanes along the route regularly support experienced road cyclists. Development is sparse west of *Hess Rd & Heirloom Pkwy (#1)* until reaching the City of Castle Pines. In contrast, the land along Hess Rd to the east of the Study area in the Town of Parker is highly developed. The Town of Parker boundary is located between Heirloom Pkwy and Chambers Rd.

- **Chambers Road.** Chambers is a 4-lane major arterial that runs north and south, connecting the Study area to areas to the North, including the E-470 Tollway facility, and three other major east/west arterials that provide access to I-25 and Parker Rd (SH 83). To the north, Chambers Rd changes names to Potomac St near the Centennial airport. South of the Project, Chambers Rd connects to Crowfoot Valley Rd and continues as Bayou Gulch Rd further southeast past State Highway 83. The posted speed limit is 45 MPH and the roadway has marked bike lanes, sidewalks on each side, and is located near several key regional trail connections. The intersection with *Chambers Rd & Heirloom Pkwy (#3)* is a signalized T-intersection. Future widening is expected to increase the total capacity to six lanes (three in each direction).

A gap in Chambers Rd south of the Project, from Hess Rd to Crowfoot Valley Rd, was not yet open when the traffic volume data presented in **Figure 2-a** *was collected.*

- **Heirloom Parkway.** Heirloom Pkwy is designated by the Town of Parker as a Collector roadway that provides access to roadway users from adjacent single-family residences, nearby recreational facilities, and Parker Water and Sanitation facilities. Heirloom connects Hess Rd and Chambers Rd at each of its ends. The speed limit along Heirloom Pkwy is posted at 30 MPH. In the northbound direction, posted speed limits are accompanied with roadside digital signage that provides "Your Speed" feedback to motorists, typically used as means of increasing prudent motorists' awareness of their travel speed and even to apply social pressure for others to maintain reasonable speeds. Heirloom Pkwy has five marked and signed pedestrian crossings at intersections between the Project site and Chambers Rd, including the signalized crossing at *Chambers Rd & Heirloom Pkwy (#3)*. The roadway was annexed into the Town of Parker, and is not included on the Town's designated trucking route [3], unlike Chambers Rd and Hess Rd (Refer to the Appendix for more information). According to Town of Parker engineering staff, the volume of traffic using Heirloom Pkwy can temporarily and suddenly increase due to motorists that navigate around incidents along northbound I-25 that unexpectedly impact the interstate's capacity. These diversions do not typically result in saturated conditions along Heirloom Pkwy due to its distance from I-25 and other available options.
- **Ancestry Drive.** Ancestry Dr is a two-lane local road that intersects Heirloom Pkwy at the same location where the Project Access is proposed. Ancestry Dr provides access to Parker

Water and Sanitation District offices and treatment facilities. Additionally, a recreational trailhead is accessed by Ancestry Dr.

An update to the Douglas County Transportation Master Plan is in progress as of February 2026 (planning year 2050), so updates were not incorporated into this TIA [4].

On-Street Parking. Parking along arterial or collector roadways such as Heirloom Parkway and Hess Road in the Town of Parker is prohibited unless dedicated on-street parking stalls are constructed. Additionally, the existing roadway section is not wide enough to accommodate on-street parking and the travel lanes.

Adjacent Land Uses. The area surrounding the Project location includes single-family residential, water/wastewater infrastructure, and a trailhead to a recreational facility (the *Reuter-Hess Incline*). Perhaps most notably, the study area resides at the base of the Reuter Hess Reservoir dam, which is located to the south of the Project and operated by the Parker Water & Sanitation District [5]. The public entrance for recreational uses on the reservoir property (accessible by reservation only) is located along Hess Rd east of Heirloom Pkwy).

Existing Level of Service. The Levels of Service (LOS) of the Study Locations estimated by the operational analysis of existing conditions are summarized in ***Table 2-A*** and ***Figure 2-a***. For a description of values used in the PTV Vistro model for this project, refer to ***Table A-6*** and the Traffic Analysis Reports in the Appendix.

Figure 2-a: Existing Conditions and LOS

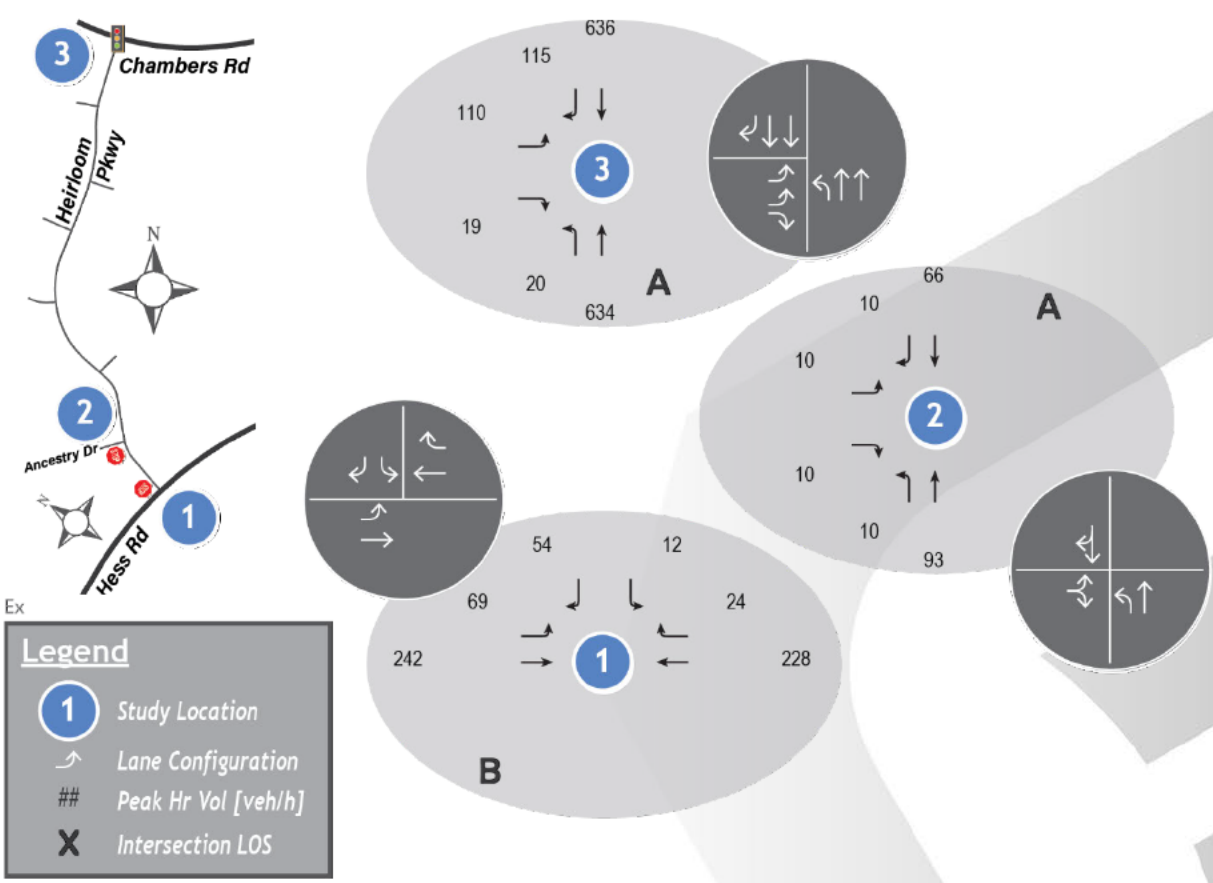


Table 2-A: Existing Level of Service (LOS) Summary

Study Location	Delay (LOS)
Hess Rd & Heirloom Pkwy (#1)	8 (B)
Heirloom Pkwy & Ancestry Dr (#2)	10 (A)
Chambers Rd & Heirloom Pkwy (#3)	8 (A)

Results of traffic operations analyses are reported in terms of Levels of Service (LOS). Please refer to the Appendix for information about the standard methodology used to analyze the intersections.

Existing Queues. Estimated 95th percentile queue lengths, storage lengths of vehicular turn bays, and queue ratios in the existing conditions are summarized in ***Table 2-B***. For more information about these metrics, refer to *5 Analysis of Future Conditions*.

Table 2-B: Existing Queue Length, Storage Lengths, and Queue Ratios

Study Location	Approach	Left	Right
Hess Rd & Heirloom Pkwy (#1)	SB	2' / 230' (1%)	6' / 100' (6%)
	EB	5' / 710' (1%)	
	WB		0' / 320' (0%)
Heirloom Pkwy & Ancestry Dr (#2)	NB	1' / 110' (1%)	
	EB	2' / 100' (2%)	
Chambers Rd & Heirloom Pkwy (#3)	NB	2' / 450' (1%)	
	SB		27' / 420' (6%)
	EB	83' / 150' (55%)	

Queue ratios (QR) are a calculated metric presented as a means to quickly assess the portion of turn bay storage capacity used by the 95th percentile queue lengths, expressed as a percentage.

3 Proposed Project Trips

This section discusses the vehicular trips that will travel to/from the Project after opening (Project trips) and estimates specifically where each trip will pass through the Study Locations using Trip Distribution and Trip Assignment processes.

3.1 SITE TRIP GENERATION

This section documents the estimated Project Trips based on the trip generation analysis performed for the Project. The analysis is based on rates available from the Institute of Transportation Engineer's (ITE) Trip Generation Manual (11th edition) [6] (TGM).

Total Project Trips. The total project trips are based on the applicable land use classifications for the Project. The Appendix contains descriptions of each land use as defined in the TGM. As described in Section 1.1, Proposed Development, typical midweek use of the Project is not expected to generate notable vehicle trips during weekday peak hours, and the Project does not for preschool, private school, or other educational uses that would require additional traffic considerations.

Internal Trip Capture. This Project did not apply internal trip capture reductions.

Multimodal Trip Reductions. This Project did not apply multimodal trip reductions.

Pass-By Trip Reductions. This Project did not apply pass-by trip reductions.

Table 3-A summarizes the net Project trips, which are analyzed in this Study.

Table 3-A: Trip Generation Summary

Peak	ITE Code	Qty	Trip Gen Rate	Trips In [veh]	Trips Out [veh]	Total Trips [veh]
Sun PHoG	560	349	0.51	80	83	163

Notes:

- ITE Code 560: Church (Seats)
- 560 Sun PHoG: 49% In, 51% Out
- PHoG = Peak Hour of Generator.

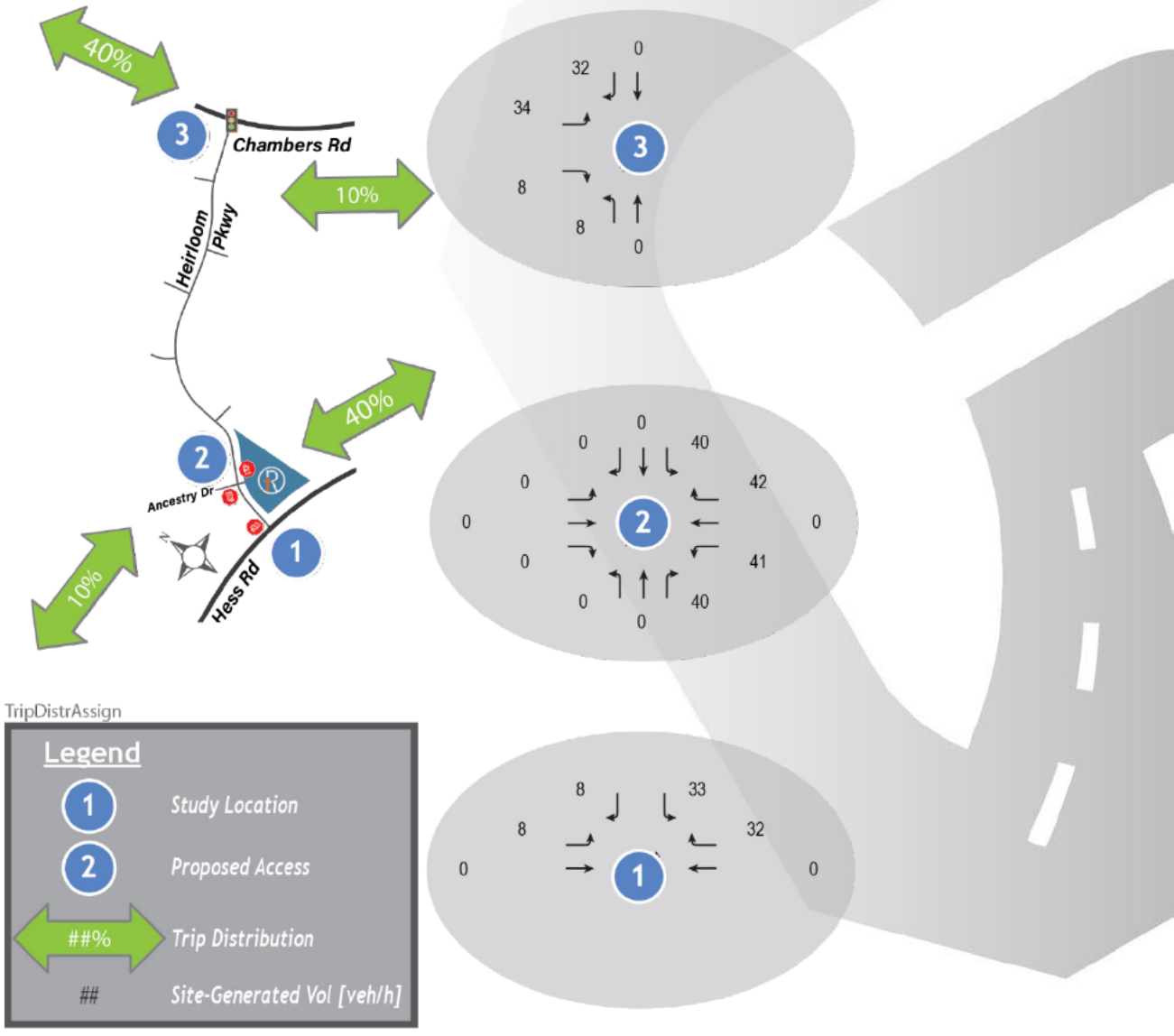
3.2 TRIP DISTRIBUTION

The proposed distribution of site-generated trips to and from the site was estimated based on engineering judgment around the nearby residential population centers and the orientation of roadways. The proposed trip distribution is illustrated in ***Figure 3-a***.

3.3 SITE TRAFFIC VOLUMES

The site-generated trips, by turn movement, are also illustrated in ***Figure 3-a*** in accordance with the proposed trip distribution.

Figure 3-a: Estimated Site-Generated Trip Distribution and Trip Assignment



4 Future Conditions

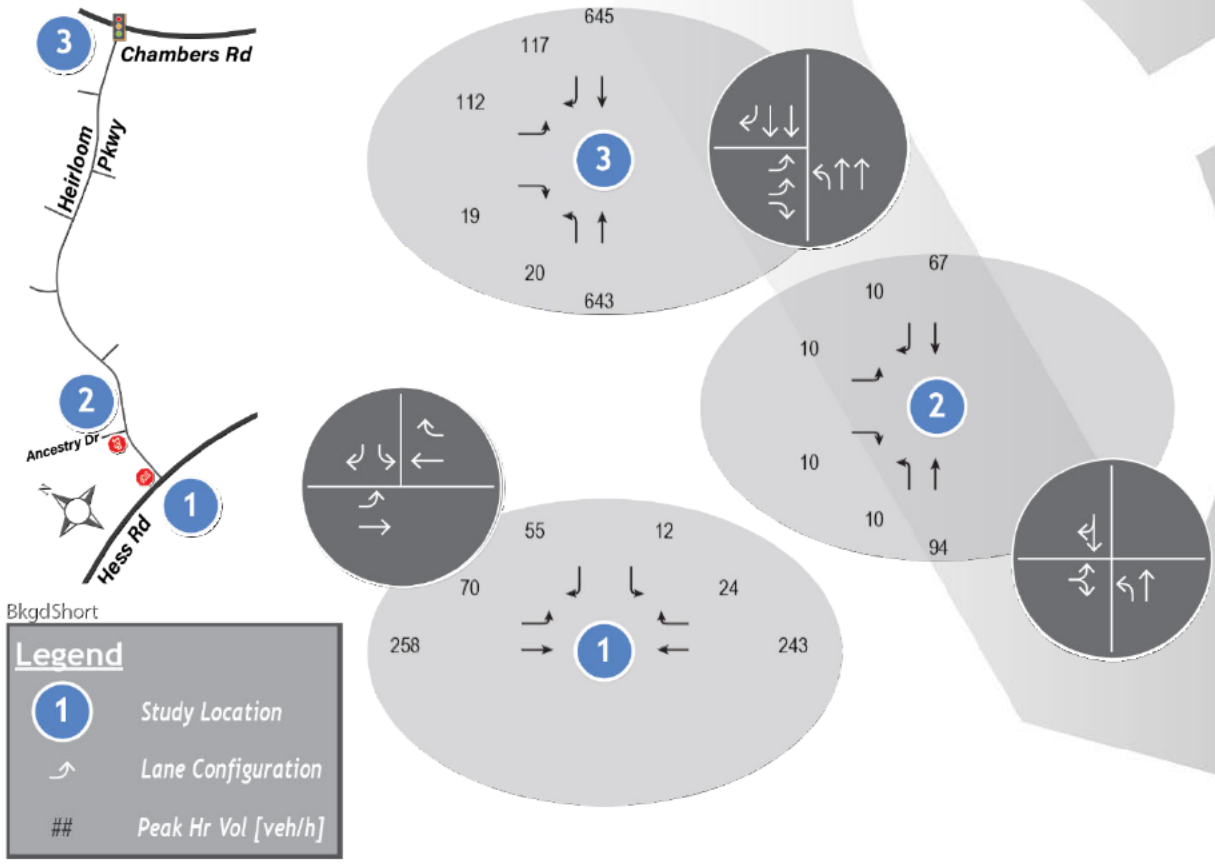
The following sections describe traffic conditions expected to be present in future Background Traffic and Total Traffic conditions.

4.1 BACKGROUND CONDITIONS

This section addresses the development of estimated Background Traffic volumes, referring to the traffic volumes that would be present without the Project (Project's no-build scenario) in future Study Years defined in *1 Introduction*. Background Traffic conditions, including traffic volumes and intersection lane configurations expected in the Short-Term and Long-Term horizons are shown in ***Figure 4-a*** and ***Figure 4-b***.

Short-Term Background Conditions – Roadway Network. No changes to the roadway network are foreseen in the Short-Term Study Year. The intersection lane configuration in the future roadway network expected in the Short-Term Background conditions is shown in ***Figure 4-a***.

Figure 4-a: Short-Term Background Traffic Conditions



Short-Term Background Conditions – Estimated Traffic Volumes. Existing turning movement counts collected for this TIA were factored to account for growth between the Existing Study Year and the Short-Term Study Year when the Project opens, as described further in the Appendix. The estimated Short-Term Background Traffic volumes are shown in ***Figure 4-a***.

Long-Term Background Conditions – Roadway Network. Several major roadway projects are programmed for the long-term scenario, based on long-range planning documents and discussions with Town staff.

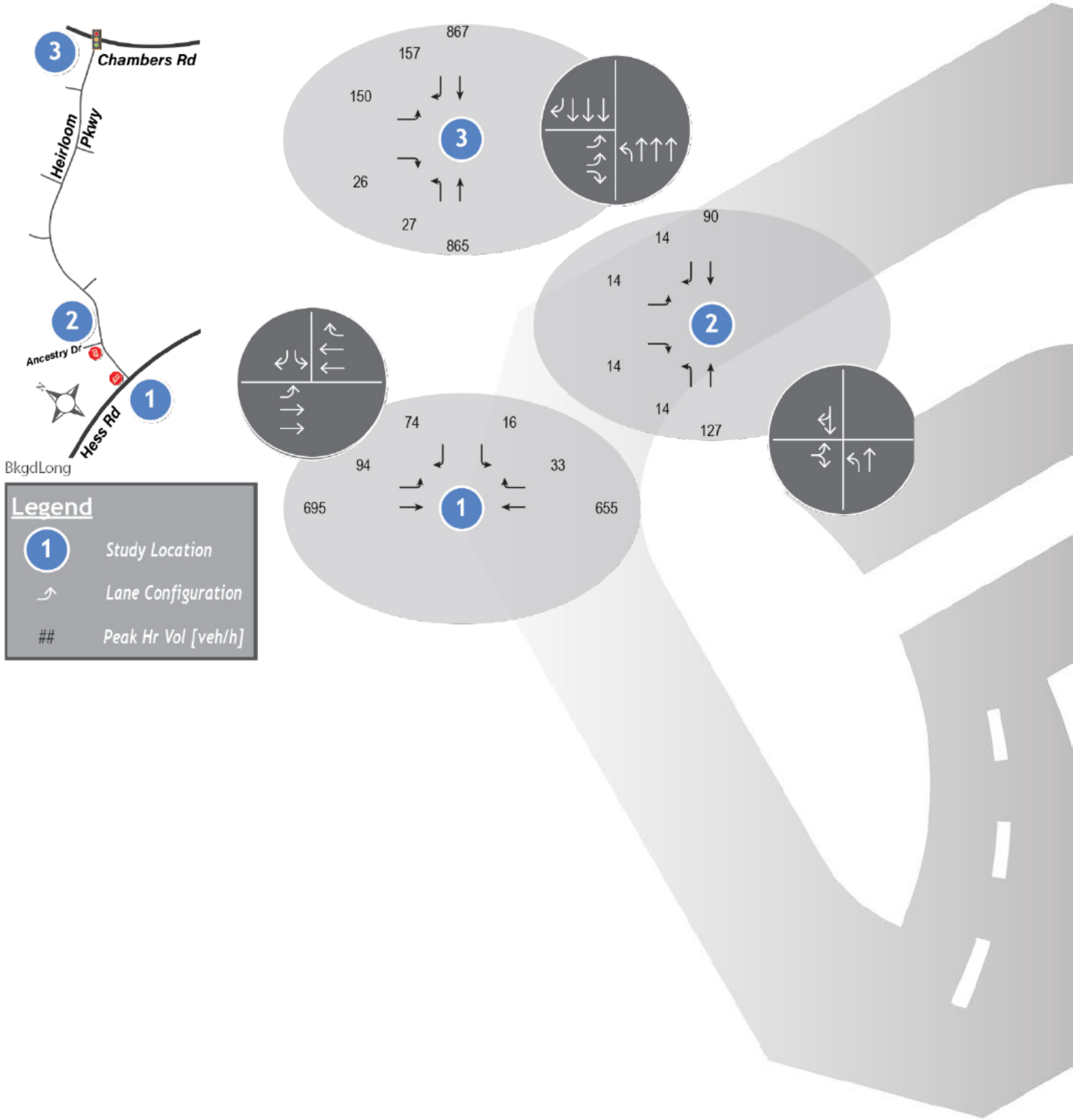
- **Chambers Rd Widening.** According to Town of Parker staff in 2024, Chambers Rd is expected to be widened to three lanes in each direction near Heirloom Pkwy between 2025 and 2040.
- **Chambers Rd Gap Project.** Chambers Rd was extended past Hess Rd to Crowfoot Valley Rd after the traffic volumes in *2 Existing Conditions* were collected and prior to the time of the Project opening. The proposed roadway extension does not directly impact the Study locations, but local travel patterns may change due to its regional significance, as described further below.

The intersection lane configuration in the future roadway network expected in the Long-Term Background conditions is shown in ***Figure 4-b***.

Long-Term Background Conditions – Estimated Traffic Volumes. Existing turning movement counts collected for this study were factored to account for growth between the Existing Study Year and the future Long-Term Study Year, as described further in the Appendix. The estimated Long-Term Background Traffic volumes are shown in ***Figure 4-b***.

The Chambers Rd extension project's impact on travel patterns is difficult to predict manually and is outside this TIA's scope. However, the travel demand model used to estimate future background traffic volumes included the extension and its roadway capacity. Therefore, the opening of the Chambers Rd extension after data collection for this TIA does not materially affect its conclusions.

Figure 4-b: Long-Term Background Traffic Conditions



4.2 TOTAL TRAFFIC CONDITIONS

This section describes the Total Traffic conditions, representing the traffic volume in a scenario where the Project is built.

The conditions analyzed in this section do not consider recommended improvements described in 6 Recommended Mitigation Measures.

Total Traffic Volume Estimates. To enable the analysis of the impacts of the site-generated traffic in each of the horizon study periods, the site-generated traffic volumes developed in *3 Proposed Project Trips* are added to the respective peak periods in both the Short Term and Long-Term Background Traffic volume scenarios above. Doing so at a granular turn-movement level provides the Total Traffic volume data used in each horizon year. The Short-Term Total Traffic volumes are illustrated in ***Figure 4-c*** and the Long-Term Total Traffic volumes are illustrated in ***Figure 4-d***.

Figure 4-c: Short-Term Total Traffic Conditions

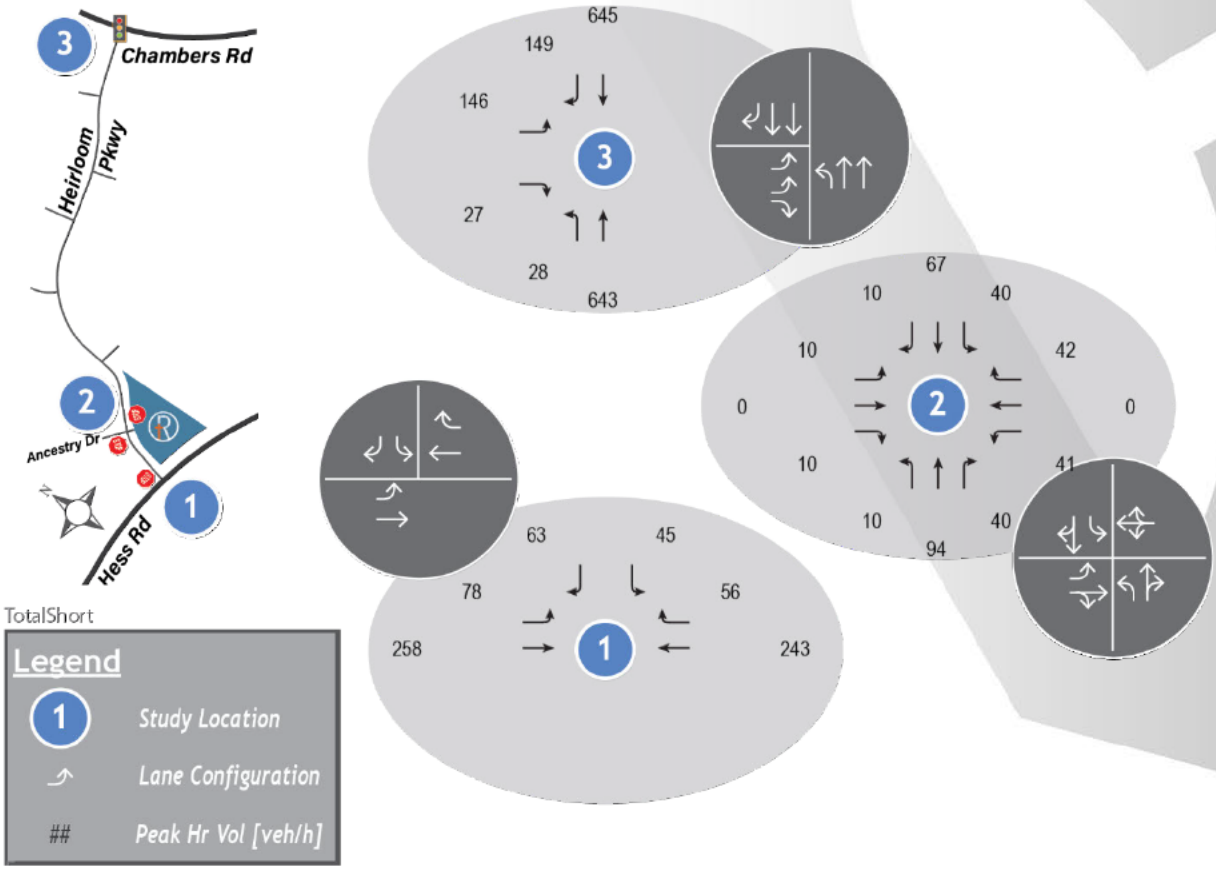
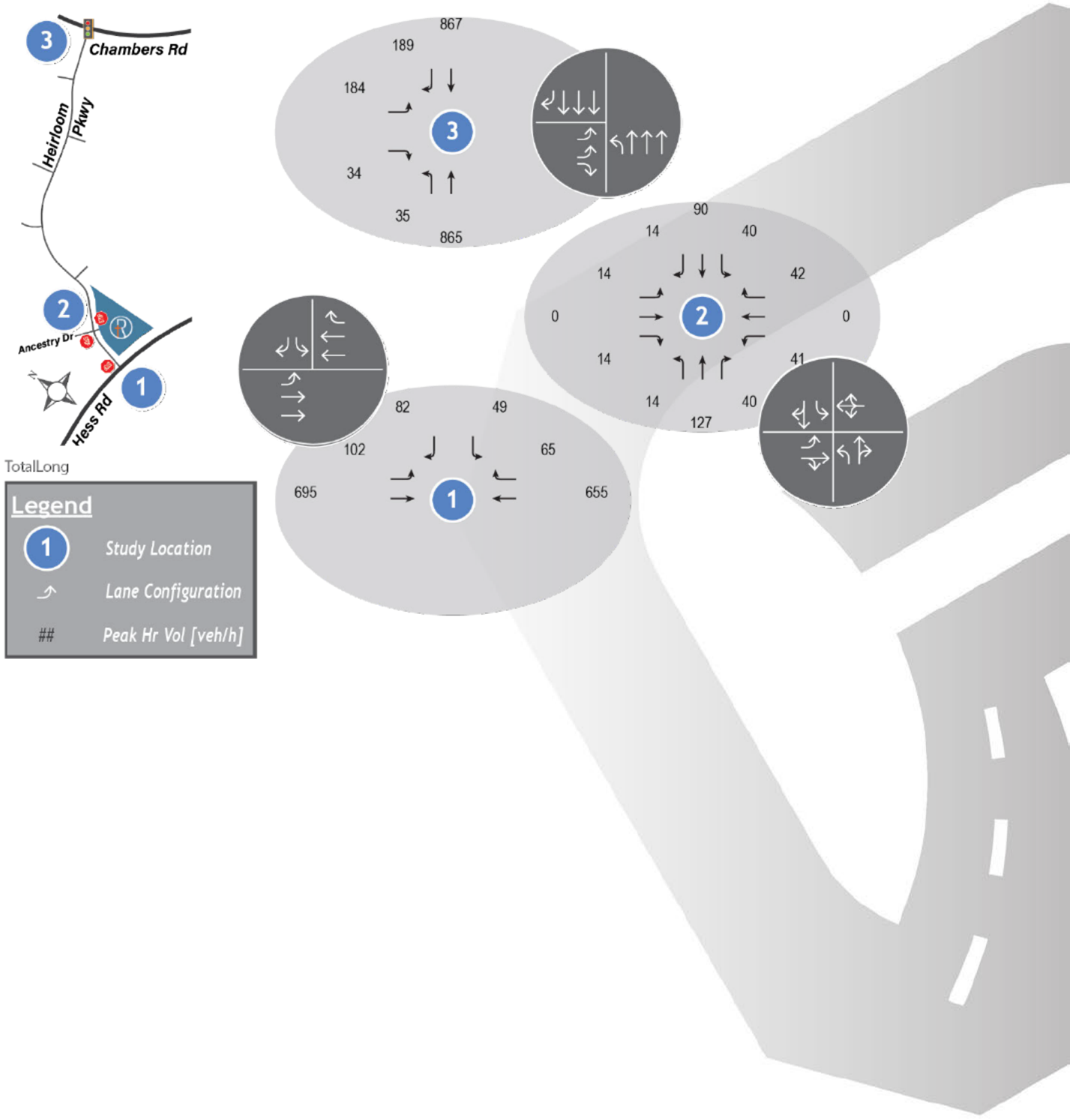


Figure 4-d: Long Term Total Traffic Conditions



5 Analysis of Future Conditions

This section reports on the evaluation of the Study Locations' performance with respect to various measures. Each analysis considers measures of effectiveness (MoE) including level of service and queueing analysis.

5.1 LEVEL OF SERVICE (LOS)

The roadway network and operational characteristics were modeled using *PTV Vistro 2025* (PTV Vistro) software using the *Highway Capacity Manual 7th Edition* (HCM) methodology.

Overview of Results. The operations analysis revealed that all of the Study Locations operate at acceptable average levels of service. The intersection delays and LOS are summarized in ***Table 5-A*** and illustrated in ***Figure 5-a***, ***Figure 5-b***, ***Figure 5-c***, and ***Figure 5-d***.

Table 5-A: Future LOS Summary

Study Location	Year	Background	Total
Hess Rd & Heirloom Pkwy (#1)	2026	9 (B)	9 (B)
	2046	10 (C)	10 (C)
Heirloom Pkwy & Ancestry Dr (#2)	2026	10 (A)	12 (B)
	2046	11 (B)	13 (B)
Chambers Rd & Heirloom Pkwy (#3)	2026	8 (A)	9 (A)
	2046	8 (A)	9 (A)

Note: Reported LOS for 2WSC intersections are based on the highest delay of minor street movements.

Figure 5-a: Short-Term Background Traffic LOS

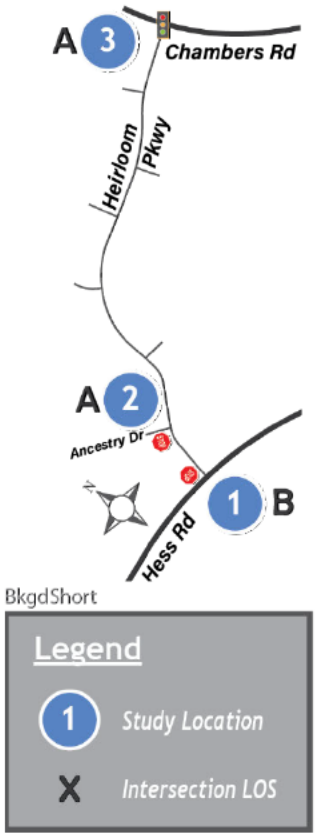


Figure 5-b: Long-Term Background Traffic LOS

Figure 5-c: Short-Term Total Traffic LOS

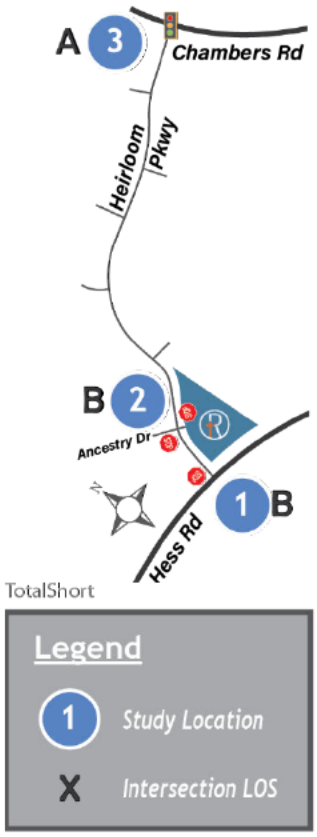
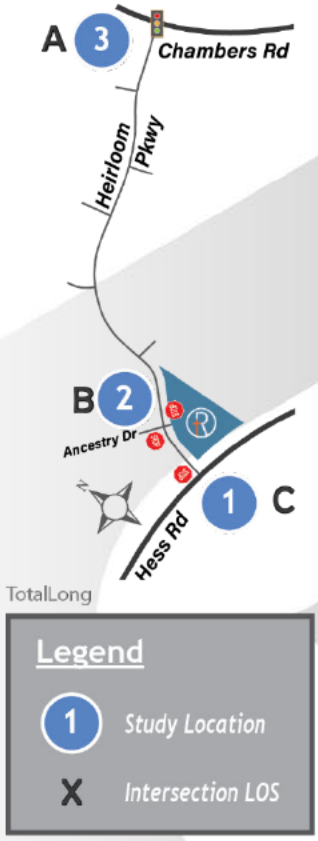


Figure 5-d: Long-Term Total Traffic LOS



5.2 QUEUING

This section summarizes the estimated queueing at the Study Locations in the Short-Term and Long-Term horizon years. Queue analysis was performed using *HCM* methodology within PTV Vistro. ***Table 5-B*** summarizes the maximum queue lengths for the Study Periods. Queue data for the individual Study Periods are also available in the Traffic Analysis Reports included in the Appendix. This TIA presents a calculated metric known as the Queue Ratio (QR), which represents the queue expressed as a percentage of the available storage capacity.

The terms queue(s) or queue length(s) in this TIA refer to the estimated Sunday 95th percentile queue length expressed in feet per lane.

Table 5-B: Estimated Maximum 95th Percentile Queue Lengths and Queue Ratios

Study Location	Approach	Background Traffic		Total Traffic	
		Left	Right	Left	Right
Hess Rd & Heirloom Pkwy (#1)	SB	2 ft / 230 ft (1%)	6 ft / 100 ft (6%)	9 ft / 230 ft (4%)	7 ft / 100 ft (7%)
	EB	5 ft / 710 ft (1%)		6 ft / 710 ft (1%)	
Heirloom Pkwy & Ancestry Dr / Project Access (#2)	NB	1 ft / 110 ft (1%)		1 ft / 110 ft (1%)	
	SB			2 ft / 150 ft (2%)	
	EB	2 ft / 100 ft (2%)		2 ft / 100 ft (2%)	
	WB			11 ft / 100 ft (11%)	
Chambers Rd & Heirloom Pkwy (#3)	NB	2 ft / 450 ft (1%)		4 ft / 450 ft (1%)	
	SB		28 ft / 420 ft (7%)		40 ft / 420 ft (9%)
	EB	84 ft / 150 ft (56%)		111 ft / 150 ft (74%)	

Note: ###' / ###' (##%) = Sun 95th Percentile Queue [ft/ln] / Storage Length [ft] (Queue Ratio)

5.3 PARKING CAPACITY

The Project proposes 147 off-street parking spaces, representing the County's maximum permitted parking supply, as indicated in ***Figure 5-e***, from the Project's site plan. Public on-street parking is not generally available in the vicinity of the Project, as discussed in *2 Existing Conditions*.

Figure 5-e: Proposed Parking Supply (Excerpt of **Figure 1-b***)*

Several strategies that can address common operational issues associated with increased traffic and parking demand are provided in the Appendix.

5.4 DRIVEWAY SIGHT DISTANCE

Intersection sight distance applies to motorists departing the Project site at the proposed stop-controlled Project driveway approach to *Heirloom Pkwy & Ancestry Dr / Project Access (#2)*. Motorists at this approach must identify gaps in cross-traffic and decide when it is safe to enter the intersection. Preliminary departure sight triangles from the Project Access are included in the Appendix.

5.5 TRAFFIC CONTROL DEVICES

This section discusses the traffic control devices evaluated in this TIA. This TIA performed all analysis of Total Traffic conditions at *Heirloom Pkwy & Ancestry Dr / Project Access (#2)* based on

the recommendation described in *6 Recommended Mitigation Measures* to operate the intersection as a full-movement two-way STOP-controlled intersection.

Traffic signal warrants were briefly considered at *Hess Rd & Heirloom Pkwy (#1)*, but the minor street volumes from Heirloom Pkwy during the Study Period do not warrant the signalization of the intersection and delays reported earlier in this section do not indicate operational issues. The existing median acceleration lane for southbound-to-eastbound left turns provides motorists the ability to safely and effectively completing the left turn onto Hess Rd in two stages, identifying gaps in and moving across each direction of Hess Rd traffic, one at a time.

5.6 TRAFFIC SIGNAL PROGRESSION

No new traffic signals are proposed for this site, so time-space diagrams were not prepared as part of this TIA.

5.7 SAFETY

Following the implementation of the recommended project improvements and mitigations described in this TIA, no significant traffic safety issues are foreseeable for the Project.

6 Recommended Mitigation Measures

This section describes mitigations recommended to provide acceptable levels of service during both the Background and Total Traffic conditions. A summary of the recommendations in this section is available in the next section, in ***Table 7-B***.

6.1 GENERAL RECOMMENDATIONS

The following summarizes the general recommendations for the Project.

- ***Mitigation 6-A. Continue to optimize traffic signal timing and phasing.*** Traffic signal timings and phasing should be reviewed periodically based on the current traffic patterns and volumes. This mitigation is routinely performed by the agency(ies) that maintain the traffic signals, such as the Town of Parker, in this case.
- ***Mitigation 6-B. Include driveway lines of sight in Project's Construction Documents.*** Consistent with the Douglas County Roadway Design and Construction Standards [2], the lines of sight for the Project Access should be drawn more precisely in the landscape architecture and other construction drawings. Refer to ***Figure A-6*** in the Appendix for preliminary lines of sight at the Project access.

6.2 RECOMMENDED ROADWAY MODIFICATIONS

No roadway modifications are necessary or recommended to maintain acceptable operations after the introduction of the Project.

6.3 RECOMMENDED TURN STORAGE LENGTHS

This section evaluates the queue lengths and storage capacity reported in *5 Analysis of Future Conditions* and summarizes the final recommended storage lengths. The purpose of this evaluation is to verify that adequate storage capacity can be expected in each future Study Year scenario, to avoid queues of turning vehicles spilling back into and blocking adjacent through lanes. Recommendations for project access turn lane storage lengths are summarized in ***Table 6-A***.

Existing Study Locations. The existing storage lengths for turn lanes available at the Study Locations were compared to the estimated maximum 95th percentile queues reported in ***Table 5-B***. The storage lengths of existing turn lanes at Study Locations were all found to be of sufficient capacity to accommodate the maximum 95th percentile queues, so ***no changes to existing storage lengths at Study Locations are necessary or recommended to support the Project***.

A max queue of 50 feet means that 95% of the Sunday peak hours will experience a queue of 50 feet or less.

Project Access. The recommended storage lengths for each vehicular turn movement to and from the Project at *Heirloom Pkwy & Ancestry Dr / Project Access (#2)* were developed according to their respective estimated queue lengths. The results of that evaluation are summarized in ***Table 6-A***. (**Note:** Estimated queue lengths at *Heirloom Pkwy & Ancestry Dr / Project Access (#2)* are minimal, as reported in ***Table 5-B***. The left turn striping shall be designed in accordance with the CDOT State Highway Access Code [7], and a minimum storage length of 100 feet is recommended to satisfy the minimum requirements of the Town of Parker for the southbound left turn at *Heirloom Pkwy & Ancestry Dr / Project Access (#2)* from Heirloom Pkwy into the Project Access.

The following project improvement is recommended to address the storage needs for traffic accessing the Project along southbound Heirloom Pkwy.

- ***Mitigation 6-C. Install recommended pavement marking changes, as described in Table 6-A..*** The existing painted median along Heirloom Pkwy shall be re-striped to create a southbound left turn pocket into the Project, according to the recommended storage length in ***Table 6-A***, to the Town of Parker[1] Development Standards and Criteria [8], and the MUTCD [9].

Table 6-A: Recommended Project Access Turn Storage Length Improvements

Mitigation ID	Study Location	Movement	Existing Storage Length (ft)	Recommended Minimum Storage Length (ft)	Traffic Condition
6-C.1	*Heirloom Pkwy & Ancestry Dr / Project Access (#2)*	Southbound Left Turn	-	100	Short-Term Total
6-C.2	*Heirloom Pkwy & Ancestry Dr / Project Access (#2)*	Westbound Left Turn	-	50	Short-Term Total

Note: the left turn striping along Heirloom Pkwy shall otherwise be designed in accordance with the CDOT State Highway Access Code [7].

[1] Refer to discussions of the Town of Parker's annexation of Heirloom Pkwy in *1 Introduction* and the Appendix.

6.4 RECOMMENDED PROJECT TRAFFIC CONTROL

This section introduces the proposed traffic control recommended at the Study Locations to support the Project and summarizes the recommendation in ***Table 6-B***.

The following project improvement is recommended.

- ***Mitigation 6-D. Install one westbound STOP sign and Stop Bar.*** Install a STOP Sign (MUTCD sign code R1-1 [9]) and white stop bar in accordance with Douglas County standards [2] at *Heirloom Pkwy & Ancestry Dr / Project Access (#2)* before the Project opens.

Table 6-B: Summary of Recommended Intersection Traffic Control

Mitigation ID	Study Location	Existing Movements	Existing Traffic Control	Proposed Movements	Recommended Traffic Control
6-D	*Heirloom Pkwy & Ancestry Dr / Project Access (#2)*	Full (T)	STOP (2WSC - T)	Full	STOP (2WSC) (one new STOP sign and stop bar)

6.5 LEVELS OF SERVICE AFTER MITIGATIONS

This TIA did not present recommendations that impact the estimated LOS already calculated for the Study locations and presented in *5 Analysis of Future Conditions*. Therefore, no further analysis is necessary or presented in this subsection.

7 Conclusions & Recommendations

This section summarizes the findings and recommendations of this Traffic Impact Analysis (TIA). The TIA addresses intersection operations impacted by the proposed new 19,400 square-foot church building for Redemption Parker, accommodating 349 seats for weekly worship services, off-street parking, and landscaping. It includes an analysis of three study periods, one signalized intersection, and two STOP-controlled access, covering existing conditions (2025), short-term (2026), and long-term (2046) horizons. Furthermore, the study will assess two traffic volume scenarios: a Background Traffic scenario representing conditions in a Project no-build scenario and a Total Traffic scenario reflecting conditions with the Project's estimated traffic. The scope of this TIA was discussed with the County prior to its implementation. During the scoping phase, a key issue was raised, which was discussed in the TIA. Refer to ***Table 7-A*** for a summary and *1 Introduction* starting on Page 1-1 for more information.

Table 7-A: Key Issue Identified by the County and Addressed in this TIA

Item	Description	Summary of Response	TIA Section with Additional Discussion
Planning Comment	*"Contact the South Metro Fire Protection District to discuss fire access, fire suppression systems, and building code requirements."*	A single point of access meets the requirements of the South Metro Fire Rescue (SMFR) [1]	*1 Introduction*

A total of 163 new hourly trips are estimated to travel to and from the Project during a peak one-hour period on a typical Sunday, based on data available from the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition). These "Project trips" were combined with estimated Background Traffic volumes in both the Short-Term and Long-Term horizon years to develop traffic volume scenarios referred to as Total Traffic volumes. Both of those future traffic volume scenarios were used to analyze the operational conditions in each horizon year. (Refer to *3 Proposed Project Trips* starting on Page 3-12 and *4 Future Conditions* starting on Page 4-14 for more information.)

A comparison of levels of service analysis during Total and Background Traffic conditions (with and without the Project trips) was made, and results indicate that all Study Locations will operate at acceptable levels of service. (Refer to *4 Future Conditions* starting on Page 4-14 for more information.)

As a result of the analysis in this TIA, several improvements are recommended at the Project access at *Heirloom Pkwy & Ancestry Dr / Project Access (#2)*. These improvements are the responsibility of the Project and are included in the summary in ***Table 7-B***. (Refer to *5 Analysis of Future Conditions*

starting on Page 5-19 and *6 Recommended Mitigation Measures* starting on Page 6-24 for more information.)

General recommendations are also provided to maintain operations at the signalized Study Location, *Chambers Rd & Heirloom Pkwy (#3)*. The recommended lane configuration and traffic control for the Project Access at *Heirloom Pkwy & Ancestry Dr / Project Access (#2)* are summarized in ***Figure 4-c***. For more information about all of the recommended improvements and strategies described in ***Table 7-B***, refer to *6 Recommended Mitigation Measures*, beginning on Page 6-24.

In summary, the results of this TIA indicate the Study Locations will operate at acceptable levels of service and provide adequate storage of vehicles turning into the Project site, assuming the anticipated future traffic conditions described in 4 Future Conditions and the implementation of the mitigation measures and project improvements, as described in 6 Recommended Mitigation Measures and summarized in Table 7-B.

Table 7-B: Summary of Recommended Improvements

Mitigation ID	Improvement Category	Location	Recommended Mitigation or Project Improvement	Traffic Condition	Recommended Timeframe
6-A	General Recommendation	*Chambers Rd & Heirloom Pkwy (#3)*	A. Continue to optimize traffic signal timing and phasing	Background	On-Going
6-B	General Recommendation	*Heirloom Pkwy & Ancestry Dr / Project Access (#2)*	B. Include driveway lines of sight in Project's Construction Documents	Total	Project Development
6-C	Project Traffic Control	*Heirloom Pkwy & Ancestry Dr / Project Access (#2)*	C. Install recommended pavement marking changes, as described in *Table 6-A*.	Total	Short-Term
6-D	Project Traffic Control	*Heirloom Pkwy & Ancestry Dr / Project Access (#2)*	D. Install one westbound STOP sign and Stop Bar	Total	Short-Term

Note: This Traffic Impact Analysis evaluated the Sunday Study Period. It did not evaluate other common periods, such as weekday peak periods. As such, the County should not rely solely on this TIA regarding the future overall performance of the Study Locations.

8 References

[1] South Metro Fire Rescue, Colorado, [Online]. Available: https://www.southmetro.org/.

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[4] Douglas County, "2050 Transportation Plan," [Online]. Available: https://www.douglas.co.us/public-works/traffic/transportation-visioning-transportation-project-development/2050-transportation-plan/. [Accessed Feb 2026].

[5] Parker Water & Sanitation District, "Rueter-Hess Reservoir," [Online]. Available: https://www.pwsd.org/2193/Rueter-Hess-Reservoir. [Accessed Mar 2025].

[6] Institute of Transportation Engineers (ITE), "ITE Trip Generation Manual, 11th Edition," Transoft Solutions, Inc., 2021. [Online]. Available: https://itetripgen.org/.

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[8] Town of Parker, "Development Standards and Criteria," 2024. [Online]. Available: https://parkeronline.org/210/Standards-and-Criteria. [Accessed 12 February 2024].

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[14] Town of Parker, "Traffic Counts & Projections | Traffic Counts Oct 2024 (map)," [Online]. Available: https://www.parkerco.gov/560/Traffic-Counts-Projections. [Accessed March 2025].

[15] Douglas County Public Works Dept - Engineering Div, "Traffic Count Viewer," [Online]. Available: https://apps.douglas.co.us/gis/TrafficCount/. [Accessed Mar 2025].

[16] Douglas County - Dept of Public Works - Engineering Div, "2040 Transportation Master Plan," Sep 2019. [Online]. Available: https://www.douglas.co.us/planning/master-plans/. [Accessed May 2024].

Appendix

PARKER MUNICIPAL PLANNING AREA AND ANNEXATIONS

The Project is in unincorporated Douglas County although it is also situated within the Parker Municipal Planning Area, as is also show in ***Figure A-1***. Additionally, Heirloom Parkway was previously annexed into the Town of Parker as far south as Hess Rd, as noted in *1 Introduction* and illustrated in ***Figure A-2***.

Figure A-1: Parker Municipal Planning Area [10]

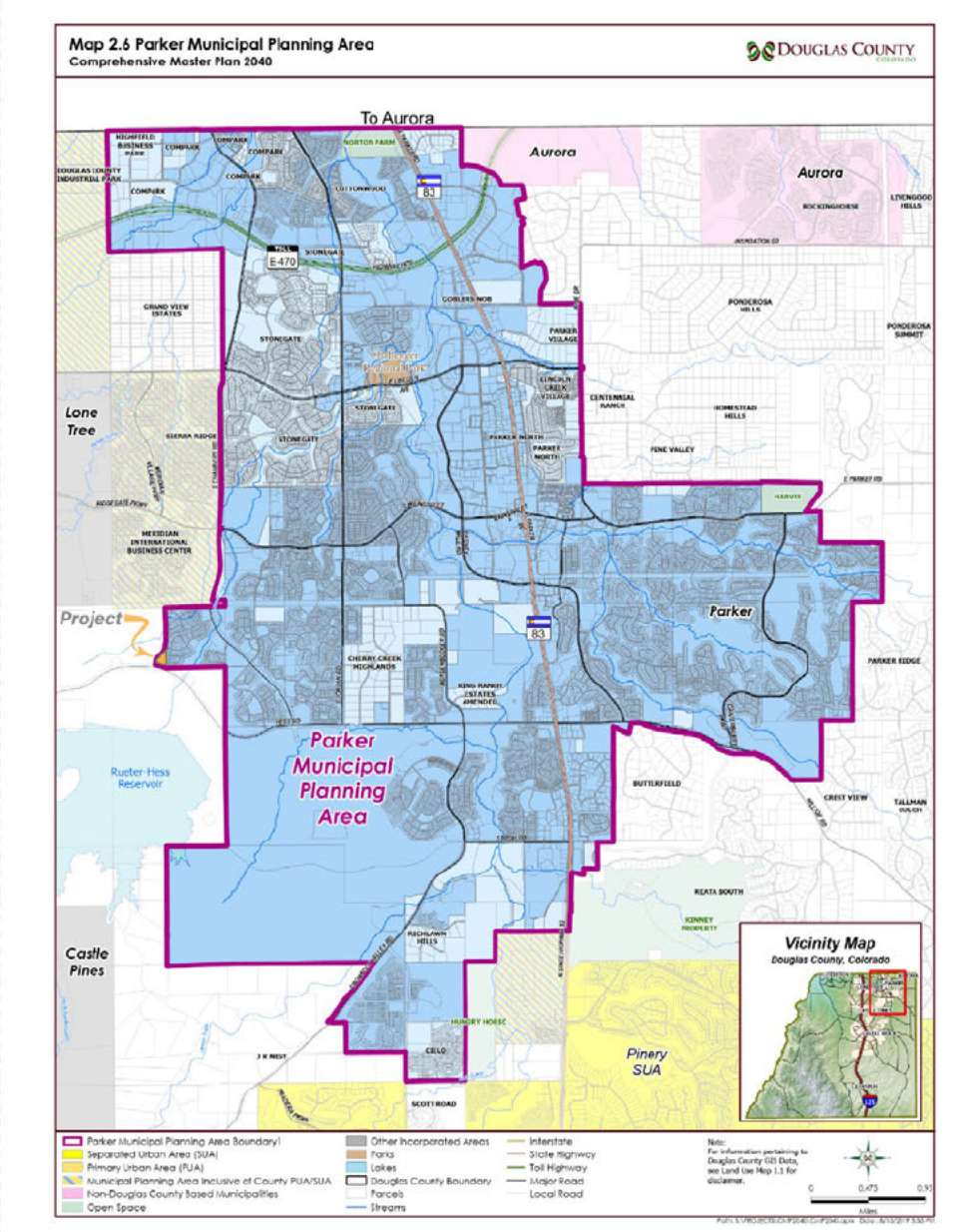
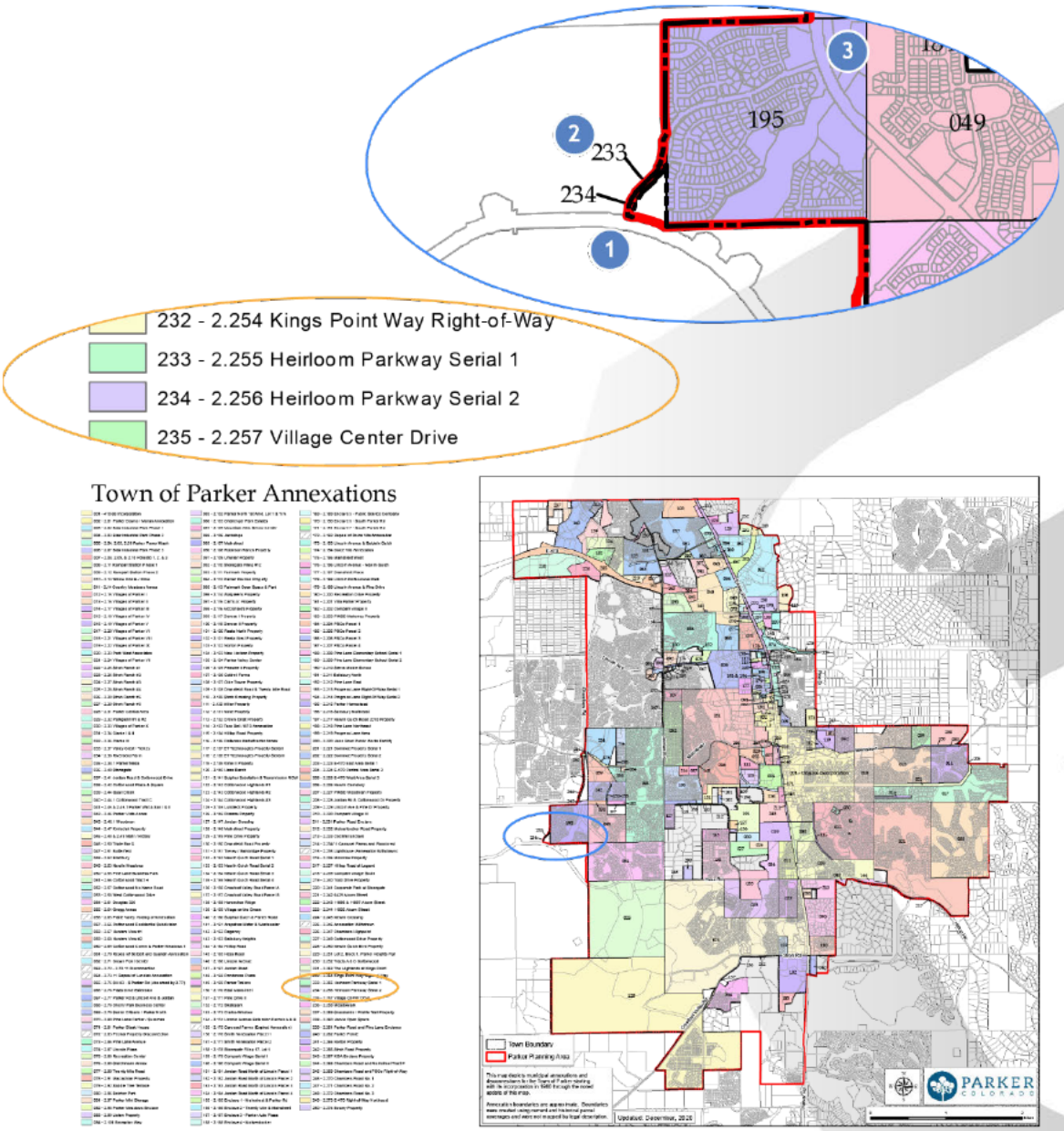


Figure A-2: Parker Annexations Map [11]



TRAFFIC COUNT DATA

The detailed traffic data reports for both the 24-hour bi-directional traffic volume data and the Sunday intersection turning movement counts at each Study Location are attached in the following pages.

Prepared by National Data & Surveying Services

VOLUME

Heirloom Pkwy Bet Hess Rd & Ancestry Dr(39.500974,-104.823130)

Day: Sunday
Date: 2/23/2025

City: Parker
Project #: CO25_770001_001

DAILY TOTALS	NB	SB	EB	WB	Total
	806	672	0	0	1,478

DAILY TOTALS

15-Minutes Interval

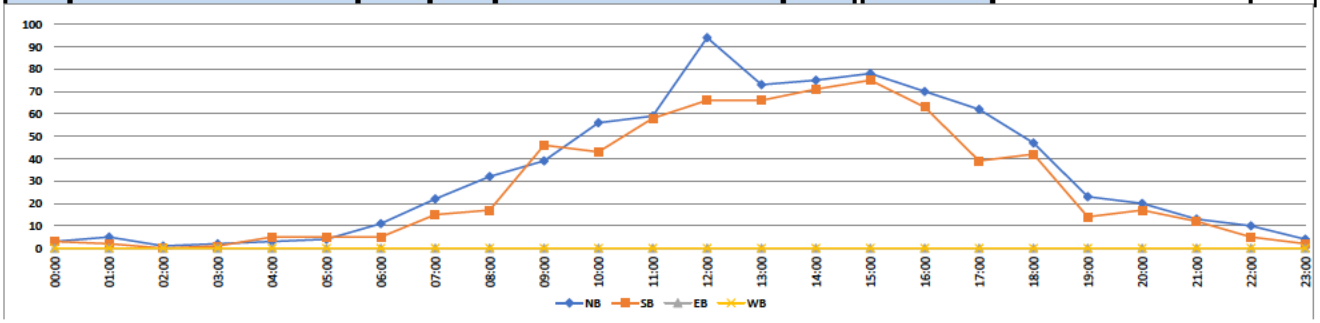
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00	0	1			1	12:00	20	15			35
0:15	2	1			3	12:15	18	12			30
0:30	0	0			0	12:30	25	19			44
0:45	1	1			2	12:45	31	20			51
1:00	3	0			3	13:00	13	18			31
1:15	1	1			2	13:15	20	19			39
1:30	1	1			2	13:30	21	14			35
1:45	0	0			0	13:45	19	15			34
2:00	1	0			1	14:00	20	18			38
2:15	0	0			0	14:15	18	14			32
2:30	0	0			0	14:30	16	21			37
2:45	0	0			0	14:45	21	18			39
3:00	1	1			2	15:00	19	20			39
3:15	0	0			0	15:15	21	19			40
3:30	0	0			0	15:30	18	20			38
3:45	1	0			1	15:45	20	16			36
4:00	2	2			4	16:00	15	17			32
4:15	1	2			3	16:15	20	12			32
4:30	0	1			1	16:30	14	15			29
4:45	0	0			0	16:45	21	19			40
5:00	1	1			2	17:00	15	6			21
5:15	2	0			2	17:15	21	13			34
5:30	0	0			0	17:30	14	8			22
5:45	1	4			5	17:45	12	12			24
6:00	1	0			1	18:00	14	20			34
6:15	5	2			7	18:15	9	5			14
6:30	0	2			2	18:30	10	9			19
6:45	5	1			6	18:45	14	8			22
7:00	3	3			6	19:00	8	5			13
7:15	2	2			4	19:15	10	3			13
7:30	6	8			14	19:30	2	4			6
7:45	11	2			13	19:45	3	2			5
8:00	3	0			3	20:00	6	5			11
8:15	12	4			16	20:15	8	7			15
8:30	6	8			14	20:30	2	3			5
8:45	11	5			16	20:45	4	2			6
9:00	7	13			20	21:00	3	6			9
9:15	13	13			26	21:15	6	1			7
9:30	13	9			22	21:30	1	4			5
9:45	6	11			17	21:45	3	1			4
10:00	9	7			16	22:00	4	2			6
10:15	9	12			21	22:15	2	1			3
10:30	21	10			31	22:30	4	1			5
10:45	17	14			31	22:45	0	1			1
11:00	20	10			30	23:00	2	1			3
11:15	13	19			32	23:15	1	0			1
11:30	9	12			21	23:30	0	0			0
11:45	17	17			34	23:45	1	1			2
TOTALS	237	200	0	0	437	TOTALS	569	472	0	0	1041
SPLIT %	54%	46%	0%	0%	30%	SPLIT %	55%	45%	0%	0%	70%

Hourly Intervals

TIME		NB	SB	EB	WB	TOTAL
00:00	01:00	3	3			6
01:00	02:00	5	2			7
02:00	03:00	1	0			1
03:00	04:00	2	1			3
04:00	05:00	3	5			8
05:00	06:00	4	5			9
06:00	07:00	11	5			16
07:00	08:00	22	15			37
08:00	09:00	32	17			49
09:00	10:00	39	46			85
10:00	11:00	56	43			99
11:00	12:00	59	58			117
12:00	13:00	94	66			160
13:00	14:00	73	66			139
14:00	15:00	75	71			146
15:00	16:00	78	75			153
16:00	17:00	70	63			133
17:00	18:00	62	39			101
18:00	19:00	47	42			89
19:00	20:00	23	14			37
20:00	21:00	20	17			37
21:00	22:00	13	12			25
22:00	23:00	10	5			15
23:00	00:00	4	2			6

STATISTICS

	NB	SB	EB	WB	TOTAL
Peak Period	00:00	to	12:00		
Volume	237	200			437
Peak Hour	10:30	11:00			10:30
Peak Volume	71	58			124
Peak Hour Factor	0.845	0.763			0.969
Peak Period	12:00	to	00:00		
Volume	569	472			1041
Peak Hour	12:00	14:30			12:30
Peak Volume	94	78			165
Peak Hour Factor	0.758	0.929			0.809
Peak Period	07:00	to	09:00		
Volume	54	32			86
Peak Hour	7:30	8:00			8:00
Peak Volume	32	17			49
Peak Hour Factor	0.667	0.531			0.766
Peak Period	16:00	to	18:00		
Volume	132	102			234
Peak Hour	16:30	16:00			16:00
Peak Volume	71	63			133
Peak Hour Factor	0.845	0.829			0.831



National Data & Surveying Services

Intersection Turning Movement Count

Location: Heirloom Pkwy & Hess Rd
City: Parker
Control: 1-Way Stop(SB)

Project ID: 25-770002-001
Date: 2/23/2025

Data - Total

NS/EW Streets:	Heirloom Pkwy				Heirloom Pkwy				Hess Rd				Hess Rd				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1	1	0	0	1	1	0	0	0	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	0	0	0	0	2	0	8	0	11	50	0	0	0	67	9	0	147
11:15 AM	0	0	0	0	5	0	14	0	10	44	0	0	0	58	3	0	134
11:30 AM	0	0	0	0	2	0	10	0	6	47	0	0	0	61	3	0	129
11:45 AM	0	0	0	0	5	0	12	0	11	61	0	0	0	48	6	0	143
12:00 PM	0	0	0	0	2	0	13	0	13	43	0	0	0	54	7	0	132
12:15 PM	0	0	0	0	1	0	11	0	12	55	0	0	0	64	6	0	149
12:30 PM	0	0	0	0	4	0	15	0	20	76	0	0	0	67	5	0	187
12:45 PM	0	0	0	0	4	0	15	1	24	68	0	0	0	43	6	0	161
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	25	0	98	1	107	444	0	0	0	462	45	0	1182
APPROACH %'s :					20.16%	0.00%	79.03%	0.81%	19.42%	80.58%	0.00%	0.00%	0.00%	91.12%	8.88%	0.00%	
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	11	0	54	1	69	242	0	0	0	228	24	0	629
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.688	0.000	0.900	0.250	0.719	0.796	0.000	0.000	0.000	0.851	0.857	0.000	0.841
							0.825				0.810				0.875		

National Data & Surveying Services

Intersection Turning Movement Count

Location: Heirloom Pkwy & Hess Rd
City: Parker
Control: 1-Way Stop(SB)

Project ID: 25-770002-001
Date: 2/23/2025

Data - Cars

NS/EW Streets:	Heirloom Pkwy				Heirloom Pkwy				Hess Rd				Hess Rd				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1	1	0	0	1	1	0	0	0	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	0	0	0	0	2	0	8	0	11	50	0	0	0	67	9	0	147
11:15 AM	0	0	0	0	5	0	14	0	10	44	0	0	0	58	3	0	134
11:30 AM	0	0	0	0	2	0	10	0	6	47	0	0	0	61	3	0	129
11:45 AM	0	0	0	0	5	0	12	0	11	61	0	0	0	47	6	0	142
12:00 PM	0	0	0	0	2	0	13	0	13	43	0	0	0	54	7	0	132
12:15 PM	0	0	0	0	1	0	11	0	12	55	0	0	0	64	6	0	149
12:30 PM	0	0	0	0	4	0	15	0	19	76	0	0	0	66	5	0	185
12:45 PM	0	0	0	0	4	0	14	1	24	67	0	0	0	43	6	0	159
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	25	0	97	1	106	443	0	0	0	460	45	0	1177
APPROACH %'s :					20.33%	0.00%	78.86%	0.81%	19.31%	80.69%	0.00%	0.00%	0.00%	91.09%	8.91%	0.00%	
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	11	0	53	1	68	241	0	0	0	227	24	0	625
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.688	0.000	0.883	0.250	0.708	0.793	0.000	0.000	0.000	0.860	0.857	0.000	0.845
							0.855				0.813				0.884		

National Data & Surveying Services

Intersection Turning Movement Count

Location: Heirloom Pkwy & Hess Rd
City: Parker
Control: 1-Way Stop(SB)

Project ID: 25-770002-001
Date: 2/23/2025

Data - HT

NS/EW Streets:	Heirloom Pkwy				Heirloom Pkwy				Hess Rd				Hess Rd				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1	1	0	0	1	1	0	0	0	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	2
12:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	1	0	1	1	0	0	0	2	0	0	5
APPROACH %'s :					0.00%	0.00%	100.00%	0.00%	50.00%	50.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	4
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.500
							0.250				0.500				0.250		

National Data & Surveying Services

Intersection Turning Movement Count

Location: Heirloom Pkwy & Hess Rd
City: Parker
Control: 1-Way Stop(SB)

Project ID: 25-770002-001
Date: 2/23/2025

Data - Bikes

NS/EW Streets:	Heirloom Pkwy				Heirloom Pkwy				Hess Rd				Hess Rd				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1	1	0	0	1	1	0	0	0	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
12:15 PM	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
12:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	3
12:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	5	0	1	0	0	3	0	0	0	0	1	0	10
APPROACH %'s :					83.33%	0.00%	16.67%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	5	0	1	0	0	2	0	0	0	0	1	0	9
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.417	0.000	0.250	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.250	0.000	0.750
					0.500				0.500				0.250				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Heirloom Pkwy & Hess Rd
City: Parker

Project ID: 25-770002-001
Date: 2/23/2025

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Heirloom Pkwy		Heirloom Pkwy		Hess Rd		Hess Rd		
NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
11:00 AM	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	**12:00 PM - 01:00 PM**								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

Prepared by National Data & Surveying Services

Heirloom Pkwy & Hess Rd

Peak Hour Turning Movement Count

ID: 25-770002-001
City: Parker

Day: Sunday
Date: 2/23/2025

PEAK HOURS	COUNT PERIODS
NONE	NONE
12:00 PM - 01:00 PM	11:00 AM - 01:00 PM
NONE	NONE

CONTROL: 1-Way Stop(SB)

	AM	NOON	PM
TEV	0	629	0
PHF		0.84	

SOUTHBOUND (Heirloom Pkwy)

AM	0	0	0	0	0	AM
NOON	54	0	11	1	94	NOON
PM	0	0	0	0	0	PM

Turning movements: 0 1 1 0

EASTBOUND (Hess Rd)

AM	NOON	PM	
0	282	0	
0	0	0	0
0	69	0	1
0	242	0	1
0	0	0	0
AM	NOON	PM	

WESTBOUND (Hess Rd)

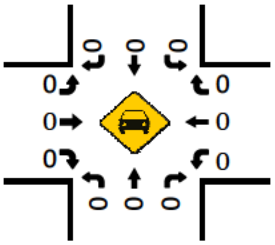
PM	NOON	AM	
0	24	0	1
0	228	0	1
0	0	0	0
0	0	0	0
0	253	0	
PM	NOON	AM	

NORTHBOUND (Heirloom Pkwy)

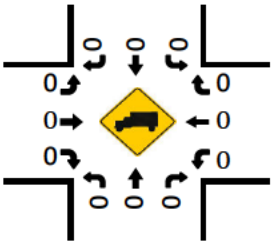
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

Turning movements: 0 0 0 0

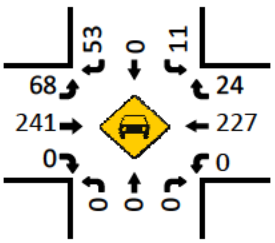
Cars (AM)



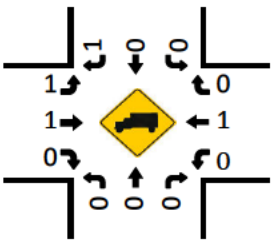
HT (AM)



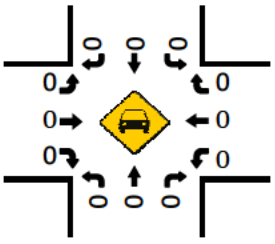
Cars (NOON)



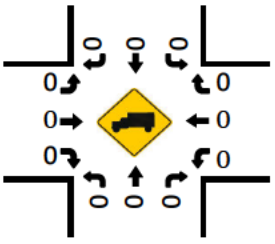
HT (NOON)



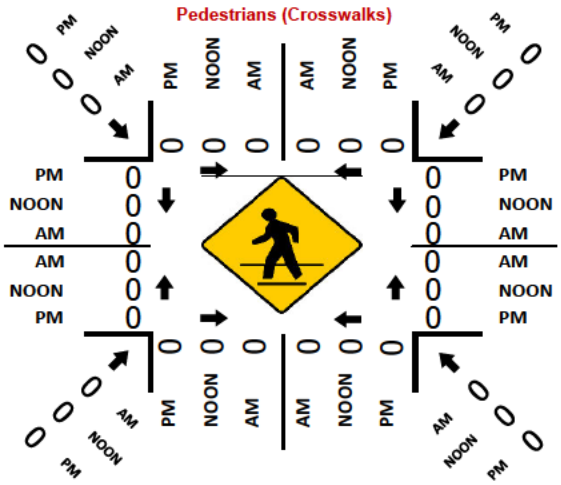
Cars (PM)



HT (PM)



Pedestrians (Crosswalks)



National Data & Surveying Services

Intersection Turning Movement Count

Location: S Chambers Rd & Heirloom Pkwy
City: Parker
Control: Signalized

Project ID: 25-770002-002
Date: 2/23/2025

Data - Total

NS/EW Streets:	S Chambers Rd				S Chambers Rd				Heirloom Pkwy				Heirloom Pkwy				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	2	1	0	2	0	1	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	4	152	0	0	0	116	16	0	22	0	2	0	0	0	0	0	312
11:15 AM	5	176	0	0	0	123	12	0	22	0	2	0	0	0	0	0	340
11:30 AM	2	158	0	0	0	139	17	0	29	0	7	0	0	0	0	0	352
11:45 AM	5	155	0	0	0	139	16	0	20	0	5	0	0	0	0	0	340
12:00 PM	7	156	0	0	0	165	28	1	26	0	5	0	0	0	0	0	388
12:15 PM	6	168	0	0	0	156	23	1	18	0	5	0	0	0	0	0	377
12:30 PM	3	153	0	0	0	149	36	0	30	0	1	0	0	0	0	0	372
12:45 PM	4	157	0	0	0	166	28	0	36	0	8	0	0	0	0	0	399
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	36	1275	0	0	0	1153	176	2	203	0	35	0	0	0	0	0	2880
APPROACH %'s :	2.75%	97.25%	0.00%	0.00%	0.00%	86.63%	13.22%	0.15%	85.29%	0.00%	14.71%	0.00%					
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	20	634	0	0	0	636	115	2	110	0	19	0	0	0	0	0	1536
PEAK HR FACTOR :	0.714	0.943	0.000	0.000	0.000	0.958	0.799	0.500	0.764	0.000	0.594	0.000	0.000	0.000	0.000	0.000	0.962
	0.940				0.970				0.733								

National Data & Surveying Services

Intersection Turning Movement Count

Location: S Chambers Rd & Heirloom Pkwy
City: Parker
Control: Signalized

Project ID: 25-770002-002
Date: 2/23/2025

Data - Cars

NS/EW Streets:	S Chambers Rd				S Chambers Rd				Heirloom Pkwy				Heirloom Pkwy				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	2	1	0	2	0	1	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	4	150	0	0	0	116	16	0	22	0	2	0	0	0	0	0	310
11:15 AM	5	176	0	0	0	123	12	0	22	0	1	0	0	0	0	0	339
11:30 AM	2	156	0	0	0	139	17	0	29	0	7	0	0	0	0	0	350
11:45 AM	5	154	0	0	0	139	16	0	20	0	5	0	0	0	0	0	339
12:00 PM	7	155	0	0	0	165	28	1	26	0	5	0	0	0	0	0	387
12:15 PM	6	167	0	0	0	156	23	1	18	0	5	0	0	0	0	0	376
12:30 PM	3	153	0	0	0	149	36	0	30	0	1	0	0	0	0	0	372
12:45 PM	3	157	0	0	0	165	28	0	35	0	8	0	0	0	0	0	396
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	35	1268	0	0	0	1152	176	2	202	0	34	0	0	0	0	0	2869
APPROACH %'s :	2.69%	97.31%	0.00%	0.00%	0.00%	86.62%	13.23%	0.15%	85.59%	0.00%	14.41%	0.00%					
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	19	632	0	0	0	635	115	2	109	0	19	0	0	0	0	0	1531
PEAK HR FACTOR :	0.679	0.946	0.000	0.000	0.000	0.962	0.799	0.500	0.779	0.000	0.594	0.000	0.000	0.000	0.000	0.000	0.967
	0.941				0.969				0.744								

National Data & Surveying Services

Intersection Turning Movement Count

Location: S Chambers Rd & Heirloom Pkwy
City: Parker
Control: Signalized

Project ID: 25-770002-002
Date: 2/23/2025

Data - HT

NS/EW Streets:	S Chambers Rd				S Chambers Rd				Heirloom Pkwy				Heirloom Pkwy				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	2	1	0	2	0	1	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
11:30 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	7	0	0	0	1	0	0	1	0	1	0	0	0	0	0	11
APPROACH %'s :	12.50%	87.50%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	50.00%	0.00%	50.00%	0.00%					
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	1	2	0	0	0	1	0	0	1	0	0	0	0	0	0	0	5
PEAK HR FACTOR :	0.250	0.500	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.417
		0.750				0.250				0.250							

National Data & Surveying Services

Intersection Turning Movement Count

Location: S Chambers Rd & Heirloom Pkwy
City: Parker
Control: Signalized

Project ID: 25-770002-002
Date: 2/23/2025

Data - Bikes

NS/EW Streets:	S Chambers Rd				S Chambers Rd				Heirloom Pkwy				Heirloom Pkwy				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	2	1	0	2	0	1	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	5	2	0	0	0	0	0	0	0	0	0	7
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	1	0	0	0	1	3	0	0	0	0	0	0	0	0	0	5
12:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
12:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	3	0	0	0	10	5	0	0	0	0	0	0	0	0	0	18
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	66.67%	33.33%	0.00%									
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	0	2	0	0	0	4	3	0	0	0	0	0	0	0	0	0	9
PEAK HR FACTOR :	0.000	0.500	0.000	0.000	0.000	0.500	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.450
		0.500				0.438											

National Data & Surveying Services

Intersection Turning Movement Count

Location: S Chambers Rd & Heirloom Pkwy
City: Parker
Control: Signalized

Project ID: 25-770002-002
Date: 2/23/2025

Data - RTOR

NS/EW Streets:	S Chambers Rd				S Chambers Rd				Heirloom Pkwy				Heirloom Pkwy				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	2	1	0	2	0	1	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	4
11:15 AM	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	3
11:30 AM	0	0	0	0	0	0	4	0	0	0	5	0	0	0	0	0	9
11:45 AM	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	6
12:00 PM	0	0	0	0	0	0	7	0	0	0	3	0	0	0	0	0	10
12:15 PM	0	0	0	0	0	0	4	0	0	0	3	0	0	0	0	0	7
12:30 PM	0	0	0	0	0	0	8	0	0	0	1	0	0	0	0	0	9
12:45 PM	0	0	0	0	0	0	12	0	0	0	6	0	0	0	0	0	18
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	42	0	0	0	24	0	0	0	0	0	66
APPROACH %'s :					0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%					
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	31	0	0	0	13	0	0	0	0	0	44
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.646	0.000	0.000	0.000	0.542	0.000	0.000	0.000	0.000	0.000	0.611
					0.646				0.542								

National Data & Surveying Services

Intersection Turning Movement Count

Location: S Chambers Rd & Heirloom Pkwy
City: Parker

Project ID: 25-770002-002
Date: 2/23/2025

Data - Pedestrians (Crosswalks)

NS/EW Streets:	S Chambers Rd		S Chambers Rd		Heirloom Pkwy		Heirloom Pkwy		
NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
11:00 AM	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	1	1
12:30 PM	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	1	1
APPROACH %'s :							0.00%	100.00%	
PEAK HR :	**12:00 PM - 01:00 PM**								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	1	1
PEAK HR FACTOR :								0.250	0.250
							0.250		

Prepared by National Data & Surveying Services

S Chambers Rd & Heirloom Pkwy

Peak Hour Turning Movement Count

ID: 25-770002-002
City: Parker

Day: Sunday
Date: 2/23/2025

PEAK HOURS	COUNT PERIODS
NONE	NONE
12:00 PM - 01:00 PM	11:00 AM - 01:00 PM
NONE	NONE

CONTROL: Signalized

	AM	NOON	PM
TEV	0	1536	0
PHF		0.96	

S Chambers Rd — SOUTHBOUND

	Left	Thru	Right	U-Turn	
AM	0	0	0	0	AM
NOON	115	636	0	2	NOON
PM	0	0	0	0	PM

Heirloom Pkwy — EASTBOUND

AM	NOON	PM	
0	135	0	
0	0	0	0
0	110	0	2
0	0	0	0
0	19	0	1

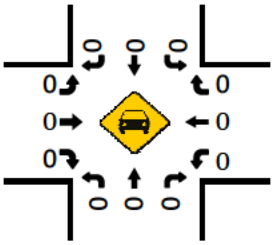
Heirloom Pkwy — WESTBOUND

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	

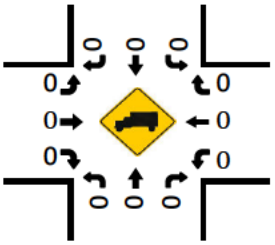
S Chambers Rd — NORTHBOUND

	Left	Thru	Right	U-Turn	
PM	0	0	0	0	PM
NOON	655	0	20	634	0	NOON
AM	0	0	0	0	0	AM

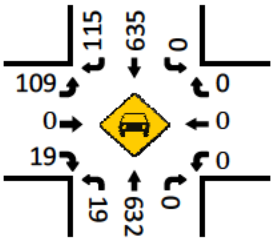
Cars (AM)



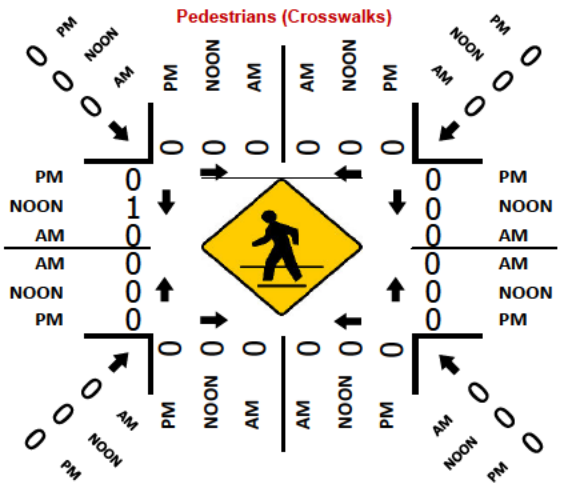
HT (AM)



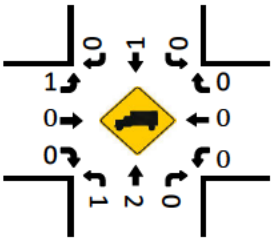
Cars (NOON)



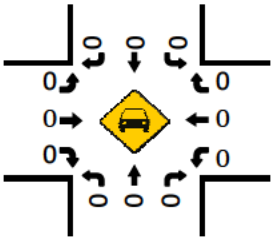
Pedestrians (Crosswalks)



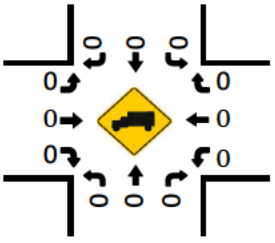
HT (NOON)



Cars (PM)



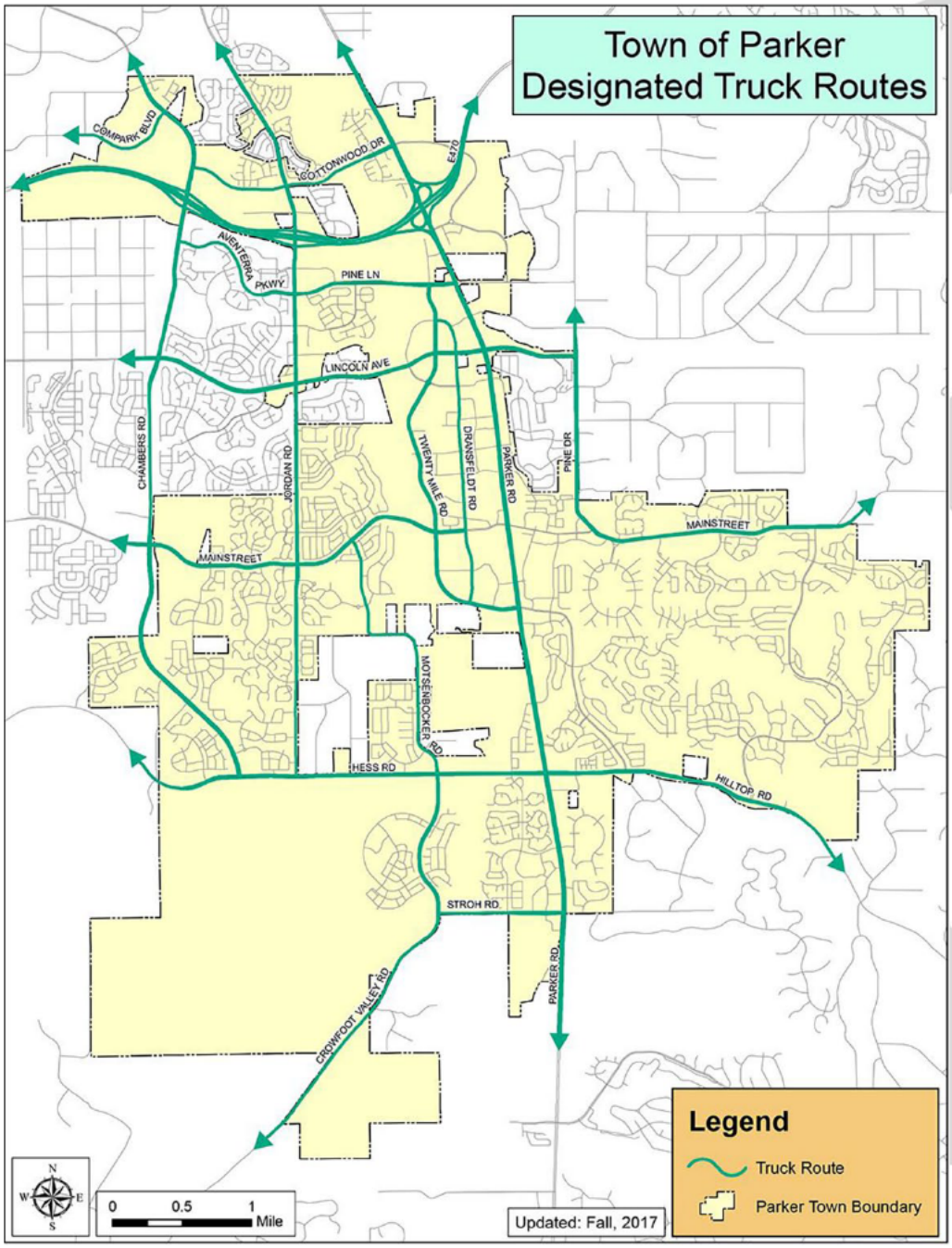
HT (PM)



PARKER TRUCK ROUTES

Figure A-3 shows the corridors designated as designated truck routes, as discussed in *2 Existing Conditions*.

Figure A-3: Parker Designated Truck Routes [3]



INTERSECTION ANALYSIS METHODOLOGY

The performance of the roadway network depends most of all on the performance at intersections, due to the exchange of right-of-way assignment that must take place to provide access where conflicting streams of traffic must cross paths. The Study Locations represent the key intersections near the Project that are analyzed in this study. The County, like most local agencies nearby and nationally, requires the use of the latest edition of the *Highway Capacity Manual 7th Edition* (*HCM*) [12] to estimate the performance of intersections within its jurisdiction.

The intersection levels of service (LOS) reported in this TIA are based on an analysis of the existing roadway features and typical one-hour traffic volumes. Peak periods are typically identified using available traffic data, engineering judgment, or a combination of both, as described more specifically in the body of the TIA.

Intersection operations were analyzed with PTV Vistro 2025 (sp 0-3) software (PTV Vistro) using the methodologies outlined in the HCM. PTV Vistro estimates delays and reports the delays and LOS. Detailed analysis reports are included in this, Appendix and results are also summarized in figures and tables throughout this TIA.

The LOS provides an overview of how well an intersection is expected to operate. The County has a design objective of LOS E or better for intersection operations, per its Traffic Impact Analysis Criteria [2]. The criteria for the HCM LOS designations are provided in the Table below. LOS are presented as letter grades, similar to an academic summarization of a student's performance.

Table A-1: LOS Meaning for Signalized and Unsignalized Intersections [12]

LOS	Control Delay (sec/veh)		Description
	Signalized Intersections	Unsignalized Intersections	
A	≤10	≤10	Operations with very low delay and most vehicles do not stop.
B	>10 and ≤20	>10 and ≤15	Operations with good progression but with some restricted movements.
C	>20 and ≤35	>15 and ≤25	Operations where a significant number of vehicles are stopping with some backup and light congestion.
D	>35 and ≤55	>25 and ≤35	Operations where congestion is noticeable, longer delays occur, and many vehicles stop. The proportion of vehicles not stopping declines.
E	>55 and ≤80	>35 and ≤50	Operations where there is significant delay, extensive queuing, and poor progression.
F	>80	>50	Operations that are unacceptable to most drivers, when the arrival rates exceed the capacity of the intersection.

ITE TRIP GENERATION LAND USES

Table A-2 summarizes the ITE Land Use descriptions discussed in *3 Proposed Project Trips*.

Table A-2: Summary of ITE Land Use Descriptions [6]

ITE Code	ITE Land Use Name	ITE Land Use Description
560	Church	*A church is a building in which public worship services are held. A church houses an assembly hall or sanctuary. It may also house meeting rooms, classrooms, and, occasionally, dining, catering, or event facilities. Worship services are typically held on Sundays. Some of the surveyed churches offered day care or extended care programs during the week.*

BACKGROUND TRAFFIC VOLUMES

As discussed in *4 Future Conditions*, this Appendix section describes how this TIA estimated the growth factors used in PTV Vistro to estimate future Background Traffic volumes in each Study Year.

General. Background traffic along Hess Rd and Chambers Rd in both the Short-Term and Long-Term Study Years were estimated based on available data about current traffic volumes and long-range planning documents by the Town of Parker and Douglas County. The available historic and projected traffic volume data is summarized in ***Table A-3*** and average annual growth rates calculated from some of the data is summarized in ***Table A-4***.

Table A-3: Roadway Segment Volume Data used to Estimate Future Traffic Volumes

		Traffic Volume [veh/d]	
Data Source	Data Year	Hess Rd west of Chambers Rd	Chambers Rd north of Heirloom Pkwy
Town of Parker Roadway System Evaluation Update (2020) [13].	2018	8,000	16,000
	2030	17,200	17,200
	2040	24,500	24,500
Town of Parker Count Map (2024) [14]	2024	8,000	24,000
Douglas County Traffic Volumes (2025) [15]	2020	8,139	-
	2017	7,114	-
	2012	2,646	-
Douglas County Transportation Master Plan (2019) [16]	2040	0 to < 20,000	> 40,000
Data Collected for the Project (2025) (refer to Appendix)	2025	1,478	-

Table A-4: Estimated Traffic Volume Annual Growth Rates

Location	Year 1	Year 2	Traffic Volume (Year 1) [veh/d]	Traffic Volume (Year 2) [veh/d]	Number of Years	Avg Annual Growth Rate
Hess Rd west of Chambers Rd	2024	2036	8,000	17,200	12	6.6%
	2036	2046	17,200	24,500	10	3.6%
Chambers Rd north of Heirloom Pkwy	2018	2030	16,000	23,600	12	3.3%
	2030	2040	23,600	30,400	10	2.6%

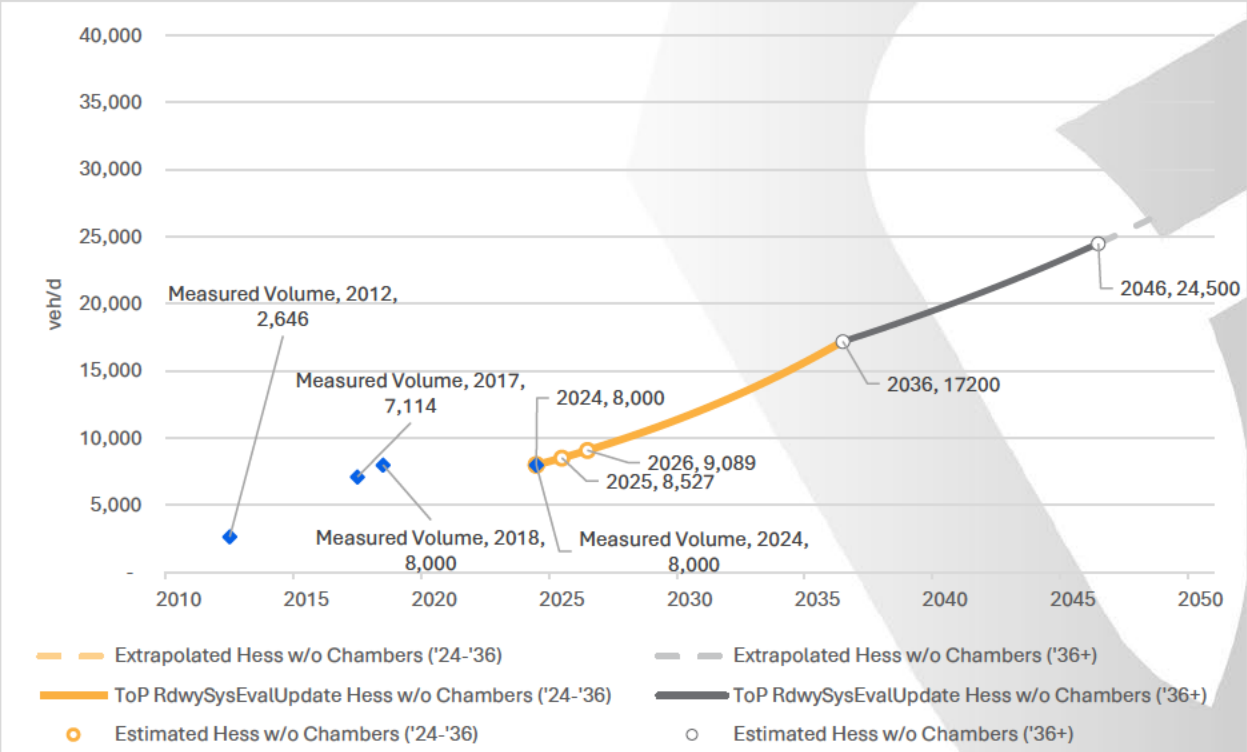
Figure A-4 and ***Figure A-5*** were created to illustrate the known historic and projected future traffic volumes over time. The estimated future volumes were calculated using average annual growth rates between 2030 and 2040 determined in ***Table A-4***.

A visual comparison of the figures reveals that each corridor is tracking differently than its respective projection. Generally, Hess Rd is tracking lower, while Chambers Rd is higher.

Hess Rd. Measured traffic volumes along Hess Rd remained unchanged between 2018 and 2024. Furthermore, the 2040 estimates in the Roadway System Update are based on growth that begins at 2018 levels. This TIA assumed that the same growth rate estimated in the 2020 Roadway System Update will apply, but it has simply been delayed due to external factors that will regulate as the anticipated housing and employment assumptions in the region develop over time.

Therefore, the traffic volume curve illustrated in ***Figure A-4*** is essentially "shifted" six years later than anticipated in the 2020 System Update. No further adjustments to the estimated future volumes were applied. The traffic volumes displayed in ***Figure A-4*** were used in ***Table A-5*** to calculate estimated growth factors applied to existing traffic volumes on Hess Rd in the PTV Vistro model.

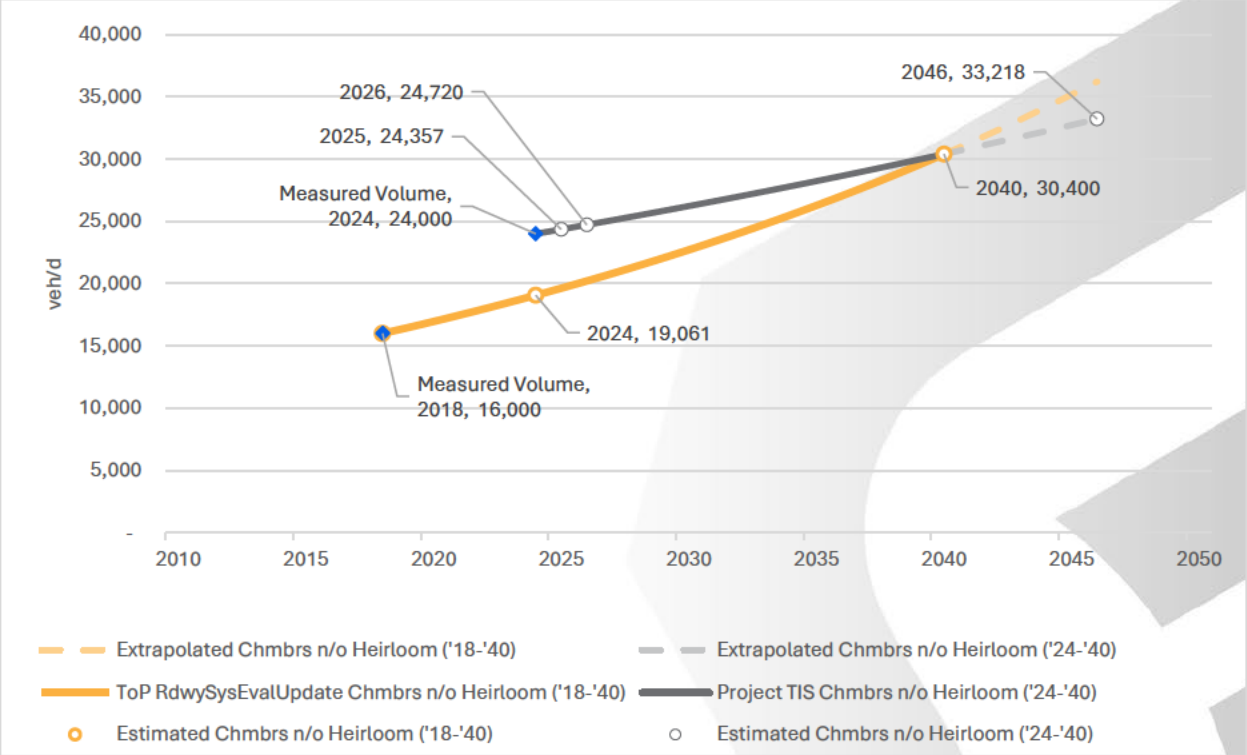
Figure A-4: Hess Rd Traffic Volumes - Historic and Future Estimates



Chambers Rd. A comparison of recent measured traffic volumes and the projected volumes from the *2020 System Update* reveal that Chambers Rd is growing at a much faster rate than anticipated. It is difficult to know if the pace will be maintained over the following twenty years. This TIA assumes that the Chambers Rd traffic volume will reach the traffic volume estimated in the 2020 System Update in 2040. Additionally, it assumes the traffic volumes continue to grow until at least 2046 at the same average annual growth rate. Refer to the estimated future background traffic

volume in ***Table A-5*** that was used to develop growth factors applied to existing traffic volumes on Chambers Rd in PTV Vistro.

Figure A-5: Chambers Rd Traffic Volumes - Historic and Future Estimates



Heirloom Pkwy. The *2020 System Evaluation* does not include estimates for Heirloom Pkwy, so an estimated average annual growth rate of 1.5% per year between 2025 and the future Study Years. The resulting growth factors applied to the Existing Year TMC for the Short-Term and Long-Term Study Year are shown in ***Table A-5***. These factors were applied to 2025 turning volumes of movements to and from Heirloom Pkwy in both Study Years. The roadway segment volumes from the *2020 System Evaluation* were used to balance respective background through-movement volumes on Chambers Rd and Hess Rd near Heirloom Pkwy.

Note. A key regional connection for Chambers Rd between Hess Rd and Crowfoot Valley Rd to the south opened after the collection of traffic volume data used in the preparation of this TIA. As discussed in *4 Future Conditions*, the opening does not materially affect the conclusions of this TIA.

Table A-5: Estimated Short-Term and Long-Term Growth Factors for Existing Volumes

Location	Description	Year 1	Year 2	Volume 1 (Year 1) [veh/d]	Volume 2 (Year 2) [veh/d]	Number of Years	Growth Factor	Avg Annual Growth Rate
Hess Rd west of Chambers Rd	Short-Term	2025	2026	8,527	9,089	1	**1.0659**	6.59%
	Long-Term	2025	2046	8,527	24,500	21	**2.8732**	5.15%
Chambers Rd north of Heirloom Pkwy	Short-Term	2025	2026	24,357	24,720	1	**1.0149**	1.49%
	Long-Term	2025	2046	24,357	33,218	21	**1.3638**	1.49%
Heirloom Pkwy north of Hess Rd	Short-Term	2025	2026	1,480	1,500	1	**1.0150**	1.50%
	Long-Term	2025	2046	1,480	2,020	21	**1.3671**	1.50%

PRELIMINARY ACCESS LINES OF SIGHT

Figure A-6 illustrates preliminary lines of sight for the Project Access based on 35 MPH design speed (30 MPH posted speed limit) and the County's standard criteria for intersection sight triangles in its Roadway Design and Construction Standards [2]. The shaded areas indicate where improvements should not block lines of sight between motorists. As recommended in ***Mitigation 6-B***, the lines of sight should be incorporated into the Project's Construction Documents.

Figure A-6: Project Access Lines of Sight (Preliminary)

> ***Note:*** *While not shown, the lines of sight for the southbound left turn traffic create less impactful sight triangles than those already shown.*

POTENTIAL SITE CIRCULATION & OPERATIONS STRATEGIES

This Appendix presents potential strategies related to site circulation and parking strategies that a church land use may benefit from, summarized in ***Table A-6***. Following the Project's opening, the owner would be well-served to monitor the site access, circulation, and parking demand. If operational or capacity issues arise, the following operational strategies could be implemented as needed to reduce peak travel and parking demand and optimize the efficiency of site circulation. Such strategies collectively can support operations that reduce the Project's traffic impacts on the adjacent roadway network.

These strategies can be implemented individually, and some naturally support one another. They can be used either on a part-time, as-needed basis (seasonal, etc.) or on a full-time/permanent basis. They are not necessarily needed at the Project opening, although some may be useful or desirable at that time.

In addition to proactively planning for future operational needs, selected strategies should be implemented in a scalable manner to accommodate potential latent demand *associated with worship service attendance.*

Latent Demand: *Previously suppressed or unexpressed demand that emerges when additional capacity is introduced, often quickly consuming the new availability and limiting the expected operational benefit.*

Table A-6: Potential Site Circulation & Operations Strategies

Strategy*	Required for Opening Day	Regulated Land Use	Peak Travel Demand	Peak Parking Demand	Peak Parking Supply	Operational Efficiency
1. Driveway Operations Monitoring. Monitor operations during initial months of occupancy and adjust traffic management strategies (e.g., staffing, signing, service timing) if recurring congestion patterns are observed.	-	-	-	-	-	●
2. Communications. Utilize on-going and pre-event communications (e.g., social media, website messaging, and/or printed programs) to encourage employees, regular worship service volunteers and attendees, as well as registered event-goers to use staggered arrival times and other travel-related news such as preferred parking locations.	-	-	●	●	-	●
3. Wayfinding Signage. Provide clear internal signage directing attendees to specific parking areas to balance lot utilization and reduce unnecessary internal circulation during peak periods. Signage is also useful for visitors who do not receive communications regarding travel and parking conventions.	-	-	-	-	-	●
4. Designated Early Arrival / Late Departure Parking. Designate the first and last several parking spaces motorists encounter upon entering and exiting the Project site (near the site access) for individuals who consistently arrive early and depart late (e.g., employees and volunteers). Limiting turnover in the circulation-sensitive location reduces maneuvering activity and delay near the primary access during peak periods.	-	-	-	-	-	●
5. Designated Visitor Parking Placement. If visitor parking spaces are designated, locate those spaces so they are not only conveniently-located but also positioned to avoid the interference of novice visitors' parking maneuvers with the highest-volume internal traffic movements. Strategic placement can reduce circulation conflicts and maintain smoother peak ingress and egress operations.	-	-	-	-	-	●
6. Active Traffic Management. Assign trained staff or volunteers to direct traffic within the parking lot and at the site access during peak Sunday arrival and departure periods to manage pedestrian/vehicle conflicts, improve internal circulation efficiency, reduce motorist hesitation at decision points, and minimize delay for vehicles exiting or entering the site, to or from Heirloom Pkwy.	-	-	-	●	-	●
7. Prioritize Exit Movements. During peak egress, prioritize outbound traffic through internal traffic control (e.g., holding minor internal movements momentarily) to reduce queueing near the site driveway and prevent spillback toward internal drive aisles.	-	-	-	-	-	●
8. Directional Circulation Plan. Implement a temporary or permanent one-way internal circulation pattern during peak periods. Clearly defined entry and exit routes can reduce internal conflicts, streamline vehicle movements, and improve overall throughput of the parking areas. This may increase circulating trips, when parking is not found right away.	-	-	-	-	-	●
9. Remote / Overflow Parking. If utilized, designate overflow parking areas with coordinated pedestrian routes and controlled vehicle access points to prevent random internal circulation patterns and reduce driveway congestion.	-	-	-	●	-	●
10. Additional Worship Services. Adding services distributes attendance across multiple time periods, reducing peak hour trip generation per service and lowering concentrated driveway and parking demand.	-	-	●	●	-	
11. Time Between Worship Services. Increasing the time between services allows departing vehicles to clear the site before arriving traffic enters. This reduces overlap between inbound and outbound movements, minimizes internal circulation conflicts, and lowers simultaneous peak ingress and egress traffic volumes at the site access.	-	-	●		-	●
12. Stream Worship Services. Providing church-goers with the option to view worship services online not only provides attendees with a convenient alternative participation option when needed, but it also serves as a valuable travel demand management strategy that can reduce overall trip generation and parking demand.	-	-	●	●	-	-
13. Alternate Parking Locations. Identify and secure agreements for alternate parking locations to accommodate peak attendance periods (e.g., Parker Water and Sanitation District (PWSD)), if feasible. Such off-site parking should be supported by a safe and accessible pedestrian route defined with clear wayfinding signage. *May be subject to Douglas County land use regulations.*	-	●	-	-	●	-
14. Expand On-Site Parking Supply. Expand the proposed on-site parking supply further, if future monitoring indicates that demand approaches or exceeds available capacity, in accordance with Douglas County land use regulations. The site plan in ***Figure 1-b*** already identifies areas where additional parking spaces could be constructed, allowing expansion to occur without substantial reconfiguration of site circulation. Phased implementation of these pre-identified spaces would provide a controlled and scalable response to increased demand. *Subject to Douglas County land use regulations.*	-	●	-	-	●	-

TRAFFIC ANALYSIS REPORTS

The following PTV Vistro traffic analysis reports, generated by the model file prepared for this TIA, are included in the remainder of this Appendix. ***Table A-7*** describes inputs used to create the volume scenarios described in this TIA.

Table A-7 Project Vistro Traffic Volume Input Notes

Vistro Volume Param	Project Input Notes	*Hess Rd & Heirloom Pkwy (#1)*	*Heirloom Pkwy & Ancestry Dr / Project Access (#2)*	*Chambers Rd & Heirloom Pkwy (#3)*
Base Volume Input	Entered TMC data gathered by NDS. Any observed U-turns were included as left turns.	●	●	●
Base Volume Adjustment factor	Not used / Factor = 1.0.	-	-	-
Heavy Vehicles (HV) Percentage	At all movements and all Study Locations, were estimated to have a default 2.0% HV.	●	●	●
Growth Factor	Used for several future volume scenarios, as discussed in the body of the TIA.	●	●	●
In-Process Volume	Not used.	-	-	-
Diverted Trips	Not used.	-	-	-
Pass-by Trips	Not used.	-	-	-
Existing Site Adjustment Volume	Not used.	-	-	-
Other Volume	Not used.	-	-	-
Right-Turn on Red Volume	10% RTOR at signalized right turns	●	●	●
Peak Hour Factor	Default 0.92 used.	●	●	●
Other Adjustment Factor	Not used.	-	-	-

25003 Redemption Parker TIS

Vistro File: C:\...\25003 Redemption v1.0.vistro
Report File: C:\...\25003Redemption_v1.0 Ex 2025 Sun LOSDetailTripGenTripDistr.pdf

Scenario 1 Ex 2025 Sun
3/28/2025

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Hess Rd & Heirloom Pkwy	Two-way stop	HCM 7th Edition	SB Left	0.026	12.4	B
2	Heirloom Pkwy & PWSD	Two-way stop	HCM 7th Edition	EB Left	0.014	9.7	A
3	Chambers Rd & Heirloom Pkwy	Signalized	HCM 7th Edition	EB Left	0.231	7.3	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Hess Rd & Heirloom Pkwy

Control Type:	Two-way stop	Delay (sec / veh):	12.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

Intersection Setup

Name	Heirloom Pkwy		Hess Rd		Hess Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	1
Entry Pocket Length [ft]	230.00	100.00	710.00	100.00	100.00	320.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		50.00		50.00	
Grade [%]	0.00		-6.00		6.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Heirloom Pkwy		Hess Rd		Hess Rd	
Base Volume Input [veh/h]	12	54	69	242	228	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	54	69	242	228	24
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	15	19	66	62	7
Total Analysis Volume [veh/h]	13	59	75	263	248	26
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	Yes					
Number of Storage Spaces in Median	1		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.07	0.06	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.42	9.92	7.97	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.08	0.24	0.19	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.01	6.03	4.63	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.37		1.77		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.97					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 2: Heirloom Pkwy & PWSD

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name	Heirloom Pkwy		Heirloom Pkwy		PWSD	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0
Entry Pocket Length [ft]	110.00	100.00	150.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Heirloom Pkwy		Heirloom Pkwy		PWSD	
Base Volume Input [veh/h]	10	93	66	10	10	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	93	66	10	10	10
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	25	18	3	3	3
Total Analysis Volume [veh/h]	11	101	72	11	11	11
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	7.40	0.00	0.00	0.00	9.71	8.77
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.00	0.00	0.00	0.08	0.08
95th-Percentile Queue Length [ft/ln]	0.55	0.00	0.00	0.00	1.94	1.94
d_A, Approach Delay [s/veh]	0.73		0.00		9.24	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.31					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Chambers Rd & Heirloom Pkwy

Control Type:	Signalized	Delay (sec / veh):	7.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.231

Intersection Setup

Name	Chambers Rd		Chambers Rd		Heirloom Pkwy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	1	0
Entry Pocket Length [ft]	450.00	100.00	100.00	420.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Chambers Rd		Chambers Rd		Heirloom Pkwy	
Base Volume Input [veh/h]	20	634	636	115	110	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	634	636	115	110	19
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	172	173	31	30	5
Total Analysis Volume [veh/h]	22	689	691	125	120	21
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPerm	Permissive	Permissive	Permissive	Permissive	Permissive
Flashing Yellow Arrow	No					
Signal Group	5	2	6	0	7	0
Auxiliary Signal Groups						
Maximum Green [s]	14	38	19	0	18	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	2.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0.0	5.0	5.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	14.0	0.0	17.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	3.0	0.0	3.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	12.0	99.0	87.0	0.0	21.0	0.0
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	5	5	0	7	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Calculated Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	103.0	103.0	94.3	94.3	7.0	7.0
g / C, Green / Cycle	0.86	0.86	0.79	0.79	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.03	0.19	0.19	0.08	0.03	0.01
s, saturation flow rate [veh/h]	742	3560	3560	1589	3459	1589
c, Capacity [veh/h]	686	3054	2796	1248	204	94
d1, Uniform Delay [s]	1.45	1.51	3.43	3.00	55.04	53.84
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.09	0.17	0.21	0.16	2.68	1.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.23	0.25	0.10	0.59	0.22
d, Delay for Lane Group [s/veh]	1.53	1.68	3.64	3.16	57.73	55.04
Lane Group LOS	A	A	A	A	E	E
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.05	0.76	1.81	0.60	1.83	0.63
50th-Percentile Queue Length [ft/ln]	1.31	19.05	45.14	15.03	45.84	15.82
95th-Percentile Queue Length [veh/ln]	0.09	1.37	3.25	1.08	3.30	1.14
95th-Percentile Queue Length [ft/ln]	2.36	34.29	81.25	27.05	82.51	28.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	1.53	1.68	3.64	3.16	57.73	55.04
Movement LOS	A	A	A	A	E	E
d_A, Approach Delay [s/veh]	1.67		3.57		57.32	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	7.31					
Intersection LOS	A					
Intersection V/C	0.231					

Emissions

Vehicle Miles Traveled [mph]	2.63	82.39	76.59	13.85	11.67	2.04
Stops [stops/h]	1.57	45.72	108.33	18.03	110.02	18.98
Fuel consumption [US gal/h]	0.12	3.72	4.25	0.74	2.68	0.46
CO [g/h]	8.32	260.02	296.84	52.02	187.46	31.86
NOx [g/h]	1.62	50.59	57.75	10.12	36.47	6.20
VOC [g/h]	1.93	60.26	68.79	12.06	43.45	7.38

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1567	1367	267
d_b, Bicycle Delay [s]	2.82	6.02	45.07
l_b,int, Bicycle LOS Score for Intersection	2.146	2.233	1.560
Bicycle LOS	B	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

25003 Redemption Parker TIS

Vistro File: C:\...\25003 Redemption v1.0.vistro
Report File: C:\...\25003Redemption_v1.0 Ex 2025 Sun LOSDetailTripGenTripDistr.pdf

Scenario 1 Ex 2025 Sun
3/28/2025

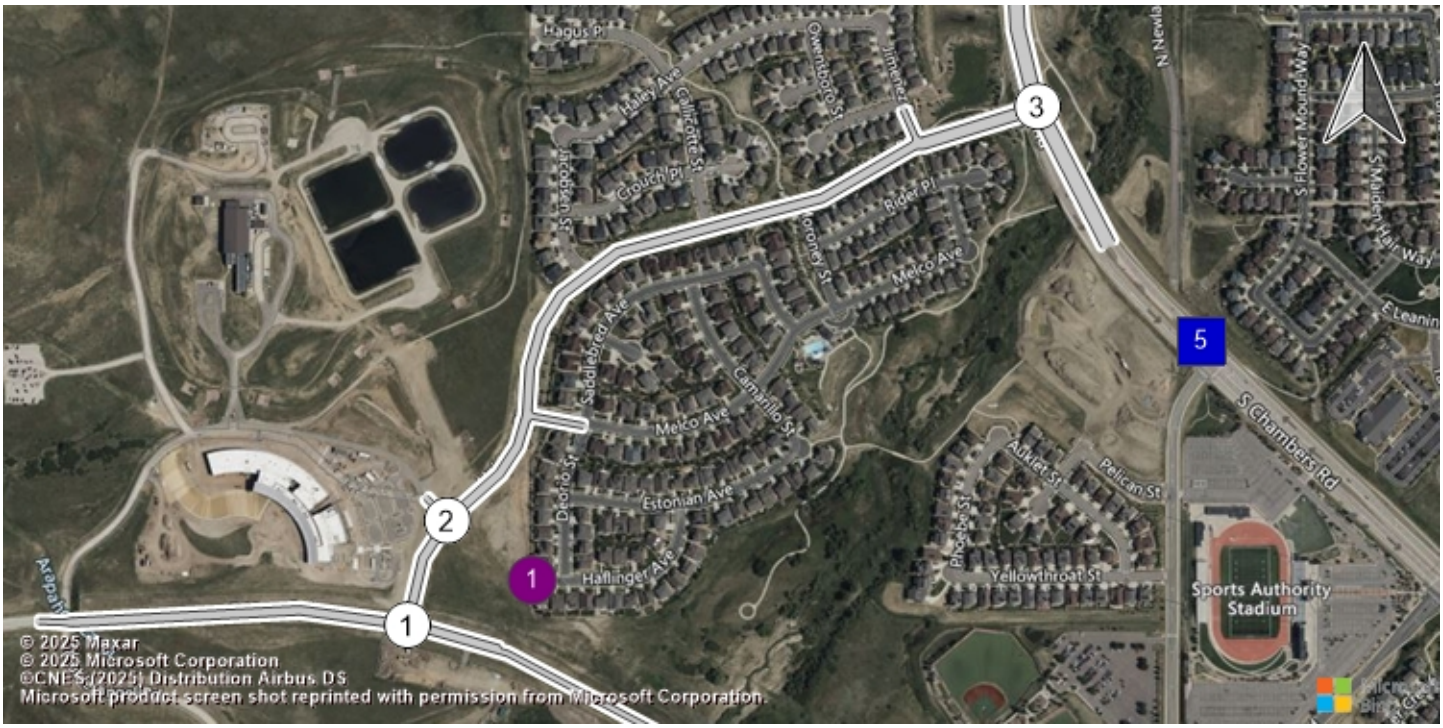
Turning Movement Volume: Detail

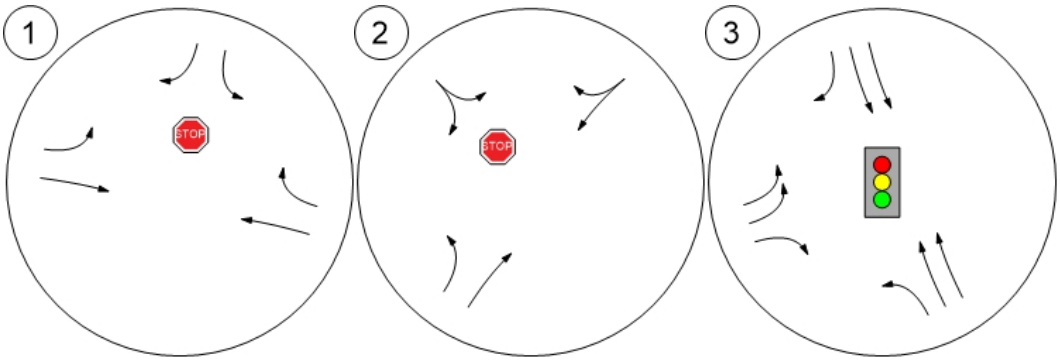
ID	Intersection Name	Volume Type	Southbound		Eastbound		Westbound		Total Volume
			Left	Right	Left	Thru	Thru	Right	
1	Hess Rd & Heirloom Pkwy	Final Base	12	54	69	242	228	24	629
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**12**	**54**	**69**	**242**	**228**	**24**	**629**

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
2	Heirloom Pkwy & PWSD	Final Base	10	93	66	10	10	10	199
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**10**	**93**	**66**	**10**	**10**	**10**	**199**

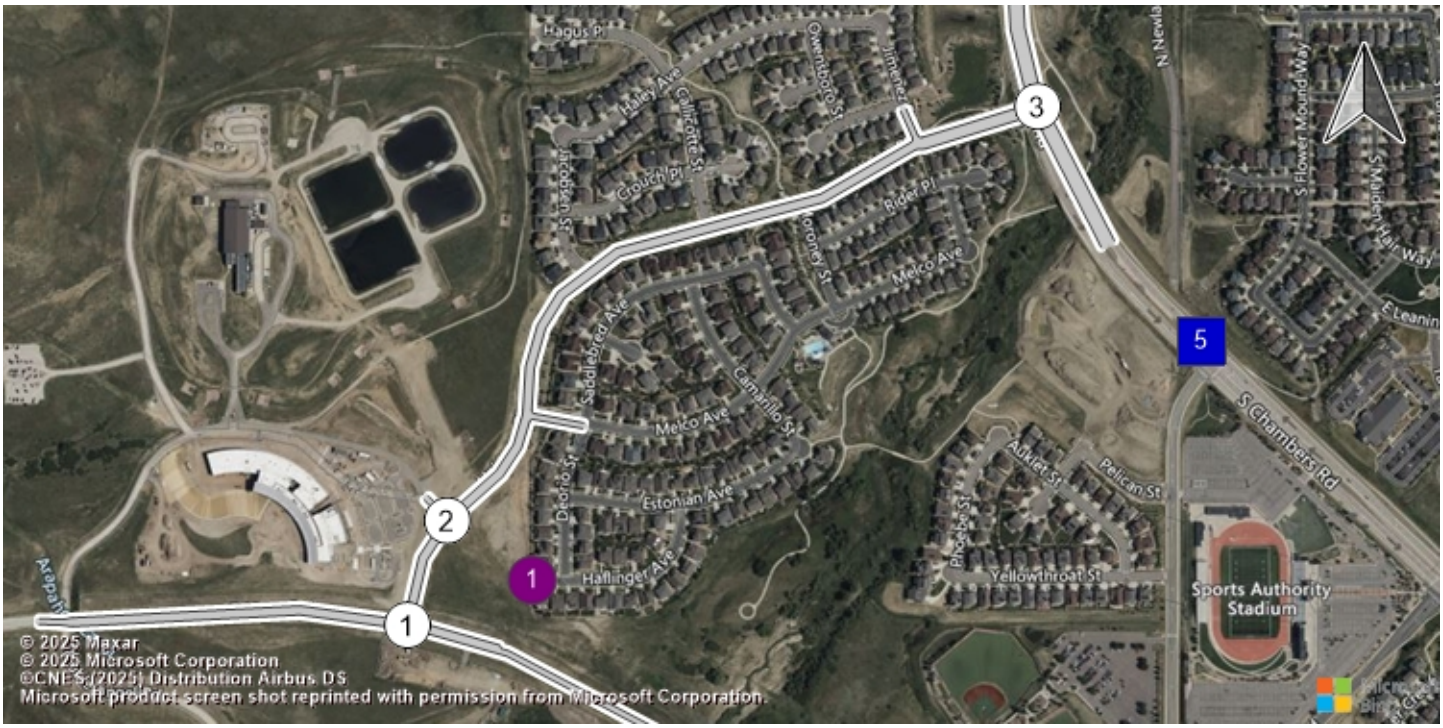
ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
3	Chambers Rd & Heirloom Pkwy	Final Base	20	634	636	115	110	19	1534
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**20**	**634**	**636**	**115**	**110**	**19**	**1534**

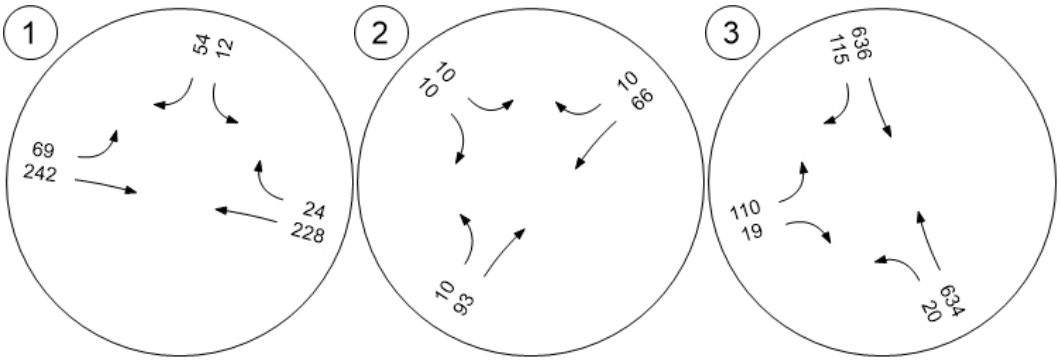
Lane Configuration and Traffic Control



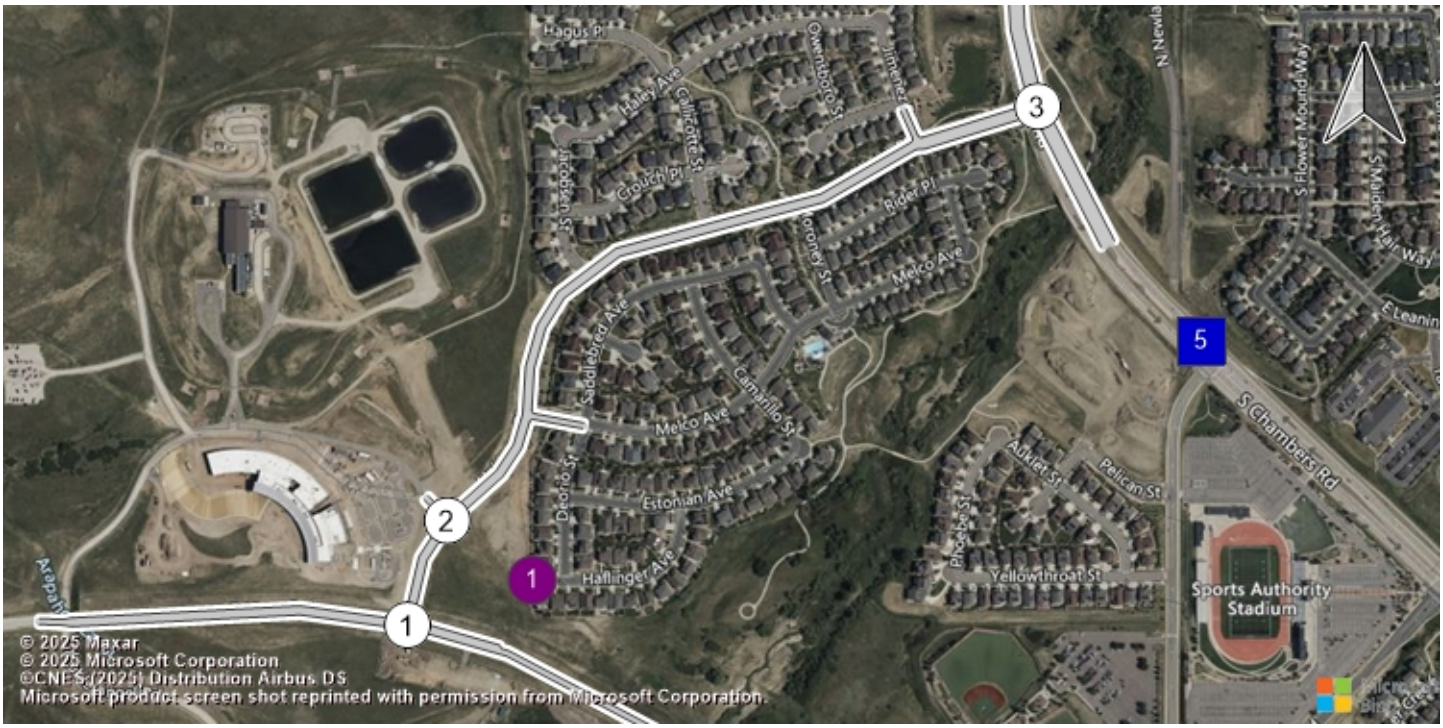


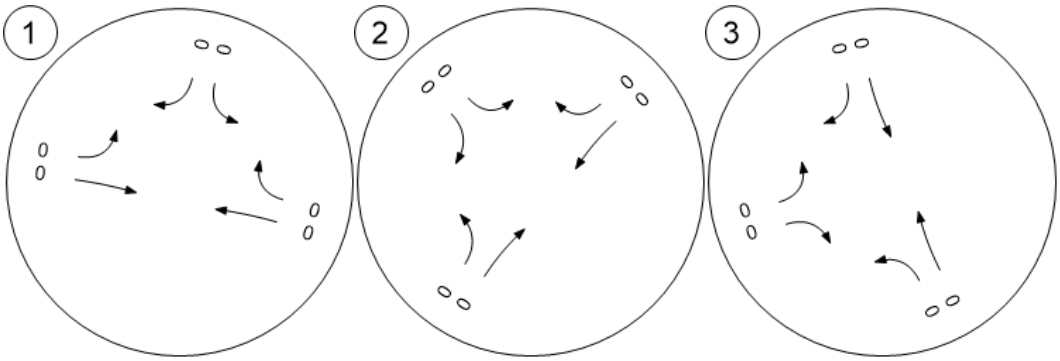
Traffic Volume - Base Volume



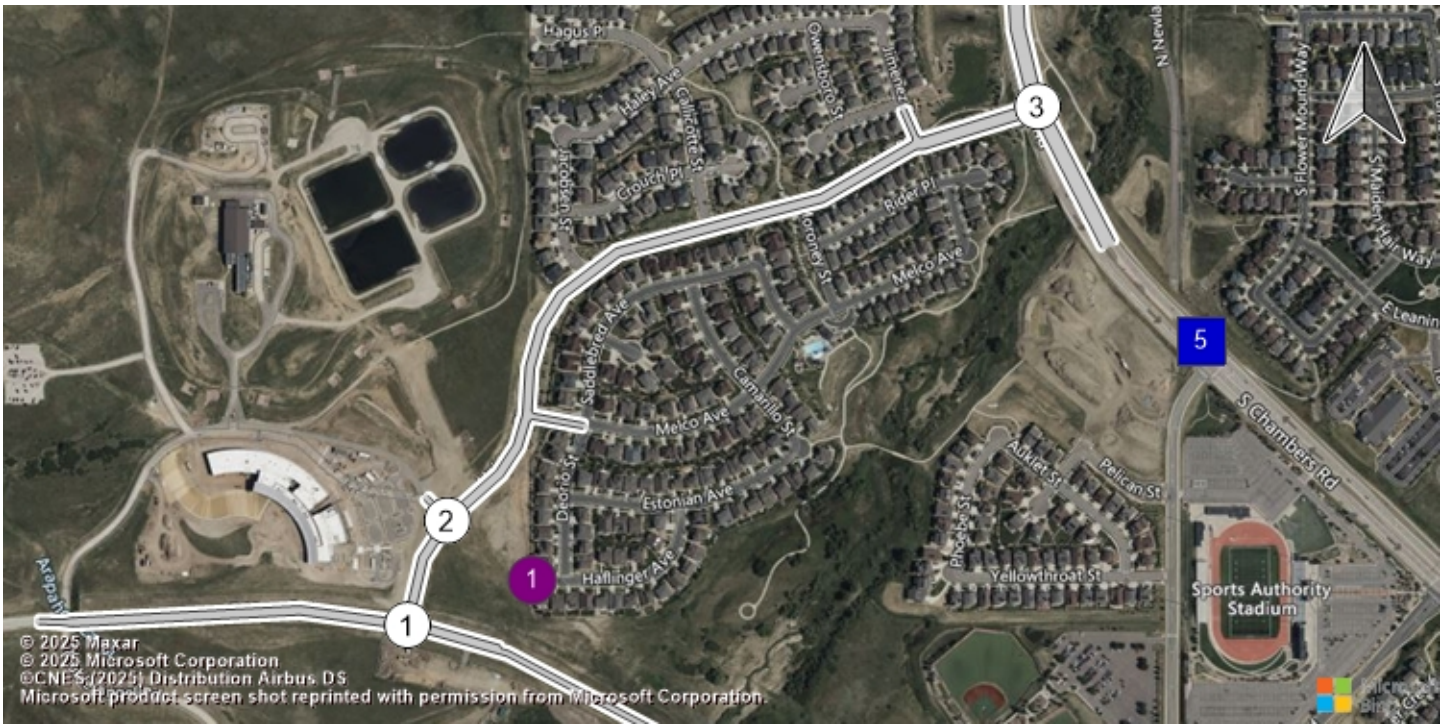


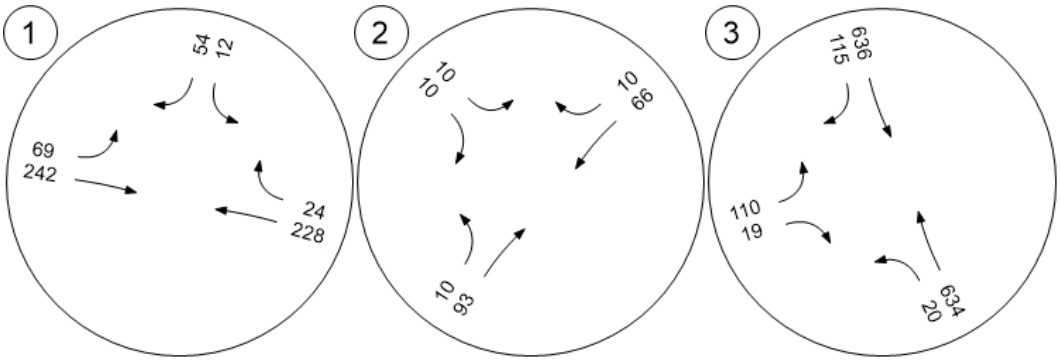
Traffic Volume - Net New Site Trips





Traffic Volume - Future Total Volume





25003 Redemption Parker TIS

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Report File: C:\...\25003Redemption_v1.0 Bkgd 2026 Sun LOSDetailTripGenTripDistr.pdf

Scenario 2 Bkgd 2026 Sun
3/28/2025

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Hess Rd & Heirloom Pkwy	Two-way stop	HCM 7th Edition	SB Left	0.027	12.6	B
2	Heirloom Pkwy & PWSD	Two-way stop	HCM 7th Edition	EB Left	0.014	9.7	A
3	Chambers Rd & Heirloom Pkwy	Signalized	HCM 7th Edition	EB Left	0.235	7.3	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Hess Rd & Heirloom Pkwy

Control Type:	Two-way stop	Delay (sec / veh):	12.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name	Heirloom Pkwy		Hess Rd		Hess Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	1
Entry Pocket Length [ft]	230.00	100.00	710.00	100.00	100.00	320.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		50.00		50.00	
Grade [%]	0.00		-6.00		6.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Heirloom Pkwy		Hess Rd		Hess Rd	
Base Volume Input [veh/h]	12	54	69	242	228	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0150	1.0150	1.0150	1.0659	1.0659	1.0150
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	55	70	258	243	24
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	15	19	70	66	7
Total Analysis Volume [veh/h]	13	60	76	280	264	26
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.08	0.06	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.65	10.04	8.01	0.00	0.00	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.08	0.25	0.19	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.07	6.28	4.76	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.50		1.71		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.91					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 2: Heirloom Pkwy & PWSD

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name	Heirloom Pkwy		Heirloom Pkwy		PWSD	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0
Entry Pocket Length [ft]	110.00	100.00	150.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Heirloom Pkwy		Heirloom Pkwy		PWSD	
Base Volume Input [veh/h]	10	93	66	10	10	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0150	1.0150	1.0150	1.0150	1.0150	1.0150
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	94	67	10	10	10
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	26	18	3	3	3
Total Analysis Volume [veh/h]	11	102	73	11	11	11
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	7.40	0.00	0.00	0.00	9.72	8.77
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.00	0.00	0.00	0.08	0.08
95th-Percentile Queue Length [ft/ln]	0.55	0.00	0.00	0.00	1.95	1.95
d_A, Approach Delay [s/veh]	0.72		0.00		9.25	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.30					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Chambers Rd & Heirloom Pkwy

Control Type:	Signalized	Delay (sec / veh):	7.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.235

Intersection Setup

Name	Chambers Rd		Chambers Rd		Heirloom Pkwy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	1	0
Entry Pocket Length [ft]	450.00	100.00	100.00	420.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Chambers Rd		Chambers Rd		Heirloom Pkwy	
Base Volume Input [veh/h]	20	634	636	115	110	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0150	1.0149	1.0149	1.0150	1.0150	1.0150
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	643	645	117	112	19
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	175	175	32	30	5
Total Analysis Volume [veh/h]	22	699	701	127	122	21
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPerm	Permissive	Permissive	Permissive	Permissive	Permissive
Flashing Yellow Arrow	No					
Signal Group	5	2	6	0	7	0
Auxiliary Signal Groups						
Maximum Green [s]	14	38	19	0	18	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	2.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0.0	5.0	5.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	14.0	0.0	17.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	3.0	0.0	3.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	12.0	99.0	87.0	0.0	21.0	0.0
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	5	5	0	7	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Calculated Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	103.0	103.0	94.3	94.3	7.0	7.0
g / C, Green / Cycle	0.86	0.86	0.79	0.79	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.03	0.20	0.20	0.08	0.04	0.01
s, saturation flow rate [veh/h]	735	3560	3560	1589	3459	1589
c, Capacity [veh/h]	680	3054	2796	1248	204	94
d1, Uniform Delay [s]	1.45	1.51	3.45	3.01	55.07	53.84
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.09	0.17	0.22	0.16	2.79	1.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.23	0.25	0.10	0.60	0.22
d, Delay for Lane Group [s/veh]	1.54	1.69	3.66	3.17	57.86	55.03
Lane Group LOS	A	A	A	A	E	E
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.05	0.78	1.84	0.61	1.87	0.63
50th-Percentile Queue Length [ft/ln]	1.32	19.41	45.97	15.29	46.67	15.82
95th-Percentile Queue Length [veh/ln]	0.09	1.40	3.31	1.10	3.36	1.14
95th-Percentile Queue Length [ft/ln]	2.37	34.94	82.74	27.53	84.01	28.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	1.54	1.69	3.66	3.17	57.86	55.03
Movement LOS	A	A	A	A	E	E
d_A, Approach Delay [s/veh]	1.68		3.59		57.44	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	7.33					
Intersection LOS	A					
Intersection V/C	0.235					

Emissions

Vehicle Miles Traveled [mph]	2.63	83.59	77.70	14.08	11.87	2.04
Stops [stops/h]	1.58	46.58	110.32	18.35	112.01	18.98
Fuel consumption [US gal/h]	0.12	3.78	4.31	0.76	2.73	0.46
CO [g/h]	8.32	263.98	301.52	52.88	190.90	31.86
NOx [g/h]	1.62	51.36	58.67	10.29	37.14	6.20
VOC [g/h]	1.93	61.18	69.88	12.26	44.24	7.38

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1567	1367	267
d_b, Bicycle Delay [s]	2.82	6.02	45.07
l_b,int, Bicycle LOS Score for Intersection	2.154	2.243	1.560
Bicycle LOS	B	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

25003 Redemption Parker TIS

Vistro File: C:\...\25003 Redemption v1.0.vistro
Report File: C:\...\25003Redemption_v1.0 Bkgd 2026 Sun LOSDetailTripGenTripDistr.pdf

Scenario 2 Bkgd 2026 Sun
3/28/2025

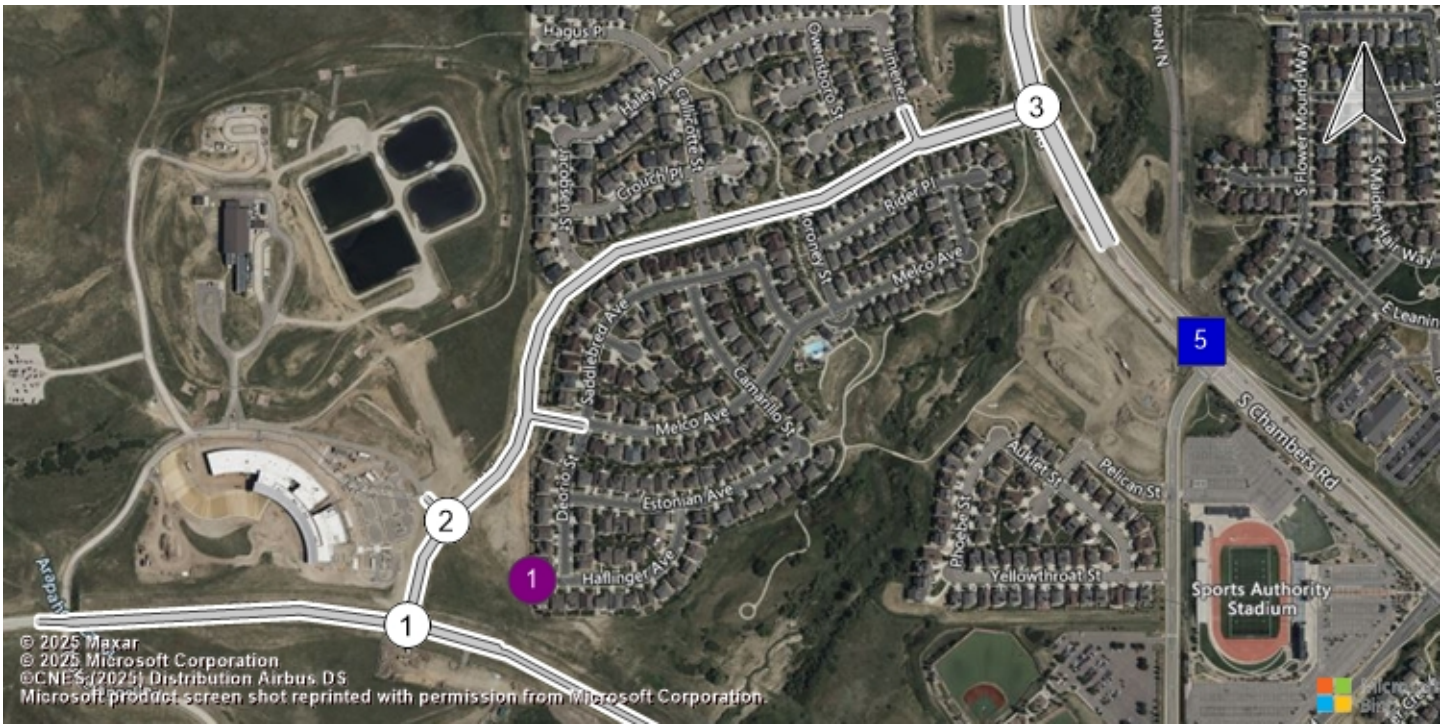
Turning Movement Volume: Detail

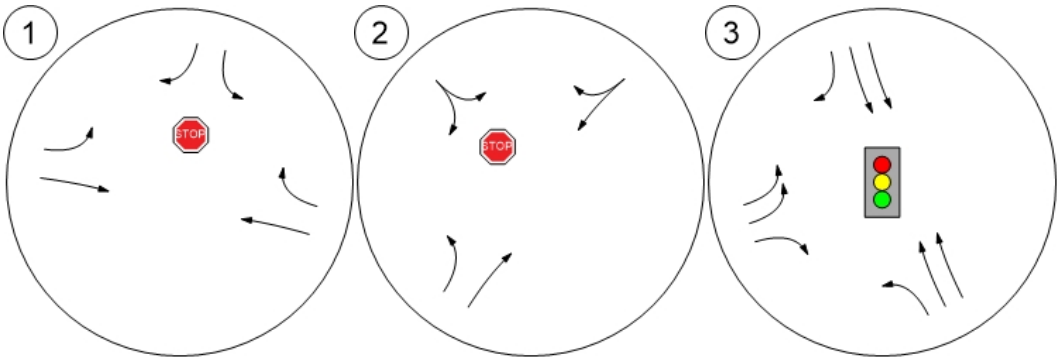
ID	Intersection Name	Volume Type	Southbound		Eastbound		Westbound		Total Volume
			Left	Right	Left	Thru	Thru	Right	
1	Hess Rd & Heirloom Pkwy	Final Base	12	54	69	242	228	24	629
		Growth Factor	1.02	1.02	1.02	1.07	1.07	1.02	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**12**	**55**	**70**	**258**	**243**	**24**	**662**

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
2	Heirloom Pkwy & PWSD	Final Base	10	93	66	10	10	10	199
		Growth Factor	1.02	1.02	1.02	1.02	1.02	1.02	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**10**	**94**	**67**	**10**	**10**	**10**	**201**

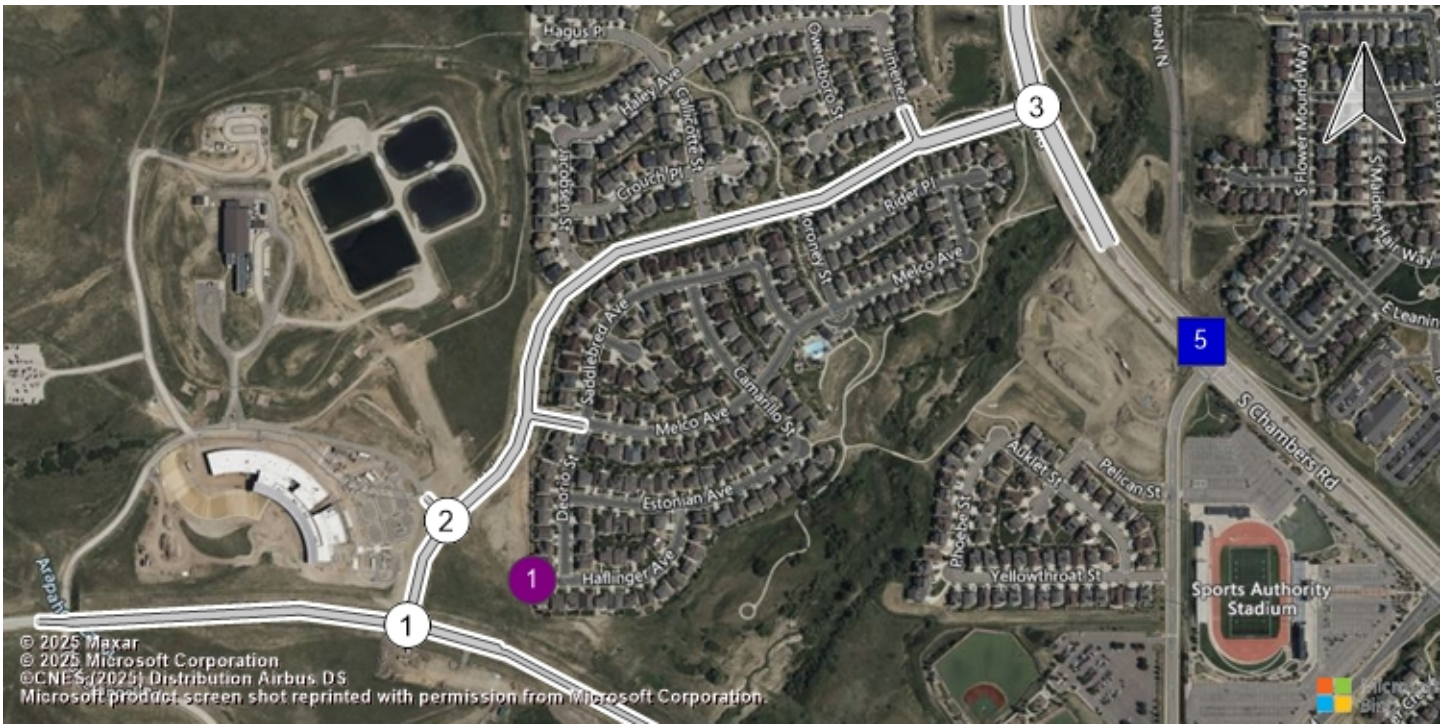
ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
3	Chambers Rd & Heirloom Pkwy	Final Base	20	634	636	115	110	19	1534
		Growth Factor	1.02	1.01	1.01	1.02	1.02	1.02	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**20**	**643**	**645**	**117**	**112**	**19**	**1556**

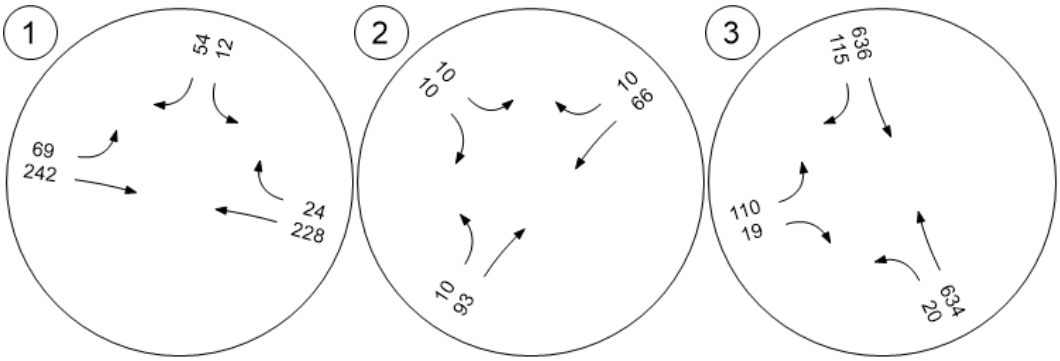
Lane Configuration and Traffic Control



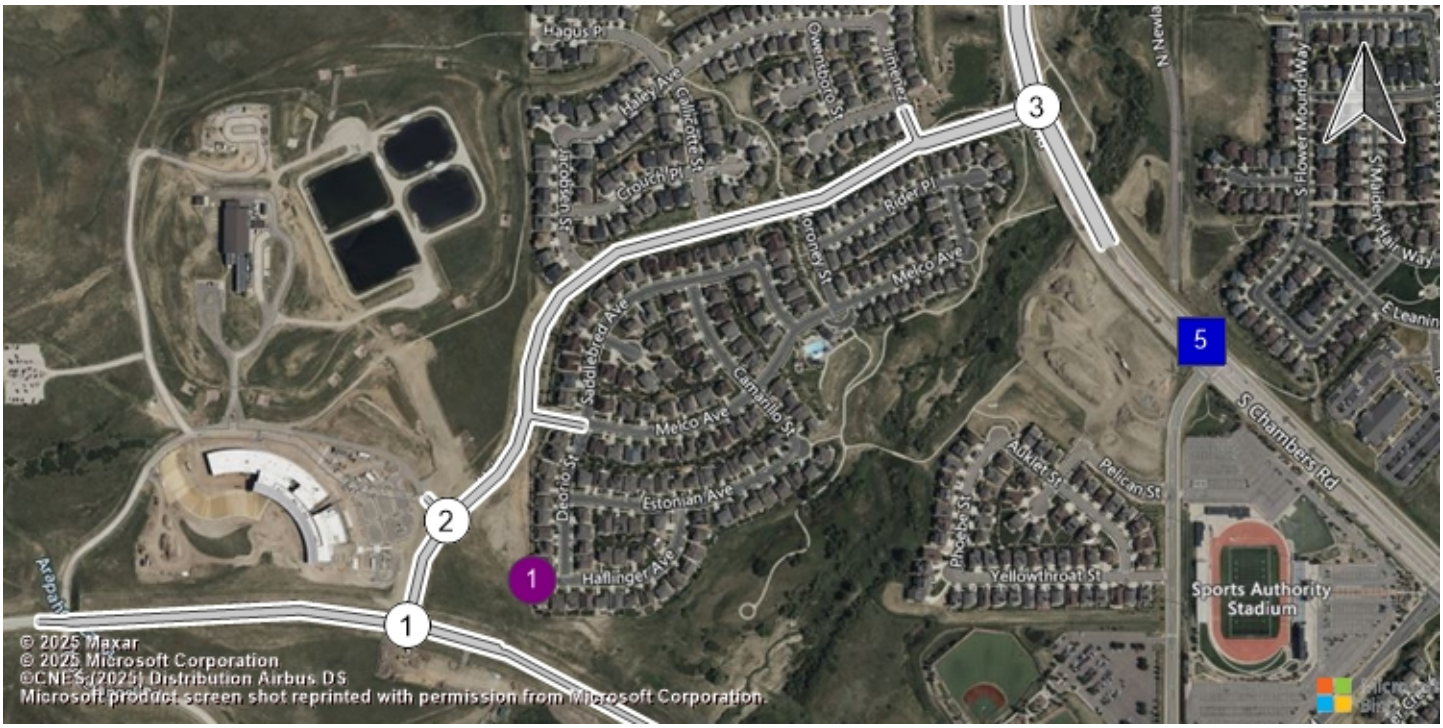


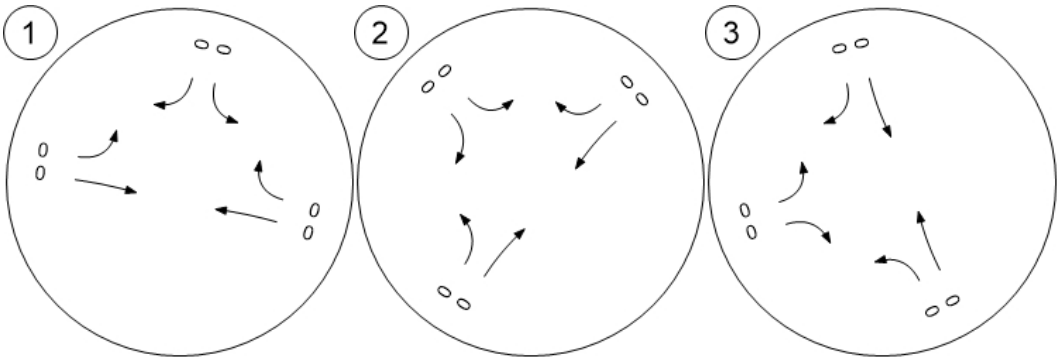
Traffic Volume - Base Volume



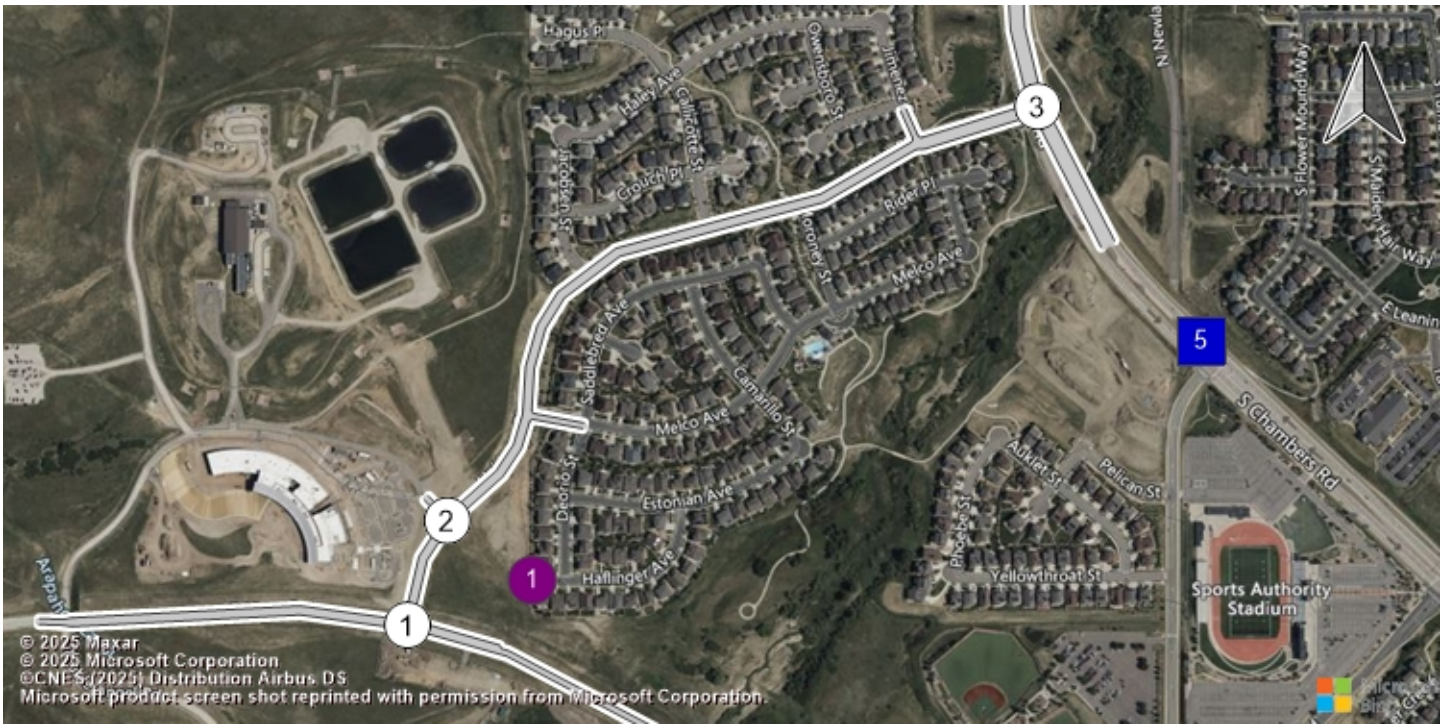


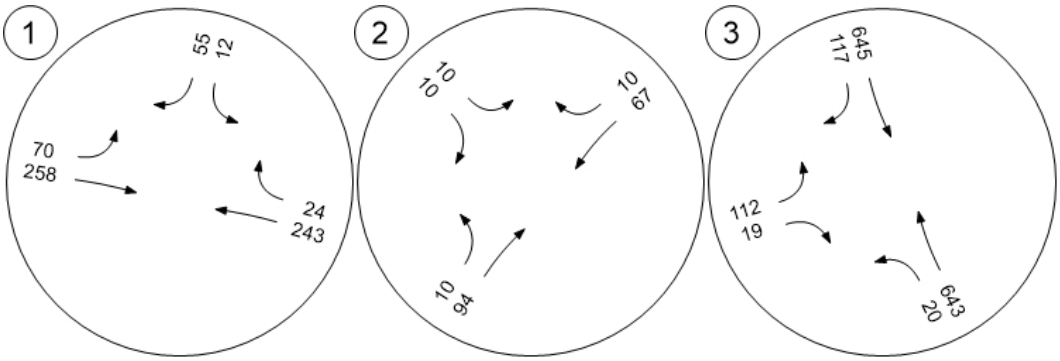
Traffic Volume - Net New Site Trips





Traffic Volume - Future Total Volume





25003 Redemption Parker TIS

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Report File: C:\...\25003Redemption_v1.0 Bkgd 2046 Sun LOSDetailTripGenTripDistr.pdf

Scenario 4 Bkgd 2046 Sun
3/28/2025

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Hess Rd & Heirloom Pkwy	Two-way stop	HCM 7th Edition	SB Left	0.063	19.3	C
2	Heirloom Pkwy & PWSD	Two-way stop	HCM 7th Edition	EB Left	0.021	10.2	B
3	Chambers Rd & Heirloom Pkwy	Signalized	HCM 7th Edition	EB Left	0.235	7.6	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Hess Rd & Heirloom Pkwy

Control Type:	Two-way stop	Delay (sec / veh):	19.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.063

Intersection Setup

Name	Heirloom Pkwy		Hess Rd		Hess Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	1
Entry Pocket Length [ft]	230.00	100.00	710.00	100.00	100.00	320.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	0.00
Speed [mph]	30.00		50.00		50.00	
Grade [%]	0.00		-6.00		6.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Heirloom Pkwy		Hess Rd		Hess Rd	
Base Volume Input [veh/h]	12	54	69	242	228	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3671	1.3671	1.3671	2.8732	2.8732	1.3671
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	16	74	94	695	655	33
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	20	26	189	178	9
Total Analysis Volume [veh/h]	17	80	102	755	712	36
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	Yes					
Number of Storage Spaces in Median	1		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.12	0.12	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	19.28	11.42	9.77	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.20	0.43	0.40	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	5.03	10.64	10.10	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.80		1.16		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.32					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: Heirloom Pkwy & PWSD

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.021

Intersection Setup

Name	Heirloom Pkwy		Heirloom Pkwy		PWSD	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0
Entry Pocket Length [ft]	110.00	100.00	150.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Heirloom Pkwy		Heirloom Pkwy		PWSD	
Base Volume Input [veh/h]	10	93	66	10	10	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3671	1.3671	1.3671	1.3671	1.3671	1.3671
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	127	90	14	14	14
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	35	24	4	4	4
Total Analysis Volume [veh/h]	15	138	98	15	15	15
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.02	0.02
d_M, Delay for Movement [s/veh]	7.46	0.00	0.00	0.00	10.25	8.96
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.00	0.12	0.12
95th-Percentile Queue Length [ft/ln]	0.77	0.00	0.00	0.00	2.88	2.88
d_A, Approach Delay [s/veh]	0.73		0.00		9.61	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.35					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Chambers Rd & Heirloom Pkwy

Control Type:	Signalized	Delay (sec / veh):	7.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.235

Intersection Setup

Name	Chambers Rd		Chambers Rd		Heirloom Pkwy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	1	0
Entry Pocket Length [ft]	450.00	100.00	100.00	420.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Chambers Rd		Chambers Rd		Heirloom Pkwy	
Base Volume Input [veh/h]	20	634	636	115	110	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.3671	1.3638	1.3638	1.3671	1.3671	1.3671
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	865	867	157	150	26
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	235	236	43	41	7
Total Analysis Volume [veh/h]	29	940	942	171	163	28
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPerm	Permissive	Permissive	Permissive	Permissive	Permissive
Flashing Yellow Arrow	No					
Signal Group	5	2	6	0	7	0
Auxiliary Signal Groups						
Maximum Green [s]	14	38	19	0	18	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	2.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0.0	5.0	5.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	14.0	0.0	17.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	3.0	0.0	3.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	12.0	95.0	83.0	0.0	25.0	0.0
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	5	5	0	7	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Calculated Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	102.0	102.0	92.7	92.7	8.0	8.0
g / C, Green / Cycle	0.85	0.85	0.77	0.77	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.05	0.18	0.18	0.11	0.05	0.02
s, saturation flow rate [veh/h]	598	5094	5094	1589	3459	1589
c, Capacity [veh/h]	568	4328	3930	1226	232	107
d1, Uniform Delay [s]	1.61	1.66	3.85	3.51	54.80	53.16
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.17	0.12	0.14	0.24	3.85	1.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.22	0.24	0.14	0.70	0.26
d, Delay for Lane Group [s/veh]	1.78	1.78	3.99	3.75	58.65	54.45
Lane Group LOS	A	A	A	A	E	D
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.08	0.77	1.78	0.94	2.52	0.84
50th-Percentile Queue Length [ft/ln]	2.06	19.24	44.48	23.50	62.99	20.91
95th-Percentile Queue Length [veh/ln]	0.15	1.39	3.20	1.69	4.54	1.51
95th-Percentile Queue Length [ft/ln]	3.71	34.63	80.07	42.29	113.38	37.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	1.78	1.78	3.99	3.75	58.65	54.45
Movement LOS	A	A	A	A	E	D
d_A, Approach Delay [s/veh]	1.78		3.95		58.04	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	7.57					
Intersection LOS	A					
Intersection V/C	0.235					

Emissions

Vehicle Miles Traveled [mph]	3.47	112.41	104.41	18.95	15.86	2.72
Stops [stops/h]	2.47	69.27	160.13	28.20	151.17	25.10
Fuel consumption [US gal/h]	0.16	5.15	5.95	1.07	3.69	0.60
CO [g/h]	11.27	359.72	415.85	74.44	257.70	42.14
NOx [g/h]	2.19	69.99	80.91	14.48	50.14	8.20
VOC [g/h]	2.61	83.37	96.38	17.25	59.72	9.77

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1500	1300	333
d_b, Bicycle Delay [s]	3.75	7.35	41.67
l_b,int, Bicycle LOS Score for Intersection	2.093	2.172	1.560
Bicycle LOS	B	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

25003 Redemption Parker TIS

Vistro File: C:\...\25003 Redemption v1.0.vistro
Report File: C:\...\25003Redemption_v1.0 Bkgd 2046 Sun LOSDetailTripGenTripDistr.pdf

Scenario 4 Bkgd 2046 Sun
3/28/2025

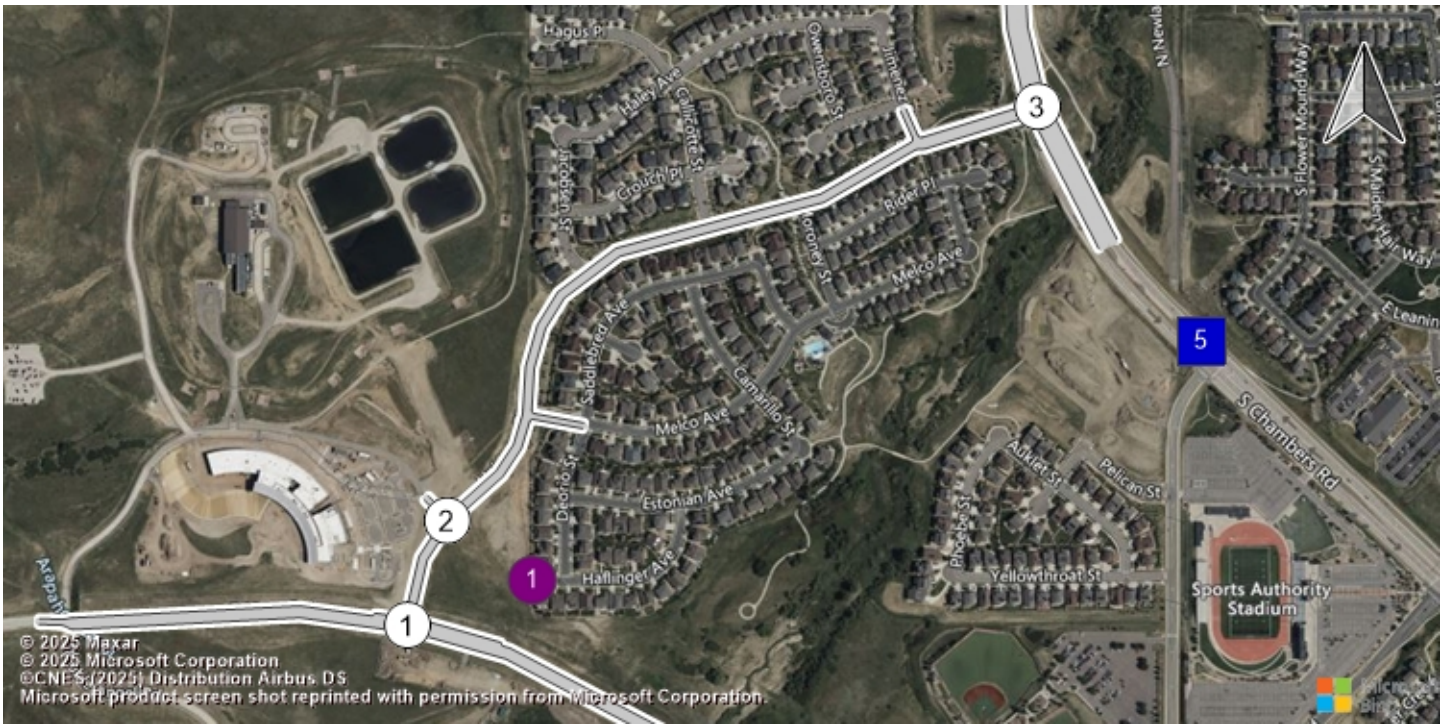
Turning Movement Volume: Detail

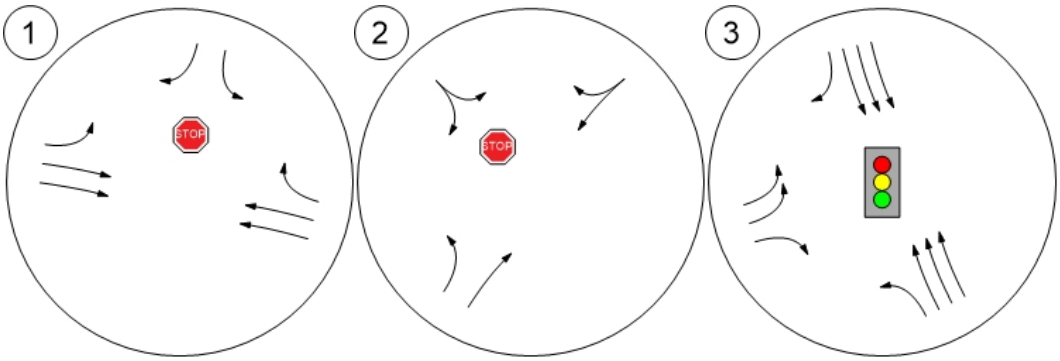
ID	Intersection Name	Volume Type	Southbound		Eastbound		Westbound		Total Volume
			Left	Right	Left	Thru	Thru	Right	
1	Hess Rd & Heirloom Pkwy	Final Base	12	54	69	242	228	24	629
		Growth Factor	1.37	1.37	1.37	2.87	2.87	1.37	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**16**	**74**	**94**	**695**	**655**	**33**	**1567**

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
2	Heirloom Pkwy & PWSD	Final Base	10	93	66	10	10	10	199
		Growth Factor	1.37	1.37	1.37	1.37	1.37	1.37	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**14**	**127**	**90**	**14**	**14**	**14**	**273**

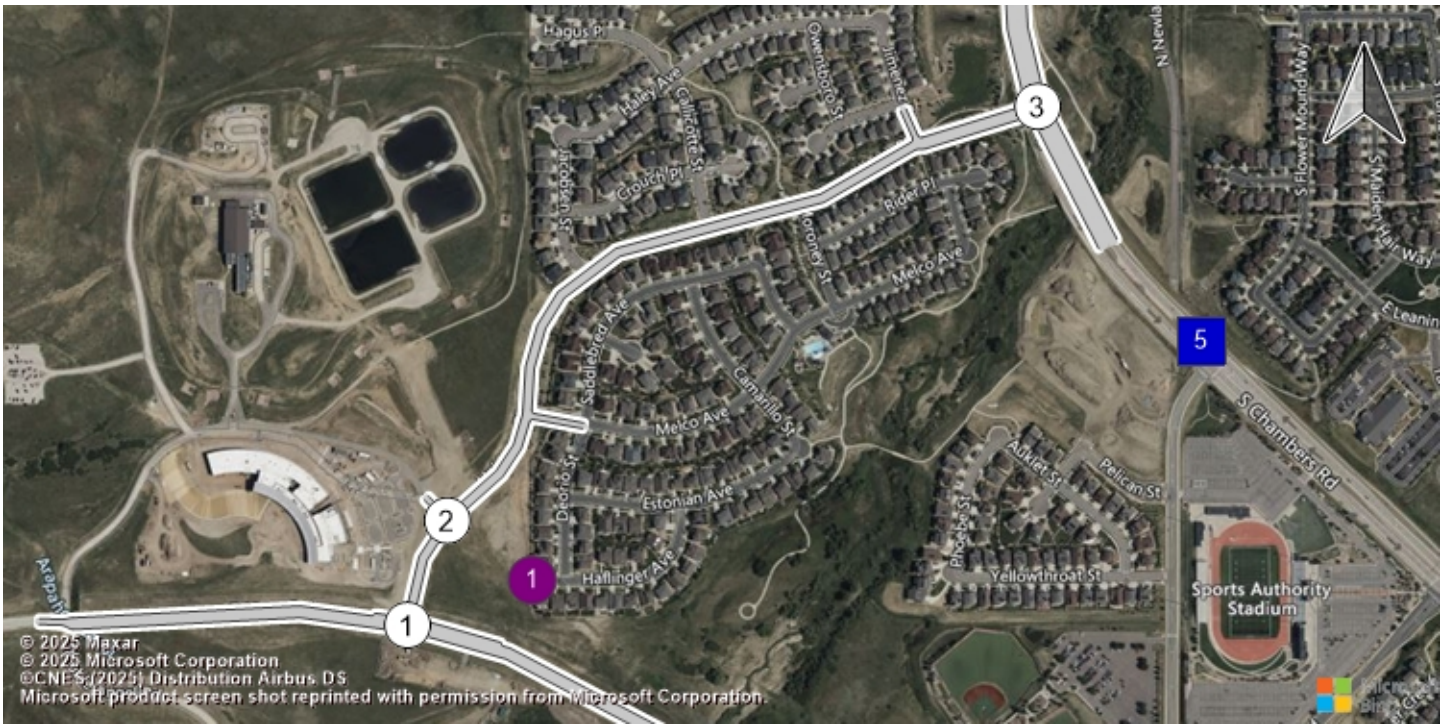
ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
3	Chambers Rd & Heirloom Pkwy	Final Base	20	634	636	115	110	19	1534
		Growth Factor	1.37	1.36	1.36	1.37	1.37	1.37	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**27**	**865**	**867**	**157**	**150**	**26**	**2092**

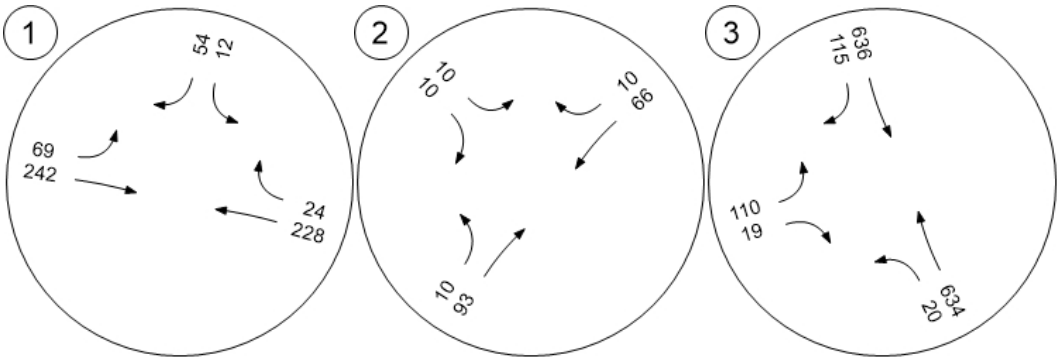
Lane Configuration and Traffic Control



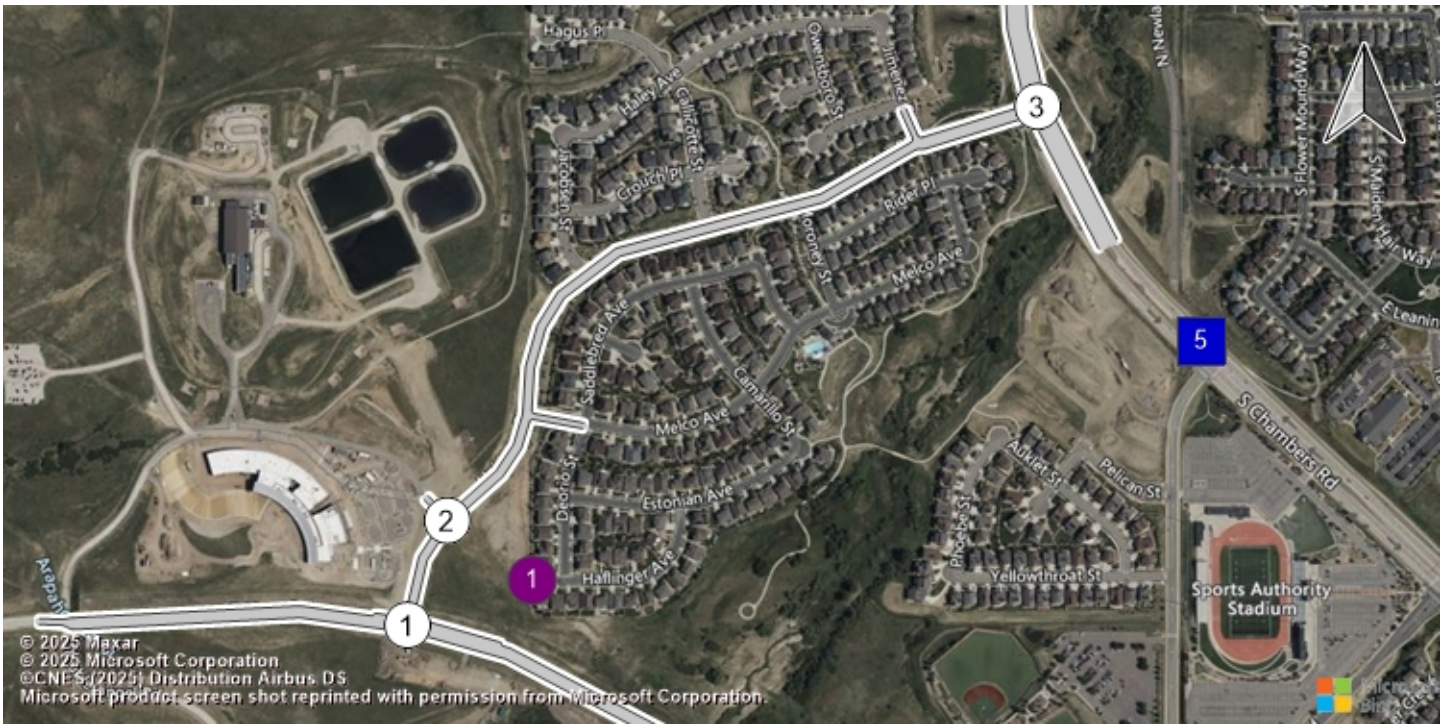


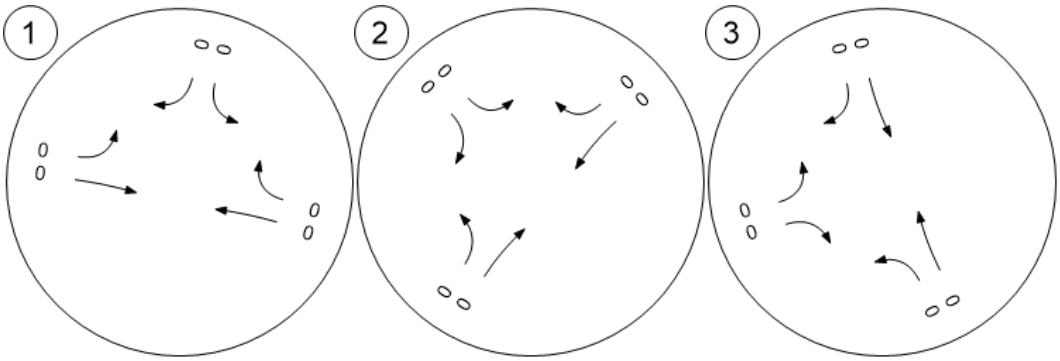
Traffic Volume - Base Volume



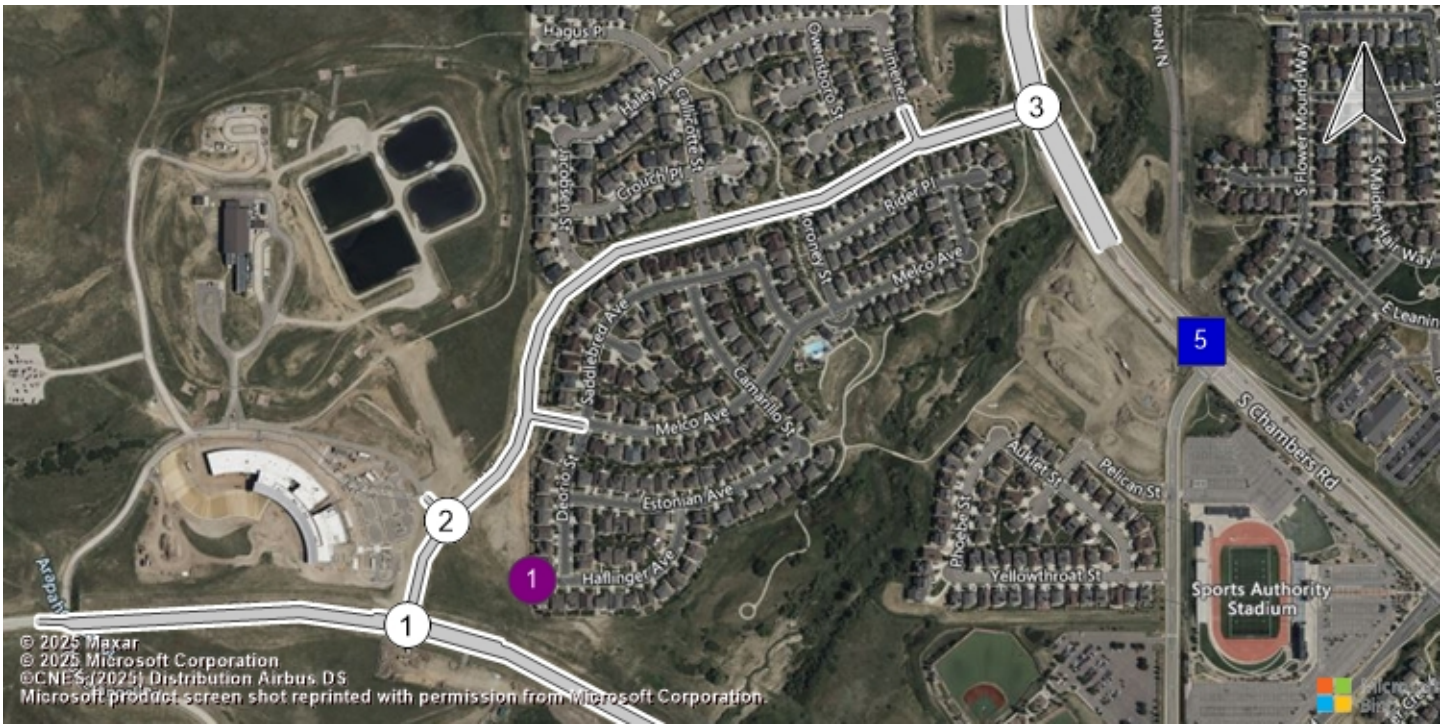


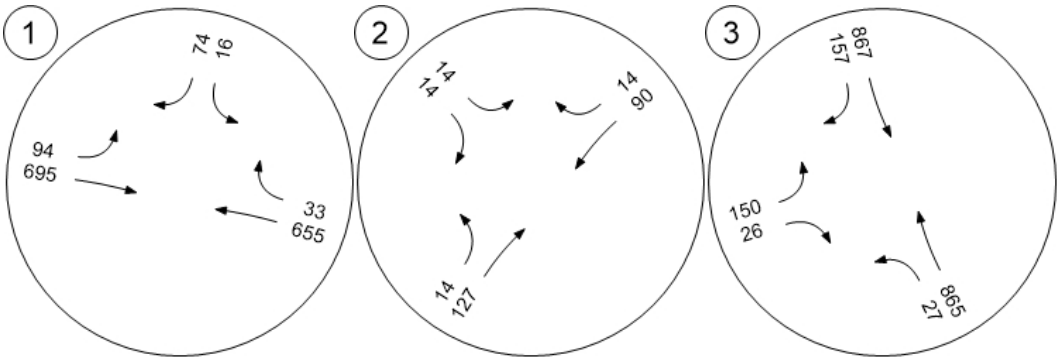
Traffic Volume - Net New Site Trips





Traffic Volume - Future Total Volume





25003 Redemption Parker TIS

Vistro File: C:\...\25003 Redemption v1.0.vistro
Report File: C:\...\25003Redemption_v1.0 Total 2026 Sun LOSDetailTripGenTripDistr.pdf

Scenario 3 Total 2026 Sun
3/28/2025

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Hess Rd & Heirloom Pkwy	Two-way stop	HCM 7th Edition	SB Left	0.104	13.5	B
2	Heirloom Pkwy & PWSD	Two-way stop	HCM 7th Edition	WB Left	0.074	11.6	B
3	Chambers Rd & Heirloom Pkwy	Signalized	HCM 7th Edition	EB Left	0.246	8.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Hess Rd & Heirloom Pkwy

Control Type:	Two-way stop	Delay (sec / veh):	13.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.104

Intersection Setup

Name	Heirloom Pkwy		Hess Rd		Hess Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	1
Entry Pocket Length [ft]	230.00	100.00	710.00	100.00	100.00	320.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		50.00		50.00	
Grade [%]	0.00		-6.00		6.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Heirloom Pkwy		Hess Rd		Hess Rd	
Base Volume Input [veh/h]	12	54	69	242	228	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0150	1.0150	1.0150	1.0659	1.0659	1.0150
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	33	8	8	0	0	32
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	45	63	78	258	243	56
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	17	21	70	66	15
Total Analysis Volume [veh/h]	49	68	85	280	264	61
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.09	0.07	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	13.51	10.09	8.13	0.00	0.00	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.35	0.29	0.22	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	8.64	7.19	5.54	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.53		1.89		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	2.53					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 2: Heirloom Pkwy & PWSD

Control Type:	Two-way stop	Delay (sec / veh):	11.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.074

Intersection Setup

Name	Heirloom Pkwy			Heirloom Pkwy			PWSD			Proposed Access		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	110.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Heirloom Pkwy			Heirloom Pkwy			PWSD			Proposed Access		
Base Volume Input [veh/h]	10	93	0	0	66	10	10	0	10	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0150	1.0150	1.0150	1.0150	1.0150	1.0150	1.0150	1.0000	1.0150	1.0150	1.0150	1.0150
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	40	40	0	0	0	0	0	41	0	42
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	94	40	40	67	10	10	0	10	41	0	42
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	26	11	11	18	3	3	0	3	11	0	11
Total Analysis Volume [veh/h]	11	102	43	43	73	11	11	0	11	45	0	46
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.03	0.00	0.00	0.02	0.00	0.01	0.07	0.00	0.05
d_M, Delay for Movement [s/veh]	7.40	0.00	0.00	7.58	0.00	0.00	11.50	11.51	8.82	11.62	11.92	9.57
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.00	0.00	0.09	0.00	0.00	0.09	0.09	0.09	0.42	0.42	0.42
95th-Percentile Queue Length [ft/ln]	0.55	0.00	0.00	2.31	0.00	0.00	2.36	2.36	2.36	10.54	10.54	10.54
d_A, Approach Delay [s/veh]	0.52			2.57			10.16			10.59		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	4.03											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Chambers Rd & Heirloom Pkwy

Control Type:	Signalized	Delay (sec / veh):	8.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.246

Intersection Setup

Name	Chambers Rd		Chambers Rd		Heirloom Pkwy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	1	0
Entry Pocket Length [ft]	450.00	100.00	100.00	420.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Chambers Rd		Chambers Rd		Heirloom Pkwy	
Base Volume Input [veh/h]	20	634	636	115	110	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0150	1.0149	1.0149	1.0150	1.0150	1.0150
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	0	0	32	34	8
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	643	645	149	146	27
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	175	175	40	40	7
Total Analysis Volume [veh/h]	30	699	701	162	159	29
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPerm	Permissive	Permissive	Permissive	Permissive	Permissive
Flashing Yellow Arrow	No					
Signal Group	5	2	6	0	7	0
Auxiliary Signal Groups						
Maximum Green [s]	14	38	19	0	18	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	2.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0.0	5.0	5.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	14.0	0.0	17.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	3.0	0.0	3.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	12.0	95.0	83.0	0.0	25.0	0.0
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	5	5	0	7	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Calculated Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	102.2	102.2	92.7	92.7	7.8	7.8
g / C, Green / Cycle	0.85	0.85	0.77	0.77	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.04	0.20	0.20	0.10	0.05	0.02
s, saturation flow rate [veh/h]	724	3560	3560	1589	3459	1589
c, Capacity [veh/h]	665	3029	2748	1227	228	105
d1, Uniform Delay [s]	1.62	1.66	3.89	3.48	54.87	53.32
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	0.18	0.22	0.22	3.83	1.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.23	0.26	0.13	0.70	0.28
d, Delay for Lane Group [s/veh]	1.75	1.84	4.11	3.70	58.70	54.74
Lane Group LOS	A	A	A	A	E	D
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.08	0.88	2.04	0.88	2.46	0.87
50th-Percentile Queue Length [ft/ln]	2.00	21.92	50.88	22.05	61.46	21.74
95th-Percentile Queue Length [veh/ln]	0.14	1.58	3.66	1.59	4.42	1.57
95th-Percentile Queue Length [ft/ln]	3.59	39.45	91.58	39.68	110.62	39.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	1.75	1.84	4.11	3.70	58.70	54.74
Movement LOS	A	A	A	A	E	D
d_A, Approach Delay [s/veh]	1.84		4.03		58.09	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	8.84					
Intersection LOS	A					
Intersection V/C	0.246					

Emissions

Vehicle Miles Traveled [mph]	3.59	83.59	77.70	17.96	15.47	2.82
Stops [stops/h]	2.40	52.60	122.10	26.45	147.49	26.09
Fuel consumption [US gal/h]	0.17	3.84	4.47	1.01	3.60	0.63
CO [g/h]	11.56	268.67	312.21	70.28	251.50	43.81
NOx [g/h]	2.25	52.27	60.75	13.67	48.93	8.52
VOC [g/h]	2.68	62.27	72.36	16.29	58.29	10.15

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1500	1300	333
d_b, Bicycle Delay [s]	3.75	7.35	41.67
l_b,int, Bicycle LOS Score for Intersection	2.161	2.272	1.560
Bicycle LOS	B	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

25003 Redemption Parker TIS

Vistro File: C:\...\25003 Redemption v1.0.vistro
Report File: C:\...\25003Redemption_v1.0 Total 2026 Sun LOSDetailTripGenTripDistr.pdf

Scenario 3 Total 2026 Sun
3/28/2025

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Southbound		Eastbound		Westbound		Total Volume
			Left	Right	Left	Thru	Thru	Right	
1	Hess Rd & Heirloom Pkwy	Final Base	12	54	69	242	228	24	629
		Growth Factor	1.02	1.02	1.02	1.07	1.07	1.02	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	33	8	8	0	0	32	81
		Other	0	0	0	0	0	0	0
		Future Total	**45**	**63**	**78**	**258**	**243**	**56**	**743**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Heirloom Pkwy & PWSD	Final Base	10	93	0	0	66	10	10	0	10	0	0	0	199
		Growth Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.00	1.02	1.02	1.02	1.02	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	40	40	0	0	0	0	0	41	0	42	163
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**10**	**94**	**40**	**40**	**67**	**10**	**10**	**0**	**10**	**41**	**0**	**42**	**364**

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
3	Chambers Rd & Heirloom Pkwy	Final Base	20	634	636	115	110	19	1534
		Growth Factor	1.02	1.01	1.01	1.02	1.02	1.02	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	8	0	0	32	34	8	82
		Other	0	0	0	0	0	0	0
		Future Total	**28**	**643**	**645**	**149**	**146**	**27**	**1638**

25003 Redemption Parker TIS

Vistro File: C:\...\25003 Redemption v1.0.vistro
Report File: C:\...\25003Redemption_v1.0 Total 2026 Sun LOSDetailTripGenTripDistr.pdf

Scenario 3 Total 2026 Sun
3/28/2025

Trip Generation summary

Added Trips

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	% Int. Capture	Trips In Adj.	Trips Out Adj.	Total Trips Adj.	% of Total Trips
1: Project	Church	560	Seats		349.000	49.00	51.00	0.00	80	83	163	100.00
					Added Trips Total				**80**	**83**	**163**	**100.00**

25003 Redemption Parker TIS

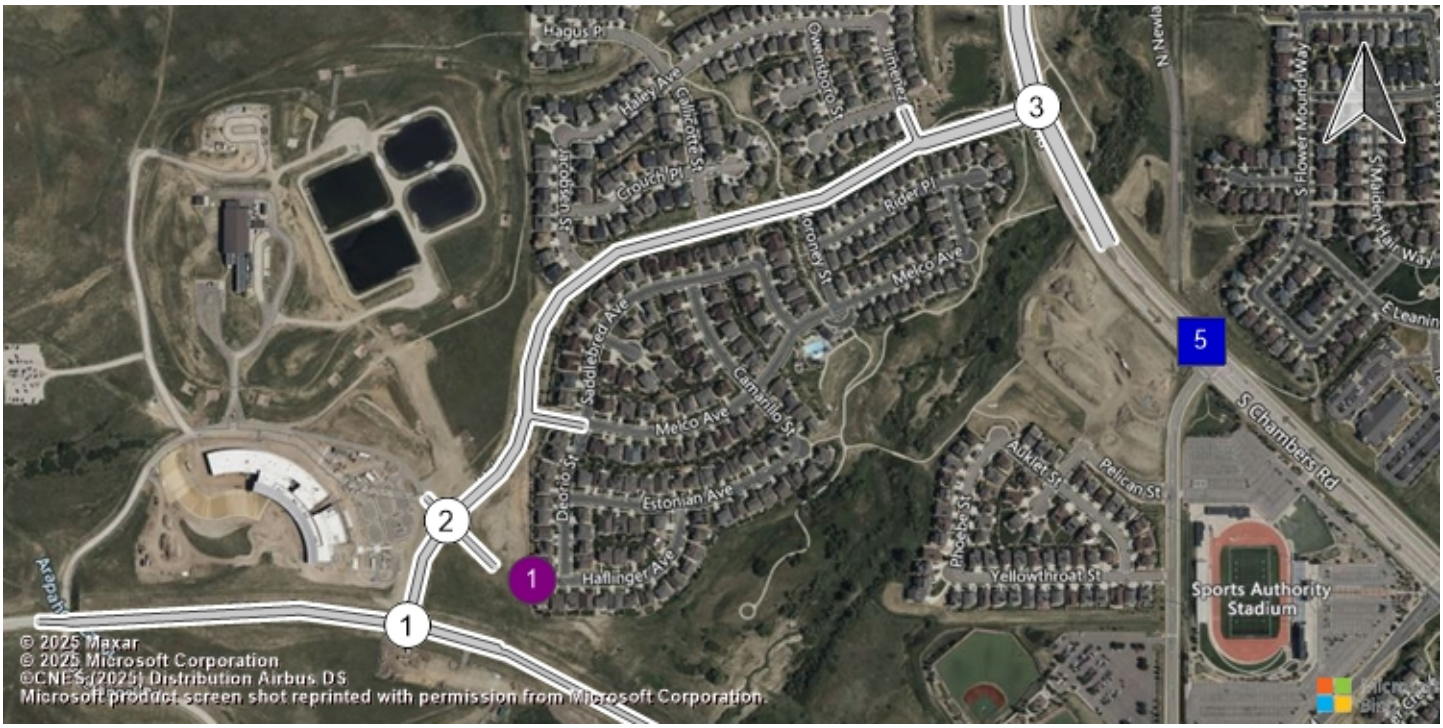
Vistro File: C:\...\25003 Redemption v1.0.vistro
Report File: C:\...\25003Redemption_v1.0 Total 2026 Sun LOSDetailTripGenTripDistr.pdf

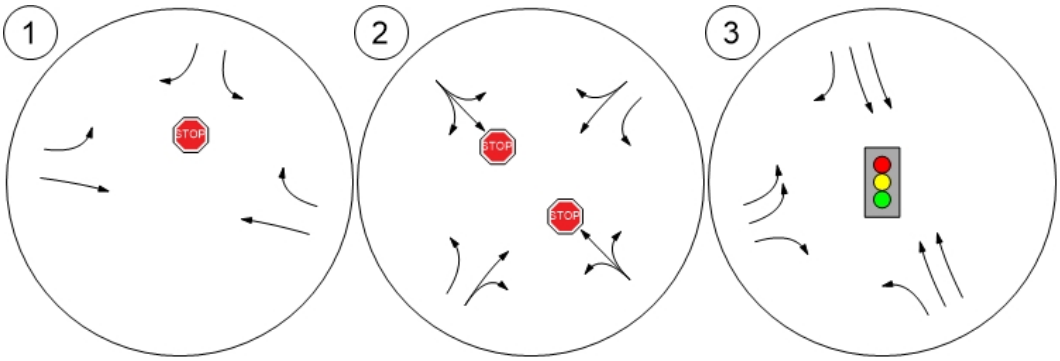
Scenario 3 Total 2026 Sun
3/28/2025

Trip Distribution summary

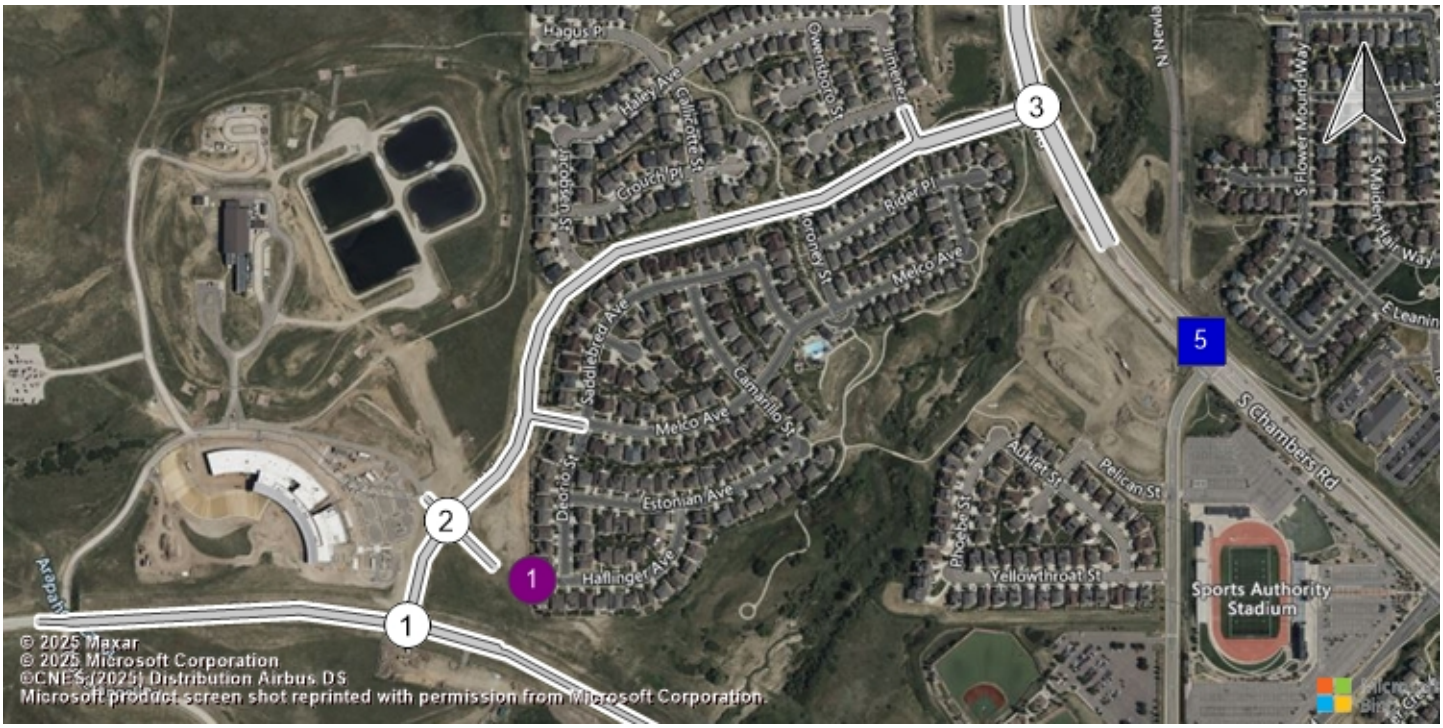
Zone / Gate	Zone 1: Project			
	To Project:		From Project:	
	Share %	Trips	Share %	Trips
2: Hess to/from West	10.00	8	10.00	8
3: Hess to/from East	40.00	32	40.00	33
4: Chambers to/from North	40.00	32	40.00	34
5: Chambers to/from South	10.00	8	10.00	8
Total	**100.00**	**80**	**100.00**	**83**

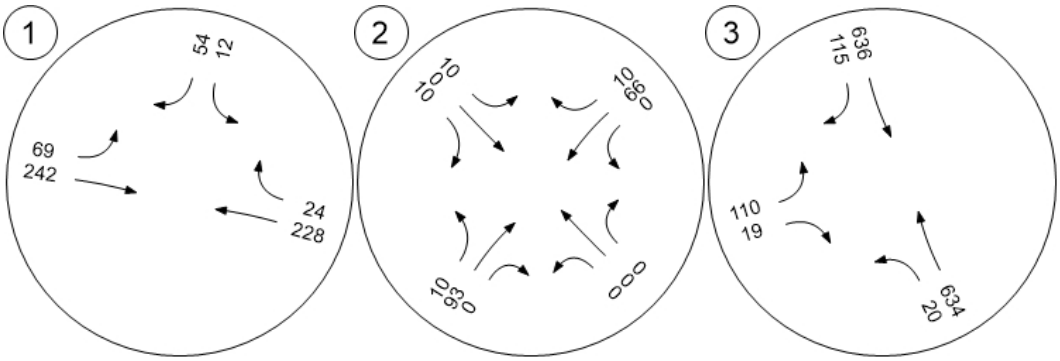
Lane Configuration and Traffic Control



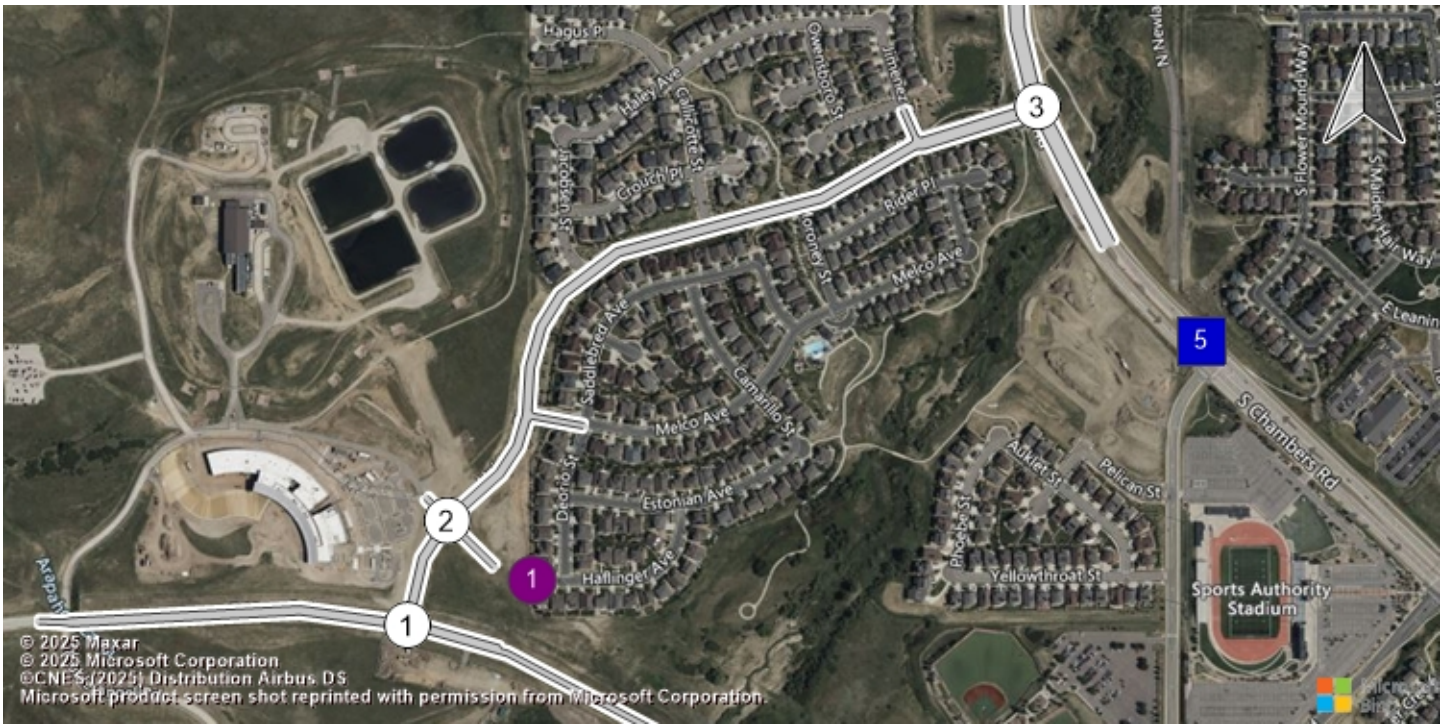


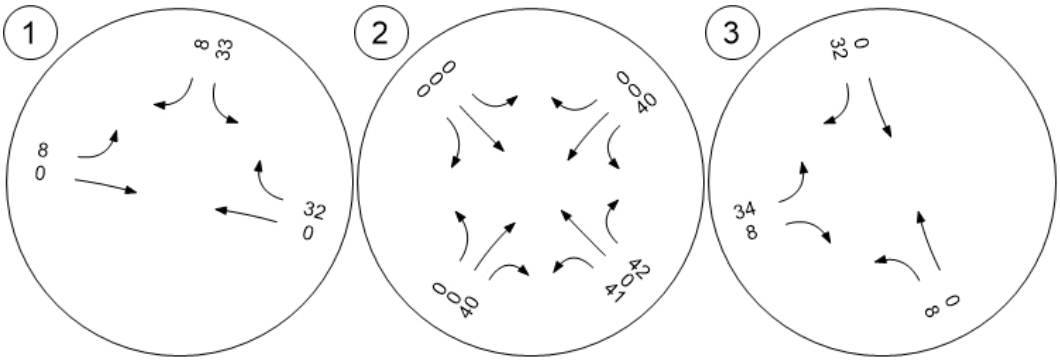
Traffic Volume - Base Volume



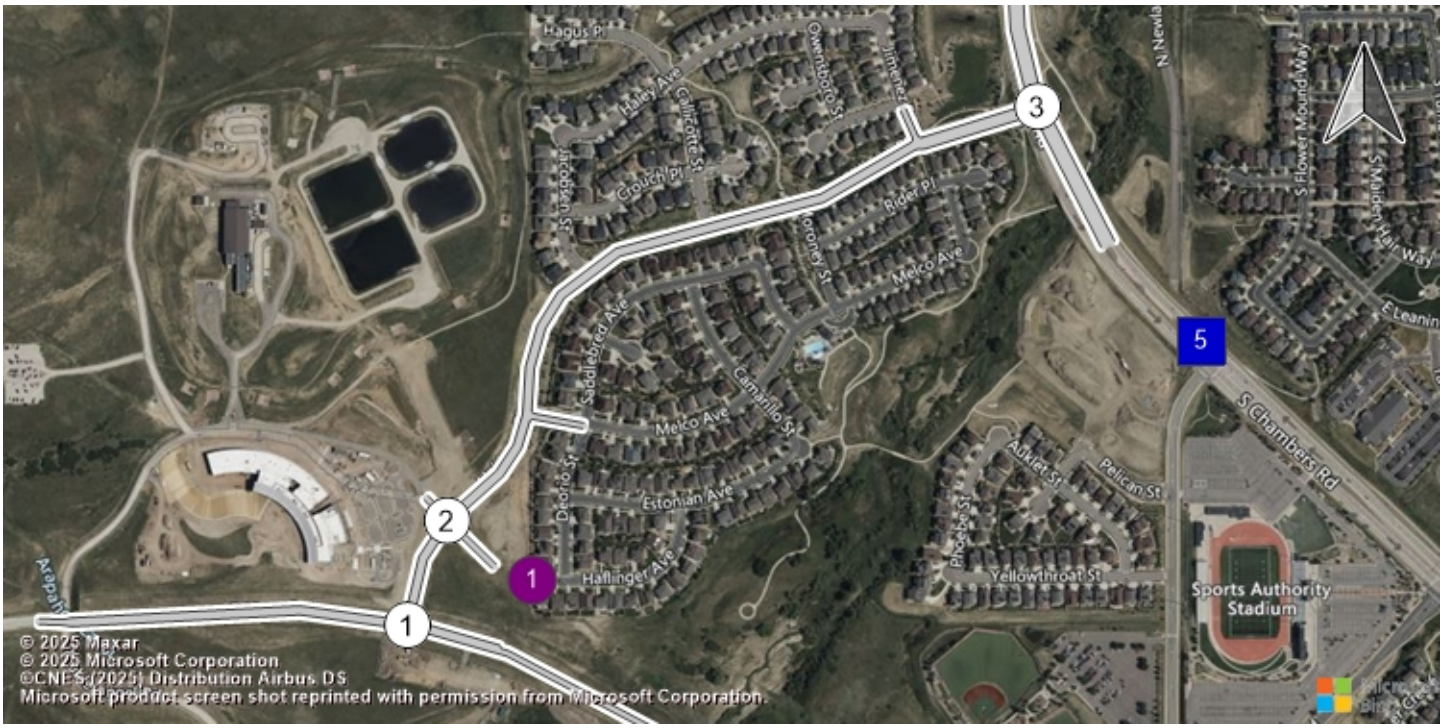


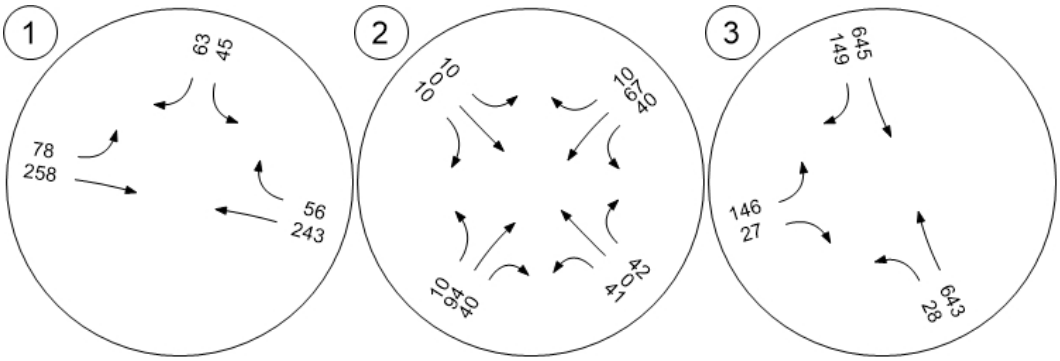
Traffic Volume - Net New Site Trips





Traffic Volume - Future Total Volume





25003 Redemption Parker TIS

Vistro File: C:\...\25003 Redemption v1.0.vistro
Report File: C:\...\25003Redemption_v1.0 Total 2046 Sun LOSDetailTripGenTripDistr.pdf

Scenario 5 Total 2046 Sun
3/28/2025

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Hess Rd & Heirloom Pkwy	Two-way stop	HCM 7th Edition	SB Left	0.202	22.2	C
2	Heirloom Pkwy & PWSD	Two-way stop	HCM 7th Edition	WB Left	0.084	12.5	B
3	Chambers Rd & Heirloom Pkwy	Signalized	HCM 7th Edition	EB Left	0.248	8.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Hess Rd & Heirloom Pkwy

Control Type:	Two-way stop	Delay (sec / veh):	22.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.202

Intersection Setup

Name	Heirloom Pkwy		Hess Rd		Hess Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	1
Entry Pocket Length [ft]	230.00	100.00	710.00	100.00	100.00	320.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	0.00
Speed [mph]	30.00		50.00		50.00	
Grade [%]	0.00		-6.00		6.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Heirloom Pkwy		Hess Rd		Hess Rd	
Base Volume Input [veh/h]	12	54	69	242	228	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3671	1.3671	1.3671	2.8732	2.8732	1.3671
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	33	8	8	0	0	32
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	49	82	102	695	655	65
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	22	28	189	178	18
Total Analysis Volume [veh/h]	53	89	111	755	712	71
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	Yes					
Number of Storage Spaces in Median	1		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.20	0.14	0.13	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	22.15	11.53	10.00	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.74	0.48	0.46	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	18.45	12.02	11.51	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	15.49		1.28		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.85					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: Heirloom Pkwy & PWSD

Control Type:	Two-way stop	Delay (sec / veh):	12.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.084

Intersection Setup

Name	Heirloom Pkwy			Heirloom Pkwy			PWSD			Proposed Access		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	110.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Heirloom Pkwy			Heirloom Pkwy			PWSD			Proposed Access		
Base Volume Input [veh/h]	10	93	0	0	66	10	10	0	10	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3671	1.3671	1.3671	1.3671	1.3671	1.3671	1.3671	1.0000	1.3671	1.3671	1.3671	1.3671
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	40	40	0	0	0	0	0	41	0	42
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	127	40	40	90	14	14	0	14	41	0	42
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	35	11	11	24	4	4	0	4	11	0	11
Total Analysis Volume [veh/h]	15	138	43	43	98	15	15	0	15	45	0	46
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.02	0.08	0.00	0.05
d_M, Delay for Movement [s/veh]	7.46	0.00	0.00	7.66	0.00	0.00	12.36	12.25	9.05	12.52	12.71	9.90
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.10	0.00	0.00	0.14	0.14	0.14	0.47	0.47	0.47
95th-Percentile Queue Length [ft/ln]	0.77	0.00	0.00	2.39	0.00	0.00	3.56	3.56	3.56	11.68	11.68	11.68
d_A, Approach Delay [s/veh]	0.57			2.11			10.71			11.20		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	3.77											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Chambers Rd & Heirloom Pkwy

Control Type:	Signalized	Delay (sec / veh):	8.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.248

Intersection Setup

Name	Chambers Rd		Chambers Rd		Heirloom Pkwy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	1	0
Entry Pocket Length [ft]	450.00	100.00	100.00	420.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Chambers Rd		Chambers Rd		Heirloom Pkwy	
Base Volume Input [veh/h]	20	634	636	115	110	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.3671	1.3638	1.3638	1.3671	1.3671	1.3671
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	0	0	32	34	8
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	865	867	189	184	34
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	235	236	51	50	9
Total Analysis Volume [veh/h]	38	940	942	205	200	37
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPerm	Permissive	Permissive	Permissive	Permissive	Permissive
Flashing Yellow Arrow	No					
Signal Group	5	2	6	0	7	0
Auxiliary Signal Groups						
Maximum Green [s]	14	38	19	0	18	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	2.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0.0	5.0	5.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	14.0	0.0	17.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	3.0	0.0	3.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	12.0	91.0	79.0	0.0	29.0	0.0
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	5	5	0	7	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Calculated Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	100.6	100.6	90.6	90.6	9.4	9.4
g / C, Green / Cycle	0.84	0.84	0.75	0.75	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.06	0.18	0.18	0.13	0.06	0.02
s, saturation flow rate [veh/h]	594	5094	5094	1589	3459	1589
c, Capacity [veh/h]	555	4267	3840	1198	273	126
d1, Uniform Delay [s]	1.89	1.94	4.46	4.18	54.01	52.10
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.24	0.12	0.15	0.31	3.75	1.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.22	0.25	0.17	0.73	0.29
d, Delay for Lane Group [s/veh]	2.13	2.06	4.62	4.49	57.76	53.39
Lane Group LOS	A	A	A	A	E	D
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.13	0.92	2.01	1.30	3.07	1.09
50th-Percentile Queue Length [ft/ln]	3.13	23.07	50.18	32.40	76.83	27.27
95th-Percentile Queue Length [veh/ln]	0.23	1.66	3.61	2.33	5.53	1.96
95th-Percentile Queue Length [ft/ln]	5.63	41.53	90.32	58.33	138.29	49.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.13	2.06	4.62	4.49	57.76	53.39
Movement LOS	A	A	A	A	E	D
d_A, Approach Delay [s/veh]	2.06		4.59		57.08	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	8.81					
Intersection LOS	A					
Intersection V/C	0.248					

Emissions

Vehicle Miles Traveled [mph]	4.54	112.41	104.41	22.72	19.46	3.60
Stops [stops/h]	3.76	83.07	180.63	38.89	184.39	32.72
Fuel consumption [US gal/h]	0.22	5.30	6.22	1.35	4.48	0.79
CO [g/h]	15.23	370.72	435.00	94.07	313.09	54.89
NOx [g/h]	2.96	72.13	84.63	18.30	60.92	10.68
VOC [g/h]	3.53	85.92	100.81	21.80	72.56	12.72

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1433	1233	400
d_b, Bicycle Delay [s]	4.82	8.82	38.40
l_b,int, Bicycle LOS Score for Intersection	2.098	2.190	1.560
Bicycle LOS	B	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

25003 Redemption Parker TIS

Vistro File: C:\...\25003 Redemption v1.0.vistro
Report File: C:\...\25003Redemption_v1.0 Total 2046 Sun LOSDetailTripGenTripDistr.pdf

Scenario 5 Total 2046 Sun
3/28/2025

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Southbound		Eastbound		Westbound		Total Volume
			Left	Right	Left	Thru	Thru	Right	
1	Hess Rd & Heirloom Pkwy	Final Base	12	54	69	242	228	24	629
		Growth Factor	1.37	1.37	1.37	2.87	2.87	1.37	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	33	8	8	0	0	32	81
		Other	0	0	0	0	0	0	0
		Future Total	**49**	**82**	**102**	**695**	**655**	**65**	**1648**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Heirloom Pkwy & PWSD	Final Base	10	93	0	0	66	10	10	0	10	0	0	0	199
		Growth Factor	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.00	1.37	1.37	1.37	1.37	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	40	40	0	0	0	0	0	41	0	42	163
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**14**	**127**	**40**	**40**	**90**	**14**	**14**	**0**	**14**	**41**	**0**	**42**	**436**

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
3	Chambers Rd & Heirloom Pkwy	Final Base	20	634	636	115	110	19	1534
		Growth Factor	1.37	1.36	1.36	1.37	1.37	1.37	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	8	0	0	32	34	8	82
		Other	0	0	0	0	0	0	0
		Future Total	**35**	**865**	**867**	**189**	**184**	**34**	**2174**

25003 Redemption Parker TIS

Vistro File: C:\...\25003 Redemption v1.0.vistro
Report File: C:\...\25003Redemption_v1.0 Total 2046 Sun LOSDetailTripGenTripDistr.pdf

Scenario 5 Total 2046 Sun
3/28/2025

Trip Generation summary

Added Trips

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	% Int. Capture	Trips In Adj.	Trips Out Adj.	Total Trips Adj.	% of Total Trips
1: Project	Church	560	Seats		349.000	49.00	51.00	0.00	80	83	163	100.00
					Added Trips Total				**80**	**83**	**163**	**100.00**

25003 Redemption Parker TIS

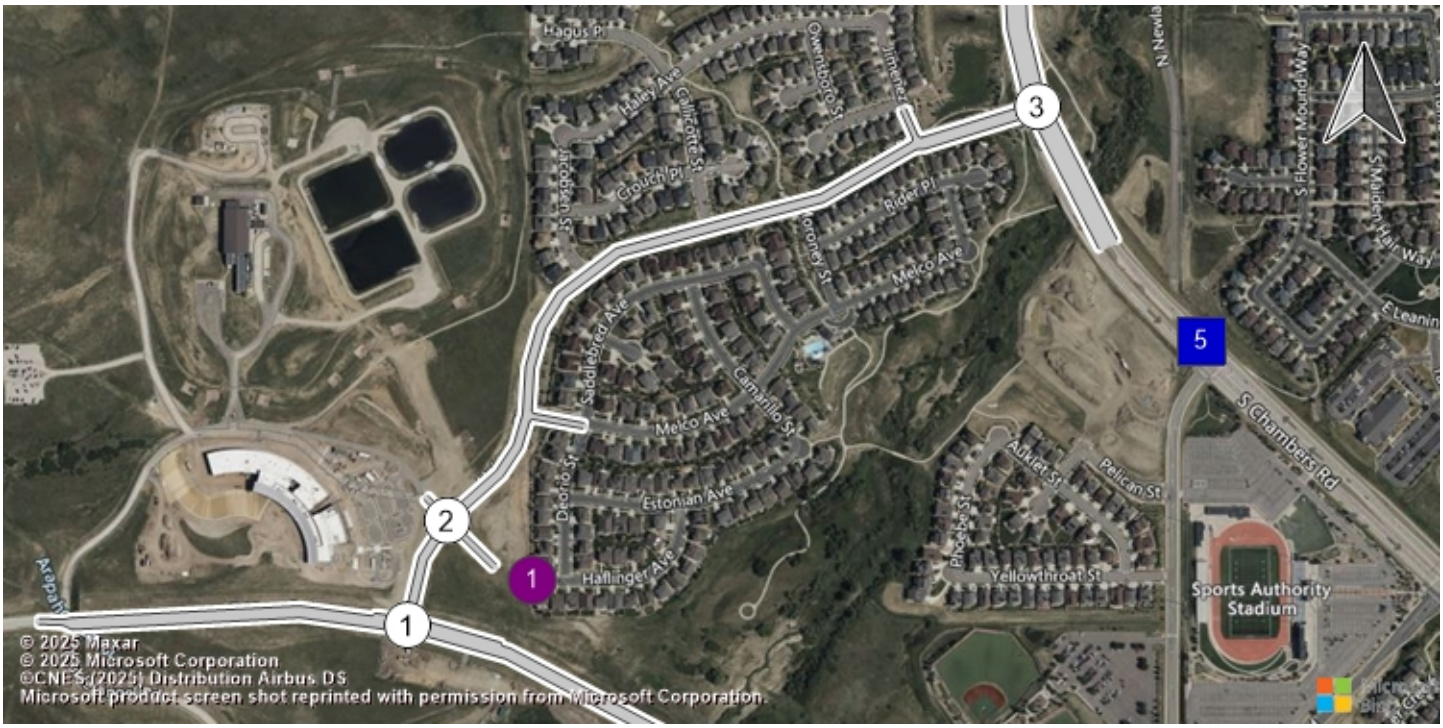
Vistro File: C:\...\25003 Redemption v1.0.vistro
Report File: C:\...\25003Redemption_v1.0 Total 2046 Sun LOSDetailTripGenTripDistr.pdf

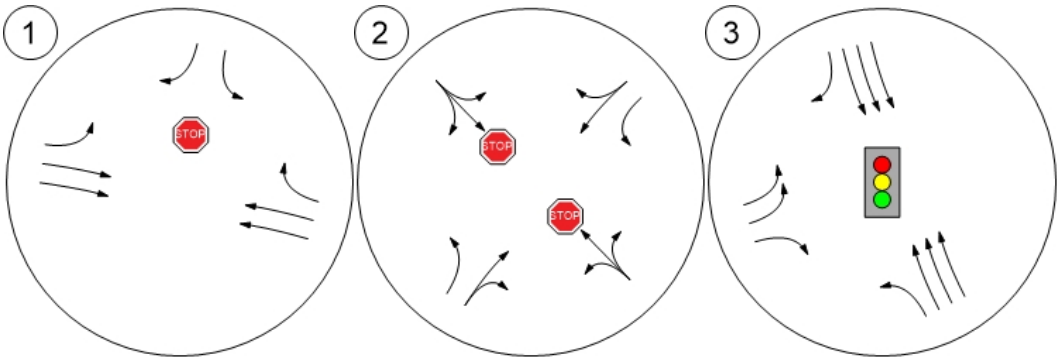
Scenario 5 Total 2046 Sun
3/28/2025

Trip Distribution summary

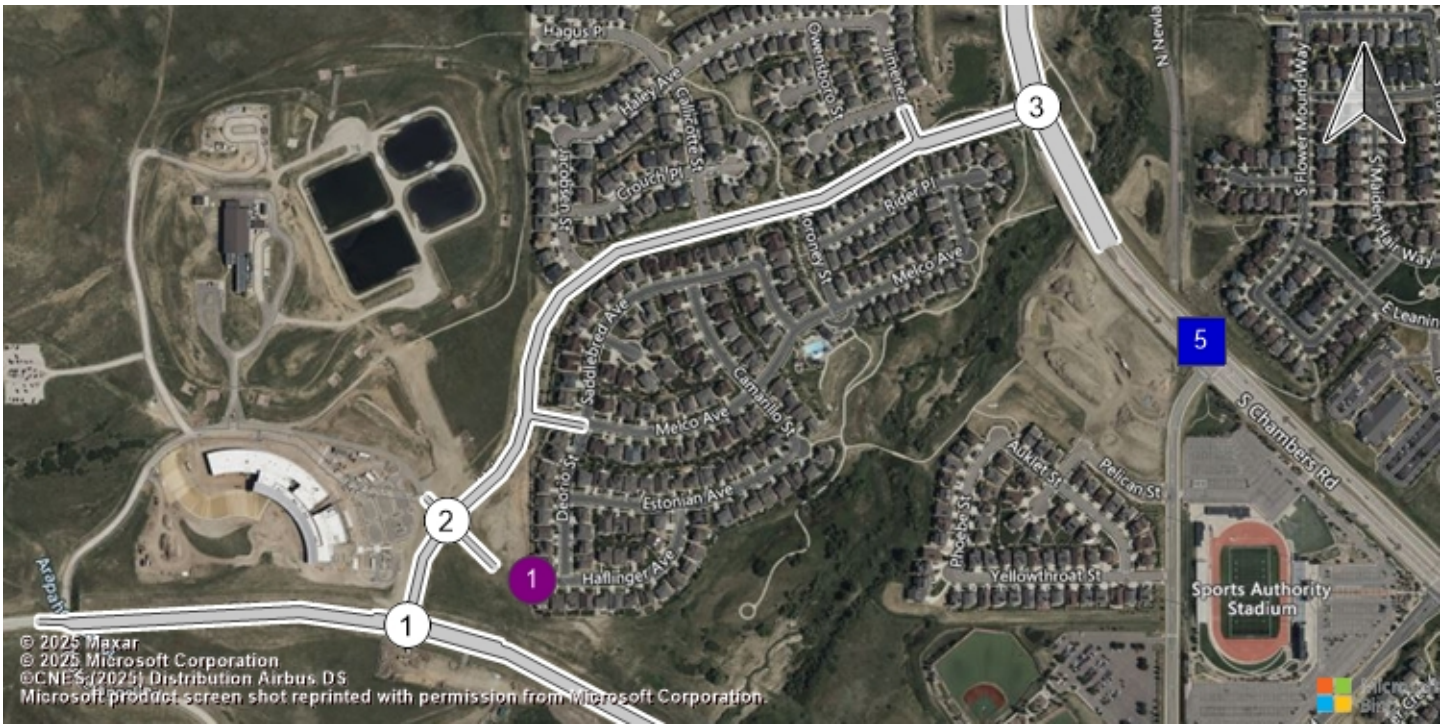
Zone / Gate	Zone 1: Project			
	To Project:		From Project:	
	Share %	Trips	Share %	Trips
2: Hess to/from West	10.00	8	10.00	8
3: Hess to/from East	40.00	32	40.00	33
4: Chambers to/from North	40.00	32	40.00	34
5: Chambers to/from South	10.00	8	10.00	8
Total	**100.00**	**80**	**100.00**	**83**

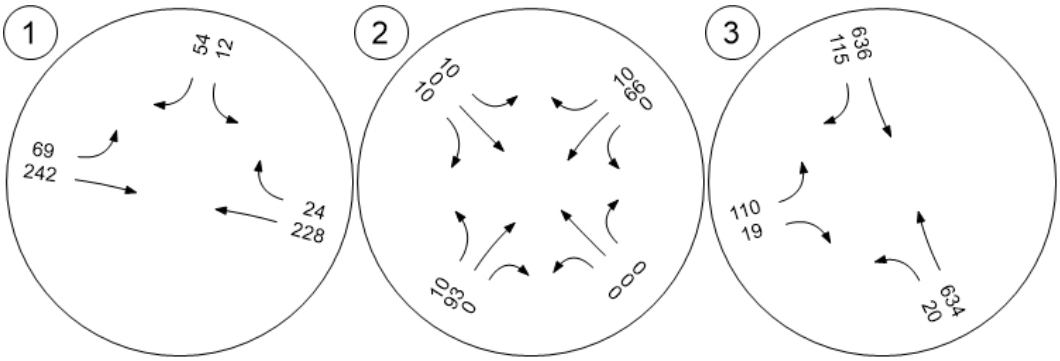
Lane Configuration and Traffic Control



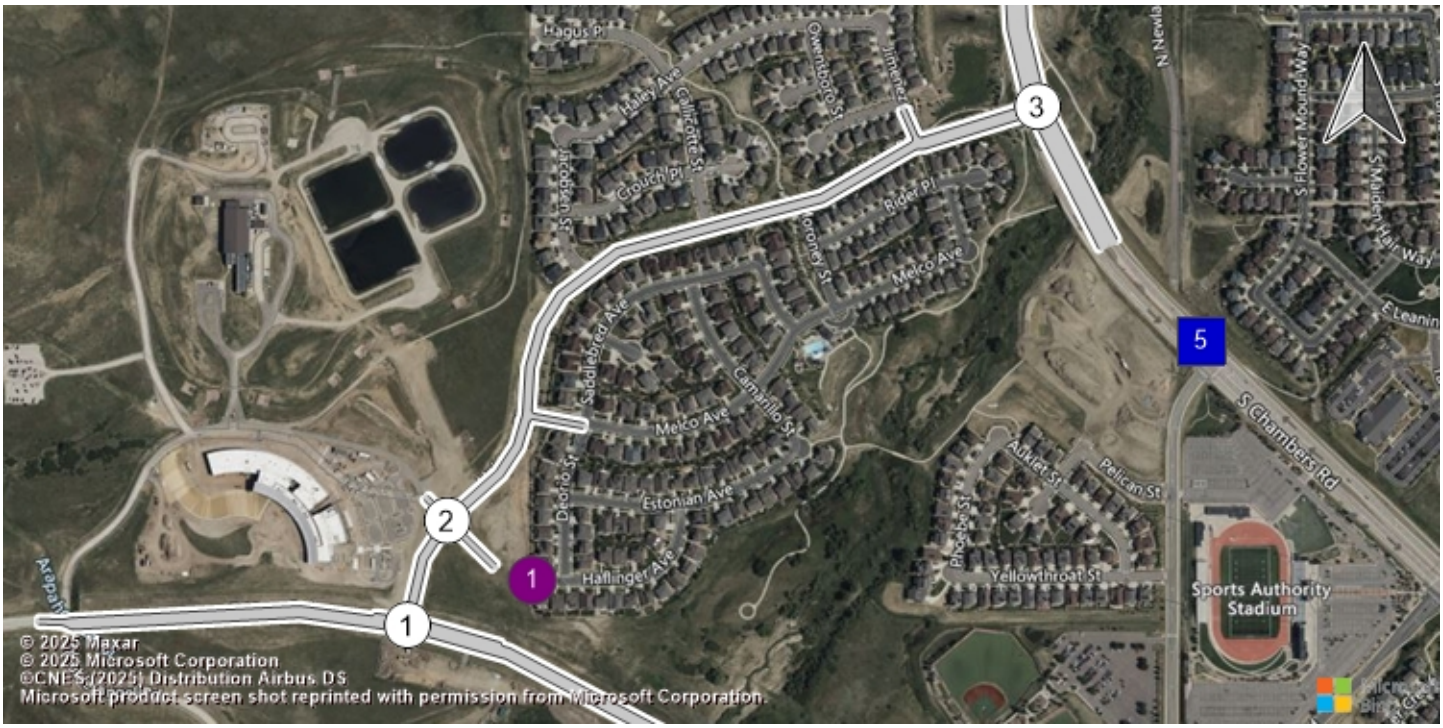


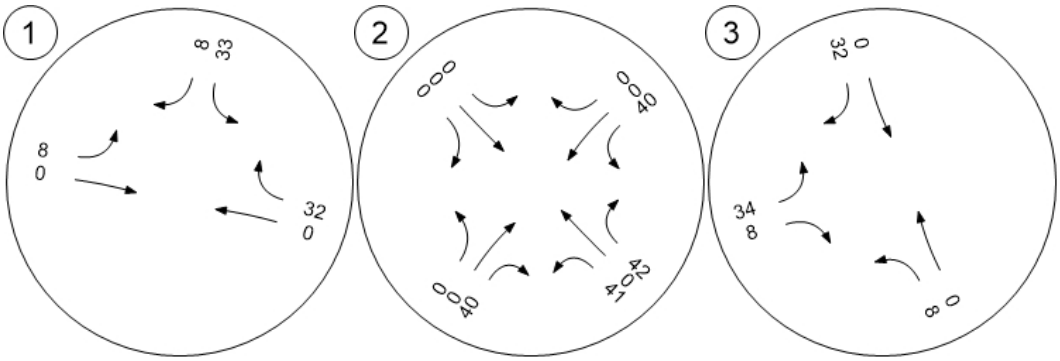
Traffic Volume - Base Volume



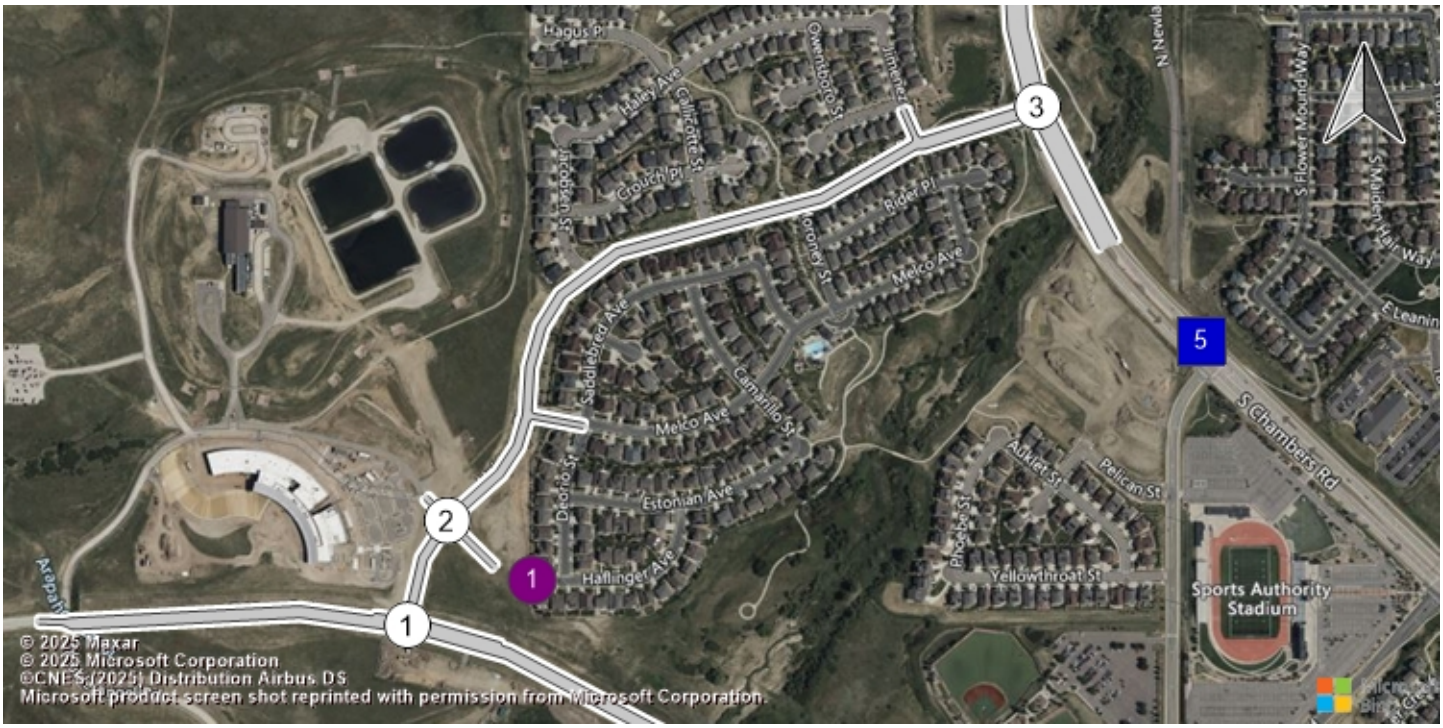


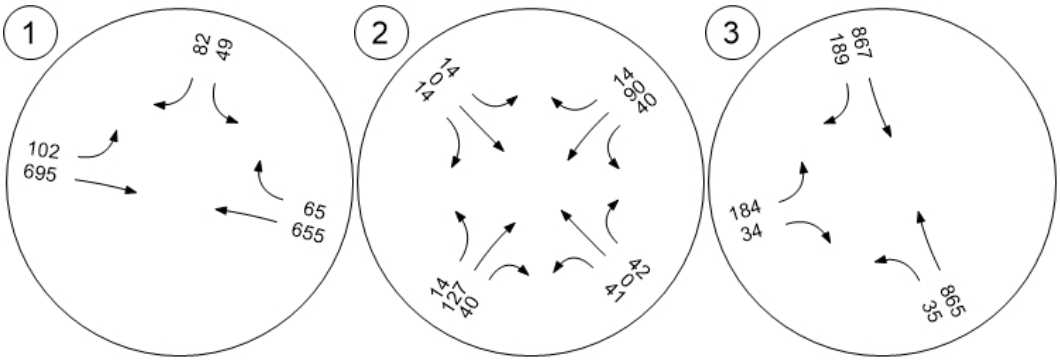
Traffic Volume - Net New Site Trips





Traffic Volume - Future Total Volume





Platinum Traffic Engineering, P.C.
Castle Rock, CO
www.PlatinumTrafficEngineering.com
303.210.9984

REDEMPTION CHURCH

A PART OF THE WEST 1/2 OF SECTION 30, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF DOUGLAS, STATE OF COLORADO

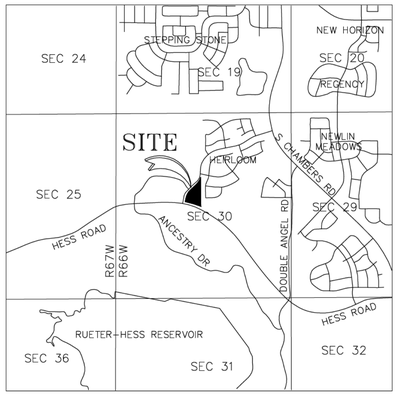
4.526 ACRES 1 LOT SB2026-005

SHEET INDEX:
SHEET 1: DEDICATION AND CERTIFICATION SHEET
SHEET 2: SCALE DRAWING OF SUBDIVISION

LEGAL DESCRIPTION:

A PARCEL OF LAND LOCATED IN THE WEST 1/2 OF SECTION 30, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE 6TH P.M., COUNTY OF DOUGLAS, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF THE NORTHWEST 1/4 OF SAID SECTION 30; THENCE N00°26'47"W ALONG THE EAST LINE OF SAID NORTHWEST 1/4 (SAID EAST LINE BEING THE BASIS OF BEARINGS FOR ALL BEARINGS STATED HEREIN), A DISTANCE OF 815.24 FEET TO THE EASTERLY ROW LINE OF HEIRLOOM PARKWAY AS DESCRIBED IN THAT DOCUMENT RECORDED UNDER RECEPTION NO. 2011071755 OF DOUGLAS COUNTY RECORDS; THENCE SOUTHWESTERLY ALONG A NON-TANGENT CURVE CONCAVE TO THE NORTHWEST (SAID CURVE HAVING A RADIUS OF 486.00 FEET, A DELTA ANGLE OF 30°01'58", A CHORD BEARING S31°55'21"W 251.84 FEET), AN ARC LENGTH OF 254.75 FEET; THENCE S46°56'20"W ALONG SAID EASTERLY ROW LINE, A DISTANCE OF 214.47 FEET; THENCE SOUTHWESTERLY ALONG A CURVE CONCAVE TO THE SOUTHEAST (SAID CURVE HAVING A RADIUS OF 414.00 FEET, A DELTA ANGLE OF 35°41'27", A CHORD BEARING S29°05'36"W 253.74 FEET), AN ARC LENGTH OF 257.89 FEET; THENCE S11°14'51"W ALONG SAID EASTERLY ROW LINE, A DISTANCE OF 109.12 FEET TO THE NORTHERLY ROW LINE OF HESS ROAD AS DESCRIBED IN THAT DOCUMENT RECORDED UNDER RECEPTION NO. 2008053065 OF DOUGLAS COUNTY RECORDS; THENCE SOUTHEASTERLY ALONG SAID NORTHERLY ROW LINE AND ALONG A NON-TANGENT CURVE CONCAVE TO THE SOUTHWEST (SAID CURVE HAVING A RADIUS OF 2800.00 FEET; A DELTA ANGLE OF 09°25'50", A CHORD BEARING S73°17'46"E 460.35 FEET), AN ARC LENGTH OF 460.87 FEET TO THE EAST LINE OF THE SOUTHWEST 1/4 OF SAID SECTION 30; THENCE N00°26'47"W ALONG SAID EAST LINE, A DISTANCE OF 6.04 FEET TO THE POINT OF BEGINNING.



VICINITY MAP

SCALE: 1"=2000'

GENERAL NOTES:

1. NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATE SHOWN HEREON.

2. THE BEARINGS ARE BASED ON THE EAST LINE OF THE NW1/4 OF SECTION 30 ASSUMED TO BEAR N00°26'47"W BETWEEN MONUMENTS FOUND AND DESCRIBED HEREON.

3. DISTANCES ON THIS PLAT ARE GROUND DISTANCES EXPRESSED IN U.S. SURVEY FEET AND DECIMALS THEREOF. A U.S. SURVEY FOOT IS DEFINED EXACTLY AS 1200/3937 METERS.

4. ANY PERSON WHO KNOWINGLY REMOVES ALTERS OR DEFACES ANY PUBLIC LAND SURVEY MONUMENT OR LAND BOUNDARY MONUMENT OR ACCESSORY COMMITS A CLASS TWO (2) MISDEMEANOR PURSUANT TO STATE STATUTE 18-4-508, OF THE COLORADO REVISED STATUTE.

5. NO OFFSET MONUMENTS WERE SET WITH THIS PLAT.

6. PER FEMA'S FIRM MAP NO. 08035C0064J DATED 12/02/2021, THE SUBJECT PROPERTY IS NOT LOCATED IN A FLOOD HAZARD AREA.

7. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY RUBINO SURVEYING TO DETERMINE OWNERSHIP OR EASEMENTS OF RECORD, RIGHT OF WAY OR TITLE OF RECORD. RUBINO SURVEYING RELIED UPON FIDELITY NATIONAL TITLE INSURANCE COMPANY, COMMITMENT NO. 153-F13011-24, DATED 11/18/2024. THE PROPERTY SHOWN AND DESCRIBED HEREON IS ALL ,OF THE PROPERTY DESCRIBED IN SAID TITLE COMMITMENT.

8. THE DRAINAGE EASEMENT AS SHOWN ON THE PLAT EXHIBIT IS HEREBY DEDICATED TO DOUGLAS COUNTY FOR THE PURPOSE OF ACCESSING, MAINTAINING, AND REPAIRING STORM WATER MANAGEMENT IMPROVEMENTS, INCLUDING, BUT NOT LIMITED TO INLETS, PIPES, CULVERTS, CHANNELS, DITCHES, HYDRAULIC STRUCTURES, RIPRAP, DETENTION BASINS, FOREBAYS, MICRO-POOLS, AND WATER QUALITY FACILITIES (COLLECTIVELY, THE "FACILITIES") IN THE EVENT PARKER WATER AND SANITATION DISTRICT, ITS SUCCESSORS AND ASSIGNS ("SYSTEM OWNER") FAILS TO SATISFACTORILY MAINTAIN OR REPAIR SAID FACILITIES. A BLANKET ACCESS EASEMENT OVER THE SUBDIVISION IS ALSO GRANTED TO DOUGLAS COUNTY, BUT ONLY FOR THE PURPOSE OF ACCESSING THE FACILITIES IN THE EVENT THAT THE DRAINAGE EASEMENTS DO NOT PROVIDE ADEQUATE ACCESS. THE MAINTENANCE AND REPAIR OF THE FACILITIES LOCATED IN THE SUBDIVISION, AS SHOWN ON THE CONSTRUCTION PLANS ACCEPTED BY DOUGLAS COUNTY OR ON THE PLAT FOR THE SUBDIVISION, SHALL BE THE RESPONSIBILITY OF THE SYSTEM OWNER. IN THE EVENT SUCH MAINTENANCE AND REPAIR ARE NOT PERFORMED BY THE SYSTEM OWNER TO THE SATISFACTION OF DOUGLAS COUNTY, THEN DOUGLAS COUNTY SHALL HAVE THE RIGHT, BUT NOT THE OBLIGATION, TO ENTER SAID SUBDIVISION, AFTER (10) DAYS PRIOR WRITTEN NOTICE TO THE SYSTEM OWNER, UNLESS THERE IN AN EMERGENCY, IN WHICH CASE DOUGLAS COUNTY SHALL GIVE NOTICE AS SOON AS PRACTICABLE, TO PERFORM ALL NECESSARY WORK, THE COST OF WHICH SHALL BE PAID BY THE SYSTEM OWNER UPON BILLING. IN THE EVENT THE SYSTEM OWNER FAILS TO REIMBURSE DOUGLAS COUNTY WITHIN THIRTY (30) DAYS AFTER SUBMISSION OF THE BILL FOR THE COSTS INCURRED, DOUGLAS COUNTY SHALL HAVE THE RIGHT TO ENFORCE SUCH OBLIGATIONS BY APPROPRIATE LEGAL ACTION. IT IS THE SYSTEM OWNER RESPONSIBILITY TO CONSTRUCT, MAINTAIN, AND REPAIR THE FACILITIES IN A MANNER CONSISTENT WITH ALL APPLICABLE PLANS APPROVED OR ACCEPTED BY DOUGLAS COUNTY.

9. THE PURPOSE OF THE PLAT IS TO ESTABLISH ONE LOT FOR A CHURCH USE. ANY CHANGE OF USE MAY REQUIRE A REPLAT PROCESS.

10. OWNER WAIVES, REMISES, AND RELEASES ANY RIGHT OR CAUSE OF ACTION IT MAY NOW HAVE OR WHICH IT MAY HAVE IN THE FUTURE AGAINST THE COUNTY OF DOUGLAS, ITS OFFICERS, EMPLOYEES, AND AGENTS RELATED TO, OR RESULTING FROM, THE PASSAGE OF AIRCRAFT IN THE AIRSPACE ABOVE THE PROPERTY THAT IS THE SUBJECT OF THIS FINAL PLAT.

11. SIGHT DISTANCE EASEMENT (SDE) AS SHOWN HEREON IS HEREBY GRANTED TO DOUGLAS COUNTY FOR SIGHT DISTANCE PURPOSES TOGETHER WITH THE FOLLOWING RESTRICTIONS OVER SAID EASEMENT: NO OBJECT WITHIN THE SIGHT DISTANCE EASEMENT SHALL BE MORE THAN TWENTY-FOUR (24) INCHES ABOVE THE FLOWLINE OF THE ADJACENT STREET. SUCH OBJECTS SHALL INCLUDE BUT ARE NOT LIMITED TO BUILDINGS, LANDSCAPING, AND UTILITY CABINETS. PARKING IS ALSO RESTRICTED WITHIN THE EASEMENT.

DEDICATION STATEMENT:

THE UNDERSIGNED, BEING ALL THE OWNERS, MORTGAGES, BENEFICIARIES OF DEEDS OF TRUST AND HOLDERS OF OTHER INTERESTS IN THE LAND DESCRIBED HEREIN, HAVE LAID OUT, SUBDIVIDED AND PLATTED SAID LANDS INTO LOTS, TRACTS, STREETS, AND EASEMENTS AS SHOWN HEREON UNDER THE NAME AND SUBDIVISION OF REDEMPTION CHURCH. THE UTILITY EASEMENTS SHOWN HEREON ARE HEREBY DEDICATED FOR PUBLIC UTILITIES AND CABLE COMMUNICATION SYSTEMS AND OTHER PURPOSES AS SHOWN HEREON. THE ENTITIES RESPONSIBLE FOR PROVIDING THE SERVICES FOR WHICH THE EASEMENTS ARE ESTABLISHED ARE HEREBY GRANTED THE PERPETUAL RIGHT OF INGRESS AND EGRESS FROM AND TO ADJACENT PROPERTIES FOR INSTALLATION, MAINTENANCE AND REPLACEMENT OF UTILITY LINES AND RELATED FACILITIES. THE UTILITY, SIGHT DISTANCE AND DRAINAGE EASEMENTS SHOWN HEREON ARE DEDICATED AND CONVEYED TO DOUGLAS COUNTY, CO, IN FEE SIMPLE ABSOLUTE, WITH MARKETABLE TITLE, FOR PUBLIC USES AND PURPOSES.

OWNER: PARKER WATER AND SANITATION DISTRICT, A COLORADO SPECIAL DISTRICT AND POLITICAL SUBDIVISION

BY: _____ _____
AUTHORIZED AGENT SIGNATURE DATE

STATE OF COLORADO)
) SS
COUNTY OF _____)

ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 2026,

BY: _____ AS _____
(NAME) (TITLE)

WITNESS MY HAND AND OFFICIAL SEAL

_____ MY COMMISSION EXPIRES _____
NOTARY PUBLIC

PLANNING COMMISSION:

THIS MINOR DEVELOPMENT FINAL PLAT (FILE NO. SB2026-005) WAS REVIEWED BY THE PLANNING COMMISSION ON _____.

_____ _____
PLANNING DIRECTOR, ON BEHALF OF THE PLANNING COMMISSION DATE

BOARD OF COUNTY COMMISSIONERS:

THIS PLAT WAS APPROVED FOR FILING BY THE BOARD OF COUNTY COMMISSIONERS OF DOUGLAS COUNTY, CO, ON THE _____ DAY OF _____ , 2026, SUBJECT TO THE DEDICATIONS OF UTILITY, SIGHT DISTANCE AND DRAINAGE EASEMENTS ARE ACCEPTED.

ALL EXPENSES INCURRED WITH RESPECT TO IMPROVEMENTS FOR ALL UTILITY SERVICES, PAVING, GRADING, LANDSCAPING, CURBS, GUTTERS, SIDEWALKS, ROAD LIGHTING, ROAD SIGNS, FLOOD PROTECTION DEVICES, DRAINAGE STRUCTURES, AND ALL OTHER IMPROVEMENTS THAT MAY BE REQUIRED SHALL BE THE RESPONSIBILITY OF THE SUBDIVIDER AND NOT DOUGLAS COUNTY.

THIS ACCEPTANCE DOES NOT GUARANTEE THAT THE SOIL CONDITIONS, SUBSURFACE GEOLOGY, GROUNDWATER CONDITIONS OR FLOODING CONDITIONS OF ANY LOT SHOWN HEREON ARE SUCH THAT A BUILDING PERMIT, WELL PERMIT OR SEWAGE DISPOSAL PERMIT WILL BE ISSUED.

_____
CHAIR, BOARD OF DOUGLAS COUNTY COMMISSIONERS

TITLE VERIFICATION:

WE, FIDELITY NATIONAL TITLE INSURANCE COMPANY, DO HEREBY CERTIFY THAT WE HAVE EXAMINED THE TITLE OF ALL LAND PLATTED HEREON AND THAT THE TITLE TO SUCH LAND IS IN THE DEDICATOR FREE AND CLEAR OF ALL LIENS, TAXES AND ENCUMBRANCES:

FIDELITY NATIONAL TITLE INSURANCE COMPANY

BY: _____ _____
AUTHORIZED OFFICIAL DATE

TITLE: _____

STATE OF COLORADO)
) SS
COUNTY OF _____)

ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____ 2026,

BY: _____ AS _____.

WITNESS MY HAND AND OFFICIAL SEAL

_____ MY COMMISSION EXPIRES _____
NOTARY PUBLIC

SURVEYOR CERTIFICATE:

I, ROBERT J. RUBINO A DULY REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THIS PLAT TRULY AND CORRECTLY REPRESENTS THE RESULTS OF A SURVEY MADE ON MARCH 13, 2025 BY ME OR UNDER MY DIRECT SUPERVISION AND THAT ALL MONUMENTS EXIST AS SHOWN HEREON; THAT MATHEMATICAL CLOSURE ERRORS ARE LESS THAN 1:50,000 (SECOND ORDER); AND THAT SAID PLAT HAS BEEN PREPARED IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS OF THE STATE OF COLORADO DEALING WITH MONUMENTS, SUBDIVISIONS OR SURVEYING OF LAND AND ALL APPLICABLE PROVISIONS OF THE DOUGLAS COUNTY SUBDIVISION RESOLUTION. THIS CERTIFICATION IS BASED ON MY KNOWLEDGE, INFORMATION, AND BELIEF AND IS NOT A GUARANTY OR WARRANTY, EITHER EXPRESS OR IMPLIED.

I ATTEST THE ABOVE ON THIS _____ DAY OF _____, 2026.

_____
ROBERT J. RUBINO
COLORADO REGISTERED PROFESSIONAL LAND SURVEYOR PLS14142

owner:
PARKER WATER & SANITATION DISTRICT
13939 ANCESTRY DRIVE
PARKER, COLORADO 80134
(303) 841-4627

prepared by:
RUBINO SURVEYING
3312 AIRPORT ROAD
BOULDER, COLORADO 80301
(303) 464-9515

REDEMPTION CHURCH

A PART OF THE WEST 1/2 OF SECTION 30, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF DOUGLAS, STATE OF COLORADO

4.526 ACRES 1 LOT SB2026-005

SHEET INDEX:
SHEET 1: DEDICATION AND CERTIFICATION SHEET
SHEET 2: SCALE DRAWING OF SUBDIVISION

LEGEND

- PROPERTY LINE
- LOT LINE
- EASEMENT LINE
- SECTION LINE
- (A) FOUND NO.5 REBAR WITH 1.5" ALUM CAP PLS 29413

DRAINAGE EASEMENT CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD DIRECTION	CHORD
C1	43.46	2800.00	0°53'22"	N77°34'01"W	43.46
C2	30.29	2800.00	0°37'12"	N76°48'44"W	30.29
C3	128.79	352.00	20°57'50"	S33°33'24"W	128.07
C4	23.07	414.00	3°11'35"	S45°20'32"W	23.07
C5	24.00	414.00	3°19'19"	S42°05'05"W	24.00
C6	15.14	10.00	86°43'58"	N04°32'56"W	13.73
C7	90.12	376.00	13°43'56"	S31°57'05"W	89.90
C8	35.21	35.90	56°11'48"	S26°43'46"E	33.81

DRAINAGE EASEMENT LINE TABLE		
LINE	LENGTH	BEARING
L1	24.24	N21°12'03"W
L2	24.21	S87°37'44"E
L3	49.13	S87°01'48"E
L4	100.80	S81°52'22"E
L5	30.51	N10°03'34"E
L6	113.17	N73°17'33"W
L7	101.69	N62°38'12"E
L8	86.54	N65°12'36"E
L9	25.00	N24°47'24"W
L10	87.10	S65°12'36"W
L11	124.33	S62°38'12"W
L12	90.84	N24°53'32"W
L13	15.50	N65°06'28"E
L14	28.35	N64°38'47"E
L15	62.03	N47°54'55"W
L16	28.45	S47°54'55"E
L17	32.64	S57°35'02"W
L18	23.34	S46°32'43"W
L19	52.26	S21°15'36"W
L20	60.16	S04°39'28"W
L21	24.27	S21°12'03"E
L22	7.43'	N36°16'15"E

N1/4 CORNER
SECTION 30
FOUND 1.5" BRASS CAP
IN CONCRETE
NO STAMPING ON CAP

N00°26'47"W 1652.02'

MELCO AVENUE
55' PUBLIC ROW
REC NO 2012081120

TRACT C
LOT 77

(A)

TRACT D
LOT 133

PARKER HOMESTEAD FILING NO. 2C
REC NO 2012081120
NOT A PART OF THIS SUBDIVISION

LOT 134
LOT 135
LOT 136
LOT 137
LOT 138
LOT 139
LOT 140
LOT 141

D=30°01'58"
R=486.00'
L=254.75'
(CHB=S31°55'21"W 251.84')

NOT A PART OF THIS SUBDIVISION
HEIRLOOM PARKWAY
72' PUBLIC ROW
REC NO 2011077755

214.47'

10' UTILITY EASEMENT

S46°56'20"W

SIGHT DISTANCE EASEMENT L22

D=35°41'27"
R=414.00'
L=257.89'
(CHB=S29°05'36"W 253.74)

SIGHT DISTANCE EASEMENT

NW1/4 SECTION 30
T6S, R66W

LOT 1
197,151 SQ. FT.
4.5260 ACRES

(BASIS OF BEARINGS)
N00°26'47"W

815.24'
2667.26'

EAST LINE NW1/4 SECTION 30

PARKER HOMESTEAD FILING NO. 2C
REC NO 2012081120
NOT A PART OF THIS SUBDIVISION

DEORIO STREET
55' PUBLIC ROW
REC NO 2012081120

NE1/4 SECTION 30
T6S, R66W

S11°14'51"W
109.12'

20' PSCO EASEMENT
REC NO 2012066855

10' UTILITY EASEMENT

HAFLINGER AVENUE
55' PUBLIC ROW
REC NO 2012081120

TRACT E

LOT 142
LOT 143
LOT 144

PARKER HOMESTEAD FILING NO. 2C
REC NO 2012081120
NOT A PART OF THIS SUBDIVISION

DRAINAGE EASEMENT
DEDICATED BY THIS PLAT

D=09°25'50"
R=2800.00'
L=460.87'
(CHB=S73°17'46"E 460.35')

10' UTILITY EASEMENT

POINT OF BEGINNING
CENTER OF SECTION 30
FOUND 3.25" ALUM CAP
PLS 12405

N00°26'47"W
6.04'

SOUTH LINE NW1/4 SECTION 30

SOUTH LINE NE1/4 SECTION 30

HESS ROAD
200' PUBLIC ROW
NOT A PART OF THIS SUBDIVISION

RESOLUTION NO. R-008-075
REC NO 2008030076

BOARD OF COMMISSIONERS
OF THE COUNTY OF DOUGLAS
REC NO 2008053065

SW1/4 SECTION 30
T6S, R66W

SE1/4 SECTION 30
T6S, R66W

EAST LINE SW1/4 SECTION 30

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)

1 inch = 60 ft.

SHEET 2 OF 2

owner:	prepared by:
PARKER WATER & SANITATION DISTRICT 13939 ANCESTRY DRIVE PARKER, COLORADO 80134 (303) 841-4627	RUBINO SURVEYING 3312 AIRPORT ROAD BOULDER, COLORADO 80301 (303) 464-9515