The City of Lee's Summit

Final Agenda

Planning Commission

Thursday, May 14, 2026
5:00 PM
City Council Chambers
City Hall
220 SE Green Street
Lee's Summit, MO 64063

1. **Call to Order**
2. **Roll Call**
3. **Approval of Agenda**
4. **Public Comments**
5. **Approval of Consent Agenda**

   A. **2026-7647** Approval of the April 23, 2026, Planning Commission Action Letter

6. **Public Hearings**

   B. **2026-7649** Application #PL2026-115 - CONSISTENCY DETERMINATION - LCRA PLAN AND AMENDED COMPREHENSIVE PLAN, approximately 1,064.00 acres generally bounded by Interstate 470 to the west, NE Woods Chapel Rd to the north, Fleming Park to the east, and NE Colbern Rd to the south; City of Lee's Summit, Applicant

   Presenter: David Bushek, Gilmore Bell
   C. Shannon McGuire, Assistant Director of Plan Services

   1) **2026-7651** A resolution of the Planning Commission of the City of Lee's Summit, Missouri, recommending that the City Council approve the Arborside Land Clearance for Redevelopment Authority (LCRA) redevelopment plan.

   Presenter: David Bushek, Gilmore Bell
   C. Shannon McGuire, Assistant Director of Plan Services

   A. **2026-7648** Application #PL2026-114 - COMPREHENSIVE PLAN AMENDMENT - LAND RESERVE PROPERTY, approximately 1,064.00 acres generally bounded by Interstate 470 to the west, NE Woods Chapel Rd to the north, Fleming Park to the east, and NE Colbern Rd to the south; City of Lee's Summit, Applicant

   Presenter: C. Shannon McGuire, Assistant Director of Plan Services

   1) **2026-7650** A resolution of the Planning Commission of the City of Lee's Summit, Missouri, amending the Lee's Summit Ignite Comprehensive Plan.

   Presenter: C. Shannon McGuire, Assistant Director of Plan Services

C. **2026-7640** Application #PL2026-046 - Preliminary Development Plan - Hazel Grove Elementary School, 1501 NW Blue Pkwy. and 861, 871, 911, 915, and 921 NW Colbern Rd.; Lee's Summit School District, applicant

Presenter: Kyle Gorrell, Applicant Representative
Adair Bright, AICP, Senior Planner

D. **2026-7644** Application #PL2026-070 - PRELIMINARY DEVELOPMENT PLAN - The Rush Funplex, Lots 1-3, 900 NW Ward Rd; Rush Funplex, applicant

Presenter: Dan Milich, Applicant Representative
Hector Soto, Jr., AICP, Senior Planner

1. **TMP-3688** An Ordinance approving a preliminary development plan for land located at 900 NW Ward Rd, all in accordance with the provisions of Chapter 33, the Unified Development Ordinance, of the Code of Ordinances for the City of Lee's Summit, Missouri.

Presenter: Dan Milich, Applicant Representative
Hector Soto, Jr., AICP, Senior Planner

7. Roundtable

8. Adjournment

For your convenience, Planning Commission agendas, as well as videos of Planning Commission meetings, may be viewed on the City's Legislative Information Center website at "lsmo.legistar.com"

Packet Information

File #: 2026-7647, **Version:** 1

Approval of the April 23, 2026, Planning Commission Action Letter

The City of Lee's Summit

Action Letter

Planning Commission

Thursday, April 23, 2026
5:00 PM
City Council Chambers
City Hall
220 SE Green Street
Lee's Summit, MO 64063

1. Call to Order

2. Roll Call

Present: 7 - Chairperson Dana Arth
Commissioner Randy Benbrook
Commissioner Jessica Gronau
Commissioner Payton Hatcher
Commissioner Tanya Jana-Ford
Commissioner Chip Touzinsky
Commissioner Ed Yerington

Absent: 1 - Vice Chair Terry Trafton

3. Approval of Agenda

A motion to modify the agenda to move item 6C to be before item 6A was made by Commissioner Touzinsky, seconded by Commissioner Jana-Ford, that the agenda be approved as modified. The motion carried unanimously.

4. Public Comments

There were no public comments at this time.

5. Approval of Consent Agenda

A motion was made by Commissioner Yerington, seconded by Commissioner Benbrook, that the consent agenda be approved. The motion carried unanimously.

A. TMP-3659 Application #PL2026-006 - FINAL PLAT - Hook Farms, 3rd Plat, Lots 216-258 & Tracts M, N and O; Hunt Midwest Real Estate Development, Inc., applicant

B. 2026-7614 Approval of the April 9, 2026, Planning Commission Action Letter

6. Public Hearings

There were no public comments at this time.

A. 2026-7523 Continued Application #PL2025-338 and #PL2025-339 - PRELIMINARY DEVELOPMENT PLAN and SPECIAL USE PERMIT for a convalescent, nursing or retirement home - Lee's Summit Senior Community, 5101 NE Lakewood Way; Lee's Summit Senior Living Community, LLC, applicant

There were 3 members of the public that spoke about their concerns regarding this application. Those concerns included:

Elevation of the buildings in reference to the houses
Understanding residential and commercial buffers
Concern about the proximity of the 3 story building

A motion was made by Commissioner Gronau, seconded by Commissioner Benbrook, that this Continued Application be recommended for approval to the City Council - Regular session due back on 5/12/2026. The motion carried unanimously.

1) TMP-3632 An Ordinance approving a Preliminary Development Plan for 16.95 acres of land located at 5101 NE Lakewood Way, all in accordance with the provisions of Chapter 33, the Unified Development Ordinance, of the Code of Ordinances for the City of Lee's Summit, Missouri.

2) TMP-3635 An Ordinance granting a Special Use Permit for a convalescent, nursing or retirement home in District CP-2 on land located at 5101 NE Lakewood Way for a period of forty (40) years, all in accordance with Article 6 of the Unified Development Ordinance, for the City of Lee's Summit, Missouri.

B. 2026-7573 Application #PL2025-164 - SPECIAL USE PERMIT renewal for Chapel Oaks Maintenance Storage Facility, 657 NE Newport Drive; Chapel Oaks Development Co, applicant.

A motion was made by Commissioner Touzinsky, seconded by Commissioner Yerington, that this application be recommended for approval to the CIty Council - Regular session due back on 5/19/2026. The motion carried unanimously.

1) TMP-3658 An Ordinance granting a Special Use Permit renewal for Chapel Oaks Maintenance Storage Facility in district RP-3 (Planned Residential Mixed Use) on land located at 657 NE Newport Dr. for a period of ten (10) years from the previous expiration date, to expire on October 17, 2035, all in accordance with Article 6 of the Unified Development Ordinance for the City of Lee's Summit, Missouri.

C. 2026-7611 Application #PL2026-069 - COMPREHENSIVE PLAN AMENDMENT - Capital Improvement Plan (CIP) 2027-2031

A motion was made by Commissioner Yerington to direct staff to present a resolution adopting the capital improvement plan, seconded by Commissioner Benbrook. The motion carried by the following votes:

Aye 7 - Commissioner Yerington
Commissioner Hatcher
Chairperson Arth
Commissioner Gronau
Commissioner Jana-Ford
Commissioner Benbrook

Recused 1 -Commissioner Touzinsky

A motion for resolution adopting the capital improvement plan was made by Commissioner Benbrook, seconded by Commissioner Jana-Ford that this application be approved. The motion carried by the following votes:

Aye: 7 - Chairperson Arth
Vice Chair Trafton
Commissioner Benbrook
Commissioner Gronau
Commissioner Hatcher
Commissioner Jana-Ford
Commissioner Yerington

Recused: 1 - Commissioner Touzinsky

1) 2026-7612 A Resolution of the Planning Commission of the City of Lee's Summit, Missouri, adopting the Capital Improvement Plan 2027-2031 as an amendment to the City of Lee's Summit Ignite Comprehensive Plan, as amended in Exhibit A, and approving the location, extent and character of all public improvement described in the City of Lee's Summit Capital Improvement Plan 2027-2031.

7. Roundtable

Senior Planner, Hector Soto had 3 things he wanted to go over. One being, reminding Commissioner Touzinsky, Chairperson Arth, and Assistant Secretary Benbrook that the resolution for the CIP needs to signed before they leave. Second, thanking Commissioner Benbrook for his tenure and good luck in his endeavors. And thirdly, a reminder that we will be two members down and to be conscious of quorum for upcoming planning commission meetings. Commissioner Gronau had a question regarding the attendance email, whether to reply all or just reply to the sender. Senior Planner Hector Soto responded with reply all. Commissioner Gronau had another question regarding the updates to the Comprehensive Plan and if there were any training or knowledge that could be shared with the planning commission. Senior Planner Hector Soto responded by saying we pull permit data on a monthly basis and some data might be 7 days old or a month old, but we can get it to the commissioners more periodically. Commissioner Yerington suggested that we add the updated Comprehensive Plan to the agenda as a reference. Commissioner Hatcher just wanted to thank everyone for their support.

8. Adjournment

There being no further business Chairperson Arth adjourned the meeting at 7:32pm.

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Packet Information

File #: 2026-7649, **Version:** 1

Application #PL2026-115 - CONSISTENCY DETERMINATION - LCRA PLAN AND AMENDED COMPREHENSIVE PLAN, approximately 1,064.00 acres generally bounded by Interstate 470 to the west, NE Woods Chapel Rd to the north, Fleming Park to the east, and NE Colbern Rd to the south; City of Lee's Summit, Applicant

Issue/Request:
The proposed Arborside Land Clearance for Redevelopment Authority (LCRA) Redevelopment Plan is for approximately 1,000 acres generally located east of I-470 between Colbern Road and Woods Chapel Road. The City has been coordinating with representatives of Land Reserve, Inc. and Property Reserve, Inc. regarding a long-term development and infrastructure financing strategy for the area, including the establishment of an LCRA Redevelopment Plan to facilitate major public infrastructure improvements necessary to support future development.

Pursuant to Section 99.830, RSMo, the Planning Commission is being asked to evaluate the consistency of the proposed redevelopment plan with the 2021 Ignite! Comprehensive Plan and provide a recommendation to the LCRA Board and City Council. Unlike previous LCRA plans that were reviewed concurrently with rezoning and Preliminary Development Plan (PDP) applications, this request is being considered independently because the area is not yet subject to specific rezoning or development applications.

Proposed Motion:
I move to direct staff to PRESENT a resolution recommending that the City Council approve the Arborside Land Clearance For Redevelopment Authority (LCRA) redevelopment plan.

David Bushek, Gilmore Bell
C. Shannon McGuire, Assistant Director of Plan Services

Recommendation: Staff recommends approval of the proposed Consistency Determination application for the Arborside LCRA Redevelopment Plan, finding that the request maintains consistency between the Arborside LCRA Plan and the 2021 Ignite! Comprehensive Plan, supports coordinated long-term growth and infrastructure planning, and provides an independent rec
ommendation to the LCRA Board and City Council.

GILMORE BELL

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Kansas City, Missouri 64108-2521

(816) 221-1000 / (816) 221-1018 FAX / gilmorebell.com

To: Lee's Summit Planning Commission

From: David Bushek

Date: May 1, 2026

Re: Arborside LCRA Redevelopment Plan

This memorandum is a summary of the Planning Commission's agenda items at the May 14, 2026 meeting regarding the Arborside Land Clearance for Redevelopment Authority (LCRA) Redevelopment Plan which includes approximately 1000 acres of property owned by Property Reserve, Inc., which is generally located to the east of I-470 between Colbern Road on the south and Woods Chapel Road on the north (the "**North Property Reserve Land**").

City staff has been working with representatives of Property Reserve, Inc., and Land Reserve, Inc. as entities connected with the Church of Jesus Christ of Latter Day Saints. Land Reserve owns the North Property Reserve Land described above, and Property Reserve owns approximately 3200 acres of property in the south part of the City. Land Reserve will serve as the Master Developer of the North Land Reserve Property as it is sold to third parties for development.

The City has worked with Land Reserve to develop an infrastructure financing plan for the major infrastructure improvements that are needed to serve the North Property Reserve Land. Part of this financing plan calls for the approval of a Redevelopment Plan by the Land Clearance for Redevelopment Authority (LCRA) Board of Commissioners. Section 99.830, RSMo, provides that the "planning agency" of the City should review the LCRA Plan and provide a recommendation to the LCRA Board and the City Council regarding the consistency between the LCRA Redevelopment Plan for the North Property Reserve Land and the Comprehensive Plan.

This step in the process of reviewing and approving an LCRA Plan in the past has been handled through the rezoning process. Prior LCRA redevelopment plans that have been approved by the City have commonly been accompanied by a rezoning and/or preliminary development plan (PDP) approval for the project. The Planning Commission evaluates the land-use designation of the property on the City's Comprehensive Plan as a routine matter for rezoning and PDP applications. In this case, because we are dealing with a large area that is not yet subject to any rezoning or PDP applications, the Planning Commission is being asked to evaluate the consistency between the Arborside LCRA Plan and the Comprehensive Plan and make an independent recommendation to the LCRA Board and City Council.

Received in the Office of
the Lee's Summit City Clerk
on May 1, 2026 @ 2:50pm
Signed: Trisha Fowler Arcuri

ARBORSIDE
LCRA REDEVELOPMENT PLAN

LAND CLEARANCE FOR REDEVELOPMENT AUTHORITY OF THE CITY OF LEE'S SUMMIT, MISSOURI

May 1, 2026

1. **Establishment of Urban Renewal Area; Purpose of this Redevelopment Plan**.

This Redevelopment Plan (this "***Plan***") has been prepared in accordance with the Land Clearance for Redevelopment Authority Act which is set forth in Sections 99.300 through 99.660 of the Revised Statutes of Missouri (the "***LCRA Act***") for the redevelopment of the property (the "***Property***") which is legally described on Exhibit 1(A) attached hereto and depicted on Exhibit 1(B) attached hereto. Upon approval of this Redevelopment Plan, the Property will be determined to be blighted based on the blight study that has been prepared concurrently with this Plan and will be designated a land clearance for redevelopment urban renewal area, to be known as the "Arborside Urban Renewal Area". The purpose of this LCRA Redevelopment Plan is to:

1. carry out the policy statement of the LCRA Act which is set forth in Section 99.310, RSMo, and more particularly to renovate, redevelop, and otherwise improve the Property to cure the blighted conditions which exist on the Property;

2. provide Missouri sales and use tax exemption on construction materials for the Public Improvements and Overall Project (as defined below); and

3. provide real property tax exemption that, in conjunction with special assessments, will allow for the financing of certain Public Improvements (as defined below) and attraction of certain Land Clearance Projects (as defined below) within the Overall Project (as defined below).

The mechanism to achieve these purposes is to establish public ownership during the construction of each redevelopment project on the Property (each a "***Land Clearance Project***") as part of the Overall Project (as defined below) and for up to twenty-five (25) years after completion of each such Land Clearance Project. The maximum duration of public ownership for each land-use type and each Land Clearance Project shall be determined by the contract and related documents that are negotiated between the City and Developer (as defined below) to implement this Plan. Developer (as defined below) will receive and use a sales tax exemption certificate for the purchase of construction materials that are used in the construction of the Public Improvements and the Overall Project. This LCRA Redevelopment Plan satisfies the requirements of the LCRA Act, and the items set forth below discuss the requirements of a "redevelopment plan" as defined in the LCRA Act.

3. Description of the Project

Before significant development of the Property can proceed, significant public improvements must be constructed, which public improvements are generally described on Exhibit 3 and generally depicted on Exhibit 4 attached hereto (the "***Public Improvements***").

Based on this Plan's structure for financing the Public Improvements, this Plan contemplates Developer's (as defined below) design, development, and construction of a mixed-use development on the Property (the "***Overall Project***"). While the specific mix of buildings and uses will be market-driven and has not yet been finalized, the current conceptual programming for the Overall Project includes the following components: single family homes, multifamily residential buildings, senior living facilities, office buildings, industrial buildings, and retail buildings, along with all associated onsite and offsite sitework and infrastructure, including, without limitation, utilities, stormwater management, street/drive and parking improvements, and landscaping. An initial conceptual site plan for the Overall Project is attached hereto as Exhibit 2. The estimated cost of the Overall Project is approximately $1,514,991,239.

4. Description of the Parties

The Developer and Affiliates. Land Reserve, Inc., ("***Developer***") is a corporation incorporated and existing under the laws of the State of Utah. The benefitting companies will be the Developer, other affiliated

entities of Developer (each an "***Affiliate***"), and any entity, other than an Affiliate, which acquires a portion of the Property from Developer (a "***Developer Transferee***"), and which will be memorialized in a separate redevelopment contract with the City of Lee's Summit ("***City***") for each Land Clearance Project. During the period of City ownership, Developer, an Affiliate, or a Developer Transferee will lease from the City the portion of the Property involved with the relevant Land Clearance Project pursuant to a lease agreement (a "***Lease Agreement***") that will be approved by the City Council.

City of Lee's Summit, Missouri. The City is a constitutional home rule charter city and municipal corporation organized and existing under the laws of the State of Missouri. The City will lease the Property, or portions thereof, to Developer, an Affiliate, or a Developer Transferee during the construction period and for up to twenty-five (25) years after completion of each Land Clearance Project pursuant to a Lease Agreement. The maximum duration of public ownership for each land-use type and each Land Clearance Project shall be determined by the redevelopment contract and related documents that are negotiated between the City and Developer (as defined below) to implement this Redevelopment Plan.

5. Power and Authority Under the LCRA Act

The LCRA and the City are authorized and empowered pursuant to Section 99.420, RSMo, and other provisions of the LCRA Act, to exercise the following powers which are relevant to this Plan:

1. The LCRA may prepare redevelopment plans and recommend approval to City Council – "To prepare or cause to be prepared and recommend redevelopment plans and urban renewal plans to the governing body" (99.420(2))

2. Build and repair public improvements – "To arrange or contract for the furnishing or repair, by any person or agency, public or private, of services, privileges, works, streets, roads, public utilities or other facilities for or in connection with a land clearance project or urban renewal project" (99.420(3))

3. Acquire, buy, sell, mortgage and lease real estate and execute contracts for real estate – (4) "Within its area of operation, to purchase, lease, obtain options upon, acquire by gift, grant, bequest, devise, eminent domain or otherwise, any real or personal property or any interest therein, including fee simple absolute title, together with any improvements thereon, necessary or incidental to a land clearance project or urban renewal project *** to sell, lease, exchange, transfer, assign, subdivide, retain for its own use, mortgage, pledge, hypothecate or otherwise encumber or dispose of any real or personal property or any interest therein; to enter into contracts with redevelopers of property and with other public agencies containing covenants, restrictions and conditions regarding the use of such property for residential, commercial, industrial, recreational purposes or for public purposes in accordance with the redevelopment or urban renewal plan *** and to enter into any contracts necessary to effectuate the purposes of this law…" (99.420(4))

4. Approve plans for redevelopment of existing structures – "To make plans for carrying out a program of voluntary repair and rehabilitation of buildings and improvements, plans for the enforcement of state and local laws, codes, and regulations relating to the use of land and the use and occupancy of buildings and improvements, and to the compulsory repair, rehabilitation, demolition, or removal of buildings and improvements" (99.420(6))

5. Hold public hearings – "Acting through one or more commissioners or other persons designated by the authority, to conduct examinations and investigations and to hear testimony and take proof under oath at public or private hearings on any matter material for its information" (99.420(9))

6. Spend public funds – "To make such expenditures as may be necessary to carry out the purposes of this law" (99.420(12))

7. City Council can exercise all LCRA powers after delegation by LCRA – "To delegate to a municipality or other public body any of the powers or functions of the authority with respect to the planning or undertaking of a land clearance project or urban renewal project in the area in which the municipality or public body is authorized to act, and the municipality or public body is hereby authorized to carry out or perform such powers or functions for the authority" (99.420(13))

8. Exercise general municipal powers to implement the redevelopment plan – The LCRA has "all the powers necessary or convenient to carry out and effectuate the purposes and provisions of this law" (Section 99.420, introductory clause) and may "exercise all powers or parts or combinations of powers necessary, convenient or appropriate to undertake and carry out land clearance, redevelopment and urban renewal plans and projects and all the powers herein granted." (99.420(14))

Other grants of power and authority under the LCRA Act may become applicable to the implementation of this Plan. The LCRA Act defines "redevelopment plans" and "urban renewal plans" and the definition of these terms in Section 99.320, RSMo, each cross-references the other definition. All the procedural requirements and legal authority for each type of plan apply to LCRA redevelopment plans such as this Plan.

6. Requirements of the LCRA Act

Section 99.430, RSMo, requires that each LCRA redevelopment plan contain certain data and information. This section sets forth the statutory requirements for a redevelopment plan under the LCRA Act along with information to satisfy such requirements.

Relationship to definite local objectives as to appropriate land uses, improved traffic, public transportation, public utilities, recreational and community facilities, and other public improvements.

Transportation Improvements. The Overall Project includes significant public street infrastructure improvements, which improvements advance the City's stated goal of ensuring safe, efficient, accessible, and convenient traffic circulation, including construction of the following public streets:

- Intersection of NE Colbern Road and NE Todd George Parkway
- NE Todd George Parkway from NE Colbern Road to NE Strother Road
- NE Todd George Parkway from NE Strother Road to NE Woods Chapel Road
- Intersection of NE Woods Chapel Road and NE Todd George Parkway
- NE Strother Road from Interstate 470 to NE Todd George Parkway
- Leinweber Road from Lake Jacomo to NE Todd George Parkway
- Leinweber Road from NE Todd George Parkway
- NE Rice Road to NE Todd George Parkway

In April 2026, the City Council approved a Cooperative Agreement between the City and Developer which provides for the construction of Todd George Parkway north of Colbern Road pursuant to the City's 2026 Capital Improvements Plan by or at the direction of Developer, acting as the construction manager for the City on this CIP project. This Agreement covers several segments of the improvements described immediately above. This Plan is to initiate a funding and financing plan for the payment of primary infrastructure costs such as these Todd George Parkway improvements.

Additional transportation improvements may be identified through the City's evaluation of development applications (including rezoning and preliminary development plan applications), and the requirement to build such transportation improvements may be appended as conditions of approval for such development applications. This Plan is intended to provide a partial mechanism to fund certain transportation improvements, as identified by the City and as agreed by the parties through the implementation of this Plan.

Public Utilities. The Project includes extension of public water mains and the construction of sanitary sewer-related improvements, electrical improvements, and storm drainage facilities, all as more thoroughly described on Exhibit 3. Together, these public utilities improvements enhance City infrastructure to promote quality growth and resilience. These utility improvements may be identified by the City through its review of development applications, as discussed above.

Boundaries of the land clearance project area, with a map showing the existing uses and condition of the real property therein

See Exhibit 1(B) and the companion Blight Study that supports this Plan.

A land use plan showing proposed uses of the area

Land uses are anticipated to consist of residential, office, industrial, and other commercial uses, as well as ancillary uses thereto. An aerial of the Property is attached hereto as Exhibit 1(B), and an initial conceptual site plan is attached hereto as Exhibit 2. The rezoning and preliminary development plan applications that are approved for each Land Clearance Project by the City Council will control the allowable land uses.

Information showing the standards of population densities, land coverage and building intensities in the area after redevelopment

An aerial of the Property is attached hereto as Exhibit 1(B), and an initial conceptual site plan is attached hereto as Exhibit 2.

Statement of the proposed changes, if any, in zoning ordinances or maps, street layouts, street levels or grades, building codes and ordinances

The Property's agricultural zoning classification will be amended to allow for the Project's various land uses. New public street infrastructure is contemplated as set forth on the initial conceptual site plan attached hereto as Exhibit 2.

Statement as to the kind and number of additional public facilities or utilities which will be required in the area after redevelopment

The primary public facilities and utilities as discussed above are detailed in Exhibit 3 and Exhibit 4, which are anticipated to be required in the area to serve the redevelopment.

A schedule indicating the estimated length of time needed for completion of each phase of the plan

The Project is anticipated to be constructed in phases, with construction expected to commence in 2027. Market demand will dictate when the Project will be completed, but current estimates are approximately 2047.

Submission to the City's planning agency for a determination as to whether the Redevelopment Plan is consistent with the Comprehensive Plan

The Overall Project is consistent with the goals and land-use designations of the City's Ignite! Comprehensive Plan. When an individual Land Clearance Project is prepared to move forward, the Developer will submit,

as appropriate, rezoning and preliminary development plan applications for the portion of the Property associated with the Land Clearance Project, which will be heard by the City's Planning Commission followed by the City Council, which in both cases will include a finding of consistency with the City's Comprehensive Plan for the project to achieve zoning approval.

This Plan was also considered by the Planning Commission and the LCRA Board to evaluate whether this Plan is "in conformity with the general plan for the development of the community as a whole." See § 99.430.1(9), RSMo. The City Council's findings in the Ordinance that approved this plan addresses the factual finding of consistency, and the Council determined that this Plan is consistent with the general plan for the development of the community as a whole as embodied in the Ignite! Comprehensive Plan.

A statement of the proposed method and estimated cost of the acquisition and preparation for redevelopment of the land clearance project area

Developer purchased the Property prior to approval of this Plan.

The estimated proceeds or revenues from its disposal to redevelopers

Developer has already acquired the Property and Developer expects to convey the Property to the City and lease the Property from the City through one or more Lease Agreements. Additionally, Developer intends to partially assign its rights and obligations under the Lease Agreement(s) to Developer Transferees at market rates to allow for the development of Land Clearance Projects. Developer is not selling any of the Property to the City or another party which would directly generate proceeds or revenues for the City. Instead, this Plan facilitates the development of property which will generate additional property tax revenues, sales tax revenues, and revenues from other taxes and fees that are charged by the City in connection with private development.

A statement of the proposed method of financing the project

The Overall Project will be financed with private debt and equity, as well as with a portion of an anticipated 1% Community Improvement District sales tax levied on sales tax producing businesses within the Project. The Public Improvements will be financed with a mix of: private debt and equity; City funding sources; a portion of an anticipated 1% Community Improvement District ("***CID***") sales and use tax levied on sales tax generating businesses within the Project; and CID special assessments ("***CID Assessments***") levied against Land Clearance Projects.

A statement of a feasible method proposed for the relocation of families to be displaced from the land clearance project area

Not applicable to this Project.

7. Statement of Financial Benefit/Estimated Costs and Benefits to City

Sales/Use Tax Exemption

The total cost of the Overall Project is estimated to be approximately $1,514,991,239. Building materials purchased for the construction of the Overall Project are expected to be exempt from Missouri sales and use tax pursuant to the provisions of Section 144.062, RSMo, in connection with the application of the LCRA Act to the Property. The estimated sales tax exemption benefit that would be the result of this Plan is set forth below:

Est. Project Costs	$1,514,991,239
Est. Materials Portion	$605,996,496

Est. Sales/Use Tax Savings **$36,685,513**

This financial benefit is approximately **2.42%** of the total estimated Overall Project costs.

The estimated cost to the City of the sales/use tax exemption is $8,332,452, the details of which are set forth below. These are estimates associated with the purchase of construction materials for the Project, and the actual sales and use tax exemption will be determined at the time materials are purchased.

Est. Construction Budget	$	1,514,991,239
Est. Materials Percentage		40.00%
Est. Materials Cost	$	605,996,496
Total Sales and Use Tax Rate		8.35%
Est. Sales and Use Tax Savings	**$**	**36,685,513**

City Sales and Use Tax Rate	2.750%
County Sales Tax Rate	1.250%
State Sales and Use Tax Rate	4.225%
Zoo Sales Tax Rate	0.125%
	8.350%
Est. Allocation of Material Purchases:	
Lee's Summit	8.00%
Missouri (outside Lee's Summit)^	50.00%
Outside Missouri	42.00%

Lee's Summit Sales Tax Savings	$	1,333,192
Lee's Summit Use Tax Savings	$	6,999,260
Total Lee's Summit Sales and Use Ta	**$**	**8,332,452**
County Sales Tax Savings	$	2,499,736
State Sales and Use Tax Savings	$	25,603,352
Zoo Sales Tax Savings	$	249,974
Lee's Summit % of Total Savings		**22.71%**

^50% of sales in MO outside City are assumed to be subject to County and Stadium Sales Tax

Real Property Tax Exemption / Payments in Lieu of Taxes; CID Assessments

Real Property Tax Exemption / Payments in Lieu of Taxes.

The City will own the Overall Project and lease it to Developer, an Affiliate, a Developer Transferee, and/or any successor of a Developer Transferee or an Affiliate. The lease period may last up to twenty five (25) years pursuant to the Missouri Constitution, but the intention is for the parties to arrange for leases lasting up to twenty (20) years following completion of each Land Clearance Project, during which time the Property will be exempt from real property taxes and Developer, Affiliate, or Developer Transferee, and/or any successor will make payments in lieu of taxes ("***PILOTs***") that will be collected by the City and distributed to the taxing districts in proportion to their tax levy rates on an annual basis. The PILOT amount for any particular Land Clearance Project will depend on and vary with Land Clearance Project implementation

pursuant to the implementing contracts for this Plan, but will reflect the percentages shown below. PILOTs will be distributed to the taxing jurisdictions by or at the direction of the City.

INDUSTRIAL	
Years 1 – 10	5% PILOT
Years 11 - 20	25% PILOT
RESIDENTIAL (R-2+)	
Years 1 – 10	25% PILOT
OFFICE	
Years 1 – 10	75% PILOT
Years 11 - 20	75% PILOT
RETAIL	
Years 1 – 10	75% PILOT
Years 11 – 20	75% PILOT

The total amount of PILOTS estimated to be collected by the taxing jurisdictions is $384,141,151.

CID Assessments

Following the completion of Land Clearance Projects, during such time that any Land Clearance Project is exempt from real property taxes, a CID assessment is anticipated to be levied by the Arborside Community Improvement District according to the following percentages of real property tax that would otherwise be due absent LCRA property tax exemption.

INDUSTRIAL	
Years 1 – 10	20% Assessment
Years 11 - 20	25% Assessment
RESIDENTIAL (R-2+)	
Years 1 – 10	25% Assessment
OFFICE	
Years 1 – 10	25% Assessment
Years 11 - 20	25% Assessment
RETAIL	
Years 1 – 10	25% Assessment
Years 11 – 20	25% Assessment

* * *

EXHIBIT 1(A)

LEGAL DESCRIPTION OF THE PROPERTY

TRACT 1:

ALL THAT PART OF THE EAST 1/2 OF THE EAST 1/2 OF SECTION 17, THE WEST 1/2 OF SECTION 16, THE EAST 1/2 OF THE EAST 1/2 OF THE NORTH 1/2 OF SECTION 20, AND THE WEST 1/2 OF THE NORTH 1/2 OF SECTION 21, ALL IN TOWNSHIP 48 NORTH, RANGE 31 WEST, IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 16; THENCE SOUTH 2° 31' 20" WEST, ALONG THE WEST LINE OF SAID SECTION 16, 30.00 FEET TO THE POINT OF BEGINNING OF THE TRACT OF LAND TO BE HEREIN DESCRIBED, WHICH POINT IS ON THE SOUTH RIGHT-OF-WAY LINE OF WOODS CHAPEL ROAD; THENCE SOUTH 88° 03' 21" EAST, ALONG SAID SOUTH RIGHT-OF-WAY LINE, PARALLEL TO AND 30.00 FEET DISTANT FROM THE CENTER LINE OF SAID WOODS CHAPEL ROAD, 176.30 FEET; THENCE SOUTH 1° 56' 39" WEST, 10.00 FEET; THENCE SOUTH 88° 03' 21" EAST, PARALLEL TO AND 40.00 FEET DISTANT FROM SAID CENTER LINE, 100.00 FEET; THENCE NORTH 1° 56' 39" EAST, 10.00 FEET TO A POINT 30.00 FEET DISTANT FROM SAID CENTER LINE; THENCE SOUTH 88° 03' 21' EAST, ALONG SAID SOUTH RIGHT-OF-WAY LINE, PARALLEL TO AND 30.00 FEET DISTANT FROM SAID CENTER LINE, 1627.54 FEET TO A POINT OF CURVATURE; THENCE NORTHEAST, ALONG A CURVE TO THE LEFT, TANGENT TO THE LAST DESCRIBED COURSE, HAVING A RADIUS OF 849.14 FEET AND A CENTRAL ANGLE OF 6° 46' 43", AN ARC DISTANCE OF 100.46 FEET TO A POINT 660.00 FEET WEST OF THE EAST LINE OF THE NORTHWEST 1/4 OF SAID SECTION 16; THENCE SOUTH 2° 22' 43' WEST, PARALLEL TO SAID EAST LINE, 2613.71 FEET TO A POINT 660.00 FEET WEST OF THE NORTHEAST CORNER OF THE SOUTHWEST 1/4 OF SAID SECTION 16; THENCE SOUTH 2° 21' 12" WEST, PARALLEL TO THE EAST LINE OF SAID 1/4 SECTION, 2646.51 FEET TO A POINT 660.00 FEET WEST OF THE NORTHEAST CORNER OF THE NORTHWEST 1/4 OF SAID SECTION 21; THENCE SOUTH 2° 05' 22" WEST, PARALLEL TO THE EAST LINE OF SAID 1/4 SECTION, 2621.63 FEET TO A POINT 660.00 FEET WEST OF SAID EAST LINE, WHICH POINT IS ON THE NORTH RIGHT-OF-WAY LINE OF LEINWEBER ROAD, 40.00 FEET DISTANT FROM THE NEW CENTER LINE THEREOF, AND WHICH POINT IS ALSO 27.77 FEET NORTH OF THE SOUTH LINE OF SAID 1/4 SECTION; THENCE NORTH 87° 14' 14" WEST, ALONG SAID NORTH RIGHT-OF-WAY LINE, PARALLEL TO AND 40.00 FEET DISTANT FROM SAID NEW CENTER LINE, 372.60 FEET TO AN ANGLE POINT; THENCE NORTH 88° 28' 41" WEST, ALONG SAID NORTH RIGHT-OF-WAY, PARALLEL TO AND 40.00 FEET DISTANT FROM SAID NEW CENTER LINE, 2271.60 FEET; THENCE NORTH 77° 02' 25" WEST, ALONG SAID NORTH RIGHT-OF-WAY LINE, 101.98 FEET TO A POINT 60.00 FEET DISTANT FROM SAID NEW CENTER LINE; THENCE NORTH 88° 21' 11" WEST, ALONG SAID NORTH RIGHT-OF-WAY LINE, PARALLEL TO AND 60.00 FEET DISTANT FROM NEW SAID CENTER LINE, 130.40 FEET TO A POINT OF CURVATURE ON LEINWEBER ROAD AT STATION 8+69.00; THENCE WESTERLY, ALONG SAID NORTH RIGHT-OF-WAY LINE, ALONG A CURVE TO THE LEFT, TANGENT TO THE LAST DESCRIBED COURSE, HAVING A RADIUS OF 518.37 FEET, AND A CENTRAL ANGLE OF 15° 12' 00", AN ARC DISTANCE OF 137.52 FEET; THENCE NORTH 88° 32' 56" WEST, ALONG SAID NORTH RIGHT-OF-WAY LINE, 261.81 FEET TO A POINT OF INTERSECTION WITH THE EAST RIGHT-OF-WAY LINE OF INTERSTATE ROUTE NO. 470, SAID POINT BEING 171.00 FEET DISTANT FROM AND OPPOSITE STATION 594+64.00 ON THE CENTER LINE OF SAID INTERSTATE

ROUTE NO. 470; THENCE ALONG THE EAST RIGHT-OF-WAY LINE OF SAID INTERSTATE ROUTE NO. 470 THE FOLLOWING COURSES AND DISTANCES: THENCE NORTH 2° 34' 38" EAST, 545.54 FEET TO A POINT 130.00 FEET DISTANT FROM AND OPPOSITE STATION 600+05.00 ON SAID CENTER LINE; THENCE NORTH 6° 53' 14" EAST, 795.00 FEET TO A POINT 130.00 FEET DISTANT FROM AND OPPOSITE STATION 608+00.00 ON SAID CENTER LINE; THENCE NORTH 12° 35' 52" EAST, 100.50 FEET TO A POINT 140.00 FEET DISTANT FROM AND OPPOSITE STATION 609+00.00 ON SAID CENTER LINE; THENCE NORTH 6° 53' 14" EAST, 1173.28 FEET TO A POINT 140.00 FEET DISTANT FROM AND OPPOSITE STATION 620+73.28 ON SAID CENTER LINE; THENCE NORTH 10° 40' 21" EAST, 227.20 FEET TO A POINT. 155.00 FEET DISTANT FROM AND OPPOSITE STATION 623+00.00 ON SAID CENTER LINE; THENCE NORTH 6° 53' 14" EAST, 200.00 FEET TO A POINT 155.00 FEET DISTANT FROM AND OPPOSITE STATION 625+00.00 ON SAID CENTER LINE; THENCE NORTH 0° 12' 52" WEST, 242.66 FEET TO A POINT 125.00 FEET DISTANT FROM AND OPPOSITE STATION 627+40.80 ON SAID CENTER LINE; THENCE NORTH 6° 53' 14" EAST, 2659.20 FEET TO A POINT 125.00 FEET DISTANT FROM AND OPPOSITE STATION 654+00.00 ON SAID CENTER LINE; THENCE NORTH 14° 55' 09" EAST, 107.35 FEET TO A POINT 140.00 FEET DISTANT FROM AND OPPOSITE STATION 655+06.30 ON SAID CENTER LINE; THENCE NORTH 6° 53' 14" EAST, 493.70 FEET TO A POINT 140.00 FEET DISTANT FROM AND OPPOSITE STATION 660+00.00 ON SAID CENTER LINE; THENCE NORTH 9° 10' 40", EAST, 500.40 FEET TO A POINT 160.00 FEET DISTANT FROM AND OPPOSITE STATION 665+00.00 ON SAID CENTER LINE; THENCE NORTH 13° 33' 00" EAST, 344.76 FEET TO A POINT 200.00 FEET DISTANT FROM AND OPPOSITE STATION 668+42.43 ON SAID CENTER LINE; THENCE NORTH 21° 19' 14" EAST, 492.15 FEET TO A POINT 350.00 FEET DISTANT FROM AND OPPOSITE STATION 672+80.00 ON SAID CENTER LINE; THENCE NORTH 76° 17' 07" EAST, 197.56 FEET TO A POINT 50.47 FEET SOUTH OF THE NORTH LINE OF THE NORTHEAST 1/4 OF THE NORTHEAST 1/4 OF SAID SECTION 17, AND WHICH POINT IS OPPOSITE STATION 15+45.00 ON THE CENTER LINE OF WOODS CHAPEL ROAD; THENCE NORTH 86° 15' 15" EAST, 206.03 FEET TO A POINT ON THE SOUTH RIGHT-OF-WAY OF WOODS CHAPEL ROAD, 30.00 FEET DISTANT FROM THE CENTER LINE THEREOF; THENCE SOUTH 88° 02' 21" EAST(TITLE CALLS FOR NORTH 88°02'21" EAST), ALONG SAID SOUTH RIGHT-OF-WAY LINE, PARALLEL TO AND 30.00 FEET DISTANT FROM SAID CENTER LINE, 90.07 FEET TO THE POINT OF BEGINNING.

TRACT 2:

ALL THAT PART OF THE EAST 1/2 OF THE EAST 1/2 OF THE SOUTH 1/2 OF SECTION 20, THE SOUTH 1/2 OF SECTION 21, THE NORTHEAST 1/4 OF SECTION 29 AND THE NORTH 1/2 OF SECTION 28, ALL IN TOWNSHIP 48 NORTH, RANGE 31 WEST, IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, LYING SOUTH OF LEINWEBER ROAD, NORTH OF COLBERN ROAD AND EAST OF OLD MISSOURI ROUTE NO. 291, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF SAID SECTION 28; THENCE SOUTH 1° 48' 58" WEST, ALONG THE EAST LINE OF THE NORTHEAST 1/4 OF SAID SECTION 28, 2627.97 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF COLBERN ROAD, 40.00 FEET DISTANT FROM THE CENTER LINE THEREOF; THENCE NORTH 88° 12' 11" WEST, ALONG SAID NORTH RIGHT-OF-WAY LINE, PARALLEL AND 40.00 FEET DISTANT FROM SAID CENTER LINE, 2659.50 FEET TO A POINT ON THE WEST LINE OF SAID 1/4 SECTION; THENCE NORTH 1° 47' 40" EAST, ALONG THE WEST LINE OF SAID 1/4 SECTION, 1286.61 FEET TO THE SOUTHEAST CORNER OF THE NORTH 1/2 OF THE NORTHWEST 1/4 OF SAID SECTION 28; THENCE NORTH 88° 27' 45" WEST, ALONG THE SOUTH LINE OF SAID 1/2-1/4 SECTION,

2663.33 FEET TO THE SOUTHWEST CORNER THEREOF, SAID CORNER ALSO BEING THE SOUTHEAST CORNER OF THE NORTHEAST 1/4 OF THE NORTHEAST 1/4 OF SAID SECTION 29; THENCE NORTH 88°38' 59" WEST, ALONG THE SOUTH LINE OF SAID 1/4-1/4 SECTION, 1257.28 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF OLD MISSOURI ROUTE NO. 291, SAID POINT BEING 60.00 FEET DISTANT FROM THE CENTER LINE THEREOF; THENCE NORTH 1° 50' 33" EAST, ALONG SAID EAST RIGHT-OF-WAY LINE, PARALLEL TO AND 60.00 FEET DISTANT FROM SAID CENTER LINE, 1247.37 FEET TO A POINT 60.00 FEET DISTANT FROM AND OPPOSITE STATION 284+51.90 ON SAID CENTER LINE; THENCE NORTH 1° 41' 49" EAST, ALONG SAID EAST RIGHT-OF-WAY LINE, PARALLEL TO AND 60.00 FEET DISTANT FROM SAID CENTER LINE, 2273.96 FEET TO A POINT OF CURVATURE; THENCE NORTHEASTERLY, ALONG A CURVE TO THE RIGHT, TANGENT TO THE LAST DESCRIBED COURSE, HAVING A RADIUS OF 398.37 FEET, AND A CENTRAL ANGLE OF 89° 57' 00", AN ARC DISTANCE OF 625.41 FEET TO A POINT OF TANGENCY ON THE SOUTH RIGHT-OF-WAY LINE OF LEINWEBER ROAD, 60.00 FEET DISTANT FROM THE NEW CENTER LINE THEREOF; THENCE SOUTH 88° 21' 11" EAST, TANGENT TO THE LAST DESCRIBED CURVE, ALONG SAID SOUTH RIGHT-OF-WAY LINE, PARALLEL TO AND 60.00 FEET DISTANT FROM SAID NEW CENTER LINE, 130.40 FEET; THENCE NORTH 80° 19' 44" EAST, ALONG SAID SOUTH RIGHT-OF-WAY LINE, 101.97 FEET TO A POINT 40.00 FEET DISTANT FROM SAID NOW CENTER LINE; THENCE SOUTH 88° 28' 41" EAST, ALONG SAID SOUTH RIGHT-OF-WAY LINE, PARALLEL TO AND 40.00 FEET DISTANT FROM SAID NEW CENTER LINE, 2270.90 FEET TO AN ANGLE POINT; THENCE SOUTH 87° 14' 14" EAST, ALONG SAID SOUTH RIGHT-OF-WAY LINE, PARALLEL TO AND 40.00 FEET DISTANT FROM SAID NEW CENTER LINE, 372.79 FEET TO A POINT 52.23 FEET SOUTH OF THE NORTH LINE AND 660.00 FEET WEST OF THE EAST LINE OF THE SOUTHWEST 1/4 OF SAID SECTION 21; THENCE SOUTH 1° 58' 18" WEST, PARALLEL TO AND 660.00 FEET WEST OF THE EAST LINE OF SAID 1/4 SECTION, 607.77 FEET; THENCE SOUTH 88° 28' 25" EAST, PARALLEL TO AND 660.00 FEET SOUTH OF THE NORTH LINE OF SAID 1/4 SECTION, 660.00 FEET TO A POINT ON THE WEST LINE OF THE SOUTHEAST 1/4 OF SAID SECTION 21; THENCE SOUTH 88° 30' 11" EAST, PARALLEL TO AND 660.00 FEET SOUTH OF THE NORTH LINE OF SAID 1/4 SECTION, 1334.06 FEET TO A POINT ON THE EAST LINE OF THE WEST 1/2 OF SAID SOUTHEAST 1/4; THENCE SOUTH 2° 04' 04" WEST, ALONG SAID EAST LINE OF SAID 1/2-1/4 SECTION, 1993.26 FEET TO THE SOUTHEAST CORNER OF SAID 1/2-1/4 SECTION, SAID POINT ALSO BEING ON THE NORTH LINE OF SAID SECTION 28; THENCE SOUTH 88° 34' 10" EAST, ALONG THE NORTH LINE OF SAID SECTION 28, 1329.92 FEET TO THE POINT OF BEGINNING.

EXCEPT 23.75 Acres deeded to the city of Lee's Summit in Special Warranty Deed as Document 2008E0097719
AND
EXCEPT 10.19 Acres deeded to the State of Missouri in Special Warranty Deed as Document 2008E0097563
AND
EXCEPT 4.13 Acres Deeded to the city of Lee's Summit in Right of Way Deed as Document 2007E0081037
AND
EXCEPT 0.22 Acres Deeded to the city of Lee's Summit in Right of Way Deed as Document 199910050890

Said Tract 1 and 2, have a combined 46,368,226.08 Square feet or 1064.47 acres more or less.

EXHIBIT 1(B)

DEPICTION OF THE PROPERTY



EXHIBIT 2

INITIAL CONCEPTUAL SITE PLAN

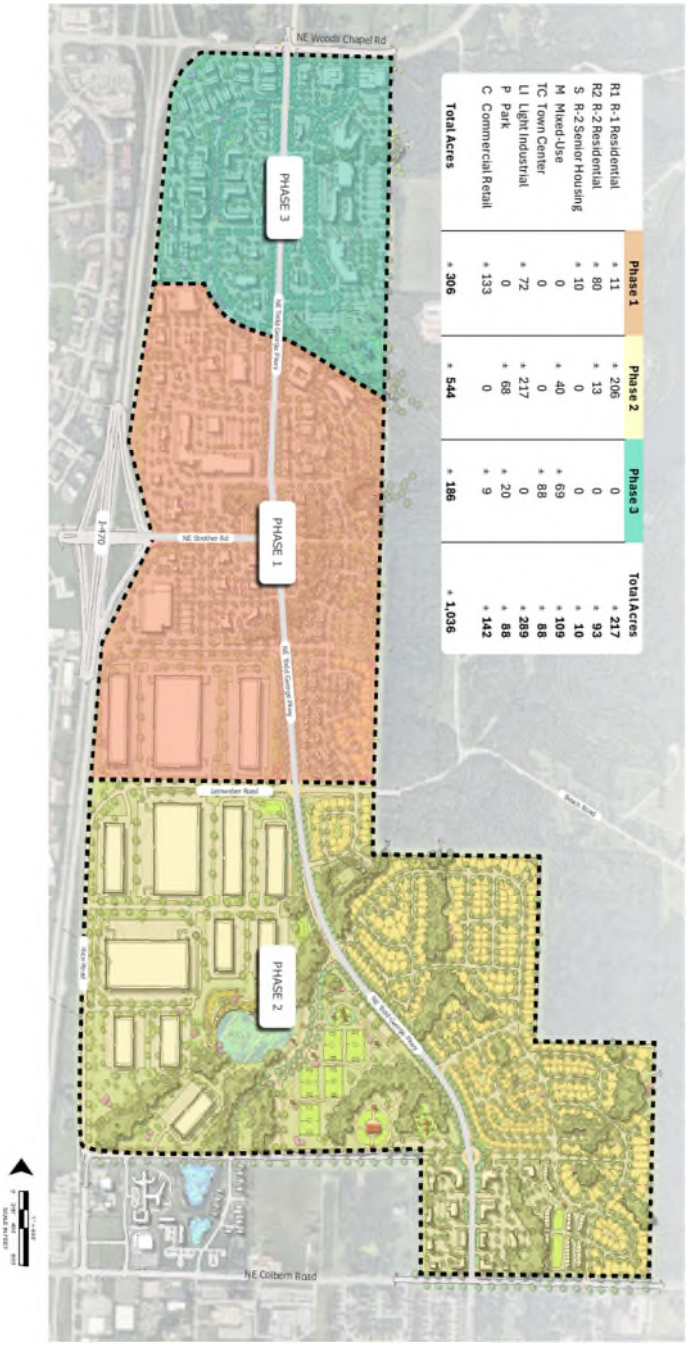


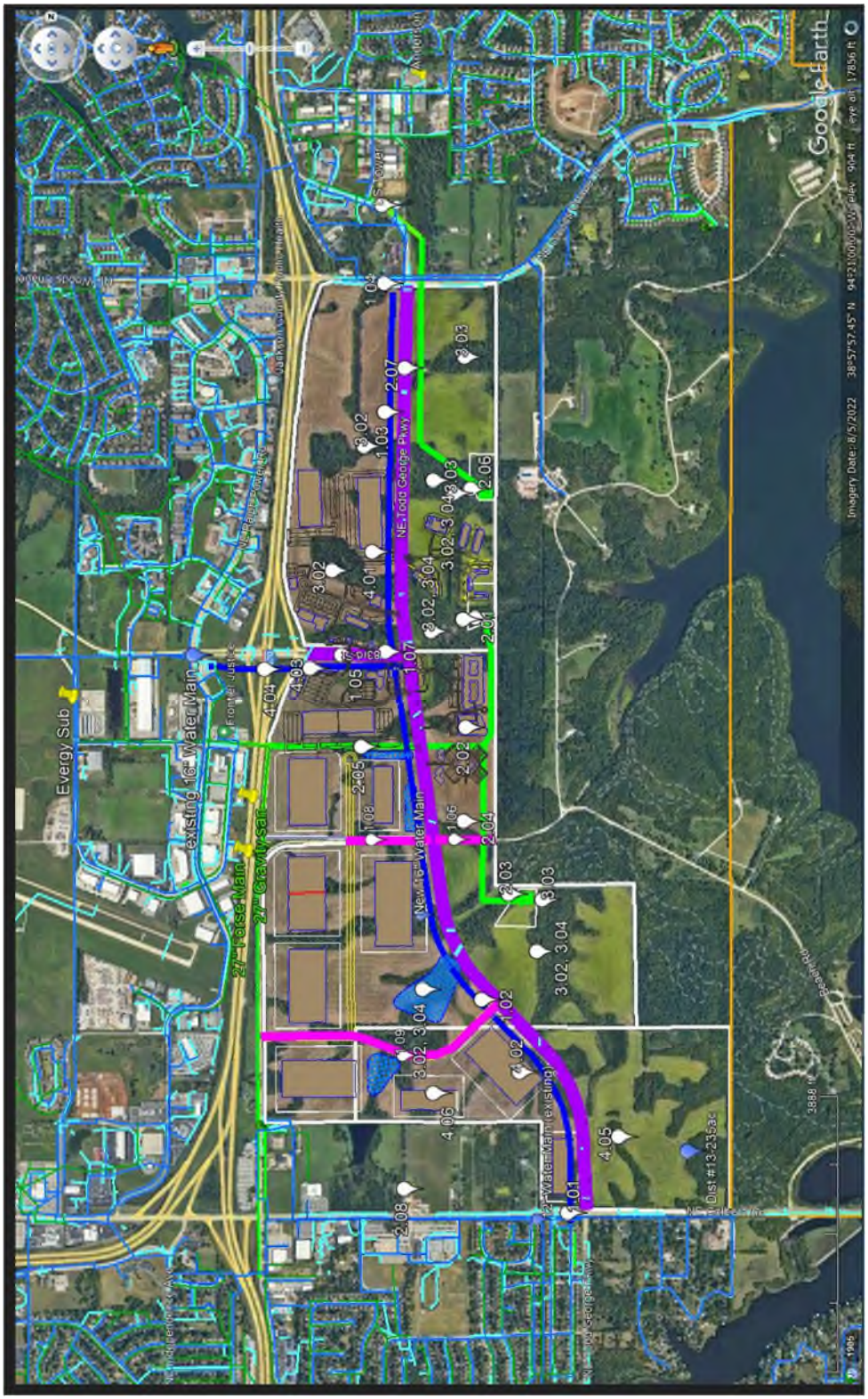
EXHIBIT 3

DESCRIPTION OF PUBLIC IMPROVEMENTS

MAJOR ACCESS	
1.01	NE Colbern Road at NE Todd George Parkway Intersection
1.02	NE Todd George Parkway North from NE Colbern Road to NE Strother Road
1.03	NE Todd George Parkway North from Strother Road to NE Woods Chapel Road
1.04	NE Woods Chapel Road at Todd George Parkway Intersection
1.05	NE Strother Road (83rd Street) East of I-470 East to NE Todd George Parkway
1.06	Leinweber Road West from Lake Jacomo Park to NE Todd George Parkway
1.07	Traffic signal (Intersection of NE Todd George Parkway & NE Strother Road)
1.08	Leinweber Road West of NE Todd George Parkway
1.09	NE Rice Road East to NE Todd George Parkway
SANITARY SEWER	
2.01	Central Pumping Plant
2.02	Central Station Force Main
2.03	South Pumping Plant
2.04	South Station Force Main
2.05	Central-South Force Main to I-470
2.06	North Pumping Plant
2.07	North Station Force Main
SITE FEATURE IMPROVEMENTS	
3.02	Site Retention and Detention Facilities Benefitting Park
3.03	Retention and Detention Dams and Release Structures
WATER MAIN DISTRIBUTION	
4.01	16" Main from NE Woods Chapel Road to NE Strother Road on West side of NE Todd George Parkway
4.02	16" Main from NE Strother Road to NE Colbern Road
4.03	16" Main from West side of I-470 to NE Todd George Parkway
4.04	Boring Work Under I-470
4.05	12' Main Serving Property East of NE Todd George Parkway
ELECTRICAL DISTRIBUTION	
6.01	Underground Conduit
6.02	Underground Pads
6.03	Cable and Switch Equipment

EXHIBIT 4

DEPICTION OF PUBLIC IMPROVEMENTS



Consistency Finding for Arborside LCRA Plan

Presentation to Planning Commission

May 14, 2026

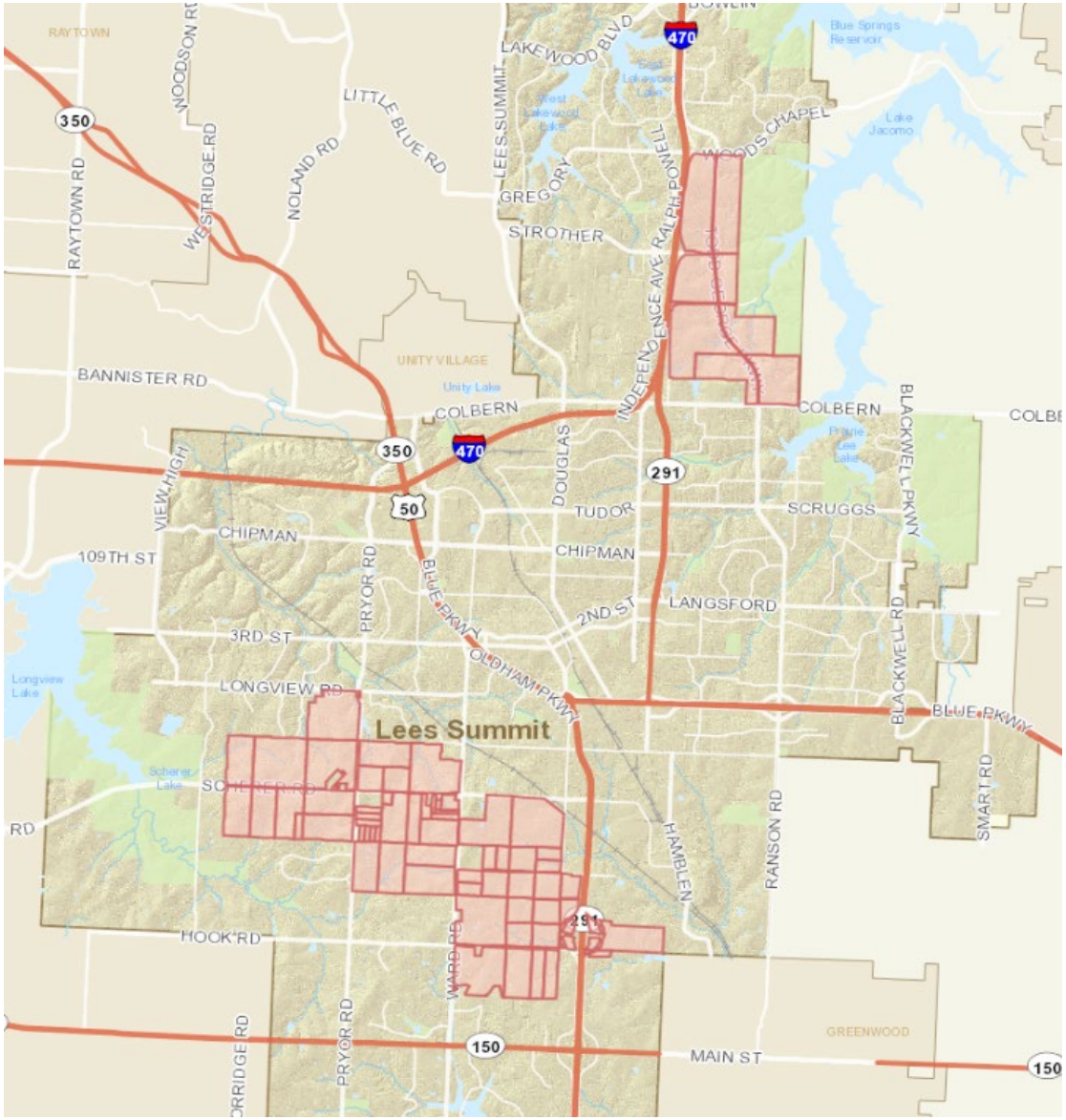
Summary of Presentation

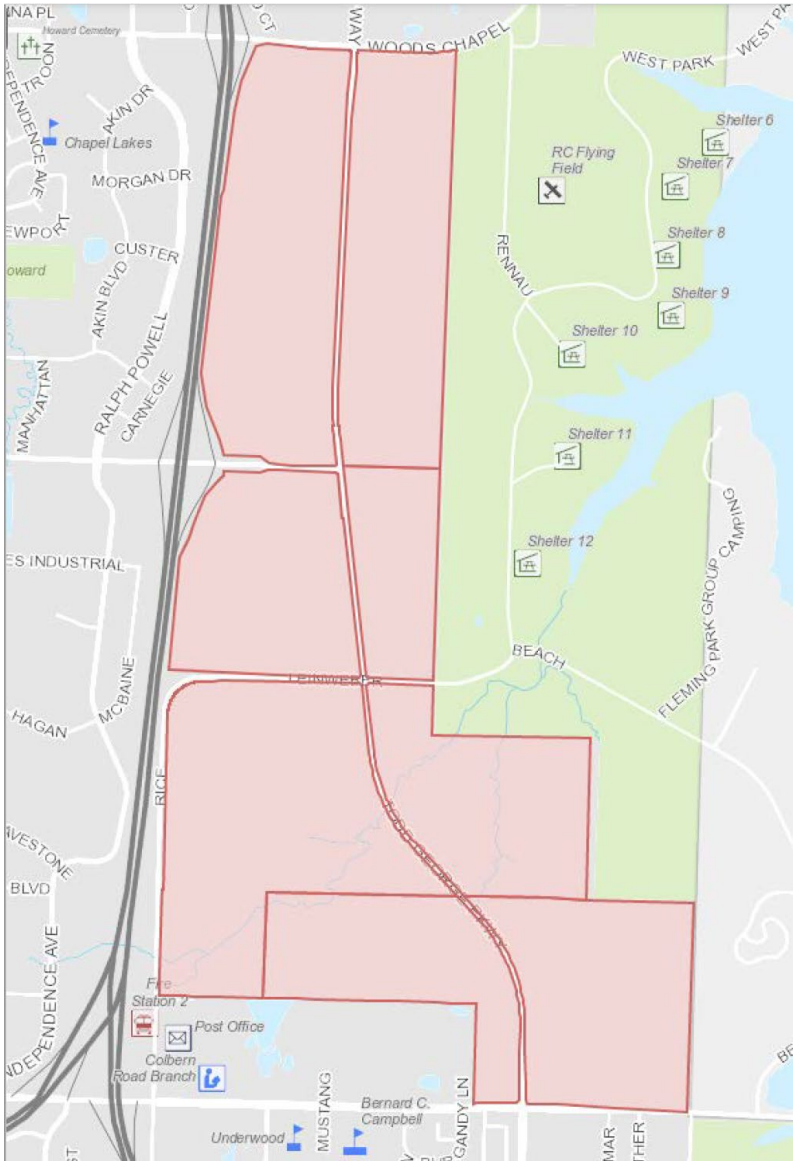
Goal and Request: Planning Commission recommendation regarding the consistency between the Arborside LCRA Plan and the Ignite! Comprehensive Plan.

Presentation:

1. **Background**
2. **Arborside Development**
3. **Consistency Finding**
4. **Resolutions**
   A. Amend Comprehensive Plan
   B. Consistency between Arborside LCRA Plan and Comprehensive Plan

1
Background


Lees Summit
470
350
50
291
150
LAKEWOOD BLVD
LITTLE BLUE RD
NOLAND RD
WESTRIDGE RD
RAYTOWN RD
BANNISTER RD
COLBERN
INDEPENDENCE AVE
RALPH POWELL
WOODS CHAPEL
GREGORY
STROTHER
DOUGLAS
TUDOR
SCRUGGS
CHIPMAN
109TH ST
3RD ST
2ND ST
LANGSFORD
PRYOR RD
BLUE PKWY
OLDHAM PKWY
LONGVIEW RD
HOOK RD
HAMBLEN
RANSON RD
BLACKWELL RD
BLACKWELL PKWY
SMART RD
MAIN ST
GREENWOOD
UNITY VILLAGE
Unity Lake
Blue Springs Reservoir
Lake Jacomo
Longview Lake
Prairie Lee Lake



Arborside LCRA Redevelopment Plan: ~1000 acres.

Parties

- The Church of Jesus Christ of Latter-day Saints (**LDS Church**)
- Property Reserve, Inc. (**PR**) – non-profit entity, landowner in Lee's Summit
- Land Reserve, Inc. (**LR**) – for-profit entity, has taken ownership, will sell land and serve as **Master Developer**
- Developers for individual projects

Scope of LR Property

- LR Property is 4,203 acres (6.57 sq miles)
  - 1,064 acres North Tract, 3,141 acres South Tract
- Lee's Summit is 6th largest municipality in Missouri by land area (65.8 sq miles) and population (106,000+)
- 1000+ municipalities in Missouri; LR land would be about #104 in Missouri by land area
- Lee's Summit is #294 in nation by land area

LR Property Compared to Missouri Municipalities

Raytown	9.93 SqMi, 28,525 pop (#25)
Peculiar	9.06 SqMi, 6,391 pop (#120)
→ LR land	6.57 SqMi
Oak Grove	6.17 SqMi, 9,378 pop (#93)
Hollister	6.33 SqMi, 4,723 pop (#157)
Grain Valley	6.06 SqMi, 17,225 pop (#51)
Univ. City	5.88 SqMi, 33,492 pop (#20)

From Census data sorted at www.worldpopulationreview.com and www.usa.com

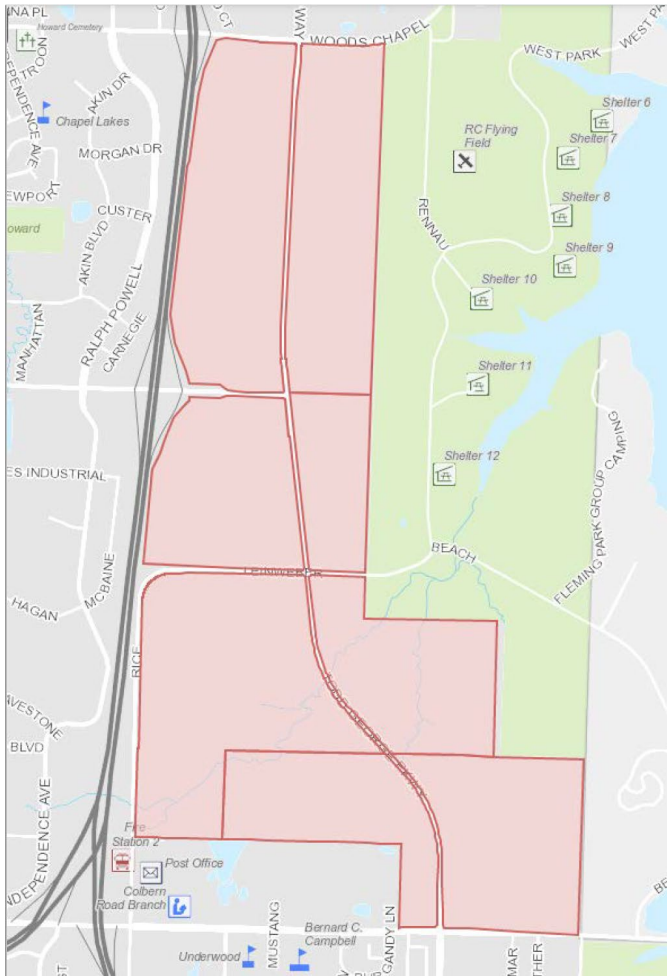
Goals of City Coordination with LR

- Create **long-term** infrastructure financing plan
- **Proactive** rather than reactive to development opportunities
- Create **certainty** for development
- **Avoid piecemeal approach**
- Secure available State & Federal funding
- Take maximum advantage of current opportunity to work with **one property owner**
- **Best long-term decisions** for land development
- Establish ongoing **transparent** process

2
Arborside Development

Redevelopment Plan Framework

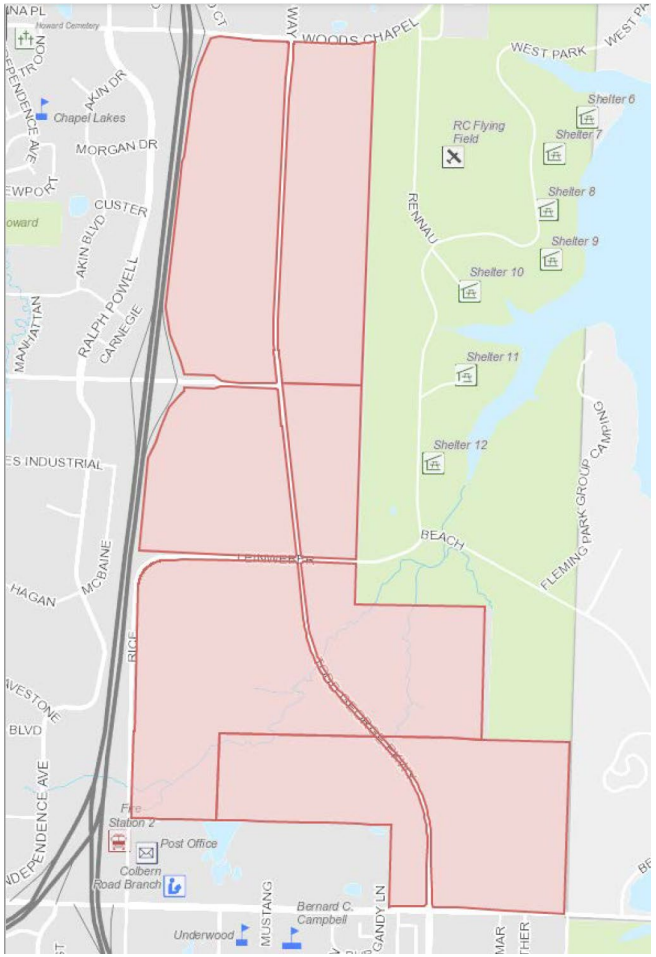
- **Land Uses**
  - Residential
  - Mixed Use
  - Commercial / Retail
  - Office / Medical Office
  - Light Industrial
- **Major Infrastructure Costs**
  - Arterial Transportation
  - Sanitary Sewer
  - Water
  - Other Utilities (Electric & Gas)
  - Regional Stormwater
- **Other Civic & Development Considerations**
  - Parks & Trail Connections
  - Police & Fire Coverage
  - Schools



Financing Plan – Public Improvements

Public Infrastructure Costs	
Major Transportation	$39,928,000
Sanitary Sewer	$34,026,000
Stormwater	$1,776,000
Major Water Mains	$6,264,000
Electric	$3,859,000
Contingency (20%)	$17,171,000
Total	**$103,024,000**

Secured City Funding	
Major Transportation	$24,000,000
Sanitary Sewer	$10,500,000
Total	**$34,500,000**



Financing Plan – Public Improvements

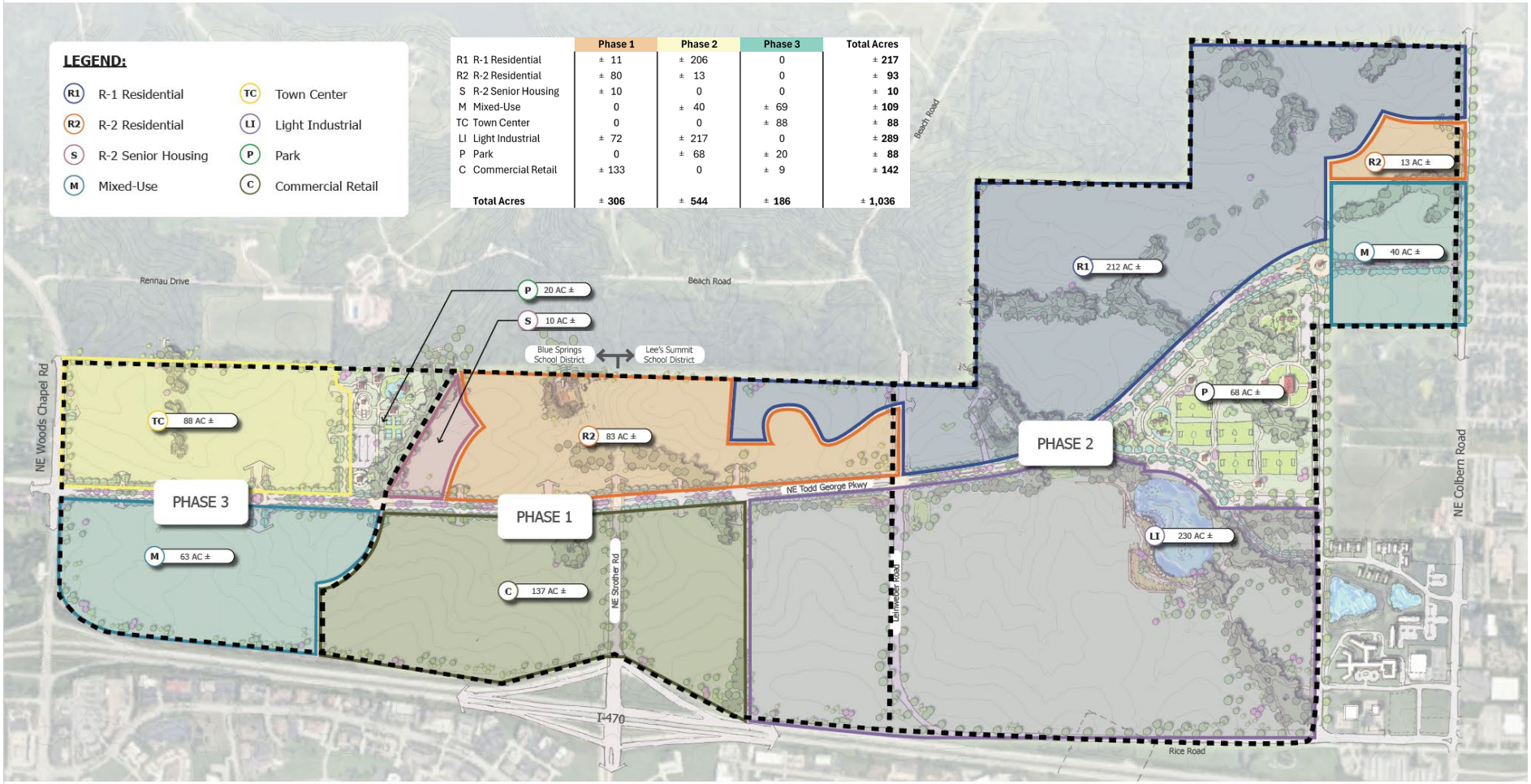
Public Improvement	Cost	City Funding	Remainder
Major Transportation	$39,928,000	$24,000,000	$15,928,000
Sanitary Sewer	$34,026,000	$10,500,000	$23,526,000
Stormwater	$1,776,000		$1,776,000
Major Water Mains	$6,264,000		$6,264,000
Electric	$3,859,000		$3,859,000
Contingency (20%)	$17,171,000		$17,171,000
Total	**$103,024,000**	**$34,500,000**	**$68,524,000**

3
Consistency Finding

Finding: Consistency

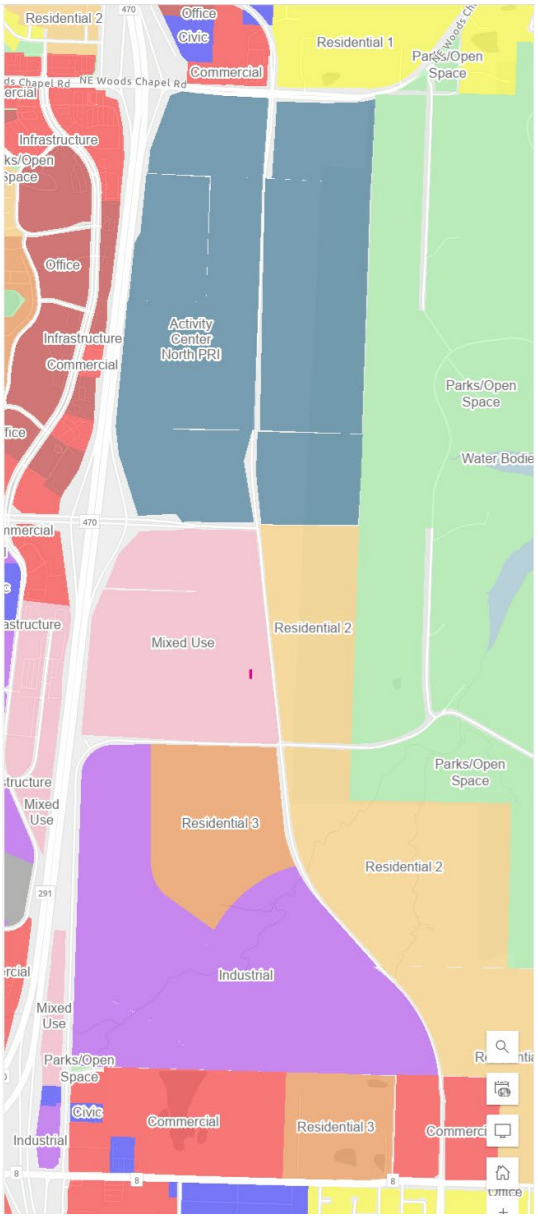
- **Planning Commission**: “Prior to recommending a redevelopment or urban renewal plan to the governing body for approval, an authority shall submit the plan to the **planning agency**, if any, of the community in which the land clearance or urban renewal project area is located for review and recommendations as to its **conformity with the general plan for the development of the community as a whole**.” § 99.430.1(5), RSMo.
- **LCRA Board**: “Prior to recommending a redevelopment or urban renewal plan to the governing body for approval, an **authority shall consider whether** the proposed **land uses** and building requirements in the land clearance or urban renewal project area are designed with the general purpose of accomplishing, **in conformance with the general plan**, a coordinated, adjusted and harmonious development of the community and its environs ….” § 99.430.1(6), RSMo.
- **City Council**: “Following the hearing, the governing body may approve a redevelopment or urban renewal plan if it **finds that the plan is feasible and in conformity with the general plan for the development of the community as a whole**.” § 99.430.1(9), RSMo.

LAND USE ZONES



	Phase 1	Phase 2	Phase 3	Total Acres
R1 R-1 Residential	± 11	± 206	0	± 217
R2 R-2 Residential	± 80	± 13	0	± 93
S R-2 Senior Housing	± 10	0	0	± 10
M Mixed-Use	0	± 40	± 69	± 109
TC Town Center	0	0	± 88	± 88
LI Light Industrial	± 72	± 217	0	± 289
P Park	0	± 68	± 20	± 88
C Commercial Retail	± 133	0	± 9	± 142
Total Acres	**± 306**	**± 544**	**± 186**	**± 1,036**


LAND USE ZONES
LEGEND:
R1 R-1 Residential
R2 R-2 Residential
S R-2 Senior Housing
M Mixed-Use
TC Town Center
LI Light Industrial
P Park
C Commercial Retail
PHASE 1
PHASE 2
PHASE 3
NE Woods Chapel Rd
NE Strother Rd
NE Colbern Road
Beach Road
Rice Road
Rentau Drive
I-470
Phase 1 Phase 2 Phase 3 Total Acres
R1 R-1 Residential ± 11 ± 206 0 ± 217
R2 R-2 Residential ± 80 ± 13 0 ± 93
S R-2 Senior Housing ± 10 0 0 ± 10
M Mixed-Use 0 ± 40 ± 69 ± 109
TC Town Center 0 0 ± 88 ± 88
LI Light Industrial ± 72 ± 217 0 ± 289
P Park 0 ± 68 ± 20 ± 88
C Commercial Retail ± 133 0 ± 9 ± 142
Total Acres ± 306 ± 544 ± 186 ± 1,036
olsson
LAND RESERVE
NEWMARK ZIMMER
SCALE IN FEET


Residential 2
Office
Civic
Commercial
Residential 1
Parks/Open Space
NE Woods Chapel Rd
Infrastructure
Office
Infrastructure
Commercial
Activity Center North PRI
Parks/Open Space
Water Bodie
Mixed Use
Residential 2
Parks/Open Space
Mixed Use
Residential 3
Residential 2
Industrial
Mixed Use
Parks/Open Space
Civic
Commercial
Residential 3
Industrial

4
Resolutions

Resolutions

- Comprehensive Plan Amendment
- Recommendation to City Council to approve LCRA Plan

LAND USE ZONES
LEGEND:
R-1 Residential
R-2 Residential
R-2 Senior Housing
Park
Commercial Retail
Town Center
Light Industrial
Mixed-Use
PHASE 1
PHASE 2
PHASE 3
NE Woods Chapel Rd
NE Strother Rd
NE Colbern Road
NE Hoad Creek Pkwy
Remau Drive
Beach Road
I-470
Phase 1
Phase 2
Phase 3
Total Acres
R1 R-1 Residential
R2 R-2 Residential
S R-2 Senior Housing
M Mixed-Use
TC Town Center
LI Light Industrial
P Park
C Commercial Retail
Total Acres
olsson
LAND RESERVE
NEWMARK
ZIMMER
1 LAND RESERVE - NORTH LEE'S SUMMIT | CONCEPT PACKAGE

Proposed Future Landuse
Activity Center Downtown
Activity Center New Longview
Activity Center North PRI
Activity Center South PRI
Activity Center Summit
Airport
Civic
Commercial
Industrial
Infrastructure
Mixed Use
Office
Parks/Open Space
Residential 1
Residential 2
Residential 3
Water Bodies
Project Boundary
Activity Center North PRI
Activity Center North PRI
Activity Center North PRI
Activity Center North PRI
Commercial
Residential 2
Industrial
Industrial
Residential 1
Industrial
Parks/Open Space
Residential 1
Mixed Use
Mixed Use
Residential 2
470
291
8
964 ft
993 ft
Appl. #PL2026-114 - COMPREHENSIVE PLAN AMENDMENT - LAND RESERVE PROPERTY
Proposed Future Land Use

Packet Information

File #: 2026-7651, **Version:** 1

A resolution of the Planning Commission of the City of Lee's Summit, Missouri, recommending that the City Council approve the Arborside Land Clearance for Redevelopment Authority (LCRA) redevelopment plan.

Proposed Motion:
I move to approve resolution 26-005, a resolution of the Planning Commission of the City of Lee's Summit, Missouri, recommending that the City Council approve the Arborside Land Clearance for Redevelopment Authority (LCRA) redevelopment plan.

David Bushek, Gilmore Bell
C. Shannon McGuire, Assistant Director of Plan Services

RESOLUTION NO. 2026-005

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF LEE'S SUMMIT, MISSOURI, RECOMMENDING THAT THE CITY COUNCIL APPROVE THE ARBORSIDE LAND CLEARANCE FOR REDEVELOPMENT AUTHORITY (LCRA) REDEVELOPMENT PLAN.

WHEREAS, pursuant to Sections 89.340 to 89.380, RSMo., a municipality is authorized to make, adopt, amend, and carry out a city plan for the physical development and uses of land and for the general location, character and extent of streets and other public ways within its corporate limits; and

WHEREAS, the Planning Commission of the City of Lee's Summit, Missouri, adopted the Lee's Summit Ignite! Comprehensive Plan as the Lee's Summit Comprehensive Plan, by Resolution dated May 20, 2021 (the "**Ignite Comprehensive Plan**"); and

WHEREAS, on May 1, 2026, the Arborside LCRA Redevelopment Plan (the "**Arborside Redevelopment Plan**") was filed with the City Clerk, and thereafter delivered to the Planning Commission for review as described below; and

WHEREAS, the Arborside Redevelopment Plan calls for a variety of land uses to be developed on the North Property Reserve Land (as defined below), including Industrial, residential, commercial retail and office uses along with infrastructure improvements to serve such development; and

WHEREAS, pursuant to Section 99.430.1(5), RSMo, which is a statute in the Land Clearance for Redevelopment Authority Act which is set forth at Sections 99.300 through 99.715, RSMo (the "**LCRA Act**"), the Arborside Redevelopment Plan was submitted by the LCRA Board of Commissioners to the Planning Commission, as the acting and recommending body for the planning agency of the City, for the purpose of evaluating, reviewing and making a recommendation to the City Council regarding the conformity of the Arborside Redevelopment Plan with the Ignite Comprehensive Plan as the general plan for the development of the community as a whole; and

WHEREAS, on May 14, 2026, the Planning Commission considered an amendment to the Comprehensive Plan in connection with the development proposed for approximately 1000 acres of land owned by Property Reserve, Inc., which is generally located to the east of I-470 between Colbern Road on the south and Woods Chapel Road on the north in the City (the "**North Property Reserve Land**"); and

WHEREAS, thereafter on May 14, 2026, the Planning Commission approved a resolution to amend the Ignite Comprehensive Plan and amend certain land-use designations that are applicable to the North Property Reserve Land as set forth on the Future Land Use Map; and

WHEREAS, after considering the evidence and testimony received from City staff and City consultants and all interested persons, the Planning Commission now desires to recommend that the City Council make a finding that the Arborside Redevelopment Plan is consistent and in conformity with the Ignite Comprehensive Plan.

NOW THEREFORE, BE IT RESOLVED BY THE CITY OF LEE'S SUMMIT PLANNING COMMISSION, as follows:

SECTION 1. In accordance with the LCRA Act, the Planning Commission finds, and recommends that the City Council by ordinance make the finding, that the Arborside Redevelopment Plan is consistent and in conformity with the Ignite Comprehensive Plan, in that land-use designations described in the Arborside Redevelopment Plan are consistent and in conformity with the Future Land Use Map designations under the Ignite Comprehensive Plan for the same property. The Planning Commission further finds that the proposed land uses and building requirements on the North Property Reserve Land are designed with the general purpose of accomplishing, in conformance with the Comprehensive Plan, a coordinated, adjusted and harmonious development of the community and its environs which, in accordance with present and future needs, will promote health, safety, morals, order, convenience, prosperity and the general welfare, as well as efficiency and economy in the process of development.

SECTION 2. That the Chairperson and Secretary of the Planning Commission are authorized to affix their signatures to this Resolution, and this resolution shall be advanced to the LCRA Board and the City Council as the formal recommendation of the Planning Commission for the Arborside Redevelopment Plan.

ADOPTED by the Planning Commission for the City of Lee's Summit, Missouri on the 14th day of May, 2026.

_____
Dana Arth, Chairperson
Planning Commission

ATTEST:

_____
Chip Touzinsky, Secretary
Planning Commission

APPROVED AS TO FORM:

_____
Erin Kelly
Staff Attorney

Received in the Office of
the Lee's Summit City Clerk
on May 1, 2026 @ 2:50pm
Signed: Trisha Fowler Arcuri

ARBORSIDE
LCRA REDEVELOPMENT PLAN

LAND CLEARANCE FOR REDEVELOPMENT AUTHORITY OF THE CITY OF LEE'S SUMMIT, MISSOURI

May 1, 2026

1. **Establishment of Urban Renewal Area; Purpose of this Redevelopment Plan**.

This Redevelopment Plan (this "***Plan***") has been prepared in accordance with the Land Clearance for Redevelopment Authority Act which is set forth in Sections 99.300 through 99.660 of the Revised Statutes of Missouri (the "***LCRA Act***") for the redevelopment of the property (the "***Property***") which is legally described on Exhibit 1(A) attached hereto and depicted on Exhibit 1(B) attached hereto. Upon approval of this Redevelopment Plan, the Property will be determined to be blighted based on the blight study that has been prepared concurrently with this Plan and will be designated a land clearance for redevelopment urban renewal area, to be known as the "Arborside Urban Renewal Area". The purpose of this LCRA Redevelopment Plan is to:

1. carry out the policy statement of the LCRA Act which is set forth in Section 99.310, RSMo, and more particularly to renovate, redevelop, and otherwise improve the Property to cure the blighted conditions which exist on the Property;

2. provide Missouri sales and use tax exemption on construction materials for the Public Improvements and Overall Project (as defined below); and

3. provide real property tax exemption that, in conjunction with special assessments, will allow for the financing of certain Public Improvements (as defined below) and attraction of certain Land Clearance Projects (as defined below) within the Overall Project (as defined below).

The mechanism to achieve these purposes is to establish public ownership during the construction of each redevelopment project on the Property (each a "***Land Clearance Project***") as part of the Overall Project (as defined below) and for up to twenty-five (25) years after completion of each such Land Clearance Project. The maximum duration of public ownership for each land-use type and each Land Clearance Project shall be determined by the contract and related documents that are negotiated between the City and Developer (as defined below) to implement this Plan. Developer (as defined below) will receive and use a sales tax exemption certificate for the purchase of construction materials that are used in the construction of the Public Improvements and the Overall Project. This LCRA Redevelopment Plan satisfies the requirements of the LCRA Act, and the items set forth below discuss the requirements of a "redevelopment plan" as defined in the LCRA Act.

3. Description of the Project

Before significant development of the Property can proceed, significant public improvements must be constructed, which public improvements are generally described on Exhibit 3 and generally depicted on Exhibit 4 attached hereto (the "***Public Improvements***").

Based on this Plan's structure for financing the Public Improvements, this Plan contemplates Developer's (as defined below) design, development, and construction of a mixed-use development on the Property (the "***Overall Project***"). While the specific mix of buildings and uses will be market-driven and has not yet been finalized, the current conceptual programming for the Overall Project includes the following components: single family homes, multifamily residential buildings, senior living facilities, office buildings, industrial buildings, and retail buildings, along with all associated onsite and offsite sitework and infrastructure, including, without limitation, utilities, stormwater management, street/drive and parking improvements, and landscaping. An initial conceptual site plan for the Overall Project is attached hereto as Exhibit 2. The estimated cost of the Overall Project is approximately $1,514,991,239.

4. Description of the Parties

The Developer and Affiliates. Land Reserve, Inc., ("***Developer***") is a corporation incorporated and existing under the laws of the State of Utah. The benefitting companies will be the Developer, other affiliated

entities of Developer (each an "***Affiliate***"), and any entity, other than an Affiliate, which acquires a portion of the Property from Developer (a "***Developer Transferee***"), and which will be memorialized in a separate redevelopment contract with the City of Lee's Summit ("***City***") for each Land Clearance Project. During the period of City ownership, Developer, an Affiliate, or a Developer Transferee will lease from the City the portion of the Property involved with the relevant Land Clearance Project pursuant to a lease agreement (a "***Lease Agreement***") that will be approved by the City Council.

City of Lee's Summit, Missouri. The City is a constitutional home rule charter city and municipal corporation organized and existing under the laws of the State of Missouri. The City will lease the Property, or portions thereof, to Developer, an Affiliate, or a Developer Transferee during the construction period and for up to twenty-five (25) years after completion of each Land Clearance Project pursuant to a Lease Agreement. The maximum duration of public ownership for each land-use type and each Land Clearance Project shall be determined by the redevelopment contract and related documents that are negotiated between the City and Developer (as defined below) to implement this Redevelopment Plan.

5. Power and Authority Under the LCRA Act

The LCRA and the City are authorized and empowered pursuant to Section 99.420, RSMo, and other provisions of the LCRA Act, to exercise the following powers which are relevant to this Plan:

1. The LCRA may prepare redevelopment plans and recommend approval to City Council – "To prepare or cause to be prepared and recommend redevelopment plans and urban renewal plans to the governing body" (99.420(2))

2. Build and repair public improvements – "To arrange or contract for the furnishing or repair, by any person or agency, public or private, of services, privileges, works, streets, roads, public utilities or other facilities for or in connection with a land clearance project or urban renewal project" (99.420(3))

3. Acquire, buy, sell, mortgage and lease real estate and execute contracts for real estate – (4) "Within its area of operation, to purchase, lease, obtain options upon, acquire by gift, grant, bequest, devise, eminent domain or otherwise, any real or personal property or any interest therein, including fee simple absolute title, together with any improvements thereon, necessary or incidental to a land clearance project or urban renewal project *** to sell, lease, exchange, transfer, assign, subdivide, retain for its own use, mortgage, pledge, hypothecate or otherwise encumber or dispose of any real or personal property or any interest therein; to enter into contracts with redevelopers of property and with other public agencies containing covenants, restrictions and conditions regarding the use of such property for residential, commercial, industrial, recreational purposes or for public purposes in accordance with the redevelopment or urban renewal plan *** and to enter into any contracts necessary to effectuate the purposes of this law…" (99.420(4))

4. Approve plans for redevelopment of existing structures – "To make plans for carrying out a program of voluntary repair and rehabilitation of buildings and improvements, plans for the enforcement of state and local laws, codes, and regulations relating to the use of land and the use and occupancy of buildings and improvements, and to the compulsory repair, rehabilitation, demolition, or removal of buildings and improvements" (99.420(6))

5. Hold public hearings – "Acting through one or more commissioners or other persons designated by the authority, to conduct examinations and investigations and to hear testimony and take proof under oath at public or private hearings on any matter material for its information" (99.420(9))

6. Spend public funds – "To make such expenditures as may be necessary to carry out the purposes of this law" (99.420(12))

7. City Council can exercise all LCRA powers after delegation by LCRA – "To delegate to a municipality or other public body any of the powers or functions of the authority with respect to the planning or undertaking of a land clearance project or urban renewal project in the area in which the municipality or public body is authorized to act, and the municipality or public body is hereby authorized to carry out or perform such powers or functions for the authority" (99.420(13))

8. Exercise general municipal powers to implement the redevelopment plan – The LCRA has "all the powers necessary or convenient to carry out and effectuate the purposes and provisions of this law" (Section 99.420, introductory clause) and may "exercise all powers or parts or combinations of powers necessary, convenient or appropriate to undertake and carry out land clearance, redevelopment and urban renewal plans and projects and all the powers herein granted." (99.420(14))

Other grants of power and authority under the LCRA Act may become applicable to the implementation of this Plan. The LCRA Act defines "redevelopment plans" and "urban renewal plans" and the definition of these terms in Section 99.320, RSMo, each cross-references the other definition. All the procedural requirements and legal authority for each type of plan apply to LCRA redevelopment plans such as this Plan.

6. Requirements of the LCRA Act

Section 99.430, RSMo, requires that each LCRA redevelopment plan contain certain data and information. This section sets forth the statutory requirements for a redevelopment plan under the LCRA Act along with information to satisfy such requirements.

Relationship to definite local objectives as to appropriate land uses, improved traffic, public transportation, public utilities, recreational and community facilities, and other public improvements.

Transportation Improvements. The Overall Project includes significant public street infrastructure improvements, which improvements advance the City's stated goal of ensuring safe, efficient, accessible, and convenient traffic circulation, including construction of the following public streets:

- Intersection of NE Colbern Road and NE Todd George Parkway
- NE Todd George Parkway from NE Colbern Road to NE Strother Road
- NE Todd George Parkway from NE Strother Road to NE Woods Chapel Road
- Intersection of NE Woods Chapel Road and NE Todd George Parkway
- NE Strother Road from Interstate 470 to NE Todd George Parkway
- Leinweber Road from Lake Jacomo to NE Todd George Parkway
- Leinweber Road from NE Todd George Parkway
- NE Rice Road to NE Todd George Parkway

In April 2026, the City Council approved a Cooperative Agreement between the City and Developer which provides for the construction of Todd George Parkway north of Colbern Road pursuant to the City's 2026 Capital Improvements Plan by or at the direction of Developer, acting as the construction manager for the City on this CIP project. This Agreement covers several segments of the improvements described immediately above. This Plan is to initiate a funding and financing plan for the payment of primary infrastructure costs such as these Todd George Parkway improvements.

Additional transportation improvements may be identified through the City's evaluation of development applications (including rezoning and preliminary development plan applications), and the requirement to build such transportation improvements may be appended as conditions of approval for such development applications. This Plan is intended to provide a partial mechanism to fund certain transportation improvements, as identified by the City and as agreed by the parties through the implementation of this Plan.

Public Utilities. The Project includes extension of public water mains and the construction of sanitary sewer-related improvements, electrical improvements, and storm drainage facilities, all as more thoroughly described on Exhibit 3. Together, these public utilities improvements enhance City infrastructure to promote quality growth and resilience. These utility improvements may be identified by the City through its review of development applications, as discussed above.

Boundaries of the land clearance project area, with a map showing the existing uses and condition of the real property therein

See Exhibit 1(B) and the companion Blight Study that supports this Plan.

A land use plan showing proposed uses of the area

Land uses are anticipated to consist of residential, office, industrial, and other commercial uses, as well as ancillary uses thereto. An aerial of the Property is attached hereto as Exhibit 1(B), and an initial conceptual site plan is attached hereto as Exhibit 2. The rezoning and preliminary development plan applications that are approved for each Land Clearance Project by the City Council will control the allowable land uses.

Information showing the standards of population densities, land coverage and building intensities in the area after redevelopment

An aerial of the Property is attached hereto as Exhibit 1(B), and an initial conceptual site plan is attached hereto as Exhibit 2.

Statement of the proposed changes, if any, in zoning ordinances or maps, street layouts, street levels or grades, building codes and ordinances

The Property's agricultural zoning classification will be amended to allow for the Project's various land uses. New public street infrastructure is contemplated as set forth on the initial conceptual site plan attached hereto as Exhibit 2.

Statement as to the kind and number of additional public facilities or utilities which will be required in the area after redevelopment

The primary public facilities and utilities as discussed above are detailed in Exhibit 3 and Exhibit 4, which are anticipated to be required in the area to serve the redevelopment.

A schedule indicating the estimated length of time needed for completion of each phase of the plan

The Project is anticipated to be constructed in phases, with construction expected to commence in 2027. Market demand will dictate when the Project will be completed, but current estimates are approximately 2047.

Submission to the City's planning agency for a determination as to whether the Redevelopment Plan is consistent with the Comprehensive Plan

The Overall Project is consistent with the goals and land-use designations of the City's Ignite! Comprehensive Plan. When an individual Land Clearance Project is prepared to move forward, the Developer will submit,

as appropriate, rezoning and preliminary development plan applications for the portion of the Property associated with the Land Clearance Project, which will be heard by the City's Planning Commission followed by the City Council, which in both cases will include a finding of consistency with the City's Comprehensive Plan for the project to achieve zoning approval.

This Plan was also considered by the Planning Commission and the LCRA Board to evaluate whether this Plan is "in conformity with the general plan for the development of the community as a whole." See § 99.430.1(9), RSMo. The City Council's findings in the Ordinance that approved this plan addresses the factual finding of consistency, and the Council determined that this Plan is consistent with the general plan for the development of the community as a whole as embodied in the Ignite! Comprehensive Plan.

A statement of the proposed method and estimated cost of the acquisition and preparation for redevelopment of the land clearance project area

Developer purchased the Property prior to approval of this Plan.

The estimated proceeds or revenues from its disposal to redevelopers

Developer has already acquired the Property and Developer expects to convey the Property to the City and lease the Property from the City through one or more Lease Agreements. Additionally, Developer intends to partially assign its rights and obligations under the Lease Agreement(s) to Developer Transferees at market rates to allow for the development of Land Clearance Projects. Developer is not selling any of the Property to the City or another party which would directly generate proceeds or revenues for the City. Instead, this Plan facilitates the development of property which will generate additional property tax revenues, sales tax revenues, and revenues from other taxes and fees that are charged by the City in connection with private development.

A statement of the proposed method of financing the project

The Overall Project will be financed with private debt and equity, as well as with a portion of an anticipated 1% Community Improvement District sales tax levied on sales tax producing businesses within the Project. The Public Improvements will be financed with a mix of: private debt and equity; City funding sources; a portion of an anticipated 1% Community Improvement District ("***CID***") sales and use tax levied on sales tax generating businesses within the Project; and CID special assessments ("***CID Assessments***") levied against Land Clearance Projects.

A statement of a feasible method proposed for the relocation of families to be displaced from the land clearance project area

Not applicable to this Project.

7. Statement of Financial Benefit/Estimated Costs and Benefits to City

Sales/Use Tax Exemption

The total cost of the Overall Project is estimated to be approximately $1,514,991,239. Building materials purchased for the construction of the Overall Project are expected to be exempt from Missouri sales and use tax pursuant to the provisions of Section 144.062, RSMo, in connection with the application of the LCRA Act to the Property. The estimated sales tax exemption benefit that would be the result of this Plan is set forth below:

Est. Project Costs	$1,514,991,239
Est. Materials Portion	$605,996,496

Est. Sales/Use Tax Savings **$36,685,513**

This financial benefit is approximately **2.42%** of the total estimated Overall Project costs.

The estimated cost to the City of the sales/use tax exemption is $8,332,452, the details of which are set forth below. These are estimates associated with the purchase of construction materials for the Project, and the actual sales and use tax exemption will be determined at the time materials are purchased.

Est. Construction Budget	$	1,514,991,239
Est. Materials Percentage		40.00%
Est. Materials Cost	$	605,996,496
Total Sales and Use Tax Rate		8.35%
Est. Sales and Use Tax Savings	**$**	**36,685,513**

City Sales and Use Tax Rate	2.750%
County Sales Tax Rate	1.250%
State Sales and Use Tax Rate	4.225%
Zoo Sales Tax Rate	0.125%
	8.350%
Est. Allocation of Material Purchases:	
Lee's Summit	8.00%
Missouri (outside Lee's Summit)^	50.00%
Outside Missouri	42.00%

Lee's Summit Sales Tax Savings	$	1,333,192
Lee's Summit Use Tax Savings	$	6,999,260
Total Lee's Summit Sales and Use Ta	**$**	**8,332,452**
County Sales Tax Savings	$	2,499,736
State Sales and Use Tax Savings	$	25,603,352
Zoo Sales Tax Savings	$	249,974
Lee's Summit % of Total Savings		**22.71%**

^50% of sales in MO outside City are assumed to be subject to County and Stadium Sales Tax

Real Property Tax Exemption / Payments in Lieu of Taxes; CID Assessments

Real Property Tax Exemption / Payments in Lieu of Taxes.

The City will own the Overall Project and lease it to Developer, an Affiliate, a Developer Transferee, and/or any successor of a Developer Transferee or an Affiliate. The lease period may last up to twenty five (25) years pursuant to the Missouri Constitution, but the intention is for the parties to arrange for leases lasting up to twenty (20) years following completion of each Land Clearance Project, during which time the Property will be exempt from real property taxes and Developer, Affiliate, or Developer Transferee, and/or any successor will make payments in lieu of taxes ("***PILOTs***") that will be collected by the City and distributed to the taxing districts in proportion to their tax levy rates on an annual basis. The PILOT amount for any particular Land Clearance Project will depend on and vary with Land Clearance Project implementation

pursuant to the implementing contracts for this Plan, but will reflect the percentages shown below. PILOTs will be distributed to the taxing jurisdictions by or at the direction of the City.

INDUSTRIAL	
Years 1 – 10	5% PILOT
Years 11 - 20	25% PILOT
RESIDENTIAL (R-2+)	
Years 1 – 10	25% PILOT
OFFICE	
Years 1 – 10	75% PILOT
Years 11 - 20	75% PILOT
RETAIL	
Years 1 – 10	75% PILOT
Years 11 – 20	75% PILOT

The total amount of PILOTS estimated to be collected by the taxing jurisdictions is $384,141,151.

CID Assessments

Following the completion of Land Clearance Projects, during such time that any Land Clearance Project is exempt from real property taxes, a CID assessment is anticipated to be levied by the Arborside Community Improvement District according to the following percentages of real property tax that would otherwise be due absent LCRA property tax exemption.

INDUSTRIAL	
Years 1 – 10	20% Assessment
Years 11 - 20	25% Assessment
RESIDENTIAL (R-2+)	
Years 1 – 10	25% Assessment
OFFICE	
Years 1 – 10	25% Assessment
Years 11 - 20	25% Assessment
RETAIL	
Years 1 – 10	25% Assessment
Years 11 – 20	25% Assessment

* * *

EXHIBIT 1(A)

LEGAL DESCRIPTION OF THE PROPERTY

TRACT I:

ALL THAT PART OF THE EAST 1/2 OF THE EAST 1/2 OF SECTION 17, THE WEST 1/2 OF SECTION 16, THE EAST 1/2 OF THE EAST 1/2 OF THE NORTH 1/2 OF SECTION 20, AND THE WEST 1/2 OF THE NORTH 1/2 OF SECTION 21, ALL IN TOWNSHIP 48 NORTH, RANGE 31 WEST, IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 16; THENCE SOUTH 2° 31' 20" WEST, ALONG THE WEST LINE OF SAID SECTION 16, 30.00 FEET TO THE POINT OF BEGINNING OF THE TRACT OF LAND TO BE HEREIN DESCRIBED, WHICH POINT IS ON THE SOUTH RIGHT-OF-WAY LINE OF WOODS CHAPEL ROAD; THENCE SOUTH 88° 03' 21" EAST, ALONG SAID SOUTH RIGHT-OF-WAY LINE, PARALLEL TO AND 30.00 FEET DISTANT FROM THE CENTER LINE OF SAID WOODS CHAPEL ROAD, 176.30 FEET; THENCE SOUTH 1° 56' 39" WEST, 10.00 FEET; THENCE SOUTH 88° 03' 21" EAST, PARALLEL TO AND 40.00 FEET DISTANT FROM SAID CENTER LINE, 100.00 FEET; THENCE NORTH 1° 56' 39" EAST, 10.00 FEET TO A POINT 30.00 FEET DISTANT FROM SAID CENTER LINE; THENCE SOUTH 88° 03' 21' EAST, ALONG SAID SOUTH RIGHT-OF-WAY LINE, PARALLEL TO AND 30.00 FEET DISTANT FROM SAID CENTER LINE, 1627.54 FEET TO A POINT OF CURVATURE; THENCE NORTHEAST, ALONG A CURVE TO THE LEFT, TANGENT TO THE LAST DESCRIBED COURSE, HAVING A RADIUS OF 849.14 FEET AND A CENTRAL ANGLE OF 6° 46' 43", AN ARC DISTANCE OF 100.46 FEET TO A POINT 660.00 FEET WEST OF THE EAST LINE OF THE NORTHWEST 1/4 OF SAID SECTION 16; THENCE SOUTH 2° 22' 43' WEST, PARALLEL TO SAID EAST LINE, 2613.71 FEET TO A POINT 660.00 FEET WEST OF THE NORTHEAST CORNER OF THE SOUTHWEST 1/4 OF SAID SECTION 16; THENCE SOUTH 2° 21' 12" WEST, PARALLEL TO THE EAST LINE OF SAID 1/4 SECTION, 2646.51 FEET TO A POINT 660.00 FEET WEST OF THE NORTHEAST CORNER OF THE NORTHWEST 1/4 OF SAID SECTION 21; THENCE SOUTH 2° 05' 22" WEST, PARALLEL TO THE EAST LINE OF SAID 1/4 SECTION, 2621.63 FEET TO A POINT 660.00 FEET WEST OF SAID EAST LINE, WHICH POINT IS ON THE NORTH RIGHT-OF-WAY LINE OF LEINWEBER ROAD, 40.00 FEET DISTANT FROM THE NEW CENTER LINE THEREOF, AND WHICH POINT IS ALSO 27.77 FEET NORTH OF THE SOUTH LINE OF SAID 1/4 SECTION; THENCE NORTH 87° 14' 14" WEST, ALONG SAID NORTH RIGHT-OF-WAY LINE, PARALLEL TO AND 40.00 FEET DISTANT FROM SAID NEW CENTER LINE, 372.60 FEET TO AN ANGLE POINT; THENCE NORTH 88° 28' 41" WEST, ALONG SAID NORTH RIGHT-OF-WAY, PARALLEL TO AND 40.00 FEET DISTANT FROM SAID NEW CENTER LINE, 2271.60 FEET; THENCE NORTH 77° 02' 25" WEST, ALONG SAID NORTH RIGHT-OF-WAY LINE, 101.98 FEET TO A POINT 60.00 FEET DISTANT FROM SAID NEW CENTER LINE; THENCE NORTH 88° 21' 11" WEST, ALONG SAID NORTH RIGHT-OF-WAY LINE, PARALLEL TO AND 60.00 FEET DISTANT FROM NEW SAID CENTER LINE, 130.40 FEET TO A POINT OF CURVATURE ON LEINWEBER ROAD AT STATION 8+69.00; THENCE WESTERLY, ALONG SAID NORTH RIGHT-OF-WAY LINE, ALONG A CURVE TO THE LEFT, TANGENT TO THE LAST DESCRIBED COURSE, HAVING A RADIUS OF 518.37 FEET, AND A CENTRAL ANGLE OF 15° 12' 00", AN ARC DISTANCE OF 137.52 FEET; THENCE NORTH 88° 32' 56" WEST, ALONG SAID NORTH RIGHT-OF-WAY LINE, 261.81 FEET TO A POINT OF INTERSECTION WITH THE EAST RIGHT-OF-WAY LINE OF INTERSTATE ROUTE NO. 470, SAID POINT BEING 171.00 FEET DISTANT FROM AND OPPOSITE STATION 594+64.00 ON THE CENTER LINE OF SAID INTERSTATE

ROUTE NO. 470; THENCE ALONG THE EAST RIGHT-OF-WAY LINE OF SAID INTERSTATE ROUTE NO. 470 THE FOLLOWING COURSES AND DISTANCES: THENCE NORTH 2° 34' 38" EAST, 545.54 FEET TO A POINT 130.00 FEET DISTANT FROM AND OPPOSITE STATION 600+05.00 ON SAID CENTER LINE; THENCE NORTH 6° 53' 14" EAST, 795.00 FEET TO A POINT 130.00 FEET DISTANT FROM AND OPPOSITE STATION 608+00.00 ON SAID CENTER LINE; THENCE NORTH 12° 35' 52" EAST, 100.50 FEET TO A POINT 140.00 FEET DISTANT FROM AND OPPOSITE STATION 609+00.00 ON SAID CENTER LINE; THENCE NORTH 6° 53' 14" EAST, 1173.28 FEET TO A POINT 140.00 FEET DISTANT FROM AND OPPOSITE STATION 620+73.28 ON SAID CENTER LINE; THENCE NORTH 10° 40' 21" EAST, 227.20 FEET TO A POINT. 155.00 FEET DISTANT FROM AND OPPOSITE STATION 623+00.00 ON SAID CENTER LINE; THENCE NORTH 6° 53' 14" EAST, 200.00 FEET TO A POINT 155.00 FEET DISTANT FROM AND OPPOSITE STATION 625+00.00 ON SAID CENTER LINE; THENCE NORTH 0° 12' 52" WEST, 242.66 FEET TO A POINT 125.00 FEET DISTANT FROM AND OPPOSITE STATION 627+40.80 ON SAID CENTER LINE; THENCE NORTH 6° 53' 14" EAST, 2659.20 FEET TO A POINT 125.00 FEET DISTANT FROM AND OPPOSITE STATION 654+00.00 ON SAID CENTER LINE; THENCE NORTH 14° 55' 09" EAST, 107.35 FEET TO A POINT 140.00 FEET DISTANT FROM AND OPPOSITE STATION 655+06.30 ON SAID CENTER LINE; THENCE NORTH 6° 53' 14" EAST, 493.70 FEET TO A POINT 140.00 FEET DISTANT FROM AND OPPOSITE STATION 660+00.00 ON SAID CENTER LINE; THENCE NORTH 9° 10' 40", EAST, 500.40 FEET TO A POINT 160.00 FEET DISTANT FROM AND OPPOSITE STATION 665+00.00 ON SAID CENTER LINE; THENCE NORTH 13° 33' 00" EAST, 344.76 FEET TO A POINT 200.00 FEET DISTANT FROM AND OPPOSITE STATION 668+42.43 ON SAID CENTER LINE; THENCE NORTH 21° 19' 14" EAST, 492.15 FEET TO A POINT 350.00 FEET DISTANT FROM AND OPPOSITE STATION 672+80.00 ON SAID CENTER LINE; THENCE NORTH 76° 17' 07" EAST, 197.56 FEET TO A POINT 50.47 FEET SOUTH OF THE NORTH LINE OF THE NORTHEAST 1/4 OF THE NORTHEAST 1/4 OF SAID SECTION 17, AND WHICH POINT IS OPPOSITE STATION 15+45.00 ON THE CENTER LINE OF WOODS CHAPEL ROAD; THENCE NORTH 86° 15' 15" EAST, 206.03 FEET TO A POINT ON THE SOUTH RIGHT-OF-WAY OF WOODS CHAPEL ROAD, 30.00 FEET DISTANT FROM THE CENTER LINE THEREOF; THENCE SOUTH 88° 02' 21" EAST(TITLE CALLS FOR NORTH 88°02'21" EAST), ALONG SAID SOUTH RIGHT-OF-WAY LINE, PARALLEL TO AND 30.00 FEET DISTANT FROM SAID CENTER LINE, 90.07 FEET TO THE POINT OF BEGINNING.

TRACT 2:

ALL THAT PART OF THE EAST 1/2 OF THE EAST 1/2 OF THE SOUTH 1/2 OF SECTION 20, THE SOUTH 1/2 OF SECTION 21, THE NORTHEAST 1/4 OF SECTION 29 AND THE NORTH 1/2 OF SECTION 28, ALL IN TOWNSHIP 48 NORTH, RANGE 31 WEST, IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, LYING SOUTH OF LEINWEBER ROAD, NORTH OF COLBERN ROAD AND EAST OF OLD MISSOURI ROUTE NO. 291, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF SAID SECTION 28; THENCE SOUTH 1° 48' 58" WEST, ALONG THE EAST LINE OF THE NORTHEAST 1/4 OF SAID SECTION 28, 2627.97 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF COLBERN ROAD, 40.00 FEET DISTANT FROM THE CENTER LINE THEREOF; THENCE NORTH 88° 12' 11" WEST, ALONG SAID NORTH RIGHT-OF-WAY LINE, PARALLEL AND 40.00 FEET DISTANT FROM SAID CENTER LINE, 2659.50 FEET TO A POINT ON THE WEST LINE OF SAID 1/4 SECTION; THENCE NORTH 1° 47' 40" EAST, ALONG THE WEST LINE OF SAID 1/4 SECTION, 1286.61 FEET TO THE SOUTHEAST CORNER OF THE NORTH 1/2 OF THE NORTHWEST 1/4 OF SAID SECTION 28; THENCE NORTH 88° 27' 45" WEST, ALONG THE SOUTH LINE OF SAID 1/2-1/4 SECTION,

2663.33 FEET TO THE SOUTHWEST CORNER THEREOF, SAID CORNER ALSO BEING THE SOUTHEAST CORNER OF THE NORTHEAST 1/4 OF THE NORTHEAST 1/4 OF SAID SECTION 29; THENCE NORTH 88°38' 59" WEST, ALONG THE SOUTH LINE OF SAID 1/4-1/4 SECTION, 1257.28 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF OLD MISSOURI ROUTE NO. 291, SAID POINT BEING 60.00 FEET DISTANT FROM THE CENTER LINE THEREOF; THENCE NORTH 1° 50' 33" EAST, ALONG SAID EAST RIGHT-OF-WAY LINE, PARALLEL TO AND 60.00 FEET DISTANT FROM SAID CENTER LINE, 1247.37 FEET TO A POINT 60.00 FEET DISTANT FROM AND OPPOSITE STATION 284+51.90 ON SAID CENTER LINE; THENCE NORTH 1° 41' 49" EAST, ALONG SAID EAST RIGHT-OF-WAY LINE, PARALLEL TO AND 60.00 FEET DISTANT FROM SAID CENTER LINE, 2273.96 FEET TO A POINT OF CURVATURE; THENCE NORTHEASTERLY, ALONG A CURVE TO THE RIGHT, TANGENT TO THE LAST DESCRIBED COURSE, HAVING A RADIUS OF 398.37 FEET, AND A CENTRAL ANGLE OF 89° 57' 00", AN ARC DISTANCE OF 625.41 FEET TO A POINT OF TANGENCY ON THE SOUTH RIGHT-OF-WAY LINE OF LEINWEBER ROAD, 60.00 FEET DISTANT FROM THE NEW CENTER LINE THEREOF; THENCE SOUTH 88° 21' 11" EAST, TANGENT TO THE LAST DESCRIBED CURVE, ALONG SAID SOUTH RIGHT-OF-WAY LINE, PARALLEL TO AND 60.00 FEET DISTANT FROM SAID NEW CENTER LINE, 130.40 FEET; THENCE NORTH 80° 19' 44" EAST, ALONG SAID SOUTH RIGHT-OF-WAY LINE, 101.97 FEET TO A POINT 40.00 FEET DISTANT FROM SAID NOW CENTER LINE; THENCE SOUTH 88° 28' 41" EAST, ALONG SAID SOUTH RIGHT-OF-WAY LINE, PARALLEL TO AND 40.00 FEET DISTANT FROM SAID NEW CENTER LINE, 2270.90 FEET TO AN ANGLE POINT; THENCE SOUTH 87° 14' 14" EAST, ALONG SAID SOUTH RIGHT-OF-WAY LINE, PARALLEL TO AND 40.00 FEET DISTANT FROM SAID NEW CENTER LINE, 372.79 FEET TO A POINT 52.23 FEET SOUTH OF THE NORTH LINE AND 660.00 FEET WEST OF THE EAST LINE OF THE SOUTHWEST 1/4 OF SAID SECTION 21; THENCE SOUTH 1° 58' 18" WEST, PARALLEL TO AND 660.00 FEET WEST OF THE EAST LINE OF SAID 1/4 SECTION, 607.77 FEET; THENCE SOUTH 88° 28' 25" EAST, PARALLEL TO AND 660.00 FEET SOUTH OF THE NORTH LINE OF SAID 1/4 SECTION, 660.00 FEET TO A POINT ON THE WEST LINE OF THE SOUTHEAST 1/4 OF SAID SECTION 21; THENCE SOUTH 88° 30' 11" EAST, PARALLEL TO AND 660.00 FEET SOUTH OF THE NORTH LINE OF SAID 1/4 SECTION, 1334.06 FEET TO A POINT ON THE EAST LINE OF THE WEST 1/2 OF SAID SOUTHEAST 1/4; THENCE SOUTH 2° 04' 04" WEST, ALONG SAID EAST LINE OF SAID 1/2-1/4 SECTION, 1993.26 FEET TO THE SOUTHEAST CORNER OF SAID 1/2-1/4 SECTION, SAID POINT ALSO BEING ON THE NORTH LINE OF SAID SECTION 28; THENCE SOUTH 88° 34' 10" EAST, ALONG THE NORTH LINE OF SAID SECTION 28, 1329.92 FEET TO THE POINT OF BEGINNING.

EXCEPT 23.75 Acres deeded to the city of Lee's Summit in Special Warranty Deed as Document 2008E0097719
AND
EXCEPT 10.19 Acres deeded to the State of Missouri in Special Warranty Deed as Document 2008E0097563
AND
EXCEPT 4.13 Acres Deeded to the city of Lee's Summit in Right of Way Deed as Document 2007E0081037
AND
EXCEPT 0.22 Acres Deeded to the city of Lee's Summit in Right of Way Deed as Document 199910050890

Said Tract 1 and 2, have a combined 46,368,226.08 Square feet or 1064.47 acres more or less.

EXHIBIT 1(B)

DEPICTION OF THE PROPERTY



EXHIBIT 2

INITIAL CONCEPTUAL SITE PLAN

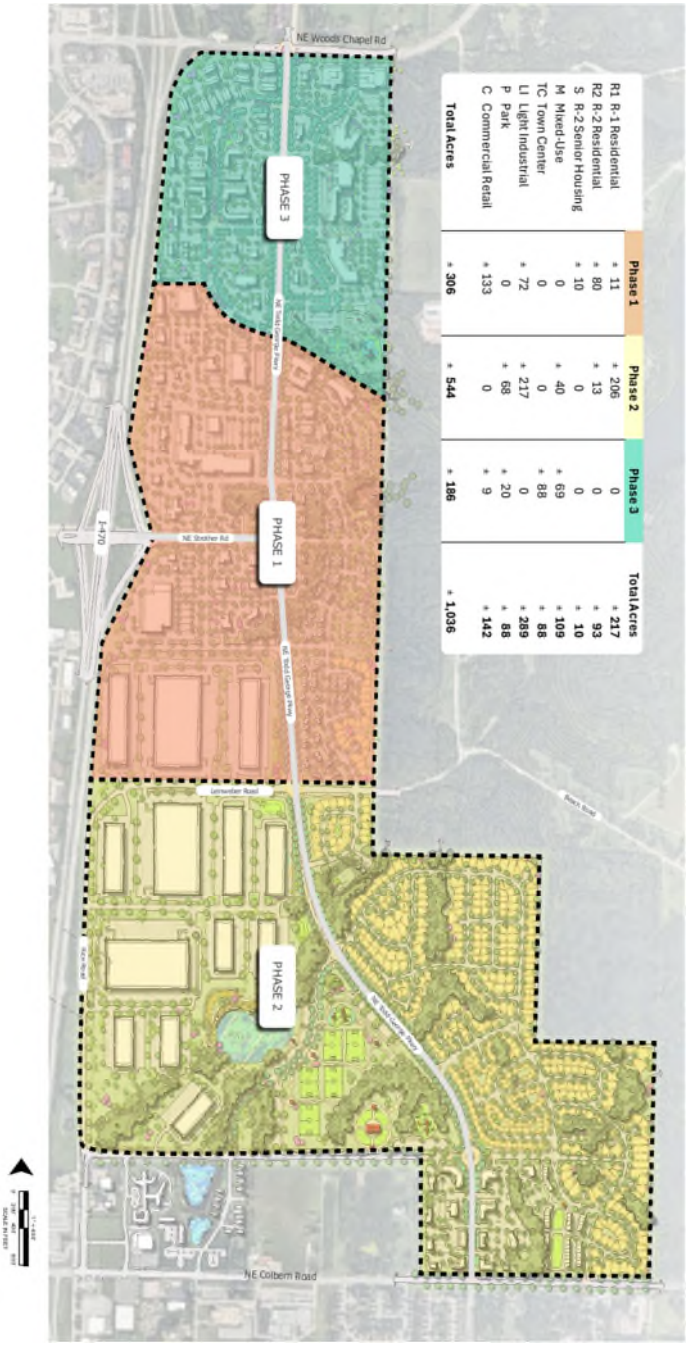


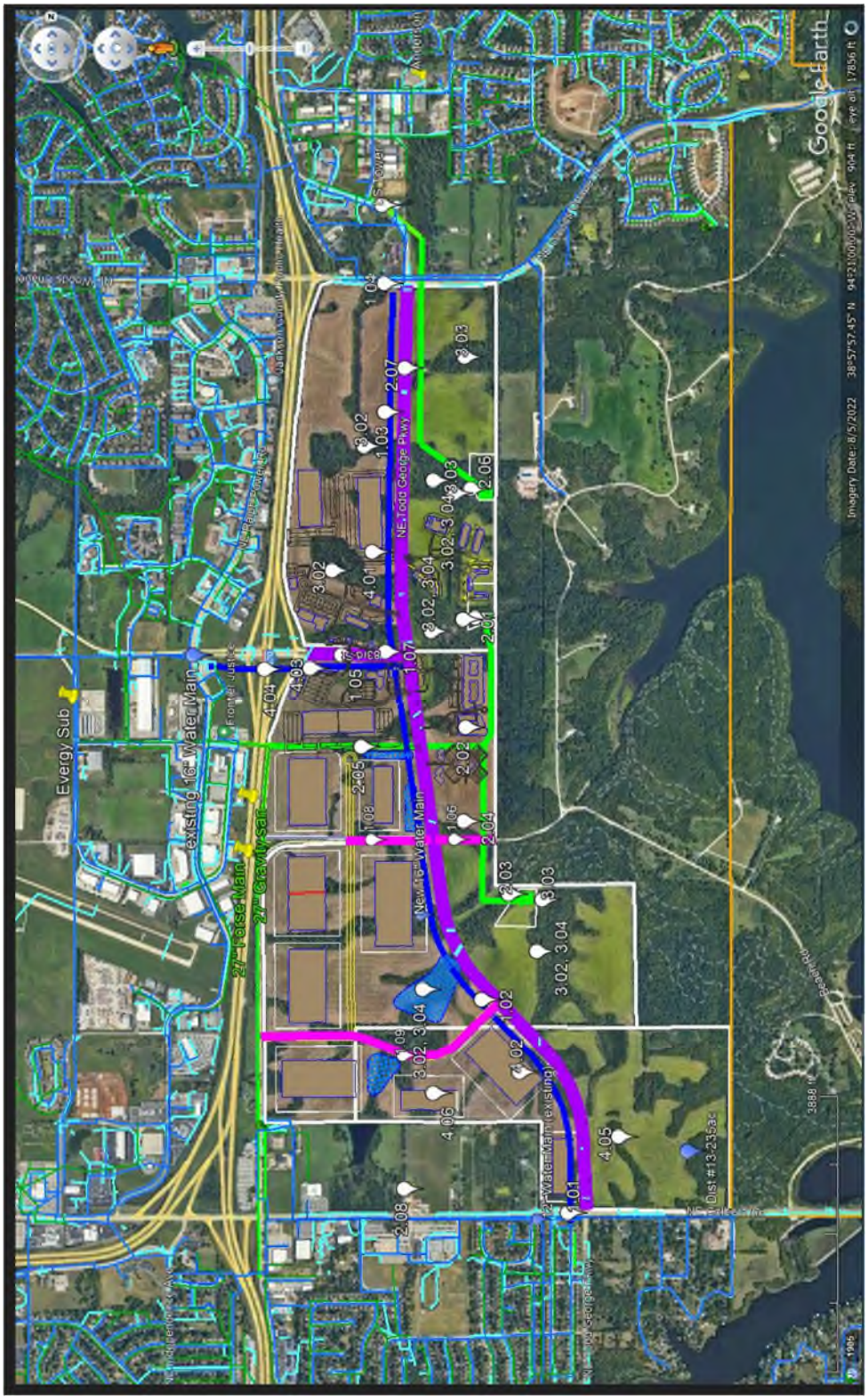
EXHIBIT 3

DESCRIPTION OF PUBLIC IMPROVEMENTS

MAJOR ACCESS	
1.01	NE Colbern Road at NE Todd George Parkway Intersection
1.02	NE Todd George Parkway North from NE Colbern Road to NE Strother Road
1.03	NE Todd George Parkway North from Strother Road to NE Woods Chapel Road
1.04	NE Woods Chapel Road at Todd George Parkway Intersection
1.05	NE Strother Road (83rd Street) East of I-470 East to NE Todd George Parkway
1.06	Leinweber Road West from Lake Jacomo Park to NE Todd George Parkway
1.07	Traffic signal (Intersection of NE Todd George Parkway & NE Strother Road)
1.08	Leinweber Road West of NE Todd George Parkway
1.09	NE Rice Road East to NE Todd George Parkway
SANITARY SEWER	
2.01	Central Pumping Plant
2.02	Central Station Force Main
2.03	South Pumping Plant
2.04	South Station Force Main
2.05	Central-South Force Main to I-470
2.06	North Pumping Plant
2.07	North Station Force Main
SITE FEATURE IMPROVEMENTS	
3.02	Site Retention and Detention Facilities Benefitting Park
3.03	Retention and Detention Dams and Release Structures
WATER MAIN DISTRIBUTION	
4.01	16" Main from NE Woods Chapel Road to NE Strother Road on West side of NE Todd George Parkway
4.02	16" Main from NE Strother Road to NE Colbern Road
4.03	16" Main from West side of I-470 to NE Todd George Parkway
4.04	Boring Work Under I-470
4.05	12' Main Serving Property East of NE Todd George Parkway
ELECTRICAL DISTRIBUTION	
6.01	Underground Conduit
6.02	Underground Pads
6.03	Cable and Switch Equipment

EXHIBIT 4

DEPICTION OF PUBLIC IMPROVEMENTS



Packet Information

File #: 2026-7648, **Version:** 1

Application #PL2026-114 - COMPREHENSIVE PLAN AMENDMENT - LAND RESERVE PROPERTY, approximately 1,064.00 acres generally bounded by Interstate 470 to the west, NE Woods Chapel Rd to the north, Fleming Park to the east, and NE Colbern Rd to the south; City of Lee's Summit, Applicant

Issue/Request:
Approximately 1,064 acres generally located east of I-470 between Colbern Road and Woods Chapel Road are owned by Land Reserve, Inc., which will serve as the Master Developer for the future development of the area as properties are sold and developed over time. The City of Lee's Summit is proposing amendments to the 2021 Ignite! Comprehensive Plan Future Land Use Map to better align the Comprehensive Plan with the Master Developer's long-range vision for the property and to establish a planning framework for future development within the area.

Proposed Motion:
I move to direct staff to **PRESENT A RESOLUTION** adopting the comprehensive plan future land use map amendment for the north Land Reserve Property, approximately 1,064.00 acres generally bounded by Interstate 470 to the west, NE Woods Chapel Rd to the north, Fleming Park to the east, and NE Colbern Rd to the south; as an Amendment to the City of Lee's Summit Ignite Comprehensive Plan.

C. Shannon McGuire, Assistant Director of Plan Services

Recommendation: Based on the information provided and the long-range planning objectives outlined in the 2021 Ignite! Comprehensive Plan, staff supports the proposed Future Land Use Map amendments. Staff finds that the proposed amendments are consistent with the vision, goals, and policy framework established by the Comprehensive Plan and will help establish a coordinated planning framework for future development within the area. Furthermore, staff finds that the subject application is compatible with the surrounding planning context and meets the applicable requirements of the Unified Development Ordinance (UDO) and the 2021 Ignite! Comprehensive Plan.

LEE'S SUMMIT
MISSOURI
Development Services Department

Development Services Staff Report

File Number	PL2026-114
File Name	Comprehensive Plan Amendment – Land Reserve Property
Applicant	City of Lee's Summit
Location	City Wide
Planning Commission Date	May 14, 2026
Heard by	Planning Commission
Analyst	C. Shannon McGuire, Assistant Director of Plan Services

Public Notification

Pre-application held: N/A
Neighborhood meeting conducted: N/A
Newspaper notification published on: April 29, 2026
Radius notices mailed to properties within 300 feet on: N/A
Site posted notice on: N/A

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1. Project Data and Facts 2
2. Unified Development Ordinance (UDO) 2
3. Comprehensive Plan 3
4. Analysis 3

Attachments

Comprehensive Plan Amendment Exhibits – 2 pages

1. Project Data and Facts

Project Data	
Applicant/Status	City of Lee's Summit/ Applicant
Applicant's Representative	C. Shannon McGuire, Assistant Director of Plan Services
Location of Property	City wide
Procedure	Consideration of a Comprehensive Plan, an amendment to the Comprehensive Plan, or a Capital Improvement Plan, shall require a public hearing before the Commission, following publication notice as provided in Article 2, of the Unified Development Ordinance. The Comprehensive Plan of the City and all amendments to the Comprehensive Plan, shall be approved by Resolution of the Commission.

Description of Applicant's Request
Approximately 1,000 acres generally located east of I-470 between Colbern Road and Woods Chapel Road are owned by Land Reserve, Inc., which will serve as the Master Developer for the future development of the area as properties are sold and developed over time. The City of Lee's Summit is proposing amendments to the 2021 Ignite! Comprehensive Plan Future Land Use Map to better align the Comprehensive Plan with the Master Developer's long-range vision for the property and to establish a planning framework for future development within the area.

2. Unified Development Ordinance (UDO)

Section	**Description**
2.220	Comprehensive Plan, Comprehensive Plan Amendment and Capital Improvement Plan

The Future Land Use Plan in the 2021 Ignite! Comprehensive Plan for the City of Lee's Summit is intended to serve as a general policy guide rather than a regulatory requirement when evaluating development proposals and planning decisions. The Future Land Use component combines a future land use map with a land use classification framework to illustrate the City's long-term vision for growth.

This section of the Comprehensive Plan provides guidance on desired land use patterns and the relationship between land uses and public infrastructure; however, it does not establish exact boundaries for specific uses. Instead, it is designed to help inform decision-making and support coordinated, orderly growth and development throughout the community.

3. Comprehensive Plan

Focus Areas	Goals, Objectives & Policies
Land Use & Community Design	Goal 3.7.A – Promote sustainable land use to meet the needs of the future.

Comprehensive Plan

The Future Land Use Map graphically illustrates the community's desired development patterns, including the general location, type, character, and intensity of future land uses throughout the city. The map serves as a policy guide to support decision-making related to growth, development, transportation planning, infrastructure investment, and the coordination of public services.

The proposed amendments to the Future Land Use Map are intended to align the 2021 Ignite! Comprehensive Plan with the Master Developer's long-range vision for the property. The proposed land use framework contemplates a coordinated mix of residential neighborhoods, activity centers, commercial areas, open space, transportation corridors, and supporting public infrastructure designed to create a cohesive, connected, and integrated development pattern consistent with the City's long-term growth objectives.

4. Analysis

Background and History

As part of the long-term development strategy for the area, the City has been coordinating with representatives of Land Reserve, Inc. and Property Reserve, Inc. regarding a comprehensive and phased approach to future development within the corridor. These discussions have focused not only on the overall land use vision for the area, but also on the significant public infrastructure investments necessary to support future growth in a coordinated and sustainable manner. Given the scale of the property and the anticipated intensity of future development, substantial improvements to transportation networks, utilities, stormwater infrastructure, and other public facilities will be required over time to adequately serve the area.

The proposed amendments to the Future Land Use Map are intended to align the Comprehensive Plan with the Master Developer's long-range vision for the property. The proposed land use pattern reflects the anticipated mix of residential neighborhoods, activity centers, commercial areas, open space, transportation corridors, and supporting infrastructure necessary to create a cohesive and integrated development pattern. Staff finds that the proposed Future Land Use Map amendments are consistent with the overall goals and policies of the Ignite! Comprehensive Plan by:

- Supporting coordinated and master-planned growth in a strategic growth area of the community;
- Providing for a balanced mix of land uses and housing opportunities;
- Encouraging infrastructure planning and investment in advance of development;
- Promoting connectivity through an integrated transportation network; and
- Creating development patterns that are compatible with surrounding land uses and the City's long-term growth objectives.

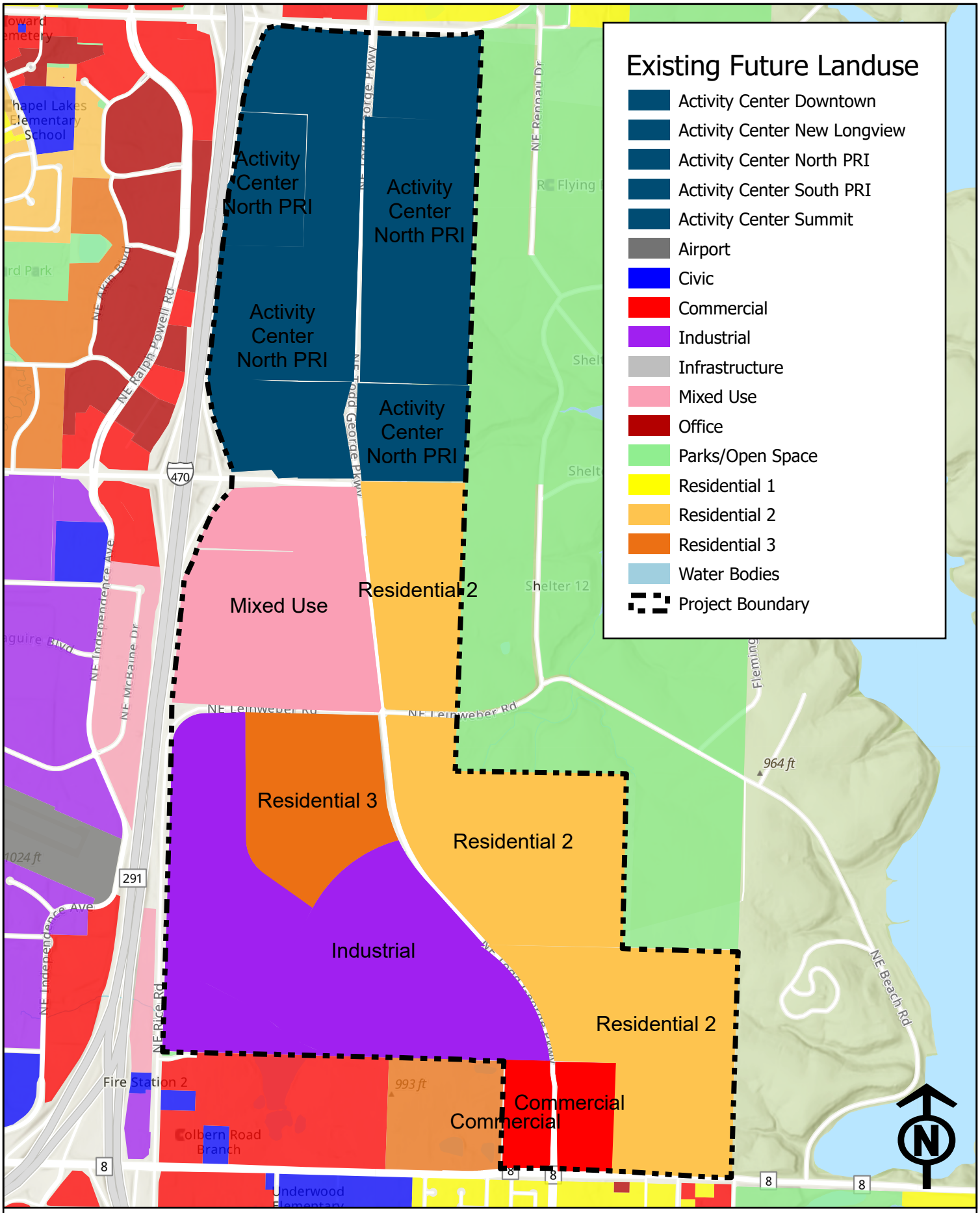
Compatibility
The 2021 Ignite! Comprehensive Plan establishes a goal of promoting sustainable land use patterns that meet the community's long-term needs, with an objective to support purposeful growth, revitalization, and redevelopment throughout the City. The proposed Future Land Use Map amendments further these objectives by providing a coordinated planning framework for anticipated future development within the subject area.

Updating the Future Land Use Map to reflect the anticipated development pattern and long-range vision for this area helps ensure that the Comprehensive Plan remains an accurate and effective planning tool. Maintaining consistency between the Comprehensive Plan and evolving development patterns allows the map to continue serving as a reliable guide for future land use recommendations, infrastructure planning, public investment decisions, and the evaluation of future development applications, ultimately supporting informed decision-making and the long-term benefit of the community.

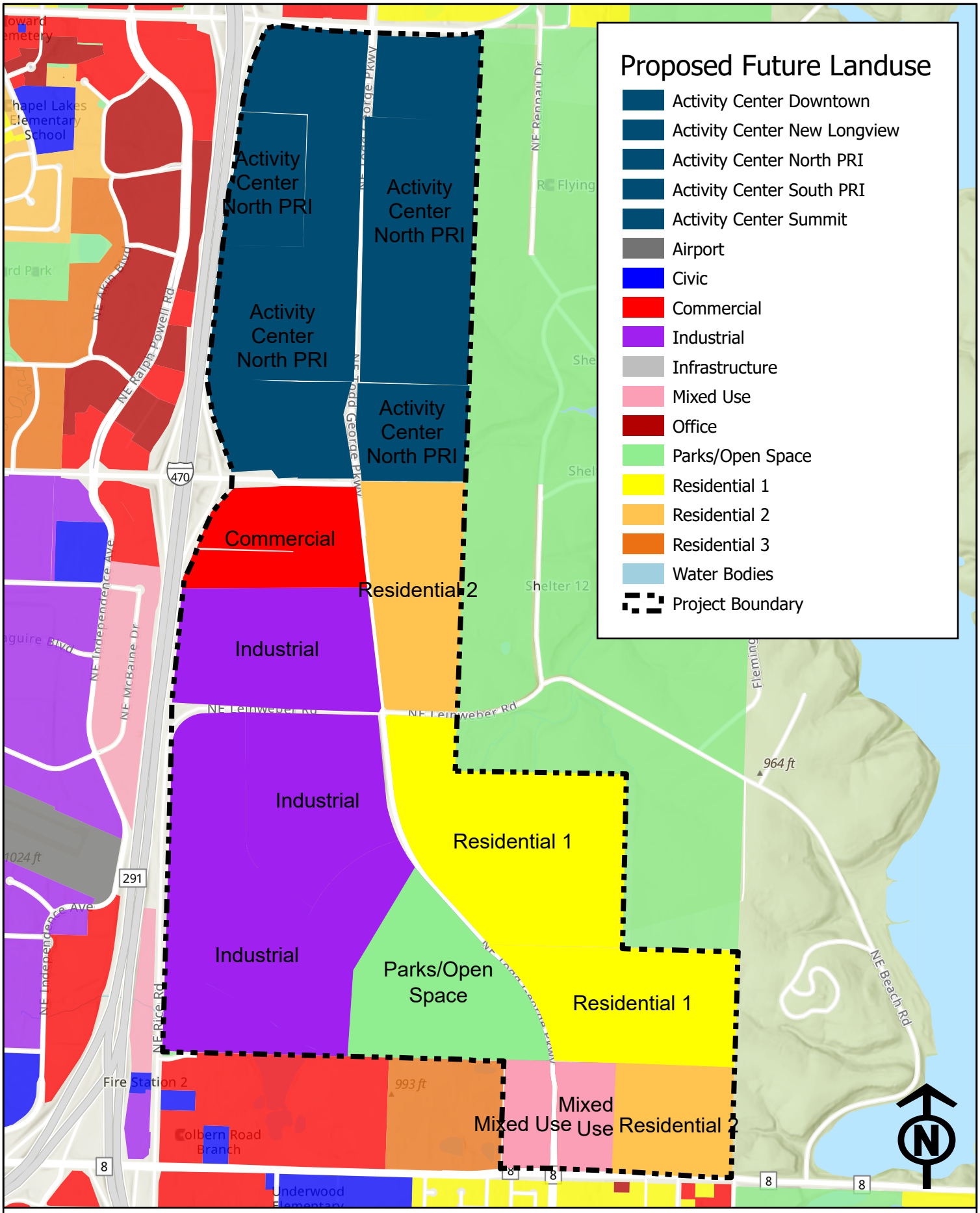
Adverse Impacts
The proposed comprehensive plan amendment is not expected to negatively impact the use or aesthetics of any neighboring property, nor is it expected to negatively impact the health, safety and welfare of the public.

Public Services
The proposed comprehensive plan amendment will not impede the normal and orderly development and improvement of the surrounding property.

Recommendation
Based on the information provided and the long-range planning objectives outlined in the 2021 Ignite! Comprehensive Plan, staff supports the proposed Future Land Use Map amendments. Staff finds that the proposed amendments are consistent with the vision, goals, and policy framework established by the Comprehensive Plan and will help establish a coordinated planning framework for future development within the area. Furthermore, staff finds that the subject application is compatible with the surrounding planning context and meets the applicable requirements of the Unified Development Ordinance (UDO) and the 2021 Ignite! Comprehensive Plan.



Appl. #PL2026-114 - COMPREHENSIVE PLAN AMENDMENT - LAND RESERVE PROPERTY
Existing Land Use



Appl. #PL2026-114 - COMPREHENSIVE PLAN AMENDMENT - LAND RESERVE PROPERTY
Proposed Future Land Use

Packet Information

File #: 2026-7650, **Version:** 1

A resolution of the Planning Commission of the City of Lee’s Summit, Missouri, amending the Lee’s Summit Ignite Comprehensive Plan.

Proposed Motion:
I move to approve resolution 26-004, a resolution of the Planning Commission of the City of Lee’s Summit, Missouri, amending the Lee’s Summit Ignite Comprehensive Plan.

C. Shannon McGuire, Assistant Director of Plan Services

RESOLUTION NO. 2026-04

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF LEE'S SUMMIT, MISSOURI, AMENDING THE LEE'S SUMMIT IGNITE COMPREHENSIVE PLAN.

WHEREAS, pursuant to Sections 89.340 to 89.380, RSMo., a municipality is authorized to make, adopt, amend, and carry out a city plan for the physical development and uses of land and for the general location, character and extent of streets and other public ways within its corporate limits; and

WHEREAS, Section 89.360, RSMo., and Section 21-38 of the City's Code of Ordinances, provide that the Planning Commission may adopt and amend the plan as a whole or, as the work of making or amending the whole plan progresses, may from time to time adopt and amend a part or parts thereof, any part corresponding generally with one or more of the functional subdivisions of the subject matter of the plan; and

WHEREAS, the Planning Commission of the City of Lee's Summit, Missouri, adopted the Lee's Summit Ignite Comprehensive Plan as the Lee's Summit Comprehensive Plan, by Resolution dated May 20, 2021 ("Lee's Summit Ignite Comprehensive Plan"); and

WHEREAS, on April 29 2026, the Planning Commission published notice in *The Pulse* of the time and place of a public hearing on amending the Lee's Summit Ignite Comprehensive Plan Future Land Use Map (Appl. #PL2026-114), and conducted a public hearing on May 14, 2026; and

WHEREAS, Resolution No. 2021-01, adopting the Lee's Summit Ignite Comprehensive Plan, passed by the Planning Commission on May 20, 2021, is intended to be amended by this Resolution No. 2026-04.

NOW THEREFORE, BE IT RESOLVED BY THE CITY OF LEE'S SUMMIT PLANNING COMMISSION, as follows:

SECTION 1. That the Lee's Summit Ignite Comprehensive Plan, is hereby amended in accordance with Section 89.360, RSMo., and Section 21-38 of the City's Code of Ordinances. The Lee's Summit Ignite Comprehensive Plan Future Land Use Map shall reflect the change in future land use designations on lands described in **Exhibit A** and incorporated herein by reference.

SECTION 2. That the Chairperson and Secretary of the Planning Commission are authorized to affix their signatures to this Resolution, and a copy of the Ignite Comprehensive Plan shall be certified to the City Council of the City and the City Clerk; that a copy shall be provided to the Recorder of Deeds office in Jackson County, Missouri, and Cass County, Missouri, for public inspection during normal office hours; and, that a copy shall be available at the City Clerk's office for public inspection during normal office hours.

ADOPTED by the Planning Commission for the City of Lee's Summit, Missouri on the _____ day of _____, 2026.

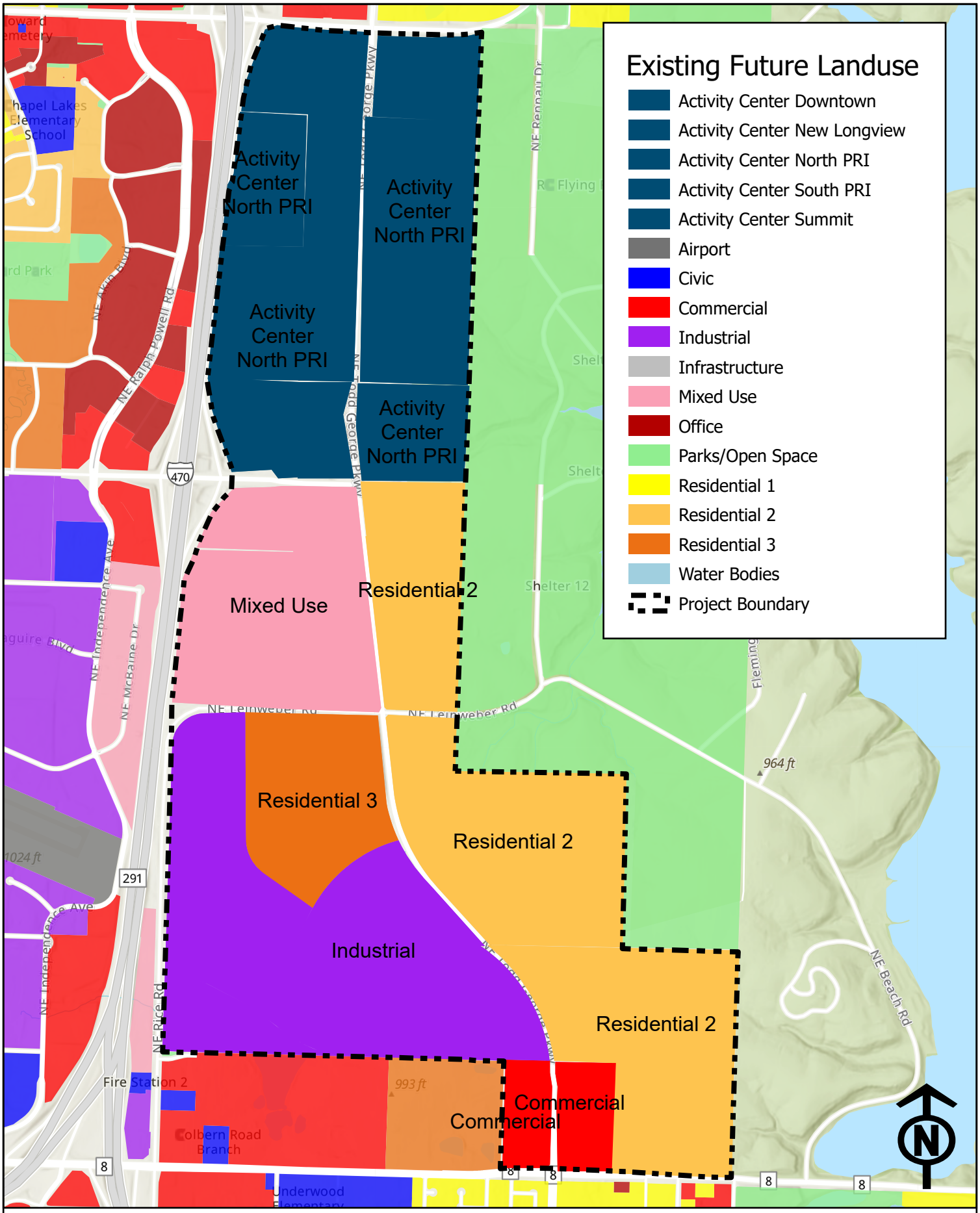
_____
Dana Arth, Chairperson
Planning Commission

ATTEST:

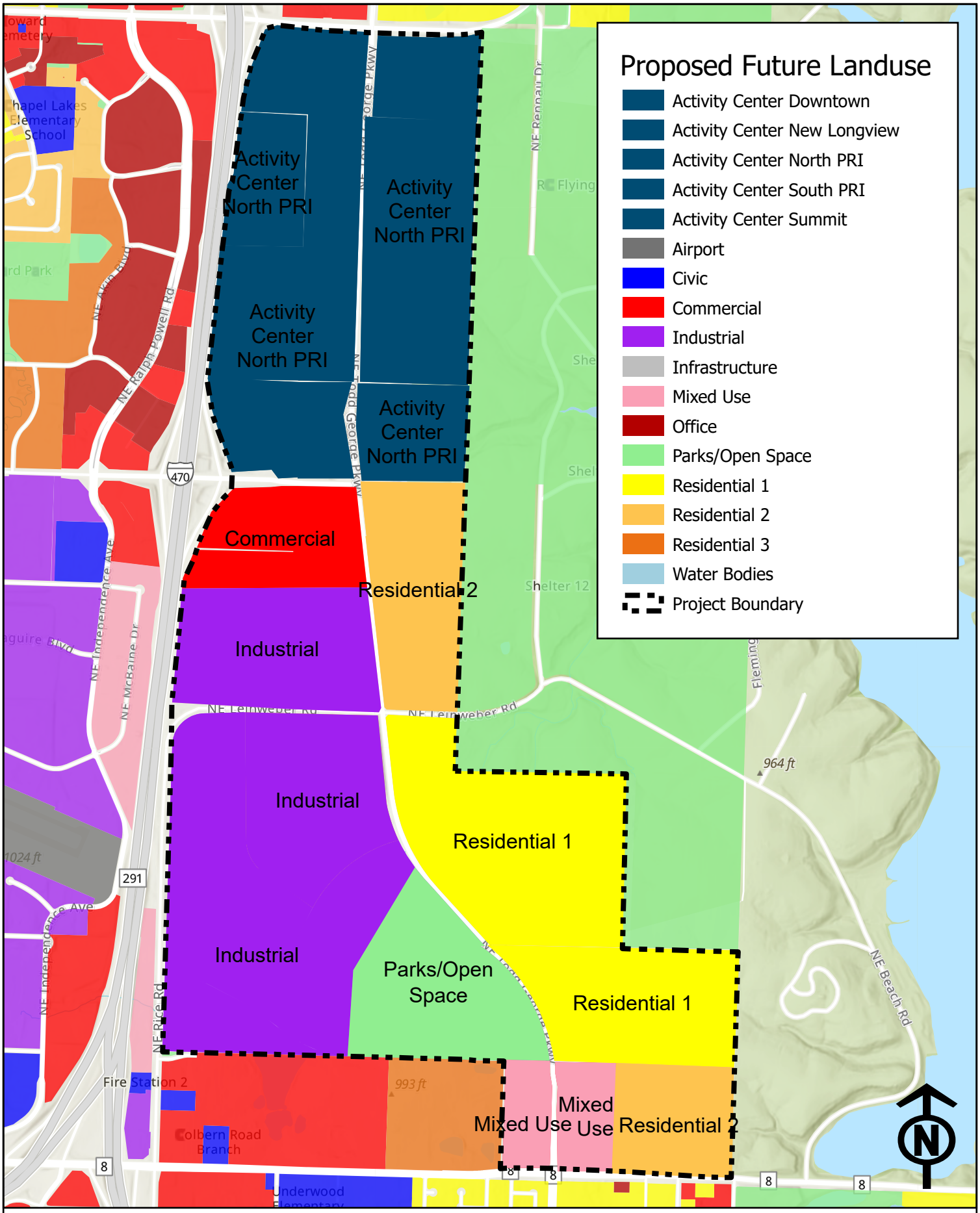
_____
Chip Touzinsky, Secretary
Planning Commission

APPROVED AS TO FORM:

_____
Erin Kelly
Staff Attorney



Appl. #PL2026-114 - COMPREHENSIVE PLAN AMENDMENT - LAND RESERVE PROPERTY
Existing Land Use



Appl. #PL2026-114 - COMPREHENSIVE PLAN AMENDMENT - LAND RESERVE PROPERTY
Proposed Future Land Use

Packet Information

File #: 2026-7640, **Version:** 1

Application #PL2026-046 - Preliminary Development Plan - Hazel Grove Elementary School, 1501 NW Blue Pkwy. and 861, 871, 911, 915, and 921 NW Colbern Rd.; Lee's Summit School District, applicant

Issue/Request:
The applicant requests approval of a Preliminary Development Plan to allow for the development of a 78,160-sf. elementary school, Hazel Grove Elementary, on the property. The existing Hazel Grove Elementary School, located within the city limits of Unity Village, will be retained by the school district; however, specific plans for the future use of the building have not yet been determined. The development includes hard- and softscape play areas and two access drives to help with drop-off and pick-up traffic circulation.

Proposed Planning Commission Motion:
I move to approve Appl. #PL2026-046 - PRELIMINARY DEVELOPMENT PLAN - Hazel Grove Elementary School, 1501 NW Blue Pkwy. and 871, 911, 915, and 921 NW Colbern Rd.; Lee's Summit School District, applicant

Kyle Gorrell, Applicant Representative
Adair Bright, AICP, Senior Planner

Recommendation: With the conditions of approval below, the application meets the goals of the Ignite! Comprehensive plan, the requirements of the UDO and Design and Construction Manual (DCM).

1. The development shall occur in accordance with the Preliminary Development Plan with an upload date of April 29, 2026.
2. Approval shall be granted for two (2) monument signs as shown within the Preliminary Development Plan with an upload date of April 29, 2026.
3. Road improvements shall be constructed as recommended in the Transportation Impact Analysis conducted by staff dated February 12, 2026.

Committee Recommendation: Planning Commission decision pending.

LEE'S SUMMIT
MISSOURI

Development Services Department

Development Services Staff Report

File Number	PL2026-046
File Name	Preliminary Development Plan for Hazel Grove Elementary
Applicant	Lee's Summit R-7 School District
Property Address	1501 NW Blue Pkwy. & 861, 871, 911, 915, and 921 NW Colbern Rd.
Planning Commission Date	May 14, 2026
Heard by	Planning Commission
Analyst	Adair Bright, AICP, Senior Planner

Public Notification

Pre-application held: December 9, 2025
Neighborhood meeting conducted: April 13, 2026
Newspaper notification published on: April 25, 2026
Radius notices mailed to properties within 300 feet on: April 24, 2026
Site posted notice on: April 28, 2026

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3. Project Proposal 5
4. Unified Development Ordinance (UDO) 6
5. Comprehensive Plan 7
6. Analysis 8
7. Recommended Conditions of Approval 11

Attachments

Transportation Impact Analysis prepared by Erin Ralovo, PE, PTOE, dated February 12, 2026 – 3 pages

Preliminary Development Plan and Elevations, upload date of April 29, 2026 – 15 pages

Building Material Specification Sheets, upload date of April 29, 2026 – 11 pages
Site Lighting Specification Sheets, upload date of April 14, 2026 – 42 pages
Traffic Impact Statement prepared by Kaw Valley Engineering, Inc., sealed February 18, 2026 – 27 pages
Storm Drainage Report prepared by Kaw Valley Engineering, Inc., sealed February 18, 2026 – 175 pages
Neighborhood Meeting Minutes, dated April 13, 2026 – 2 pages
Location Map

1. Project Data and Facts

Project Data	
Applicant/Status	LSR7 / Developer
Applicant's Representative	Kyle Gorrell
Location of Property	1501 NW Blue Pkwy. & 871, 911, 915, and 921 NW Colbern Rd.
Size of Property	+/- 34.435 acres (1,499,988.6-sf.)
Number of Lots	3
Zoning	PMIX (Planned Mixed Use)
Comprehensive Plan Designation	Mixed-Use
Procedure	Pursuant to Sec. 2.150 of the Unified Development Ordinance, Preliminary Development Plans for public facilities of the state and its lawfully designated subdivisions or agencies, including public school facilities, are subject to a single public hearing before the Planning Commission. No additional public hearing before the City Council is required. Duration of Validity: Preliminary development plan approval shall not be valid for a period longer than 24 months from the date of such approval, unless within such period a final development plan application is submitted. The Approving Authority may grant one extension not exceeding 12 months upon written request.

Current Land Use
The subject 34.435-acre property is currently an undeveloped site located off NW Colbern Road and NW Blue Parkway. The PMIX (Planned Mixed Use District) was established in 2012 by Appl. #2012-124 after the property was annexed in 2011.

Description of Applicant's Request

The applicant requests approval of a Preliminary Development Plan to allow for the development of a 78,160-sf. elementary school, Hazel Grove Elementary, on the property. The existing Hazel Grove Elementary School, located within the city limits of Unity Village, will be retained by the school district; however, specific plans for the future use of the building have not yet been determined. The development includes hard- and softscape play areas and two access drives to help with drop-off and pick-up traffic circulation.

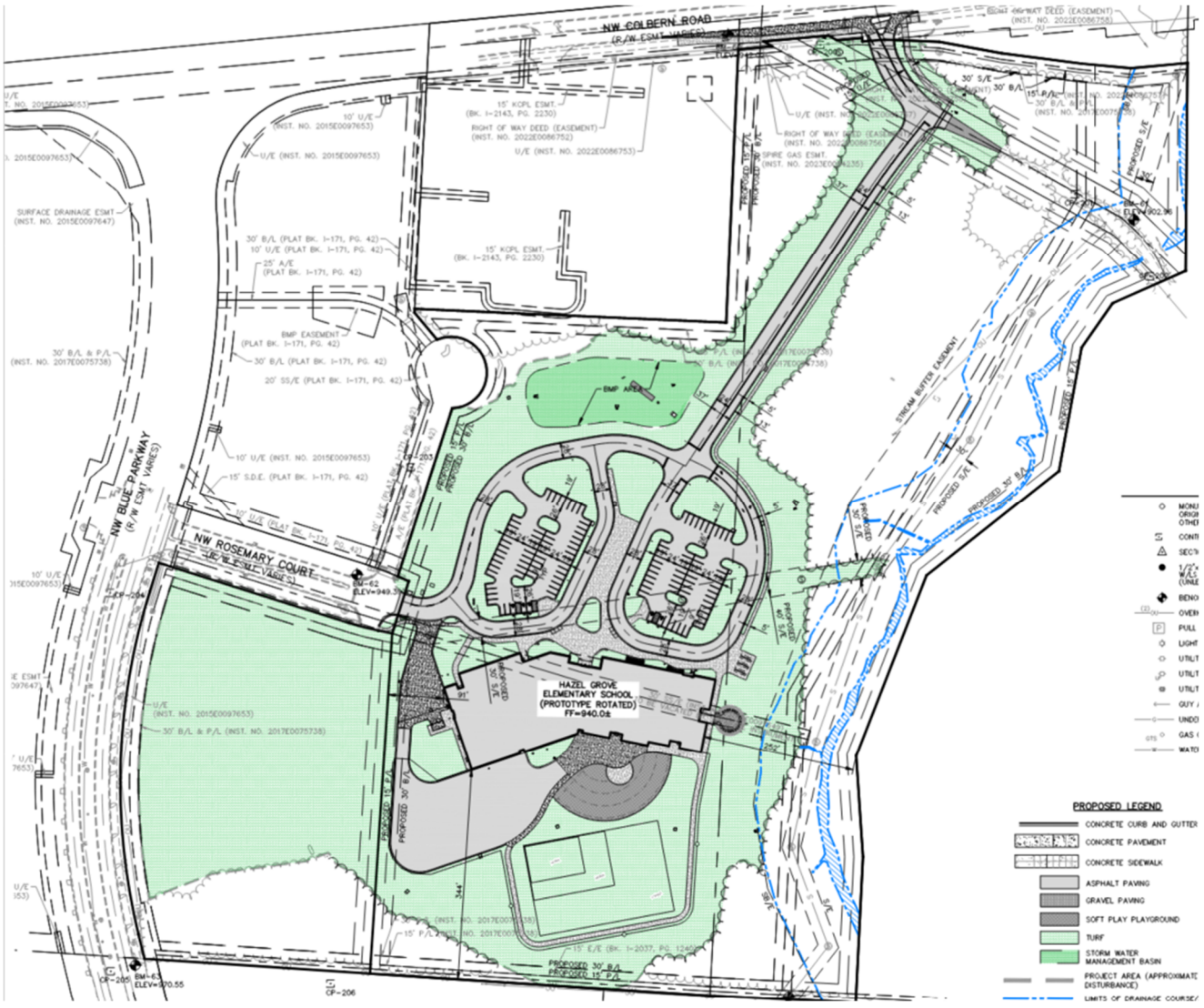

Figure 1 – Site Plan

2. Land Use

Description and Character of Surrounding Area

The subject property is located approximately 3/10 of a mile northeast of the I-470 and M 350 Hwy. interchange. The surrounding area is mostly vacant with the exception of an apartment complex north along NW Colbern Road and a mix of commercial and light industrial uses to the south.

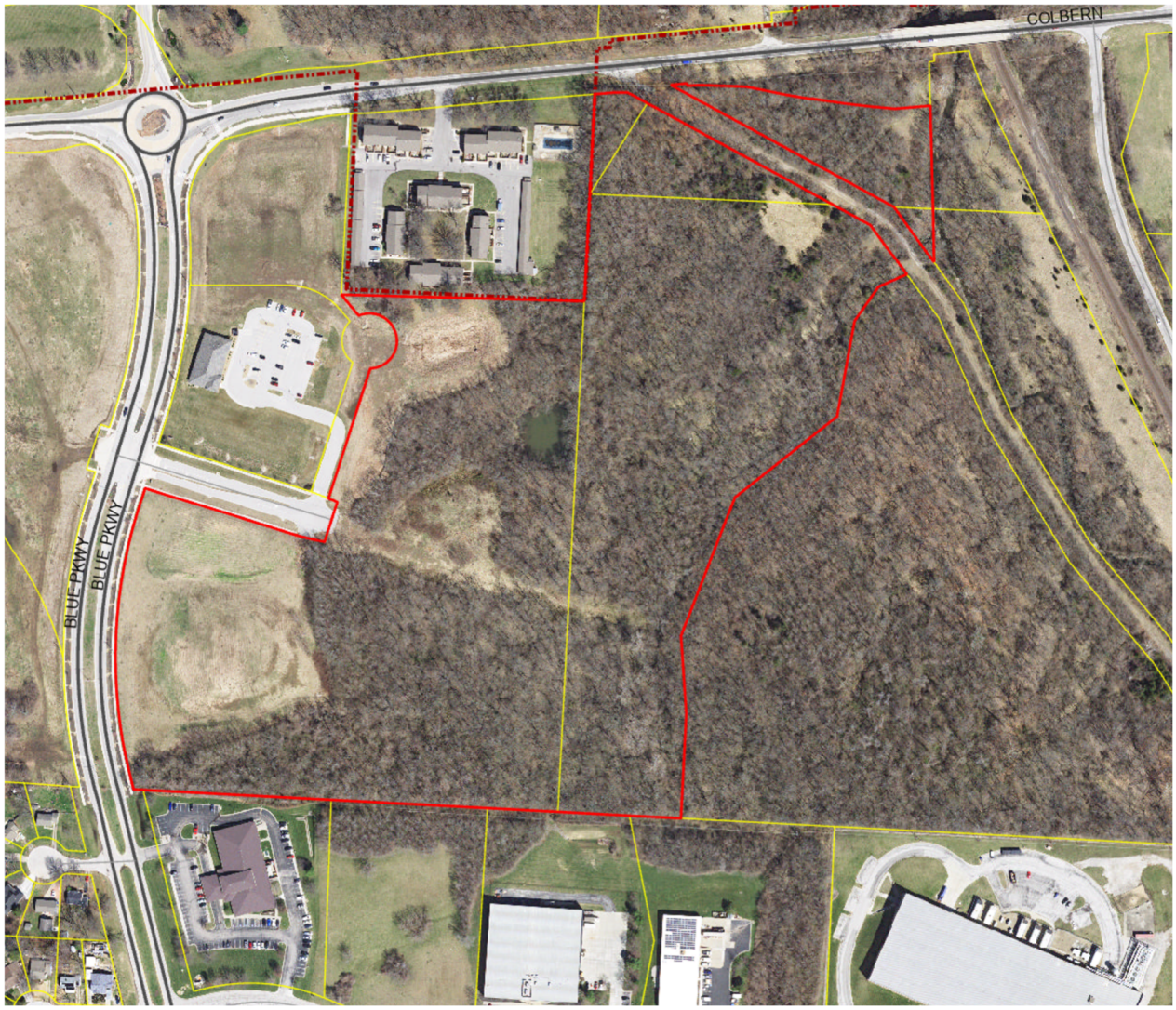

Figure 2 – Aerial map of the surrounding property (subject property in red).

Adjacent Land Uses and Zoning

North:	Dwelling, Multi-Family (Apartment) / Unity Village
South:	Medical Office / CP-2 (Planned Community Commercial) Office/Warehouse & Construction Contractor / PI (Planned Industrial)
East:	Vacant – Undeveloped / PMIX (Planned Mixed Use)
West (across NW Blue Pkwy.):	Vacant – Undeveloped / PMIX (Planned Mixed Use)

Site Characteristics
The subject property consists of three (3) undeveloped lots. The site will be served by two drives, one off NW Colbern Road and one off NW Rosemary Court. The site generally slopes east towards an existing creek which will be protected and maintained. The highest point of the site is about 970-ft. sloping to a low point of about 900-ft.

Special Considerations
None

3. Project Proposal

Parking

Proposed		**Required**	
Total parking spaces:	120	Total parking spaces required:	48
Accessible spaces provided:	5	Accessible spaces required:	5

Building Setbacks (Perimeter)

Yard	PMIX Zoning Standard	Proposed
Front[1]	Established with the plan	1,040 (along NW Colbern Rd.) 125’ (along NW Rosemary Ct.)
Side[1]	Established with the plan	344’ (south) 252’ (east)

[1] – Under the UDO, each street frontage is considered to be a front property line. The remaining interior lot lines are considered to be side property lines.

Parking Setbacks (Perimeter)

Yard	Required Minimum	Proposed
Front	20’	770’ (along NW Colbern Rd.); 129’ (along NW Rosemary Ct.)
Side	20’ (south) 20’ (east)	598’ (south) 310’ (east)

Structure(s) Design

Number and Proposed Use of Building
1 / School
Building Size
78,159-sf.
Number of Stories
2 Stories
Floor Area Ratio
0.043

Architecture & Building Design

Building Type	Materials	Roofing
Civic	Brick Veneer, fired clay (Class 1); Stone Veneer, natural (Class 1); Architectural Metal (Class 1); Clear Glass (Class 1); Spandrel Glass (Class 1); Brick Paneling, fired clay (Class 2)	PVC Membrane Roofing System (Class 3)

The proposed building design complies with all UDO standards pertaining to material mix and usage. The UDO requires that civic buildings' primary facade(s), those facing private or public streets, contain no less than three (3) different Class 1 or Class 2 building materials that comprise at least half of the façade. Since the subject site has a street on both the north and west, those are the primary facades. The applicant is proposing only Class 1 and 2 materials on all facades as noted in the table above. The remaining secondary facades, the south and east, shall no contain no less than three (3) different Class 1, Class 2, or Class 3 materials which is being met by a continuation of the previously mentioned materials. The UDO also prescribes that commercial buildings only utilize Class 1, Class 2, or Class 3 roofing materials which is being met.

All articulation and entrance feature requirements are being met by the proposed building design. The architecture and building design standards also have requirements for building and roof articulations along with covered entries. Primary facades shall have a wall articulation no less than once every 80 linear feet and the rooflines shall have an articulation no less than one every 100 linear feet.

4. Unified Development Ordinance (UDO)

Section	Description
2.300-2.340	Preliminary Development Plans
4.240	PMIX (Planned Mixed Use District)

In 2012, a rezoning to the PMIX district was approved by City Council without a Preliminary Development Plan. The subject property had been recently annexed in 2011 where the applicant had supplied a conceptual site plan under the premise that subject Preliminary Development Plans would be reviewed at the time of development.

The PMIX district states that allowed land uses and development standards are established as part of the Preliminary Development Plan.

Neighborhood Meeting
The applicant hosted a neighborhood meeting on April 13, 2026. One (1) member of the public attended. The applicant reported that the topics covered, and questions answered related to the following:

- Determination of location and need
- Plans for the existing Hazel Grove Elementary
- Proximity of train tracks to the site and their associated noise/vibrations

Staff has not received any comments, emails, or phone calls in favor or in opposition to the project.

5. Comprehensive Plan

Focus Areas	Goals, Objectives & Policies
Quality of Life	Goal: Enhance current educational opportunities and plan for future educational opportunities that support the City's economic development.
Sustainable Environment	Objective: Appreciate, protect, and enhance the natural environment to meet the community's needs today without compromising the ability of future generations to live and prosper. Objective: Preserve natural resources.

The proposed development supports two identified focus areas of the comprehensive plan, namely "Quality of Life" and "Sustainable Environment". Each focus area has goals and objectives that establish a long-term framework to direct growth and change for the city. As it relates to the Quality of Life plan element, Hazel Grove Elementary allows for the collaboration with the Lee's Summit R-7 School District to identify where expansion and construction of school facilities can support city growth and development objectives. As it relates to the Sustainable Environment plan element, the proposed project includes preservation of existing mature vegetation along the southern and eastern boundaries.

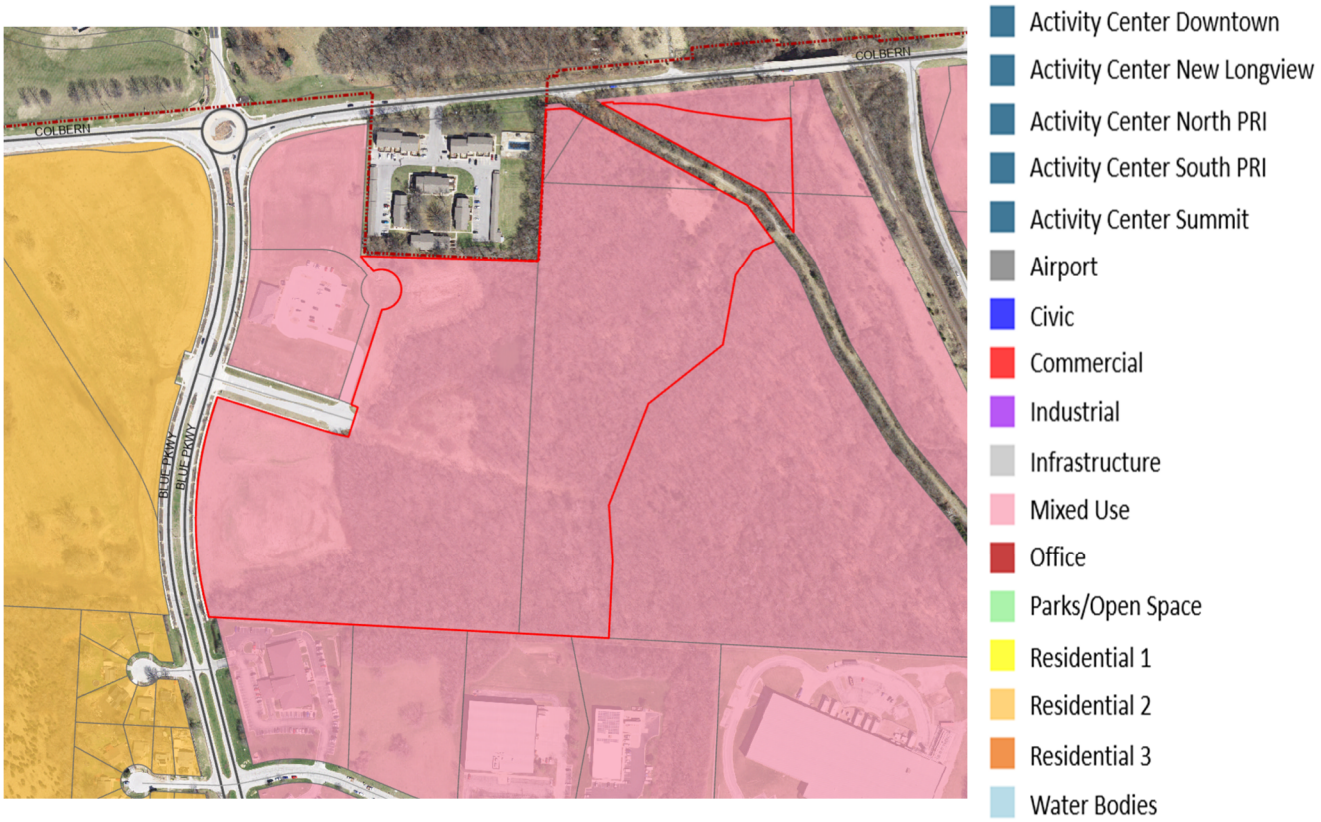

Figure 3 – Future Land Use Map & Legend

The subject property is located in the "Mixed Use" future land use designation. The Mixed-Use category is intended to accommodate low-rise buildings with a mix of retail, office, services, and public uses with a complimentary mix of residential development of varying densities to provide for the greatest amount of flexibility. The proposed school land use qualifies as a public use within a low-rise building.

6. Analysis

Background and History

- December 16, 2011 – The City Council approved the annexation of 307.615 +/- acres, of which 34.435 +/- acres contained the subject property, by Ordinance No. 7130.
- December 20, 2012 – The City Council approved a zoning classification of PMIX (Appl. #PL2012-124) by Ordinance No. 7270.
- April 15, 2026 – The plat for *Summit Village Corporate Park, 2nd Plat,* was recorded by the Jackson County Recorder of Deeds office by Instrument #2026E0027662.

Signage

The proposed development is subject to the PMIX sign standards listed below, except that the applicant seeks approval for two (2) monument signs to serve as the primary identification signage at the northern and western boundaries of the site. The table identifies the subject standards per the UDO and the proposed standards for the site.

Sign Type		Height	Sign Area	Number of Signs	Lighting
UDO Standards	**Freestanding Signs**	12’ (144”) max. for monument	72 sq. ft. sign face area and 96 sq. ft. structure area	1 per building	External indirect, halo, or internal lighting
Freestanding Sign (Monument)		7’ 6”	30 sq. ft. sign face area and 65 sq. ft. structure area	2	Electronic Message Board

The applicant proposes an allowance for two (2) monument signs opposed to the UDO allowance of one (1) due to the site abutting two roadways and the site being accessed from either one. The signs will allow for users of the site to be directed appropriately to the school and are not expected to cause visual clutter as both signs are well within the size allowances per the UDO. Staff supports the applicant’s proposal for two monument signs as depicted below.

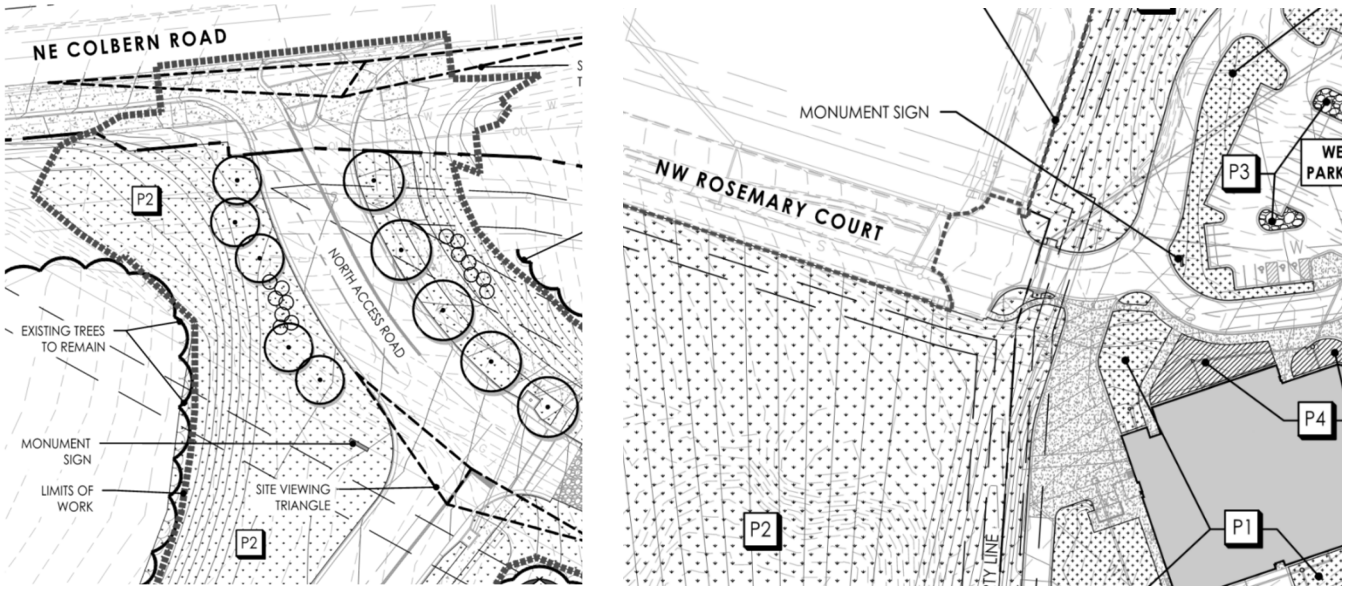

Figure 1 - Monument Sign Locations

Compatibility

The subject property is located approximately 3/10 of a mile northeast of the I-470 and M 350 Hwy. interchange. The surrounding area is mostly vacant with the exception of an apartment complex north along NW Colbern Road and a mix of commercial and light industrial uses to the south. The proposed land use is not expected to be incompatible with those around it.

From an architectural standpoint, the proposed development is not expected to negatively affect the aesthetics of neighboring properties. The proposed building uses a combination of materials and wall and roof articulations to create visual interest and break up the facades. The UDO was recently amended in August of 2025 to include more detailed architectural and building design requirements. The proposed building meets all requirements.



Figure 4 – Exterior Rendering (front entrance facing North)

Adverse Impacts

The proposed development is not expected to seriously injure the appropriate use of, or detrimentally affect, neighboring property. Except for the undeveloped properties, the surrounding properties include more intense uses such as higher-density residential, commercial, and industrial. The subject development is not expected to create excessive storm water runoff for the area. A detention basin will be constructed on the northern side of the project site.

Public Services

Development of the site will not impede the normal and orderly development and improvement of the surrounding property. Water and sanitary sewer service to the site will continue to utilize existing public water and sewer line connections. Two segments of the existing sewer will require realignment to accommodate the development.

Road Improvements

The proposed development will be accessed from two entrances – a right-in/right-out access to the north off NW Colbern Road and a full access on the west side of the side off NW Rosemary Court. The traffic impact study prepared by Kaw Valley Engineering, Inc., identified several road improvements and staff recommendations are as follows:

- Construct a right-in/right-out access on NW Colbern Road to provide adequate access spacing and sight distance.
- Construct a 12-foot wide eastbound right turn lane with a minimum of 150-feet of storage length, plus taper.
- The existing terminus of NW Rosemary Court shall remain a traditional 4-way intersection.

- It is recommended that LSR7 implement a traffic management plan to ease congestion and preserve mobility on campus and the adjacent street network during drop-off/pick-up periods.
- It is recommended that separate loading zones are dedicated for buses and the car rider traffic lines. The traffic management plan should incorporate 2,000 linear feet of pavement or excess parking should be dedicated to managing queueing during morning arrival and afternoon dismissal.

Recommendation

With the conditions of approval below, the application meets the goals of the Ignite! Comprehensive plan, the requirements of the UDO and Design and Construction Manual (DCM).

7. Recommended Conditions of Approval

Site Specific

1. The development shall occur in accordance with the Preliminary Development Plan with an upload date of April 29, 2026.
2. Approval shall be granted for two (2) monument signs as shown within the Preliminary Development Plan with an upload date of April 29, 2026.
3. Road improvements shall be constructed as recommended in the Transportation Impact Analysis conducted by staff dated February 12, 2026.

Standard Conditions of Approval

1. All issues pertaining to life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to the safety to fire fighters and emergency responders during emergency operations, shall be in accordance with the 2018 International Fire Code.
2. Where required by the fire code official, approved signs or other approved notices or markings that include the words NO PARKING—FIRE LANE shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. The means by which fire lanes are designated shall be maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.
3. Fire department connections. The location of fire department connections shall be approved by the fire code official. Connections shall be a 4-inch Storz type fitting and located within 100 feet of a fire hydrant, or as approved by the code official.
4. All required engineering plans and studies, including water lines, sanitary sewers, storm drainage, streets and erosion and sediment control shall be submitted along with the final development plan. All public infrastructure must be substantially complete, prior to the issuance of any certificates of occupancy.
5. All Engineering Plan Review and Inspection Fees shall be paid prior to approval of the associated engineering plans and prior to the issuance of any site development permits or the start of construction (excluding land disturbance permit).
6. All subdivision-related public improvements must have a Certificate of Final Acceptance prior to approval of the final plat, unless security is provided in the manner set forth in the City's Unified Development Ordinance (UDO) Section 7.340. If security is provided, building permits may be issued

upon issuance of a Certificate of Substantial Completion of the public infrastructure as outlined in Article 3, Division V, Sections 3.540 and 3.550 and Article 3, Division IV, Section 3.475 of the UDO, respectively.

7. A Land Disturbance Permit shall be obtained from the City if groundbreaking will take place prior to the issuance of a site development permit, building permit, or prior to the approval of the Final Development Plan / Engineering Plans.
8. Any cut and / or fill operations, which cause public infrastructure to exceed the maximum / minimum depths of cover shall be mitigated by relocating the infrastructure vertically and / or horizontally to meet the specifications contained within the City's Design and Construction Manual.
9. An "Irrevocable Consent to Dedicate A Sanitary Sewer Agreement" between the Lee's Summit R7 School District and the Lee's Summit Parks Department shall be executed and recorded Jackson County prior to approval of the final development plan for the Hazel Grove Elementary.
10. Private parking lots shall follow Article 8 of the Unified Development Ordinance for pavement thickness and base requirements.
11. All exterior mechanical equipment, whether roof mounted or ground mounted, shall be entirely screened from view. Roof mounted equipment shall be screened by the parapet equal to the height of the mechanical equipment. Ground mounted equipment shall be screened by masonry wall or landscaping equal to the height of the units.
12. Sign permits shall be obtained prior to installation of any signs through the Development Services Department. All signs proposed must comply with the sign requirements as outlined in the sign section of the Unified Development Ordinance.

LEE'S SUMMIT
MISSOURI

DEVELOPMENT REVIEW FORM
TRANSPORTATION IMPACT

DATE:	February 12, 2026	**CONDUCTED BY:**	Erin Ralovo, PE, PTOE
SUBMITTAL DATE:	July 24, 2025	**PHONE:**	816.969.1800
APPLICATION #:	PL2026046	**EMAIL:**	Erin.Ralovo@cityofls.net
PROJECT NAME:	HAZEL GROVE ELEMENTARY	**PROJECT TYPE:**	Prel Dev Plan (PDP)

SURROUNDING ENVIRONMENT *(Streets, Developments)*

The proposed development is located southeast of the intersection of NW Colbern Road and NW Blue Parkway at the end of NW Rosemary Court. North of the school property is an apartment complex, northwest and south of the property is commercial office and east of the school is undeveloped wooded park land.

ALLOWABLE ACCESS

The site will be accessed from two entrances - a right-in/right-out access north of the site off NW Colbern Road and a full access on the west side of the site as the east leg of Rosemary Court.

EXISTING STREET CHARACTERISTICS *(Lanes, Speed limits, Sight Distance, Medians)*

NW Colbern Road is a four lane Major Arterial with 12-foot lanes and a 45 MPH speed limit. There is a roundabout at the intersection with NW Blue Parkway. NW Blue Parkway is a Major Arterial with 12-foot drive lanes and a 40 MPH speed limit with southbound left turn lane to Rosemary Court. Both arterials have storm, curb and gutter, and lighting. Rosemary Court is a two-lane undivided local street with a speed limit of 25 MPH. There is storm and curb and gutter, but no sidewalks.

UNIMPROVED ROAD POLICY COMPLIANCE? **YES** ☐ **NO** ☒

This development is not subject to the Unimproved Road Policy (URP) considering the existing typical section and street classification of the surrounding roadways. The URP adopted by City Council resolution provides guidance for staff to use in consideration of development that impacts adjacent roadways which are not constructed to "urban standards". Per the URP, an unimproved road is narrow in width (< 22' of pavement) and consistent with a rural character. The surrounding streets have all been brought up to full urban standards and are not in need of further improvement.

ACCESS MANAGEMENT CODE COMPLIANCE? **YES** ☒ **NO** ☐

All intersection spacing, turn lanes and other applicable criteria required by the Access Management Code have been satisfied as shown on the development plans.

TRIP GENERATION

Time Period	Total	In	Out
Weekday	776	388	388
A.M. Peak Hour	257	139	118
P.M. Peak Hour	154	71	83

Trips were generated using ITE Codes in the ITE Trip Generation Manual 11th Edition using ITE code 520 - Elementary School.

TRANSPORTATION IMPACT STUDY REQUIRED? **YES** ☒ **NO** ☐

The proposed development will likely generate more than 100 vehicle trips to the surrounding street system during a peak hour based on industry standard methods for trip generation estimates, a minimum requirement for a traffic impact study in the Access Management Code. A traffic impact study was prepared by Kaw Valley Engineering dated February 18, 2026. The traffic study was prepared to assess traffic impacts associated with the development and to provide public improvement recommendations or waivers requested by the development that mitigate delay and/or meet minimum standards defined by City policies.

The traffic study evaluated existing conditions and proposed development conditions of the subject development. The traffic study looked at each intersection for turn lane requirements based on roadway classification, operational capacity/queues, projected turning movements, and minimum standards in the Access Management Code. The available space and storage lengths were reviewed in coordination with the required turn lane lengths to provide recommendations for the subject development. The study found that the following improvements would be required:

1. The connection to NW Colbern Road is designed as a right-in/right-out access. The centerline of the drive shall be a minimum of 540 feet from the centerline of the Unity Villa Apartments access and 225 feet from the northwest property corner adjacent to NW Colbern Road to provide adequate spacing and intersection sight distance for vehicles entering and exiting the property. It is recommended that the northbound approach is stop-controlled.

2. If a right turn lane is required, the turn lane shall have a minimum full width length of 150 feet with a 12.5:1 taper. Recommended lane width shall be 11 to 12 feet as required by the City.

3. It is recommended that the school access drive tees into the shared access drive 165 feet south of the NW Colbern Road as illustrated on the development plan to meet the driveway throat separation requirements outlined in section 18 of the City of Lee's Summit Access Management Code. It is recommended that school access drive is stop-controlled.

4. It is recommended that the existing terminus of NW Rosemary Court is converted to a cul-de-sac meeting the design criteria as outlined in Section 5200 of the city of Lee's Summit Design and Construction Manual. The inscribed diameter of the cul-de-sac should be a minimum of 39 feet in accordance with the DCM Section 5203.13. It is recommended that the minor approaches are stop-controlled.

5. It is recommended that the LSR7 implements a traffic management plan to ease congestion and preserve mobility on campus and the adjacent street network during drop-off/pick-up periods.

6. It is recommended that separate loading zones are dedicated for buses and the car rider traffic line. The traffic management plan should incorporate 2,000 LF of pavement or excess parking should be dedicated to managing queuing during morning arrival and afternoon dismissal.

7. The street network within the subject property shall be designed to meet the minimum intersection sight distance requirements as outlined in this report based on a design speed of 20 MPH.

8. It is recommended the approach grade on all driveway should be limited to 3% or less within 25 FT of the roadway as practical. Care should be taken when placing landscaping or other site features such as monument signs near driveways to preserve sight lines.

9. LSR7 shall incorporate pedestrian connectivity to NW Colbern Road and NW Blue Parkway. Crosswalks should be well marked and signed. It is recommended that limited bicycle parking is provided.

LIVABLE STREETS *(Resolution 10-17)* **COMPLIANT** ☒ **EXCEPTIONS** ☐

The proposed development plan will provide required sidewalks, shared use path/trail, on-road bicycle accommodations and all elements otherwise required by ordinances and standards and comprehensive plan (i.e. Bicycle Transportation Plan and Greenway Master Plan) including but not limited to property landscaping, lighting, parking, and ADA accessibility. No exceptions to the Livable Streets Policy adopted by Resolution 10-17 are requested.

RECOMMENDATION: **APPROVAL** ☒ **DENIAL** ☐ **N/A** ☐ **STIPULATIONS** ☒

Recommendations for Approval refer only to the transportation impact and do not constitute an endorsement from City Staff.

Staff recommends approval of the proposed preliminary development plan subject to the conditions noted below and any such public improvements shall be substantially completed prior to any issued occupancy permit associated with the phase of development described therein:

1. Construct a Right-in/Right-out access on NW Colbern Road to provide adequate access spacing and sight distance.
2. Construct a 12 foot eastbound right turn lane with a minimum of 150 feet of storage length, plus taper.
3. The existing terminus of NW Rosemary Ct shall remain a traditional 4-way intersection.
4. It is recommended that the LSR7 implements a traffic management plan to ease congestion and preserve mobility on campus and the adjacent street network during drop-off/pick-up periods.
5. It is recommended that separate loading zones are dedicated for buses and the car rider traffic line. The traffic management plan should incorporate 2,000 LF of pavement or excess parking should be dedicated to managing queuing during morning arrival and afternoon dismissal.

HAZEL GROVE ELEMENTARY SCHOOL
LEE'S SUMMIT R-7 SCHOOL DISTRICT

PRELIMINARY DEVELOPMENT PACKAGE
04.14.2026

ALTERNATES

ALTERNATE #1: REMOVE PARTITIONS, WALL BASE, WALL FINISHES, DOORS & FRAMES FROM THIS SCOPE. REPLACE WITH FULL-HEIGHT PLASTIC PRIVACY TOILET PARTITIONS (TLT1). REFER TO SPECIFICATION 102113.19 - PLASTIC TOILET COMPARTMENT FOR ADDITIONAL INFORMATION.

ALTERNATE #2: REMOVE ROOFTOP EQUIPMENT SCREENS AND ALL ASSOCIATED SCOPE: INCLUDING ROOF SCREENS WALLS, METAL COPING, AND SCREEN WALL STRUCTURE. NO REPLACEMENT FOR THIS ALTERNATE, ROOFTOP UNITS WILL BE EXPOSED.

ALTERNATE #3: REPLACE ALL COPPER ELECTRICAL FEEDERS OVER 100A WITH ALUMINUM FEEDERS. REFER TO SPECIFICATION 260519 FOR ADDITIONAL INFORMATION.

ALTERNATE #4: REMOVE AES "SAFE" SYSTEM INFRASTRUCTURE.

ALTERNATE #5: REMOVE THIN BRICK FROM EXTERIOR PRECAST PANELS. REPLACE WITH FORM LINER BRICK PATTERN ON EXTERIOR PRECAST PANELS AND PAINT TO MATCH FACE BRICK COLOR.

ALTERNATE #6: REMOVE CLERESTORY AND ALL ASSOCIATED SCOPE: INCLUDING PARTITIONS, METAL COPING, ALUMINUM FRAMED WINDOWS, GUTTERS, DOWNSPOUTS, AND CLERESTORY FRAMING STRUCTURE. REPLACE SCOPE WITH ROOFING SYSTEM TO MATCH ADJACENT HEIGHT AND ROOF TYPE. ADDITIONALLY REMOVE THE SECOND LEVEL "LIGHT WELL" FLOOR OPENING AND GUARDRAIL. REPLACE WITH FLOOR SLAB AND FLOOR FINISH TO MATCH ADJACENT FLOORING.

EXTERIOR RENDERING



PROJECT LOCATION



ARCHITECT

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CIVIL ENGINEER

KAW VALLEY ENGINEERING
8040 NORTH OAK TRAFFICWAY
KANSAS CITY, MO 64118
PHONE: 816-468-5858

STRUCTURAL ENGINEER

STAND STRUCTURAL ENGINEERING
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OVERLAND PARK, KS 66204
PHONE: 913-214-2169

MEP ENGINEER

HENDERSON ENGINEERS
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LENEXA, KS 66214
PHONE: 913-742-5000

LANDSCAPE ARCHITECT

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FOOD CONSULTANT

DENNIS G. GLORE, INC.
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EUREKA, MO 63025
PHONE: 636-938-7887

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OVERLAND PARK, KS 66211
PHONE: 913-341-4880

HAUSMANN CONSTRUCTION, INC.
1510 WALNUT ST. #201
KANSAS CITY, MO 64108
PHONE: 816-741-5125

UNIVERSAL CONSTRUCTION COMPANY, INC.
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Landscape Architect
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816.207.6019

Licensed Architect
PATRICK B. SMITH

License
A-2013041352

Cert. of Authority
A-2004016376
INCITE DESIGN STUDIO, LLC

HAZEL GROVE ELEMENTARY SCHOOL

NW ROSEMARY COURT
LEE'S SUMMIT, MO 64086

Project Phase
PRELIMINARY DEVELOPMENT PACKAGE

Project Number
26-107

Issue Date
04.14.2026

Revision No.	Description	Date Issued

Sheet Name
COVER SHEET

Sheet Number
G1.00

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Autodesk Docs://Lee's Summit Hazel Grove Elementary/24 HAZEL GROVE ELEMENTARY.rvt

DRAWING INDEX

GENERAL
G1.00 COVER SHEET
G1.01 SHEET INDEX

CIVIL
C0.0 PRELIMINARY DEVELOPMENT PLAN
C0.1 PRELIMINARY PLAT
C0.5 PROPOSED IMPORVEMENT AND TRAFFIC MANAGEMENT PLAN
C0.6 EXISTING CONDITIONS AND TREE CLEARING PLAN
C1.0 SITE PLAN
C3.0 GRADING AND STORM WATER MANAGEMENT PLAN
C5.0 UTILITY PLAN
C9.0 NW COLBERN ROAD ACCESS EXHIBIT
C9.1 NW COLBERN ROAD EASTBOUND RIGHT TURN LANE EXHIBIT

LANDSCAPE
L100 OVERALL SITE LANDSCAPE PLANTING PLAN

ARCHITECTURAL - SITE
AS1.20 SITE DETAILS

ARCHITECTURAL
A5.00 EXTERIOR ELEVATIONS - OVERALL

ELECTRICAL
ES1.10 SITE LIGHTING PHOTOMETRIC PLAN

incite Design Studio
architects building relationships

Architect
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913.742.5000

Licensed Architect
PATRICK B. SMITH

License
A-2013041352

Cert. of Authority
A-2004016376
INCITE DESIGN STUDIO, LLC

NOT FOR CONSTRUCTION

HAZEL GROVE ELEMENTARY SCHOOL

NW ROSEMARY COURT
LEE'S SUMMIT, MO 64086

Project Phase
PRELIMINARY DEVELOPMENT PACKAGE

Project Number
26-107

Issue Date
04.14.2026

Revision No.	Description	Date Issued

Area Plan

Sheet Name
SHEET INDEX

Sheet Number
G1.01

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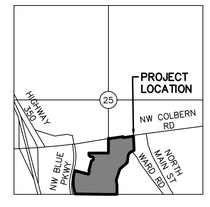
HAZEL GROVE ELEMENTARY SCHOOL
SUMMIT VILLAGE CORPORATE PARK, 2ND PLAT
PRELIMINARY DEVELOPMENT PLAN
LEE'S SUMMIT, MO 64086
SECTION 25 - TOWNSHIP 48 NORTH - RANGE 32 WEST



VICINITY MAP
SEC 25 - TWP 48N - RNG 32W
NOT TO SCALE

UTILITY CONTACTS:

SANITARY SEWER:
WATER UTILITIES SERVICE CENTER
1200 SE HAMBLEN ROAD
LEE'S SUMMIT, MO 64081
PHONE: (816) 969-1900

WATER:
WATER UTILITIES SERVICE CENTER
1200 SE HAMBLEN ROAD
LEE'S SUMMIT, MO 64081
PHONE: (816) 969-1900

GAS:
SPIRE GAS
PHONE:800-585-1234

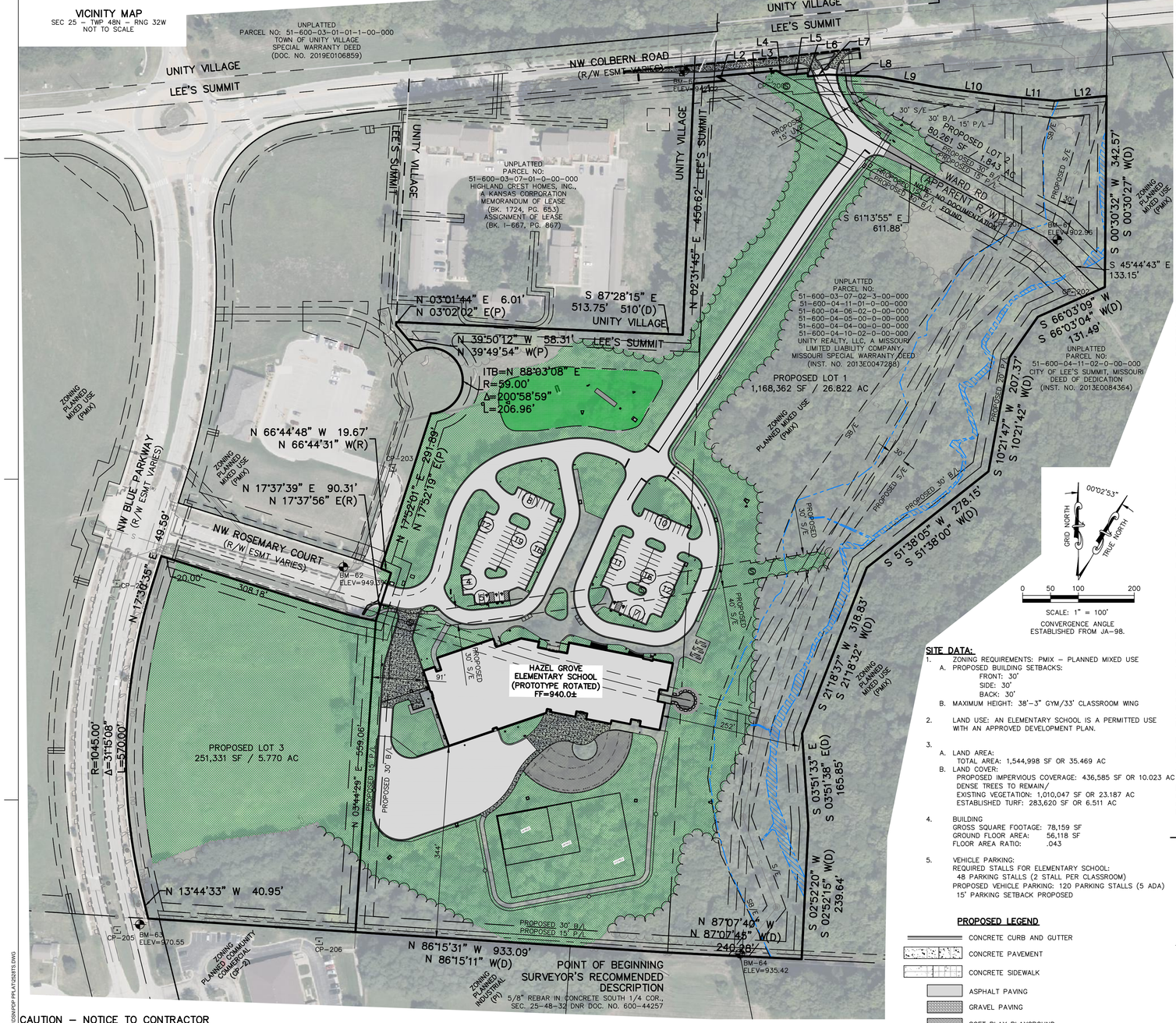
COMMUNICATION:
TELECOMM
AT&T – (800) 464-7928
GOOGLE FIBER – (877) 454-6959

ELECTRICAL:
EVERGY
PHONE: (888) 471-5275

PREPARED BY:
KAW VALLEY ENGINEERING, INC.
14700 W 114TH TERR.
LENEXA, KANSAS 66215
PHONE: (913) 894-5150
CONTACT: DAVID WOOD
EMAIL: wood@kveng.com

DEVELOPER:
LEE'S SUMMIT SCHOOL DISTRICT
502 SE TRANSPORT RD,
LEE'S SUMMIT, MO 64081
PHONE: (816) 986-2421
CONTACT: KYLE GORRELL
EMAIL: kyle.gorrell@lsr7.net

OWNER:
UNITY REALTY, LLC.
1901 NW BLUE PARKWAY,
UNITY VILLAGE, MO 64065
PHONE: 816-251-3511
CONTACT: GUY SWANSON
EMAIL: swansongs@unityonline.org



SITE DATA:

1. ZONING REQUIREMENTS: PMIX – PLANNED MIXED USE
   A. PROPOSED BUILDING SETBACKS:
      FRONT: 30'
      SIDE: 30'
      BACK: 30'
   B. MAXIMUM HEIGHT: 38'-3" GYM/33' CLASSROOM WING
2. LAND USE: AN ELEMENTARY SCHOOL IS A PERMITTED USE WITH AN APPROVED DEVELOPMENT PLAN.
3. A. LAND AREA:
      TOTAL AREA: 1,544,998 SF OR 35.469 AC
   B. LAND COVER:
      PROPOSED IMPERVIOUS COVERAGE: 436,585 SF OR 10.023 AC
      DENSE TREES TO REMAIN/
      EXISTING VEGETATION: 1,010,047 SF OR 23.187 AC
      ESTABLISHED TURF: 283,620 SF OR 6.511 AC
4. BUILDING
   GROSS SQUARE FOOTAGE: 78,159 SF
   GROUND FLOOR AREA: 56,118 SF
   FLOOR AREA RATIO: .043
5. VEHICLE PARKING:
   REQUIRED STALLS FOR ELEMENTARY SCHOOL:
   48 PARKING STALLS (2 STALL PER CLASSROOM)
   PROPOSED VEHICLE PARKING: 120 PARKING STALLS (5 ADA)
   15' PARKING SETBACK PROPOSED

PROPOSED LEGEND

- CONCRETE CURB AND GUTTER
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- ASPHALT PAVING
- GRAVEL PAVING
- SOFT PLAY PLAYGROUND
- TURF
- STORM WATER MANAGEMENT BASIN
- PROJECT AREA (APPROXIMATE LIMITS OF DISTURBANCE)
- LIMITS OF DRAINAGE COURSE/STREAM

SURVEYOR'S RECOMMENDED DESCRIPTION:

ALL THAT PART OF A TRACT OF LAND DESCRIBED IN A MISSOURI SPECIAL WARRANTY DEED FOUND IN INSTRUMENT NO. 2013E0047288 (ALL DOCUMENTS MENTIONED HEREON ARE AS FILED IN THE JACKSON COUNTY RECORDER OF DEEDS OFFICE), LYING IN THE SOUTHWEST QUARTER AND THE SOUTHEAST QUARTER OF SECTION 25, TOWNSHIP 48 NORTH, RANGE 32 WEST, OF THE FIFTH PRINCIPAL MERIDIAN IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, DESCRIBED BY KENNETH J. DEDRICK, PS–2571, ON THIS 19TH DAY OF DECEMBER 2025 AS FOLLOWS:

BEGINNING AT A 5/8" REBAR IN CONCRETE MARKING THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER; THENCE NORTH 86°15'31" WEST (THIS AND ALL THE FOLLOWING BEARINGS ARE BASED ON THE MISSOURI STATE PLANE COORDINATE SYSTEM 1983 (2003) WEST ZONE) (NORTH 86°15'11" WEST DEED) ON THE SOUTH LINE OF SAID SOUTHWEST QUARTER, A DISTANCE OF 933.09 FEET (ALL DISTANCE REFERENCES ARE IN U.S. SURVEY FEET) TO A 1/2" REBAR WITH LS–214F CAP MARKING AN INTERSECTION WITH SAID SOUTH LINE AND THE EAST RIGHT–OF–WAY LINE OF NORTHWEST BLUE PARKWAY AS DEDICATED BY A RIGHT–OF–WAY DEED AS FILED IN INSTRUMENT NO. 2015E0097650; THENCE NORTH 13°44'33" WEST ON SAID EAST RIGHT–OF–WAY LINE, A DISTANCE OF 40.95 FEET TO A 1/2" REBAR WITH LC–214F CAP; THENCE NORTHERLY ON A CURVE TO THE RIGHT, ON SAID EAST RIGHT–OF–WAY LINE, TANGENT TO THE LAST DESCRIBED COURSE, HAVING A RADIUS OF 1045.00 FEET, A DELTA ANGLE OF 31°15'08" AND AN ARC LENGTH OF 570.00 FEET TO A 1/2" REBAR WITH 214F CAP; THENCE NORTH 17°30'35" EAST ON SAID EAST RIGHT–OF–WAY LINE, A DISTANCE OF 49.59 FEET TO A 1/2" REBAR WITH 214F CAP MARKING AN ANGLE POINT IN SAID EAST RIGHT–OF–WAY LINE; THENCE SOUTH 72°29'23" EAST ON SAID EAST RIGHT–OF–WAY LINE, A DISTANCE OF 20.00 FEET TO A 1/2" REBAR WITH 214F CAP MARKING THE SOUTHWEST CORNER OF NORTHWEST ROSEMARY COURT AS DEDICATED BY A RIGHT–OF–WAY DEED AS FILED IN INSTRUMENT NO. 2017E0061615; THENCE CONTINUING SOUTH 72°29'23" EAST (SOUTH 72°29'05" EAST RECORD) ON THE SOUTH RIGHT–OF–WAY LINE OF LAST SAID RIGHT–OF–WAY DEED, A DISTANCE OF 308.18 FEET TO A 1/2" REBAR WITH 214F CAP; THENCE EASTERLY ON A CURVE TO THE LEFT, ON SAID SOUTH RIGHT–OF–WAY LINE, TANGENT TO THE LAST DESCRIBED COURSE, HAVING A RADIUS OF 500.00 FEET, A DELTA ANGLE OF 5°44'34" AND AN ARC LENGTH OF 50.12 FEET TO A 1/2" REBAR WITH 214F CAP; THENCE SOUTH 78°13'56" EAST (SOUTH 78°13'39" EAST RECORD) ON SAID SOUTH RIGHT–OF–WAY LINE, A DISTANCE OF 23.25 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING THE SOUTHEAST CORNER OF SAID RIGHT–OF–WAY DEED; THENCE NORTH 17°37'39" EAST (NORTH 17°37'56" EAST RECORD) ON THE EAST RIGHT–OF–WAY LINE OF SAID RIGHT–OF–WAY DEED, A DISTANCE OF 90.31 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING THE NORTHEAST CORNER OF SAID RIGHT–OF–WAY DEED; THENCE NORTH 66°44'48" WEST (NORTH 66°44'31" WEST RECORD) ON THE NORTH RIGHT–OF–WAY LINE OF SAID RIGHT–OF–WAY DEED, A DISTANCE OF 19.67 FEET TO A CHISELED "+" MARKING THE SOUTHEAST CORNER OF LOT 2, SUMMIT VILLAGE CORPORATE PARK, LOTS 1 AND 2, A RECORDED SUBDIVISION AS FILED IN BOOK I–171, AT PAGE 42 (PLAT); THENCE DEPARTING SAID NORTH RIGHT–OF–WAY LINE NORTH 17°52'01" EAST (NORTH 17°52'19" EAST PLAT) ON THE EAST LINE OF SAID LOT 2, A DISTANCE OF 291.89 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING AN ANGLE POINT IN SAID EAST LINE; THENCE NORTHEASTERLY AND NORTHWESTERLY ON A NON–TANGENT CURVE TO THE LEFT, ON SAID EAST LINE, HAVING AN INITIAL TANGENT BEARING OF NORTH 88°03'08" EAST, A RADIUS OF 59.00 FEET, A DELTA ANGLE OF 200°58'59" AND AN ARC LENGTH OF 206.96 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING AN ANGLE POINT IN SAID EAST LINE; THENCE NORTH 39°50'12" WEST (NORTH 39°49'54" WEST PLAT) ON SAID EAST LINE, A DISTANCE OF 58.31 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING AN ANGLE POINT IN SAID EAST LINE; THENCE NORTH 03°01'44" EAST (NORTH 03°02'02" EAST PLAT) ON SAID EAST LINE, A DISTANCE OF 6.01 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING THE SOUTHWEST CORNER OF A MEMORANDUM OF LEASE AS FILED IN BOOK 1724, AT PAGE 653 AND AN ASSIGNMENT OF LEASE AS FILED IN BOOK I–667, AT PAGE 867; THENCE DEPARTING SAID EAST LINE SOUTH 87°28'15" EAST ON THE SOUTH LINE OF SAID LEASE, A DISTANCE OF 513.75 FEET (510 FEET DEED) TO A 1/2" REBAR WITH LS–214F CAP MARKING THE SOUTHEAST CORNER OF SAID LEASE; THENCE NORTH 02°31'45" EAST ON THE EAST LINE OF SAID LEASE, A DISTANCE OF 450.62 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT ON THE SOUTH LINE OF COLBERN ROAD BEING AT STATION 39+38.89 AND OFFSET 64.00 FEET TO THE RIGHT; (THIS AND THE FOLLOWING TWELVE COURSES ARE ON THE SOUTH RIGHT–OF–WAY LINE OF SAID COLBERN ROAD AS ESTABLISHED BY COLBERN ROAD RECONSTRUCTION PROJECT PERFORMED BY GARVER, PROJECT NO. 17177041, CITY PROJECT NO. F.A.P. STP–3301(527). A RIGHT–OF–WAY DEED AS FILED IN INSTRUMENT NO. 2022E0086752, A RIGHT–OF–WAY DEED AS FILED IN INSTRUMENT NO. 2022E0086756, AND A RIGHT–OF–WAY DEED AS FILED IN INSTRUMENT NO. 2022E0086758) THENCE DEPARTING SAID EAST LINE NORTH 84°44'20" EAST, A DISTANCE OF 36.40 FEET TO A POINT ON SAID SOUTHEAST QUARTER BEING AT STATION 39+75.29 AND OFFSET 64.00 FEET TO THE RIGHT; THENCE CONTINUING NORTH 84°44'20" EAST, A DISTANCE OF 19.76 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 39+95.05 AND OFFSET 64.00 FEET TO THE RIGHT; THENCE NORTH 61°03'35" WEST, A DISTANCE OF 16.53 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 39+81.38 AND OFFSET 54.71 FEET TO THE RIGHT; THENCE NORTH 84°43'45" EAST, A DISTANCE OF 107.08 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 40+88.46 AND OFFSET 54.69 FEET TO THE RIGHT; THENCE SOUTH 61°13'55" EAST, A DISTANCE OF 16.64 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 41+02.25 AND OFFSET 64.00 FEET TO THE RIGHT; THENCE NORTH 84°44'20" EAST, A DISTANCE OF 41.62 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 41+43.87 AND OFFSET 64.00 FEET TO THE RIGHT; THENCE SOUTH 05°15'40" EAST, A DISTANCE OF 6.00 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 41+43.87 AND OFFSET 70.00 FEET TO THE RIGHT; THENCE NORTH 84°44'20" EAST, A DISTANCE OF 36.13 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 41+80.00 AND OFFSET 70.00 FEET TO THE RIGHT; THENCE SOUTH 87°39'59" EAST, A DISTANCE OF 90.80 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 42+70.00 AND OFFSET 82.00 FEET TO THE RIGHT; THENCE SOUTH 79°37'08" EAST, A DISTANCE OF 103.85 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 43+70.00 AND OFFSET 110.00 FEET TO THE RIGHT; THENCE SOUTH 82°41'08" EAST, A DISTANCE OF 133.20 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 45+00.00 AND OFFSET 139.00 FEET TO THE RIGHT; THENCE SOUTH 84°38'29" EAST, A DISTANCE OF 81.39 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 45+80.00 AND OFFSET 154.00 FEET TO THE RIGHT; THENCE NORTH 84°44'20" EAST, A DISTANCE OF 93.33 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 46+73.33 AND OFFSET 154.00 FEET TO THE RIGHT, SAID POINT BEING ON THE WEST LINE OF A DEED OF DEDICATION AS FILED IN INSTRUMENT NO. 2013E0084364; (THIS AND THE FOLLOWING SEVEN COURSES ARE ON THE WEST LINE OF SAID DEED OF DEDICATION) THENCE SOUTH 00°30'32" WEST (SOUTH 00°30'27" WEST DEED), A DISTANCE OF 342.57 FEET TO A 1/2" REBAR WITH LS–214F CAP; THENCE SOUTH 66°03'09" WEST (SOUTH 66°03'04" WEST DEED), A DISTANCE OF 131.49 FEET TO A 1/2" REBAR WITH LS–214F CAP; THENCE SOUTH 34°55'49" WEST (SOUTH 34°55'44" WEST DEED), A DISTANCE OF 89.13 FEET TO A 1/2" REBAR WITH LS–214F CAP; THENCE SOUTH 10°21'47" WEST (SOUTH 10°21'42" WEST DEED), A DISTANCE OF 207.37 FEET TO A 1/2" REBAR WITH LS–214F CAP; THENCE SOUTH 51°38'05" WEST (SOUTH 51°38'00" WEST DEED), A DISTANCE OF 278.15 FEET TO A 1/2" REBAR WITH LS–214F CAP; THENCE SOUTH 21°18'37" WEST (SOUTH 21°18'32" WEST DEED), A DISTANCE OF 318.83 FEET TO A 1/2" REBAR WITH LS–214F CAP; THENCE SOUTH 03°51'33" EAST (SOUTH 03°51'38" EAST DEED), A DISTANCE OF 165.85 FEET TO A 1/2" REBAR WITH LS–214F CAP; THENCE SOUTH 02°52'20" WEST (SOUTH 02°52'15" WEST DEED), A DISTANCE OF 239.64 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT ON THE SOUTH LINE OF SAID SOUTHEAST QUARTER; THENCE DEPARTING SAID WEST LINE NORTH 87°07'40" WEST (NORTH 87°07'45" WEST DEED) ON SAID SOUTH LINE, A DISTANCE OF 240.28 FEET TO THE POINT OF BEGINNING.

THE SOUTH RIGHT–OF–WAY LINE OF COLBERN ROAD PER THE DOCUMENTS ARE AMBIGUOUS IN THEIR DESCRIPTIONS, THE RESOLUTION WAS OBTAINED BY HOLDING THE STATION AND OFFSETS FROM SAID COLBERN ROAD RECONSTRUCTION PROJECT. THE CENTERLINE OF SAID COLBERN ROAD IS DESCRIBED AS FOLLOWS:

COMMENCING AT 5/8" REBAR IN CONCRETE MARKING THE SOUTHEAST CORNER SAID SOUTHWEST QUARTER; THENCE NORTH 03°02'34" EAST ON THE EAST LINE OF SAID SOUTHWEST QUARTER, A DISTANCE OF 1627.92 FEET TO THE INTERSECTION OF SAID EAST LINE AND SAID CENTERLINE BEING AT STATION 39+84.63; THENCE SOUTH 84°44'20" WEST, A DISTANCE OF 307.87 FEET TO A POINT OF TANGENCY BEING AT STATION 36+76.76 BEING THE POINT OF BEGINNING; THENCE NORTH 84°44'20" EAST ON SAID CENTERLINE, A DISTANCE OF 2927.20 FEET TO A POINT BEING AT STATION 66+03.96, SAID POINT BEING 1998.59 FEET NORTH 02°20'16" EAST OF A 5/8" REBAR IN CONCRETE MARKING THE SOUTHEAST CORNER OF SAID SOUTHEAST QUARTER, SAID POINT BEING THE POINT OF TERMINUS.

THIS DESCRIPTION WAS CREATED WITH THE BENEFIT OF GROUND SURVEY PERFORMED, DECEMBER 3, 2025 (KVE PROJECT C2552528) AND CONTAINS 1,544,998 SQUARE FEET OR 35.469 ACRES MORE OR LESS, INCLUDING 45,044 SQUARE FEET OR 1.034 ACRES OF APPARENT EXISTING RIGHT–OF–WAY FOR WARD ROAD.

HORIZONTAL AND VERTICAL DATUM:

UNLESS OTHERWISE NOTED THE COORDINATES SHOWN HEREON ARE GROUND COORDINATES
BASED ON THE MISSOURI STATE PLANE, WEST ZONE (NAD 1983/2003) (NAVD 1988)
CAF: 0.99999276
1 METER = 3.28083333 U.S. SURVEY FEET
GROUND COORDINATES X COMBINED ADJUSTMENT FACTOR (CAF) = GRID COORDINATES
SCALED AROUND 0,0

JA–98 (PID–095098)
NORTHING: 310381.520 (GRID)(METERS) 1018317.41 (GROUND)(U.S. SURVEY FEET)
EASTING: 856629.081 (GRID)(METERS) 2810477.61 (GROUND)(U.S. SURVEY FEET)
ELEV = 234.59 (METERS) 799.18 (U.S. SURVEY FEET)

PROJECT BENCH MARKS:

BM–60
CHISELED SQUARE ON THE SOUTHEAST CORNER OF A CURB INLET ON THE SOUTH SIDE OF COLBERN ROAD AND 152'± WEST OF WARD ROAD.
ELEV = 942.02

BM–61
CHISELED "III" ON THE SOUTH SIDE OF A SANITARY SEWER MANHOLE ON THE NORTH SIDE OF WARD ROAD AND NORTHEAST OF A UTILITY POLE (LABELED KCPL 884223) WITH TRANSFORMER.
ELEV = 902.96

BM–62
CHISELED SQUARE ON THE NORTHEAST CORNER OF A CURB INLET ON THE NORTH SIDE OF NORTHWEST ROSEMARY COURT 25'± WEST OF ACCESS ROAD TO SUMMIT EYE CENTER.
ELEV = 949.39

BM–63
CHISELED SQUARE ON TOP OF THE EAST CURB FOR NORTHBOUND BLUE PARKWAY AT THE END OF THE CURB LINE, 145'± NORTH OF NORTHWEST ASTOR STREET.
ELEV = 970.55

BM–64
CHISLED "III" ON NORTH RIM OF A SANITARY SEWER MANHOLE ON THE SOUTH LINE OF SITE.
ELEV = 935.42

LINE TABLE		
LINE	BEARING	LENGTH
L1	N 84°44'20" E	56.16'
L2	N 61°03'35" W	16.53'
L3	N 84°43'45" E	107.08'
L4	S 61°13'55" E	16.64'
L5	N 84°44'20" E	41.62'
L6	S 05°15'40" E	6.00'
L7	N 84°44'20" E	36.13'
L8	S 87°39'59" E	90.80'
L9	S 79°37'08" E	103.85'
L10	S 82°41'08" E	133.20'
L11	S 84°38'29" E	81.39'
L12	N 84°44'20" E	93.33'

PROJECT CONTROL:

CP #200
1/2"x24" REBAR W/ CONTROL POINT CAP
NORTHING: 1011497.868 (GROUND)
EASTING: 2816944.678 (GROUND)
ELEV = 937.40

CP #201
1/2"x24" REBAR W/ CONTROL POINT CAP
NORTHING: 1011252.604 (GROUND)
EASTING: 2817364.015 (GROUND)
ELEV = 908.04

CP #202
1/2"x24" REBAR W/ CONTROL POINT CAP
NORTHING: 1011116.479 (GROUND)
EASTING: 2817487.361 (GROUND)
ELEV = 897.33

CP #203
1/2"x24" REBAR W/ CONTROL POINT CAP
NORTHING: 1010801.674 (GROUND)
EASTING: 2816270.048 (GROUND)
ELEV = 951.12

CP #204
1/2"x24" REBAR W/ CONTROL POINT CAP
NORTHING: 1010594.013 (GROUND)
EASTING: 2815775.083 (GROUND)
ELEV = 963.83

CP #205
1/2"x24" REBAR W/ CONTROL POINT CAP
NORTHING: 1009972.931 (GROUND)
EASTING: 2815776.251 (GROUND)
ELEV = 970.79

CP #206
1/2"x24" REBAR W/ CONTROL POINT CAP
NORTHING: 1009952.821 (GROUND)
EASTING: 2816138.015 (GROUND)
ELEV = 961.37

LEGEND:

- MONUMENT FOUND ORIGIN UNCERTAIN UNLESS OTHERWISE NOTED
- CONTROL POINT
- SECTION CORNER
- 1/2"x24" REBAR W/LS 214F CAP SET (UNLESS NOTED OTHERWISE)
- BENCHMARK
- (2)OU OVERHEAD UTILITY LINE (# OF LINES)
- PULL BOX
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ LIGHT
- UTILITY POLE W/ TRANSFORMER
- GUY ANCHOR
- G UNDERGROUND GAS
- GTS GAS CATHODIC PROTECTION TESTING STATION
- W WATER LINE
- WATER LINE GATE VALVE
- FIRE HYDRANT
- FOC FIBER OPTIC CABLE SIGN
- FOC UNDERGROUND FIBER OPTIC CABLE
- SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- S SANITARY SEWER LINE
- CMP CORRUGATED METAL PIPE
- RCB REINFORCED CONCRETE BOX
- PVC POLYVINYL CHLORIDE PIPE
- HDPE HIGH DENSITY POLYETHYLENE
- STREET/TRAFFIC SIGN
- B/B BACK TO BACK OF CURB MEASUREMENT
- E/E EDGE TO EDGE OF ASPHALT
- DECIDUOUS TREE
- TREE LINE
- WIRE FENCE
- 939 EXISTING GRADE 1' CONTOUR
- 950 EXISTING GRADE 5' CONTOUR

CAUTION – NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

WARRANTY / DISCLAIMER

THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

SAFETY NOTICE TO CONTRACTOR

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

THERE IS NO PHYSICAL EVIDENCE OF OIL OR GAS WELLS ON THE SUBJECT PROPERTY. THERE IS NO RECORD OF A PERMITTED OIL OR GAS WELL ON THE MDNR MISSOURI GEOLOGICAL SURVEY.

Know what's below. Call before you dig.

PROJ. NO. C25_2528 DSN: DDW
CFN: 2528TS DWN: NJN
DAVID D. WOOD
ENGINEER
MO # 2011037427
14700 WEST 114TH TERRACE
LENEXA, KANSAS 66215
PH. (913) 894-5150
lx@kveng.com | www.kveng.com
KAW VALLEY ENGINEERING
KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/27

incite Design Studio
architects building relationships

Architect
INCITE DESIGN STUDIO
110 WEST 18TH STREET
KANSAS CITY, MO 64108
816.979.3500

Civil
KAW VALLEY ENGINEERING, INC.
8040 N. OAK TRAFFICWAY
KANSAS CITY, MO 64118
816.468.5858

Landscape Architect
LAND3 STUDIO
317 SE MAIN ST.
LEE'S SUMMIT, MO 64063
816.207.6019

Food Service
DENNIS G. GLORE, INC.
P.O. BOX 200
EUREKA, MO 63025
636.938.7887

Structural
STAND STRUCTURAL ENGINEERING, INC.
8234 ROBINSON ST.
OVERLAND PARK, KS 66204
913.214.2169

Mech., Plumb., Elec., Telecom.
HENDERSON ENGINEERS
8345 LENEXA DRIVE, SUITE 300
LENEXA, KS 66214
913.742.5000

DAVID D. WOOD

License
MO #2011037427

Cert. of Authority
#000842
KAW VALLEY ENGINEERING, INC.

STATE OF MISSOURI DAVID WOOD NUMBER PE-2011037427 12/31/2027 PROFESSIONAL ENGINEER

HAZEL GROVE ELEMENTARY SCHOOL

NW ROSEMARY COURT
LEE'S SUMMIT, MO 64086

Project Phase
PRELIMINARY DEVELOPMENT PACKAGE

Project Number
26-107

Issue Date
02.18.2026

Revision No.	Description	Date Issued
1	City Comments	4.14.2026

Area Plan

Sheet Name
PRELIMINARY DEVELOPMENT PLAN

Sheet Number
C0.0

in • cite *v.* to provoke thought

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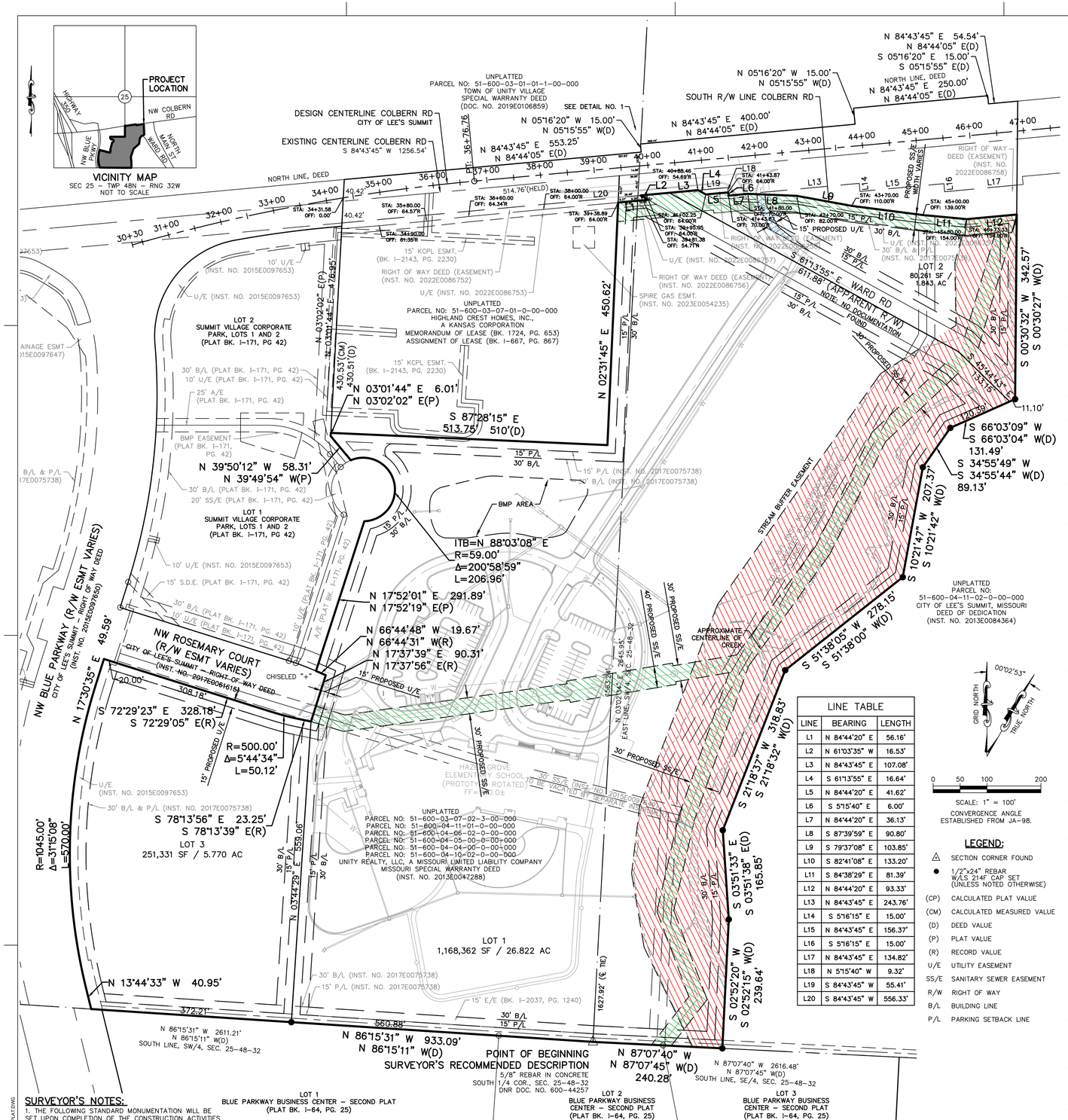
HAZEL GROVE ELEMENTARY SCHOOL
PRELIMINARY PLAT FOR
SUMMIT VILLAGE CORPORATE PARK, 2ND PLAT
LEE'S SUMMIT, MO 64086
SECTION 25 - TOWNSHIP 48 NORTH - RANGE 32 WEST



LINE TABLE		
LINE	BEARING	LENGTH
L1	N 84°44'20" E	56.16'
L2	N 61°03'35" W	16.53'
L3	N 84°43'45" E	107.08'
L4	S 61°13'55" E	16.64'
L5	N 84°44'20" E	41.62'
L6	S 5°15'40" E	6.00'
L7	N 84°44'20" E	36.13'
L8	S 87°39'59" E	90.80'
L9	S 79°37'08" E	103.85'
L10	S 82°41'08" E	133.20'
L11	S 84°38'29" E	81.39'
L12	N 84°44'20" E	93.33'
L13	N 84°43'45" E	243.76'
L14	S 5°16'15" E	15.00'
L15	N 84°43'45" E	156.37'
L16	S 5°16'15" E	15.00'
L17	N 84°43'45" E	134.82'
L18	N 5°15'40" W	9.32'
L19	S 84°43'45" W	55.41'
L20	S 84°43'45" W	556.33'

LEGEND:

- SECTION CORNER FOUND
- 1/2"x24" REBAR W/LS. 214F CAP SET (UNLESS NOTED OTHERWISE)
- (CP) CALCULATED PLAT VALUE
- (CM) CALCULATED MEASURED VALUE
- (D) DEED VALUE
- (P) PLAT VALUE
- (R) RECORD VALUE
- U/E UTILITY EASEMENT
- SS/E SANITARY SEWER EASEMENT
- R/W RIGHT OF WAY
- B/L BUILDING LINE
- P/L PARKING SETBACK LINE

OWNER:
UNITY REALTY, LLC.
1901 NW BLUE PARKWAY,
UNITY VILLAGE, MO 64065
PHONE: (816)-251-3511
CONTACT: GUY SWANSON
EMAIL: swansongs@unityonline.org

DEVELOPER:
LEE'S SUMMIT SCHOOL DISTRICT
502 SE TRANSPORT RD,
LEE'S SUMMIT, MO 64081
PHONE: (816) 986-2421
CONTACT: KYLE GORRELL
EMAIL: kyle.gorrell@lsr7.net

TOTAL AREA TABLE
LOT 1 = 1,168,362 SQUARE FEET / 26.822 ACRES
LOT 2 = 80,261 SQUARE FEET / 1.843 ACRES
LOT 3 = 251,331 SQUARE FEET / 5.770 ACRES
RIGHT-OF-WAY = 45,044 SQUARE FEET / 1.034 ACRES
OVERALL TOTAL = 1,544,998 SQUARE FEET / 35.469 ACRES

PLAT DESCRIPTION:

ALL THAT PART OF A TRACT OF LAND DESCRIBED IN A MISSOURI SPECIAL WARRANTY DEED FOUND IN INSTRUMENT NO. 2013E0047288 (ALL DOCUMENTS MENTIONED HEREON ARE AS FILED IN THE JACKSON COUNTY RECORDER OF DEEDS OFFICE), LYING IN THE SOUTHWEST QUARTER AND THE SOUTHEAST QUARTER OF SECTION 25, TOWNSHIP 48 NORTH, RANGE 32 WEST, OF THE FIFTH PRINCIPAL MERIDIAN IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, DESCRIBED BY KENNETH J. DEDRICK, PS-2571, ON THIS 19TH DAY OF DECEMBER 2025 AS FOLLOWS:

BEGINNING AT A 5/8" REBAR IN CONCRETE MARKING THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER; THENCE NORTH 86°15'31" WEST (THIS AND ALL THE FOLLOWING BEARINGS ARE BASED ON THE MISSOURI STATE PLANE COORDINATE SYSTEM 1983 (2003) WEST ZONE) (NORTH 86°15'11" WEST DEED) ON THE SOUTH LINE OF SAID SOUTHWEST QUARTER, A DISTANCE OF 933.09 FEET (ALL DISTANCE REFERENCES ARE IN U.S. SURVEY FEET) TO A 1/2" REBAR WITH LS-214F CAP MARKING AN INTERSECTION WITH SAID SOUTH LINE AND THE EAST RIGHT-OF-WAY LINE OF NORTHWEST BLUE PARKWAY AS DEDICATED BY A RIGHT-OF-WAY DEED AS FILED IN INSTRUMENT NO. 2015E0097650; THENCE NORTH 13°44'33" WEST ON SAID EAST RIGHT-OF-WAY LINE, A DISTANCE OF 40.95 FEET TO A 1/2" REBAR WITH LC-214F CAP; THENCE NORTHERLY ON A CURVE TO THE RIGHT, ON SAID EAST RIGHT-OF-WAY LINE, TANGENT TO THE LAST DESCRIBED COURSE, HAVING A RADIUS OF 1045.00 FEET, A DELTA ANGLE OF 31°15'08" AND AN ARC LENGTH OF 570.00 FEET TO A 1/2" REBAR WITH 214F CAP; THENCE NORTH 17°30'35" EAST ON SAID EAST RIGHT-OF-WAY LINE, A DISTANCE OF 49.59 FEET TO A 1/2" REBAR WITH 214F CAP MARKING AN ANGLE POINT IN SAID EAST RIGHT-OF-WAY LINE; THENCE SOUTH 72°29'23" EAST ON SAID EAST RIGHT-OF-WAY LINE, A DISTANCE OF 20.00 FEET TO A 1/2" REBAR WITH 214F CAP MARKING THE SOUTHWEST CORNER OF NORTHWEST ROSEMARY COURT AS DEDICATED BY A RIGHT-OF-WAY DEED AS FILED IN INSTRUMENT NO. 2017E0067618; THENCE CONTINUING SOUTH 72°29'23" EAST (SOUTH 72°29'05" EAST RECORD) ON THE SOUTH RIGHT-OF-WAY LINE OF LAST SAID RIGHT-OF-WAY DEED, A DISTANCE OF 308.18 FEET TO A 1/2" REBAR WITH 214F CAP; THENCE EASTERLY ON A CURVE TO THE LEFT, ON SAID SOUTH RIGHT-OF-WAY LINE, TANGENT TO THE LAST DESCRIBED COURSE, HAVING A RADIUS OF 500.00 FEET, A DELTA ANGLE OF 5°44'34" AND AN ARC LENGTH OF 50.12 FEET TO A 1/2" REBAR WITH 214F CAP; THENCE SOUTH 78°13'56" EAST (SOUTH 78°13'39" EAST RECORD) ON SAID SOUTH RIGHT-OF-WAY LINE, A DISTANCE OF 23.25 FEET TO A 1/2" REBAR WITH LS-214F CAP MARKING THE SOUTHEAST CORNER OF SAID RIGHT-OF-WAY DEED; THENCE NORTH 17°37'39" EAST (NORTH 17°37'56" EAST RECORD) ON THE EAST RIGHT-OF-WAY LINE OF SAID RIGHT-OF-WAY DEED, A DISTANCE OF 90.31 FEET TO A 1/2" REBAR WITH LS-214F CAP MARKING THE NORTHEAST CORNER OF SAID RIGHT-OF-WAY DEED; THENCE NORTH 66°44'48" WEST (NORTH 66°44'31" WEST RECORD) ON THE NORTH RIGHT-OF-WAY LINE OF SAID RIGHT-OF-WAY DEED, A DISTANCE OF 19.67 FEET TO A CHISELED "+" MARKING THE SOUTHEAST CORNER OF LOT 2, SUMMIT VILLAGE CORPORATE PARK, LOTS 1 AND 2, A RECORDED SUBDIVISION AS FILED IN BOOK I-171, AT PAGE 42 (PLAT); THENCE DEPARTING SAID NORTH RIGHT-OF-WAY LINE NORTH 17°52'01" EAST (NORTH 17°52'19" EAST PLAT) ON THE EAST LINE OF SAID LOT 2, A DISTANCE OF 291.89 FEET TO A 1/2" REBAR WITH LS-214F CAP MARKING AN ANGLE POINT IN SAID EAST LINE; THENCE NORTHEASTERLY AND NORTHWESTERLY ON A NON-TANGENT CURVE TO THE LEFT, ON SAID EAST LINE, HAVING AN INITIAL TANGENT BEARING OF NORTH 88°03'08" EAST, A RADIUS OF 59.00 FEET, A DELTA ANGLE OF 200°58'59" AND AN ARC LENGTH OF 206.96 FEET TO A 1/2" REBAR WITH LS-214F CAP MARKING AN ANGLE POINT IN SAID EAST LINE; THENCE NORTH 39°50'12" WEST (NORTH 39°49'54" WEST PLAT) ON SAID EAST LINE, A DISTANCE OF 58.31 FEET TO A 1/2" REBAR WITH LS-214F CAP MARKING AN ANGLE POINT IN SAID EAST LINE; THENCE NORTH 03°01'44" EAST (NORTH 03°02'02" EAST PLAT) ON SAID EAST LINE, A DISTANCE OF 6.01 FEET TO A 1/2" REBAR WITH LS-214F CAP MARKING THE SOUTHWEST CORNER OF A MEMORANDUM OF LEASE AS FILED IN BOOK 1724, AT PAGE 653 AND AN ASSIGNMENT OF LEASE AS FILED IN BOOK I-667, AT PAGE 867; THENCE DEPARTING SAID EAST LINE SOUTH 87°28'15" EAST ON THE SOUTH LINE OF SAID LEASE, A DISTANCE OF 513.75 FEET (510 FEET DEED) TO A 1/2" REBAR WITH LS-214F CAP MARKING THE SOUTHEAST CORNER OF SAID LEASE; THENCE NORTH 02°31'45" EAST ON THE EAST LINE OF SAID LEASE, A DISTANCE OF 450.62 FEET TO A 1/2" REBAR WITH LS-214F CAP MARKING A POINT ON THE SOUTH LINE OF COLBERN ROAD BEING AT STATION 39+38.89 AND OFFSET 64.00 FEET TO THE RIGHT; THENCE ALONG THE FOLLOWING TWELVE COURSES ARE ON THE SOUTH RIGHT-OF-WAY LINE OF SAID COLBERN ROAD AS ESTABLISHED BY COLBERN ROAD RECONSTRUCTION PROJECT PERFORMED BY GARVER, PROJECT NO. 17177041, CITY PROJECT NO. F.A.P. STP-3301(527), A RIGHT-OF-WAY DEED AS FILED IN INSTRUMENT NO. 2022E0086752, A RIGHT-OF-WAY DEED AS FILED IN INSTRUMENT NO. 2022E0086756, AND A RIGHT-OF-WAY DEED AS FILED IN INSTRUMENT NO. 2022E0086758) THENCE DEPARTING SAID EAST LINE NORTH 84°44'20" EAST, A DISTANCE OF 36.40 FEET TO A POINT ON SAID SOUTHEAST QUARTER BEING AT STATION 39+75.29 AND OFFSET 64.00 FEET TO THE RIGHT; THENCE CONTINUING NORTH 84°44'20" EAST, A DISTANCE OF 19.76 FEET TO A 1/2" REBAR WITH LS-214F CAP MARKING A POINT BEING AT STATION 39+95.05 AND OFFSET 64.00 FEET TO THE RIGHT; THENCE NORTH 61°03'35" WEST, A DISTANCE OF 16.53 FEET TO A 1/2" REBAR WITH LS-214F CAP MARKING A POINT BEING AT STATION 39+81.38 AND OFFSET 54.71 FEET TO THE RIGHT; THENCE NORTH 84°43'45" EAST, A DISTANCE OF 107.08 FEET TO A 1/2" REBAR WITH LS-214F CAP MARKING A POINT BEING AT STATION 40+88.46 AND OFFSET 54.69 FEET TO THE RIGHT; THENCE SOUTH 61°13'55" EAST, A DISTANCE OF 16.64 FEET TO A 1/2" REBAR WITH LS-214F CAP MARKING A POINT BEING AT STATION 41+02.25 AND OFFSET 64.00 FEET TO THE RIGHT; THENCE NORTH 84°44'20" EAST, A DISTANCE OF 41.62 FEET TO A 1/2" REBAR WITH LS-214F CAP MARKING A POINT BEING AT STATION 41+43.87 AND OFFSET 64.00 FEET TO THE RIGHT; THENCE SOUTH 05°15'40" EAST, A DISTANCE OF 6.00 FEET TO A 1/2" REBAR WITH LS-214F CAP MARKING A POINT BEING AT STATION 41+43.87 AND OFFSET 70.00 FEET TO THE RIGHT; THENCE NORTH 84°44'20" EAST, A DISTANCE OF 36.13 FEET TO A 1/2" REBAR WITH LS-214F CAP MARKING A POINT BEING AT STATION 41+80.00 AND OFFSET 70.00 FEET TO THE RIGHT; THENCE SOUTH 87°39'59" EAST, A DISTANCE OF 90.80 FEET TO A 1/2" REBAR WITH LS-214F CAP MARKING A POINT BEING AT STATION 42+70.00 AND OFFSET 82.00 FEET TO THE RIGHT; THENCE SOUTH 79°37'08" EAST, A DISTANCE OF 103.85 FEET TO A 1/2" REBAR WITH LS-214F CAP MARKING A POINT BEING AT STATION 43+70.00 AND OFFSET 110.00 FEET TO THE RIGHT; THENCE SOUTH 82°41'08" EAST, A DISTANCE OF 133.20 FEET TO A 1/2" REBAR WITH LS-214F CAP MARKING A POINT BEING AT STATION 45+00.00 AND OFFSET 139.00 FEET TO THE RIGHT; THENCE SOUTH 84°38'29" EAST, A DISTANCE OF 81.39 FEET TO A 1/2" REBAR WITH LS-214F CAP MARKING A POINT BEING AT STATION 45+80.00 AND OFFSET 154.00 FEET TO THE RIGHT; THENCE NORTH 84°44'20" EAST, A DISTANCE OF 93.33 FEET TO A 1/2" REBAR WITH LS-214F CAP MARKING A POINT BEING AT STATION 46+73.33 AND OFFSET 154.00 FEET TO THE RIGHT, SAID POINT BEING ON THE WEST LINE OF A DEED OF DEDICATION AS FILED IN INSTRUMENT NO. 2013E0084364; (THIS AND THE FOLLOWING SEVEN COURSES ARE ON THE WEST LINE OF SAID DEED OF DEDICATION) THENCE SOUTH 00°30'32" WEST (SOUTH 00°30'27" WEST DEED), A DISTANCE OF 342.57 FEET TO A 1/2" REBAR WITH LS-214F CAP; THENCE SOUTH 45°44'43" EAST (SOUTH 45°44'43" EAST DEED), A DISTANCE OF 13.15 FEET TO A 1/2" REBAR WITH LS-214F CAP; THENCE SOUTH 66°03'09" WEST (SOUTH 66°03'04" WEST DEED), A DISTANCE OF 131.49 FEET TO A 1/2" REBAR WITH LS-214F CAP; THENCE SOUTH 34°55'49" WEST (SOUTH 34°55'44" WEST DEED), A DISTANCE OF 89.13 FEET TO A 1/2" REBAR WITH LS-214F CAP; THENCE SOUTH 10°21'47" WEST (SOUTH 10°21'42" WEST DEED), A DISTANCE OF 207.37 FEET TO A 1/2" REBAR WITH LS-214F CAP; THENCE SOUTH 51°38'05" WEST (SOUTH 51°38'00" WEST DEED), A DISTANCE OF 278.15 FEET TO A 1/2" REBAR WITH LS-214F CAP; THENCE SOUTH 21°18'37" WEST (SOUTH 21°18'32" WEST DEED), A DISTANCE OF 318.83 FEET TO A 1/2" REBAR WITH LS-214F CAP; THENCE SOUTH 03°51'33" EAST (SOUTH 03°51'38" EAST DEED), A DISTANCE OF 165.85 FEET TO A 1/2" REBAR WITH LS-214F CAP; THENCE SOUTH 02°52'20" WEST (SOUTH 02°52'15" WEST DEED), A DISTANCE OF 239.64 FEET TO A 1/2" REBAR WITH LS-214F CAP MARKING A POINT ON THE SOUTH LINE OF SAID SOUTHEAST QUARTER; THENCE DEPARTING SAID WEST LINE NORTH 87°07'40" WEST (NORTH 87°07'45" WEST DEED) ON SAID SOUTH LINE, A DISTANCE OF 240.28 FEET TO THE POINT OF BEGINNING.

THE SOUTH RIGHT-OF-WAY LINE OF COLBERN ROAD PER THE DOCUMENTS ARE AMBIGUOUS IN THEIR DESCRIPTIONS, THE RESOLUTION WAS OBTAINED BY HOLDING THE STATION AND OFFSETS FROM SAID COLBERN ROAD RECONSTRUCTION PROJECT. THE CENTERLINE OF SAID COLBERN ROAD IS DESCRIBED AS FOLLOWS:

COMMENCING AT 5/8" REBAR IN CONCRETE MARKING THE SOUTHEAST CORNER SAID SOUTHWEST QUARTER; THENCE NORTH 03°02'34" EAST ON THE EAST LINE OF SAID SOUTHWEST QUARTER, A DISTANCE OF 1627.92 FEET TO THE INTERSECTION OF SAID EAST LINE AND SAID CENTERLINE BEING AT STATION 39+84.63; THENCE SOUTH 84°44'20" WEST, A DISTANCE OF 307.87 FEET TO A POINT OF TANGENCY BEING AT STATION 36+76.76 BEING THE POINT OF BEGINNING; THENCE NORTH 84°44'20" EAST ON SAID CENTERLINE, A DISTANCE OF 2927.20 FEET TO A POINT BEING AT STATION 66+03.96, SAID POINT BEING 1998.59 FEET NORTH 02°20'16" EAST OF A 5/8" REBAR IN CONCRETE MARKING THE SOUTHEAST CORNER OF SAID SOUTHEAST QUARTER, SAID POINT BEING THE POINT OF TERMINUS.

THIS DESCRIPTION WAS CREATED WITH THE BENEFIT OF GROUND SURVEY PERFORMED, DECEMBER 3, 2025 (KVE PROJECT C25S2528) AND CONTAINS 1,544,998 SQUARE FEET OR 35.469 ACRES MORE OR LESS, INCLUDING 45,044 SQUARE FEET OR 1.034 ACRES OF APPARENT EXISTING RIGHT-OF-WAY FOR WARD ROAD.

PLAT DEDICATION:

THE UNDERSIGNED PROPRIETORS OF THE HEREIN DESCRIBED TRACT OF LAND CAUSE THE SAME TO BE SUBDIVIDED IN THE MANNER SHOWN ON THE ACCOMPANYING PLAT, WHICH SUBDIVISION AND PLAT SHALL HEREAFTER BE KNOWN AS: **SUMMIT VILLAGE CORPORATE PARK, 2ND PLAT.**

UTILITY EASEMENT:

AN EASEMENT OR LICENSE IS HEREBY GRANTED TO THE CITY OF LEE'S SUMMIT, MISSOURI TO LOCATE, CONSTRUCT AND MAINTAIN, OR TO AUTHORIZE THE LOCATION, CONSTRUCTION AND MAINTENANCE OF SIDEWALKS, POLES, WIRES, ANCHORS, CONDUITS AND OR STRUCTURES FOR, PEDESTRIAN ACCESS, GAS, SANITARY SEWER, STORM SEWER, SURFACE DRAINAGE CHANNEL, ELECTRICITY, TELEPHONE, CABLE, TELEVISION, OR ANY OTHER NECESSARY PUBLIC UTILITY OR SERVICES, ANY OR ALL OF THEM, UPON, OVER, OR UNDER THOSE AREAS OUTLINED OR DESIGNATED UPON THIS PLAT AS "UTILITY EASEMENT" (U/E) OR WITHIN ANY STREET OR THOROUGHFARE DEDICATED TO PUBLIC USE ON THIS PLAT. GRANTORS, ON BEHALF OF THEMSELVES, THEIR HEIRS, THEIR ASSIGNS AND SUCCESSORS IN INTEREST, HEREBY WAIVES, TO THE FULLEST EXTENT ALLOWED BY LAW, INCLUDING, WITHOUT LIMITATION, SECTION 527.188 RSMo. (2006), ANY RIGHT TO REQUEST RESTORATION OF RIGHTS PREVIOUSLY TRANSFERRED AND VACATION OF THE EASEMENT HEREIN GRANTED.

DRAINAGE EASEMENT:

ALL STORM WATER CONVEYANCE, RETENTION, OR DETENTION FACILITIES SHALL BE OWNED AND MAINTAINED BY THE OWNER OF LOT 1. THESE STORMWATER DETENTION FACILITIES SHALL BE INSPECTED BY THE OWNER ON THE FREQUENCY SPECIFIED IN THE CURRENT CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL, TO ASSURE THAT ALL INLET AND OUTLET STRUCTURES ARE FULLY-FUNCTIONAL, THE DETENTION BASIN HAS FULL STORAGE CAPACITY AND ALL LANDSCAPING, VEGETATION AND STRUCTURAL IMPROVEMENTS ARE BEING MAINTAINED IN ACCORDANCE WITH THE CURRENT CITY OF LEE'S SUMMIT PROPERTY MAINTENANCE CODE.

SANITARY SEWER EASEMENT:

A PERMANENT AND EXCLUSIVE EASEMENT IS HEREBY GRANTED TO THE CITY OF LEE'S SUMMIT TO PATROL, ALTER, CONDUCT SURVEYS, CONSTRUCT, ERECT, INSPECT, INSTALL, MAINTAIN, OPERATE, REBUILD, RECONSTRUCT, RELOCATE, REMOVE, RENEW, REPAIR AND REPLACE SEWER PIPE LINES, MANHOLES, AND APPURTENANCES THERETO, INCLUDING THE RIGHT AND PRIVILEGE AT ANY TIME AND FROM TIME TO TIME TO ENTER UPON, OVER, UNDER, THROUGH, ACROSS, IN, AND UPON THOSE AREAS OUTLINED OR DESIGNATED UPON THIS PLAT AS "SANITARY SEWER EASEMENT" ("SS/E" OR "S.S.E.") OR WITHIN ANY STREET OR THOROUGHFARE DEDICATED TO THE PUBLIC USE ON THIS PLAT. GRANTOR, ITS SUCCESSORS AND ASSIGNS, SHALL NOT OBSTRUCT OR INTERFERE WITH GRANTEE'S USE AND ENJOYMENT OF THE EASEMENT GRANTED HEREUNDER BY ANY MEANS, INCLUDING, WITHOUT LIMITATION, OBSTRUCTING OR INTERFERING WITH THE OPERATION, MAINTENANCE, OR ACCESS TO SUCH PIPE LINES, MANHOLES, AND APPURTENANCES THERETO, BY ERECTING, OR CAUSING OR ALLOWING TO BE ERECTED, ANY BUILDING, STRUCTURE, OR OTHER IMPROVEMENTS ON SAID EASEMENT. GRANTOR, ITS SUCCESSORS AND ASSIGNS, TO THE FULLEST EXTENT ALLOWED BY LAW, INCLUDING, WITHOUT LIMITATION, SECTION 527.188, RSMO., HEREBY WAIVES ANY RIGHT TO REQUEST VACATION OF THE EASEMENTS HEREIN GRANTED. ALL EASEMENTS SHALL, AT ALL TIMES, BE DEEMED TO BE AND SHALL BE A CONTINUING COVENANT RUNNING WITH THE LAND AND SHALL BE BINDING UPON THE SUCCESSORS AND ASSIGNS OF THE GRANTOR.

STREAM BUFFER EASEMENT:

IN THE AREAS DESIGNATED AS "STREAM BUFFER EASEMENT" THERE IS HEREBY GRANTED TO THE CITY AN EASEMENT FOR THE PURPOSE OF PROHIBITING ANY DEVELOPMENT OF ANY KIND AND PROHIBITING THE ERECTION, CONSTRUCTION, PLACEMENT OR MAINTENANCE OF ANY STRUCTURES UPON SUCH LAND, AS THE TERM "STRUCTURE" SHALL BE DEFINED IN THE CITY'S UNIFIED DEVELOPMENT ORDINANCE IN CHAPTER 33 OF THE CITY CODE OF ORDINANCES, AND PROHIBITING ANY CHANGE IN THE GRADE AND ELEVATION OF SUCH LAND, AND PROHIBITING THE ALTERATION OF THE NATURAL COURSE AND FLOW OF THE WATER IN THE STREAM, AND PROHIBITING THE DAMMING OR STOPPAGE OF THE WATER IN THE STREAM, AND TO REQUIRE THE OWNERS OF SUCH LAND TO KEEP AND MAINTAIN SUCH LAND IN ITS NATURAL VEGETATIVE STATE AND TO TEND, MAINTAIN AND MOW SUCH LAND AS REQUIRED BY THE CITY'S PROPERTY MAINTENANCE CODE IN CHAPTER 16 OF THE CITY CODE OF ORDINANCES, WHICH EASEMENT SHALL CONSTITUTE A SERVITUDE UPON THE LAND SO ENCUMBERED AND WHICH SHALL RUN WITH THE LAND IN PERPETUITY AND BE BINDING UPON THE LAND OWNERS, THEIR SUCCESSORS AND ASSIGNS AND ALL OTHER PARTIES CLAIMING UNDER THEM, AND SHALL REMAIN IN FULL FORCE AND EFFECT FOREVER. A WAIVER OR MODIFICATION TO THIS STREAM BUFFER EASEMENT, OR A RELEASE OF THIS STREAM BUFFER EASEMENT, MAY BE GRANTED BY THE CITY ENGINEER ON BEHALF OF THE CITY AS TO ANY OR ALL AREAS SO DESIGNATED ON THIS PLAT, WHICH WAIVER, MODIFICATION OR RELEASE SHALL BE RECORDED IN THE LAND RECORDS FOR JACKSON COUNTY.

SURVEYOR'S NOTES:

1. THE FOLLOWING STANDARD MONUMENTATION WILL BE SET UPON COMPLETION OF THE CONSTRUCTION ACTIVITIES WITHIN THIS PLAT OR WITHIN 12 MONTHS FOLLOWING THE RECORDING OF THIS PLAT, WHICH EVER IS EARLIER.

SEMI-PERMANENT MONUMENTS: 1/2" REBAR WITH PLASTIC CAP STAMPED "LS 214F" SET AT ALL LOT CORNERS AND AT OTHER LOCATIONS MARKED BY MONUMENT SET SYMBOL IN LEGEND. CURBS ARE NOTCHED AT THE PROLONGATION OF EACH INTERIOR LOT LINE.

2. THE FOLLOWING PROPERTY IS CLASSIFIED AS URBAN BY 20 CSR 2030-16.030 AND 20 CSR 2030-16.040.

3. THERE IS NO PHYSICAL EVIDENCE OF OIL OR GAS WELLS ON THE SUBJECT PROPERTY. THERE IS NO RECORD OF A PERMITTED OIL OR GAS WELL ON THE MDNR MISSOURI GEOLOGICAL SURVEY.

REFERENCE PLATS:

1. BLUE PARKWAY BUSINESS CENTER – FIRST PLAT – BOOK I52–PAGE:6. DATE RECORDED: AUGUST 4, 1992.
2. BLUE PARKWAY BUSINESS CENTER – SECOND PLAT – LOTS 1 THROUGH 3 – BOOK I64–PAGE:25. DATE RECORDED: DECEMBER 30, 1998
3. SUMMIT VILLAGE CORPORATE PARK, LOTS 1 AND 2 – BOOK I171–PAGE:42. DATE RECORDED: JULY 19, 2017.

REFERENCE DEEDS:

1. MISSOURI SPECIAL WARRANTY DEED (INST. NO. 2013E0047288)
2. MEMORANDUM OF LEASE (BK. 1724, PG. 653)
3. ASSIGNMENT OF LEASE (BK. I–667, PG. 867)
4. DEED OF DEDICATION (INST. NO. 2013E0084364)

LOT 1 BLUE PARKWAY BUSINESS CENTER – SECOND PLAT (PLAT BK. I–64, PG. 25)
LOT 2 BLUE PARKWAY BUSINESS CENTER – SECOND PLAT (PLAT BK. I–64, PG. 25)
LOT 3 BLUE PARKWAY BUSINESS CENTER – SECOND PLAT (PLAT BK. I–64, PG. 25)

HORIZONTAL AND VERTICAL DATUM:

UNLESS OTHERWISE NOTED THE COORDINATES SHOWN HEREON ARE GROUND COORDINATES BASED ON THE MISSOURI STATE PLANE, WEST ZONE (NAD 1983/2003) (NAVD 1988)
CAF: 0.99999276
1 METER = 3.28083333 U.S. SURVEY FEET
GROUND COORDINATES X COMBINED ADJUSTMENT FACTOR (CAF) = GRID COORDINATES SCALED AROUND 0,0

JA-98 (PID–095098)

NORTHING:	310381.520 (GRID)(METERS)	1018317.41 (GROUND)(U.S. SURVEY FEET)
EASTING:	856629.081 (GRID)(METERS)	2810477.61 (GROUND)(U.S. SURVEY FEET)
ELEV =	234.59 (METERS)	799.18 (U.S. SURVEY FEET)

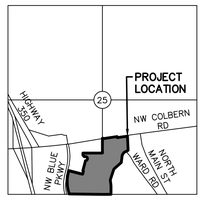
FLOOD STATEMENT:

THE SUBJECT PROPERTY IS SHOWN TO BE LOCATED IN ZONE "X" (AREA OF MINIMAL FLOOD HAZARD), AS DEPICTED ON THE FLOOD INSURANCE RATE MAP NO. 29095C0409G, MAP REVISED JANUARY 20, 2017, CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI. LOCATION DETERMINED BY A SCALED GRAPHICAL PLOT OF THE FLOOD INSURANCE RATE MAP.

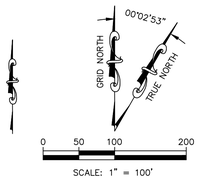
BUILDING LINES:

BUILDING LINES (B/L) OR SETBACK LINES ARE HEREBY ESTABLISHED AS SHOWN ON THE ACCO

HAZEL GROVE ELEMENTARY SCHOOL
SUMMIT VILLAGE CORPORATE PARK, 2ND PLAT
PROPOSED IMPROVEMENT AND TRAFFIC MANAGEMENT PLAN
LEE'S SUMMIT, MO 64086
SECTION 25 - TOWNSHIP 48 NORTH - RANGE 32 WEST



VICINITY MAP
SEC 25 - TWP 48N - RNG 32W
NOT TO SCALE



SCALE: 1" = 100'
CONVERGENCE ANGLE
ESTABLISHED FROM JA-98.

PREPARED BY:
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14700 W 114TH TERR.
LENEXA, KANSAS 66215
PHONE: (913) 894-5150
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DEVELOPER:
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502 SE TRANSPORT RD,
LEE'S SUMMIT, MO 64081
PHONE: (816) 986-2421
CONTACT: KYLE GORRELL
EMAIL: kyle.gorrell@sr7.net



HAZEL GROVE ELEMENTARY SCHOOL
PLANNED ENROLLMENT: 342 STUDENTS
BUILDING CAPACITY: 552 STUDENTS
PROPOSED STAFF: 50 FULL TIME/PART TIME
CURRENT BUS RIDERSHIP (STUDENTS): 226 OF 342 STUDENTS (66%)
BUS CAPACITY: 10 FULL SIZE BUSES
EXISTING HAZEL GROVE ELEMENTARY SCHOOL SERVICED BY 8 FULL SIZE BUSES

RECOMMENDED PARKING FOR CAPACITY: 110-120 STALLS (5 ADA STALLS)
RECOMMENDATION BASED ON ITE PARKING GENERATION MANUAL, 4TH EDITION. LAND USE IS ITE CODE 520.
AVERAGE PEAK PERIOD PARKING DEMAND: 0.17 VEHICLES PER STUDENT - 94 STALLS
85TH PERCENTILE: 0.21 VEHICLES PER STUDENT - 116 STALLS

PROVIDED PARKING: 120 STALLS FOR STAFF/VISITORS (5 ADA)

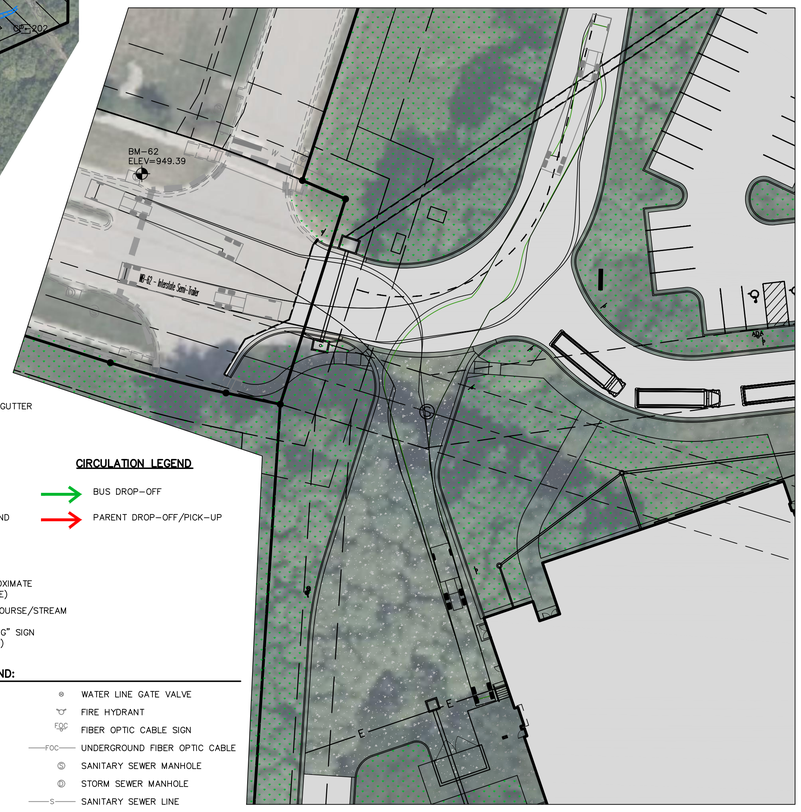
CAR RIDERSHIP (STUDENTS):

AM ARRIVAL:
ESTIMATED RATIO OF 18% VEHICLES TO ENROLLMENT: 62 VEHICLES DURING MORNING ARRIVAL
PEAK 15 MINUTE ARRIVAL RATIO OF 12% VEHICLES TO ENROLLMENT: 41 VEHICLES
PEAK 5 MINUTE ARRIVAL RATIO OF 8% VEHICLES TO ENROLLMENT: 28 VEHICLES
ANTICIPATED QUEUE AT ARRIVAL: 7% VEHICLES TO ENROLLMENT: 24 VEHICLES

PM DISMISSAL:
ESTIMATED RATIO OF 14% OF VEHICLES TO ENROLLMENT: 49 VEHICLES DURING AFTERNOON DISMISSAL
ESTIMATED 13% VEHICLES TO ENROLLMENT STANDING QUEUE PRIOR TO DISMISSAL: 44 VEHICLES
RECOMMENDED CAPACITY: 53 VEHICLES BETWEEN PRIMARY CAR RIDER LINE AND EXCESS PARKING
80± VEHICLES AT BUILDING CAPACITY

PEDESTRIAN (STUDENTS)
NEGLIGIBLE STUDENT POPULATION DUE TO PROXIMITY TO RESIDENTIAL DENSITY WITHIN ½ MILE OF PROPOSED SCHOOL.

* DELIVERIES AND RECEIVING SUPPORTS SINGLE UNIT BOX TRUCKS (SU-40) AND TRUCK AND TRAILER (WB-62) WITH ACCESS TO/FROM NW ROSEMARY COURT.



DOCK AND SERVICE AREA DETAIL
SCALE: 1" = 30'

PROPOSED LEGEND
- CONCRETE CURB AND GUTTER
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- ASPHALT PAVING
- GRAVEL PAVING
- SOFT PLAY PLAYGROUND
- TURF
- STORM WATER MANAGEMENT BASIN
- PROJECT AREA (APPROXIMATE LIMITS OF DISTURBANCE)
- LIMITS OF DRAINAGE COURSE/STREAM
- (A) "FIRE LANE NO PARKING" SIGN (SEE NOTE THIS SHEET)

CIRCULATION LEGEND
- BUS DROP-OFF
- PARENT DROP-OFF/PICK-UP

LEGEND:
- MONUMENT FOUND ORIGIN UNCERTAIN UNLESS OTHERWISE NOTED
- CONTROL POINT
- SECTION CORNER
- 1/2"x24" REBAR W/LS 2147 CAP SET (UNLESS NOTED OTHERWISE)
- BENCHMARK
- (2) OU — OVERHEAD UTILITY LINE (# OF LINES)
- P — PULL BOX
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ LIGHT
- UTILITY POLE W/ TRANSFORMER
- GUY ANCHOR
- G — UNDERGROUND GAS
- GTS — GAS CATHODIC PROTECTION TESTING STATION
- W — WATER LINE
- WATER LINE GATE VALVE
- FIRE HYDRANT
- FOC — FIBER OPTIC CABLE SIGN
- FOC — UNDERGROUND FIBER OPTIC CABLE
- S — SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- S — SANITARY SEWER LINE
- CMP — CORRUGATED METAL PIPE
- RCB — REINFORCED CONCRETE BOX
- PVC — POLYVINYL CHLORIDE PIPE
- HDPE — HIGH DENSITY POLYETHYLENE
- STREET/TRAFFIC SIGN
- B/B — BACK TO BACK OF CURB MEASUREMENT
- E/E — EDGE TO EDGE OF ASPHALT
- DECIDUOUS TREE
- TREE LINE
- WIRE FENCE
- 939 — EXISTING GRADE 1' CONTOUR
- 950 — EXISTING GRADE 5' CONTOUR

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ACCESS:
ACCESS TO SUBJECT PROPERTY IS AVAILABLE FROM ROSEMARY COURT AND COLBERN ROAD. ACCESS TO NW COLBERN ROAD IS PREPARED TO BE RIGHT IN/RIGHT OUT. REFER TO THE PROPOSED IMPROVEMENT AND TRAFFIC MANAGEMENT PLAN FOR ADDITIONAL INFORMATION.

SAFETY NOTICE TO CONTRACTOR
IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

NOTE:
CURB ALONG DROP OFF LOOPS AND WEST OF BUILDING TO BE PAINTED RED AND MARKED "FIRE LANE - NO PARKING". SIGNAGE WILL BE SUPPLEMENTED AS APPROPRIATE.

Know what's below. Call before you dig. 811

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CFN: 2528TRAF DWN: NJN
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lx@kveng.com | www.kveng.com
KAW VALLEY ENGINEERING
KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/27

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DAVID D. WOOD

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MO #2011037427

Cert. of Authority
#000842
KAW VALLEY ENGINEERING, INC.

STATE OF MISSOURI DAVID D. WOOD NUMBER PE-2011037427 PROFESSIONAL ENGINEER
4/14/26

HAZEL GROVE ELEMENTARY SCHOOL

NW ROSEMARY COURT
LEE'S SUMMIT, MO 64086

Project Phase
PRELIMINARY DEVELOPMENT PACKAGE

Project Number
26-107

Issue Date
02.18.2026

Revision No.	Description	Date Issued
1	City Comments	4.14.2026

Area Plan

Sheet Name
PROPOSED IMPROVEMENT AND TRAFFIC MANAGEMENT PLAN

Sheet Number
C0.5

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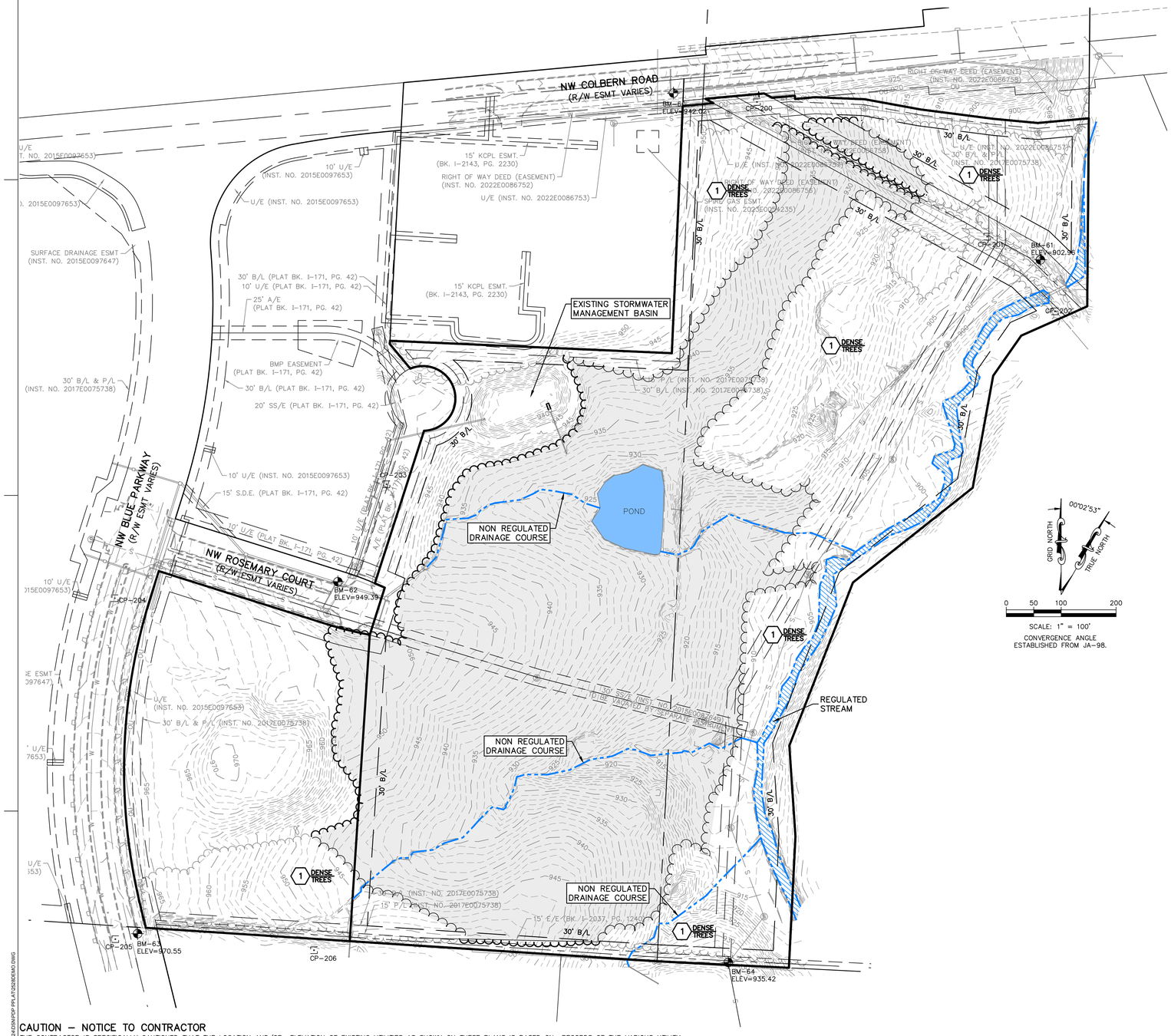

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HORIZONTAL AND VERTICAL DATUM:
REFERENCE PRELIMINARY DEVELOPMENT PLAN (C0.0)

PROJECT BENCH MARKS:
REFERENCE PRELIMINARY DEVELOPMENT PLAN (C0.0)

PROJECT CONTROL:
REFERENCE PRELIMINARY DEVELOPMENT PLAN (C0.0)

1 DEMOLITION
1 TO REMAIN.

EROSION & PROPOSED IMPROVEMENTS LEGEND:

INDICATES TREE/SHRUB TO BE REMOVED. TREES OVER 9" DBH TO BE FELLED PRIOR TO MARCH 31, 2026. (±665,480 SF)

EXISTING POND TO BE DRAINED AND EMBANKMENT BREACHED (±16,183 SF)

LIMITS OF DRAINAGE COURSE/STREAM

811 Know what's below. Call before you dig.

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CFN: 2528DEMO DWN: NJN
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STATE OF MISSOURI DAVID D. WOOD NUMBER PE-2011037427 PROFESSIONAL ENGINEER 4/14/26

HAZEL GROVE ELEMENTARY SCHOOL

NW ROSEMARY COURT
LEE'S SUMMIT, MO 64086

Project Phase
PRELIMINARY DEVELOPMENT PACKAGE

Project Number
26-107

Issue Date
02.18.2026

Revision No.	Description	Date Issued
1	City Comments	4.14.2026

Area Plan

Sheet Name
EXISTING CONDITIONS AND TREE CLEARING PLAN

Sheet Number
C0.6

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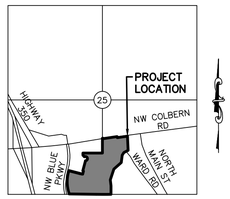
HAZEL GROVE ELEMENTARY SCHOOL
SUMMIT VILLAGE CORPORATE PARK, 2ND PLAT
SITE PLAN
LEE'S SUMMIT, MO 64086
SECTION 25 - TOWNSHIP 48 NORTH - RANGE 32 WEST



VICINITY MAP
SEC 25 - TWP 48N - RNG 32W
NOT TO SCALE

PREPARED BY:
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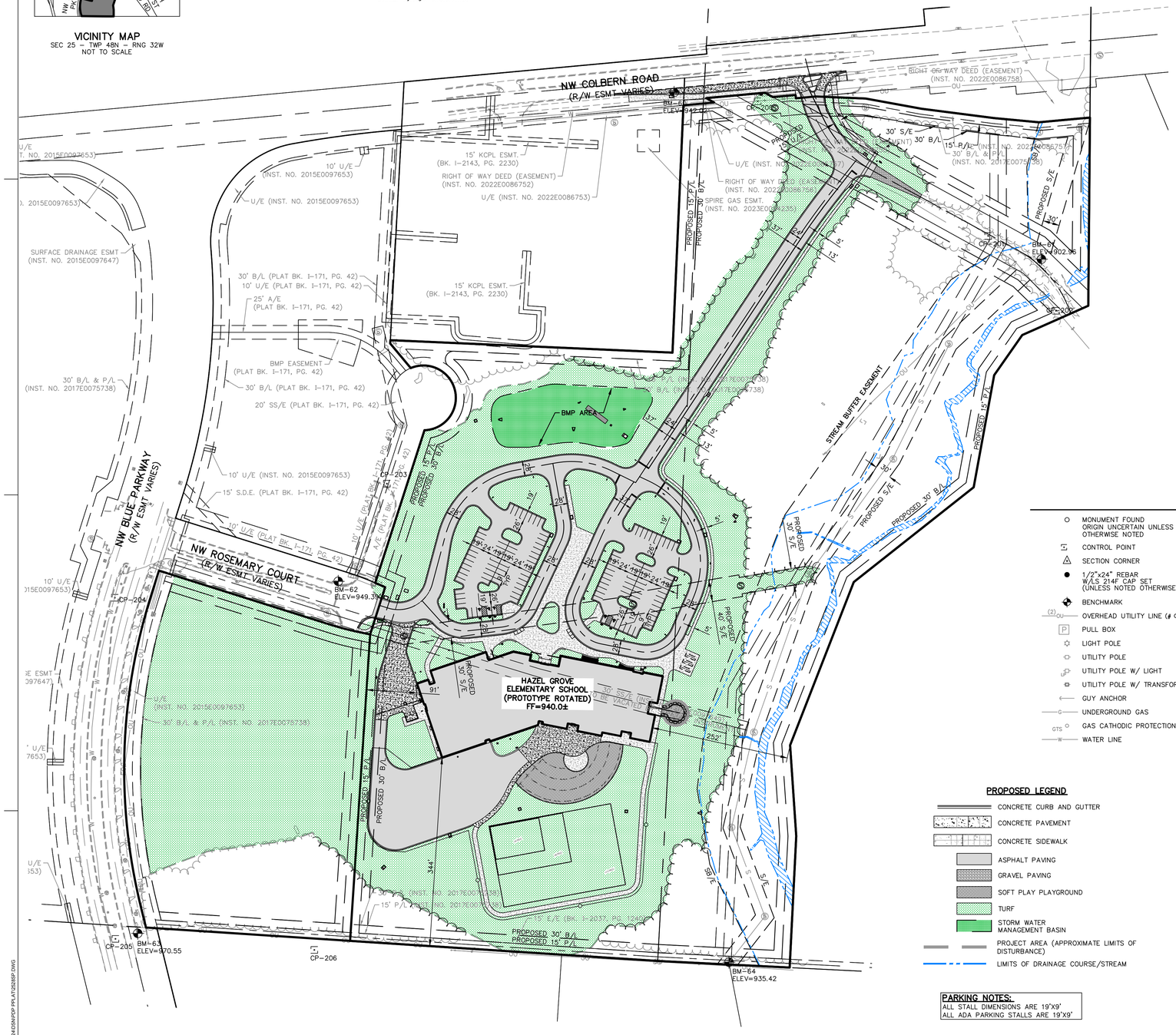
UNITY VILLAGE, MO 64065
PHONE: 816-251-3511
CONTACT: GUY SWANSON
EMAIL: swansongs@unityonline.org

DEVELOPER:
LEE'S SUMMIT SCHOOL DISTRICT
502 SE TRANSPORT RD,
LEE'S SUMMIT, MO 64081
PHONE: (816) 986-2421
CONTACT: KYLE GORRELL
EMAIL: kyle.gorrell@lsr7.net



LEGEND:

MONUMENT FOUND ORIGIN UNCERTAIN UNLESS OTHERWISE NOTED	WATER LINE GATE VALVE
CONTROL POINT	FIRE HYDRANT
SECTION CORNER	FOC — UNDERGROUND FIBER OPTIC CABLE
1/2"x24" REBAR W/LS 214F CAP SET (UNLESS NOTED OTHERWISE)	SANITARY SEWER MANHOLE
BENCHMARK	STORM SEWER MANHOLE
(2) OU — OVERHEAD UTILITY LINE (# OF LINES)	S — SANITARY SEWER LINE
PULL BOX	CMP — CORRUGATED METAL PIPE
LIGHT POLE	RCB — REINFORCED CONCRETE BOX
UTILITY POLE	PVC — POLYVINYL CHLORIDE PIPE
UTILITY POLE W/ LIGHT	HDPE — HIGH DENSITY POLYETHYLENE
UTILITY POLE W/ TRANSFORMER	STREET/TRAFFIC SIGN
GUY ANCHOR	B/B — BACK TO BACK OF CURB MEASUREMENT
G — UNDERGROUND GAS	E/E — EDGE TO EDGE OF ASPHALT
GTS — GAS CATHODIC PROTECTION TESTING STATION	DECIDUOUS TREE
W — WATER LINE	TREE LINE
	WIRE FENCE
	939 — EXISTING GRADE 1' CONTOUR
	950 — EXISTING GRADE 5' CONTOUR

PROPOSED LEGEND

- CONCRETE CURB AND GUTTER
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- ASPHALT PAVING
- GRAVEL PAVING
- SOFT PLAY PLAYGROUND
- TURF
- STORM WATER MANAGEMENT BASIN
- PROJECT AREA (APPROXIMATE LIMITS OF DISTURBANCE)
- LIMITS OF DRAINAGE COURSE/STREAM

PARKING NOTES:
ALL STALL DIMENSIONS ARE 19'X9'
ALL ADA PARKING STALLS ARE 19'X9'

NOTE:
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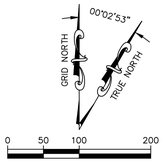

0 50 100 200
SCALE: 1" = 100'
CONVERGENCE ANGLE ESTABLISHED FROM JA-98.

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architects building relationships

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4/14/26

HAZEL GROVE ELEMENTARY SCHOOL

NW ROSEMARY COURT
LEE'S SUMMIT, MO 64086

Project Phase
PRELIMINARY DEVELOPMENT PACKAGE

Project Number
26-107

Issue Date
02.18.2026

Revision No.	Description	Date Issued
1	City Comments	4.14.2026

Area Plan

Sheet Name
SITE PLAN

Sheet Number
C1.0

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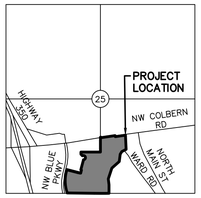
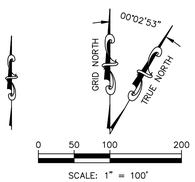
HAZEL GROVE ELEMENTARY SCHOOL
SUMMIT VILLAGE CORPORATE PARK, 2ND PLAT
GRADING AND STORM WATER MANAGEMENT PLAN
LEE'S SUMMIT, MO 64086
SECTION 25 - TOWNSHIP 48 NORTH - RANGE 32 WEST
UNNAMED TRIBUTARY OF LITTLE CEDAR CREEK
DISTURBED AREA = 20.531 Ac



VICINITY MAP
SEC 25 - TWP 48N - RNG 32W
NOT TO SCALE



SCALE: 1" = 100'

CONVERGENCE ANGLE
ESTABLISHED FROM JA-98.

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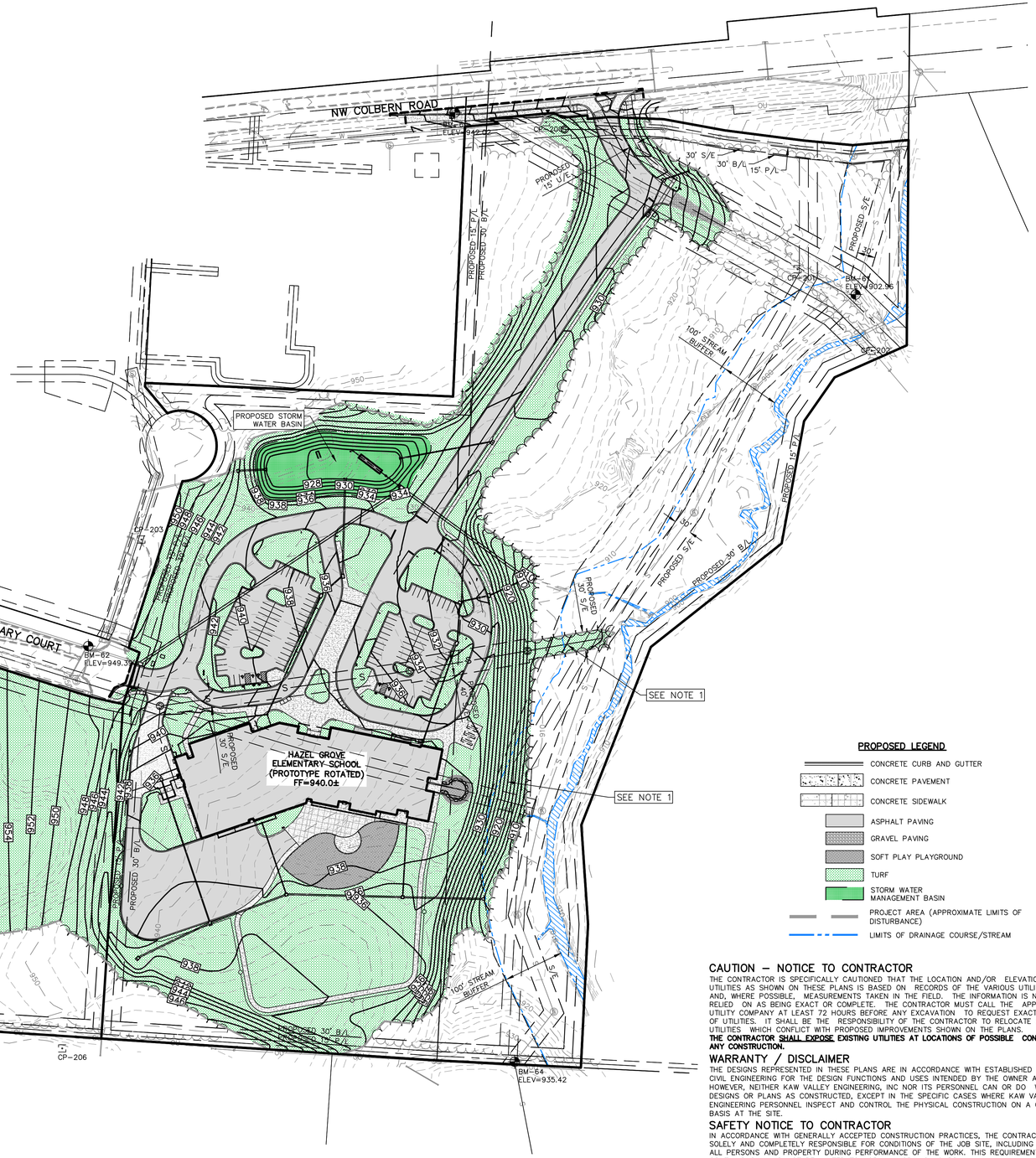
NW COLBERN ROAD
NW BLUE PARKWAY
NW ROSEMARY COURT
HAZEL GROVE ELEMENTARY SCHOOL (PROTOTYPE ROTATED) FF=940.0±
PROPOSED STORM WATER BASIN
100' STREAM BUFFER
SEE NOTE 1
SEE NOTE 1
BM-62 ELEV=949.37
BM-63 ELEV=970.55
BM-64 ELEV=935.42
BM-81 ELEV=902.36
CP-203
CP-204
CP-205
CP-206
CP-207
CP-208
PROPOSED 15' U/E
PROPOSED 15' P/L
PROPOSED 30' B/L
PROPOSED 30' S/E
PROPOSED 15' S/E
PROPOSED 15' P/L
PROPOSED 30' B/L
PROPOSED 30' S/E
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PROPOSED 15' P/L
PROPOSED 30' S/E
PROPOSED 30' B/L
PROPOSED 15' P/L
PROPOSED 30' B/L
PROPOSED 15

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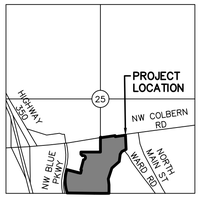

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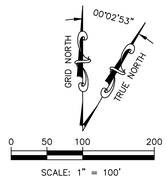
SEC 25 – TWP 48N – RNG 32W
NOT TO SCALE

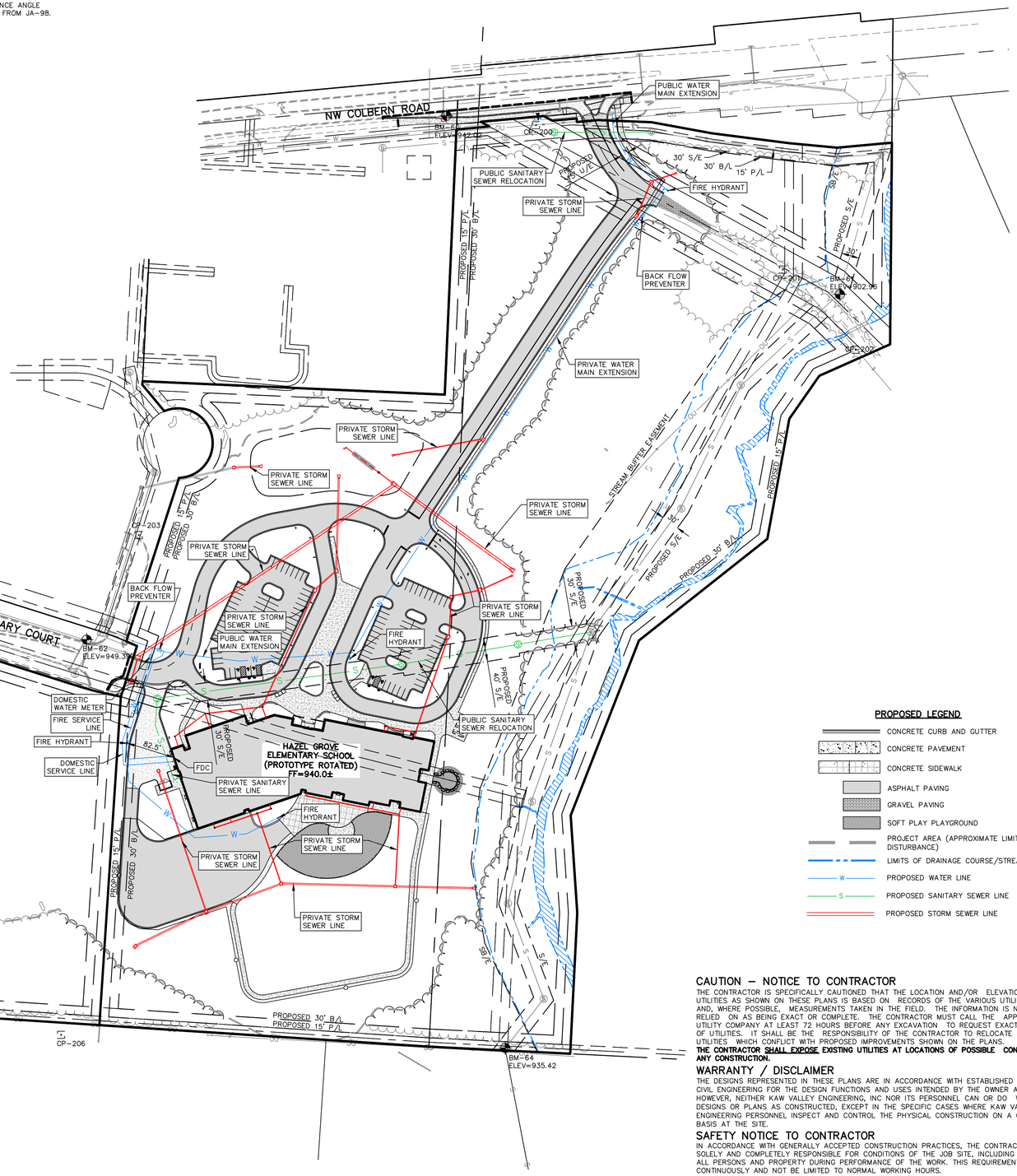


SCALE: 1" = 100'
CONVERGENCE ANGLE
ESTABLISHED FROM JA-98.

PREPARED BY:
KAW VALLEY ENGINEERING, INC.
14700 W 114TH TERR.
LENEXA, KANSAS 66215
PHONE: (913) 894-5150
CONTACT: DAVID WOOD
EMAIL: wood@kveng.com

DEVELOPER:
LEE'S SUMMIT SCHOOL DISTRICT
502 SE TRANSPORT RD,
LEE'S SUMMIT, MO 64081
PHONE: (816) 986-2421
CONTACT: KYLE GORRELL
EMAIL: kyle.gorrell@lsr7.net

OWNER:
UNITY REALTY, LLC.
1901 NW BLUE PARKWAY,
UNITY VILLAGE, MO 64065
PHONE: 816-251-3511
CONTACT: GUY SWANSON
EMAIL: swansong5@unityonline.org



PROPOSED LEGEND

- CONCRETE CURB AND GUTTER
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- ASPHALT PAVING
- GRAVEL PAVING
- SOFT PLAY PLAYGROUND
- PROJECT AREA (APPROXIMATE LIMITS OF DISTURBANCE)
- LIMITS OF DRAINAGE COURSE/STREAM
- W — PROPOSED WATER LINE
- S — PROPOSED SANITARY SEWER LINE
- PROPOSED STORM SEWER LINE

LEGEND:

○	MONUMENT FOUND ORIGIN UNCERTAIN UNLESS OTHERWISE NOTED	⊗	WATER LINE GATE VALVE
⊡	CONTROL POINT	⛽	FIRE HYDRANT
△	SECTION CORNER	FOC	FIBER OPTIC CABLE SIGN
●	1/2"x24" REBAR W/LS 214F CAP SET (UNLESS NOTED OTHERWISE)	—FOC—	UNDERGROUND FIBER OPTIC CABLE
◆	BENCHMARK	Ⓢ	SANITARY SEWER MANHOLE
(2)—OU—	OVERHEAD UTILITY LINE (# OF LINES)	Ⓢ	STORM SEWER MANHOLE
P	PULL BOX	—S—	SANITARY SEWER LINE
☼	LIGHT POLE	CMP	CORRUGATED METAL PIPE
⊟	UTILITY POLE	RCB	REINFORCED CONCRETE BOX
⊟	UTILITY POLE W/ LIGHT	PVC	POLYVINYL CHLORIDE PIPE
⊟	UTILITY POLE W/ TRANSFORMER	HDPE	HIGH DENSITY POLYETHYLENE
⟵	GUY ANCHOR	⚑	STREET/TRAFFIC SIGN
—G—	UNDERGROUND GAS	B/B	BACK TO BACK OF CURB MEASUREMENT
GTS ○	GAS CATHODIC PROTECTION TESTING STATION	E/E	EDGE TO EDGE OF ASPHALT
—W—	WATER LINE		DECIDUOUS TREE
			TREE LINE
		—X—	WIRE FENCE
		939	EXISTING GRADE 1' CONTOUR
		950	EXISTING GRADE 5' CONTOUR

UTILITY CONTACTS:

SANITARY SEWER:
WATER UTILITIES SERVICE CENTER
1200 SE HAMBLEN ROAD
LEE'S SUMMIT, MO 64081
PHONE: (816) 969-1900

WATER:
WATER UTILITIES SERVICE CENTER
1200 SE HAMBLEN ROAD
LEE'S SUMMIT, MO 64081
PHONE: (816) 969-1900

GAS:
SPIRE GAS
PHONE: 800-585-1234

COMMUNICATION:
TELECOMM
AT&T – (800) 464-7928
GOOGLE FIBER – (877) 454-6959

ELECTRICAL:
EVERGY
PHONE: (888) 471-5275

LIQUID WASTES:
SANITARY SEWER IS PROVIDED BY THE CITY OF LEE'S SUMMIT. RELOCATION OF THE PUBLIC SANITARY SEWER FROM ROSEMARY COURT TO THE INTERCEPTOR IS REQUIRED. SEE PLAN FOR ILLUSTRATION. A SERVICE LINE WILL BE ROUTED TO A PROPOSED MANHOLE ON THE RELOCATED MAIN.

WATER SERVICE:
DOMESTIC WATER AND WATER FOR FIRE PROTECTION ARE PROVIDED BY THE CITY OF LEE'S SUMMIT.
ESTIMATED DOMESTIC FLOW DEMAND IS 164 GPM.

CAUTION – NOTICE TO CONTRACTOR
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
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811 Know what's below. Call before you dig.

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CFN: 2528UP DWN: NJN
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lx@kveng.com | www.kveng.com
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KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/27

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816.979.3500

Civil
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LENEXA, KS 66214
913.742.5000

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License
MO #2011037427
Cert. of Authority
#000842
KAW VALLEY ENGINEERING, INC.

STATE OF MISSOURI DAVID D. WOOD NUMBER PE-2011037427 PROFESSIONAL ENGINEER
4/14/26

HAZEL GROVE ELEMENTARY SCHOOL

NW ROSEMARY COURT
LEE'S SUMMIT, MO 64086

Project Phase
PRELIMINARY DEVELOPMENT PACKAGE
Project Number
26-107
Issue Date
02.18.2026

Revision No.	Description	Date Issued
1	City Comments	4.14.2026

Area Plan

Sheet Name
UTILITY PLAN

Sheet Number
C5.0

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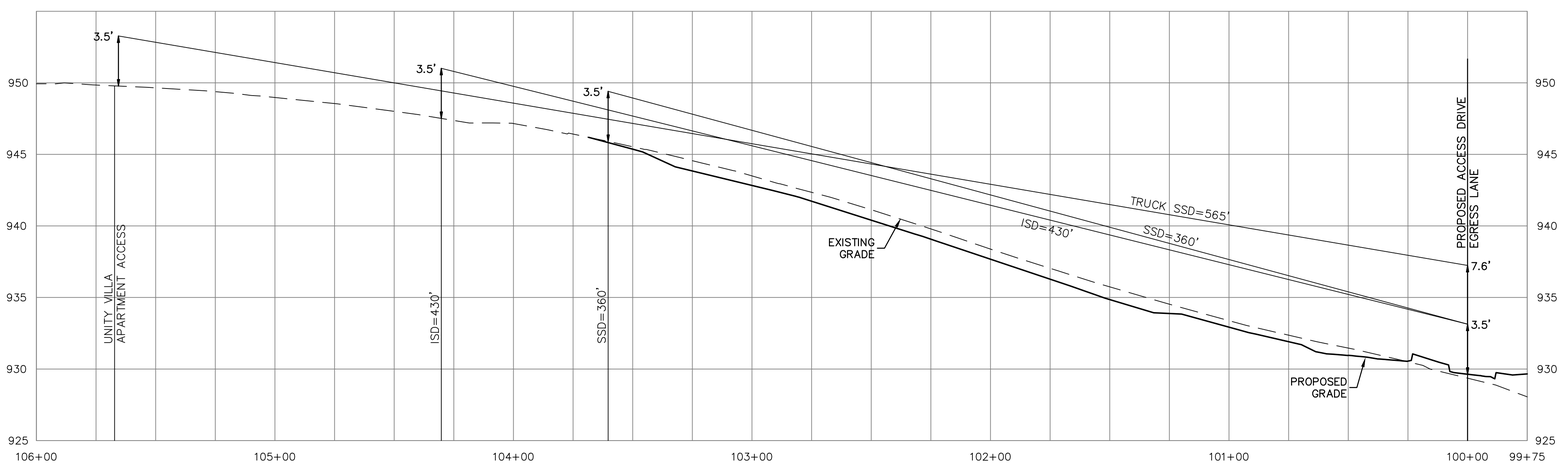
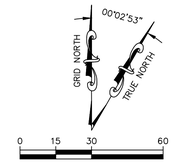
NW COLBERN ROAD ACCESS
RIGHT IN/RIGHT OUT



NW COLBERN ROAD SIGHT LINES
DESIGN SPEED 45 MPH



SCALE: 1" = 30'
VERTICAL SCALE: 1" = 5'
CONVERGENCE ANGLE ESTABLISHED FROM JA-98.

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CFN: 2528TMP DWN: NJN
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STATE OF MISSOURI · DAVID D. WOOD · NUMBER PE-2011037427 · PROFESSIONAL ENGINEER

HAZEL GROVE ELEMENTARY SCHOOL

NW ROSEMARY COURT
LEE'S SUMMIT, MO 64086

Project Phase
PRELIMINARY DEVELOPMENT PACKAGE

Project Number
26-107

Issue Date
02.18.2026

Revision No.	Description	Date Issued

Area Plan

Sheet Name
NW COLBERN ROAD ACCESS EXHIBIT

Sheet Number
C9.0

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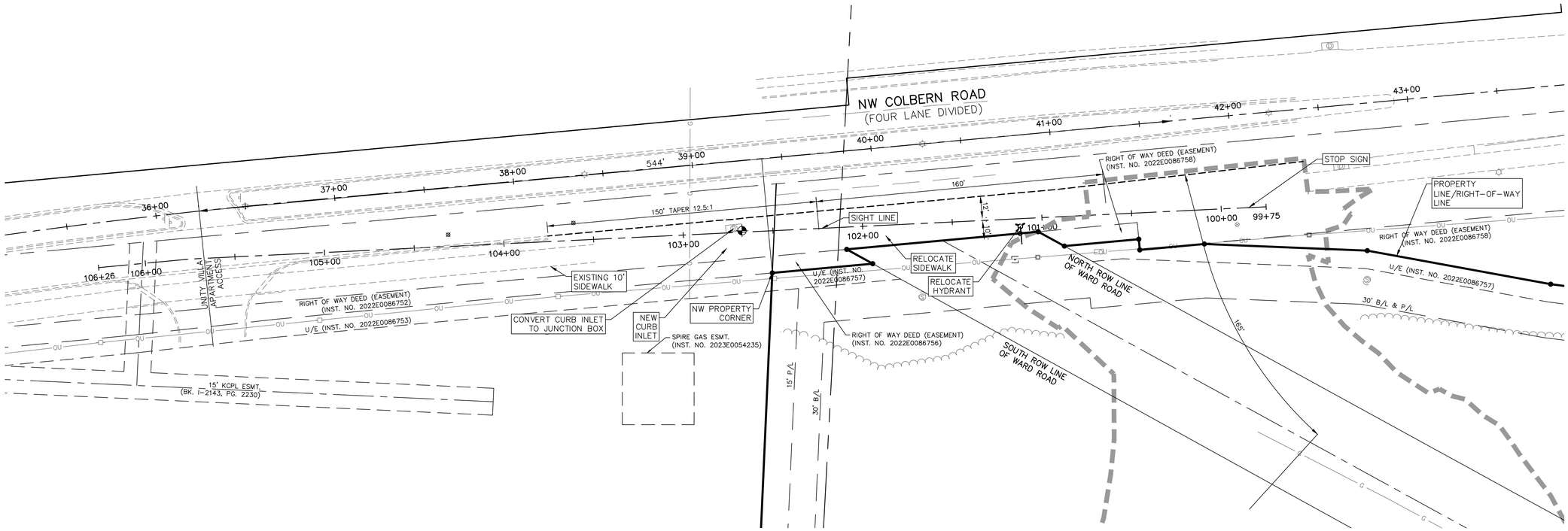
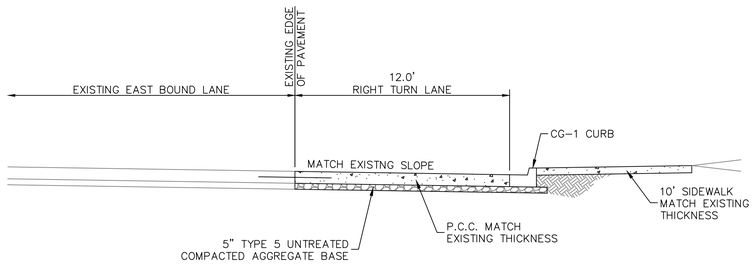
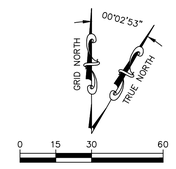


NW COLBERN ROAD ACCESS
EASTBOUND RIGHT TURN LANE EXHIBIT



TYPICAL CROSS SECTION
NOT TO SCALE



SCALE: 1" = 30'
CONVERGENCE ANGLE
ESTABLISHED FROM JA-98.

CONSTRUCTION NOTES:
1. PROVIDE 1-1/4"x18" DOWEL BARS AT 12" CENTERS THRU CONTRACTION JOINTS.
2. REFER TO MODOT STANDARD DETAIL 502.05S FOR ADDITIONAL REQUIREMENTS

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913.742.5000

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#000842
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STATE OF MISSOURI · DAVID D. WOOD · NUMBER PE-2011037427 · PROFESSIONAL ENGINEER

HAZEL GROVE ELEMENTARY SCHOOL

NW ROSEMARY COURT
LEE'S SUMMIT, MO 64086

Project Phase
PRELIMINARY DEVELOPMENT PACKAGE

Project Number
26-107

Issue Date
02.18.2026

Revision No.	Description	Date Issued

Area Plan

Sheet Name
NW COLBERN ROAD EASTBOUND RIGHT TURN LANE EXHIBIT

Sheet Number
C9.1

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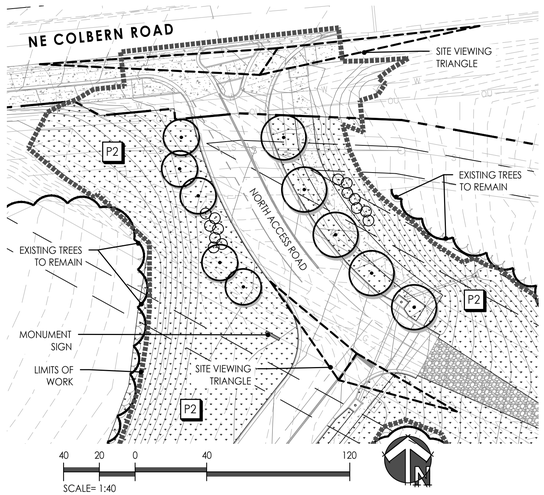

2 PUBLIC ACCESS ROAD ENLARGEMENT

Scale: 1" =40'

1 OVERALL SITE LANDSCAPE PLANTING PLAN

Scale: 1" =100'

PLANTING PLAN LEGEND

- P1 — TURFGRASS SOD
- P2 — TURFGRASS SEED
- P3 — DECORATIVE ROCK
  - 1"-1-1/2" SIZE; RIVER ROCK
- P4 — PLANTING AREA
  - DECIDUOUS/EVERGREEN SHRUBS & PERENNIALS
- DECIDUOUS SHADE TREE
  - 3" CALIPER (MIN.)
- DECIDUOUS/EVERGREEN SHRUBS
  - #5 CONTAINER (MIN)
- LIMITS OF WORK/DISTURBANCE
- EXISTING TREES TO REMAIN (TYP.)



EXISTING TREES

THIS PHOTO IS OF THE EXISTING TREE MASSING THAT IS TO BE PRESERVED ALONG THE SOUTHERN PROPERTY LINE. TREES ALONG WITH UNDERSTORY VEGETATION WILL BE PRESERVED AND USED TO FULLFILL BUFFER REQUIREMENTS ALONG THE SOUTHERN PROPERTY LINE.

LANDSCAPE REQUIREMENTS (LEE'S SUMMIT, MO)

ORDINANCE REQUIREMENTS: UDO ART. 8, DIV. III LANDSCAPING, BUFFERS & TREE PROTECTION
CURRENT SITE ZONING: PMIX

1. SECTION 8.790.A.1 - STREET FRONTAGE TREES
   - PUBLIC ENTRANCE DRIVE: 140 L.F.
   - REQUIREMENT: (1) TREE PER (30) L.F. STREET FRONTAGE & 20' LANDSCAPE STRIP
     - TREES REQUIRED: 5
     - TREES PROVIDED: 5
2. SECTION 8.790.A.3 - STREET FRONTAGE SHRUBS
   - PUBLIC ENTRANCE DRIVE: 140 L.F.
   - REQUIREMENT: (1) SHRUB PER (20) L.F. STREET FRONTAGE
     - SHRUBS REQUIRED: 7
     - TREES PROVIDED: 7

SECTION 8.810.A - PARKING LOT LANDSCAPE ISLANDS
- REQUIREMENT: LANDSCAPE ISLANDS, STRIPS, OR OTHER PLANTING AREAS SHALL BE LOCATED WITHIN THE PARKING LOT AND SHALL CONSTITUTE AT LEAST 5% OF THE ENTIRE AREA DEVOTED TO PARKING SPACES, AISLES AND DRIVEWAYS.
  - PARKING AREA: 92,155 S.F.
  - PLANTING AREA PROVIDED: 41,505 S.F. (45%)

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MO LA Corp #2008001860

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Licensed Landscape Architect
Bob G. Bushyhead

License
LA-2002003007

MO Cert. of Authority
2008001860
LAND3 STUDIO, LLC

STATE OF MISSOURI
BOB G. BUSHYHEAD
NUMBER
LA-2002003007
LANDSCAPE ARCHITECT
02.17.26

HAZEL GROVE ELEMENTARY SCHOOL

NW ROSEMARY COURT
LEE'S SUMMIT, MO 64086

Project Phase
PRELIMINARY DEVELOPMENT PACKAGE

Project Number
26-107

Issue Date
02.18.2026

Revision No.	Description	Date Issued
1	City Comments	04.14.2026

Area Plan

Sheet Name
Overall Site Landscape Planting Plan

Sheet Number
L100

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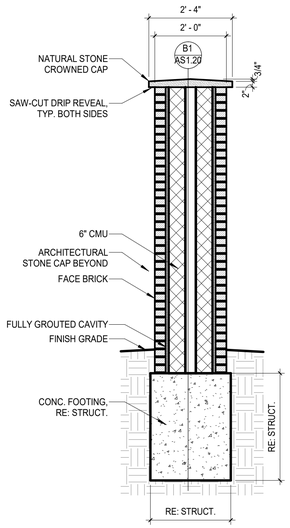
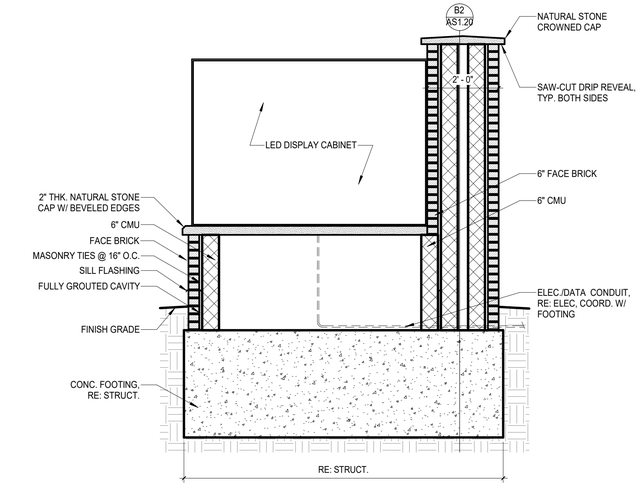
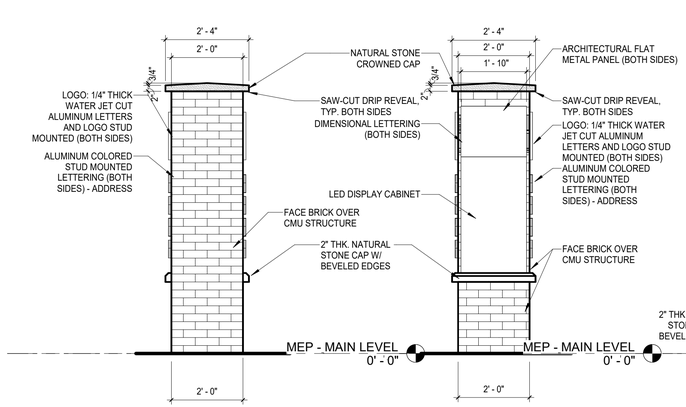


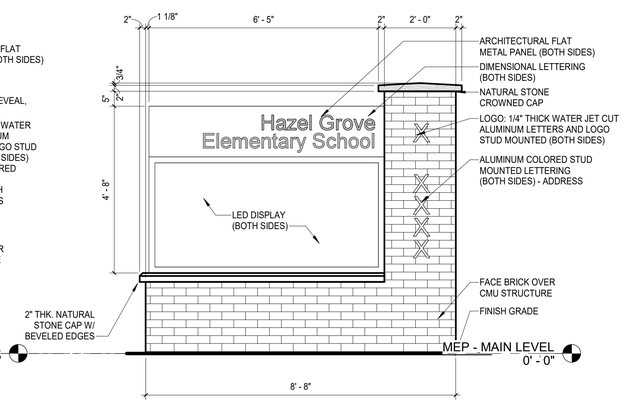
B2 SIGN TYPE 11 - MONUMENT SIGN SECTION
SCALE: 1/2" = 1'-0"



B1 SIGN TYPE 11 - MONUMENT SIGN SECTION
SCALE: 1/2" = 1'-0"



A3 SIGN TYPE 11 - MONUMENT SIGN ELEVATIONS
SCALE: 1/2" = 1'-0"



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Mech., Plumb., Elec., Telecom.
HENDERSON ENGINEERS
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Licensed Architect
PATRICK B. SMITH

License
A-2013041352

Cert. of Authority
A-2004016376
INCITE DESIGN STUDIO, LLC

NOT FOR CONSTRUCTION

HAZEL GROVE ELEMENTARY SCHOOL

NW ROSEMARY COURT
LEE'S SUMMIT, MO 64086

Project Phase
PRELIMINARY DEVELOPMENT PACKAGE

Project Number
26-107

Issue Date
04.14.2026

Revision No.	Description	Date Issued

Area Plan

Sheet Name
SITE DETAILS

Sheet Number
AS1.20

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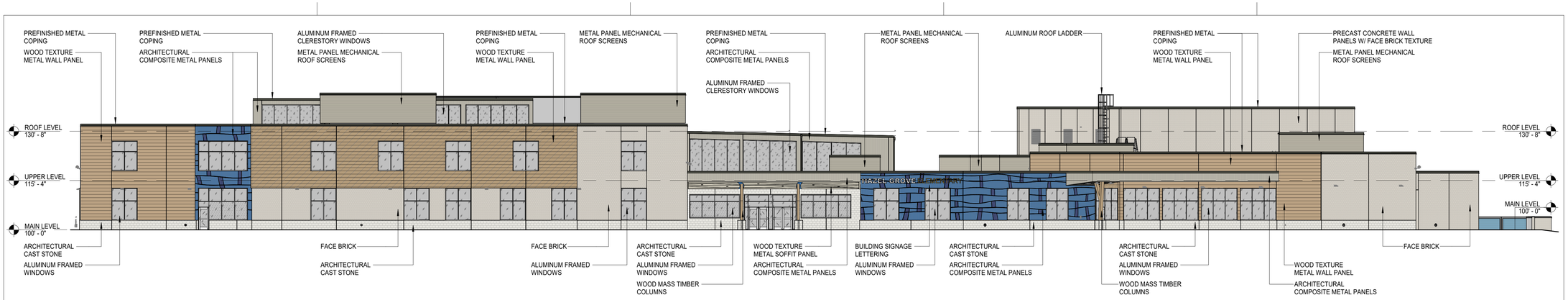
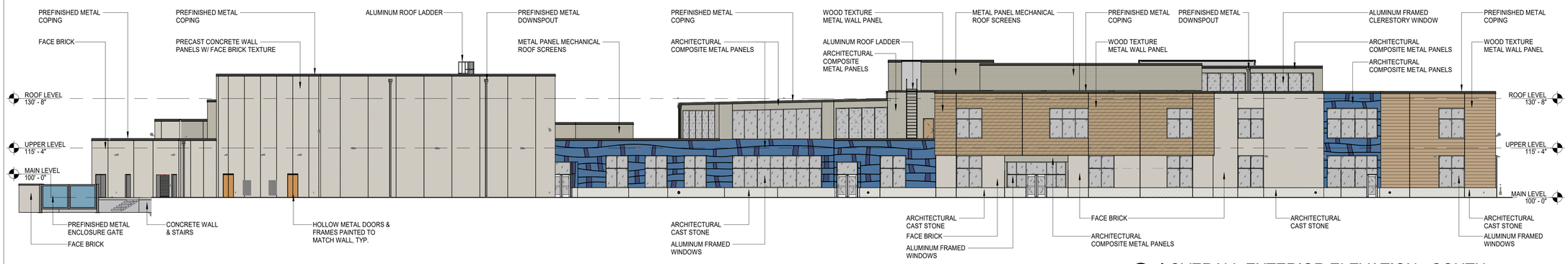


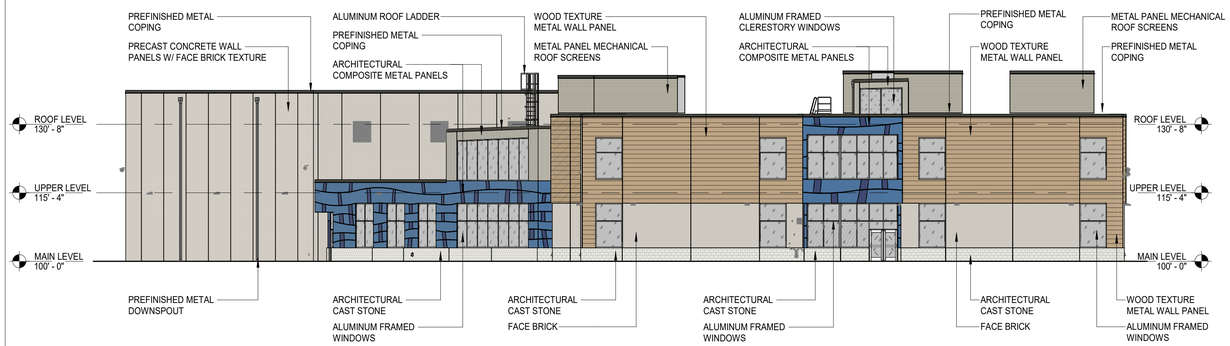
D1 OVERALL EXTERIOR ELEVATION - NORTH

SCALE: 1/16" = 1'-0"



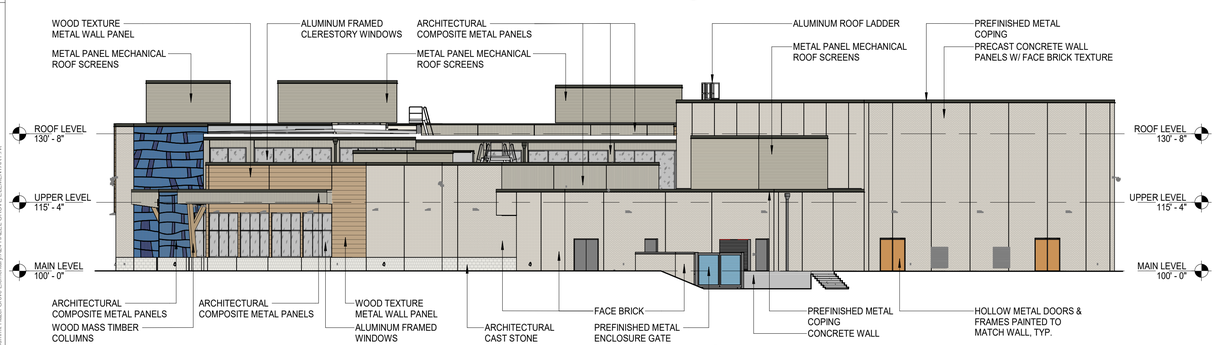
C1 OVERALL EXTERIOR ELEVATION - SOUTH

SCALE: 1/16" = 1'-0"



B3 OVERALL EXTERIOR ELEVATION - EAST

SCALE: 1/16" = 1'-0"



A3 OVERALL EXTERIOR ELEVATION - WEST

SCALE: 1/16" = 1'-0"

EXTERIOR MATERIALS PERCENTAGE

FACE BRICK (FB-1)
5,850 SF
13%
CLASS 1

PRECAST PANELS W/ INLAY THIN BRICK
8,976 SF
19%
CLASS 2

ARCHITECTURAL STONE (AS-1)
3,715 SF
8%
CLASS 1

ALUMINUM COMPOSITE PANELS (ACM-#)
3,239 SF
7%
CLASS 1

METAL PANEL (MWP-1, MWP-2)
15,768 SF
34%
CLASS 1

GLAZING
7,623 SF
16%
CLASS 1

SPANDREL GLASS
1,153 SF
3%
CLASS 1

EXTERIOR ELEVATION MATERIALS

- PRECAST PANELS W/ INLAY THIN BRICK
  BASIN OF DESIGN: CLOUD CERAMICS
  COLOR: WINTER BLEND
  FINISH: RE: SPEC
- FACE BRICK (FB-1)
  BASIS OF DESIGN: CLOUD CERAMICS
  COLOR: WINTER BLEND
  FINISH: VELOUR, MODULAR SIZE
- ARCHITECTURAL STONE (AS-1)
  BASIS OF DESIGN: READING ROCK, ROCKCAST
  COLOR: STARBUCK
  FINISH: SMOOTH
  SIZE: 8"x16"x4", 8"x8"x4", 4"x24"x4"
- METAL WALL PANEL (MWP-1)
  BASIS OF DESIGN: BELLARA STEEL SIDING
  COLOR: WARM ROSEWOOD
- METAL WALL PANEL (MWP-2)
  BASIS OF DESIGN: PADCLAD, 7.2 PANEL
  COLOR: SANDSTONE
- ALUMINUM COMPOSITE PANELS (ACM-#)
  BASIS OF DESIGN: PAC-CLAD PAC-3000 RS
  COLOR: (ACM-1) BERKSHIRE BLUE
  (ACM-2) AWARD BLUE
  (ACM-3) SANDSTONE
- GLAZING
  (REFER TO ALUMINUM FRAME ELEVATIONS & GLAZING LEGEND)
- ROOFING MATERIAL
  BASIS OF DESIGN PVC SIKA SARNAFIL 327, 60 MIL
  CLASS 3

ELEVATION NOTES:
1. ALUMINUM FRAME FINISH: ANODIZED ALUMINUM
2. PREFINISHED MTL. FLASHING @ WINDOW SYSTEM: CLEAR ANODIZED
3. PREFINISHED MTL. @ COPING TO BE: GRAPHITE
4. ALL STL. LINTELS TO BE PAINTED U.N.O.

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NW ROSEMARY COURT
LEE'S SUMMIT, MO 64086

Project Phase
PRELIMINARY DEVELOPMENT PACKAGE

Project Number
26-107

Issue Date
04.14.2026

Revision No.	Description	Date Issued

Area Plan

Sheet Name
EXTERIOR ELEVATIONS - OVERALL

Sheet Number
A5.00

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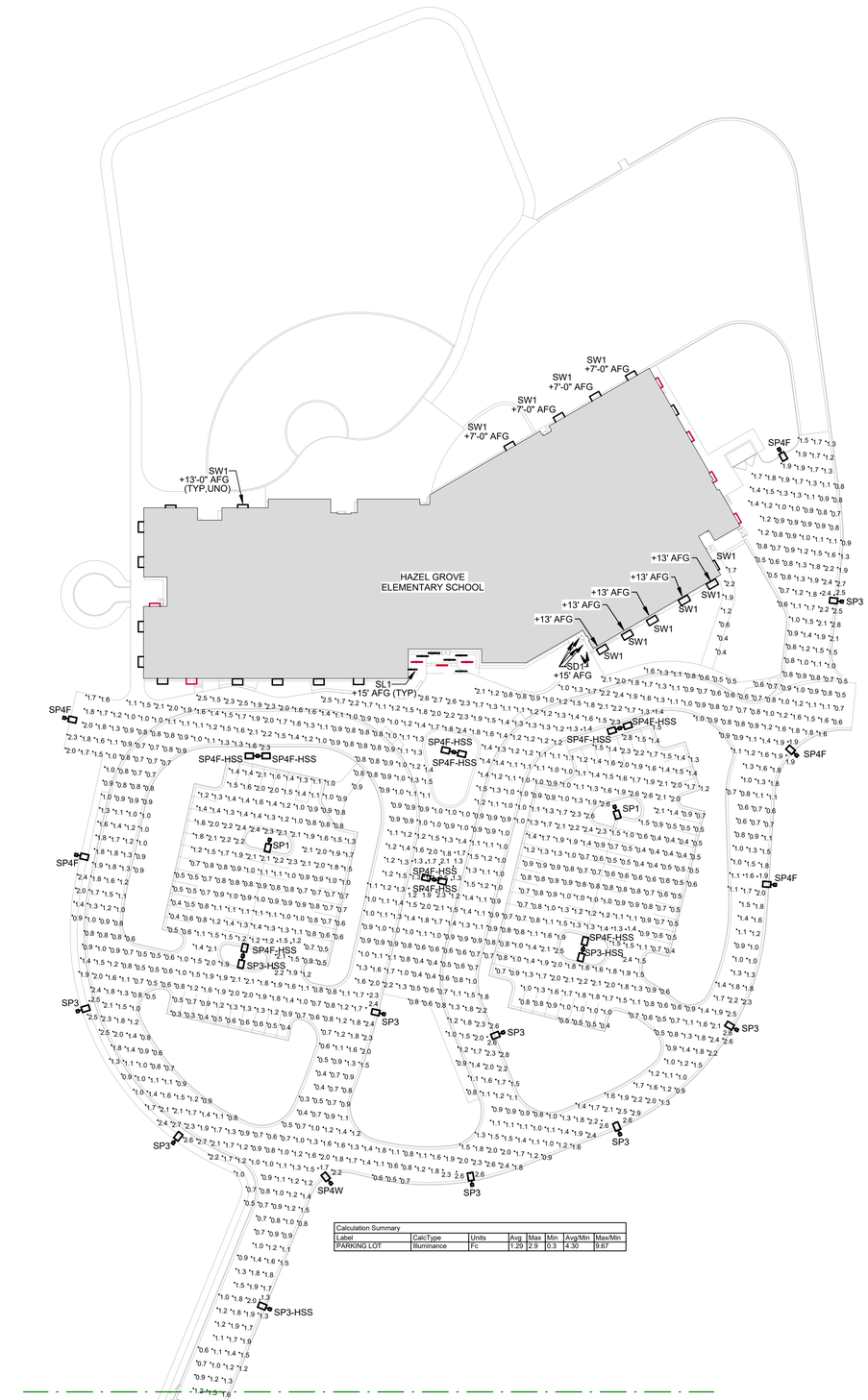
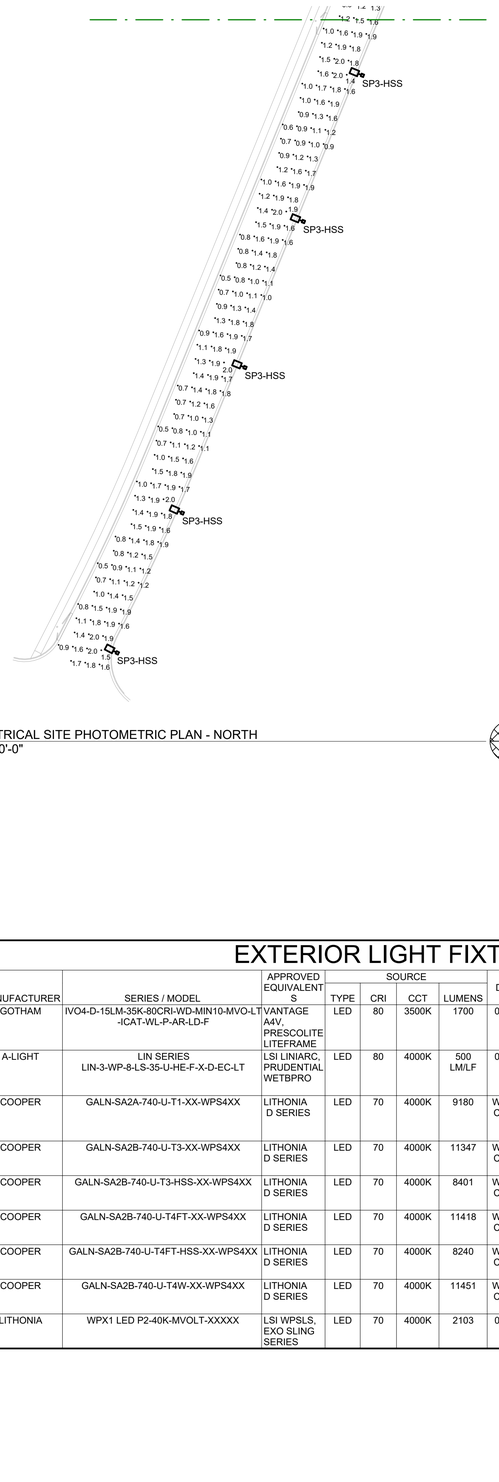


1 ELECTRICAL SITE PHOTOMETRIC PLAN - SOUTH
1" = 50'-0"

Calculation Summary								
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
PARKING LOT	Illuminance	Fc	1.29	2.9	0.3	4.30	9.67

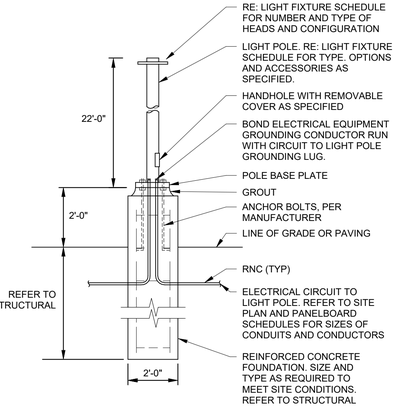


2 ELECTRICAL SITE PHOTOMETRIC PLAN - NORTH
1" = 50'-0"

SITE PHOTOMETRIC GENERAL NOTES:

SITE LIGHTING IS DESIGNED TO MEET THE FOLLOWING CRITERIA:

A. PARKING LOTS:
   a. MAXIMUM FIXTURE HEIGHT: 28'-0"
   b. MAXIMUM POLE BASE HEIGHT: 3'
   c. MAXIMUM HEAD WATTAGE: 400W
   d. MAXIMUM POLE WATTAGE: 800W
   e. FLAT LENS FULL 90-DEGREE CUTOFF
   f. PHOTOMETRIC REQUIREMENTS:
      - 10.0 fc MAX/MIN RATIO
   g. CONTROL REQUIREMENTS:
      - 50% LIGHT REDUCTION 1 HOUR AFTER CLOSING



3 TYPICAL POLE BASE DETAIL - TYPE SP#
NTS

EXTERIOR LIGHT FIXTURE SCHEDULE

TYPE	MANUFACTURER	SERIES / MODEL	APPROVED EQUIVALENTS	SOURCE				DIMMING TYPE	VOLTAGE	INPUT WATTS	INPUT VA	DESCRIPTION
				TYPE	CRI	CCT	LUMENS					
SD1	GOTHAM	IVO4-D-15LM-35K-80CRI-WD-MIN10-MVO-LT -ICAT-WL-P-AR-LD-F	VANTAGE A4V, PRESCOLITE LITEFRAME	LED	80	3500K	1700	0-10V, 1%	277	21	22	4" ROUND DOWNLIGHT. WIDE DISTRIBUTION WITH CLEAR REFLECTOR, FLANGED FLUSH TRIM, IC HOUSING, WET LOCATION AND COLD WEATHER RATED. FINISH COLOR BY ARCHITECT.
SL1	A-LIGHT	LIN SERIES LIN-3-WP-8-LS-35-U-HE-F-X-D-EC-LT	LSI LINIARC, PRUDENTIAL WETBPRO	LED	80	4000K	500 LM/LF	0-10V, 1%	277	40	45	3" AERATURE BY 8' LONG SURFACE MOUNTED LINEAR SUITABLE FOR WET, LOW TEMPERATURE, EXTERIOR APPLICATIONS. PROVIDE SEPERATE CIRCUIT TO SERVE 4' EMERGENCY SECTION OF FIXTURE. FINISH BY ARCHITECT.
SP1	COOPER	GALN-SA2A-740-U-T1-XX-WPS4XX	LITHONIA D SERIES	LED	70	4000K	9180	WIRELESS CONTROL	480	45	57	EXTERIOR PARKING LOT HEAD WITH TYPE I DISTRIBUTION. PROVIDE 22' TALL ROUND POLE ON A 2' BASE FOR AN OAH OF 24' AFG. STANDARD MOUNTING ARM. FINISH TBD. B2-U0-G1
SP3	COOPER	GALN-SA2B-740-U-T3-XX-WPS4XX	LITHONIA D SERIES	LED	70	4000K	11347	WIRELESS CONTROL	480	85	94	SIMILAR TO TYPE SP1 BUT WITH TYPE III DISTRIBUTION AND HIGHER OUTPUT. B2-U0-G2
SP3-HSS	COOPER	GALN-SA2B-740-U-T3-HSS-XX-WPS4XX	LITHONIA D SERIES	LED	70	4000K	8401	WIRELESS CONTROL	480	85	94	SIMILAR TO TYPE SP3 BUT WITH HOUSE SIDE SHIELD ACCESSORY ON POLE SIDE OF FIXTURE. B2-U0-G2
SP4F	COOPER	GALN-SA2B-740-U-T4FT-XX-WPS4XX	LITHONIA D SERIES	LED	70	4000K	11418	WIRELESS CONTROL	480	85	94	SIMILAR TO TYPE SP1 BUT WITH TYPE IV FORWARD THROW DISTRIBUTION AND HIGHER OUTPUT. B2-U0-G3
SP4F-HSS	COOPER	GALN-SA2B-740-U-T4FT-HSS-XX-WPS4XX	LITHONIA D SERIES	LED	70	4000K	8240	WIRELESS CONTROL	480	85	94	SIMILAR TO TYPE SP4 BUT WITH HOUSE SIDE SHIELD ACCESSORY ON POLE SIDE OF FIXTURE. B2-U0-G2
SP4W	COOPER	GALN-SA2B-740-U-T4W-XX-WPS4XX	LITHONIA D SERIES	LED	70	4000K	11451	WIRELESS CONTROL	480	85	94	SIMILAR TO TYPE SP1 BUT WITH TYPE IV WIDE THROW DISTRIBUTION AND HIGHER OUTPUT. B2-U0-G2
SW1	LITHONIA	WPX1 LED P2-40K-MVOLT-XXXXX	LSI WPSLS, EXO SLING SERIES	LED	70	4000K	2103	0-10V, 1%	277	18	20	EXTERIOR LOW-PROFILE WALL PACK IN DIE-CAST ALUMINUM HOUSING. IP66 RATED. FINISH TBD.

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MO. CORPORATE NO: E-556D
EXPIRES 12/31/2026

incite Design Studio
architects building relationships

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STATE OF MISSOURI
NATHAN W. STOSS
NUMBER PE-2023044638
PROFESSIONAL ENGINEER
02/18/26
NATHAN W. STOSS
LICENSE # PE-2023044638

HAZEL GROVE ELEMENTARY SCHOOL

NW ROSEMARY COURT
LEE'S SUMMIT, MO 64086

Project Phase
PRELIMINARY DEVELOPMENT PACKAGE

Project Number
26-107

Issue Date
02.18.2026

Revision No.	Description	Date Issued

Area Plan

Sheet Name
SITE LIGHTING PHOTOMETRIC PLAN

Sheet Number
ES1.10

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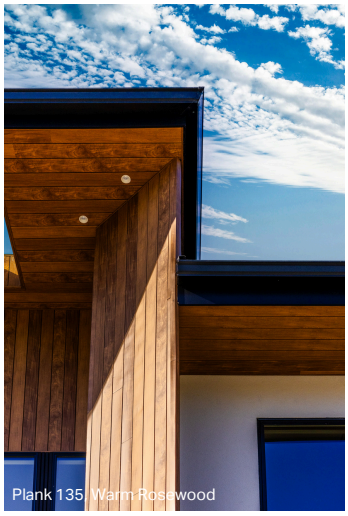
Bellara

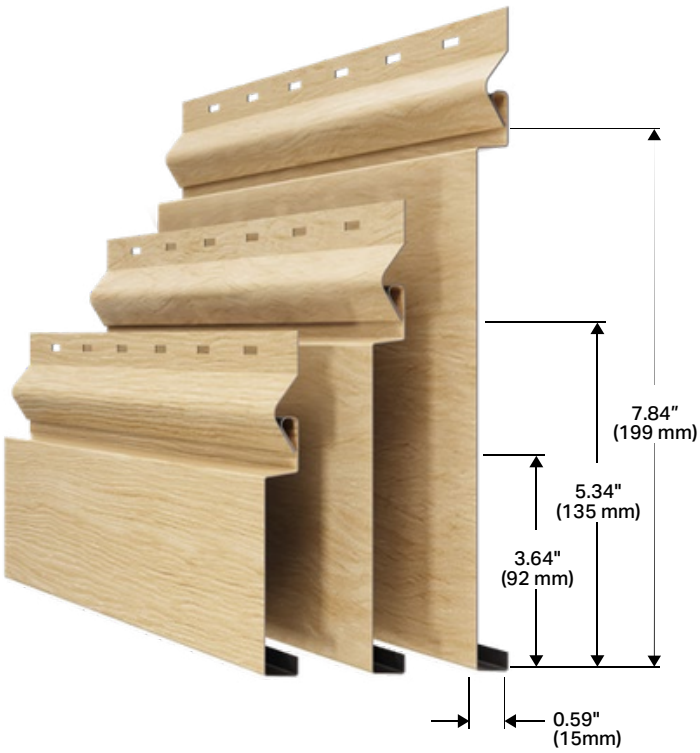
Data Sheet

Plank 90 | 135 | 200


Plank 135, River Rock Grey, Cambridge White, Mountain Cedar


Plank 135, Natural Maple


Plank 135, Warm Rosewood



Product Description

Our Bellara Plank steel siding series is an ideal choice for both residential and commercial projects. These 12-foot planks are incredibly versatile, serving a variety of purposes—from creating captivating wall features to crafting elegant soffits. The siding is designed to emulate natural wood, engineered from steel, and built to last a lifetime. For those who appreciate the beauty of woodgrain finishes, our Bellara Plank offers a hyper-realistic appearance without the environmental impact of using real wood.

Dimensions

Fastening System	**Hidden fasteners**
Application	**Wall**
Panel Width	Plank 90: **3.64" (92mm)** Plank 135: **5.34" (135mm)** Plank 200: **7.84" (199mm)**
Profile Depth	**0.59" (15mm)**
Screw Holes	Width: **0.187" (4.76mm)** Height: **0.63" (16.0mm)**
Screw Holes Spacing	**2.0" (50.8mm)** center to center

Panel Width	Gauges		Weight - LB/FEET
Plank 90	**24GA**	Non-Standard	**0.695**
Plank 90	**26GA**		**0.553**
Plank 135	**24GA**	Non-Standard	**0.836**
Plank 135	**26GA**		**0.666**
Plank 200	**24GA**	Non-Standard	**1.045**
Plank 200	**26GA**		**0.832**

*Weight-LB per linear feet may differ per paint finish, gauge and profile covered width. Please contact your sales representative for further assistance.

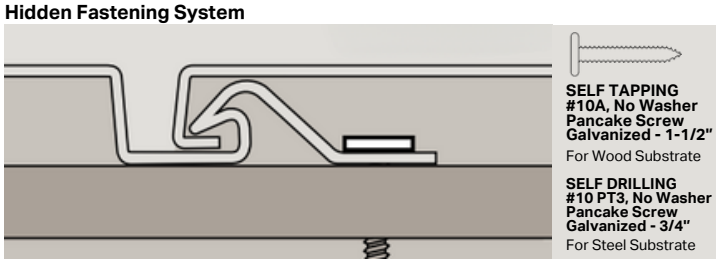
Installation Direction

Installation Orientation	**Horizontal & vertical**

Lead Times

Standard Regional	**2–3 weeks**
Nonstandard	**Upon customer request**

Hidden Fastening System



Plank 90 | 135 | 200

Expressence – Architectural Print Series

Warm Rosewood	Dark Rosewood	Charred Circle Sawn	Whitewashed	Smoked Barnboard	Brindle Barnboard	Obsidian Barnboard
18-0191	18-3280	18-3267	18-3269	18-0257	18-0270	18-3273
24, 26GA	26GA	26GA	26GA	26GA	26GA	26GA

Signature – SMP Coated metal

Deep Walnut	Mountain Cedar	River Rock Gray	Natural Maple	Regent Grey	Stone Grey	Cambridge White
18-2768	18-2772	18-0254	18-0255	56082	56071	56161
24, 26GA	24, 26GA	24, 26GA	24, 26GA	26GA	24, 26GA	24, 26GA

Signature Matte – SMP Coated metal

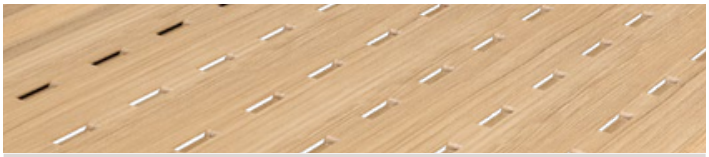
Ebony	Graphite	Espresso
9822	9821	10276
24, 26GA	24, 26GA	24, 26GA

Colour Availability

Please scan the QR code or click here to confirm colour availability for Bellara Plank 90, 135, & 200 by region.

Perforation*

7.0in2/ft2 (48,613mm2/m2)



Punch Size	Ventillation Area	% Open Air
0.5"(12.7mm) x 0.125"(3.175mm)	7.0in2/ft2 (48,613mm2/m2)	4.86%

*Only available for 135mm Plank.
Note: perforation voids warranty.

Warranty

Weather XL
Expressence

SHERWIN-WILLIAMS. Coil Coatings

Principal Characteristics

- Realistic 5/8" thick architectural profile
- Durable locking system
- Galvanized steel to protect from rust and UV exposure
- Longer lasting than traditional wood siding
- Hidden fastener system
- Pre-punched holes
- Complete system of colour-matched trims
- Sidelap design eliminates the need for clips or unsightly butt joints

Engineering & Environmental Documents

CSSBI EPD
XCarb EPD
Bellara EPD
Install Guide
Bellara Negative Wind Load - ASD
Bellara Negative Wind Load - LSD



Plank 135, Brindle Barnboard



Plank 135, Warm Rosewood

Plank 90 | 135 | 200

Matching Trim System



Inside Corner
TM01-301



Outside Corner
TM04-304



Conversion Moulding
TM15-315



Partition Moulding
TM21-321



J-Trim
TMMLD-313



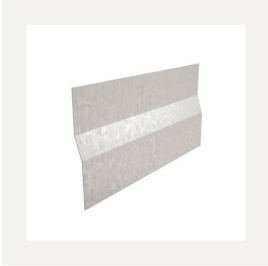
A & B 2-Piece J-Trim
TMMLD-350A
TMMLD-350B



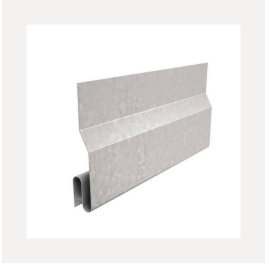
Drip Edge
TM22-322



Z-58 Support Trim
TMMLD-Z58



Universal Starter
TMMLD-USTART



Starter Strip
TMMLD-352



Perforated Anti-Rodent
Starter Strip
TMMLD-351

ProKut Kit (UKUT8)



Description

While cutting Bellara Steel Siding can be done using traditional tools, we've developed a custom cutter to make installation even easier.

- Cut all Bellara profiles including Plank 90, 135, and 200, Board & Batten 140 and 260, and Lap Siding 155
- Kit includes 4 different blades
- Assembly required
- Available nationally



Plank 135, Brindle Barnboard



Plank 135, Warm Rosewood

Vicwest Inc. reserves the right to amend product specifications without prior notice. Product specification, thicknesses and colours shown in this document should not be taken as being available in all regions, and reference should be made to Vicwest's colour chart, or advice should be sought from Vicwest's Customer Service Department. Recommendations for the uses described herein should be verified for suitability and compliance with actual requirements of any local building codes, applicable laws and regulations.
Colours shown in this document are representative only. Final colour selection should be made from actual colour samples which are available through our Sample Store. To ensure you are viewing the most recent and accurate product information, please scan the QR code or click here.

Sure-Flex™ PVC Membrane



Overview

Carlisle's Sure-Flex PVC is an advanced-formula, heat-weldable PVC membrane that is designed for long-term weatherability and performance. The physical properties of the membrane are enhanced by a tenacious, anti-wicking, weft-inserted polyester fabric that is encapsulated by thick PVC-based top and bottom plies. The membrane's smooth surfaces facilitate a permanent weld for a consistent, watertight, monolithic roof assembly.

Features and Benefits

- Exceptional fire and chemical resistance
- Fully formulated monolithic top-ply for long-term weatherability
- Enhanced physical characteristics meeting ASTM D4434 Type IV requirements
- Antimicrobials throughout the polymer for increased resistance to mold, mildew, and algae growth
- Highly flexible with a wide window of weldability for ease of installation
- Available colors:

White | Gray | Tan | Light Gray | Slate Gray

Sustainable Attributes

Carlisle SynTec Systems' focus has always been innovation - Innovation to solve problems, improve performance, reduce labor, and above all, improve sustainability. Carlisle is committed to driving sustainable and efficient processes in the design and manufacturing of our products.

- PVC polymer derived from less than 50% fossil fuels
- Up to 10% pre-consumer recycled content
- Fully recyclable when used in mechanically-attached systems
- 3rd-party verified Environmental Product Declaration available
- California Title 24 compliant*
- See Radiative Properties and LEED® Information tables below for additional attributes

*White only.

Installation

Installation requires minimal labor and few components, making it quick and easy to install. Sheet seams are heat-welded together using hot-air welding equipment to create a monolithic, water-tight roof system.

Sure-Flex PVC is suitable for the following roof systems:

Fully-Adhered – membrane is adhered to a suitable substrate utilizing an appropriate bonding adhesive

Mechanically Fastened – membrane is attached to a suitable substrate utilizing plates and fasteners which are overlapped with membrane

Induction-Welded – membrane is attached to a suitable substrate via an induction welding tool being placed over the membrane where a fastened PVC induction welding plate is located to weld the two components together

Review Carlisle specifications and details for complete installation information.

Sure-Flex PVC Membrane

Precautions

- Sunglasses that filter out ultraviolet light are strongly recommended when working on reflective membranes. Roofing technicians should dress appropriately and wear sunscreen.
- Exercise caution when walking on wet membranes; membranes may be slippery when wet or due to frost and ice buildup.
- Care must be exercised while working close to a roof edge when the surrounding area is snow-covered, as the roof edge may not be clearly visible.
- Use proper stacking procedures to ensure sufficient stability of the materials.
- Store membrane in its original, undisturbed plastic wrap in a cool, shaded area and cover with light-colored, breathable, waterproof tarpaulins.
- Membrane that has been exposed to the weather or contaminated with dirt must be prepared with Sure-Flex PVC/KEE HP Membrane Cleaner prior to hot-air welding.

Supplemental Approvals, Statements and Characteristics

- Sure-Flex PVC meets or exceeds the requirements of ASTM D4434 Standard Specification for Poly (Vinyl Chloride) Sheet Roofing. Sure-Flex PVC is classified as Type III and/or Type IV as defined by ASTM D4434.
- Sure-Flex reinforced PVC was tested for dynamic puncture resistance per ASTM D5635-04 using the most recently modified impact head. 50-mil thick membrane was watertight after an impact energy of 22.5 J (16.6 ft-lbf), which passes the ASTM D4434 requirement.
- Sure-Flex reinforced PVC was tested for static puncture resistance per ASTM D5602-98 and exceeded 33 lbf (145 N), which passes the ASTM D4434 requirement.

Typical Properties and Characteristics

Physical Property	ASTM D4434 Requirement	50-mil	60-mil	80-mil
Thickness over scrim, in. (mm) ASTM D4434 optical method average of 3 areas	0.016 min (0.40)	0.022 (0.559)	0.027 (0.686)	0.037 (0.940)
Weight, lbs/ft² (kg/m²)	No requirement	0.33 (1.61)	0.40 (1.95)	0.55 (2.68)
Breaking strength (MD × CD), lbf (N) ASTM D751 grab method	275 min (1223)	320 x 300 (1423 x 1334)	330 x 300 (1468 x 1334)	360 x 330 (1601 x 1468)
Elongation break of reinforcement (MD x CD), % ASTM D751 grab method	25 min	30 x 30	30 x 30	30 x 30
Tearing strength (MD x CD), lbf (N) ASTM D751 proc. B, 8 in. x 8 in.	90 min (400)	100 x 120 (445 x 534)	100 x 130 (445 x 578)	100 x 132 (445 x 587)
Low temperature bend, ASTM D2136, no cracks 5x at -40°C	PASS	PASS (-40°C)	PASS (-40°C)	PASS (-40°C)
Linear dimensional change, % ASTM D1204, 6 hours at 176°F	±0.5 max	0.4	0.4	0.4
Ozone resistance, no cracks 7x ASTM D1149, 100pphm, 168 hrs	PASS	PASS	PASS	PASS
Water absorption resistance, mass % ASTM D570, 166 hours at 158°F water	±3.0 max	2.0	2.0	2.0
Field seam strength, lbf/in. (kN/m) ASTM D1876 tested in peel	No requirement	25 (4.4) min 60 (10.5) typ.	25 (4.4) min 60 (10.5) typ.	25 (4.4) min 60 (10.5) typ.
Water vapor permeance, Perms, ASTM E96 proc. B	No requirement	0.10 max 0.05 typ	0.10 max 0.05 typ	0.10 max 0.05 typ
Puncture resistance - Federal, lbf (kN) FTM 101C, method 2031	No requirement	280	320	380
Puncture resistance - Dynamic, J (ft-lbf) ASTM D5635	20 (14.7)	PASS	PASS	PASS
Puncture resistance - Static, lbf (N) ASTM D5602	33 (145)	99 (440)	99 (440)	99 (440)
Xenon-Arc resistance, no cracks/ crazing 10x, ASTM G155 0.35 W/m² at 340-nm, 63°C B.P.T. 12,600 kJ/m² total radiant exposure 10,000 hours	PASS	PASS	PASS	PASS
Properties after heat aging ASTM D3045, 56 days at 176°F Breaking strength, % retained Elongation reinf., % retained	90 min 90 min	90 min 90 min	90 min 90 min	90 min 90 min
Air Permeance ASTM E2178	No requirement	PASS	PASS	PASS

Typical properties and characteristics are based on samples tested and are not guaranteed for all samples of this product. This data and information is intended as a guide and does not reflect the specification range for any particular property of this product.

CARLISLE SYNTEC SYSTEMS

Sure-Flex PVC Membrane

Radiative Properties for Cool Roof Rating Council (CRRC) and LEED

Physical Property	Test Method	White PVC	Tan PVC	Gray PVC	Light Gray PVC	Slate Gray PVC
CRRC - Initial Solar Reflectance	ASTM C1549	0.87	0.72	0.59	0.74	N/A
CRRC - Solar Reflectance after 3 years	ASTM C1549 (uncleaned)	0.70	0.56	0.49	0.59	N/A
CRRC - Initial Thermal Emittance	ASTM C1371	0.89	0.87	0.89	0.88	N/A
CRRC - Thermal Emittance after 3 years	ASTM C1371 (uncleaned)	0.88	0.87	0.89	0.89	N/A
Solar Reflective Index (SRI)	ASTM E1980	110	89	70	91	N/A
Solar Reflective Index (SRI) SRI after 3 years	ASTM E1980	86	65	57	70	N/A

Green Building Information

Pre-Consumer Recycled Content	10%
Post-Consumer Recycled Content	0%
Solar Reflectance Index (SRI)	White: 110, Tan: 89, Gray: 70, Light Gray: 91, Slate Gray: N/A
Global Warming Potential (GWP)	50-mils: 5.5, 60-mils: 6.6, 80-mils: 8.8
Volatile Organic Compounds (VOC) Content	N/A
Manufacturing Location(s)	Greenville, IL
Corporate Sustainability Report (CSR) Availability	Yes
Environmental Product Declaration (EPD) Availability	

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REPRINT CODE: 605245 PVC-1024 - "Sure-Flex PVC Membrane Product Data Sheet"
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LEED is a registered trademark of the U.S. Green Building Council.

BUILDING TRUST

PRODUCT DATA SHEET

Sarnafil® S 327-60 EnergySmart

60 mil thick PVC thermoplastic membrane

PRODUCT DESCRIPTION

Sarnafil® S 327-60 EnergySmart Roof Membrane is a PVC thermoplastic membrane produced with an integral polyester reinforcement for high strength, is highly reflective, with heat-weldable seams, and a unique lacquer coating applied to the top of the membrane to reduce dirt pick up. Sarnafil® S 327-60 EnergySmart utilizes the Pro-Weld™ visual indicator to provide real-time feedback that the proper seam welding temperature and speed settings are being used during installation.

USES

Used in mechanically attached applications with various fastening methods, over various substrates. It can also be used in adhered applications to approved substrates.

AREAS OF APPLICATION

- New Roofs
- Reroofs
- Recovers

CHARACTERISTICS / ADVANTAGES

- Highly reflective
- Excellent tear strength resistance
- Factory applied lacquer coated to reduce dirt pick up
- Hot-air welded seams for long-term performance
- Proven membrane performance
- Superior fire resistance
- Pro-WeldTM visual welding temperature indicator[1]

[1] Available on White, Gray and Tan mebranes

APPROVALS / STANDARDS

- FM Global
- Underwriters Laboratories
- Underwriters Laboratories of Canada
- ICC Code Compliance – ESR 1157
- Miami-Dade County
- Florida Building Code
- NSF/ANSI 347: Platinum Certified
- California Title 24
- LEED / Green Globes

PRODUCT INFORMATION

Chemical Base	High-quality, PVC membrane containing ultraviolet light stabilizers, flame retardant and polyester scrim reinforcement with a unique lacquer coating on the top surface.	
Recycled Content	9% Pre-consumer, 1% Post-consumer	
Reinforcing Material	Polyester	
Packaging	**60 mil (1.5 mm) Membrane** 10 ft x 100 ft (3 m x 30 m) roll, 389 lbs (177 kg) per roll 8 rolls per pallet 5 ft x 100 ft (1.5 m x 30 m) roll, 195 lbs (89 kg) per roll 12 rolls per pallet Coverstrip: 8" x 100 ft (20 cm x 30 m) roll, 25 lbs (12 kg) per roll 25 per pallet	
Appearance / Color	▪ Top: White, Tan, and Reflective Gray ▪ Bottom: Gray	
Shelf Life	N/A	
Storage Conditions	Store rolls on pallets and fully protected from the weather with clean canvas tarpaulins. Unvented polyethylene tarpaulins are not accepted due to the accumulation of moisture beneath the tarpaulin in certain weather conditions that may affect the ease of membrane weldability.	
Overall Thickness	60 mil (1.5 mm), minimum thickness 45 mil	(ASTM D-751) (ASTM Type III D-4434 Spec. Requirement)
Thickness Above Scrim	27 mil 16 mil	(ASTM D-7635) (ASTM Type III D-4434 Spec. Requirement)

TECHNICAL INFORMATION

Resistance to Static Puncture	Pass 33 lbf (15 kg)	(ASTM D-5602) (ASTM Type III D-4434 Spec. Requirement)
Resistance to Dynamic Puncture	Pass 14.7 ft-lbf (20 J)	(ASTM D-5635) (ASTM Type III D-4434 Spec. Requirement)
Tensile Strength	305 lbf (1356 N) 200 lbf (890 N)	(ASTM D-751) (ASTM Type III D-4434 Spec. Requirement)
Elongation at Break	28.5 & 29.5% MD & CMD[1] 15 & 15% MD & CMD[1] [1] MD = Machine Direction, CMD = Cross Machine Direction.	(ASTM D-751) (ASTM Type III D-4434 Spec. Requirement)
Linear Dimensional Change	-0.12% 0.5%	(ASTM D-1204) (ASTM Type III D-4434 Spec. Requirement)
Tear Strength	48 lbf (213 N) 45 lbf (200 N)	(ASTM D-751) (ASTM Type III D-4434 Spec. Requirement)
Seam Strength	Pass 75% of original[2] [2] Failure occurs through membrane rupture not seam failure.	(ASTM D-751) (ASTM Type III D-4434 Spec. Requirement)

Retention of Properties after Heat Ageing	Tensile Strength, % of original: Pass Elongation, % of original: Pass Tensile Strength, % of original: 90 Elongation, % of original: 90	(ASTM D-751) (ASTM D-751) (ASTM Type III D-4434 Spec. Requirement)
UV Exposure	10,000 hours 5,000 hours Cracking (7x magnification): None Crazing (7x magnification): None	(ASTM G-154) (ASTM Type III D-4434 Spec. Requirement)
Weight Change after Immersion in Water	2.0% ± 3.0%	(ASTM D-570) (ASTM Type III D-4434 Spec. Requirement)

Solar Reflectance

EnergySmart Colors	Initial Solar Reflectance[1]	3-Year Solar Reflectance[1]
EnergySmart White[2]	0.84	0.76
EnergySmart Tan[2]	0.73	0.65
EnergySmart Reflective Gray[2]	0.73	0.66

[1] Solar Reflectance testing according to ASTM C1549.
[2] Meets LEED, Green Globes, and California's Title 24 criteria for Low and Steep Slope applications.

Thermal Emittance

EnergySmart Colors	Initial Thermal Emittance[1]	3-Year Thermal Emittance[1]
EnergySmart White[2]	0.86	0.85
EnergySmart Tan[2]	0.85	0.86
EnergySmart Reflective Gray[2]	0.89	0.88

[1] Thermal Emittance testing according to ASTM C1371, Slide Method.
[2] Meets LEED, Green Globes, and California's Title 24 criteria for Low and Steep Slope applications.

Solar Reflectance Index

EnergySmart Colors	Initial Solar Reflectance Index[1]	3-Year Solar Reflectance Index[1]
EnergySmart White[2]	105	93
EnergySmart Tan[2]	89	78
EnergySmart Reflective Gray[2]	90	80

[1] Solar Reflectance Index calculated according to ASTM E1980.
[2] Meets LEED, Green Globes, and California's Title 24 criteria for Low and Steep Slope applications.

Low Temperature Bend	Pass Pass -40°F (-40°C)	(ASTM D-2136) (ASTM Type III D-4434 Spec. Requirement)

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

AVAILABILITY/WARRANTY

AVAILABILITY
From Sika Corporation – Roofing Authorized Applicators for use within Sarnafil or Sikaplan systems.

WARRANTY
Upon successful completion of the installed roof by the Sika Authorized Applicator in compliance with Sika requirements, Sika Corporation will provide a warranty to the Building Owner via the Sika Authorized Applicator.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

APPLICATION INSTRUCTIONS

APPLICATION

Sarnafil S 327 is rolled out after proper preparation of the approved substrate and fastened to the roof deck with appropriate mechanically attached system with Sarnafasteners in accordance with Sika's technical requirements. Sarnafil S 327 seams are heat-welded together by trained operators using hot-air welding equipment. Different mechanically attached systems require different application methods. Please consult Sika's Specifications or Applicator Handbook for detailed installation procedures.

MAINTENANCE

Standard maintenance of Sarnafil systems should include regular inspections of flashings, drains, and termination sealants at least twice a year and after each storm.

OTHER RESTRICTIONS

See Legal Disclaimer.

LEGAL DISCLAIMER

- **KEEP CONTAINER TIGHTLY CLOSED**
- **KEEP OUT OF REACH OF CHILDREN**
- **NOT FOR INTERNAL CONSUMPTION**
- **FOR INDUSTRIAL USE ONLY**
- **FOR PROFESSIONAL USE ONLY**

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

Sale of SIKA products are subject to the Terms and Conditions of Sale which are available at https://usa.sika.com/en/group/SikaCorp/termsandconditions.html or by calling 1-800-933-7452.

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IVO™ 4" Round Downlight
New Construction




Parabolic


Bevel

New construction housing shown. Please see page 6 for full set of dimensional drawings.

TRIM STYLES AND COLORS

Flange Styles


Flanged


Flangeless


Flangeless in Millwork

Reflector Colors

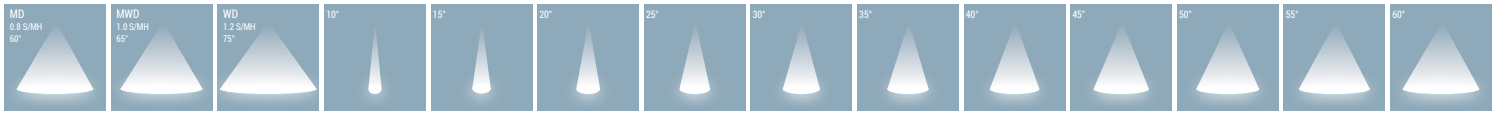


QUICK SPECIFICATIONS

Feature Set

- Perfect Color™ consistency within ½-step MacAdam Ellipse
- Exceptional color rendering with 80 CRI, 90 CRI, or 95 CRI minimum
- Bounding Ray™ optical design delivers low brightness apertures for a comfortable lighting experience
- 45° visual cut-off angle to source
- Up to 90% lumen maintenance at 55,000 hours
- Wet Location optional, covered ceiling
- Easy installation and servicing with snap-in Driver
- Batwing distributions with feathered edges to provide even illumination fixture-to-fixture
- Clean beams with soft transitions from narrow spot up to wide flood distributions
- Field changeable optics available every 5°

Distribution / Beam Angles



Superior Perfomance*

Nominal Lumens	05LM	07LM	10LM	15LM	20LM	25LM	30LM	35LM	40LM	45LM
Delivered Lumens	493	735	991	1486	1968	2447	2732	3313	3796	4236
Wattage	5.1	7.3	9.8	15.0	20.5	26.8	29.7	34.4	41.8	45.3
Lumens per Watt	96	100	101	99	96	91	92	96	91	94

*Based on 3500K MWD 80CRI P AR LSS

PRODUCT FAMILY

IVO 4" Round Product Family


Downlight


Lensed WW


Surface Cylinder


Pendant Cylinder


Wall Cylinder


Wall Adjustable Cylinder

GOTHAM ARCHITECTURAL DOWNLIGHTING | 1 Acuity Way, Decatur, GA 30035 | P 800-705-SERV (7378) | gothamlighting.com
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ORDERING INFORMATION

Design Select options indicated by this color background.
Maximum order quantity for design select lead times is 100

Luminaire Type:

Catalog Number:

EXAMPLE: IVO4 D 10LM 35K 80CRI MWD MIN10 MVOLT ZT NCH P AR LSS F

Series

IVO4	4" Round Recessed

Function

D	Downlight

Lumen Packages

05LM[1]	500 Lumens
07LM	750 Lumens
10LM	1000 Lumens
15LM	1500 Lumens
20LM	2000 Lumens
25LM	2500 Lumens
30LM	3000 Lumens
35LM	3500 Lumens
40LM[2]	4000 Lumens
45LM[3]	4500 Lumens

Kelvin Temperature

27K	2700K
30K	3000K
35K	3500K
40K	4000K
50K	5000K

Color Rendering Index

80CRI	80+ CRI
90CRI[4]	90+ CRI
95CRI[4]	95+ CRI

Distribution

Narrow / Flood

10D	10°	**30D**	30°	**50D**	50°
15D	15°	**35D**	35°	**55D**	55°
20D	20°	**40D**	40°	**60D**	60°
25D	25°	**45D**	45°		

General Illumination / Batwing

MD	Medium Batwing (0.8 s/mh, 60°)
MWD	Medium Wide Batwing (1.0 s/mh, 65°)
WD	Wide Batwing (1.2 s/mh, 75°)

Dimming Level

MIN10	Min 10% Dim Level
MIN1	Min 1% Dim Level
DARK	Min 0.1% Dim Level, Dim-to-Dark

Voltage

MVOLT	Multi-Volt input, 120V-277V
120	120V input
347[5]	347V input

Control Input[6]

ZT[7]	Generic 0-10V
EZT	EldoLED 0-10V
ELV[8]	Phase Dimming (Forward/Reverse) (120V only)
DMX[9]	DMX
DALI[9]	DALI-2
NLIGHT	Embedded wired controls by nLight
NLTAIR2	Embedded wireless controls by nLight
NLIGHTER	Embedded wired controls by nLight with UL924 listed emergency operation
NLTAIREM2	Embedded wireless controls by nLight with UL924 listed emergency operation

Emergency Option

(blank)	No Emergency Pack
E7W[10]	IOTA 7W Emergency battery pack, Constant Power, Title 20 compliant, integrated test switch.
E7WR[10,11]	IOTA 7W Emergency battery pack, Constant Power, Title 20 compliant, remote test switch.
E10W[12]	IOTA 10W Emergency battery pack, Constant Power, Title 20 compliant, integrated test switch
E10WR[12]	IOTA 10W Emergency battery pack, Constant Power, Title 20 compliant, remote test switch.
GTD[9,13]	Generator Transfer Device

Housing Style

NCH	Non-IC Housing (new construction only)
ICAT	IC/Airtight Housing (new construction only) 15LM max.
CP	Chicago Plenum CCEA Housing (new construction only)

Options

SF[14]	Single Fuse, specify 120 or 277
WL[15]	Wet Location

Trim Style

P	Parabolic Trim
BEV[16]	Bevel Trim
SH[17]	Shower/IP65 Bevel Trim (Deadfront)

Baffle Color

(blank)	non-Bevel
ARS	Clear Anodized Semi-Specular
WMRS	Soft White
BRS	Black Semi-Specular
BRD	Black Diffuse

Trim Lens

(blank)	no lens
SLG	Solite Lens
CLR	Clear Lens

Trim Color

AR	Clear Anodized
BR	Black Anodized
GR	Gold Anodized
PR	Pewter Anodized
WTR	Wheat Anodized
WR[16,18]	White Gloss (painted)
WMR[16]	Soft White Matte (painted)
WRAMF[16]	White Gloss with Anti-Microbial (painted)
BZR[16,18]	Dark Bronze (painted)
TRALTBD[19]	Trim RAL # (TBD for pricing only)
TCPC	Trim Custom Paint Color

Trim Finish

LD	Matte Diffuse
LS	Specular
LSS	Semi Specular

Flange Style

F	Self Flanged (color matches trim)
FL	Flangeless (Drywall)
FLM[20]	Flangeless Millwork
FBL[21]	Flange Only Black
FWR[22]	Flange Only White
FRALTBD[19]	Flange Only RAL
FCPC	Flange Only Custom Paint Color

ORDERING NOTES

1. 05LM only available with ELV or ZT. Not available with 347V.
2. 40LM and CP requires Marked Spacing.
3. 45LM and NCH requires Marked Spacing.
4. 90CRI not available with 50K, 95CRI not available with 35K, 40K or 50K.
5. 347 only available with ZT and MIN1 or MIN10. Not available with nLight or Emergency options. 40LM max.
6. Refer to Tech-240 for compatible dimmers.
7. ZT is not available with DARK.
8. ELV only available with MIN1 and 120V.
9. DMX and DALI are only available with DARK.
10. E7W and E7WR and not available with ICAT.
11. E7WR is not available with CP housings.
12. E10W, E10WR and GTD not available with ICAT or CP. Not available with NLIGHTER or NLTAIREM2.
13. GTD only available with NCH and ZT, ELV, or EZT.
14. Specify 120 or 277 volt. Not available with 347 volt.
15. Not available with E7W or E10W
16. Not available with Trim Finishes.
17. SH Trim not available with FL or FLM flange style.
18. Corrosion Resistant Powder Coat.
19. Replace with applicable RAL number and finish when ready to order. See RAL BROCHURE for available color options.
20. FLM requires Millwork Ceiling Cutout Template accessory, IVO*FLMKIT. Millwork Router Bit accessory, IVOFLMBIT, is optional or use similar. Millwork Adapter is included.
21. For use with different reflector flange color only (i.e AR, BZR, GR, PR, WR, WTR, WMR, WRAMF). Not available with BR (black reflector) or FL or FLM (flangeless) options.
22. For use with different reflector flange color only (i.e AR, BR, BZR, GR, PR, WTR). Not available with WR, WMR, WRAMF (white reflector) or FL or FLM (flangeless) options.

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ACCESSORIES — order as separate catalog numbers (shipped separately)	
GRA4-6IVO	Round goof ring adapter 4" ID, 6.5" OD
SCA4	Sloped ceiling adaptor. Degree of slope must be specified (5D, 10D, 15D, 20D, 25D, 30D). Ex: SCA4 10D. Refer to TECH-190 for details.
CTAIVODL20	Trim ceiling thickness adaptors for 1-1/4" to 2" thick ceilings and ≤ 30LM (includes set of two for one trim).
CTAIVODL27	Trim ceiling thickness adaptors for 2" to 2-3/4" thick ceilings and ≤ 30LM (includes set of two for one trim).
CTAIVODL30	Trim ceiling thickness adaptors for 2-3/4" to 3" thick ceilings and ≤ 30LM (includes set of two for one trim).
IVO4FLMKIT	IVO 4" Round Flangeless in Millwork Ceiling Cutout Template (min. 1 required per install)
IVOFLMBIT	IVO Flangeless in Millwork Straight Router Bit, ¼" Shank with Bearing (optional)
IVO4OPTC D MD	Field Replaceable 4" Downlight Optic, Medium Batwing Distribution, 0.8 s/mh
IVO4OPTC D MWD	Field Replaceable 4" Downlight Optic, Medium Wide Batwing Distribution,1.0 s/mh
IVO4OPTC D WD	Field Replaceable 4" Downlight Optic, Wide Batwing Distribution, 1.2 s/mh
IVO4OPTC D 10D	Field Replaceable 4" Downlight Optic, 10°
IVO4OPTC D 15D	Field Replaceable 4" Downlight Optic, 15°
IVO4OPTC D 20D	Field Replaceable 4" Downlight Optic, 20°
IVO4OPTC D 25D	Field Replaceable 4" Downlight Optic, 25°
IVO4OPTC D 30D	Field Replaceable 4" Downlight Optic, 30°
IVO4OPTC D 35D	Field Replaceable 4" Downlight Optic, 35°
IVO4OPTC D 40D	Field Replaceable 4" Downlight Optic, 40°
IVO4OPTC D 45D	Field Replaceable 4" Downlight Optic, 45°
IVO4OPTC D 50D	Field Replaceable 4" Downlight Optic, 50°
IVO4OPTC D 55D	Field Replaceable 4" Downlight Optic, 55°
IVO4OPTC D 60D	Field Replaceable 4" Downlight Optic, 60°

design select

Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect.
*See ordering tree for details

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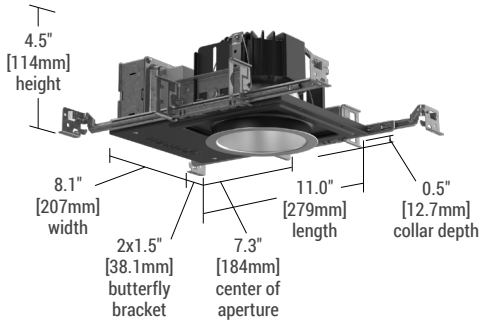
DIMENSIONAL DATA

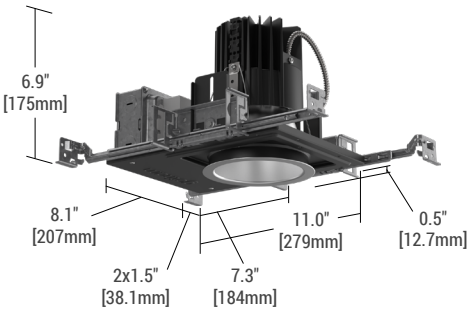
New Construction Dimensions

- Dimensions in inches [millimeters] are overall width and height (including mounting hardware Butterfly Brackets / Hanger Bars), length excludes extendable Hanger Bars.
- ½" clearance on all sides from non-combustible materials for non-IC applications required, unless marked spacing is noted otherwise.
- nLight Air Antenna extends 1.5" off the end of the j-box (lengthwise).
- Ceiling cutout for Flanged or Flangeless Trim is 5.0"
- Fixture with Marked Spacing require the following clearances (min): 24" center-to-center, 12" center to side building member, 2" overhead to building member
- Hanger Bars are extendable from 8.5" to 24".

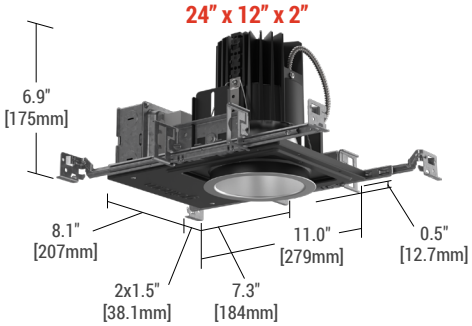
Non-IC Housing (NCH) For 05LM to 30LM



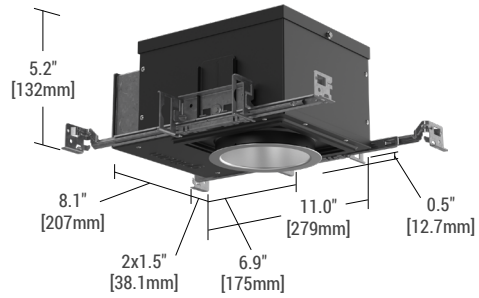
Non-IC Housing (NCH) For 35LM to 40LM



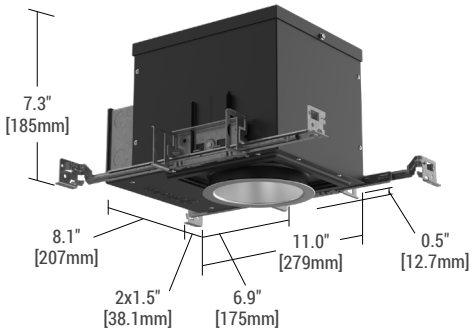
Non-IC Housing (NCH) For 45LM – MARKED SPACING 24" x 12" x 2"



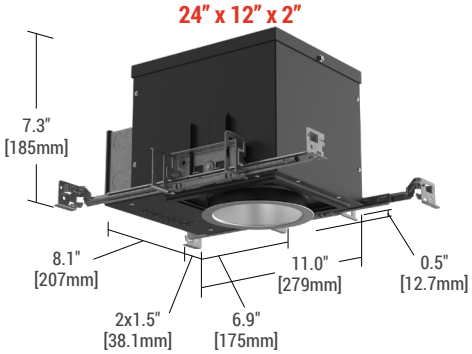
Chicago Plenum Housing (CP) For 05LM to 25LM



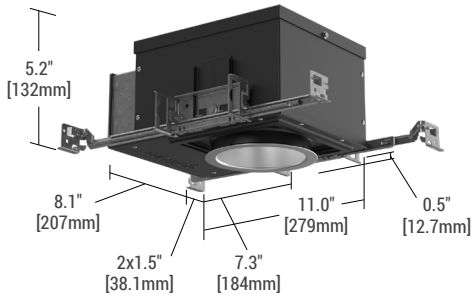
Chicago Plenum, New Construction Housing (CP) For 30LM to 35LM



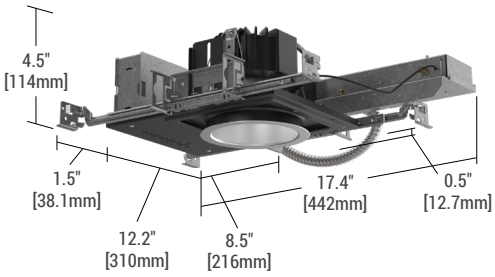
Chicago Plenum Housing (CP) For 40LM – MARKED SPACING 24" x 12" x 2"



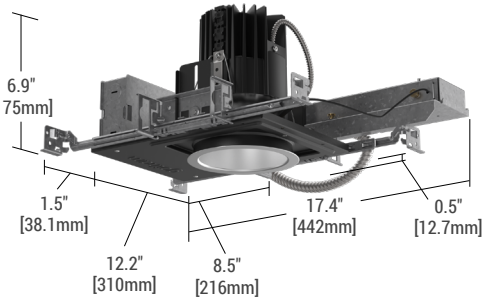
IC rated Housing (ICAT) For 05LM to 15LM



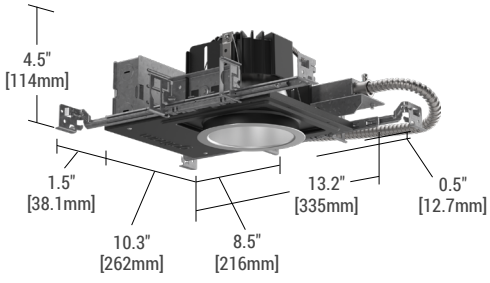
Non-IC Housing (NCH) with E7Wx, E10Wx Emergency Battery For 07LM to 30LM



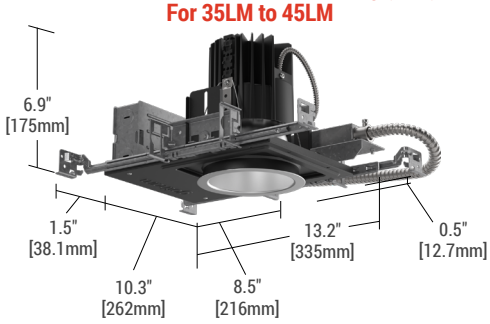
Non-IC Housing (NCH) with E7Wx, E10Wx Emergency Battery For 35LM to 45LM



Generator Transfer Device Housing (GTD) For 07LM to 30LM



Generator Transfer Device Housing (GTD) For 35LM to 45LM



GOTHAM ARCHITECTURAL DOWNLIGHTING | 1 Acuity Way, Decatur, GA 30035 | P 800-705-SERV (7378) | gothamlighting.com
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TRIM OPTIONS

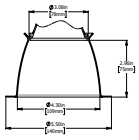
Trim Style and Flange Option

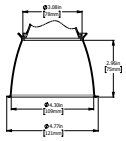
- Dimensions in inches [millimeters]


Parabolic Flanged
(P) (F)


Parabolic Flangeless
(P) (FL)

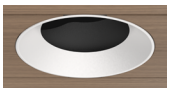

Parabolic Flangeless Millwork
(P) (FLM)



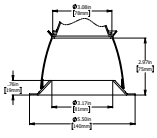


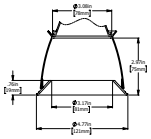

Bevel Flanged
(BEV) (F)


Bevel Flangeless
(BEV) (FL)


Bevel Flangeless Millwork
(BEV) (FLM)


Bevel Solite Lens Flanged
(BEV) (SLG) (F)





Trim Color


Clear Anodized
(AR)


Soft White
Matte Painted
(WMR)


Black Anodized
(BR)


Gold Anodized
(GR)


Pewter Anodized
(PR)


Wheat Anodized
(WTR)


Dark Bronze
Gloss Painted
(BZR)


White
Gloss Painted
(WR)


White Anti-Microbial
Gloss Painted
(WRAMF)

Parabolic Flanged shown.

Optical Finish


Semi-Specular
(LSS)


Specular
(LS)


Matte Diffuse
(LD)

Clear Anodized shown.

Note: These colors were carefully reproduced to give as true a depiction as possible of the finished product color. Some colors, however, may vary slightly from actual appearance due to display/printing variations and limitations. Please contact a Gotham representative for an Architectural Color Chip Kit (GCOLORS KIT), consisting of Powder-Coated and Plated Finishes.

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FLANGELESS

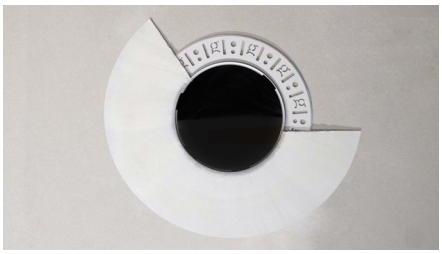
Flangeless Installation

Gotham's flangeless option utilizes a micro-thin polymer mud ring that minimizes the amount of drywall compound required to finish the ceiling. The end result is a virtually undetectable flangeless downlight installation.

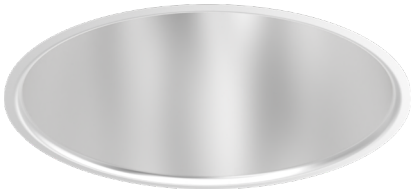
The polymer mud ring is installed independent of the of the recessed frame, therefore floating with the ceiling. This innovation minimizes any surface cracks during reflector installation, ceiling movement and any future service to the recessed frame, wiring, electronics, etc.



Partially finished mud ring, showing cross-section detail.



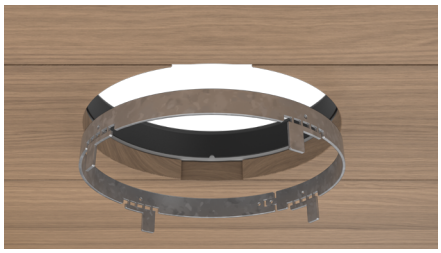
An IVO downlight requires only approximately 3" of plaster to finish.



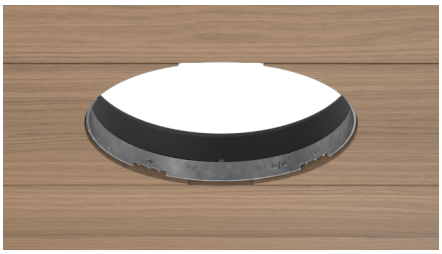
IVO with flangeless trim

Flangeless Millwork Installation

IVO's Flangeless in Millwork solution makes installation easy and precise. First, cut a hole in the Wood Ceiling using the Millwork Cutout Template (sold separately). Second, once Housing and ceiling are mounted in place, insert sheet metal Millwork Adapter (provided) lining up edge of tab with bottom of ceiling. Third, secure in place using finishing nails (provided) then remove tabs from Millwork Adapter. Last, install Trim!



Insert Millwork Adapter into precision-cut hole.



Secure with finishing nails.



Insert Trim and Module.

TABLES OF USE

Dimming Configurations

Dimming Level		Control Input	Dimming Level	Driver Dim Curve	Recommended Control Dim Curve
MIN10	+	ZT	100% to 10%	Linear	Linear/Logarithmic
	+	EZT	100% to 10%	Linear	Linear/Logarithmic
MIN1	+	ZT	100% to 1%	Linear	Linear/Logarithmic
	+	EZT	100% to 1%	Linear	Linear/Logarithmic
	+	ELV	100% to 1%*	n/a	n/a
DARK	+	EZT	100% to 0.1%	Logarithmic	Linear
	+	DMX	100% to 0.1%	Square	Linear
	+	DALI	100% to 0.1%	Logarithmic	Linear

* ELV Minimum Dimming level depends on dimmer and dimmer load

Embedded Nlight Configurations

Dimming Level		Control Input	Dimming Level	Control Provided	Driver Provided
MIN10	+	NLIGHT	100% to 10%	NIO EZDXA	eldoLED ECOdrive
	+	NLIGHTER	100% to 10%	NIO EZDCL ER	eldoLED ECOdrive
	+	NLTAIR2	100% to 10%	RIO EZDL G2	eldoLED ECOdrive
	+	NLTAIREM2	100% to 10%	RIO EZDL EM G2	eldoLED ECOdrive
MIN1	+	NLIGHT	100% to 1%	NIO EZDXA	eldoLED ECOdrive
	+	NLIGHTER	100% to 1%	NIO EZDCL ER	eldoLED ECOdrive
	+	NLTAIR2	100% to 1%	RIO EZDL G2	eldoLED ECOdrive
	+	NLTAIREM2	100% to 1%	RIO EZDL EM G2	eldoLED ECOdrive
DARK	+	NLIGHT	100% to 0.1%	NIO EZDXA	eldoLED SOLOdrive
	+	NLIGHTER	100% to 0.1%	NIO EZDCL ER	eldoLED SOLOdrive
	+	NLTAIR2	100% to 0.1%	RIO EZDL G2	eldoLED SOLOdrive
	+	NLTAIREM2	100% to 0.1%	RIO EZDL EM G2	eldoLED SOLOdrive

IVO4D	Drivers:	Title 24, JA8 ZT, EZT, ELV, DMX	Energy Star ZT, EZT, ELV, DMX, DALI, NLIGHT(ER), NLTAIR(EM)2
DOWNLIGHT 80CRI	2700K		✓5,6
	3000K		✓5,6
	3500K		✓5,6
	4000K		✓5,6
	5000K		✓5,6
DOWNLIGHT 90CRI	2700K	✓1,2,3	✓5,6
	3000K	✓1,2,3	✓5,6
	3500K	✓1,2,3	✓5,6
	4000K	✓1,2,3	✓5,6
DOWNLIGHT 95CRI	2700K	✓1,2,3,4	
	3000K	✓1,2,3,4	

1 - 05LM, 07LM, 10LM, 15LM with ICAT housings only
2 - 347V, DALI, NLIGHT(ER), & NLTAIR(EM)2 excluded
3 - Emergency options excluded
4 - 95CRI + P trim with BR or BZR finishes excluded
5 - 05LM excluded
6 - 07LM + P trim with BR or BZR finishes excluded

How to Estimate Delivered Lumens in Emergency Mode

Delivered Lumens = 1.25 x P x LPW

P = Output Power/Wattage of Emergency Battery Driver (E7WR* = 7W, E10WR* = 10W, E15WR* = 15W)

LPW = Lumen per Watt rating of luminaire based on Ordering Code selections

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SPECIFICATIONS

Optical System
- Bounding Ray™ optical design delivers low brightness apertures for a comfortable lighting experience and ensures no source image up to cut-off angle, minimizing glare.
- 45° visual cut-off angle to source
- Top-Down Flash characteristics avoids flash on trim until source becomes visible.
- Batwing distributions with feathered edges to provide even illumination fixture-to-fixture. Available with 0.8, 1.0, and 1.2 spacing-to-mounting-height ratio (s/mh).
- Clean beams with soft transitions from narrow spot up to wide flood distributions with optics available every 5°
- Optics are field changeable (tool-free).

LED Light Engine
- Perfect Color™ consistency within ½-step MacAdam Ellipse using proprietary pick and place algorithm
- 90% lumen maintenance at 55,000 hours.
- Available in 80, 90, or 95 CRI. 90CRI has R9 greater than 50, 95 CRI has R9 greater than 80.

Trims
- Trims are field changeable via twist-lock (tool-free).
- Trims are available in 9 colors and 3 surface finishes (standard)
- Custom RAL and Paint colors available upon request.
- Wall Wash and Downlight Trims are designed to be interchangeable.
- Trim lenses are made of Tempered Glass.

Electrical
- 120, 347, or Multi-Volt (MVOLT) 120-277 VAC input at 50/60 Hz
- Power Factor > 85%
- Input wires 18 AWG, 600V minimum, copper
- Fixtures are ROHS compliant

EMI/RFI
- EMI/RFI per FCC Title 47 CFR, Part 15, Class A rated standard.

Controls (Optional)
- Luminaire can be equipped with interface for nLight wired, allowing it to communicate over an nLight network. Couple with nLight-enabled sensors, power packs, or WallPods using CAT-5 cabling to create an nLight Control Zone. Link Control Zone to a Gateway directly or via a Bridge for remote status monitoring and control using SensorView software.
- Luminaire can be equipped with interface for nLight Air, allowing it to communicate over the wireless nLight control platform. Can be paired to other luminaires and wall switches through CLAIRITY+, a mobile app, which allows individual fixture control.

Dimming
- Luminaire Is capable of continuous dimming without perceivable flicker (stroboscopic) as measured by flicker index (ASNI/IES RP-16-10).
- Available dimming ranges include: 100%-10% (MIN10), 100%-1% (MIN1), and 100%-0.1% (DARK) of rated lumen output.
- Available with smooth shut off function from minimum dimming level to 0%.
- EldoLED drivers (EZT, DALI) conform to IEEE P1789 standards.
- Drivers are inaudible in 24dB environment and stable even when input voltage conditions experience typical commercial environment fluctuations.

Emergency Battery (Optional)
- Luminaires equipped with battery pack (E7W, E10W, E15W) comply with NFPA 101 (Life Safety Code) and deliver constant light output for a duration of 90 minutes minimum with AC power loss.
- Emergency battery is CEC T20 compliant.

Installation
- Patent-pending Wire-Form Mounting Springs with custom profile facilitates effortless installation, maintains tension across various ceiling thicknesses, and ensures a snug-fit of the trim to the ceiling with no sag.
- Plug-in Driver design allows for quick and easy installation and servicing.
- Light Engine, Driver, Housing, and Trim can be installed tool-free.
- Ceiling Thickness Adapters available for 1.25" to 3" thick ceilings.

Construction
- Access to Light Engine, Driver, and branch circuit conductors is available from below the ceiling without the use of tools.
- Universal Mounting Butterfly Brackets can adjust vertically 2.5" and accept various mounting bars including ¾" and 1-1/2" C Channel, ½" or ¾" Flat Strap, ½" Conduit, and ½" Angle Bars, as well as standard Hanger Bars (included).
- Hanger Bars are extendable from 8.5" to 24".
- Luminaire is constructed with 20 gauge min cold-rolled steel, galvanized steel, and aluminum.

Listings
- Fixtures are CSA certified to meet US and Canadian standards.
- Fixtures are NOM certified to meet Mexican standards
- All fixtures are manufactured in strict accordance with the appropriate and current requirements of the "Standards for Safety" per UL.
- Damp Location standard.
- Wet Location available, covered ceiling.

Photometrics
- All photometry is conducted by IESNA standard LM-79-08 in an accredited lab.
- LEDs are tested to LM-80 standards. Lumen maintenance is calculated via TM-21.

Warranty
- 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note:
- Actual performance may differ as a result of end-user environment and application.
- All values are design or typical values, measured under laboratory conditions at 25 °C.
- The product images shown are for illustration purposes only and may not be an exact representation of the product.

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provided consistent color appearance and out-of-the-box control capability with simple commissioning when used with Acuity Brands controls products.

All configurations of this luminaire are calibrated and tested meet the Acuity Brands' specification for chromatic consistency - including color rendering, color fidelity and color temperature tolerance around standard CIE chromaticity coordinates.

To learn more about A+, visit www.acuitybrands.com/aplus.

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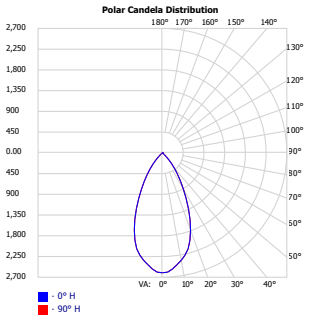
PHOTOMETRY

MD Medium Beam

IVO4 D 20LM 35K 80CRI MD P AR LSS



Wattage: 20.5, Lumens: 1920, LPW: 94, S/MH: ..8, Test No: 24-850-22P801

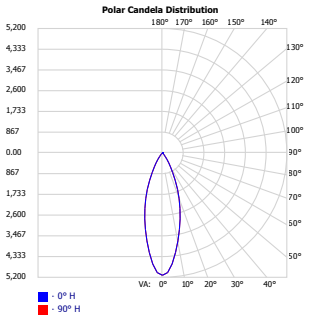
Candela Summary	
0°	2603
10°	2366
20°	1784
30°	909
40°	319
50°	26
60°	6
70°	3
80°	1
90°	0

Zonal Lumen Summary		
Zone	Lumens	%
0-30	1435	74.7%
0-40	1798.4	93.7%
0-60	1914	99.7%
0-90	1920.1	100%

Cone of Light			
Mounting Height	Initial FC Center Beam	Beam Diameter (ft)	
		Horizontal	Vertical
8'	40.67	7.6	7.6
10'	26.03	9.5	9.5
12'	18.07	11.4	11.4
14'	13.28	13.3	13.3
16'	10.17	15.2	15.2

35 Degree Beam

IVO4 D 20LM 35K 80CRI 35D P AR LSS



Wattage: 20.5, Lumens: 2044.6, LPW: 100, S/MH: .54, Test No: 24-850-34P401

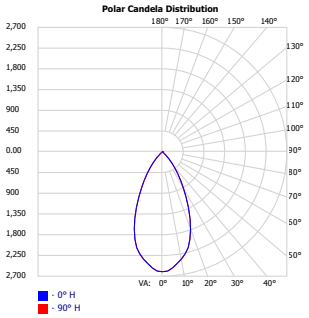
Candela Summary	
0°	5116
10°	3734
20°	2039
30°	675
40°	120
50°	14
60°	4
70°	2
80°	1
90°	0

Zonal Lumen Summary		
Zone	Lumens	%
0-30	1778.1	87.0%
0-40	1992.7	97.5%
0-60	2040.2	99.8%
0-90	2044.6	100%

Cone of Light			
Mounting Height	Initial FC Center Beam	Beam Diameter (ft)	
		Horizontal	Vertical
8'	79.94	4.8	4.8
10'	51.16	6	6
12'	35.53	7.2	7.2
14'	26.1	8.4	8.4
16'	19.99	9.6	9.6

50 Degree Beam

IVO4 D 20LM 35K 80CRI 45D P AR LSS



Wattage: 20.5, Lumens: 1920.1, LPW: 94, S/MH: .8, Test No: 24-850-11P809

Candela Summary	
0°	2603
10°	2366
20°	1784
30°	909
40°	319
50°	26
60°	6
70°	3
80°	1
90°	0

Zonal Lumen Summary		
Zone	Lumens	%
0-30	1435	74.7%
0-40	1798.4	93.7%
0-60	1914	99.7%
0-90	1920.1	100.0%

Cone of Light			
Mounting Height	Initial FC Center Beam	Beam Diameter (ft)	
		Horizontal	Vertical
8'	40.67	7.6	7.6
10'	26.03	9.5	9.5
12'	18.07	11.4	11.4
14'	13.28	13.3	13.3
16'	10.17	15.2	15.2

CRI/CCT Multiplier		
CRI	CCT	Multiplier
80	2700K	0.92
	3000K	0.96
	3500K	1.00
	4000K	1.01
	5000K	1.04
90	2700K	0.80
	3000K	0.85
	3500K	0.85
	4000K	0.89
95	2700K	0.68
	3000K	0.75

Trim Color and Finish Multiplier		
Trim Color	Trim Finish	Multiplier
AR	LSS	1.00
AR	LS	1.06
AR	LD	0.97
GR	LSS	0.97
GR	LS	0.98
GR	LD	0.92
PR	LSS	0.97
PR	LS	0.97
PR	LD	0.90
BR	LSS	0.68
BR	LS	0.68
BR	LD	0.68
WTR	LSS	0.87
WTR	LS	0.89
WTR	LD	0.87
WR		1.03
WMR		1.03
WRAMF		1.04
BZR		0.68

UGR (70% 50% 20% reflectance using a 4H x 8H room size)						
Lumen Package	Crosswise			Endwise		
	MD	MWD	WD	MD	MWD	WD
05LM	0	0	0	0	0	0
07LM	0	0	0.7	0	0	0.7
10LM	0	0.1	1.8	0	0.1	1.8
15LM	1.4	1.5	3.2	1.4	1.5	3.2
20LM	2.4	2.5	4.2	2.4	2.5	4.2
25LM	3.1	3.3	4.9	3.1	3.3	4.9
30LM	3.8	3.9	5.6	3.8	3.9	5.6
35LM	4.2	4.3	6	4.2	4.3	6
40LM	4.7	4.8	6.4	4.7	4.8	6.4
45LM	5	5.2	6.8	5	5.2	6.8

*UGR varies based on luminaire options and is affected by application dependent parameters. Numbers depicted here are considered "Luminaire-UGR" and/or "Point-UGR" values. To determine a more precise maximum UGR value ("Application-UGR"), a full lighting design layout should be completed with the selected luminaire configuration for each application.

**Calculated using an AR (Clear reflector) with LSS (Semi-Specular) finish

UGR of zero for fixtures aimed at nadir with a cut-off equal to or less than 60deg per CIE 117-1995 Discomfort Glare in Interior Lighting. UGR FAQ

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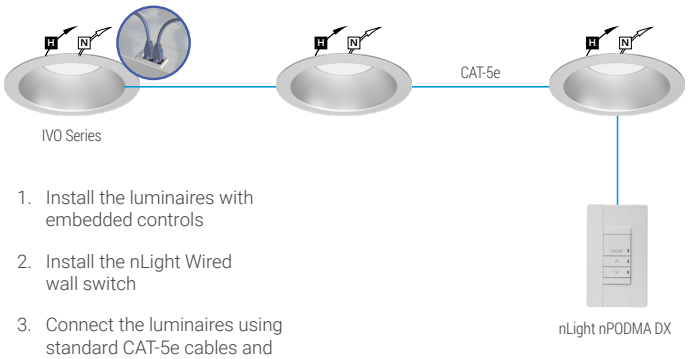
NLIGHT

Single Lighting Controls Platform for Indoor & Outdoor Spaces

nLight® is your networked lighting controls platform, for indoor and outdoor applications, providing wired or wireless options. Scaling from room to campus-wide applications, it is the one platform that grows with your business today and tomorrow; to seamlessly address energy cost optimization, building code compliance, improved occupant comfort, and much more. nLight also interfaces with DALI®, BACnet®, DMX and additional third-party devices.

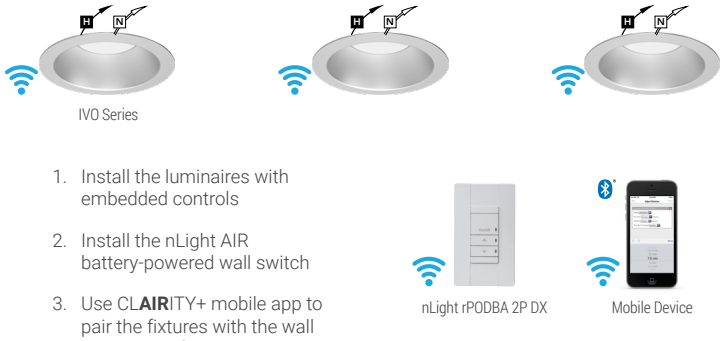
nLightcontrols.com

Wired Embedded Controls



1. Install the luminaires with embedded controls
2. Install the nLight Wired wall switch
3. Connect the luminaires using standard CAT-5e cables and the controls devices will automatically discover each other and work (plug and play)

Wireless Embedded Controls



1. Install the luminaires with embedded controls
2. Install the nLight AIR battery-powered wall switch
3. Use CL**AIR**ITY+ mobile app to pair the fixtures with the wall switch and if desired, customize the sensor settings

UL924 Sequence of Operation

The below information applies to all nLight AIR devices with an EM option.

- EM devices will remain at their high-end trim and ignore wireless lighting control commands, unless a normal-power-sensed (NPS) broadcast is received at least every 8 seconds.
- Using the CLAIRITY+ mobile app, EM devices must be associated with a group that includes a normal power sensing device to receive NPS broadcasts.
- Only non-emergency rPP20, rLSXR, rSBOR, rSDGR, and nLight AIR luminaires with version 3.4 or later firmware can provide normal power sensing for EM devices. See specification sheets for control devices and luminaires for more information on options that support normal power sensing.

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LINO

Combining clean line aesthetics with IP66 rated protection against the elements, Lino is a slim, linear luminaire that subtly integrates into exterior or interior environments.

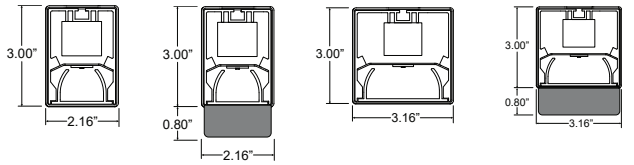
nLIGHT Controls · HE Tech lens · eldoLED Drivers · White tuning · Dim. to warm · RGBW · cULus Certified · BAA Buy American · Build America Buy America BABA · cULus Certified · ADA Compliant · IK IK Rated · IP66 IP66 Rated

Performance

FIXTURE	OUTPUT	OPTICS	DELIVERED		
			OUTPUT	INPUT WATTS	EFFICACY
LIN3SP	LVH (Very high)	HE Tech™	1263 lm/ft	12.5 W/ft	101 lm/W
LIN3WP	LVH (Very high)	HE Tech™	1300 lm/ft	12.5 W/ft	104 lm/W

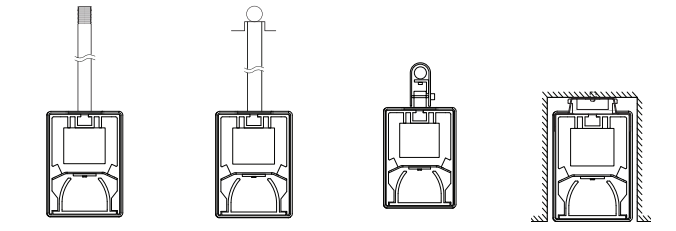
Based on static white 3500K HE lens fixtures. For the complete photometric data of this fixture, refer to page 3.

Dimensions

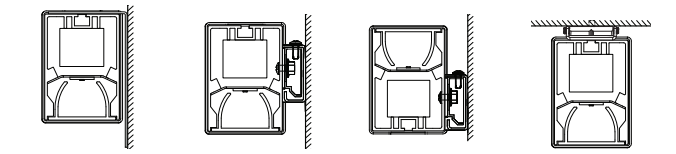


LIN3SP HE Tech (HE) · LIN3SP Flat Blade Louvers (LV) · LIN3WP HE Tech (HE) · LIN3WP Flat Blade Louvers (LV)

Mounting options

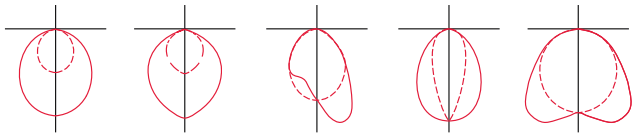


(P) Rigid Stem · (PV) Swivel Stem · (CY) Catenary · (FB) Channel Mount ADA Compliant



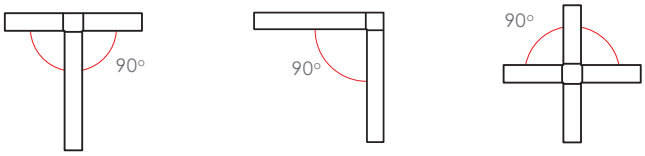
(R) Wall Mount ADA Compliant · (M) Mullion Block (direct) ADA Compliant · (M) Mullion Block (indirect) ADA Compliant · (F) Surface Mount ADA Compliant

Downlight/Uplight lens options



He Tech (HE) · Flat Blade Louvers (LV) · Asymmetric (ASY) · Wall Grazer (WG) · Batwing (BW)

Multiple corners options



*Corners are unlit.
For custom angle options, please contact Design Assist.

Project name | Type | Date | Quantities



Need help?
Don't see what you need?
We know that having so many options can be overwhelming. Please reach out to our factory for any specific request or questions you have.

Our Design Assist team (**designassist@alights.com**) is here to make the process move smoothly.

LIN						
SERIES	**FIXTURE TYPE**	**FIXTURE SIZE**	**LENGTH OR PATTERN TYPE**	**OUTPUT**	**LED CCT**	**CRI**
LIN	**1** Indirect[1] **3** Direct	**SP** 3" X 2" **WP** 3" X 3"	**_** Nominal Length[1, 4] **M_** Exact Length[2, 4] **PL_** "L" shape[3] **PT_** "T" shape[3] **PX_** "X" shape[3] **PU_** "U" shape[3] **CP_** Custom pattern[4]	**LVH** Very High Output **LH** High Output **LS** Standard Output **C_** Custom Output[1]	**27** 2700K **30** 3000K **35** 3500K **40** 4000K **TW** Tunable White[1,2] **RW** RGBW (full color + 3000k White)[2,3]	**_** 80+ CRI **CRI** 90+ CRI
	[1] Mullion block mounting only		[1] Specify in feet to the nearest foot (i.e. 8) Minimum fixture length is 2'. For fixtures shorter than 8', specify if ajustable mounting is requried. [2] Specify in inches to the nearest 1/8 (i.e. 180.125). Minimum fixture length is 2'. [3] Specify in inches to the nearest 1/8. Corners are unlit. [4] Contact Design Assist for custom pattern or standalone with adjustable mounting point.	[1] If other output is needed, please contact Design Assist.	[1] Standard CCT range is 27-50K. Contact Design Assist for custom range. [2] Photometric data pending for Tunable White and RGBW. [3] RGBW is UL pending and only available in DMX dimming. Contact Design Assist for white CCTs other than 3000k.	

VOLTAGE	OPTICS	MOUNTING	FINISH	DIMMING
U 120-277V **3** 347V[1]	**HE** HE Tech **LV** Flat Blade Louver[1] **ASY** Asymmetric **WG** Wall Grazer **BW** Batwing	**P_** Rigid Stem[1] **PV_** Swivel Stem[1] **F** Ceiling Surface Mount[2] **FB** Channel Mount[3] **R** Wall Mount **M_** Mullion block[4] **CY** Catenary[5]	**W** White **B** Black **T** Titanium **O_** Other[1] CBD SFH SPN SDW SCY LME SMN	**D** Standard 0-10V dimming[1] **D3** DMX 0.1% dim-to-dark [2] **D4** DALI dim-to-off (EldoLED) **NAIR** nLight ®AIR (dim-to-off)
[1] Not offered with Tunable White, Dim-to-Warm, RGBW, or Emergency option.	[1] Flat Blade Louver 2' minimum. Only available for nominal lengths. The louvers standard finish matches the extrusion. Not available with wall mount mounting.	[1] Indicate stem length to nearest inch. 6" minimum. [2] Available for ceiling and wall surface mounting. [3] Not available with corners. Not suitable for vertical mount. [4] Enter 1 for 1" depth. Enter 5 for 1/2" depth. Enter 2 for 1.5" depth. [5] Specify power cord lengths to the nearest inch. Power feed to terminate at remote junction box for individual sections.	[1]Specify RAL# or other custom color.	[1] 0.1% dim-to-dark standard unless otherwise specified. [2] Not offered with ceiling surface and channel mount.

EMERGENCY	SENSORS	OPTIONS
ES_ Emergency - battery Single Electrical Panel[1] **ED_** Emergency - battery Dual Electrical Panel[1] **EC_** Emergency - circuit[2]	**OF_** Occupancy Sensor On-Board[1]	**K** Natatorium application[1] **TP** Tamper resistant end caps **AC** Armored cable entry **LT** Low temperature[2]
For standalone units only. Not available on row-mounted fixtures. [1] Factory-installed integral emergency battery pack. Specify desired quantity of batteries. Not available on fixtures <4' length. Not available for 347V. Not available with Low Temperature applications; EM must be provided by inverter in that case (provided by others). [2] For dedicated LED sections being on emergency circuit contact Design Assist for details.	Specify quantity of sensors per fixture. Sensor Module (PIR) is low profile, embedded into the lens, surrounded by a color-matched cover. Designed for sensing at 15ft mounting height. Not offered with DMX dimming/ nLight® AIR/ RGBW.	[1] See guide and contact Design Assist. Not compatible with Flat Blade Louvers. [2] Operating temperature up to -30°C. Only available in 0-10V 1% dimming. Not available with emergency battery, must be remote inverter in that case (provided by others).

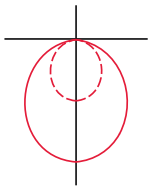
Project name | Type | Date | Quantities

Photometric data - Lino SP

DIRECT HE TECH

LVH- 4FT- 3500K

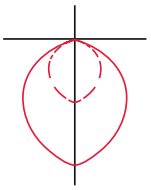
Lumens: 1263 lm/ft
Input watts: 12.5 W/ft
Efficacy: 101 lm/W



DIRECT FLAT BLADE LOUVERS

LVH- 4FT- 3500K- White finish

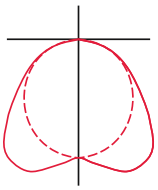
Lumens: 950 lm/ft
Input watts: 12.5 W/ft
Efficacy: 76 lm/W



DIRECT BATWING

LVH- 4FT- 3500K

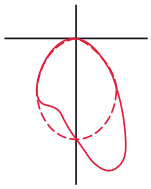
Lumens: 875 lm/ft
Input watts: 12.5 W/ft
Efficacy: 70 lm/W



DIRECT ASYMMETRIC

LVH- 4FT- 3500K

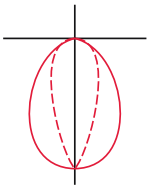
Lumens: 963 lm/ft
Input watts: 12.5 W/ft
Efficacy: 77 lm/W



DIRECT WALL GRAZER

LVH- 4FT- 3500K

Lumens: 938 lm/ft
Input watts: 12.5 W/ft
Efficacy: 75 lm/W

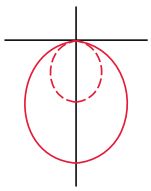


Photometric data - Lino WP

DIRECT HE TECH

LVH- 4FT- 3500K

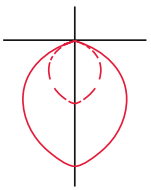
Lumens: 1300 lm/ft
Input watts: 12.5 W/ft
Efficacy: 104 lm/W



DIRECT FLAT BLADE LOUVERS

LVH- 4FT- 3500K- White finish

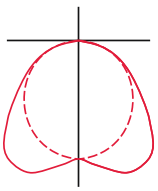
Lumens: 988 lm/ft
Input watts: 12.5 W/ft
Efficacy: 79 lm/W



DIRECT BATWING

LVH- 4FT- 3500K

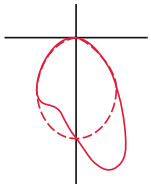
Lumens: 1013 lm/ft
Input watts: 12.5 W/ft
Efficacy: 81 lm/W



DIRECT ASYMMETRIC

LVH- 4FT- 3500K

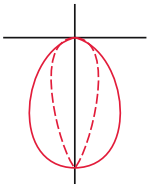
Lumens: 1013 lm/ft
Input watts: 12.5 W/ft
Efficacy: 81 lm/W



DIRECT WALL GRAZER

LVH- 4FT- 3500K

Lumens: 1100 lm/ft
Input watts: 12.5 W/ft
Efficacy: 88 lm/W



Project name | Type | Date | Quantities

Light loss factor (LLF) - Lino SP

OUTPUT	CCT	LLF RATIO		DIRECT EFFICACY									
				HE TECH		FLAT BLADE LOUVER		BATWING		ASYMMETRIC		WALL GRAZER	
		CRI 80	CRI 90	CRI 80	CRI 90	CRI 80	CRI 90	CRI 80	CRI 90	CRI 80	CRI 90	CRI 80	CRI 90
LVH (very high)	4000K	1.02	0.84	103 lm/W	85 lm/W	78 lm/W	64 lm/W	71 lm/W	59 lm/W	79 lm/W	65 lm/W	77 lm/W	63 lm/W
	3500K	1	0.83	101 lm/W	84 lm/W	76 lm/W	63 lm/W	70 lm/W	58 lm/W	77 lm/W	64 lm/W	75 lm/W	62 lm/W
	3000K	0.97	0.81	98 lm/W	82 lm/W	74 lm/W	62 lm/W	68 lm/W	57 lm/W	75 lm/W	62 lm/W	73 lm/W	61 lm/W
	2700K	0.94	0.79	95 lm/W	80 lm/W	71 lm/W	60 lm/W	66 lm/W	55 lm/W	72 lm/W	61 lm/W	71 lm/W	59 lm/W
LH (high)	4000K	1.02	0.84	100 lm/W	82 lm/W	75 lm/W	62 lm/W	68 lm/W	56 lm/W	77 lm/W	63 lm/W	77 lm/W	63 lm/W
	3500K	1	0.83	98 lm/W	81 lm/W	74 lm/W	61 lm/W	67 lm/W	56 lm/W	75 lm/W	62 lm/W	72 lm/W	60 lm/W
	3000K	0.97	0.81	95 lm/W	79 lm/W	72 lm/W	60 lm/W	65 lm/W	54 lm/W	73 lm/W	61 lm/W	70 lm/W	58 lm/W
	2700K	0.94	0.79	92 lm/W	77 lm/W	70 lm/W	58 lm/W	63 lm/W	53 lm/W	71 lm/W	59 lm/W	68 lm/W	57 lm/W
LS (standard)	4000K	1.02	0.84	109 lm/W	90 lm/W	81 lm/W	66 lm/W	74 lm/W	61 lm/W	83 lm/W	68 lm/W	80 lm/W	66 lm/W
	3500K	1	0.83	107 lm/W	89 lm/W	79 lm/W	66 lm/W	73 lm/W	61 lm/W	81 lm/W	67 lm/W	78 lm/W	65 lm/W
	3000K	0.97	0.81	104 lm/W	87 lm/W	77 lm/W	64 lm/W	71 lm/W	59 lm/W	79 lm/W	66 lm/W	76 lm/W	63 lm/W
	2700K	0.94	0.79	101 lm/W	85 lm/W	74 lm/W	62 lm/W	69 lm/W	58 lm/W	76 lm/W	64 lm/W	73 lm/W	62 lm/W

OUTPUT	CCT	LLF RATIO		DIRECT LUMEN OUTPUT									
				HE TECH		FLAT BLADE LOUVER		BATWING		ASYMMETRIC		WALL GRAZER	
		CRI 80	CRI 90	CRI 80	CRI 90	CRI 80	CRI 90	CRI 80	CRI 90	CRI 80	CRI 90	CRI 80	CRI 90
LVH (very high)	4000K	1.02	0.84	1288 lm/ft	1061 lm/ft	969 lm/ft	798 lm/ft	893 lm/ft	735 lm/ft	982 lm/ft	809 lm/ft	956 lm/ft	788 lm/ft
	3500K	1	0.83	1263 lm/ft	1048 lm/ft	950 lm/ft	789 lm/ft	875 lm/ft	726 lm/ft	963 lm/ft	799 lm/ft	938 lm/ft	778 lm/ft
	3000K	0.97	0.81	1225 lm/ft	1023 lm/ft	922 lm/ft	770 lm/ft	849 lm/ft	709 lm/ft	934 lm/ft	780 lm/ft	909 lm/ft	759 lm/ft
	2700K	0.94	0.79	1187 lm/ft	997 lm/ft	893 lm/ft	751 lm/ft	823 lm/ft	691 lm/ft	905 lm/ft	760 lm/ft	881 lm/ft	741 lm/ft
LH (high)	4000K	1.02	0.84	1050 lm/ft	864 lm/ft	793 lm/ft	653 lm/ft	718 lm/ft	591 lm/ft	803 lm/ft	662 lm/ft	803 lm/ft	662 lm/ft
	3500K	1	0.83	1029 lm/ft	854 lm/ft	777 lm/ft	645 lm/ft	704 lm/ft	584 lm/ft	788 lm/ft	654 lm/ft	756 lm/ft	627 lm/ft
	3000K	0.97	0.81	998 lm/ft	833 lm/ft	754 lm/ft	629 lm/ft	682 lm/ft	570 lm/ft	764 lm/ft	638 lm/ft	733 lm/ft	612 lm/ft
	2700K	0.94	0.79	967 lm/ft	813 lm/ft	730 lm/ft	614 lm/ft	661 lm/ft	556 lm/ft	740 lm/ft	622 lm/ft	711 lm/ft	597 lm/ft
LS (standard)	4000K	1.02	0.84	546 lm/ft	449 lm/ft	403 lm/ft	332 lm/ft	372 lm/ft	307 lm/ft	413 lm/ft	340 lm/ft	398 lm/ft	328 lm/ft
	3500K	1	0.83	535 lm/ft	444 lm/ft	395 lm/ft	328 lm/ft	365 lm/ft	303 lm/ft	405 lm/ft	336 lm/ft	390 lm/ft	324 lm/ft
	3000K	0.97	0.81	519 lm/ft	433 lm/ft	383 lm/ft	320 lm/ft	354 lm/ft	296 lm/ft	393 lm/ft	328 lm/ft	378 lm/ft	316 lm/ft
	2700K	0.94	0.79	503 lm/ft	423 lm/ft	371 lm/ft	312 lm/ft	343 lm/ft	288 lm/ft	381 lm/ft	320 lm/ft	367 lm/ft	308 lm/ft

Project name | Type | Date | Quantities

Light loss factor (LLF) - Lino WP

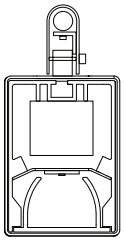
OUTPUT	CCT	LLF RATIO		DIRECT EFFICACY									
				HE TECH		FLAT BLADE LOUVER		BATWING		ASYMMETRIC		WALL GRAZER	
		CRI 80	CRI 90	CRI 80	CRI 90	CRI 80	CRI 90	CRI 80	CRI 90	CRI 80	CRI 90	CRI 80	CRI 90
LVH (very high)	4000K	1.02	0.84	106 lm/W	87 lm/W	81 lm/W	66 lm/W	83 lm/W	68 lm/W	83 lm/W	68 lm/W	90 lm/W	74 lm/W
	3500K	1	0.83	104 lm/W	86 lm/W	79 lm/W	66 lm/W	81 lm/W	67 lm/W	81 lm/W	67 lm/W	88 lm/W	73 lm/W
	3000K	0.97	0.81	101 lm/W	84 lm/W	77 lm/W	64 lm/W	79 lm/W	66 lm/W	79 lm/W	66 lm/W	85 lm/W	71 lm/W
	2700K	0.94	0.79	98 lm/W	82 lm/W	74 lm/W	62 lm/W	76 lm/W	64 lm/W	76 lm/W	64 lm/W	83 lm/W	70 lm/W
LH (high)	4000K	1.02	0.84	102 lm/W	84 lm/W	78 lm/W	64 lm/W	81 lm/W	66 lm/W	81 lm/W	66 lm/W	90 lm/W	74 lm/W
	3500K	1	0.83	100 lm/W	83 lm/W	76 lm/W	63 lm/W	79 lm/W	66 lm/W	79 lm/W	66 lm/W	86 lm/W	71 lm/W
	3000K	0.97	0.81	97 lm/W	81 lm/W	74 lm/W	62 lm/W	77 lm/W	64 lm/W	77 lm/W	64 lm/W	83 lm/W	70 lm/W
	2700K	0.94	0.79	94 lm/W	79 lm/W	71 lm/W	60 lm/W	74 lm/W	62 lm/W	74 lm/W	62 lm/W	81 lm/W	68 lm/W
LS (standard)	4000K	1.02	0.84	111 lm/W	92 lm/W	84 lm/W	69 lm/W	88 lm/W	72 lm/W	88 lm/W	72 lm/W	95 lm/W	78 lm/W
	3500K	1	0.83	109 lm/W	90 lm/W	82 lm/W	68 lm/W	86 lm/W	71 lm/W	86 lm/W	71 lm/W	93 lm/W	77 lm/W
	3000K	0.97	0.81	106 lm/W	88 lm/W	80 lm/W	66 lm/W	83 lm/W	70 lm/W	83 lm/W	70 lm/W	90 lm/W	75 lm/W
	2700K	0.94	0.79	102 lm/W	86 lm/W	77 lm/W	65 lm/W	81 lm/W	68 lm/W	81 lm/W	68 lm/W	87 lm/W	73 lm/W

OUTPUT	CCT	LLF RATIO		DIRECT LUMEN OUTPUT									
				HE TECH		FLAT BLADE LOUVER		BATWING		ASYMMETRIC		WALL GRAZER	
		CRI 80	CRI 90	CRI 80	CRI 90	CRI 80	CRI 90	CRI 80	CRI 90	CRI 80	CRI 90	CRI 80	CRI 90
LVH (very high)	4000K	1.02	0.84	1326 lm/ft	1092 lm/ft	1007 lm/ft	830 lm/ft	1033 lm/ft	851 lm/ft	1033 lm/ft	851 lm/ft	1122 lm/ft	924 lm/ft
	3500K	1	0.83	1300 lm/ft	1079 lm/ft	988 lm/ft	820 lm/ft	1013 lm/ft	840 lm/ft	1013 lm/ft	840 lm/ft	1100 lm/ft	913 lm/ft
	3000K	0.97	0.81	1261 lm/ft	1053 lm/ft	958 lm/ft	800 lm/ft	982 lm/ft	820 lm/ft	982 lm/ft	820 lm/ft	1067 lm/ft	891 lm/ft
	2700K	0.94	0.79	1222 lm/ft	1027 lm/ft	928 lm/ft	780 lm/ft	952 lm/ft	800 lm/ft	952 lm/ft	800 lm/ft	1034 lm/ft	869 lm/ft
LH (high)	4000K	1.02	0.84	1071 lm/ft	882 lm/ft	814 lm/ft	670 lm/ft	846 lm/ft	697 lm/ft	846 lm/ft	697 lm/ft	942 lm/ft	776 lm/ft
	3500K	1	0.83	1050 lm/ft	872 lm/ft	798 lm/ft	662 lm/ft	830 lm/ft	688 lm/ft	830 lm/ft	688 lm/ft	903 lm/ft	749 lm/ft
	3000K	0.97	0.81	1019 lm/ft	851 lm/ft	774 lm/ft	646 lm/ft	805 lm/ft	672 lm/ft	805 lm/ft	672 lm/ft	876 lm/ft	731 lm/ft
	2700K	0.94	0.79	987 lm/ft	830 lm/ft	750 lm/ft	630 lm/ft	780 lm/ft	655 lm/ft	780 lm/ft	655 lm/ft	849 lm/ft	713 lm/ft
LS (standard)	4000K	1.02	0.84	556 lm/ft	458 lm/ft	418 lm/ft	344 lm/ft	439 lm/ft	361 lm/ft	439 lm/ft	361 lm/ft	474 lm/ft	391 lm/ft
	3500K	1	0.83	545 lm/ft	452 lm/ft	410 lm/ft	340 lm/ft	430 lm/ft	357 lm/ft	430 lm/ft	357 lm/ft	465 lm/ft	386 lm/ft
	3000K	0.97	0.81	529 lm/ft	441 lm/ft	398 lm/ft	332 lm/ft	417 lm/ft	348 lm/ft	417 lm/ft	348 lm/ft	451 lm/ft	377 lm/ft
	2700K	0.94	0.79	512 lm/ft	431 lm/ft	385 lm/ft	324 lm/ft	404 lm/ft	340 lm/ft	404 lm/ft	340 lm/ft	437 lm/ft	367 lm/ft

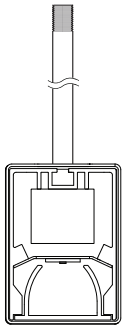
Project name | Type | Date | Quantities

Mountings

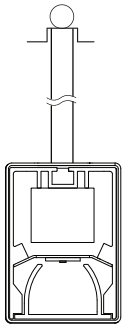
Lino SP



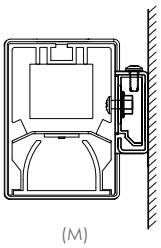
(CY)
Catenary



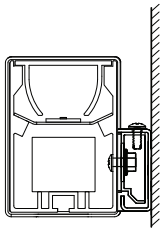
(P)
Rigid Stem



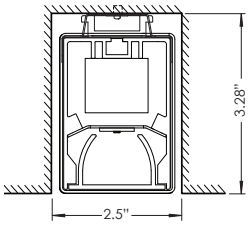
(PV)
Swivel Stem



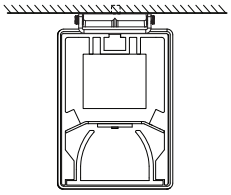
(M)
Mullion Block
(direct)
ADA Compliant



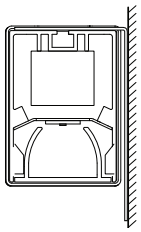
(M)
Mullion Block
(indirect)
ADA Compliant



(FB)
Channel Mount
ADA Compliant

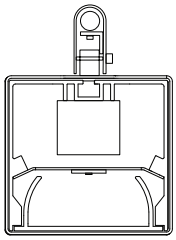


(F)
Surface Mount
ADA Compliant

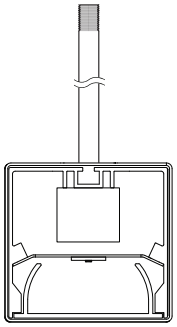


(R)
Wall Mount
ADA Compliant

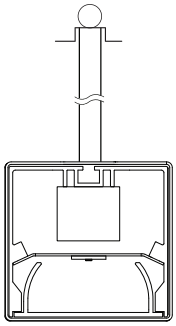
Lino WP



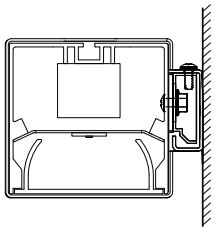
(CY)
Catenary



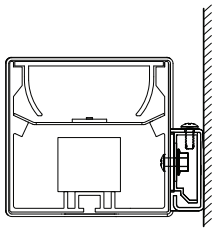
(P)
Rigid Stem



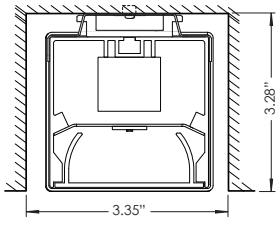
(PV)
Swivel Stem



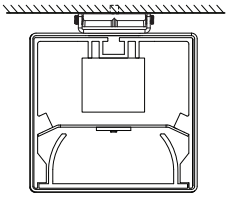
(M)
Mullion Block
(direct)
ADA Compliant



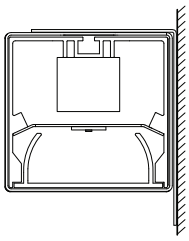
(M)
Mullion Block
(indirect)
ADA Compliant



(FB)
Channel Mount
ADA Compliant



(F)
Surface Mount
ADA Compliant

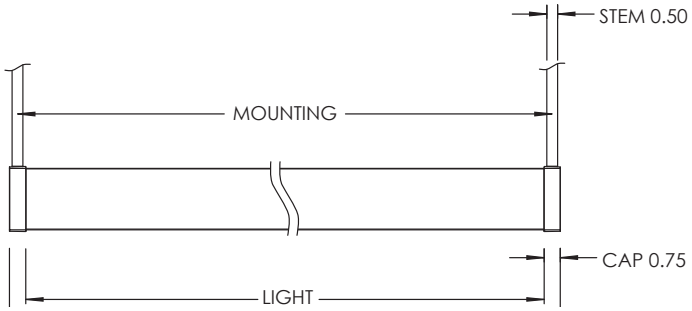


(R)
Wall Mount
ADA Compliant

Project name | Type | Date | Quantities

Dimensions

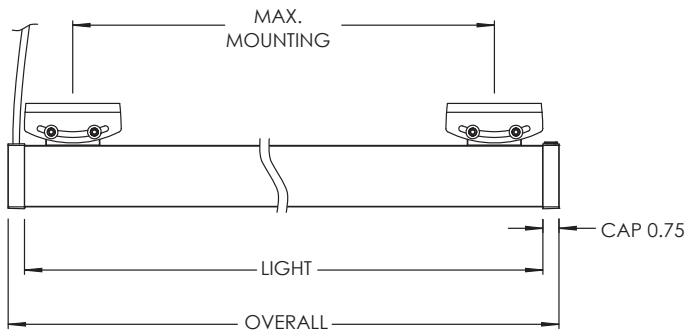
Rigid and swivel stem



	DIMENSIONS (NOMINAL)						
	2'	3'	4'	5'	6'	7'	8'
MOUNTING *	24.75"	36.75"	48.75"	60.75"	72.75"	84.75"	96.75"
LIGHT	24.00"	36.00"	48.00"	60.00"	72.00"	84.00"	96.00"
OVERALL	25.375"	37.375"	49.375"	61.375"	73.375"	85.375"	97.375"

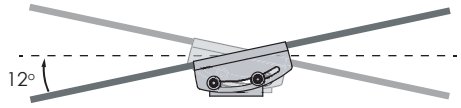
* Not adjustable

Catenary



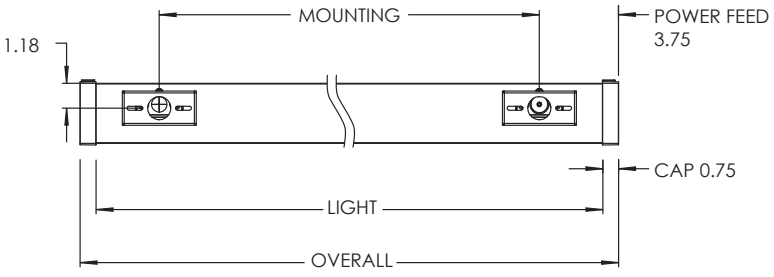
	DIMENSIONS (NOMINAL)						
	2'	3'	4'	5'	6'	7'	8'
MOUNTING (MAX.)	19.52"	31.52"	43.52"	55.52"	67.52"	79.52"	91.52"
LIGHT	24.00"	36.00"	48.00"	60.00"	72.00"	84.00"	96.00"
OVERALL	25.375"	37.375"	49.375"	61.375"	73.375"	85.375"	97.375"

ANGLE ADJUSTMENT :



Ø 1/4" aircraft cable

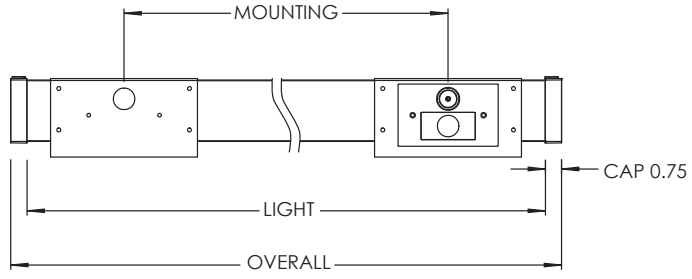
Mullion block (direct)



	DIMENSIONS (NOMINAL)						
	2'	3'	4'	5'	6'	7'	8'
MOUNTING*	18.00"	30.00"	42.00"	54.00"	66.00"	78.00"	90.00"
LIGHT	24.00"	36.00"	48.00"	60.00"	72.00"	84.00"	96.00"
OVERALL	25.375"	37.375"	49.375"	61.375"	73.375"	85.375"	97.375"

*Max, specify otherwise.
*2,3,4,5,6' two Mullion blocks. 7 and 8', three mullions with the middle one centered.
*Power feed not adjustable, please specify position.

Wall mount

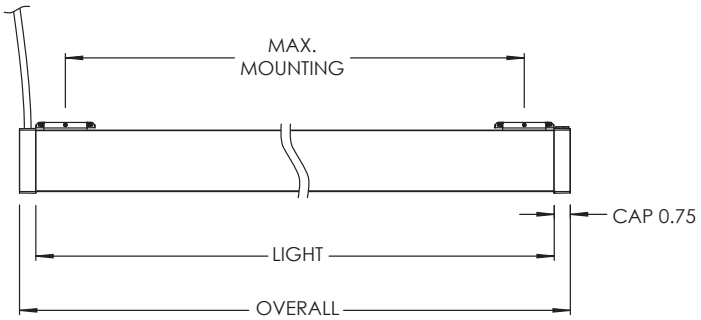


	DIMENSIONS (NOMINAL)						
	2'	3'	4'	5'	6'	7'	8'
MOUNTING*	15.00"	27.00"	39.00"	51.00"	63.00"	75.00"	87.00"
LIGHT	24.00"	36.00"	48.00"	60.00"	72.00"	84.00"	96.00"
OVERALL	25.375"	37.375"	49.375"	61.375"	73.375"	85.375"	97.375"

*Max, specify otherwise.
*2,3,4,5,6' two brackets. 7 and 8', three brackets with the middle one centered.
*Power feed not adjustable, please specify position.

Project name | Type | Date | Quantities

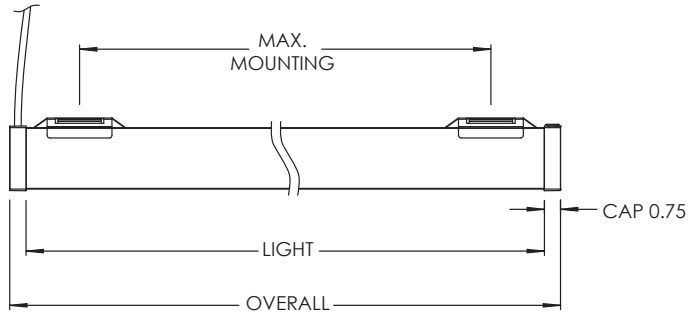
Ceiling surface mount



	DIMENSIONS (NOMINAL)						
	2'	3'	4'	5'	6'	7'	8'
MOUNTING (MAX.)	21.24"	33.24"	45.24"	57.24"	69.24"	81.24"	93.24"
LIGHT	24.00"	36.00"	48.00"	60.00"	72.00"	84.00"	96.00"
OVERALL	25.375"	37.375"	49.375"	61.375"	73.375"	85.375"	97.375"

*Adjustable
*2,3,4,5,6' two mounting brackets. 7 and 8', three mounting brackets with the middle one centered.
*Power feed not adjustable, please specify position.

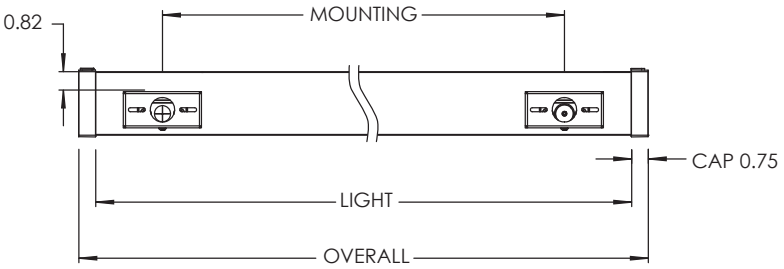
Channel mount



	DIMENSIONS (NOMINAL)						
	2'	3'	4'	5'	6'	7'	8'
MOUNTING (MAX.)*	19.05"	31.05"	43.05"	55.05"	67.05"	79.05"	91.05"
LIGHT	24.00"	36.00"	48.00"	60.00"	72.00"	84.00"	96.00"
OVERALL	25.375"	37.375"	49.375"	61.375"	73.375"	85.375"	97.375"

*Adjustable
*2,3,4,5,6' two mounting brackets. 7 and 8', three mounting brackets with the middle one centered.
*Power feed not adjustable, please specify position.

Mullion block mount (indirect)

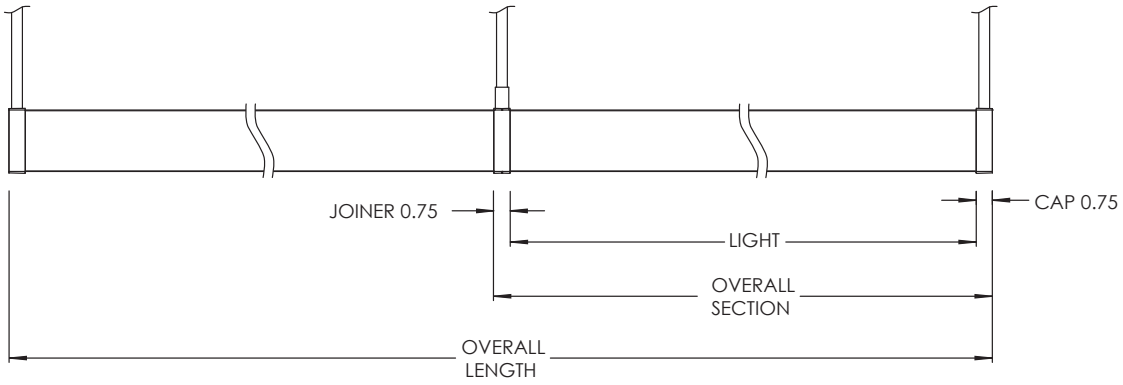


	DIMENSIONS (NOMINAL)						
	2'	3'	4'	5'	6'	7'	8'
MOUNTING*	18.00"	30.00"	42.00"	54.00"	66.00"	78.00"	90.00"
LIGHT	24.00"	36.00"	48.00"	60.00"	72.00"	84.00"	96.00"
OVERALL	25.375"	37.375"	49.375"	61.375"	73.375"	85.375"	97.375"

*Max, specify otherwise.
*2,3,4,5,6' two Mullion blocks. 7 and 8', three mullions with the middle one centered.
*Power feed not adjustable, please specify position.

Project name | Type | Date | Quantities

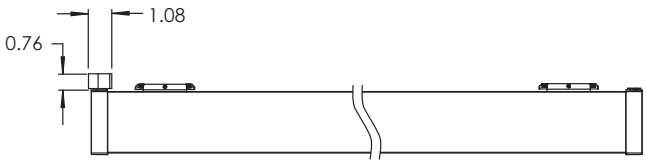
Row mounting



	DIMENSIONS (NOMINAL)						
	2'	**3'**	**4'**	**5'**	**6'**	**7'**	**8'**
LIGHT	24.00"	36.00"	48.00"	60.00"	72.00"	84.00"	96.00"
OVERALL SECTION	25.50"	37.50"	49.50"	61.50"	73.50"	85.50"	97.50"

	DIMENSIONS (NOMINAL)						
	10' (5'+5')	**11' (6'+5')**	**12' (6'+6')**	**13' (7'+6')**	**14' (7'+7')**	**15' (8'+7')**	**16' (8'+8')**
OVERALL LENGTH	122.00"	134.00"	146.00"	158.00"	170.00"	182.00"	194.00"

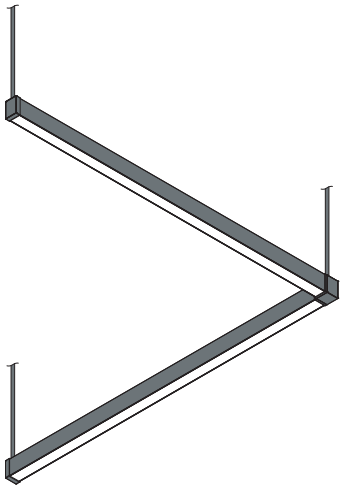
Armored cable

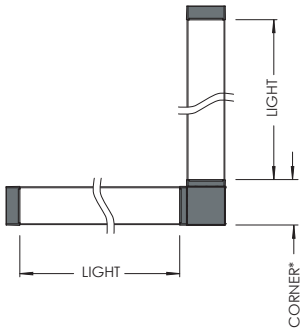


Project name | Type | Date | Quantities

Configurations

"L" shape

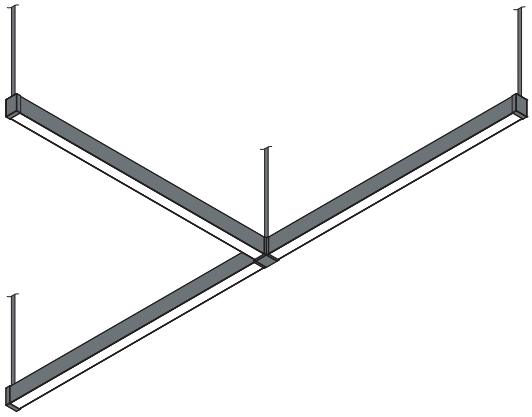


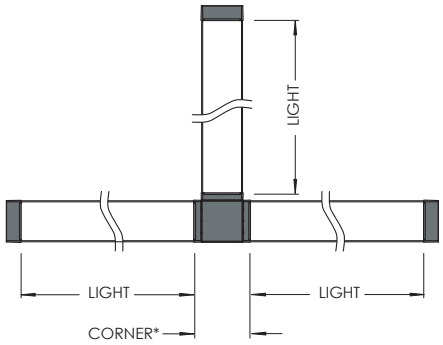


	DIMENSION CORNER
SP	2.52"
WP	3.52"

*Corner is unlit.

"T" shape

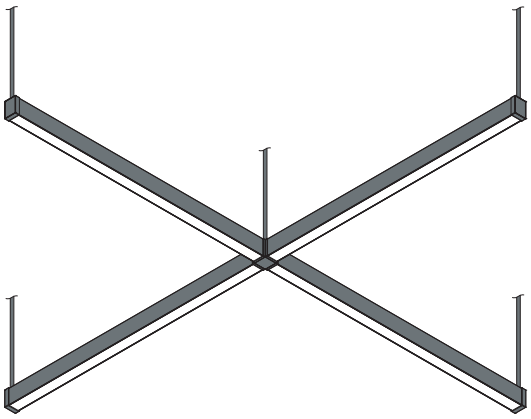


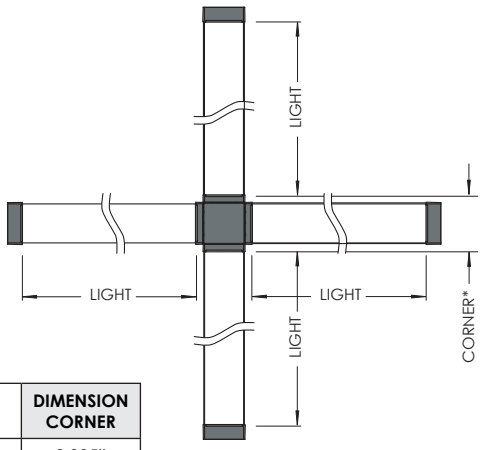


	DIMENSION CORNER
SP	2.895"
WP	3.895"

*Corner is unlit.

"X" shape





	DIMENSION CORNER
SP	2.895"
WP	3.895"

*Corner is unlit.

Project name | Type | Date | Quantities

Dimensions

Occupency sensor option*

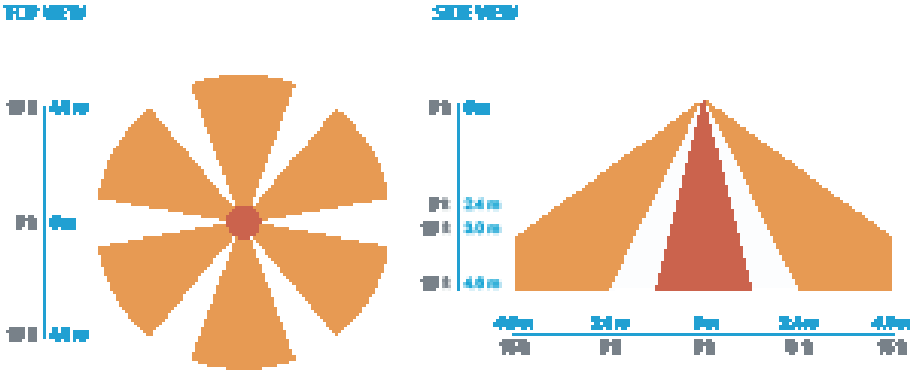


15F - LARGE MOTION EXTENDED RANGE

Optimized full coverage from 8 ft - 15 ft (2.4 m - 4.5 m) mounting heights

Reliable detection of large motion (e.g. pedestrian walking traffic)

1.3 x's mounting height equals approximate detection range



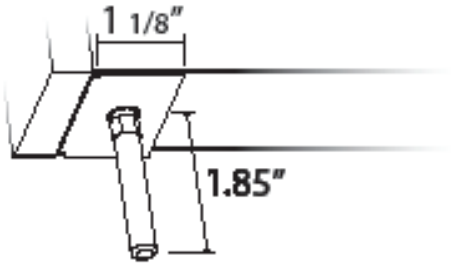
* On/Off occupancy sensor with auto dimming photocell with VLP programming at 15ft mounting height. Programming is done through VLP app. Sensor will only control the fixture section it is embedded into (Standalone operation). Sensor has a low-profile lens-embedded round lens (black only), surrounded by a painted cover matching the body color.

Sensor cover reduces the dimensions of the lit portion of the lens. Ex: If specifying a 48" lens fixture with Sensor option (OF), the lit portion will be reduced to 46 1/4", whereas the body remains at 48". Contact Design Assist for any assistance.

Project name | Type | Date | Quantities

Dimensions

nLight® AIR option*



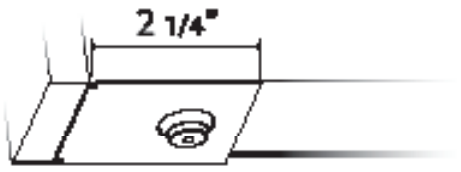
*nLight® AIR has a lens-mounted antenna, surrounded by a painted cover matching the body color. Antenna is available in Black or White; color will be chosen based on body color (Ex: Black antenna for Black or Titanium body, White for White body). Contact Design Assist to specify antenna color for custom requests.

Antenna cover reduces the dimensions of the lit portion of the lens. Ex: If specifying a 48" fixture with Sensor option, the lit portion will be reduced to 46 7/8", whereas the body remains at 48". Contact Design Assist for any assistance.

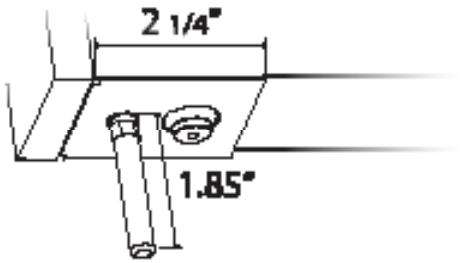
NOTE: nLight® Wired controls are not available on the Lino.

Emergency battery option*

EMERGENCY ONLY



EMERGENCY + nLIGHT® AIR ANTENNA



*Emergency Battery Option has a small lens-embedded round test button (black only) surrounded by a painted cover matching the body color.

If nLight® AIR option is chosen, antenna is available in Black or White; color will be chosen based on body color (Ex: Black antenna for Black or Titanium body, White for White body). Contact Design Assist to specify antenna color for custom requests.

Button cover reduces the dimensions of the lit portion of the lens. Ex: If specifying a 48" lens fixture with Emergency option (E/EC), the lit portion will be reduced to 45 1/4", whereas the body remains at 48". Contact Design Assist for any assistance.

Project name | Type | Date | Quantities

LINEAR DIMENSIONS

Nominal or exact lengths to the nearest 1/8th of an inch available as individual fixtures or joined to create continuous row lengths, minimum fixture lengths is 2 feet. Patterns comprised of 90° L, T and X corners provide a multitude of geometric options and architectural transitions.

Custom - Contact Design Assist for modifications to product not detailed within specification sheets.

OPTICS

The high-efficiency extruded acrylic lens technology, patented HE Tech™, features high efficacy lumen outputs, UV-stability, an integrated opaque white reflector, an optimal uniform lens surface luminance for direct distribution and a TPU gasket for IP66 sealing.

Flat Blade Louvers are used to cut down on glare and better control the light source. This option includes the high efficacy extruded diffuse acrylic lens technology with integrated opaque white reflector (inserted between the louvers and the LEDs), that enhances glare control. The louvers standard finish matches the extrusion. Other colors and custom finish options available, specify RAL# or contact factory regarding custom finish requirement.

Asymmetric, Wall grazer and Batwing are film optics that refract light along with an HE Tech co-extruded diffuse acrylic lens with integrated opaque white reflector.

LED LIGHT SOURCE

Custom manufactured linear board array uses high performance Nichia® LED in combination with a performance driven heat sink technology. Tested in accordance with LM79 and LM-80; L70>60,0000hr; operated at reduced output for high efficacy and lumen maintenance. 2700K, 3000K, 3500K, and 4000K with 80+ CRI standard; other color temperatures and 90+ CRI available upon request, contact factory. LED color variation maintained at a 3-step MacAdam ellipse (SDCM 3x). LEDs are available in Standard, High and Very High outputs. Refer to photometry for delivered lumens. Custom output available.

LED DIMMING DRIVER

Factory tuned constant current electronic 0-10V control dimming driver is standard. Specification grade dimming down to 1%. Driver life of 50,000 hrs with ambient operating temperature range of -20°C to 50°C, maximum case temperature of 80°C. Electrical specifications at maximum driver load: PF >0.9, THD <20%, >85% Efficiency. For low temperature option, minimum ambient operating temperature is -40°C.

EMERGENCY

This luminaire can be provided with a factory installed integral LED emergency lighting battery pack for both normal and emergency operation, 120-277v only (not available with 347v). This fixture integrated unit contains long-life Ni- Cad recyclable battery, 24 hour charger, and converter circuit. Test switch and charge indicator provided. Test button to be remote located within 3 feet of the luminaire, in accordance with local code. Emergency mode provides constant power to a nominal 12W LED load for a period of 90 minutes, delivering 1200 lumens of unwavering illumination throughout the full 90 minute emergency duration. Unless otherwise specified, the emergency battery pack will illuminate one 2 foot end in the direct portion of the fixture. Not available in fixtures <4ft'. Should the fixture be smaller than 4ft or require Low Temperature rating, must be wired to remote inverter (inverter provided by others).

Emergency circuiting provided as a separate circuit from normal power circuit according to NEC requirements, specify circuit length and location.

NLIGHT ®

Integrated nLIght ® for networking wireless :

The integrated API smart sensor is part of each luminaire in the nLight® AIR network, which can be grouped to control multiple luminaires. The granularity of control with the digital PIR occupancy detection and daylight sensing makes a great solution for any application. Optionally you can order nLight® AIR sensors for compatibility with an nLight Air wireless system. The rIO model are available for integration

nLight enabled, remote mounted controls provided by others. Please contact an Acuity controls representative for more information.

MOUNTING

Suspension with catenary system or pendant stems mounting available.

Catenary system set includes brackets to mount fixture directly to catenary cable. Black power cord provided for all other fixture finishes unless otherwise specified.

Rigid pendant stem-set includes 3/4" hollow threaded rod for suspension and power feed. Standard specification length 36", 6" minimum. Rigid pendant stems & 5" round mono point canopies are painted white unless otherwise noted.

45-degree angle swivel stem. Swivel stem set includes 3/4" hollow threaded rod for suspension and power feed, standard specification length 36", 6" minimum. Swivel stem & 5" round mono point canopies are painted white unless otherwise noted.

Specify if another suspension length is required. Canopies provided as required for the quantity of power feed and non-

power feed locations (crossbar included with power feed only). Specify if another shape, size, or color is required.

Wall mounting is ADA compliant. The top groove of the fixture is used to mount the fixture and provides a firm and flexible mounting option.

Surface ceiling is offered with die-cast mounting blocks with sheet metal brackets used to provide a firm flexible mounting option in any orientation the system might be installed in. Surface ceiling is ADA compliant when mounting on walls.

Channel mount is offered with similar hardware than regular surface ceiling but the brackets are altered so fixtures can be removed in tight, enclosed spaces where side access to the fixture is not available. Channel mount is also ADA compliant.

Mullion blocks are used to mount fixture to a horizontal or vertical window mullion and can also be used to offset fixture from wall. 0.5", 1" or 1.5" sheet metal mullion blocks are standard available. (2) blocks provided for extrusions 8ft or less, fixtures larger than 8ft additional blocks are provided as required. Quantity of power feed and non power feed blocks provided as required. Fixture mounting requires field drilled mounting and power feed holes. Factory pre-drilled holes can be drilled and tapped for ½" chase nipple, submit dimension requirements when ordering.

FINISH

Electrostatically applied powder coat finish. Standard finish options include titanium, white, and black. Other colors and custom finish options available, specify RAL# or contact factory regarding custom finish requirement.

LISTING

Product is compliant and certified to CSA C22.2 No. 250.0 and UL 1598. Wet location as per the applicable standards.
IP66 test report available upon request.

The Lino 1 and Lino 3 are assembled in the U.S.A. and comply with the Buy America(n) Act(BAA), Build American, Buy America (BABA), government procurement requirements under FAR, DFARS, and DOTS.

WARRANTY

Limited defect-free manufactured equipment warranty provided under normal use and proper storage for five (5) year. LED products (LED boards and drivers) will be covered for five (5) years. Please refer to the full terms and conditions on our website: www.alights.com/downloads/warranty/

Project		Catalog #		Type	
Prepared by		Notes		Date	



McGraw-Edison

GALN Galleon II

Area / Site Luminaire

Product Features

BABA · BAA · TAA · FADC · Light ARchitect™

Product Certifications

ISO Systems Certified · DLC Listed · DLC Listed Premium · 3G VIB · IP66 · UL Certified · Dark Sky Approved · 5 Year Limited Warranty · RoHS Compliant · Declare.

Interactive Menu

- Ordering Information page 2
- Mounting Details page 3
- Optical Distributions page 5
- Product Specifications page 5
- Energy and Performance Data page 6
- Control Options page 17

Quick Facts

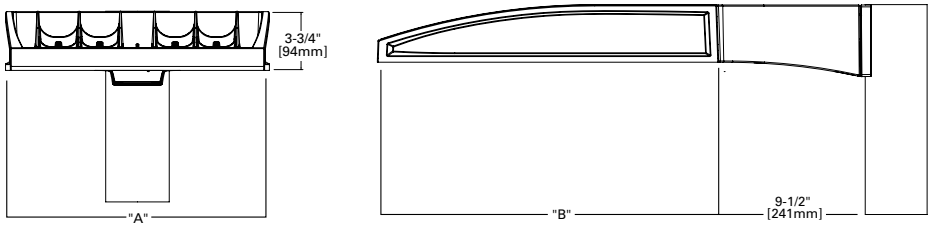
- Lumen packages range from 3,300 - 102,700 (33W - 658W)
- 22 optical distributions
- Efficacy up to 178 LPW

Connected Systems

- Wavelinx LITE Wireless
- Wavelinx PRO Wireless
- AirMesh Wireless

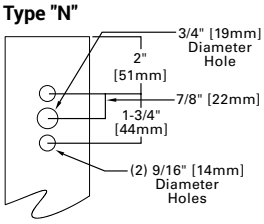
Dimensional Details

Standard Pole Mount Arm



Pole Drilling Pattern

Type "N"



Number of Light Squares	Width "A"	Housing Length "B"	Weight with Standard or QM Arm	EPA with Standard or QM Arm
1-4	16"	22"	29 lb	0.95
5-6	22"	22"	39 lb	0.95
7-9	22"	28-1/8"	48 lb	1.1

NOTES: For arm selection requirements and additional line art, see Mounting Details section.

NOTES:
1. IDA Certified (3000K CCT and warmer only, fixed mounting options)

Ordering Information

SAMPLE NUMBER: **GALN-SA4C-740-U-T4FT-GM**

Product Family [1, 2]	Light Engine Configuration			Color Temperature	Voltage	Distribution	Mounting	Finish
	Light Square	Square Count	Lumen Output					
GALN=Galleon II **BAA-GALN**=Galleon II Buy American Act Compliant [26] **TAA-GALN**=Galleon II Trade Agreements Act Compliant [26] **BABA-GALN**=Galleon II BABA/IIJA Compliant [38]	**SA**=16 LED Light Square **SB**=26 LED Light Square	**1**=1 Light Square **2**=2 Light Squares **3**=3 Light Squares **4**=4 Light Squares **5**=5 Light Squares **6**=6 Light Squares **7**=7 Light Squares **8**=8 Light Squares **9**=9 Light Squares	**A**=Output Level 1 **B**=Output Level 2 **C**=Output Level 3 **D**=Output Level 4 [4, 16] **Z**=Configured Output[32]	**722**=70CRI, 2200K **727**=70CRI, 2700K **730**=70CRI, 3000K **735**=70CRI, 3500K **740**=70CRI, 4000K **750**=70CRI, 5000K **760**=70CRI, 6000K **827**=80CRI, 2700K **830**=80CRI, 3000K **835**=80CRI, 3500K **840**=80CRI, 4000K **930**=90CRI, 3000K **935**=90CRI, 3500K **940**=90CRI, 4000K **950**=90CRI, 5000K **AMB**=Amber[14, 16]	**U**=120-277V **H**=347V-480V [7, 29] **1**=120V **2**=208V **3**=240V **4**=277V **8**=480V [7, 29] **9**=347V [7] **DV**=277V-480V DuraVolt Drivers [28, 29, 30]	**T1**=Type I **T2**=Type II **T2R**=Type II Roadway **T3**=Type III **T3R**=Type III Roadway **T4FT**=Type IV Forward Throw **T4W**=Type IV Wide **5NQ**=Type V Narrow **5MQ**=Type V Square Medium **5WQ**=Type V Square Wide **SL2**=Type II w/Spill Control **SL3**=Type III w/Spill Control **SL4**=Type IV w/Spill Control **SLL**=90° Spill Light Eliminator Left **SLR**=90° Spill Light Eliminator Right **RW**=Rectangular Wide Type I **AFL**=Automotive Frontline **T2BC**=Type II w/ Backlight Control [39] **T3BC**=Type III w/ Backlight Control [39] **T4BC**=Type IV w/ Backlight Control [39] **LBC**=90° Left w/ Backlight Control [39] **RBC**=90° Right w/ Backlight Control [39]	**[Blank]**=Standard Pole Mount Arm **QU**=Quick Mount Universal Arm **QM**=Pole Mount Arm with Quick Mount Adaptor **PA**=Pole Mount, Adjustable **SP**=3" Slipfitter, Adjustable [8] **SP2**=2-3/8" Slipfitter, Adjustable [8] **QMA**=Quick Mount Mast Arm, Fixed **MA**=Mast Arm, Fixed **WM**=Wall Mount, Fixed **WA**=Wall Mount, Adjustable **UP**=Upswept Arm	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White **RALXX**=Custom Color

Options (Add as Suffix)

DIM=External 0-10V Dimming Leads [19]
F=Single Fuse (120, 277 or 347V Specify Voltage)
FF=Double Fuse (208, 240 or 480V Specify Voltage)
20K=20kV UL 1449 fused surge protective device [10]
2L=Two Circuits [10]
HA=50°C High Ambient [16]
HSS=Installed House Side Shield [17]
BCS=Backlight Control Shield [17, 37]
GRSBK=Glare Reducing Shield, Black [22]
GRSWH=Glare Reducing Shield, White [22]
LCF=Light Square Trim Painted to Match Housing [25]
TH=Tool-less Door Hardware [5]
CC=Coastal Construction finish [3]
L90=Optics Rotated 90° Left
R90=Optics Rotated 90° Right
3SDCM=3 Standard Deviation Color Matching [36]
AHD145=After Hours Dim, 5 Hours [21]
AHD245=After Hours Dim, 6 Hours [21]
AHD255=After Hours Dim, 7 Hours [21]
AHD355=After Hours Dim, 8 Hours [21]
DALI=DALI Drivers
CDW=Non-programmable Drivers [41]

Controls and Systems Options (Add as Suffix)

BPC=Button Type Photocontrol. Must specify voltage 120V, 208V, 240V or 277V. [6]
PR=NEMA 3-PIN Photocontrol Receptacle
PR7=NEMA 7-PIN Photocontrol Receptacle [20]
FADC=Field Adjustable Dimming Controller [31]
PSC=Photocontrol Shorting Cap
SPB2=Dimming Motion Sensor, 9'-20' mounting [23]
SPB4=Dimming Motion Sensor, 21'-40' mounting [23]
SPB2/X=Dimming Motion Sensor, limited square count, 9'-20' mounting [23]
SPB4/X=Dimming Motion Sensor, limited square count, 21'-40' mounting [23]
MS/DIM-L20=Motion Sensor for Dimming Operation, 9'-20' Mounting [33, 40]
MS/DIM-L40=Motion Sensor for Dimming Operation, 21'-40' Mounting [33, 40]
WLS2XX=WaveLinx LITE, SR Driver, Dimming Motion and Daylight, Bluetooth Programmable, 7' - 15' Mounting [12, 18, 34]
WLS4XX=WaveLinx LITE, SR Driver, Dimming Motion and Daylight, Bluetooth Programmable, 15' - 40' Mounting [12, 18, 34]
WPS2XX=WaveLinx PRO, SR Driver, Dimming Motion and Daylight, WAC Programmable, 7' - 15' Mounting [12, 13, 18, 34]
WPS4XX=WaveLinx PRO, SR Driver, Dimming Motion and Daylight, WAC Programmable, 15' - 40' Mounting [12, 13, 18, 34]
DIM10-L20=AirMesh Occupancy Sensor (9'-20' Mounting) [18, 35]
DIM10-L40=AirMesh Occupancy Sensor (21'-40' Mounting) [18, 35]

Accessories (Order Separately) [27]

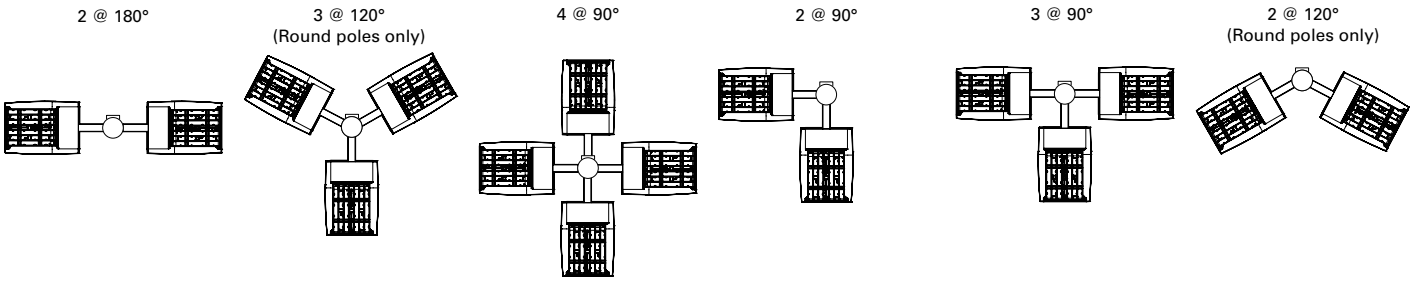
OA/RA1016=NEMA Photocontrol Multi-Tap - 105-285V
OA/RA1027=NEMA Photocontrol - 480V
OA/RA1201=NEMA Photocontrol - 347V
OA/RA1013=Photocontrol Shorting Cap
OA/RA1014=120V Photocontrol
MA1252=10kV Surge Module Replacement
MA1036-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon
MA1037-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon
MA1197-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon
MA1188-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1189-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1190-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1191-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon
MA1038-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon
MA1039-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon
MA1192-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon
MA1193-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon
MA1194-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon
MA1195-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon
SRA238=Adapter kit for mounting 3" SP arm to 2-3/8" O.D. vertical tenon
FSIR-100=Wireless Configuration Tool for MS/DIM [33]
LS/HSS=Field Installed House Side Shield for SA Light Squares [9, 17]
LS/HSS-SB=Field Installed House Side Shield for SB Light Squares [9, 17]
LS/BCS=Backlight Control Shield [9, 17, 37]
LS/GRSBK-2PK =Glare Reducing Shield, Black [9, 22]
LS/GRSWH-2PK =Glare Reducing Shield, White [9, 22]
LS/PFS=Perimeter Shield, Black [15]
WOLC-7P-10A=WaveLinx Outdoor Control Module [11, 18, 13]
TL7-G1-HV= AirMesh 7-PIN node, 110-480V [11, 18, 35]
CBSSW-450-002= AirMesh central base station with 5-button control [35]

NOTES:

1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
2. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
3. Coastal construction finish salt spray tested to over 5,000-hours per ASTM B117, with a scribe rating of 9 per ASTM D1654. Not available with TH option.
4. When using SA light squares, Output Level 4 not available with color temperatures 722, 727, 827, 830 or 930 when HSS is used.
5. TH option not 3G rated. Not available with Coastal Construction (CC) option.
6. Not available with voltage options H, 8 or 9.
7. Not available with SB1A or SB2A configurations. Not available in combination with HA high ambient and sensor options at Output Level 3. H voltage not available with sensor options, choose voltage 8 or 9.
8. SP arm limited to 3" O.D. vertical tenon. SP2 limited to 2-3/8" O.D. vertical tenon.
9. One required for each Light Square.
10. 2L is not available with SB light squares. Not available with SPB at 347V or 480V. Not available with WaveLinx or 20kV surge option.
11. Requires PR7.
12. Replace XX with sensor color (WH, BZ or BK.).
13. WAC Gateway required to enable field-configurability: Order WAC-PoE and WPOE-120 (10V to PoE injector) power supply if needed. WAC not required for LC Bluetooth sensors.
14. Narrow-band 590nm +/- 5nm for wildlife and observatory use. Choose Output Level 1; supplied at 500mA drive current only. Not available with SB light squares. Exact luminaire wattage available in IES files. Available with 5WQ, 5MQ, SL2, SL3 and SL4 distributions. Can be used with HSS option.
15. Set of 4 pcs. One set required per Light Square.
16. HA option not available with Output Level 4 or AMB Amber.
17. Not for use with T1, 5NQ, 5MQ, 5WQ or RW optics.
18. Cannot be used with other control options.
19. Low voltage control lead brought out 18" outside fixture. Not available with DALI or integrated controls options.
20. Not available if any SPB, or WaveLinx sensor is selected. Motion sensor has an integral photocell.
21. Requires the use of BPC photocontrol or the PR7 or PR photocontrol receptacle with photocontrol accessory. Not available with SB light squares when using Output Level 4.
22. Not for use with T1, T4FT, T4W or SL optics. See IES files for details. Not available with SB light squares.
23. Sensor configuration mobile application required for configuration. See controls page for details.
24. Replace X with number of Light Squares controlled by the SPB, referencing the "SPB/X Availability Table" on the controls page.
25. Not available with HSS, GRSWH or GRSBK.
26. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
27. For BAA or TAA requirements, Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
28. DuraVolt drivers feature added protection from power quality issues such as loss of neutral, transients and voltage fluctuations. Visit www.signify.com/duravolt for more information.
29. 480V not to be used with ungrounded or impedance grounded systems.
30. Not available with SA1A or SA1B. Not available with SB1, or any SB configuration using Output Level 1. Not available with any control option except SPB
31. Cannot be used with DALI, PR7, or other motion response control options. Not available with SB light squares when using Output Level 4.
32. Use GALN Product Configurator to specify lumen output, drive current and wattage. Not available with AMB. Not available with SB light squares.
33. Uses the FSP-211 motion sensor. The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Cooper Lighting Solutions for more information.
34. Controls system is not available with photocontrol receptacles (PR , PR7) or other controls systems (FADC, SPBx).
35. Requires AirMesh central base station CBSSW-450-002 and Synapse commissioning for operation.
36. 3-step MacAdam ellipse binning. Available in 740 CRI/CCT only. Longer lead times apply, consult your lighting representative at Cooper Lighting Solutions for more information.
37. Not available with SB light squares.
38. Only product configurations with these prefixes are built to be compliant with theBuy American Act of 1933 (BAA) or the Build America Buy America Act (BABA).BABA is the minimum Government compliance requirement for the Build America Buy America standards which is part of the Infrastructure and Investment JobsAct (IIJA). Individual Government Agencies may have more stringent compliancestandards. Please refer to the DOMESTIC PREFERENCES website or consult the CLSDomestic Preferences team for more information. Components shipped separatelymay be separately analyzed under domestic preference requirements.
39. Select SA light square. Only available with Output Levels 1, 2 or 3. Not compatible with HSS, GRS, BCS or PFS shield options, or LCF.
40. Not compatible with DALI.
41. Uses non-NFC (Near Field Communication) drivers to eliminate field-programmability.

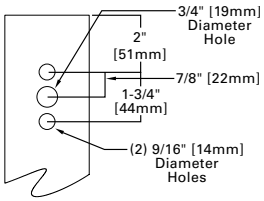
Mounting Details

Pole Configuration Options



Pole Drilling Patterns

Type "N"



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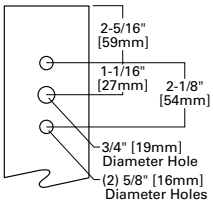

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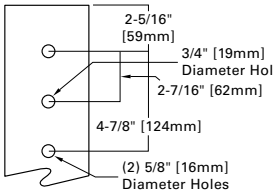
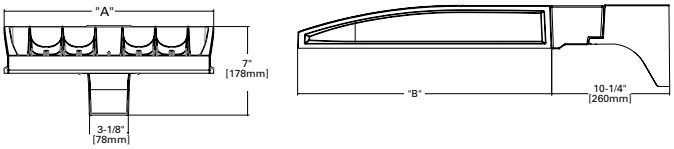
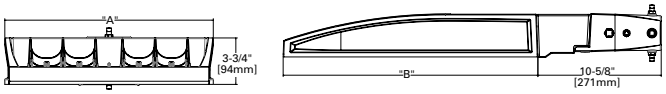


Quick Mount Universal Arm (QU)



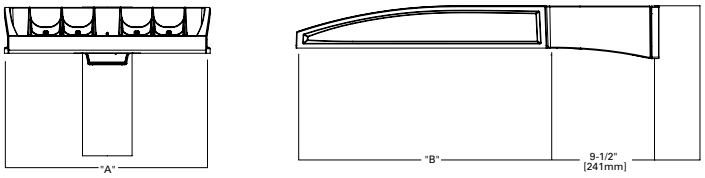
*NOTE: Universal bolt pattern compatible with Type N through Type M drilling patterns

Quick Mount Mast Arm (QMA)



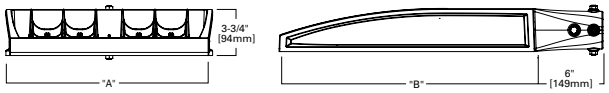
*NOTE: Fits 2-3/8" O.D. tenon

Pole Mount Arm with Quick Mount Adaptor (QM)



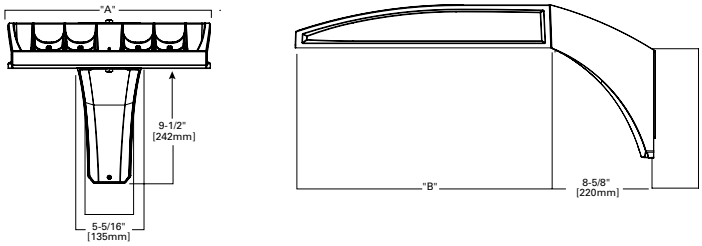
*NOTE: Use Type N drilling pattern

Mast Arm, Fixed (MA)



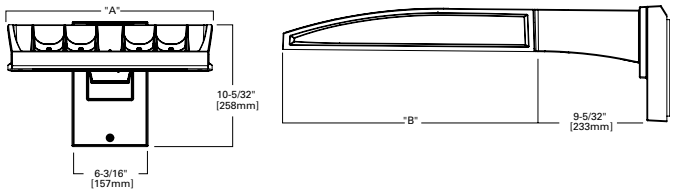
*NOTE: Fits 2-3/8" O.D. tenon

Upswept Arm (UP)



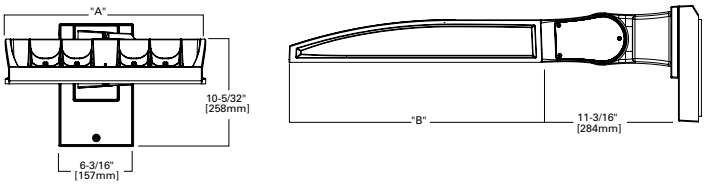
*NOTE: Universal bolt pattern compatible with Type N through Type M drilling patterns

Wall Mount, Fixed (WM)

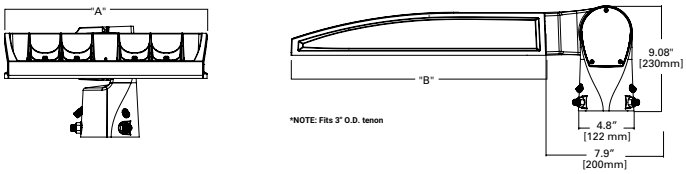


Mounting Details

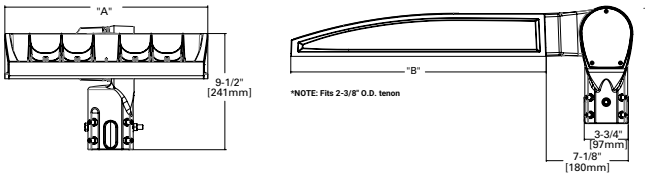
Wall Mount, Adjustable (WA)



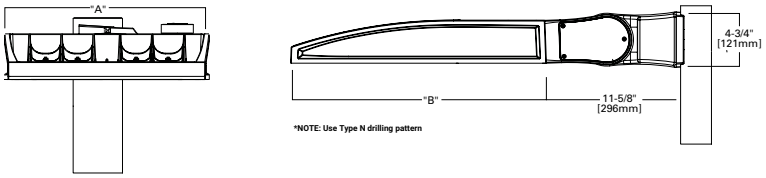
3" Slipfitter, Adjustable (SP)



2-3/8" Slipfitter, Adjustable (SP2)

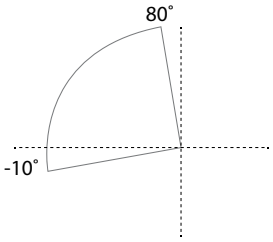


Pole Mount, Adjustable Arm (PA)



Adjustable Arm Range of Motion

- Includes WA, SP, SP2 and PA mounting options
- Adjustable in increments of 5°
- Must maintain downward facing orientation

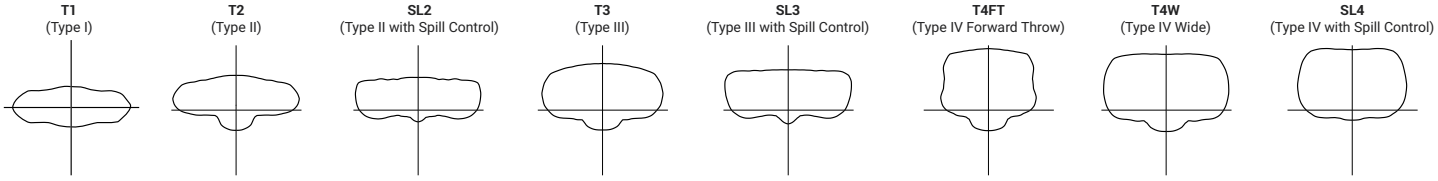


Fixture Weights and EPAs

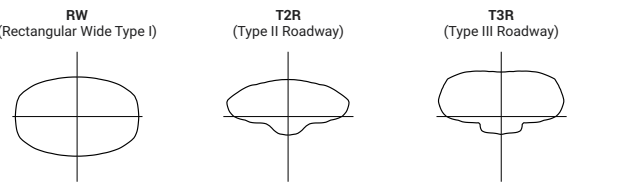
Tilt Angle (Degrees)	Number of Light Squares	Weight	1 @ 90°	2 @ 180°	2 @ 90°	2 @ 120°	3 @ 90°	3 @ 120°	4 @ 90°
0°	1-4	33.5 lb (15.2 kg)	0.85	1.70	1.46	1.66	2.31	2.25	2.35
	5-6	43.5 lb (19.7 kg)	0.86	1.71	1.62	1.80	2.49	2.35	2.50
	7-9	52.5 lb (23.8 kg)	0.98	1.95	1.75	1.98	2.73	2.55	2.76
15°	1-4	33.5 lb (15.2 kg)	1.10	1.71	1.95	2.26	2.81	3.30	2.87
	5-6	43.5 lb (19.7 kg)	1.42	1.71	2.27	2.72	3.13	3.63	3.15
	7-9	52.5 lb (23.8 kg)	1.69	1.96	2.67	3.22	3.65	4.38	3.72
30°	1-4	33.5 lb (15.2 kg)	1.72	1.81	2.58	3.21	3.44	4.59	3.53
	5-6	43.5 lb (19.7 kg)	2.26	2.29	3.11	4.00	3.97	5.27	4.00
	7-9	52.5 lb (23.8 kg)	2.75	2.85	3.73	4.83	4.71	6.45	4.81
45°	1-4	33.5 lb (15.2 kg)	2.25	2.36	3.10	4.00	3.96	5.63	4.08
	5-6	43.5 lb (19.7 kg)	2.96	2.99	3.81	5.06	4.67	6.49	4.71
	7-9	52.5 lb (23.8 kg)	3.63	3.76	3.73	6.17	5.59	8.03	5.73
60°	1-4	33.5 lb (15.2 kg)	2.63	2.77	3.49	4.58	4.34	6.21	4.48
	5-6	43.5 lb (19.7 kg)	3.46	3.51	4.32	5.84	5.19	7.01	5.22
	7-9	52.5 lb (23.8 kg)	4.27	4.44	5.25	7.15	6.23	8.80	6.40

Optical Distributions

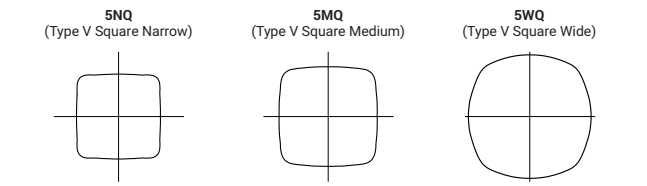
Asymmetric Area Distributions



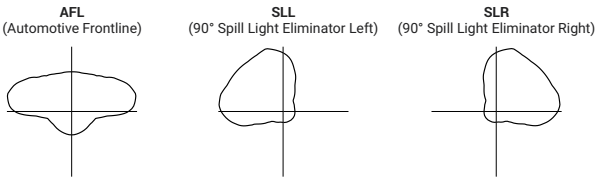
Asymmetric Roadway Distributions



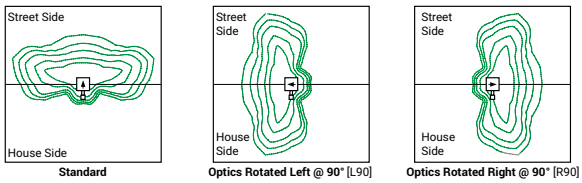
Symmetric Distributions



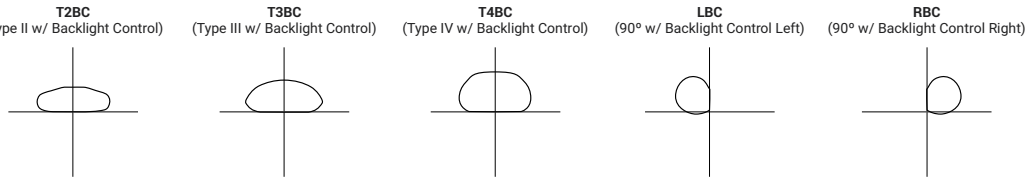
Specialized Distributions



Rotated Optics



Backlight Control Distributions



Product Specifications

Construction
- Die-cast aluminum housing and heat sink
- Three housing sizes, using 1 to 9 light squares

Optics
- High-efficiency injection-molded AccuLED Optics technology
- 22 optical distributions for area site and roadway applications
- 4 shielding options include HSS, BCS, GRS and PFS
- IDA Certified (3000K CCT and warmer only, fixed mounting options)
- 5 step MacAdam ellipse binning (5 SDCM) standard with 70CRI and 80CRI. 3SDCM option available with 740 CRI/CCT. 3 step MacAdam ellipse binning standard with 90CRI

Electrical
- Removable power tray assembly includes drivers, surge modules and control modules for ease of maintenance and serviceability
- Standard with 0-10V dimming
- Standard with 10kV surge module, optional 20kV surge module
- Suitable for operation in -40°C to 40°C ambient environments. Optional 50°C high ambient (HA) configuration
- Luminaire available with the field adjustable dimming controller (FADC) to manually adjust wattage and reduce the total lumen output and light levels. Comes pre-set to the highest position at the lumen output selected

Mounting
- Arms are factory installed, enabling closed-housing installation
- All arms suitable for round or square pole installation
- All arms provide clearance for multiple fixture installations at 90°

Finish
- 6 standard finishes use super durable TGIC polyester powder coat paint, providing 2.5 mil nominal thickness and salt-spray tested to 3,000 hours per ASTM B117
- RAL and custom color matches available
- Coastal Construction (CC) option salt-spray tested to 5,000 hours per ASTM B117, achieving a scribe rating of 9 per ASTM D1654

Compliance
- Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified
- IDA Certified (3000K CCT and warmer only, fixed mounting options)
- Declare compliant
- This Cooper product is manufactured in the US and meets the BABA cost of components rule. To verify a configured product with specific accessories and options meets BABA Domestic Preference Requirements; submit this catalog number to Cooper Lighting Quotation team for validation by our Engineering and Manufacturing teams. Our BABA designation is based on the minimum compliance requirement for BABA. Individual Government Agencies may have more stringent compliance standards.
- Please refer to the DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components shipped separately may be separately analyzed under domestic preference requirements

Typical Applications
- Outdoor, Parking Lots, Walkways, Roadways, Building Areas
- Sports lighting, including tennis, pickleball, basketball courts

Warranty
- Five-year limited warranty. Consult website for details. www.cooperlighting.com/legal

Energy and Performance Data

Lumen Maintenance (TM-21)

Output Level	Ambient Temperature	25,000 hours*	50,000 hours*	60,000 hours*	100,000 hours**	Theoretical L70 hours**
Output Levels 1-3	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.7%	98.3%	98.1%	97.4%	> 1.9M
	50°C	98.2%	97.2%	96.8%	95.2%	> 851,000
Output Level 4	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.5%	97.9%	97.7%	96.7%	> 1.3M

* Supported by IES TM-21 standards
** Theoretical values represent estimations commonly used; however, refer to the IES position on LED Product Lifetime Prediction, IES PS-10-18, explaining proper use of IES TM-21 and LM-80.

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
0ºC	1.02
10ºC	1.01
25ºC	1.00
40ºC	0.99
50ºC	0.97

FADC Settings
SA1-SA3 (All Output Levels)

FADC Position	Percent of Typical Lumen Output
1	25%
2	48%
3	56%
4	65%
5	75%
6	80%
7	85%
8	90%
9	95%
10	100%

Note: +/-5% typical value

FADC Settings
SA4-SA6 (All Output Levels)

FADC Position	Percent of Typical Lumen Output
1	14%
2	25%
3	32%
4	43%
5	49%
6	57%
7	65%
8	72%
9	80%
10	100%

Note: +/-5% typical value

FADC Settings
SA7-SA9 (All Output Levels)

FADC Position	Percent of Typical Lumen Output
1	19%
2	38%
3	47%
4	63%
5	74%
6	85%
7	95%
8	97%
9	100%
10	100%

Note: +/-5% typical value

Drive Currents

Lumen Output	SA Light Squares	SB Light Squares
Output Level 1	615mA	350mA
Output Level 2	800mA	450mA
Output Level 3	1050mA	615mA
Output Level 4	1200mA	900mA

SA Light Squares, Output Level 1, 4000K CCT, 70 CRI

Galleon II IES Files | Supplemental Lumen Tables

Number of Light Squares		1	2	3	4	5	6	7	8	9
Nominal Power (Watts)		33	63	93	121	154	182	215	244	274
Input Current @ 120V		0.283	0.529	0.778	1.058	1.310	1.556	1.839	2.089	2.335
Input Current @ 208V		0.165	0.309	0.460	0.618	0.771	0.919	1.082	1.240	1.379
Input Current @ 240V		0.143	0.270	0.398	0.540	0.671	0.796	0.944	1.078	1.194
Input Current @ 277V		0.125	0.237	0.352	0.473	0.581	0.705	0.818	0.962	1.057
Input Current @ 347V		0.098	0.181	0.272	0.362	0.454	0.544	0.636	0.738	0.816
Input Current @ 480V		0.073	0.133	0.200	0.267	0.335	0.400	0.470	0.554	0.600
Optics										
T1	Lumens	4,619	9,180	13,628	18,059	22,861	27,070	31,796	36,863	41,385
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
	Lumens per Watt	140	146	147	149	148	149	148	151	151
T2	Lumens	4,654	9,249	13,730	18,194	23,032	27,273	32,034	37,138	41,694
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
	Lumens per Watt	141	147	148	150	150	150	149	152	152
T2R	Lumens	4,716	9,372	13,913	18,437	23,340	27,637	32,462	37,634	42,251
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
	Lumens per Watt	143	149	150	152	152	152	151	154	154
T3	Lumens	4,589	9,120	13,538	17,940	22,711	26,892	31,587	36,620	41,112
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G4
	Lumens per Watt	139	145	146	148	147	148	147	150	150
T3R	Lumens	4,735	9,411	13,970	18,513	23,436	27,751	32,596	37,790	42,425
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
	Lumens per Watt	143	149	150	153	152	152	152	155	155
T4FT	Lumens	4,617	9,176	13,622	18,051	22,851	27,058	31,782	36,847	41,366
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	140	146	146	149	148	149	148	151	151
T4W	Lumens	4,631	9,203	13,662	18,104	22,918	27,138	31,876	36,955	41,488
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	140	146	147	150	149	149	148	151	151
SL2	Lumens	4,619	9,180	13,627	18,058	22,860	27,069	31,795	36,861	41,383
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5
	Lumens per Watt	140	146	147	149	148	149	148	151	151
SL3	Lumens	4,586	9,115	13,531	17,931	22,699	26,879	31,571	36,602	41,091
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
	Lumens per Watt	139	145	145	148	147	148	147	150	150
SL4	Lumens	4,529	9,002	13,363	17,708	22,417	26,544	31,178	36,146	40,580
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B2-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	137	143	144	146	146	146	145	148	148
5NQ	Lumens	4,829	9,598	14,247	18,880	23,901	28,301	33,242	38,539	43,266
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3
	Lumens per Watt	146	152	153	156	155	155	155	158	158
5MQ	Lumens	4,853	9,645	14,318	18,974	24,020	28,442	33,407	38,731	43,482
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	147	153	154	157	156	156	155	159	159
5WQ	Lumens	4,843	9,625	14,288	18,934	23,969	28,382	33,337	38,649	43,390
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5
	Lumens per Watt	147	153	154	156	156	156	155	158	158
SLL/ SLR	Lumens	3,989	7,927	11,768	15,594	19,741	23,375	27,456	31,831	35,736
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
	Lumens per Watt	121	126	127	129	128	128	128	130	130
RW	Lumens	4,774	9,488	14,085	18,665	23,628	27,979	32,863	38,100	42,774
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
	Lumens per Watt	145	151	151	154	153	154	153	156	156
AFL	Lumens	4,673	9,286	13,785	18,268	23,126	27,384	32,164	37,290	41,864
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
	Lumens per Watt	142	147	148	151	150	150	150	153	153

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

SA Light Squares, Output Level 2, 4000K CCT, 70 CRI

Galleon II IES Files | Supplemental Lumen Tables

Number of Light Squares		1	2	3	4	5	6	7	8	9
Nominal Power (Watts)		44	82	121	164	204	243	286	325	364
Input Current @ 120V		0.367	0.689	1.014	1.378	1.704	2.027	2.393	2.716	3.041
Input Current @ 208V		0.213	0.401	0.594	0.802	0.997	1.188	1.400	1.605	1.782
Input Current @ 240V		0.184	0.347	0.510	0.694	0.860	1.021	1.210	1.386	1.531
Input Current @ 277V		0.160	0.303	0.449	0.605	0.757	0.898	1.065	1.242	1.347
Input Current @ 347V		0.125	0.235	0.355	0.471	0.592	0.710	0.828	0.958	1.065
Input Current @ 480V		0.092	0.172	0.258	0.344	0.432	0.517	0.605	0.706	0.775
Optics										
T1	Lumens	5,748	11,423	16,957	22,470	28,446	33,683	39,563	45,867	51,494
	BUG Rating	B2-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	Lumens per Watt	131	139	140	137	139	139	138	141	141
T2	Lumens	5,790	11,508	17,083	22,638	28,658	33,935	39,859	46,210	51,879
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	132	140	141	138	140	140	139	142	143
T2R	Lumens	5,868	11,662	17,311	22,941	29,041	34,388	40,391	46,827	52,572
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
	Lumens per Watt	133	142	143	140	142	142	141	144	144
T3	Lumens	5,710	11,347	16,845	22,322	28,258	33,461	39,303	45,565	51,155
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B4-U0-G4	B4-U0-G5	B4-U0-G5
	Lumens per Watt	130	138	139	136	139	138	137	140	141
T3R	Lumens	5,892	11,710	17,383	23,035	29,161	34,530	40,558	47,020	52,788
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	134	143	144	140	143	142	142	145	145
T4FT	Lumens	5,745	11,418	16,949	22,460	28,433	33,668	39,546	45,847	51,471
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	131	139	140	137	139	139	138	141	141
T4W	Lumens	5,762	11,451	16,999	22,526	28,517	33,767	39,662	45,982	51,622
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	131	140	140	137	140	139	139	141	142
SL2	Lumens	5,747	11,422	16,956	22,469	28,444	33,681	39,561	45,865	51,491
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	131	139	140	137	139	139	138	141	141
SL3	Lumens	5,707	11,342	16,836	22,311	28,244	33,444	39,283	45,542	51,129
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	130	138	139	136	138	138	137	140	140
SL4	Lumens	5,636	11,201	16,627	22,034	27,893	33,028	38,794	44,976	50,493
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	128	137	137	134	137	136	136	138	139
5NQ	Lumens	6,009	11,942	17,727	23,492	29,739	35,214	41,362	47,953	53,835
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
	Lumens per Watt	137	146	147	143	146	145	145	148	148
5MQ	Lumens	6,039	12,001	17,816	23,609	29,887	35,389	41,568	48,191	54,103
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5
	Lumens per Watt	137	146	147	144	147	146	145	148	149
5WQ	Lumens	6,026	11,976	17,778	23,559	29,824	35,315	41,480	48,090	53,989
	BUG Rating	B3-U0-G1	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	137	146	147	144	146	145	145	148	148
SLL/ SLR	Lumens	4,963	9,863	14,642	19,403	24,563	29,085	34,163	39,607	44,465
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	113	120	121	118	120	120	119	122	122
RW	Lumens	5,940	11,806	17,526	23,224	29,400	34,813	40,891	47,407	53,222
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	Lumens per Watt	135	144	145	142	144	143	143	146	146
AFL	Lumens	5,814	11,555	17,153	22,730	28,775	34,073	40,021	46,398	52,090
	BUG Rating	B1-U0-G1	B2-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4
	Lumens per Watt	132	141	142	139	141	140	140	143	143

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

SA Light Squares, Output Level 3, 4000K CCT, 70 CRI

Galleon II IES Files | Supplemental Lumen Tables

Number of Light Squares		1	2	3	4	5	6	7	8	9
Nominal Power (Watts)		57	108	160	213	269	321	377	429	481
Input Current @ 120V		0.478	0.905	1.338	1.810	2.244	2.675	3.150	3.584	4.013
Input Current @ 208V		0.279	0.532	0.780	1.064	1.313	1.559	1.845	2.093	2.339
Input Current @ 240V		0.243	0.458	0.664	0.916	1.123	1.328	1.582	1.788	1.991
Input Current @ 277V		0.213	0.404	0.582	0.808	0.997	1.164	1.401	1.589	1.745
Input Current @ 347V		0.164	0.322	0.471	0.644	0.795	0.943	1.117	1.269	1.414
Input Current @ 480V		0.121	0.235	0.341	0.469	0.579	0.681	0.814	0.923	1.022
Optics										
T1	Lumens	7,101	14,113	20,950	27,763	35,146	41,616	48,882	56,671	63,623
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	125	131	131	130	131	130	130	132	132
T2	Lumens	7,154	14,219	21,107	27,970	35,408	41,927	49,247	57,094	64,098
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	132	132	131	132	131	131	133	133
T2R	Lumens	7,250	14,408	21,389	28,344	35,881	42,487	49,905	57,857	64,954
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	127	133	134	133	133	132	132	135	135
T3	Lumens	7,054	14,020	20,812	27,580	34,914	41,342	48,560	56,297	63,203
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B4-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	124	130	130	129	130	129	129	131	131
T3R	Lumens	7,280	14,468	21,477	28,461	36,029	42,663	50,111	58,096	65,222
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	128	134	134	134	134	133	133	135	136
T4FT	Lumens	7,098	14,107	20,941	27,751	35,130	41,598	48,860	56,646	63,594
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	125	131	131	130	131	130	130	132	132
T4W	Lumens	7,119	14,148	21,003	27,832	35,233	41,720	49,004	56,812	63,781
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	125	131	131	131	131	130	130	132	133
SL2	Lumens	7,101	14,112	20,949	27,761	35,144	41,614	48,879	56,668	63,619
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	125	131	131	130	131	130	130	132	132
SL3	Lumens	7,051	14,013	20,802	27,566	34,897	41,321	48,535	56,269	63,172
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	124	130	130	129	130	129	129	131	131
SL4	Lumens	6,963	13,839	20,543	27,223	34,463	40,808	47,932	55,569	62,386
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	122	128	128	128	128	127	127	130	130
5NQ	Lumens	7,424	14,755	21,903	29,025	36,743	43,508	51,104	59,247	66,515
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	Lumens per Watt	130	137	137	136	137	136	136	138	138
5MQ	Lumens	7,461	14,828	22,012	29,169	36,926	43,725	51,359	59,542	66,846
	BUG Rating	B3-U0-G1	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	131	137	138	137	137	136	136	139	139
5WQ	Lumens	7,445	14,797	21,966	29,108	36,849	43,633	51,250	59,417	66,705
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	131	137	137	137	137	136	136	139	139
SLL/ SLR	Lumens	6,132	12,187	18,091	23,973	30,348	35,936	42,210	48,935	54,938
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	108	113	113	113	113	112	112	114	114
RW	Lumens	7,340	14,587	21,653	28,694	36,325	43,013	50,522	58,573	65,757
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	129	135	135	135	135	134	134	137	137
AFL	Lumens	7,183	14,276	21,193	28,084	35,552	42,098	49,448	57,327	64,359
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B4-U0-G4
	Lumens per Watt	126	132	132	132	132	131	131	134	134

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

SA Light Squares, Output Level 4, 4000K CCT, 70 CRI

Galleon II IES Files | Supplemental Lumen Tables

Number of Light Squares		1	2	3	4	5	6	7	8	9
Nominal Power (Watts)		65	125	184	245	309	368	433	493	552
Input Current @ 120V		0.546	1.041	1.535	2.082	2.578	3.070	3.619	4.114	4.605
Input Current @ 208V		0.318	0.610	0.893	1.219	1.504	1.786	2.113	2.397	2.679
Input Current @ 240V		0.276	0.523	0.758	1.046	1.282	1.516	1.806	2.041	2.274
Input Current @ 277V		0.241	0.460	0.662	0.920	1.133	1.325	1.593	1.807	1.987
Input Current @ 347V		0.187	0.370	0.543	0.740	0.915	1.085	1.285	1.459	1.628
Input Current @ 480V		0.138	0.269	0.391	0.537	0.663	0.782	0.932	1.057	1.173
Optics										
T1	Lumens	7,814	15,529	23,053	30,549	38,672	45,793	53,787	62,358	70,007
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	120	124	125	125	125	124	124	126	127
T2	Lumens	7,872	15,645	23,225	30,777	38,962	46,135	54,189	62,824	70,530
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	121	125	126	126	126	125	125	127	128
T2R	Lumens	7,977	15,854	23,535	31,188	39,482	46,751	54,913	63,663	71,472
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	123	127	128	127	128	127	127	129	129
T3	Lumens	7,762	15,427	22,901	30,348	38,418	45,491	53,433	61,947	69,546
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B4-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	119	123	124	124	124	124	123	126	126
T3R	Lumens	8,010	15,920	23,632	31,317	39,645	46,944	55,139	63,925	71,767
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	123	127	128	128	128	128	127	130	130
T4FT	Lumens	7,810	15,522	23,043	30,535	38,655	45,772	53,763	62,330	69,976
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	120	124	125	125	125	124	124	126	127
T4W	Lumens	7,833	15,568	23,110	30,625	38,769	45,907	53,921	62,513	70,182
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	121	125	126	125	125	125	125	127	127
SL2	Lumens	7,813	15,528	23,052	30,547	38,670	45,790	53,784	62,354	70,003
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	120	124	125	125	125	124	124	126	127
SL3	Lumens	7,758	15,419	22,889	30,332	38,398	45,468	53,406	61,916	69,511
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	119	123	124	124	124	124	123	126	126
SL4	Lumens	7,662	15,228	22,605	29,955	37,921	44,903	52,742	61,146	68,646
	BUG Rating	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	118	122	123	122	123	122	122	124	124
5NQ	Lumens	8,169	16,235	24,101	31,938	40,431	47,874	56,232	65,193	73,190
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	126	130	131	130	131	130	130	132	133
5MQ	Lumens	8,210	16,316	24,221	32,097	40,632	48,113	56,512	65,517	73,554
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	126	131	132	131	131	131	131	133	133
5WQ	Lumens	8,192	16,282	24,170	32,029	40,546	48,011	56,393	65,379	73,399
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	126	130	131	131	131	130	130	133	133
SLL/ SLR	Lumens	6,747	13,410	19,906	26,379	33,394	39,542	46,445	53,846	60,451
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	104	107	108	108	108	107	107	109	110
RW	Lumens	8,076	16,050	23,826	31,574	39,970	47,329	55,592	64,450	72,356
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5
	Lumens per Watt	124	128	129	129	129	129	128	131	131
AFL	Lumens	7,904	15,709	23,320	30,902	39,120	46,323	54,410	63,079	70,817
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B4-U0-G4	B4-U0-G4
	Lumens per Watt	122	126	127	126	127	126	126	128	128

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

SB Light Squares, Output Level 1, 4000K, 70 CRI

Number of Light Squares		1	2	3	4	5	6	7	8	9
Nominal Power (Watts)		31	57	85	114	142	171	199	227	256
Input Current @ 120V		0.263	0.484	0.717	0.952	1.201	1.434	1.685	1.918	2.151
Input Current @ 208V		0.154	0.280	0.420	0.552	0.700	0.839	0.979	1.119	1.259
Input Current @ 240V		0.136	0.245	0.370	0.483	0.615	0.740	0.860	0.985	1.110
Input Current @ 277V		0.122	0.216	0.330	0.425	0.546	0.660	0.762	0.876	0.989
Input Current @ 347V		-	-	0.248	0.328	0.413	0.495	0.577	0.665	0.743
Input Current @ 480V		-	-	0.182	0.238	0.304	0.364	0.426	0.493	0.547
Optics										
T1	Lumens	4,696	9,389	14,086	18,816	23,716	28,470	33,388	37,964	42,763
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4
	Lumens per Watt	152	164	166	165	167	167	168	167	167
T2	Lumens	4,704	9,404	14,109	18,846	23,754	28,515	33,442	38,024	42,831
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G5
	Lumens per Watt	152	164	167	165	168	167	168	167	168
T2R	Lumens	4,835	9,667	14,503	19,373	24,418	29,313	34,377	39,087	44,029
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
	Lumens per Watt	156	169	171	170	172	172	173	172	172
T3	Lumens	4,751	9,497	14,249	19,033	23,989	28,798	33,773	38,401	43,256
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G4
	Lumens per Watt	154	166	168	167	169	169	170	169	169
T3R	Lumens	4,874	9,743	14,618	19,526	24,611	29,544	34,648	39,396	44,376
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5
	Lumens per Watt	158	170	173	171	174	173	174	173	174
T4FT	Lumens	4,692	9,380	14,074	18,799	23,694	28,444	33,358	37,929	42,724
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	152	164	166	165	167	166	168	167	167
T4W	Lumens	4,738	9,472	14,211	18,983	23,926	28,723	33,685	38,300	43,142
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	153	165	168	167	169	168	169	169	169
SL2	Lumens	4,719	9,433	14,153	18,905	23,828	28,605	33,546	38,143	42,965
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B4-U0-G4	B4-U0-G5
	Lumens per Watt	153	165	167	166	168	167	168	168	168
SL3	Lumens	4,640	9,276	13,916	18,589	23,430	28,127	32,986	37,506	42,247
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	150	162	164	163	165	165	166	165	165
SL4	Lumens	4,706	9,408	14,115	18,854	23,764	28,527	33,456	38,040	42,849
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	152	164	167	165	168	167	168	168	168
5NQ	Lumens	4,975	9,945	14,921	19,931	25,121	30,157	35,367	40,213	45,297
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
	Lumens per Watt	161	174	176	175	177	176	178	177	177
5MQ	Lumens	4,972	9,939	14,912	19,919	25,106	30,139	35,346	40,189	45,269
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	161	173	176	175	177	176	178	177	177
5WQ	Lumens	4,802	9,600	14,403	19,239	24,249	29,110	34,139	38,817	43,724
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5
	Lumens per Watt	155	168	170	169	171	170	171	171	171
SLL/SLR	Lumens	4,730	9,457	14,188	18,952	23,887	28,676	33,630	38,238	43,072
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	153	165	168	166	169	168	169	168	169
RW	Lumens	4,889	9,773	14,663	19,586	24,686	29,635	34,755	39,517	44,513
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4
	Lumens per Watt	158	171	173	172	174	173	175	174	174
AFL	Lumens	4,828	9,652	14,482	19,344	24,381	29,269	34,325	39,029	43,963
	BUG Rating	B1-U0-G1	B2-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
	Lumens per Watt	156	168	171	170	172	171	172	172	172

SB Light Squares, Output Level 2, 4000K, 70 CRI

Number of Light Squares		1	2	3	4	5	6	7	8	9
Nominal Power (Watts)		40	74	109	147	183	220	257	293	330
Input Current @ 120V		0.330	0.627	0.919	1.255	1.547	1.838	2.174	2.466	2.758
Input Current @ 208V		0.192	0.370	0.533	0.739	0.902	1.066	1.272	1.435	1.598
Input Current @ 240V		0.169	0.327	0.467	0.655	0.794	0.933	1.121	1.260	1.400
Input Current @ 277V		0.150	0.294	0.412	0.588	0.706	0.823	1.000	1.118	1.235
Input Current @ 347V		0.112	0.215	0.316	0.431	0.531	0.632	0.746	0.847	0.947
Input Current @ 480V		0.086	0.160	0.230	0.320	0.390	0.460	0.550	0.620	0.690
Optics										
T1	Lumens	5,895	11,786	17,683	23,620	29,771	35,739	41,913	47,656	53,681
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	148	159	162	161	163	162	163	163	163
T2	Lumens	5,905	11,805	17,711	23,658	29,818	35,796	41,980	47,732	53,766
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G5	B4-U0-G5
	Lumens per Watt	148	160	162	161	163	162	164	163	163
T2R	Lumens	6,070	12,135	18,206	24,319	30,652	36,797	43,154	49,067	55,270
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5
	Lumens per Watt	153	164	167	165	168	167	168	168	168
T3	Lumens	5,963	11,922	17,887	23,892	30,114	36,151	42,396	48,206	54,300
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B4-U0-G4	B4-U0-G5	B4-U0-G5
	Lumens per Watt	150	161	164	163	165	164	165	165	165
T3R	Lumens	6,118	12,231	18,350	24,511	30,894	37,087	43,494	49,454	55,706
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	154	166	168	167	169	168	169	169	169
T4FT	Lumens	5,890	11,775	17,667	23,599	29,744	35,706	41,875	47,613	53,632
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	148	159	162	161	163	162	163	163	163
T4W	Lumens	5,948	11,891	17,840	23,830	30,035	36,056	42,285	48,079	54,157
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	149	161	163	162	164	164	165	164	164
SL2	Lumens	5,923	11,842	17,766	23,732	29,912	35,908	42,111	47,882	53,935
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B4-U0-G4	B4-U0-G5	B4-U0-G5
	Lumens per Watt	149	160	163	161	164	163	164	164	164
SL3	Lumens	5,824	11,644	17,469	23,335	29,412	35,308	41,407	47,081	53,033
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	146	158	160	159	161	160	161	161	161
SL4	Lumens	5,907	11,810	17,718	23,668	29,831	35,811	41,998	47,752	53,789
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5
	Lumens per Watt	148	160	162	161	163	162	164	163	163
5NQ	Lumens	6,245	12,484	18,731	25,020	31,535	37,857	44,397	50,480	56,862
	BUG Rating	B2-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	Lumens per Watt	157	169	172	170	173	172	173	172	173
5MQ	Lumens	6,241	12,477	18,719	25,005	31,516	37,834	44,370	50,450	56,827
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	157	169	171	170	173	172	173	172	172
5WQ	Lumens	6,028	12,051	18,080	24,151	30,440	36,542	42,855	48,728	54,887
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	151	163	166	164	167	166	167	166	167
SLL/SLR	Lumens	5,938	11,871	17,811	23,791	29,986	35,997	42,216	48,001	54,069
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	149	161	163	162	164	163	164	164	164
RW	Lumens	6,137	12,268	18,406	24,587	30,989	37,201	43,628	49,606	55,877
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	154	166	169	167	170	169	170	169	170
AFL	Lumens	6,061	12,117	18,179	24,283	30,606	36,742	43,089	48,993	55,187
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4
	Lumens per Watt	152	164	166	165	168	167	168	167	167

SB Light Squares, Output Level 3, 4000K, 70 CRI

Number of Light Squares		1	2	3	4	5	6	7	8	9
Nominal Power (Watts)		54	101	149	201	250	301	351	400	450
Input Current @ 120V		0.437	0.857	1.259	1.714	2.116	2.518	2.973	3.375	3.776
Input Current @ 208V		0.254	0.498	0.721	0.996	1.219	1.442	1.717	1.940	2.163
Input Current @ 240V		0.223	0.437	0.628	0.874	1.065	1.256	1.501	1.693	1.884
Input Current @ 277V		0.197	0.386	0.550	0.772	0.936	1.100	1.322	1.485	1.649
Input Current @ 347V		0.150	0.292	0.432	0.584	0.724	0.863	1.016	1.155	1.295
Input Current @ 480V		0.111	0.213	0.311	0.427	0.525	0.622	0.738	0.836	0.933
Optics										
T1	Lumens	7,841	15,675	23,517	31,414	39,594	47,531	55,743	63,381	71,393
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5
	Lumens per Watt	144	155	158	157	159	158	159	159	159
T2	Lumens	7,853	15,700	23,555	31,464	39,657	47,607	55,832	63,482	71,507
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G5	B4-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	144	156	158	157	159	158	159	159	159
T2R	Lumens	8,073	16,139	24,214	32,344	40,766	48,938	57,393	65,257	73,507
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	148	160	162	161	163	163	164	163	163
T3	Lumens	7,931	15,856	23,789	31,776	40,051	48,080	56,386	64,112	72,217
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B4-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5
	Lumens per Watt	146	157	160	158	161	160	161	160	161
T3R	Lumens	8,137	16,267	24,405	32,599	41,088	49,325	57,846	65,773	74,087
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	150	161	164	162	165	164	165	165	165
T4FT	Lumens	7,834	15,661	23,496	31,385	39,558	47,488	55,692	63,324	71,329
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5
	Lumens per Watt	144	155	158	156	159	158	159	158	159
T4W	Lumens	7,910	15,814	23,726	31,693	39,946	47,953	56,238	63,944	72,027
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	145	157	159	158	160	159	160	160	160
SL2	Lumens	7,878	15,749	23,629	31,562	39,781	47,756	56,006	63,681	71,731
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B4-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	145	156	158	157	159	159	160	159	159
SL3	Lumens	7,746	15,486	23,234	31,035	39,117	46,958	55,070	62,616	70,532
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	142	153	156	155	157	156	157	157	157
SL4	Lumens	7,857	15,707	23,565	31,477	39,674	47,627	55,855	63,509	71,538
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	144	156	158	157	159	158	159	159	159
5NQ	Lumens	8,305	16,604	24,911	33,275	41,940	50,348	59,046	67,137	75,624
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	153	165	167	166	168	167	168	168	168
5MQ	Lumens	8,300	16,594	24,896	33,255	41,915	50,318	59,010	67,097	75,578
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	153	164	167	166	168	167	168	168	168
5WQ	Lumens	8,017	16,027	24,046	32,120	40,484	48,600	56,996	64,806	72,998
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	147	159	161	160	162	162	163	162	162
SLL/SLR	Lumens	7,897	15,788	23,687	31,641	39,880	47,875	56,146	63,839	71,909
	BUG Rating	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5
	Lumens per Watt	145	156	159	158	160	159	160	160	160
RW	Lumens	8,162	16,317	24,480	32,699	41,215	49,476	58,024	65,975	74,315
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5
	Lumens per Watt	150	162	164	163	165	164	166	165	165
AFL	Lumens	8,061	16,115	24,177	32,295	40,705	48,865	57,307	65,160	73,397
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
	Lumens per Watt	148	160	162	161	163	162	164	163	163

SB Light Squares, Output Level 4, 4000K, 70 CRI

Number of Light Squares		1	2	3	4	5	6	7	8	9
Nominal Power (Watts)		80	148	218	294	365	440	513	585	658
Input Current @ 120V		0.638	1.234	1.840	2.469	3.094	3.680	4.349	4.934	5.519
Input Current @ 208V		0.367	0.705	1.045	1.410	1.779	2.090	2.513	2.824	3.135
Input Current @ 240V		0.320	0.614	0.913	1.227	1.567	1.827	2.220	2.480	2.740
Input Current @ 277V		0.280	0.537	0.813	1.075	1.402	1.626	1.992	2.215	2.439
Input Current @ 347V		0.219	0.430	0.640	0.897	1.089	1.280	1.537	1.729	1.920
Input Current @ 480V		0.160	0.313	0.479	0.700	0.829	0.958	1.179	1.308	1.437
Optics										
T1	Lumens	10,654	21,299	31,955	42,684	53,800	64,585	75,742	86,121	97,008
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	134	144	147	145	147	147	148	147	147
T2	Lumens	10,671	21,333	32,006	42,752	53,886	64,688	75,863	86,258	97,162
	BUG Rating	B2-U0-G2	B3-U0-G3	B4-U0-G4	B4-U0-G5	B4-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	134	145	147	146	148	147	148	147	148
T2R	Lumens	10,969	21,929	32,901	43,948	55,392	66,496	77,984	88,670	99,879
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5
	Lumens per Watt	138	149	151	150	152	151	152	152	152
T3	Lumens	10,777	21,545	32,324	43,177	54,420	65,329	76,616	87,114	98,127
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G4	B4-U0-G4	B4-U0-G5	B4-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	135	146	148	147	149	148	149	149	149
T3R	Lumens	11,056	22,103	33,161	44,295	55,830	67,022	78,600	89,371	100,668
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	139	150	152	151	153	152	153	153	153
T4FT	Lumens	10,644	21,280	31,926	42,646	53,751	64,526	75,674	86,043	96,920
	BUG Rating	B2-U0-G3	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	134	144	146	145	147	147	148	147	147
T4W	Lumens	10,748	21,488	32,239	43,063	54,277	65,158	76,414	86,885	97,869
	BUG Rating	B2-U0-G2	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	135	146	148	147	149	148	149	149	149
SL2	Lumens	10,704	21,400	32,106	42,886	54,054	64,890	76,100	86,528	97,467
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	134	145	147	146	148	147	148	148	148
SL3	Lumens	10,525	21,042	31,570	42,169	53,151	63,805	74,828	85,082	95,837
	BUG Rating	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	132	143	145	144	146	145	146	145	146
SL4	Lumens	10,675	21,342	32,020	42,771	53,908	64,715	75,895	86,295	97,204
	BUG Rating	B2-U0-G3	B3-U0-G4	B4-U0-G5	B4-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	134	145	147	146	148	147	148	148	148
5NQ	Lumens	11,285	22,561	33,849	45,214	56,988	68,412	80,230	91,224	102,756
	BUG Rating	B3-U0-G1	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	142	153	155	154	156	155	156	156	156
5MQ	Lumens	11,278	22,547	33,828	45,187	56,954	68,371	80,182	91,169	102,694
	BUG Rating	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	142	153	155	154	156	155	156	156	156
5WQ	Lumens	10,893	21,778	32,673	43,644	55,009	66,037	77,445	88,057	99,189
	BUG Rating	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	137	148	150	149	151	150	151	151	151
SLL/SLR	Lumens	10,731	21,453	32,186	42,993	54,189	65,051	76,290	86,743	97,709
	BUG Rating	B2-U0-G3	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	135	145	148	146	149	148	149	148	148
RW	Lumens	11,090	22,171	33,263	44,431	56,001	67,228	78,842	89,645	100,978
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	139	150	153	151	153	153	154	153	153
AFL	Lumens	10,953	21,897	32,852	43,882	55,309	66,397	77,868	88,538	99,730
	BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G5	B4-U0-G5	B5-U0-G5
	Lumens per Watt	138	148	151	149	152	151	152	151	152

Backlight Control Optics, Output Level 1, 4000K CCT, 70 CRI

Number of Light Squares		1	2	3	4	5	6	7	8	9
Nominal Power (Watts)		29	56	82	108	136	162	193	218	245
Input Current @ 120V		0.247	0.469	0.680	0.939	1.150	1.361	1.619	1.829	2.041
Input Current @ 208V		0.144	0.273	0.396	0.546	0.669	0.792	0.942	1.070	1.188
Input Current @ 240V		0.126	0.240	0.348	0.480	0.588	0.696	0.828	0.944	1.045
Input Current @ 277V		0.111	0.212	0.310	0.424	0.522	0.620	0.734	0.844	0.929
Input Current @ 347V		0.087	0.160	0.240	0.319	0.400	0.481	0.559	0.650	0.721
Input Current @ 480V		0.066	0.118	0.177	0.237	0.295	0.354	0.414	0.483	0.532
Optics		SA1A	SA2A	SA3A	SA4A	SA5A	SA6A	SA7A	SA8A	SA9A
T2BC	Lumens	3,639	7,299	10,947	14,537	17,743	21,263	24,840	28,510	32,106
	BUG Rating	B0-U0-G1	B0-U0-G2	B0-U0-G2	B0-U0-G3	B0-U0-G3	B0-U0-G3	B0-U0-G4	B0-U0-G4	B0-U0-G4
	Lumens per Watt	125	131	134	135	130	131	129	131	131
T3BC	Lumens	3,824	7,670	11,504	15,276	18,645	22,344	26,103	29,960	33,739
	BUG Rating	B0-U0-G1	B0-U0-G2	B0-U0-G2	B0-U0-G3	B0-U0-G4	B0-U0-G4	B0-U0-G4	B0-U0-G5	B0-U0-G5
	Lumens per Watt	132	137	141	142	136	137	135	138	138
T4BC	Lumens	3,698	7,417	11,125	14,772	18,030	21,607	25,242	28,972	32,626
	BUG Rating	B0-U0-G2	B0-U0-G3	B0-U0-G3	B0-U0-G4	B0-U0-G4	B0-U0-G5	B0-U0-G5	B0-U0-G5	B0-U0-G5
	Lumens per Watt	128	133	137	138	132	133	131	133	133
RBC	Lumens	3,327	6,673	10,008	13,290	16,221	19,439	22,709	26,065	29,352
	BUG Rating	B0-U0-G1	B0-U0-G2	B0-U0-G2	B0-U0-G2	B0-U0-G3	B0-U0-G3	B0-U0-G4	B0-U0-G4	B0-U0-G4
	Lumens per Watt	115	120	123	124	119	119	118	120	120
LBC	Lumens	3,327	6,673	10,008	13,290	16,221	19,439	22,709	26,064	29,352
	BUG Rating	B0-U0-G1	B0-U0-G2	B0-U0-G2	B0-U0-G2	B0-U0-G3	B0-U0-G3	B0-U0-G4	B0-U0-G4	B0-U0-G4
	Lumens per Watt	115	120	123	124	119	119	118	120	120

Backlight Control Optics, Output Level 2, 4000K CCT, 70 CRI

Number of Light Squares		1	2	3	4	5	6	7	8	9
Nominal Power (Watts)		39	73	106	144	179	213	249	283	314
Input Current @ 120V		0.320	0.610	0.890	1.220	1.500	1.781	2.110	2.385	2.671
Input Current @ 208V		0.185	0.352	0.513	0.704	0.865	1.027	1.217	1.380	1.540
Input Current @ 240V		0.161	0.307	0.449	0.615	0.756	0.898	1.064	1.210	1.347
Input Current @ 277V		0.141	0.270	0.395	0.539	0.665	0.790	0.934	1.069	1.185
Input Current @ 347V		0.111	0.207	0.314	0.414	0.522	0.629	0.729	0.847	0.943
Input Current @ 480V		0.083	0.152	0.229	0.303	0.380	0.457	0.532	0.620	0.686
Optics		SA1B	SA2B	SA3B	SA4B	SA5B	SA6B	SA7B	SA8B	SA9B
T2BC	Lumens	4,549	9,135	14,026	17,976	22,214	26,621	31,146	35,647	39,532
	BUG Rating	B0-U0-G1	B0-U0-G2	B0-U0-G2	B0-U0-G3	B0-U0-G4	B0-U0-G4	B0-U0-G4	B0-U0-G5	B0-U0-G5
	Lumens per Watt	118	125	132	125	124	125	125	126	126
T3BC	Lumens	4,780	9,599	14,739	18,890	23,344	27,975	32,730	37,460	41,542
	BUG Rating	B0-U0-G2	B0-U0-G2	B0-U0-G3	B0-U0-G4	B0-U0-G4	B0-U0-G4	B0-U0-G5	B0-U0-G5	B0-U0-G5
	Lumens per Watt	124	132	139	131	131	131	131	132	133
T4BC	Lumens	4,622	9,282	14,253	18,267	22,574	27,052	31,650	36,224	40,172
	BUG Rating	B0-U0-G2	B0-U0-G3	B0-U0-G4	B0-U0-G4	B0-U0-G5	B0-U0-G5	B0-U0-G5	B0-U0-G5	B0-U0-G5
	Lumens per Watt	119	128	134	127	126	127	127	128	128
RBC	Lumens	4,159	8,351	12,823	16,434	20,309	24,338	28,475	32,590	36,141
	BUG Rating	B0-U0-G1	B0-U0-G2	B0-U0-G2	B0-U0-G3	B0-U0-G3	B0-U0-G4	B0-U0-G4	B0-U0-G4	B0-U0-G5
	Lumens per Watt	107	115	121	114	114	114	114	115	116
LBC	Lumens	4,158	8,351	12,822	16,434	20,308	24,337	28,474	32,589	36,140
	BUG Rating	B0-U0-G1	B0-U0-G2	B0-U0-G2	B0-U0-G3	B0-U0-G3	B0-U0-G4	B0-U0-G4	B0-U0-G4	B0-U0-G5
	Lumens per Watt	107	115	121	114	114	114	114	115	116

Backlight Control Optics, Output Level 3, 4000K CCT, 70 CRI

Number of Light Squares		1	2	3	4	5	6	7	8	9
Nominal Power (Watts)		50	96	140	190	236	283	330	377	417
Input Current @ 120V		0.427	0.803	1.176	1.606	1.979	2.352	2.782	3.155	3.528
Input Current @ 208V		0.248	0.465	0.672	0.929	1.136	1.343	1.601	1.808	2.015
Input Current @ 240V		0.218	0.407	0.586	0.814	0.993	1.171	1.399	1.578	1.757
Input Current @ 277V		0.192	0.359	0.512	0.718	0.872	1.025	1.231	1.384	1.537
Input Current @ 347V		0.144	0.286	0.418	0.573	0.704	0.836	0.991	1.122	1.253
Input Current @ 480V		0.108	0.209	0.301	0.418	0.510	0.602	0.719	0.811	0.903
Optics		**SA1C**	**SA2C**	**SA3C**	**SA4C**	**SA5C**	**SA6C**	**SA7C**	**SA8C**	**SA9C**
T2BC	Lumens	5,676	11,326	16,920	22,428	27,616	33,094	38,563	43,758	49,195
	BUG Rating	B0-U0-G2	B0-U0-G2	B0-U0-G3	B0-U0-G4	B0-U0-G4	B0-U0-G4	B0-U0-G5	B0-U0-G5	B0-U0-G5
	Lumens per Watt	113	118	121	118	117	117	117	116	118
T3BC	Lumens	5,965	11,902	17,780	23,568	29,020	34,777	40,524	45,983	51,697
	BUG Rating	B0-U0-G2	B0-U0-G2	B0-U0-G3	B0-U0-G4	B0-U0-G5	B0-U0-G5	B0-U0-G5	B0-U0-G5	B0-U0-G5
	Lumens per Watt	119	124	127	124	123	123	123	121	124
T4BC	Lumens	5,768	11,509	17,194	22,791	28,063	33,630	39,187	44,466	49,992
	BUG Rating	B0-U0-G2	B0-U0-G3	B0-U0-G4	B0-U0-G5	B0-U0-G5	B0-U0-G5	B0-U0-G5	B0-U0-G5	B0-U0-G5
	Lumens per Watt	115	120	122	120	119	119	119	117	120
RBC	Lumens	5,189	10,355	15,468	20,504	25,247	30,255	35,255	40,004	44,976
	BUG Rating	B0-U0-G2	B0-U0-G2	B0-U0-G3	B0-U0-G3	B0-U0-G4	B0-U0-G4	B0-U0-G5	B0-U0-G5	B0-U0-G5
	Lumens per Watt	103	108	110	108	107	107	107	106	108
LBC	Lumens	5,189	10,354	15,468	20,503	25,246	30,255	35,255	40,004	44,975
	BUG Rating	B0-U0-G2	B0-U0-G2	B0-U0-G3	B0-U0-G3	B0-U0-G4	B0-U0-G4	B0-U0-G5	B0-U0-G5	B0-U0-G5
	Lumens per Watt	103	108	110	108	107	107	107	106	108

Control Options

0-10V (DIM)
This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (BPC, PR and PR7)
Optional button-type photocontrol (BPC) and photocontrol receptacles (PR and PR7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PR7 receptacle.

After Hours Dim (AHD)
This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

Dimming Occupancy Sensor (SPB and MS/DIM-LXX)
These passive infrared (PIR) sensors are factory installed in the luminaire housing. When the SPB (FSP-321 or FSP-311) or MS/DIM (FSP-211) sensor options are selected, the occupancy sensor is connected to a dimming driver and the luminaire dims when no motion is detected. After a set period of time, the luminaire turns off, and when motion is detected, the luminaire returns to full light output. Both sensors are factory preset to dim down to approximately 10% power with a time delay of five minutes. The MS/DIM sensor requires the FSIR-100 programming tool to adjust factory defaults. The SPB sensor default parameters are listed in the table below and can be configured utilizing the Sensor Configuration mobile application for iOS and Android devices. The SPB/X is configured to control only the specified number of light squares (See SPB/X Availability Table below.) An integral photocontrol can be activated with the app for "dusk-to-dawn" control or daylight harvesting - the factory default is off. Four sensor colors are available; Bronze, Black, Gray and White, and are automatically selected based on the luminaire finish as indicated by the table below.

SPB sensor finish matched to luminaire finish		
Luminaire Finish		SPB Sensor Finish*
WH	White	White
BK	Black	Black
GM	Graphite Metallic	Black
BZ	Bronze	Bronze
AP	Gray	Gray
DP	Dark Platinum	Gray

*SPB bezel color automatically selected based on luminaire finish

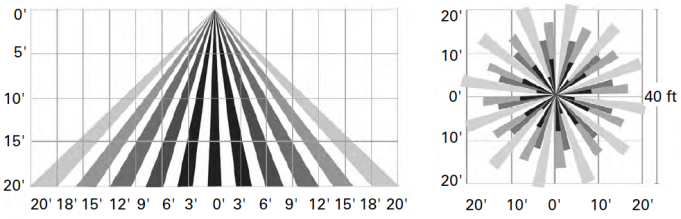
SPB/X Availability Table	
Fixture Square Count	Available SPB/X Square Count
1	Not Available
2	Not Available
3	Not Available
4	2
5	2 or 3
6	3
7	2, 3, 4 or 5
8	2, 3, 5 or 6
9	3 or 6

Default Program Settings (Out of the Box Functionality)

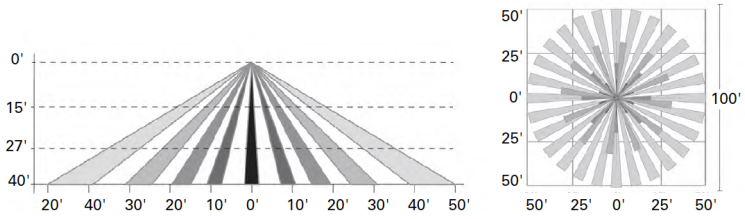
Occupancy Sensor				
Setting	MS/DIM	SPB	WaveLinx Lite (WLS4 / WLS2)	WaveLinx (WPS)
High Mode %	100%	100%	100%	100%
Low Mode %	10%	10%	50%	50%
Time Delay	5 min	5 min	15 min	15 min
Cut Off Delay	1 hr	1 hr	Disabled	Disabled
Photocell Enabled	No	No	Yes	Yes

WaveLinx Wireless Control and Monitoring System
Operates on a wireless mesh network based on IEEE 802.15.4 standards enabling wireless control of outdoor lighting. WaveLinx (WPS2 to WPS4) outdoor wireless sensors offer passive infrared (PIR) occupancy and photocell for closed loop daylight harvesting. Sensors are factory preset to dim down to 50% after 15 minutes of no motion detected. Two lens options are available for mounting heights of 7' to 40'. Use the WaveLinx mobile application for set-up and configuration. At least one Wireless Area Controller (WAC) is required for full functionality and remote communication (including adjustment of any factory pre-sets). WaveLinx Lite (WLS4 and WLS2) outdoor wireless sensors provide PIR occupancy and photocell for closed loop daylight harvesting. Sensors are factory preset to dim down to 50% after 15 minutes of no motion detected. Two lens options are available for mounting heights of 7' to 40'. Use the WaveLinx Lite mobile application for set-up and configuration. WAC not required. WaveLinx Outdoor Control Module (WOLC-7P-10A) accessory provides a photocontrol enabling astronomic or time-based schedules to provide ON, OFF and dimming control of fixtures utilizing a 7-PIN receptacle. The out-of-box functionality is ON at dusk and OFF at dawn.

For mounting heights up to 15' (WPS2 and WLS2)



For mounting heights up to 40' (WPS4 and WLS4)



AirMesh (DIM10)
AirMesh integrated wireless controls system includes factory installed DIM10 Synapse control module and FSP-201 motion sensor; requires additional AirMesh components for operation. Contact Synapse at www.synapsewireless.com for product support, warranty and terms and conditions.

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Specifications and dimensions subject to change without notice.



WPX LED
Wall Packs

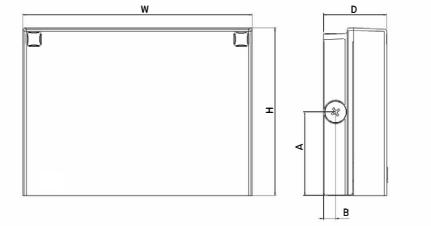
Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications



Front View **Side View**

Luminaire	Height (H)	Width (W)	Depth (D)	Side Conduit Location		Weight
				A	B	
WPX1	8.1" (20.6 cm)	11.1" (28.3 cm)	3.2" (8.1 cm)	4.0" (10.3 cm)	0.6" (1.6 cm)	6.1 lbs (2.8kg)
WPX2	9.1" (23.1 cm)	12.3" (31.1 cm)	4.1" (10.5 cm)	4.5" (11.5 cm)	0.7" (1.7 cm)	8.2 lbs (3.7kg)
WPX3	9.5" (24.1 cm)	13.0" (33.0 cm)	5.5" (13.7 cm)	4.7" (12.0 cm)	0.7" (1.7 cm)	11.0 lbs (5.0kg)

Introduction

The WPX LED wall packs are energy-efficient, cost-effective, and aesthetically appealing solutions for both HID wall pack replacement and new construction opportunities. Available in three sizes, the WPX family delivers 1,550 to 9,200 lumens with a wide, uniform distribution.

The WPX full cut-off solutions fully cover the footprint of the HID glass wall packs that they replace, providing a neat installation and an upgraded appearance. Reliable IP66 construction and excellent LED lumen maintenance ensure a long service life. Photocell and emergency egress battery options make WPX ideal for every wall mounted lighting application.

Ordering Information

EXAMPLE: WPX2 LED 40K MVOLT DDBXD

Series		Color Temperature		Voltage		Options		Finish	
WPX1 LED P1	1,550 Lumens, 11W [1]	30K	3000K	MVOLT	120V - 277V	(blank)	None	DDBXD	Dark bronze
WPX1 LED P2	2,900 Lumens, 24W	40K	4000K	347	347V [3]	E4WH	Emergency battery backup, CEC compliant (4W, 0°C min) [2]	DWHXD	White
WPX2 LED	6,000 Lumens, 47W	50K	5000K			E14WC	Emergency battery backup, CEC compliant (14W, -20°C min) [2]	DBLXD	Black
WPX3 LED	9,200 Lumens, 69W					PE	Photocell [3]	Note : For other options, consult factory.	

Note: The lumen output and input power shown in the ordering tree are average representations of all configuration options. Specific values are available on request.

NOTES

1. All WPX wall packs come with 6kV surge protection standard, except WPX1 LED P1 package which comes with 2.5kV surge protection standard. Add SPD6KV option to get WPX1 LED P1 with 6kV surge protection.
   Sample nomenclature: WPX1 LED P1 40K MVOLT SPD6KV DDBXD
2. Battery pack options only available on WPX1 and WPX2.
3. Battery pack options not available with 347V or PE options.

FEATURES & SPECIFICATIONS

INTENDED USE
The WPX LED wall packs are designed to provide a cost-effective, energy-efficient solution for the one-for-one replacement of existing HID wall packs. The WPX1, WPX2 and WPX3 are ideal for replacing up to 150W, 250W, and 400W HID luminaires respectively. WPX luminaires deliver a uniform, wide distribution. WPX is rated for -40°C to 40°C.

CONSTRUCTION
WPX feature a die-cast aluminum main body with optimal thermal management that both enhances LED efficacy and extends component life. The luminaires are IP66 rated, and sealed against moisture or environmental contaminants.

ELECTRICAL
Light engine(s) configurations consist of high-efficacy LEDs and LED lumen maintenance of L90/100,000 hours. Color temperature (CCT) options of 3000K, 4000K and 5000K with minimum CRI of 70. Electronic drivers ensure system power factor >90% and THD <20%. All luminaires have 6kV surge protection (Note: WPX1 LED P1 package comes with a standard surge protection rating of 2.5kV. It can be ordered with an optional 6kV surge protection).
All photocell (PE) operate on MVOLT (120V - 277V) input.

Note: The standard WPX LED wall pack luminaires come with field-adjustable drive current feature. This feature allows tuning the output current of the LED drivers to adjust the lumen output (to dim the luminaire).

INSTALLATION
WPX can be mounted directly over a standard electrical junction box. Three 1/2 inch conduit ports on three sides allow for surface conduit wiring. A port on the back surface allows poke-through conduit wiring on surfaces that don't have an electrical junction box. Wiring can be made in the integral wiring compartment in all cases. WPX is only recommended for installations with LEDs facing downwards. The WPX is intended for installation on flat wall surfaces. Other applications may void warranty

LISTINGS
CSA Certified to meet U.S. and Canadian standards. Suitable for wet locations. IP66 Rated. DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified. International Dark Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

WARRANTY
5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at:
www.acuitybrands.com/support/warranty/terms-and-conditions.

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25°C. Specifications subject to change without notice.

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Performance Data

Electrical Load

Luminaire	Input Power (W)	120V	208V	240V	277V	347V
WPX1 LED P1	11W	0.09	0.05	0.05	0.04	0.03
WPX1 LED P2	24W	0.20	0.12	0.10	0.09	0.07
WPX2	47W	0.39	0.23	0.20	0.17	0.14
WPX3	69W	0.58	0.33	0.29	0.25	0.20

Projected LED Lumen Maintenance

Data references the extrapolated performance projections in a 25°C ambient, based on 6,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	50,000	75,000	100,000
Lumen Maintenance Factor	>0.94	>0.92	>0.90

HID Replacement Guide

Luminaire	Equivalent HID Lamp	WPX Input Power
WPX1 LED P1	100W	11W
WPX1 LED P2	150W	24W
WPX2	250W	47W
WPX3	400W	69W

Lumen Output

Luminaire	Color Temperature	Lumen Output
WPX1 LED P1	3000K	1,537
	4000K	1,568
	5000K	1,602
WPX1 LED P2	3000K	2,748
	4000K	2,912
	5000K	2,954
WPX2	3000K	5,719
	4000K	5,896
	5000K	6,201
WPX3	3000K	8,984
	4000K	9,269
	5000K	9,393

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient	Ambient	Lumen Multiplier
0°C	32°F	1.05
5°C	41°F	1.04
10°C	50°F	1.03
15°C	59°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

Emergency Egress Battery Packs

The emergency battery backup is integral to the luminaire — no external housing or back box is required. The emergency battery will power the luminaire for a minimum duration of 90 minutes and deliver minimum initial output of 550 lumens. Both battery pack options are CEC compliant.

Battery Type	Minimum Temperature Rating	Power (Watts)	Controls Option	Ordering Example
Standard	0°C	4W	E4WH	WPX2 LED 40K MVOLT **E4WH** DDBXD
Cold Weather	-20°C	14W	E14WC	WPX2 LED 40K MVOLT **E14WC** DDBXD

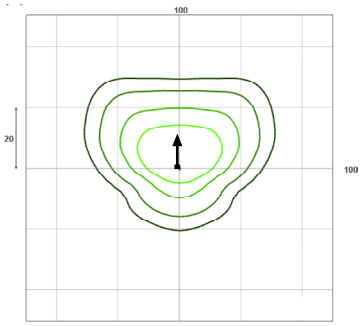
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the Lithonia Lighting WPX LED homepage. Tested in accordance with IESNA LM-79 and LM-80 standards

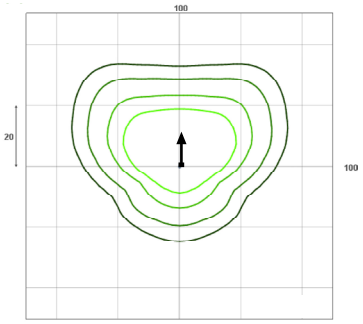
LEGEND

- 0.1 fc
- 0.2 fc
- 0.5 fc
- 1.0 fc

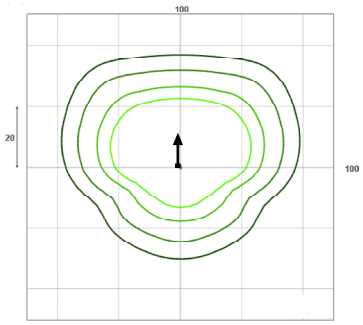
WPX1 LED P1



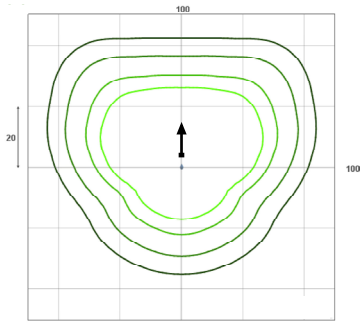
WPX1 LED P2



WPX2 LED



WPX3 LED



Mounting Height = 12 Feet.

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TRAFFIC IMPACT STATEMENT
HAZEL GROVE ELEMENTARY
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

Prepared For:

LEE'S SUMMIT R-VII SCHOOL DISTRICT FACILITY SERVICES
502 SE Transport Road
Lee's Summit, Missouri 64081

Prepared By:



KAW VALLEY ENGINEERING, INC.
14700 West 114th Terrace
Lenexa, Kansas 66215

February 18, 2026

Project No. C25D2528

Hazel Grove Elementary
Lee's Summit, Jackson County, Missouri
Project No. C25D2528

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TRAFFIC ANALYSIS

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February 18, 2026 **C25D2528**

Mr. Kyle Gorrell
Lee's Summit School District Facility Services
502 SE Transport Road
Lee's Summit, Missouri 64081

RE: TRAFFIC IMPACT STATEMENT
HAZEL GROVE ELEMENTARY
LEE'S SUMMIT, MISSOURI 64086

Dear Mr. Gorrell:

Kaw Valley Engineering, Inc. (KVE) has evaluated the Lee's Summit R-VII School District (LSR7) proposal to relocate Hazel Grove Elementary School approximately 1/2 miles south of the existing school to a 29.7-acre property in Summit Village Corporate Park. The purpose of this analysis is to provide strategies and recommendations to support development of the LSR7 property. This Traffic Impact Statement will also discuss the traffic impacts the new Hazel Grove Elementary may have on the adjacent streets. This report will be submitted to the City of Lee's Summit, Missouri in conjunction with the Preliminary Development Plan and Plat.

DEVELOPMENT DESCRIPTION

LSR7 operates the existing Hazel Grove Elementary School located at 2001 NE Blue Parkway, Lee's Summit, Missouri 64064. The school serves Kindergarten through Fifth Grade students. To align with current LSR7 building standards and allow for future growth in enrollment or adjustments in attendance boundaries, LSR7 is proposing to build a new elementary school on a 29.7-acre property in Summit Village Corporate Park and vacate the existing building. The subject property is generally bound by NW Colbern Road and the Unity Villa Apartments to the north, NW Blue Parkway and the Summit Village Corporate Park to the west, general business and light industrial uses in the Blue Parkway Business Center to the south, and undeveloped future parkland to the east.

ADJACENT ROADWAY CONDITIONS

The subject property can be accessed from NW Blue Parkway via Rosemary Court and has frontage on NW Colbern Road. Refer to the Hazel Grove Elementary School Preliminary Development Plan for an illustration of the subject property.

The NW Blue Parkway corridor is an important link for access to both Interstates 470 and Missouri Highway 350. Although the site does not abut the roadway, most of the traffic to and from the school is likely to gravitate to the corridor. NW Blue Parkway is a four-lane divided arterial. The posted speed limit is 40 mph along NW Blue Parkway, and the vertical and horizontal alignment lends itself to good sight lines.

The subject property has a single point of access to NW Blue Parkway via Rosemary Court through the Summit Village Corporate Park Subdivision. Rosemary Court is a two-lane, divided roadway that dead

ends at the subject property approximately 430' east of the Parkway. An auxiliary left turn lane is provided on the approach to NW Blue Parkway and the eastbound approach to an existing access drive in the Summit Village Corporate Park. The existing right of way is 100'. Although not posted, the assumed design speed of NW Rosemary Court is 20 mph.

The subject property has approximately 740' of frontage along NW Colbern Road. NW Colbern Road will be an important link for school traffic to access the site. Based on the Hazel Grove Elementary School attendance boundary, most school generated traffic should be expected to utilize the corridor to access residential areas along Lee's Summit Road to the northeast as well as subdivisions west of Missouri Highway 350. NW Colbern Road was recently improved as a four-lane divided arterial. The posted speed limit is 45 mph. The horizontal alignment along the property lends itself to good sight lines, but the vertical alignment of the road will limit potential locations for access to the property. The NW Colbern Road and NW Blue Parkway intersection was constructed as a two-lane roundabout providing flexibility to restrict turning movements at proposed access points.

KVE reviewed traffic counts available from the City of Lee's Summit and Missouri Department of Transportation (MoDOT). MoDOT has published counts for 2024 for both NW Blue Parkway and NW Colbern Road. In summary, the following traffic counts were available:

NW Blue Parkway

- ADT: 3,363 VPD
- AM Peak Hour Coinciding with Hazel Grove ES: 200 VPH+/- (50%NB/50%SB) Directional Split
- PM Peak Hour Coinciding with Hazel Grove ES: 260 VPH+/- (45% NB/55% SB) Directional Split

NW Colbern Road

- ADT: 4,974 VPD
- AM Peak Hour Coinciding with Hazel Grove ES: 275 VPH+/-(50% EB/50% WB) Directional Split
- PM Peak Hour Coinciding with Hazel Grove ES: 380 VPH+/- (52% EB/48% WB) Directional Split

Refer to the Appendix for the MoDOT Traffic Count Summary. Figure 1 presents the Existing A.M and P.M. Peak Hour Traffic Volumes and Distribution utilized for analysis. Traffic volumes of Rosemary Court were estimated using ITE Trip Generation rates for a 7000 SF Medical Office Building.

As designed, both NW Blue Parkway and NW Colbern Road could accommodate substantially higher traffic volumes in the future following good access management practices. Both corridors are currently underdeveloped and the timing of future projects in the immediate vicinity of the school site is unknown.

SUBJECT PROPERTY DEVELOPMENT PLAN

Elementary school programming typically requires a 15-to-20-acre site to build a school and provide ancillary spaces for outdoor education and recreation, traffic circulation and parking. Based on available public access to NW Blue Parkway via Rosemary Court, frontage on NW Colbern Road and natural barriers and environmentally sensitive areas along the east property line, the LSR7 design team has identified the southwest corner of the subject property as the preferred location for the new elementary school. It is recommended that LSR7 plans a private drive on the north side of the school to link NW Rosemay Court to NW Colbern Road and provide access to the school. It is KVE's understanding that Lee's Summit School District intends to partner with Lee's Summit Parks and Recreation to provide shared access to Hazel Grove Elementary and Park owned property abutting the east property line. It is recommended that the school access tees into the shared access south of NW Colbern Road to negate the need for inbound traffic to either facility from stopping on the roadway. This approach has been illustrated on the Hazel

Grove Elementary School Preliminary Development Plan. Private streets shall be designed to meet the City of Lee's Summit Design and Construction Manual and Fire Code as adopted and amended by the City. It is assumed the design speed will be 20 mph.

INTERSECTION, DRIVEWAY SPACING AND ACCESS MANAGEMENT

As it relates to adjacent public right of way, the fundamental concern that needs to be addressed for any site is proper planning of intersections and major site driveways to account for future traffic volumes and to follow access management best management practices. To maintain traffic operations and enhance safety, it is important that the proximity and functional area of adjacent intersections is accounted for. AASHTO states the driveways should not be situated within the functional boundary of at-grade intersections. This boundary is traditionally recognized as the physical limits of the intersection including the limits of auxiliary turn lanes but should also be expanded to include the functional area comprising of queues, reaction, and maneuvering distance as practical. Research has indicated that to enhance safety, the average driver should expect to clear an intersection or complete one maneuver prior to being expected to encounter another decision due to downstream traffic operations. Section 11 of The City of Lee's Summit Access Management Code includes standards to preserve the upstream and downstream functional area. Per preliminary discussions with the City of Lee's Summit staff, it anticipated that the access to NW Colbern Road will be restricted to right in right out. Therefore, this access should be located a minimum of 405' east of the existing access to the Unity Villa Apartments to accommodate deceleration and perception reaction time. These distances could be reduced assuming that vehicles using the access are likely to enter the school site at 10 mph or more. The access spacing should be increased as needed to address intersection sight-distance requirements. As noted above, it was recommended that the school access tees into NW Colbern Road access. KVE is recommending that the north edge of the school access drive is offset 165' south of the south edge of Colbern Road as measured along the shared access centerline. This separation will meet the requirements of Section 18 of the City of Lee's Summit Access Management Code. Lastly, it is recommended that the terminus of Rosemay Court is converted to a cul-de-sac in accordance with section 5203.13 of the City of Lee's Summit Design and Construction Manual to clearly differentiate the transition from City owned right of way to school district owned property. Minor approaches at these intersections should be stop controlled.

INTERSECTION SIGHT DISTANCE

The guidelines for sight distance analysis are based upon the design guidelines for intersection sight distance for at-grade intersections published in the American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highway and Streets, *2011 Edition.* Refer to the following table for the recommended sight distances for intersections and driveways with stop control on the minor approach.

Intersection (Driveway) Sight Distance				
Access Location and Turning Movement		Design Speed	AASHTO Recommended Distance Passenger Car	AASHTO Recommended Distance Single Unit Truck/Bus
Internal Intersections (Two Lane Section)	Left (Case B1)(Two Lane)	20	225'	280'
	Right (Case B2)	20	195'	250'
	Left from Major Rd (Case F)	20	165'	225'
Colbern Road (RIRO)	Right (Case B2)	45	430'	565'

The recommended intersection sight distance needs to be considered for all existing and proposed intersections and school driveways. The proposed roadway network within the subject property should be designed to meet the requisite sight distance along the entire roadway. It is recommended that the proposed connecting drive between NW Rosemary Court as well as any connection to NW Colbern Avenue is

designed in accordance with Section 5200 of the Lee's Summit Design and Construction Manual. It is recommended that the access drives and parking areas within subject property are lighted. To provide adequate intersection sight distance for the access to NW Colbern Road, it is recommended that the access drive is planned to be a minimum of 540' from the centerline of the Unity Villa Apartments access and 225' from the northwest property corner along NW Colbern Road. This spacing will mitigate the sight line restrictions at the top of the hill adjacent to the Unity Villa Apartments. Refer to the NW Colbern Road Access Exhibit attached to the appendix of this report.

School Driveways: One challenge that consistently impacts school operations is the impact that multiple egress lanes can have on sightlines. Vehicle demand on school driveways typically has a concentrated vehicle load at morning arrival and afternoon dismissal and the sightline for a right turning vehicle can be easily obstructed by a left turning vehicle at an unsignalized driveway leading to a higher probability of an incident with a vehicle on the mainline. Similarly, vehicles in auxiliary lanes on the main line can block sightlines for vehicles on side street approaches. Ideally all unsignalized school driveways would be constructed with a single egress lane, but due to traffic volumes this approach isn't always practical. To alleviate these concerns with the proposed site layout, it is recommended that movement through both parking lot loops is restricted to one-way. This will create adequate separation for traffic entering and exiting each loop and avoid competing vehicle movements in close proximity to each other. When these driveways are constructed, the approach grade on all driveways shall be limited to 3% or less within 25' of the roadway as practical. Care should be taken by the landscape architect to not locate landscaping or signage within the sight triangles at each driveway as well.

TRAFFIC PROJECTIONS

A trip generation analysis was completed to predict the number of vehicular trips that Hazel Grove Elementary is expected to generate during a typical school day. These trip generation estimates focus on the typical weekday A.M. and P.M. peak hours that coincide with morning arrival and afternoon dismissal. Vehicle trip generation estimates were determined using the Institute of Transportation Engineers (ITE) Trip Generation Manual, *11th Edition*. The basis of the ITE Trip Generation Estimates was the current enrollment of 342. The Lee's Summit School District Facilities team has stated that the enrollment for this school will be stable in future years unless a change in attendance boundaries is adopted by the Board of Education. LSR7 has further stated that the new school will continue to be supported by 50 staff members and have 8 bus routes. These numbers would be scalable to building capacity of 552 students.

ITE Trip Generation: 11th Edition						
Land Use	**Students**	**ITE Code**	**Daily Traffic**	**AM Peak Hour**	**PM Peak Hour**	**PM Peak Hour Adjacent Street (4 PM to 6PM)**
Elementary School	**342**	**520**	**776**	**257**	**154**	**55**
	Enter		388	139	71	25
	Exit		388	118	83	30

HAZEL GROVE ELEMENTARY PEAK HOUR TRAFFIC DEMAND

To predict the arrival and departure rates as well as queueing at the new school, arrival and dismissal was observed at Hazel Grove Elementary on February 5, 2025. The February 2025 student enrollment at Hazel Grove Elementary was 342 students with a staff of 50. Morning Arrival was observed from 8:15 to 9:15 The building opened at 8:50 or twenty minutes prior to school. During the peak hour a total of 62 passenger vehicles (18% of enrollment) were observed using the car rider line. The peak departure rates were 60 vehicles (18% of enrollment) during a fifteen-minute period and 28 vehicles (8% of enrollment) in a five-minute period. During morning arrival, approximately 13 vehicles were in the car rider line before the school opened at 8:50. The peak queue was 24 vehicles but quickly dissipated once the building was opened. The following table is a summary of vehicle counts during morning arrival.

Hazel Grove Elementary AM Arrival - Peak Hour (February 5, 2026)		
Time (AM)	Ingress	Egress
8:15-8:30	0	0
8:30	1	0
8:35	1	0
8:40	3	0
8:45	8	0
8:50	**11**	**0**
8:55	**20**	**28**
9:00	**10**	**23**
9:05	6	**9**
9:10	2	2
9:15	0	0
Peak Hour Total	62	62
Peak 15 Min	41	60
Peak 5 Min	20	28

Afternoon dismissal was observed from 3:30 to 4:15. During that time a total of 49 passenger vehicles were observed using the car rider line. Vehicles began to arrive thirty minutes prior to dismissal and 44 (13% of enrollment) of the vehicles were in the car rider line before the school dismissed at 4:00 but quickly dissipated after dismissal. The following table is a summary of vehicle counts during afternoon dismissal. The standing queues and vehicles serviced during afternoon dismissal should be expected to fluctuate at different times of the year.

Hazel Grove Elementary PM Dismissal - Peak Hour (February 5, 2026)			
Time (AM)	Ingress	Egress	Observed Queue
3:30	5	0	5
3:35	8	0	13
3:40	6	0	19
3:45	8	0	27
3:50	7	0	34
3:55	4	0	38
4:00	7	16	44 Max
4:05	4	29	
4:10	0	4	
4:15	0	0	
4:15	0	0	
Peak Hour Total	49	49	
Peak 15 Min	22	49	
Peak 5 Min	8	29	

Using the observed arrival and dismissal patterns at Hazel Grove Elementary and the ITE Trip Generation estimates. Traffic demand by mode was determined. The following table is the Projected Traffic Demand Summary during morning arrival and afternoon dismissal.

Existing Hazel Grove Elementary School - Traffic Demand Summary

Morning Arrival Peak Hour Estimates / Students:		342		
Staff/Visitor	Bus	Car Rider Line		
	(66% Student Ridership)	Total (18% of Enrollment)	Peak Fifteen Minutes (12% of Enrollment)	Peak Five Minutes (8% of Enrollment)
50	8	62	41	28

Afternoon Dismissal Peak Hour Estimates / Students:		342	
Staff/Visitor	Bus	Car Rider Line	Peak Queue
	(66% Student Ridership)	Total (14% of Enrollment)	(13% of Enrollment)
50	8	49	44

The results of this Audit at the existing Hazel Grove Elementary School indicate that the ITE Trip Generation Estimates are conservative. This is likely due to the higher-than-average bus ridership rates at Hazel Grove Elementary School. The following table outlines the anticipated traffic demand Hazel Grove Elementary School will generate based on school demographics, bus ridership and schedule.

Projected Enrollment: **342**
No. of Buses: **8**
Bus Ridership: **66%**
No. of Staff (Provided by LSR7): **50**
Recommended Parking Spaces: **120**
Parking Percentage Enrollment: **See Parking Demand Calculations**

Traffic Demand Summary - ITE Trip Generation Manual

User	Student Enrollment	AM Peak Hour (Arrival) - Enter*	AM Peak Hour (Arrival) - Exit*	PM Peak Hour (Dismissal) - Enter **	PM Peak Hour (Dismissal) - Exit**
Visitor/Car Rider Line	**342**	**62**	**62**	**49**	**49**
Staff (50 Full Time / Part Time)		50	0	0	30
Bus (66% Ridership)		8	8	8	8
Totals		190		144	

*Car Rider Line Arrival - 18% Enrollment

**Car Rider Line Dismissal - 14% of Enrollment

It is recommended that the car rider line and parking lot have capacity to stage a minimum of 55 vehicles at current enrollment to account for seasonal fluctuations. It is recommended that the car rider line and parking lot has space dedicated for approximately 80 vehicles at building capacity.

HAZEL GROVE ELEMENTARY SITE PLAN

The Hazel Grove Elementary School Site plan should be organized to allow for separate car rider and bus loading zones. Based on the projected traffic demand, 2000 LF of pavement or excess parking should be dedicated to managing queuing during morning arrival and afternoon dismissal at full capacity. Queuing adjacent to parking areas or along access drives could be permitted as long as it is not detrimental to mobility and access to the school or the adjacent properties. To meet the traffic demands during morning arrival and afternoon dismissal, a two-lane roadway with adequate width to accommodate an additional lane for queuing is recommended along the car rider route. Typically, a 37’ cross section with an effective pavement width of 33’ is sufficient to meet these requirements unless the circulation path is one way. Double loading the car rider line and providing a separate point of ingress is typically the most economical approach to managing traffic.

As shown on the Traffic Management Plan, the proposed site configuration separates the car rider queue and the bus queue loading zones with different points of ingress to the site. To maximize queueing, car riders should utilize the NW Colbern Road Access and loop the east parking lot. It is anticipated that most car riders will enter from NW Colbern Road, however some may enter from Rosemary Court. A small percentage of parents accessing the car rider loop from NW Rosemay Court should have a negligible impact on functionality of the traffic management plan. At current enrollment, adequate space should be available to single load the car rider line once vehicles are on campus. Double loading the car rider line increases queuing capacity to 79 cars. Excess parking can also be used to support afternoon dismissal. Buses should utilize NW Rosemary Court to access the loading zone looping the west parking lot. This access strategy will limit conflicts with incoming car riders. There is available queuing space for 10 full size buses. LSR7 could consider angling buses approximately 15 degrees and staging buses in a sawtooth configuration if additional capacity is needed. It is anticipated that most staff will use the west parking lot and enter the site via Rosemary Couty to avoid conflicts with the car rider line. It is assumed that the east parking lot will primarily be used for visitors during the day and for after hours care and other community activities and events during evenings.

The City of Lee's Summit stipulates that a minimum of two parking stalls shall be provided per classroom. The building has classroom space for four sections per grade requiring a minimum of 48 parking stalls. The Institute of Transportation Engineers (ITE) Parking Generation Manual, 4th Edition is an informational report that samples parking demand for various land uses. This Manual includes data collected at Elementary Schools. The variable used by ITE were stalls per students. The observed parking demand using these variables is presented in the following table. The average and 85th percentile were reported. These values do not include spaces for vehicles queued in the car rider line during morning arrival and afternoon dismissal.

ITE Parking Generation: Land Use 520 - Elementary School

Average Peak Period Parking Demand	Rate	Students	Parking Stalls
Vehicles Per Student	0.17	552	94
85th Percentile	0.21	552	116

Using the ITE Parking Generation Manual, it is recommended that LSR7 incorporates 110 to 120 parking stalls into the site layout to address parking needs at full capacity. Parking lot geometric design shall meet the City of Lee's Summit Section 8.620 of the City of Lee's Summit Unified Development Ordinance. It is recommended that the access drive adjacent to parking stalls has a minimum effective pavement width of 24' to support greater maneuverability from parking stalls. Site drives shall have a minimum pavement width of 24' to support two way traffic operations. The effective pavement width shall be a minimum of 26' wide exclusive of curb and gutter 20' feet either side of fire hydrants and adjacent to structures exceeding 30' in height. Drive approaches should be improved with a minimum 20' corner radii (25' preferred) if intended to support emergency vehicles, buses and small delivery vehicles. Corner radii in the parking field should be a minimum of 8'.

Due to the proximity to residential areas within ½ mile of the property, the number of walkers and bikers is negligible. However, pedestrian connectivity to both NW Blue Parkway and NW Colbern Road with limited crossings on site has been proposed. Crosswalks should be well marked and signed. Bike Racks have been illustrated on the northeast side of the school.

TRIP DISTRIBUTION

Based on the current district boundaries, it is assumed that the traffic generated by Hazel Grove Elementary would predominantly utilize the NW Colbern Road corridor during morning arrival and afternoon dismissal. Refer to the following table for the anticipated trip distribution.

Hazel Grove Elementary Trip Distribution	
Direction	HGE Site
To/From South on NW Blue Parkway	5%
To/From South on NW Blue Parkway	5%
To/From West Via NW Colbern Road	40%
To/From East Via NW Colbern Road	50%
Total	100%

Traffic will be assigned to access points based upon the recommended traffic management plan. Figure 2 presents the Proposed A.M and P.M. Peak Hour Traffic Volumes and Distribution.

AUXILIARY TURN LANE WARRANT ANALYSIS

Auxiliary turn lanes are recommended to improve safety as well as capacity at on-grade intersections. Several Transportation Research Board (TRB) reports include guidance on establishing a warrant analysis to determine if auxiliary turn lanes and tapers at driveways and intersections are needed based upon speed, opposing, advancing, and turning volumes on the primary roadway. The safety benefit associated with auxiliary turn lanes is realized by removing slow or stopped vehicles from through lanes. Section 16 of the City of Lee's Summit Access Management Code utilizes prescriptive auxiliary turn lane standards based upon the classification of the roadway and the number of vehicles turning into the property. These standards were used to determine if an auxiliary right turn lane would be warranted on NW Colbern Road at the proposed access point. Section 16 stipulates that auxiliary right turn lanes are required on Minor Arterial Roads with more than 60 right turning vehicles projected in the peak hour and Major Arterial Roads with more than 30 right turning vehicles. The NW Colbern Road access will predominantly be used by parents accessing the car rider line and staff/visitor parking in the east parking lot. Depending on the City's classification of NW Colbern Road, this threshold may be exceeded during morning arrival and afternoon dismissal. An auxiliary right-turn lane at the NW Colbern Road access has not been illustrated on the Development Plan, but could be implemented if required by the City of Lee's Summit. Refer to the NW Colbern Road Eastbound Right Turn Lane Exhibit for an illustration of this improvement.

CAPACITY AND QUEUING ANALYSIS (CAQA)

The peak hour traffic volumes at the study intersections were analyzed to determine the operational characteristics during the peak hours coinciding with morning arrival and afternoon dismissal during a typical school day for the following scenarios:

- Existing Conditions
- Proposed Conditions

These peak hours do not necessarily coincide with the traditional peak hours of the adjacent street network. Currently Hazel Grove Elementary's AM Peak Hour is between 8:30 and 9:30 AM and the PM peak Hour is between 3:30 and 4:30. The 15 minutes prior to and after school start and dismissal times are the heaviest.

The study intersections were analyzed using procedures and methodology outlined in the Highway Capacity Manual 7th Edition (HCM) produced by the Transportation Research Board. The intersections were

evaluated using Level-of-Service (LOS). An intersection operational analysis is typically quantified by the LOS experienced by drivers. LOS ranges from 'A' to 'F'. LOS 'A' represents free flow movement of traffic and minimal delay. LOS 'F' is usually an indication of congested conditions and excessive delay. Intermediate grades indicate incremental increases in congestion and delay. The LOS deemed acceptable varies by community and facility type. LOS of 'E' of 'F' are often acceptable for low or moderate traffic volumes such as private driveways or intersections where signalization warrants are not met or a traffic signal may be undesirable. The criteria for LOS as defined by delay for an unsignalized and signalized intersection is listed in the following table.

	Level-of-Service: Delay Threshold	
Level-of-Service	Unsignalized Intersection	Signalized Intersection
(LOS)	Approach Delay (Sec/Veh)	Approach Delay (Sec/Veh)
A	0-<10	0-<10
B	10-<15	10-<20
C	15-<25	21-<35
D	25-<35	35-<55
E	35-<50	55-<80
F	>50	>80

A queuing analysis was also performed for the study intersections. This type of analysis is used to determine if the proposed driveways and intersections are adequately spaced, if there are potential conflicts with the access points, and determine if dedicated turning lanes or additional length to turning lanes may be required. Results are presented as the 95th Percentile Queue for unsignalized intersections and 50% queue at signalize intersections. Moreover, the 50th/95th Percentile Queue is a measurement of the expected length (queue) of traffic that would develop because of traffic control at an intersection. The 95th percentile was used to account for traffic fluctuations. The results of the analyses as well as recommendations for improvements to the study intersections are listed below for each of the scenarios evaluated.

CAQA: EXISTING CONDITIONS

For this study, KVE analyzed the impacts to the NW Blue Parkway and NW Rosemary Court intersection. The existing traffic volumes are illustrated on Figure 1. Peak Hour Factors were assumed to be 0.85. The results of the analysis are summarized in the following Table.

Summary of Results: Capacity & Queuing Analysis							
Existing Conditions:							
		AM Peak Hour (Arrival)			PM Peak Hour (Dismissal)		
Intersection	Movement	LOS	Delay (sec/veh)	95% Queuing (*veh)*	LOS	Delay (sec/veh)	95% Queuing (*veh)*
NW Colbern Road and Access	Northbound						
NW Rosemary Court and NW Blue Parkway	Westbound Left	A	9.6	0.0	A	10.0	0.0
	Westbound Right	A	8.6	0.0	A	8.7	0.0
	Southbound Left	A	7.5	0.0	A	7.5	0.0

Field observation and analysis indicate that all movements at these intersections with existing traffic control are operating at an acceptable LOS with minor delays.

CAQA: PROPOSED CONDITIONS

KVE reanalyzed the NW Blue Parkway and NW Rosemary Court as well as the proposed right in/right out access on NW Colbern Road. The proposed traffic volumes are illustrated on Figure 2. Peak Hour Factors were adjusted to account for the condensed traffic demand during arrival and dismissal. The results of the analysis are summarized in the following Table.

Summary of Results: Capacity & Queuing Analysis							
Existing Plus Proposed Conditions							
		AM Peak Hour (Arrival)			PM Peak Hour (Dismissal)		
Intersection	Movement	LOS	Delay (sec/veh)	95% Queuing (*veh*)	LOS	Delay (sec/veh)	95% Queuing (*veh*)
NW Colbern Road and Access	Northbound	A	9.3	0.2	A	9.8	0.5
NW Rosemary Court and NW Blue Parkway	Westbound Left	B	11.0	0.1	B	10.5	0.1
	Westbound Right	A	8.9	0.2	A	9.4	0.4
	Southbound Left	A	7.6	0.2	A	7.6	0.0

With the construction of the new elementary school, analysis indicates that the NW Blue Parkway and NW Rosemay Court intersection will continue to operate at an acceptable LOS. Minor increases in delays will be experienced due to the added traffic volumes. Similarly, the northbound approach to NW Colbern Road will also operate at an acceptable LOS with minimal delay. As additional development occurs along the NW Colbern and NW Blue Parkway Corridors, level of service should be expected to degrade.

RECOMMENDED IMPROVEMENTS

Based upon the analysis results described above, the following improvements would be recommended to allow for the study intersections to continue to operate safely and at an acceptable LOS through the design year.

Hazel Grove Elementary School

1. A Preliminary Development Plan has been prepared for the subject property illustrating the proposed lot configuration and street network. At minimum this street network shall include connectivity from NW Rosemary Court to the east to NW Colbern Road to the north.
2. It is recommended that the connection to NW Colbern Road is designed as a right in /right out access. The centerline of this drive shall be a minimum of 540' from the centerline of the Unity Villa Apartments access and 225' from the northwest property corner adjacent to NW Colbern Road to provide adequate spacing and intersection sight distance for vehicles entering and exiting the property. It is recommended that the northbound approach is stop controlled.
3. The City of Lee's Summit should be consulted to discuss requirements for an eastbound right turn lane on NW Colbern Road at the proposed access point. The arterial classification of NW Colbern Road is unknown and the projected number of right turning vehicles in the peak hour is nearing the prescriptive thresholds for auxiliary right turn lanes as outlined in Section 16 of the City of Lee's Summit Access Management Code. If an auxiliary right turn lane is required, this turn lane shall have a minimum full width length of 150' with a 12.5:1 taper. Recommended lane width shall be 11' to 12' as required by the City. The existing roadside trail and utilities would need to be relocated to accommodate the turn lane.
4. It is recommended that the school access drive tees into the shared access drive 165' south of the NW Colbern Road as illustrated on the development plan to meet the driveway throat separation

requirements outlined in Section 18 of the City of Lee's Summit Access Management Code. It is recommended that school access drive (northeast bound approach) is stop controlled.

5. It is recommended that the existing terminus of NW Rosemary Court is converted to a cul-de-sac meeting the design criteria as outlined in Section 5200 of the city of Lee's Summit Design and Construction Manual. This inscribed diameter of the Cul-de-sac should be a minimum of 39' in accordance with DCM Section 5203.13. It is recommended that minor approaches are stop controlled.
6. It is recommended that the LSR7 implements a traffic management plan to ease congestion and preserve mobility on campus and the adjacent street network during drop off/pick up periods.
7. It is recommended that separate loading zones are dedicated for buses and the car rider traffic line. The traffic management plan should incorporate 2000 LF of pavement or excess parking should be dedicated to managing queuing during morning arrival and afternoon dismissal.
8. It is recommended that LSR7 provides 120 parking stalls as illustrated on the development plan. Parking lot geometric design shall meet the City of Lee's Summit Section 8.620 of the City of Lee's Summit Unified Development Ordinance.
9. At minimum, the roadway network within the subject property should be designed to meet APWA standards and Fire Code Requirements as adopted and amended by the City of Lee's Summit, Missouri. At minimum, two-way site access drives should be based on a 28' cross section to provide an effective pavement width of 24' feet of driving surface with curb and gutter. If abutting parking areas, the access drive should provide a minimum effective pavement width of 24' to support greater maneuverability from parking stalls. The effective pavement width shall be a minimum of 26' wide exclusive of curb and gutter 20' feet either side of fire hydrants and adjacent to structures exceeding 30' in height. Drive approaches should be improved with a minimum 20' corner radii (25' preferred) if intended to support emergency vehicles, buses and small delivery vehicles. Corner radii in the parking field should be a minimum of 8'. It is recommended that roadways within the subject property are lighted.
10. The street network within the subject property shall be designed to meet the minimum intersection sight distance requirements as outlined in this report based on a design speed of 20 mph.
11. It is recommended the approach grade on all driveways should be limited to 3% or less within 25' of the roadway as practical. Care should be taken when placing landscaping or other site features such as monument signs near driveways to preserve sight lines.
12. Onsite traffic control shall be installed in accordance with the latest version of the Manual of Uniform Traffic Control Devices.
13. LSR7 shall incorporate pedestrian connectivity to NW Colbern Road and NW Blue Parkway. Crosswalks should be well marked and signed. It is recommended that limited bicycle parking is provided.

CONCLUSION

We appreciate the opportunity to be of service to you on this project. If you have any questions or require additional information, please contact us via email at wood@kveng.com or at (913) 894-5150.

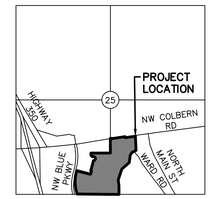
Respectfully submitted,
Kaw Valley Engineering, Inc.



David D. Wood, P.E., PTOE
Principal

cc./ Incite Design Studio
\\VMLX-FILE\Projects\C25_2528\DSN\Traffic\20260218 Traffic Impact Statement HGE.docx

HAZEL GROVE ELEMENTARY SCHOOL
SUMMIT VILLAGE CORPORATE SITE
PRELIMINARY DEVELOPMENT PLAN
LEE'S SUMMIT, MO 64086
SECTION 25 - TOWNSHIP 48 NORTH - RANGE 32 WEST



VICINITY MAP
SEC 25 – TWP 48N – RNG 32W
NOT TO SCALE

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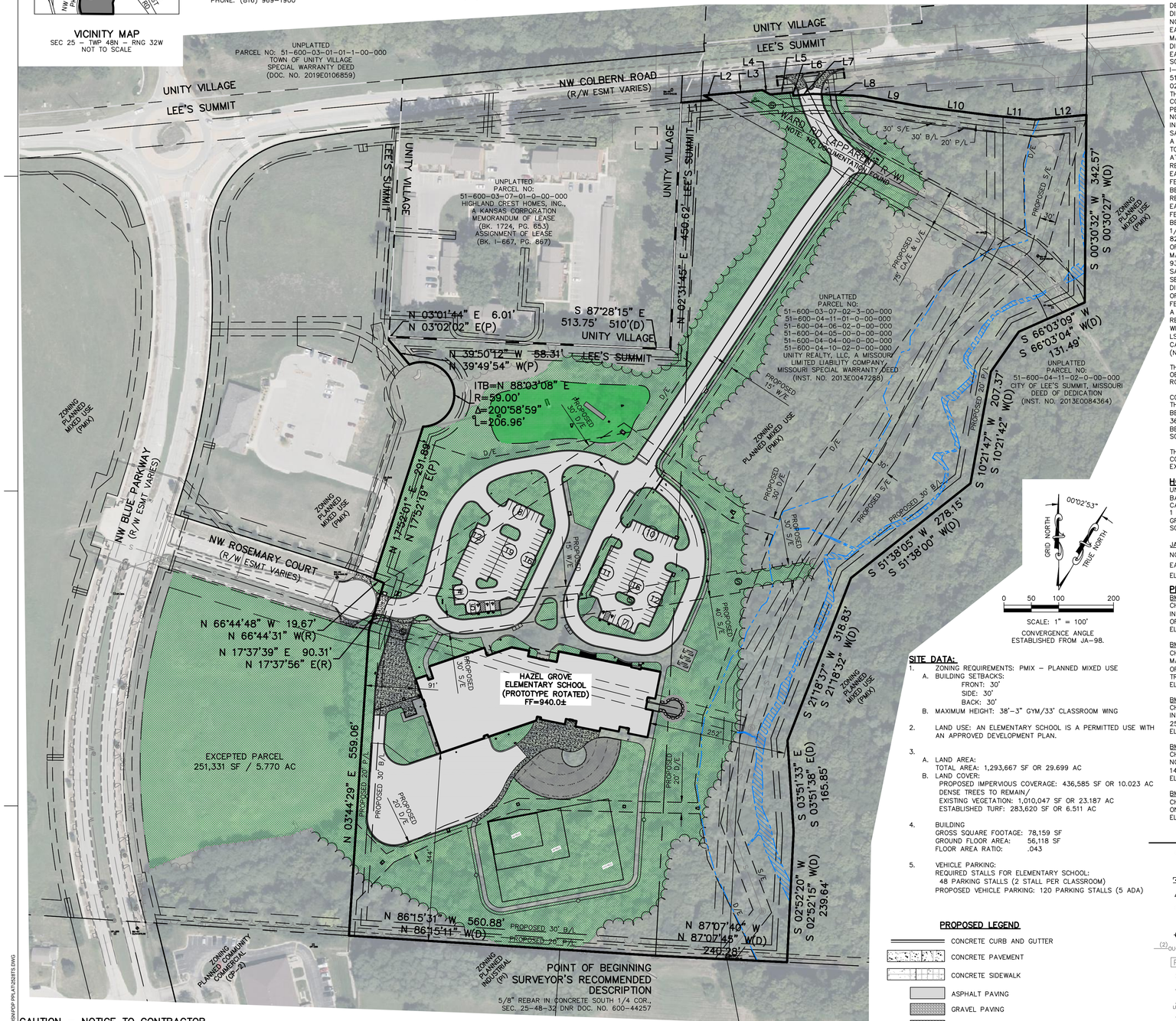

SITE DATA:

1. ZONING REQUIREMENTS: PMIX – PLANNED MIXED USE
   A. BUILDING SETBACKS:
      FRONT: 30'
      SIDE: 30'
      BACK: 30'
   B. MAXIMUM HEIGHT: 38'–3" GYM/33' CLASSROOM WING
2. LAND USE: AN ELEMENTARY SCHOOL IS A PERMITTED USE WITH AN APPROVED DEVELOPMENT PLAN.
3. A. LAND AREA:
      TOTAL AREA: 1,293,667 SF OR 29.699 AC
   B. LAND COVER:
      PROPOSED IMPERVIOUS COVERAGE: 436,585 SF OR 10.023 AC
      DENSE TREES TO REMAIN/
      EXISTING VEGETATION: 1,010,047 SF OR 23.187 AC
      ESTABLISHED TURF: 283,620 SF OR 6.511 AC
4. BUILDING
   GROSS SQUARE FOOTAGE: 78,159 SF
   GROUND FLOOR AREA: 56,118 SF
   FLOOR AREA RATIO: .043
5. VEHICLE PARKING:
   REQUIRED STALLS FOR ELEMENTARY SCHOOL:
   48 PARKING STALLS (2 STALL PER CLASSROOM)
   PROPOSED VEHICLE PARKING: 120 PARKING STALLS (5 ADA)

PROPOSED LEGEND

- CONCRETE CURB AND GUTTER
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- ASPHALT PAVING
- GRAVEL PAVING
- SOFT PLAY PLAYGROUND
- TURF
- STORM WATER MANAGEMENT BASIN
- PROJECT AREA (APPROXIMATE LIMITS OF DISTURBANCE)
- LIMITS OF DRAINAGE COURSE/STREAM

SURVEYOR'S RECOMMENDED DESCRIPTION:

ALL THAT PART OF A TRACT OF LAND DESCRIBED IN A MISSOURI SPECIAL WARRANTY DEED FOUND IN INSTRUMENT NO. 2013E0047288 (ALL DOCUMENTS MENTIONED HEREON ARE AS FILED IN THE JACKSON COUNTY RECORDER OF DEEDS OFFICE), LYING IN THE SOUTHWEST QUARTER AND THE SOUTHEAST QUARTER OF SECTION 25, TOWNSHIP 48 NORTH, RANGE 32 WEST, OF THE FIFTH PRINCIPAL MERIDIAN IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, DESCRIBED BY KENNETH J. DEDRICK, PS–2571, ON THIS 19TH DAY OF DECEMBER 2025 AS FOLLOWS:

BEGINNING AT A 5/8" REBAR IN CONCRETE MARKING THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER; THENCE NORTH 86°15'31" WEST (THIS AND ALL THE FOLLOWING BEARINGS ARE BASED ON THE MISSOURI STATE PLANE COORDINATE SYSTEM 1983 (2003) WEST ZONE) (NORTH 86°15'11" WEST DEED) ON THE SOUTH LINE OF SAID SOUTHWEST QUARTER, A DISTANCE OF 560.88 FEET (ALL DISTANCE REFERENCES ARE IN U.S. SURVEY FEET) TO A 1/2" REBAR WITH LS–214F CAP; THENCE DEPARTING SAID SOUTH LINE NORTH 03°44'29" EAST, A DISTANCE OF 559.06 FEET TO A 1/2" REBAR WITH LS–214F CAP BEING A POINT ON THE EAST RIGHT–OF–WAY LINE OF NORTHWEST ROSEMARY COURT AS DEDICATED BY A RIGHT–OF–WAY DEED AS FILED IN INSTRUMENT NO. 2017E0061615; THENCE NORTH 17°37'39" EAST (NORTH 17°37'56" EAST RECORD) ON SAID EAST RIGHT–OF–WAY LINE, A DISTANCE OF 90.31 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING THE NORTHEAST CORNER OF SAID RIGHT–OF–WAY DEED; THENCE NORTH 66°44'48" WEST (NORTH 66°44'31" WEST RECORD) ON THE NORTH RIGHT–OF–WAY LINE OF SAID NORTHWEST ROSEMARY COURT, A DISTANCE OF 19.67 FEET TO A CHISELED "+" MARKING THE SOUTHEAST CORNER OF LOT 2, SUMMIT VILLAGE CORPORATE PARK, LOTS 1 AND 2, A RECORDED SUBDIVISION AS FILED IN BOOK I–171, AT PAGE 42 (PLAT); THENCE DEPARTING SAID NORTH RIGHT–OF–WAY LINE NORTH 17°52'01" EAST (NORTH 17°52'19" EAST PLAT) ON THE EAST LINE OF SAID LOT 2, A DISTANCE OF 291.89 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING AN ANGLE POINT IN SAID EAST LINE; THENCE NORTHEASTERLY AND NORTHWESTERLY ON A NON–TANGENT CURVE TO THE LEFT, ON SAID EAST LINE, HAVING AN INITIAL TANGENT BEARING OF NORTH 88°03'08" EAST, A RADIUS OF 59.00 FEET, A DELTA ANGLE OF 200°58'59" AND AN ARC LENGTH OF 206.96 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING AN ANGLE POINT IN SAID EAST LINE; THENCE NORTH 39°50'12" WEST (NORTH 39°49'54" WEST PLAT) ON SAID EAST LINE, A DISTANCE OF 58.31 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING AN ANGLE POINT IN SAID EAST LINE; THENCE NORTH 03°01'44" EAST (NORTH 03°02'02" EAST PLAT) ON SAID EAST LINE, A DISTANCE OF 6.01 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING THE SOUTHWEST CORNER OF A MEMORANDUM OF LEASE AS FILED IN BOOK 1724, AT PAGE 653 AND AN ASSIGNMENT OF LEASE AS FILED IN BOOK I–667, AT PAGE 867; THENCE DEPARTING SAID EAST LINE SOUTH 87°28'15" EAST ON THE SOUTH LINE OF SAID LEASE, A DISTANCE OF 513.75 FEET (510 FEET DEED) TO A 1/2" REBAR WITH LS–214F CAP MARKING THE SOUTHEAST CORNER OF SAID LEASE; THENCE NORTH 02°31'45" EAST ON THE EAST LINE OF SAID LEASE, A DISTANCE OF 450.62 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT ON THE SOUTH LINE OF COLBERN ROAD BEING AT STATION 39+38.89 AND OFFSET 64.00 FEET TO THE RIGHT; (THIS AND THE FOLLOWING TWELVE COURSES ARE ON THE SOUTH RIGHT–OF–WAY LINE OF SAID COLBERN ROAD AS ESTABLISHED BY COLBERN ROAD RECONSTRUCTION PROJECT PERFORMED BY GARVER, PROJECT NO. 17177041, CITY PROJECT NO. F.A.P. STP–3301(527), A RIGHT–OF–WAY DEED AS FILED IN INSTRUMENT NO. 2022E0086752, A RIGHT–OF–WAY DEED AS FILED IN INSTRUMENT NO. 2022E0086756, AND A RIGHT–OF–WAY DEED AS FILED IN INSTRUMENT NO. 2022E0086758) THENCE DEPARTING SAID EAST LINE NORTH 84°44'20" EAST, A DISTANCE OF 36.40 FEET TO A POINT ON SAID SOUTHEAST QUARTER BEING AT STATION 39+75.29 AND OFFSET 64.00 FEET TO THE RIGHT; THENCE CONTINUING NORTH 84°44'20" EAST, A DISTANCE OF 19.76 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 39+95.05 AND OFFSET 64.00 FEET TO THE RIGHT; THENCE NORTH 61°03'35" WEST, A DISTANCE OF 16.53 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 39+81.38 AND OFFSET 54.71 FEET TO THE RIGHT; THENCE NORTH 84°43'45" EAST, A DISTANCE OF 107.08 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 40+88.46 AND OFFSET 54.69 FEET TO THE RIGHT; THENCE SOUTH 61°13'55" EAST, A DISTANCE OF 16.64 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 41+02.25 AND OFFSET 64.00 FEET TO THE RIGHT; THENCE NORTH 84°44'20" EAST, A DISTANCE OF 41.62 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 41+43.87 AND OFFSET 64.00 FEET TO THE RIGHT; THENCE SOUTH 05°15'40" EAST, A DISTANCE OF 6.00 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 41+43.87 AND OFFSET 70.00 FEET TO THE RIGHT; THENCE NORTH 84°44'20" EAST, A DISTANCE OF 36.13 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 41+80.00 AND OFFSET 70.00 FEET TO THE RIGHT; THENCE SOUTH 87°39'59" EAST, A DISTANCE OF 90.80 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 42+70.00 AND OFFSET 82.00 FEET TO THE RIGHT; THENCE SOUTH 79°37'08" EAST, A DISTANCE OF 103.85 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 43+70.00 AND OFFSET 110.00 FEET TO THE RIGHT; THENCE SOUTH 82°41'08" EAST, A DISTANCE OF 133.20 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 45+00.00 AND OFFSET 139.00 FEET TO THE RIGHT; THENCE SOUTH 84°38'29" EAST, A DISTANCE OF 81.39 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 45+80.00 AND OFFSET 154.00 FEET TO THE RIGHT; THENCE NORTH 84°44'20" EAST, A DISTANCE OF 93.33 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT BEING AT STATION 46+73.33 AND OFFSET 154.00 FEET TO THE RIGHT, SAID POINT BEING ON THE WEST LINE OF A DEED OF DEDICATION AS FILED IN INSTRUMENT NO. 2013E0084364; (THIS AND THE FOLLOWING SEVEN COURSES ARE ON THE WEST LINE OF SAID DEED OF DEDICATION) THENCE SOUTH 00°30'32" WEST (SOUTH 00°30'27" WEST DEED), A DISTANCE OF 342.57 FEET TO A 1/2" REBAR WITH LS–214F CAP; THENCE SOUTH 66°03'09" WEST (SOUTH 66°03'04" WEST DEED), A DISTANCE OF 131.49 FEET TO A 1/2" REBAR WITH LS–214F CAP; THENCE SOUTH 34°55'49" WEST (SOUTH 34°55'44" WEST DEED), A DISTANCE OF 89.13 FEET TO A 1/2" REBAR WITH LS–214F CAP; THENCE SOUTH 10°21'47" WEST (SOUTH 10°21'42" WEST DEED), A DISTANCE OF 207.37 FEET TO A 1/2" REBAR WITH LS–214F CAP; THENCE SOUTH 51°38'05" WEST (SOUTH 51°38'00" WEST DEED), A DISTANCE OF 278.15 FEET TO A 1/2" REBAR WITH LS–214F CAP; THENCE SOUTH 21°18'37" WEST (SOUTH 21°18'32" WEST DEED), A DISTANCE OF 318.83 FEET TO A 1/2" REBAR WITH LS–214F CAP; THENCE SOUTH 03°51'33" EAST (SOUTH 03°51'38" EAST DEED), A DISTANCE OF 165.85 FEET TO A 1/2" REBAR WITH LS–214F CAP; THENCE SOUTH 02°52'20" WEST (SOUTH 02°52'15" WEST DEED), A DISTANCE OF 239.64 FEET TO A 1/2" REBAR WITH LS–214F CAP MARKING A POINT ON THE SOUTH LINE OF SAID SOUTHEAST QUARTER; THENCE DEPARTING SAID WEST LINE NORTH 87°07'40" WEST (NORTH 87°07'45" WEST DEED) ON SAID SOUTH LINE, A DISTANCE OF 240.28 FEET TO THE POINT OF BEGINNING.

THE SOUTH RIGHT–OF–WAY LINE OF COLBERN ROAD PER THE DOCUMENTS ARE AMBIGUOUS IN THEIR DESCRIPTIONS, THE RESOLUTION WAS OBTAINED BY HOLDING THE STATION AND OFFSETS FROM SAID COLBERN ROAD RECONSTRUCTION PROJECT. THE CENTERLINE OF SAID COLBERN ROAD IS DESCRIBED AS FOLLOWS:

COMMENCING AT 5/8" REBAR IN CONCRETE MARKING THE SOUTHEAST CORNER SAID SOUTHWEST QUARTER; THENCE NORTH 03°02'34" EAST ON THE EAST LINE OF SAID SOUTHWEST QUARTER, A DISTANCE OF 1627.92 FEET TO THE INTERSECTION OF SAID EAST LINE AND SAID CENTERLINE BEING AT STATION 39+84.63; THENCE SOUTH 84°44'20" WEST, A DISTANCE OF 307.87 FEET TO A POINT OF TANGENCY BEING AT STATION 36+76.76 BEING THE POINT OF BEGINNING; THENCE NORTH 84°44'20" EAST ON SAID CENTERLINE, A DISTANCE OF 2927.20 FEET TO A POINT BEING AT STATION 66+03.96, SAID POINT BEING 1998.59 FEET NORTH 02°20'16" EAST OF A 5/8" REBAR IN CONCRETE MARKING THE SOUTHEAST CORNER OF SAID SOUTHEAST QUARTER, SAID POINT BEING THE POINT OF TERMINUS.

THIS DESCRIPTION WAS CREATED WITH THE BENEFIT OF GROUND SURVEY PERFORMED, DECEMBER 3, 2025 (KVE PROJECT C25S2528) AND CONTAINS 1,293,667 SQUARE FEET OR 29.699 ACRES MORE OR LESS, INCLUDING 45,044 SQUARE FEET OR 1.034 ACRES OF APPARENT EXISTING RIGHT–OF–WAY FOR WARD ROAD.

HORIZONTAL AND VERTICAL DATUM:

UNLESS OTHERWISE NOTED THE COORDINATES SHOWN HEREON ARE GROUND COORDINATES
BASED ON THE MISSOURI STATE PLANE, WEST ZONE (NAD 1983/2003) (NAVD 1988)
CAF: 0.99999276
1 METER = 3.28083333 U.S. SURVEY FEET
GROUND COORDINATES X COMBINED ADJUSTMENT FACTOR (CAF) = GRID COORDINATES
SCALED AROUND 0,0

JA–98 (PID–095098)

NORTHING: 310381.520 (GRID)(METERS)	1018317.41 (GROUND)(U.S. SURVEY FEET)
EASTING: 856629.081 (GRID)(METERS)	2810477.61 (GROUND)(U.S. SURVEY FEET)
ELEV = 234.59 (METERS)	799.18 (U.S. SURVEY FEET)

PROJECT BENCH MARKS:

BM–60
CHISELED SQUARE ON THE SOUTHEAST CORNER OF A CURB INLET ON THE SOUTH SIDE OF COLBERN ROAD AND 152'± WEST OF WARD ROAD.
ELEV = 942.02

BM–61
CHISELED "III" ON THE SOUTH SIDE OF A SANITARY SEWER MANHOLE ON THE NORTH SIDE OF WARD ROAD AND NORTHEAST OF A UTILITY POLE (LABELED KCPL 884223) WITH TRANSFORMER.
ELEV = 902.96

BM–62
CHISELED SQUARE ON THE NORTHEAST CORNER OF A CURB INLET ON THE NORTH SIDE OF NORTHWEST ROSEMARY COURT 25'± WEST OF ACCESS ROAD TO SUMMIT EYE CENTER.
ELEV = 949.39

BM–63
CHISELED SQUARE ON TOP OF THE EAST CURB FOR NORTHBOUND BLUE PARKWAY AT THE END OF THE CURB LINE, 145'± NORTH OF NORTHWEST ASTOR STREET.
ELEV = 970.55

BM–64
CHISLED "III" ON NORTH RIM OF A SANITARY SEWER MANHOLE ON THE SOUTH LINE OF SITE.
ELEV = 935.42

LINE TABLE

LINE	BEARING	LENGTH
L1	N 84°44'20" E	56.16'
L2	N 61°03'35" W	16.53'
L3	N 84°43'45" E	107.08'
L4	S 61°13'55" E	16.64'
L5	N 84°44'20" E	41.62'
L6	S 05°15'40" E	6.00'
L7	N 84°44'20" E	36.13'
L8	S 87°39'59" E	90.80'
L9	S 79°37'08" E	103.85'
L10	S 82°41'08" E	133.20'
L11	S 84°38'29" E	81.39'
L12	N 84°44'20" E	93.33'

PROJECT CONTROL:

CP #200
1/2"x24" REBAR W/ CONTROL POINT CAP
NORTHING: 1011497.868 (GROUND)
EASTING: 2816944.678 (GROUND)
ELEV = 937.40

CP #201
1/2"x24" REBAR W/ CONTROL POINT CAP
NORTHING: 1011252.604 (GROUND)
EASTING: 2817364.015 (GROUND)
ELEV = 908.04

CP #202
1/2"x24" REBAR W/ CONTROL POINT CAP
NORTHING: 1011116.479 (GROUND)
EASTING: 2817487.361 (GROUND)
ELEV = 897.33

CP #203
1/2"x24" REBAR W/ CONTROL POINT CAP
NORTHING: 1010801.674 (GROUND)
EASTING: 2816270.048 (GROUND)
ELEV = 951.12

CP #204
1/2"x24" REBAR W/ CONTROL POINT CAP
NORTHING: 1010594.013 (GROUND)
EASTING: 2815775.083 (GROUND)
ELEV = 963.83

CP #205
1/2"x24" REBAR W/ CONTROL POINT CAP
NORTHING: 1009972.931 (GROUND)
EASTING: 2815776.251 (GROUND)
ELEV = 970.79

CP #206
1/2"x24" REBAR W/ CONTROL POINT CAP
NORTHING: 1009952.821 (GROUND)
EASTING: 2816138.015 (GROUND)
ELEV = 961.37

LEGEND:

- MONUMENT FOUND ORIGIN UNCERTAIN UNLESS OTHERWISE NOTED
- CONTROL POINT
- SECTION CORNER
- 1/2"x24" REBAR W/LS 214F CAP SET (UNLESS NOTED OTHERWISE)
- BENCHMARK
- (2)OU OVERHEAD UTILITY LINE (# OF LINES)
- P PULL BOX
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ LIGHT
- UTILITY POLE W/ TRANSFORMER
- GUY ANCHOR
- G UNDERGROUND GAS
- GTS GAS CATHODIC PROTECTION TESTING STATION
- W WATER LINE
- WATER LINE GATE VALVE
- FIRE HYDRANT
- FOC FIBER OPTIC CABLE SIGN
- FOC UNDERGROUND FIBER OPTIC CABLE
- S SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- S SANITARY SEWER LINE
- CMP CORRUGATED METAL PIPE
- RCB REINFORCED CONCRETE BOX
- PVC POLYVINYL CHLORIDE PIPE
- HDPE HIGH DENSITY POLYETHYLENE
- STREET/TRAFFIC SIGN
- B/B BACK TO BACK OF CURB MEASUREMENT
- E/E EDGE TO EDGE OF ASPHALT
- DECIDUOUS TREE
- TREE LINE
- WIRE FENCE
- 939 EXISTING GRADE 1' CONTOUR
- 950 EXISTING GRADE 5' CONTOUR

CAUTION – NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

WARRANTY / DISCLAIMER

THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

SAFETY NOTICE TO CONTRACTOR

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

THERE IS NO PHYSICAL EVIDENCE OF OIL OR GAS WELLS ON THE SUBJECT PROPERTY. THERE IS NO RECORD OF A PERMITTED OIL OR GAS WELL ON THE MDNR MISSOURI GEOLOGICAL SURVEY.

811 Know what's below. Call before you dig.

PROJ. NO. C25_2528 DSN: DDW
CFN: 2528TS DWN: NJN
DAVID D. WOOD
ENGINEER
MO # 2011037427
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LENEXA, KANSAS 66215
PH. (913) 894-5150
lx@kveng.com | www.kveng.com
KAW VALLEY ENGINEERING
KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/27

incite Design Studio
architects building relationships

Architect
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110 WEST 18TH STREET
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816.979.3500

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Landscape Architect
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LEE'S SUMMIT, MO 64063
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OVERLAND PARK, KS 66204
913.214.2169

Mech., Plumb., Elec., Telecom.
HENDERSON ENGINEERS
8345 LENEXA DRIVE, SUITE 300
LENEXA, KS 66214
913.742.5000

DAVID D. WOOD

License
MO #2011037427

Cert. of Authority
#000842
KAW VALLEY ENGINEERING, INC.

STATE OF MISSOURI DAVID D. WOOD NUMBER PE-2011037427 PROFESSIONAL ENGINEER 2-19-2026

NW ROSEMARY COURT
LEE'S SUMMIT, MO 64086

Project Phase
PRELIMINARY DEVELOPMENT PACKAGE

Project Number
26-107

Issue Date
02.18.2026

Revision No.	Description	Date Issued

Area Plan

Sheet Name
PRELIMINARY DEVELOPMENT PLAN

Sheet Number
C0.0

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\\KVLX-FILE\PROJECTS\C25_2528\C3D\4.0\SNP\PRELIMSETS.DWG

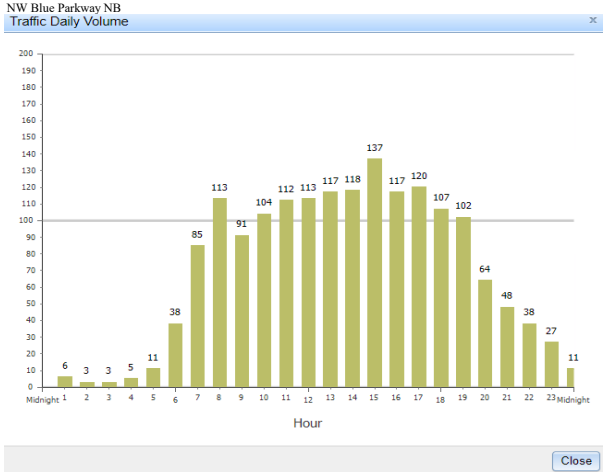
Traffic Impact Study: Hazel Grove Elementary School
Kaw Valley Engineering, Inc.
Project #: C25D2528

Traffic Count Summary: NW Blue Parkway

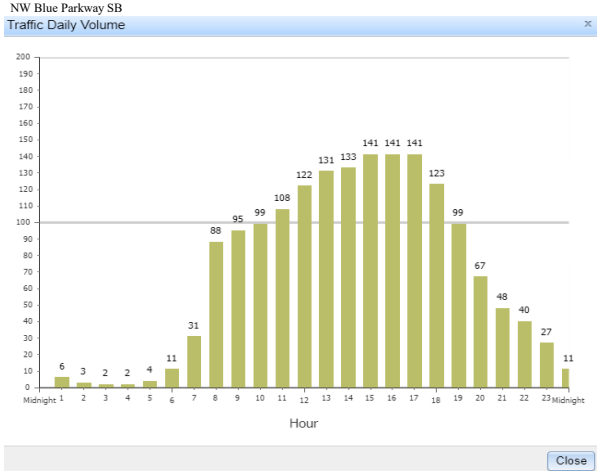
2024 Hourly Counts - NW Blue Parkway*			
	NB	SB	Total
12:00-1:00 AM	6	6	12
1:00-2:00 AM	3	3	6
2:00-3:00 AM	3	2	5
3:00-4:00 AM	5	2	7
4:00-5:00 AM	11	4	15
5:00-6:00 AM	38	11	49
6:00-7:00 AM	85	31	116
7:00-8:00 AM	113	88	201
8:00-9:00 AM	91	95	186
9:00-10:00 AM	104	99	203
11:00-11:00 AM	112	108	220
11:00-12:00 PM	113	122	235
12:00-1:00 PM	117	131	248
1:00-2:00 PM	118	133	251
2:00-3:00 PM	137	141	278
3:00-4:00 PM	117	141	258
4:00-5:00 PM	120	141	261
5:00-6:00 PM	107	123	230
6:00-7:00 PM	102	99	201
7:00-8:00 PM	64	67	131
8:00-9:00 PM	48	48	96
9:00-10:00 PM	38	40	78
11:00-11:00 PM	27	27	54
11:00-12:00 AM	11	11	22
	1690	1673	3363

*Source: Missouri Department of Transportation

NW Blue Parkway NB



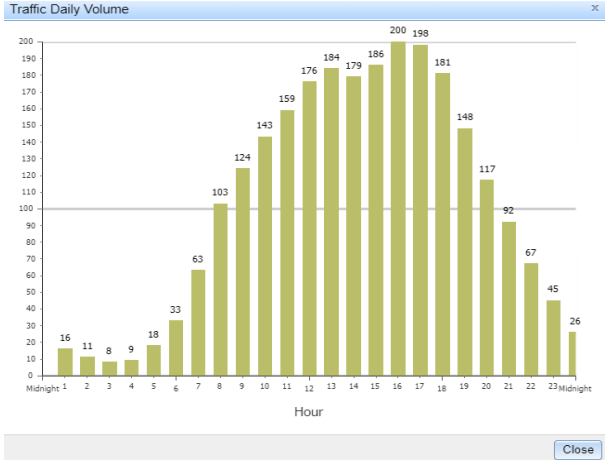
NW Blue Parkway SB



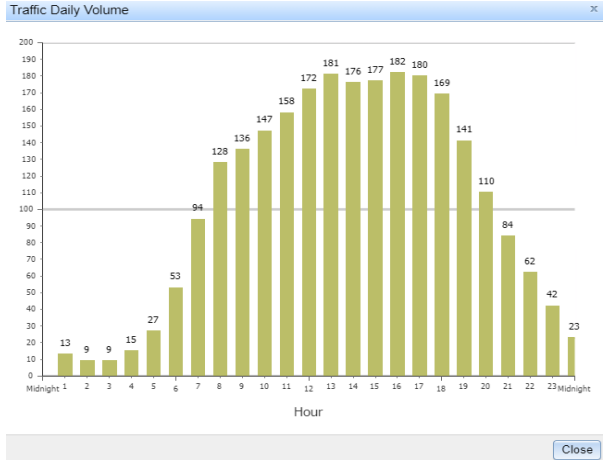
2024 Hourly Counts - NW Colbern Road*			
	EB	WB	Total
12:00-1:00 AM	16	13	29
1:00-2:00 AM	11	9	20
2:00-3:00 AM	8	9	17
3:00-4:00 AM	9	15	24
4:00-5:00 AM	18	27	45
5:00-6:00 AM	33	53	86
6:00-7:00 AM	63	94	157
7:00-8:00 AM	103	128	231
8:00-9:00 AM	124	136	260
9:00-10:00 AM	143	147	290
11:00-11:00 AM	159	158	317
11:00-12:00 PM	176	172	348
12:00-1:00 PM	184	181	365
1:00-2:00 PM	179	176	355
2:00-3:00 PM	186	177	363
3:00-4:00 PM	200	182	382
4:00-5:00 PM	198	180	378
5:00-6:00 PM	181	169	350
6:00-7:00 PM	148	141	289
7:00-8:00 PM	117	110	227
8:00-9:00 PM	92	84	176
9:00-10:00 PM	67	62	129
11:00-11:00 PM	45	42	87
11:00-12:00 AM	26	23	49
	2486	2488	4974

*Source: Missouri Department of Transportation

NW Colbern Road EB



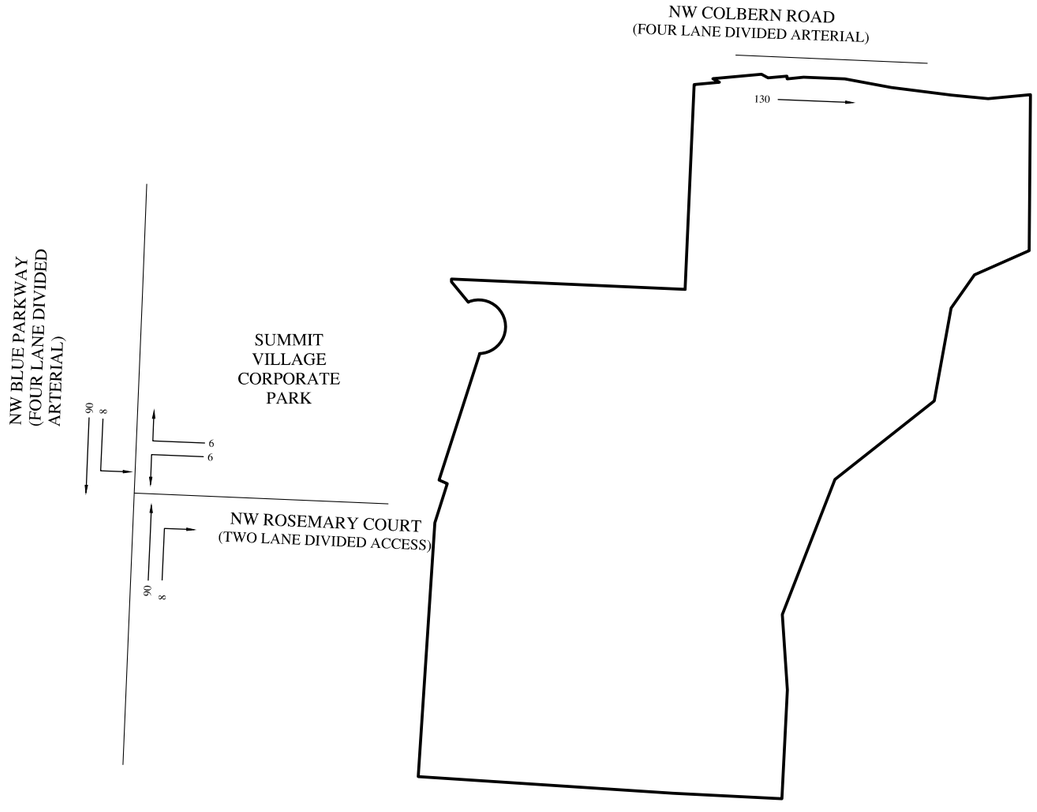
NW Colbern Road WB



LEGEND

245 ← EXISTING TRAFFIC COUNTS ESTIMATED FROM MODOT 2024 TRAFFIC COUNTS AND ITE TRIP GENERATION ESTIMATE FOR A MEDICAL OFFICE BUILDING

AM PEAK HOUR
8:30 TO 9:30



PM PEAK HOUR
3:30 TO 4:30

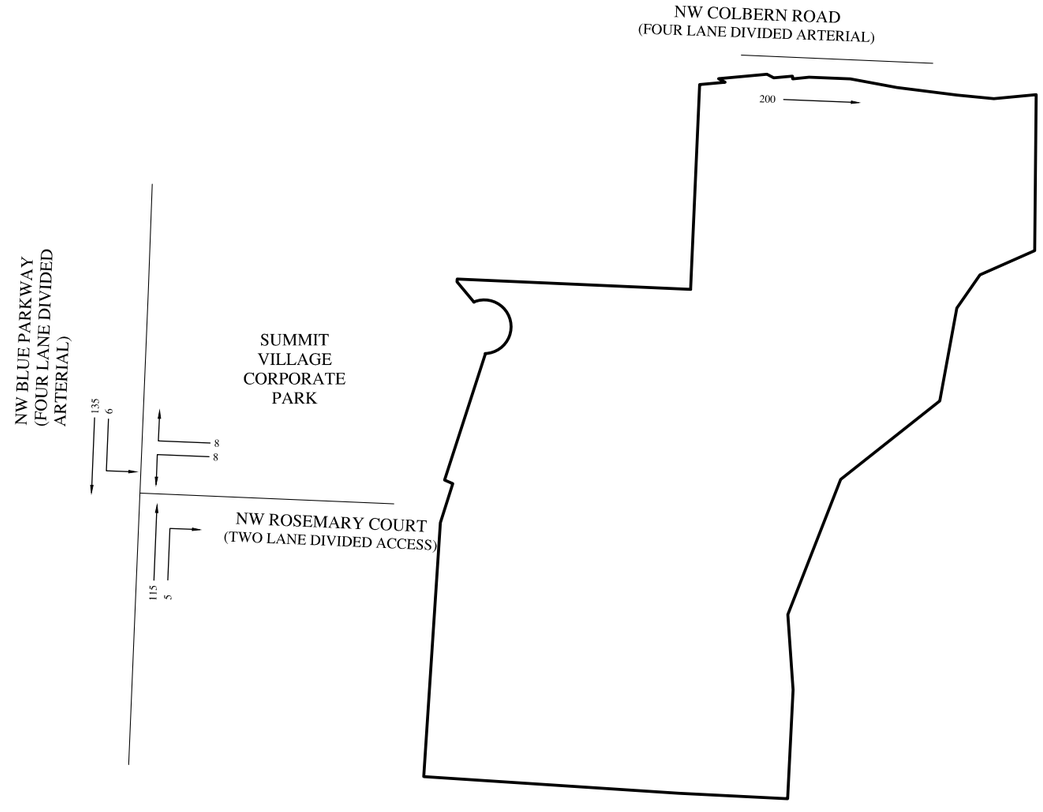


FIGURE "1"

PROJECT #: C25D2528

HAZEL GROVE ELEMENTARY SCHOOL

LEE'S SUMMIT, MISSOURI

EXISTING AM/PM PEAK HOUR TRAFFIC VOLUME AND DISTRIBUTION DIAGRAM
SCALE: N.T.S.

FIGURE-1.dwg

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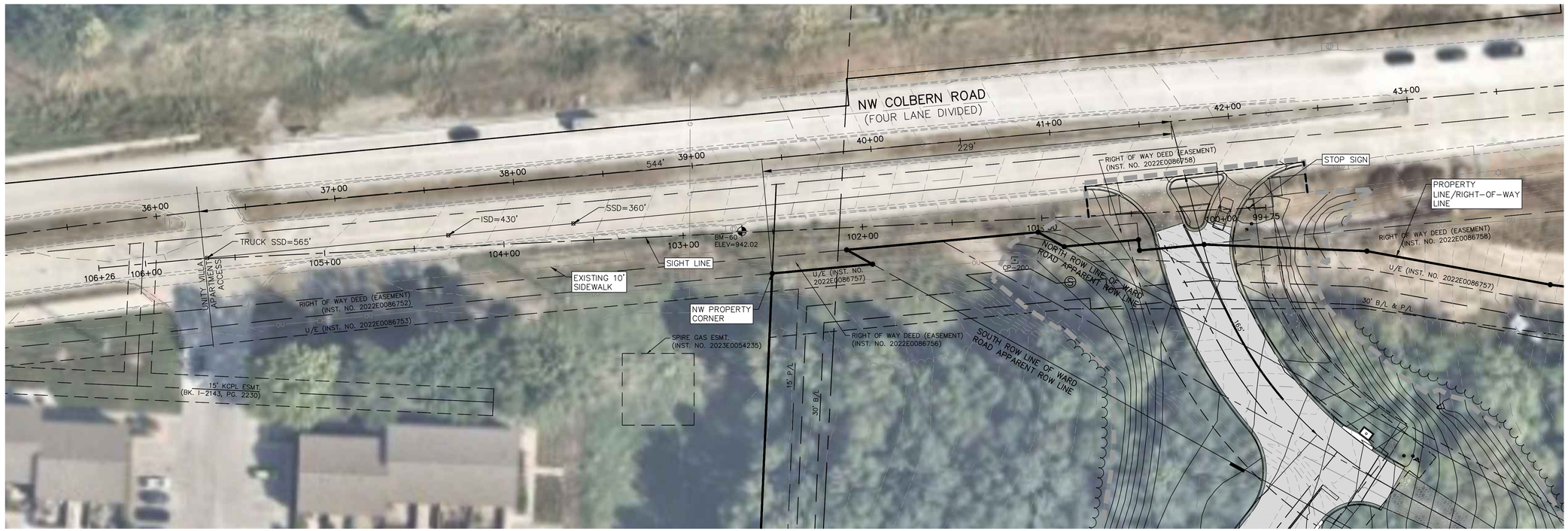
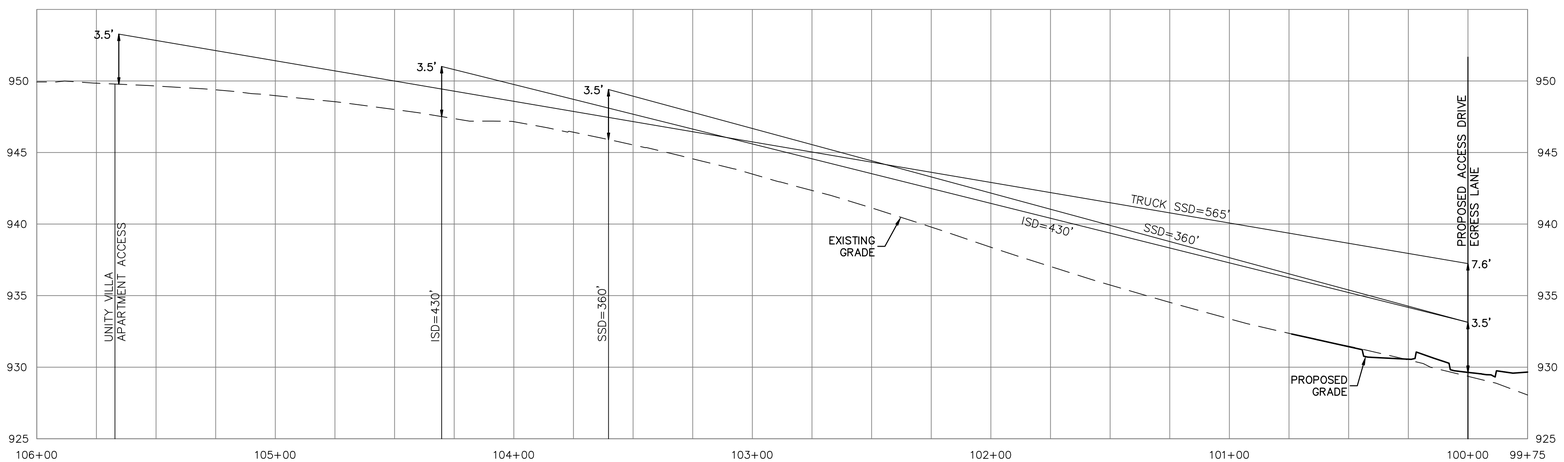
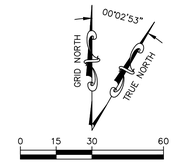
lx@kveng.com | www.kveng.com



NW COLBERN ROAD ACCESS
RIGHT IN/RIGHT OUT



NW COLBERN ROAD SIGHT LINES
DESIGN SPEED 45 MPH



SCALE: 1" = 30'
VERTICAL SCALE: 1" = 5'
CONVERGENCE ANGLE
ESTABLISHED FROM JA-98.

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Know what's **below.**
Call before you dig.

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PH. (913) 894-5150
lx@kveng.com | www.kveng.com
KAW VALLEY ENGINEERING

PROJ. NO. C25_2528 DSN: DDW
CFN: 2528TMP DWN: NJN

KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/27

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816.468.5858

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LAND3 STUDIO
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HENDERSON ENGINEERS
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DAVID D. WOOD

License
MO #2011037427

Cert. of Authority
#000842
KAW VALLEY ENGINEERING, INC.

STATE OF MISSOURI · DAVID D. WOOD · NUMBER PE-2011037427 · PROFESSIONAL ENGINEER
2.19.2026

HAZEL GROVE ELEMENTARY SCHOOL

NW ROSEMARY COURT
LEE'S SUMMIT, MO 64086

Project Phase
PRELIMINARY DEVELOPMENT PACKAGE

Project Number
26-107

Issue Date
02.18.2026

Revision No.	Description	Date Issued

Area Plan

Sheet Name
NW COLBERN ROAD ACCESS EXHIBIT

Sheet Number
C9.0

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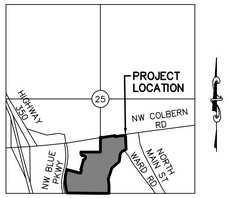
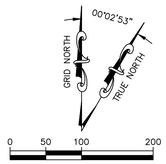


VICINITY MAP
SEC 25 - TWP 48N - RNG 32W
NOT TO SCALE



CONVERGENCE ANGLE
ESTABLISHED FROM JA-98.

PREPARED BY:
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14700 W 114TH TERR.
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PHONE: (913) 894-5150
CONTACT: DAVID WOOD
EMAIL: woodd@kveng.com

OWNER:
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1901 NW BLUE PARKWAY,
UNITY VILLAGE, MO 64065
PHONE: 816-251-3511
CONTACT: GUY SWANSON
EMAIL: swansongs@unityonline.org

DEVELOPER:
LEE'S SUMMIT SCHOOL DISTRICT
502 SE TRANSPORT RD,
LEE'S SUMMIT, MO 64081
PHONE: (816) 986-2421
CONTACT: KYLE GORRELL
EMAIL: kyle.gorrell@lsr7.net

HAZEL GROVE ELEMENTARY SCHOOL
SUMMIT VILLAGE CORPORATE SITE
PROPOSED IMPROVEMENT AND TRAFFIC MANAGEMENT PLAN
LEE'S SUMMIT, MO 64086
SECTION 25 - TOWNSHIP 48 NORTH - RANGE 32 WEST



PROPOSED LEGEND

- CONCRETE CURB AND GUTTER
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- ASPHALT PAVING
- GRAVEL PAVING
- SOFT PLAY PLAYGROUND
- TURF
- STORM WATER MANAGEMENT BASIN
- PROJECT AREA (APPROXIMATE LIMITS OF DISTURBANCE)
- LIMITS OF DRAINAGE COURSE/STREAM

CIRCULATION LEGEND

- BUS DROP-OFF
- PARENT DROP-OFF/PICK-UP

LEGEND:

- MONUMENT FOUND ORIGIN UNCERTAIN UNLESS OTHERWISE NOTED
- CONTROL POINT
- SECTION CORNER
- 1/2"x24" REBAR W/LS 2148 CAP SET (UNLESS NOTED OTHERWISE)
- BENCHMARK
- (2) OU — OVERHEAD UTILITY LINE (# OF LINES)
- P — PULL BOX
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ LIGHT
- UTILITY POLE W/ TRANSFORMER
- GUY ANCHOR
- G — UNDERGROUND GAS
- GTS — GAS CATHODIC PROTECTION TESTING STATION
- W — WATER LINE
- WATER LINE GATE VALVE
- FIRE HYDRANT
- FOC — FIBER OPTIC CABLE SIGN
- FOC — UNDERGROUND FIBER OPTIC CABLE
- S — SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- S — SANITARY SEWER LINE
- CMP — CORRUGATED METAL PIPE
- RCB — REINFORCED CONCRETE BOX
- PVC — POLYVINYL CHLORIDE PIPE
- HDPE — HIGH DENSITY POLYETHYLENE
- STREET/TRAFFIC SIGN
- B/B — BACK TO BACK OF CURB MEASUREMENT
- E/E — EDGE TO EDGE OF ASPHALT
- DECIDUOUS TREE
- TREE LINE
- WIRE FENCE
- 939 — EXISTING GRADE 1' CONTOUR
- 950 — EXISTING GRADE 5' CONTOUR

HAZEL GROVE ELEMENTARY SCHOOL
PLANNED ENROLLMENT: 342 STUDENTS
BUILDING CAPACITY: 552 STUDENTS
PROPOSED STAFF: 50 FULL TIME/PART TIME
CURRENT BUS RIDERSHIP (STUDENTS): 226 OF 342 STUDENTS (66%)
BUS CAPACITY: 10 FULL SIZE BUSES
EXISTING HAZEL GROVE ELEMENTARY SCHOOL SERVICED BY 8 FULL SIZE BUSES

RECOMMENDED PARKING FOR CAPACITY: 110-120 STALLS (5 ADA STALLS)
RECOMMENDATION BASED ON ITE PARKING GENERATION MANUAL, 4TH EDITION. LAND USE IS ITE CODE 520.
AVERAGE PEAK PERIOD PARKING DEMAND: 0.17 VEHICLES PER STUDENT - 94 STALLS
85TH PERCENTILE: 0.21 VEHICLES PER STUDENT - 116 STALLS

PROVIDED PARKING: 120 STALLS FOR STAFF/VISITORS (5 ADA)

CAR RIDERSHIP (STUDENTS):

AM ARRIVAL:
ESTIMATED RATIO OF 18% VEHICLES TO ENROLLMENT: 62 VEHICLES DURING MORNING ARRIVAL
PEAK 15 MINUTE ARRIVAL RATIO OF 12% VEHICLES TO ENROLLMENT: 41 VEHICLES
PEAK 5 MINUTE ARRIVAL RATIO OF 8% VEHICLES TO ENROLLMENT: 28 VEHICLES
ANTICIPATED QUEUE AT ARRIVAL: 7% VEHICLES TO ENROLLMENT: 24 VEHICLES

PM DISMISSAL:
ESTIMATED RATIO OF 14% OF VEHICLES TO ENROLLMENT: 49 VEHICLES DURING AFTERNOON DISMISSAL
ESTIMATED 13% VEHICLES TO ENROLLMENT STANDING QUEUE PRIOR TO DISMISSAL: 44 VEHICLES
RECOMMENDED CAPACITY: 53 VEHICLES BETWEEN PRIMARY CAR RIDER LINE AND EXCESS PARKING
80± VEHICLES AT BUILDING CAPACITY

PEDESTRIAN (STUDENTS)
NEGLIGIBLE STUDENT POPULATION DUE TO PROXIMITY TO RESIDENTIAL DENSITY WITHIN ½ MILE OF PROPOSED SCHOOL.

* DELIVERIES AND RECEIVING SUPPORTS SINGLE UNIT BOX TRUCKS (SU-40) AND TRUCK AND TRAILER (WB-62) WITH ACCESS TO/FROM NW ROSEMARY COURT.



DOCK AND SERVICE AREA DETAIL
SCALE: 1" = 30'

CAUTION - NOTICE TO CONTRACTOR
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

WARRANTY / DISCLAIMER
THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

ACCESS:
ACCESS TO SUBJECT PROPERTY IS AVAILABLE FROM ROSEMARY COURT AND COLBERN ROAD. ACCESS TO NW COLBERN ROAD IS PREPARED TO BE RIGHT IN/RIGHT OUT. REFER TO THE PROPOSED IMPROVEMENT AND TRAFFIC MANAGEMENT PLAN FOR ADDITIONAL INFORMATION.

SAFETY NOTICE TO CONTRACTOR
IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

Know what's below. Call before you dig.

PROJ. NO. C25_2528 DSN: DDW
CFN: 2528TRAF DWN: NJN
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ENGINEER
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KAW VALLEY ENGINEERING
KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/27

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816.979.3500

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KANSAS CITY, MO 64118
816.468.5858

Landscape Architect
LAND3 STUDIO
317 SE MAIN ST.
LEE'S SUMMIT, MO 64063
816.207.6019

Food Service
DENNIS G. GLORE, INC.
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EUREKA, MO 63025
636.938.7887

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STATE OF MISSOURI DAVID D. WOOD NUMBER PE-2011037427 PROFESSIONAL ENGINEER 2-18-2026

HAZEL GROVE ELEMENTARY SCHOOL

NW ROSEMARY COURT
LEE'S SUMMIT, MO 64086

Project Phase
PRELIMINARY DEVELOPMENT PACKAGE
Project Number
26-107
Issue Date
02.18.2026

Revision No.	Description	Date Issued

Area Plan

Sheet Name
PROPOSED IMPROVEMENT AND TRAFFIC MANAGEMENT PLAN
Sheet Number
C0.5

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Lee's Summit School District
2020-21

Please contact Transportation at 986-4BUS for questions, clarification and details - Revision 12.19.18

Hazel Grove

Underwood

Mason

Westview

Richardson

Meadow Lane

Cedar Creek

Lee's Summit

Prairie View

Highland Park

Pleasant Lea

Longview Farm

Sunset Valley

Hawthorn Hill

Trailridge

Woodland

Summit Pointe

Greenwood

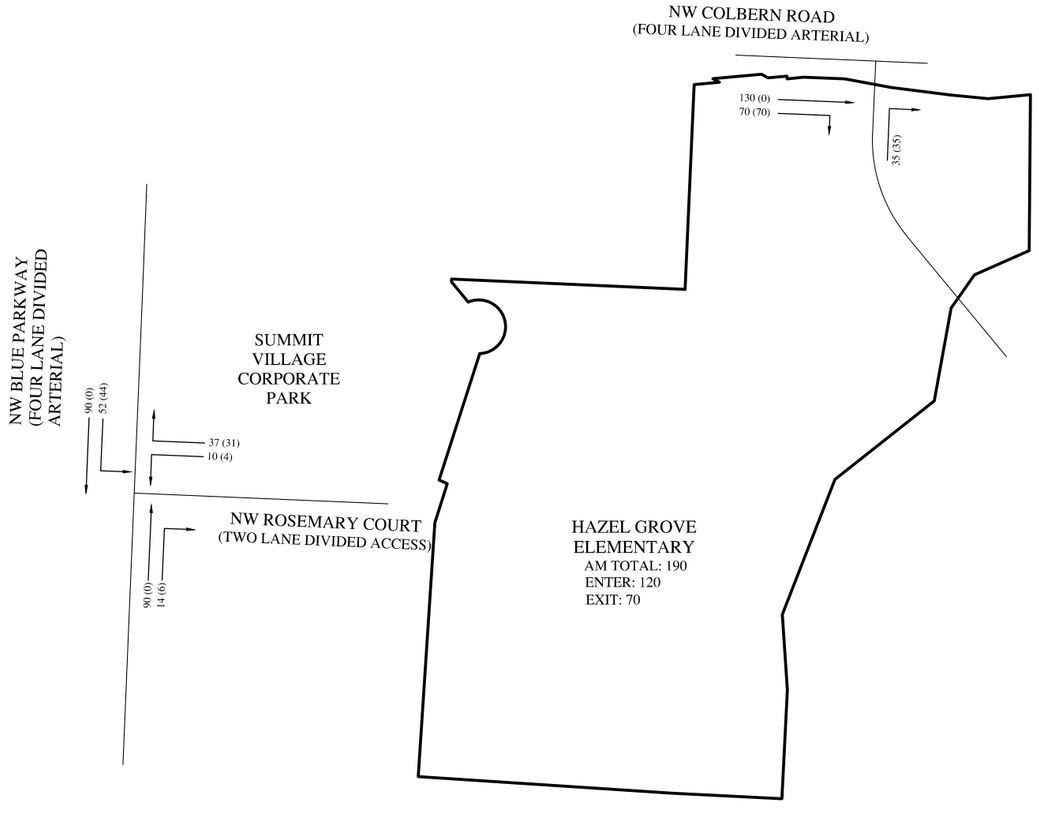
Hazel Grove Elementary Trip Distribution	
Direction	HGE Site
To/From South on NW Blue Parkway	5%
To/From South on NW Blue Parkway	5%
To/From West Via NW Colbern Road	40%
To/From East Via NW Colbern Road	50%
Total	100%

LEGEND

PROPOSED PEAK HOUR VOLUME

245 (40%) ← DISTRIBUTION

AM PEAK HOUR
8:30 TO 9:30



PM PEAK HOUR
3:30 TO 4:30

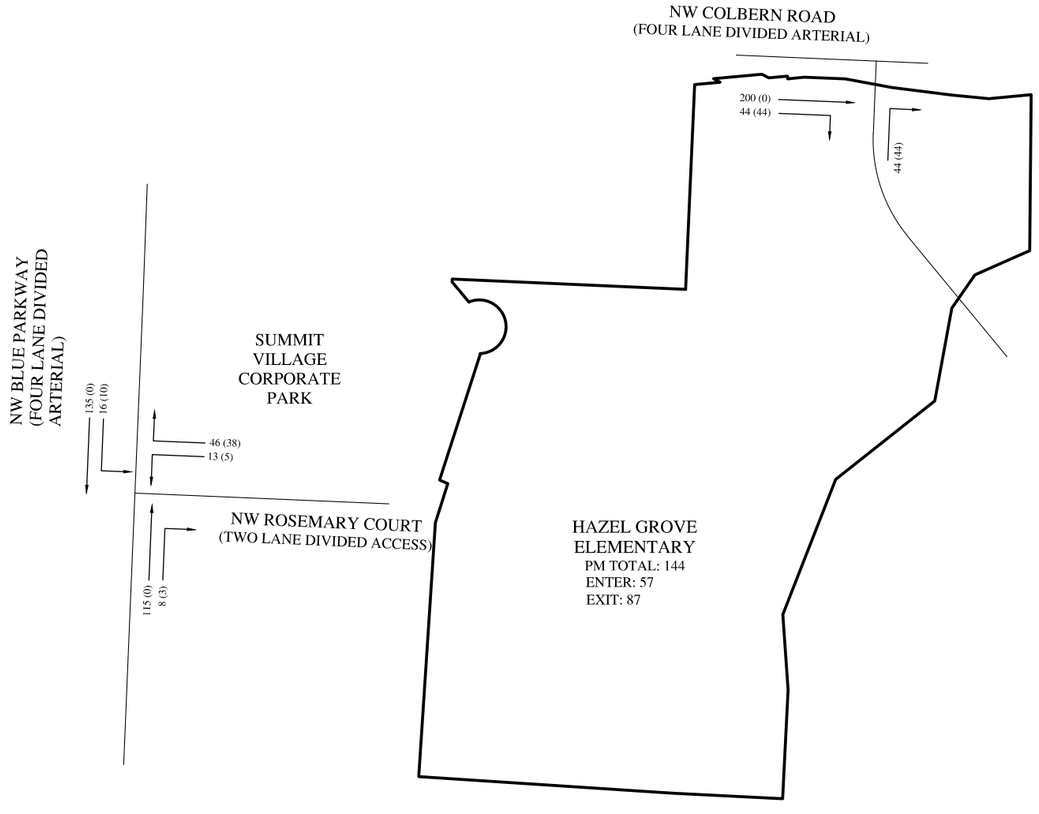


FIGURE "2"

PROJECT #: C25D2528

HAZEL GROVE ELEMENTARY SCHOOL

LEE'S SUMMIT, MISSOURI

SOUTH SITE (RAVEN AND TABITHA) - PROPOSED AM/PM PEAK HOUR TRAFFIC VOLUME AND DISTRIBUTION DIAGRAM

SCALE: N.T.S.

FIGURE-2.dwg

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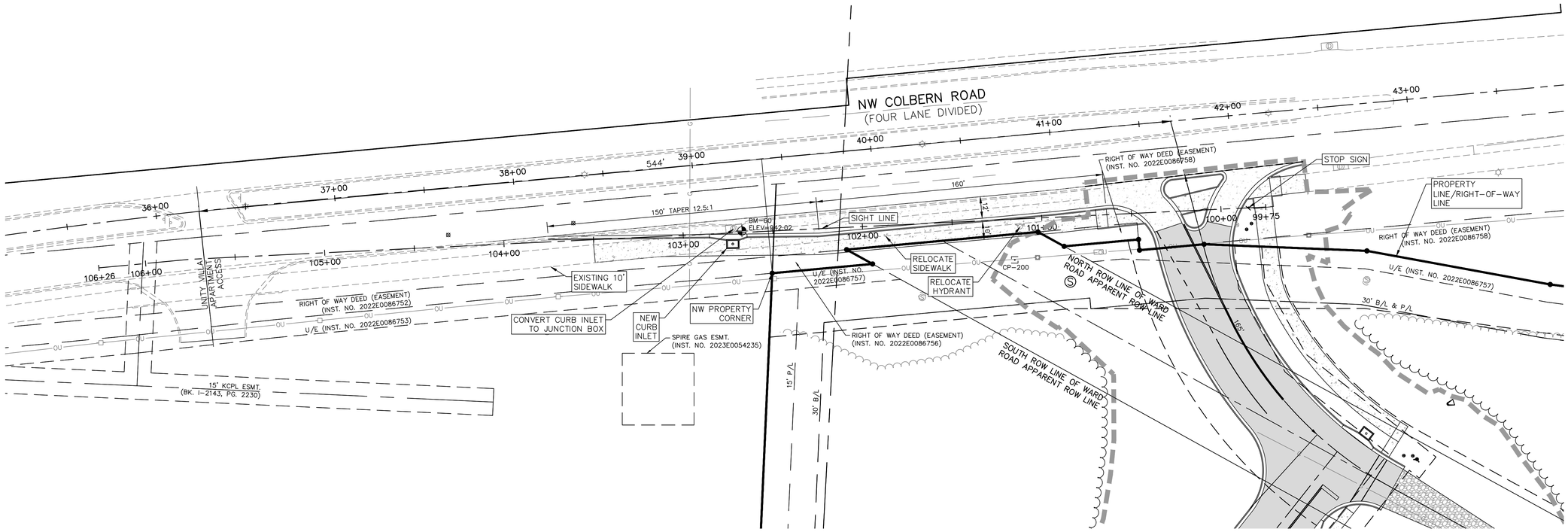
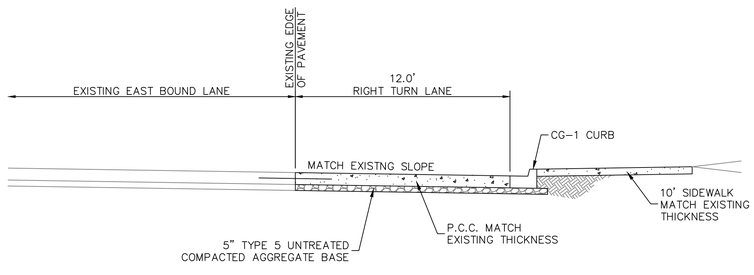
lx@kveng.com | www.kveng.com

KAW VALLEY ENGINEERING



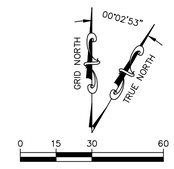
NW COLBERN ROAD ACCESS
EASTBOUND RIGHT TURN LANE EXHIBIT



TYPICAL CROSS SECTION
NOT TO SCALE

CONSTRUCTION NOTES:

1. PROVIDE 1-1/4"x18" DOWEL BARS AT 12" CENTERS THRU CONTRACTION JOINTS.
2. REFER TO MODOT STANDARD DETAIL 502.05S FOR ADDITIONAL REQUIREMENTS



SCALE: 1" = 30'
CONVERGENCE ANGLE ESTABLISHED FROM JA-98.

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CFN: 2528TMP-ALT DWN: NJN
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DAVID D. WOOD
NUMBER PE-2011037427
PROFESSIONAL ENGINEER
2-13-2026

HAZEL GROVE ELEMENTARY SCHOOL

NW ROSEMARY COURT
LEE'S SUMMIT, MO 64086

Project Phase
PRELIMINARY DEVELOPMENT PACKAGE

Project Number
26-107

Issue Date
02.18.2026

Revision No.	Description	Date Issued

Area Plan

Sheet Name
NW COLBERN ROAD EASTBOUND RIGHT TURN LANE EXHIBIT

Sheet Number
C9.1

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I:\KVLX\PROJECTS\C25_2528\CDS\DWG\2528TMP-ALT.DWG

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	6	90	8	8	90
Future Vol, veh/h	6	6	90	8	8	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	265	0	-	-	230	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	7	106	9	9	106

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	182	58	0	0	115	0
Stage 1	111	-	-	-	-	-
Stage 2	72	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	790	996	-	-	1471	-
Stage 1	902	-	-	-	-	-
Stage 2	943	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	785	996	-	-	1471	-
Mov Cap-2 Maneuver	785	-	-	-	-	-
Stage 1	902	-	-	-	-	-
Stage 2	937	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.13	0	0.61
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	785	996	1471	-
HCM Lane V/C Ratio	-	-	0.009	0.007	0.006	-
HCM Ctrl Dly (s/v)	-	-	9.6	8.6	7.5	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	8	115	5	6	135
Future Vol, veh/h	8	8	115	5	6	135
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	265	0	-	-	230	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	9	135	6	7	159

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	232	71	0	0	141	0
Stage 1	138	-	-	-	-	-
Stage 2	94	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	736	978	-	-	1439	-
Stage 1	874	-	-	-	-	-
Stage 2	920	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	732	978	-	-	1439	-
Mov Cap-2 Maneuver	732	-	-	-	-	-
Stage 1	874	-	-	-	-	-
Stage 2	915	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.35	0	0.32
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	732	978	1439	-
HCM Lane V/C Ratio	-	-	0.013	0.01	0.005	-
HCM Ctrl Dly (s/v)	-	-	10	8.7	7.5	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	0	-

Intersection	
Int Delay, s/veh	3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	37	90	14	52	90
Future Vol, veh/h	10	37	90	14	52	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	265	0	-	-	230	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	65	85	70	70	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	57	106	20	74	106

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	317	63	0	0	126	0
Stage 1	116	-	-	-	-	-
Stage 2	202	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	651	989	-	-	1458	-
Stage 1	896	-	-	-	-	-
Stage 2	813	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	618	989	-	-	1458	-
Mov Cap-2 Maneuver	618	-	-	-	-	-
Stage 1	896	-	-	-	-	-
Stage 2	771	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.31	0	3.13
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	618	989	1458	-
HCM Lane V/C Ratio	-	-	0.025	0.058	0.051	-
HCM Ctrl Dly (s/v)	-	-	11	8.9	7.6	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.2	0.2	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	130	70	0	0	0	35
Future Vol, veh/h	130	70	0	0	0	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	60	92	92	92	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	153	117	0	0	0	58

Major/Minor	Major1			Minor1	
Conflicting Flow All	0	0		-	135
Stage 1	-	-		-	-
Stage 2	-	-		-	-
Critical Hdwy	-	-		-	6.94
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	-	-		-	-
Follow-up Hdwy	-	-		-	3.32
Pot Cap-1 Maneuver	-	-		0	889
Stage 1	-	-		0	-
Stage 2	-	-		0	-
Platoon blocked, %	-	-			
Mov Cap-1 Maneuver	-	-		-	889
Mov Cap-2 Maneuver	-	-		-	-
Stage 1	-	-		-	-
Stage 2	-	-		-	-

Approach	EB	NB
HCM Ctrl Dly, s/v	0	9.33
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR
Capacity (veh/h)	889	-	-
HCM Lane V/C Ratio	0.066	-	-
HCM Ctrl Dly (s/v)	9.3	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-

Intersection	
Int Delay, s/veh	3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	46	115	8	16	135
Future Vol, veh/h	13	46	115	8	16	135
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	265	0	-	-	230	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	40	40	85	70	70	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	115	135	11	23	159

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	266	73	0	0	147	0
Stage 1	141	-	-	-	-	-
Stage 2	125	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	701	974	-	-	1433	-
Stage 1	871	-	-	-	-	-
Stage 2	887	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	689	974	-	-	1433	-
Mov Cap-2 Maneuver	689	-	-	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	873	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.48	0	0.95
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	689	974	1433	-
HCM Lane V/C Ratio	-	-	0.047	0.118	0.016	-
HCM Ctrl Dly (s/v)	-	-	10.5	9.2	7.6	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.4	0	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	200	44	0	0	0	44
Future Vol, veh/h	200	44	0	0	0	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	70	92	92	92	35
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	235	63	0	0	0	126

Major/Minor	Major1			Minor1	
Conflicting Flow All	0	0		-	149
Stage 1	-	-		-	-
Stage 2	-	-		-	-
Critical Hdwy	-	-		-	6.94
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	-	-		-	-
Follow-up Hdwy	-	-		-	3.32
Pot Cap-1 Maneuver	-	-		0	871
Stage 1	-	-		0	-
Stage 2	-	-		0	-
Platoon blocked, %	-	-			
Mov Cap-1 Maneuver	-	-		-	871
Mov Cap-2 Maneuver	-	-		-	-
Stage 1	-	-		-	-
Stage 2	-	-		-	-

Approach	EB	NB
HCM Ctrl Dly, s/v	0	9.83
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR
Capacity (veh/h)	871	-	-
HCM Lane V/C Ratio	0.144	-	-
HCM Ctrl Dly (s/v)	9.8	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-

STORM DRAINAGE REPORT
HAZEL GROVE ELEMENTARY
LITTLE CEDEAR CREEK WATERSHED
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

Section 25, Township 48 N, Range 32 W

Prepared for:

LEE'S SUMMIT R-VII SCHOOL DISTRICT FACILITY SERVICES
502 SE Transport Road
Lee's Summit, Missouri 64081

Prepared by:

KAW VALLEY ENGINEERING, INC.
14700 West 114th Terrace
Lenexa, Kansas 66215

February 18, 2026

Kaw Valley Engineering Project No. **C25D2528**

STORM DRAINAGE REPORT

Hazel Grove Elementary School
Lee's Summit, Missouri
Project No. C25D2528

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EXHIBITS

Exhibit A – Existing Conditions Plan, Existing Drainage Area Map, FEMA Firmette, Soils Map, Wetland Inventory, & Zoning Map
Exhibit B – Preliminary Development Plan, Grading & Stormwater Management Plan
Exhibit C – Proposed Drainage Area Map & Calculations, BMP Plan & Worksheets
Exhibit D – Pondpack Analysis

REVISIONS

Revision 0 – February 18, 2026 Preliminary Development Plan

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February 18, 2026 **C25D2528**

Mr. Kyle Gorrell
Lee's Summit School District Facility Services
502 SE Transport Road
Lee's Summit, MO 64081

RE: STORMWATER MANAGEMENT STUDY
HAZEL GROVE ELEMENTARY
LEES SUMMIT, MISSOURI, 64034

Dear Mr. Gorrell:

Kaw Valley Engineering, Inc. has completed a review of the stormwater management implications associated with the Lee's Summit R-VII School District's (LSR7) proposal to relocate Hazel Grove Elementary School approximately ½ miles southeast of the existing school to a 29.7-acre property recently purchased by the district. The purpose of this study is to analyze the anticipated changes in stormwater drainage conditions and flows associated with the proposed project.

CITY STORM WATER MANAGEMENT REQUIREMENTS

Based upon the Storm Water Management Guidelines as described in the City of Lee's Summit Design and Construction Manual, Section 5600, the proposed development on the property would be subject to the following requirements:

- The City has adopted the Default Strategy: Comprehensive Protection method. Under this strategy, peak runoff control will be required for the 1%, 10%, and 50% annual chance storm event. Peak runoff control will be required where there are known downstream flooding problems or where an increase in the peak runoff from a development has the potential to create flooding of property, structures, stormwater infrastructure, roads, bridges, and dams. Under this strategy, volumetric and/or extended detention control of the 90% mean annual event storm event shall be provided for broad protection of the receiving system, including channel erosion protection and flood peak reductions over a range of return periods. Volumetric and/or extended detention control of the 90% mean annual even storm shall be implemented for all sites unless otherwise exempt by Section 5601.3. Performance standards and sizing criteria are provided in Section 5608

Based on information provided in the effective Flood Insurance Report for Jackson County, Missouri (Study 29095CV006C, dated December 7, 2023), there are no apparent downstream flooding issues at Colbern Road crossing and/or the railroad crossing. Therefore, KVE is recommending that the proposed development of the site shall maintain existing drainage patterns and releases rates from both the developed site and the existing detention basin that provides mitigation for the Summit Village Corporate Park Development and a portion of the Unity Villa Apartments.

EXISTING CONDITIONS

The project site is located on the south side of NW Colbern Road, approximately ¼ mile east of U.S. 350 Highway in Lee's Summit, Missouri as located on the general vicinity map.



Figure 1 - Vicinity Map, Not to scale

The subject property is approximately 29.70 acres and is generally bound by NW Colbern Road to the north, NW Blue Parkway to the west, commercial development to the south and undeveloped city owned land to the east. The property is currently undeveloped with dense tree coverage across the site. The property generally drains to the east / northeast to an unnamed tributary of Little Cedar Creek. There is an existing detention pond located in the northwest corner of the site that provides stormwater mitigation for Summit Village Corporate Park Lots 1 & 2 to the west. In addition, approximately 2.62 acres of the Unity Villa Apartments drain through the subject property. Approximately 1 acre of the apartments drains to the existing detention basin and the remaining 1.62 acres flows east to the creek. For the purposes of this report, the offsite areas are included in calculations. The existing land cover within the site and offsite areas is defined in Table 1.

Table 1 - Hazel Grove Elementary School - Existing Drainage Area Conditions

Description	Area (sf)	Area (ac)	Land Cover	CN Value	Area (sf)	Area (ac)	%	CN
EXDA Offsite (Detained)	264,492	6.07	Open Space (HSG D)	77	118,573	2.72	45%	89
			Buildings/Pavements	98	145,919	3.35	55%	
EXDA Offsite (Undetained)	70,777	1.62	Open Space (HSG D)	77	38,446	0.88	15%	87
			Buildings/Pavements	98	32,331	0.74	12%	
EXDA Onsite (Detained)	38,584	0.89	Woods (HSG D)	77	14,144	0.32	37%	78
			Meadow (HSG D)	78	24,440	0.56	63%	
EXDA Onsite (Undetained)	1,255,096	28.81	Woods (HSG D)	77	1,183,555	27.17	94%	77
			Meadow (HSG D)	78	63,595	1.46	5%	
			Pond (HSG D)	98	7,946	0.18	1%	
Total Contributing Drainage Area	1,628,949	37.40	Woods (HSG D)	77	1,197,699	27.50	74%	80
			Meadow (HSG D)	78	88,035	2.02	5%	
			Pond (HSG D)	98	7,946	0.18	0%	
			Open Space (HSG D)	80	157,019	3.60	10%	
			Buildings/Pavements	98	178,250	4.09	11%	

The contributing drainage area to the stream on the east side of the property is in excess of 40 acres, therefore KVE is recommending that the stream is protected by a stream buffer zone in accordance with APWA Section 5605.3. The buffer zone should measure 100 feet on either side of the stream banks. The proposed limits of the stream buffer zone are shown on the Site Development Plan & Preliminary Plat in Exhibit B.

The subject property is shown to be located in Zone "X" on the revised flood insurance rate map for Jackson County, Missouri (Community Panel No. 29095C0409G) dated January 20, 2017.

A soils map has been obtained for the site. The soils were identified according to the soil survey maps in the *NRCS Web Soil Survey*. The map indicates that the following soils exist on the site and included the following engineering characteristics and soil and water features information.

- **10113 – Oska silty clay loam, 5 to 9 percent slopes, eroded.** The surface runoff class is very high. The groundwater table is located at more than 80 inches. The soil is classified as a type D hydrologic soil group and is a well drained non-hydric hydric soil.

- **10128 – Sharpsburg-Urban land complex, 2 to 5 percent slopes.** The surface runoff class is high. The groundwater table is located at 24 to 35 inches. The soil is classified as a type D hydrologic soil group and is a moderately well drained non-hydric soil.

- **10179 – Udarents-Urban land-Oska complex, 5 to 9 percent slopes.** The surface runoff class is very high. The groundwater table is located at more than 80 inches. The soil is classified as a type C hydrologic soil group and is a somewhat poorly drained non-hydric soil.

- **40107 – Snead-Rock outcrop complex, warm, 5 to 14 percent slopes.** The surface runoff class is undefined. The groundwater table is located at 24 to 30 inches. The soil is classified as a type D hydrologic soil group and is a moderately well drained non-hydric soil.

- **99012 – Urban land, upland, 5 to 9 percent slopes.**

See Exhibit A for the Existing Site Topography and Existing Drainage Area Map.

PROPOSED CONDITIONS

To align with current LSR7 building standards and allow for future growth in enrollment, LSR7 is proposing to build a new elementary school with associated drives, sidewalks, parking lots, outdoor play areas, and utilities on the subject property. In order to maintain existing drainage conditions and functionality of the existing detention basin, KVE is proposing to expand the existing detention basin to continue to provide stormwater mitigation for Summit Village Corporate Park Lots 1 & 2 as well as provide stormwater mitigation and treatment for the new school development. The expanded detention basin will detain the contributing drainage area from Summit Village Corporate Park Lots 1 & 2, 2.62 acres of the Unity Villa Apartments and 5.58 acres on the north half of the school property. The proposed land cover within the project area is defined in Table 2.

Table 2 - Hazel Grove Elementary School - Proposed Drainage Area Conditions								
Description	**Area (sf)**	**Area (ac)**	**Land Cover**	**CN Value**	**Area (sf)**	**Area (ac)**	**%**	**CN**
PDA Onsite (Detained)	243,121	5.58	Woods (HSG D)	77	29,661	0.68	12%	86
			Meadow (HSG D)	78	6,498	0.15	3%	
			Open Space (HSG D)	80	118,175	2.71	49%	
			Buildings/Pavements	98	88,787	2.04	37%	
PDA Offsite (Detained)	335,279	7.70	Open Space (HSG D)	80	157,029	3.60	47%	90
			Buildings/Pavements	98	178,250	4.09	53%	
PDA Onsite (Undetained)	1,050,549	24.12	Woods (HSG D)	77	528,522	12.13	50%	82
			Meadow (HSG D)	78	21,239	0.49	2%	
			Open Space (HSG D)	80	305,955	7.02	29%	
			Buildings/Pavements	98	194,833	4.47	19%	
Total Contributing Drainage Area	1,628,949	37.40	Woods (HSG D)	77	558,183	12.81	34%	84
			Meadow (HSG D)	78	27,737	0.64	2%	
			Open Space (HSG D)	80	581,159	13.34	36%	
			Buildings/Pavements	98	461,870	10.60	28%	

The detention basin will discharge via public storm sewer infrastructure to the creek to the east. The south and east half of the school will drain via overland flow and storm sewer east to the creek. See Exhibit B Existing for the Site Development Plan & Preliminary Plat, Grading Plan and Exhibit C for the Proposed Drainage Area Map.

DRAINAGE ANALYSIS

The storm runoff for the project site was analyzed for the 2-year, 10-year, and 100-year storms for the existing and proposed conditions.

Runoff and time of concentration were calculated using the SCS Method as described in *Urban Hydrology for Small Watersheds (TR-55)*

The Curve Number (CN) for the drainage areas to be used in the calculations are identified in Tables 1 and 2. This number was based upon the existing and proposed land cover as specified in TR-55. It was assumed that maintained pervious surfaces have a range of CN values depending upon soil type and land cover. Newly established pervious areas are assumed to have a CN value of 80 for planned turf (lawn) areas. These values are based upon APWA guidelines and are representative of typical grading operations based upon the existing soil types on the campus and assuming moderate compaction efforts and placement of the requisite topsoil. Impervious surfaces have a CN value of 98.

DETENTION ROUTING AND ANALYSIS

For this study, the existing detention basin was evaluated based on as built conditions of the basin and the full build out of the Summit Village Corporate Park Lots 1 & 2 as approved by the City of Lee's Summit. The basin currently provides stormwater mitigation for 5.07 acres of Summit Village Corporate Park Lots 1 & 2, 1 acre of the Unity Villa Apartments and 0.89 acre of the school property. Discharges are controlled via 4' x 4' concrete box outlet structure with multiple orifices to control the 2-year, 10-year and 100-year storm events. A summary of the existing detention routing and discharge calculations for the existing school property are included in Table 3 below. The existing combined release rates were used as the total allowable release rates in the design of the expanded basin.

Table 3: Existing Detention Routing Summary

2 Year Design Storm	Existing Pond Detained	EXDA Onsite Undetained	EXDA Offsite Undetained	Comparative Analysis	Site
Inflow (cfs)	20.69	34.19	4.78	Existing Inflow (cfs)	59.66
Outflow (cfs)	0.89	34.19	4.78	Existing Outflow (cfs)	39.86
Storage (ac-ft)	0.744	-	-		
Max WS Elev.	940.59	-	-	Allowable Flow (cfs)	39.86
10 Year Design Storm	Existing Pond Detained	EXDA Onsite Undetained	EXDA Offsite Undetained	Comparative Analysis	Site
Inflow (cfs)	35.22	70.24	8.22	Existing Inflow (cfs)	113.68
Outflow (cfs)	1.68	70.24	8.22	Existing Outflow (cfs)	80.14
Storage (ac-ft)	1.346	-	-		
Max WS Elev.	942.75	-	-	Allowable Flow (cfs)	80.14
100 Year Design Storm	Existing Pond Detained	EXDA Onsite Undetained	EXDA Offsite Undetained	Comparative Analysis	Site
Inflow (cfs)	55.27	124.28	12.97	Existing Inflow (cfs)	192.52
Outflow (cfs)	17.22	124.28	12.97	Existing Outflow (cfs)	154.47
Storage (ac-ft)	1.76	-	-		
Max WS Elev.	944	-	-	Allowable Flow (cfs)	154.47

In order to provide continued stormwater mitigation for Summit Village Corporate Lots 1 & 2 and to maintain existing release rates from the school property KVE is proposing to expand the existing detention basin.

The top of the embankment is at 935.0 ft minimum with side slopes of 3:1. The detention basin will receive stormwater from the Summit Village Corporate Park Development to the west, the Unity Villa Apartments to the North and the north quarter of the development school property. The 2-year event is controlled by a 4" perforated underdrain and riser that drains to the outlet structure at elevation 922.0 The 10-year and 100-year storm evens are controlled by a 5' x 4' area inlet with a single 5' x 0.5' opening that functions as an orifice. The flow from the outlet structure is conveyed to the 42" public storm line running through the school property that discharges to the creek to the east. In the unlikely scenario that the primary outlet orifice is compromised, additional overflow is provided via grated opening on the surface of the outlet structure.

Refer to the Stormwater Management Plan in Exhibit C for details. Detention routing calculations were modeled using PondPack Connect Edition. Results can be found in Exhibit D.

A summary of the proposed detention routing and discharge calculations for the proposed school development are included in table 4 below.

Table 4: Proposed Detention Routing Summary				
2 Year Design Storm	Proposed Pond Detained	PDA Onsite Undetained	Comparative Analysis	Site
Inflow (cfs)	40.33	37.05	Proposed Inflow (cfs)	77.38
Outflow (cfs)	1.20	37.05	Proposed Outflow	38.25
Storage (ac-ft)	1.544	-	Allowable Flow (cfs)	39.86
Max WS Elev.	930.38	-	Reduction in Flow	-1.61
10 Year Design Storm	Proposed Pond Detained	PDA Onsite Undetained	Comparative Analysis	Site
Inflow (cfs)	68.19	70.00	Proposed Inflow (cfs)	138.19
Outflow (cfs)	3.74	70.00	Proposed Outflow	73.74
Storage (ac-ft)	2.639	-	Allowable Flow (cfs)	80.14
Max WS Elev.	932.79	-	Reduction in Flow	-6.40
100 Year Design Storm	Proposed Pond Detained	PDA Onsite Undetained	Comparative Analysis	Site
Inflow (cfs)	106.62	117.29	Proposed Inflow (cfs)	223.91
Outflow (cfs)	30.81	117.29	Proposed Outflow	148.1
Storage (ac-ft)	3.423	-	Allowable Flow (cfs)	154.47
Max WS Elev.	934.21	-	Reduction in Flow	-6.37

As shown in Table 4 above the increase in impervious coverage and run-off generated by the development of the proposed school is mitigated by the proposed expanded detention basin. A reduction in peak runoff from the existing condition is provided for the 2-year, 10-year, and 100-year storm events.

WATER QUALITY REQUIREMENTS

Per methods outlined in the October 2012 MARC BMP Manual, the required value rating for the site was calculated based upon the change in Curve Number and planned area for the project. Using worksheet 1 for an undeveloped site, KVE determined that a Level of Service (LoS) of 6.0 should be provided for the planned improvements on the site. To meet these requirements, KVE determined the value rating that is realized by preserving the existing native vegetation within the undeveloped areas of the site, the proposed extended dry detention basin that provides treatment of the water quality event, and establishing native vegetation within the basin footprint. The level of service provided by the proposed stormwater mitigation efforts, yields a value rating of 6.2 which meets the required LOS. The level of service calculations and BMP details are included in Exhibit C.

To mitigate the storm water impacts of the proposed improvements during construction, Kaw Valley Engineering is recommending that construction activities onsite shall adhere to the project Erosion Control and Storm Water Pollution Prevention Plan. The contractor shall use structural BMP's including silt fence, wattles, inlet protection and other means as site construction progresses and these BMP's shall be maintained until the site can be permanently stabilized.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this study, the proposed expansion of the detention basin is capable of the continued mitigation of Summit Village Corporate Park Lots 1 & 2 as well as mitigating the increases in run-off due to the proposed school development. In addition, stormwater treatment of the water quality storm event is provided by preserving and/or establishing native vegetation outside of the disturbed area of the proposed improvements, extended storage of the water quality event within the basin and establishing native vegetation within the basin footprint. Based on these findings, it is the opinion of Kaw Valley Engineering, Inc. that the City of Lee's Summit design requirements are satisfied for the planned improvements.

If you have any questions or require additional information, please do not hesitate to contact me at (913) 894-5150 or via email at crowder@kveng.com.

Respectfully submitted,
Kaw Valley Engineering, Inc.



Christian J. Crowder, P.E.
Project Engineer

cc. Incite Design Studio

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EXHIBIT A

EXISTING CONDITIONS PLAN
EXISTING DRAINAGE AREA MAP
FEMA FIRMETTE
NRCS SOILS REPORT
NATIONAL WETLANDS INVENTORY MAP
ZONING MAP



HORIZONTAL AND VERTICAL DATUM:
REFERENCE PRELIMINARY DEVELOPMENT PLAN (C0.0)

PROJECT BENCH MARKS:
REFERENCE PRELIMINARY DEVELOPMENT PLAN (C0.0)

PROJECT CONTROL:
REFERENCE PRELIMINARY DEVELOPMENT PLAN (C0.0)

⬡ 1 DEMOLITION
TO REMAIN.

EROSION & PROPOSED IMPROVEMENTS LEGEND:

INDICATES TREE/SHRUB TO BE REMOVED. TREES OVER 9" DBH TO BE FELLED PRIOR TO MARCH 31, 2026. (±665,480 SF)

EXISTING POND TO BE DRAINED AND EMBANKMENT BREACHED (±16,183 SF)

LIMITS OF DRAINAGE COURSE/STREAM

CAUTION – NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

WARRANTY / DISCLAIMER

THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

SAFETY NOTICE TO CONTRACTOR

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

811 Know what's below. Call before you dig.

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KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/27

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Mech., Plumb., Elec., Telecom.
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2.18.2026

HAZEL GROVE ELEMENTARY SCHOOL

NW ROSEMARY COURT
LEE'S SUMMIT, MO 64086

Project Phase
PRELIMINARY DEVELOPMENT PACKAGE

Project Number
26-107

Issue Date
02.18.2026

Revision No.	Description	Date Issued

Area Plan

Sheet Name
EXISTING CONDITIONS AND TREE CLEARING PLAN

Sheet Number
C0.6

J:\KAW FILES\PROJECTS\C25_2528\CAD\04 DWG\PRP PLAT\2528DEMO.DWG



0 100 200 400

SCALE: 1" = 200'

14700 WEST 114TH TERRACE
LENEXA, KANSAS 66215
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KAW VALLEY ENGINEERING

EXISTING DRAINAGE AREA MAP

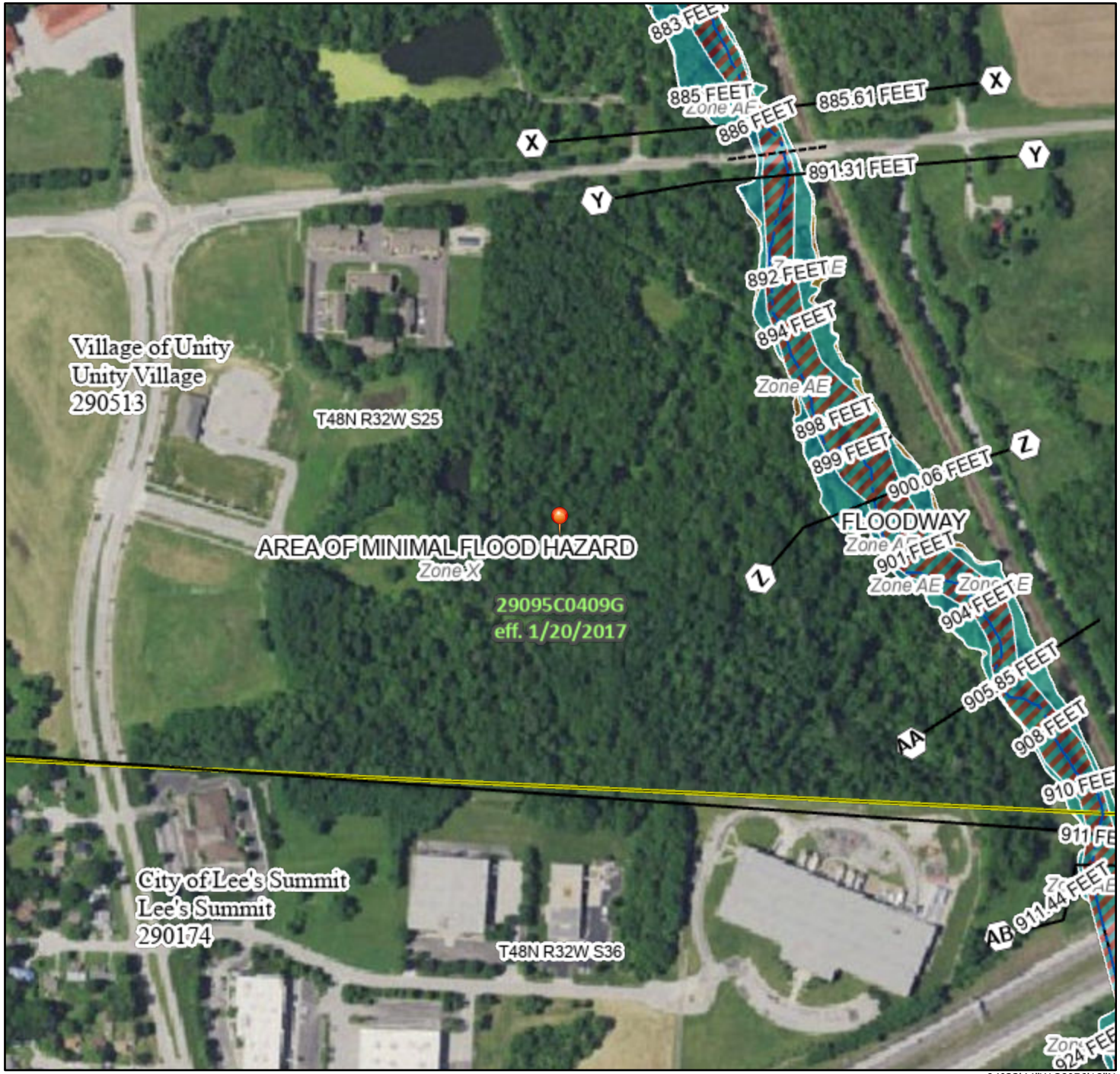
2/18/2026

2528DAM2

National Flood Hazard Layer FIRMette

FEMA

94°24'21"W 38°56'46"N



94°23'44"W 38°56'18"N

Feet

0 250 500 1,000 1,500 2,000

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

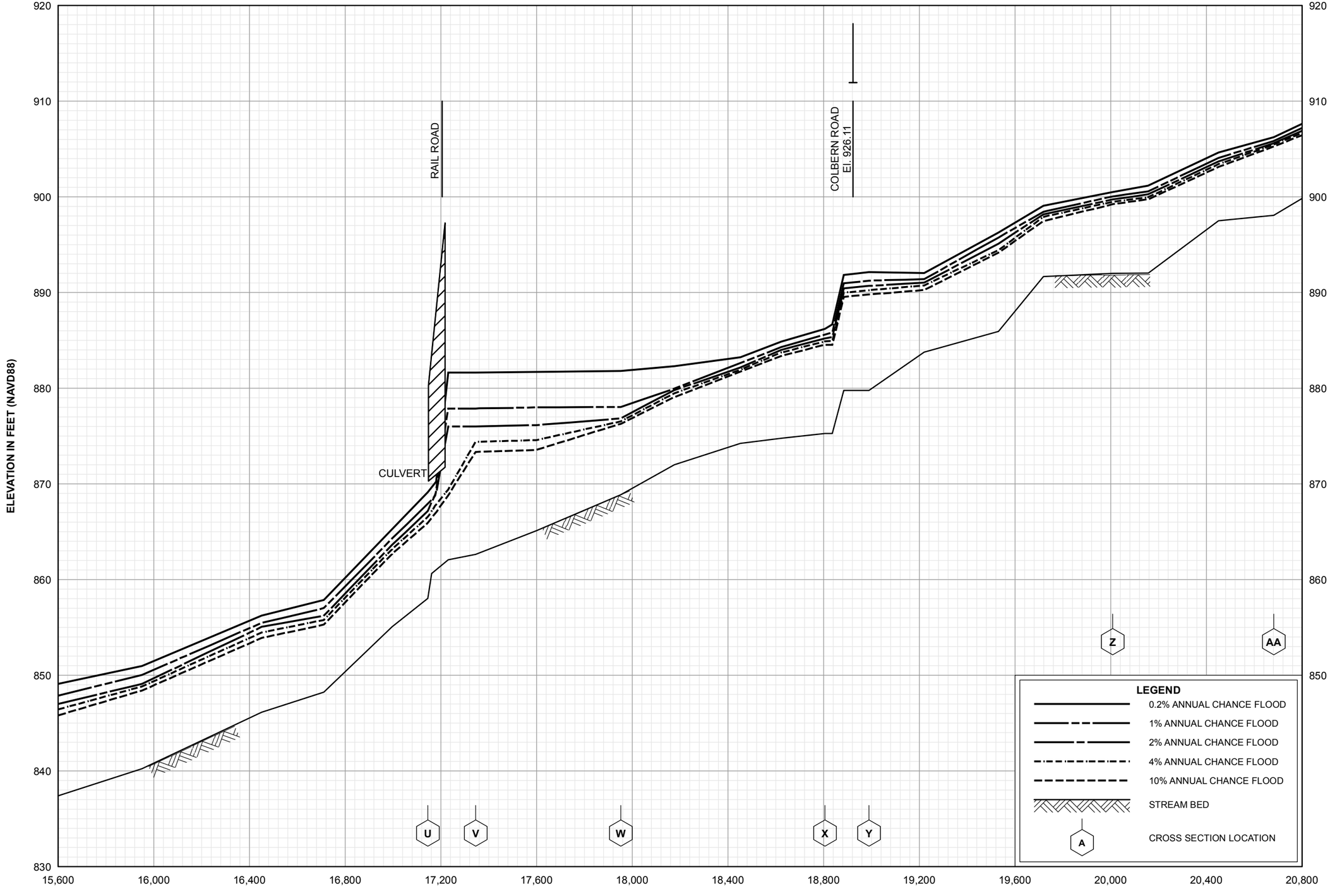
N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/29/2026 at 4:41 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



FLOOD PROFILES

LITTLE CEDAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, MO
AND INCORPORATED AREAS

203P

United States Department of Agriculture

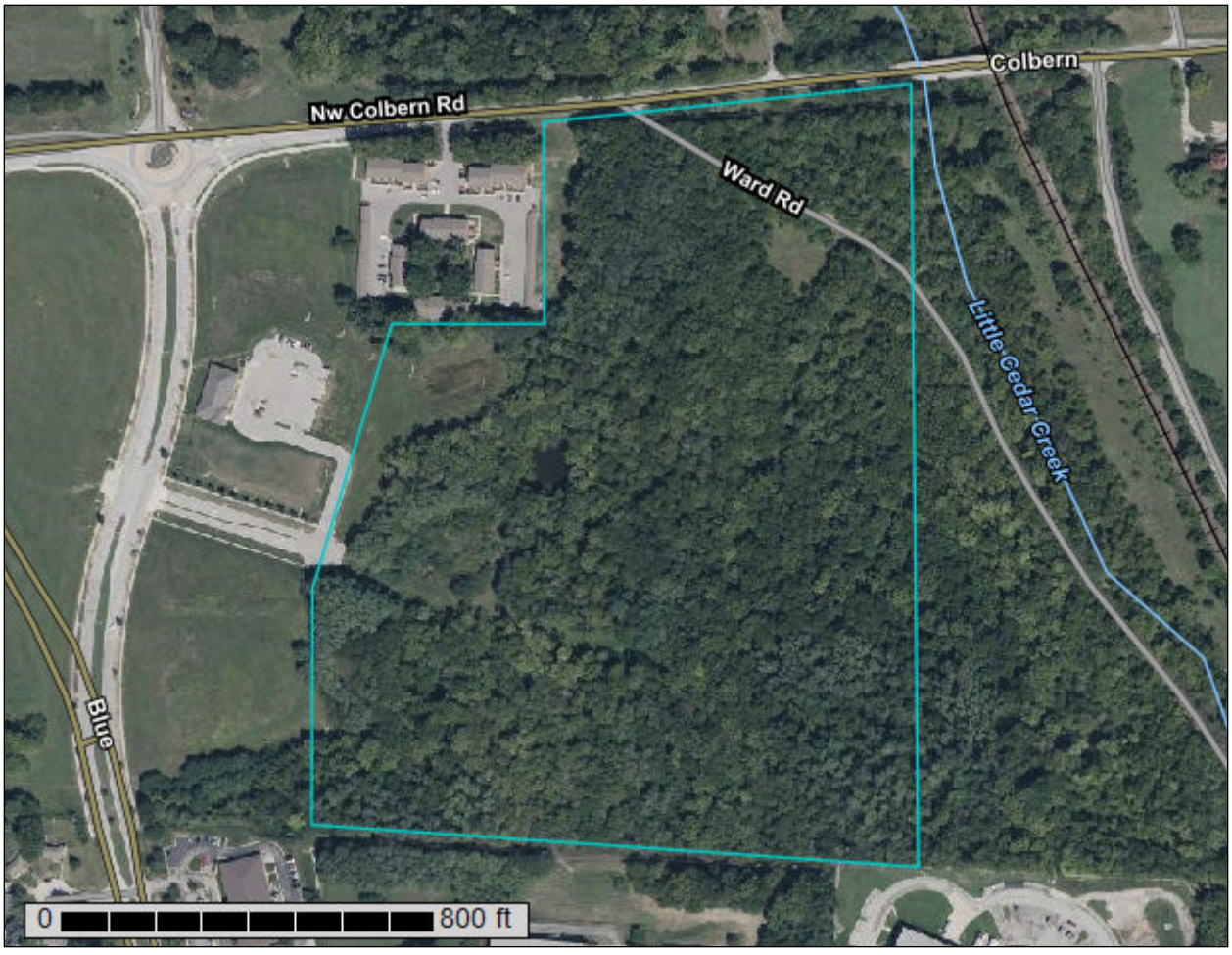
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Jackson County, Missouri

Hazel Grove Elementary



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



Map Scale: 1:3,070 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 45 90 180 270

Feet
0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jackson County, Missouri
Survey Area Data: Version 28, Sep 2, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 30, 2022—Sep 8, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
10113	Oska silty clay loam, 5 to 9 percent slopes, eroded	5.1	12.6%
10128	Sharpsburg-Urban land complex, 2 to 5 percent slopes	0.5	1.3%
10179	Udarents-Urban land-Oska complex, 5 to 9 percent slopes	2.7	6.7%
40107	Snead-Rock outcrop complex, warm, 5 to 14 percent slopes	32.2	78.9%
99012	Urban land, upland, 5 to 9 percent slopes	0.2	0.5%
Totals for Area of Interest		**40.7**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it

was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Jackson County, Missouri

10113—Oska silty clay loam, 5 to 9 percent slopes, eroded

Map Unit Setting

National map unit symbol: yrm7
Landscape: Hills
Elevation: 600 to 1,200 feet
Mean annual precipitation: 33 to 43 inches
Mean annual air temperature: 50 to 57 degrees F
Frost-free period: 177 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Oska and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Oska

Setting

Landscape: Hills
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum

Typical profile

A - 0 to 7 inches: silty clay loam
Bt - 7 to 34 inches: silty clay loam
R - 34 to 80 inches: bedrock

Properties and qualities

Slope: 5 to 9 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: R106XY075NE - Loamy Upland
Hydric soil rating: No

Minor Components

Sampsel

Percent of map unit: 5 percent
Landscape: Uplands
Landform: Hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Concave
Ecological site: R109XY010MO - Interbedded Sedimentary Upland Savanna
Hydric soil rating: No

Snead, eroded, warm

Percent of map unit: 5 percent
Landscape: Plains
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R109XY010MO - Interbedded Sedimentary Upland Savanna
Hydric soil rating: No

10128—Sharpsburg-Urban land complex, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2ql09
Landscape: Hills
Elevation: 1,000 to 1,320 feet
Mean annual precipitation: 33 to 41 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 155 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Sharpsburg and similar soils: 60 percent
Urban land: 35 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sharpsburg

Setting

Landscape: Hills
Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex

Across-slope shape: Convex
Parent material: Loess

Typical profile

A - 0 to 17 inches: silt loam
Bt - 17 to 55 inches: silty clay loam
C - 55 to 60 inches: silty clay loam

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 35 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: R109XY002MO - Loess Upland Prairie
Hydric soil rating: No

Description of Urban Land

Setting

Landscape: Hills
Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Minor Components

Macksburg

Percent of map unit: 5 percent
Landscape: Uplands
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R108XD860IA - Loess Upland Prairie
Hydric soil rating: No

10179—Udarents-Urban land-Oska complex, 5 to 9 percent slopes

Map Unit Setting

National map unit symbol: 1n85j
Elevation: 700 to 1,200 feet
Mean annual precipitation: 33 to 43 inches
Mean annual air temperature: 50 to 57 degrees F
Frost-free period: 175 to 220 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Udarents and similar soils: 46 percent
Urban land: 39 percent
Oska and similar soils: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udarents

Setting

Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Anthropogenic Feature: Urban land
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Mine spoil or earthy fill

Typical profile

C1 - 0 to 5 inches: silt loam
C2 - 5 to 80 inches: silty clay loam

Properties and qualities

Slope: 5 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: R107XB002MO - Deep Loess Upland Prairie
Hydric soil rating: No

Description of Urban Land

Setting

Landscape: Hills
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Across-slope shape: Convex

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Description of Oska

Setting

Landscape: Hills
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum

Typical profile

A - 0 to 7 inches: silty clay loam
Bt - 7 to 34 inches: silty clay loam
R - 34 to 80 inches: bedrock

Properties and qualities

Slope: 5 to 9 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: R106XY075NE - Loamy Upland
Hydric soil rating: No

40107—Snead-Rock outcrop complex, warm, 5 to 14 percent slopes

Map Unit Setting

National map unit symbol: 2zccr
Landscape: Plains
Elevation: 660 to 1,130 feet
Mean annual precipitation: 39 to 43 inches
Mean annual air temperature: 54 to 57 degrees F
Frost-free period: 185 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Snead, warm, and similar soils: 70 percent
Rock outcrop: 20 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Snead, Warm

Setting

Landscape: Plains
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from limestone and shale

Typical profile

A - 0 to 10 inches: silty clay loam
Bw - 10 to 20 inches: silty clay
BC - 20 to 24 inches: silty clay
C - 24 to 35 inches: silty clay
Cr - 35 to 45 inches: bedrock

Properties and qualities

Slope: 5 to 14 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D
Ecological site: R109XY010MO - Interbedded Sedimentary Upland Savanna
Hydric soil rating: No

Description of Rock Outcrop

Typical profile

R - 0 to 79 inches: bedrock

Properties and qualities

Slope: 5 to 14 percent
Depth to restrictive feature: 0 inches to lithic bedrock
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Minor Components

Oska

Percent of map unit: 4 percent
Landscape: Plains
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R106XY075NE - Loamy Upland
Hydric soil rating: No

Kennebec, occasionally flooded

Percent of map unit: 3 percent
Landscape: Plains
Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R109XY028MO - Loamy Upland Drainageway Savanna
Hydric soil rating: No

Sampsel

Percent of map unit: 3 percent
Landscape: Plains
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Concave
Ecological site: R109XY010MO - Interbedded Sedimentary Upland Savanna
Hydric soil rating: Yes

99012—Urban land, upland, 5 to 9 percent slopes

Map Unit Setting

National map unit symbol: 2q0qh
Mean annual precipitation: 36 to 43 inches
Frost-free period: 170 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Anthropogenic Feature: Urban land

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: Unranked

Minor Components

Udorthents

Percent of map unit: 5 percent
Landform position (three-dimensional): Tread
Anthropogenic features: Spoil piles
Down-slope shape: Convex
Across-slope shape: Concave
Ecological site: R107XB002MO - Deep Loess Upland Prairie
Hydric soil rating: No

Harvester

Percent of map unit: 5 percent
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Anthropogenic features: Urban land
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F115XB061MO - Anthropic Deep Loess Upland
Hydric soil rating: No

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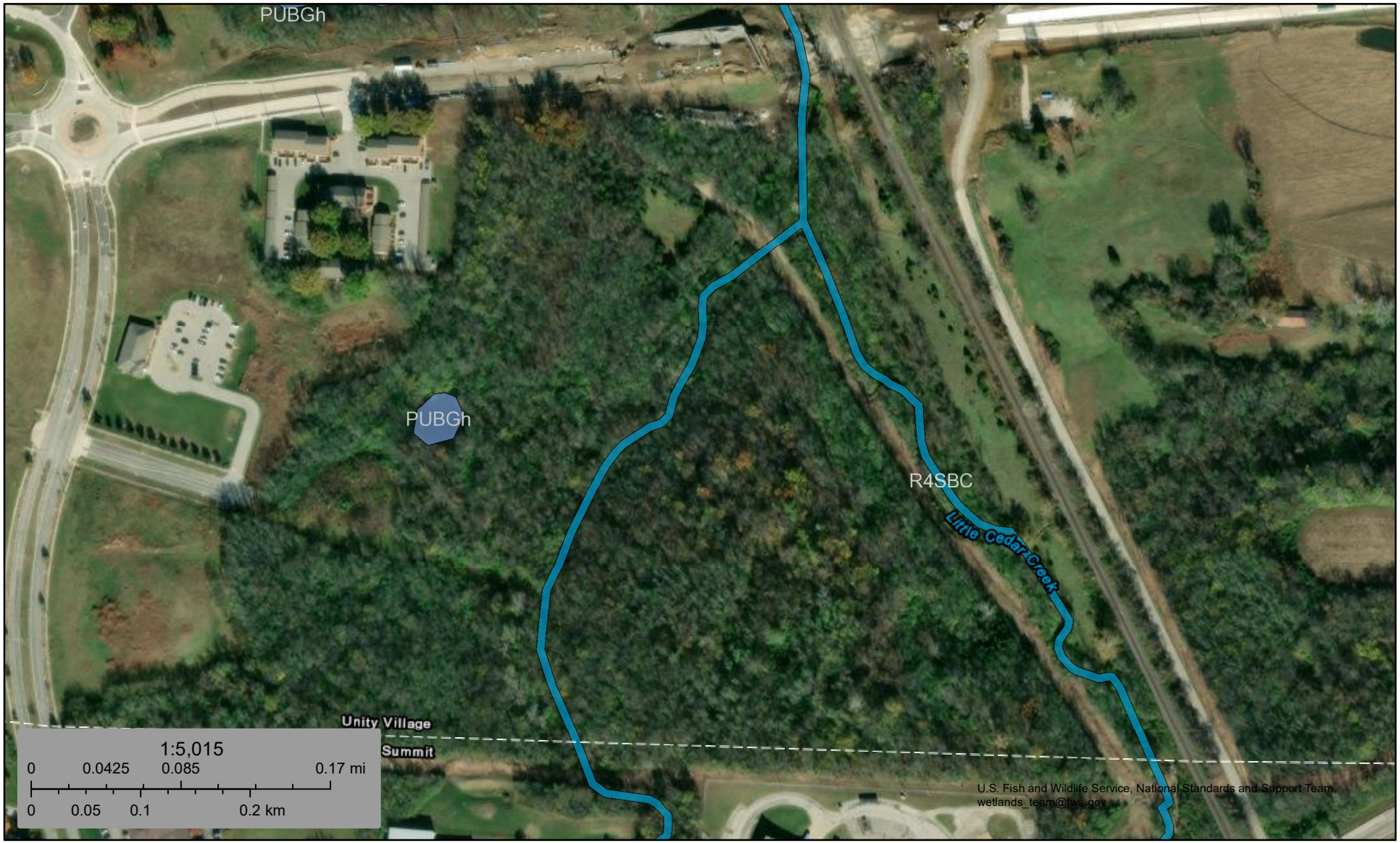
U.S. Fish and Wildlife Service
National Wetlands Inventory

Hazel Grove Elementary



January 29, 2026

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Hazel Grove Zoning Map



1/29/2026

1:8,227

0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

Zoning

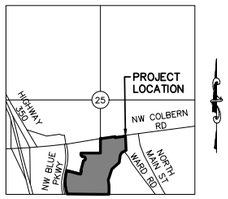
- AG - Agricultural
- CP-2 - Planned Community Commercial
- PI - Planned Industrial
- PMIX - Planned Mixed Use
- PO - Planned Office
- R-1 - Single Family Residential
- RDR - Rural Density Residential
- World Imagery
- Low Resolution 15m Imagery
- High Resolution 60cm Imagery
- High Resolution 30cm Imagery
- Citations

Vantor, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community, City of Lee's

EXHIBIT B

PRELMINARY DEVELOPMENT PLAN
GRADING & STORMWATER MANAGEMENT PLAN

HAZEL GROVE ELEMENTARY SCHOOL
SUMMIT VILLAGE CORPORATE SITE
SITE PLAN
LEE'S SUMMIT, MO 64086
SECTION 25 - TOWNSHIP 48 NORTH - RANGE 32 WEST



VICINITY MAP
SEC 25 - TWP 48N - RNG 32W
NOT TO SCALE

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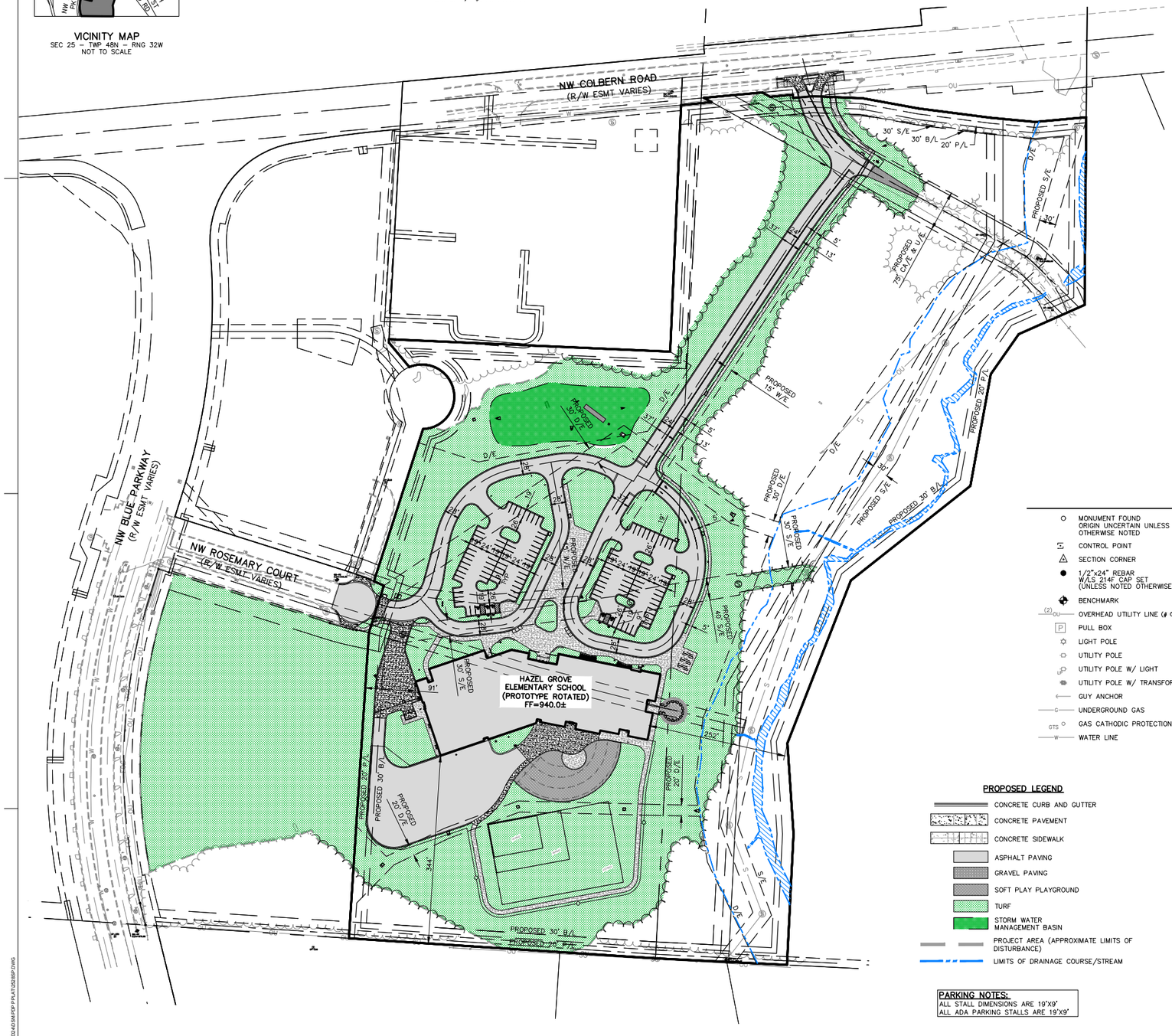
EMAIL: kyle.gorrell@lsr7.net



LEGEND:

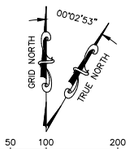
MONUMENT FOUND ORIGIN UNCERTAIN UNLESS OTHERWISE NOTED	WATER LINE GATE VALVE
CONTROL POINT	FIRE HYDRANT
SECTION CORNER	FOC — UNDERGROUND FIBER OPTIC CABLE
1/2"x24" REBAR W/LS 2147 CAP SET (UNLESS NOTED OTHERWISE)	SANITARY SEWER MANHOLE
BENCHMARK	STORM SEWER MANHOLE
(2) OU — OVERHEAD UTILITY LINE (# OF LINES)	S — SANITARY SEWER LINE
PULL BOX	CMP — CORRUGATED METAL PIPE
LIGHT POLE	RCB — REINFORCED CONCRETE BOX
UTILITY POLE	PVC — POLYVINYL CHLORIDE PIPE
UTILITY POLE W/ LIGHT	HDPE — HIGH DENSITY POLYETHYLENE
UTILITY POLE W/ TRANSFORMER	STREET/TRAFFIC SIGN
GUY ANCHOR	B/B — BACK TO BACK OF CURB MEASUREMENT
G — UNDERGROUND GAS	E/E — EDGE TO EDGE OF ASPHALT
GTS — GAS CATHODIC PROTECTION TESTING STATION	DECIDUOUS TREE
W — WATER LINE	TREE LINE
	WIRE FENCE
	939 — EXISTING GRADE 1' CONTOUR
	950 — EXISTING GRADE 5' CONTOUR

PROPOSED LEGEND

- CONCRETE CURB AND GUTTER
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- ASPHALT PAVING
- GRAVEL PAVING
- SOFT PLAY PLAYGROUND
- TURF
- STORM WATER MANAGEMENT BASIN
- PROJECT AREA (APPROXIMATE LIMITS OF DISTURBANCE)
- LIMITS OF DRAINAGE COURSE/STREAM

PARKING NOTES:
ALL STALL DIMENSIONS ARE 19'X9'
ALL ADA PARKING STALLS ARE 19'X9'

Know what's below. Call before you dig.



0 50 100 200
SCALE: 1" = 100'
CONVERGENCE ANGLE ESTABLISHED FROM JA-98.

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CFN: 2528SP DWN: NJN
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2.18.2026

HAZEL GROVE ELEMENTARY SCHOOL

NW ROSEMARY COURT
LEE'S SUMMIT, MO 64086

Project Phase
PRELIMINARY DEVELOPMENT PACKAGE

Project Number
26-107

Issue Date
02.18.2026

Revision No.	Description	Date Issued

Area Plan

Sheet Name
SITE PLAN

Sheet Number
C1.0

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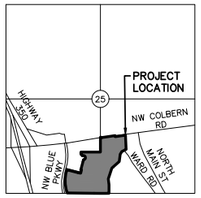
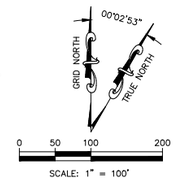
HAZEL GROVE ELEMENTARY SCHOOL
SUMMIT VILLAGE CORPORATE SITE
GRADING AND STORM WATER MANAGEMENT PLAN
LEE'S SUMMIT, MO 64086
SECTION 25 - TOWNSHIP 48 NORTH - RANGE 32 WEST
UNNAMED TRIBUTARY OF LITTLE CEDAR CREEK
DISTURBED AREA = 20.531 Ac



VICINITY MAP
SEC 25 - TWP 48N - RNG 32W
NOT TO SCALE



SCALE: 1" = 100'

CONVERGENCE ANGLE
ESTABLISHED FROM JA-98.

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FLOOD STATEMENT:
THE SUBJECT PROPERTY IS SHOWN TO BE LOCATED IN ZONE "X" (AREA OF MINIMAL FLOOD HAZARD), AS DEPICTED ON THE FLOOD INSURANCE RATE MAP NO. 29095C0409G, MAP REVISED JANUARY 20, 2017, CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI. LOCATION DETERMINED BY A SCALED GRAPHICAL PLOT OF THE FLOOD INSURANCE RATE MAP.

STORM WATER:
THE SITE IS SITUATED IN THE LITTLE CEDAR CREEK WATERSHED. STORM WATER WILL BE COLLECTED AND CONVEYED BY PRIVATE/PUBLIC STORM SEWER OR OVERLAND FLOW ON PROPERTY AND DISCHARGE DIRECTLY TO AN UNNAMED TRIBUTARY. THE DEVELOPMENT OF THE PROPERTY WILL CAUSE AN INCREASE IN IMPERVIOUS COVERAGE. FLOOD CONTROL AND WATER QUALITY MITIGATION WILL BE REQUIRED AS PART OF THIS PROJECT. STORM WATER FEATURES WILL BE DESIGNED IN ACCORDANCE WITH THE LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL, SECTION 5600.

PROPOSED LEGEND

- CONCRETE CURB AND GUTTER
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- ASPHALT PAVING
- GRAVEL PAVING
- SOFT PLAY PLAYGROUND
- TURF
- STORM WATER MANAGEMENT BASIN
- PROJECT AREA (APPROXIMATE LIMITS OF DISTURBANCE)
- LIMITS OF DRAINAGE COURSE/STREAM

LEGEND:

MONUMENT FOUND ORIGIN UNCERTAIN UNLESS OTHERWISE NOTED	WATER LINE GATE VALVE
CONTROL POINT	FIRE HYDRANT
SECTION CORNER	FIBER OPTIC CABLE SIGN
1/2"x24" REBAR W/LS 2147 CAP SET (UNLESS NOTED OTHERWISE)	UNDERGROUND FIBER OPTIC CABLE
BENCHMARK	SANITARY SEWER MANHOLE
OVERHEAD UTILITY LINE (# OF LINES)	STORM SEWER MANHOLE
PULL BOX	SANITARY SEWER LINE
LIGHT POLE	CORRUGATED METAL PIPE
UTILITY POLE	REINFORCED CONCRETE BOX
UTILITY POLE W/ LIGHT	POLYVINYL CHLORIDE PIPE
UTILITY POLE W/ TRANSFORMER	HIGH DENSITY POLYETHYLENE
GUY ANCHOR	STREET/TRAFFIC SIGN
UNDERGROUND GAS	BACK TO BACK OF CURB MEASUREMENT
GAS CATHODIC PROTECTION TESTING STATION	EDGE TO EDGE OF ASPHALT
WATER LINE	DECIDUOUS TREE
	TREE LINE
	WIRE FENCE
	EXISTING GRADE 1' CONTOUR
	EXISTING GRADE 5' CONTOUR

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811 Know what's below. Call before you dig.

PROJ. NO. C25_2528 DSN: DDW
CFN: 2528GP DWN: NJN
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NUMBER PE-2011037427
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2-13-2026

HAZEL GROVE ELEMENTARY SCHOOL

NW ROSEMARY COURT
LEE'S SUMMIT, MO 64086

Project Phase
PRELIMINARY DEVELOPMENT PACKAGE

Project Number
26-107

Issue Date
02.18.2026

Revision No.	Description	Date Issued

Area Plan

Sheet Name
GRADING AND STORM WATER MANAGEMENT PLAN

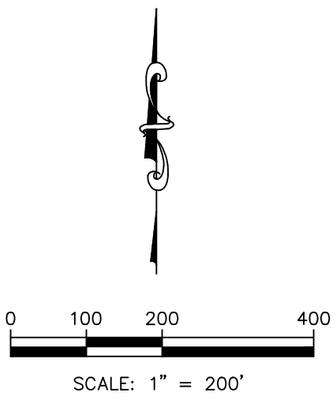
Sheet Number
C3.0

\\MAX-FILE\PROJECTS\25_2528\CSD\GMWP\P-PLAT2528GP.DWG

EXHIBIT C

PROPOSED DRAINAGE AREA MAP & CALCULATIONS
BMP PLAN & WORKSHEETS





SCALE: 1" = 200'

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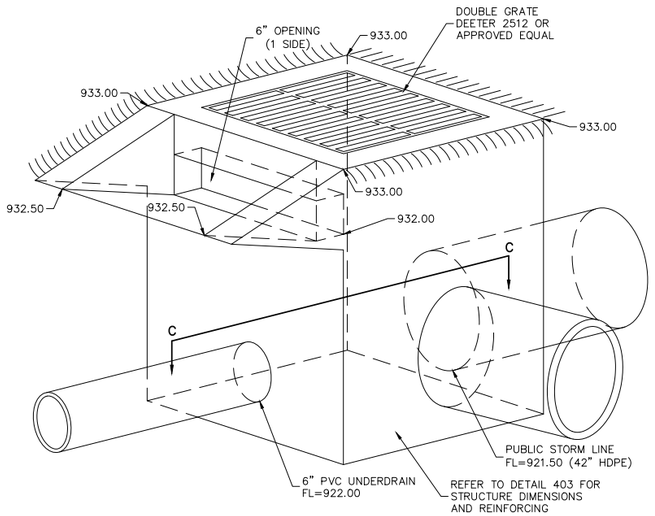
KAW VALLEY ENGINEERING

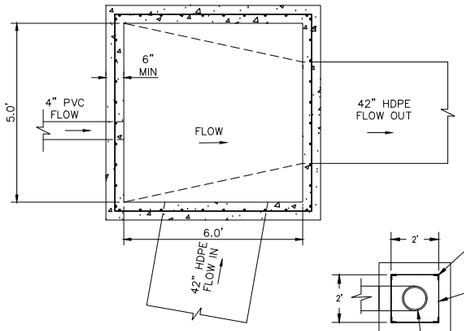
PROPOSED DRAINAGE AREA MAP

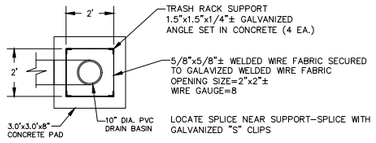
2/18/2026

2528DAM2

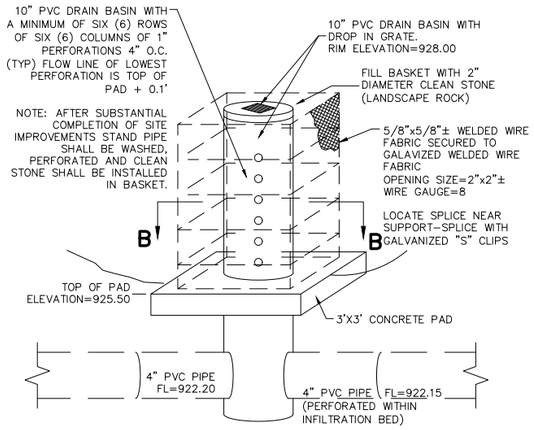


POND OUTLET STRUCTURE PB2 DETAIL





B–B RISER PIPE PLAN
N.T.S.



OUTLET STRUCTURE J1 DETAIL
NOT TO SCALE

NATIVE VEGATATION TO BE ESTABLISHED
REFER TO LANDSCAPE PLANS
ELEVATION 928.00 AND BELOW

NOTE: SLOPES SHALL BE STABILIZED PRIOR TO PLANTING PERMANENT VEGETATION. UPSTREAM EROSION CONTROL SHALL REMAIN IN PLACE UNTIL VEGETATION IN BASIN IS ESTABLISHED.

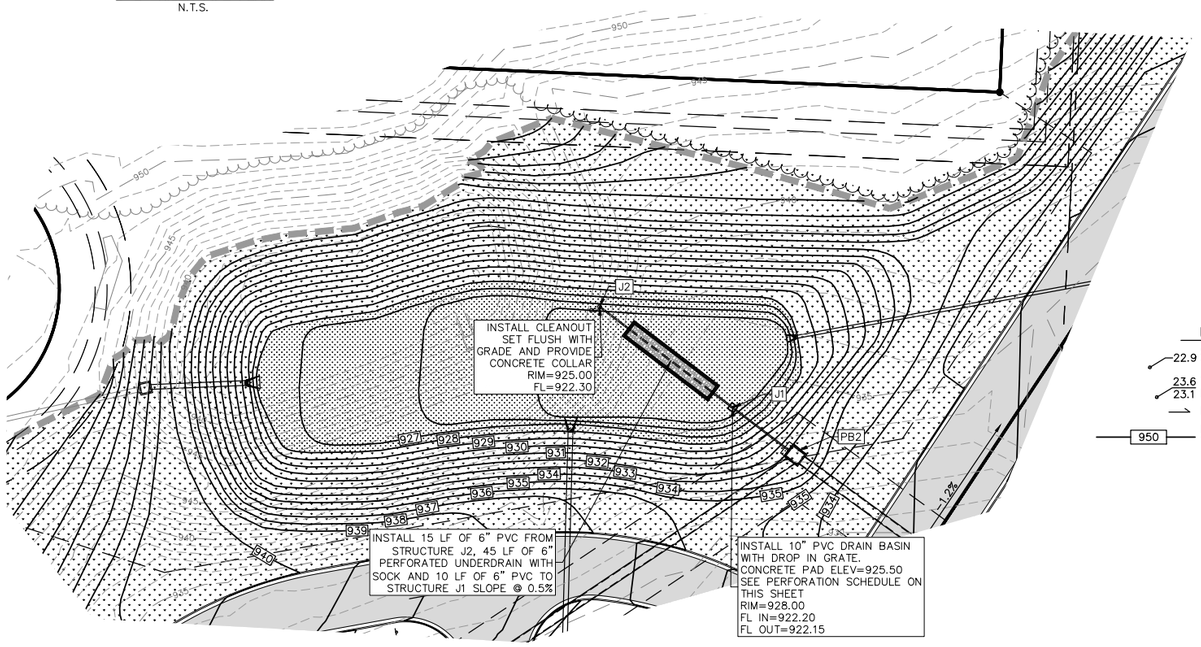
HIGH FLOW, LONG TERM CLASS 2, TYPE F BIODEGRADEABLE EROSION CONTROL MAT.

POND DISCHARGE

Q_2=1.16 cfs

Q_{10}=2.50 cfs

Q_{100}=28.27 cfs



GRADING NOTES:
REFERENCE OVERALL GRADING PLAN (C3.00)

HORIZONTAL AND VERTICAL DATUM:
REFERENCE OVERALL SITE PLAN (C0.00)

PROJECT BENCH MARKS:
REFERENCE OVERALL SITE PLAN (C0.00)

PROJECT CONTROL:
REFERENCE OVERALL SITE PLAN (C0.00)

WARRANTY / DISCLAIMER

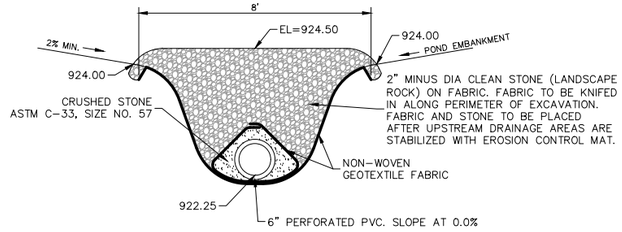
THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

SAFETY NOTICE TO CONTRACTOR

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

CAUTION – NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.



UNDERDRAIN
SECTION: A

BASIN AREA TABLE

ELEVATION	AREA
925.00	4,199 SF
926.00	7,401 SF
927.00	10,951 SF
928.00	13,099 SF
929.00	14,853 SF
930.00	16,655 SF
931.00	18,585 SF
932.00	20,638 SF
933.00	22,774 SF
934.00	25,206 SF
935.00	27,519 SF

811 Know what's below. Call before you dig.

0 15 30 60
SCALE: 1" = 30'

NOTES:
21 MATCH EXISTING CURB ELEVATION.
22 MATCH EXISTING SIDEWALK ELEVATION.
23 MATCH EXISTING PAVEMENT ELEVATION.
24 TRANSITION FROM ZERO HEIGHT CURB TO FULL HEIGHT CURB
25 TRANSITION FROM LAYBACK CURB TO FULL HEIGHT CURB

LEGEND (PROPOSED)

22.9 SPOT ELEVATION (ADD 900), TOP OF PAVEMENT
23.6 / 23.1 TOP OF CURB (ADD 900) / FLOWLINE OF CURB (ADD 900)
FLOW DIRECTION
950 FINISHED 1' CONTOUR INTERVALS, TOP OF PAVEMENT
SWALE
LP LOW POINT
HP HIGH POINT
LOC LIP OF CURB
TW TOP OF WALL
BW BOTTOM OF WALL
SW SIDEWALK ELEVATION
P PAVEMENT ELEVATION

PROJ. NO. C25_2528 DSN: DDW
CFN: 2528GP-DET DWN: NJN

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ENGINEER
MO # 2011037427

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architects building relationships

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KANSAS CITY, MO 64108
816.979.3500

Civil
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317 SE MAIN ST.
LEE'S SUMMIT, MO 64063
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EUREKA, MO 63025
636.938.7887

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STAND STRUCTURAL ENGINEERING, INC.
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OVERLAND PARK, KS 66204
913.214.2169

Mech., Plumb., Elec., Telecom.
HENDERSON ENGINEERS
8345 LENEXA DRIVE, SUITE 300
LENEXA, KS 66214
913.742.5000

DAVID D. WOOD

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MO #2011037427

Cert. of Authority
#000842
KAW VALLEY ENGINEERING, INC.

STATE OF MISSOURI
DAVID D. WOOD
NUMBER PE-2011037427
PROFESSIONAL ENGINEER

HAZEL GROVE ELEMENTARY SCHOOL

NW ROSEMARY COURT
LEE'S SUMMIT, MO 64086

Project Phase
PRELIMINARY DEVELOPMENT PACKAGE

Project Number
26-107

Issue Date
02.18.2026

Revision No.	Description	Date Issued

Area Plan

Sheet Name
BMP PLAN

Sheet Number
C3.25

in • cite *v.* to provoke thought

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5 4 3 2 1 D C B A

WORKSHEET 1: REQUIRED LEVEL OF SERVICE - UNDEVELOPED SITE

Project: C25D2528 - Hazel Grove Elementary School By: CC Date: 2/4/2026
Location: Greenwood, MO

1. Runoff Curve Number

A. Predevelopment CN

Cover Description	Soil HSG	CN from Table 1	Area (ac.)	Product of CN x Area
Woods (Good)	D	77	27.50	2117.5
Meadows (Good)	D	78	2.02	157.6
Pond	D	98	0.18	17.6
		Totals:	29.70	2292.7

Area-Weighted CN = total product/total area = 77.20 77 (Round to integer)

B. Postdevelopment CN

Cover Description	Soil HSG[1]	CN from Table 1	Area (ac.)	Product of CN x Area
Woods (Good)	D	77	10.86	836.22
Meadows (Good)	D	78	0.49	38.22
Open Space (Good)	D	80	11.79	943.2
Building/Pavement	D	98	6.56	642.88
		Totals:	29.70	2460.52

[1] Postdevelopment CN is one HSG higher for all cover types except preserved vegetation, absent documentation showing how postdevelopment soil structure will be peserved.

Area-Weighted CN = total product/total area = 82.85 83 (Round to integer)

C. Level of Service (LS) Calculation

		Change in CN	LS
Predevelopment CN:	77	1	4.3
		2	4.7
Postdevelopment CN:	83	3	5
		4	5.3
Difference:	6	5	5.7
		6	6
LS Required (see scale at right):	6	7	6.1
		8	6.2
		9	6.3
		10	6.4

* All CN Values determined from Table 4.1 of the BMP Manual

WORKSHEET 2: DEVELOP MITIGATION PACKAGE(S) THAT MEET THE REQUIRED LS

Project:	C25D2528 - Hazel Grove Elementary School		By:	CC	Date: 2/4/2026
Location:	Greenwood, MO		Checked:	CC	Date: 2/4/2026
Sheet	1 of 1				

1. Required LS (New Development, Wksht 1) or Total VR (Redevelopment, Wksht 1A): 6.0

Note: Various BMPs may alter CN of proposed development, and LS; recalculate both if applicable.

2. Proposed BMP Option Package No. 1

Cover/BMP Description	Treatment Area	VR from Table 4.4 or 4.6[1]	Product of VR x Area
Preserved Native Vegetation (S.M.E)	13.53	9.25	125.2
Established Native Vegetation	0.50	9.25	4.6
Extended Dry Detention Basin	13.28	4	53.1
Untreated	2.39	0	0.0
Total[2]	29.70	**Totals:**	182.9
		Weighted VR	6.2

[1] VR calculated for final BMP only in Treatment Train
[2] Total treatment area cannot exceed 100 percent of the actual site area.
* Blank in Redevelopment

Meets required LS (Yes/No)? YES

EXHIBIT D

PONDPACK ANALYSIS

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Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
EXDA (Detained)	2 YEAR	2	1.313	12.000	20.69
EXDA (Detained)	10 YEAR	10	2.289	12.000	35.22
EXDA (Detained)	100 YEAR	100	3.689	12.000	55.27
PDA Offsite (Detained)	2 YEAR	2	1.567	12.000	24.44
PDA Offsite (Detained)	10 YEAR	10	2.668	12.000	40.49
PDA Offsite (Detained)	100 YEAR	100	4.232	12.000	62.51
EXDA Offsite (Undetained)	2 YEAR	2	0.294	12.000	4.78
EXDA Offsite (Undetained)	10 YEAR	10	0.519	12.000	8.22
EXDA Offsite (Undetained)	100 YEAR	100	0.843	12.000	12.97
PDA Onsite (Detained)	2 YEAR	2	0.974	12.000	15.89
PDA Onsite (Detained)	10 YEAR	10	1.739	12.000	27.71
PDA Onsite (Detained)	100 YEAR	100	2.849	12.000	44.11
PDA Onsite (Undetained)	2 YEAR	2	3.556	12.200	37.05
PDA Onsite (Undetained)	10 YEAR	10	6.685	12.150	70.00
PDA Onsite (Undetained)	100 YEAR	100	11.325	12.150	117.29
EXDA Onsite (Undetained)	2 YEAR	2	3.407	12.200	34.19
EXDA Onsite (Undetained)	10 YEAR	10	6.857	12.200	70.24
EXDA Onsite (Undetained)	100 YEAR	100	12.148	12.150	124.28

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
EX Offsite D	2 YEAR	2	0.914	13.950	0.89
EX Offsite D	10 YEAR	10	1.378	13.600	1.67
EX Offsite D	100 YEAR	100	2.629	12.200	17.43
P OUT	2 YEAR	2	4.907	12.200	38.18
P OUT	10 YEAR	10	8.808	12.150	71.30
P OUT	100 YEAR	100	15.943	12.150	147.23
EX Onsite UD	2 YEAR	2	3.407	12.200	34.19
EX Onsite UD	10 YEAR	10	6.857	12.200	70.24
EX Onsite UD	100 YEAR	100	12.148	12.150	124.28
EX Offsite UD	2 YEAR	2	0.294	12.000	4.78
EX Offsite UD	10 YEAR	10	0.519	12.000	8.22
EX Offsite UD	100 YEAR	100	0.843	12.000	12.97

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
Existing Pond (IN)	2 YEAR	2	1.313	12.000	20.69	(N/A)	(N/A)
Existing Pond (OUT)	2 YEAR	2	0.914	13.950	0.89	940.59	0.744
Existing Pond (IN)	10 YEAR	10	2.289	12.000	35.22	(N/A)	(N/A)
Existing Pond (OUT)	10 YEAR	10	1.378	13.600	1.67	942.75	1.346
Existing Pond (IN)	100 YEAR	100	3.689	12.000	55.27	(N/A)	(N/A)
Existing Pond (OUT)	100 YEAR	100	2.629	12.200	17.43	943.99	1.758
Proposed EDDB (IN)	2 YEAR	2	2.541	12.000	40.33	(N/A)	(N/A)
Proposed EDDB (OUT)	2 YEAR	2	1.351	15.300	1.20	930.38	1.544
Proposed EDDB (IN)	10 YEAR	10	4.407	12.000	68.19	(N/A)	(N/A)
Proposed EDDB (OUT)	10 YEAR	10	2.123	13.300	3.74	932.79	2.639
Proposed EDDB (IN)	100 YEAR	100	7.081	12.000	106.62	(N/A)	(N/A)
Proposed EDDB (OUT)	100 YEAR	100	4.618	12.200	30.81	934.21	3.423

Time-Depth Curve: 10 Year	
Label	10 Year
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	10 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.0	0.0	0.0	0.0
1.000	0.1	0.1	0.1	0.1	0.1
1.500	0.1	0.1	0.1	0.1	0.1
2.000	0.1	0.1	0.1	0.1	0.1
2.500	0.1	0.2	0.2	0.2	0.2
3.000	0.2	0.2	0.2	0.2	0.2
3.500	0.2	0.2	0.2	0.2	0.2
4.000	0.3	0.3	0.3	0.3	0.3
4.500	0.3	0.3	0.3	0.3	0.3
5.000	0.3	0.3	0.4	0.4	0.4
5.500	0.4	0.4	0.4	0.4	0.4
6.000	0.4	0.4	0.4	0.5	0.5
6.500	0.5	0.5	0.5	0.5	0.5
7.000	0.5	0.5	0.5	0.6	0.6
7.500	0.6	0.6	0.6	0.6	0.6
8.000	0.6	0.6	0.7	0.7	0.7
8.500	0.7	0.7	0.7	0.7	0.8
9.000	0.8	0.8	0.8	0.8	0.8
9.500	0.9	0.9	0.9	0.9	0.9
10.000	1.0	1.0	1.0	1.0	1.1
10.500	1.1	1.1	1.1	1.2	1.2
11.000	1.2	1.3	1.3	1.4	1.4
11.500	1.5	1.6	1.9	2.3	3.0
12.000	3.5	3.6	3.7	3.8	3.8
12.500	3.9	3.9	4.0	4.0	4.1
13.000	4.1	4.1	4.2	4.2	4.2
13.500	4.2	4.3	4.3	4.3	4.3
14.000	4.3	4.4	4.4	4.4	4.4
14.500	4.4	4.5	4.5	4.5	4.5
15.000	4.5	4.5	4.6	4.6	4.6
15.500	4.6	4.6	4.6	4.6	4.7
16.000	4.7	4.7	4.7	4.7	4.7
16.500	4.7	4.7	4.7	4.8	4.8
17.000	4.8	4.8	4.8	4.8	4.8
17.500	4.8	4.8	4.9	4.9	4.9
18.000	4.9	4.9	4.9	4.9	4.9
18.500	4.9	4.9	4.9	5.0	5.0
19.000	5.0	5.0	5.0	5.0	5.0
19.500	5.0	5.0	5.0	5.0	5.0
20.000	5.0	5.1	5.1	5.1	5.1

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
20.500	5.1	5.1	5.1	5.1	5.1
21.000	5.1	5.1	5.1	5.1	5.1
21.500	5.1	5.2	5.2	5.2	5.2
22.000	5.2	5.2	5.2	5.2	5.2
22.500	5.2	5.2	5.2	5.2	5.2
23.000	5.2	5.2	5.3	5.3	5.3
23.500	5.3	5.3	5.3	5.3	5.3
24.000	5.3	(N/A)	(N/A)	(N/A)	(N/A)

Time-Depth Curve: 100 YR	
Label	100 YR
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.0	0.1	0.1	0.1
1.000	0.1	0.1	0.1	0.1	0.1
1.500	0.1	0.1	0.1	0.2	0.2
2.000	0.2	0.2	0.2	0.2	0.2
2.500	0.2	0.2	0.2	0.2	0.3
3.000	0.3	0.3	0.3	0.3	0.3
3.500	0.3	0.3	0.3	0.4	0.4
4.000	0.4	0.4	0.4	0.4	0.4
4.500	0.4	0.4	0.5	0.5	0.5
5.000	0.5	0.5	0.5	0.5	0.5
5.500	0.6	0.6	0.6	0.6	0.6
6.000	0.6	0.6	0.7	0.7	0.7
6.500	0.7	0.7	0.7	0.7	0.8
7.000	0.8	0.8	0.8	0.8	0.8
7.500	0.9	0.9	0.9	0.9	0.9
8.000	0.9	1.0	1.0	1.0	1.0
8.500	1.0	1.1	1.1	1.1	1.1
9.000	1.1	1.2	1.2	1.2	1.2
9.500	1.3	1.3	1.3	1.4	1.4
10.000	1.4	1.4	1.5	1.5	1.6
10.500	1.6	1.6	1.7	1.7	1.8
11.000	1.8	1.9	2.0	2.0	2.1
11.500	2.2	2.4	2.8	3.4	4.4
12.000	5.2	5.3	5.4	5.6	5.7
12.500	5.7	5.8	5.9	5.9	6.0
13.000	6.0	6.1	6.1	6.2	6.2
13.500	6.2	6.3	6.3	6.3	6.4
14.000	6.4	6.4	6.5	6.5	6.5
14.500	6.5	6.6	6.6	6.6	6.6
15.000	6.7	6.7	6.7	6.7	6.7
15.500	6.8	6.8	6.8	6.8	6.8
16.000	6.9	6.9	6.9	6.9	6.9
16.500	7.0	7.0	7.0	7.0	7.0
17.000	7.0	7.0	7.1	7.1	7.1
17.500	7.1	7.1	7.1	7.2	7.2
18.000	7.2	7.2	7.2	7.2	7.2
18.500	7.3	7.3	7.3	7.3	7.3
19.000	7.3	7.3	7.3	7.3	7.4
19.500	7.4	7.4	7.4	7.4	7.4
20.000	7.4	7.4	7.4	7.5	7.5

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
20.500	7.5	7.5	7.5	7.5	7.5
21.000	7.5	7.5	7.5	7.6	7.6
21.500	7.6	7.6	7.6	7.6	7.6
22.000	7.6	7.6	7.6	7.6	7.7
22.500	7.7	7.7	7.7	7.7	7.7
23.000	7.7	7.7	7.7	7.7	7.7
23.500	7.8	7.8	7.8	7.8	7.8
24.000	7.8	(N/A)	(N/A)	(N/A)	(N/A)

Time-Depth Curve: 2 Year	
Label	2 Year
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	2 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.0	0.0	0.0	0.0
1.000	0.0	0.0	0.0	0.0	0.1
1.500	0.1	0.1	0.1	0.1	0.1
2.000	0.1	0.1	0.1	0.1	0.1
2.500	0.1	0.1	0.1	0.1	0.1
3.000	0.1	0.1	0.1	0.1	0.1
3.500	0.1	0.1	0.2	0.2	0.2
4.000	0.2	0.2	0.2	0.2	0.2
4.500	0.2	0.2	0.2	0.2	0.2
5.000	0.2	0.2	0.2	0.2	0.2
5.500	0.2	0.3	0.3	0.3	0.3
6.000	0.3	0.3	0.3	0.3	0.3
6.500	0.3	0.3	0.3	0.3	0.3
7.000	0.3	0.4	0.4	0.4	0.4
7.500	0.4	0.4	0.4	0.4	0.4
8.000	0.4	0.4	0.4	0.4	0.5
8.500	0.5	0.5	0.5	0.5	0.5
9.000	0.5	0.5	0.5	0.5	0.6
9.500	0.6	0.6	0.6	0.6	0.6
10.000	0.6	0.6	0.7	0.7	0.7
10.500	0.7	0.7	0.8	0.8	0.8
11.000	0.8	0.8	0.9	0.9	1.0
11.500	1.0	1.1	1.2	1.5	2.0
12.000	2.3	2.4	2.4	2.5	2.5
12.500	2.6	2.6	2.6	2.7	2.7
13.000	2.7	2.7	2.7	2.8	2.8
13.500	2.8	2.8	2.8	2.8	2.9
14.000	2.9	2.9	2.9	2.9	2.9
14.500	2.9	2.9	3.0	3.0	3.0
15.000	3.0	3.0	3.0	3.0	3.0
15.500	3.0	3.0	3.1	3.1	3.1
16.000	3.1	3.1	3.1	3.1	3.1
16.500	3.1	3.1	3.1	3.1	3.1
17.000	3.2	3.2	3.2	3.2	3.2
17.500	3.2	3.2	3.2	3.2	3.2
18.000	3.2	3.2	3.2	3.2	3.2
18.500	3.3	3.3	3.3	3.3	3.3
19.000	3.3	3.3	3.3	3.3	3.3
19.500	3.3	3.3	3.3	3.3	3.3
20.000	3.3	3.3	3.3	3.3	3.4

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
20.500	3.4	3.4	3.4	3.4	3.4
21.000	3.4	3.4	3.4	3.4	3.4
21.500	3.4	3.4	3.4	3.4	3.4
22.000	3.4	3.4	3.4	3.4	3.4
22.500	3.4	3.4	3.4	3.5	3.5
23.000	3.5	3.5	3.5	3.5	3.5
23.500	3.5	3.5	3.5	3.5	3.5
24.000	3.5	(N/A)	(N/A)	(N/A)	(N/A)

Unit Hydrograph Method (Computational Notes)
Definition of Terms

At	Total area (acres): At = Ai+Ap
Ai	Impervious area (acres)
Ap	Pervious area (acres)
CNi	Runoff curve number for impervious area
CNp	Runoff curve number for pervious area
fLoss	f loss constant infiltration (depth/time)
gKs	Saturated Hydraulic Conductivity (depth/time)
Md	Volumetric Moisture Deficit
Psi	Capillary Suction (length)
hK	Horton Infiltration Decay Rate (time^-1)
fo	Initial Infiltration Rate (depth/time)
fc	Ultimate(capacity)Infiltration Rate (depth/time)
Ia	Initial Abstraction (length)
dt	Computational increment (duration of unit excess rainfall) Default dt is smallest value of 0.1333Tc, rtm, and th (Smallest dt is then adjusted to match up with Tp)
UDdt	User specified override computational main time increment (only used if UDdt is => .1333Tc)
D(t)	Point on distribution curve (fraction of P) for time step t
K	2 / (1 + (Tr/Tp)): default K = 0.75: (for Tr/Tp = 1.67)
Ks	Hydrograph shape factor = Unit Conversions * K: = ((1hr/3600sec) * (1ft/12in) * ((5280ft)**2/sq.mi)) * K Default Ks = 645.333 * 0.75 = 484
Lag	Lag time from center of excess runoff (dt) to Tp: Lag = 0.6Tc
P	Total precipitation depth, inches
Pa(t)	Accumulated rainfall at time step t
Pi(t)	Incremental rainfall at time step t
qp	Peak discharge (cfs) for 1in. runoff, for 1hr, for 1 sq.mi. = (Ks * A * Q) / Tp (where Q = 1in. runoff, A=sq.mi.)
Qu(t)	Unit hydrograph ordinate (cfs) at time step t
Q(t)	Final hydrograph ordinate (cfs) at time step t
Rai(t)	Accumulated runoff (inches) at time step t for impervious area
Rap(t)	Accumulated runoff (inches) at time step t for pervious area
Rii(t)	Incremental runoff (inches) at time step t for impervious area
Rip(t)	Incremental runoff (inches) at time step t for pervious area
R(t)	Incremental weighted total runoff (inches)
Rtm	Time increment for rainfall table
Si	S for impervious area: Si = (1000/CNi) - 10
Sp	S for pervious area: Sp = (1000/CNp) - 10
t	Time step (row) number
Tc	Time of concentration
Tb	Time (hrs) of entire unit hydrograph: Tb = Tp + Tr
Tp	Time (hrs) to peak of a unit hydrograph: Tp = (dt/2) + Lag
Tr	Time (hrs) of receding limb of unit hydrograph: Tr = ratio of Tp

Unit Hydrograph Method
Computational Notes
Precipitation

Column (1)	Time for time step t
Column (2)	D(t) = Point on distribution curve for time step t
Column (3)	Pi(t) = Pa(t) - Pa(t-1): Col.(4) - Preceding Col.(4)
Column (4)	Pa(t) = D(t) x P: Col.(2) x P

Pervious Area Runoff (using SCS Runoff CN Method)

Column (5)	Rap(t) = Accumulated pervious runoff for time step t
	If (Pa(t) is <= 0.2Sp) then use: Rap(t) = 0.0
	If (Pa(t) is > 0.2Sp) then use:
	
	Rap(t) = (Col.(4)-0.2Sp)**2 / (Col.(4)+0.8Sp)

Column (6)	Rip(t) = Incremental pervious runoff for time step t Rip(t) = Rap(t) - Rap(t-1) Rip(t) = Col.(5) for current row - Col.(5) for preceding row.

Impervious Area Runoff

Column (7 & 8)...	Did not specify to use impervious areas.

Incremental Weighted Runoff

Column (9)	R(t) = (Ap/At) x Rip(t) + (Ai/At) x Rii(t) R(t) = (Ap/At) x Col.(6) + (Ai/At) x Col.(8)

SCS Unit Hydrograph Method

Column (10)	Q(t) is computed with the SCS unit hydrograph method using R(t) and Qu(t).

Storm Event	2 Year
Return Event	2 years
Duration	24.000 hours
Depth	3.5 in
Time of Concentration (Composite)	0.189 hours
Area (User Defined)	6.960 acres

Computational Time Increment	0.025 hours
Time to Peak (Computed)	11.995 hours
Flow (Peak, Computed)	20.72 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	20.69 ft³/s

Drainage Area	
SCS CN (Composite)	88.000
Area (User Defined)	6.960 acres
Maximum Retention (Pervious)	1.4 in
Maximum Retention (Pervious, 20 percent)	0.3 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.3 in
Runoff Volume (Pervious)	1.316 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.313 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.189 hours
Computational Time Increment	0.025 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	41.72 ft³/s
Unit peak time, Tp	0.126 hours
Unit receding limb, Tr	0.504 hours
Total unit time, Tb	0.630 hours

Storm Event	10 Year
Return Event	10 years
Duration	24.000 hours
Depth	5.3 in
Time of Concentration (Composite)	0.189 hours
Area (User Defined)	6.960 acres

Computational Time Increment	0.025 hours
Time to Peak (Computed)	11.995 hours
Flow (Peak, Computed)	35.32 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	35.22 ft³/s

Drainage Area	
SCS CN (Composite)	88.000
Area (User Defined)	6.960 acres
Maximum Retention (Pervious)	1.4 in
Maximum Retention (Pervious, 20 percent)	0.3 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.0 in
Runoff Volume (Pervious)	2.294 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.289 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.189 hours
Computational Time Increment	0.025 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	41.72 ft³/s
Unit peak time, Tp	0.126 hours
Unit receding limb, Tr	0.504 hours
Total unit time, Tb	0.630 hours

Storm Event	100 YR
Return Event	100 years
Duration	24.000 hours
Depth	7.8 in
Time of Concentration (Composite)	0.189 hours
Area (User Defined)	6.960 acres

Computational Time Increment	0.025 hours
Time to Peak (Computed)	11.995 hours
Flow (Peak, Computed)	55.46 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	55.27 ft³/s

Drainage Area	
SCS CN (Composite)	88.000
Area (User Defined)	6.960 acres
Maximum Retention (Pervious)	1.4 in
Maximum Retention (Pervious, 20 percent)	0.3 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.4 in
Runoff Volume (Pervious)	3.696 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	3.689 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.189 hours
Computational Time Increment	0.025 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	41.72 ft³/s
Unit peak time, Tp	0.126 hours
Unit receding limb, Tr	0.504 hours
Total unit time, Tb	0.630 hours

Storm Event	2 Year
Return Event	2 years
Duration	24.000 hours
Depth	3.5 in
Time of Concentration (Composite)	0.167 hours
Area (User Defined)	1.620 acres

Computational Time Increment	0.022 hours
Time to Peak (Computed)	11.979 hours
Flow (Peak, Computed)	4.80 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	4.78 ft³/s

Drainage Area	
SCS CN (Composite)	87.000
Area (User Defined)	1.620 acres
Maximum Retention (Pervious)	1.5 in
Maximum Retention (Pervious, 20 percent)	0.3 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.2 in
Runoff Volume (Pervious)	0.295 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.294 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.167 hours
Computational Time Increment	0.022 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	10.99 ft³/s
Unit peak time, Tp	0.111 hours
Unit receding limb, Tr	0.445 hours
Total unit time, Tb	0.557 hours

Storm Event	10 Year
Return Event	10 years
Duration	24.000 hours
Depth	5.3 in
Time of Concentration (Composite)	0.167 hours
Area (User Defined)	1.620 acres

Computational Time Increment	0.022 hours
Time to Peak (Computed)	11.979 hours
Flow (Peak, Computed)	8.30 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	8.22 ft³/s

Drainage Area	
SCS CN (Composite)	87.000
Area (User Defined)	1.620 acres
Maximum Retention (Pervious)	1.5 in
Maximum Retention (Pervious, 20 percent)	0.3 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.9 in
Runoff Volume (Pervious)	0.520 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.519 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.167 hours
Computational Time Increment	0.022 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	10.99 ft³/s
Unit peak time, Tp	0.111 hours
Unit receding limb, Tr	0.445 hours
Total unit time, Tb	0.557 hours

Storm Event	100 YR
Return Event	100 years
Duration	24.000 hours
Depth	7.8 in
Time of Concentration (Composite)	0.167 hours
Area (User Defined)	1.620 acres

Computational Time Increment	0.022 hours
Time to Peak (Computed)	11.979 hours
Flow (Peak, Computed)	13.14 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	12.97 ft³/s

Drainage Area	
SCS CN (Composite)	87.000
Area (User Defined)	1.620 acres
Maximum Retention (Pervious)	1.5 in
Maximum Retention (Pervious, 20 percent)	0.3 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.3 in
Runoff Volume (Pervious)	0.844 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.843 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.167 hours
Computational Time Increment	0.022 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	10.99 ft³/s
Unit peak time, Tp	0.111 hours
Unit receding limb, Tr	0.445 hours
Total unit time, Tb	0.557 hours

Storm Event	2 Year
Return Event	2 years
Duration	24.000 hours
Depth	3.5 in
Time of Concentration (Composite)	0.495 hours
Area (User Defined)	28.810 acres

Computational Time Increment	0.066 hours
Time to Peak (Computed)	12.210 hours
Flow (Peak, Computed)	34.31 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.200 hours
Flow (Peak Interpolated Output)	34.19 ft³/s

Drainage Area	
SCS CN (Composite)	77.000
Area (User Defined)	28.810 acres
Maximum Retention (Pervious)	3.0 in
Maximum Retention (Pervious, 20 percent)	0.6 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.4 in
Runoff Volume (Pervious)	3.434 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	3.407 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.495 hours
Computational Time Increment	0.066 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	65.95 ft³/s
Unit peak time, Tp	0.330 hours
Unit receding limb, Tr	1.320 hours
Total unit time, Tb	1.650 hours

Storm Event	10 Year
Return Event	10 years
Duration	24.000 hours
Depth	5.3 in
Time of Concentration (Composite)	0.495 hours
Area (User Defined)	28.810 acres

Computational Time Increment	0.066 hours
Time to Peak (Computed)	12.210 hours
Flow (Peak, Computed)	70.30 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.200 hours
Flow (Peak Interpolated Output)	70.24 ft³/s

Drainage Area	
SCS CN (Composite)	77.000
Area (User Defined)	28.810 acres
Maximum Retention (Pervious)	3.0 in
Maximum Retention (Pervious, 20 percent)	0.6 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.9 in
Runoff Volume (Pervious)	6.905 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	6.857 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.495 hours
Computational Time Increment	0.066 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	65.95 ft³/s
Unit peak time, Tp	0.330 hours
Unit receding limb, Tr	1.320 hours
Total unit time, Tb	1.650 hours

Storm Event	100 YR
Return Event	100 years
Duration	24.000 hours
Depth	7.8 in
Time of Concentration (Composite)	0.495 hours
Area (User Defined)	28.810 acres

Computational Time Increment	0.066 hours
Time to Peak (Computed)	12.144 hours
Flow (Peak, Computed)	124.33 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	124.28 ft³/s

Drainage Area	
SCS CN (Composite)	77.000
Area (User Defined)	28.810 acres
Maximum Retention (Pervious)	3.0 in
Maximum Retention (Pervious, 20 percent)	0.6 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.1 in
Runoff Volume (Pervious)	12.223 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	12.148 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.495 hours
Computational Time Increment	0.066 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	65.95 ft³/s
Unit peak time, Tp	0.330 hours
Unit receding limb, Tr	1.320 hours
Total unit time, Tb	1.650 hours

Storm Event	2 Year
Return Event	2 years
Duration	24.000 hours
Depth	3.5 in
Time of Concentration (Composite)	0.189 hours
Area (User Defined)	7.700 acres

Computational Time Increment	0.025 hours
Time to Peak (Computed)	11.995 hours
Flow (Peak, Computed)	24.49 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	24.44 ft³/s

Drainage Area	
SCS CN (Composite)	90.000
Area (User Defined)	7.700 acres
Maximum Retention (Pervious)	1.1 in
Maximum Retention (Pervious, 20 percent)	0.2 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.4 in
Runoff Volume (Pervious)	1.571 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.567 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.189 hours
Computational Time Increment	0.025 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	46.16 ft³/s
Unit peak time, Tp	0.126 hours
Unit receding limb, Tr	0.504 hours
Total unit time, Tb	0.630 hours

Storm Event	10 Year
Return Event	10 years
Duration	24.000 hours
Depth	5.3 in
Time of Concentration (Composite)	0.189 hours
Area (User Defined)	7.700 acres

Computational Time Increment	0.025 hours
Time to Peak (Computed)	11.995 hours
Flow (Peak, Computed)	40.62 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	40.49 ft³/s

Drainage Area	
SCS CN (Composite)	90.000
Area (User Defined)	7.700 acres
Maximum Retention (Pervious)	1.1 in
Maximum Retention (Pervious, 20 percent)	0.2 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.2 in
Runoff Volume (Pervious)	2.673 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.668 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.189 hours
Computational Time Increment	0.025 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	46.16 ft³/s
Unit peak time, Tp	0.126 hours
Unit receding limb, Tr	0.504 hours
Total unit time, Tb	0.630 hours

Storm Event	100 YR
Return Event	100 years
Duration	24.000 hours
Depth	7.8 in
Time of Concentration (Composite)	0.189 hours
Area (User Defined)	7.700 acres

Computational Time Increment	0.025 hours
Time to Peak (Computed)	11.995 hours
Flow (Peak, Computed)	62.74 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	62.51 ft³/s

Drainage Area	
SCS CN (Composite)	90.000
Area (User Defined)	7.700 acres
Maximum Retention (Pervious)	1.1 in
Maximum Retention (Pervious, 20 percent)	0.2 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.6 in
Runoff Volume (Pervious)	4.241 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	4.232 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.189 hours
Computational Time Increment	0.025 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	46.16 ft³/s
Unit peak time, Tp	0.126 hours
Unit receding limb, Tr	0.504 hours
Total unit time, Tb	0.630 hours

Storm Event	2 Year
Return Event	2 years
Duration	24.000 hours
Depth	3.5 in
Time of Concentration (Composite)	0.167 hours
Area (User Defined)	5.580 acres

Computational Time Increment	0.022 hours
Time to Peak (Computed)	11.979 hours
Flow (Peak, Computed)	15.93 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	15.89 ft³/s

Drainage Area	
SCS CN (Composite)	86.000
Area (User Defined)	5.580 acres
Maximum Retention (Pervious)	1.6 in
Maximum Retention (Pervious, 20 percent)	0.3 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.1 in
Runoff Volume (Pervious)	0.976 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.974 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.167 hours
Computational Time Increment	0.022 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	37.86 ft³/s
Unit peak time, Tp	0.111 hours
Unit receding limb, Tr	0.445 hours
Total unit time, Tb	0.557 hours

Storm Event	10 Year
Return Event	10 years
Duration	24.000 hours
Depth	5.3 in
Time of Concentration (Composite)	0.167 hours
Area (User Defined)	5.580 acres

Computational Time Increment	0.022 hours
Time to Peak (Computed)	11.979 hours
Flow (Peak, Computed)	27.96 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	27.71 ft³/s

Drainage Area	
SCS CN (Composite)	86.000
Area (User Defined)	5.580 acres
Maximum Retention (Pervious)	1.6 in
Maximum Retention (Pervious, 20 percent)	0.3 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.7 in
Runoff Volume (Pervious)	1.743 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.739 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.167 hours
Computational Time Increment	0.022 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	37.86 ft³/s
Unit peak time, Tp	0.111 hours
Unit receding limb, Tr	0.445 hours
Total unit time, Tb	0.557 hours

Storm Event	100 YR
Return Event	100 years
Duration	24.000 hours
Depth	7.8 in
Time of Concentration (Composite)	0.167 hours
Area (User Defined)	5.580 acres

Computational Time Increment	0.022 hours
Time to Peak (Computed)	11.979 hours
Flow (Peak, Computed)	44.68 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	44.11 ft³/s

Drainage Area	
SCS CN (Composite)	86.000
Area (User Defined)	5.580 acres
Maximum Retention (Pervious)	1.6 in
Maximum Retention (Pervious, 20 percent)	0.3 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.1 in
Runoff Volume (Pervious)	2.854 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.849 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.167 hours
Computational Time Increment	0.022 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	37.86 ft³/s
Unit peak time, Tp	0.111 hours
Unit receding limb, Tr	0.445 hours
Total unit time, Tb	0.557 hours

Storm Event	2 Year
Return Event	2 years
Duration	24.000 hours
Depth	3.5 in
Time of Concentration (Composite)	0.476 hours
Area (User Defined)	24.100 acres

Computational Time Increment	0.063 hours
Time to Peak (Computed)	12.186 hours
Flow (Peak, Computed)	37.59 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.200 hours
Flow (Peak Interpolated Output)	37.05 ft³/s

Drainage Area	
SCS CN (Composite)	82.000
Area (User Defined)	24.100 acres
Maximum Retention (Pervious)	2.2 in
Maximum Retention (Pervious, 20 percent)	0.4 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.8 in
Runoff Volume (Pervious)	3.580 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	3.556 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.476 hours
Computational Time Increment	0.063 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	57.37 ft³/s
Unit peak time, Tp	0.317 hours
Unit receding limb, Tr	1.269 hours
Total unit time, Tb	1.587 hours

Storm Event	10 Year
Return Event	10 years
Duration	24.000 hours
Depth	5.3 in
Time of Concentration (Composite)	0.476 hours
Area (User Defined)	24.100 acres

Computational Time Increment	0.063 hours
Time to Peak (Computed)	12.186 hours
Flow (Peak, Computed)	70.59 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	70.00 ft³/s

Drainage Area	
SCS CN (Composite)	82.000
Area (User Defined)	24.100 acres
Maximum Retention (Pervious)	2.2 in
Maximum Retention (Pervious, 20 percent)	0.4 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.3 in
Runoff Volume (Pervious)	6.725 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	6.685 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.476 hours
Computational Time Increment	0.063 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	57.37 ft³/s
Unit peak time, Tp	0.317 hours
Unit receding limb, Tr	1.269 hours
Total unit time, Tb	1.587 hours

Storm Event	100 YR
Return Event	100 years
Duration	24.000 hours
Depth	7.8 in
Time of Concentration (Composite)	0.476 hours
Area (User Defined)	24.100 acres

Computational Time Increment	0.063 hours
Time to Peak (Computed)	12.186 hours
Flow (Peak, Computed)	117.74 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	117.29 ft³/s

Drainage Area	
SCS CN (Composite)	82.000
Area (User Defined)	24.100 acres
Maximum Retention (Pervious)	2.2 in
Maximum Retention (Pervious, 20 percent)	0.4 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.7 in
Runoff Volume (Pervious)	11.388 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	11.325 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.476 hours
Computational Time Increment	0.063 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	57.37 ft³/s
Unit peak time, Tp	0.317 hours
Unit receding limb, Tr	1.269 hours
Total unit time, Tb	1.587 hours

Summary for Hydrograph Addition at 'EX Offsite D'

Upstream Link	Upstream Node
Pond Out	Existing Pond

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	Pond Out	0.914	13.950	0.89
Flow (In)	EX Offsite D	0.914	13.950	0.89

Summary for Hydrograph Addition at 'EX Offsite D'

Upstream Link	Upstream Node
Pond Out	Existing Pond

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	Pond Out	1.378	13.600	1.67
Flow (In)	EX Offsite D	1.378	13.600	1.67

Summary for Hydrograph Addition at 'EX Offsite D'

Upstream Link	Upstream Node
Pond Out	Existing Pond

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	Pond Out	2.629	12.200	17.43
Flow (In)	EX Offsite D	2.629	12.200	17.43

Summary for Hydrograph Addition at 'EX Offsite UD'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EXDA Offsite (Undetained)

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	EXDA Offsite (Undetained)	0.294	12.000	4.78
Flow (In)	EX Offsite UD	0.294	12.000	4.78

Summary for Hydrograph Addition at 'EX Offsite UD'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EXDA Offsite (Undetained)

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	EXDA Offsite (Undetained)	0.519	12.000	8.22
Flow (In)	EX Offsite UD	0.519	12.000	8.22

Summary for Hydrograph Addition at 'EX Offsite UD'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EXDA Offsite (Undetained)

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	EXDA Offsite (Undetained)	0.843	12.000	12.97
Flow (In)	EX Offsite UD	0.843	12.000	12.97

Summary for Hydrograph Addition at 'EX Onsite UD'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EXDA Onsite (Undetained)

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	EXDA Onsite (Undetained)	3.407	12.200	34.19
Flow (In)	EX Onsite UD	3.407	12.200	34.19

Summary for Hydrograph Addition at 'EX Onsite UD'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EXDA Onsite (Undetained)

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	EXDA Onsite (Undetained)	6.857	12.200	70.24
Flow (In)	EX Onsite UD	6.857	12.200	70.24

Summary for Hydrograph Addition at 'EX Onsite UD'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EXDA Onsite (Undetained)

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	EXDA Onsite (Undetained)	12.148	12.150	124.28
Flow (In)	EX Onsite UD	12.148	12.150	124.28

Summary for Hydrograph Addition at 'P OUT'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA Onsite (Undetained)
Pond Out	Proposed EDDB

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	PDA Onsite (Undetained)	3.556	12.200	37.05
Flow (From)	Pond Out	1.351	15.300	1.20
Flow (In)	P OUT	4.907	12.200	38.18

Summary for Hydrograph Addition at 'P OUT'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA Onsite (Undetained)
Pond Out	Proposed EDDB

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	PDA Onsite (Undetained)	6.685	12.150	70.00
Flow (From)	Pond Out	2.123	13.300	3.74
Flow (In)	P OUT	8.808	12.150	71.30

Summary for Hydrograph Addition at 'P OUT'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA Onsite (Undetained)
Pond Out	Proposed EDDB

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	PDA Onsite (Undetained)	11.325	12.150	117.29
Flow (From)	Pond Out	4.618	12.200	30.81
Flow (In)	P OUT	15.943	12.150	147.23

Elevation (ft)	Planimeter (ft²)	Area (acres)	A1+A2+sqr(A1*A2) (acres)	Volume (ac-ft)	Volume (Total) (ac-ft)
935.91	0.0	0.003	0.000	0.000	0.000
937.00	0.0	0.129	0.152	0.055	0.055
938.00	0.0	0.170	0.448	0.149	0.204
939.00	0.0	0.201	0.556	0.185	0.390
940.00	0.0	0.229	0.645	0.215	0.605
941.00	0.0	0.258	0.730	0.243	0.848
942.00	0.0	0.288	0.818	0.273	1.121
943.00	0.0	0.320	0.912	0.304	1.425
944.00	0.0	0.354	1.011	0.337	1.762
945.00	0.0	0.391	1.116	0.372	2.134
946.00	0.0	0.462	1.278	0.426	2.560

Pond Volume Equations
*** Incremental volume computed by the Conic Method for Reservoir Volumes.**

Volume = (1/3) * (EL2 - El1) * (Area1 + Area2 + sqr(Area1 * Area2))

where:	EL1, EL2	Lower and upper elevations of the increment
	Area1, Area2	Areas computed for EL1, EL2, respectively
	Volume	Incremental volume between EL1 and EL2

Elevation (ft)	Planimeter (ft²)	Area (acres)	A1+A2+sqr(A1*A2) (acres)	Volume (ac-ft)	Volume (Total) (ac-ft)
922.00	0.0	0.000	0.000	0.000	0.000
925.00	0.0	0.096	0.096	0.096	0.096
926.00	0.0	0.170	0.394	0.131	0.228
927.00	0.0	0.251	0.628	0.209	0.437
928.00	0.0	0.301	0.827	0.276	0.713
929.00	0.0	0.341	0.962	0.321	1.033
930.00	0.0	0.382	1.084	0.361	1.395
931.00	0.0	0.427	1.213	0.404	1.799
932.00	0.0	0.474	1.350	0.450	2.249
933.00	0.0	0.523	1.494	0.498	2.747
934.00	0.0	0.579	1.651	0.551	3.298
935.00	0.0	0.632	1.815	0.605	3.903

Pond Volume Equations
*** Incremental volume computed by the Conic Method for Reservoir Volumes.**

Volume = (1/3) * (EL2 - El1) * (Area1 + Area2 + sqr(Area1 * Area2))

where:	EL1, EL2	Lower and upper elevations of the increment
	Area1, Area2	Areas computed for EL1, EL2, respectively
	Volume	Incremental volume between EL1 and EL2

Requested Pond Water Surface Elevations	
Minimum (Headwater)	935.91 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	946.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Underdrain	Forward	Outlet Pipe	935.91	946.00
Orifice-Circular	Secondary Orifice	Forward	Outlet Pipe	942.10	946.00
Rectangular Weir	Overflow	Forward	Outlet Pipe	942.75	946.00
Orifice-Area	Primary Orifice	Forward	Outlet Pipe	943.44	946.00
Culvert-Circular	Outlet Pipe	Forward	TW	935.32	946.00
Rectangular Weir	Spillway	Forward	TW	945.00	946.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Underdrain Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	935.91 ft
Orifice Diameter	4.0 in
Orifice Coefficient	0.600

Structure ID: Outlet Pipe Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	15.0 in
Length	81.00 ft
Length (Computed Barrel)	81.03 ft
Slope (Computed)	0.026 ft/ft

Outlet Control Data	
Manning's n	0.012
Ke	0.200
Kb	0.020
Kr	0.200
Convergence Tolerance	0.00 ft

Inlet Control Data	
Equation Form	Form 1
K	0.0018
M	2.0000
C	0.0292
Y	0.7400
T1 ratio (HW/D)	1.049
T2 ratio (HW/D)	1.194
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	936.63 ft	T1 Flow	4.80 ft³/s
T2 Elevation	936.81 ft	T2 Flow	5.49 ft³/s

Structure ID: Spillway Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	945.00 ft
Weir Length	240.00 ft
Weir Coefficient	3.00 (ft^0.5)/s

Structure ID: Secondary Orifice Structure Type: Orifice-Circular	
Number of Openings	2
Elevation	942.10 ft
Orifice Diameter	4.0 in
Orifice Coefficient	0.600

Structure ID: Primary Orifice Structure Type: Orifice-Area	
Number of Openings	1
Elevation	943.44 ft
Orifice Area	1.8 ft²
Top Elevation	943.94 ft
Datum Elevation	943.69 ft
Orifice Coefficient	0.600

Structure ID: Overflow Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	942.75 ft
Weir Length	3.10 ft
Weir Coefficient	3.00 (ft^0.5)/s

Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
935.91	0.00	(N/A)	0.00	(no Q: Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe,Spillway)
936.41	0.24	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
936.91	0.38	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
937.41	0.48	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
937.91	0.57	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
938.41	0.64	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
938.91	0.71	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
939.41	0.77	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
939.91	0.82	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
940.41	0.87	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
940.91	0.92	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
941.41	0.97	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
941.91	1.02	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
942.10	1.03	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
942.41	1.35	(N/A)	0.00	Underdrain,Secondary Orifice,Outlet Pipe (no Q: Overflow,Primary Orifice,Spillway)
942.75	1.67	(N/A)	0.00	Underdrain,Secondary Orifice,Outlet Pipe (no Q: Overflow,Primary Orifice,Spillway)
942.91	2.37	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Outlet Pipe (no Q: Primary Orifice,Spillway)
943.41	7.02	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Outlet Pipe (no Q: Primary Orifice,Spillway)
943.44	7.38	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Outlet Pipe (no Q: Primary Orifice,Spillway)
943.91	17.27	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe (no Q: Spillway)
944.41	18.30	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe (no Q: Spillway)
944.91	18.86	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe (no Q: Spillway)
945.00	18.95	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe (no Q: Spillway)
945.41	208.38	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe,Spillway
945.91	644.85	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe,Spillway
946.00	739.91	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe,Spillway

Requested Pond Water Surface Elevations	
Minimum (Headwater)	935.91 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	946.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Underdrain	Forward	Outlet Pipe	935.91	946.00
Orifice-Circular	Secondary Orifice	Forward	Outlet Pipe	942.10	946.00
Rectangular Weir	Overflow	Forward	Outlet Pipe	942.75	946.00
Orifice-Area	Primary Orifice	Forward	Outlet Pipe	943.44	946.00
Culvert-Circular	Outlet Pipe	Forward	TW	935.32	946.00
Rectangular Weir	Spillway	Forward	TW	945.00	946.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Underdrain Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	935.91 ft
Orifice Diameter	4.0 in
Orifice Coefficient	0.600

Structure ID: Outlet Pipe Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	15.0 in
Length	81.00 ft
Length (Computed Barrel)	81.03 ft
Slope (Computed)	0.026 ft/ft

Outlet Control Data	
Manning's n	0.012
Ke	0.200
Kb	0.020
Kr	0.200
Convergence Tolerance	0.00 ft

Inlet Control Data	
Equation Form	Form 1
K	0.0018
M	2.0000
C	0.0292
Y	0.7400
T1 ratio (HW/D)	1.049
T2 ratio (HW/D)	1.194
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	936.63 ft	T1 Flow	4.80 ft³/s
T2 Elevation	936.81 ft	T2 Flow	5.49 ft³/s

Structure ID: Spillway Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	945.00 ft
Weir Length	240.00 ft
Weir Coefficient	3.00 (ft^0.5)/s

Structure ID: Secondary Orifice Structure Type: Orifice-Circular	
Number of Openings	2
Elevation	942.10 ft
Orifice Diameter	4.0 in
Orifice Coefficient	0.600

Structure ID: Primary Orifice Structure Type: Orifice-Area	
Number of Openings	1
Elevation	943.44 ft
Orifice Area	1.8 ft²
Top Elevation	943.94 ft
Datum Elevation	943.69 ft
Orifice Coefficient	0.600

Structure ID: Overflow Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	942.75 ft
Weir Length	3.10 ft
Weir Coefficient	3.00 (ft^0.5)/s

Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
935.91	0.00	(N/A)	0.00	(no Q: Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe,Spillway)
936.41	0.24	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
936.91	0.38	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
937.41	0.48	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
937.91	0.57	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
938.41	0.64	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
938.91	0.71	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
939.41	0.77	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
939.91	0.82	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
940.41	0.87	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
940.91	0.92	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
941.41	0.97	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
941.91	1.02	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
942.10	1.03	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
942.41	1.35	(N/A)	0.00	Underdrain,Secondary Orifice,Outlet Pipe (no Q: Overflow,Primary Orifice,Spillway)
942.75	1.67	(N/A)	0.00	Underdrain,Secondary Orifice,Outlet Pipe (no Q: Overflow,Primary Orifice,Spillway)
942.91	2.37	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Outlet Pipe (no Q: Primary Orifice,Spillway)
943.41	7.02	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Outlet Pipe (no Q: Primary Orifice,Spillway)
943.44	7.38	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Outlet Pipe (no Q: Primary Orifice,Spillway)
943.91	17.27	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe (no Q: Spillway)
944.41	18.30	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe (no Q: Spillway)
944.91	18.86	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe (no Q: Spillway)
945.00	18.95	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe (no Q: Spillway)
945.41	208.38	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe,Spillway
945.91	644.85	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe,Spillway
946.00	739.91	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe,Spillway

Requested Pond Water Surface Elevations	
Minimum (Headwater)	935.91 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	946.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Underdrain	Forward	Outlet Pipe	935.91	946.00
Orifice-Circular	Secondary Orifice	Forward	Outlet Pipe	942.10	946.00
Rectangular Weir	Overflow	Forward	Outlet Pipe	942.75	946.00
Orifice-Area	Primary Orifice	Forward	Outlet Pipe	943.44	946.00
Culvert-Circular	Outlet Pipe	Forward	TW	935.32	946.00
Rectangular Weir	Spillway	Forward	TW	945.00	946.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Underdrain Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	935.91 ft
Orifice Diameter	4.0 in
Orifice Coefficient	0.600

Structure ID: Outlet Pipe Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	15.0 in
Length	81.00 ft
Length (Computed Barrel)	81.03 ft
Slope (Computed)	0.026 ft/ft

Outlet Control Data	
Manning's n	0.012
Ke	0.200
Kb	0.020
Kr	0.200
Convergence Tolerance	0.00 ft

Inlet Control Data	
Equation Form	Form 1
K	0.0018
M	2.0000
C	0.0292
Y	0.7400
T1 ratio (HW/D)	1.049
T2 ratio (HW/D)	1.194
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	936.63 ft	T1 Flow	4.80 ft³/s
T2 Elevation	936.81 ft	T2 Flow	5.49 ft³/s

Structure ID: Spillway Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	945.00 ft
Weir Length	240.00 ft
Weir Coefficient	3.00 (ft^0.5)/s

Structure ID: Secondary Orifice Structure Type: Orifice-Circular	
Number of Openings	2
Elevation	942.10 ft
Orifice Diameter	4.0 in
Orifice Coefficient	0.600

Structure ID: Primary Orifice Structure Type: Orifice-Area	
Number of Openings	1
Elevation	943.44 ft
Orifice Area	1.8 ft²
Top Elevation	943.94 ft
Datum Elevation	943.69 ft
Orifice Coefficient	0.600

Structure ID: Overflow Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	942.75 ft
Weir Length	3.10 ft
Weir Coefficient	3.00 (ft^0.5)/s

Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
935.91	0.00	(N/A)	0.00	(no Q: Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe,Spillway)
936.41	0.24	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
936.91	0.38	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
937.41	0.48	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
937.91	0.57	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
938.41	0.64	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
938.91	0.71	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
939.41	0.77	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
939.91	0.82	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
940.41	0.87	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
940.91	0.92	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
941.41	0.97	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
941.91	1.02	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
942.10	1.03	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Secondary Orifice,Overflow,Primary Orifice,Spillway)
942.41	1.35	(N/A)	0.00	Underdrain,Secondary Orifice,Outlet Pipe (no Q: Overflow,Primary Orifice,Spillway)
942.75	1.67	(N/A)	0.00	Underdrain,Secondary Orifice,Outlet Pipe (no Q: Overflow,Primary Orifice,Spillway)
942.91	2.37	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Outlet Pipe (no Q: Primary Orifice,Spillway)
943.41	7.02	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Outlet Pipe (no Q: Primary Orifice,Spillway)
943.44	7.38	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Outlet Pipe (no Q: Primary Orifice,Spillway)
943.91	17.27	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe (no Q: Spillway)
944.41	18.30	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe (no Q: Spillway)
944.91	18.86	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe (no Q: Spillway)
945.00	18.95	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe (no Q: Spillway)
945.41	208.38	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe,Spillway
945.91	644.85	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe,Spillway
946.00	739.91	(N/A)	0.00	Underdrain,Secondary Orifice,Overflow,Primary Orifice,Outlet Pipe,Spillway

Requested Pond Water Surface Elevations	
Minimum (Headwater)	922.00 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	935.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Apron	Forward	Area Inlet	932.50	935.00
Orifice-Area	Area Inlet	Forward	Outlet Pipe	932.00	935.00
Orifice-Circular	Underdrain	Forward	Outlet Pipe	922.00	935.00
Orifice-Area	Overflow	Forward	Outlet Pipe	933.00	935.00
Culvert-Circular	Outlet Pipe	Forward	TW	921.50	935.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Underdrain Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	922.00 ft
Orifice Diameter	4.0 in
Orifice Coefficient	0.600

Structure ID: Outlet Pipe Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	42.0 in
Length	81.00 ft
Length (Computed Barrel)	81.06 ft
Slope (Computed)	0.037 ft/ft

Outlet Control Data	
Manning's n	0.012
Ke	0.200
Kb	0.005
Kr	0.200
Convergence Tolerance	0.00 ft

Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.077
T2 ratio (HW/D)	1.179
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	925.27 ft	T1 Flow	63.00 ft³/s
T2 Elevation	925.63 ft	T2 Flow	72.00 ft³/s

Structure ID: Apron Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	932.50 ft
Weir Length	5.00 ft
Weir Coefficient	3.00 (ft^0.5)/s

Structure ID: Area Inlet Structure Type: Orifice-Area	
Number of Openings	1
Elevation	932.00 ft
Orifice Area	2.5 ft²
Top Elevation	932.50 ft
Datum Elevation	932.25 ft
Orifice Coefficient	0.600

Structure ID: Overflow Structure Type: Orifice-Area	
Number of Openings	1
Elevation	933.00 ft
Orifice Area	2.5 ft²
Top Elevation	0.00 ft
Datum Elevation	0.00 ft
Orifice Coefficient	0.600

Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
922.00	0.00	(N/A)	0.00	(no Q: Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe)
922.10	0.02	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.20	0.07	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.30	0.14	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.40	0.20	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.50	0.24	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.60	0.28	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.70	0.31	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.80	0.33	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.90	0.36	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.00	0.38	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.10	0.41	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.20	0.43	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.30	0.45	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.40	0.47	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.50	0.48	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.60	0.50	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.70	0.52	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
923.80	0.54	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.90	0.55	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.00	0.57	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.10	0.58	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.20	0.60	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.30	0.61	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.40	0.63	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.50	0.64	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.60	0.66	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.70	0.67	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.80	0.68	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.90	0.69	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.00	0.71	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.10	0.72	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.20	0.73	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.30	0.74	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.40	0.76	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.50	0.77	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
925.60	0.78	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.70	0.79	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.80	0.80	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.90	0.81	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.00	0.82	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.10	0.83	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.20	0.84	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.30	0.85	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.40	0.86	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.50	0.87	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.60	0.88	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.70	0.89	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.80	0.90	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.90	0.91	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.00	0.92	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.10	0.93	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.20	0.94	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.30	0.95	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
927.40	0.96	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.50	0.97	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.60	0.98	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.70	0.99	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.80	1.00	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.90	1.01	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.00	1.01	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.10	1.02	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.20	1.03	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.30	1.04	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.40	1.05	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.50	1.06	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.60	1.07	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.70	1.07	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.80	1.08	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.90	1.09	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.00	1.10	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.10	1.11	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
929.20	1.11	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.30	1.12	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.40	1.13	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.50	1.14	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.60	1.15	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.70	1.15	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.80	1.16	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.90	1.17	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.00	1.18	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.10	1.18	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.20	1.19	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.30	1.20	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.40	1.21	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.50	1.21	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.60	1.22	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.70	1.23	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.80	1.23	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.90	1.24	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
931.00	1.25	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.10	1.26	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.20	1.26	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.30	1.27	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.40	1.28	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.50	1.28	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.60	1.29	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.70	1.30	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.80	1.30	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.90	1.31	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
932.00	1.32	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
932.10	1.32	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
932.20	1.33	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
932.30	1.34	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
932.40	1.34	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
932.50	1.35	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
932.60	1.83	(N/A)	0.00	Apron,Area Inlet,Underdrain,Outlet Pipe (no Q: Overflow)
932.70	2.70	(N/A)	0.00	Apron,Area Inlet,Underdrain,Outlet Pipe (no Q: Overflow)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
932.80	3.83	(N/A)	0.00	Apron,Area Inlet,Underdrain,Outlet Pipe (no Q: Overflow)
932.90	5.17	(N/A)	0.00	Apron,Area Inlet,Underdrain,Outlet Pipe (no Q: Overflow)
933.00	6.68	(N/A)	0.00	Apron,Area Inlet,Underdrain,Outlet Pipe (no Q: Overflow)
933.10	12.04	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.20	14.97	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.30	17.36	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.40	19.44	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.50	21.27	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.60	22.94	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.70	24.47	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.80	25.87	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.90	27.18	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.00	28.41	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.10	29.57	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.20	30.67	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.30	31.72	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.40	32.73	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.50	33.71	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
934.60	34.65	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.70	35.56	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.80	36.45	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.90	37.30	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
935.00	38.12	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe

Requested Pond Water Surface Elevations	
Minimum (Headwater)	922.00 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	935.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Apron	Forward	Area Inlet	932.50	935.00
Orifice-Area	Area Inlet	Forward	Outlet Pipe	932.00	935.00
Orifice-Circular	Underdrain	Forward	Outlet Pipe	922.00	935.00
Orifice-Area	Overflow	Forward	Outlet Pipe	933.00	935.00
Culvert-Circular	Outlet Pipe	Forward	TW	921.50	935.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Underdrain Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	922.00 ft
Orifice Diameter	4.0 in
Orifice Coefficient	0.600

Structure ID: Outlet Pipe Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	42.0 in
Length	81.00 ft
Length (Computed Barrel)	81.06 ft
Slope (Computed)	0.037 ft/ft

Outlet Control Data	
Manning's n	0.012
Ke	0.200
Kb	0.005
Kr	0.200
Convergence Tolerance	0.00 ft

Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.077
T2 ratio (HW/D)	1.179
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	925.27 ft	T1 Flow	63.00 ft³/s
T2 Elevation	925.63 ft	T2 Flow	72.00 ft³/s

Structure ID: Apron Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	932.50 ft
Weir Length	5.00 ft
Weir Coefficient	3.00 (ft^0.5)/s

Structure ID: Area Inlet Structure Type: Orifice-Area	
Number of Openings	1
Elevation	932.00 ft
Orifice Area	2.5 ft²
Top Elevation	932.50 ft
Datum Elevation	932.25 ft
Orifice Coefficient	0.600

Structure ID: Overflow Structure Type: Orifice-Area	
Number of Openings	1
Elevation	933.00 ft
Orifice Area	2.5 ft²
Top Elevation	0.00 ft
Datum Elevation	0.00 ft
Orifice Coefficient	0.600

Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
922.00	0.00	(N/A)	0.00	(no Q: Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe)
922.10	0.02	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.20	0.07	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.30	0.14	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.40	0.20	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.50	0.24	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.60	0.28	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.70	0.31	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.80	0.33	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.90	0.36	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.00	0.38	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.10	0.41	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.20	0.43	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.30	0.45	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.40	0.47	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.50	0.48	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.60	0.50	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.70	0.52	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
923.80	0.54	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.90	0.55	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.00	0.57	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.10	0.58	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.20	0.60	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.30	0.61	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.40	0.63	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.50	0.64	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.60	0.66	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.70	0.67	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.80	0.68	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.90	0.69	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.00	0.71	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.10	0.72	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.20	0.73	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.30	0.74	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.40	0.76	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.50	0.77	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
925.60	0.78	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.70	0.79	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.80	0.80	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.90	0.81	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.00	0.82	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.10	0.83	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.20	0.84	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.30	0.85	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.40	0.86	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.50	0.87	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.60	0.88	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.70	0.89	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.80	0.90	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.90	0.91	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.00	0.92	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.10	0.93	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.20	0.94	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.30	0.95	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
927.40	0.96	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.50	0.97	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.60	0.98	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.70	0.99	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.80	1.00	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.90	1.01	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.00	1.01	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.10	1.02	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.20	1.03	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.30	1.04	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.40	1.05	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.50	1.06	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.60	1.07	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.70	1.07	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.80	1.08	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.90	1.09	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.00	1.10	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.10	1.11	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
929.20	1.11	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.30	1.12	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.40	1.13	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.50	1.14	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.60	1.15	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.70	1.15	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.80	1.16	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.90	1.17	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.00	1.18	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.10	1.18	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.20	1.19	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.30	1.20	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.40	1.21	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.50	1.21	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.60	1.22	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.70	1.23	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.80	1.23	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.90	1.24	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
931.00	1.25	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.10	1.26	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.20	1.26	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.30	1.27	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.40	1.28	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.50	1.28	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.60	1.29	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.70	1.30	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.80	1.30	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.90	1.31	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
932.00	1.32	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
932.10	1.32	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
932.20	1.33	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
932.30	1.34	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
932.40	1.34	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
932.50	1.35	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
932.60	1.83	(N/A)	0.00	Apron,Area Inlet,Underdrain,Outlet Pipe (no Q: Overflow)
932.70	2.70	(N/A)	0.00	Apron,Area Inlet,Underdrain,Outlet Pipe (no Q: Overflow)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
932.80	3.83	(N/A)	0.00	Apron,Area Inlet,Underdrain,Outlet Pipe (no Q: Overflow)
932.90	5.17	(N/A)	0.00	Apron,Area Inlet,Underdrain,Outlet Pipe (no Q: Overflow)
933.00	6.68	(N/A)	0.00	Apron,Area Inlet,Underdrain,Outlet Pipe (no Q: Overflow)
933.10	12.04	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.20	14.97	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.30	17.36	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.40	19.44	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.50	21.27	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.60	22.94	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.70	24.47	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.80	25.87	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.90	27.18	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.00	28.41	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.10	29.57	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.20	30.67	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.30	31.72	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.40	32.73	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.50	33.71	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
934.60	34.65	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.70	35.56	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.80	36.45	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.90	37.30	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
935.00	38.12	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe

Requested Pond Water Surface Elevations	
Minimum (Headwater)	922.00 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	935.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Apron	Forward	Area Inlet	932.50	935.00
Orifice-Area	Area Inlet	Forward	Outlet Pipe	932.00	935.00
Orifice-Circular	Underdrain	Forward	Outlet Pipe	922.00	935.00
Orifice-Area	Overflow	Forward	Outlet Pipe	933.00	935.00
Culvert-Circular	Outlet Pipe	Forward	TW	921.50	935.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Underdrain Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	922.00 ft
Orifice Diameter	4.0 in
Orifice Coefficient	0.600

Structure ID: Outlet Pipe Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	42.0 in
Length	81.00 ft
Length (Computed Barrel)	81.06 ft
Slope (Computed)	0.037 ft/ft

Outlet Control Data	
Manning's n	0.012
Ke	0.200
Kb	0.005
Kr	0.200
Convergence Tolerance	0.00 ft

Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.077
T2 ratio (HW/D)	1.179
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	925.27 ft	T1 Flow	63.00 ft³/s
T2 Elevation	925.63 ft	T2 Flow	72.00 ft³/s

Structure ID: Apron Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	932.50 ft
Weir Length	5.00 ft
Weir Coefficient	3.00 (ft^0.5)/s

Structure ID: Area Inlet Structure Type: Orifice-Area	
Number of Openings	1
Elevation	932.00 ft
Orifice Area	2.5 ft²
Top Elevation	932.50 ft
Datum Elevation	932.25 ft
Orifice Coefficient	0.600

Structure ID: Overflow Structure Type: Orifice-Area	
Number of Openings	1
Elevation	933.00 ft
Orifice Area	2.5 ft²
Top Elevation	0.00 ft
Datum Elevation	0.00 ft
Orifice Coefficient	0.600

Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
922.00	0.00	(N/A)	0.00	(no Q: Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe)
922.10	0.02	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.20	0.07	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.30	0.14	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.40	0.20	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.50	0.24	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.60	0.28	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.70	0.31	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.80	0.33	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
922.90	0.36	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.00	0.38	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.10	0.41	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.20	0.43	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.30	0.45	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.40	0.47	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.50	0.48	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.60	0.50	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.70	0.52	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
923.80	0.54	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
923.90	0.55	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.00	0.57	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.10	0.58	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.20	0.60	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.30	0.61	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.40	0.63	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.50	0.64	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.60	0.66	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.70	0.67	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.80	0.68	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
924.90	0.69	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.00	0.71	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.10	0.72	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.20	0.73	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.30	0.74	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.40	0.76	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.50	0.77	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
925.60	0.78	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.70	0.79	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.80	0.80	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
925.90	0.81	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.00	0.82	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.10	0.83	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.20	0.84	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.30	0.85	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.40	0.86	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.50	0.87	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.60	0.88	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.70	0.89	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.80	0.90	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
926.90	0.91	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.00	0.92	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.10	0.93	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.20	0.94	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.30	0.95	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
927.40	0.96	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.50	0.97	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.60	0.98	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.70	0.99	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.80	1.00	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
927.90	1.01	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.00	1.01	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.10	1.02	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.20	1.03	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.30	1.04	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.40	1.05	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.50	1.06	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.60	1.07	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.70	1.07	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.80	1.08	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
928.90	1.09	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.00	1.10	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.10	1.11	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
929.20	1.11	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.30	1.12	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.40	1.13	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.50	1.14	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.60	1.15	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.70	1.15	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.80	1.16	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
929.90	1.17	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.00	1.18	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.10	1.18	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.20	1.19	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.30	1.20	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.40	1.21	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.50	1.21	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.60	1.22	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.70	1.23	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.80	1.23	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
930.90	1.24	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
931.00	1.25	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.10	1.26	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.20	1.26	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.30	1.27	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.40	1.28	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.50	1.28	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.60	1.29	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.70	1.30	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.80	1.30	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
931.90	1.31	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
932.00	1.32	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
932.10	1.32	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
932.20	1.33	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
932.30	1.34	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
932.40	1.34	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
932.50	1.35	(N/A)	0.00	Underdrain,Outlet Pipe (no Q: Apron,Area Inlet,Overflow)
932.60	1.83	(N/A)	0.00	Apron,Area Inlet,Underdrain,Outlet Pipe (no Q: Overflow)
932.70	2.70	(N/A)	0.00	Apron,Area Inlet,Underdrain,Outlet Pipe (no Q: Overflow)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
932.80	3.83	(N/A)	0.00	Apron,Area Inlet,Underdrain,Outlet Pipe (no Q: Overflow)
932.90	5.17	(N/A)	0.00	Apron,Area Inlet,Underdrain,Outlet Pipe (no Q: Overflow)
933.00	6.68	(N/A)	0.00	Apron,Area Inlet,Underdrain,Outlet Pipe (no Q: Overflow)
933.10	12.04	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.20	14.97	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.30	17.36	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.40	19.44	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.50	21.27	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.60	22.94	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.70	24.47	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.80	25.87	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
933.90	27.18	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.00	28.41	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.10	29.57	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.20	30.67	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.30	31.72	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.40	32.73	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.50	33.71	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)	Contributing Structures
934.60	34.65	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.70	35.56	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.80	36.45	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
934.90	37.30	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe
935.00	38.12	(N/A)	0.00	Apron,Area Inlet,Underdrain,Overflow, Outlet Pipe

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	935.91 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (acres)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
935.91	0.00	0.000	0.003	0.00	0.00	0.00
936.41	0.24	0.009	0.038	0.00	0.24	4.39
936.91	0.38	0.044	0.112	0.00	0.38	21.83
937.41	0.48	0.111	0.145	0.00	0.48	54.38
937.91	0.57	0.189	0.166	0.00	0.57	92.12
938.41	0.64	0.277	0.183	0.00	0.64	134.51
938.91	0.71	0.372	0.198	0.00	0.71	180.64
939.41	0.77	0.474	0.212	0.00	0.77	230.42
939.91	0.82	0.584	0.227	0.00	0.82	283.58
940.41	0.87	0.701	0.241	0.00	0.87	340.17
940.91	0.92	0.825	0.255	0.00	0.92	400.18
941.41	0.97	0.956	0.270	0.00	0.97	463.72
941.91	1.02	1.095	0.285	0.00	1.02	530.91
942.10	1.03	1.150	0.291	0.00	1.03	557.42
942.41	1.35	1.241	0.301	0.00	1.35	602.16
942.75	1.67	1.346	0.312	0.00	1.67	652.92
942.91	2.37	1.396	0.317	0.00	2.37	677.99
943.41	7.02	1.559	0.334	0.00	7.02	761.45
943.44	7.38	1.569	0.335	0.00	7.38	766.66
943.91	17.27	1.730	0.351	0.00	17.27	854.55
944.41	18.30	1.910	0.369	0.00	18.30	942.62
944.91	18.86	2.099	0.387	0.00	18.86	1,034.63
945.00	18.95	2.134	0.391	0.00	18.95	1,051.66
945.41	208.38	2.300	0.419	0.00	208.38	1,321.41
945.91	644.85	2.518	0.455	0.00	644.85	1,863.69
946.00	739.91	2.560	0.462	0.00	739.91	1,978.74

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	935.91 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (acres)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
935.91	0.00	0.000	0.003	0.00	0.00	0.00
936.41	0.24	0.009	0.038	0.00	0.24	4.39
936.91	0.38	0.044	0.112	0.00	0.38	21.83
937.41	0.48	0.111	0.145	0.00	0.48	54.38
937.91	0.57	0.189	0.166	0.00	0.57	92.12
938.41	0.64	0.277	0.183	0.00	0.64	134.51
938.91	0.71	0.372	0.198	0.00	0.71	180.64
939.41	0.77	0.474	0.212	0.00	0.77	230.42
939.91	0.82	0.584	0.227	0.00	0.82	283.58
940.41	0.87	0.701	0.241	0.00	0.87	340.17
940.91	0.92	0.825	0.255	0.00	0.92	400.18
941.41	0.97	0.956	0.270	0.00	0.97	463.72
941.91	1.02	1.095	0.285	0.00	1.02	530.91
942.10	1.03	1.150	0.291	0.00	1.03	557.42
942.41	1.35	1.241	0.301	0.00	1.35	602.16
942.75	1.67	1.346	0.312	0.00	1.67	652.92
942.91	2.37	1.396	0.317	0.00	2.37	677.99
943.41	7.02	1.559	0.334	0.00	7.02	761.45
943.44	7.38	1.569	0.335	0.00	7.38	766.66
943.91	17.27	1.730	0.351	0.00	17.27	854.55
944.41	18.30	1.910	0.369	0.00	18.30	942.62
944.91	18.86	2.099	0.387	0.00	18.86	1,034.63
945.00	18.95	2.134	0.391	0.00	18.95	1,051.66
945.41	208.38	2.300	0.419	0.00	208.38	1,321.41
945.91	644.85	2.518	0.455	0.00	644.85	1,863.69
946.00	739.91	2.560	0.462	0.00	739.91	1,978.74

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	935.91 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (acres)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
935.91	0.00	0.000	0.003	0.00	0.00	0.00
936.41	0.24	0.009	0.038	0.00	0.24	4.39
936.91	0.38	0.044	0.112	0.00	0.38	21.83
937.41	0.48	0.111	0.145	0.00	0.48	54.38
937.91	0.57	0.189	0.166	0.00	0.57	92.12
938.41	0.64	0.277	0.183	0.00	0.64	134.51
938.91	0.71	0.372	0.198	0.00	0.71	180.64
939.41	0.77	0.474	0.212	0.00	0.77	230.42
939.91	0.82	0.584	0.227	0.00	0.82	283.58
940.41	0.87	0.701	0.241	0.00	0.87	340.17
940.91	0.92	0.825	0.255	0.00	0.92	400.18
941.41	0.97	0.956	0.270	0.00	0.97	463.72
941.91	1.02	1.095	0.285	0.00	1.02	530.91
942.10	1.03	1.150	0.291	0.00	1.03	557.42
942.41	1.35	1.241	0.301	0.00	1.35	602.16
942.75	1.67	1.346	0.312	0.00	1.67	652.92
942.91	2.37	1.396	0.317	0.00	2.37	677.99
943.41	7.02	1.559	0.334	0.00	7.02	761.45
943.44	7.38	1.569	0.335	0.00	7.38	766.66
943.91	17.27	1.730	0.351	0.00	17.27	854.55
944.41	18.30	1.910	0.369	0.00	18.30	942.62
944.91	18.86	2.099	0.387	0.00	18.86	1,034.63
945.00	18.95	2.134	0.391	0.00	18.95	1,051.66
945.41	208.38	2.300	0.419	0.00	208.38	1,321.41
945.91	644.85	2.518	0.455	0.00	644.85	1,863.69
946.00	739.91	2.560	0.462	0.00	739.91	1,978.74

Peak Discharge	0.89 ft³/s
Time to Peak	13.950 hours
Hydrograph Volume	0.914 ac-ft

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
6.150	0.00	0.00	0.00	0.00	0.00
6.400	0.01	0.01	0.01	0.01	0.01
6.650	0.01	0.01	0.02	0.02	0.02
6.900	0.02	0.02	0.03	0.03	0.03
7.150	0.03	0.03	0.04	0.04	0.04
7.400	0.04	0.04	0.05	0.05	0.05
7.650	0.05	0.06	0.06	0.06	0.06
7.900	0.07	0.07	0.07	0.07	0.08
8.150	0.08	0.08	0.08	0.09	0.09
8.400	0.09	0.10	0.10	0.11	0.11
8.650	0.11	0.12	0.12	0.13	0.13
8.900	0.14	0.14	0.15	0.16	0.16
9.150	0.17	0.17	0.18	0.18	0.19
9.400	0.19	0.20	0.20	0.21	0.21
9.650	0.22	0.22	0.23	0.24	0.24
9.900	0.25	0.25	0.25	0.25	0.25
10.150	0.25	0.25	0.26	0.26	0.26
10.400	0.26	0.27	0.27	0.27	0.28
10.650	0.28	0.29	0.29	0.30	0.30
10.900	0.31	0.32	0.32	0.33	0.34
11.150	0.35	0.36	0.37	0.38	0.38
11.400	0.39	0.40	0.40	0.41	0.42
11.650	0.43	0.45	0.48	0.51	0.55
11.900	0.60	0.65	0.71	0.75	0.79
12.150	0.82	0.83	0.84	0.85	0.86
12.400	0.86	0.86	0.87	0.87	0.87
12.650	0.87	0.88	0.88	0.88	0.88
12.900	0.88	0.88	0.88	0.88	0.89
13.150	0.89	0.89	0.89	0.89	0.89
13.400	0.89	0.89	0.89	0.89	0.89
13.650	0.89	0.89	0.89	0.89	0.89
13.900	0.89	0.89	0.89	0.89	0.89
14.150	0.89	0.89	0.89	0.89	0.89
14.400	0.89	0.89	0.89	0.89	0.89
14.650	0.89	0.89	0.89	0.89	0.89
14.900	0.89	0.89	0.89	0.89	0.89
15.150	0.89	0.89	0.89	0.88	0.88
15.400	0.88	0.88	0.88	0.88	0.88
15.650	0.88	0.88	0.88	0.88	0.88
15.900	0.88	0.88	0.88	0.88	0.88
16.150	0.88	0.88	0.87	0.87	0.87
16.400	0.87	0.87	0.87	0.87	0.87
16.650	0.87	0.87	0.87	0.87	0.87
16.900	0.87	0.87	0.86	0.86	0.86
17.150	0.86	0.86	0.86	0.86	0.86

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
17.400	0.86	0.86	0.86	0.86	0.86
17.650	0.86	0.85	0.85	0.85	0.85
17.900	0.85	0.85	0.85	0.85	0.85
18.150	0.85	0.85	0.85	0.85	0.84
18.400	0.84	0.84	0.84	0.84	0.84
18.650	0.84	0.84	0.84	0.84	0.84
18.900	0.84	0.83	0.83	0.83	0.83
19.150	0.83	0.83	0.83	0.83	0.83
19.400	0.83	0.83	0.82	0.82	0.82
19.650	0.82	0.82	0.82	0.82	0.82
19.900	0.82	0.82	0.81	0.81	0.81
20.150	0.81	0.81	0.81	0.81	0.81
20.400	0.81	0.80	0.80	0.80	0.80
20.650	0.80	0.80	0.80	0.80	0.80
20.900	0.79	0.79	0.79	0.79	0.79
21.150	0.79	0.79	0.79	0.79	0.78
21.400	0.78	0.78	0.78	0.78	0.78
21.650	0.78	0.78	0.78	0.78	0.77
21.900	0.77	0.77	0.77	0.77	0.77
22.150	0.77	0.77	0.76	0.76	0.76
22.400	0.76	0.76	0.76	0.76	0.76
22.650	0.76	0.75	0.75	0.75	0.75
22.900	0.75	0.75	0.75	0.75	0.74
23.150	0.74	0.74	0.74	0.74	0.74
23.400	0.74	0.74	0.73	0.73	0.73
23.650	0.73	0.73	0.73	0.73	0.73
23.900	0.73	0.72	0.72	(N/A)	(N/A)

Peak Discharge	1.67 ft³/s
Time to Peak	13.600 hours
Hydrograph Volume	1.378 ac-ft

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
4.450	0.00	0.00	0.00	0.00	0.00
4.700	0.01	0.01	0.01	0.01	0.01
4.950	0.02	0.02	0.02	0.02	0.03
5.200	0.03	0.03	0.04	0.04	0.04
5.450	0.04	0.05	0.05	0.05	0.06
5.700	0.06	0.06	0.07	0.07	0.08
5.950	0.08	0.08	0.09	0.09	0.09
6.200	0.10	0.10	0.11	0.11	0.11
6.450	0.12	0.12	0.13	0.13	0.13
6.700	0.14	0.14	0.15	0.15	0.16
6.950	0.16	0.16	0.17	0.17	0.18
7.200	0.18	0.19	0.19	0.19	0.20
7.450	0.20	0.21	0.21	0.22	0.22
7.700	0.23	0.23	0.24	0.24	0.24
7.950	0.25	0.25	0.25	0.25	0.25
8.200	0.25	0.25	0.25	0.25	0.26
8.450	0.26	0.26	0.26	0.26	0.27
8.700	0.27	0.27	0.27	0.28	0.28
8.950	0.28	0.29	0.29	0.29	0.30
9.200	0.30	0.31	0.31	0.32	0.32
9.450	0.32	0.33	0.33	0.34	0.34
9.700	0.35	0.35	0.36	0.36	0.37
9.950	0.37	0.38	0.38	0.39	0.39
10.200	0.39	0.39	0.40	0.40	0.40
10.450	0.41	0.41	0.42	0.42	0.43
10.700	0.43	0.44	0.44	0.45	0.45
10.950	0.46	0.47	0.47	0.48	0.49
11.200	0.49	0.50	0.51	0.52	0.52
11.450	0.53	0.54	0.55	0.57	0.58
11.700	0.60	0.64	0.67	0.71	0.77
11.950	0.83	0.89	0.94	0.98	1.01
12.200	1.03	1.11	1.21	1.29	1.35
12.450	1.40	1.43	1.47	1.50	1.52
12.700	1.54	1.56	1.57	1.59	1.60
12.950	1.61	1.62	1.63	1.64	1.65
13.200	1.65	1.66	1.66	1.67	1.67
13.450	1.67	1.67	1.67	1.67	1.67
13.700	1.67	1.67	1.67	1.67	1.67
13.950	1.66	1.66	1.66	1.65	1.65
14.200	1.64	1.64	1.63	1.63	1.62
14.450	1.62	1.61	1.61	1.60	1.60
14.700	1.59	1.59	1.58	1.58	1.57
14.950	1.56	1.56	1.55	1.55	1.54
15.200	1.53	1.53	1.52	1.51	1.51
15.450	1.50	1.49	1.49	1.48	1.47

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
15.700	1.47	1.46	1.45	1.44	1.44
15.950	1.43	1.42	1.42	1.41	1.40
16.200	1.39	1.39	1.38	1.37	1.36
16.450	1.36	1.35	1.34	1.33	1.32
16.700	1.32	1.31	1.30	1.29	1.28
16.950	1.28	1.27	1.26	1.25	1.25
17.200	1.24	1.23	1.22	1.22	1.21
17.450	1.20	1.20	1.19	1.18	1.17
17.700	1.17	1.16	1.15	1.15	1.14
17.950	1.13	1.13	1.12	1.11	1.10
18.200	1.10	1.09	1.08	1.08	1.07
18.450	1.07	1.06	1.05	1.05	1.04
18.700	1.03	1.03	1.03	1.03	1.03
18.950	1.03	1.03	1.03	1.03	1.03
19.200	1.03	1.03	1.03	1.03	1.03
19.450	1.03	1.02	1.02	1.02	1.02
19.700	1.02	1.02	1.02	1.02	1.02
19.950	1.02	1.02	1.02	1.02	1.02
20.200	1.02	1.01	1.01	1.01	1.01
20.450	1.01	1.01	1.01	1.01	1.01
20.700	1.01	1.01	1.01	1.01	1.00
20.950	1.00	1.00	1.00	1.00	1.00
21.200	1.00	1.00	1.00	1.00	1.00
21.450	1.00	1.00	0.99	0.99	0.99
21.700	0.99	0.99	0.99	0.99	0.99
21.950	0.99	0.99	0.99	0.99	0.99
22.200	0.98	0.98	0.98	0.98	0.98
22.450	0.98	0.98	0.98	0.98	0.98
22.700	0.98	0.98	0.98	0.97	0.97
22.950	0.97	0.97	0.97	0.97	0.97
23.200	0.97	0.97	0.97	0.97	0.97
23.450	0.96	0.96	0.96	0.96	0.96
23.700	0.96	0.96	0.96	0.96	0.96
23.950	0.96	0.96	(N/A)	(N/A)	(N/A)

Peak Discharge	17.43 ft³/s
Time to Peak	12.200 hours
Hydrograph Volume	2.629 ac-ft

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
3.200	0.00	0.00	0.00	0.00	0.01
3.450	0.01	0.01	0.01	0.02	0.02
3.700	0.02	0.03	0.03	0.04	0.04
3.950	0.04	0.05	0.05	0.06	0.06
4.200	0.07	0.07	0.08	0.08	0.09
4.450	0.09	0.10	0.10	0.11	0.11
4.700	0.12	0.13	0.13	0.14	0.14
4.950	0.15	0.16	0.16	0.17	0.17
5.200	0.18	0.19	0.19	0.20	0.20
5.450	0.21	0.22	0.22	0.23	0.24
5.700	0.24	0.25	0.25	0.25	0.25
5.950	0.25	0.25	0.25	0.25	0.26
6.200	0.26	0.26	0.26	0.26	0.27
6.450	0.27	0.27	0.27	0.27	0.28
6.700	0.28	0.28	0.29	0.29	0.29
6.950	0.29	0.30	0.30	0.30	0.31
7.200	0.31	0.31	0.32	0.32	0.32
7.450	0.33	0.33	0.33	0.34	0.34
7.700	0.35	0.35	0.35	0.36	0.36
7.950	0.37	0.37	0.37	0.38	0.38
8.200	0.38	0.39	0.39	0.39	0.39
8.450	0.40	0.40	0.40	0.40	0.41
8.700	0.41	0.41	0.42	0.42	0.42
8.950	0.43	0.43	0.43	0.44	0.44
9.200	0.45	0.45	0.45	0.46	0.46
9.450	0.47	0.47	0.48	0.48	0.48
9.700	0.49	0.49	0.49	0.50	0.50
9.950	0.51	0.51	0.51	0.52	0.52
10.200	0.53	0.53	0.54	0.54	0.55
10.450	0.55	0.56	0.57	0.57	0.58
10.700	0.58	0.59	0.59	0.60	0.61
10.950	0.62	0.62	0.63	0.64	0.65
11.200	0.65	0.66	0.67	0.68	0.69
11.450	0.70	0.71	0.72	0.73	0.75
11.700	0.78	0.81	0.84	0.89	0.95
11.950	1.02	1.54	5.55	12.79	17.30
12.200	17.43	17.41	17.30	15.92	14.32
12.450	12.83	11.49	10.29	9.23	8.30
12.700	7.50	7.04	6.73	6.44	6.17
12.950	5.91	5.66	5.43	5.20	4.99
13.200	4.80	4.61	4.43	4.27	4.12
13.450	3.97	3.83	3.70	3.58	3.46
13.700	3.35	3.25	3.15	3.05	2.96
13.950	2.88	2.80	2.72	2.64	2.57
14.200	2.50	2.44	2.38	2.35	2.32

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
14.450	2.30	2.27	2.25	2.22	2.20
14.700	2.17	2.15	2.13	2.10	2.08
14.950	2.06	2.04	2.01	1.99	1.97
15.200	1.95	1.93	1.91	1.89	1.86
15.450	1.84	1.82	1.80	1.78	1.76
15.700	1.74	1.72	1.70	1.68	1.67
15.950	1.67	1.66	1.66	1.65	1.65
16.200	1.64	1.64	1.63	1.62	1.62
16.450	1.61	1.61	1.60	1.60	1.59
16.700	1.59	1.58	1.57	1.57	1.56
16.950	1.56	1.55	1.55	1.54	1.53
17.200	1.53	1.52	1.52	1.51	1.51
17.450	1.50	1.49	1.49	1.48	1.48
17.700	1.47	1.47	1.46	1.45	1.45
17.950	1.44	1.44	1.43	1.42	1.42
18.200	1.41	1.41	1.40	1.40	1.39
18.450	1.38	1.38	1.37	1.37	1.36
18.700	1.35	1.35	1.34	1.33	1.33
18.950	1.32	1.31	1.31	1.30	1.29
19.200	1.29	1.28	1.27	1.27	1.26
19.450	1.25	1.25	1.24	1.23	1.23
19.700	1.22	1.21	1.21	1.20	1.19
19.950	1.19	1.18	1.17	1.17	1.16
20.200	1.15	1.15	1.14	1.13	1.13
20.450	1.12	1.12	1.11	1.10	1.10
20.700	1.09	1.09	1.08	1.07	1.07
20.950	1.06	1.06	1.05	1.05	1.04
21.200	1.04	1.03	1.03	1.03	1.03
21.450	1.03	1.03	1.03	1.03	1.03
21.700	1.03	1.03	1.03	1.03	1.03
21.950	1.03	1.03	1.03	1.03	1.03
22.200	1.03	1.02	1.02	1.02	1.02
22.450	1.02	1.02	1.02	1.02	1.02
22.700	1.02	1.02	1.02	1.02	1.02
22.950	1.02	1.02	1.02	1.02	1.02
23.200	1.02	1.01	1.01	1.01	1.01
23.450	1.01	1.01	1.01	1.01	1.01
23.700	1.01	1.01	1.01	1.01	1.01
23.950	1.01	1.01	(N/A)	(N/A)	(N/A)

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	922.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (acres)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
922.00	0.00	0.000	0.000	0.00	0.00	0.00
922.10	0.02	0.000	0.000	0.00	0.02	0.02
922.20	0.07	0.000	0.000	0.00	0.07	0.08
922.30	0.14	0.000	0.001	0.00	0.14	0.19
922.40	0.20	0.000	0.002	0.00	0.20	0.31
922.50	0.24	0.000	0.003	0.00	0.24	0.46
922.60	0.28	0.001	0.004	0.00	0.28	0.65
922.70	0.31	0.001	0.005	0.00	0.31	0.90
922.80	0.33	0.002	0.007	0.00	0.33	1.22
922.90	0.36	0.003	0.009	0.00	0.36	1.62
923.00	0.38	0.004	0.011	0.00	0.38	2.11
923.10	0.41	0.005	0.013	0.00	0.41	2.71
923.20	0.43	0.006	0.015	0.00	0.43	3.41
923.30	0.45	0.008	0.018	0.00	0.45	4.24
923.40	0.47	0.010	0.021	0.00	0.47	5.21
923.50	0.48	0.012	0.024	0.00	0.48	6.32
923.60	0.50	0.015	0.027	0.00	0.50	7.58
923.70	0.52	0.018	0.031	0.00	0.52	9.01
923.80	0.54	0.021	0.035	0.00	0.54	10.61
923.90	0.55	0.024	0.039	0.00	0.55	12.41
924.00	0.57	0.029	0.043	0.00	0.57	14.39
924.10	0.58	0.033	0.047	0.00	0.58	16.59
924.20	0.60	0.038	0.052	0.00	0.60	19.00
924.30	0.61	0.043	0.057	0.00	0.61	21.64
924.40	0.63	0.049	0.062	0.00	0.63	24.52
924.50	0.64	0.056	0.067	0.00	0.64	27.64
924.60	0.66	0.063	0.072	0.00	0.66	31.03
924.70	0.67	0.070	0.078	0.00	0.67	34.68
924.80	0.68	0.078	0.084	0.00	0.68	38.61
924.90	0.69	0.087	0.090	0.00	0.69	42.84
925.00	0.71	0.096	0.096	0.00	0.71	47.36
925.10	0.72	0.106	0.103	0.00	0.72	52.19
925.20	0.73	0.117	0.109	0.00	0.73	57.34
925.30	0.74	0.128	0.116	0.00	0.74	62.82
925.40	0.76	0.140	0.123	0.00	0.76	68.63
925.50	0.77	0.153	0.131	0.00	0.77	74.78
925.60	0.78	0.166	0.138	0.00	0.78	81.29

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (acres)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
925.70	0.79	0.181	0.146	0.00	0.79	88.17
925.80	0.80	0.195	0.154	0.00	0.80	95.42
925.90	0.81	0.211	0.162	0.00	0.81	103.05
926.00	0.82	0.228	0.170	0.00	0.82	111.09
926.10	0.83	0.245	0.177	0.00	0.83	119.50
926.20	0.84	0.263	0.185	0.00	0.84	128.28
926.30	0.85	0.282	0.193	0.00	0.85	137.43
926.40	0.86	0.302	0.201	0.00	0.86	146.95
926.50	0.87	0.322	0.209	0.00	0.87	156.87
926.60	0.88	0.344	0.217	0.00	0.88	167.17
926.70	0.89	0.366	0.225	0.00	0.89	177.88
926.80	0.90	0.389	0.234	0.00	0.90	189.00
926.90	0.91	0.412	0.243	0.00	0.91	200.54
927.00	0.92	0.437	0.251	0.00	0.92	212.50
927.10	0.93	0.463	0.256	0.00	0.93	224.79
927.20	0.94	0.488	0.261	0.00	0.94	237.32
927.30	0.95	0.515	0.266	0.00	0.95	250.07
927.40	0.96	0.542	0.271	0.00	0.96	263.06
927.50	0.97	0.569	0.276	0.00	0.97	276.28
927.60	0.98	0.597	0.280	0.00	0.98	289.75
927.70	0.99	0.625	0.285	0.00	0.99	303.45
927.80	1.00	0.654	0.290	0.00	1.00	317.40
927.90	1.01	0.683	0.296	0.00	1.01	331.59
928.00	1.01	0.713	0.301	0.00	1.01	346.03
928.10	1.02	0.743	0.305	0.00	1.02	360.68
928.20	1.03	0.774	0.309	0.00	1.03	375.53
928.30	1.04	0.805	0.313	0.00	1.04	390.57
928.40	1.05	0.836	0.317	0.00	1.05	405.80
928.50	1.06	0.868	0.321	0.00	1.06	421.23
928.60	1.07	0.900	0.325	0.00	1.07	436.85
928.70	1.07	0.933	0.329	0.00	1.07	452.66
928.80	1.08	0.966	0.333	0.00	1.08	468.67
928.90	1.09	1.000	0.337	0.00	1.09	484.89
929.00	1.10	1.033	0.341	0.00	1.10	501.30
929.10	1.11	1.068	0.345	0.00	1.11	517.91
929.20	1.11	1.102	0.349	0.00	1.11	534.71
929.30	1.12	1.138	0.353	0.00	1.12	551.71
929.40	1.13	1.173	0.357	0.00	1.13	568.91
929.50	1.14	1.209	0.361	0.00	1.14	586.31
929.60	1.15	1.245	0.366	0.00	1.15	603.91
929.70	1.15	1.282	0.370	0.00	1.15	621.71
929.80	1.16	1.319	0.374	0.00	1.16	639.71
929.90	1.17	1.357	0.378	0.00	1.17	657.91
930.00	1.18	1.395	0.382	0.00	1.18	676.32
930.10	1.18	1.433	0.387	0.00	1.18	694.94
930.20	1.19	1.472	0.391	0.00	1.19	713.77
930.30	1.20	1.512	0.395	0.00	1.20	732.81
930.40	1.21	1.551	0.400	0.00	1.21	752.06
930.50	1.21	1.592	0.404	0.00	1.21	771.52
930.60	1.22	1.632	0.409	0.00	1.22	791.20
930.70	1.23	1.673	0.413	0.00	1.23	811.09

Elevation (ft)	Outflow (ft^3/s)	Storage (ac-ft)	Area (acres)	Infiltration (ft^3/s)	Flow (Total) (ft^3/s)	2S/t + O (ft^3/s)
930.80	1.23	1.715	0.418	0.00	1.23	831.20
930.90	1.24	1.757	0.422	0.00	1.24	851.53
931.00	1.25	1.799	0.427	0.00	1.25	872.08
931.10	1.26	1.842	0.431	0.00	1.26	892.84
931.20	1.26	1.885	0.436	0.00	1.26	913.84
931.30	1.27	1.929	0.441	0.00	1.27	935.05
931.40	1.28	1.974	0.445	0.00	1.28	956.49
931.50	1.28	2.018	0.450	0.00	1.28	978.16
931.60	1.29	2.064	0.455	0.00	1.29	1,000.06
931.70	1.30	2.109	0.459	0.00	1.30	1,022.19
931.80	1.30	2.155	0.464	0.00	1.30	1,044.54
931.90	1.31	2.202	0.469	0.00	1.31	1,067.13
932.00	1.32	2.249	0.474	0.00	1.32	1,089.95
932.10	1.32	2.297	0.479	0.00	1.32	1,113.00
932.20	1.33	2.345	0.483	0.00	1.33	1,136.29
932.30	1.34	2.394	0.488	0.00	1.34	1,159.81
932.40	1.34	2.443	0.493	0.00	1.34	1,183.57
932.50	1.35	2.492	0.498	0.00	1.35	1,207.56
932.60	1.83	2.542	0.503	0.00	1.83	1,232.26
932.70	2.70	2.593	0.508	0.00	2.70	1,257.59
932.80	3.83	2.644	0.513	0.00	3.83	1,283.43
932.90	5.17	2.695	0.518	0.00	5.17	1,309.70
933.00	6.68	2.747	0.523	0.00	6.68	1,336.40
933.10	12.04	2.800	0.528	0.00	12.04	1,367.19
933.20	14.97	2.853	0.534	0.00	14.97	1,395.82
933.30	17.36	2.907	0.539	0.00	17.36	1,424.18
933.40	19.44	2.961	0.545	0.00	19.44	1,452.49
933.50	21.27	3.016	0.550	0.00	21.27	1,480.83
933.60	22.94	3.071	0.556	0.00	22.94	1,509.27
933.70	24.47	3.127	0.562	0.00	24.47	1,537.84
933.80	25.87	3.183	0.567	0.00	25.87	1,566.56
933.90	27.18	3.240	0.573	0.00	27.18	1,595.47
934.00	28.41	3.298	0.579	0.00	28.41	1,624.56
934.10	29.57	3.356	0.584	0.00	29.57	1,653.85
934.20	30.67	3.415	0.589	0.00	30.67	1,683.34
934.30	31.72	3.474	0.594	0.00	31.72	1,713.03
934.40	32.73	3.533	0.600	0.00	32.73	1,742.94
934.50	33.71	3.594	0.605	0.00	33.71	1,773.06
934.60	34.65	3.654	0.610	0.00	34.65	1,803.41
934.70	35.56	3.716	0.616	0.00	35.56	1,833.98
934.80	36.45	3.778	0.621	0.00	36.45	1,864.80
934.90	37.30	3.840	0.626	0.00	37.30	1,895.83
935.00	38.12	3.903	0.632	0.00	38.12	1,927.10

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	922.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (acres)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
922.00	0.00	0.000	0.000	0.00	0.00	0.00
922.10	0.02	0.000	0.000	0.00	0.02	0.02
922.20	0.07	0.000	0.000	0.00	0.07	0.08
922.30	0.14	0.000	0.001	0.00	0.14	0.19
922.40	0.20	0.000	0.002	0.00	0.20	0.31
922.50	0.24	0.000	0.003	0.00	0.24	0.46
922.60	0.28	0.001	0.004	0.00	0.28	0.65
922.70	0.31	0.001	0.005	0.00	0.31	0.90
922.80	0.33	0.002	0.007	0.00	0.33	1.22
922.90	0.36	0.003	0.009	0.00	0.36	1.62
923.00	0.38	0.004	0.011	0.00	0.38	2.11
923.10	0.41	0.005	0.013	0.00	0.41	2.71
923.20	0.43	0.006	0.015	0.00	0.43	3.41
923.30	0.45	0.008	0.018	0.00	0.45	4.24
923.40	0.47	0.010	0.021	0.00	0.47	5.21
923.50	0.48	0.012	0.024	0.00	0.48	6.32
923.60	0.50	0.015	0.027	0.00	0.50	7.58
923.70	0.52	0.018	0.031	0.00	0.52	9.01
923.80	0.54	0.021	0.035	0.00	0.54	10.61
923.90	0.55	0.024	0.039	0.00	0.55	12.41
924.00	0.57	0.029	0.043	0.00	0.57	14.39
924.10	0.58	0.033	0.047	0.00	0.58	16.59
924.20	0.60	0.038	0.052	0.00	0.60	19.00
924.30	0.61	0.043	0.057	0.00	0.61	21.64
924.40	0.63	0.049	0.062	0.00	0.63	24.52
924.50	0.64	0.056	0.067	0.00	0.64	27.64
924.60	0.66	0.063	0.072	0.00	0.66	31.03
924.70	0.67	0.070	0.078	0.00	0.67	34.68
924.80	0.68	0.078	0.084	0.00	0.68	38.61
924.90	0.69	0.087	0.090	0.00	0.69	42.84
925.00	0.71	0.096	0.096	0.00	0.71	47.36
925.10	0.72	0.106	0.103	0.00	0.72	52.19
925.20	0.73	0.117	0.109	0.00	0.73	57.34
925.30	0.74	0.128	0.116	0.00	0.74	62.82
925.40	0.76	0.140	0.123	0.00	0.76	68.63
925.50	0.77	0.153	0.131	0.00	0.77	74.78
925.60	0.78	0.166	0.138	0.00	0.78	81.29

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (acres)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
925.70	0.79	0.181	0.146	0.00	0.79	88.17
925.80	0.80	0.195	0.154	0.00	0.80	95.42
925.90	0.81	0.211	0.162	0.00	0.81	103.05
926.00	0.82	0.228	0.170	0.00	0.82	111.09
926.10	0.83	0.245	0.177	0.00	0.83	119.50
926.20	0.84	0.263	0.185	0.00	0.84	128.28
926.30	0.85	0.282	0.193	0.00	0.85	137.43
926.40	0.86	0.302	0.201	0.00	0.86	146.95
926.50	0.87	0.322	0.209	0.00	0.87	156.87
926.60	0.88	0.344	0.217	0.00	0.88	167.17
926.70	0.89	0.366	0.225	0.00	0.89	177.88
926.80	0.90	0.389	0.234	0.00	0.90	189.00
926.90	0.91	0.412	0.243	0.00	0.91	200.54
927.00	0.92	0.437	0.251	0.00	0.92	212.50
927.10	0.93	0.463	0.256	0.00	0.93	224.79
927.20	0.94	0.488	0.261	0.00	0.94	237.32
927.30	0.95	0.515	0.266	0.00	0.95	250.07
927.40	0.96	0.542	0.271	0.00	0.96	263.06
927.50	0.97	0.569	0.276	0.00	0.97	276.28
927.60	0.98	0.597	0.280	0.00	0.98	289.75
927.70	0.99	0.625	0.285	0.00	0.99	303.45
927.80	1.00	0.654	0.290	0.00	1.00	317.40
927.90	1.01	0.683	0.296	0.00	1.01	331.59
928.00	1.01	0.713	0.301	0.00	1.01	346.03
928.10	1.02	0.743	0.305	0.00	1.02	360.68
928.20	1.03	0.774	0.309	0.00	1.03	375.53
928.30	1.04	0.805	0.313	0.00	1.04	390.57
928.40	1.05	0.836	0.317	0.00	1.05	405.80
928.50	1.06	0.868	0.321	0.00	1.06	421.23
928.60	1.07	0.900	0.325	0.00	1.07	436.85
928.70	1.07	0.933	0.329	0.00	1.07	452.66
928.80	1.08	0.966	0.333	0.00	1.08	468.67
928.90	1.09	1.000	0.337	0.00	1.09	484.89
929.00	1.10	1.033	0.341	0.00	1.10	501.30
929.10	1.11	1.068	0.345	0.00	1.11	517.91
929.20	1.11	1.102	0.349	0.00	1.11	534.71
929.30	1.12	1.138	0.353	0.00	1.12	551.71
929.40	1.13	1.173	0.357	0.00	1.13	568.91
929.50	1.14	1.209	0.361	0.00	1.14	586.31
929.60	1.15	1.245	0.366	0.00	1.15	603.91
929.70	1.15	1.282	0.370	0.00	1.15	621.71
929.80	1.16	1.319	0.374	0.00	1.16	639.71
929.90	1.17	1.357	0.378	0.00	1.17	657.91
930.00	1.18	1.395	0.382	0.00	1.18	676.32
930.10	1.18	1.433	0.387	0.00	1.18	694.94
930.20	1.19	1.472	0.391	0.00	1.19	713.77
930.30	1.20	1.512	0.395	0.00	1.20	732.81
930.40	1.21	1.551	0.400	0.00	1.21	752.06
930.50	1.21	1.592	0.404	0.00	1.21	771.52
930.60	1.22	1.632	0.409	0.00	1.22	791.20
930.70	1.23	1.673	0.413	0.00	1.23	811.09

Elevation (ft)	Outflow (ft^3/s)	Storage (ac-ft)	Area (acres)	Infiltration (ft^3/s)	Flow (Total) (ft^3/s)	2S/t + O (ft^3/s)
930.80	1.23	1.715	0.418	0.00	1.23	831.20
930.90	1.24	1.757	0.422	0.00	1.24	851.53
931.00	1.25	1.799	0.427	0.00	1.25	872.08
931.10	1.26	1.842	0.431	0.00	1.26	892.84
931.20	1.26	1.885	0.436	0.00	1.26	913.84
931.30	1.27	1.929	0.441	0.00	1.27	935.05
931.40	1.28	1.974	0.445	0.00	1.28	956.49
931.50	1.28	2.018	0.450	0.00	1.28	978.16
931.60	1.29	2.064	0.455	0.00	1.29	1,000.06
931.70	1.30	2.109	0.459	0.00	1.30	1,022.19
931.80	1.30	2.155	0.464	0.00	1.30	1,044.54
931.90	1.31	2.202	0.469	0.00	1.31	1,067.13
932.00	1.32	2.249	0.474	0.00	1.32	1,089.95
932.10	1.32	2.297	0.479	0.00	1.32	1,113.00
932.20	1.33	2.345	0.483	0.00	1.33	1,136.29
932.30	1.34	2.394	0.488	0.00	1.34	1,159.81
932.40	1.34	2.443	0.493	0.00	1.34	1,183.57
932.50	1.35	2.492	0.498	0.00	1.35	1,207.56
932.60	1.83	2.542	0.503	0.00	1.83	1,232.26
932.70	2.70	2.593	0.508	0.00	2.70	1,257.59
932.80	3.83	2.644	0.513	0.00	3.83	1,283.43
932.90	5.17	2.695	0.518	0.00	5.17	1,309.70
933.00	6.68	2.747	0.523	0.00	6.68	1,336.40
933.10	12.04	2.800	0.528	0.00	12.04	1,367.19
933.20	14.97	2.853	0.534	0.00	14.97	1,395.82
933.30	17.36	2.907	0.539	0.00	17.36	1,424.18
933.40	19.44	2.961	0.545	0.00	19.44	1,452.49
933.50	21.27	3.016	0.550	0.00	21.27	1,480.83
933.60	22.94	3.071	0.556	0.00	22.94	1,509.27
933.70	24.47	3.127	0.562	0.00	24.47	1,537.84
933.80	25.87	3.183	0.567	0.00	25.87	1,566.56
933.90	27.18	3.240	0.573	0.00	27.18	1,595.47
934.00	28.41	3.298	0.579	0.00	28.41	1,624.56
934.10	29.57	3.356	0.584	0.00	29.57	1,653.85
934.20	30.67	3.415	0.589	0.00	30.67	1,683.34
934.30	31.72	3.474	0.594	0.00	31.72	1,713.03
934.40	32.73	3.533	0.600	0.00	32.73	1,742.94
934.50	33.71	3.594	0.605	0.00	33.71	1,773.06
934.60	34.65	3.654	0.610	0.00	34.65	1,803.41
934.70	35.56	3.716	0.616	0.00	35.56	1,833.98
934.80	36.45	3.778	0.621	0.00	36.45	1,864.80
934.90	37.30	3.840	0.626	0.00	37.30	1,895.83
935.00	38.12	3.903	0.632	0.00	38.12	1,927.10

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	922.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (acres)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
922.00	0.00	0.000	0.000	0.00	0.00	0.00
922.10	0.02	0.000	0.000	0.00	0.02	0.02
922.20	0.07	0.000	0.000	0.00	0.07	0.08
922.30	0.14	0.000	0.001	0.00	0.14	0.19
922.40	0.20	0.000	0.002	0.00	0.20	0.31
922.50	0.24	0.000	0.003	0.00	0.24	0.46
922.60	0.28	0.001	0.004	0.00	0.28	0.65
922.70	0.31	0.001	0.005	0.00	0.31	0.90
922.80	0.33	0.002	0.007	0.00	0.33	1.22
922.90	0.36	0.003	0.009	0.00	0.36	1.62
923.00	0.38	0.004	0.011	0.00	0.38	2.11
923.10	0.41	0.005	0.013	0.00	0.41	2.71
923.20	0.43	0.006	0.015	0.00	0.43	3.41
923.30	0.45	0.008	0.018	0.00	0.45	4.24
923.40	0.47	0.010	0.021	0.00	0.47	5.21
923.50	0.48	0.012	0.024	0.00	0.48	6.32
923.60	0.50	0.015	0.027	0.00	0.50	7.58
923.70	0.52	0.018	0.031	0.00	0.52	9.01
923.80	0.54	0.021	0.035	0.00	0.54	10.61
923.90	0.55	0.024	0.039	0.00	0.55	12.41
924.00	0.57	0.029	0.043	0.00	0.57	14.39
924.10	0.58	0.033	0.047	0.00	0.58	16.59
924.20	0.60	0.038	0.052	0.00	0.60	19.00
924.30	0.61	0.043	0.057	0.00	0.61	21.64
924.40	0.63	0.049	0.062	0.00	0.63	24.52
924.50	0.64	0.056	0.067	0.00	0.64	27.64
924.60	0.66	0.063	0.072	0.00	0.66	31.03
924.70	0.67	0.070	0.078	0.00	0.67	34.68
924.80	0.68	0.078	0.084	0.00	0.68	38.61
924.90	0.69	0.087	0.090	0.00	0.69	42.84
925.00	0.71	0.096	0.096	0.00	0.71	47.36
925.10	0.72	0.106	0.103	0.00	0.72	52.19
925.20	0.73	0.117	0.109	0.00	0.73	57.34
925.30	0.74	0.128	0.116	0.00	0.74	62.82
925.40	0.76	0.140	0.123	0.00	0.76	68.63
925.50	0.77	0.153	0.131	0.00	0.77	74.78
925.60	0.78	0.166	0.138	0.00	0.78	81.29

Elevation (ft)	Outflow (ft^3/s)	Storage (ac-ft)	Area (acres)	Infiltration (ft^3/s)	Flow (Total) (ft^3/s)	2S/t + O (ft^3/s)
925.70	0.79	0.181	0.146	0.00	0.79	88.17
925.80	0.80	0.195	0.154	0.00	0.80	95.42
925.90	0.81	0.211	0.162	0.00	0.81	103.05
926.00	0.82	0.228	0.170	0.00	0.82	111.09
926.10	0.83	0.245	0.177	0.00	0.83	119.50
926.20	0.84	0.263	0.185	0.00	0.84	128.28
926.30	0.85	0.282	0.193	0.00	0.85	137.43
926.40	0.86	0.302	0.201	0.00	0.86	146.95
926.50	0.87	0.322	0.209	0.00	0.87	156.87
926.60	0.88	0.344	0.217	0.00	0.88	167.17
926.70	0.89	0.366	0.225	0.00	0.89	177.88
926.80	0.90	0.389	0.234	0.00	0.90	189.00
926.90	0.91	0.412	0.243	0.00	0.91	200.54
927.00	0.92	0.437	0.251	0.00	0.92	212.50
927.10	0.93	0.463	0.256	0.00	0.93	224.79
927.20	0.94	0.488	0.261	0.00	0.94	237.32
927.30	0.95	0.515	0.266	0.00	0.95	250.07
927.40	0.96	0.542	0.271	0.00	0.96	263.06
927.50	0.97	0.569	0.276	0.00	0.97	276.28
927.60	0.98	0.597	0.280	0.00	0.98	289.75
927.70	0.99	0.625	0.285	0.00	0.99	303.45
927.80	1.00	0.654	0.290	0.00	1.00	317.40
927.90	1.01	0.683	0.296	0.00	1.01	331.59
928.00	1.01	0.713	0.301	0.00	1.01	346.03
928.10	1.02	0.743	0.305	0.00	1.02	360.68
928.20	1.03	0.774	0.309	0.00	1.03	375.53
928.30	1.04	0.805	0.313	0.00	1.04	390.57
928.40	1.05	0.836	0.317	0.00	1.05	405.80
928.50	1.06	0.868	0.321	0.00	1.06	421.23
928.60	1.07	0.900	0.325	0.00	1.07	436.85
928.70	1.07	0.933	0.329	0.00	1.07	452.66
928.80	1.08	0.966	0.333	0.00	1.08	468.67
928.90	1.09	1.000	0.337	0.00	1.09	484.89
929.00	1.10	1.033	0.341	0.00	1.10	501.30
929.10	1.11	1.068	0.345	0.00	1.11	517.91
929.20	1.11	1.102	0.349	0.00	1.11	534.71
929.30	1.12	1.138	0.353	0.00	1.12	551.71
929.40	1.13	1.173	0.357	0.00	1.13	568.91
929.50	1.14	1.209	0.361	0.00	1.14	586.31
929.60	1.15	1.245	0.366	0.00	1.15	603.91
929.70	1.15	1.282	0.370	0.00	1.15	621.71
929.80	1.16	1.319	0.374	0.00	1.16	639.71
929.90	1.17	1.357	0.378	0.00	1.17	657.91
930.00	1.18	1.395	0.382	0.00	1.18	676.32
930.10	1.18	1.433	0.387	0.00	1.18	694.94
930.20	1.19	1.472	0.391	0.00	1.19	713.77
930.30	1.20	1.512	0.395	0.00	1.20	732.81
930.40	1.21	1.551	0.400	0.00	1.21	752.06
930.50	1.21	1.592	0.404	0.00	1.21	771.52
930.60	1.22	1.632	0.409	0.00	1.22	791.20
930.70	1.23	1.673	0.413	0.00	1.23	811.09

Elevation (ft)	Outflow (ft^3/s)	Storage (ac-ft)	Area (acres)	Infiltration (ft^3/s)	Flow (Total) (ft^3/s)	2S/t + O (ft^3/s)
930.80	1.23	1.715	0.418	0.00	1.23	831.20
930.90	1.24	1.757	0.422	0.00	1.24	851.53
931.00	1.25	1.799	0.427	0.00	1.25	872.08
931.10	1.26	1.842	0.431	0.00	1.26	892.84
931.20	1.26	1.885	0.436	0.00	1.26	913.84
931.30	1.27	1.929	0.441	0.00	1.27	935.05
931.40	1.28	1.974	0.445	0.00	1.28	956.49
931.50	1.28	2.018	0.450	0.00	1.28	978.16
931.60	1.29	2.064	0.455	0.00	1.29	1,000.06
931.70	1.30	2.109	0.459	0.00	1.30	1,022.19
931.80	1.30	2.155	0.464	0.00	1.30	1,044.54
931.90	1.31	2.202	0.469	0.00	1.31	1,067.13
932.00	1.32	2.249	0.474	0.00	1.32	1,089.95
932.10	1.32	2.297	0.479	0.00	1.32	1,113.00
932.20	1.33	2.345	0.483	0.00	1.33	1,136.29
932.30	1.34	2.394	0.488	0.00	1.34	1,159.81
932.40	1.34	2.443	0.493	0.00	1.34	1,183.57
932.50	1.35	2.492	0.498	0.00	1.35	1,207.56
932.60	1.83	2.542	0.503	0.00	1.83	1,232.26
932.70	2.70	2.593	0.508	0.00	2.70	1,257.59
932.80	3.83	2.644	0.513	0.00	3.83	1,283.43
932.90	5.17	2.695	0.518	0.00	5.17	1,309.70
933.00	6.68	2.747	0.523	0.00	6.68	1,336.40
933.10	12.04	2.800	0.528	0.00	12.04	1,367.19
933.20	14.97	2.853	0.534	0.00	14.97	1,395.82
933.30	17.36	2.907	0.539	0.00	17.36	1,424.18
933.40	19.44	2.961	0.545	0.00	19.44	1,452.49
933.50	21.27	3.016	0.550	0.00	21.27	1,480.83
933.60	22.94	3.071	0.556	0.00	22.94	1,509.27
933.70	24.47	3.127	0.562	0.00	24.47	1,537.84
933.80	25.87	3.183	0.567	0.00	25.87	1,566.56
933.90	27.18	3.240	0.573	0.00	27.18	1,595.47
934.00	28.41	3.298	0.579	0.00	28.41	1,624.56
934.10	29.57	3.356	0.584	0.00	29.57	1,653.85
934.20	30.67	3.415	0.589	0.00	30.67	1,683.34
934.30	31.72	3.474	0.594	0.00	31.72	1,713.03
934.40	32.73	3.533	0.600	0.00	32.73	1,742.94
934.50	33.71	3.594	0.605	0.00	33.71	1,773.06
934.60	34.65	3.654	0.610	0.00	34.65	1,803.41
934.70	35.56	3.716	0.616	0.00	35.56	1,833.98
934.80	36.45	3.778	0.621	0.00	36.45	1,864.80
934.90	37.30	3.840	0.626	0.00	37.30	1,895.83
935.00	38.12	3.903	0.632	0.00	38.12	1,927.10

Peak Discharge	1.20 ft³/s
Time to Peak	15.300 hours
Hydrograph Volume	1.351 ac-ft

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
5.150	0.00	0.00	0.00	0.00	0.01
5.400	0.01	0.01	0.01	0.02	0.02
5.650	0.02	0.02	0.03	0.03	0.03
5.900	0.03	0.04	0.04	0.04	0.04
6.150	0.05	0.05	0.05	0.05	0.06
6.400	0.06	0.06	0.06	0.07	0.07
6.650	0.07	0.08	0.08	0.08	0.09
6.900	0.09	0.09	0.10	0.10	0.11
7.150	0.11	0.12	0.12	0.13	0.13
7.400	0.14	0.14	0.15	0.15	0.16
7.650	0.16	0.17	0.17	0.18	0.18
7.900	0.19	0.19	0.20	0.20	0.21
8.150	0.21	0.22	0.23	0.24	0.25
8.400	0.25	0.26	0.27	0.27	0.28
8.650	0.29	0.30	0.31	0.31	0.32
8.900	0.33	0.34	0.35	0.36	0.36
9.150	0.37	0.38	0.39	0.39	0.40
9.400	0.40	0.41	0.42	0.42	0.43
9.650	0.43	0.44	0.44	0.45	0.45
9.900	0.46	0.47	0.47	0.48	0.49
10.150	0.49	0.50	0.51	0.52	0.52
10.400	0.53	0.54	0.55	0.56	0.56
10.650	0.57	0.58	0.59	0.60	0.60
10.900	0.61	0.62	0.63	0.64	0.65
11.150	0.65	0.66	0.67	0.68	0.69
11.400	0.70	0.71	0.72	0.73	0.74
11.650	0.76	0.78	0.81	0.85	0.88
11.900	0.93	0.98	1.02	1.06	1.10
12.150	1.12	1.13	1.14	1.15	1.15
12.400	1.16	1.16	1.17	1.17	1.17
12.650	1.17	1.18	1.18	1.18	1.18
12.900	1.18	1.18	1.19	1.19	1.19
13.150	1.19	1.19	1.19	1.19	1.19
13.400	1.19	1.19	1.19	1.20	1.20
13.650	1.20	1.20	1.20	1.20	1.20
13.900	1.20	1.20	1.20	1.20	1.20
14.150	1.20	1.20	1.20	1.20	1.20
14.400	1.20	1.20	1.20	1.20	1.20
14.650	1.20	1.20	1.20	1.20	1.20
14.900	1.20	1.20	1.20	1.20	1.20
15.150	1.20	1.20	1.20	1.20	1.20
15.400	1.20	1.20	1.20	1.20	1.20
15.650	1.20	1.20	1.20	1.20	1.20
15.900	1.20	1.20	1.20	1.20	1.20
16.150	1.20	1.20	1.20	1.20	1.20

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
16.400	1.20	1.20	1.20	1.20	1.20
16.650	1.20	1.20	1.20	1.20	1.20
16.900	1.20	1.20	1.20	1.20	1.20
17.150	1.20	1.20	1.20	1.20	1.20
17.400	1.20	1.20	1.20	1.20	1.20
17.650	1.20	1.19	1.19	1.19	1.19
17.900	1.19	1.19	1.19	1.19	1.19
18.150	1.19	1.19	1.19	1.19	1.19
18.400	1.19	1.19	1.19	1.19	1.19
18.650	1.19	1.19	1.19	1.19	1.19
18.900	1.19	1.19	1.19	1.19	1.18
19.150	1.18	1.18	1.18	1.18	1.18
19.400	1.18	1.18	1.18	1.18	1.18
19.650	1.18	1.18	1.18	1.18	1.18
19.900	1.18	1.18	1.18	1.18	1.18
20.150	1.18	1.17	1.17	1.17	1.17
20.400	1.17	1.17	1.17	1.17	1.17
20.650	1.17	1.17	1.17	1.17	1.17
20.900	1.17	1.17	1.17	1.17	1.17
21.150	1.16	1.16	1.16	1.16	1.16
21.400	1.16	1.16	1.16	1.16	1.16
21.650	1.16	1.16	1.16	1.16	1.16
21.900	1.16	1.16	1.16	1.16	1.15
22.150	1.15	1.15	1.15	1.15	1.15
22.400	1.15	1.15	1.15	1.15	1.15
22.650	1.15	1.15	1.15	1.15	1.15
22.900	1.15	1.15	1.14	1.14	1.14
23.150	1.14	1.14	1.14	1.14	1.14
23.400	1.14	1.14	1.14	1.14	1.14
23.650	1.14	1.14	1.14	1.14	1.13
23.900	1.13	1.13	1.13	(N/A)	(N/A)

Peak Discharge	3.74 ft³/s
Time to Peak	13.300 hours
Hydrograph Volume	2.123 ac-ft

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
3.650	0.00	0.00	0.00	0.01	0.01
3.900	0.01	0.02	0.02	0.02	0.03
4.150	0.03	0.03	0.04	0.04	0.05
4.400	0.05	0.05	0.06	0.06	0.07
4.650	0.07	0.07	0.08	0.08	0.09
4.900	0.09	0.10	0.10	0.10	0.11
5.150	0.12	0.12	0.13	0.14	0.15
5.400	0.15	0.16	0.17	0.17	0.18
5.650	0.19	0.20	0.20	0.21	0.22
5.900	0.23	0.24	0.24	0.25	0.25
6.150	0.26	0.26	0.27	0.28	0.28
6.400	0.29	0.30	0.30	0.31	0.31
6.650	0.32	0.33	0.33	0.34	0.34
6.900	0.35	0.36	0.36	0.37	0.37
7.150	0.38	0.38	0.39	0.40	0.40
7.400	0.41	0.41	0.42	0.42	0.43
7.650	0.43	0.44	0.44	0.45	0.45
7.900	0.46	0.46	0.47	0.47	0.48
8.150	0.48	0.49	0.49	0.50	0.50
8.400	0.51	0.51	0.52	0.52	0.53
8.650	0.54	0.54	0.55	0.55	0.56
8.900	0.57	0.57	0.58	0.59	0.59
9.150	0.60	0.60	0.61	0.61	0.62
9.400	0.62	0.63	0.63	0.64	0.64
9.650	0.65	0.65	0.66	0.66	0.67
9.900	0.67	0.68	0.68	0.69	0.69
10.150	0.70	0.70	0.71	0.72	0.72
10.400	0.73	0.73	0.74	0.74	0.75
10.650	0.76	0.76	0.77	0.78	0.78
10.900	0.79	0.79	0.80	0.81	0.82
11.150	0.82	0.83	0.84	0.84	0.85
11.400	0.86	0.87	0.88	0.89	0.90
11.650	0.91	0.93	0.96	0.99	1.03
11.900	1.08	1.14	1.19	1.24	1.27
12.150	1.30	1.31	1.32	1.33	1.34
12.400	1.34	1.35	1.42	1.66	1.89
12.650	2.20	2.45	2.67	2.89	3.09
12.900	3.25	3.39	3.49	3.58	3.64
13.150	3.68	3.71	3.73	3.74	3.73
13.400	3.72	3.71	3.68	3.65	3.62
13.650	3.58	3.54	3.49	3.44	3.40
13.900	3.34	3.29	3.24	3.19	3.13
14.150	3.08	3.02	2.97	2.92	2.88
14.400	2.83	2.79	2.75	2.71	2.68
14.650	2.65	2.62	2.59	2.56	2.53

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
14.900	2.50	2.48	2.45	2.42	2.40
15.150	2.37	2.34	2.32	2.29	2.27
15.400	2.24	2.22	2.19	2.17	2.14
15.650	2.12	2.09	2.07	2.04	2.02
15.900	2.00	1.97	1.95	1.92	1.90
16.150	1.88	1.85	1.83	1.82	1.81
16.400	1.80	1.78	1.77	1.76	1.75
16.650	1.74	1.73	1.72	1.71	1.70
16.900	1.68	1.67	1.66	1.65	1.64
17.150	1.63	1.62	1.61	1.60	1.59
17.400	1.58	1.57	1.56	1.55	1.54
17.650	1.53	1.53	1.52	1.51	1.50
17.900	1.49	1.48	1.47	1.46	1.45
18.150	1.44	1.43	1.42	1.41	1.41
18.400	1.40	1.39	1.38	1.37	1.36
18.650	1.35	1.35	1.35	1.35	1.35
18.900	1.35	1.35	1.35	1.35	1.35
19.150	1.35	1.35	1.35	1.35	1.35
19.400	1.35	1.35	1.35	1.35	1.35
19.650	1.35	1.35	1.35	1.35	1.35
19.900	1.35	1.35	1.35	1.35	1.34
20.150	1.34	1.34	1.34	1.34	1.34
20.400	1.34	1.34	1.34	1.34	1.34
20.650	1.34	1.34	1.34	1.34	1.34
20.900	1.34	1.34	1.34	1.34	1.34
21.150	1.34	1.34	1.34	1.34	1.34
21.400	1.34	1.34	1.34	1.34	1.34
21.650	1.34	1.34	1.34	1.34	1.34
21.900	1.34	1.33	1.33	1.33	1.33
22.150	1.33	1.33	1.33	1.33	1.33
22.400	1.33	1.33	1.33	1.33	1.33
22.650	1.33	1.33	1.33	1.33	1.33
22.900	1.33	1.33	1.33	1.33	1.33
23.150	1.33	1.33	1.33	1.33	1.33
23.400	1.33	1.33	1.33	1.32	1.32
23.650	1.32	1.32	1.32	1.32	1.32
23.900	1.32	1.32	1.32	(N/A)	(N/A)

Peak Discharge	30.81 ft³/s
Time to Peak	12.200 hours
Hydrograph Volume	4.618 ac-ft

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
2.600	0.00	0.00	0.00	0.01	0.01
2.850	0.02	0.03	0.03	0.04	0.05
3.100	0.05	0.06	0.07	0.07	0.08
3.350	0.09	0.09	0.10	0.10	0.11
3.600	0.12	0.13	0.13	0.14	0.15
3.850	0.16	0.17	0.18	0.19	0.20
4.100	0.21	0.22	0.23	0.25	0.25
4.350	0.26	0.27	0.27	0.28	0.29
4.600	0.30	0.31	0.31	0.32	0.33
4.850	0.34	0.35	0.35	0.36	0.37
5.100	0.38	0.38	0.39	0.40	0.41
5.350	0.41	0.42	0.43	0.43	0.44
5.600	0.45	0.45	0.46	0.46	0.47
5.850	0.48	0.48	0.49	0.49	0.50
6.100	0.50	0.51	0.52	0.52	0.53
6.350	0.53	0.54	0.54	0.55	0.55
6.600	0.56	0.56	0.57	0.57	0.58
6.850	0.58	0.59	0.59	0.59	0.60
7.100	0.60	0.61	0.61	0.62	0.62
7.350	0.62	0.63	0.63	0.64	0.64
7.600	0.65	0.65	0.65	0.66	0.66
7.850	0.67	0.67	0.67	0.68	0.68
8.100	0.68	0.69	0.69	0.70	0.70
8.350	0.70	0.71	0.71	0.72	0.72
8.600	0.73	0.73	0.73	0.74	0.74
8.850	0.75	0.75	0.76	0.76	0.77
9.100	0.77	0.78	0.78	0.79	0.79
9.350	0.79	0.80	0.80	0.81	0.81
9.600	0.81	0.82	0.82	0.83	0.83
9.850	0.83	0.84	0.84	0.85	0.85
10.100	0.86	0.86	0.87	0.87	0.88
10.350	0.88	0.89	0.89	0.90	0.90
10.600	0.91	0.91	0.92	0.92	0.93
10.850	0.93	0.94	0.95	0.95	0.96
11.100	0.97	0.97	0.98	0.99	0.99
11.350	1.00	1.01	1.02	1.03	1.04
11.600	1.05	1.07	1.09	1.12	1.15
11.850	1.20	1.25	1.31	3.18	20.26
12.100	27.16	29.94	30.81	30.72	30.13
12.350	29.27	28.23	27.06	25.76	24.36
12.600	22.87	21.32	19.73	18.12	16.55
12.850	15.08	13.57	12.29	10.62	9.28
13.100	8.32	7.62	7.09	6.69	6.58
13.350	6.48	6.37	6.25	6.13	6.01
13.600	5.89	5.77	5.65	5.53	5.41

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
13.850	5.29	5.18	5.08	4.97	4.87
14.100	4.77	4.68	4.58	4.49	4.41
14.350	4.33	4.25	4.18	4.11	4.05
14.600	3.98	3.92	3.87	3.82	3.77
14.850	3.73	3.68	3.64	3.60	3.56
15.100	3.51	3.47	3.43	3.39	3.36
15.350	3.32	3.28	3.24	3.20	3.16
15.600	3.13	3.09	3.05	3.01	2.98
15.850	2.94	2.90	2.87	2.83	2.80
16.100	2.76	2.72	2.69	2.67	2.64
16.350	2.62	2.59	2.57	2.55	2.53
16.600	2.51	2.49	2.47	2.45	2.43
16.850	2.41	2.39	2.37	2.36	2.34
17.100	2.32	2.31	2.29	2.28	2.26
17.350	2.24	2.23	2.21	2.20	2.18
17.600	2.17	2.16	2.14	2.13	2.11
17.850	2.10	2.09	2.07	2.06	2.04
18.100	2.03	2.02	2.00	1.99	1.98
18.350	1.96	1.95	1.94	1.92	1.91
18.600	1.90	1.88	1.87	1.86	1.85
18.850	1.83	1.82	1.82	1.81	1.80
19.100	1.79	1.79	1.78	1.77	1.76
19.350	1.75	1.74	1.73	1.72	1.71
19.600	1.70	1.69	1.68	1.67	1.66
19.850	1.65	1.64	1.63	1.62	1.61
20.100	1.60	1.59	1.58	1.57	1.56
20.350	1.55	1.54	1.53	1.53	1.52
20.600	1.51	1.50	1.49	1.48	1.48
20.850	1.47	1.46	1.46	1.45	1.44
21.100	1.44	1.43	1.42	1.42	1.41
21.350	1.41	1.40	1.39	1.39	1.38
21.600	1.38	1.37	1.37	1.36	1.36
21.850	1.35	1.35	1.35	1.35	1.35
22.100	1.35	1.35	1.35	1.35	1.35
22.350	1.35	1.35	1.35	1.35	1.35
22.600	1.35	1.35	1.35	1.35	1.35
22.850	1.35	1.35	1.35	1.35	1.35
23.100	1.35	1.35	1.35	1.35	1.35
23.350	1.35	1.35	1.35	1.35	1.35
23.600	1.35	1.35	1.35	1.35	1.35
23.850	1.35	1.35	1.35	1.35	(N/A)

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LEE'S SUMMIT
MISSOURI

DESIGN AND CONSTRUCTION MANUAL
CONSTRUCTION MODIFICATION REQUEST

PROJECT NAME: Hazel Grove Elementary School

PREMISE ADDRESS: NW Rosemary Court Lee's Summit, MO 64086

PERMIT NUMBER: PL2026046

OWNER'S NAME: Kyle Gorrell – Lee's Summit School District

TO: Lee's Summit City Engineer

In accordance with Sections 1002.A and 1002.B of the City of Lee's Summit's Design and Construction Manual (DCM), I wish to apply for a modification to one or more specification(s). The following articulates my request for your review and action. (NOTE: Cite specific code sections and engineering justification and drawings.)

The Lee's Summit School District is dedicating an easement to preserve/protect a 100' stream buffer from the west edge of the apparent OHW of a natural drainage channel along the east property line of the subject property. that LSR7 is requesting authorization to disturb approximately 0.38 acres of the 6.15 acre stream buffer to clear vegetation, relocate an existing public sewer main, install storm sewer outfalls at the toe of slope and place fill along the outer edge of the buffer to support the construction of the school (Site adapt prototype) building pad in accordance with standard geotechnical recommendations for slope stability. Section 5605.3 4 states that *"No construction or disturbance of any type, including clearing, grubbing, stripping fill, excavation, linear grading, paving or building is allowed in the buffer zone except by permission of the City/County Engineer. Dense stands of native vegetation shall be maintained, particularly in the 25 closest to the top of bank."* The disturbed area will be restored with low maintenance ground cover and native vegetation upon completion of the earth disturbing activities. Furthermore, it is anticipated that the placement of the fill will not cause a rise in the 1% water surface elevation in the adjacent channel (DCM 5605.10).

SUBMITTED BY:

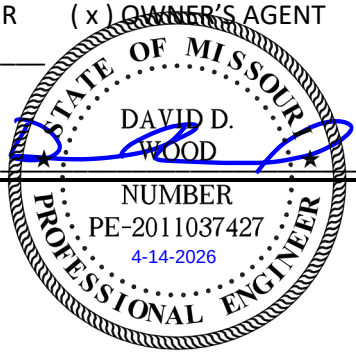
NAME: David Wood ( ) OWNER (x) OWNER'S AGENT

ADDRESS: 14700 West 114th Terrace

Tel.# (913)-894-5150

CITY, STATE, ZIP: Lenexa, KS 66215

Email: wood@kveng.com SIGNATURE:



FORWARDING MANAGER: _____ RECOMMENDATION: ( ) APPROVAL ( ) DENIAL

SIGNATURE:_____ DATE:_____

GEORGE BINGER III, P.E. – CITY ENGINEER: ( ) APPROVED ( ) DENIED

SIGNATURE:_____ DATE:_____

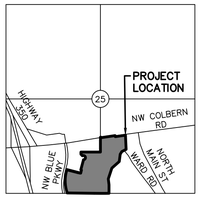
COMMENTS_____

_____

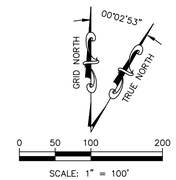
_____

A COPY MUST BE ATTACHED TO THE APPROVED PLANS

HAZEL GROVE ELEMENTARY SCHOOL
SUMMIT VILLAGE CORPORATE PARK, 2ND PLAT
GRADING AND STORM WATER MANAGEMENT PLAN
LEE'S SUMMIT, MO 64086
SECTION 25 - TOWNSHIP 48 NORTH - RANGE 32 WEST
UNNAMED TRIBUTARY OF LITTLE CEDAR CREEK
DISTURBED AREA = 20.531 Ac



VICINITY MAP
SEC 25 - TWP 48N - RNG 32W
NOT TO SCALE



SCALE: 1" = 100'

CONVERGENCE ANGLE
ESTABLISHED FROM JA-98.

PREPARED BY:
KAW VALLEY ENGINEERING, INC.
14700 W 114TH TERR.
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PHONE: (913) 894-5150
CONTACT: DAVID WOOD
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1901 NW BLUE PARKWAY,
UNITY VILLAGE, MO 64065
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502 SE TRANSPORT RD,
LEE'S SUMMIT, MO 64081
PHONE: (816) 986-2421
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EMAIL: kyle.gorrell@lsr7.net


NW COLBERN ROAD
NW BLUE PARKWAY
NW ROSEMARY COURT
HAZEL GROVE ELEMENTARY SCHOOL (PROTOTYPE ROTATED) FF=940.0±
PROPOSED STORM WATER BASIN
100' STREAM BUFFER
SEE NOTE 1
SEE NOTE 1
BM-62 ELEV=949.37
BM-63 ELEV=970.55
BM-64 ELEV=935.42
BM-81 ELEV=902.36
CP-203
CP-204
CP-205
CP-206
CP-207
CP-208
PROPOSED 15' U/E
PROPOSED 15' P/L
PROPOSED 30' B/L
PROPOSED 30' S/E
PROPOSED 15' S/E
PROPOSED 30' B/L
PROPOSED 15' P/L
PROPOSED 30' S/E
PROPOSED 30' B/L
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PROPOSED 30' B/L
PROPOSED 15' P/L
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PROPOSED 15' P/L
PROPOSED 30' B/L
PROPOSED 15' P/L

Lee Summit Hazel Grove Elementary School
Adjacent Property Owner Meeting
April 13, 2026

Attendees:

Name, Company	Attendee	Name, Company	Attendee
Kyle Gorrell, LSR7	X	Dustin Kurle, iDS	X
Kent Andersen, LSR7	X	Patrick Claybrook, iDS	X
Dr. Steve Shelton, LSR7	X		
Amy Westacott, HGE	X	Lauren Williams, POR	X

LSR7 – Lee's Summit School LSR7
HGE – Hazel Grove Elementary School
iDS – incite Design Studio
POR - Property Owner / Resident

A. Review of Presentation of New Hazel Grove Elementary School
   a. Site location and access
   b. Design of building

B. Questions from Property Owners / Residents
   a. Lauren Williams questioned why the Site at Colbern Road was selected?
      i. LSR7 staff stated that 7 to 8 sites were under review prior to the selection of the Colbern Road site.
      ii. LSR7 staff stated this site was selected based on the following preferences from the LSR7 school district.
         1. The new site adjacency to the existing Hazel Grove Elementary School.
         2. Certain existing utilities on the site that can be used by the new school which have design implications.
         3. Site size and layout has good access/connections to roads.
   b. Lauren Williams questioned why was a new Hazel Grove Elementary School needed?
      i. LSR7 and iDS staff stated the following reasons for a new Hazel Grove Elementary School.
         1. The current Hazel Grove Elementary School is 80-years old and has several additions to the school, but there is no longer room for the school to expand.
         2. It is difficult for the existing school to meet current school needs/standards.
         3. Routine maintenance on an 80-year-old school is difficult and not cost effective.
         4. Existing school layout does not meet accessibility requirements for students and staff.
         5. New school will have a tornado safe room for all students and staff.
   c. Lauren Williams questioned what will happen to the existing Hazel Grove Elementary School needed?
      i. LSR7 staff stated the existing school will still be used as a school, but no official plan has been determined yet.

C. Miscellaneous Discussion
   a. Lauren Williams stated that there are existing train tracks to the east of the new site location and that when a train goes by, she can feel vibrations at her apartment building.

i. Lauren asked if there will be any vibrations concerns?
   1. LSR7 and iDS Staff stated that we will review this concern during the design of the structural system.

Prepared By:

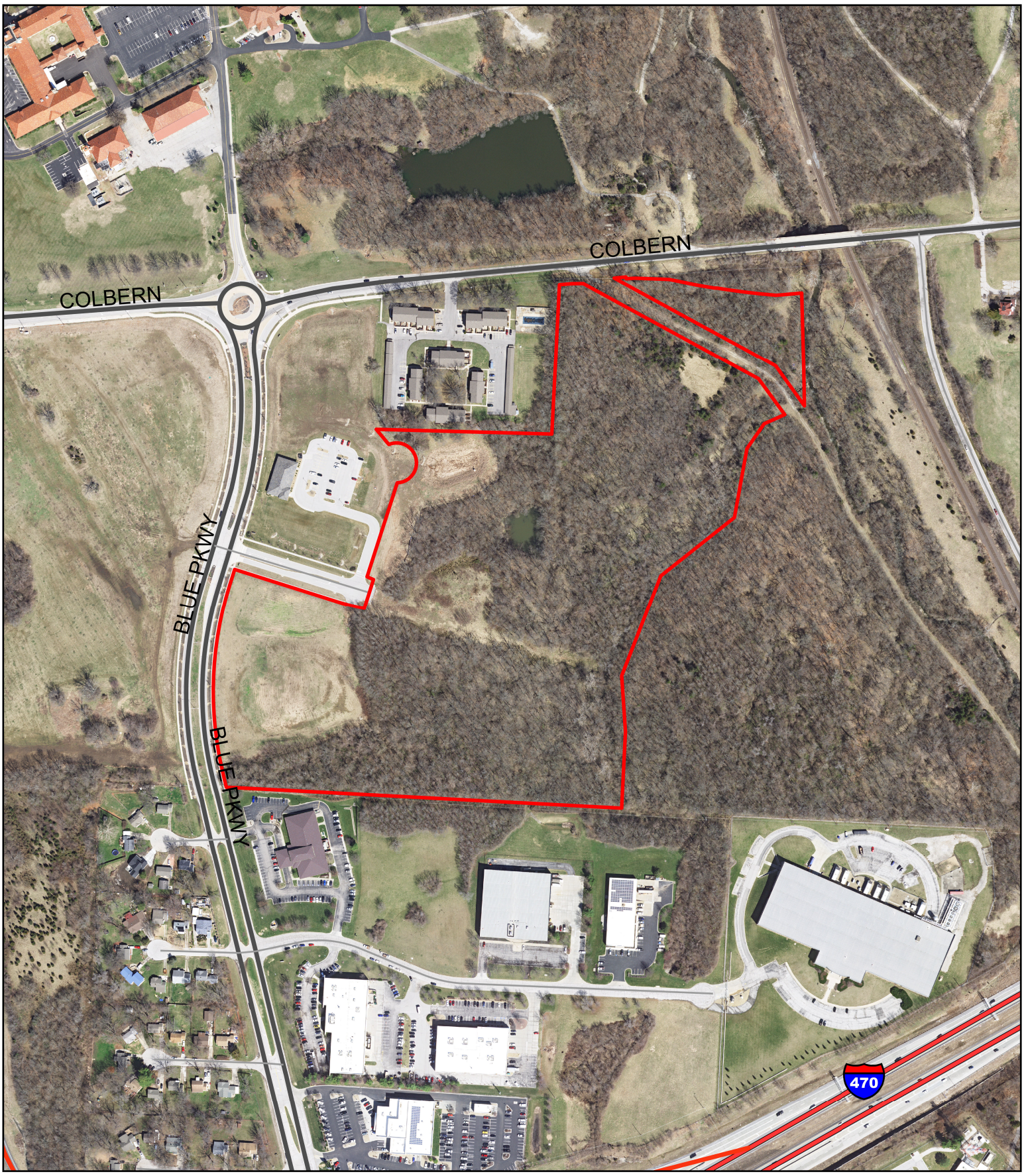
Dustin Kurle
Project Manager

Incite Design Studio

Enclosures:

Cc: File

Appl. #PL2026-046 - PRELIMINARY DEVELOPMENT PLAN - 1501 NW Blue Pkwy. & 861, 871, 911, 915, and 921 NW Colbern Rd.; LSR7, applicant



Packet Information

File #: 2026-7644, **Version:** 1

Application #PL2026-070 - PRELIMINARY DEVELOPMENT PLAN - The Rush Funplex, Lots 1-3, 900 NW Ward Rd; Rush Funplex, applicant

Issue/Request:
The applicant proposes a preliminary development plan for a 3-lot, 102,660 total sq. ft. commercial development anchored by a 77,225 sq. ft. indoor entertainment center for The Rush Funplex. The remaining two (2) lots are proposed to be developed with a total of 25,435 sq. ft. of multi-tenant flex office space. The proposed architectural style and palette of exterior building materials are complementary and reflective of those found in the surrounding Summit Orchards and Summit Innovation Center developments. Proposed materials include tilt-up concrete, brick, architectural concrete masonry units (CMU) and exterior insulation finish system (EIFS).

The subject application amends the previously approved preliminary development plan from 2022 for Summit Orchards West that proposed 123,000 sq. ft. industrial space on the subject 10.1-acre site.

The applicant requests one (1) modification as part of the application. The modification request is to the fenestration requirement for the street-facing façade (the east façade facing NW Ward Rd) of The Rush Funplex building on Lot 1.

Proposed Planning Commission Motion:
I move to recommend APPROVAL of Application #PL2026-070 - PRELIMINARY DEVELOPMENT PLAN - The Rush Funplex, Lots 1-3, 900 NW Ward Rd; Rush Funplex, applicant.

Dan Milich, Applicant Representative
Hector Soto, Jr., AICP, Senior Planner

Recommendation: With the conditions of approval below, the application meets the requirements of the UDO and Design & Construction Manual.

1. A modification shall be granted to the minimum 50% clear glass fenestration requirement for the pedestrian view zone along the street-facing facade of a building, to allow 1.67% clear glass fenestration for the pedestrian view zone along the east building façade facing NW Ward Rd.
2. Development shall be in accordance with the preliminary development plan dated April 14, 2026, and building elevations contained therein.
3. Road improvements shall be constructed as recommended in the Transportation Impact Analysis conducted by staff dated April 27, 2026.

Committee Recommendation: Planning Commission action pending.

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Development Services Department

Development Services Staff Report

File Number	PL2026-070
File Name	PRELIMINARY DEVELOPMENT PLAN – The Rush Funplex, Lots 1-3
Applicant	Rush Funplex
Property Address	900 NW Ward Rd
Planning Commission Date	May 14, 2026
Heard by	Planning Commission and City Council
Analyst	Hector Soto, Jr., AICP, Senior Planner

Public Notification

Pre-application held: March 31, 2026
Neighborhood meeting conducted: April 9, 2026
Newspaper notification published on: April 25, 2026
Radius notices mailed to properties within 300 feet on: April 23, 2026
Site posted notice on: April 23, 2026

Table of Contents

1. Project Data and Facts 2
2. Land Use 3
3. Project Proposal 4
4. Unified Development Ordinance (UDO) 5
5. Comprehensive Plan 6
6. Analysis 7
7. Recommended Conditions of Approval 11

Attachments

Transportation Impact Analysis prepared by Erin Ralovo, dated April 27, 2026 – 3 pages
Traffic Impact Study prepared by McCurdy Engineers, dated April 7, 2026 – 101 pages
Preliminary Development Plan, revision date April 14, 2026 – 32 pages

Project Narrative prepared by the applicant, dated April 14, 2026 – 4 pages
Parking Statement, dated April 24, 2026 – 2 pages
Preliminary Storm Drainage Report, signed and sealed March 13, 2026 – 36 pages
Location Map

1. Project Data and Facts

Project Data	
Applicant/Status	Rush Funplex/Developer
Applicant's Representative	Dan Milich
Location of Property	900 NW Ward Rd
Size of Property	6.02 acres (262,105 sq. ft.) – Lot 1 2.05 acres (89,202 sq. ft.) – Lot 2 2.01 acres (87,625 sq. ft.) – Lot 3 **±10.08 total acres (438,938 sq. ft.)**
Number of Lots	3
Building Area	77,225 sq. ft. – Lot 1 (Rush Funplex) 13,700 sq. ft. – Lot 2 (multi-tenant flex office) 11,735 sq. ft. – Lot 3 (multi-tenant flex office) **102,660 total sq. ft.**
Floor Area Ratio (FAR)	0.29 FAR – Lot 1 0.15 FAR – Lot 2 0.13 FAR – Lot 3
Zoning	PMIX (Planned Mixed Use)
Comprehensive Plan Designation	Summit Activity Center
Procedure	The Planning Commission makes a recommendation to the City Council on the proposed preliminary development plan. The City Council takes final action on the preliminary development plan in the form of an ordinance. ***Duration of Validity:*** Preliminary development plan approval by the City Council shall not be valid for a period longer than twenty-four (24) months from the date of such approval, unless within such period a final development plan application is submitted. The City Council may grant one extension not exceeding twelve (12) months upon written request.

Current Land Use
The subject 10.1-acre site is the remaining undeveloped property at the northern limits of the Summit Orchards West development. The subject property is platted as Summit Orchards West, Lot 10A.

Description of Applicant's Request

The applicant proposes a preliminary development plan for a 3-lot, 102,660 total sq. ft. commercial development anchored by a 77,225 sq. ft. indoor entertainment center for The Rush Funplex. The remaining two (2) lots are proposed to be developed with a total of 25,435 sq. ft. of multi-tenant flex office space. The proposed architectural style and palette of exterior building materials are complementary and reflective of those found in the surrounding Summit Orchards and Summit Innovation Center developments. Proposed materials include tilt-up concrete, brick, architectural concrete masonry units (CMU) and exterior insulation finish system (EIFS).

The subject application amends the previously approved preliminary development plan from 2022 for Summit Orchards West that proposed 123,000 sq. ft. industrial space on the subject 10.1-acre site.

The applicant requests one (1) modification as part of the application. The modification request is to the fenestration requirement for the street-facing façade (the east façade facing NW Ward Rd) of The Rush Funplex building on Lot 1.

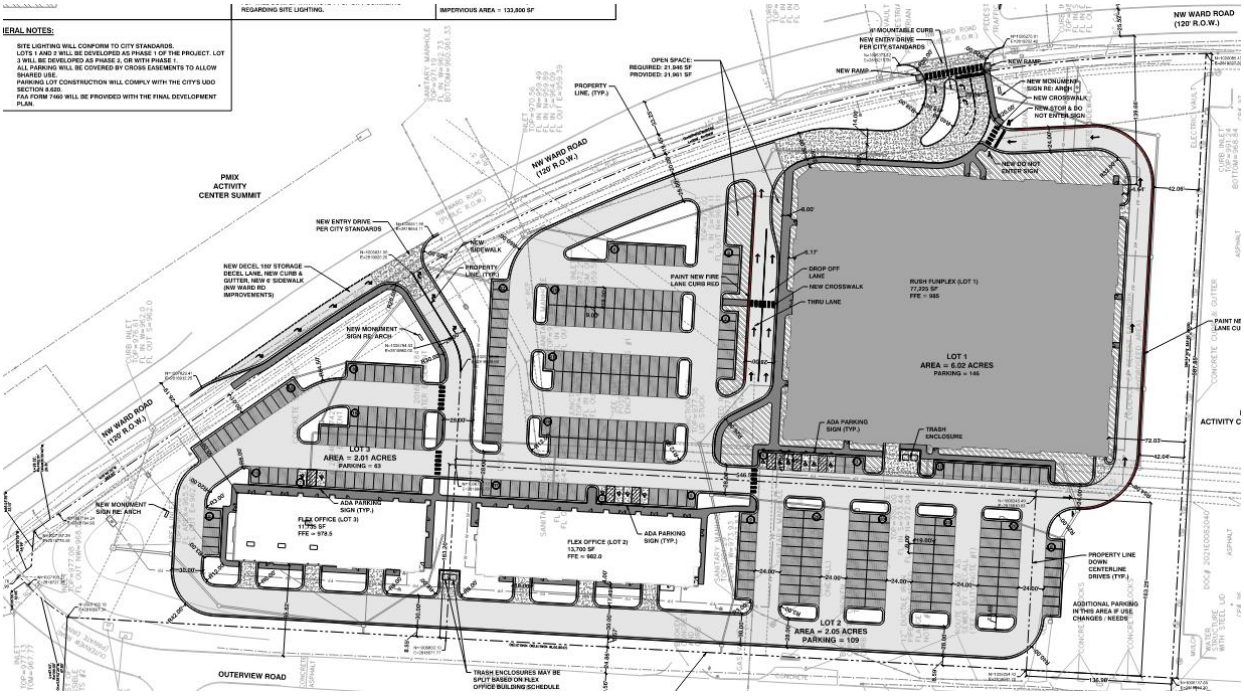

Figure 1 - Site Plan (plan north to the left)

2. Land Use

Description and Character of Surrounding Area

The subject site constitutes the northernmost 10.1 acres of the Summit Orchards West development. The site is located on the west side of NW Ward Rd at its intersection with NW Tudor Rd. The surrounding area is characterized by a mix of multi-family residential, commercial, industrial and institutional uses.

Adjacent Land Uses and Zoning

North (across NW Ward Rd):	Hotel and vacant, undeveloped acreage / PMIX (Planned Mixed Use)
South:	Multi-family residential / PMIX
East (across NW Ward Rd):	Institutional and undeveloped acreage / PMIX
West:	Summit Technology campus / PMIX

Site Characteristics
The 10.1-acre site is bordered by NW Ward Rd along the east and north; and a drive internal to the Summit Technology campus named NW Outerview Rd along the west. Vehicular access to the site will come via two driveways along NW Ward Rd, one of which is a signalized intersection at NW Tudor Rd. The site generally slopes from southwest to northeast.

Special Considerations
None.

3. Project Proposal

Site Design

Land Use	
Impervious Coverage:	30%
Pervious:	70%
TOTAL	100%

Parking

Proposed		**Required**	
Standard parking spaces proposed:	306	Total parking spaces required:	256
Accessible spaces proposed:	12	Accessible spaces required:	11
Parking Reduction requested?	No	Off-site Parking requested?	No

The UDO allows for the number of required parking spaces to be provided for a particular use or development to be established by one of two methods. One method is to determine the minimum number of parking spaces using Table 8-1 (Minimum Parking by Use) from UDO Section 8.530. The second method is to establish the minimum number of parking spaces through an Alternate Parking Plan. Use of an Alternate Parking Plan is encouraged to tailor parking to the particular needs of the use or development and to allow introduction of operational solutions such as shared parking.

The applicant proposes to establish the minimum parking requirement for the subject development via an Alternate Parking Plan based on documented parking generation information from other Rush Funplex sites. The subject development proposes 318 parking spaces for the total project; the Rush Funplex and the two (2) flex office buildings. A shared parking arrangement shall be employed among all uses. The majority of Rush Funplex customers are not of driving age, so they are dropped off or carpool to the facilities. Rush Funplex developments are parked at 1/500 square feet of "usable building area". Parked at 1 space / 500 sq. ft. of gross building area, the Rush Funplex use requires 154 parking spaces. This leaves 164 spaces for the

two (2) flex office buildings totaling 25,435 sq. ft., which yields a parking ratio of 6.4 parking spaces per 1,000 sq. ft. of building area. For comparison, Table 8-1 of the UDO requires a minimum of 4 parking spaces per 1,000 sq. ft. for office uses, while a minimum of 5 parking spaces per 1,000 sq. ft. are required for retail uses. The proposed Alternate Parking Plan is expected to satisfy the parking demands of the development based on the information provided by the applicant. It should be noted that the "Additional Parking" area noted on the site plan in the SW corner of the development site could support an additional 20+ parking spaces should parking become an issue in the future.

Setbacks (Perimeter)

Yard	Building / Parking Required	Building / Parking Proposed
Front (NW Ward Rd)	15' (Building) / 20' (Parking)	54' (Building) / 20' (Parking)
Side	10' (Building) / 6' (Parking)	72' (Building) / 42' (Parking)
Rear (NW Outerview Rd)	20' (Building) / 6' (Parking)	60' (Building) / 8.5' (Parking)

Structure(s) Design

Number and Proposed Use of Buildings
1 building – Lot 1 (The Rush Funplex) 1 building – Lot 2 (Multi-tenant flex office) 1 building – Lot 3 (Multi-tenant flex office)
Building Height
38' – Lot 1 (The Rush Funplex) 27'-4" – Lot 2 (Multi-tenant flex office) 27'-4" – Lot 3 (Multi-tenant flex office)
Number of Stories
1 story – Lot 1 (The Rush Funplex) 1 story – Lot 2 (Multi-tenant flex office) 1 story – Lot 3 (Multi-tenant flex office)

4. Unified Development Ordinance (UDO)

Section	Description
2.040,2.260,2.300,2.320	Preliminary Development Plans
4.240	Zoning Districts (PMIX)

Unified Development Ordinance

The proposed commercial uses on the PMIX property are allowed by right "per approved plan" under the UDO. The PMIX District is intended to permit a mixture of uses which, with property design and planning,

will be compatible with each other and with surrounding uses or zoning districts and will permit a finer-grained and more comprehensive response to market demand. As the last undeveloped lot in the Summit Orchards West development, the proposed uses are compatible with and complementary to area multi-family residential, commercial and institutional uses that comprise the larger surrounding Summit Orchards and Summit Technology developments.

Neighborhood Meeting
The applicant hosted a neighborhood meeting on April 9, 2026, from 6:30 PM to 7:30 PM at the University of Central Missouri's Summit Innovation Center. No members of the public attended.

5. Comprehensive Plan

Focus Areas	**Goals, Objectives & Policies**
Strong Neighborhoods & Housing Choice	Objective: Increase business activity by designing mutually supportive neighborhoods.
Resilient Economy	Objective: Diversity Lee's Summit economy. Objective: Increase business retention and grow business activity.
Land Use & Community Design	Objective: Plan for purposeful growth, revitalization and redevelopment.

Comprehensive Plan

The proposed uses are consistent with the Summit Activity Center land use designation under the Ignite Comprehensive Plan. The Summit Activity Center includes a range of commercial, industrial and residential development options. The Activity Center will continue to serve as a regional retail destination with the potential to serve as a community mobility hub, ensuring increased connectivity to all parts of Lee's Summit, as well as Interstate 470 and Highway 50.

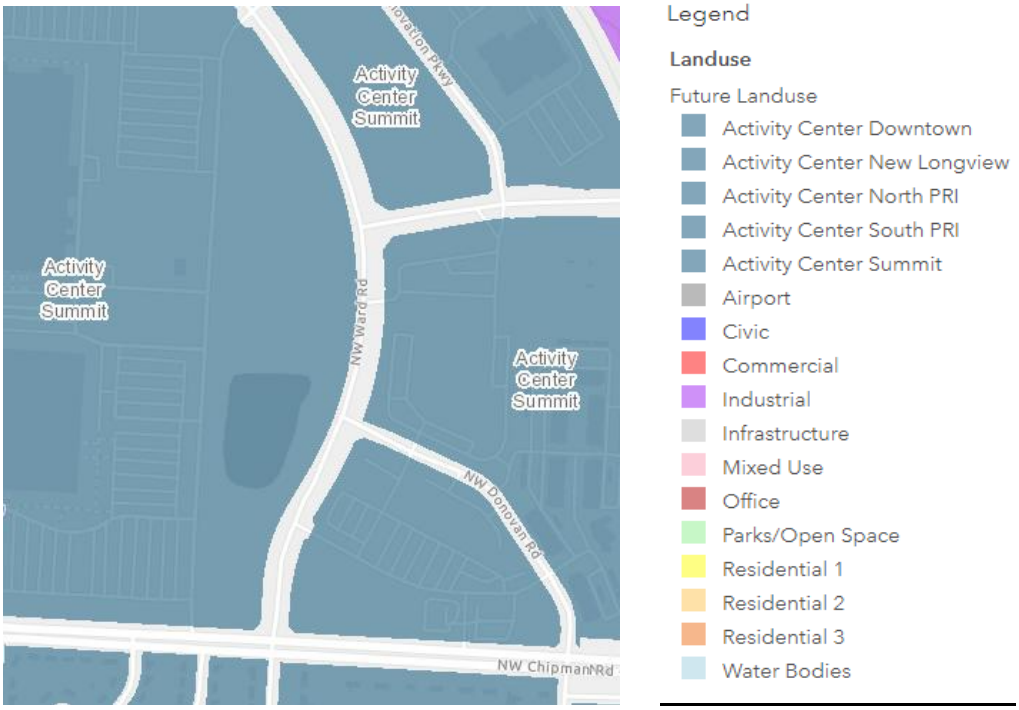

Figure 2 - Ignite Comprehensive Plan Future Land Use Map

6. Analysis

Background and History

- May 20, 1999 – The City Council approved the rezoning from PI (then M-1) to PMIX (then PUD) and the preliminary development plan (Appl. #1999-014) for the 333-acre Summit Technology Campus by Ordinance No. 4793. The plan included the site of the Summit Technology Campus, portions of Summit Fair, Summit Place, Summit Innovation Center, and the proposed Summit Orchards.
- August 24, 2006 – The City Council approved a rezoning (Appl. #2005-271) from CP-2 (Planned Community Commercial) and PMIX to PMIX and a preliminary development plan (Appl. #2005-272) for the Summit Fair shopping center by Ordinance No. 6262. The site encompasses 58.7 acres generally bounded by Chipman Road on the south, US 50 Hwy on the west and Blue Parkway on the east and north.
- December 12, 2006 – The Planning Commission approved the preliminary plat (Appl. #2006-230) of *Summit Fair, Lots 1-13 and Tracts A-F*.
- April 13, 2007 – A preliminary development plan application (Appl. #2007-073) was submitted to the Planning and Development Department for the proposed 725,240 sq. ft. Summit Fair Phase II shopping center development. The proposed Summit Fair Phase II site encompassed approximately 90 acres generally bounded by I-470 on the north, Ward Road on the south, Blue Parkway on the west and railroad right-of-way on the east. The application was withdrawn by the applicant prior to the application being considered by the Planning Commission or City Council.
- May 1, 2008 – The City Council approved the final plat (Appl. #2007-243) of *Summit Fair, 2nd Plat, Lots 8, 10-14 and Tract C* by Ordinance No. 6622.

- January 30, 2009 – The minor plat (Appl. #2008-181) of *Fleck, Lucy and Lilly, Lots 1 & 2* was recorded with Jackson County. Lot 1 is a 4.5-acre parcel that is the existing site of a KCP&L operations facility. Lot 2 is an undeveloped 1.0-acre parcel that will be incorporated into the Summit Place development.
- July 10, 2014 – The City Council approved a rezoning from PI to PMIX and preliminary development plan (Appl. #PL2011-119) by Ord. #7496. The Summit Place development is located on the west 43 acres of the 90-acre site previously proposed for Summit Fair Phase II.
- June 4, 2015 – The City Council approved a preliminary development plan (Appl. #PL2015-034) for approximately 38 acres comprising the Summit Innovation Center development, located at the northeast corner of NW Ward Road and the future NW Tudor Road extension, by Ord. #7637.
- May 19, 2016 – The City Council approved a preliminary development plan (Appl. #PL2016-039) for the 46-acre Summit Orchards mixed use development located at the northeast corner of NW Chipman Rd and NW Ward Rd by Ordinance No. 7885.
- December 6, 2022 – The City Council approved a preliminary development plan (Appl. #PL2022-311) for the 25-acre Summit Orchards West mixed use development located at the northwest corner of NW Chipman Rd and NW Ward by Ordinance No. 9551.

Development Standards

Because the PMIX zoning district is a customizable zoning district intended to allow the greatest flexibility to accommodate a mix uses and development concepts, the governing development standards are established at the time of preliminary development approval based on the specifics of the proposed plan. The previously approved preliminary development plan from 2022 for Summit Orchards West established the CP-2 (Planned Community Commercial) zoning district development standards (e.g. building setbacks, floor area ratio, building height, etc.) as the governing standards. The subject application makes no change to those established development standards and complies with said standards.

Compatibility

The property is located on the west side of the intersection of NW Ward Rd and NW Tudor Rd. This is an intersection of arterial streets serving the eastern area of the largest commercial node in the city comprised of the Summit Orchards, Summit Technology and Summit Fair developments.

The proposed commercial uses are compatible to existing development found in the initial phases of the Summit Orchards development along NW Chipman Rd and NW Ward Rd, as well as existing office and industrial-related uses found within the abutting Summit Technology campus, all of which is developed under PMIX zoning.

From an aesthetic standpoint, the proposed development will complement the existing architectural styles and material palette found in the existing Summit Orchards development. The proposed buildings will also complement the existing Summit Technology campus and the nearby Summit Innovation Center. The material palette for the development includes: tilt-up concrete, brick, architectural CMU, EIFS and glass.



Figure 3 – The Rush Funplex (front elevation)



Figure 4 – Lot 2 Multi-tenant flex office (front elevation)



Figure 5- Lot 3 Multi-tenant flex office (front elevation)

Adverse Impacts

The proposed development is not expected to detrimentally impact the surrounding area. The proposed project develops a vacant property at the west corner of two arterial streets (NW Ward Rd and NW Tudor Rd) at a major commercial node.

Public and Private Infrastructure Services

The proposed development will not impede the normal and orderly development and improvement of the surrounding property. The subject property is a vacant site, but has access to existing water, sanitary sewer and storm sewer that serves existing area development. Water service will come from an existing 12" main along the west side of NW Ward Rd. Sanitary sewer service to all three lots will connect to an existing 10"/12"main that runs through the site. Stormwater from the proposed development will be regionally managed by connecting to the public system along NW Ward Rd, which ultimately drains to a creek located to the northeast which runs parallel to the Union Pacific railroad tracks.

Traffic

The proposed development likely will generate more than 100 peak hour trips, a minimum condition in the Access Management Code for traffic impact studies. A Traffic Impact Study was prepared by McCurdy Engineers dated April 7, 2026, to assess the traffic impacts of the development on the existing infrastructure and provide public improvement recommendations for the subject development. The study made the recommendations listed below for the development. The Traffic Impact Analysis prepared by City staff concurs with the listed public improvement recommendations, the construction of which are conditions of approval of the subject application.

1. Construct a southbound right turn lane with a minimum storage Length of 150 feet plus taper on NW Ward Road at the right-in/right-out access. Maintain a minimum driveway throat length of 75 feet.
2. Lengthen the northbound left turn lane on NW Ward Road at NW Tudor Road to provide a minimum of 200 feet of storage plus taper. Maintain a minimum driveway throat length of 75 feet.
3. Construct a westbound left-turn Lane on NW Tudor Road with minimum length of 250 feet plus taper.
4. Convert the existing east leg of the NW Tudor Road intersection to three lanes, a left, through, and right.
5. The west leg of the NW Tudor Road intersection should be configured with one receiving lane and two exiting lanes consisting of a left-turn lane and a shared through/right turn lane.

Modifications

Fenestration (UDO Section 8.050.B.4.i). The applicant requests a modification. Staff supports the request.

- Required – All commercial and retail building façades that face a public or private street shall provide fenestrations with clear glass occupying no less than 50 percent (50%) of the pedestrian view zone. (The pedestrian view zone is defined as the 8'-tall of the building façade that is between 2' and 10' above the adjacent sidewalk or ground level.)
- Proposed – 1.67% of the pedestrian view zone along the east façade of the Rush Funplex building facing NW Ward Rd is occupied by clear glass.



Figure 6 - East facade of Rush Funplex building

- Recommended – The Rush Funplex is a purpose-built structure for an indoor entertainment center that houses bowling, billiards, go-carts, arcades, bumper cars, climbing walls foam pit, etc. The interior use of space to accommodate most of these uses prohibit exterior glass at the pedestrian level, thus the need for a modification to the fenestration requirement along the building's street-facing east façade.

  The intent of the fenestration requirement along a building's street-facing façade is to help provide some pedestrian scale to commercial buildings, provide visual interest and break up the large wall planes. Architecturally, the east façade has a clearly defined base, middle and top by employing the use of contrasting materials, colors, projections and varying roofline to provide visual interest, break up the large wall planes and provide some pedestrian scale. An extensive amount of proposed landscaping along the east side of the building will also help soften the view of the building when viewed from NW Ward Rd. Staff supports the requested modification.

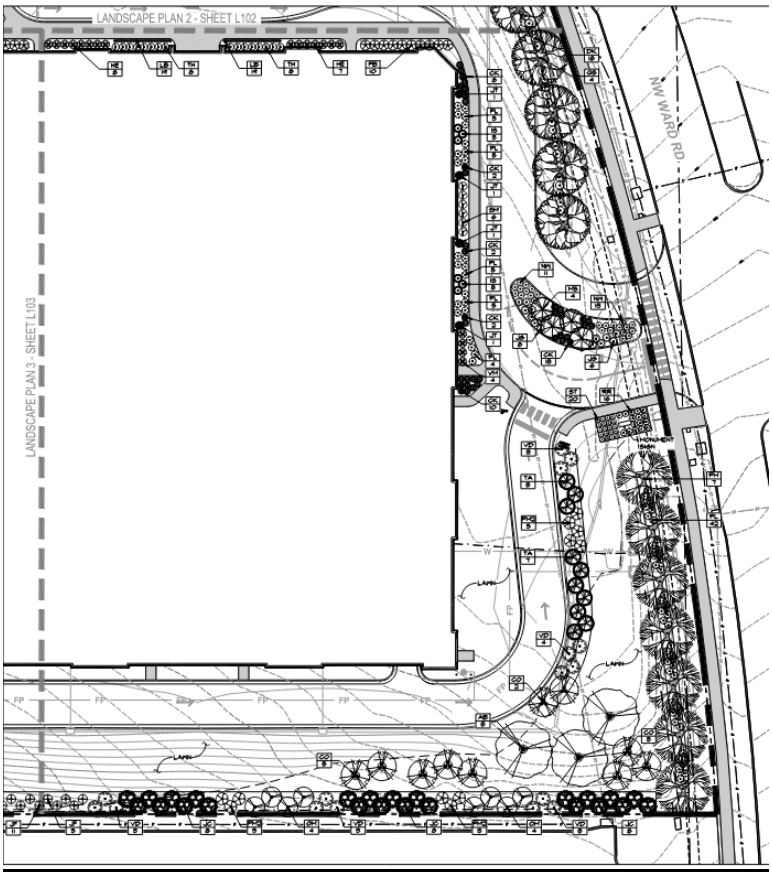

Figure 7 - Landscape Plan (east side of Rush Funplex building along NW Ward Rd)

Recommendation

With the conditions of approval below, the application meets the requirements of the UDO and Design & Construction Manual.

7. Recommended Conditions of Approval

Site Specific

1. A modification shall be granted to the minimum 50% clear glass fenestration requirement for the pedestrian view zone along the street-facing facade of a building, to allow 1.67% clear glass fenestration for the pedestrian view zone along the east building façade facing NW Ward Rd.
2. Development shall be in accordance with the preliminary development plan dated April 14, 2026, and building elevations contained therein.
3. Road improvements shall be constructed as recommended in the Transportation Impact Analysis conducted by staff dated April 27, 2026.

Standard Conditions of Approval

4. All required engineering plans and studies, including water lines, sanitary sewers, storm drainage, streets and erosion and sediment control shall be submitted along with the final development plan. All public infrastructure must be substantially complete, prior to the issuance of any certificates of occupancy.
5. All Engineering Plan Review and Inspection Fees shall be paid prior to approval of the associated engineering plans and prior to the issuance of any site development permits or the start of construction (excluding land disturbance permit).
6. A Land Disturbance Permit shall be obtained from the City if groundbreaking will take place prior to the issuance of a site development permit, building permit, or prior to the approval of the Final Development Plan / Engineering Plans.
7. Private parking lots shall follow Article 8 of the Unified Development Ordinance for pavement thickness and base requirements.
8. All issues pertaining to life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to the safety to fire fighters and emergency responders during emergency operations, shall be in accordance with the 2018 International Fire Code.
9. Sign permits shall be obtained prior to installation of any signs through the Development Services Department. All signs proposed must comply with the sign requirements as outlined in the sign section of the Unified Development Ordinance.

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DEVELOPMENT REVIEW FORM
TRANSPORTATION IMPACT

DATE:	April 27, 2026	**CONDUCTED BY:**	Erin Ralovo, PE, PTOE
SUBMITTAL DATE:	March 11, 2026	**PHONE:**	816.969.1800
APPLICATION #:	2026070	**EMAIL:**	Erin.Ralovo@cityofls.net
PROJECT NAME:	RUSH FUNPLEX	**PROJECT TYPE:**	Prel Dev Plan (PDP)

SURROUNDING ENVIRONMENT *(Streets, Developments)*

The proposed development is located at the northwest corner of NW Tudor Road and NW Ward Road. This development is surrounded by commercial development on the south and east. Directly south and to the east are existing apartments.

ALLOWABLE ACCESS

The proposed development will be accessed from two access points along NW Ward Road. The north most access will be a right-in/right-out access approximately 490 feet south of NW Outerview Road. The main entrance will be full access and create the fourth leg of the intersection of NW Ward Road and NW Tudor Road. NW Outerview Road is directly to the west of the development but there will not be any access from NW Outerview to this development.

EXISTING STREET CHARACTERISTICS *(Lanes, Speed limits, Sight Distance, Medians)*

NW Tudor Road is a generally four-lane divided Minor Arterial roadway with a speed limit of 35 MPH. NW Tudor Road has sidewalk, shared-use path, curb and gutter, a dividing median, and turn lanes at NW Ward Road. NW Ward Road is generally a four-lane divided Major Arterial roadway with a speed limit of 35 MPH. Ward Road has sidewalk, shared-use path, curb and gutter, a dividing median, and turn lanes at NW Tudor Road and NW Outerview Drive. There is no sidewalk on the east side of Ward north of Tudor Road as this is mostly undeveloped land. Outerview Drive is a private undeveloped road. Outerview Drive does not have any improvements and a speed limit of 20 MPH. Outerview Drive has right-in/right-out access at Chipman Road.

ACCESS MANAGEMENT CODE COMPLIANCE? **YES** ☒ **NO** ☐

All intersection spacing, turn lanes and other applicable criteria required by the Access Management Code have been satisfied as shown on the development plans.

TRIP GENERATION

PHASE 1: Time Period	Total	In	Out
Weekday	N/A	N/A	N/A
A.M. Peak Hour	0	0	0
P.M. Peak Hour	257	144	113

PHASE 2: Time Period	Total	In	Out
Weekday	746	N/A	N/A
A.M. Peak Hour	79	58	21
P.M. Peak Hour	88	30	58

Trips were generated using ITE Codes in the ITE Trip Generation Manual 12th Edition using ITE code 435 - Multipurpose Recreational Facility for Phase 1 and codes 710 - General Office Building and 932 - High-Turnover (Sit-Down) Restaurant for Phase 2. No trips are generated for the AM peak in Phase 1 since the Rush Funplex does not open until 10:00 am.

TRANSPORTATION IMPACT STUDY REQUIRED? **YES** ☒ **NO** ☐

The proposed development likely will generate more than 100 peak hour trips, a minimum condition in the Access Management Code for Traffic Impact Studies. A Traffic Impact Study was prepared by McCurdy Engineers dated April 7, 2026, to assess the traffic impacts of the development on the existing infrastructure and provide public improvement recommendations for the subject development. The study made the following recommendations for the development:

1. Construct a southbound right turn lane with a minimum storage Length of 150 feet plus taper on NW Ward Road at the right-in/right-out access. Maintain a minimum driveway throat length of 75 feet.
2. Lengthen the northbound left turn lane on NW Ward Road at NW Tudor Road to provide a minimum of 200 feet of storage plus taper. Maintain a minimum driveway throat length of 75 feet.
3. Construct a westbound left-turn Lane on Tudor Road with minimum length of 250 feet plus taper.
4. Convert the existing east leg of the Tudor Road intersection to three lanes, a left, through, and right.
5. The west leg of the Tudor Road intersection should be configured with one receiving lane and two exiting lanes consisting of a left-turn lane and a shared through/right turn lane.

LIVABLE STREETS *(Resolution 10-17)* **COMPLIANT** ☒ **EXCEPTIONS** ☐

The proposed development plan will provide required sidewalks and all elements otherwise required by ordinances and standards, including but not limited to property landscaping, lighting, parking, and ADA accessibility. No exceptions to the Livable Streets Policy adopted by Resolution 10-17 are requested.

RECOMMENDATION: **APPROVAL** ☒ **DENIAL** ☐ **N/A** ☐ **STIPULATIONS** ☐

Recommendations for Approval refer only to the transportation impact and do not constitute an endorsement from City Staff.

Staff recommends approval of the proposed preliminary development plan subject to the conditions noted below and any such public improvements shall be substantially completed prior to any issued occupancy permit associated with Phase 1 of the development described therein:

1. Construct a southbound right turn lane with a minimum storage Length of 150 feet plus taper on NW Ward Road at the right-in/right-out access. Maintain a minimum driveway throat length of 75 feet.
2. Lengthen the northbound left turn lane on NW Ward Road at NW Tudor Road to provide a minimum of 200 feet of storage plus taper. Maintain a minimum driveway throat length of 75 feet.
3. Construct a westbound left-turn Lane on Tudor Road with minimum length of 250 feet plus taper.
4. Convert the existing east leg of the Tudor Road intersection to three lanes, a left, through, and right.
5. The west leg of the Tudor Road intersection should be configured with one receiving lane and two exiting lanes consisting of a left-turn lane and a shared through/right turn lane.

Lot 10-A Preliminary Plan
Traffic Impact Study
LEE'S SUMMIT, MISSOURI

April 7th, 2026



Prepared by:

McCURDY ENGINEERS

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INTRODUCTION

The purpose of this traffic impact study is to assess the potential impact on traffic with the Lot 10-A Preliminary Plan development on the northwest corner of the intersection of Tudor Road and Ward Road in Lee's Summit, Missouri. The location of the development in relation to the street network is shown in Figure 1. The site plan for the development is shown in Figure 2.

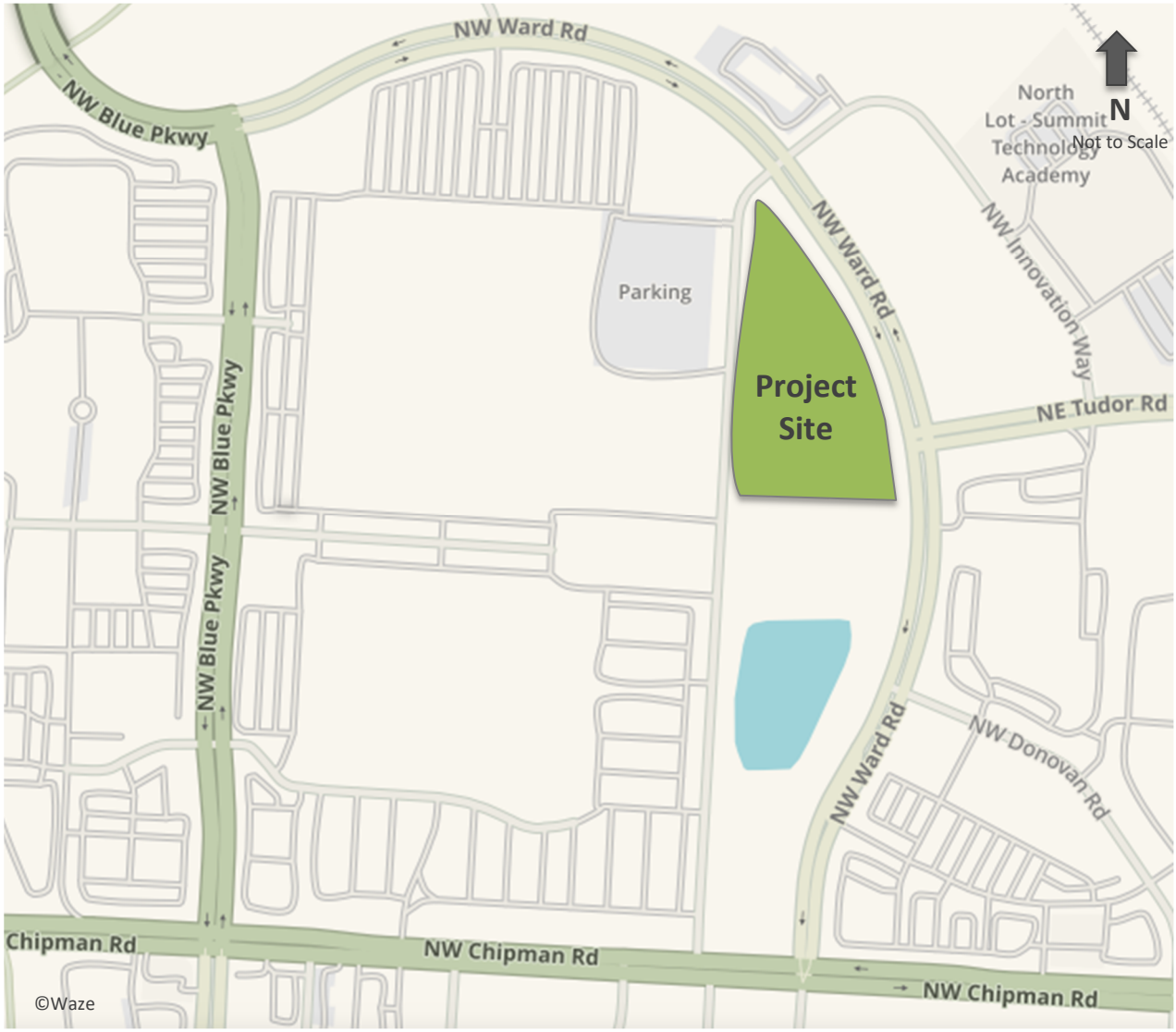

Figure 1 – Development Location

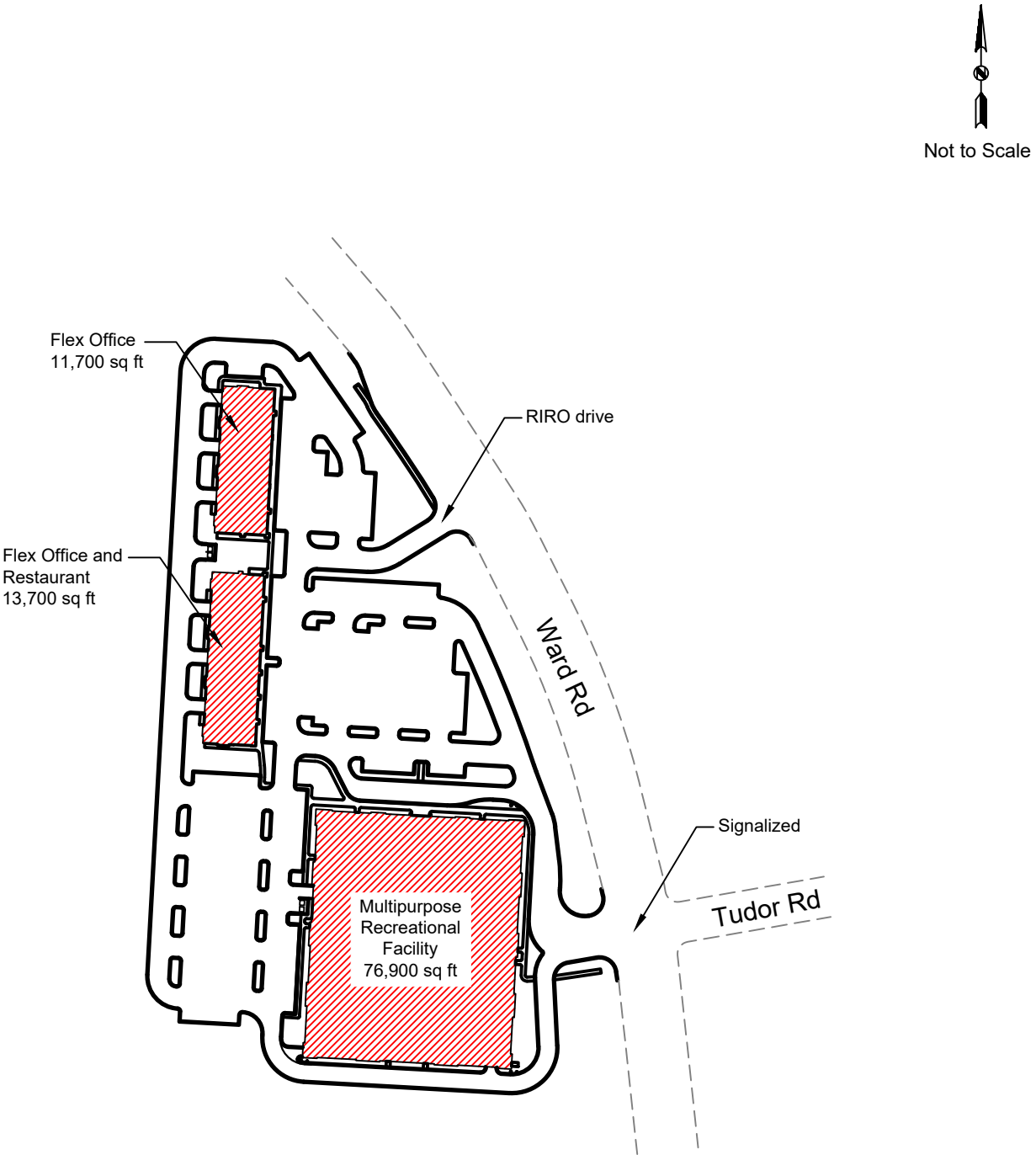

Figure 2 - Site Plan

EXISTING CONDITIONS

The site is in Lee's Summit, Missouri, on the northwest quadrant of the intersection of Tudor Road and Ward Road. The land use of the surrounding area is undeveloped to the northeast, light industrial to the west, commercial/retail/multi-family housing to the east, and the Summit Orchard West mixed use development to the south.

Street Network and Traffic Control

The development is bordered on the west by Outerview Road and on the east by Ward Road. Chipman Road is located to the south of the site and provides access to Missouri Highway 50.

Ward Road is a four-lane north-south median divided major arterial roadway with a posted speed limit of 35 mph. The intersection of Chipman Road and Ward Road is signalized with left-turn lanes on all approaches (dual lefts southbound and eastbound), a southbound right-turn lane, and a westbound right-turn lane. The intersection of Chipman Road and Ward Road is approximately 2,700 feet west of MO Highway 50.

Outerview Road/Innovation Parkway is a two-lane unmarked north-south private drive with no posted speed limit. The intersection of Outerview Road and Ward Road to the north is stop-controlled, with Outerview Road stopping and aligning with Innovation Parkway on the east side of Ward Road.

Tudor Road is a four-lane east-west median divided minor arterial roadway. There is a posted speed limit of 35 mph. The intersection of Tudor Road and Ward Road is a signalized T-intersection.

Traffic Volumes

Intersections counted for analysis in this study were:

- Ward Road and Tudor Road
- Ward Road and Innovation Parkway/Outerview Road

The turning movement traffic counts were completed on Wednesday, January 7th, 2026 and Tuesday, February 24th, 2026 for the peak volume time periods. Morning traffic counts were conducted from 7:00 AM until 9:00 AM and afternoon traffic counts were from 4:00 PM until 6:00 PM. The morning peak period was determined to be from 7:00 AM until 8:00 AM and the afternoon peak period was determined to be from 4:30 PM until 5:30 PM.

For both the Ward Road and Innovation Parkway/Outerview Road intersection and the Ward Road and Tudor Road intersection, trips from the *Summit Orchard North* Traffic Impact Study (McCurdy Engineers, January 2024) were added to the existing morning peak hour and afternoon peak hour traffic scenarios to create the existing plus site conditions for analysis as these sites are approved and under construction.

The existing plus approved traffic volumes are shown on Figure 3.

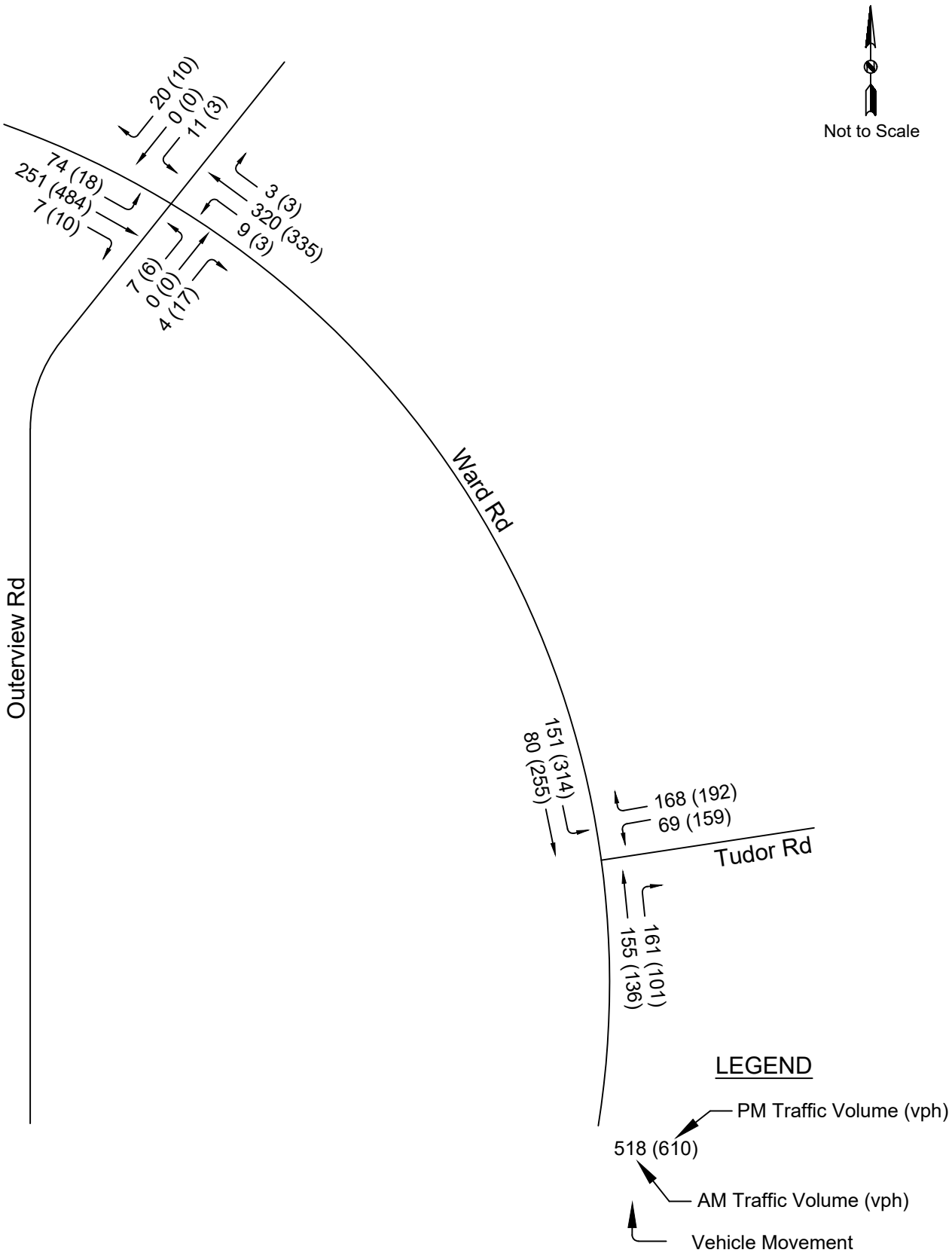

Figure 3 - Existing Traffic Volumes

PROPOSED CONDITIONS

Lot 10-A Preliminary Plan is expected to be constructed in two phases. The first phase will be on the south side of the site and will be a 76,900 square feet multipurpose recreational facility. The second phase will be on the north/west side of the development and will include two buildings totaling 25,400 square feet—3,900 square feet of restaurant and 21,500 square feet of flex office.

Access Plan

The site will be accessed at two locations from Ward Road—construction of the west leg of the signalized Tudor Road intersection and construction of a right-in/right-out (RIRO) only access north of Tudor Road. A drive to the south of the building will connect to the Tudor Road entrance; however, this drive is intended for fire access and occasional deliveries occurring outside of the site's peak hours. It will be signed as a one-way access fire drive and is not intended for general site traffic. Its location is also expected to naturally discourage regular use in addition to the signing.

Access to the front of the FunPlex building will be provided by two lanes: a drop-off lane and an outside lane that will function as a passing lane for vehicles to bypass those loading or unloading.

There are no plans for access to the site from Outerview Road or interconnectivity with the site to the south.

Sight Distance

Sight distance was measured at the proposed RIRO access using the methodology recommended by the American Association of State Highway and Transportation Engineers (AASHTO) for the 35 mph speed limit on Ward Road.

For 35 mph, AASHTO requires a minimum intersection sight distance of 390 feet and a stopping sight distance of 250 feet. Based on field measurements at the RIRO access, the available intersection and stopping sight distance is greater than 400 feet and meets the AASHTO requirements.

Driveway Spacing

Adequate spacing between access points is important for traffic safety and operation. Per City of Lee's Summit *Access Management Code*, March 2018, the minimum spacing standard for a full median opening along a major arterial is ¼ mile between access points. For a three-quarter access or right-in/right-out access, the intersection should not be located within the functional area of another intersection or in a location where sight distance is inadequate.

The proposed centerline-to-centerline spacing along Ward Road is:

- 490 feet between Outerview Road/Innovation Park and RIRO Drive
- 550 feet between RIRO Drive and Tudor Road

The proposed right-in/right-out drive has adequate sight distance and is located outside the functional area of both adjacent intersections.

Crash Analysis

Crashes at the study intersections were analyzed over a three-year period (2023-current) from City of Lee's Summit Police Department data to identify existing crash patterns. There were a total of nine crashes reported within the project corridor during the crash study time period. There were no fatal crashes within the study area.

Ward Road between Innovation Parkway/Outerview Road and Tudor Road

The one reported crash, during the study time period, was a Property Damage Only (PDO), lost control/fixed object crash where the driver struck the median.

Ward Road and Tudor Road

There were five reported crashes at the intersection during the study period—four lost control/fixed object crashes and one angle crash.

Two of the lost control/fixed object crashes were attributed to snowy/icy conditions, while the other two occurred when drivers failed to complete the turning movement. The angle crash was attributed to a failure to stop at a red traffic signal.

All reported crashes resulted in property damage only (PDO).

Ward Road and Innovation Parkway/Outerview Road

During the study period, three crashes were reported at the intersection.

Two of the crashes involved lost control/fixed object. One of these occurred under snowy/icy conditions (one reported injury), while the other occurred when a driver lost control of the vehicle (PDO). The third crash was a rear-end collision at the stop sign, which resulted in one injury and was attributed to the following driver following too closely.

No correctable crash patterns emerged as a result of the study and no recommendations are made to alter the study intersections based on crash data.

Detailed crash summaries are included in the Appendix.

Throat Length Analysis

The throat lengths for the proposed entrances into the site from Ward Road were compared to City of Lee's Summit *Access Management Code*, March 2018 requirements for drives adjacent to arterial roadways based on vehicles per hour.

Throat lengths for entrances onto Ward Road are provided in Table 1.

Table 1 – Driveway Throat Depths

Intersection	Recommended Throat Length (feet)	Site Plan Measured Throat Length (feet)
Ward Road and RIRO Drive	75	130
Ward Road and Tudor Road*	75	190

* The throat length is measured along the curved drive, as the intersecting drive to the south is intended for deliveries and fire access only and will be signed accordingly.

All accesses onto Ward Road meet or exceed the recommended throat lengths.

School bus turning movement exhibits are included in the Appendix.

Trip Generation

The expected trip generation for the development was estimated using the 12th Edition of the Trip Generation Handbook published by the Institute of Transportation Engineers. The trip generation was based on Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 AM along with Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 PM criteria.

The multipurpose recreational facility is not expected to generate a morning peak hour, as it does not open until 10:00 AM. In addition, the Trip Generation Handbook does not provide weekday morning peak hour trip generation data for this land use.

Estimates for the expected trips generated by the development are provided in Table 2.

Table 2 – Trip Generation					
	Weekday	**A.M.**		**P.M.**	
ITE Land Use Code Units	**Trips (vpd)**	**Trips In (vph)**	**Trips Out (vph)**	**Trips In (vph)**	**Trips Out (vph)**
210-Multipurpose Recreational Facility 76,900 sq ft	n/a	0	0	144	113
Phase 1 Total	**n/a**	**0**	**0**	**144**	**113**
710-General Office Building 25,400 sq ft	341	39	5	8	44
932-High-Turnover (Sit-Down) Restaurant 3,900 sq ft	405	19	16	22	14
Phase 2 Total	**746**	**58**	**21**	**30**	**58**
Phase 1 & 2 Total	**n/a**	**58**	**21**	**174**	**171**

Trip Distribution

The trip distribution pattern was determined for the site based on the existing directional traffic pattern of the peak period and based on a general analysis of the surrounding area. The detailed distribution patterns can be found in the appendix. Based on the existing traffic patterns, the type of development, location of nearby schools, and the metropolitan population centers, the new trips were assigned onto the roadway network, as shown below for the morning and afternoon periods.

Trip distribution during the morning peak period:

- 45% to and 40% from the north
- 25% to and 30% from the south
- 30% to and from the east

Trip distribution during the afternoon peak period:

- 35% to and 50% from the north
- 30% to and 25% from the south
- 35% to and 25% from the east

Existing Plus Site Traffic Volumes

The expected development site-generated traffic volumes were added to the existing traffic scenario. The volumes are shown on Figures 4, 5, and 6.

Future Traffic Volumes

Future traffic volumes were generated at a rate of 2% annual growth over a twenty-year period. The calculated traffic volumes were added to the existing plus site traffic. The volumes for the future morning and afternoon peak hours are shown on Figure 7.

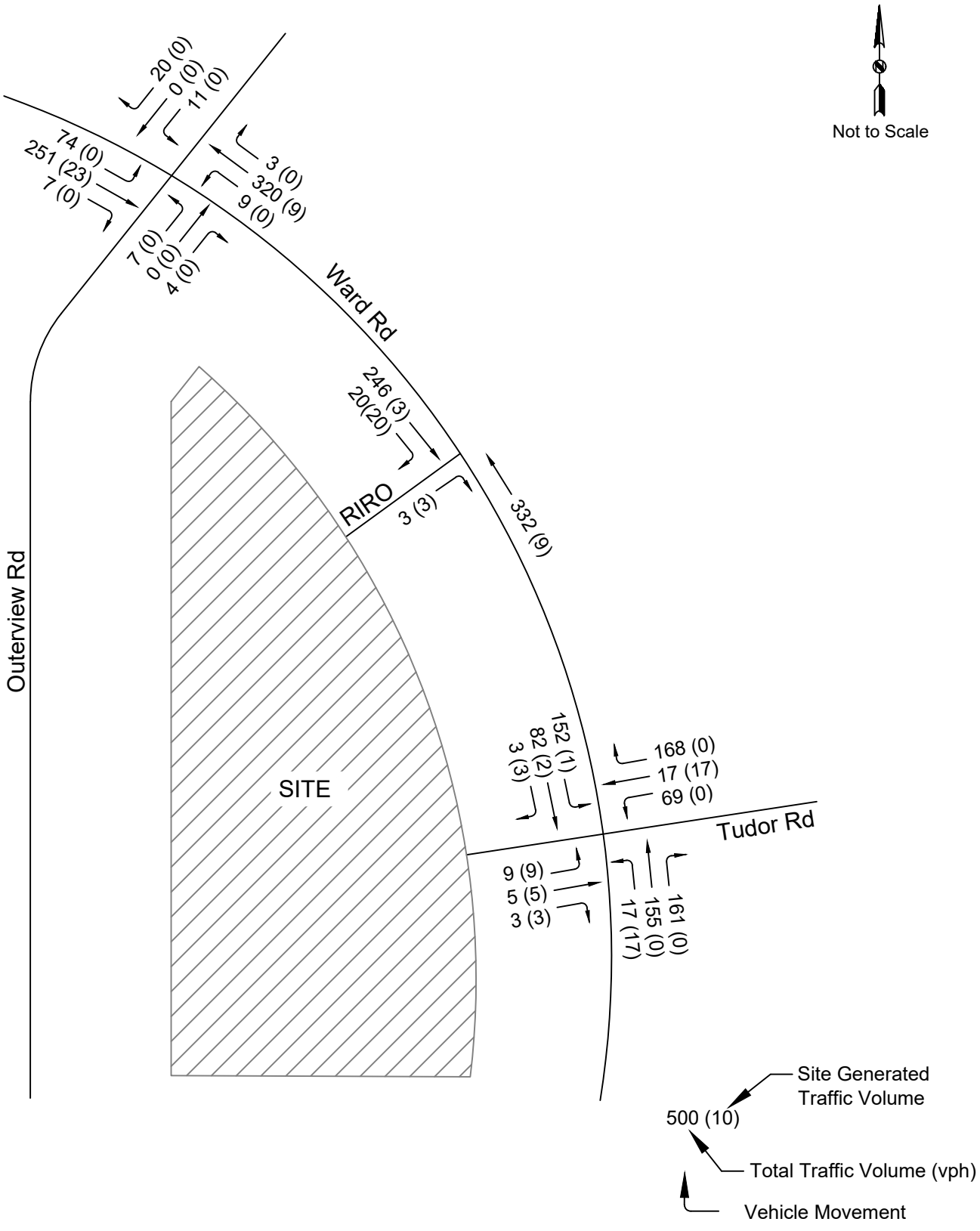

Figure 4 - Existing plus Site (Phase 1 & 2) AM Peak Hour Volumes

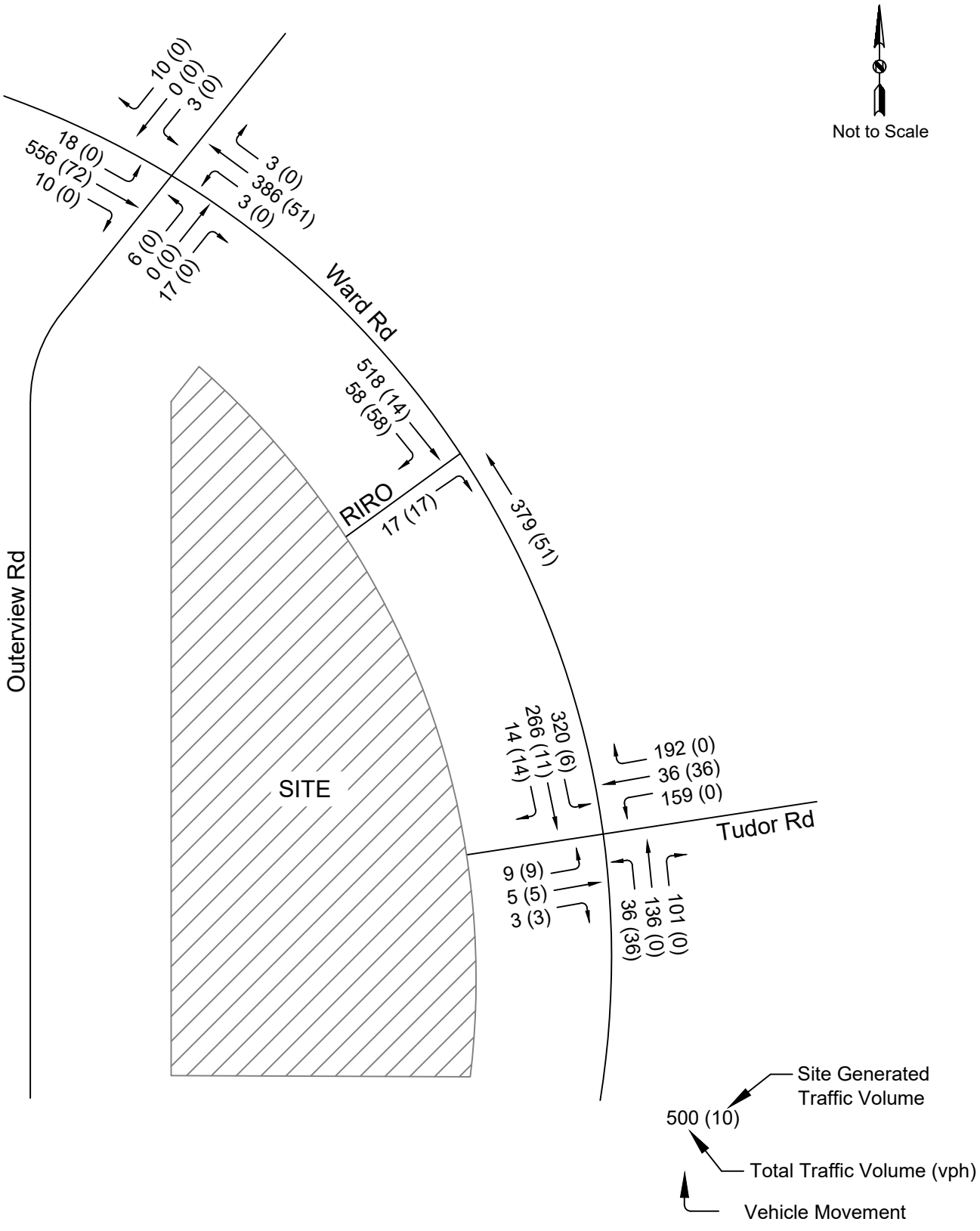

Figure 5 - Existing plus Site (Phase 1) PM Peak Hour Volumes

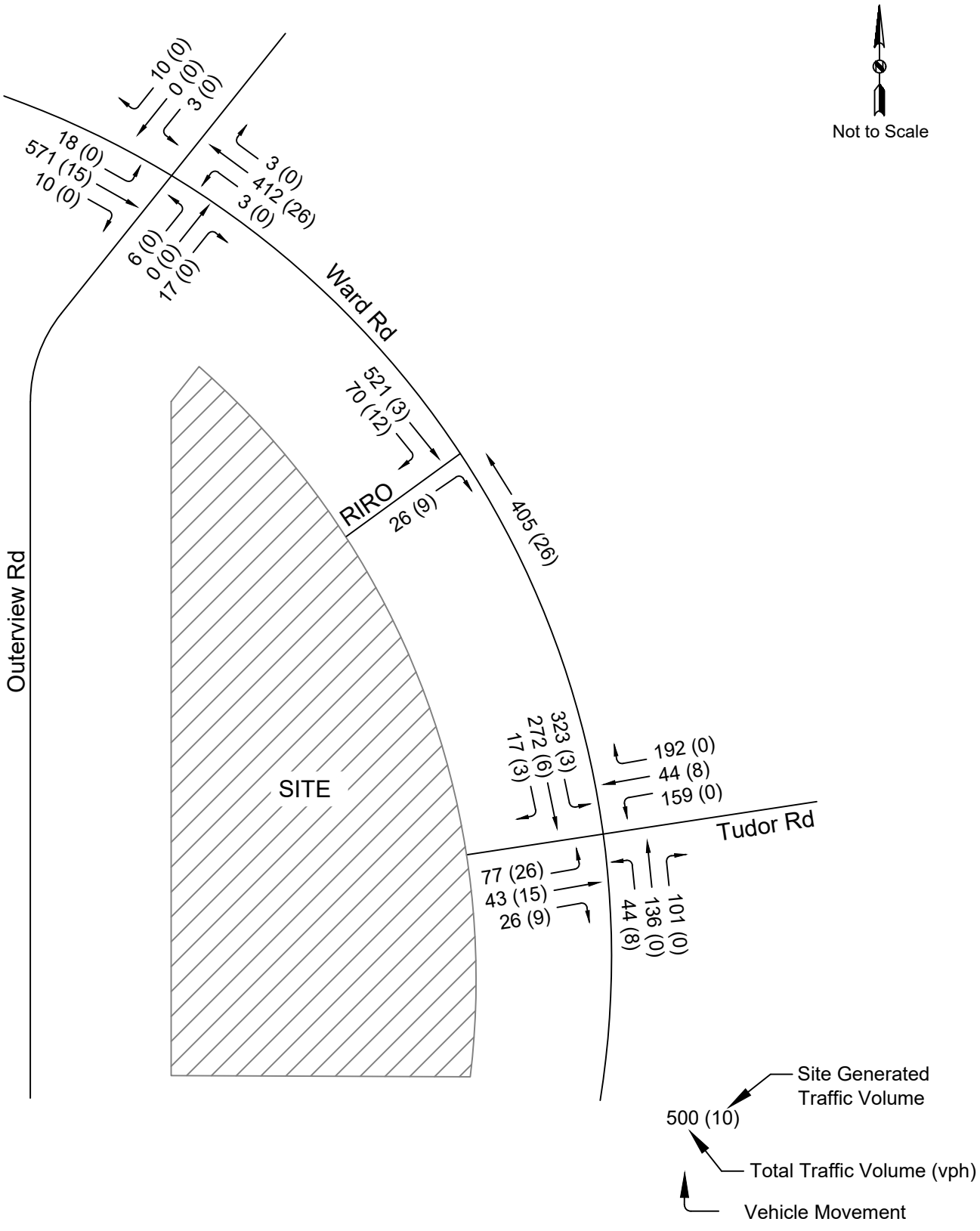

Figure 6 - Existing plus Site (Phase 1 & 2) PM Peak Hour Volumes

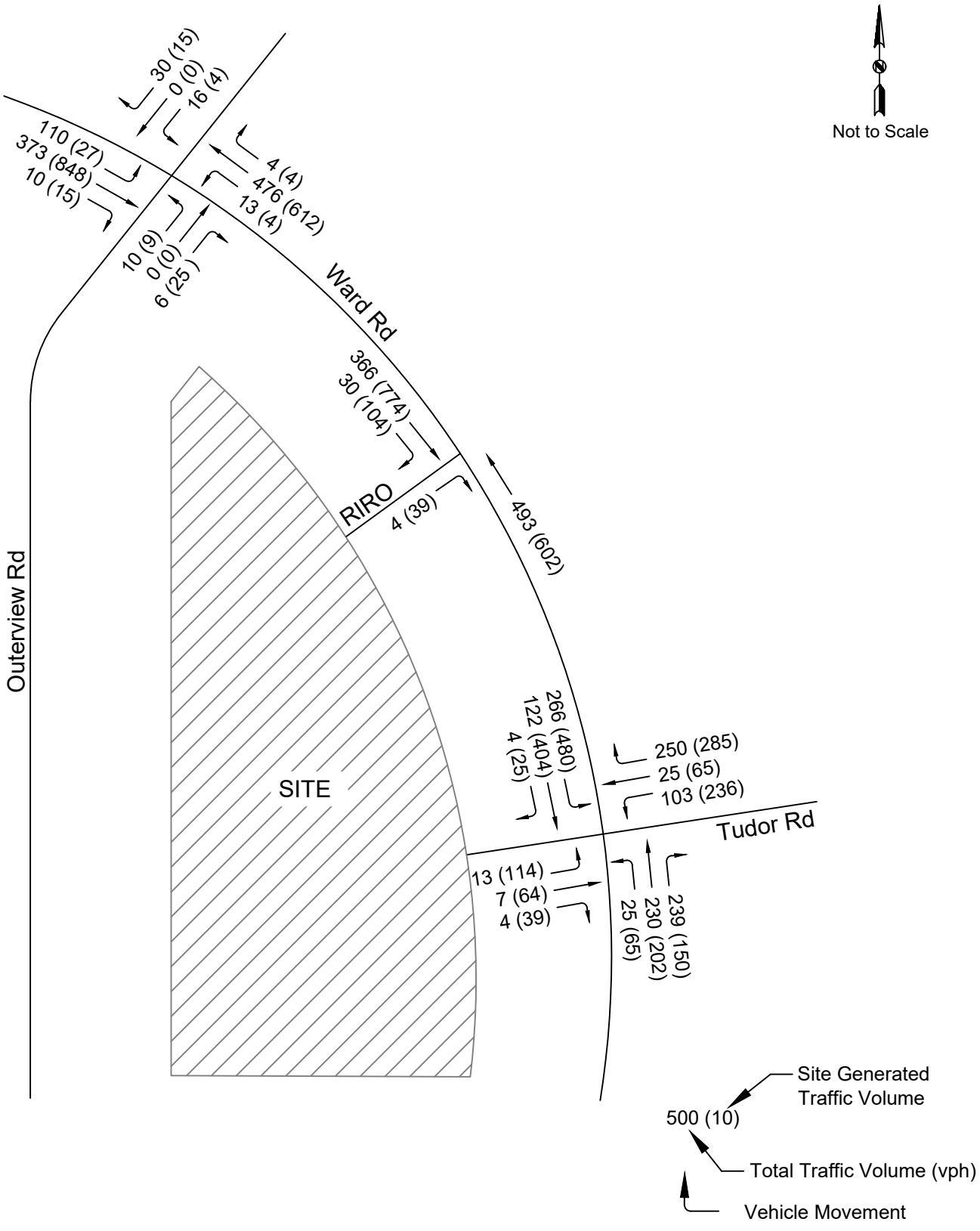

Figure 7 - Future AM & PM Peak Hour Volumes

Signal Warrant Study

A traffic signal warrant study was not included in this report because the intersection of Ward Road and Tudor Road is already signalized, and the proposed right-in/right-out access would not meet the criteria for installation of a traffic signal.

Right-Turn and Left-Turn Lane Warrants

The need for right and left-turn lanes into the site entrances was evaluated using the City of Lee's Summit *Access Management Code*, March 2018 turning lane guidelines as part of this study for the existing plus site (Phase 1 & 2) condition.

Left-Turn Warrant

Left-turn lane guidelines per City of Lee's Summit *Access Management Code*:

> 16.1.B. Left-turn lanes shall be provided on all arterial streets at the intersection with other arterial and collector streets. Left-turn lanes shall be provided on minor arterial streets at the intersection with any local street or driveway where the left-turn volume is at least 20 vehicles in any hour. On major arterial streets, left-turn lanes shall be at the intersection with all connectors (an exception may be granted for a singular, existing, residential lot).
>
> 16.1.E. Left-turn lanes shall be provided at all median openings on roadways with medians.
>
> 16.1.H. The minimum length of left-turn lane should be 250 feet plus taper on an arterial street intersecting another arterial street and 200 feet plus taper on an arterial street at other locations. The minimum length of left-turn lane on collectors should be 150 feet plus taper. The minimum length of left-turn lane on connectors should meet the driveway throat length requirements.

There is an existing northbound left-turn lane at the Tudor Road intersection with approximately 90 feet of storage. City guidelines require a minimum storage length of 200 feet for a left-turn lane on an arterial roadway.

Right-Turn Warrant

Right-turn lane guidelines per City of Lee's Summit *Access Management Code*:

> 16.2.A. Required on arterial streets at each intersecting street or driveway where the right-turn volume on the major arterial street is or is projected to be at least 30 vehicles in any hour, or the right-turn volume on the minor arterial street is or is projected to be at least 60 vehicles in any hour. Minimum length should be 250 feet plus the taper on a major arterial at the intersection of another arterial street or 200 feet plus the taper on a minor arterial at the intersection with another arterial street or on a major arterial at the intersection of a collector and 150 feet plus the taper at other locations along arterial streets.

The traffic volumes are expected to meet the right-turning volume criteria southbound at the RIRO drive for the Phase I afternoon peak period. As Ward Road is a major arterial roadway, the right-turn lane will need to be a minimum of 150 feet. The right-turn lane criteria is not met for the southbound movement at Tudor Road.

The raw analysis data is included in the Appendix.

CAPACITY

The capacity analysis for the study intersections was completed using the methodology outlined in the Highway Capacity Manual, 6th Edition. The volume and capacity analysis was completed using Trafficware SYNCHRO software (latest version) for the following scenarios:

- Existing (existing 2026 counts plus volumes from approved traffic impact studies)
- Existing plus Phase 1 and 2
- Future (20-year scenario)

Level of Service (LOS) is defined as the measure of the quality of traffic flow and is graded from A to F—with A being the best situation, F being the worst, and D being generally the minimum acceptable level of service. The criteria for determining level of service for signalized and unsignalized study intersections and access points are based on the average vehicle delay and is outlined in Table 3.

Table 3 – Intersection Level of Service

Level of Service (LOS)	Average Control Delay (sec/veh)	
	Unsignalized	Signalized
A	< 10	< 10
B	< 15	< 20
C	< 25	< 35
D	< 35	< 55
E	< 50	< 80
F	≥ 50	≥ 80

Existing Conditions

Analysis was completed for existing conditions with existing roadway and lane configurations.

Tudor Road and Ward Road

All approaches operate at a LOS D or better for the morning and afternoon peak periods and the intersection has sufficient capacity for queuing vehicles. The overall LOS for the intersection is a LOS B during the morning and afternoon peak period.

Outerview Road/Innovation Parkway and Ward Road

The through movements of Ward Road are not stop-controlled and are therefore operating in a free-flow condition. The northeast and southwest movements all operate at a LOS C or better and have sufficient capacity for queuing vehicles.

The results of the existing conditions analysis are shown for the morning and afternoon peak hours along with lane configuration and queue lengths on Figures 8 and 9.

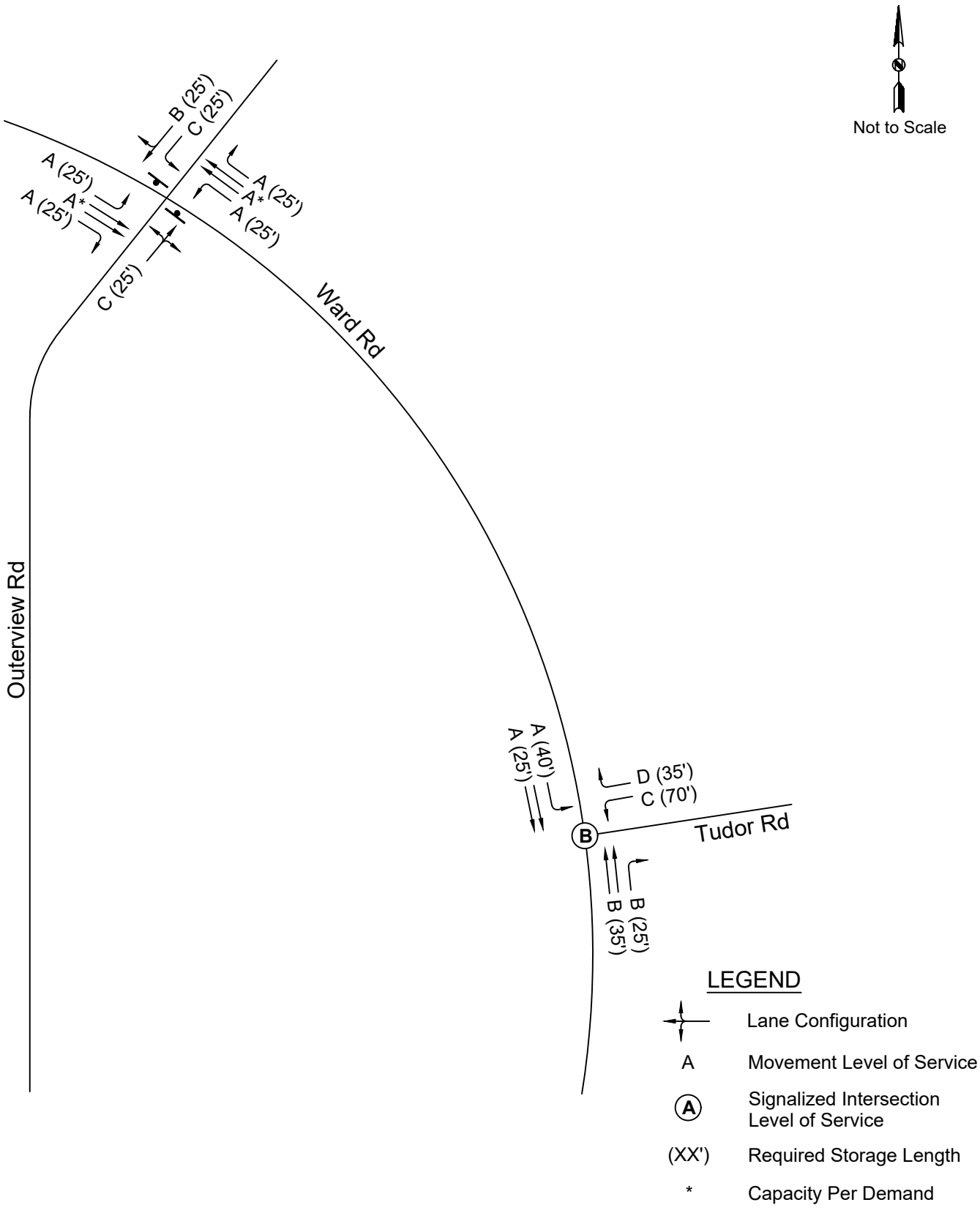

Figure 8 - Existing AM Level of Service

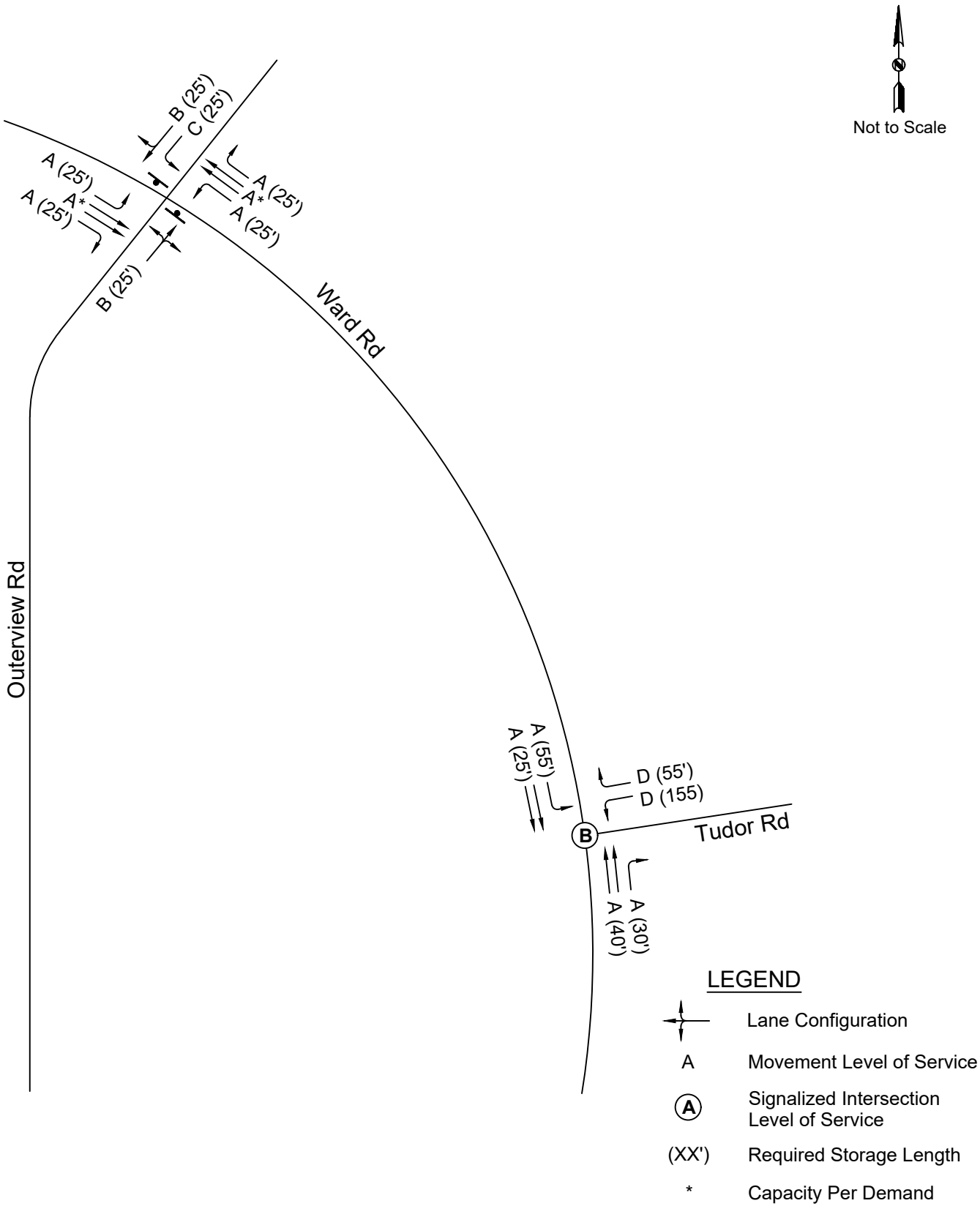

Figure 9 - Existing PM Level of Service

Existing Plus Site (Phase 1 & 2) Conditions

Signal timings were optimized to account for the additional traffic. Unless noted, existing roadway and lane configurations were used in intersection analysis.

Because the required improvements are triggered by the Phase 1 development, the analysis groups Phase 1 and Phase 2 traffic conditions together for the Level of Service analysis.

Tudor Road and Ward Road

With an additional west leg (left-turn lane and shared through/right-turn lane) and modified east leg (a 250 feet left-turn lane, a through lane, and a right-turn lane): All approaches operate at a LOS D or better for the morning and afternoon peak periods, and the intersection has sufficient capacity for queuing vehicles. The overall LOS for the intersection is LOS B during the morning and afternoon peak period.

Outerview Road/Innovation Parkway and Ward Road

There is no significant change in the operation of this intersection from the existing conditions. All approaches continue to operate at a LOS D or better for the morning and afternoon peak periods, and the intersection has sufficient capacity for queuing vehicles.

RIRO Access and Ward Road

With a stop controlled right-in/right-out only west leg and a southbound right-turn lane: All approaches operated at a LOS B or better and the intersection has sufficient capacity for queuing vehicles.

Internally, the traffic volumes will require a minimum of 25 feet of storage, which is available.

The results of the existing plus site analysis for the morning and afternoon peak hour conditions along with lane configuration and queue lengths are shown on Figures 10, 11, and 12.

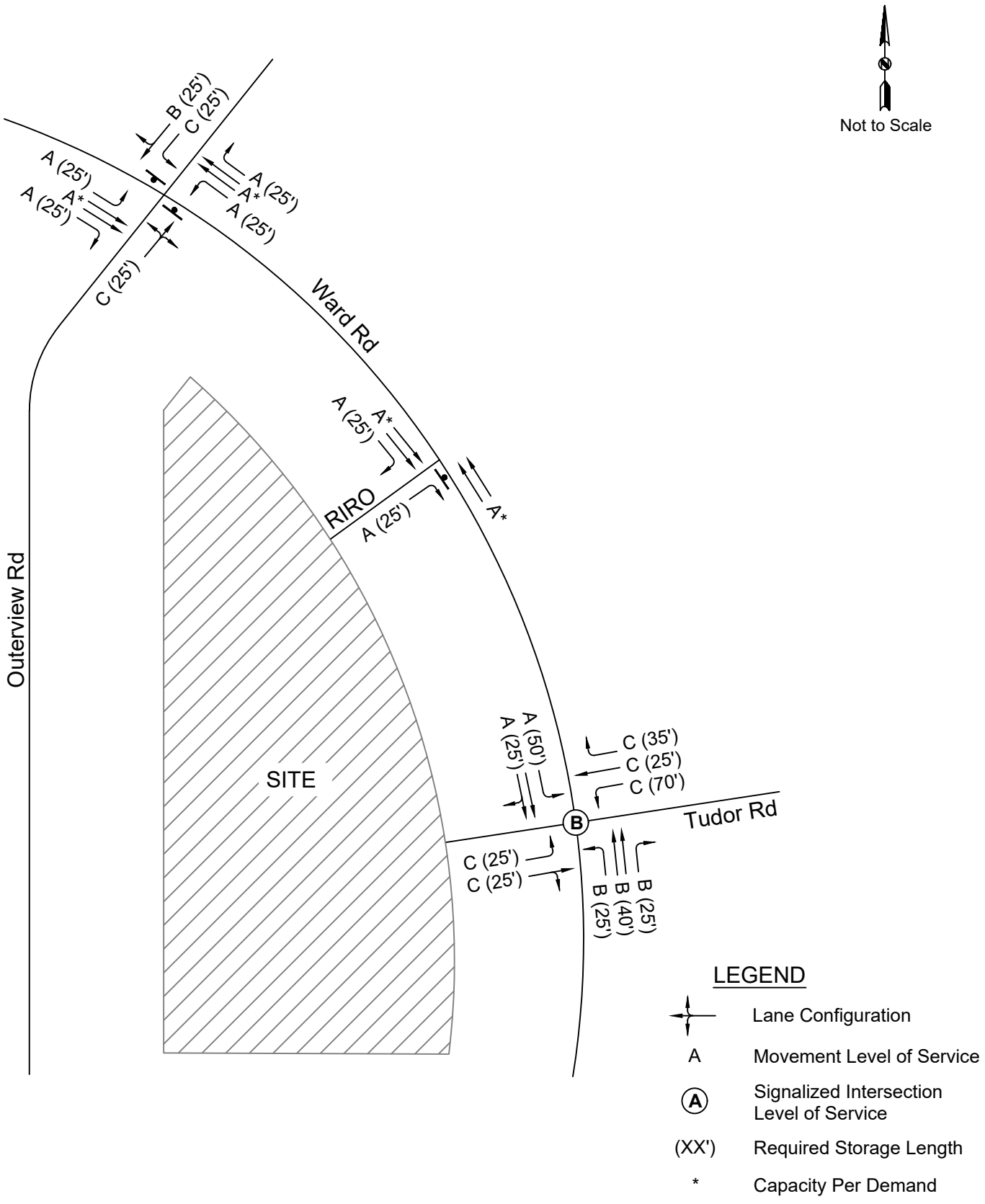

Figure 10 - Existing plus Site (Phase 1 & 2) AM Level of Service

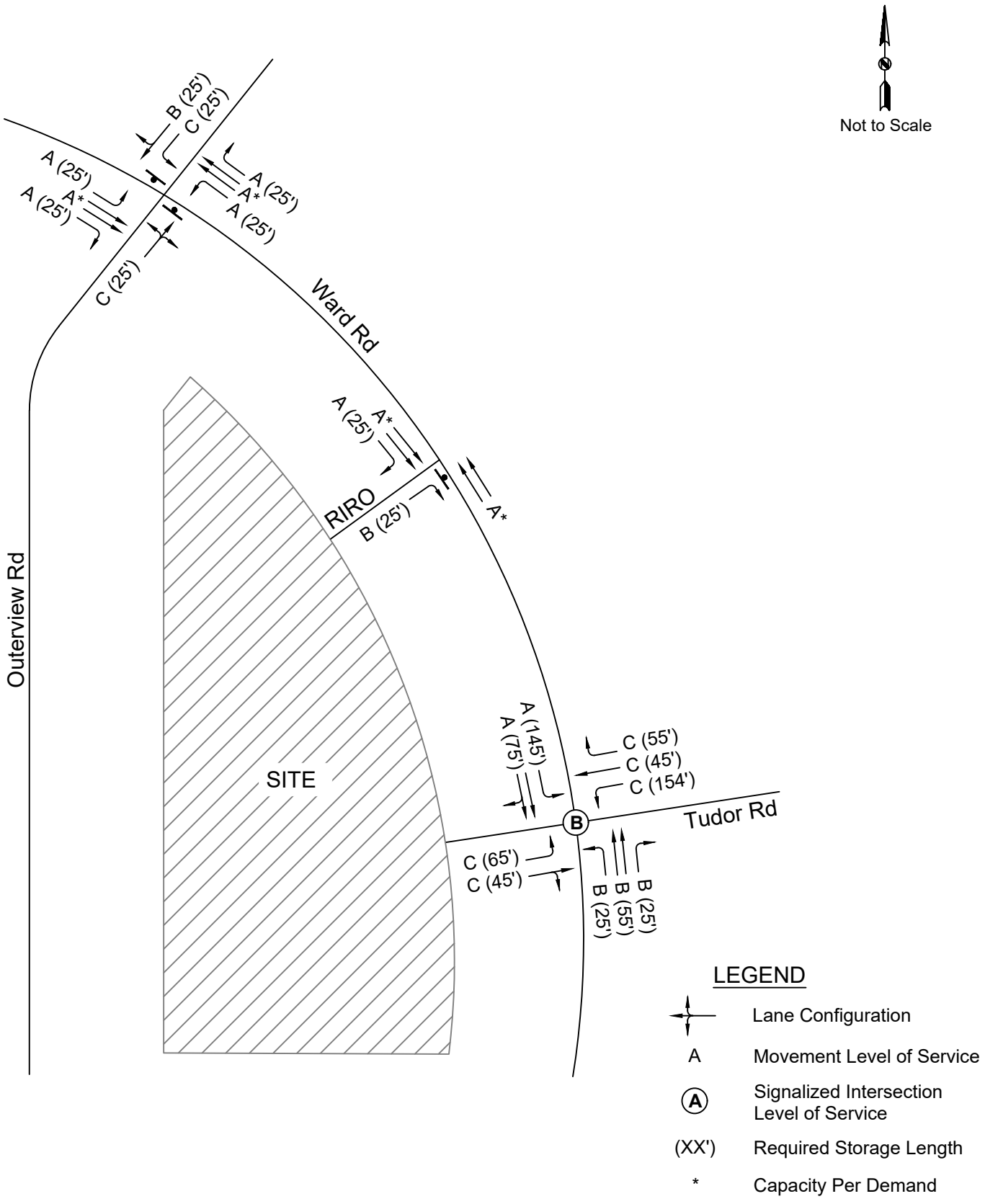

Figure 11 - Existing plus Site (Phase 1) PM Level of Service

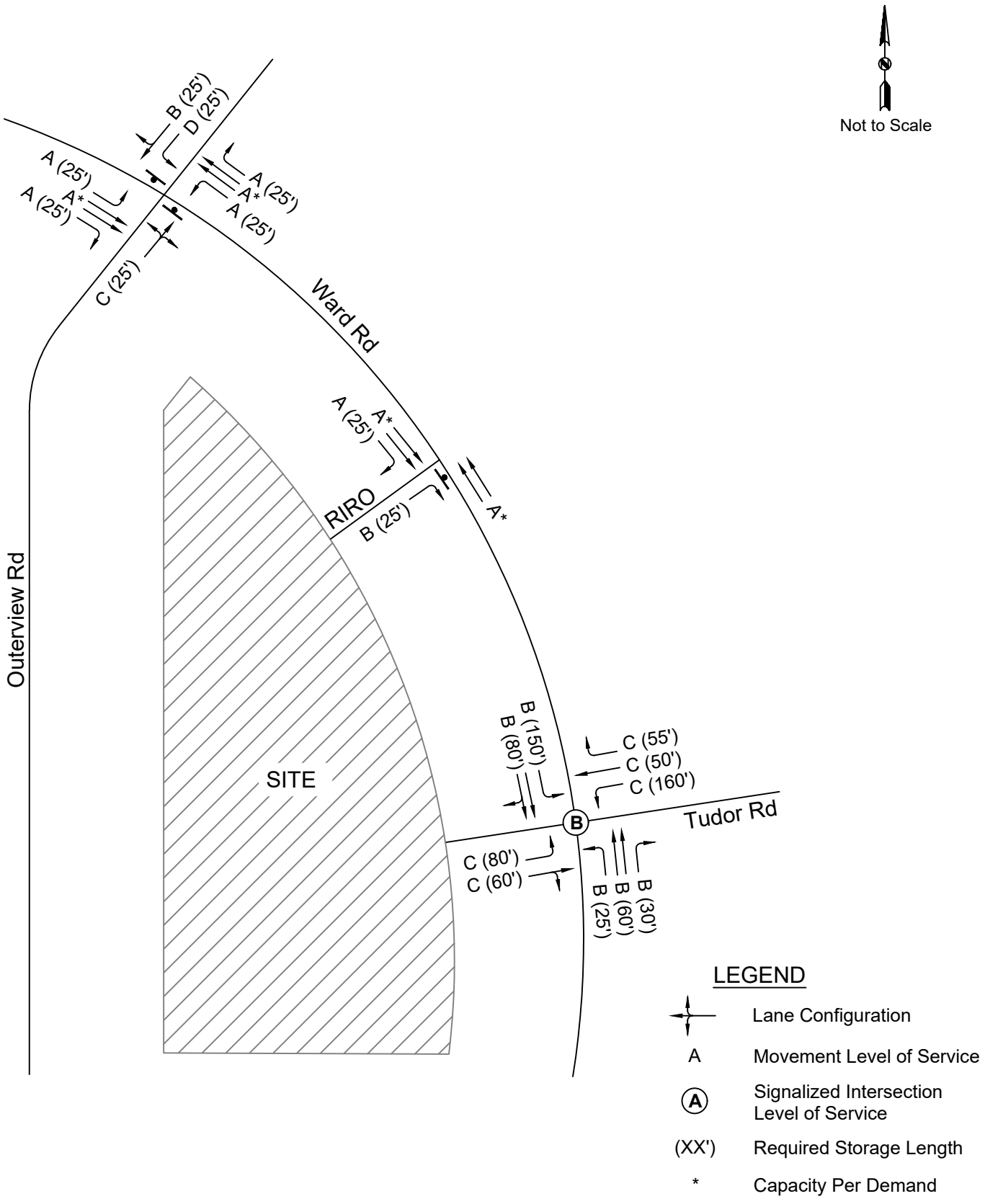

Figure 12 - Existing plus Site (Phase 1 & 2) PM Level of Service

Future Conditions

Future analysis is intended to provide a high-level overview of increases in trips as other development occurs and provide recommendations for reserving right-of-way for future expansion. Signal timings of intersection movements were optimized to account for the additional traffic.

A 2% annual growth rate was used to project future conditions. This represents an aggressive growth rate for a fully developed urban area, and the actual growth rate is expected to be lower since traffic from approved developments is already included in the existing conditions. Using the 2% growth assumption, future traffic is projected to result in a noticeable decrease in the overall level of service (LOS) at the nearby intersections.

Tudor Road and Ward Road

All approaches operate at LOS D or better during the morning and afternoon peak periods, and the intersection has sufficient capacity for queuing vehicles, although some approaches are approaching the maximum available storage length. The overall intersection operates at LOS C.

Outerview Road/Innovation Parkway and Ward Road

During this phase, the additional traffic on Ward Road is predicted to cause the southwest left-turn movement and the northeast approach to operate at LOS F and LOS E, respectively, during the afternoon peak period. However, the volumes experiencing these delays are less than 20 vehicles per hour for each movement, and alternative routes are available during the peak periods.

Because a traffic signal is not expected to meet warrant criteria at this intersection, installation of a signal to address these delays is not recommended.

RIRO Access and Ward Road

There is no significant change in the operation of this intersection compared to the existing plus site conditions. All approaches continue to operate at LOS B or better during the morning and afternoon peak periods, and the intersection has sufficient capacity for queuing vehicles.

The results of the future analysis is shown for the morning and afternoon peak hour conditions along with lane configuration and queue lengths on Figures 13 and 14.

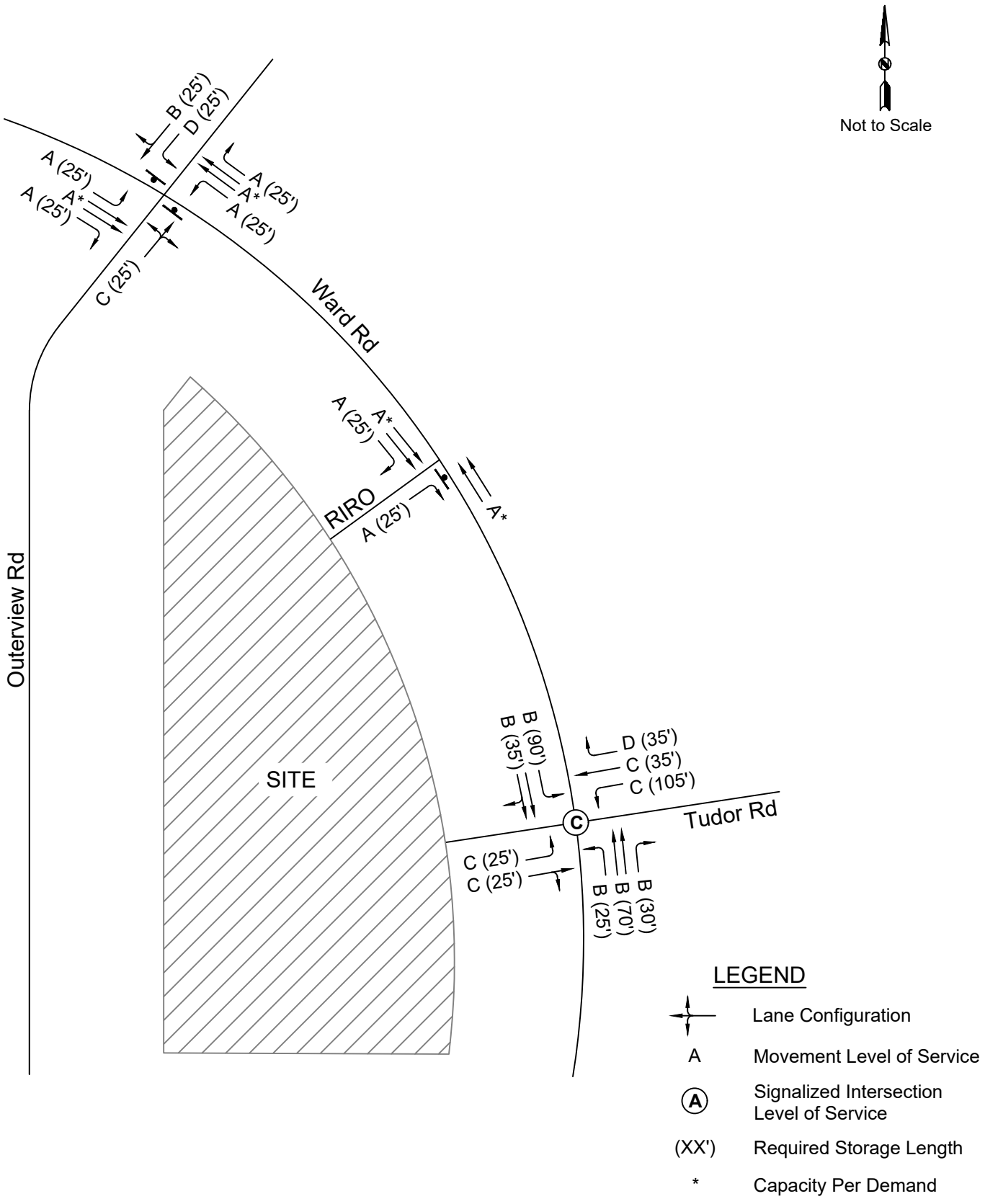

Figure 13 - Future AM Level of Service

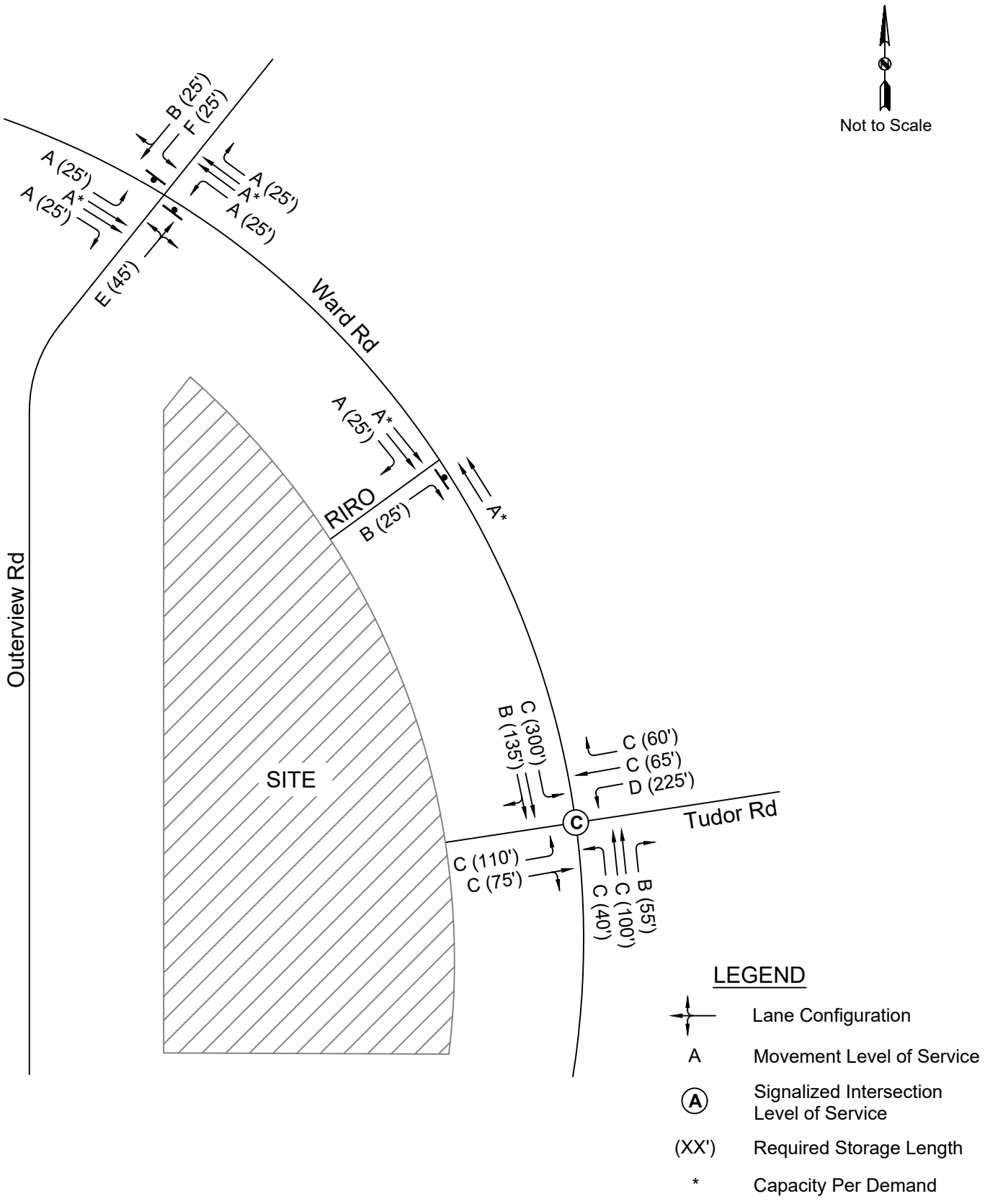

Figure 14 - Future PM Level of Service

RECOMMENDATIONS

This study documents the findings of the traffic analysis of the expected traffic for the Lot 10-A preliminary plan development in Lee's Summit, Missouri. The study includes an analysis of the existing conditions, existing plus site conditions (Phase 1 and 2), and future conditions.

Based on the results of the SYNCHRO analysis, observations from the field, and engineering judgment, the following recommendations are made:

- *Ward Road and Outerview Road/Innovation Parkway:* No specific recommendations.
- *Ward Road and RIRO Drive:* Construct an eastbound stop-controlled right-in/right-out (RIRO) access. Install a southbound right-turn lane with a minimum of 150 feet of storage plus taper in accordance with the City of Lee's Summit Access Management Code. Maintain a minimum driveway throat length of 75 feet for the RIRO access.
- *Ward Road and Tudor Road:* Extend the existing northbound left-turn lane to provide a minimum of 200 feet of storage plus taper to meet City guidelines for arterial roadways. Maintain a minimum driveway throat length of 75 feet for the site access at Tudor Road. The west leg of the Tudor Road intersection should be configured with one receiving lane and two exit lanes consisting of a left-turn lane and a shared through/right-turn lane. Construct a westbound left-turn lane with a minimum of 250 feet of storage plus taper and convert the operations for the existing east leg to a through lane and a right-turn lane. Optimize/adjust signal timings as necessary.
- The future traffic volumes in this study should be incorporated into the City's future traffic projections and corridor planning as development continues in the area.

APPENDIX

Ward & Tudor
AM

	Eastbound				Westbound				Northbound				Southbound				
Time	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Int. Total
7:00	0	0	0	0	16	0	26	42	3	31	23	57	33	4	0	37	136
7:15	0	0	0	0	18	0	51	69	0	32	26	58	31	12	0	43	170
7:30	0	0	0	0	15	0	31	46	0	35	54	89	30	13	0	43	178
7:45	0	0	0	0	20	0	35	55	1	32	58	91	32	15	0	47	193
8:00	0	0	0	0	23	0	30	53	0	27	15	42	30	5	0	35	130
8:15	0	0	0	0	26	0	27	53	0	36	26	62	28	10	0	38	153
8:30	0	0	0	0	23	0	26	49	0	34	25	59	17	12	0	29	137
8:45	0	0	0	0	21	0	23	44	0	14	19	33	30	15	0	45	122
Total	**0**	**0**	**0**	**0**	**162**	**0**	**249**	**411**	**4**	**241**	**246**	**491**	**231**	**86**	**0**	**317**	**1219**

	PHF																			
Time	EB Left	EB Thru	EB Right	EB Total	PHF	WB Left	WB Thru	WB Right	WB Total	PHF	NB Left	NB Thru	NB Right	NB Total	PHF	SB Left	SB Thru	SB Right	SB Total	PHF	Int. Total
7:00	0	0	0	0	#DIV/0!	16	0	26	42	0.77	3	31	23	57	0.81	33	4	0	37	0.9	136
7:15	0	0	0	0		18	0	51	69		0	32	26	58		31	12	0	43		170
7:30	0	0	0	0		15	0	31	46		0	35	54	89		30	13	0	43		178
7:45	0	0	0	0		20	0	35	55		1	32	58	91		32	15	0	47		193
Total	0	0	0	0		69	0	143	212		4	130	161	295		126	44	0	170		677

Ward & Innovation Parkway/Outerview Road
AM

	Eastbound				Westbound				Northbound				Southbound				
Time	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Int. Total
7:00	2	0	1	3	8	0	6	14	3	53	0	56	7	41	1	49	122
7:15	1	0	1	2	0	0	3	3	0	99	1	100	5	39	1	45	150
7:30	2	0	1	3	2	0	6	8	3	60	1	64	30	33	3	66	141
7:45	2	0	1	3	1	0	5	6	3	50	1	54	32	54	2	88	151
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**7**	**0**	**4**	**11**	**11**	**0**	**20**	**31**	**9**	**262**	**3**	**274**	**74**	**167**	**7**	**248**	**564**

	PHF																			
Time	EB Left	EB Thru	EB Right	EB Total	PHF	WB Left	WB Thru	WB Right	WB Total	PHF	NB Left	NB Thru	NB Right	NB Total	PHF	SB Left	SB Thru	SB Right	SB Total	PHF	Int. Total
7:00	2	0	1	3	0.92	8	0	6	14	0.55	3	53	0	56	0.69	7	41	1	49	0.7	122
7:15	1	0	1	2		0	0	3	3		0	99	1	100		5	39	1	45		150
7:30	2	0	1	3		2	0	6	8		3	60	1	64		30	33	3	66		141
7:45	2	0	1	3		1	0	5	6		3	50	1	54		32	54	2	88		151
Total	7	0	4	11		11	0	20	31		9	262	3	274		74	167	7	248		564

Ward & Tudor
PM

	Eastbound				Westbound				Northbound				Southbound				
Time	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Int. Total
4:00 PM	0	0	0	0	44	0	37	81	1	27	13	41	40	47	0	87	209
4:15 PM	0	0	0	0	39	0	39	78	1	37	38	76	49	47	0	96	250
4:30 PM	0	0	0	0	36	0	41	77	0	24	22	46	49	42	0	91	214
4:45 PM	0	0	0	0	36	0	38	74	2	33	25	60	43	61	0	104	238
5:00 PM	0	0	1	1	47	0	42	89	2	24	30	56	58	55	0	113	259
5:15 PM	0	0	0	0	40	0	44	84	3	28	24	55	59	62	0	121	260
5:30 PM	0	0	0	0	26	0	39	65	0	29	28	57	41	43	0	84	206
5:45 PM	0	0	0	0	30	0	29	59	1	22	22	45	42	53	0	95	199
Total	**0**	**0**	**1**	**1**	**298**	**0**	**309**	**607**	**10**	**224**	**202**	**436**	**381**	**410**	**0**	**791**	**1835**

	PHF																			
Time	EB Left	EB Thru	EB Right	EB Total	PHF	WB Left	WB Thru	WB Right	WB Total	PHF	NB Left	NB Thru	NB Right	NB Total	PHF	SB Left	SB Thru	SB Right	SB Total	PHF	Int. Total
4:30 PM	0	0	0	0	**0.25**	36	0	41	77	**0.91**	0	24	22	46	**0.9**	49	42	0	91	**0.89**	214
4:45 PM	0	0	0	0		36	0	38	74		2	33	25	60		43	61	0	104		238
5:00 PM	0	0	1	1		47	0	42	89		2	24	30	56		58	55	0	113		259
5:15 PM	0	0	0	0		40	0	44	84		3	28	24	55		59	62	0	121		260
Total	0	0	1	1		159	0	165	324		7	109	101	217		209	220	0	429		971

Ward & Innovation Parkway/Outerview Road
PM

	Eastbound				Westbound				Northbound				Southbound				
Time	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Int. Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	2	0	5	7	0	0	2	2	0	62	1	63	4	111	2	117	189
4:45 PM	2	0	3	5	1	0	1	2	0	66	1	67	1	118	2	121	195
5:00 PM	1	0	7	8	2	0	4	6	1	84	0	85	5	94	3	102	201
5:15 PM	1	0	2	3	0	0	3	3	2	69	1	72	8	103	3	114	192
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**6**	**0**	**17**	**23**	**3**	**0**	**10**	**13**	**3**	**281**	**3**	**287**	**18**	**426**	**10**	**454**	**777**

	PHF																			
Time	EB Left	EB Thru	EB Right	EB Total	PHF	WB Left	WB Thru	WB Right	WB Total	PHF	NB Left	NB Thru	NB Right	NB Total	PHF	SB Left	SB Thru	SB Right	SB Total	PHF	Int. Total
4:30 PM	2	0	5	7	**0.72**	0	0	2	2	**0.54**	0	62	1	63	**0.84**	4	111	2	117	**0.94**	189
4:45 PM	2	0	3	5		1	0	1	2		0	66	1	67		1	118	2	121		195
5:00 PM	1	0	7	8		2	0	4	6		1	84	0	85		5	94	3	102		201
5:15 PM	1	0	2	3		0	0	3	3		2	69	1	72		8	103	3	114		192
Total	6	0	17	23		3	0	10	13		3	281	3	287		18	426	10	454		777

LEGEND:

- NEW ASPHALT PAVEMENT (DRIVES) RE: --/C--
- NEW ASPHALT PAVEMENT (AISLES) RE: --/C--
- NEW PORTLAND CEMENT CONCRETE PAVEMENT RE: --/C--
- NEW TYPE CG-1 CURB & GUTTER RE: --/C--
- OPEN SPACE

LOT NOTES:

TOTAL LOT AREA = 438938 SF (10.08 AC)

LOT 1 AREA = 262105 SF (6.02 AC)
LOT 2 AREA = 89202 SF (2.05 AC)
LOT 3 AREA = 87625 SF (2.01 AC)
LOT 1 FLOOR AREA RATIO: = .29
LOT 2 FLOOR AREA RATIO: = .15
LOT 3 FLOOR AREA RATIO: = .13

THERE ARE NO ACTIVE, INACTIVE, OR CAPPED OIL NOR GAS WELLS LOCATED ON THE PROPERTY, PER MODNR GIS INFO.

ALL NEIGHBORING SITES WITHIN 185' ARE DESIGNATED PMIX ZONING AND ACTIVITY CENTER SUMMIT LAND USE PER LS GIS.

FDP WILL COMPLY WITH NOTE 14 OF CITY COMMENTS REGARDING SITE LIGHTING.

PARKING NOTES:

PARKING WILL BE DESIGNATED "SHARED" WITH CROSS USE EASEMENT(S)
REQUIRED STANDARD SPACES = 256
PROVIDED STANDARD SPACES = 306
REQUIRED ADA SPACES = 11
PROVIDED ADA SPACES = 12
TOTAL STALLS = 318

ALL PARKING STALL DIMENSIONS AND STRIPING TO BE COMPLIANT WITH LEE'S SUMMIT UDO STANDARDS.

OPEN SPACE:

TOTAL LOT AREA = 438,938 SF (10.08 AC)
REQUIRED OPEN SPACE = 438,938.26 x 5% = 21,950 SF
PROVIDED OPEN SPACE = 22,000 SF
IMPERVIOUS AREA = 133,800 SF

GENERAL NOTES:

1. SITE LIGHTING WILL CONFORM TO CITY STANDARDS.
2. LOTS 1 AND 2 WILL BE DEVELOPED AS PHASE 1 OF THE PROJECT. LOT 3 WILL BE DEVELOPED AS PHASE 2, OR WITH PHASE 1.
3. ALL PARKING WILL BE COVERED BY CROSS EASEMENTS TO ALLOW SHARED USE.
4. PARKING LOT CONSTRUCTION WILL COMPLY WITH THE CITY'S UDO SECTION 8.620.
5. FAA FORM 7460 WILL BE PROVIDED WITH THE FINAL DEVELOPMENT PLAN.

TUDOR & NW WARD ROAD IMPROVEMENTS RE: C600
NW WARD ROAD (120' R.O.W.)
4" MOUNTABLE CURB
NEW ENTRY DRIVE PER CITY STANDARDS
NEW RAMP
NEW MONUMENT SIGN RE: ARCH
NEW CROSSWALK
NEW STOP & DO NOT ENTER SIGN
NEW DO NOT ENTER SIGN
OPEN SPACE: REQUIRED: 21,946 SF PROVIDED: 21,961 SF
PROPERTY LINE, (TYP.)
PMIX ACTIVITY CENTER SUMMIT
NEW SIDEWALK
NEW DECEL 150' STORAGE DECEL LANE, NEW CURB & GUTTER, NEW 6' SIDEWALK (NW WARD RD IMPROVEMENTS)
PAINT NEW FIRE LANE CURB RED
DROP OFF LANE
NEW CROSSWALK
THRU LANE
RUSH FUNPLEX (LOT 1) 76,900 SF FFE = 985
LOT 1 AREA = 6.02 ACRES PARKING = 146
LOT 3 AREA = 2.01 ACRES PARKING = 63
FLEX OFFICE (LOT 3) 11,725 SF FFE = 978.5
ADA PARKING SIGN (TYP.)
FLEX OFFICE (LOT 2) 13,685 SF FFE = 982.0
LOT 2 AREA = 2.05 ACRES PARKING = 109
ADA PARKING SIGN (TYP.)
TRASH ENCLOSURE
PROPERTY LINE DOWN CENTERLINE DRIVES (TYP.)
ADDITIONAL PARKING IN THIS AREA IF USE CHANGES / NEEDS
TRASH ENCLOSURES MAY BE SPLIT BASED ON FLEX OFFICE BUILDING SCHEDULE
OUTERVIEW ROAD
OUTERVIEW ROAD (PRIVATE DRIVE)
PROPERTY LINE, (TYP.)
1040.11'
PMIX ACTIVITY CENTER SUMMIT

LOT 2 (OFFICE) - 9800 SF AT 5/1000 = 49
LOT 2 (RESTAURANT) 3900 SF AT 14/1000 = 55
NEED 104 STALLS
PROVIDED 109 STALLS

LOT 3 - 11,700 SF AT 5/1000 = 59
PROVIDED 63 STALLS

40 20 0 40
SCALE IN FEET

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NOT FOR CONSTRUCTION

The Rush Funplex
New Entertainment Center

Lot 10A - Summit Orchards West
Lee's Summit, MO

#	Revisions:

Project #: 251203-C

Preliminary Development Plan

13 March 2026

SITE LAYOUT PLAN

C200

U:\2025\25-194\01-DWGs\C200 - SITE LAYOUT PLAN.dwg Plotted: Apr 03, 2026 - 4:04pm by chamman

LEGEND:

- NEW ASPHALT PAVEMENT (DRIVES) RE: --/C--
- NEW ASPHALT PAVEMENT (AISLES) RE: --/C--
- NEW PORTLAND CEMENT CONCRETE PAVEMENT RE: --/C--
- NEW TYPE CG-1 CURB & GUTTER RE: --/C--

GENERAL NOTES:

1. TRAFFIC SIGNAL DESIGN SHALL CONFORM TO THE CITY OF LEE'S SUMMIT STANDARDS.
2. SCOPE SHALL CONFORM TO THE APPROVED TRAFFIC IMPACT STUDY AND INCLUDES NEW SIGNAL POLE (SE CORNER), NEW SIGNAL HEAD (WESTBOUND TUDOR), REVISED STRIPING INCLUDING NEW CROSSWALK (WEST SIDE), AND PEDESTRIAN SIGNALS / CONTROLS FOR THE ADDED INTERSECTION LEG.

RELOCATE EXISTING STREET LIGHT TO CENTER OF REDUCED MEDIAN

TUDOR ROAD (110' R.O.W.)

250.00'

RELOCATE EXISTING STREET LIGHT TO CENTER OF REDUCED MEDIAN

PAVE REMAINING MEDIAN PER CITY STANDARDS

RELOCATE EXISTING STREET LIGHT TO CENTER OF REDUCED MEDIAN

CONSTRUCT TRAFFIC SIGNAL POLE FOR NEW EASTBOUND TRAFFIC MOVEMENT

PAINT EXISTING "U" PAVEMENT MARKINGS BLACK. PAINT NEW LEFT TURN ARROWS PER LS STANDARDS.

14.00'

INCREASE LANE STORAGE FROM 100' TO 200' WITH NEW TAPER

13.00'

NW WARD ROAD (120' R.O.W.)

ADJUST TRAFFIC SIGNAL HEADS AS NEEDED. ADD LEFT-TURN SIGNAL HEAD ON EXISTING MAST ARM. ADD PEDESTRIAN SIGNAL EQUIPMENT FOR NEW PEDESTRIAN CROSSING.

PROPERTY LINE, (TYP.)

NW WARD ROAD (120' R.O.W.)

30 15 0 30
SCALE IN FEET

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The Rush Funplex
New Entertainment Center
Lot 10A - Summit Orchards West
Lee's Summit, MO

Revisions:

Project #: 251203-C

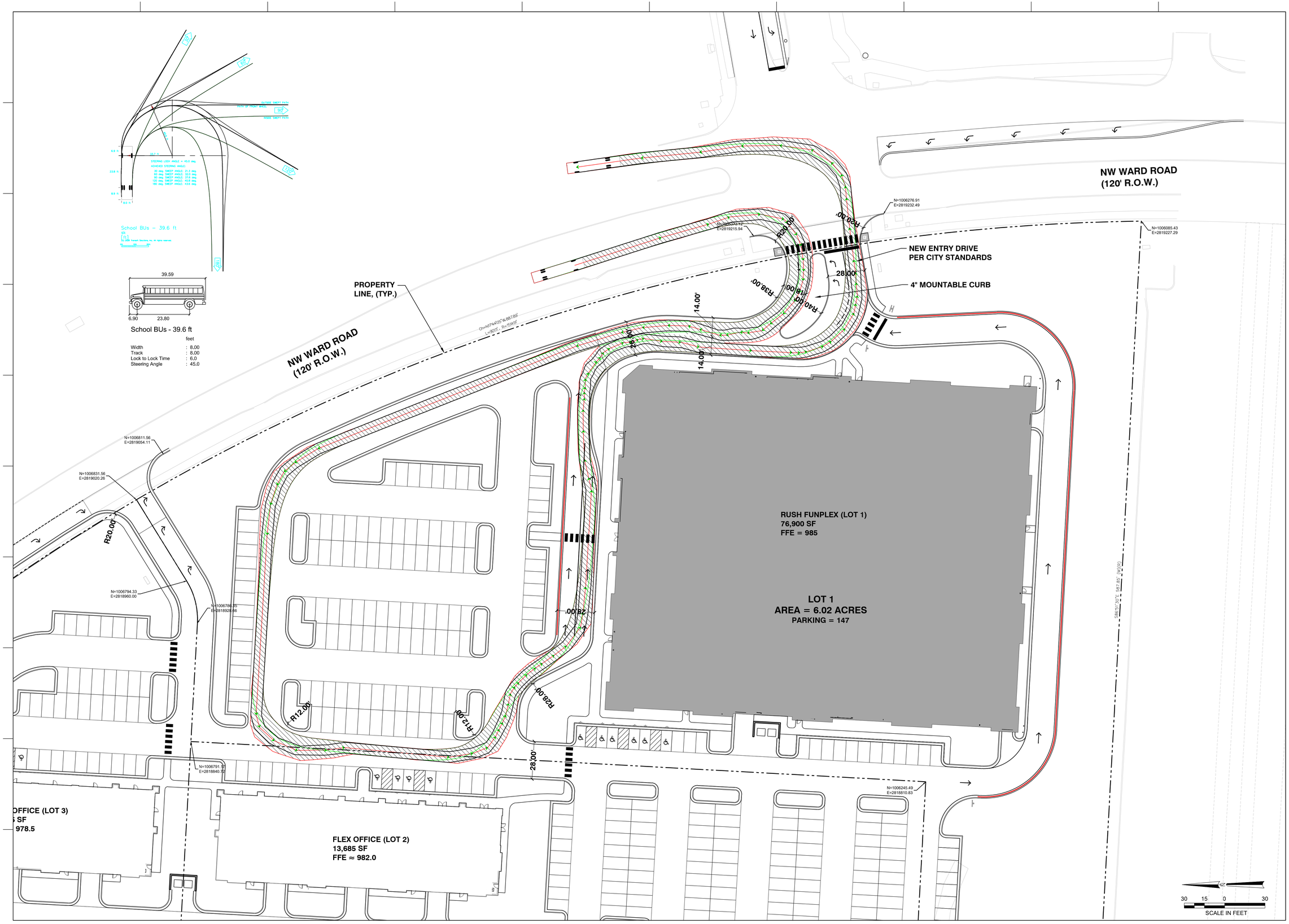
Preliminary Development Plan

13 March 2026

NW WARD & TUDOR PUBLIC IMPROVEMENTS

C600

U:\2025\25-194\01-DWGs\C600 - NW WARD & TUDOR PUB.dwg Plotted: Apr 03, 2026 - 4:04pm by chamman



SAL
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New Entertainment Center
Lot 10A - Summit Orchards West
Lee's Summit, MO

Revisions:

Project #: 251203-C

Preliminary Development Plan

13 March 2026

BUS TURN STUDY

C700

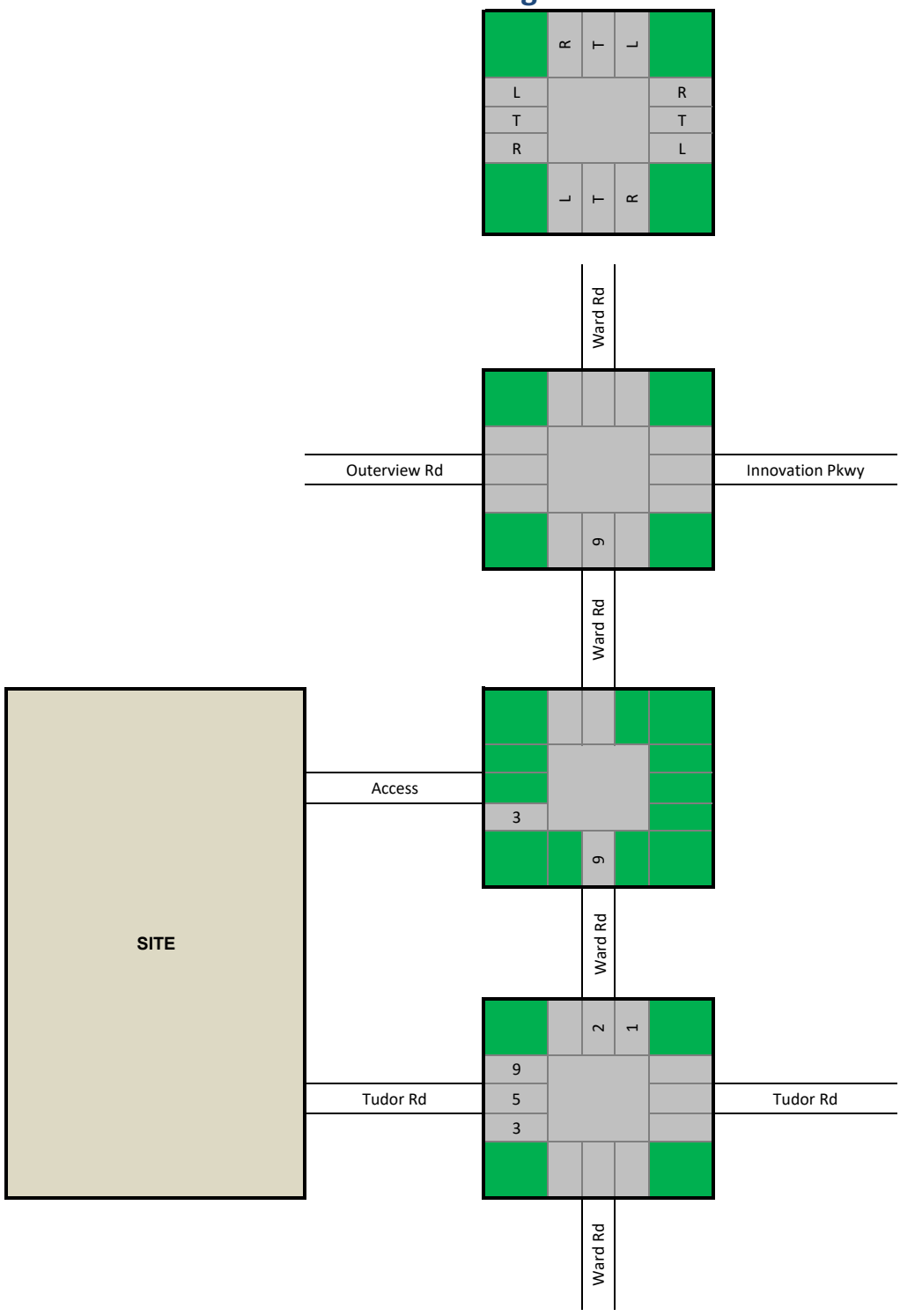
U:\2025\25-194\01-DWGs\C700 - BUS TURN STUDY.dwg Plotted: Apr 03, 2026 - 4:04pm by chamman

Crash Summaries (Previous 3 Years)					
ID	**Year**	**Intersection**	**Type of Crash**	**PDO/ Injury/ Fatality**	**Notes/Description**
607	2026	Tudor and Ward	Fixed Object	PDO	Slid on snow/ice - One vehicle into curb
740	2024	Tudor and Ward	Angle	PDO	Failure to stop at red light
648	2024	Tudor and Ward	Fixed Object	PDO	Slid on snow/ice - One vehicle into curb
415	2024	Tudor and Ward	Fixed Object	PDO	Failed to turn and hit fire hydrant
48	2024	Innovation and Ward	Fixed Object	PDO	Driver lost control, "blacked out"
547	2024	Tudor and Ward	Fixed Object	PDO	Failed to turn and hit speed limit sign
331	2023	Ward between Inn & Tudor	Fixed Object	PDO	Hit median
966	2025	Innovation and Ward	Rear End	INJ - 1	Following too close
325	2024	Innovation and Ward	Fixed Object	INJ - 1	Slid on snow - hit street light in median

AM - Trips Out
Phase II

Trips
21

Legend



High-Turnover (Sit-Down) Restaurant
(932)

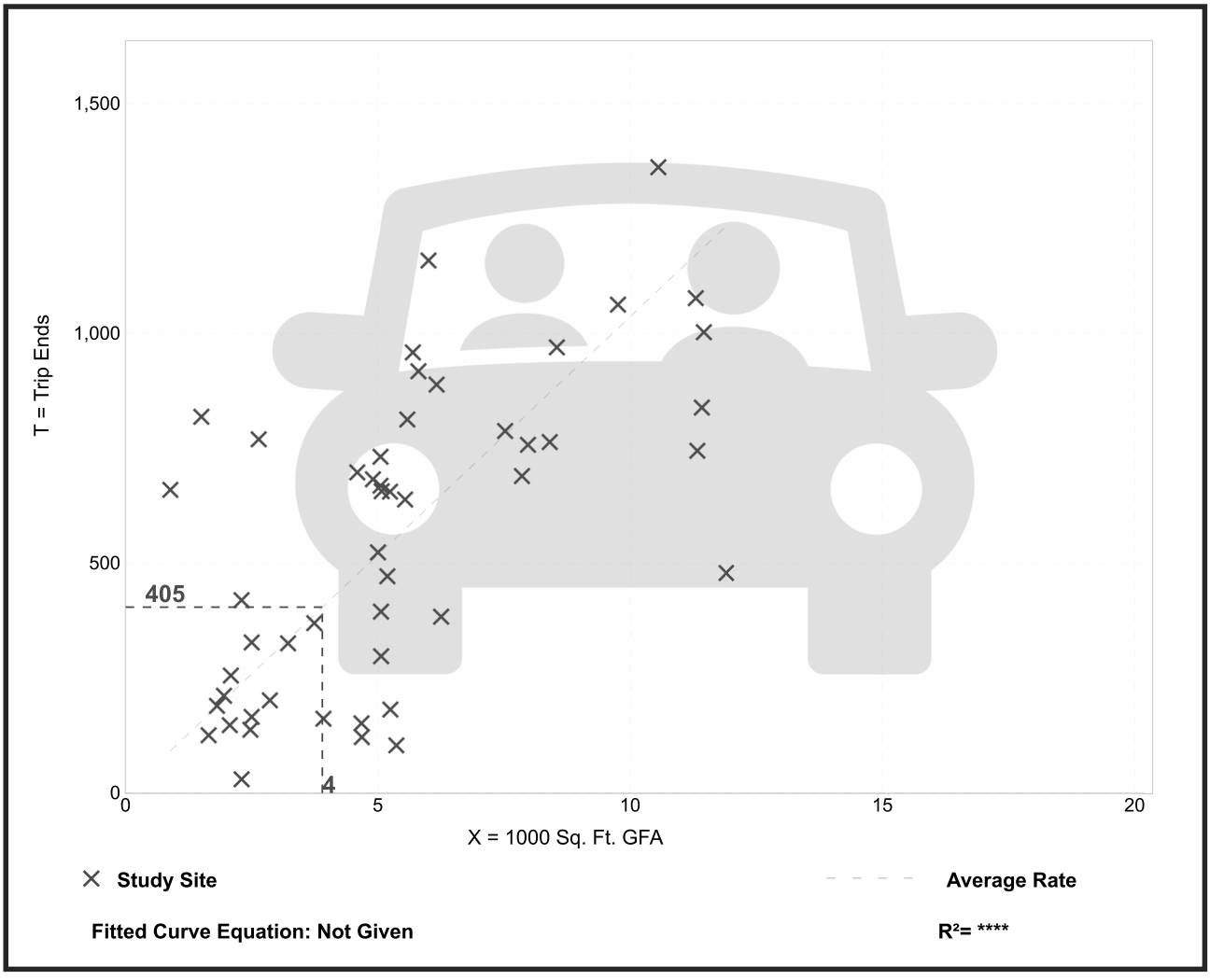
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 50
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
103.75	13.04 - 742.41	67.15

Data Plot and Equation



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General Office Building
(710)

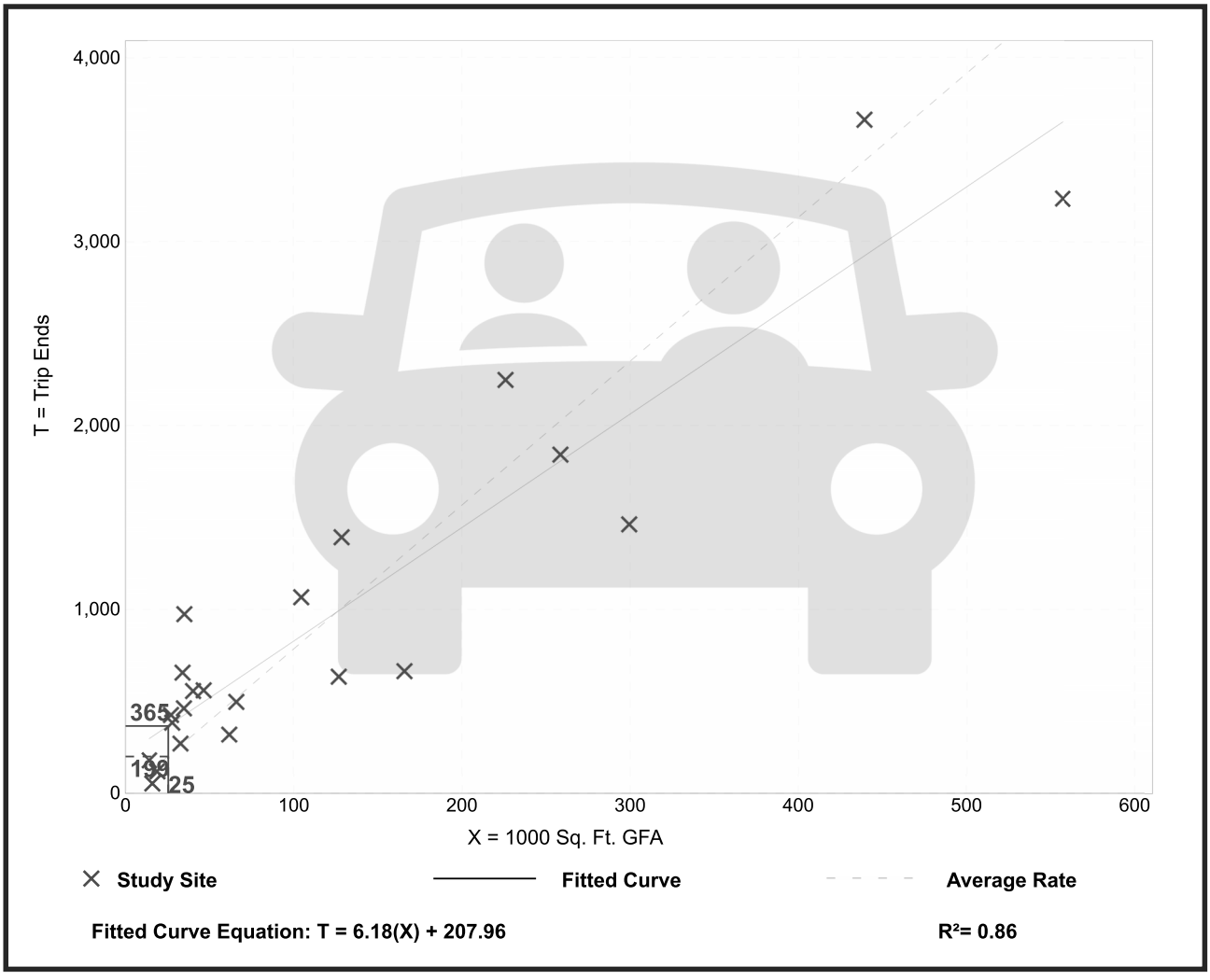
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 22
Avg. 1000 Sq. Ft. GFA: 126
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
7.83	3.27 - 27.56	3.71

Data Plot and Equation



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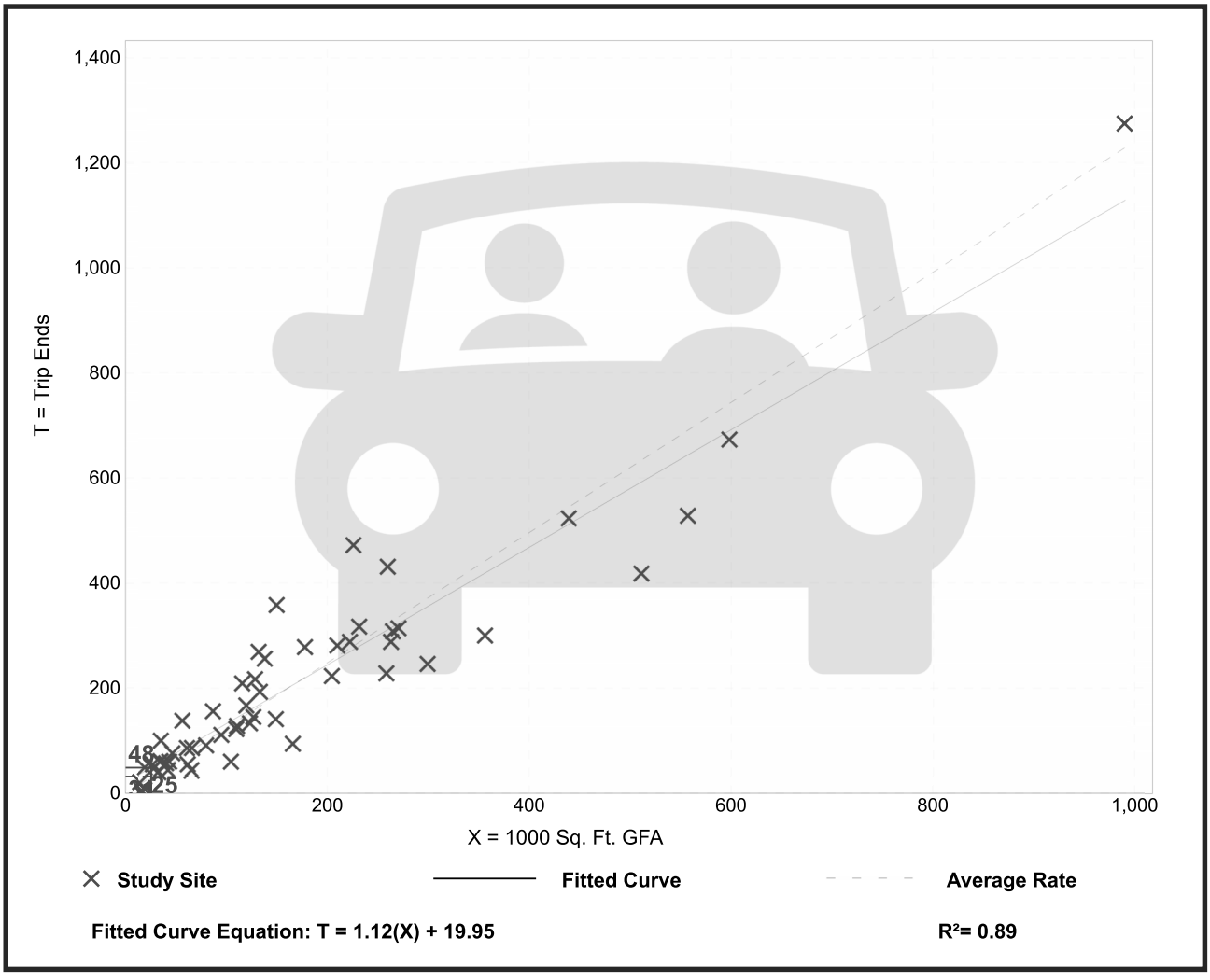
General Office Building
(710)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 54
Avg. 1000 Sq. Ft. GFA: 170
Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.24	0.32 - 2.83	0.40

Data Plot and Equation



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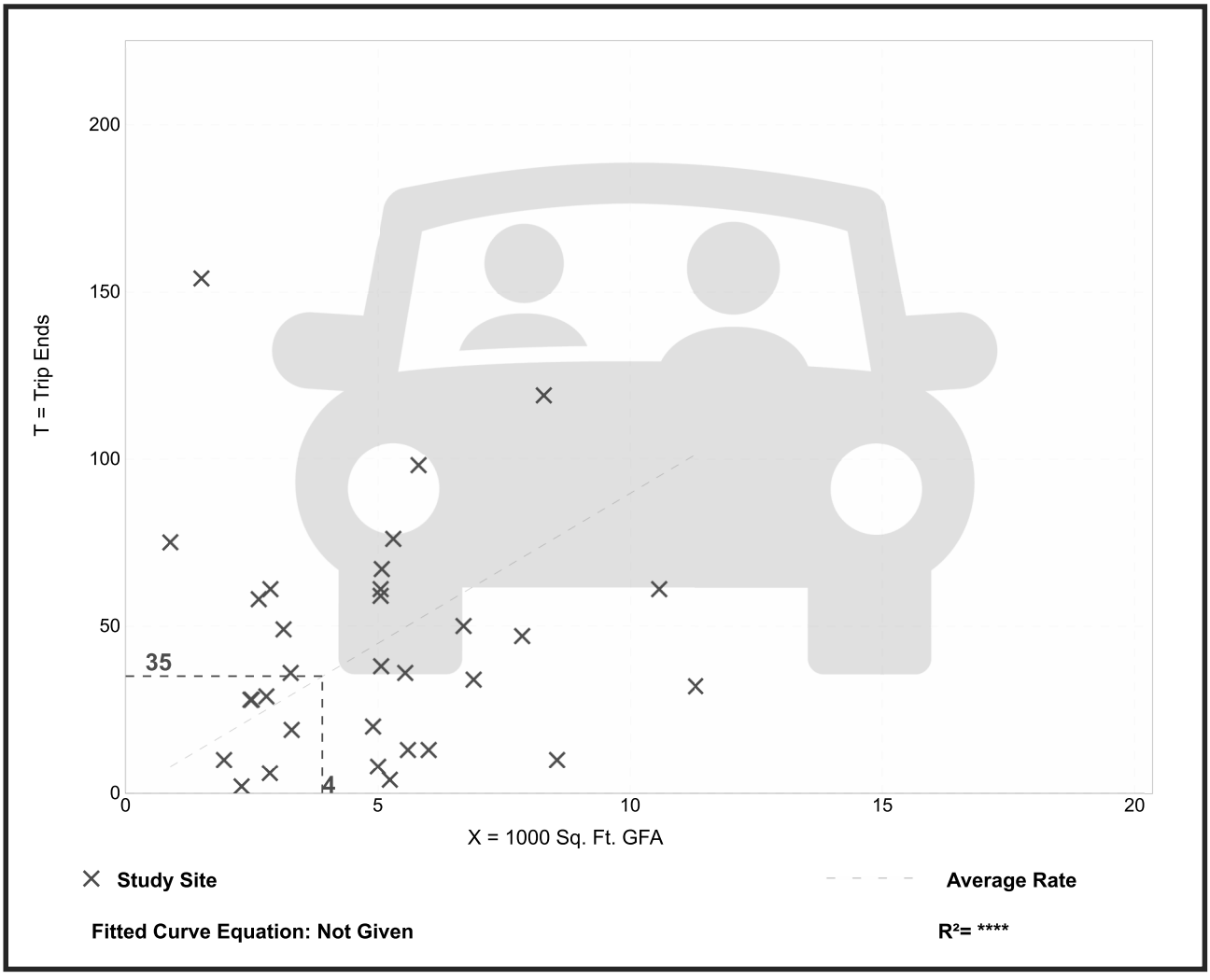
High-Turnover (Sit-Down) Restaurant
(932)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 32
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 55% entering, 45% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
8.97	0.76 - 102.39	12.35

Data Plot and Equation



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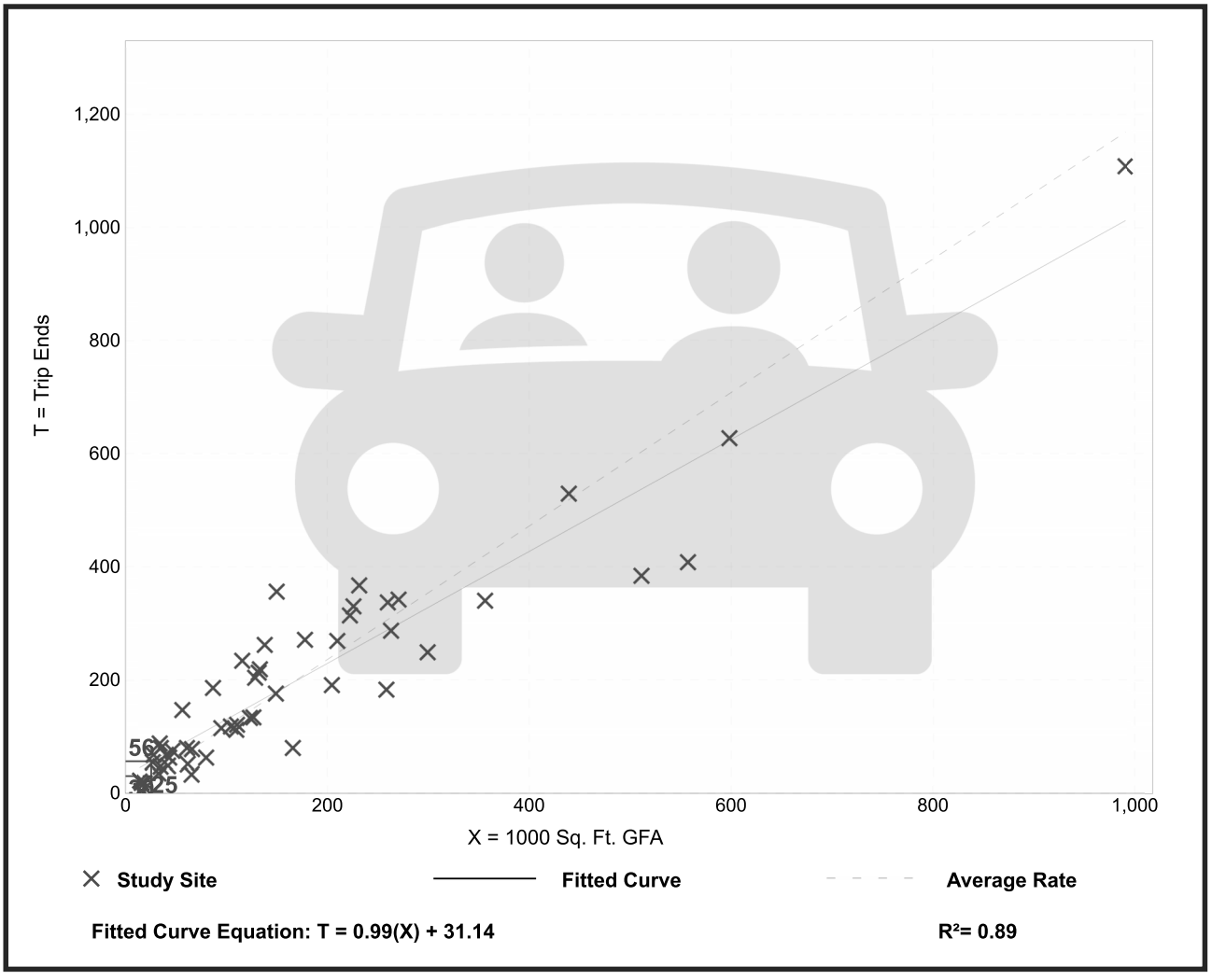
General Office Building
(710)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 53
Avg. 1000 Sq. Ft. GFA: 166
Directional Distribution: 16% entering, 84% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.18	0.26 - 2.59	0.41

Data Plot and Equation



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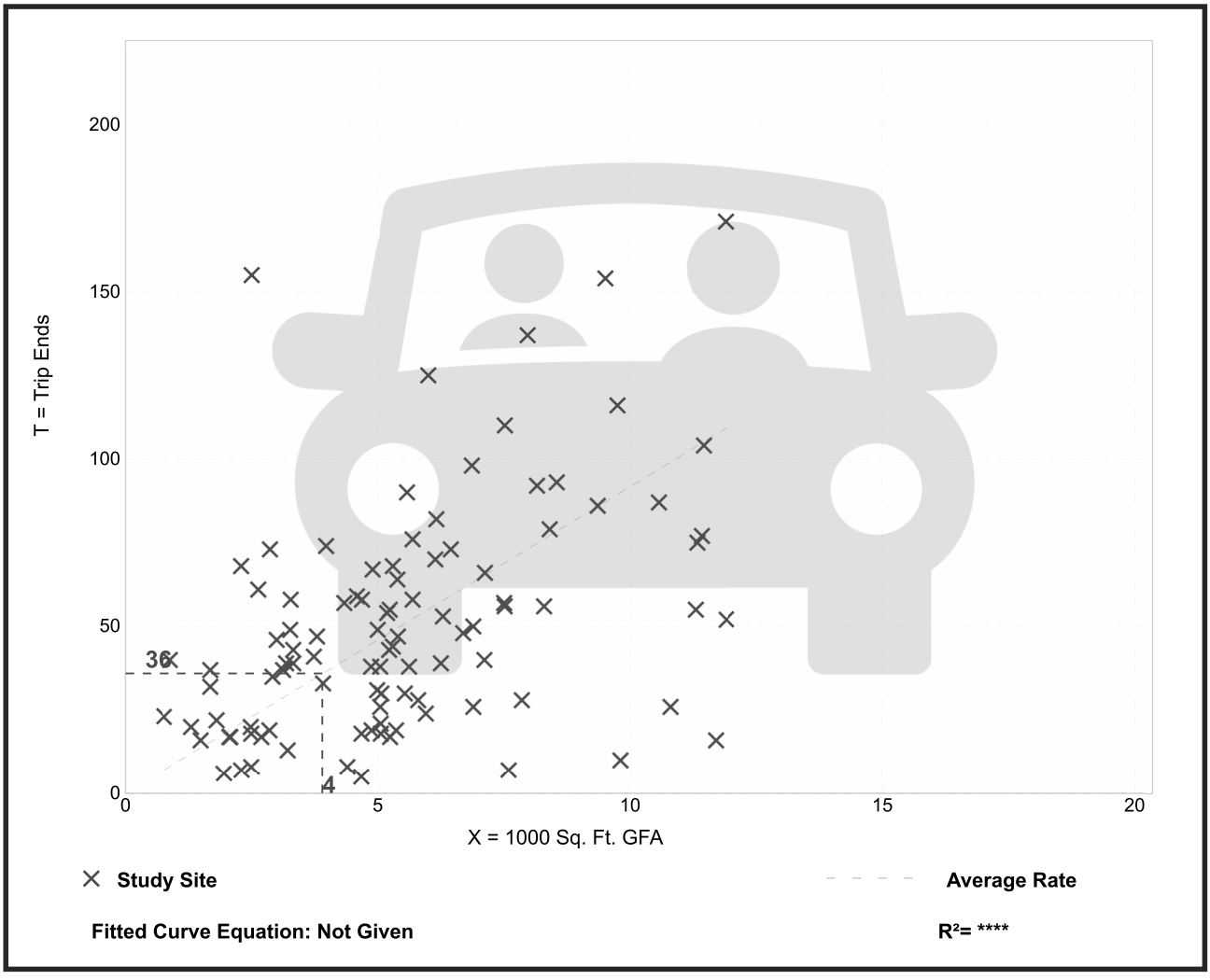
High-Turnover (Sit-Down) Restaurant
(932)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	100
Avg. 1000 Sq. Ft. GFA:	5
Directional Distribution:	61% entering, 39% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.18	0.92 - 62.00	6.36

Data Plot and Equation



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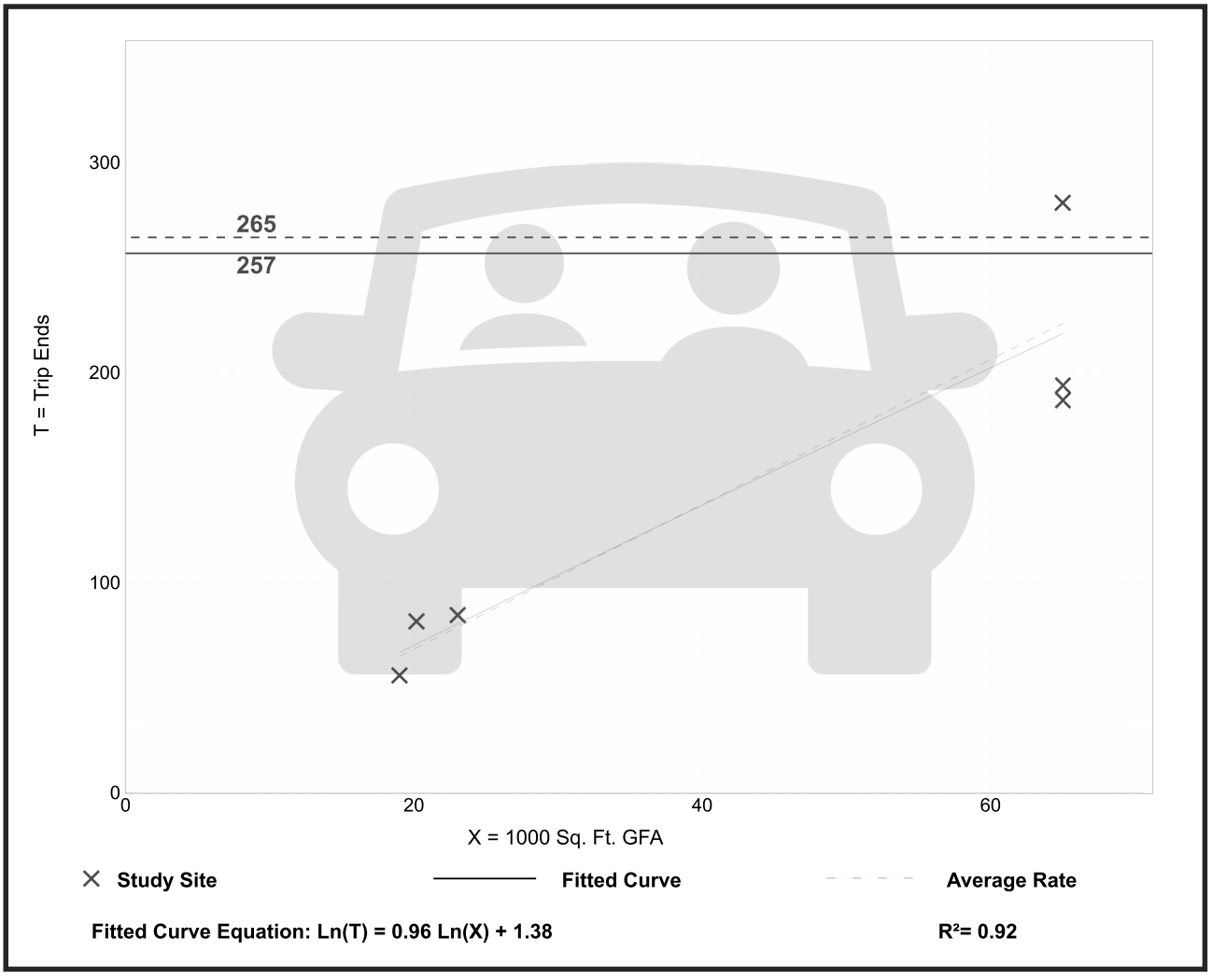
Multipurpose Recreational Facility
(435)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 6
Avg. 1000 Sq. Ft. GFA: 43
Directional Distribution: 56% entering, 44% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.44	2.88 - 4.32	0.68

Data Plot and Equation



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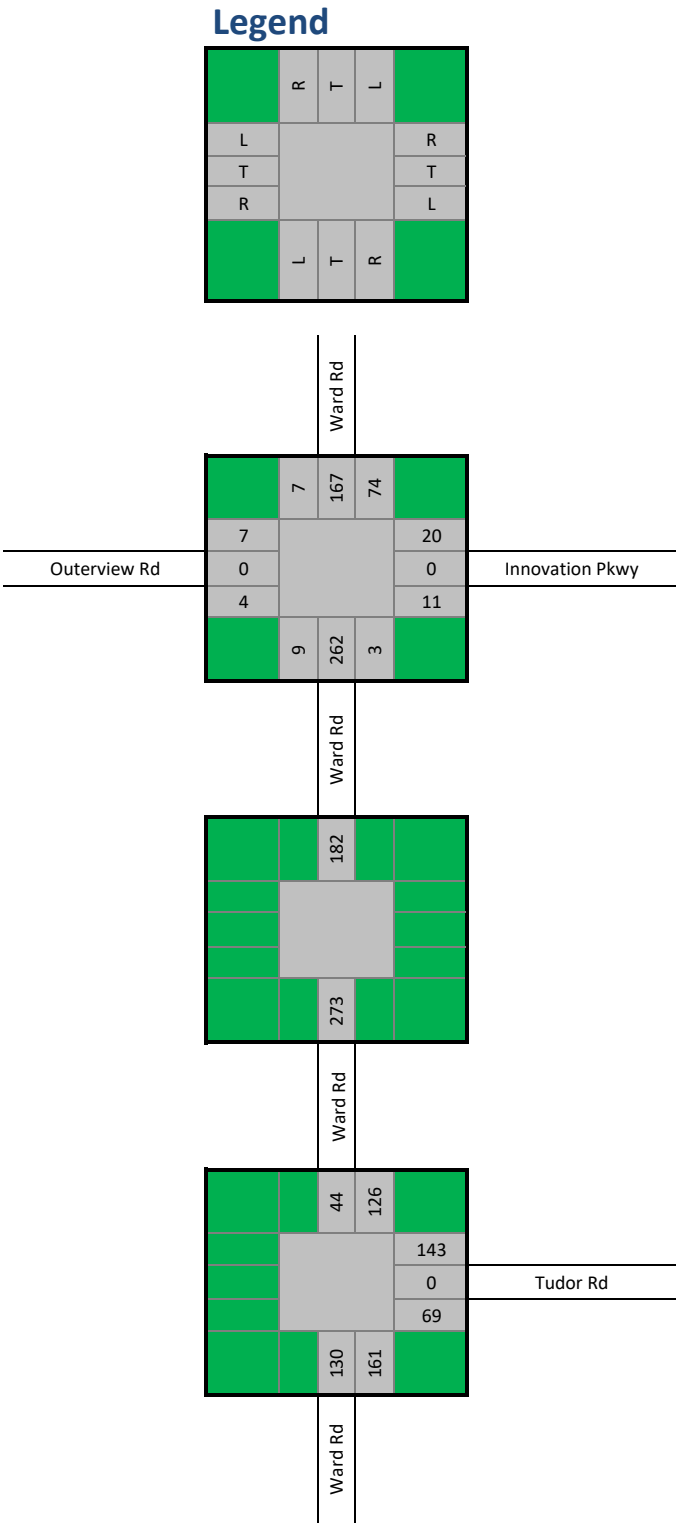
Rush Fun Plex TIS Site Trip Generation

ITE Trip Generation Manual - 12th Edition

Highlighted text indicates trips used in Synchro and Warrant Analysis

Land Use	ITE Code	Size	Units	Equation	Trips (Eq.)	Av. Rate	Trips (Av. Rate)	In%	Out%	Trips In	Trips Out
****PHASE I****											
Multipurpose Recreational Facility **(Weekday)**	210	76.9	1000 Sq Ft	N/A							
Multipurpose Recreational Facility **(AM)**	210	76.9	1000 Sq Ft	N/A							
Multipurpose Recreational Facility **(PM)**	210	76.9	1000 Sq Ft	Ln(T)=0.96Ln(X)+1.38	257	3.44	265	56%	44%	144	113
****PHASE II****											
General Office Building **(Weekday)**	710	21.5	1000 Sq Ft	T=6.18(X)+207.96	341	7.83	168	50%	50%	171	170
High-Turnover (Sit-Down) Restaurant	932	3.9	1000 Sq Ft	n/a	n/a	103.75	405	50%	50%	203	202
										374	372
General Office Building **(AM)**	710	21.5	1000 Sq Ft	T=1.12(X)+19.95	44	1.24	27	88%	12%	39	5
High-Turnover (Sit-Down) Restaurant	932	3.9	1000 Sq Ft	n/a	n/a	8.97	35	55%	45%	19	16
										58	21
General Office Building **(AM)**	710	21.5	1000 Sq Ft	T=.099(X)+31.14	52	1.18	25	16%	84%	8	44
High-Turnover (Sit-Down) Restaurant	932	3.9	1000 Sq Ft	n/a	n/a	9.18	36	61%	39%	22	14
										30	58

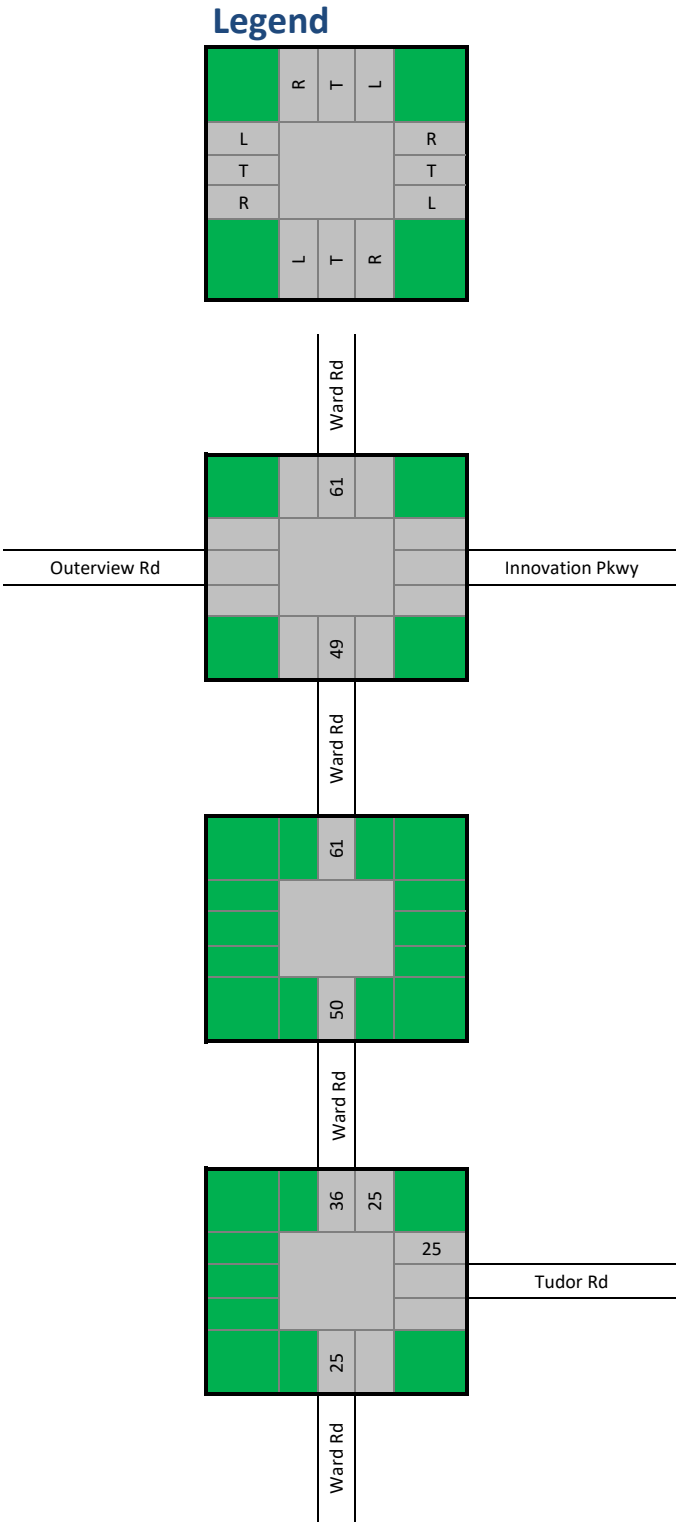
AM - Existing Traffic Volumes



AM - Volumes from Approved Site

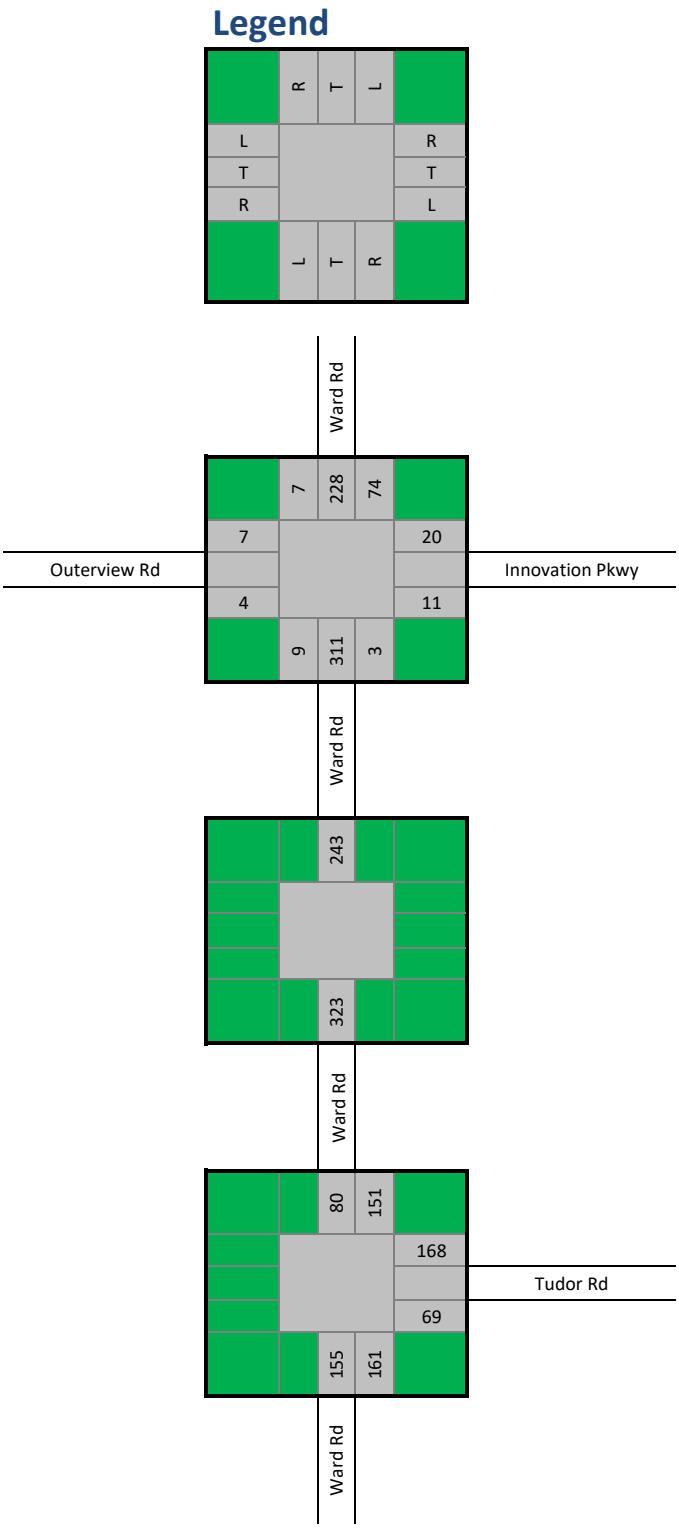
*Summit Orchard North - trips from unconstructed sites

Legend

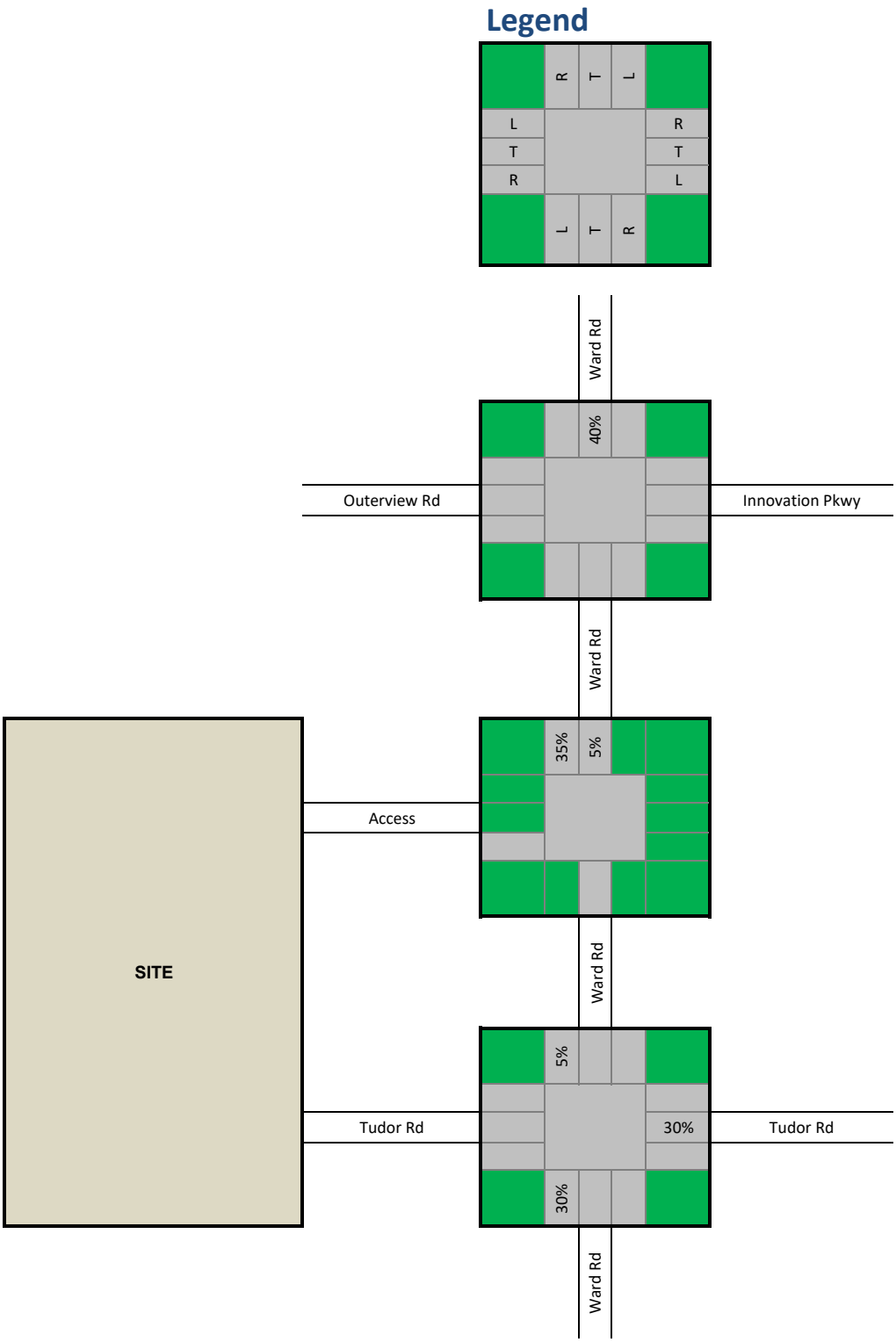


AM - Existing plus Approved Trips

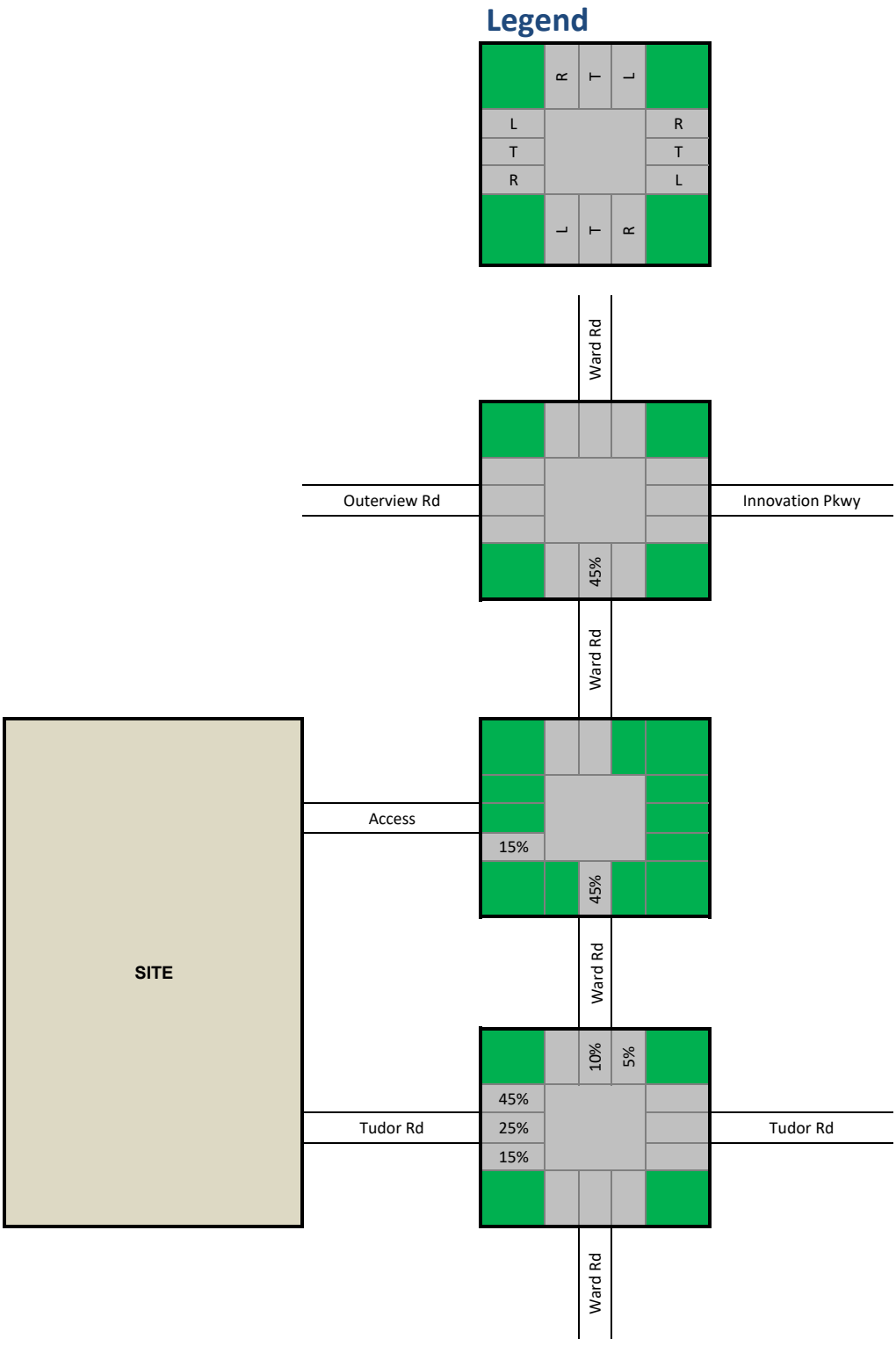
*Used for the existing conditions analysis



AM - Distribution In
Phase I



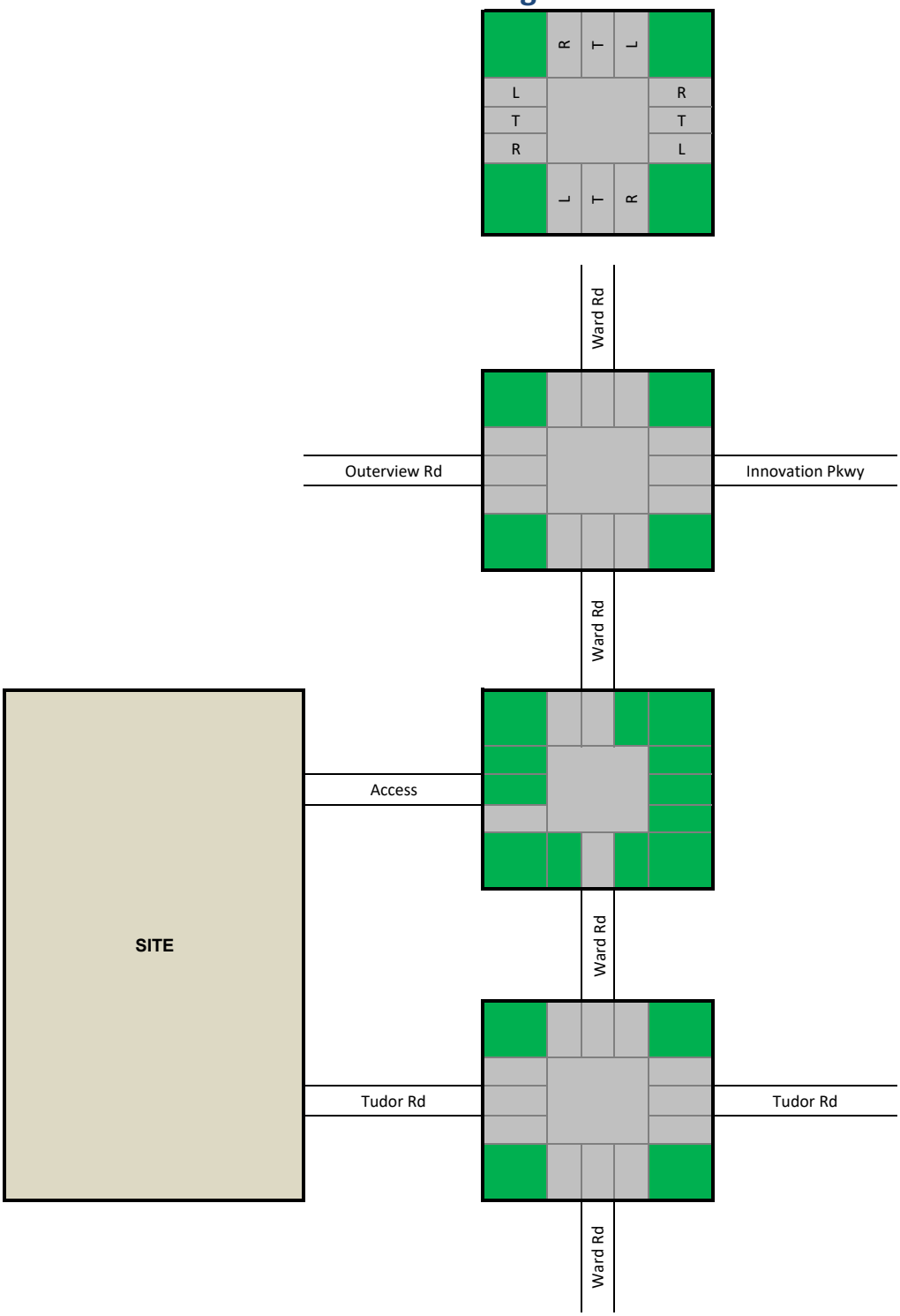
AM - Distribution Out
Phase I



AM - Trips In
Phase I

Trips

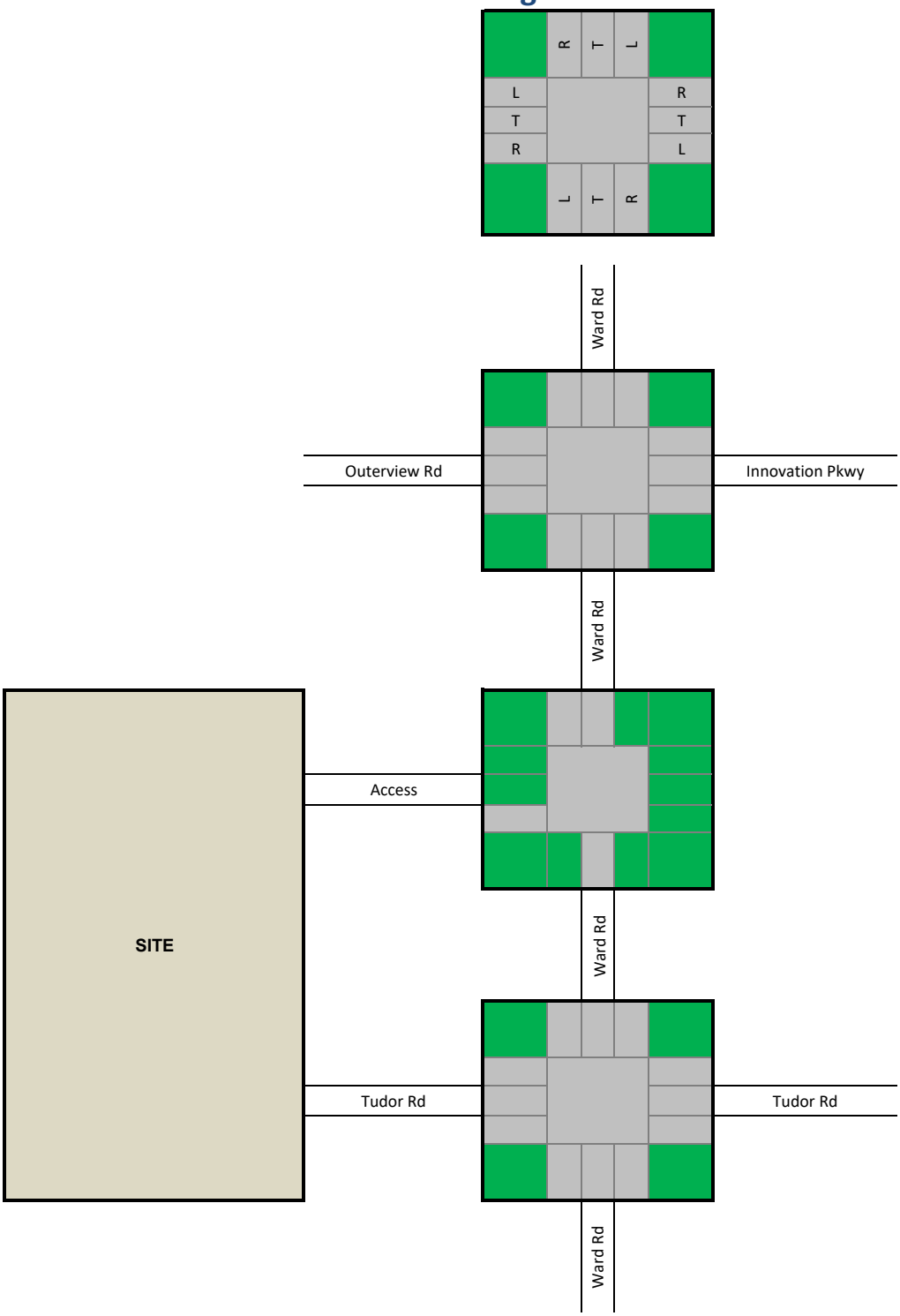
Legend



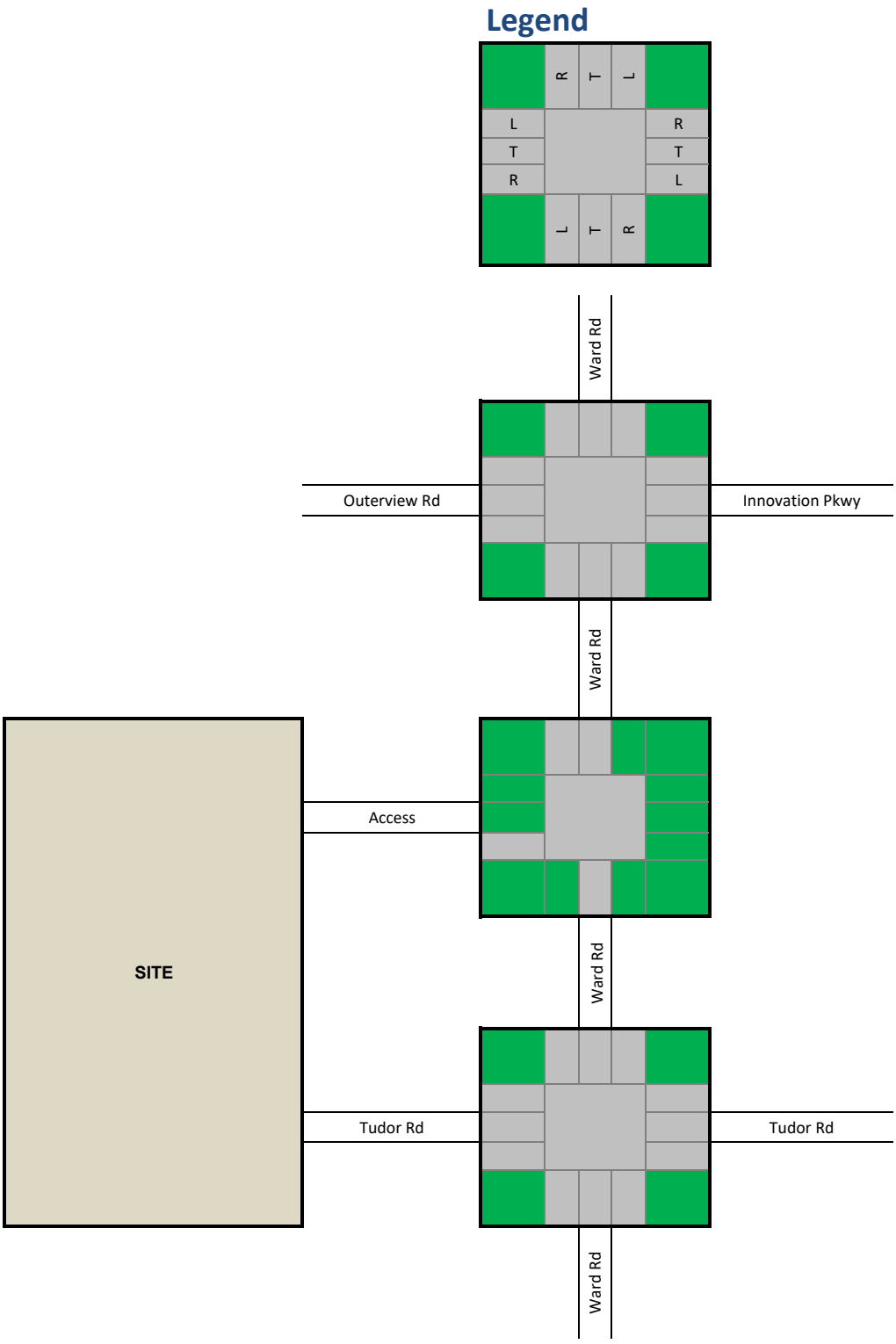
AM - Trips Out
Phase I

Trips

Legend



AM - Trips (I)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Outerview Rd
Innovation Pkwy
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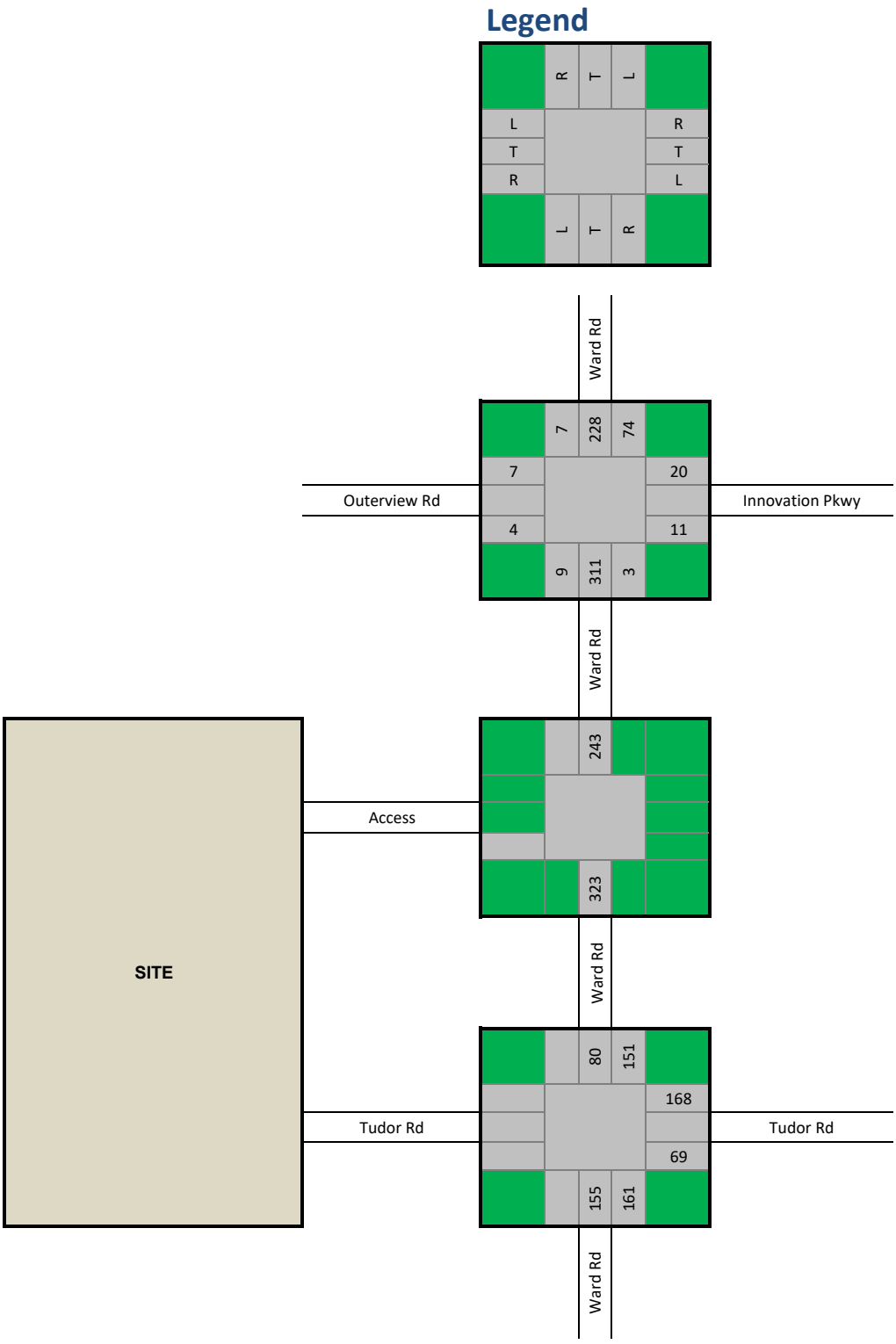
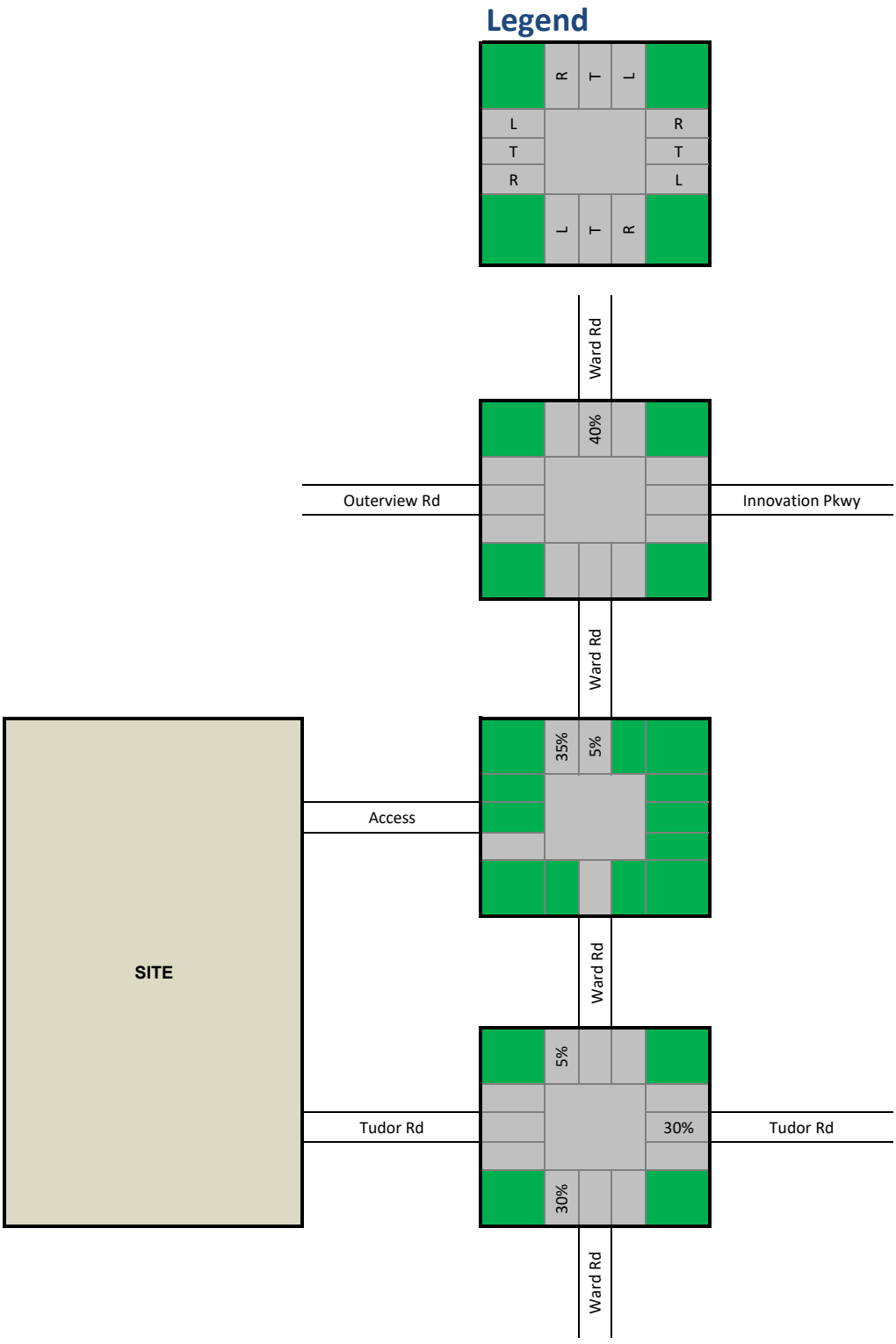
Access
SITE
Ward Rd
Tudor Rd
Tudor Rd
Ward Rd

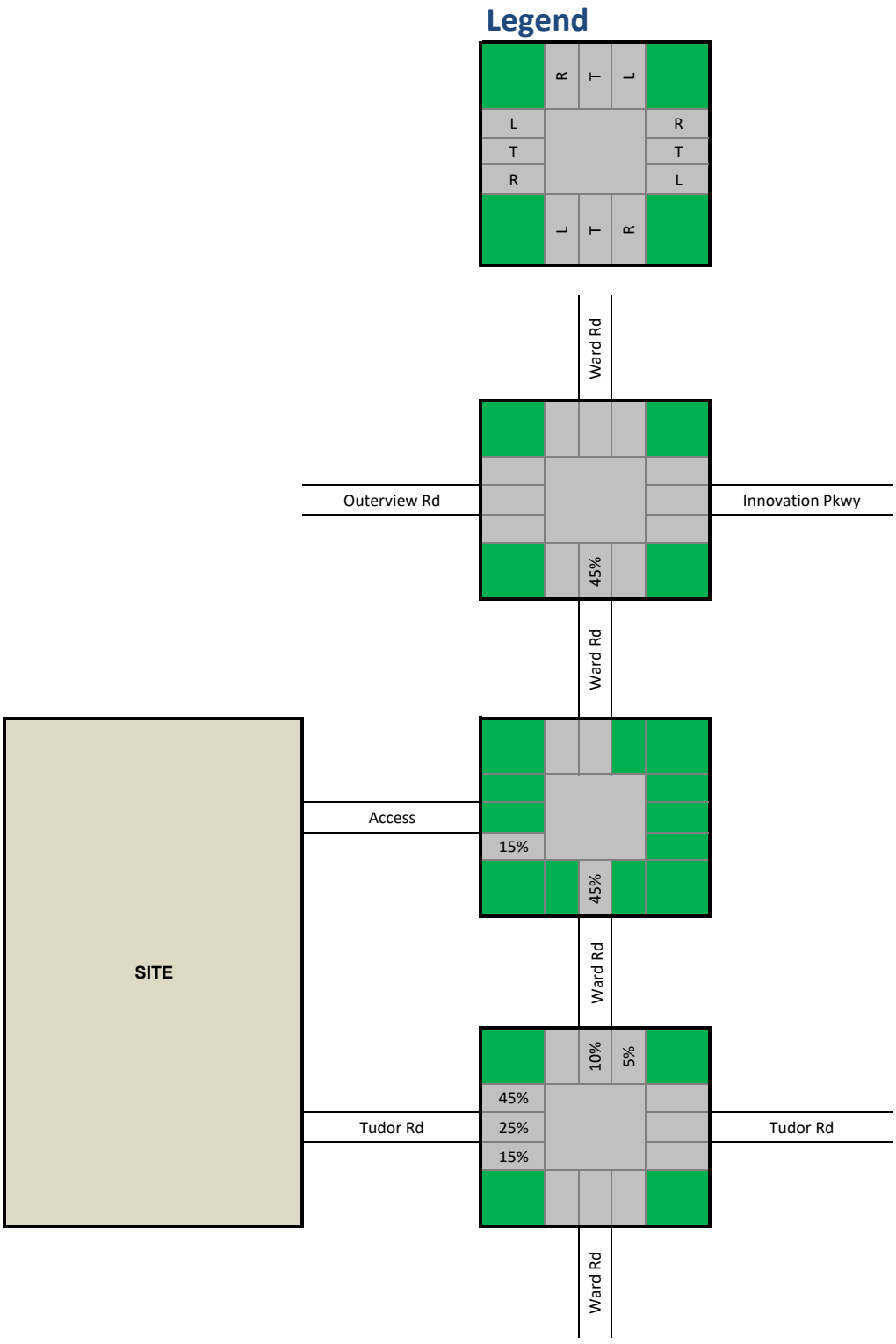
AM - Existing (Approved) plus Trips (I)



AM - Distribution In
Phase II



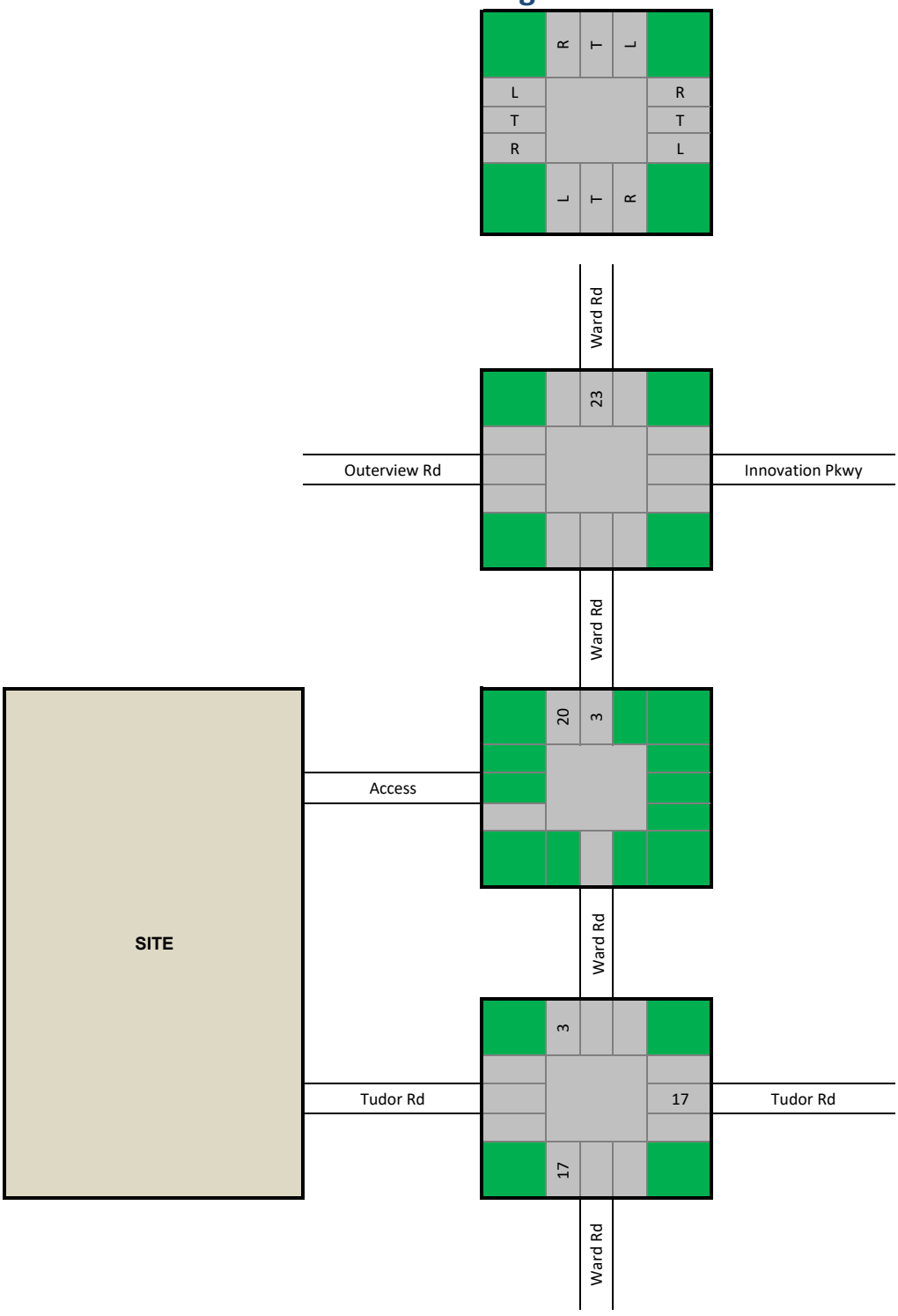
AM - Distribution Out
Phase II



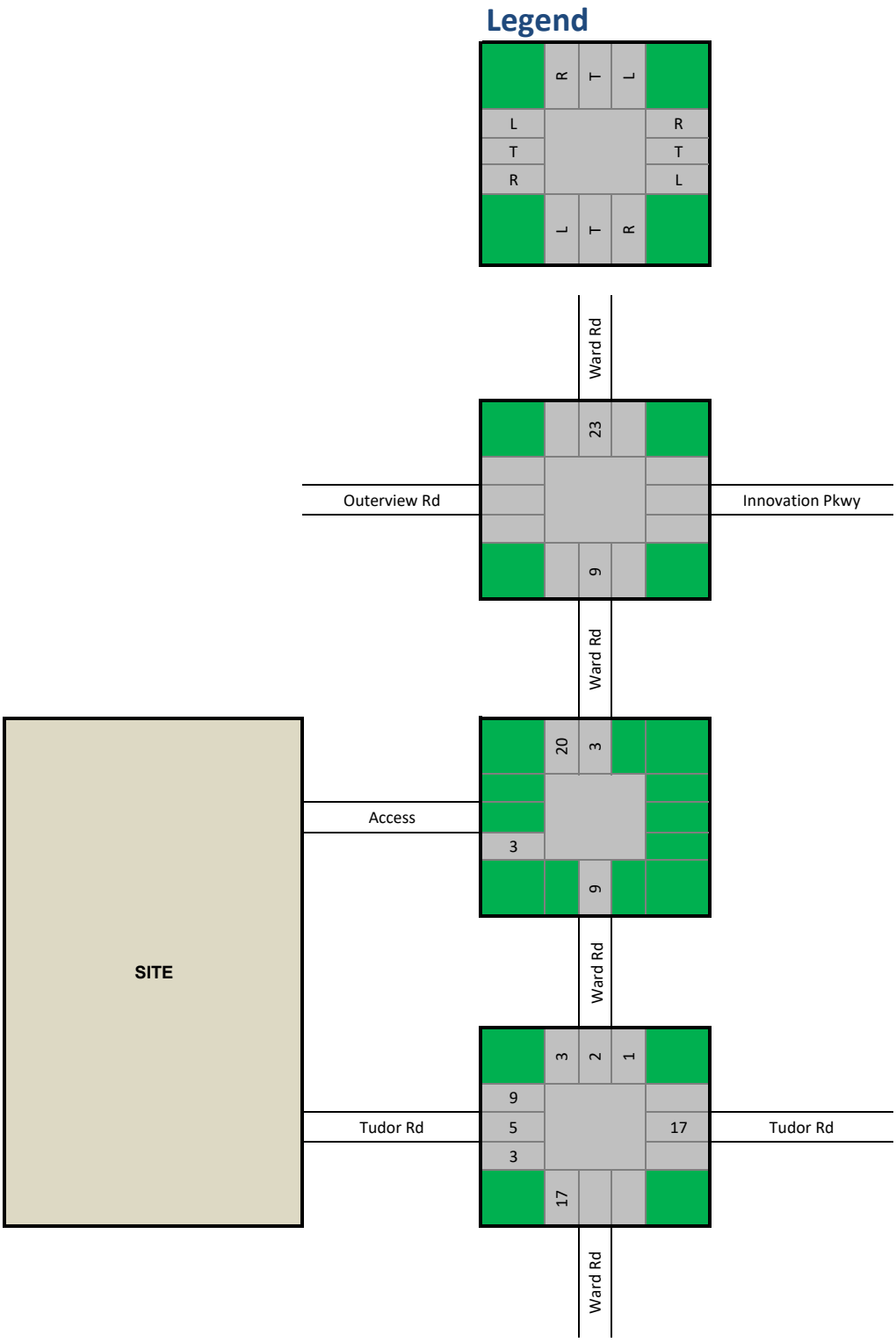
AM - Trips In
Phase II

Trips
58

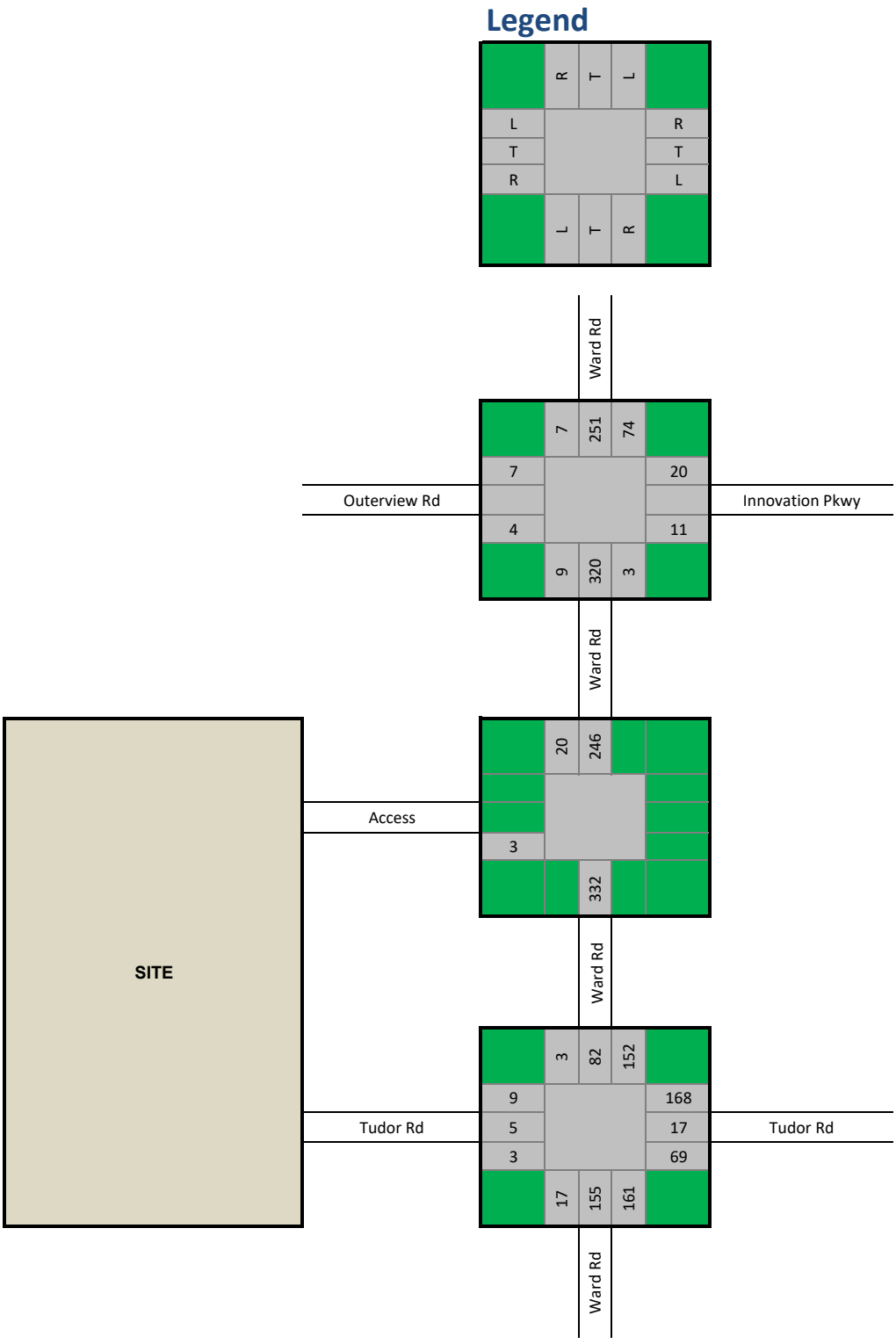
Legend



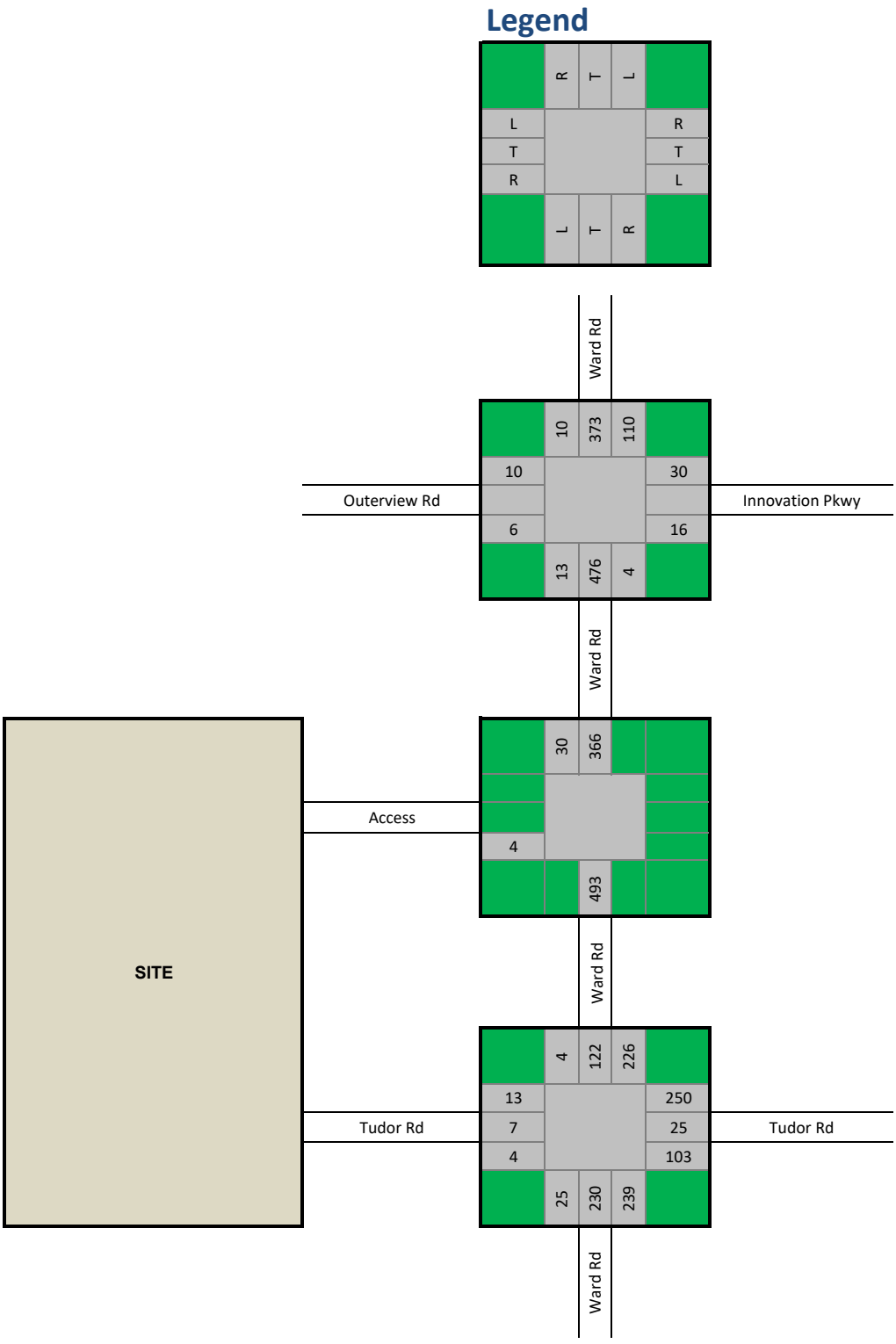
AM - Trips (II)
Phase II



AM - Existing (Approved) plus Trips (II) Phase II



AM - Future


Legend
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SITE
Ward Rd
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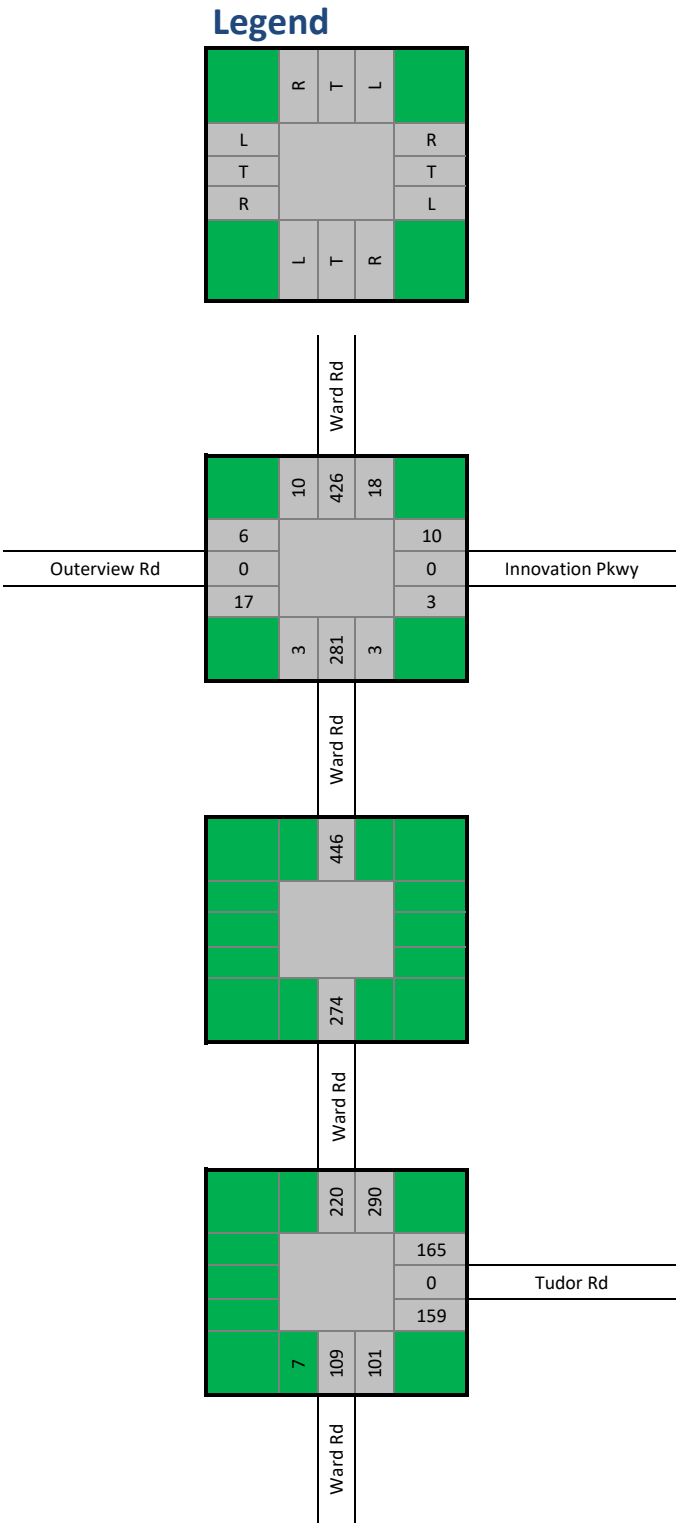
Ward Rd

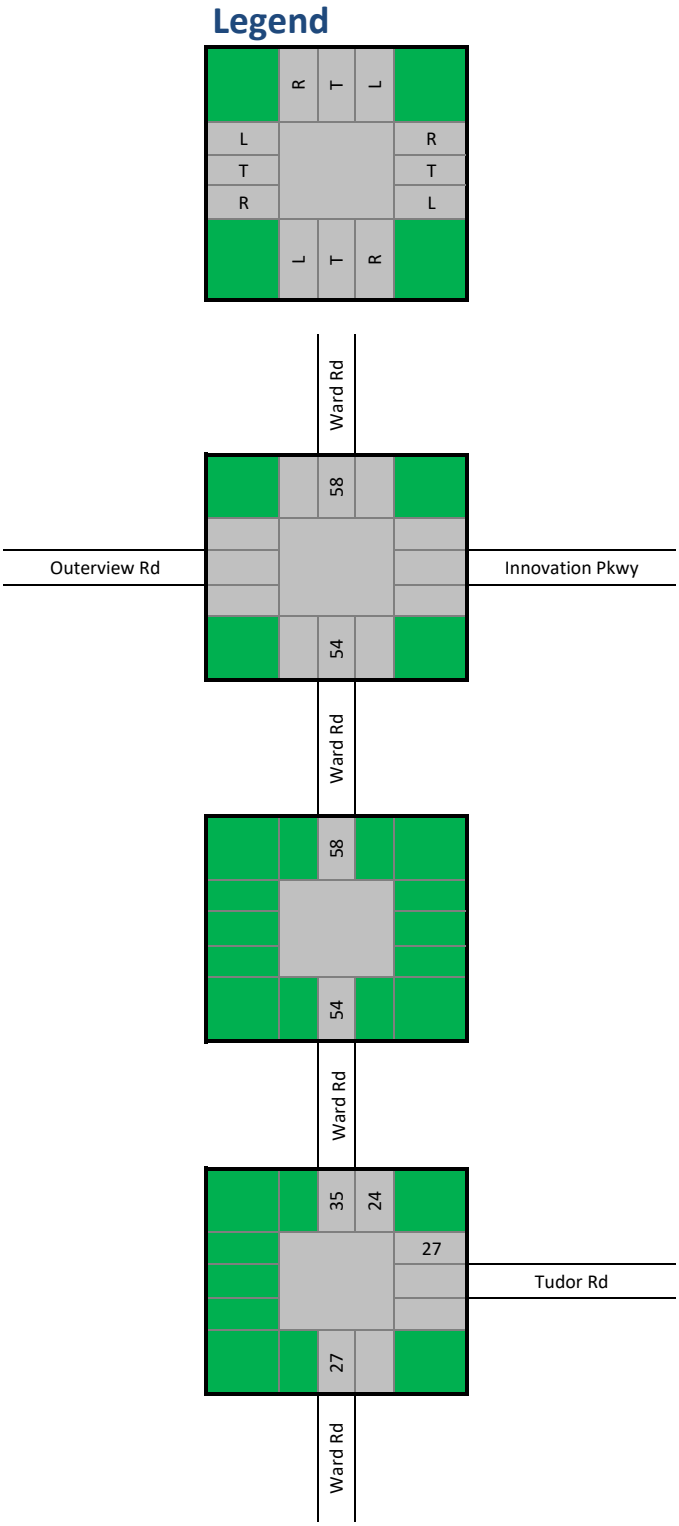
PM - Existing Traffic Volumes



PM - Volumes from Approved Site

*Summit Orchard North - trips from unconstructed sites

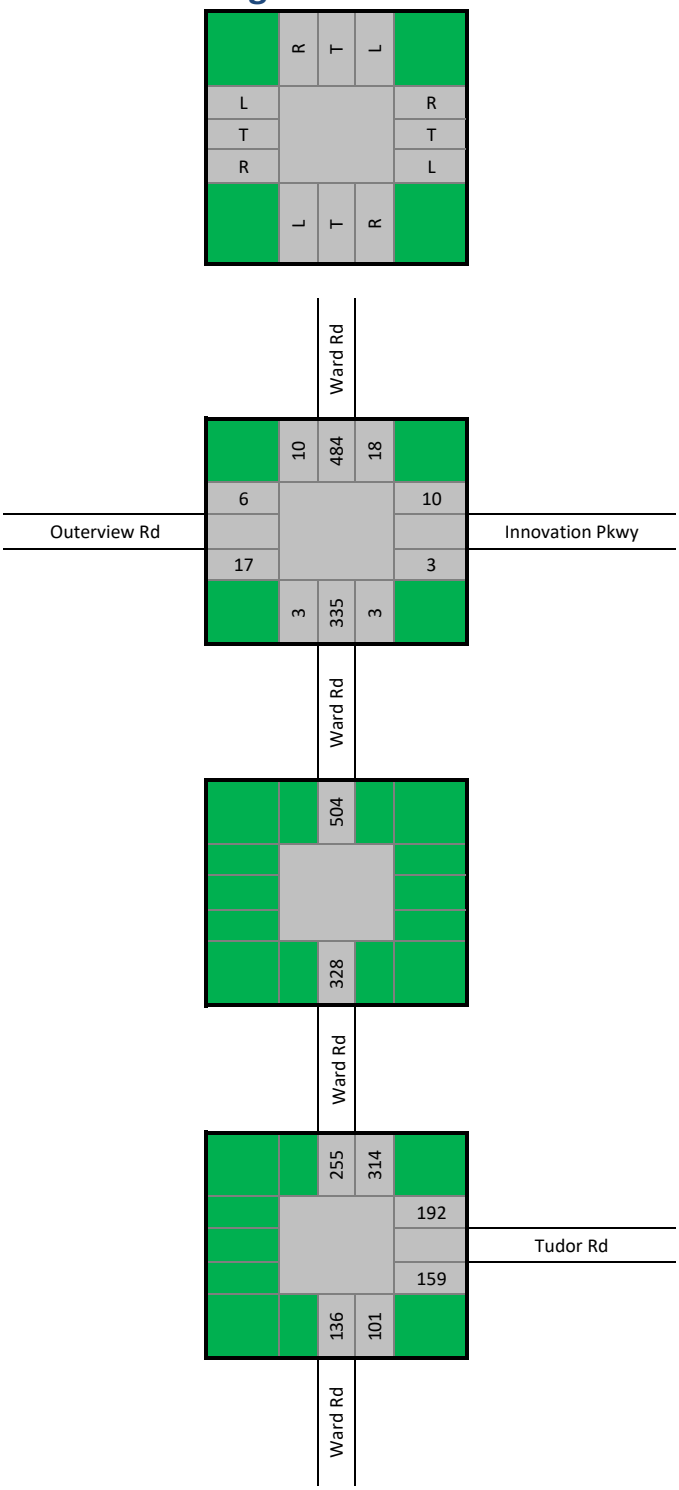
Legend



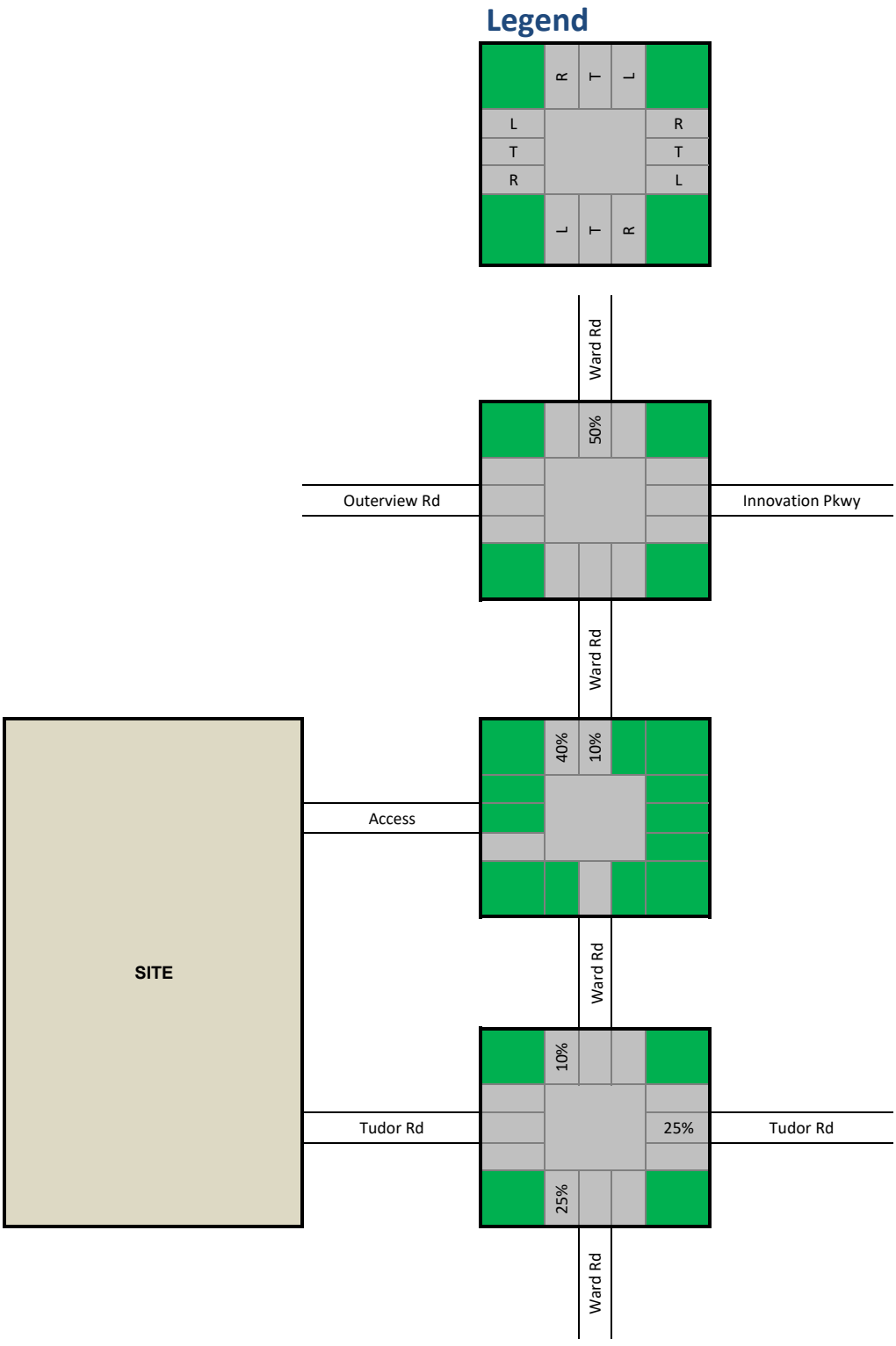
PM - Existing plus Approved Trips

*Used for the existing conditions analysis

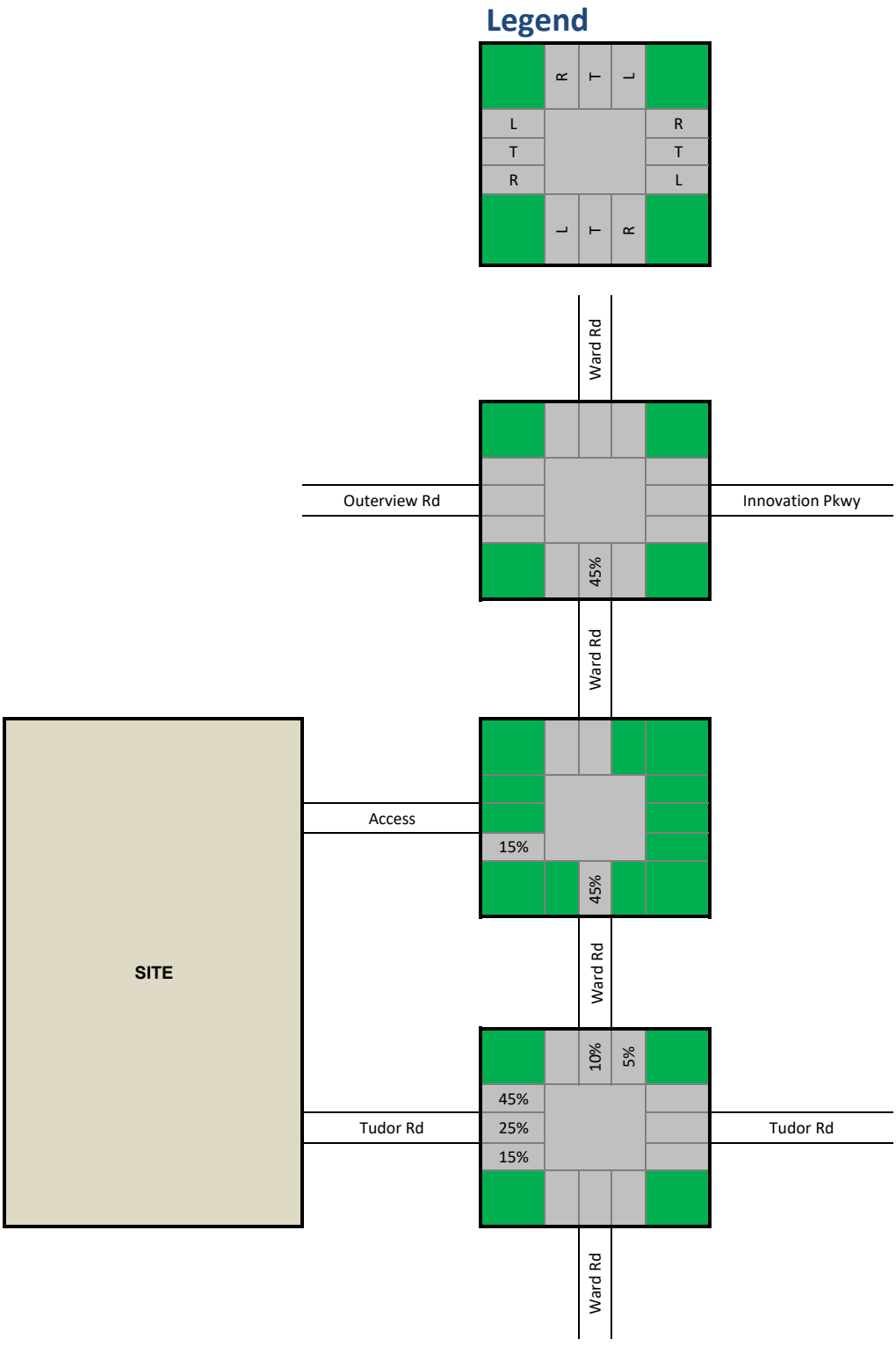
Legend



PM - Distribution In
Phase I



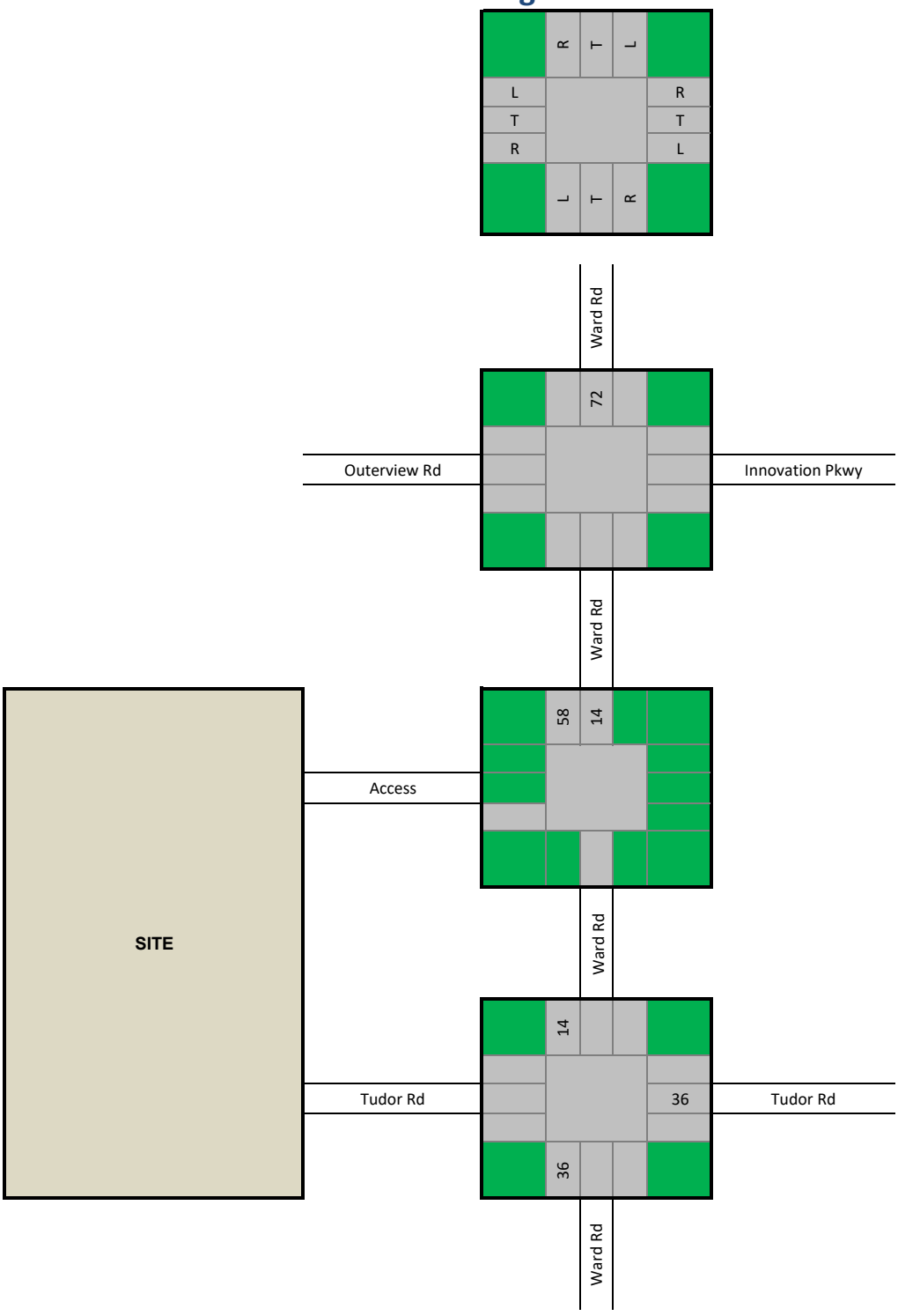
PM - Distribution Out
Phase I



PM - Trips In
Phase I

Trips
144

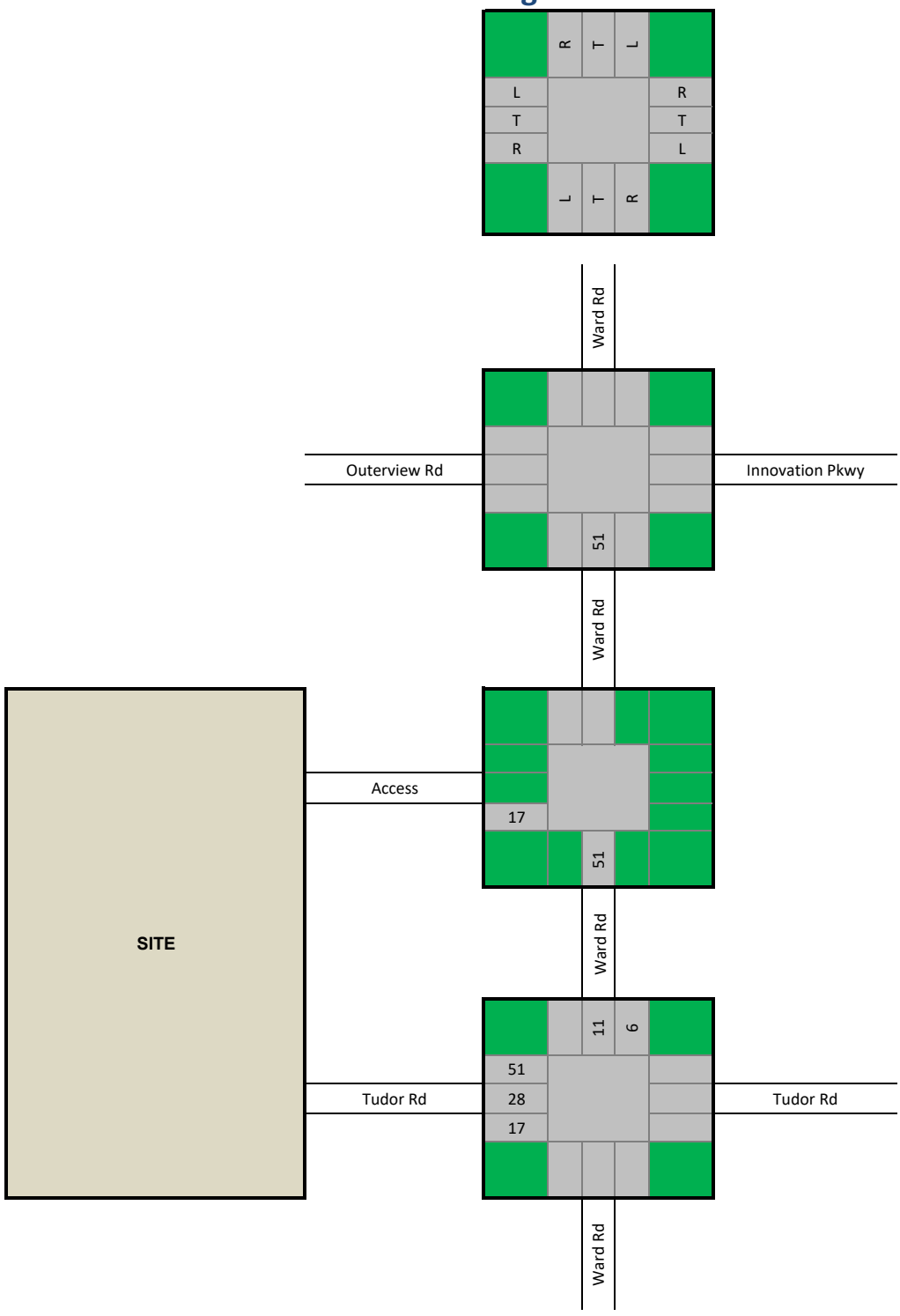
Legend



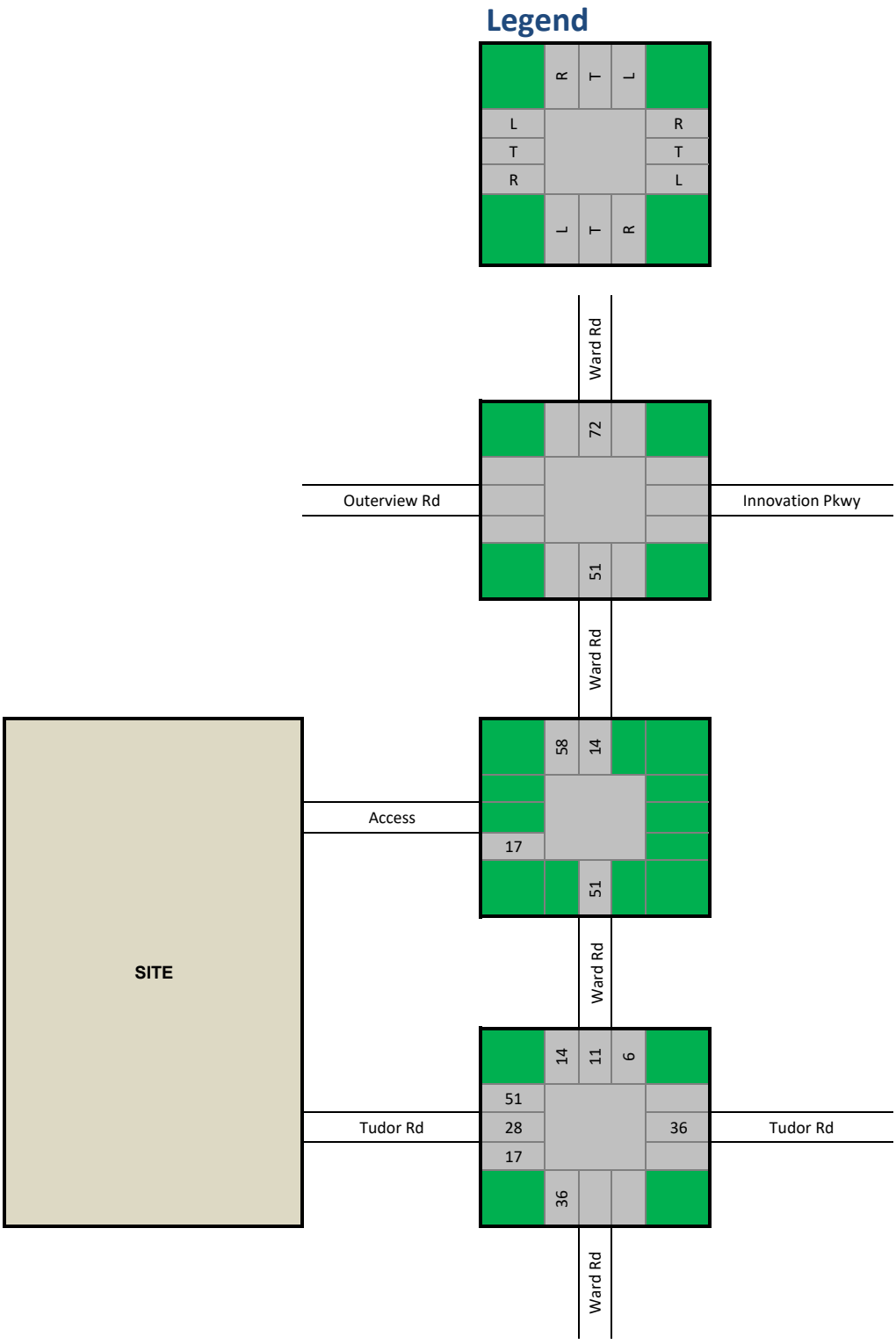
PM - Trips Out
Phase I

Trips
113

Legend



PM - Trips (I)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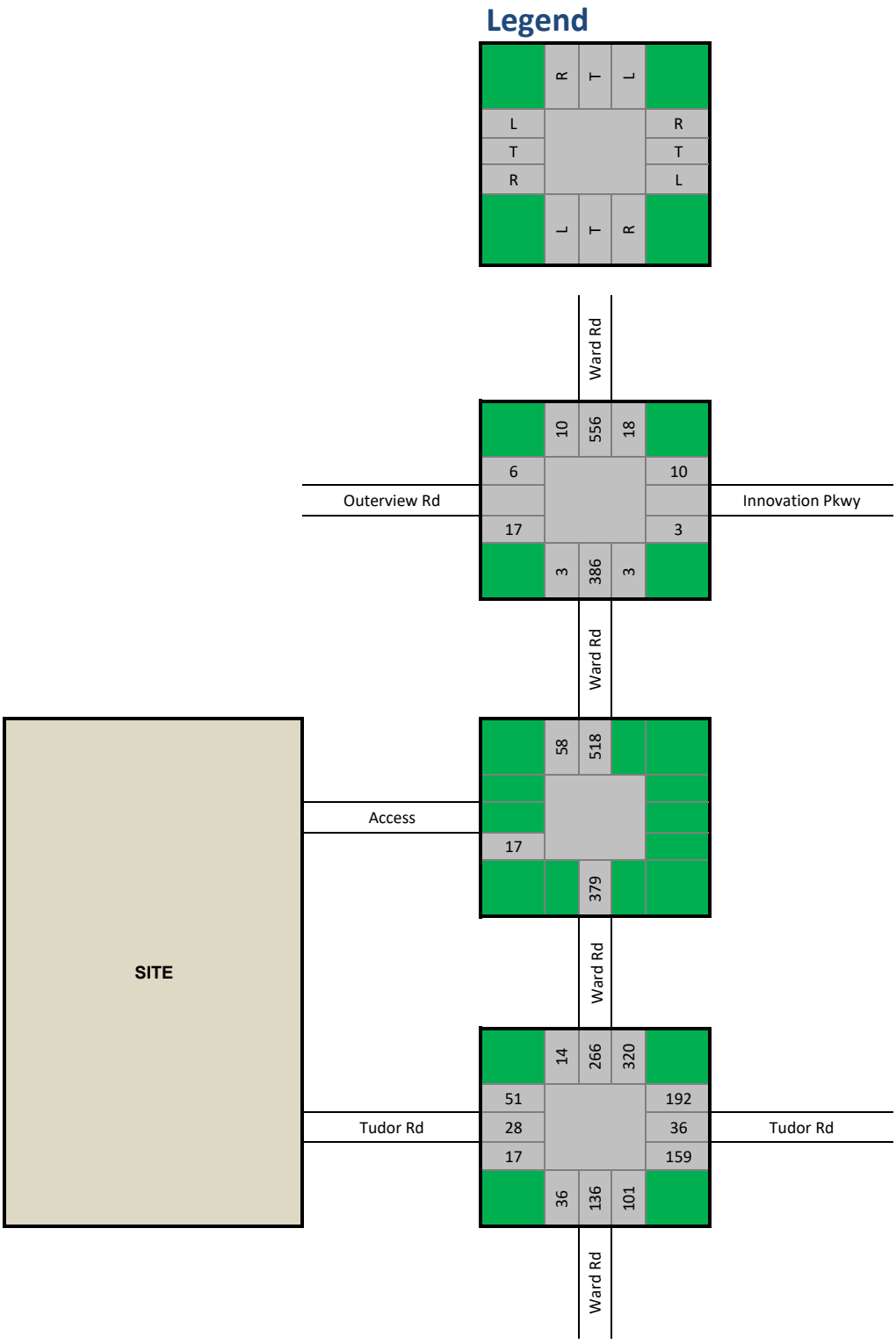
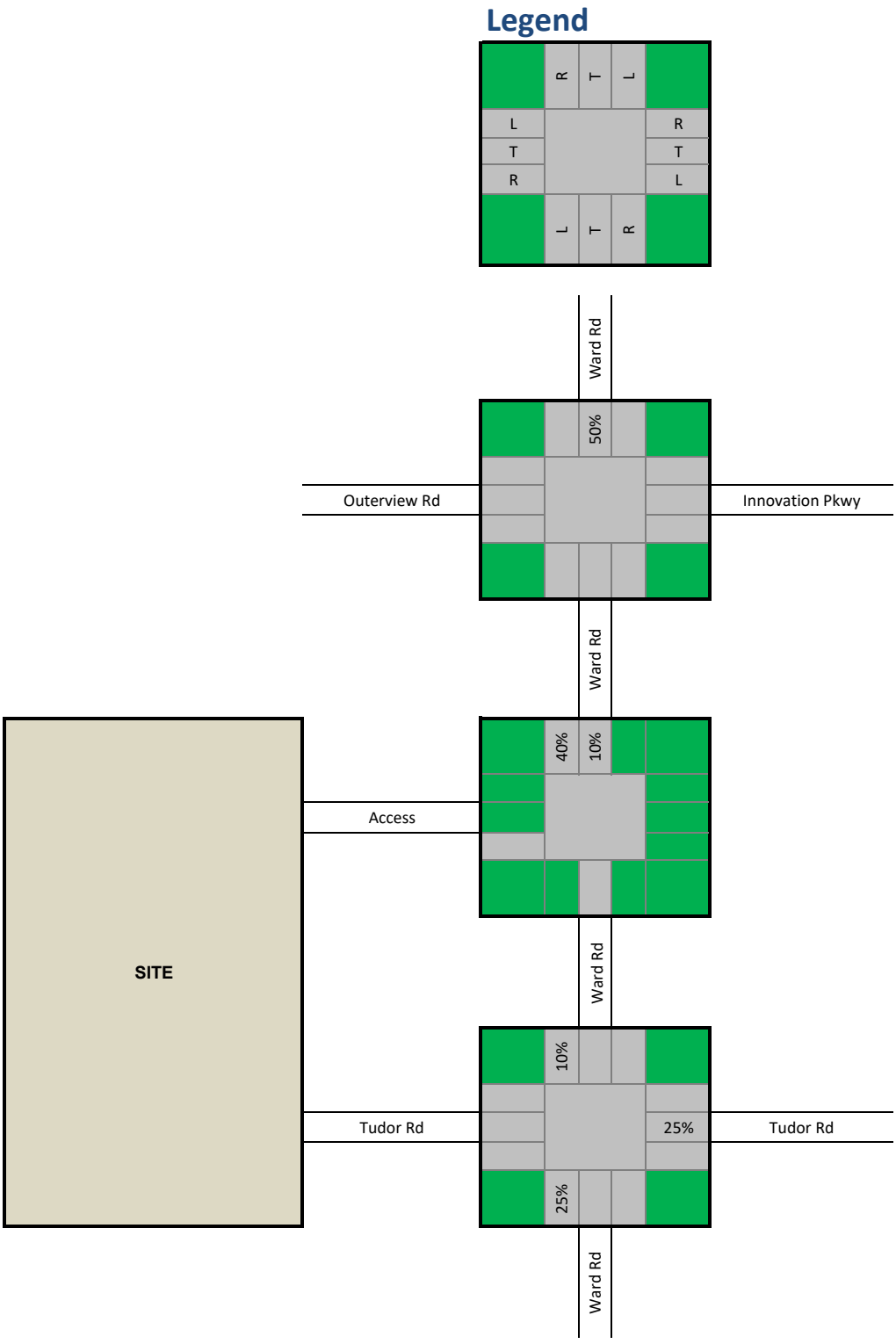
Ward Rd

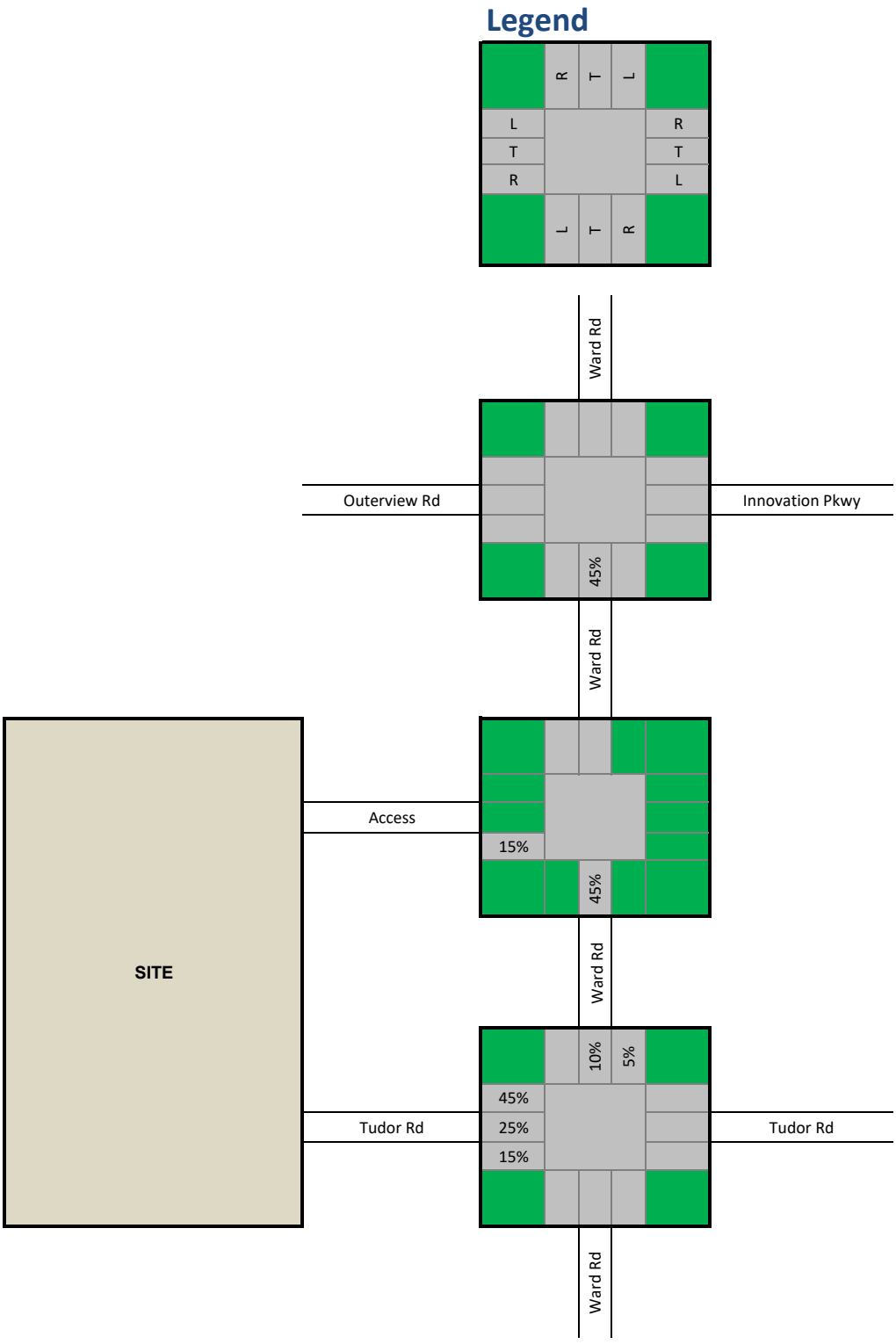
PM - Existing (Approved) plus Trips (I)



PM - Distribution In
Phase II



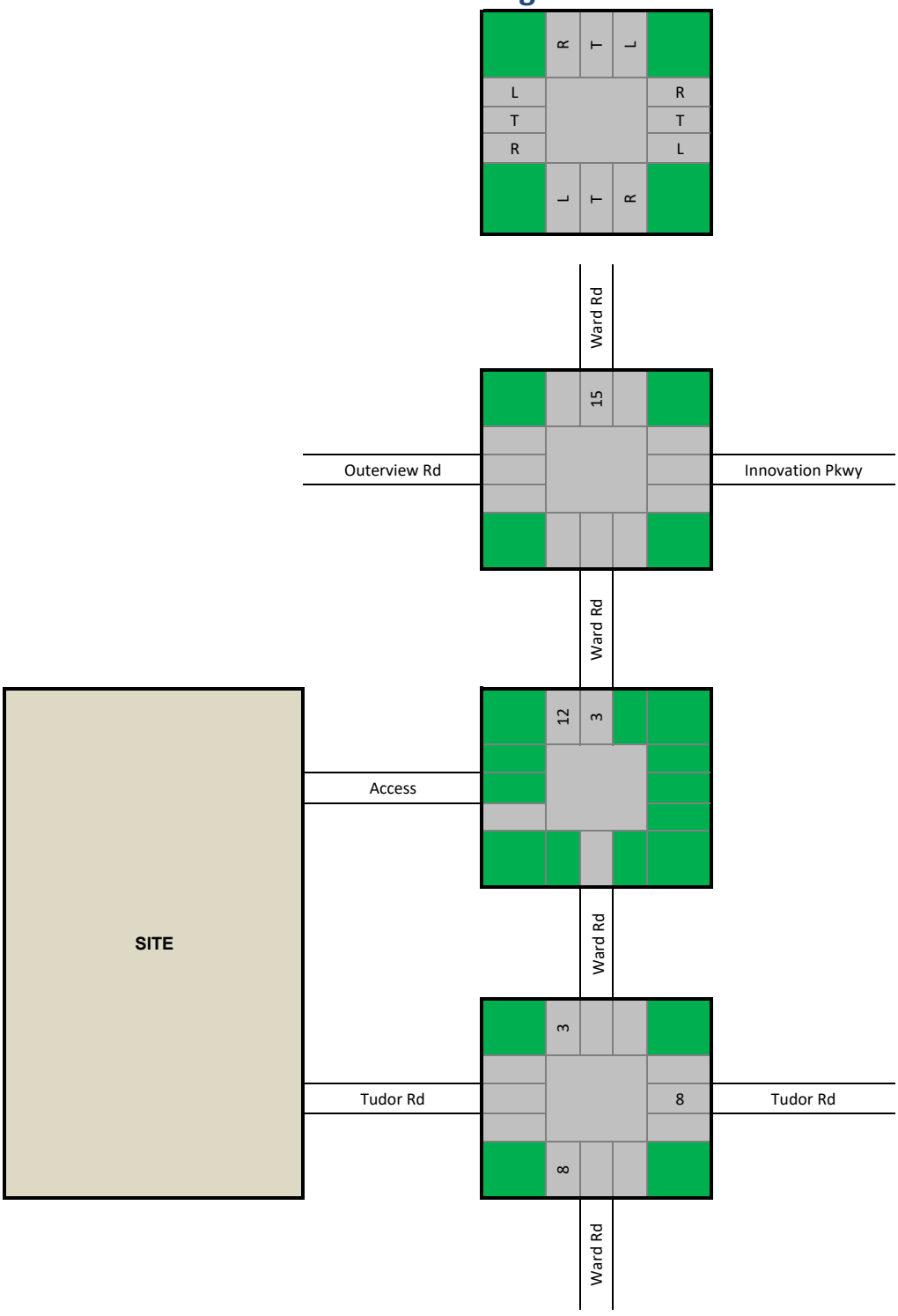
PM - Distribution Out
Phase II



PM - Trips In
Phase II

Trips
30

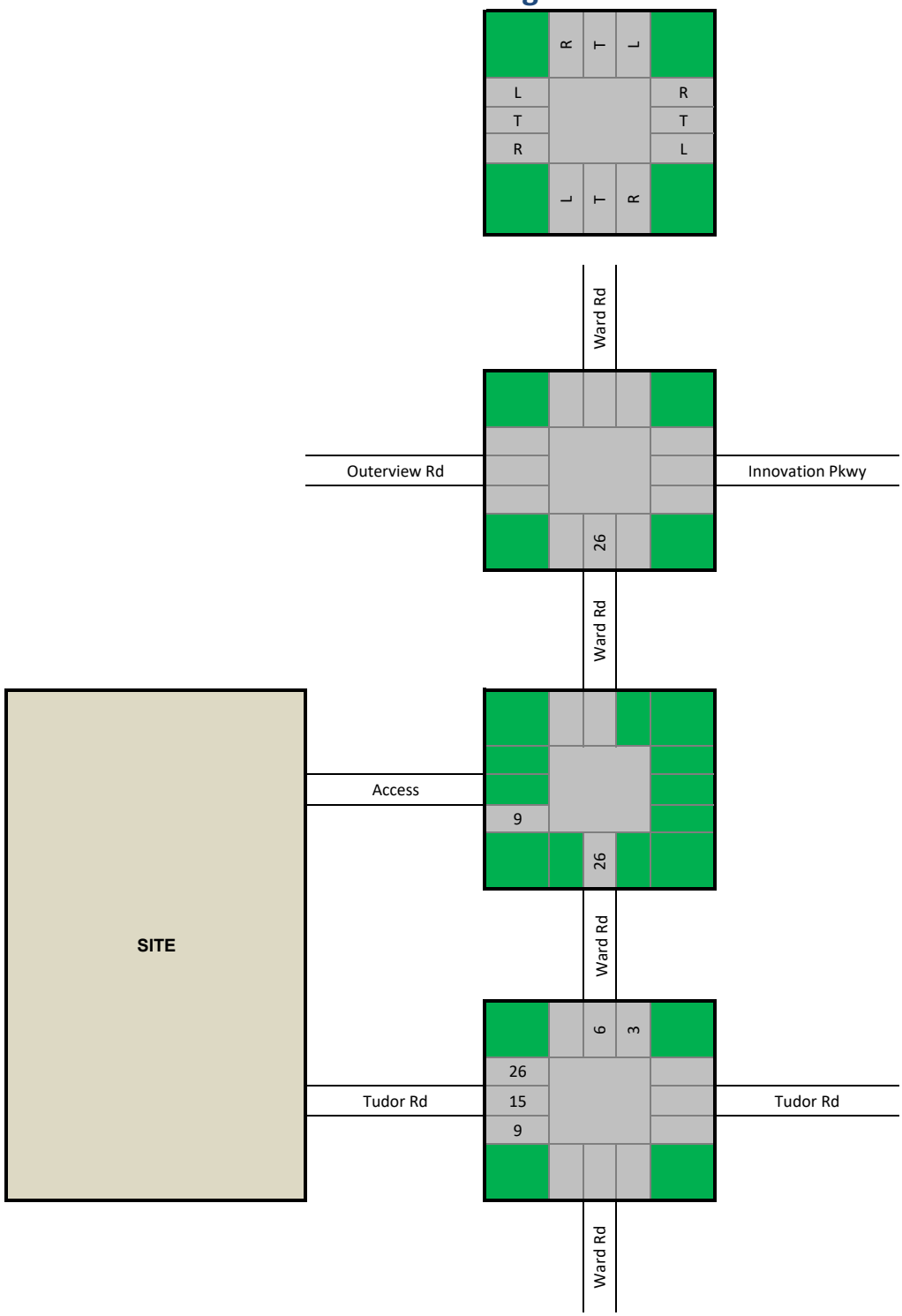
Legend



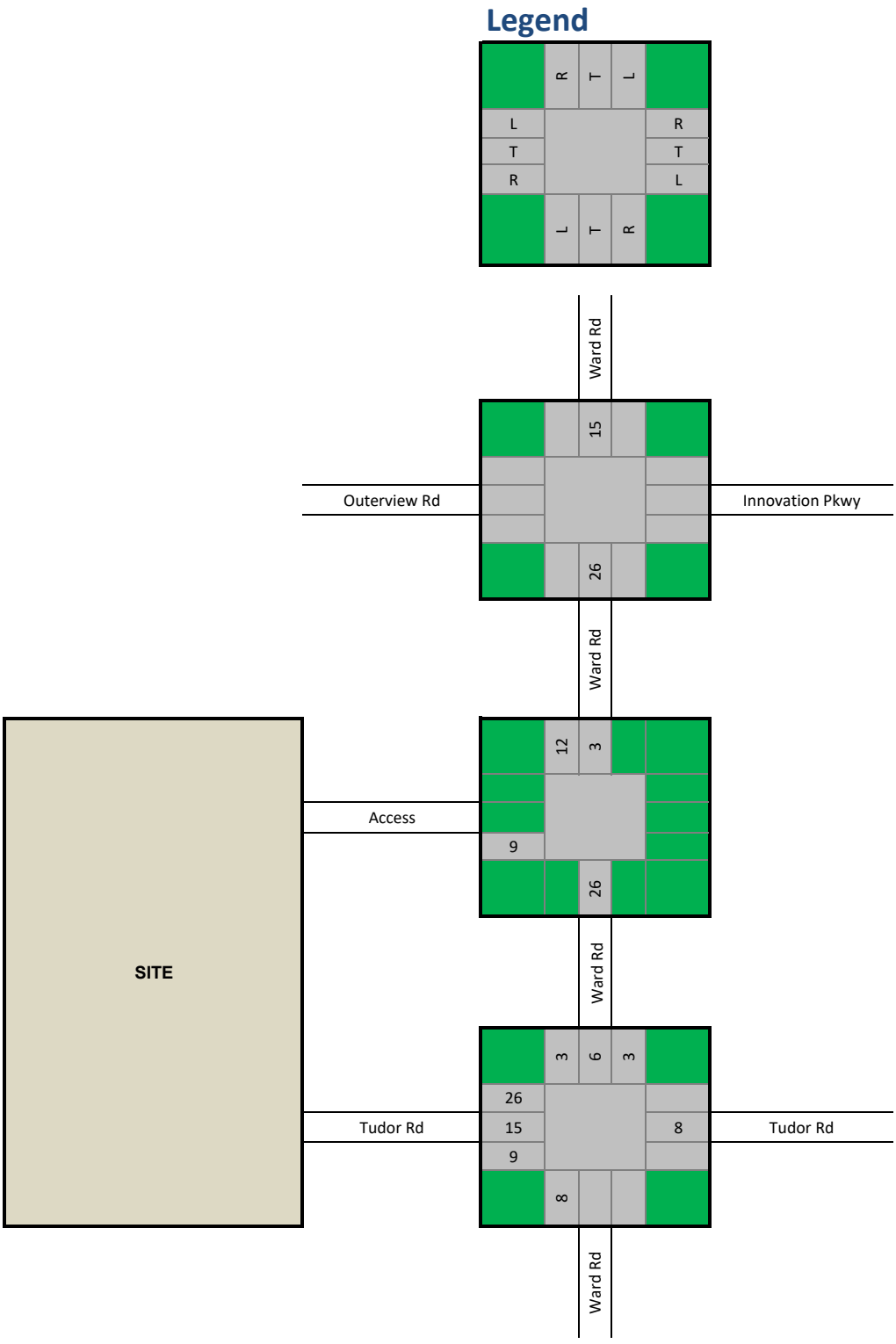
PM - Trips Out
Phase II

Trips
58

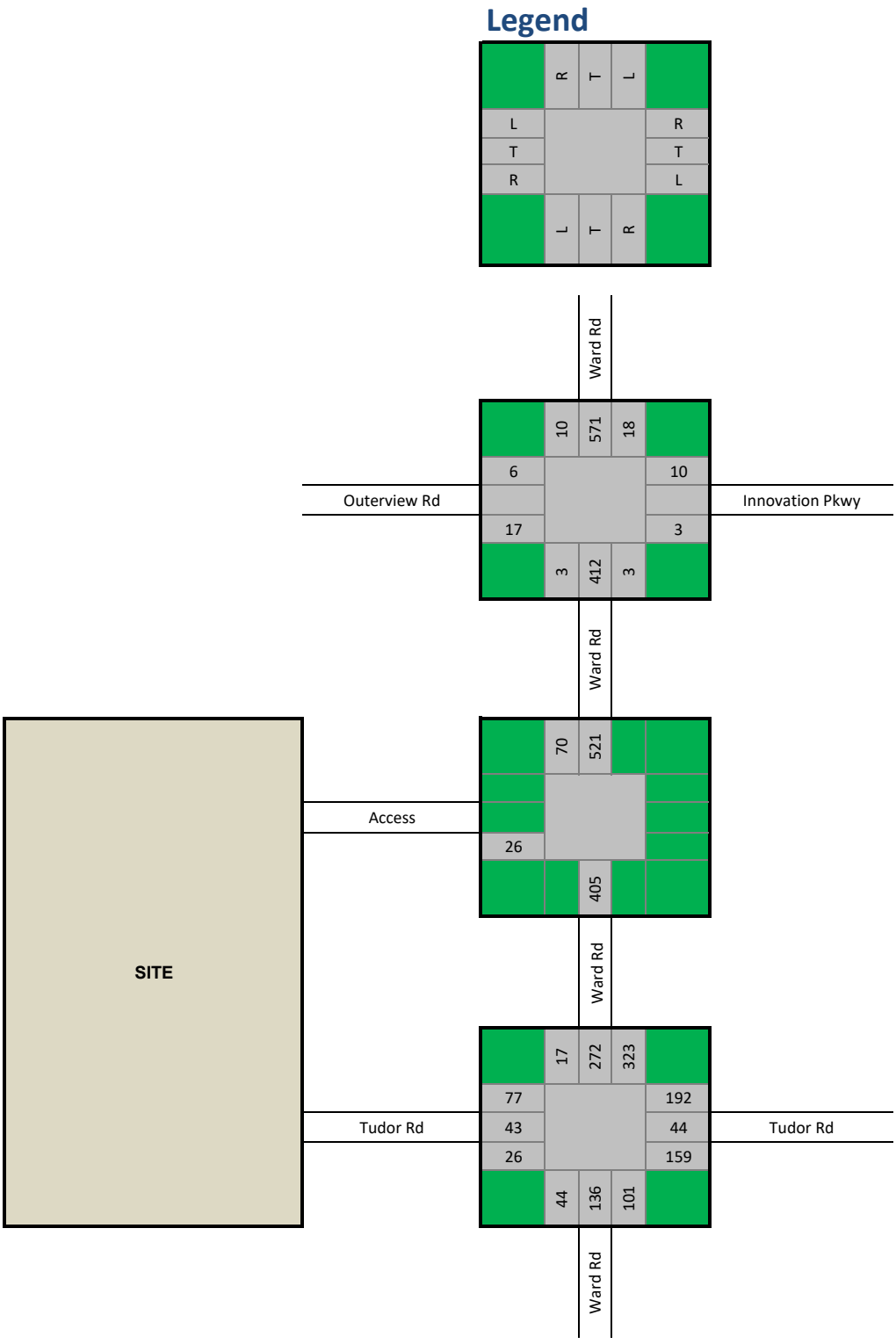
Legend



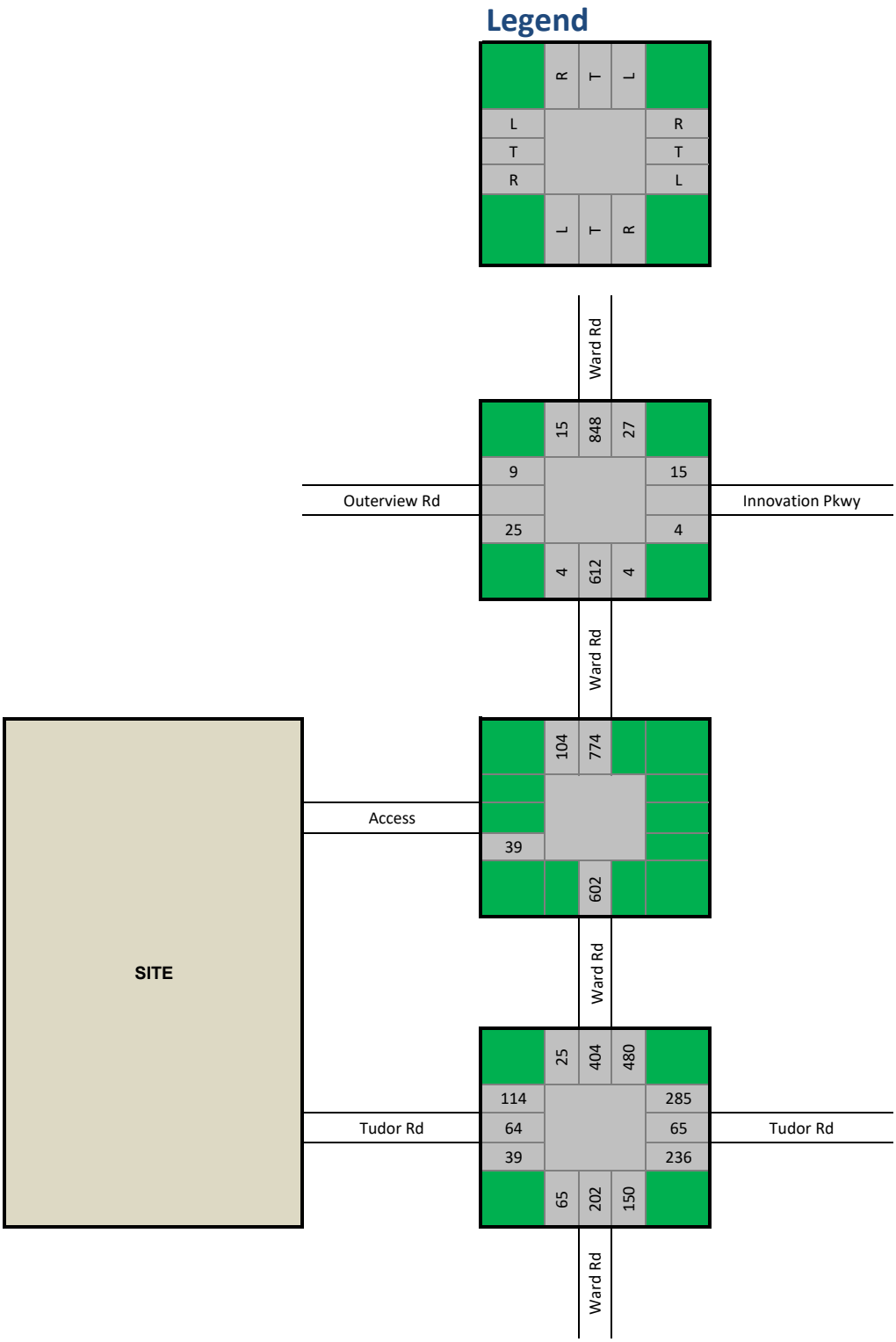
PM - Trips (II)
Phase II



PM - Existing (Approved) plus Trips (II) Phase II



PM - Future


Legend
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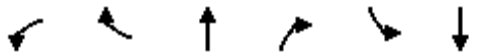


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	90	218	191	199	168	89
v/c Ratio	0.42	0.57	0.09	0.20	0.19	0.03
Control Delay	37.5	11.3	8.2	2.0	3.8	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.5	11.3	8.2	2.0	3.8	2.9
Queue Length 50th (ft)	41	0	19	0	17	4
Queue Length 95th (ft)	70	34	34	21	38	11
Internal Link Dist (ft)	1567		2098			1216
Turn Bay Length (ft)				90	150	
Base Capacity (vph)	750	796	2015	987	1025	2653
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.27	0.09	0.20	0.16	0.03

Intersection Summary



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	69	168	155	161	151	80
Future Volume (veh/h)	69	168	155	161	151	80
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	90	218	191	199	168	89
Peak Hour Factor	0.77	0.77	0.81	0.81	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	300	267	1934	863	776	2518
Arrive On Green	0.17	0.17	0.54	0.54	0.10	0.71
Sat Flow, veh/h	1781	1585	3647	1585	1781	3647
Grp Volume(v), veh/h	90	218	191	199	168	89
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	3.6	10.8	2.1	5.3	3.0	0.6
Cycle Q Clear(g_c), s	3.6	10.8	2.1	5.3	3.0	0.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	300	267	1934	863	776	2518
V/C Ratio(X)	0.30	0.82	0.10	0.23	0.22	0.04
Avail Cap(c_a), veh/h	713	635	1934	863	1010	2518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.6	32.5	8.9	9.6	5.8	3.5
Incr Delay (d2), s/veh	0.6	6.1	0.1	0.6	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.4	0.8	1.8	0.9	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.1	38.6	9.0	10.3	6.0	3.6
LnGrp LOS	C	D	A	B	A	A
Approach Vol, veh/h	308		390			257
Approach Delay, s/veh	36.1		9.6			5.1
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	13.3	49.7			63.0	18.2
Change Period (Y+Rc), s	5.5	5.5			5.5	4.5
Max Green Setting (Gmax), s	18.5	33.5			57.5	32.5
Max Q Clear Time (g_c+I1), s	5.0	7.3			2.6	12.8
Green Ext Time (p_c), s	0.3	1.9			0.6	0.9

Intersection Summary	
HCM 6th Ctrl Delay	17.0
HCM 6th LOS	B

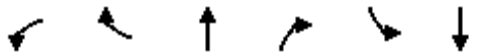
Intersection	
Int Delay, s/veh	2.1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	74	228	7	9	311	3	7	0	4	11	0	20
Future Vol, veh/h	74	228	7	9	311	3	7	0	4	11	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	190	-	190	200	-	145	-	-	-	25	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	69	69	69	92	92	92	55	55	55
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	106	326	10	13	451	4	8	0	4	20	0	36

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	455	0	0	336	0	0	790	1019	163	852	1025	226
Stage 1	-	-	-	-	-	-	538	538	-	477	477	-
Stage 2	-	-	-	-	-	-	252	481	-	375	548	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1102	-	-	1220	-	-	281	236	853	253	234	777
Stage 1	-	-	-	-	-	-	495	521	-	538	554	-
Stage 2	-	-	-	-	-	-	730	552	-	618	515	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1102	-	-	1220	-	-	246	211	853	231	209	777
Mov Cap-2 Maneuver	-	-	-	-	-	-	246	211	-	231	209	-
Stage 1	-	-	-	-	-	-	447	471	-	486	548	-
Stage 2	-	-	-	-	-	-	688	546	-	556	466	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	2.1	0.2	16.2	14.2
HCM LOS			C	B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	332	1220	-	-	1102	-	-	231	777
HCM Lane V/C Ratio	0.036	0.011	-	-	0.096	-	-	0.087	0.047
HCM Control Delay (s)	16.2	8	-	-	8.6	-	-	22.1	9.9
HCM Lane LOS	C	A	-	-	A	-	-	C	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0.3	-	-	0.3	0.1



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	175	181	121	112	326	247
v/c Ratio	0.62	0.45	0.07	0.13	0.37	0.10
Control Delay	43.9	8.9	12.3	3.5	6.4	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.9	8.9	12.3	3.5	6.4	4.4
Queue Length 50th (ft)	90	0	16	0	52	18
Queue Length 95th (ft)	154	53	37	30	104	36
Internal Link Dist (ft)	1567		2098			1216
Turn Bay Length (ft)				90	150	
Base Capacity (vph)	564	628	1830	872	1072	2525
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.29	0.07	0.13	0.30	0.10

Intersection Summary



Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Traffic Volume (veh/h)	159	165	109	101	290	220	
Future Volume (veh/h)	159	165	109	101	290	220	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No		No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	
Adj Flow Rate, veh/h	175	181	121	112	326	247	
Peak Hour Factor	0.91	0.91	0.90	0.90	0.89	0.89	
Percent Heavy Veh, %	2	2	2	2	2	2	
Cap, veh/h	259	230	1953	871	894	2576	
Arrive On Green	0.15	0.15	0.55	0.55	0.11	0.73	
Sat Flow, veh/h	1781	1585	3647	1585	1781	3647	
Grp Volume(v), veh/h	175	181	121	112	326	247	
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777	
Q Serve(g_s), s	7.9	9.3	1.3	2.9	6.5	1.7	
Cycle Q Clear(g_c), s	7.9	9.3	1.3	2.9	6.5	1.7	
Prop In Lane	1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	259	230	1953	871	894	2576	
V/C Ratio(X)	0.68	0.79	0.06	0.13	0.36	0.10	
Avail Cap(c_a), veh/h	577	514	1953	871	1317	2576	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	34.4	35.0	8.9	9.3	6.0	3.4	
Incr Delay (d2), s/veh	3.1	5.8	0.1	0.3	0.2	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	3.5	3.8	0.5	1.0	2.0	0.5	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	37.4	40.8	9.0	9.6	6.3	3.5	
LnGrp LOS	D	D	A	A	A	A	
Approach Vol, veh/h	356		233			573	
Approach Delay, s/veh	39.2		9.3			5.1	
Approach LOS	D		A			A	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	14.9	52.1			67.0	17.8
Change Period (Y+Rc), s	5.5	5.5			5.5	5.5
Max Green Setting (Gmax), s	29.5	26.5			61.5	27.5
Max Q Clear Time (g_c+I1), s	8.5	4.9			3.7	11.3
Green Ext Time (p_c), s	0.9	1.0			1.7	1.0

Intersection Summary		
HCM 6th Ctrl Delay	16.4	
HCM 6th LOS	B	

Intersection	
Int Delay, s/veh	0.7

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	18	426	10	3	281	3	6	0	17	3	0	10
Future Vol, veh/h	18	426	10	3	281	3	6	0	17	3	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	190	-	190	200	-	145	-	-	-	25	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	72	72	54	54	54	84	84	84	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	592	14	6	520	6	7	0	20	3	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	526	0	0	606	0	0	914	1180	296	878	1188	260
Stage 1	-	-	-	-	-	-	642	642	-	532	532	-
Stage 2	-	-	-	-	-	-	272	538	-	346	656	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1037	-	-	968	-	-	228	189	700	242	187	739
Stage 1	-	-	-	-	-	-	429	467	-	499	524	-
Stage 2	-	-	-	-	-	-	711	521	-	643	460	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1037	-	-	968	-	-	220	183	700	230	181	739
Mov Cap-2 Maneuver	-	-	-	-	-	-	220	183	-	230	181	-
Stage 1	-	-	-	-	-	-	419	456	-	487	521	-
Stage 2	-	-	-	-	-	-	696	518	-	609	449	-

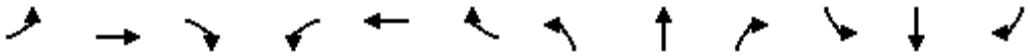
Approach	SE	NW	NE	SW
HCM Control Delay, s	0.3	0.1	13.6	12.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	446	968	-	-	1037	-	-	230	739
HCM Lane V/C Ratio	0.061	0.006	-	-	0.024	-	-	0.014	0.014
HCM Control Delay (s)	13.6	8.7	-	-	8.6	-	-	20.9	9.9
HCM Lane LOS	B	A	-	-	A	-	-	C	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0	0



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	10	8	90	22	218	21	191	199	169	94
v/c Ratio	0.05	0.03	0.44	0.08	0.52	0.02	0.11	0.22	0.21	0.04
Control Delay	27.4	22.9	35.6	27.6	9.4	3.7	10.1	2.5	4.9	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	22.9	35.6	27.6	9.4	3.7	10.1	2.5	4.9	6.5
Queue Length 50th (ft)	4	2	35	8	0	2	21	0	19	5
Queue Length 95th (ft)	17	13	69	24	32	8	40	23	47	21
Internal Link Dist (ft)		1008		1567			2098			650
Turn Bay Length (ft)	50		250			200		90	150	
Base Capacity (vph)	633	806	641	853	843	963	1774	892	968	2270
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.01	0.14	0.03	0.26	0.02	0.11	0.22	0.17	0.04

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	5	3	69	17	168	17	155	161	152	82	3
Future Volume (veh/h)	9	5	3	69	17	168	17	155	161	152	82	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	5	3	90	22	218	21	191	199	169	91	3
Peak Hour Factor	0.92	0.92	0.92	0.77	0.77	0.77	0.81	0.81	0.81	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	284	189	114	336	324	274	897	1766	788	751	2080	68
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.02	0.50	0.50	0.11	0.59	0.59
Sat Flow, veh/h	1140	1095	657	1407	1870	1585	1781	3554	1585	1781	3511	115
Grp Volume(v), veh/h	10	0	8	90	22	218	21	191	199	169	46	48
Grp Sat Flow(s),veh/h/ln	1140	0	1752	1407	1870	1585	1781	1777	1585	1781	1777	1850
Q Serve(g_s), s	0.5	0.0	0.3	4.2	0.7	9.7	0.3	2.1	5.3	3.1	0.8	0.8
Cycle Q Clear(g_c), s	1.3	0.0	0.3	4.4	0.7	9.7	0.3	2.1	5.3	3.1	0.8	0.8
Prop In Lane	1.00		0.38	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	284	0	303	336	324	274	897	1766	788	751	1052	1095
V/C Ratio(X)	0.04	0.00	0.03	0.27	0.07	0.79	0.02	0.11	0.25	0.22	0.04	0.04
Avail Cap(c_a), veh/h	591	0	775	715	828	701	1061	1766	788	988	1052	1095
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	0.0	25.2	27.1	25.4	29.1	5.5	9.8	10.6	6.5	6.3	6.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.4	0.1	5.2	0.0	0.1	0.8	0.2	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.1	1.4	0.3	3.9	0.1	0.8	1.8	1.0	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.0	0.0	25.3	27.5	25.5	34.3	5.5	9.9	11.4	6.6	6.3	6.3
LnGrp LOS	C	A	C	C	C	C	A	A	B	A	A	A
Approach Vol, veh/h		18			330			411			263	
Approach Delay, s/veh		25.7			31.9			10.4			6.5	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.2	42.0		18.2	6.2	49.0		18.2				
Change Period (Y+Rc), s	5.5	5.5		5.5	4.5	5.5		5.5				
Max Green Setting (Gmax), s	17.5	33.5		32.5	8.5	43.5		32.5				
Max Q Clear Time (g_c+I1), s	5.1	7.3		3.3	2.3	2.8		11.7				
Green Ext Time (p_c), s	0.3	1.9		0.0	0.0	0.5		1.0				

Intersection Summary												
HCM 6th Ctrl Delay			16.6									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	7	251	74	9	320	3	7	0	4	11	0	20
Future Vol, veh/h	7	251	74	9	320	3	7	0	4	11	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	190	-	190	200	-	145	-	-	-	25	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	69	69	69	92	92	92	55	55	55
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	359	106	13	464	4	8	0	4	20	0	36

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	468	0	0	465	0	0	637	873	180	690	975	232
Stage 1	-	-	-	-	-	-	379	379	-	490	490	-
Stage 2	-	-	-	-	-	-	258	494	-	200	485	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1090	-	-	1093	-	-	362	287	832	331	250	770
Stage 1	-	-	-	-	-	-	615	613	-	529	547	-
Stage 2	-	-	-	-	-	-	724	545	-	783	550	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1090	-	-	1093	-	-	340	281	832	324	245	770
Mov Cap-2 Maneuver	-	-	-	-	-	-	340	281	-	324	245	-
Stage 1	-	-	-	-	-	-	609	607	-	524	540	-
Stage 2	-	-	-	-	-	-	682	538	-	772	545	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0.2	0.2	13.6	12.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	433	1093	-	-	1090	-	-	324	770
HCM Lane V/C Ratio	0.028	0.012	-	-	0.009	-	-	0.062	0.047
HCM Control Delay (s)	13.6	8.3	-	-	8.3	-	-	16.8	9.9
HCM Lane LOS	B	A	-	-	A	-	-	C	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	332	246	20
Future Vol, veh/h	0	3	0	332	246	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	81	81	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	3	0	410	273	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	137	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	886	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	886	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

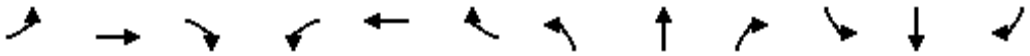
Approach	EB	NB	SB
HCM Control Delay, s	9.1	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	886	-	-
HCM Lane V/C Ratio	-	0.004	-	-
HCM Control Delay (s)	-	9.1	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0	-	-



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	55	48	175	40	211	40	151	112	360	315
v/c Ratio	0.20	0.13	0.66	0.11	0.44	0.05	0.10	0.15	0.44	0.15
Control Delay	29.6	19.9	42.8	27.8	7.2	6.0	16.4	3.1	8.8	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.6	19.9	42.8	27.8	7.2	6.0	16.4	3.1	8.8	9.6
Queue Length 50th (ft)	25	13	88	18	0	6	22	0	66	38
Queue Length 95th (ft)	56	41	154	44	53	21	55	25	146	75
Internal Link Dist (ft)		1008		1567			2098			650
Turn Bay Length (ft)	50		250			200		90	150	
Base Capacity (vph)	518	679	514	708	732	736	1545	767	1014	2082
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.07	0.34	0.06	0.29	0.05	0.10	0.15	0.36	0.15

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	28	17	159	36	192	36	136	101	320	266	14
Future Volume (veh/h)	51	28	17	159	36	192	36	136	101	320	266	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	30	18	175	40	211	40	151	112	360	299	16
Peak Hour Factor	0.92	0.92	0.92	0.91	0.91	0.91	0.90	0.90	0.90	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	280	205	123	312	350	297	734	1682	750	833	2008	107
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.04	0.47	0.47	0.14	0.59	0.59
Sat Flow, veh/h	1129	1095	657	1357	1870	1585	1781	3554	1585	1781	3431	183
Grp Volume(v), veh/h	55	0	48	175	40	211	40	151	112	360	154	161
Grp Sat Flow(s),veh/h/ln	1129	0	1752	1357	1870	1585	1781	1777	1585	1781	1777	1837
Q Serve(g_s), s	3.5	0.0	1.9	10.0	1.4	10.1	0.7	1.9	3.3	8.0	3.2	3.2
Cycle Q Clear(g_c), s	4.9	0.0	1.9	11.9	1.4	10.1	0.7	1.9	3.3	8.0	3.2	3.2
Prop In Lane	1.00		0.38	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	280	0	328	312	350	297	734	1682	750	833	1040	1075
V/C Ratio(X)	0.20	0.00	0.15	0.56	0.11	0.71	0.05	0.09	0.15	0.43	0.15	0.15
Avail Cap(c_a), veh/h	493	0	658	568	703	596	812	1682	750	1238	1040	1075
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	0.0	27.6	32.5	27.4	30.9	6.0	11.8	12.1	7.8	7.7	7.7
Incr Delay (d2), s/veh	0.3	0.0	0.2	1.6	0.1	3.1	0.0	0.1	0.4	0.4	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.8	3.3	0.6	4.0	0.2	0.7	1.2	2.6	1.1	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.8	0.0	27.8	34.1	27.5	34.1	6.0	11.9	12.5	8.1	8.0	8.0
LnGrp LOS	C	A	C	C	C	C	A	B	B	A	A	A
Approach Vol, veh/h		103			426			303			675	
Approach Delay, s/veh		28.8			33.5			11.3			8.1	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.6	43.9		20.7	7.5	53.0		20.7				
Change Period (Y+Rc), s	5.5	5.5		5.5	4.5	5.5		5.5				
Max Green Setting (Gmax), s	29.5	23.5		30.5	6.5	47.5		30.5				
Max Q Clear Time (g_c+I1), s	10.0	5.3		6.9	2.7	5.2		13.9				
Green Ext Time (p_c), s	1.0	1.2		0.4	0.0	1.9		1.3				

Intersection Summary												
HCM 6th Ctrl Delay			17.3									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	0.7

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	18	556	10	3	286	3	6	0	17	3	0	10
Future Vol, veh/h	18	556	10	3	286	3	6	0	17	3	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	190	-	190	200	-	145	-	-	-	25	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	72	72	54	54	54	84	84	84	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	772	14	6	530	6	7	0	20	3	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	536	0	0	786	0	0	1099	1370	386	978	1378	265
Stage 1	-	-	-	-	-	-	822	822	-	542	542	-
Stage 2	-	-	-	-	-	-	277	548	-	436	836	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1028	-	-	829	-	-	167	145	612	205	144	733
Stage 1	-	-	-	-	-	-	334	386	-	492	518	-
Stage 2	-	-	-	-	-	-	706	515	-	569	381	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1028	-	-	829	-	-	161	141	612	194	140	733
Mov Cap-2 Maneuver	-	-	-	-	-	-	161	141	-	194	140	-
Stage 1	-	-	-	-	-	-	326	377	-	480	514	-
Stage 2	-	-	-	-	-	-	691	511	-	537	372	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0.3	0.1	16	13.2
HCM LOS			C	B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	354	829	-	-	1028	-	-	194	733
HCM Lane V/C Ratio	0.077	0.007	-	-	0.024	-	-	0.016	0.015
HCM Control Delay (s)	16	9.4	-	-	8.6	-	-	23.9	10
HCM Lane LOS	C	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.1	0

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	17	0	379	518	58
Future Vol, veh/h	0	17	0	379	518	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	90	90	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	18	0	421	582	65

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	291	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	706	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	706	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

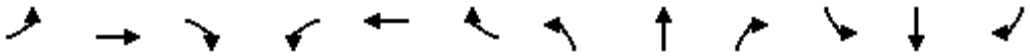
Approach	EB	NB	SB
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	706	-	-
HCM Lane V/C Ratio	-	0.026	-	-
HCM Control Delay (s)	-	10.2	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	84	75	175	48	211	49	151	112	363	325
v/c Ratio	0.31	0.20	0.65	0.13	0.43	0.07	0.10	0.15	0.45	0.16
Control Delay	31.3	20.1	42.6	27.8	7.1	6.1	16.8	3.1	9.1	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.3	20.1	42.6	27.8	7.1	6.1	16.8	3.1	9.1	9.7
Queue Length 50th (ft)	39	21	89	22	0	7	22	0	68	41
Queue Length 95th (ft)	79	56	155	50	52	24	56	26	150	78
Internal Link Dist (ft)		1008		1567			2098			650
Turn Bay Length (ft)	50		250			200		90	150	
Base Capacity (vph)	510	680	497	703	728	724	1528	760	1000	2065
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.11	0.35	0.07	0.29	0.07	0.10	0.15	0.36	0.16

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	43	26	159	44	192	44	136	101	323	272	17
Future Volume (veh/h)	77	43	26	159	44	192	44	136	101	323	272	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	84	47	28	175	48	211	49	151	112	363	306	19
Peak Hour Factor	0.92	0.92	0.92	0.91	0.91	0.91	0.90	0.90	0.90	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	290	222	132	307	379	321	716	1637	730	821	1940	120
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.04	0.46	0.46	0.14	0.57	0.57
Sat Flow, veh/h	1120	1098	654	1325	1870	1585	1781	3554	1585	1781	3399	210
Grp Volume(v), veh/h	84	0	75	175	48	211	49	151	112	363	159	166
Grp Sat Flow(s),veh/h/ln	1120	0	1753	1325	1870	1585	1781	1777	1585	1781	1777	1833
Q Serve(g_s), s	5.5	0.0	3.0	10.6	1.7	10.2	0.9	2.0	3.4	8.5	3.5	3.6
Cycle Q Clear(g_c), s	7.3	0.0	3.0	13.5	1.7	10.2	0.9	2.0	3.4	8.5	3.5	3.6
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	290	0	355	307	379	321	716	1637	730	821	1014	1046
V/C Ratio(X)	0.29	0.00	0.21	0.57	0.13	0.66	0.07	0.09	0.15	0.44	0.16	0.16
Avail Cap(c_a), veh/h	473	0	642	525	685	581	782	1637	730	1184	1014	1046
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.1	0.0	27.7	33.3	27.2	30.5	6.5	12.6	13.0	8.4	8.4	8.4
Incr Delay (d2), s/veh	0.5	0.0	0.3	1.7	0.1	2.3	0.0	0.1	0.4	0.4	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	1.2	3.4	0.8	3.9	0.3	0.8	1.2	2.9	1.3	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.7	0.0	28.0	35.0	27.3	32.8	6.6	12.8	13.5	8.8	8.8	8.8
LnGrp LOS	C	A	C	C	C	C	A	B	B	A	A	A
Approach Vol, veh/h		159			434			312			688	
Approach Delay, s/veh		29.4			33.1			12.0			8.8	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.1	43.8		22.4	7.9	53.0		22.4				
Change Period (Y+Rc), s	5.5	5.5		5.5	4.5	5.5		5.5				
Max Green Setting (Gmax), s	28.5	24.5		30.5	6.5	47.5		30.5				
Max Q Clear Time (g_c+I1), s	10.5	5.4		9.3	2.9	5.6		15.5				
Green Ext Time (p_c), s	1.0	1.2		0.7	0.0	1.9		1.3				

Intersection Summary												
HCM 6th Ctrl Delay			18.1									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	0.6

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	10	571	18	3	412	3	6	0	17	3	0	10
Future Vol, veh/h	10	571	18	3	412	3	6	0	17	3	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	190	-	190	200	-	145	-	-	-	25	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	72	72	54	54	54	84	84	84	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	793	25	6	763	6	7	0	20	3	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	769	0	0	818	0	0	1215	1602	397	1200	1621	382
Stage 1	-	-	-	-	-	-	821	821	-	775	775	-
Stage 2	-	-	-	-	-	-	394	781	-	425	846	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	841	-	-	806	-	-	137	105	602	141	102	616
Stage 1	-	-	-	-	-	-	335	387	-	357	406	-
Stage 2	-	-	-	-	-	-	602	403	-	578	377	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	841	-	-	806	-	-	132	102	602	134	100	616
Mov Cap-2 Maneuver	-	-	-	-	-	-	132	102	-	134	100	-
Stage 1	-	-	-	-	-	-	329	380	-	351	403	-
Stage 2	-	-	-	-	-	-	587	400	-	549	371	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0.2	0.1	17.6	15.9
HCM LOS			C	C

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	312	806	-	-	841	-	-	134	616
HCM Lane V/C Ratio	0.088	0.007	-	-	0.017	-	-	0.024	0.017
HCM Control Delay (s)	17.6	9.5	-	-	9.4	-	-	32.5	10.9
HCM Lane LOS	C	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.1	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	26	0	405	521	70
Future Vol, veh/h	0	26	0	405	521	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	90	90	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	28	0	450	585	79

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	293	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	703	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	703	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

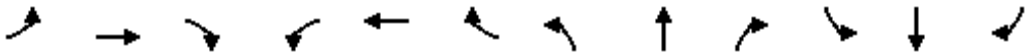
Approach	EB	NB	SB
HCM Control Delay, s	10.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	703	-	-
HCM Lane V/C Ratio	-	0.04	-	-
HCM Control Delay (s)	-	10.3	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	14	12	134	32	325	31	284	295	251	140
v/c Ratio	0.06	0.04	0.55	0.10	0.60	0.04	0.17	0.32	0.34	0.06
Control Delay	27.9	23.2	38.9	28.0	8.7	4.8	12.8	3.0	6.8	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.9	23.2	38.9	28.0	8.7	4.8	12.8	3.0	6.8	7.5
Queue Length 50th (ft)	5	3	56	12	0	4	37	0	37	9
Queue Length 95th (ft)	22	18	101	32	32	13	69	29	86	33
Internal Link Dist (ft)		1008		1567			2098			650
Turn Bay Length (ft)	50		250			200		90	150	
Base Capacity (vph)	548	710	559	745	828	879	1696	912	900	2230
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.02	0.24	0.04	0.39	0.04	0.17	0.32	0.28	0.06

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	7	4	103	25	250	25	230	239	226	122	4
Future Volume (veh/h)	13	7	4	103	25	250	25	230	239	226	122	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	8	4	134	32	325	31	284	295	251	136	4
Peak Hour Factor	0.92	0.92	0.92	0.77	0.77	0.77	0.81	0.81	0.81	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	312	278	139	408	442	374	806	1679	749	617	1949	57
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.03	0.47	0.47	0.10	0.55	0.55
Sat Flow, veh/h	1024	1176	588	1402	1870	1585	1781	3554	1585	1781	3525	103
Grp Volume(v), veh/h	14	0	12	134	32	325	31	284	295	251	68	72
Grp Sat Flow(s),veh/h/ln	1024	0	1764	1402	1870	1585	1781	1777	1585	1781	1777	1852
Q Serve(g_s), s	0.9	0.0	0.4	7.0	1.1	16.9	0.6	3.9	10.4	6.0	1.5	1.5
Cycle Q Clear(g_c), s	2.1	0.0	0.4	7.4	1.1	16.9	0.6	3.9	10.4	6.0	1.5	1.5
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	312	0	417	408	442	374	806	1679	749	617	983	1024
V/C Ratio(X)	0.04	0.00	0.03	0.33	0.07	0.87	0.04	0.17	0.39	0.41	0.07	0.07
Avail Cap(c_a), veh/h	434	0	627	574	664	563	887	1679	749	824	983	1024
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.3	0.0	25.2	28.1	25.5	31.5	7.6	13.0	14.7	9.3	8.9	8.9
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.5	0.1	9.3	0.0	0.2	1.6	0.4	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.2	2.3	0.5	7.1	0.2	1.5	3.8	2.1	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.4	0.0	25.3	28.6	25.6	40.8	7.6	13.2	16.2	9.7	9.1	9.1
LnGrp LOS	C	A	C	C	C	D	A	B	B	A	A	A
Approach Vol, veh/h		26			491			610			391	
Approach Delay, s/veh		25.9			36.5			14.4			9.5	
Approach LOS		C			D			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.0	46.1		25.8	7.1	53.0		25.8				
Change Period (Y+Rc), s	5.5	5.5		5.5	4.5	5.5		5.5				
Max Green Setting (Gmax), s	18.5	34.5		30.5	6.5	47.5		30.5				
Max Q Clear Time (g_c+I1), s	8.0	12.4		4.1	2.6	3.5		18.9				
Green Ext Time (p_c), s	0.5	2.9		0.1	0.0	0.8		1.4				

Intersection Summary												
HCM 6th Ctrl Delay			20.5									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	1.3

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	10	373	110	13	476	4	10	0	6	16	0	30
Future Vol, veh/h	10	373	110	13	476	4	10	0	6	16	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	190	-	190	200	-	145	-	-	-	25	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	69	69	69	92	92	92	55	55	55
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	533	157	19	690	6	11	0	7	29	0	55

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	696	0	0	690	0	0	944	1295	267	1023	1446	345
Stage 1	-	-	-	-	-	-	561	561	-	728	728	-
Stage 2	-	-	-	-	-	-	383	734	-	295	718	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	896	-	-	900	-	-	217	161	731	190	131	651
Stage 1	-	-	-	-	-	-	480	508	-	381	427	-
Stage 2	-	-	-	-	-	-	611	424	-	689	431	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	896	-	-	900	-	-	193	155	731	183	126	651
Mov Cap-2 Maneuver	-	-	-	-	-	-	193	155	-	183	126	-
Stage 1	-	-	-	-	-	-	472	500	-	375	418	-
Stage 2	-	-	-	-	-	-	548	415	-	672	424	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0.2	0.2	19.4	17.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	267	900	-	-	896	-	-	183	651
HCM Lane V/C Ratio	0.065	0.021	-	-	0.016	-	-	0.159	0.084
HCM Control Delay (s)	19.4	9.1	-	-	9.1	-	-	28.4	11
HCM Lane LOS	C	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.6	0.3

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	4	0	493	366	30
Future Vol, veh/h	0	4	0	493	366	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	81	81	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	0	609	407	33

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	204	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	803	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	803	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

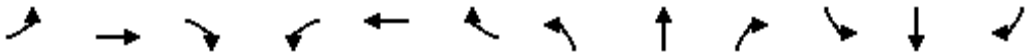
Approach	EB	NB	SB
HCM Control Delay, s	9.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	803	-	-
HCM Lane V/C Ratio	-	0.005	-	-
HCM Control Delay (s)	-	9.5	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0	-	-



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	124	112	259	71	313	72	224	167	539	482
v/c Ratio	0.36	0.23	0.77	0.14	0.48	0.13	0.20	0.27	0.70	0.26
Control Delay	29.3	19.5	46.0	25.2	5.7	9.0	26.9	6.7	17.1	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.3	19.5	46.0	25.2	5.7	9.0	26.9	6.7	17.1	13.6
Queue Length 50th (ft)	57	35	137	31	0	15	48	0	156	77
Queue Length 95th (ft)	106	75	224	63	58	40	99	54	298	131
Internal Link Dist (ft)		1008		1567			2098			650
Turn Bay Length (ft)	50		250			200		90	150	
Base Capacity (vph)	509	696	490	717	801	554	1110	611	889	1853
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.16	0.53	0.10	0.39	0.13	0.20	0.27	0.61	0.26

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	64	39	236	65	285	65	202	150	480	404	25
Future Volume (veh/h)	114	64	39	236	65	285	65	202	150	480	404	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	124	70	42	259	71	313	72	224	167	539	454	28
Peak Hour Factor	0.92	0.92	0.92	0.91	0.91	0.91	0.90	0.90	0.90	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	334	311	186	379	531	450	548	1062	474	751	1704	105
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.05	0.30	0.30	0.24	0.50	0.50
Sat Flow, veh/h	999	1095	657	1281	1870	1585	1781	3554	1585	1781	3400	209
Grp Volume(v), veh/h	124	0	112	259	71	313	72	224	167	539	237	245
Grp Sat Flow(s),veh/h/ln	999	0	1752	1281	1870	1585	1781	1777	1585	1781	1777	1833
Q Serve(g_s), s	9.7	0.0	4.5	17.8	2.6	16.1	1.7	4.3	7.6	18.4	7.0	7.1
Cycle Q Clear(g_c), s	12.2	0.0	4.5	22.2	2.6	16.1	1.7	4.3	7.6	18.4	7.0	7.1
Prop In Lane	1.00		0.38	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	334	0	497	379	531	450	548	1062	474	751	891	919
V/C Ratio(X)	0.37	0.00	0.23	0.68	0.13	0.70	0.13	0.21	0.35	0.72	0.27	0.27
Avail Cap(c_a), veh/h	416	0	641	485	684	580	565	1062	474	902	891	919
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.0	0.0	25.1	33.6	24.4	29.3	10.1	24.0	25.2	14.4	13.1	13.2
Incr Delay (d2), s/veh	0.7	0.0	0.2	2.7	0.1	2.5	0.1	0.5	2.1	2.2	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	1.9	5.6	1.1	6.2	0.7	1.9	3.1	7.2	2.8	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.7	0.0	25.3	36.3	24.5	31.8	10.2	24.5	27.2	16.6	13.9	13.9
LnGrp LOS	C	A	C	D	C	C	B	C	C	B	B	B
Approach Vol, veh/h		236			643			463			1021	
Approach Delay, s/veh		27.6			32.8			23.2			15.3	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.2	32.9		31.5	8.7	51.4		31.5				
Change Period (Y+Rc), s	5.5	5.5		5.5	4.5	5.5		5.5				
Max Green Setting (Gmax), s	29.5	20.5		33.5	5.1	45.9		33.5				
Max Q Clear Time (g_c+I1), s	20.4	9.6		14.2	3.7	9.1		24.2				
Green Ext Time (p_c), s	1.3	1.5		1.1	0.0	3.0		1.7				

Intersection Summary			
HCM 6th Ctrl Delay		22.8	
HCM 6th LOS		C	

Intersection	
Int Delay, s/veh	1.2

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	27	848	15	4	612	4	9	0	24	4	0	15
Future Vol, veh/h	27	848	15	4	612	4	9	0	24	4	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	190	-	190	200	-	145	-	-	-	25	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	72	72	54	54	54	84	84	84	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	1178	21	7	1133	7	11	0	29	4	0	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1140	0	0	1199	0	0	1835	2408	589	1812	2422	567
Stage 1	-	-	-	-	-	-	1254	1254	-	1147	1147	-
Stage 2	-	-	-	-	-	-	581	1154	-	665	1275	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	609	-	-	578	-	-	47	33	452	49	32	467
Stage 1	-	-	-	-	-	-	182	242	-	212	272	-
Stage 2	-	-	-	-	-	-	467	270	-	416	236	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	609	-	-	578	-	-	43	31	452	43	30	467
Mov Cap-2 Maneuver	-	-	-	-	-	-	43	31	-	43	30	-
Stage 1	-	-	-	-	-	-	171	227	-	199	269	-
Stage 2	-	-	-	-	-	-	446	267	-	365	221	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0.3	0.1	46	30.8
HCM LOS			E	D

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	126	578	-	-	609	-	-	43	467
HCM Lane V/C Ratio	0.312	0.013	-	-	0.062	-	-	0.099	0.034
HCM Control Delay (s)	46	11.3	-	-	11.3	-	-	97.7	13
HCM Lane LOS	E	B	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	1.2	0	-	-	0.2	-	-	0.3	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	39	0	602	774	104
Future Vol, veh/h	0	39	0	602	774	104
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	90	90	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	42	0	669	870	117

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	435	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	569	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	569	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	569	-	-
HCM Lane V/C Ratio	-	0.075	-	-
HCM Control Delay (s)	-	11.8	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-

The Rush Funplex

Lot 10 A - Summit Orchards West
Lee's Summit, Jackson County, MO



New Entertainment Center and Flex/Commercial Space

Preliminary Development Plans

13 March 2026
REVISED 14 April 2026

DRAWING INDEX

COVER

CIVIL

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C300	SITE GRADING PLAN
C400	SITE UTILITY PLAN
C500	DRAINAGE AREA MAP
C501	DRAINAGE CALCULATIONS
C600	NW WARD ROAD & TUDOR PUBLIC IMPROVEMENT
C700	BUS TURN STUDY

LANDSCAPE

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L-101	LANDSCAPE PLAN
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L-103	LANDSCAPE PLAN
L-104	LANDSCAPE PLAN

ARCHITECTURAL

A-001	LOT 1 EXTERIOR RENDERINGS
A-002	LOTS 2 & 3 EXTERIOR RENDERINGS
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A-103	TRASH ENCLOSURE AND MONUMENT SIGN
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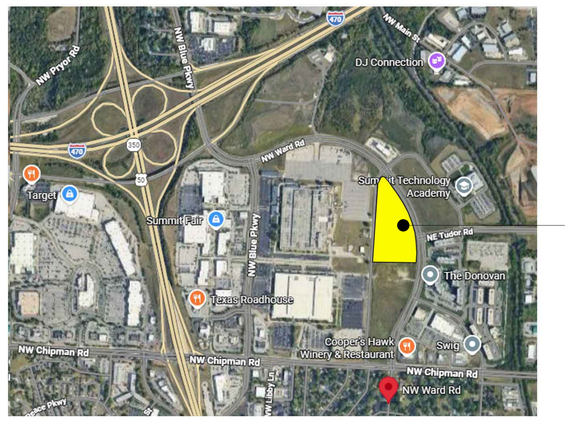
A-203	LOT 3 EXTERIOR ELEVATIONS
	PRELIMINARY EXTERIOR MATERIALS PALETTE
	PROPOSED EXTERIOR LIGHT FIXTURES



PROPOSED SITE

VICINITY MAP

GENERAL NOTES:

1. PROPOSED ZONING/BUILDING USES ARE AS FOLLOWS: ENTERTAINMENT, RETAIL, COMMERCIAL, OFFICE, FLEX-COMMERCIAL.
2. A COMMON PROPERTY MAINTENANCE AND CROSS EASEMENT PLAN TO BE INCLUDED IN FUTURE RESUBMITTAL. PLAN TO BE IN ACCORDANCE WITH ARTICLE 5 DIVISION V.

SLAGGIE ARCHITECTS, INC.

APPLICANT
RUSH FUNPLEX
2940 N. CHURCH STREET, SUITE 202
LAYTON, UT 84040
PHONE: (760) 644-5119

OWNER
TOWNSEND SUMMIT, LLC.
230 SHILLING CIRCLE, SUITE 120
HUNT VALLEY, MD 21031
PHONE: (303) 947-2044

ARCHITECT
SLAGGIE ARCHITECTS, INC.
4600 MADISON AVENUE, SUITE 350
KANSAS CITY, MO 64112
PHONE: (816) 756-1958

CIVIL ENGINEER
SK DESIGN GROUP, INC.
4600 COLLEGE BLVD., STE. 100
OVERLAND PARK, KS 66211
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LORAX DESIGN GROUP
8021 SANTA FE DRIVE, SUITE 200
OVERLAND PARK, KS 66204
PHONE: (913) 972-7244



















NOTE: REFER TO LANDSCAPE PLAN FOR EXACT LANDSCAPE SPECIFICATIONS. LANDSCAPE SHOWN IN THESE RENDERINGS IS FOR ILLUSTRATION ONLY.

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The Rush Funplex
New Entertainment Center

Lot 10A - Summit Orchards West
Lee's Summit, MO

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Preliminary Development Plan

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Lot 1
Exterior Renderings

A-001



















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Preliminary Development Plan

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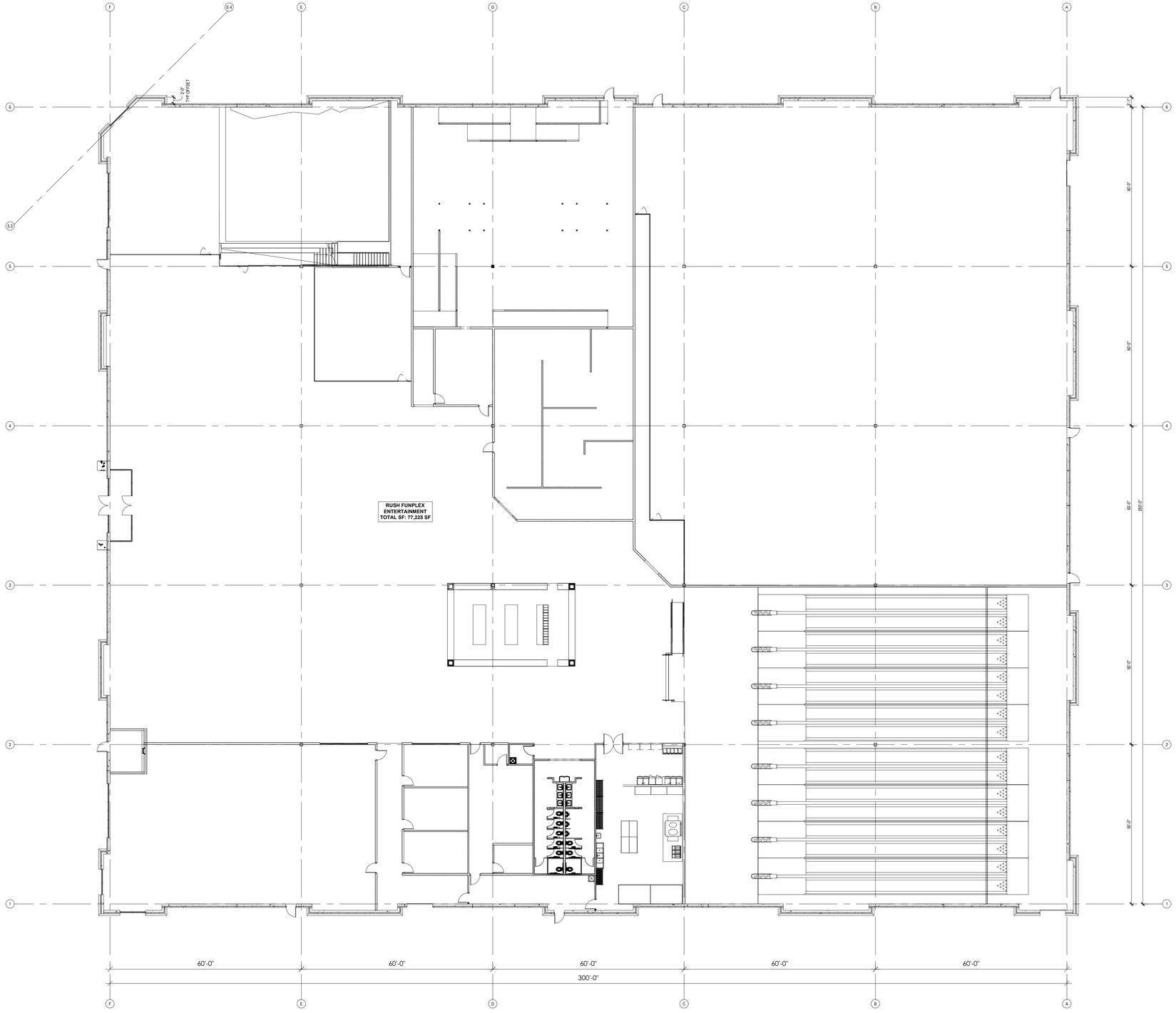
Lots 2 & 3
Exterior Renderings

A-002



Lot 1 Floorplan
1/16" = 1'-0"

1

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Preliminary Development Plan

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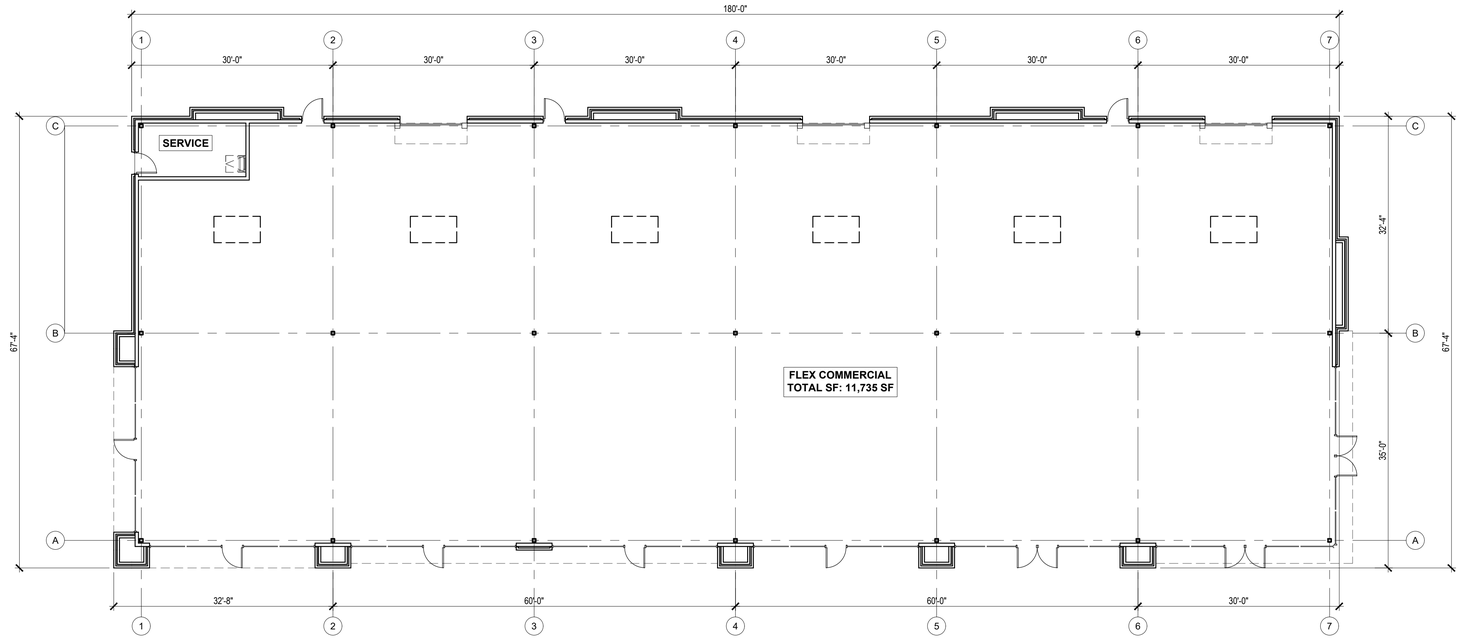
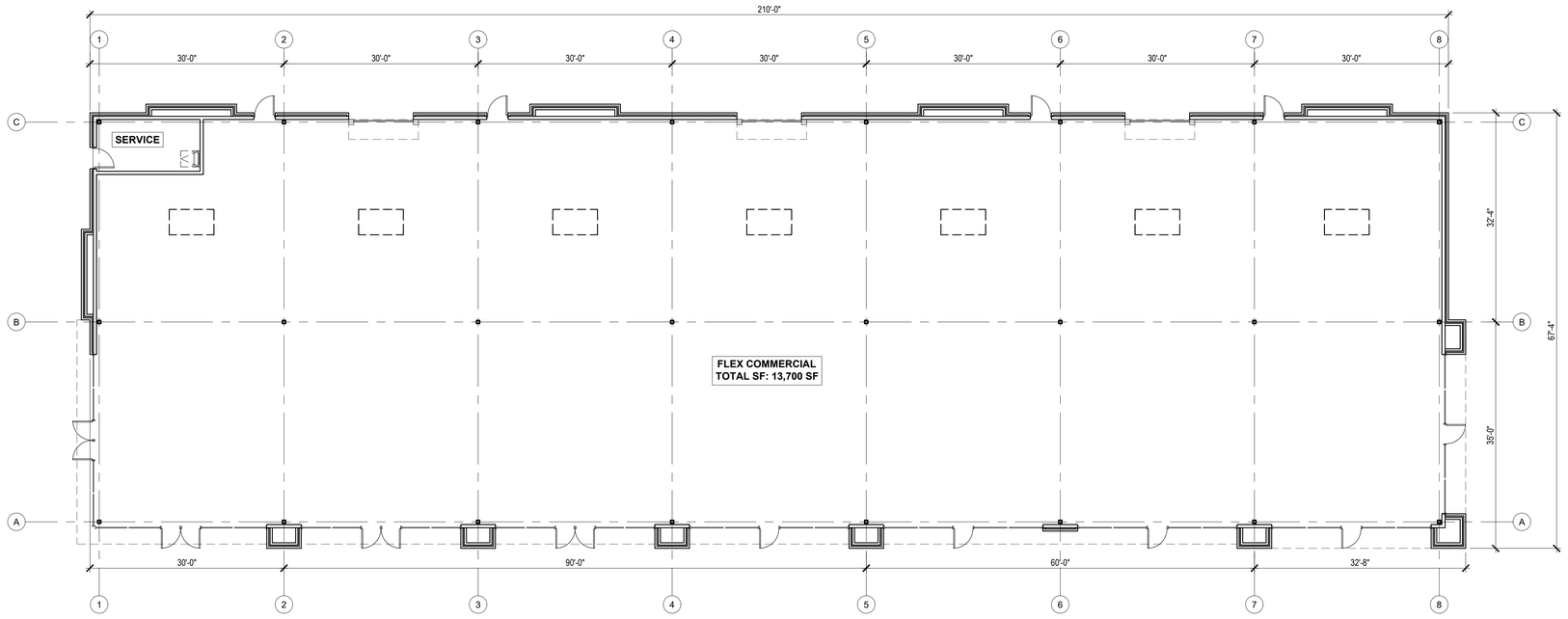
Lot 1
Floorplan

A-101



Lot 3 Floorplan
3/32" = 1'-0"
2



Lot 2 Floorplan
3/32" = 1'-0"
1

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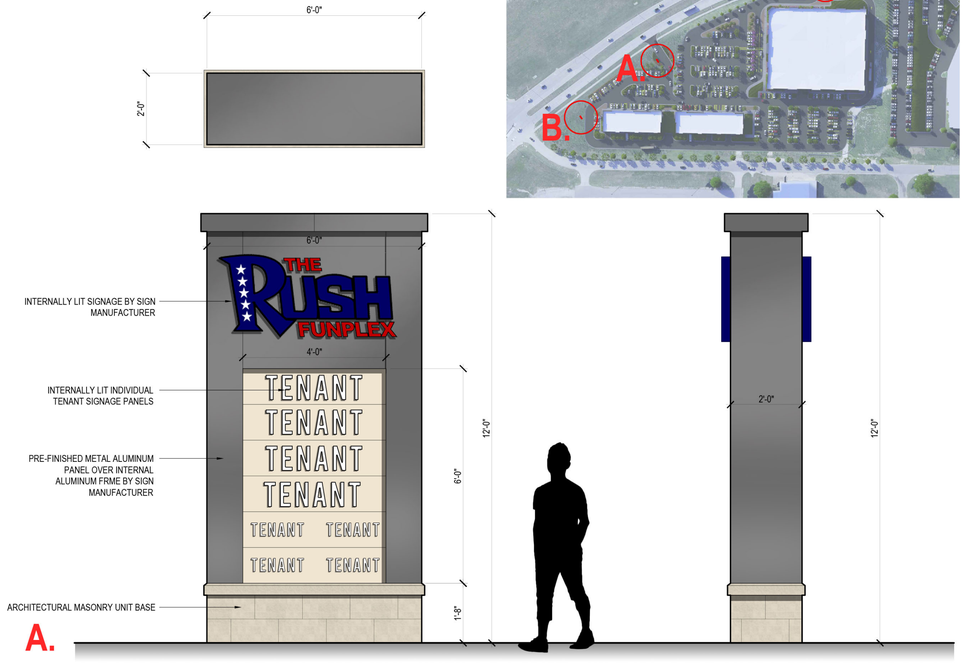
Lots 2 & 3 Floorplans

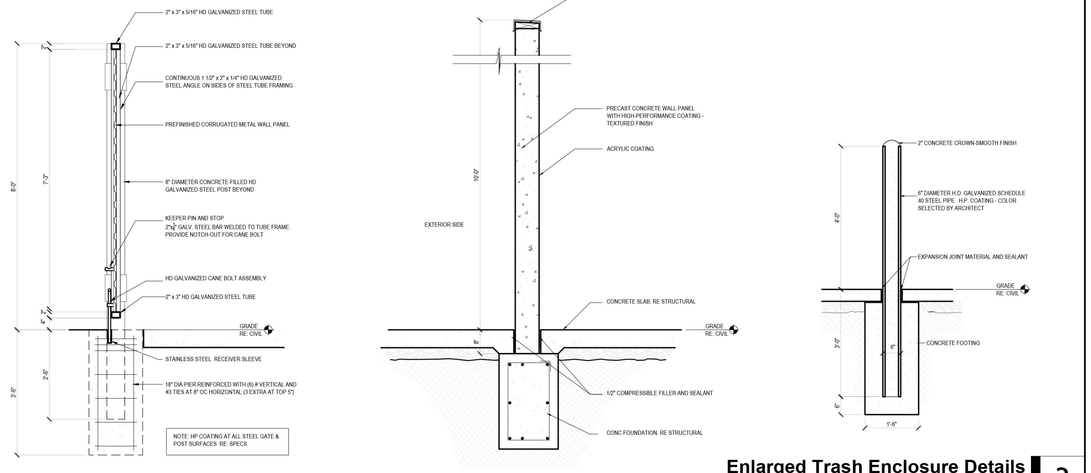
A-102



Monument Signage

1/2" = 1'-0"

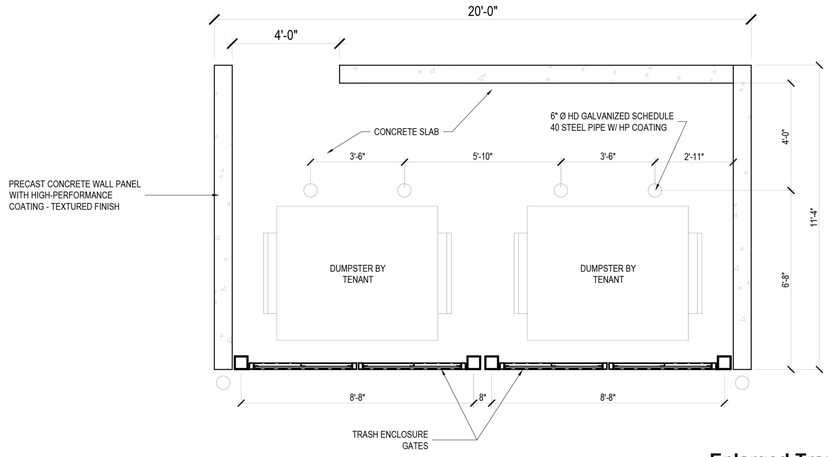
4



Enlarged Trash Enclosure Details

1/2" = 1'-0"

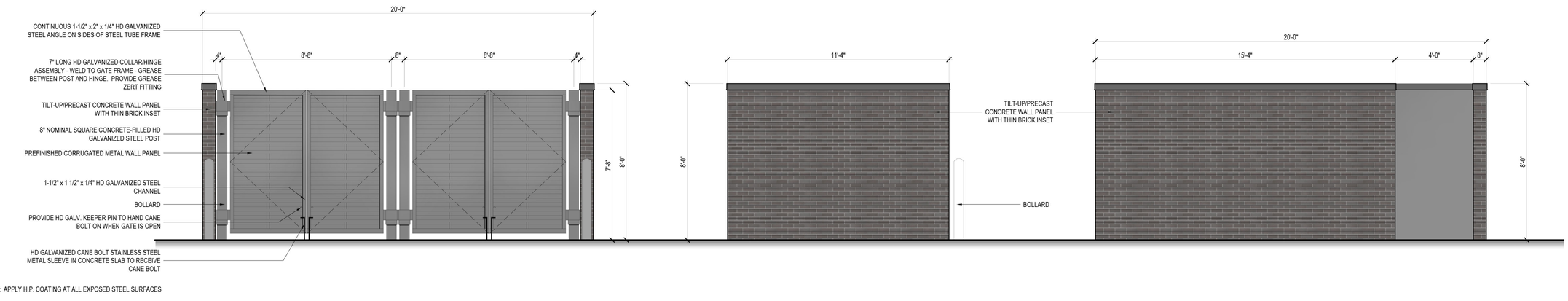
3



Enlarged Trash Enclosure Plan

3/8" = 1'-0"

2



NOTE: APPLY H.P. COATING AT ALL EXPOSED STEEL SURFACES

Trash Enclosure Elevation

3/8" = 1'-0"

1

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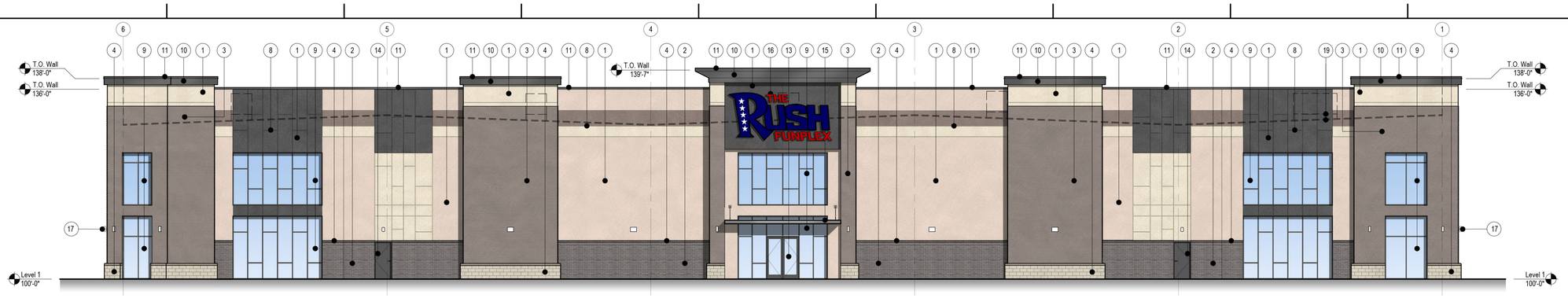
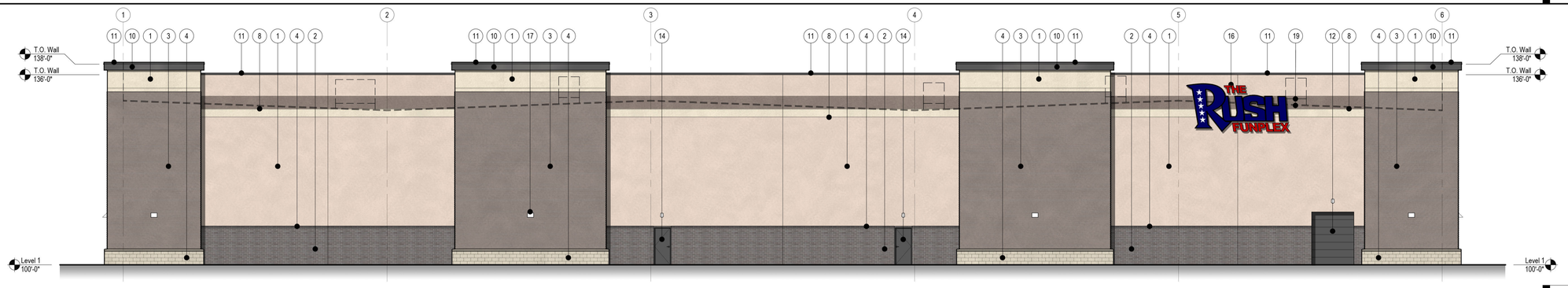
Trash Enclosure and Monument Signage

A-103

488

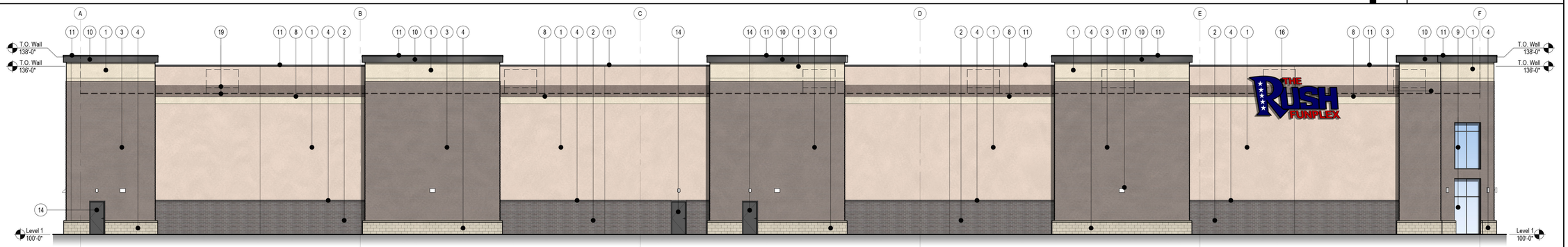


North Elevation 3/32" = 1'-0" — 4

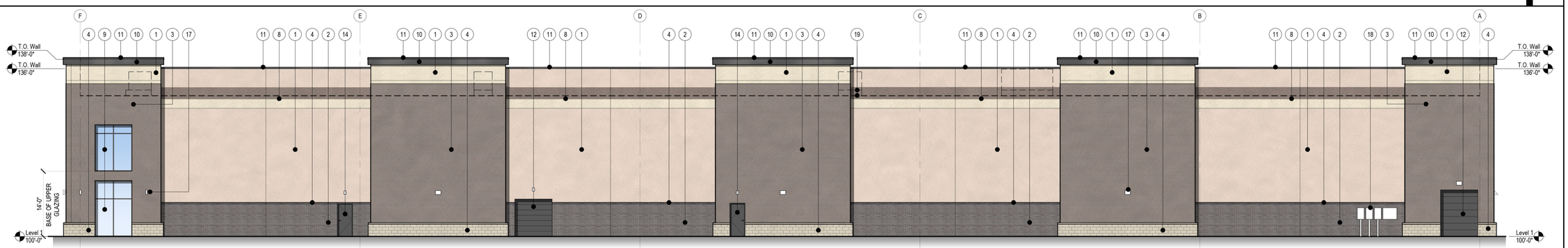


South Elevation 3/32" = 1'-0" — 3

NOTE:
1. NOTATION 0'-0" TO CORRESPOND WITH A SPECIFIC CIVIL ELEVATION.



East Elevation 3/32" = 1'-0" — 2



West Elevation 3/32" = 1'-0" — 1

MATERIALS LEGEND

1. INSULATED TILT-UP/PRECAST CONCRETE WALL PANEL WITH DIRECT-APPLIED TEXTURED ACRYLIC COATING SYSTEM
2. INSULATED TILT-UP/PRECAST CONCRETE WALL PANEL WITH THIN BRICK INSET
3. INSULATED TILT-UP/PRECAST CONCRETE WALL PANEL WITH SURFACE FORMLINER (3/4" DEEP RIB AT 4' O.C) WITH DIRECT-APPLIED TEXTURED ACRYLIC COATING SYSTEM
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5. FACE BRICK
6. ALUMINUM COMPOSITE METAL PANEL SYSTEM
7. EXTERIOR INSULATION FINISH SYSTEM
8. CONCRETE WALL REVEAL - TYPICAL
9. ALUMINUM STOREFRONT SYSTEM WITH CLEAR INSULATED LOW-E GLAZING
10. PREFABRICATED CORNICE - ALUMINUM COMPOSITE METAL PANEL OR EQUAL
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12. INSULATED PRE-FINISHED STEEL PANEL OVERHEAD SECTIONAL DOOR
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18. WALL-MOUNTED ELECTRICAL EQUIPMENT CONFIRM EXACT SIZE AND LOCATION WITH TENANT - EQUIPMENT TO BE SCREENED WITH LANDSCAPING
19. LINE OF ROOF AND RTUS BEYOND. CONFIRM EXACT SIZES OF RTUS PER DESIGN DEVELOPMENT

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The Rush Funplex
New Entertainment Center
Lot 10A - Summit Orchards West
Lee's Summit, MO

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Preliminary Development Plan

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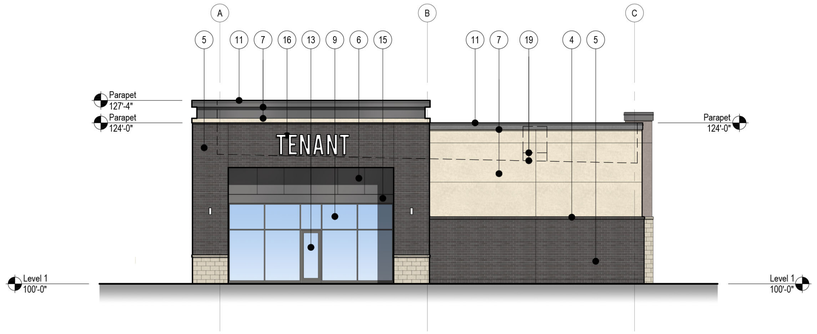
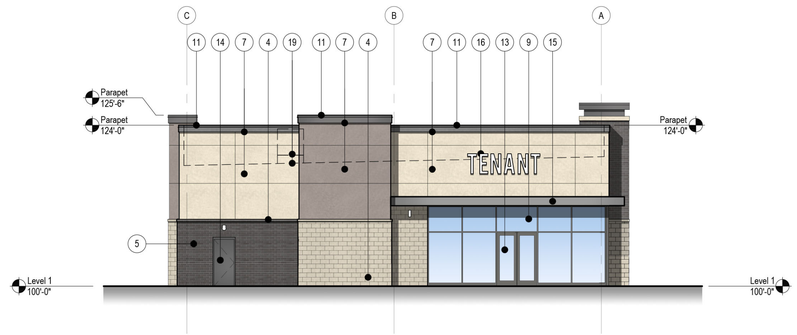
Lot 1
Exterior Elevations

A-201

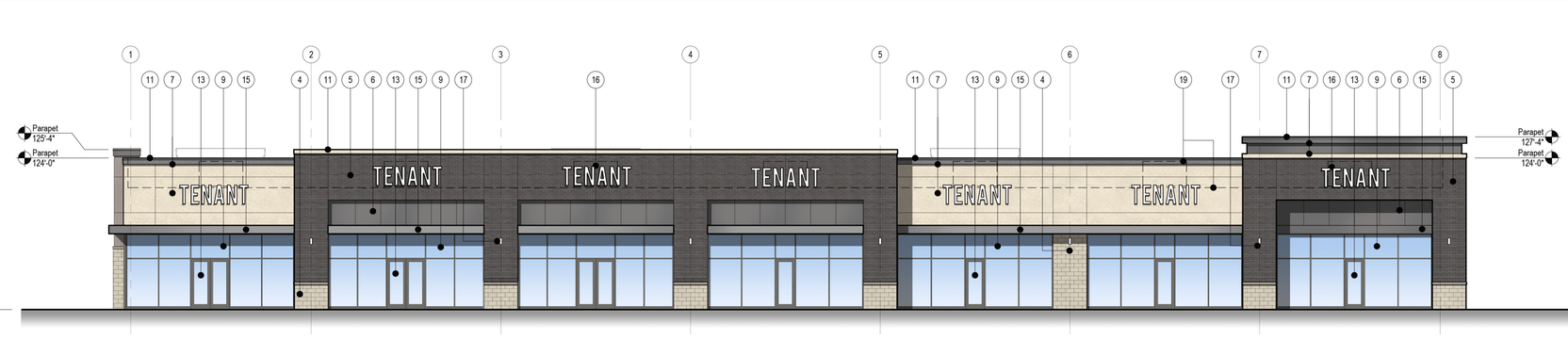


North Elevation 3/32" = 1'-0" — 4

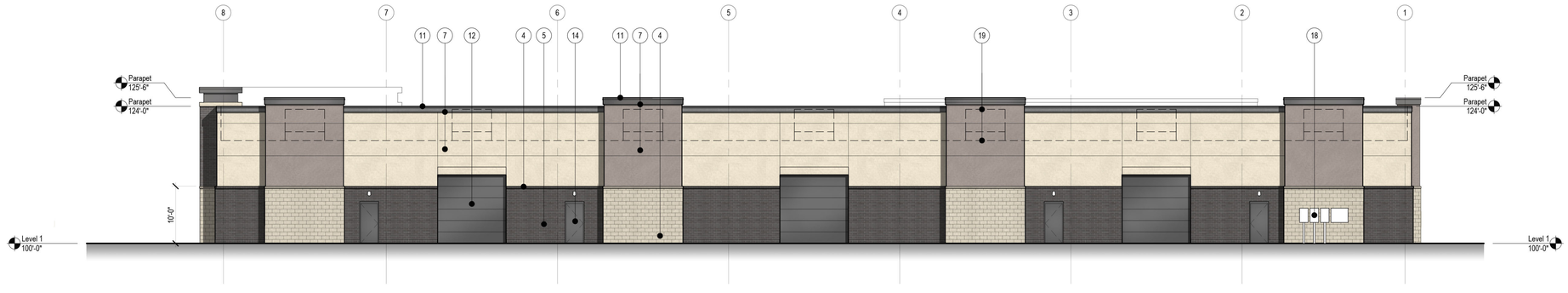


South Elevation 3/32" = 1'-0" — 3

NOTE:
1. NOTATION 0'-0" TO CORRESPOND WITH A SPECIFIC CIVIL ELEVATION.



East Elevation 3/32" = 1'-0" — 2



West Elevation 3/32" = 1'-0" — 1

MATERIALS LEGEND

1. INSULATED TILT-UP/PRECAST CONCRETE WALL PANEL WITH DIRECT-APPLIED TEXTURED ACRYLIC COATING SYSTEM
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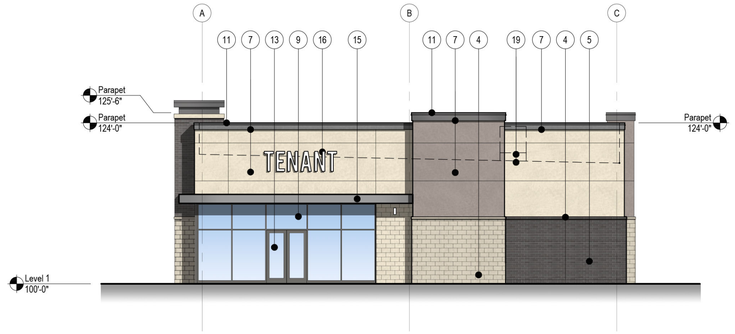
Preliminary Development Plan

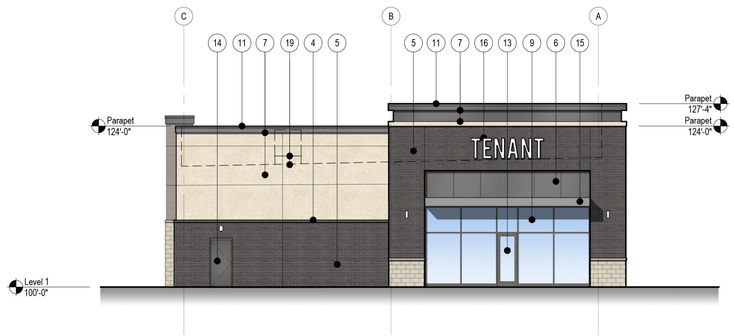
13 March 2026

Lot 2
Exterior Elevations

A-202



North Elevation 4
3/32" = 1'-0"



South Elevation 3
3/32" = 1'-0"

NOTE:
1. NOTATION 0'-0" TO CORRESPOND WITH A SPECIFIC CIVIL ELEVATION.

MATERIALS LEGEND

1. INSULATED TILT-UP/PRECAST CONCRETE WALL PANEL WITH DIRECT-APPLIED TEXTURED ACRYLIC COATING SYSTEM
2. INSULATED TILT-UP/PRECAST CONCRETE WALL PANEL WITH THIN BRICK INSET
3. INSULATED TILT-UP/PRECAST CONCRETE WALL PANEL WITH SURFACE FORMLINER (3/4" DEEP RIB AT 4' O.C) WITH DIRECT-APPLIED TEXTURED ACRYLIC COATING SYSTEM
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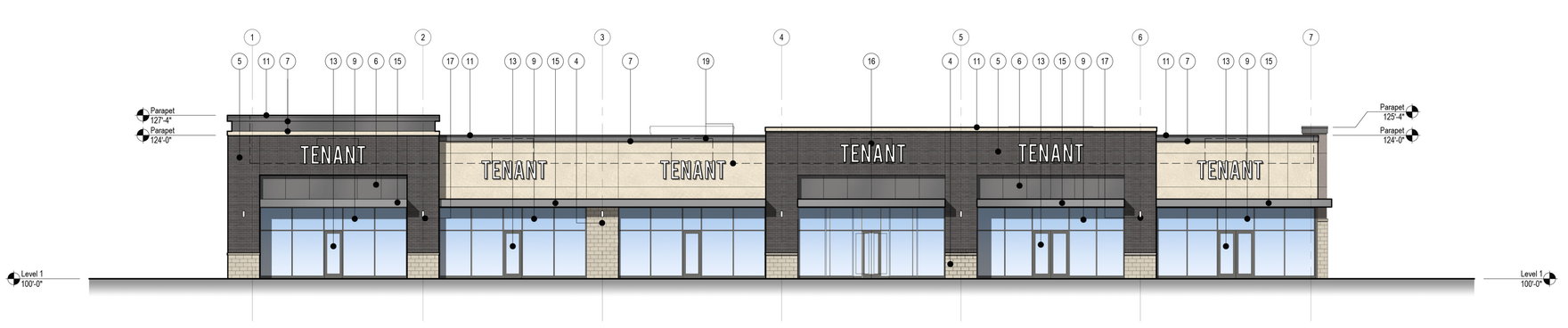
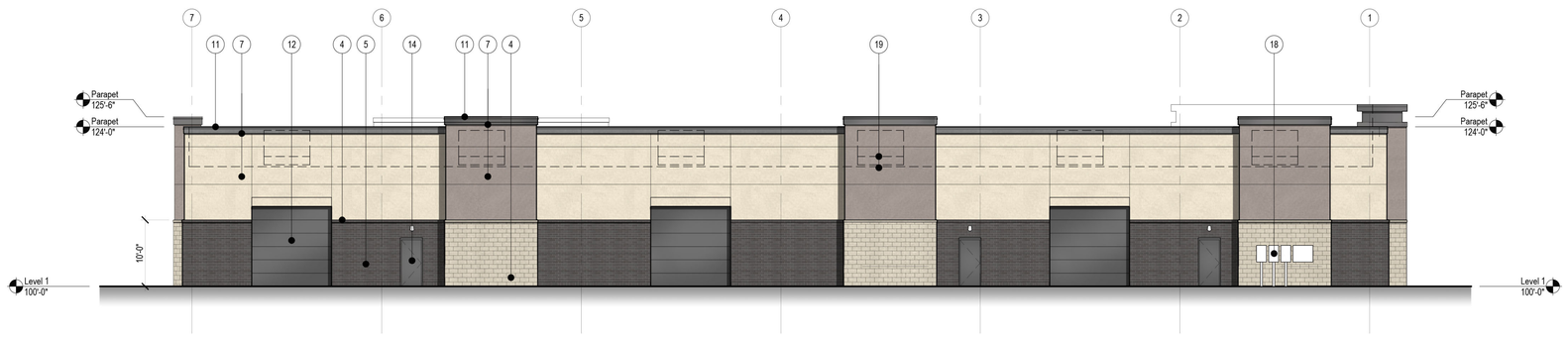


East Elevation 2
3/32" = 1'-0"



West Elevation 1
3/32" = 1'-0"

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New Entertainment Center

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Lot 3
Exterior Elevations

A-203

PROPOSED EXTERIOR MATERIALS PALETTE:

1. **Insulated Tilt-up/Precast Concrete Wall Panel with Direct-Applied Textured Acrylic Coating System**
Colors: A. To Match SW 7674: Peppercorn
B. To Match SW 2859: Beige
C. To Match SW 6074: Spalding Gray
D. To Match SW 2829: Classical White

2. **Insulated Tilt-up/Precast Concrete Wall Panel with Thin-Brick Inset**
Manufacturer: Endicott Thin Brick
Color: Mix of Gray Blend Velour (80%)
and Light Gray Blend Velour (20%)

3. **Insulated Tilt-up/Precast Concrete Wall Panel with Surface Formliner with Direct-Applied Textured Acrylic Coating System**
Manufacturer: Customrock Formliner #4010
Color: SW 6074 Spalding Gray

4. **Architectural Masonry Unit**
Manufacturer: Reading Rock Rockcast
Color: Buffstone
Pattern: Running Bond

5. **Face Brick**
Manufacturer: Endicott Brick Modular
Color: Mix of Gray Blend Velour (80%)
and Light Gray Blend Velour (20%)

6. **Aluminum Composite Metal Wall Panel**
Manufacturer: Alpolic
Color: Mica MFS Grey

7: **Exterior Insulated Finish System - Wall**
Manufacturer: Sto Corporation
Model: Stotherm CI Lotusan
Colors: To Match SW 7674: Peppercorn
To Match SW 6074: Spalding Gray
To Match SW 2829: Classical White
Finish: Fine

8. Concrete Wall Reveal - Typical

9: **Aluminum Storefront System with Clear Insulated Low-E Glazing**
Manufacturer: Kawneer
Model: Tri-Fab Versaglaze 451-7
Color: Black Anodized

10: **Prefabricated Cornice**
Aluminum Composite Metal Panel or Equal
Manufacturer: Alpolic
Color: Mica MFS Grey

11: **Pre-Finished Metal Coping Assembly/Sheet Metal Flashing**
Manufacturer: Berridge
Color: Lead-Cote

12: Insulated Prefinished Steel Panel Overhead Sectional Door

13: Aluminum/Glass Storefront Door(s)

14: Flush Hollow-Core Steel Door with High-Performance Coating

15: Prefinished Metal Canopy System

16: Internally Illuminated Building Mounted Signage - All Signage to Conform to City Signage Requirements and Submitted for Review Under a Separate Application

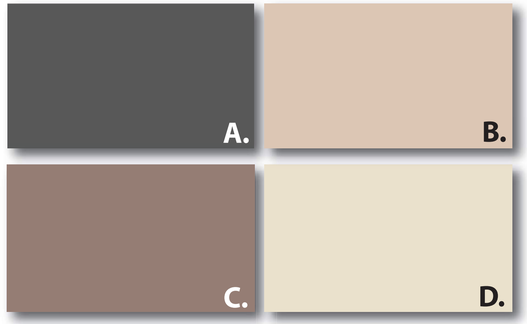
17. Wall-Mounted Exterior Lighting

18. Wall-Mounted Electrical Equipment - Confirm Exact Size and Location with Tenant. Equipment to be Screened with Landscaping

19. Line of Roof and RTUs Beyond. Confirm Exact Sizes of RTUs per Design Devlopment

NOTE: All Materials Subject to Approved Equal or Substitutions as Development Progresses.





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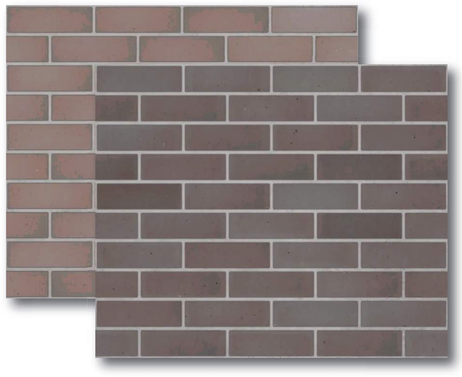

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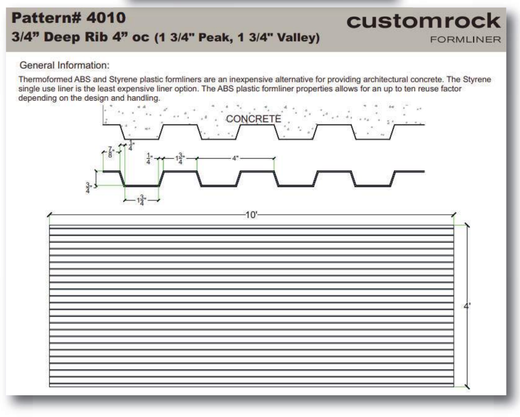


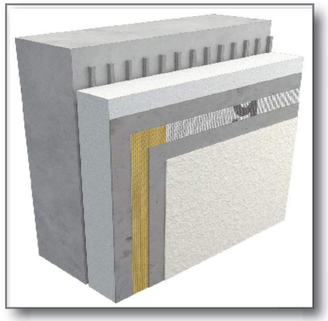
3.

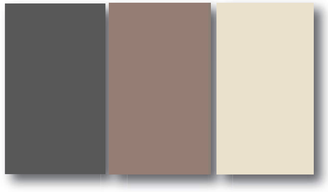


6. / 10.



4.





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9.

SAI
SLAGGIE ARCHITECTS INC

Rush Funplex - Preliminary Exterior Materials Lots 1-3

Lee's Summit, Missouri

SAI# 230605 | 03.13.2026

492

Optec LED LIGHTING

Catalog:
Project:
Type:

Area Series (Small)



The OLA1 Small Series is a stylish aerodynamic area luminaire that fits within today's accepted design form factors. Excellent optical performance is achieved with Nichia brand LED's and engineered discrete optics. LED life is assured through efficient thermal coupling and dissipation via a durable, pressure die cast, low-copper alloy, aluminum housing. Engineered to last, all gaskets are anti-UV, anti-aging with no harmful out-gassing. All models come standard with a universal pole mount bracket or an optional wall surface box. Luminaries are available with a number of options including alternate CCT choices, finishes, photocells and occupancy sensors.

FEATURES

- LED Brand: Nichia
- Color Temperatures: 4000K & 5000K (Other CCT's are available upon request)
- CRI: 70
- Lumen Maintenance: L70 = 50,000 hours
- Full Cutoff (meets IDA criteria)
- Operating Temperature: -40˚C (-40˚F) to 40˚C (104˚F)
- Durable All Aluminum Pressure Die Cast Housing
- Powder Coat Finish
- Salt Fog Tested to 2500 hours / per ASTM B117
- IP65 Rated (wet listed / NEMA IEC 60529)
- Mounting: Universal Round or Square Pole, Wall Surface Box

ELECTRICAL SPECIFICATIONS

- Power Input: 120-277V (347-480V Optional)
- Power Factor: > 0.95
- THD: < 15%
- Surge Protection: 20 kV
- Control Options: 0-10V Dimming standard (Photocell and Occupancy Sensors Optional)

TESTS & CERTIFICATIONS

- ETL (UL 1598, UL 8750, NEMA C82.77)
- CSA (C22.2 No.250.0)
- RoHS Compliant
- Design Lights Consortium (Premium)
- 3G Vibration tested (ANSI C136.31)

WARRANTY

- 10-Year Warranty (parts or replacement)

PERFORMANCE SPECIFICATIONS

Distribution	Model / Wattage	Lumens		Bug Rating		
		4000K	5000K	B	U	G
Type 2	OLA1-080	10,801	10,960	3 *	0	1
	OLA1-120	15,840	16,200	3 *	0	2
	OLA1-150	19,800	20,250	3 *	0	2
Type 3	OLA1-080	11,600	11,760	2 *	0	2
	OLA1-120	16,561	16,920	3 *	0	2
	OLA1-150	20,549	21,000	3 *	0	2
Type 3L	OLA1-080	10,799	10,960	3 *	0	3
	OLA1-120	15,960	16,199	3 *	0	3
	OLA1-150	19,800	20,249	4 *	0	3
Type 3R	OLA1-080	10,799	10,960	3 *	0	3
	OLA1-120	15,960	16,198	3 *	0	3
	OLA1-150	19,800	20,250	4 *	0	3
Type 4	OLA1-080	10,596	10,794	2 *	0	2
	OLA1-120	15,472	15,712	2 *	0	2
	OLA1-150	19,046	19,349	3 *	0	2
Type 4L	OLA1-080	10,800	10,960	3 *	0	3
	OLA1-120	16,080	16,320	3 *	0	3
	OLA1-150	19,800	20,250	4 *	0	4
Type 4R	OLA1-080	10,800	10,960	3 *	0	3
	OLA1-120	16,080	16,320	3 *	0	3
	OLA1-150	19,781	20,250	4 *	0	4
Type 5	OLA1-080	10,032	10,185	4	0	3
	OLA1-120	15,049	15,278	4	0	3
	OLA1-150	18,811	19.097	5	0	4

* Backlight = 1 when BC (Backlight Control System) is applied.

Voltage (V)	Current (A)		
	80W	120W	150W
120	0.67	1.00	1.25
208	0.38	0.58	0.72
240	0.33	0.50	0.63
277	0.29	0.43	0.54
347	0.23	0.35	0.43
480	0.17	0.25	0.31



Area Series (Small)

ORDERING INFORMATION

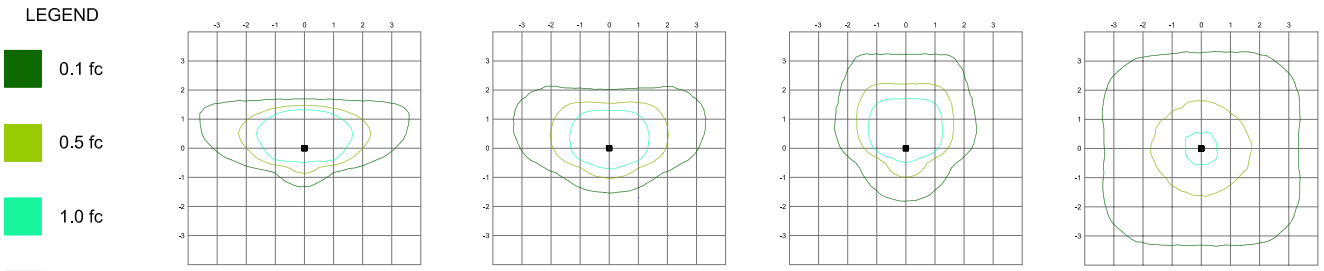
EXAMPLE: OLA1-120-UNVL-50-4-SQ-BZ-PR-TL12

SERIES	WATTAGE	VOLTAGE	COLOR TEMP	DISTRIBUTION	MOUNTING	FINISH	CONTROLS / OPTIONS
OLA1 = Optec LED Area Light	080 = 80W 120 = 120W 150 = 150W	UNVL = 120-277V UNVH =347-480V	30 = 3000K 40 = 4000K 50 = 5000K	2 = Type 2 3 = Type 3 3L = Type 3 Left 3R = Type 3 Right 4 = Type 4 4L = Type 4 Left 4R = Type 4 Right 5 = Type 5	SQ = Square Pole[1] RD = Round Pole[1] WM = Wall Mount[1,2] TA = Tenon Adapter[1] LK = Leveling Kit[3]	WH = White BZ = Dark Bronze BL = Black NA = Natural Aluminum GM = Graphic Metallic CF = Custom Finish	OSWS = Occupancy Sensor (WattStopper)[4] PR3 = Photocell Receptacle 3-pin PR5 = Photocell Receptacle 5-pin PR7 = Photocell Receptacle 7-pin WCS = Wireless Control (Synapse)[5] BCS = Backlight Control System SF = Single Fuse (120V, 277V, 347V) DF = Double Fuse (220V, 240V, 480V) TLSC = Twist Lock Shorting Cap 924 = UL924 Relay TL12 = Twist Lock Photocell 120V[6] TL24 = Twist Lock Photocell 240V[6] TL27 = Twist Lock Photocell 277V[6] TL28 = Twist Lock Photocell 208V[6] TL34 = Twist Lock Photocell 347V[6] TL48 = Twist Lock Photocell 480V[6]

1 - For details, reference accessory data sheet.
2 - WM option requires SQ pole mount bracket (ordering example: SQ-WM)
3 - Leveling kit adjusts up by 5 degrees or down by 5 degrees
4 - OSWS = For Wattstopper PIR sensor information and options contact factory
5 - WCS = for Synapse wireless controls information and options contact factory for details
6 - Photocell default = Fail in "ON" mode (unless otherwise specified)

PHOTOMETRIC PERFORMANCE

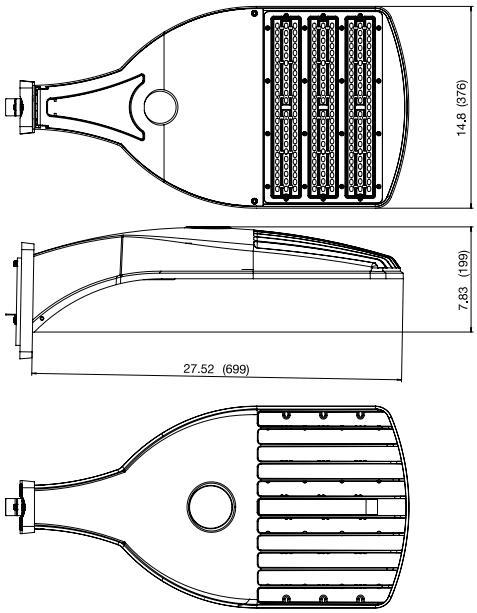
Isofootcandle plots = OLA1 120W model in 5000K CCT @ 30' mounting height. Distances are in units of mounting height.



120W (Type 2) Plot | 120W (Type 3) Plot | 120W (Type 4) Plot | 120W (Type 5) Plot

Published luminaire photometric testing performed to IESNA-79-08 standards

DIMENSIONS, WEIGHTS & EPA



Wattage	80W	120W	150W
Length (inches / mm)	27.52 / 699	27.52 / 699	27.52 / 699
Width (inches / mm)	14.8 / 376	14.8 / 376	14.8 / 376
Height (inches / mm)	7.83 / 199	7.83 / 199	7.83 / 199
Weight (lbs / kg)	19.4 / 8.8	19.4 / 8.9	20 / 9.1

Wattage	Effective Projected Area (EPA) in ft²				
					
80	0.96	1.92	1.81	2.77	3.63
120	0.96	1.92	1.81	2.77	3.63
150	0.96	1.92	1.81	2.77	3.63

FWPC™

PacLights



CCT selectable full-cut off
LED Wall Mount

PROJECT:

DATE:

TYPE:

PREPARED BY:

5 YEAR WARRANTY

KEY FEATURES
100,000-Hour LED lifespan
1-10V dimming standard on all models
Selected models **3000K/4000K/5000K field-selectable**
Optional **photocell and motion control**
Emergency backup option provided

c UL us LISTED

DLC PREMIUM

1-10V DIMMING

CCT FIELD ADJUSTABLE *

EMERGENCY BACKUP OPTION

*available on selected models

TECHNICAL SPECIFICATIONS

COMPLIANCE

UL Listed
Suitable for wet locations

IESNA LM79 & LM-80 Testing
Paclights LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

DLC Qualification
Selected models of this product are on the Design Lights Consortium (DLC) Qualified Products List and are eligible for rebates from DLC Member Utilities. To view our DLC qualified products, please consult the DLC Qualified Products List at www.designlights.org/qpl

LED CHARACTERISTICS

LEDS
Long-life, high-efficacy, surface-mount LEDs

Lifespan
100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations

Color Rendering Index
>80

Beam Angel & BUG
100° beam; B2-U0-G1

Field-selectable Color Temperature
On selected models (3CCT), 3000K/4000K/5000K, selectable by a dip switch

Color Uniformity
PacLights' range of Correlated Color Temperature follows the guidelines of the American National Standard for Specications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2017

ELECTRICAL

Drivers
1-10V Dimmable
Input Voltage: 120-277V, 50-60 Hz
Power Factor > 0.9; THD <20%
Surge Protection 6kA

CONSTRUCTION

IP Rating
IP 65 Rated

Ambient Temperature
Suitable for up to 50° C (122° F) ambient temperature

Cold Weather Starting
The minimum starting temperature is -40 F°/-40° C

Housing
Die-cast aluminum housing

Gaskets
Silicon Gaskets

Finish
Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color, and contain no VOC or toxic heavy metals.

Mounting Methods
Surface mount

Green Technology
Mercury and UV free, and RoHS compliant. Polyester powder coat finish formulated without the use of VOC or toxic heavy metals.

Lens
Polycarbonate

OTHER

5-Year Limited Warranty**
The PacLights 5-year, limited warranty covers light output, driver performance and paint finish.
**PacLights's warranty is subject to all terms and conditions found at paclights.com/warranty

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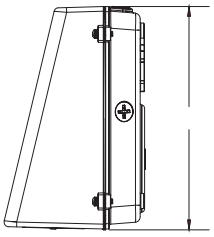
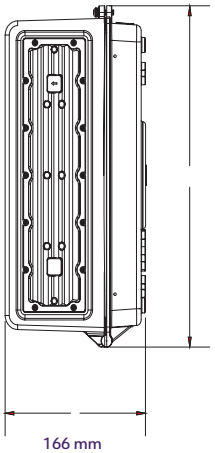
TECHNICAL SPECIFICATIONS Continued

FWPC-040/060/080

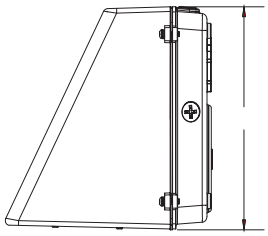
Weight 7.5 lbs

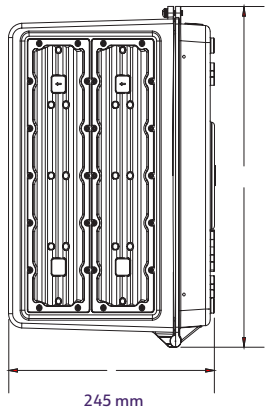




FWPC-100/120/150

Weight 11.3 lbs



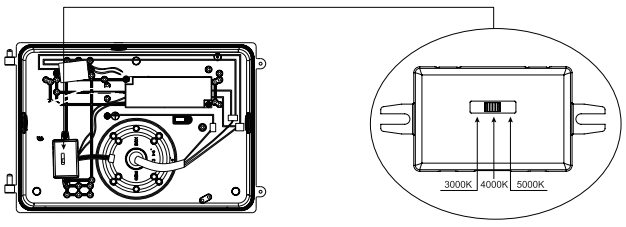


FINISHES	
all models	Dark Bronze

LIGHT MODULES	
FWPC-040/060/080	1
FWPC-100/120/150	2



CCT SELECTABLE on selected models



CCT SELECTABLE ON FIXTURE

Selected models (3CCT) are equipped with color temperature settings ranging from: 3000K (Warm White), 4000K (Neutral White) and 5000K (Daylight). Simply use the switch directly on the fixutre to select the desired color temperature and then install. Selectable color temperature technology removes the guesswork of choosing the correct color temperature for your space. Select 3000K in applications requiring warm and inviting light, select 4000K for a slightly cooler light appearance, select 5000K in areas requiring bright, crisp light.

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ACCESSORIES Optional

EMERGENCY BATTERY BACKUP

Emergency Battery Backup generates a bright illumination even in emergency environments, such as power outages, blackouts, and fires, thanks to its UL924 approved battery for backup lighting. In addition, with intelligent emergency detection function automatically, it can provide 90 minutes ~ 180 minutes continuously work time under power-off mode.

SECONDARY SURGE PROTECTOR

Secondary surge protector can act as the second line of defense, in addtional to the LED driver's intergrated lightning arrester.

CONTROLS

Photocell Control allows ON/OFF switching the luminaries, to be determined by the amount of daylight present. Specified low light levels at dusk will turn lights ON. When sufficient daylight returns at dawn, the lights automatically turn OFF. Automatic lighting controls save energy.

Bi-level Motion Control uses passive infrared sensing strategies option (up to 18ft) to provide the ability of sensing occupancy or vacancy on luminaries, to bi-level dimming and automatically turn ON and OFF the lighting fixture. Or, select microwave sensing strategies option to provide extended range of sensing (up to 60ft).

PERFORMANCE

FWPC™ 040

40W	3000K Warm white	4000K Neutral	5000K Daylight
LUMENS	4,880	5,680	5,040
LM/W	122	142	126

FWPC™ 060

60W	3000K Warm white	4000K Neutral	5000K Daylight
LUMENS	7,320	8,640	7,620
LM/W	122	144	127

FWPC™ 080

80W	3000K Warm white	4000K Neutral	5000K Daylight
LUMENS	9,680	11,360	10,080
LM/W	121	142	126

FWPC™ 100

100W	3000K Warm white	4000K Neutral	5000K Daylight
LUMENS	12,600	14,600	13,000
LM/W	126	146	130

FWPC™ 120

120W	3000K Warm white	4000K Neutral	5000K Daylight
LUMENS	14,520	16,800	15,240
LM/W	121	140	127

FWPC™ 150

150W	3000K Warm white	4000K Neutral	5000K Daylight
LUMENS	18,000	21,300	18,900
LM/W	120	142	126

ORDERING INFORMATION

FWPC™

Family	Model	Color Temp	Options
FWPC			

Model	
040	40w
060	60w
080	80w
100	100w
120	120w
150	150w

Color Temp	
30	3000K (warm white)
40	4000K (neutral)
50	5000K (daylight)
3CCT	3000/4000/5000K Selectable

Options	
SP	secondary surge protector
PC	photocell control
MC	motion control (PIR)
MW	motion control (microwave)
EM	emergency battery backup

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WCED-4S(U)D-LCT

4" Wall Mount Square Cylinder Down and Up/Down Light
120/277V, 3 Power/Lumens & 5 CCT Selectable

DoB
Driver on Board
AC Direct Module

Catalog #		Type
Project		
Prepared by		Date

4" Square LED Cylinder

SELECTABLE 5 CCT 2700K · 3000K · 3500K 4000K · 5000K

SELECTABLE 3 WATTS

Buy American Act COMPLIANT

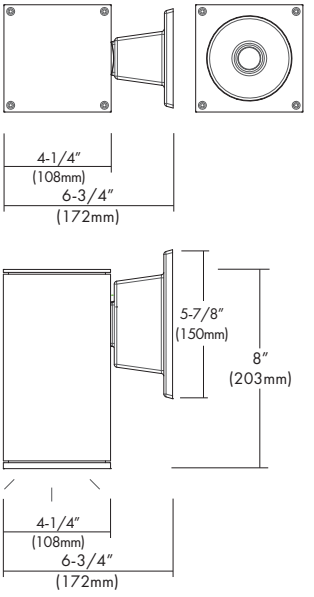
Dimmable



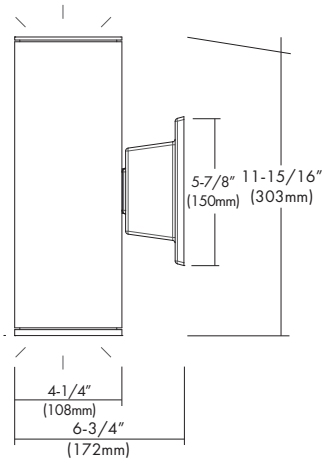
[**WCED-4SD-LCT** : DOWN TYPE]



[**WCED-4SUD-LCT** : UP/DOWN TYPE]



[**WCED-4SD-LCT** : DOWN TYPE]



[**WCED-4SUD-LCT** : UP/DOWN TYPE]

DESCRIPTION

The WCED-4S(U)D-LCT 4" Square Cylinders are Wet Location and IP65 rated for outdoor use. These wall mount cylinders come in two versions : down light and up & down light. The fixtures are offered in 15W, 20W and 30W LED, DoB modules with a customized IC, highbred circuit on board with dimming down to 5% with most of Triac and ELV dimmers or 0-10V dimming. Non-Isolated DOB, Direct AC technology has low heat, great reliability and has been designed for these fixtures to operate environments between -22˚ F to 104˚ F (-30˚C to 40˚C). Optional Photo Cell is available for Dusk to Dawn operation and EM drivers for emergency lighting.

DESIGN FEATURES

Features

- Weatherproof aluminum powder coated white & black finish for outdoor & indoor applications.
- 15W, 20W & 30W Selectable power.
- 2700K, 3000K, 3500K, 4000K & 5000K Selectable CCT.
- 90 CRI Standard.
- Universal 120-277V 50/60 Hz Input.
- Triac, ELV & 0-10V dimming.

Mounting

- Mount completely assembled fixture directly onto wall surface using appropriate anchor bolts or screws (supplied by others).

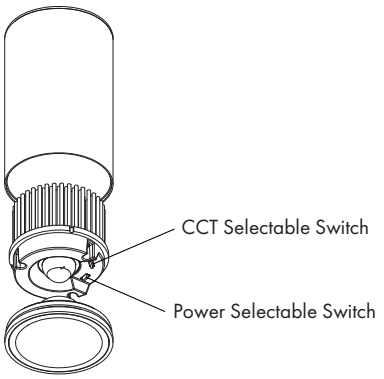
Limited Warranty

- LED Module & Product: 3 years

Listing

- ETL cETL Listed
- State of California Title 24
- Wet location (IP65 Rated)

Drawing



SPECIFICATION			
Input Voltage	120/277V		
Wattage	15W	20W	30W
Lumen	1,050	1,400	2,100
Efficacy (LPW)	70 lm/W	70 lm/W	70 lm/W
Beam Angle	48˚		
CRI (Standard)	90		
CCT (Color +/-5%)	2700K, 3000K, 3500K, 4000K, 5000K		
Dimming	Triac, ELV & 0-10V Dimming*		
LED Module	3 years		
Environment	Wet location		

*Double wattage for Up/Down Type
*Contact factory for custom beam angles

120V Approved Dimmers

* Lutron: Skylark S-600
: MRF2-6DN-120
: MACL-153M
: DVLV-600P
: SELV-300P
: CTCL-153P
: DVELV-303P
: DVCL-153P
* Leviton: D600R, Acenti: Ate06,
Trimatron #705W
* Cooper Devine incandescent dimmer 600W
* Pass&seymour harmony incandescent 600W

For 0-10V Driver
* Lutron: Nova 0-10V : NTFTV
Diva 0-10V : DVTV
* Leviton: Decora 0-10V : IP710DL

*Consult tech. service or factory for additional dimmers
**Consult with factory if you are not using the approved dimmers

OPTIONS



- PCELL = Photocell for Dusk to Dawn operation. Outdoor use ONLY.

Model	-Housing Finish*	-Options
WCED-4SD-LCT = 4" Wall Square Cylinder Down Light **WCED-4SUD-LCT** = 4" Wall Square Cylinder Up/Down Light	**-WH** = White **-BK** = Black	**-PCELL** = Photocell for Outdoor use ONLY **-EM** = Emergency Driver

Example : **WCED-4SUD-LCT-WH**

* Consult factory for other Color Temperatures and Finishes

Camray™ LED Series

Die-cast aluminum LED emergency lighting – interior or exterior



Housing
- Indoor/outdoor suitable for wet location
- Die-cast aluminum housing
- UV-resistant (3" x 1.5") polycarbonate lens

Mounting
- Wall mount
- 1/2" rigid conduit top entry
- Universal J-box mounting patern

Lamp Type
- Patent-pending light engine: four power LEDs with redundant connections
- 400-640 lumens
- Color temperature: 4000K
- Optional forward-throw light distribution, for applications of outdoor egress
- Optional high-lumen output
- Optional dual-mode operation: normal and emergency LED lighting with separate AC inputs
- Pulse plus charger
- Low voltage disconnect
- Automatic brownout protection
- Battery lock-out
- Fused output circuit
- Standard Improved Diagnostics
- 120/277 60Hz

Approval
- UL 924 listed
- Nema-3R rated for indoor/outdoor cold-weather wet and damp locations: -4°F to 104°F (-20°C to 40°C)

Warranty (subject to proper installation and maintenance)

Unit: five-year full warranty

Detailed warranty terms located on **page 197 or online at: www.lightalarms.com**

NEMA-3R UL

Unit color

Platinum gray



Black

White



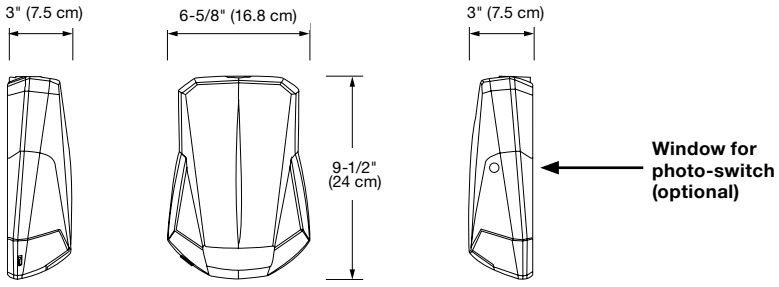
Dark bronze (painted)

Power consumption chart

			AC Specs		DC Specs
	Normal lighting		Emergency lighting		6-12V[1]
Model	Current (maximum)	Power (maximum)	Current (maximum)	Power (maximum)	Power (maximum)
AC, 2AC, ACDC, DC	0.12/0.08A	12W	0.11/0.08A	12W	8W
All above, -H	0.18/0.11A	18W	0.18/0.11A	18W	14W (VDC only)
ACSD, SD, SD-H	0.12/0.06A	12W	0.05/0.02A	5W	
SD-CW	–	–	0.15/0.07A	16W	N/A[1]
ACSD-CW-P, -FT		N/A[1]	0.22/0.10A	24W	

[1] Only unswitched AC input; normal lighting with photo-switch or remote control

Dimensions (Dimensions are approximate and subject to change)



Photometric performance

Table A – Spacing for NFPA101 (average = 1FC) – Average of 1 foot-candle

Model type	Mounting height	Lumen	Color temperature	Width X length (ft) Single unit	Width X length (ft) Center-to-center
Standard	9'	400	4000K	6' X 50'	6' X 50'
With option -H	11'	550		6' X 60'	6' X 60'
With option -FT	12'	460			3' X 70'
With option -FTH	15'	640		6' X 40'	–
				6' X 50'	–

Indoor reflectance: 80/50/20 and 10-ft wide corridor. Outdoor reflectance: 0/30/10
Note: The illumination level meets ALL the requirements of the Life Safety Code (NFPA 101):
1) Average of 1 foot-candle or more
2) Minimum at any point of 0.1 foot-candle or more
3) Maximum-to-minimum illumination uniformity ratio of 40:1 or less

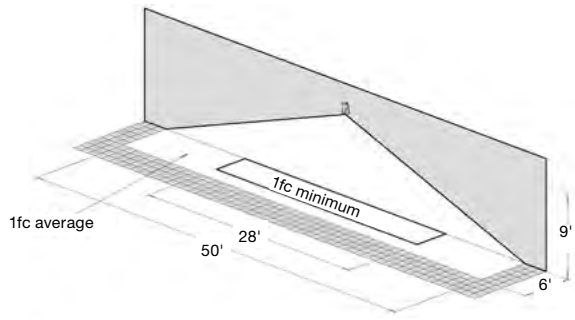
Table B – Spacing for minimum illumination = 1FC – Minimum of 1 foot-candle

Model type	Mounting height	Lumen	Color temperature	Width X length (ft) Single unit	Width X length (ft) Center-to-center
Standard	9'	400	4000K	4' X 28'	6' X 32'
With option -H	11'	550		4' X 32'	6' X 40'
With option -FH	12'	460		4' X 22'	–
With option -FTH	15'	640		4' X 27'	–

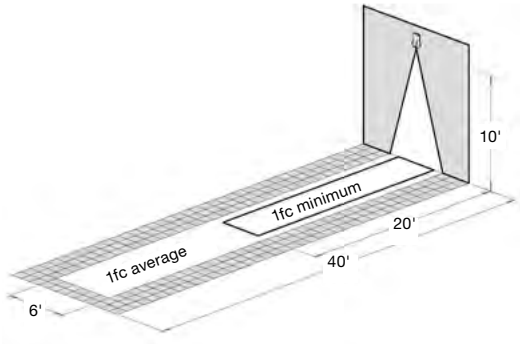
Photometry performance

Whether installed indoors or outdoors, with spacing measurements for a single unit or between two units center-to-center, the Camray® Series LED delivers a stable and consistent illumination making it easy to specify in a wide range of applications. The outstanding spacing of illumination ranges from 50 to 70 feet for standard units (wide beam) and from 40 to 50 feet with the forward-throw beam option.

Photometry performance – Wide beam



Photometry performance – Forward throw



Ordering format – Battery unit

Series	Model	Color	Options	
CAM= Camray LED battery unit	**Nickel-Metal Hydride Battery Units (standard with Self-Diagnostics)** **SD**= Self-Powered & Self-Diagnostic (-4°F + 122°F)(-20°C + 50°C) **ACSD**= Dual-Mode AC/Self-Powered & Diagnostics (-4°F + 104°F) (-20°C + 40°C)	**B**= Black **DB**= Dark bronze **OW**= Off white **PG**= Platinum gray	**-CW**= Cold weather (-40°F - 86°F) (-40°C - 30°C); not available with option -H **-FT**= Forward throw lighting **-H**= High lumen output (32... 86°F / 0... 30°C; model SD only)	**-P**= Photo-switch, (model models ACSD only) **-T3**= Time delay: 15 minutes (models ACSD, SD only) **-RC**= Remote control - infrared[1]

Example: CAMSDOW-RC

[1] For ACSD Model only, with -RC option, order the remote control keypad (TB-RC1-L) separately

LEGEND

- SET 5/8" X 24" REBAR W/ CAP STAMPED OWN LC-62, UNLESS OTHERWISE NOTED
- FOUND MONUMENT AS NOTED
- X FENCE LINE
- (91/387) BK/PG OF RECORD PLAT/SURVEY
- M MEASURED DISTANCE
- R RECORD DISTANCE
- BENCHMARK
- CONTROL POINT
- ELECTRICAL PEDESTAL
- ELECTRICAL TRANSFORMER
- ELECTRICAL VAULT
- WATER METER
- WATER VALVE
- FIRE HYDRANT
- OHP OVERHEAD POWER
- G GAS LINE
- SAN SEWER LINE
- (XX) SCHEDULE B EXCEPTION NUMBER
- RIGHT OF WAY MARKER
- AIR CONDITIONING UNIT
- GUY WIRE ANCHOR
- POWER POLE
- SANITARY CLEAN OUT
- SANITARY MANHOLE
- SECTION CORNER MONUMENT
- SET MONUMENT
- SIGN
- STORM MANHOLE
- STREET LIGHT
- STREET LIGHT CONTROLLER
- STREET LIGHT VAULT
- STUMP
- TANK
- FIBER OPTIC MARKER
- FIBER OPTIC MANHOLE
- FIBER OPTIC PEDESTAL
- FIBER OPTIC VAULT
- SURVEY BOUNDARY
- CHAIN LINK FENCE
- UNDERGROUND TELEPHONE LINE
- UNDERGROUND FIBER OPTIC LINE
- UNDERGROUND POWER LINE
- UNDERGROUND WATER LINE
- OVERHEAD POWER LINE
- OVERHEAD TELEPHONE LINE
- OVERHEAD TELEVISION LINE
- BUILDING SETBACK
- SECTION OR 1/4 SECTION LINE
- EASEMENT LINE
- SANITARY LINE
- STORM CENTERLINE

OWNERS:

TOWNSEND SUMMIT LLC, A MISSOURI LIMITED LIABILITY COMPANY

LEGAL DESCRIPTION:

LOT 10A, SUMMIT FAIR, LTOS 10A-10C, A SUBDIVISION IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, ACCORDING TO THE RECORDED PLAT THEREOF

ZONING:

NO ZONING LETTER WAS PROVIDED TO THE SURVEYOR

TRACT ZONED PMIX "PLANNED MIXED USE" PER CITY OF LEE'S SUMMIT ONLINE ZONING MAP

LIST OF POSSIBLE ENCROACHMENTS:

1. SOME UTILITY STRUCTURES ARE NOT LOCATED IN PUBLIC EASEMENTS. IT IS UNKNOWN IF UTILITY STRUCTURES ARE PUBLIC OR PRIVATE.

2. THE EAST CURB AND INLET OF NW WARD ROAD ENCROACH ONTO SUBJECT TRACT.

UTILITY NOTES:

1. MANHOLE ON WEST SIDE OF SITE WAS MARKED BY ONECALL AS SEWER WITH LINES GOING NORTH AND SOUTH. UPON FIELD INVESTIGATION, ONLY ONE DUCTILE IRON PIPE WAS FOUND IN THE MANHOLE HEADING EAST. NO SANITARY SEWER PIPES WERE OBSERVED.

GENERAL NOTES:

THE BASIS OF BEARINGS IS MISSOURI STATE PLANE GRID SYSTEM, WEST ZONE, NAD 83 ZONE.

THIS SURVEY WAS EXECUTED TO COMPLY WITH THE ALLOWABLE RELATIVE POSITIONAL ACCURACY FOR MEASUREMENTS CONTROLLING LAND BOUNDARIES ON ALTA/NSPS LAND TITLE SURVEYS [0.07 FEET (OR 20 MM) + 50 PPM]

THE PROPERTY DESCRIBED HEREON IS THE SAME AS THE PROPERTY DESCRIBED AS EXHIBIT "A" IN THAT CERTAIN TITLE COMMITMENT ISSUED BY CHICAGO TITLE INSRUANCE COMPANY, HAVING AN EFFECTIVE DATE OF NOVEMBER 28, 2025, COMMITMENT NUMBER KCC252655. ALL EASEMENTS, COVENANTS & RESTRICTIONS REFERENCED IN SAID TITLE COMMITMENT OR APPARENT FROM A PHYSICAL INSPECTION OF THE SITE OR OTHERWISE KNOWN TO ME HAVE BEEN PLOTTED HEREON OR OTHERWISE NOTED AS TO THEIR EFFECT ON THE SUBJECT PROPERTY.

SOME OF THE EXISTING WATER, SEWER, ELECTRIC, GAS, & TELEPHONE UTILITIES ARE LOCATED IN PUBLIC RIGHT OF WAY OR IN THE PUBLIC UTILITY CORRIDOR, APPROXIMATE LOCATION AS MARKED BY MISSOURI ONE-CALL ARE SHOWN HEREON. MO ONE-CALL TICKET# 260053187, 260053189, 260161744. NO ADDITIONAL UTILITY MAPS WERE PROVIDED TO THE SURVEYOR.

RECENT EARTHWORK WAS OBSERVED ON THE PROPERTY. (SHOWN HEREON)

NO CHANGES IN STREET RIGHTS OF WAY LINES ARE PROPOSED BY THE CONTROLLING JURISDICTION TO OUR KNOWLEDGE, AND NO EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS WERE OBSERVED.

THERE WERE NO OBSERVED PERMANENT BUILDINGS/STRUCTURES ON THE SUBJECT TRACT.

THERE WERE NO OBSERVED PARKING STALLS ON THE SUBJECT TRACT.

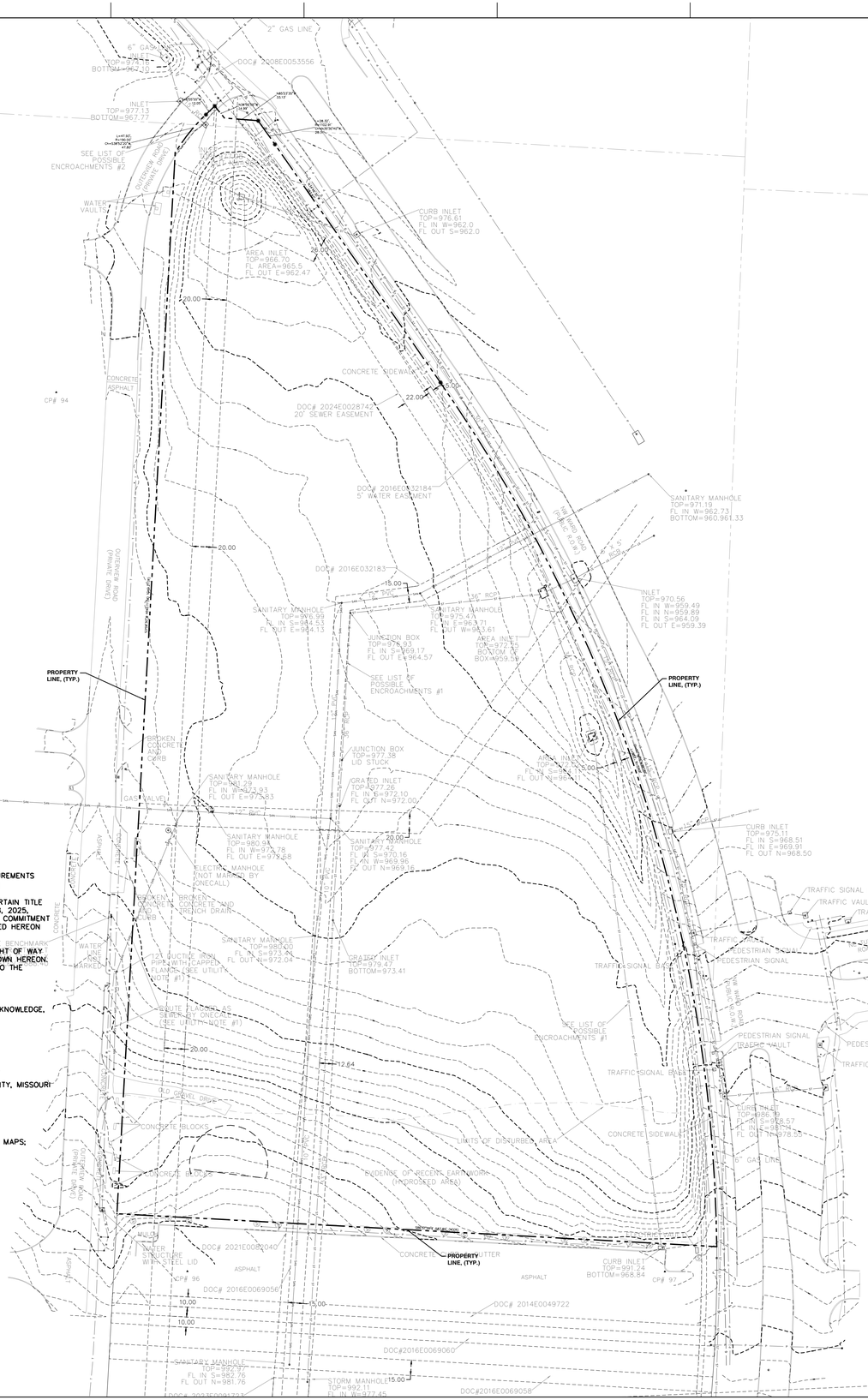
THE PHYSICAL ADDRESS FOR THIS SITE IS 900 NW WARD ROAD, LEE'S SUMMIT, JACKSON COUNTY, MISSOURI.

THE NAMES OF ADJOINING OWNERS ARE PER CURRENT TAX RECORDS FOUND ONLINE ON THE JACKSON COUNTY, MISSOURI GIS MAP.

PROFESSIONAL LIABILITY INSURANCE WILL BE PROVIDED UPON REQUEST.

FLOOD PLAIN NOTE:

NO PART OF THIS TRACT IS LOCATED IN THE 100 YEAR FLOOD PLAIN AS SHOWN BY THE FIRM FLOOD PLAIN MAPS; COMMUNITY-PANEL# 29095C0417G. DATED JANUARY 20, 2017.



SCHEDULE B-SECTION II SPECIAL EXCEPTIONS:

1. NOT SURVEY RELATED.
2. NOT SURVEY RELATED.
3. NOT SURVEY RELATED.
4. NOT SURVEY RELATED.
5. NOT SURVEY RELATED.
6. NOT SURVEY RELATED.
7. NOT SURVEY RELATED.
8. COVENANTS AND RESTRICTIONS, TOGETHER WITH A RIGHT OF ACCESS IN FAVOR OF THE MISSOURI DEPARTMENT OF NATURAL RESOURCES, PURSUANT TO DECLARATION RECORDED APRIL 24, 2007 AS A DOCUMENT NO. 2007E0054314, (AFFECTS SUBJECT TRACT, RESTRICTIVE COVENANTS APPLY TO PARENT TRACT "DESENDORF ACRES" PRIOR TO THE PLATTING OF LOT 10A) AS AFFECTED BY THE CERTIFICATE OF COMPLETION RECORDED AUGUST 8, 2007 AS DOCUMENT NO. 2007E0104283. (NOT PLOTTABLE)
9. TERMS, PROVISIONS, COVENANTS, CONDITIONS, RESTRICTIONS, EASEMENTS, AND PROVISIONS FOR CREATION OF A PROPERTY OWNERS ASSOCIATION WITH THE POWER TO LEVY ASSESSMENTS, ESTABLISHED PURSUANT TO STORM WATER DRAINAGE AND DETENTION EASEMENT AGREEMENT RECORDED JUNE 5, 2007 AS DOCUMENT NO. 2007E0074477. (EASEMENT AREAS DESCRIBED ARE NOT LOCATED ON THE SUBJECT TRACT)
10. COVENANTS, EASEMENTS, AND RESTRICTIONS, INCLUDING ACTIVITY AND USE LIMITATIONS, PURSUANT TO CERTIFICATE OF COMPLETION RECORDED AUGUST 8, 2007 AS DOCUMENT NO. 2007E0104283. (NOT PLOTTABLE)
11. RIGHT OF WAY GRANTED TO THE CITY OF LEE'S SUMMIT, RECORDED MAY 16, 2008 AS DOCUMENT NO. 2008E0053556. (LOCATED NORTH OF THE SUBJECT TRACT. AFFECTS PROPERTY. PROVIDES ACCESS FROM WARD ROAD TO OUTERVIEW ROAD. DEPICTED HEREON)
12. TERMS AND PROVISIONS OF CITY OF LEE'S SUMMIT ORDINANCE 6622, ACCEPTING THE FINAL PLAT OF SUMMIT FAIR 2ND PLAT, LOTS 8, 10-14 & TRACT C, RECORDED AUGUST 7, 2008 AS DOCUMENT NO. 2008E0085123. (BLANKET IN NATURE, NOT PLOTTED, AFFECTS SUBJECT TRACT)
13. UTILITY EASEMENTS, SANITARY SEWER EASEMENT AND PROPOSED SIDEWALKS, ESTABLISHED BY THE PLAT RECORDED AUGUST 7, 2008 AS DOCUMENT NO. 2008E0085124, IN PLAT BOOK I-122, PAGE 1, EXCEPT THOSE EASEMENTS TERMINATED BY INSTRUMENTS RECORDED AS DOCUMENT NO. 2016E0069054; AND 2016E0069059. (DOCUMENT 2016E0069054 TERMINATES THE PRIVATE EASEMENT DESCRIBED IN DOCUMENT 2007E0106563. DOCUMENT 2016E0069059 TERMINATES THE PRIVATE EASEMENT DESCRIBED IN DOCUMENT 2007E0106564. THE EASEMENTS DEPICTED ON THE PLAT RECORDED AUGUST 7, 2008 AS DOCUMENT NUMBER 2008E0085124 APPEAR TO BE COEXTENSIVE WITH THE PREVIOUSLY IDENTIFIED TERMINATED EASEMENTS. THE PLAT LACKS SUFFICIENT DETAIL TO DISTINGUISH BETWEEN PREVIOUSLY TERMINATED EASEMENTS AND THOSE INTENDED FOR NEW PUBLIC DEDICATION. MAY AFFECT SUBJECT TRACT.
14. THE NON-EXCLUSIVE EASEMENT, IF ANY, TOGETHER WITH THE NON-EXCUSIVE RIGHTS FOR THE BENEFIT OF KC SUMMIT TECHNOLOGY LLC, A DELAWARE LIMITED LIABILITY COMPANY, DESCRIBED BY INSTRUMENT RECORDED AUGUST 14, 2007 AS DOCUMENT NO. 2007E0106562; SUBJECT TO TERMINATION OF SANITARY SEWER EASEMENT RECORDED JULY 28, 2016 AS DOCUMENT NO. 2016E0069055; AND FURTHER SUBJECT TO ANY APPURTENANCES AND OR FACILITIES LYING THEREIN. (EASEMENT HAS BEEN TERMINATED, DOES NOT AFFECT)
15. THE NON-EXCLUSIVE EASEMENT, IF ANY, TOGETHER WITH THE NON-EXCLUSIVE RIGHTS TO BENEFIT KC SUMMIT TECHNOLOGY LLC, A DELAWARE LIMITED LIABILITY COMPANY, DESCRIBED BY INSTRUMENT RECORDED AUGUST 14, 2007 AS DOCUMENT NO. 2007E0106563; SUBJECT TO THE TERMINATION OF ELECTRIC UTILITY EASEMENT RECORDED JUNE 28, 2016 AS DOCUMENT NO. 2016E0069054; AND FURTHER SUBJECT TO ANY APPURTENANCES AND OR FACILITIES LYING THEREIN. (EASEMENT HAS BEEN TERMINATED, DOES NOT AFFECT)
16. SANITARY SEWER EASEMENT GRANTED TO THE CITY OF LEE'S SUMMIT, RECORDED APRIL 13, 2016 AS DOCUMENT NO. 2016E0032183. (AFFECTS SUBJECT TRACT, SHOWN HEREON)
17. WATER LINE EASEMENT GRANTED TO THE CITY OF LEE'S SUMMIT, RECORDED APRIL 13, 2016 AS DOCUMENT NO. 2016E0032184. (AFFECTS SUBJECT TRACT, SHOWN HEREON)
18. AN EASEMENT GRANTED TO THE CITY OF LEE'S SUMMIT, MISSOURI, DESCRIBED BY INSTRUMENT RECORDED JULY 28, 2016 AS DOCUMENT NO. 2016E0069056; SUBJECT TO ORDINANCE NO. 9787 OF PARTIAL VACATION, RECORDED NOVEMBER 20, 2023 AS DOCUMENT NO. 2023E0091723. (AFFECTS SUBJECT TRACT, SHOWN HEREON, VACATED PORTION LIES SOUTH OF LOT 10A)
19. AN EASEMENT GRANTED TO THE CITY OF LEE'S SUMMIT, MISSOURI, DESCRIBED BY INSTRUMENT RECORDED JULY 28, 2016 AS DOCUMENT NO. 2016E0069058; SUBJECT TO FIRST AMENDMENT RECORDED NOVEMBER 13, 2017 AS DOCUMENT NO. 2017E0102347. (DOES NOT AFFECT SUBJECT TRACT, LIES SOUTH OF LOT 10A)
20. AN EASEMENT GRANTED TO KANSAS CITY POWER & LIGHT COMPANY RECORDED JULY 8, 2016 AS DOCUMENT NO. 2016E0069060; SUBJECT TO FIRST AMENDMENT TO EASEMENT RECORDED MAY 9, 2017 AS DOCUMENT NO. 2017E0040340. (DOES NOT AFFECT SUBJECT TRACT, LIES SOUTH OF LOT 10A)
21. THE NON-EASEMENT, IF ANY, TOGETHER WITH THE NON-EXCLUSIVE RIGHTS GRANTED BY TOWNSEND SUMMIT, LLC, TO SAINT LUKE'S HEALTH SYSTEM, INC., DESCRIBED BY INSTRUMENT RECORDED FEBRUARY 23, 2017 AS DOCUMENT NO. 2017E0016699; SUBJECT TO THE FIRST AMENDMENT TO EASEMENT RECORDED JUNE 5, 2017 AS DOCUMENT NO. 2017E0049722. (DOES NOT AFFECT SUBJECT TRACT, LIES SOUTH OF LOT 10A)
22. AN EASEMENT GRANTED TO CITY OF LEE'S SUMMIT, MISSOURI, DESCRIBED BY INSTRUMENT RECORDED NOVEMBER 13, 2017 AS DOCUMENT NO. 2017E0102348. (DOES NOT AFFECT SUBJECT TRACT, LIES SOUTH OF LOT 10A)
23. TERMS AND PROVISIONS OF THE SUMMIT ORCHARDS CID COOPERATIVE AGREEMENT, INCLUDING BY NOT LIMITED TO ANY ASSESSMENTS, AND OR LIENS, NOTICE OF WHICH IS PROVIDED BY THE MEMORANDUM RECORDED JULY 8, 2019 AS DOCUMENT NO. 2019E0021682. (AFFECTS SUBJECT TRACT, BLANKET IN NATURE, NOT PLOTTED)
24. AN EASEMENT GRANTED TO THE CITY OF LEE'S SUMMIT, MISSOURI DESCRIBED BY INSTRUMENT RECORDED SEPTEMBER 29, 2021 AS DOCUMENT NO. 2021E0082040; SUBJECT TO ORDINANCE NO. 9787 OF PARTIAL VACATION, RECORDED NOVEMBER 20, 2023 AS DOCUMENT NO. 2023E0091723. (AFFECTS SUBJECT TRACT SHOWN HEREON, VACATED PORTION LIES SOUTH OF LOT 10A)
25. AN EASEMENT GRANTED TO THE CITY OF LEE'S SUMMIT, MISSOURI DESCRIBED BY INSTRUMENT RECORDED SEPTEMBER 29, 2021 AS DOCUMENT NO. 2021E0107450. (AFFECTS SUBJECT TRACT, SHOWN HEREON, THIS EASEMENT IS NOT VACATED BY PARTIAL VACATION ORDINANCE NO. 9798, DOC NO. 2023E0091723 AS MENTIONED IN EXCEPTION 18 AND 24)
26. BUILDING LINES, RESTRICTIONS, UTILITY, DRAINAGE, STORM SEWER, SANITARY SEWER, AND WATERLINE EASEMENTS SHOWN ON THE PLAT RECORDED JANUARY 10, 2023 AS DOCUMENT NO. 2023E0001734 IN BOOK 208 AT PAGE 26; SUBJECT TO ORDINANCE NO. 9847, PROVIDING A NEW PERMANENT EASEMENT; AND PROVIDING NOTICE OF ELECTRIC EASEMENT GRANTED TO MISSOURI PUBLIC SERVICE COMPANY, AND GAS EASEMENT GRANTED TO THE GAS SERVICE COMPANY, AND FURTHER VACATING WATER SYSTEM EASEMENT RECORDED IN BOOK I-1154 AT PAGE 1961, SAID ORDINANCE RECORDED MARCH 11, 2024 AS DOCUMENT NO. 2024E0014842. (THE PLAT RECORDED IN BOOK 208, PAGE 26 CREATES LOT 10A, AFFECTS SUBJECT TRACT, SHOWN HEREON. THE VACATED EASEMENT DESCRIBED IN DOCUMENT NUMBER 2024E0014842 LIES SOUTH OF SUBJECT TRACT, NOT PLOTTED)
27. TERMS AND PROVISIONS OF THE SUMMIT ORCHARDS COMMUNITY IMPROVEMENT DISTRICT AND COOPERATIVE AGREEMENT, NOTICE OF WHICH IS GIVEN BY MEMORANDUM THEREOF RECORDED JULY 8, 2019 AS DOCUMENT NO. 2019E0051682. (AFFECTS SUBJECT TRACT, BLANKET IN NATURE, NOT PLOTTED)
28. AN EASEMENT GRANTED TO THE CITY OF LEE'S SUMMIT, MISSOURI, DESCRIBED BY INSTRUMENT RECORDED MAY 9, 2024 AS DOCUMENT NO. 2024E0028742. (AFFECTS SUBJECT TRACT, SHOWN HEREON)
29. NOT SURVEY RELATED.
30. NOT SURVEY RELATED.

TO:

TOWNSEND CAPITAL LLC, A MISSOURI LIMITED LIMITED LIABILITY COMPANY, CHICAGO TITLE INSURANCE COMPANY, THEIR SUCCESSORS AND ASSIGNS;

THAT I MADE AN ON THE GROUND SURVEY PER RECORD DESCRIPTION OF THE LAND SHOWN HEREON LOCATED IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY SECTION 36, TOWNSHIP 48 NORTH, RANGE 32 WEST ON THIS 14TH DAY OF JANUARY, LAND TITLE SURVEY, AS DEFINED IN THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS.

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS IN 2016, AND INCLUDES ITEMS 1, 2, 3, 4, 5, 6A, 6B, 8, 11A, 11B, 13, & 16 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON JANUARY 14, 2026.

ANTHONY DERBOVEN, P.L.S. 2016019005
DATE FEBRUARY 04, 2026

60 30 0 60
SCALE IN FEET

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The Rush Funplex
New Entertainment Center
Lot 10A - Summit Orchards West
Lee's Summit, MO

#	Revisions:

Project #: 251203-C

Preliminary Development Plan

13 March 2026

EXISTING CONDITIONS

C100

U:\2025\25-194\01-DWGs\C100 - EXISTING CONDITIONS.dwg Plotted: Apr 10, 2026 - 9:03am by chamman

LEGEND:

- NEW ASPHALT PAVEMENT (DRIVES) RE: --/C--
- NEW ASPHALT PAVEMENT (AISLES) RE: --/C--
- NEW PORTLAND CEMENT CONCRETE PAVEMENT RE: --/C--
- NEW TYPE CG-1 CURB & GUTTER RE: --/C--
- OPEN SPACE

LOT NOTES:

TOTAL LOT AREA = 438938 SF (10.08 AC)

LOT 1 AREA = 262105 SF (6.02 AC)
LOT 2 AREA = 89202 SF (2.05 AC)
LOT 3 AREA = 87625 SF (2.01 AC)
LOT 1 FLOOR AREA RATIO: = .29
LOT 2 FLOOR AREA RATIO: = .15
LOT 3 FLOOR AREA RATIO: = .13

THERE ARE NO ACTIVE, INACTIVE, OR CAPPED OIL NOR GAS WELLS LOCATED ON THE PROPERTY, PER MODNR GIS INFO.

ALL NEIGHBORING SITES WITHIN 185' ARE DESIGNATED PMIX ZONING AND ACTIVITY CENTER SUMMIT LAND USE PER LS GIS.

FDP WILL COMPLY WITH NOTE 14 OF CITY COMMENTS REGARDING SITE LIGHTING.

PARKING NOTES:

PARKING WILL BE DESIGNATED "SHARED" WITH CROSS USE EASEMENT(S)
REQUIRED STANDARD SPACES = 256
PROVIDED STANDARD SPACES = 306
REQUIRED ADA SPACES = 11
PROVIDED ADA SPACES = 12
TOTAL STALLS = 318

ALL PARKING STALL DIMENSIONS AND STRIPING TO BE COMPLIANT WITH LEE'S SUMMIT UDO STANDARDS.

OPEN SPACE:

TOTAL LOT AREA = 438,938 SF (10.08 AC)
REQUIRED OPEN SPACE = 438,938.26 x 5% = 21,950 SF
PROVIDED OPEN SPACE = 22,000 SF
IMPERVIOUS AREA = 133,800 SF

GENERAL NOTES:

1. SITE LIGHTING WILL CONFORM TO CITY STANDARDS.
2. LOTS 1 AND 2 WILL BE DEVELOPED AS PHASE 1 OF THE PROJECT. LOT 3 WILL BE DEVELOPED AS PHASE 2, OR WITH PHASE 1.
3. ALL PARKING WILL BE COVERED BY CROSS EASEMENTS TO ALLOW SHARED USE.
4. PARKING LOT CONSTRUCTION WILL COMPLY WITH THE CITY'S UDO SECTION 8.620.
5. FAA FORM 7460 WILL BE PROVIDED WITH THE FINAL DEVELOPMENT PLAN.

TUDOR & NW WARD ROAD IMPROVEMENTS RE: C600
NW WARD ROAD (120' R.O.W.)
4" MOUNTABLE CURB
NEW ENTRY DRIVE PER CITY STANDARDS
NEW RAMP
NEW MONUMENT SIGN RE: ARCH
NEW CROSSWALK
NEW STOP & DO NOT ENTER SIGN
NEW DO NOT ENTER SIGN
OPEN SPACE: REQUIRED: 21,946 SF PROVIDED: 21,961 SF
PROPERTY LINE, (TYP.)
PMIX ACTIVITY CENTER SUMMIT
NEW SIDEWALK
NEW DECEL 150' STORAGE DECEL LANE, NEW CURB & GUTTER, NEW 6' SIDEWALK (NW WARD RD IMPROVEMENTS)
PAINT NEW FIRE LANE CURB RED
DROP OFF LANE
THRU LANE
RUSH FUNPLEX (LOT 1)
77,225 SF
FFE = 985
LOT 1
AREA = 6.02 ACRES
PARKING = 146
LOT 3
AREA = 2.01 ACRES
PARKING = 63
FLEX OFFICE (LOT 3)
11,735 SF
FFE = 978.5
FLEX OFFICE (LOT 2)
13,700 SF
FFE = 982.0
LOT 2
AREA = 2.05 ACRES
PARKING = 109
ADA PARKING SIGN (TYP.)
TRASH ENCLOSURE
PROPERTY LINE DOWN CENTERLINE DRIVES (TYP.)
ADDITIONAL PARKING IN THIS AREA IF USE CHANGES / NEEDS
TRASH ENCLOSURES MAY BE SPLIT BASED ON FLEX OFFICE BUILDING SCHEDULE
OUTERVIEW ROAD
OUTERVIEW ROAD (PRIVATE DRIVE)
1040.11'

LOT 2 (OFFICE) - 9800 SF AT 5/1000 = 49
LOT 2 (RESTAURANT) 3900 SF AT 14/1000 = 55
NEED 104 STALLS
PROVIDED 109 STALLS

LOT 3 - 11,735 SF AT 5/1000 = 59
PROVIDED 63 STALLS

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13 March 2026

SITE LAYOUT PLAN

C200

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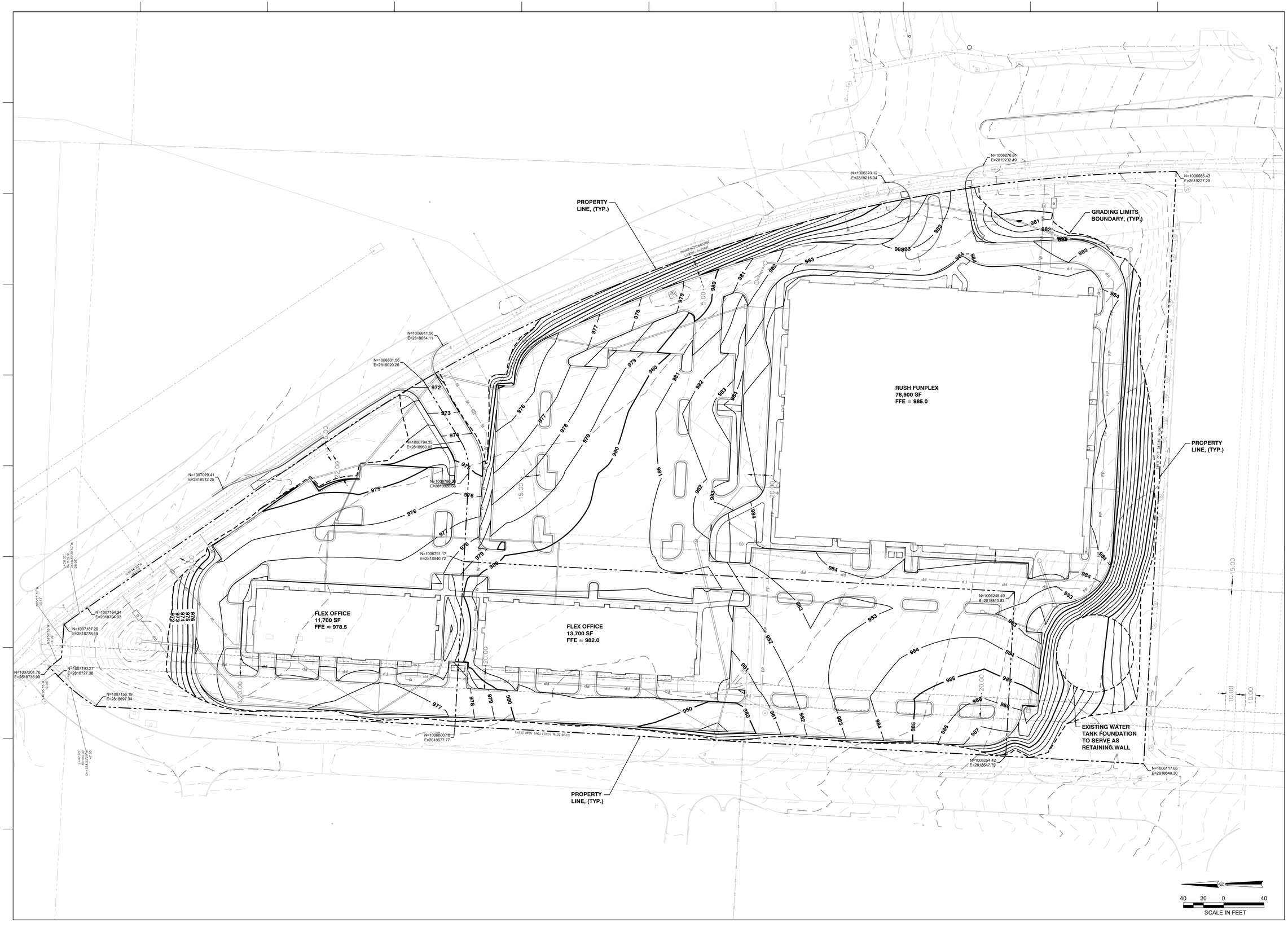

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SITE GRADING PLAN

C300

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LEGEND

- W — W — PROPOSED DOMESTIC WATER LINE
- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER
- FP — FP — PROPOSED FIRE PROTECTION LINE
- E — PROPOSED ELECTRICAL
- UD — UD — PROPOSED UNDERDRAIN

STANDARD ABBREVIATIONS:

JB	JUNCTION BOX
CI	CURB INLET
AI	AREA INLET
RD	ROOF DRAIN
EX	EXISTING STRUCTURE
MH	MANHOLE
CO	CLEANOUT
FH	FIRE HYDRANT
WM	WATER METER
BFP	BACKFLOW PREVENTER
FDC	FIRE DEPARTEMENT CONNECTION

PROPERTY LINE, (TYP.)

N=1006373.12
E=2819215.94

N=1006276.91
E=2819232.49

N=1006085.43
E=2819227.29

NW WARD ROAD (PUBLIC R.O.W.)

RUSH FUNPLEX
76,900 SF
FFE = 985.0

20.00' SAN EASEMENT UTIL ABANDONED

15.00' SAN EASEMENT

PROP SAN MAIN

SAN WYE CONNECTION

EX SAN MAIN

15.00' SAN EASEMENT

PROP FIRE PROTECTION LINE

20.00' SAN EASEMENT W/ PRIVATE LINE

20.00' EASEMENT UTILITY ABANDONED

FLEX OFFICE
11,700 SF
FFE ≈ 978.5

20.00' EASEMENT UTILITY ABANDONED

FLEX OFFICE
13,700 SF
FFE ≈ 982.0

20.00' EASEMENT UTILITY ABANDONED

VAR. ±13.82' STORM EASEMENT

PROPERTY LINE, (TYP.)

PROPERTY LINE, (TYP.)

OUTERVIEW ROAD (PRIVATE DRIVE)

N=1007029.41
E=2818912.25

N=1006794.33
E=2818560.00

N=1006786.35
E=2818928.66

N=1006791.17
E=2818840.72

N=1007164.24
E=2818794.93

N=1007187.29
E=2818778.48

N=1007193.27
E=2818727.38

N=1007201.76
E=2818735.99

N=1007156.19
E=2818697.34

N=1006800.10
E=2818677.77

N=1006811.56
E=2819054.11

N=1006831.56
E=2819020.26

N=1006245.49
E=2818810.83

N=1006254.42
E=2818647.79

N=1006117.65
E=2818640.30

SCALE IN FEET: 40 20 0 40

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SITE UTILITY PLAN

C400

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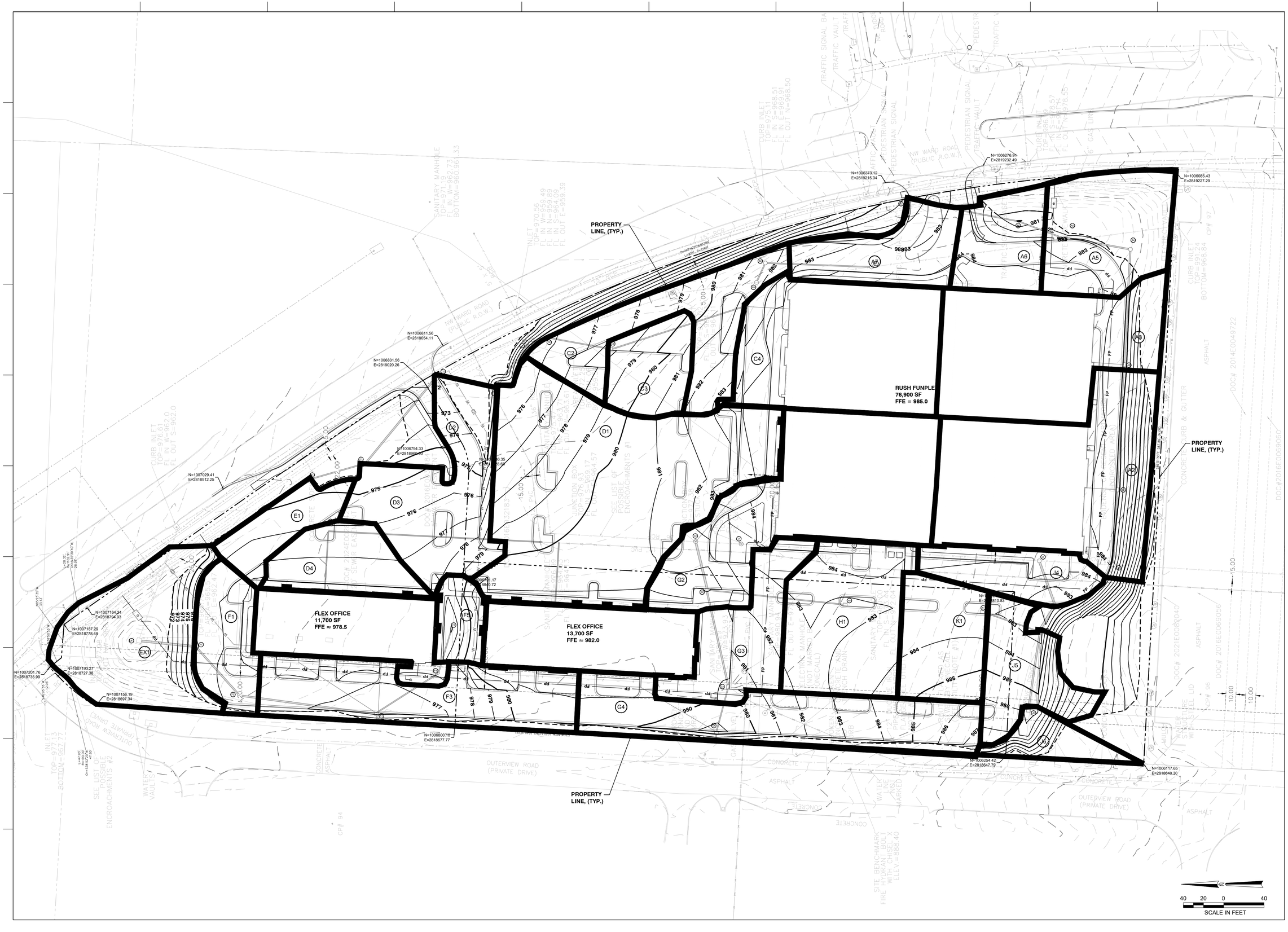

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The Rush Funplex
New Entertainment Center

Lot 10A - Summit Orchards West
Lee's Summit, MO

#	Revisions:

Project #: 251203-C

Preliminary Development Plan

13 March 2026

DRAINAGE AREA MAP

C500

U:\2025\25-194\01-DWGs\C500-DRAINAGE AREA MAP.dwg Plotted: Apr 10, 2026 - 9:04am by chamman

Sub Area	Total Sub Area (sf)	Total Sub Area (ac)
A7	9620.54	0.22
A6	8222.20	0.19
A5	14314.90	0.33
A3	25108.86	0.58
A2	31959.24	0.73
C4	25271.71	0.58
C3	7260.16	0.17
C2	14379.04	0.33
D4	8542.82	0.20
D3	12497.85	0.29
D2	5401.47	0.12
D1	46531.93	1.07
E1	5931.57	0.14
EX1	18289.11	0.42
F5	3855.33	0.09
F3	18416.62	0.42
F1	7943.32	0.18
G4	20497.95	0.47
G3	11522.62	0.26
G2	30379.50	0.70
H1	17374.76	0.40
J6	4170.60	0.10
J5	9399.39	0.22
J4	7605.44	0.17
K1	10049.32	0.23

Line	Cumulative Area (acres)	Time in Line	Length of Line	Cumulative C	Tc Cumulative (min)	I -10 (in/hr)	Q -10 (cfs)	Pipe Dia (inches)	Pipe n	Grade %	Capacity (cfs)
A7-A6	0.22	0.00	1.00	0.81	5.0	7.35	1.32	12	0.013	1.00	3.57
A6-A5	0.41	0.00	1.00	0.81	5.0	7.35	2.44	12	0.013	1.00	3.57
A5-A4	0.74	0.00	1.00	0.81	5.0	7.35	4.40	15	0.013	1.00	6.48
A4-A3	1.31	0.00	1.00	0.81	5.0	7.35	7.83	18	0.013	1.00	10.53
A3-A2	0.73	0.00	1.00	0.81	5.0	7.35	4.37	18	0.013	1.00	10.53
A2-A1	0.73	0.00	1.00	0.81	5.0	7.35	4.37	18	0.013	1.00	10.53
B3-B2	0.00	0.00	1.00	0.81	5.0	7.35	0.00	12	0.013	1.00	3.57
B2-B1	0.00	0.00	1.00	0.81	5.0	7.35	0.00	36	0.013	1.00	66.88
C4-C3	0.58	0.00	1.00	0.81	5.0	7.35	3.46	36	0.013	1.00	66.88
C3-C2	0.75	0.00	1.00	0.81	5.0	7.35	4.45	18	0.013	1.00	10.53
C2-C1	1.08	0.00	1.00	0.81	5.0	7.35	6.41	18	0.013	1.00	10.53
D4-D3	0.20	0.00	1.00	0.81	5.0	7.35	1.17	12	0.013	1.00	3.57
D3-D2	0.48	0.00	1.00	0.81	5.0	7.35	2.88	12	0.013	1.00	3.57
D2-D1	0.61	0.00	1.00	0.81	5.0	7.35	3.62	15	0.013	1.00	6.48
D1-C1	1.68	0.00	1.00	0.81	5.0	7.35	9.98	18	0.013	1.00	10.53
F5-F4	0.09	0.00	1.00	0.81	5.0	7.35	0.53	18	0.013	1.00	10.53
F4-F3	0.09	0.00	1.00	0.81	5.0	7.35	0.53	18	0.013	1.00	10.53
F3-F2	0.51	0.00	1.00	0.81	5.0	7.35	3.05	18	0.013	1.00	10.53
F2-F1	0.69	0.00	1.00	0.81	5.0	7.35	4.13	18	0.013	1.00	10.53
F1-EX1	1.11	0.00	1.00	0.81	5.0	7.35	6.63	18	0.013	1.00	10.53
G4-G3	0.47	0.00	1.00	0.81	5.0	7.35	2.80	12	0.013	1.00	3.57
G3-G2	0.74	0.00	1.00	0.81	5.0	7.35	4.38	15	0.013	1.00	6.48
G2-G1	1.43	0.00	1.00	0.81	5.0	7.35	8.53	18	0.013	1.00	10.53
J6-J5	0.10	0.00	1.00	0.81	5.0	7.35	0.57	12	0.013	1.00	3.57
K1-J5	0.23	0.00	1.00	0.81	5.0	7.35	1.37	12	0.013	1.00	3.57
J5-J4	0.54	0.00	1.00	0.81	5.0	7.35	3.23	12	0.013	1.00	3.57
J4-J3	0.72	0.00	1.00	0.81	5.0	7.35	4.27	15	0.013	1.00	6.48
A1-J3	0.73	0.00	1.00	0.81	5.0	7.35	4.37	15	0.013	1.00	6.48
J3-J2	0.73	0.00	1.00	0.81	5.0	7.35	4.37	15	0.013	1.00	6.48
J2-J1	0.73	0.00	1.00	0.81	5.0	7.35	4.37	15	0.013	1.00	6.48
J1-G1	0.73	0.00	1.00	0.81	5.0	7.35	4.37	15	0.013	1.59	8.17

SUB Area	Total Sub Area sf	Total Sub Area acres	Pervious Area sf	Impervious Area sf	Pervious Area acres	Impervious Area acres	Impervious %	Pervious %	Composite C	Composite CN
EXISTING	443271	10.18	443271	0	10.18	0.00	0.00	100.00	0.30	74.0
PROPOSED	443271	10.18	163399	279872	3.75	6.42	63.14	36.86	0.68	89.2

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DRAINAGE CALCULATIONS

C501

U:\2025\25-194\01-DWGs\C500-DRAINAGE AREA MAP.dwg Plotted: Apr 10, 2026 - 9:04am by chammon

LEGEND:

- NEW ASPHALT PAVEMENT (DRIVES) RE: --/C--
- NEW ASPHALT PAVEMENT (AISLES) RE: --/C--
- NEW PORTLAND CEMENT CONCRETE PAVEMENT RE: --/C--
- NEW TYPE CG-1 CURB & GUTTER RE: --/C--

GENERAL NOTES:

1. TRAFFIC SIGNAL DESIGN SHALL CONFORM TO THE CITY OF LEE'S SUMMIT STANDARDS.
2. SCOPE SHALL CONFORM TO THE APPROVED TRAFFIC IMPACT STUDY AND INCLUDES NEW SIGNAL POLE (SE CORNER), NEW SIGNAL HEAD (WESTBOUND TUDOR), REVISED STRIPING INCLUDING NEW CROSSWALK (WEST SIDE), AND PEDESTRIAN SIGNALS / CONTROLS FOR THE ADDED INTERSECTION LEG.

RELOCATE EXISTING STREET LIGHT TO CENTER OF REDUCED MEDIAN

TUDOR ROAD (110' R.O.W.)

250.00'

RELOCATE EXISTING STREET LIGHT TO CENTER OF REDUCED MEDIAN

PAVE REMAINING MEDIAN PER CITY STANDARDS

RELOCATE EXISTING STREET LIGHT TO CENTER OF REDUCED MEDIAN

CONSTRUCT TRAFFIC SIGNAL POLE FOR NEW EASTBOUND TRAFFIC MOVEMENT

PAINT EXISTING "U" PAVEMENT MARKINGS BLACK. PAINT NEW LEFT TURN ARROWS PER LS STANDARDS.

14.00'

INCREASE LANE STORAGE FROM 100' TO 200' WITH NEW TAPER

13.00'

NW WARD ROAD (120' R.O.W.)

ADJUST TRAFFIC SIGNAL HEADS AS NEEDED. ADD LEFT-TURN SIGNAL HEAD ON EXISTING MAST ARM. ADD PEDESTRIAN SIGNAL EQUIPMENT FOR NEW PEDESTRIAN CROSSING.

PROPERTY LINE, (TYP.)

NW WARD ROAD (120' R.O.W.)

30 15 0 30
SCALE IN FEET

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NW WARD & TUDOR PUBLIC IMPROVEMENTS

C600

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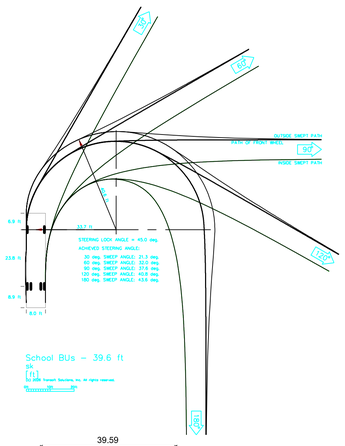

School BUs - 39.6 ft

	feet
Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 45.0

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BUS TURN STUDY

C700

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LEE'S SUMMIT LANDSCAPE REQUIREMENTS

STREET FRONTAGE LANDSCAPING

CODE REQUIREMENT	
	PER SEC. 8.790-A(1-3) 1 TREE SHALL BE PLANTED FOR EACH 30 FT OF STREET FRONTAGE, PUBLIC OR PRIVATE, WITHIN THE LANDSCAPED SETBACK ABUTTING SAID STREET FRONTAGE. 1 SHRUB SHALL BE PROVIDED FOR EACH 20 FEET OF STREET FRONTAGE, OR PORTION THEREOF, WITHIN THE LANDSCAPED SETBACK ABUTTING SUCH FRONTAGE. SUCH SHRUBS MAY BE CLUSTERED OR ARRANGED WITHIN THE SETBACK.

REQUIREMENT AREA	CALCULATION	PLANTING REQUIRED	PLANTING PROVIDED
1,100 LF OUTERVIEW RD FRONTAGE	1,100 / 30 = 37 1,100 / 20 = 55	37 TREES & 55 SHRUBS	37 TREES & 56 SHRUBS
1,213 LF NW WARD RD FRONTAGE	1,213 / 30 = 41 1,213 / 20 = 61	41 TREES & 61 SHRUBS	32 TREES & 113 SHRUBS (TREE PLACEMENT ALONG NW WARD RD LIMITED DUE TO PRESENSE OF UNDERGROUND UTILITIES & UTILITY EASEMENTS. ADDITIONAL TREES PROVIDED WITHIN OPEN YARD AREAS.

OPEN YARD AREAS

CODE REQUIREMENT	
	PER SEC. 8.790-B(1-3) PROVIDE TWO SHRUBS PER 5,000 SQUARE FEET OF TOTAL LOT AREA- EXCLUDING BUILDING FOOTPRINT AREA. ALL PORTIONS OF THE SITE NOT COVERED WITH PAVING OR BUILDINGS SHALL BE LANDSCAPED. OPEN AREAS NOT COVERED WITH OTHER MATERIALS SHALL BE COVERED WITH SOD. GROUND COVER SHALL BE UTILIZED ON ALL SLOPES IN EXCESS OF 3:1 SLOPE. IN ADDITION TO THE TREES REQUIRED BASED UPON STREET FRONTAGE, ADDITIONAL TREES SHALL BE REQUIRED AT A RATIO OF 1 TREE FOR EVERY 5,000 SF OF LOT AREA NOT COVERED BY BUILDINGS/STRUCTURES.

REQUIREMENT AREA	CALCULATION	PLANTING REQUIRED	PLANTING PROVIDED
333,612 SF TOTAL LOT AREA (NOT INCLUDING BUILDING)	333,612 / 5,000 = 67 67 x 2 = 134 SHRUBS	67 TREES + 134 SHRUBS	86 TREES + 423 SHRUBS

INTERIOR PARKING LOT LANDSCAPING

CODE REQUIREMENT	
	PER SEC. 8.810 (A-C) LANDSCAPE ISLANDS, STRIPS OR OTHER PLANTING AREAS SHALL BE LOCATED WITHIN THE PARKING LOT AND SHALL CONSTITUTE AT LEAST FIVE PERCENT OF THE ENTIRE AREA DEVOTED TO PARKING SPACES, AISLES AND DRIVEWAYS. EVERY FOUR ROWS OF PARKING SHALL INCLUDE A LANDSCAPE ISLAND OF AT LEAST TEN FEET IN WIDTH,THE ISLAND SHALL BE PLANTED IN TREES, SHRUBS, GRASS, OR GROUND COVER, EXCEPT FOR THOSE AREAS THAT ARE MULCHED.

REQUIREMENT AREA	CALCULATION	PLANTING REQUIRED	PLANTING PROVIDED
163,659 SF INTERIOR PARKING LOT AREA	163,659 X .05 = 8,183	163,659 X .05 = 8,183 SF PARKING LOT ISLANDS	12,268 SF PARKING LOT ISLANDS

PARKING LOT SCREENING

CODE REQUIREMENT	
	PER SEC. 8.820 (A-C) PROVIDE A HEDGE BETWEEN THE EDGE OF THE PARKING LOT PARALLEL TO A STREET CONSISTING OF AT LEAST 12 SHRUBS PER 40 LF THAT WILL SPREAD INTO A CONTINUOUS VISUAL SCREEN WITHIN 2 GROWING SEASONS. SHRUBS MUST BE AT LEAST 18" TALL AT THE TIME OF PLANTING AND BE OF A SPECIES THAT WILL NORMALLY GROW TO AT LEAST 2.5' IN HT AT MATURITY AND BE SUITABLE FOR THE PARKING LOT APPLICATION. THE STREET-SIDE SCREENING TREATMENT MAY BE LOCATED WITHIN THE LANDSCAPE STRIP REQUIRED UNDER THIS DIVISION ALONG THE FRONT YARD OF THE PROPERTY.

REQUIREMENT AREA	CALCULATION	PLANTING REQUIRED	PLANTING PROVIDED
867 LF NW WARD RD PARKING LOT FRONTAGE	867 / 40 = 21.67 21.67 x 12 = 260	260 PARKING LOT SCREENING SHRUBS REQUIRED ALONG NW WARD RD	260 PARKING LOT SCREENING SHRUBS REQUIRED ALONG NW WARD RD

LANDSCAPE BUFFERS

CODE REQUIREMENT	
	PER SEC. 8.870 PROVIDE A LANDSCAPE BUFFER ALONG THE SOUTH AND EAST PROPERTY LINES ABUTTING OR SEPARATED BY A RIGHT OF WAY FROM RESIDENTIAL DISTRICTS. LANDSCAPE BUFFER SHALL BE CONSISTENT WITH THE APPROVED PLAN.

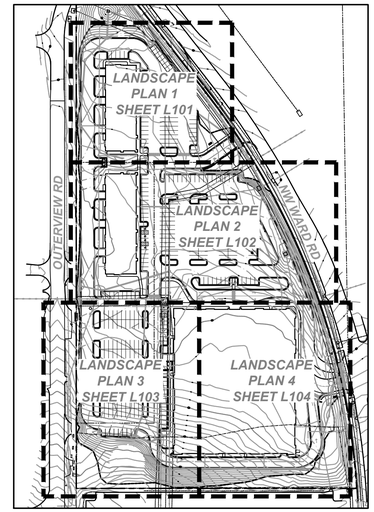
REQUIREMENT AREA	CALCULATION	PLANTING REQUIRED	PLANTING PROVIDED
PROVIDE LANDSCAPE BUFFER ALONG 588 LF SOUTH PROPERTY LINE AND SOUTHERN-MOST 216 LF OF EAST PROPERTY LINE.	N/A	LANDSCAPE BUFFER SHALL BE CONSISTENT WITH APPROVED SUMMIT ORCHARDS PLAN	20 SHADE TREES, 16 ORNAMENTAL TREES, 50 EVERGREEN TREES, 52 SHRUBS

PLANTING REQUIREMENTS

PLANT SIZE (PER LEE'S SUMMIT)	SIZE REQUIREMENT (AT TIME OF PLANTING)
TREES	
LARGE DECIDUOUS TREES	MINIMUM 2.5" CALIPER MEASURED AT 6" ABOVE THE GROUND OR TOP OF THE ROOT BALL
ORNAMENTAL TREES	MINIMUM 1.5" CALIPER MEASURED AT 6" ABOVE THE GROUND OR TOP OF THE ROOT BALL
EVERGREEN TREES	MINIMUM 8' HT.
SHRUBS	
MEDIUM SHRUBS	18- TO 24-INCH BALLED AND BURLAPPED OR TWO-GALLON CONTAINER
LARGE SHRUBS	24- TO 30-INCH BALLED AND BURLAPPED OR 5-GALLON CONTAINER
GROUNDCOVER	
GROUND COVER (ALL TYPES)	TWO AND ONE-HALF-INCH PEAT POT

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
EVERGREEN TREES					
	JC	Juniperus virginiana 'Canaerti'	Canaerti Juniper	8' Ht.	B&B
	JT	Juniperus virginiana 'Taylor'	Taylor Juniper	6'-8' ht.	B&B
	TA	Thuja occidentalis 'Wintergreen'	Wintergreen Arborvitae	6'-8' ht.	B&B
ORNAMENTAL TREES					
	CO	Cercis canadensis	Eastern Redbud	2" Cal.	B&B
	MS	Malus x 'Sutyzam'	Sugar Tyme® Crabapple	2" Cal.	B&B
SHADE TREES					
	AB	Acer saccharum 'Ballsta'	Fall Fiesta® Sugar Maple	2.5" Cal.	B&B
	PM	Platanus x acerifolia 'Morton Circle'	Exclamation!± London Plane Tree	2" Cal.	B&B
	QS	Quercus shumardii	Shumard Oak	2.5" Cal.	B&B
	QM	Quercus x 'Scarlet Letter'	Scarlet Letter Oak	2.5" Cal.	B&B
	TS	Tilia tomentosa 'Sterling'	Sterling Silver Linden	2.5" Cal.	B&B
	UC	Ulmus x 'Frontier'	Frontier Elm	2.5" Cal.	B&B
DECIDUOUS SHRUBS					
	DK	Diervilla x Kodiak Orange	Kodiak Orange Bush Honeysuckle	---	5 gal.
	FB	Fothergilla x intermedia 'Blue Shadow'	Blue Shadow Fothergilla	---	5 gal.
	HE	Hydrangea macrophylla 'Ballmer'	Endless Summer® The Original Hydrangea	---	5 gal.
	PL	Physocarpus opulifolius 'Little Devil'	Little Devil± Dwarf Ninebark	---	3 gal.
	PM2	Physocarpus opulifolius 'Mindia'	Coppertina® Ninebark	---	5 gal.
	RG	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	---	3 gal.
	RR	Rosa x 'Red Drift'	Red Drift Rose	---	3 gal.
	SM	Syringa meyeri 'Palibin'	Dwarf Korean Lilac	---	3 gal.
	VM	Viburnum dentatum 'Blue Muffin'	Blue Muffin Arrowwood Viburnum	---	3 gal.
	VD	Viburnum plicatum tomentosum 'Mariesii'	Marie Doubletile Viburnum	---	5 gal.
EVERGREEN SHRUBS					
	IS	Ilex glabra 'Shamrock'	Shamrock Inkberry Holly	---	5 gal.
	JF	Juniperus chinensis 'Sea Green'	Sea Green Juniper	---	5 gal.
	JG	Juniperus virginiana 'Grey Owl'	Grey Owl Juniper	---	5 gal.
	TH	Taxus x media 'Hicksii'	Hicks Yew	48" ht. min.	
ORNAMENTAL GRASSES					
	CK	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	---	1 gal.
	SS	Schizachyrium scoparium 'Standing Ovation'	Standing Ovation Little Bluestem	---	1 gal.
	ST	Sporobolus heterolepis 'Tara'	Tara Prairie Dropseed	---	1 gal.
PERENNIALS					
	LB	Liriope muscari 'Big Blue'	Big Blue Lilyturf	---	1 gal.
	NW	Nepeta x faassenii 'Walker's Low'	Walker's Low Catmint	---	2 gal.



KEY PLAN

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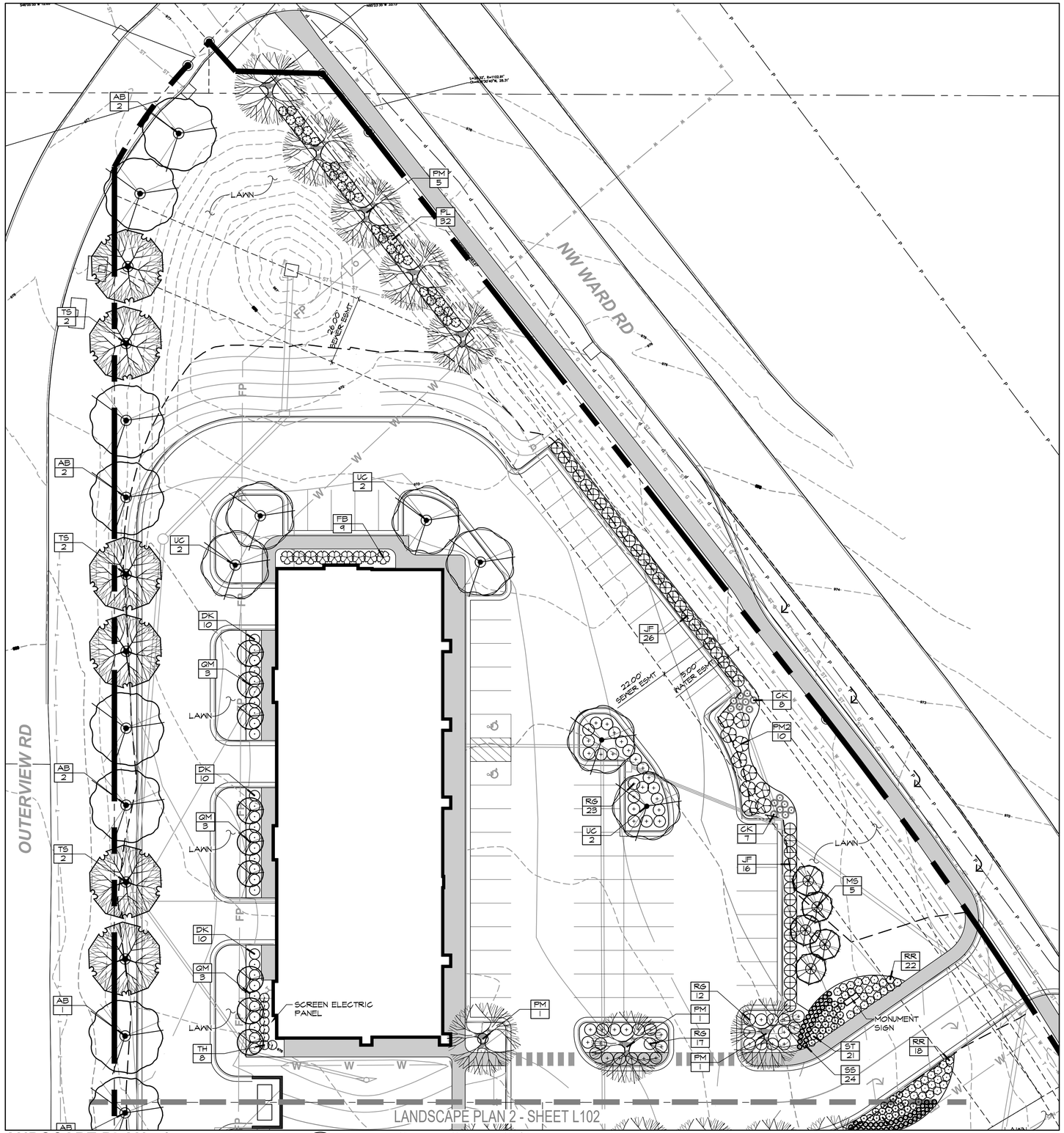
LANDSCAPE SCHEDULES

L-100



LANDSCAPE PLAN - 1

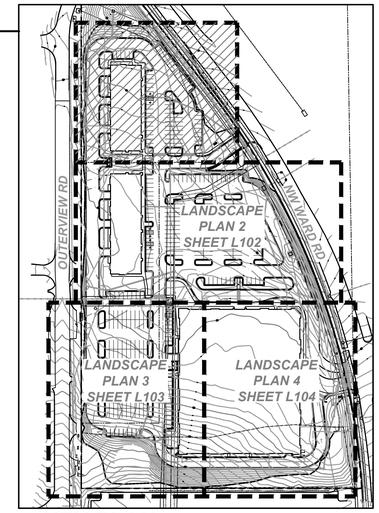
SCALE:1"=20'

0 20 20 60 feet

SCALE: 1" = 20'

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL / COMMON NAME
EVERGREEN TREES		
	JC	Juniperus virginiana 'Canaertii' Canaerti Juniper
	JT	Juniperus virginiana 'Taylor' Taylor Juniper
	TA	Thuja occidentalis 'Wintergreen' Wintergreen Arborvitae
ORNAMENTAL TREES		
	CO	Cercis canadensis Eastern Redbud
	MS	Malus x 'Sutyzam' Sugar Tyme® Crabapple
SHADE TREES		
	AB	Acer saccharum 'Ballsta' Fall Fiesta® Sugar Maple
	PM	Platanus x acerifolia 'Morton Circle' Exclamation!± London Plane Tree
	QS	Quercus shumardii Shumard Oak
	QM	Quercus x 'Scarlet Letter' Scarlet Letter Oak
	TS	Tilia tomentosa 'Sterling' Sterling Silver Linden
	UC	Ulmus x 'Frontier' Frontier Elm
DECIDUOUS SHRUBS		
	DK	Diervilla x Kodiak Orange Kodiak Orange Bush Honeysuckle
	FB	Fothergilla x intermedia 'Blue Shadow' Blue Shadow Fothergilla
	HE	Hydrangea macrophylla 'Ballmer' Endless Summer® The Original Hydrangea
	PL	Physocarpus opulifolius 'Little Devil' Little Devil± Dwarf Ninebark
	PM2	Physocarpus opulifolius 'Mindia' Coppertina® Ninebark
	RG	Rhus aromatica 'Gro-Low' Gro-Low Fragrant Sumac
	RR	Rosa x 'Red Drift' Red Drift Rose
	VM	Viburnum dentatum 'Blue Muffin' Blue Muffin Arrowwood Viburnum
	VD	Viburnum plicatum tomentosum 'Mariesii' Marie Doublefile Viburnum
EVERGREEN SHRUBS		
	IS	Ilex glabra 'Shamrock' Shamrock Inkberry Holly
	JF	Juniperus chinensis 'Sea Green' Sea Green Juniper
	JG	Juniperus virginiana 'Grey Owl' Grey Owl Juniper
	TH	Taxus x media 'Hicksii' Hicks Yew
ORNAMENTAL GRASSES		
	CK	Calamagrostis x acutiflora 'Karl Foerster' Karl Foerster Feather Reed Grass
	SS	Schizachyrium scoparium 'Standing Ovation' Standing Ovation Little Bluestem
	ST	Sporobolus heterolepis 'Tara' Tara Prairie Dropseed
PERENNIALS		
	LB	Liriope muscari 'Big Blue' Big Blue Lilyturf



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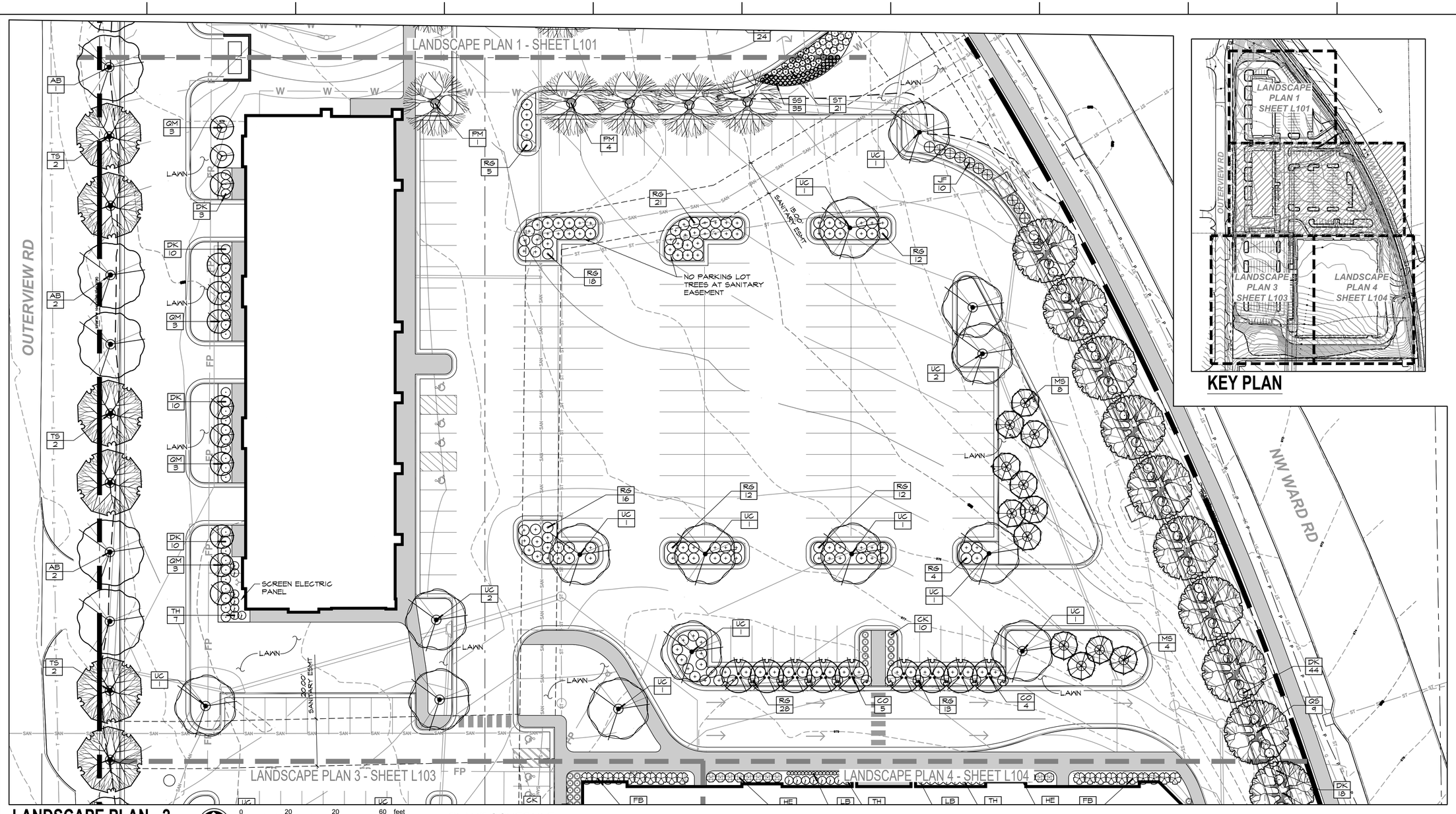
LANDSCAPE PLAN

L-101



KEY PLAN

LANDSCAPE PLAN - 2

SCALE: 1"=20'

0 20 20 60 feet

SCALE: 1" = 20'

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL / COMMON NAME
EVERGREEN TREES		
	JC	Juniperus virginiana 'Canaerti' Canaerti Juniper
	JT	Juniperus virginiana 'Taylor' Taylor Juniper
	TA	Thuja occidentalis 'Wintergreen' Wintergreen Arborvitae
ORNAMENTAL TREES		
	CO	Cercis canadensis Eastern Redbud
	MS	Malus x 'Sutyzam' Sugar Tyme® Crabapple
SHADE TREES		
	AB	Acer saccharum 'Ballsta' Fall Fiesta® Sugar Maple
	PM	Platanus x acerifolia 'Morton Circle' Exclamation!® London Plane Tree
	QS	Quercus shumardii Shumard Oak
	QM	Quercus x 'Scarlet Letter' Scarlet Letter Oak
	TS	Tilia tomentosa 'Sterling' Sterling Silver Linden
	UC	Ulmus x 'Frontier' Frontier Elm
DECIDUOUS SHRUBS		
	DK	Diervilla x Kodiak Orange Kodiak Orange Bush Honeysuckle
	FB	Fothergilla x intermedia 'Blue Shadow' Blue Shadow Fothergilla
	HE	Hydrangea macrophylla 'Ballmer' Endless Summer® The Original Hydrangea
	PL	Physocarpus opulifolius 'Little Devil' Little Devil® Dwarf Ninebark
	PM2	Physocarpus opulifolius 'Mindia' Coppertina® Ninebark
	RG	Rhus aromatica 'Gro-Low' Gro-Low Fragrant Sumac
	RR	Rosa x 'Red Drift' Red Drift Rose
	VM	Viburnum dentatum 'Blue Muffin' Blue Muffin Arrowwood Viburnum
	VD	Viburnum plicatum tomentosum 'Mariesii' Marie Doublefile Viburnum
EVERGREEN SHRUBS		
	IS	Ilex glabra 'Shamrock' Shamrock Inkberry Holly
	JF	Juniperus chinensis 'Sea Green' Sea Green Juniper
	JG	Juniperus virginiana 'Grey Owl' Grey Owl Juniper
	TH	Taxus x media 'Hicksii' Hicks Yew
ORNAMENTAL GRASSES		
	CK	Calamagrostis x acutiflora 'Karl Foerster' Karl Foerster Feather Reed Grass
	SS	Schizachyrium scoparium 'Standing Ovation' Standing Ovation Little Bluestem
	ST	Sporobolus heterolepis 'Tara' Tara Prairie Dropseed
PERENNIALS		
	LB	Liriope muscari 'Big Blue' Big Blue Lilyturf

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The Rush Funplex
New Entertainment Center

Lot 10A - Summit Orchards West
Lee's Summit, MO

#	Revisions:

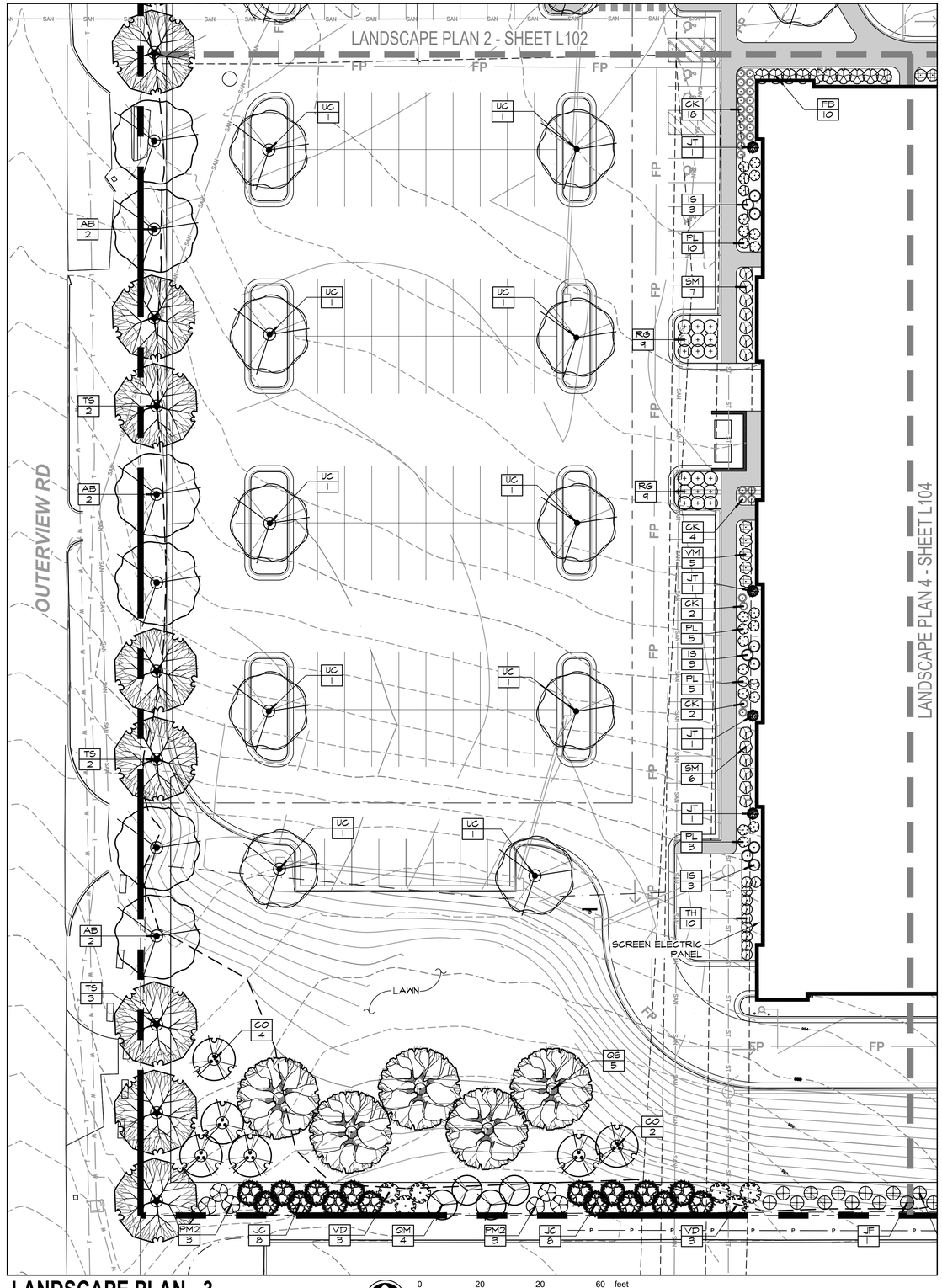
Project #: 251203-C

Preliminary Development Plan

14 April 2026

LANDSCAPE PLAN

L-102



LANDSCAPE PLAN - 3

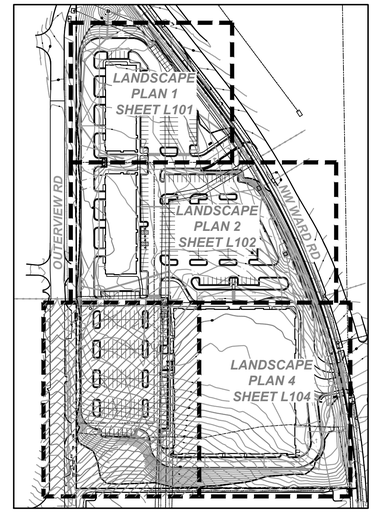
SCALE: 1"=20'

0 20 20 60 feet

SCALE: 1" = 20'

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL / COMMON NAME
EVERGREEN TREES		
	JC	Juniperus virginiana 'Canaertil' Canaerti Juniper
	JT	Juniperus virginiana 'Taylor' Taylor Juniper
	TA	Thuja occidentalis 'Wintergreen' Wintergreen Arborvitae
ORNAMENTAL TREES		
	CO	Cercis canadensis Eastern Redbud
	MS	Malus x 'Sutyzam' Sugar Tyme® Crabapple
SHADE TREES		
	AB	Acer saccharum 'Ballsta' Fall Fiesta® Sugar Maple
	PM	Platanus x acerifolia 'Morton Circle' Exclamation!‡ London Plane Tree
	QS	Quercus shumardii Shumard Oak
	QM	Quercus x 'Scarlet Letter' Scarlet Letter Oak
	TS	Tilia tomentosa 'Sterling' Sterling Silver Linden
	UC	Ulmus x 'Frontier' Frontier Elm
DECIDUOUS SHRUBS		
	DK	Diervilla x Kodiak Orange Kodiak Orange Bush Honeysuckle
	FB	Fothergilla x intermedia 'Blue Shadow' Blue Shadow Fothergilla
	HE	Hydrangea macrophylla 'Ballmer' Endless Summer® The Original Hydrangea
	FL	Physocarpus opulifolius 'Little Devil' Little Devil‡ Dwarf Ninebark
	PM2	Physocarpus opulifolius 'Mindia' Coppertina® Ninebark
	RG	Rhus aromatica 'Gro-Low' Gro-Low Fragrant Sumac
	RR	Rosa x 'Red Drift' Red Drift Rose
	VM	Viburnum dentatum 'Blue Muffin' Blue Muffin Arrowwood Viburnum
	VD	Viburnum plicatum tomentosum 'Mariesii' Mariesii Doubletile Viburnum
EVERGREEN SHRUBS		
	IS	Ilex glabra 'Shamrock' Shamrock Inkberry Holly
	JF	Juniperus chinensis 'Sea Green' Sea Green Juniper
	JG	Juniperus virginiana 'Grey Owl' Grey Owl Juniper
	TH	Taxus x media 'Hicksii' Hicks Yew
ORNAMENTAL GRASSES		
	CK	Calamagrostis x acutiflora 'Karl Foerster' Karl Foerster Feather Reed Grass
	SS	Schizachyrium scoparium 'Standing Ovation' Standing Ovation Little Bluestem
	ST	Sporobolus heterolepis 'Tara' Tara Prairie Dropseed
PERENNIALS		
	LB	Liriope muscari 'Big Blue' Big Blue Lilyturf



KEY PLAN

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The Rush Funplex
New Entertainment Center

Lot 10A - Summit Orchards West
Lee's Summit, MO

#	Revisions:

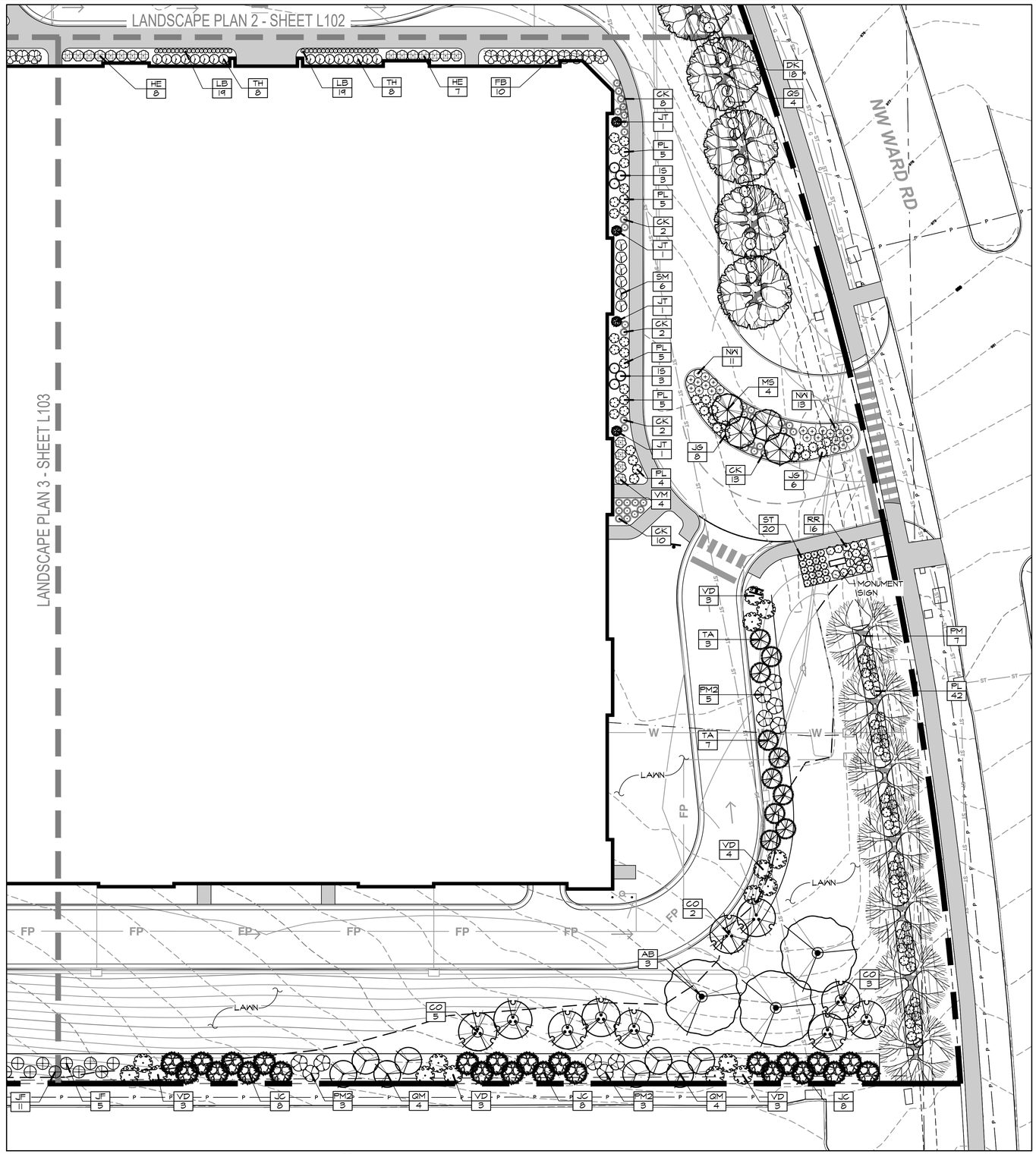
Project #: 251203-C

Preliminary Development Plan

14 April 2026

LANDSCAPE PLAN

L-103



LANDSCAPE PLAN - 4

SCALE:1"=20'

0 20 20 60 feet

SCALE: 1" = 20'

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL / COMMON NAME
EVERGREEN TREES		
	JC	Juniperus virginiana 'Canaerti' Canaerti Juniper
	JT	Juniperus virginiana 'Taylor' Taylor Juniper
	TA	Thuja occidentalis 'Wintergreen' Wintergreen Arborvitae
ORNAMENTAL TREES		
	CO	Cercis canadensis Eastern Redbud
	MS	Malus x 'Sutyzam' Sugar Tyme® Crabapple
SHADE TREES		
	AB	Acer saccharum 'Ballsta' Fall Fiesta® Sugar Maple
	PM	Platanus x acerifolia 'Morton Circle' Exclamation!± London Plane Tree
	QS	Quercus shumardii Shumard Oak
	QM	Quercus x 'Scarlet Letter' Scarlet Letter Oak
	TS	Tilia tomentosa 'Sterling' Sterling Silver Linden
	UC	Ulmus x 'Frontier' Frontier Elm
DECIDUOUS SHRUBS		
	DK	Diervilla x Kodiak Orange Kodiak Orange Bush Honeysuckle
	FB	Fothergilla x intermedia 'Blue Shadow' Blue Shadow Fothergilla
	HE	Hydrangea macrophylla 'Ballmer' Endless Summer® The Original Hydrangea
	PL	Physocarpus opulifolius 'Little Devil' Little Devil± Dwarf Ninebark
	PM2	Physocarpus opulifolius 'Mindia' Coppertina® Ninebark
	RG	Rhus aromatica 'Gro-Low' Gro-Low Fragrant Sumac
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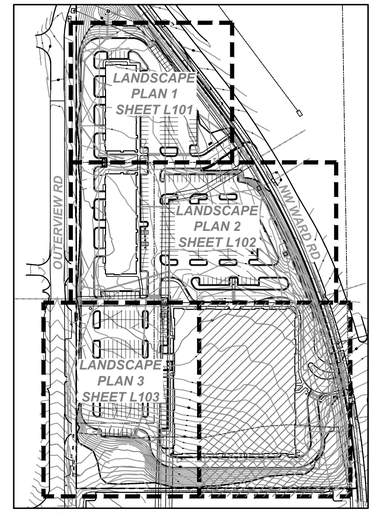
	VM	Viburnum dentatum 'Blue Muffin' Blue Muffin Arrowwood Viburnum
	VD	Viburnum plicatum tomentosum 'Mariesii' Marie Doublefile Viburnum
EVERGREEN SHRUBS		
	IS	Ilex glabra 'Shamrock' Shamrock Inkberry Holly
	JF	Juniperus chinensis 'Sea Green' Sea Green Juniper
	JG	Juniperus virginiana 'Grey Owl' Grey Owl Juniper
	TH	Taxus x media 'Hicksii' Hicks Yew
ORNAMENTAL GRASSES		
	CK	Calamagrostis x acutiflora 'Karl Foerster' Karl Foerster Feather Reed Grass
	SS	Schizachyrium scoparium 'Standing Ovation' Standing Ovation Little Bluestem
	ST	Sporobolus heterolepis 'Tara' Tara Prairie Dropseed
PERENNIALS		
	LB	Liriope muscari 'Big Blue' Big Blue Lilyturf



KEY PLAN

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The Rush Funplex
New Entertainment Center

Lot 10A - Summit Orchards West
Lee's Summit, MO

#	Revisions:

Project #: 251203-C

Preliminary Development Plan

14 April 2026

LANDSCAPE PLAN

L-104

April 14 2026

To: City of Lee's Summit

From: Dan Milich – VP of Development for Rush Funplex

Subject: Lee's Summit MO - Letter of Support / Project Narrative, for the Rush Funplex and in-line flex commercial building development

Location: 900 NW Ward Road, Lees's Summit MO; Lot 10 A of Summit Orchards West (10.08 acres)

The intent of this application is to gain entitlement approvals for: a new Rush Funplex building to house an indoor, family entertainment and recreational use (Lot 1); and 2 in-line flex-commercial buildings (Lots 2 and 3).

The approximately 10.08-acre development site is located immediately west of the NE Tudor and NW Ward Road intersection. NW Ward Road provides the eastern boundary of the subject site.

Upon obtaining required entitlement approvals, our goal is to immediately file for land development permits and building permits to allow the development of the subject site with a new Rush Funplex building on Lot 1, and the in-line flex commercial building on Lot 2. Rush Funplex is a Family Entertainment and Recreational use. The timing of the Lot 3 building development will be market driven.

All entertainment and recreational uses as a part of the Rush Funplex are conducted 100% indoors, and therefore available for year-round use.

The City's Unified Development Ordinance defines the Rush Funplex use as an Indoor Commercial Recreation Facility (Section 6.430). This use is consistent with and permitted within the PMIX zoning designation of this site. This use is also consistent with the "Activity Center" designation of the site.

To develop this site as proposed, we respectfully request approval of our Commercial Preliminary Development Plan.

We appreciate your support of this request.

Rush Funplex and Commercial Development – Lee's Summit MO

Description and Justification Introduction:

The Rush Funplex is a proposed Family Entertainment Center to be located in a new building of approximately 77,225 square feet constructed on a new parcel located within the 6.02-acre Lot 1 of the Development site. Lot 2 of the development site is proposed as a 2.05-acre parcel for the development of a +/- 13,700 SF flex commercial building, and Lot 3 is proposed at 2.01 acres for the development of a +/- 11,735 SF flex commercial building.

This overall development site is intended to provide shared parking throughout. Required cross access and maintenance agreement documents, and shared parking agreements, will be provided as needed.

The Rush Funplex building is proposed as a single level structure, with a total gross building square footage of approximately 77,225 square feet. The building is proposed of tilt-up concrete construction and will be articulated in a manner to meet city development standards and requirements. Exterior materials include concrete walls with Formliner end caps with decorative cornice features at each corner, aluminum storefront entry on the north elevation and additional storefront features along this primary building entry, and metal wall cap. Building colors are all earth tones, including grays and charcoal.

The inline flex commercial buildings are proposed as single level structures, with respective total square footages of: Lot 2 building = 13,700 SF; and Lot 3 building = 11,735 SF. These buildings are proposed in a similar material and color palette to compliment the Rush Funplex development.

Rush Funplex: Proposed use; operating characteristics; number of employees; hours of operation, etc.

Rush Funplex is a family entertainment use, conducted 100% indoors.

Proposed activities within the building include: bowling; billiards; go-carts; arcades; bumper cars; climbing walls; foam pit and other similar indoor recreational uses; as well as party rooms, restaurant / food service areas, and building support service areas.

Proposed Hours of Operation are: 10am 8pm Sunday through Thursday; and 10am 11pm Friday and Saturday. This business will employee approximately 35 full and part-time employees.

Site Development: The development proposed includes significant landscaped setback areas and extensive landscaping along the NW Ward Avenue site frontage as well as on the north end of the site at the intersection of NW Ward Road and Outerview Road.

NW WARD Road provides the access to the development site, at two points. The most northern entry is a right in / right out access to the property that enters nearest the two side by side in-line flex retail commercial buildings. The primary, signalized project entry is

located farther south on NW Ward Road. This access location provides one entry lane into the site and two exit lanes from the site at this signalized intersection.

Per Article 2 of the UDO, listed below are the findings for the approval of a Commercial Preliminary Development Plan:

1. Development is designed, located and proposed to be operated so that the public health, safety and welfare will be protected.

This application proposes a Rush Funplex and in-line flex commercial building uses as part of a coordinated site development plan. This use of this property is defined as a commercial use per the City and will be proposed in a manner that is compatible with and designed to meet or exceed all applicable provisions of city codes, ordinances and development requirements, including all city design and operational requirements, so that this development is built and operated in a manner that protects the public health, safety and general welfare to the greatest extent possible.

2. Development will not impede the normal and orderly development and improvement of the surrounding property.

This parcel is somewhat unique in that is surrounded on 3 sides by existing public right of way or improved access ways. The southern property line adjoins land that can be developed in the future with no issue from this subject development site. This subject site could not be found to impede the normal and orderly development of surrounding property in any way.

3. Development incorporates adequate ingress and egress and an internal street network that minimizes traffic congestion.

This development site provides adequate ingress and egress and adequate internal circulation patterns for the operational efficiency of traffic into and out of this subject property. There is a signalized full access intersection that provides the primary ingress and egress to the site at the NW Ward Road and NE Tudor Road intersection. The secondary site access is farther north off of NW Ward Road that provides right in and right-out ingress and egress to the subject site.

We believe the proposed use of the site as a Rush Funplex and in-line flex-commercial development will be a compatible use to those existing in proximity to the site currently, and to those proposed potential uses on the surrounding commercially zoned properties.

This use is a commercial use that is permitted in the PMIX zone with the review and approval of a commercial preliminary development plan. We believe all applicable provisions of the development requirements and criteria are met by this proposed development.

We believe there is a lack of family-type entertainment facilities within this part of the city. As such, this use will fulfill an unmet or underserved need.

We believe the proposed use of this site will be compatible with adjacent uses in terms of scale, site design, operating characteristics, hours of operation, traffic generation, lighting, noise, odor, dust, and other external impacts.

This new development will create local jobs and strengthen the tax base of the city. Parking, pedestrian access, and environmentally sensitive site design characters will be implemented as required and consistent with city standards and policies. This will be completed to derive a safe, efficient and harmonious development that is compatible with the location and surroundings, as well as the existing and planned development pattern in and around this development site. This development is proposed in a manner that adheres to or complies with all development and use related criteria of the city. The Rush Funplex portion of this development site will provide a family entertainment facility, all 100% indoors for the year-round enjoyment of residents and visitors alike.

This development is consistent with the city development standards and requirements. Landscaping will be provided as required by the city standards and requirements, and in a manner that enhances the building's character and features.

Conclusion:
As evidenced by the information provided herein, the Rush Funplex building and use, and the in-line flex commercial buildings are proposed in a manner that is compliant with applicable codes, development standards and requirements of the City of Lee's Summit.

We respectfully request your approval of the Commercial Preliminary Development Plan.

Thank you.

Dan Milich
VP of Development
Rush Funplex

Rush Funplex – Lee's Summit MO

Date: April 24, 2026

Application Number: PL2026070

Type of Application: Commercial Preliminary Development Plan

Applicant Name: The Rush Funplex – Summit Orchards West

Property Owner: Townsend Summit LLC

Location: 900 NW Ward Road, Lees Summit MO 64086

Zoning: PMIX

Response to Site Parking Related Agency Comments:

City Comment:

PARKING. A parking statement addressing and justifying the adequacy of a shared parking model to serve the Rush Funplex and the two multi-tenant pad site was provided. However, the statement is a copy of one prepared for a project in Goodyear, AZ. All details, context of development, site plan, etc., is for Goodyear. The Statement needs to be updated to address the site-and community-specifics of Lee's Summit.

Response:

As owners and operators of 9 existing Rush Funplex development sites in MO (2), UT (6) and AZ (1), and 5 more Rush Funplex developments in the due diligence / feasibility or entitlement stage, we have a unique perspective and understanding when it comes to parking our facilities. We never want to be under parked and possibly turn away customers, but we also do not want to be overparked. A significant number of unneeded parking spaces does not serve the city, the public or the owner / operator well.

The majority of our customers are not of driving age, so they are dropped off or carpool to our facilities. While not stated specifically in the city code, it is written in a way that seems to assume everyone coming to an "amusement center" type use, is each driving their own vehicle. This is simply not the case with a Rush Funplex and significantly overstates the parking need for our use.

Many municipal codes to not have a parking generation use that fits the Rush Funplex building and use, that is not the case with Lee's Summit. Our use is identified as "amusement center", with a required parking ratio of 6 spaces per 1000 sf of GFA, requiring

462 parking spaces. Assuming 345 sf per parking space (includes drive aisles and landscaping per space) we'd need to provide 3.66 acres of 'parking' just to satisfy this standard. This represents an unnecessary expense and large asphalt areas that are better used for landscaping and site access (vehicular and pedestrian). As a comparison – our entire Goodyear AZ Rush Funplex development is on less than 3.6 acres.

This Lee's Summit development proposes 318 parking spaces for the total project; the Rush Funplex and the 2 flex office buildings. And a shared parking arrangement among all uses.

On average, our Rush Funplex developments are parked at 1/500 square feet of "usable building area". This usable building square foot number typically 'nets out': vertical circulation; custodial / janitor closets; equipment rooms; storage areas; back of house for the bowling alley; etc. These areas typically make up at least 5% of the gross floor area.

Assuming the Rush Funplex is parked at 1 space / 500 SF of gross building area (more than will be needed based on data provided with the application submittal, and per the note above), the Rush Funplex use requires 154 parking spaces. This leaves 164 spaces for the 2 flex office buildings.

The 2 flex office buildings total 25,435 gross square feet. The 164 parking spaces for these 2 buildings equate to 1 parking space per 155 sf of building area. The code requires 1 parking space for each 1000 sf of gross building area, or 101 parking spaces.

The "Additional Parking" area noted on the site plan in the SW corner of the development site could support an additional 20+ parking spaces should parking become an issue in the future.

To conclude, we've planned, developed and built numerous Rush Funplex sites, some standalone buildings, and some within existing or proposed commercial centers (such as Goodyear AZ). We have a keen understanding of our development requirements as they relate to operational efficiencies of our sites. This includes understanding the balance of providing adequate facilities, including parking, while not over providing and incurring additional costs in land purchase, development and long-term maintenance obligations and costs.

Along with this memo summary, the additional parking data and use information previously provided should allow you to have the confidence that parking is more than adequately provided for as shown on the current site development plan.

We appreciate your support of this information, and look forward to moving forward with our development.

PRELIMINARY
STORM DRAINAGE REPORT

for

The Rush Funplex
Lot 10A-Summit Orchards West
Lee's Summit, MO 64081

SK Project No. 25-194

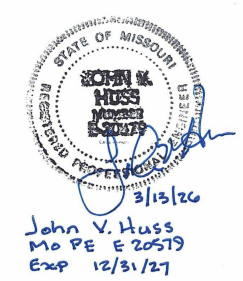
13 March 2026

Containing Pages:
See Table of Contents

Prepared for:

Slaggie Architects Inc.
4600 Madison Ave,
Kansas City, Missouri 64112

Prepared by:



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The Rush Funplex
Lot 10A- Summit Orchards West
Lee's Summit, MO 64081
Preliminary Storm Drainage Report
March 2026

Project Description

SK Design Group has been hired in conjunction with Slaggie Architects Inc. to provide civil-site design services for The Rush Funplex. The proposed project site is located in the Summit Orchards West development, north of the intersection of NW Chipman Road and NW Ward Road in Lee's Summit, Missouri (See Exhibits 1 &2) within Section 36, Township 32 North, Range 32 West. It is bound by NW Ward Road to the North and East, a large office building to the West, and varying commercially developed land to the South. This project consists of a new, freestanding indoor entertainment center, and flex office buildings with associated parking and sidewalks (See Exhibit 6). The site area is approximately 10.2 acres. The proposed development will disturb the entire site. The impervious area will increase by 279,872 square feet.

Methodology

The Rational method was used to determine the effects of the project. A CN value of 74 (C = 0.30) was used for grassed areas, and a CN value of 98 (C = 0.90) was used for all impervious surfaces.

Federal Emergency Management Agency

From the Federal Emergency Management Agency (FEMA) Flood Insurance Study (FIS) information, no part of the project property is within the FEMA 100-year flood plain (See Exhibit 3).

Soils

From information obtained from the NRCS Soil Survey of Jackson County, Missouri, the site soils consist of Udarents-Urban land-Sampsel complex, Arisburg-Urban land Complex, Snead-Rock outcrop complex, and Urban land upland. (See Exhibit 4 & Appendix A) Soils are in the Hydrological Soils Group "C/D", which generally have a slow infiltration rate and are moderately well drained to well drained soils. These soils have moderately coarse texture and a moderate rate of water transmission.

Existing Conditions

The existing site generally drains north toward an existing area inlet on site. This inlet then carries the flow further north towards an existing detention basin.

The overall existing site was a grassy area located in the center of a previously developed commercial area. The existing site to be disturbed in this project contains 10.2 acres. The existing site has a “C” value of 0.30, a CN of 74.0, and is 0.0% impervious (see Exhibit 5 and Table 1). The existing site generally drains north toward an existing storm sewer system where it is distributed further north to an existing basin The proposed site is in the Little Blue River Watershed.

Proposed Conditions

The proposed site includes the construction of a new free-standing indoor entertainment center and two office buildings with associated parking areas and sidewalks. New turning lanes will be constructed as a part of this project. The project will increase the impervious area by 279,872 square feet. With the proposed improvement, the site will have an overall “C” value of 0.68, CN value of 89.2, and will be 63.1% impervious (See Exhibit 6).

The existing detention basin off site will be used to hold and treat stormwater runoff. Curbs and gutters will be used to carry water from proposed parking areas to existing storm sewers which will carry the flows to the detention basin off site. Drainage from the site will either sheet flow or be collected in an adequate enclosed storm sewer system, per current design standard, and connected to the adjacent storm drainage facilities. The drainage basin to the north of the proposed site was designed by others to be an adequate size to treat stormwater from the larger developed area and therefore is sufficient to detain peak flows from the 1%, 10%, and 100% design storms.

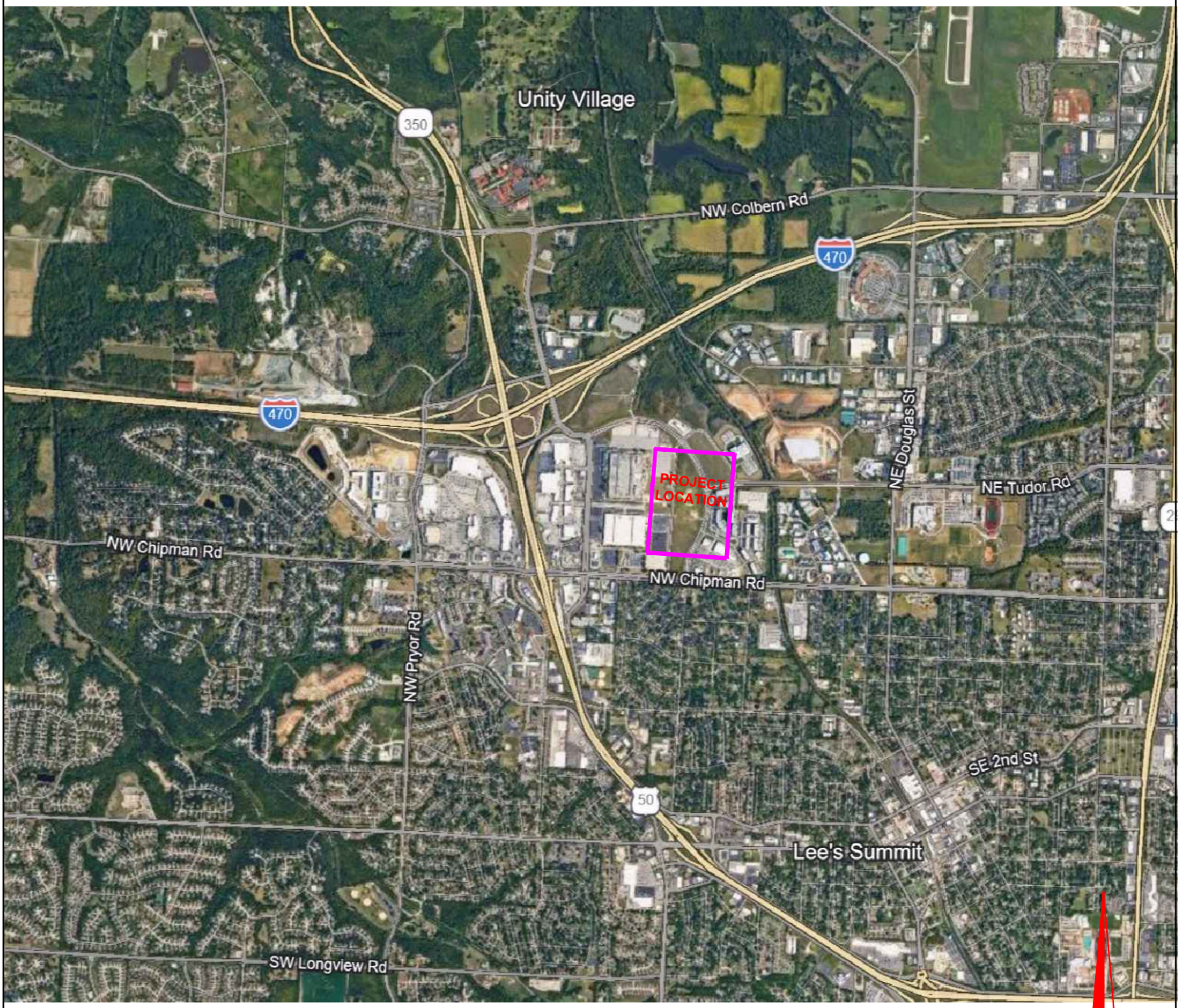
Summary

The proposed improvements consisting of a new indoor entertainment center, office buildings, associated sidewalks, and parking areas will increase the impervious area by 279,872 square feet. The existing detention basin constructed as a part of the surrounding developed area and has adequate storage to hold stormwater runoff from the proposed construction.

Conclusions and Recommendations

The proposed development will have no adverse impacts on the downstream system, the overall drainage characteristics and patterns of the site will not change. It is therefore recommended that the site be developed as proposed.

EXHIBITS



NTS

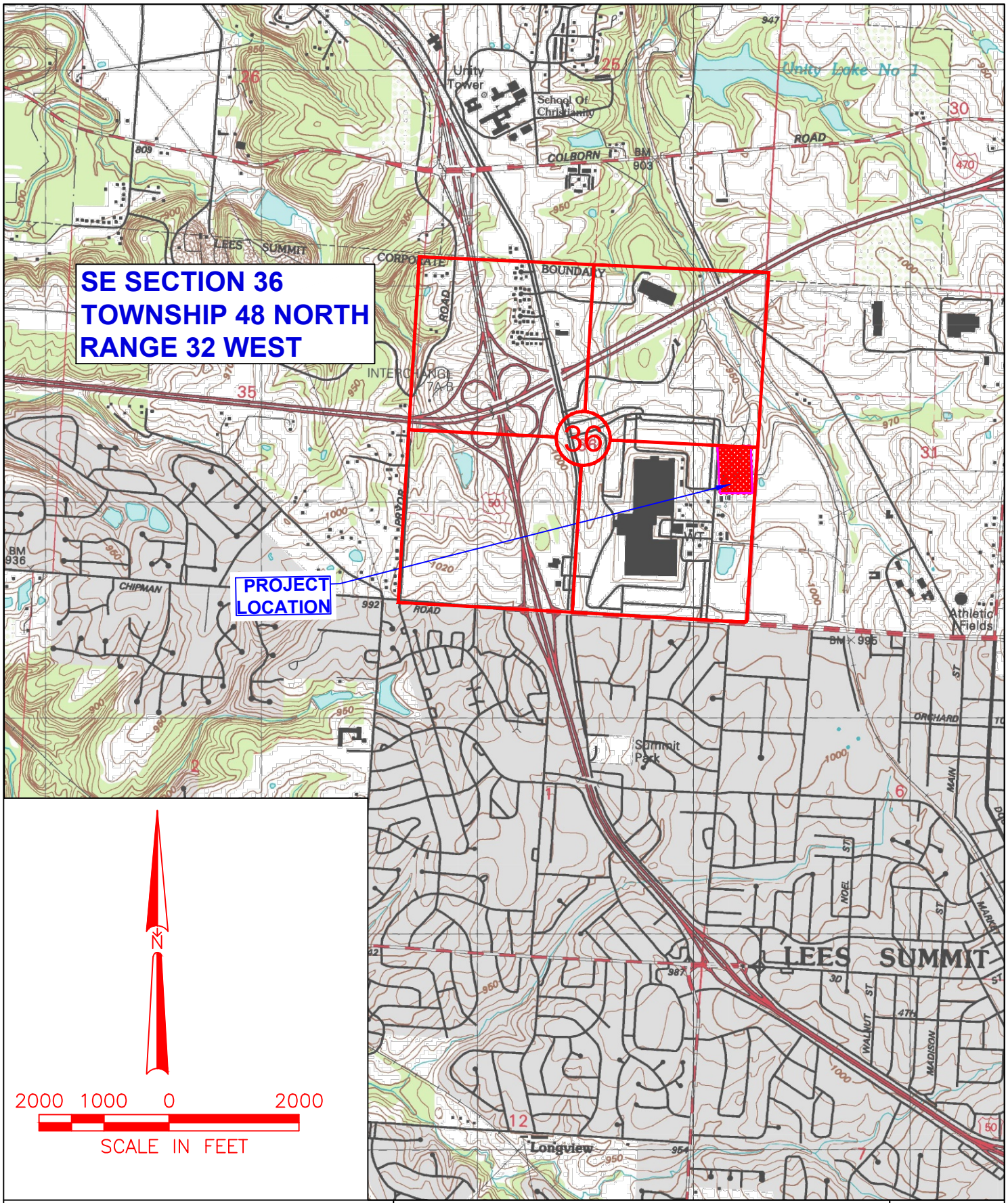
SK Design Group, Inc.
4600 College Blvd. Suite 100
Overland Park, KS. 66211
913-451-1818

GENERAL LOCATION

THE RUSH FUNPLEX

EXHIBIT 1

MAR 2026



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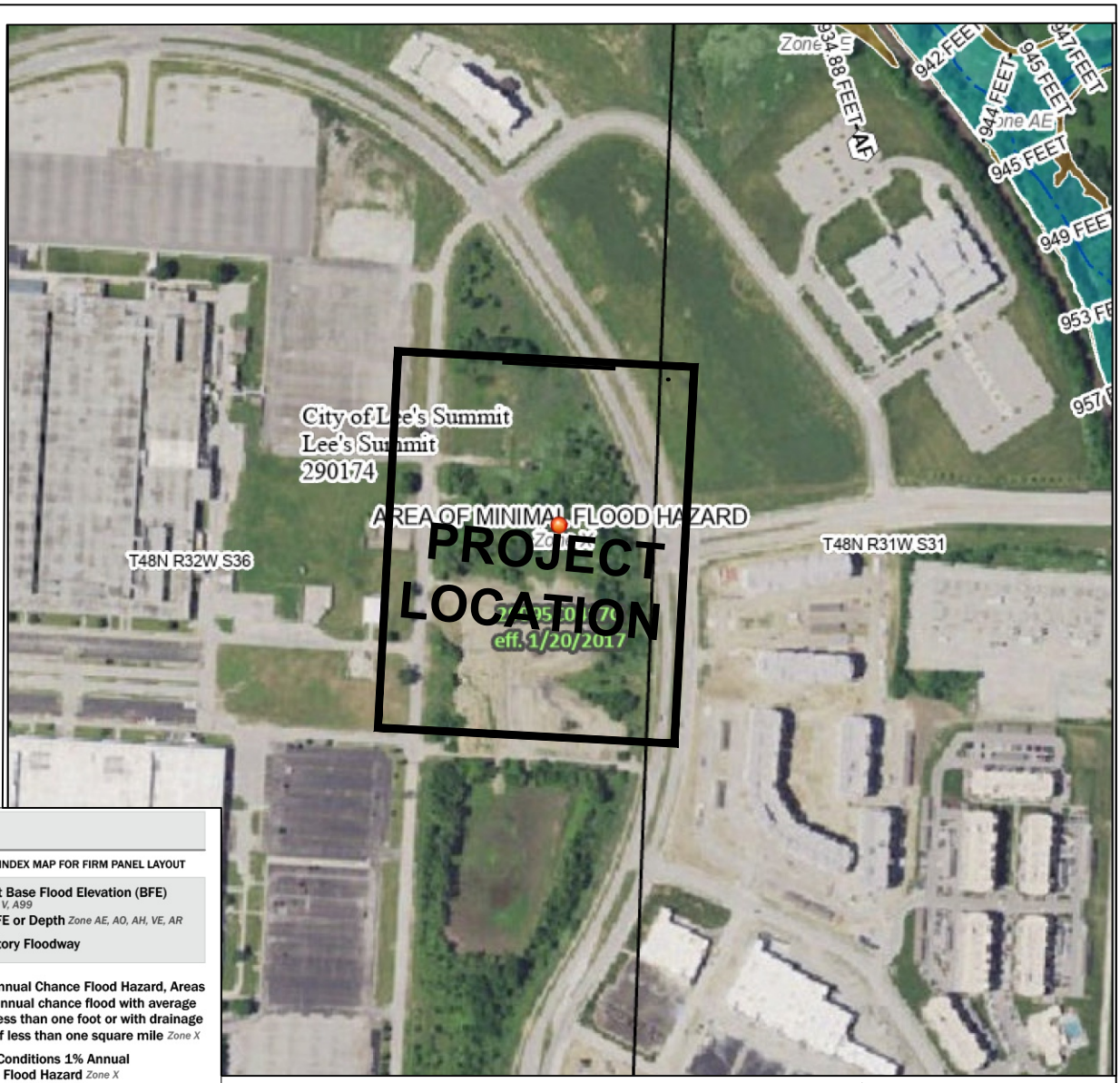
USGS MAP

THE RUSH FUNPLEX

EXHIBIT

2

MAR 2026



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

N

600 300 0 600

SCALE IN FEET

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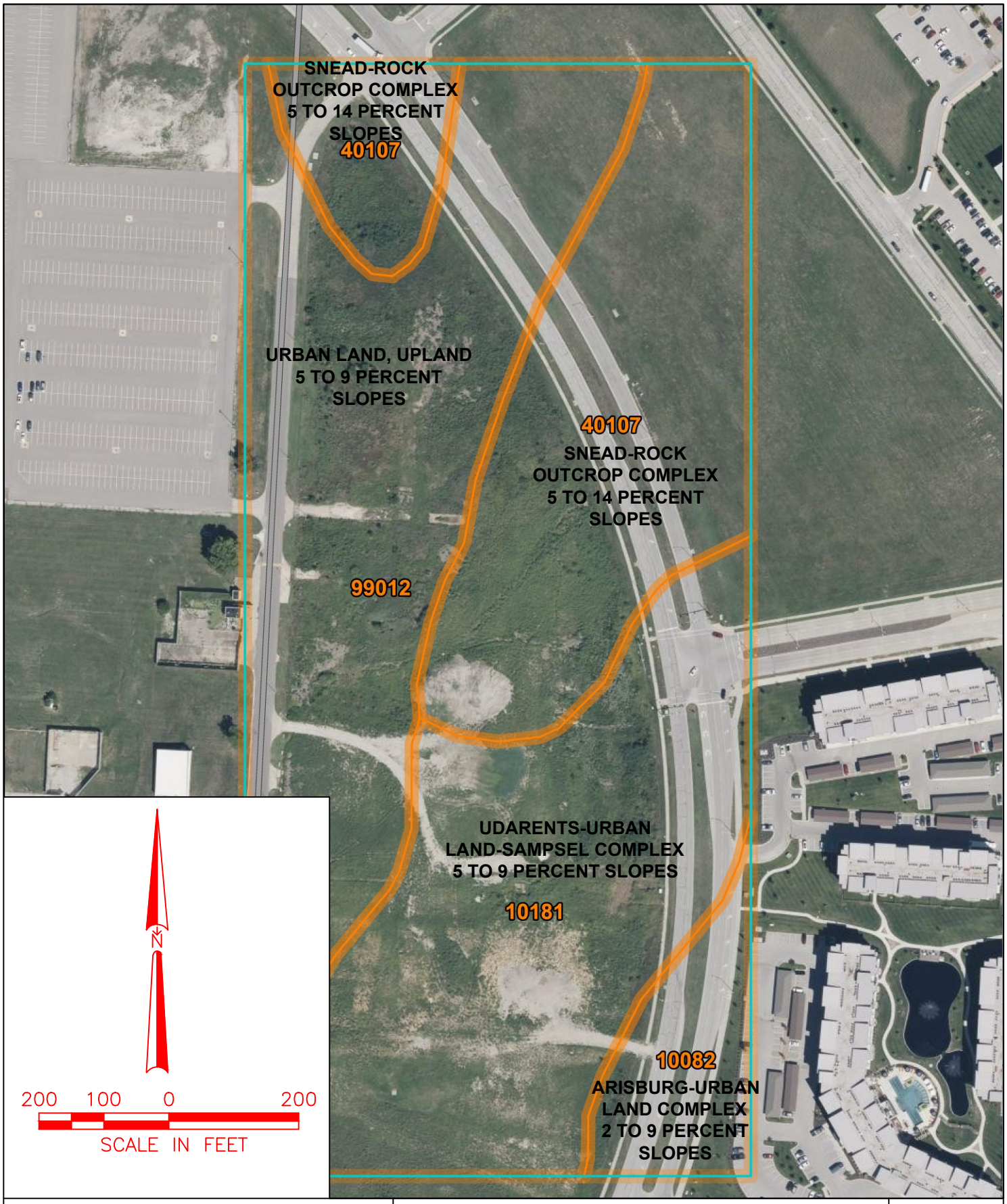
FEMA MAP

THE RUSH FUNPLEX

EXHIBIT 3

MAR 2026



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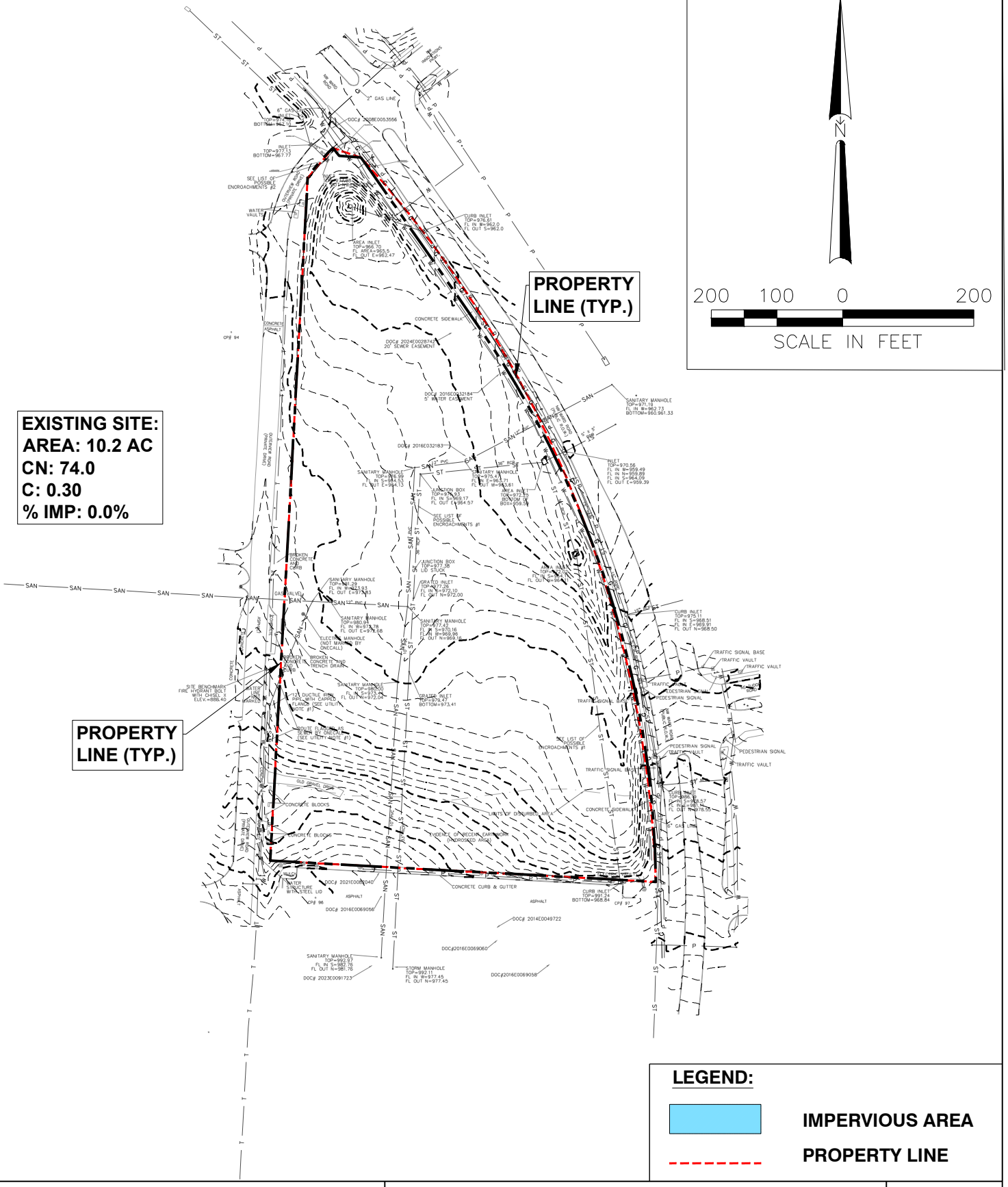
SOILS MAP

THE RUSH FUNPLEX

EXHIBIT
4

MAR 2026



SK Design Group, Inc.

4600 College Blvd. Suite 100
Overland Park, KS. 66211
913-451-1818

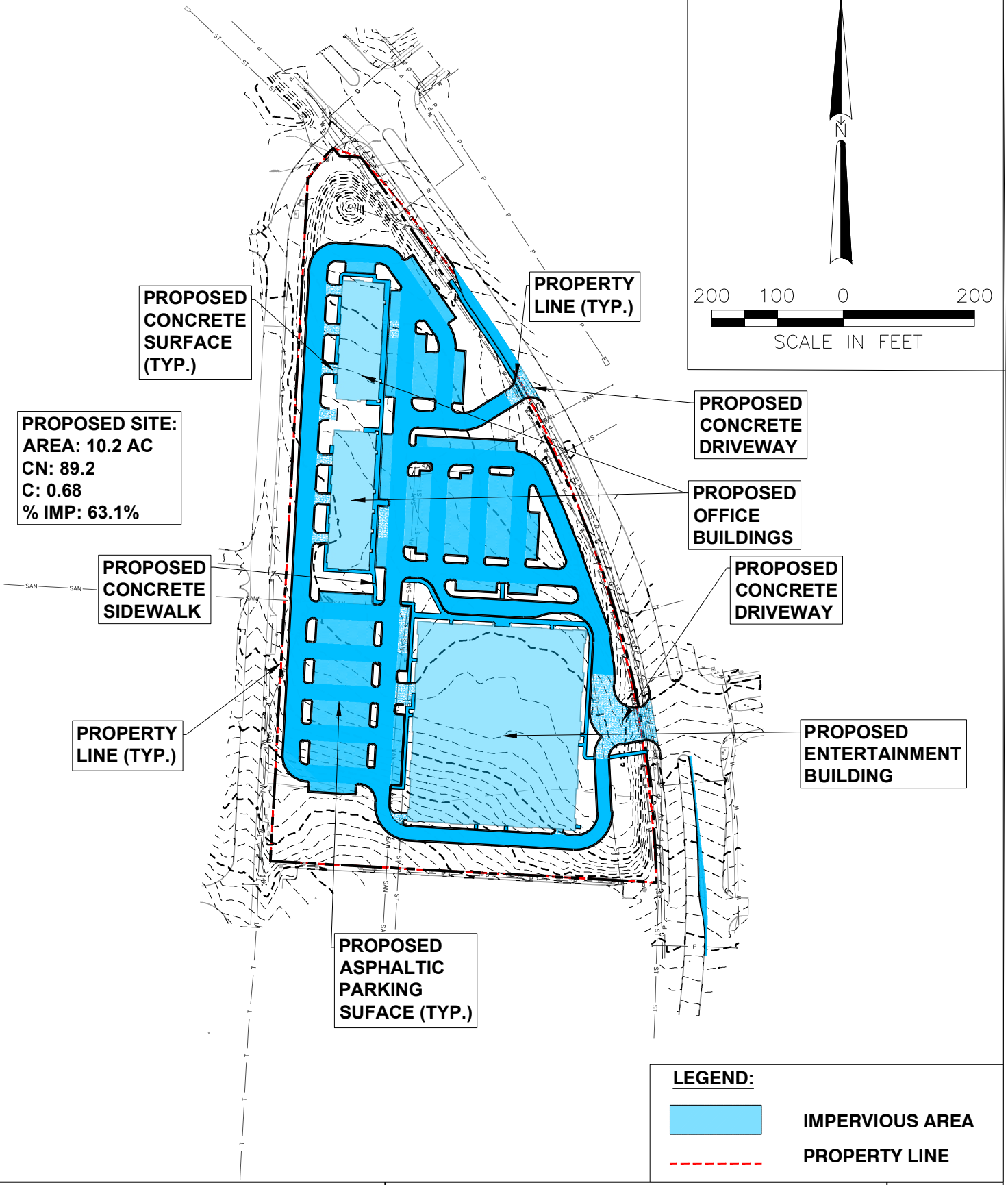
EXISTING CONDITIONS

THE RUSH FUNPLEX

EXHIBIT

5

MAR 2026



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PROPOSED CONDITIONS

THE RUSH FUNPLEX

EXHIBIT 6

MAR 2026

Tables and Exhibits

Table 1: Existing vs Proposed Conditions

SUB Area	Total Sub Area sf	Pervious Area sf	Impervious Area sf	Impervious %	Pervious %	Composite C	Impervious %
EXISTING	443271	443271	0	0.00	100.00	0.30	0.0
PROPOSED	443271	163399	279872	63.14	36.86	0.68	63.1

APPENDIX A

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Jackson County, Missouri



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

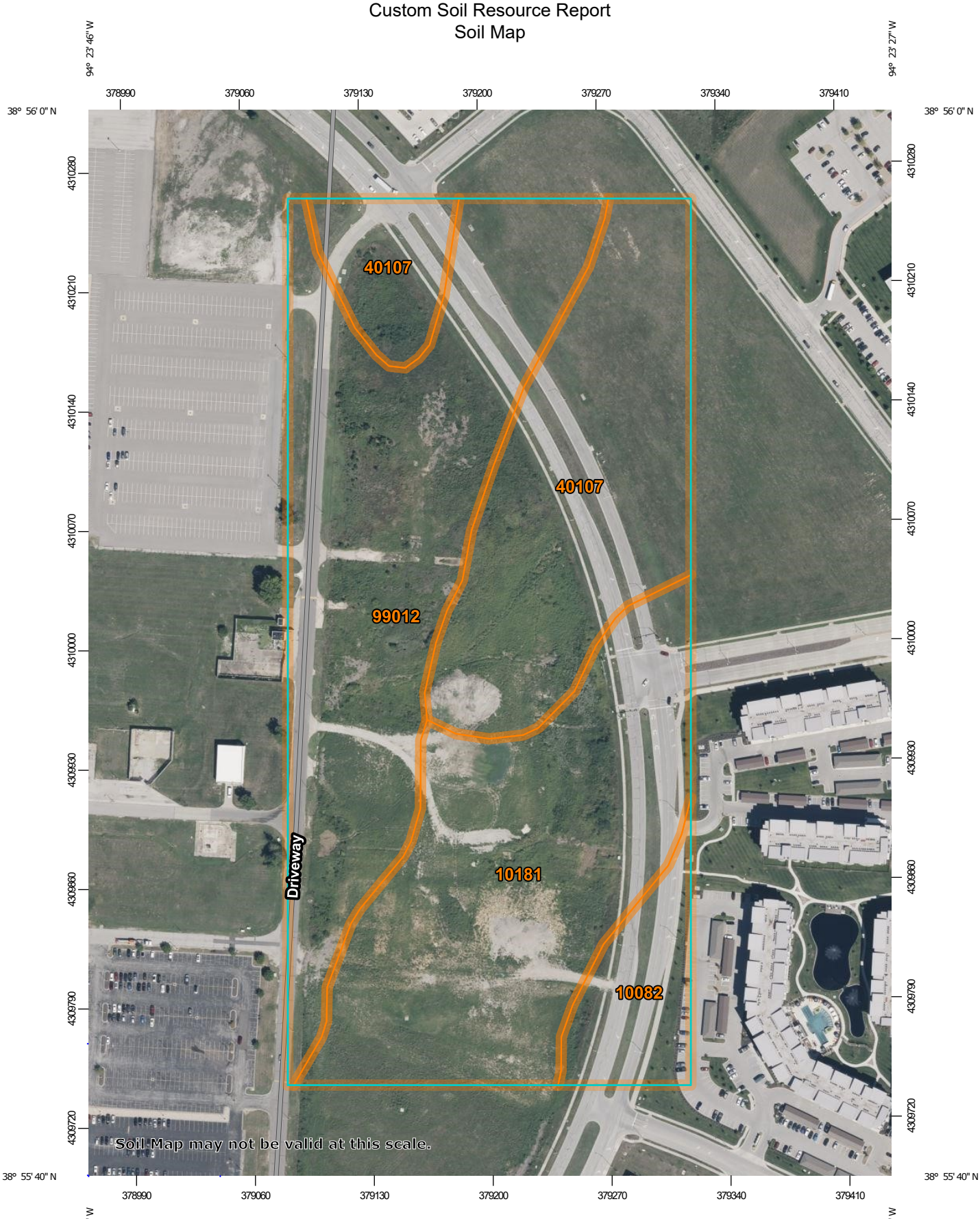
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



Map Scale: 1:3,050 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 45 90 180 270

Feet
0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jackson County, Missouri
Survey Area Data: Version 28, Sep 2, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 30, 2022—Sep 8, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
10082	Arisburg-Urban land complex, 1 to 5 percent slopes	1.8	6.0%
10181	Udarents-Urban land-Sampsel complex, 5 to 9 percent slopes	9.2	30.0%
40107	Snead-Rock outcrop complex, warm, 5 to 14 percent slopes	8.9	29.0%
99012	Urban land, upland, 5 to 9 percent slopes	10.7	35.1%
Totals for Area of Interest		**30.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Jackson County, Missouri

10082—Arisburg-Urban land complex, 1 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2w7ld
Landscape: Hills
Elevation: 750 to 1,130 feet
Mean annual precipitation: 39 to 45 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 177 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Arisburg and similar soils: 61 percent
Urban land: 30 percent
Minor components: 9 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arisburg

Setting

Landscape: Hills
Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loess

Typical profile

Ap - 0 to 6 inches: silt loam
A - 6 to 13 inches: silt loam
Bt - 13 to 19 inches: silty clay loam
Btg - 19 to 56 inches: silty clay loam
BCg - 56 to 79 inches: silty clay loam

Properties and qualities

Slope: 1 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: R107XB007MO - Loess Upland Prairie
Hydric soil rating: No

Description of Urban Land

Setting

Anthropogenic Feature: Urban land

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Minor Components

Sharpsburg

Percent of map unit: 3 percent
Landscape: Uplands
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R109XY002MO - Loess Upland Prairie
Hydric soil rating: No

Greenton

Percent of map unit: 3 percent
Landscape: Hills
Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R109XY002MO - Loess Upland Prairie
Hydric soil rating: No

Sampsel

Percent of map unit: 3 percent
Landscape: Uplands
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Concave
Ecological site: R109XY010MO - Interbedded Sedimentary Upland Savanna
Hydric soil rating: Yes

10181—Udarents-Urban land-Sampsel complex, 5 to 9 percent slopes

Map Unit Setting

National map unit symbol: 1n85g

Elevation: 600 to 900 feet
Mean annual precipitation: 33 to 43 inches
Mean annual air temperature: 50 to 57 degrees F
Frost-free period: 175 to 220 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Udarents and similar soils: 46 percent
Urban land: 39 percent
Sampsel and similar soils: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udarents

Setting

Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Anthropogenic Feature: Urban land
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Mine spoil or earthy fill

Typical profile

C1 - 0 to 5 inches: silt loam
C2 - 5 to 80 inches: silty clay loam

Properties and qualities

Slope: 5 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: R107XB002MO - Deep Loess Upland Prairie
Hydric soil rating: No

Description of Urban Land

Setting

Landscape: Hills
Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Across-slope shape: Convex

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8
Hydric soil rating: No

Description of Sampsel

Setting
Landscape: Hills
Landform: Hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Residuum weathered from shale

Typical profile
Ap - 0 to 13 inches: silty clay loam
Bt - 13 to 80 inches: silty clay

Properties and qualities
Slope: 5 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.6 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C/D
Ecological site: R109XY010MO - Interbedded Sedimentary Upland Savanna
Hydric soil rating: No

40107—Snead-Rock outcrop complex, warm, 5 to 14 percent slopes

Map Unit Setting
National map unit symbol: 2zccr
Landscape: Plains
Elevation: 660 to 1,130 feet
Mean annual precipitation: 39 to 43 inches
Mean annual air temperature: 54 to 57 degrees F
Frost-free period: 185 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Snead, warm, and similar soils: 70 percent
Rock outcrop: 20 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Snead, Warm

Setting

Landscape: Plains
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from limestone and shale

Typical profile

A - 0 to 10 inches: silty clay loam
Bw - 10 to 20 inches: silty clay
BC - 20 to 24 inches: silty clay
C - 24 to 35 inches: silty clay
Cr - 35 to 45 inches: bedrock

Properties and qualities

Slope: 5 to 14 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D
Ecological site: R109XY010MO - Interbedded Sedimentary Upland Savanna
Hydric soil rating: No

Description of Rock Outcrop

Typical profile

R - 0 to 79 inches: bedrock

Properties and qualities

Slope: 5 to 14 percent
Depth to restrictive feature: 0 inches to lithic bedrock
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8
Hydric soil rating: No

Minor Components

Oska
Percent of map unit: 4 percent
Landscape: Plains
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R106XY075NE - Loamy Upland
Hydric soil rating: No

Kennebec, occasionally flooded
Percent of map unit: 3 percent
Landscape: Plains
Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R109XY028MO - Loamy Upland Drainageway Savanna
Hydric soil rating: No

Sampsel
Percent of map unit: 3 percent
Landscape: Plains
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Concave
Ecological site: R109XY010MO - Interbedded Sedimentary Upland Savanna
Hydric soil rating: Yes

99012—Urban land, upland, 5 to 9 percent slopes

Map Unit Setting
National map unit symbol: 2q0qh
Mean annual precipitation: 36 to 43 inches
Frost-free period: 170 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition
Urban land: 90 percent
Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Anthropogenic Feature: Urban land

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: Unranked

Minor Components

Udorthents

Percent of map unit: 5 percent
Landform position (three-dimensional): Tread
Anthropogenic features: Spoil piles
Down-slope shape: Convex
Across-slope shape: Concave
Ecological site: R107XB002MO - Deep Loess Upland Prairie
Hydric soil rating: No

Harvester

Percent of map unit: 5 percent
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Anthropogenic features: Urban land
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F115XB061MO - Anthropic Deep Loess Upland
Hydric soil rating: No

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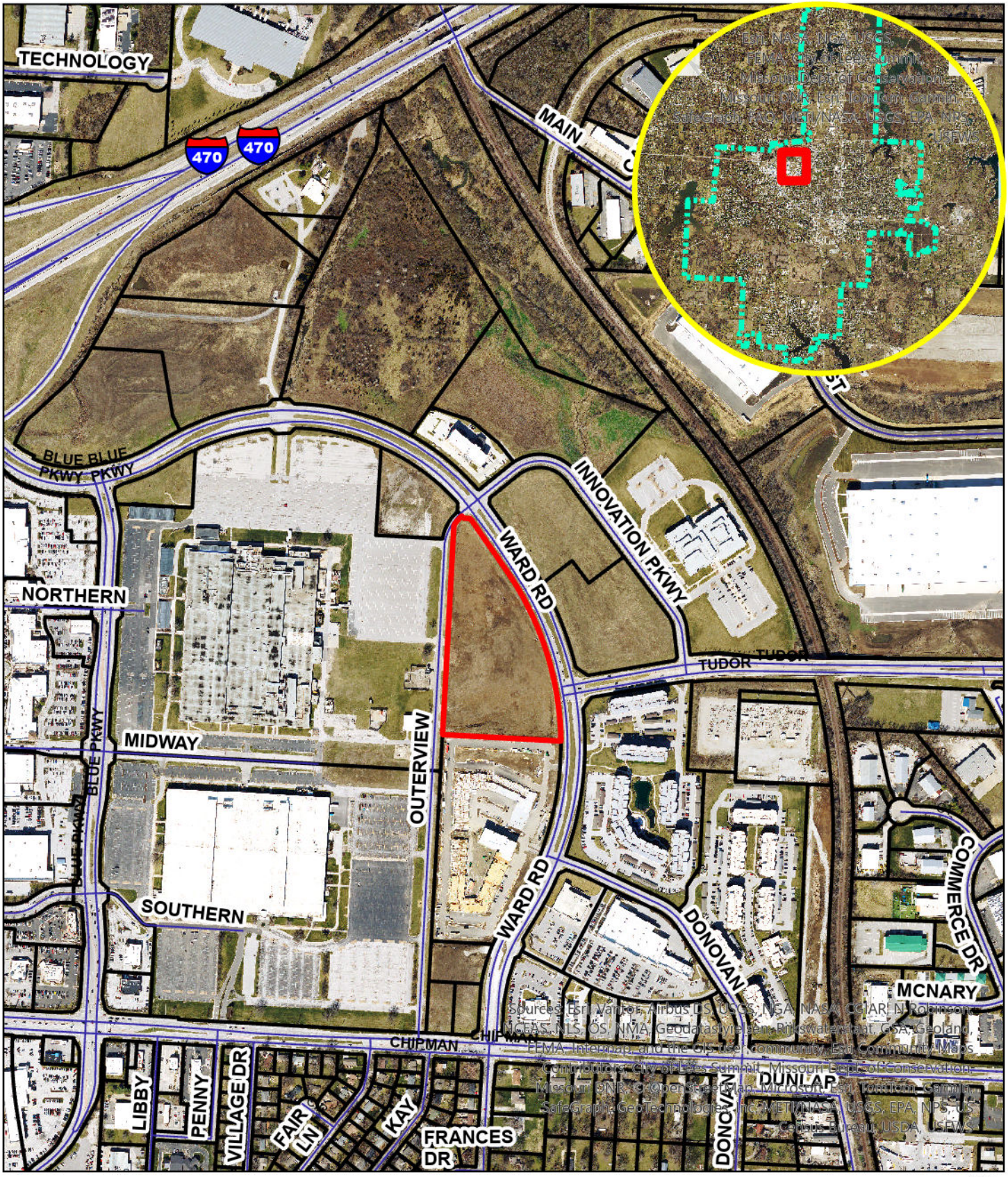
Appl. #PL2026-070 PRELIMINARY DEVELOPMENT PLAN
900 NW Ward Rd



N

0 0.13 0.25 0.5 Miles

Packet Information

File #: TMP-3688, **Version:** 1

An Ordinance approving a preliminary development plan for land located at 900 NW Ward Rd, all in accordance with the provisions of Chapter 33, the Unified Development Ordinance, of the Code of Ordinances for the City of Lee's Summit, Missouri.

Proposed City Council Motion:
An Ordinance approving a preliminary development plan for land located at 900 NW Ward Rd, all in accordance with the provisions of Chapter 33, the Unified Development Ordinance, of the Code of Ordinances for the City of Lee's Summit, Missouri.

Dan Milich, Applicant Representative
Hector Soto, Jr., AICP, Senior Planner

BILL NO.

AN ORDINANCE APPROVING A PRELIMINARY DEVELOPMENT PLAN FOR LAND LOCATED AT 900 NW WARD RD, ALL IN ACCORDANCE WITH THE PROVISIONS OF CHAPTER 33, THE UNIFIED DEVELOPMENT ORDINANCE, OF THE CODE OF ORDINANCES FOR THE CITY OF LEE'S SUMMIT, MISSOURI.

WHEREAS, Application #PL2026-070 submitted by Rush Funplex, requesting approval of a preliminary development plan in District PMIX on land located at 900 NW Ward Rd. was referred to the Planning Commission to hold a public hearing; and

WHEREAS, the Unified Development Ordinance provides for the approval of a preliminary development plan by the City following public hearings by the Planning Commission and City Council; and

WHEREAS, after due public notice in the manner prescribed by law, the Planning Commission held public hearings for the consideration of the preliminary development plan on May 14, 2026, and rendered a report to the City Council recommending that the preliminary development plan be approved; and

WHEREAS, after due public notice in the manner prescribed by law, the City Council held a public hearing on June 2, 2026, and rendered a decision to approve the preliminary development plan for said property.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF LEE'S SUMMIT, MISSOURI, as follows:

SECTION 1. That a preliminary development plan is hereby approved on the following described property:

LOT 10A, SUMMIT FAIR LOTS 10A-10C

SECTION 2. That the following conditions of approval apply:

1. A modification shall be granted to the minimum 50% clear glass fenestration requirement for the pedestrian view zone along the street-facing facade of a building, to allow 1.67% clear glass fenestration for the pedestrian view zone along the east building façade facing NW Ward Rd.
2. Development shall be in accordance with the preliminary development plan dated April 14, 2026, and building elevations contained therein.
3. Road improvements shall be constructed as recommended in the Transportation Impact Analysis conducted by staff dated April 27, 2026.

SECTION 3. Development shall be in accordance with the preliminary development plan revision dated April 14, 2026, including the building elevations contained therein, appended hereto as Attachment A; and the recommended road improvements in the Transportation Impact Analysis dated April 27, 2026, appended as Attachment B.

SECTION 4. Nonseverability. All provisions of this ordinance are so essentially and inseparably connected with, and so dependent upon, each other that no such provision would be enacted without all others. If a court of competent jurisdiction enters a final judgment on the merits that is not subject to appeal and that declares any provision or part of this ordinance void, unconstitutional, or unenforceable, then this ordinance, in its collective entirety, is invalid and shall have no legal effect as of the date of such judgment.

SECTION 5. That failure to comply with all of the provisions contained in this ordinance shall constitute violations of both this ordinance and Chapter 33, the City's Unified Development Ordinance, of the Code of Ordinances for the City of Lee's Summit.

SECTION 6. That this ordinance shall be in full force and effect from and after the date of its passage and adoption, and approval by the Mayor.

PASSED by the City Council of the City of Lee's Summit, Missouri, this _____day of , 2026.

_____
Mayor J. Beto Lopez

ATTEST:

_____
City Clerk *Trisha Fowler Arcuri*

APPROVED by the Mayor of said city this _____ day of _____, 2026.

_____
Mayor J. Beto Lopez

ATTEST:

_____
City Clerk *Trisha Fowler Arcuri*

APPROVED AS TO FORM:

City Attorney *Brian Head*

The Rush Funplex

Lot 10 A - Summit Orchards West
Lee's Summit, Jackson County, MO



New Entertainment Center and Flex/Commercial Space

Preliminary Development Plans

13 March 2026
REVISED 14 April 2026

DRAWING INDEX

COVER

CIVIL

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C200	SITE LAYOUT PLAN
C300	SITE GRADING PLAN
C400	SITE UTILITY PLAN
C500	DRAINAGE AREA MAP
C501	DRAINAGE CALCULATIONS
C600	NW WARD ROAD & TUDOR PUBLIC IMPROVEMENT
C700	BUS TURN STUDY

LANDSCAPE

L-100	LANDSCAPE SCHEDULES
L-101	LANDSCAPE PLAN
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ARCHITECTURAL

A-001	LOT 1 EXTERIOR RENDERINGS
A-002	LOTS 2 & 3 EXTERIOR RENDERINGS
A-101	LOT 1 FLOORPLAN
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A-103	TRASH ENCLOSURE AND MONUMENT SIGN
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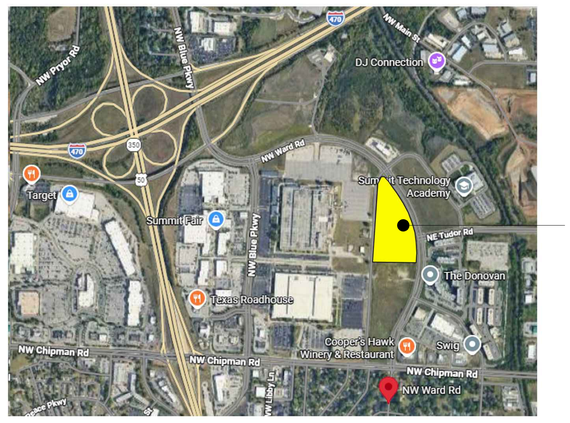
A-203	LOT 3 EXTERIOR ELEVATIONS
	PRELIMINARY EXTERIOR MATERIALS PALETTE
	PROPOSED EXTERIOR LIGHT FIXTURES



PROPOSED SITE

VICINITY MAP

GENERAL NOTES:

1. PROPOSED ZONING/BUILDING USES ARE AS FOLLOWS: ENTERTAINMENT, RETAIL, COMMERCIAL, OFFICE, FLEX-COMMERCIAL.
2. A COMMON PROPERTY MAINTENANCE AND CROSS EASEMENT PLAN TO BE INCLUDED IN FUTURE RESUBMITTAL. PLAN TO BE IN ACCORDANCE WITH ARTICLE 5 DIVISION V.

SLAGGIE ARCHITECTS, INC.

APPLICANT
RUSH FUNPLEX
2940 N. CHURCH STREET, SUITE 202
LAYTON, UT 84040
PHONE: (760) 644-5119

OWNER
TOWNSEND SUMMIT, LLC.
230 SHILLING CIRCLE, SUITE 120
HUNT VALLEY, MD 21031
PHONE: (303) 947-2044

ARCHITECT
SLAGGIE ARCHITECTS, INC.
4600 MADISON AVENUE, SUITE 350
KANSAS CITY, MO 64112
PHONE: (816) 756-1958

CIVIL ENGINEER
SK DESIGN GROUP, INC.
4600 COLLEGE BLVD., STE. 100
OVERLAND PARK, KS 66211
PHONE: (913) 451-1818

LANDSCAPE ARCHITECT
LORAX DESIGN GROUP
8021 SANTA FE DRIVE, SUITE 200
OVERLAND PARK, KS 66204
PHONE: (913) 972-7244



















NOTE: REFER TO LANDSCAPE PLAN FOR EXACT LANDSCAPE SPECIFICATIONS. LANDSCAPE SHOWN IN THESE RENDERINGS IS FOR ILLUSTRATION ONLY.

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The Rush Funplex
New Entertainment Center
Lot 10A - Summit Orchards West
Lee's Summit, MO

#	Revisions:
PDP - CITY REVIEW COMMENTS	04/14/2026

Project #: 251203-C

Preliminary Development Plan

13 March 2026

Lot 1
Exterior Renderings

A-001



















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New Entertainment Center
Lot 10A - Summit Orchards West
Lee's Summit, MO

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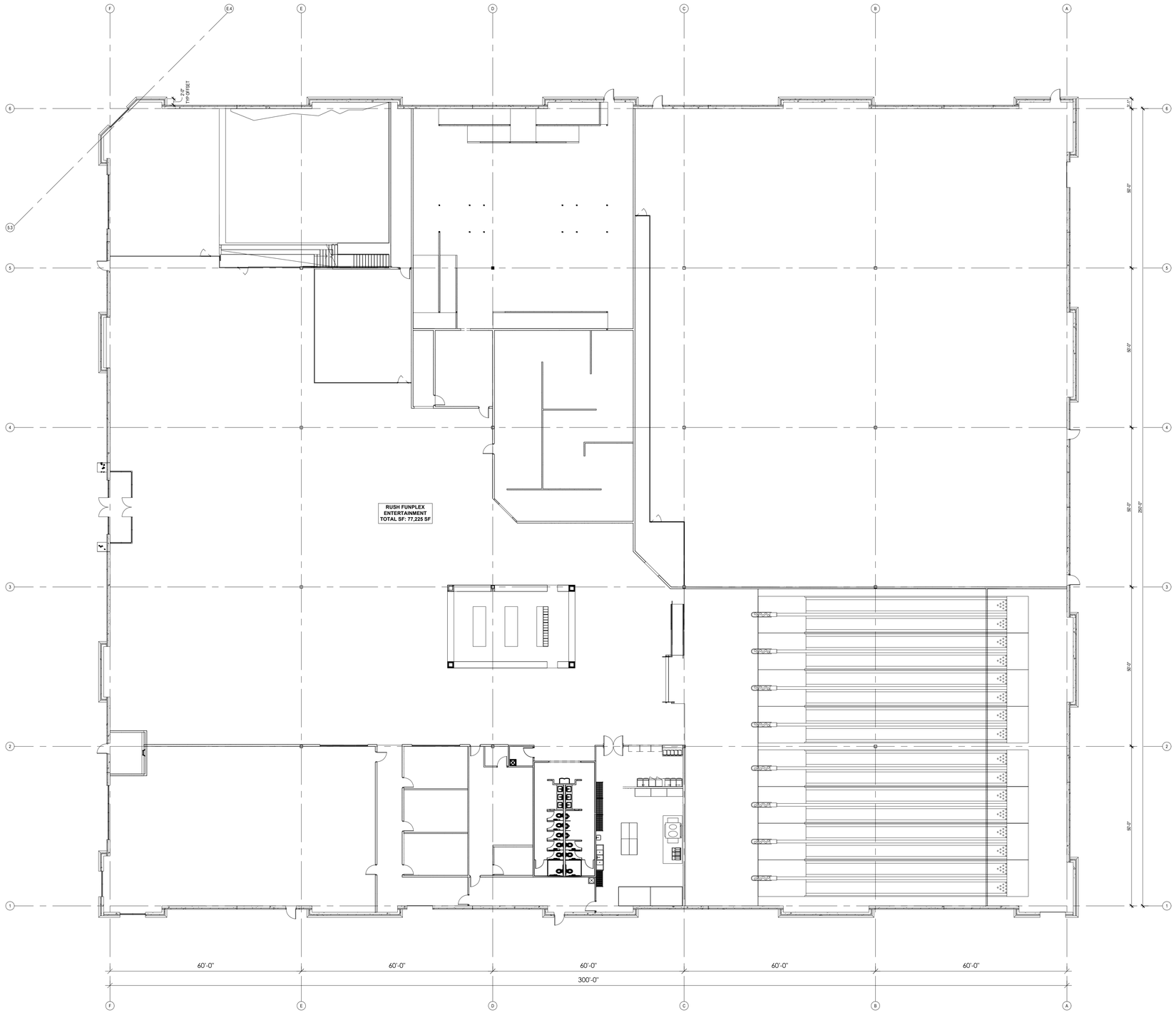
Preliminary Development Plan

13 March 2026

Lots 2 & 3
Exterior Renderings

A-002



Lot 1 Floorplan
1/16" = 1'-0"

1

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The Rush Funplex
New Entertainment Center

Lot 10A - Summit Orchards West
Lee's Summit, MO

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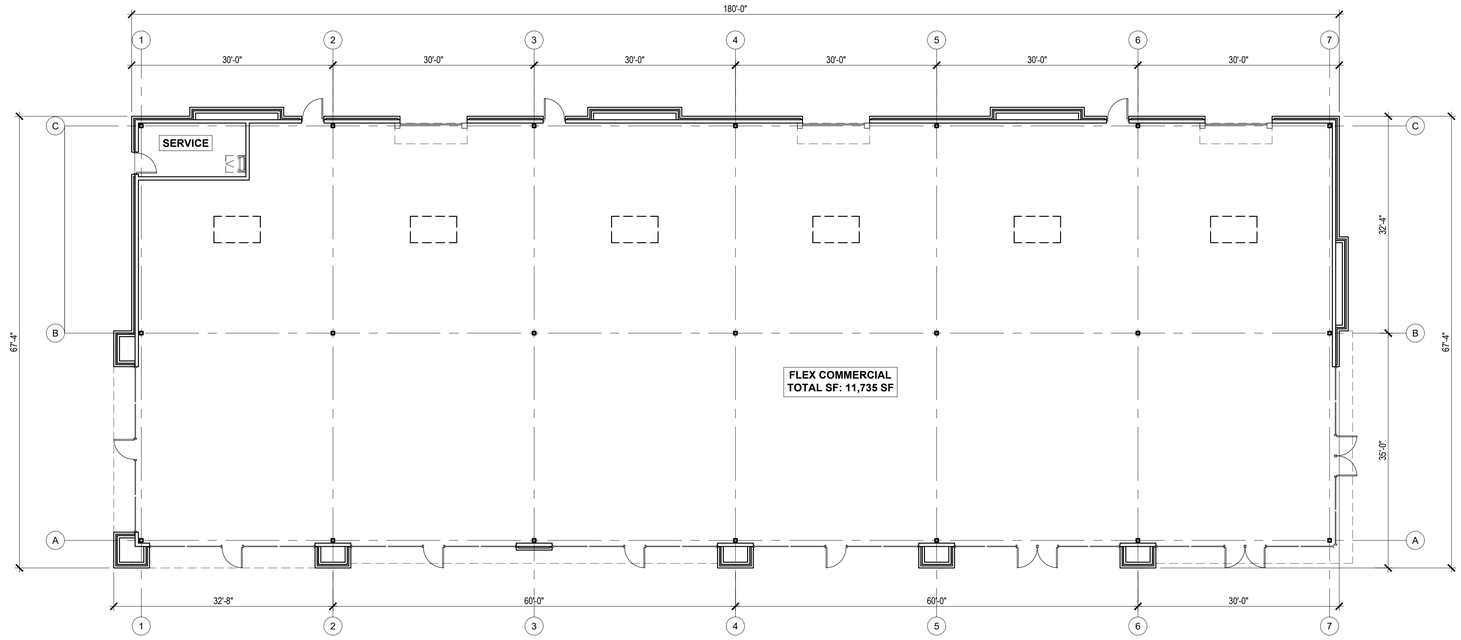
Preliminary Development Plan

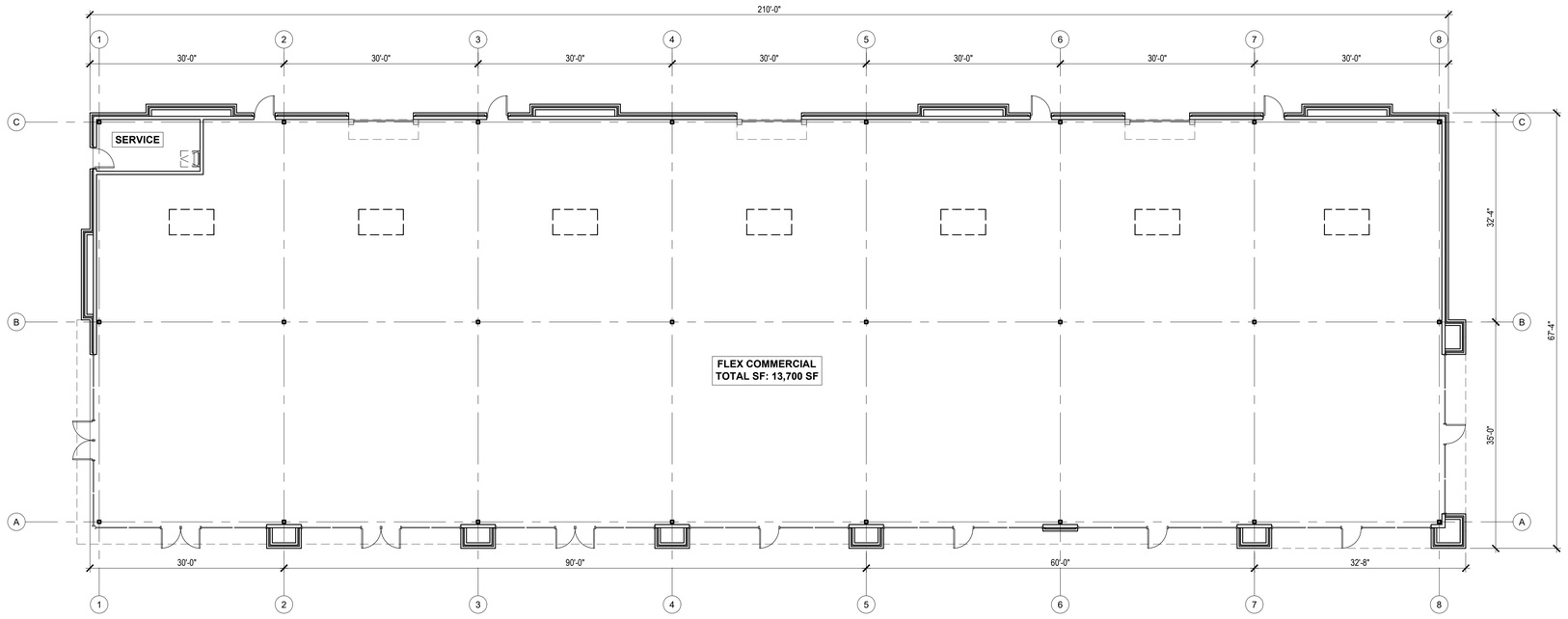
13 March 2026

Lot 1
Floorplan

A-101



Lot 3 Floorplan
3/32" = 1'-0"
2



Lot 2 Floorplan
3/32" = 1'-0"
1

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The Rush Funplex
New Entertainment Center

Lot 10A - Summit Orchards West
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Preliminary Development Plan

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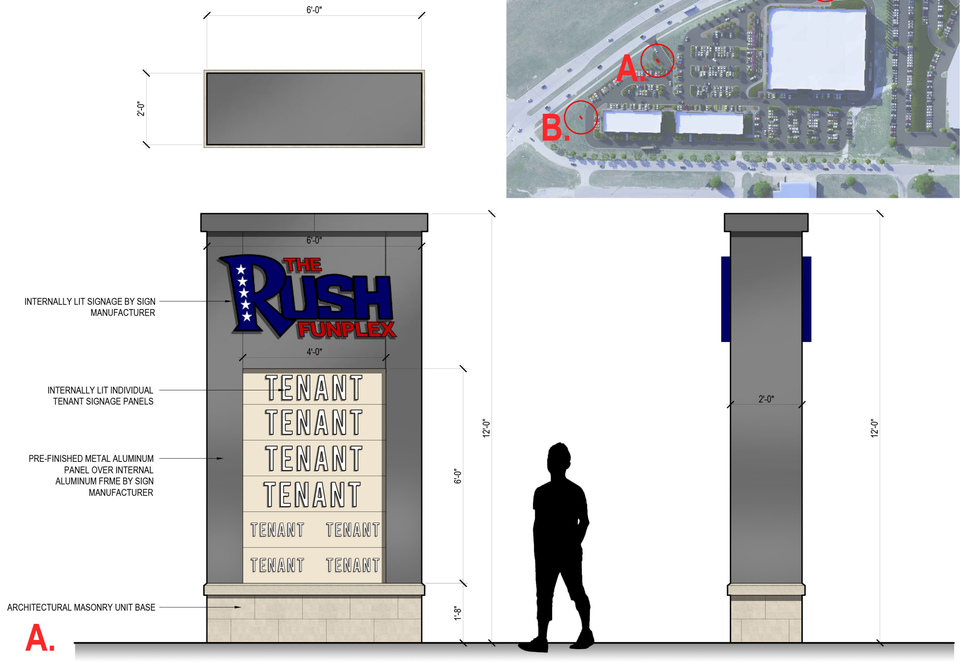
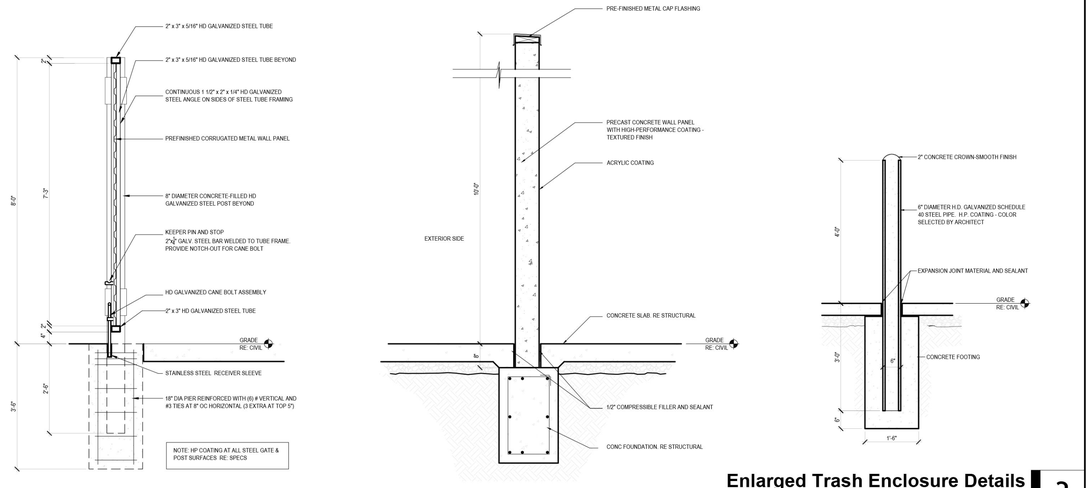
Lots 2 & 3 Floorplans

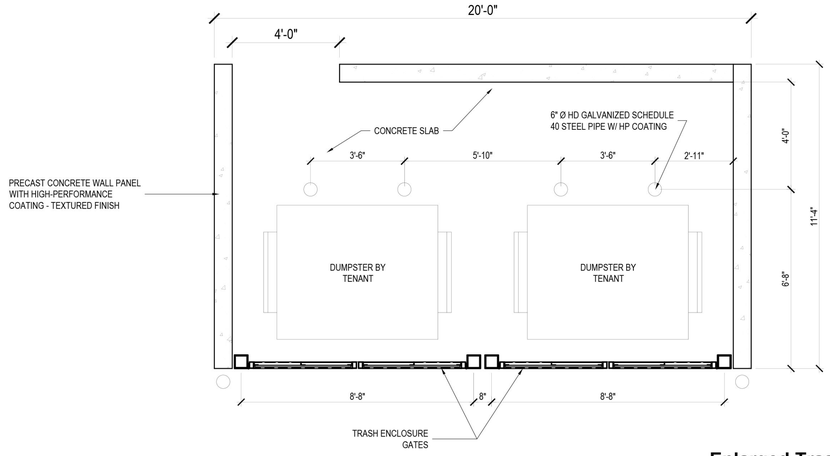
A-102



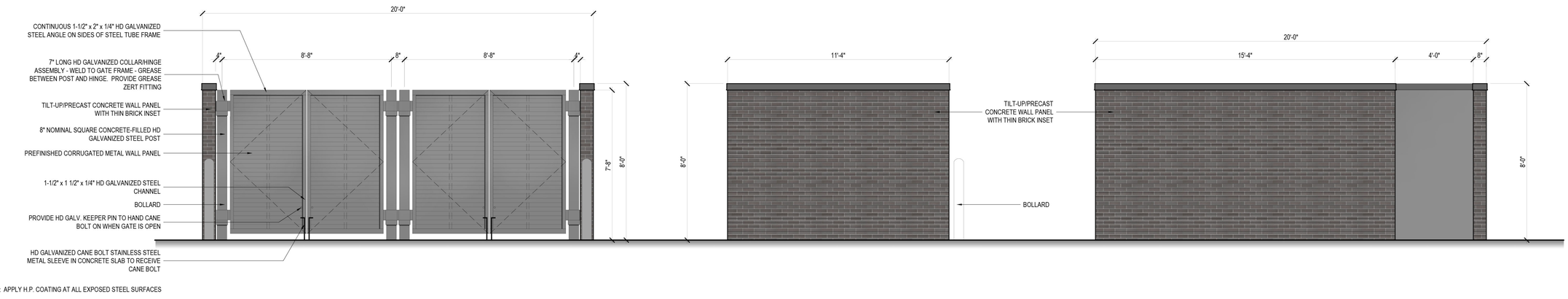
Monument Signage
1/2" = 1'-0" | 4



Enlarged Trash Enclosure Details
1/2" = 1'-0" | 3



Enlarged Trash Enclosure Plan
3/8" = 1'-0" | 2



NOTE: APPLY H.P. COATING AT ALL EXPOSED STEEL SURFACES

Trash Enclosure Elevation
3/8" = 1'-0" | 1

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The Rush Funplex
New Entertainment Center
Lot 10A - Summit Orchards West
Lee's Summit, MO

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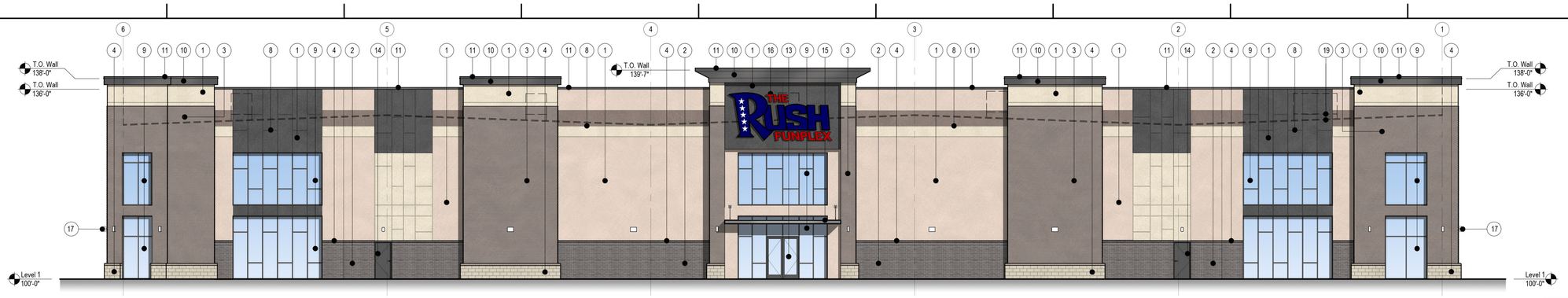
Preliminary Development Plan

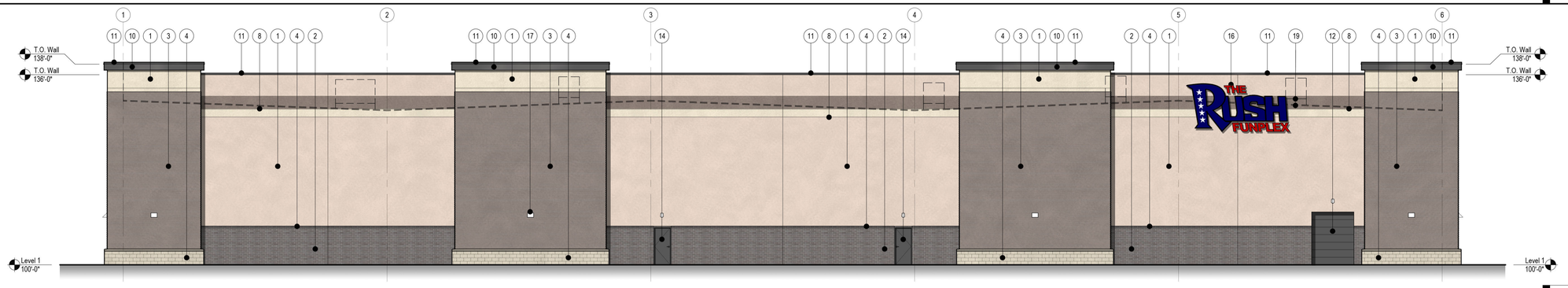
13 March 2026

Trash Enclosure and Monument Signage

A-103

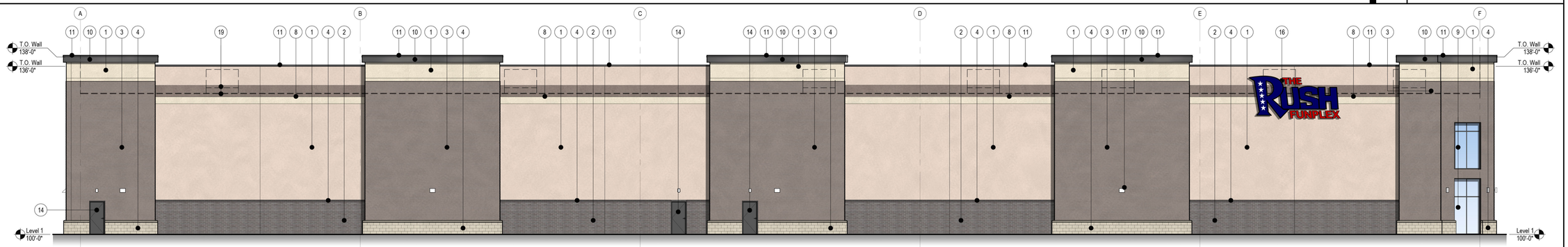


North Elevation 3/32" = 1'-0" — 4

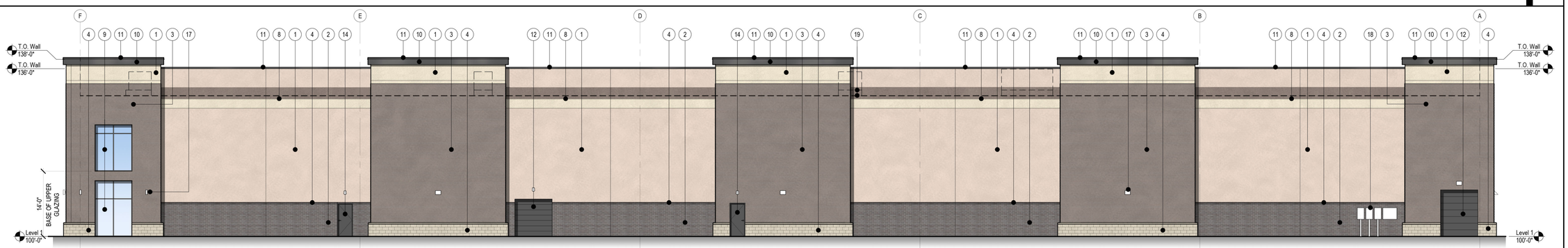


South Elevation 3/32" = 1'-0" — 3

NOTE:
1. NOTATION 0'-0" TO CORRESPOND WITH A SPECIFIC CIVIL ELEVATION.



East Elevation 3/32" = 1'-0" — 2



West Elevation 3/32" = 1'-0" — 1

MATERIALS LEGEND

1. INSULATED TILT-UP/PRECAST CONCRETE WALL PANEL WITH DIRECT-APPLIED TEXTURED ACRYLIC COATING SYSTEM
2. INSULATED TILT-UP/PRECAST CONCRETE WALL PANEL WITH THIN BRICK INSET
3. INSULATED TILT-UP/PRECAST CONCRETE WALL PANEL WITH SURFACE FORMLINER (3/4" DEEP RIB AT 4' O.C) WITH DIRECT-APPLIED TEXTURED ACRYLIC COATING SYSTEM
4. ARCHITECTURAL MASONRY UNIT
5. FACE BRICK
6. ALUMINUM COMPOSITE METAL PANEL SYSTEM
7. EXTERIOR INSULATION FINISH SYSTEM
8. CONCRETE WALL REVEAL - TYPICAL
9. ALUMINUM STOREFRONT SYSTEM WITH CLEAR INSULATED LOW-E GLAZING
10. PREFABRICATED CORNICE - ALUMINUM COMPOSITE METAL PANEL OR EQUAL
11. PREFINISHED METAL COPING / SHEET METAL FLASHING
12. INSULATED PRE-FINISHED STEEL PANEL OVERHEAD SECTIONAL DOOR
13. ALUMINUM/GLASS STOREFRONT DOOR(S)
14. FLUSH HOLLOW CORE STEEL DOOR WITH HIGH-PERFORMANCE COATING
15. PREFINISHED METAL CANOPY SYSTEM
16. INTERNALLY ILLUMINATED BUILDING MOUNTED SIGNAGE - ALL SIGNAGE TO CONFORM TO CITY SIGNAGE REQUIREMENTS AND SUBMITTED FOR REVIEW UNDER A SEPARATE APPLICATION
17. WALL-MOUNTED EXTERIOR LIGHTING
18. WALL-MOUNTED ELECTRICAL EQUIPMENT CONFIRM EXACT SIZE AND LOCATION WITH TENANT - EQUIPMENT TO BE SCREENED WITH LANDSCAPING
19. LINE OF ROOF AND RTUS BEYOND. CONFIRM EXACT SIZES OF RTUS PER DESIGN DEVELOPMENT

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The Rush Funplex
New Entertainment Center
Lot 10A - Summit Orchards West
Lee's Summit, MO

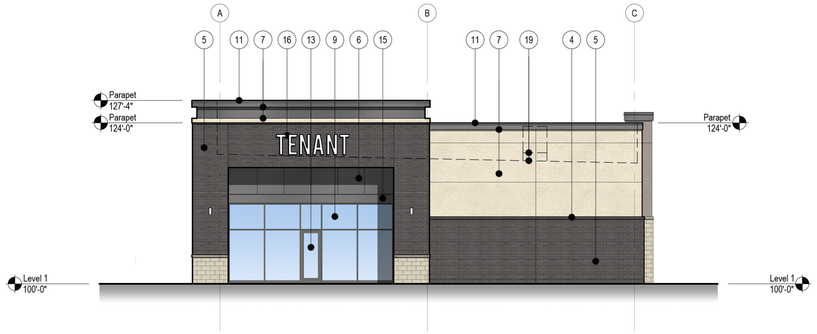
#	Revisions:	
	PDP - CITY REVIEW COMMENTS	04/14/2026

Project #: 251203-C

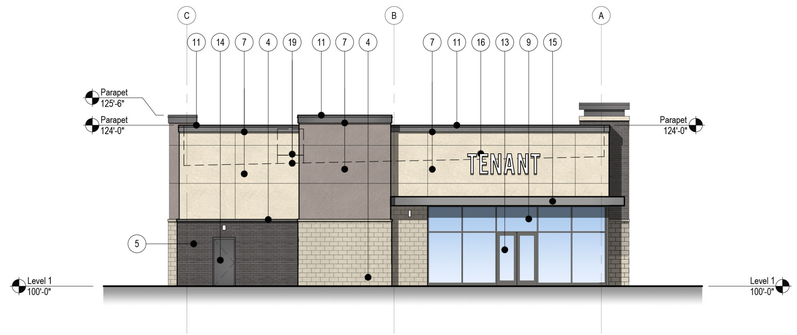
Preliminary Development Plan
13 March 2026

Lot 1
Exterior Elevations

A-201

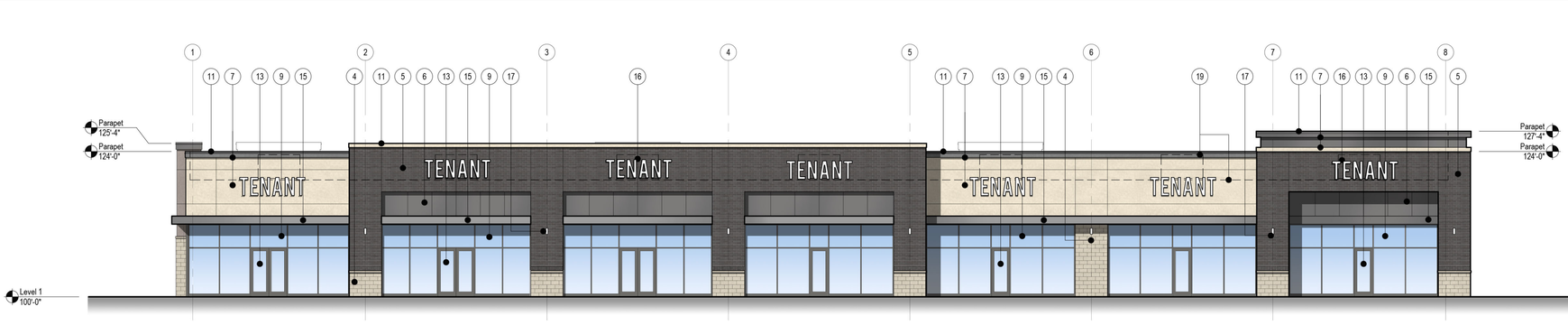


North Elevation 3/32" = 1'-0" — 4

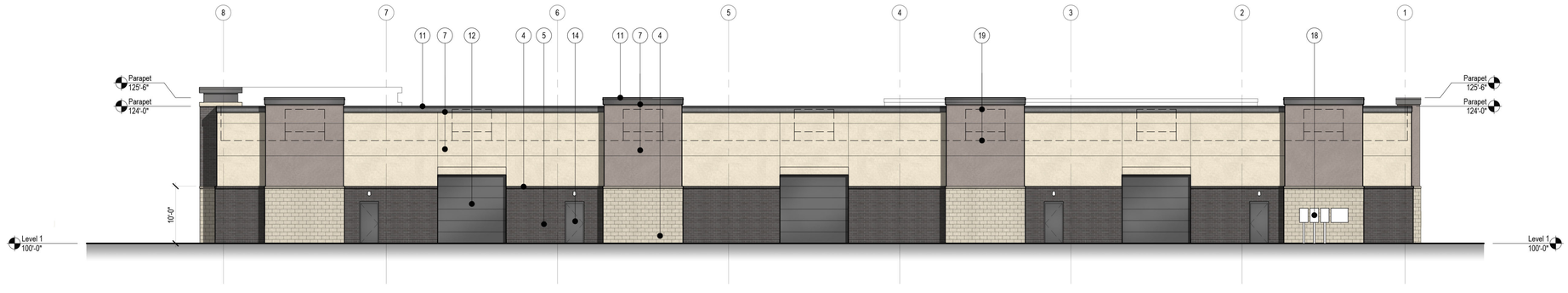


South Elevation 3/32" = 1'-0" — 3

NOTE:
1. NOTATION 0'-0" TO CORRESPOND WITH A SPECIFIC CIVIL ELEVATION.



East Elevation 3/32" = 1'-0" — 2



West Elevation 3/32" = 1'-0" — 1

MATERIALS LEGEND

1. INSULATED TILT-UP/PRECAST CONCRETE WALL PANEL WITH DIRECT-APPLIED TEXTURED ACRYLIC COATING SYSTEM
2. INSULATED TILT-UP/PRECAST CONCRETE WALL PANEL WITH THIN BRICK INSET
3. INSULATED TILT-UP/PRECAST CONCRETE WALL PANEL WITH SURFACE FORMLINER (3/4" DEEP RIB AT 4' O.C) WITH DIRECT-APPLIED TEXTURED ACRYLIC COATING SYSTEM
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The Rush Funplex
New Entertainment Center
Lot 10A - Summit Orchards West
Lee's Summit, MO

#	Revisions:
PDP - CITY REVIEW COMMENTS	04/14/2026

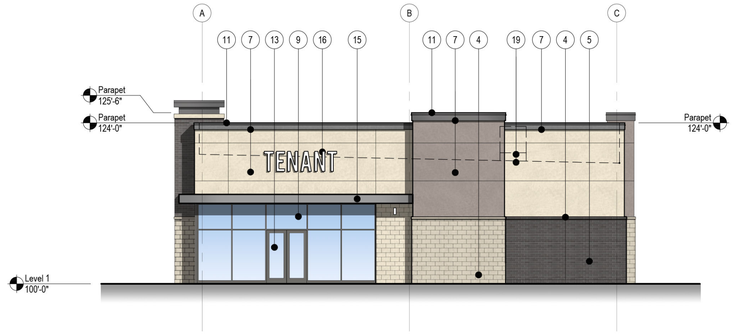
Project #: 251203-C

Preliminary Development Plan

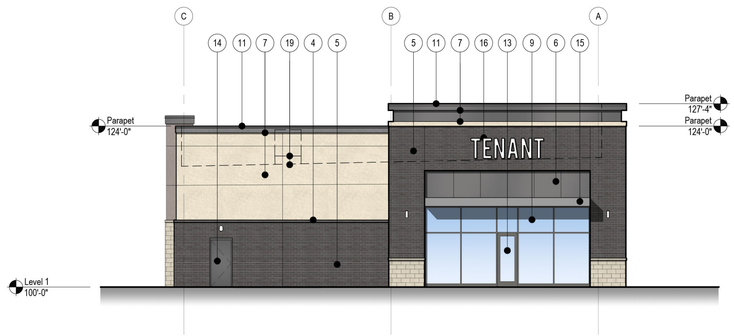
13 March 2026

Lot 2
Exterior Elevations

A-202



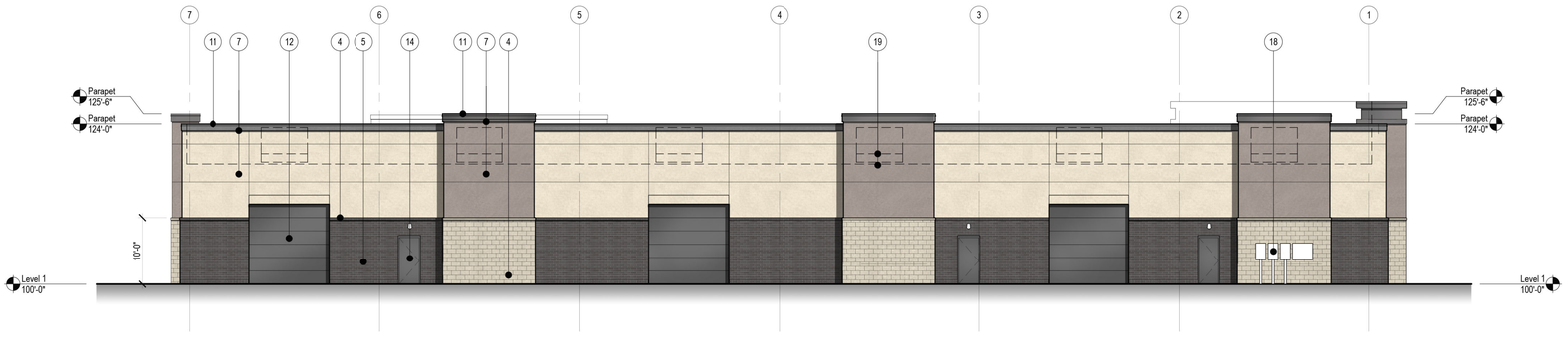
North Elevation 3/32" = 1'-0" — 4



South Elevation 3/32" = 1'-0" — 3

NOTE:
1. NOTATION 0'-0" TO CORRESPOND WITH A SPECIFIC CIVIL ELEVATION.

East Elevation 3/32" = 1'-0" — 2



West Elevation 3/32" = 1'-0" — 1

MATERIALS LEGEND

1. INSULATED TILT-UP/PRECAST CONCRETE WALL PANEL WITH DIRECT-APPLIED TEXTURED ACRYLIC COATING SYSTEM
2. INSULATED TILT-UP/PRECAST CONCRETE WALL PANEL WITH THIN BRICK INSET
3. INSULATED TILT-UP/PRECAST CONCRETE WALL PANEL WITH SURFACE FORMLINER (3/4" DEEP RIB AT 4' O.C) WITH DIRECT-APPLIED TEXTURED ACRYLIC COATING SYSTEM
4. ARCHITECTURAL MASONRY UNIT
5. FACE BRICK
6. ALUMINUM COMPOSITE METAL PANEL SYSTEM
7. EXTERIOR INSULATION FINISH SYSTEM
8. CONCRETE WALL REVEAL - TYPICAL
9. ALUMINUM STOREFRONT SYSTEM WITH CLEAR INSULATED LOW-E GLAZING
10. PREFABRICATED CORNICE - ALUMINUM COMPOSITE METAL PANEL OR EQUAL
11. PREFINISHED METAL COPING / SHEET METAL FLASHING
12. INSULATED PRE-FINISHED STEEL PANEL OVERHEAD SECTIONAL DOOR
13. ALUMINUM/GLASS STOREFRONT DOOR(S)
14. FLUSH HOLLOW CORE STEEL DOOR WITH HIGH-PERFORMANCE COATING
15. PREFINISHED METAL CANOPY SYSTEM
16. INTERNALLY ILLUMINATED BUILDING MOUNTED SIGNAGE - ALL SIGNAGE TO CONFORM TO CITY SIGNAGE REQUIREMENTS AND SUBMITTED FOR REVIEW UNDER A SEPARATE APPLICATION
17. WALL-MOUNTED EXTERIOR LIGHTING
18. WALL-MOUNTED ELECTRICAL EQUIPMENT CONFIRM EXACT SIZE AND LOCATION WITH TENANT - EQUIPMENT TO BE SCREENED WITH LANDSCAPING
19. LINE OF ROOF AND RTUS BEYOND. CONFIRM EXACT SIZES OF RTUS PER DESIGN DEVELOPMENT

SLAGGIE ARCHITECTS, INC. © 2026
Kansas City, Missouri • Omaha, Nebraska
888-756-1958
slaggie.com

NOT FOR CONSTRUCTION

The Rush Funplex
New Entertainment Center

Lot 10A - Summit Orchards West
Lee's Summit, MO

#	Revisions:	
	PDP - CITY REVIEW COMMENTS	04/14/2026

Project #: 251203-C

Preliminary Development Plan

13 March 2026

Lot 3
Exterior Elevations

A-203

570

PROPOSED EXTERIOR MATERIALS PALETTE:

1. **Insulated Tilt-up/Precast Concrete Wall Panel with Direct-Applied Textured Acrylic Coating System**
Colors: A. To Match SW 7674: Peppercorn
B. To Match SW 2859: Beige
C. To Match SW 6074: Spalding Gray
D. To Match SW 2829: Classical White

2. **Insulated Tilt-up/Precast Concrete Wall Panel with Thin-Brick Inset**
Manufacturer: Endicott Thin Brick
Color: Mix of Gray Blend Velour (80%)
and Light Gray Blend Velour (20%)

3. **Insulated Tilt-up/Precast Concrete Wall Panel with Surface Formliner with Direct-Applied Textured Acrylic Coating System**
Manufacturer: Customrock Formliner #4010
Color: SW 6074 Spalding Gray

4. **Architectural Masonry Unit**
Manufacturer: Reading Rock Rockcast
Color: Buffstone
Pattern: Running Bond

5. **Face Brick**
Manufacturer: Endicott Brick Modular
Color: Mix of Gray Blend Velour (80%)
and Light Gray Blend Velour (20%)

6. **Aluminum Composite Metal Wall Panel**
Manufacturer: Alpolic
Color: Mica MFS Grey

7: **Exterior Insulated Finish System - Wall**
Manufacturer: Sto Corporation
Model: Stotherm CI Lotusan
Colors: To Match SW 7674: Peppercorn
To Match SW 6074: Spalding Gray
To Match SW 2829: Classical White
Finish: Fine

8. Concrete Wall Reveal - Typical

9: **Aluminum Storefront System with Clear Insulated Low-E Glazing**
Manufacturer: Kawneer
Model: Tri-Fab Versaglaze 451-7
Color: Black Anodized

10: **Prefabricated Cornice**
Aluminum Composite Metal Panel or Equal
Manufacturer: Alpolic
Color: Mica MFS Grey

11: **Pre-Finished Metal Coping Assembly/Sheet Metal Flashing**
Manufacturer: Berridge
Color: Lead-Cote

12: Insulated Prefinished Steel Panel Overhead Sectional Door

13: Aluminum/Glass Storefront Door(s)

14: Flush Hollow-Core Steel Door with High-Performance Coating

15: Prefinished Metal Canopy System

16: Internally Illuminated Building Mounted Signage - All Signage to Conform to City Signage Requirements and Submitted for Review Under a Separate Application

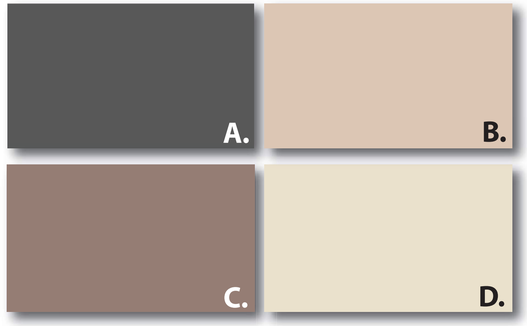
17. Wall-Mounted Exterior Lighting

18. Wall-Mounted Electrical Equipment - Confirm Exact Size and Location with Tenant. Equipment to be Screened with Landscaping

19. Line of Roof and RTUs Beyond. Confirm Exact Sizes of RTUs per Design Devlopment

NOTE: All Materials Subject to Approved Equal or Substitutions as Development Progresses.





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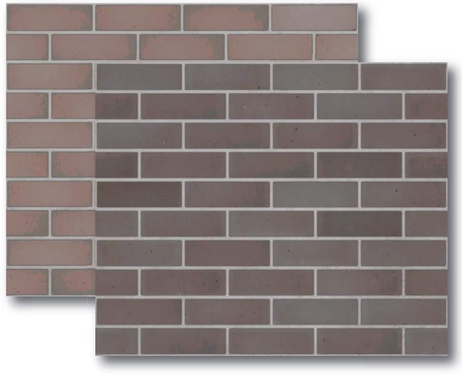

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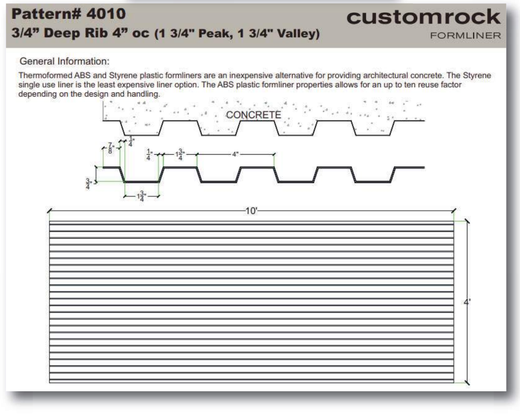

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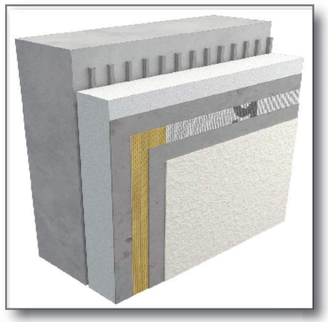

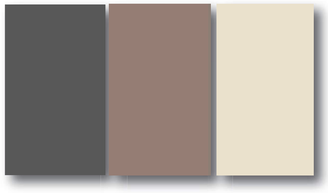

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11.





9.

SAI
SLAGGIE
ARCHITECTS INC

Rush Funplex - Preliminary Exterior Materials Lots 1-3

Lee's Summit, Missouri

SAI# 230605 | 03.13.2026

571

Optec LED LIGHTING

Catalog:
Project:
Type:

Area Series (Small)



The OLA1 Small Series is a stylish aerodynamic area luminaire that fits within today's accepted design form factors. Excellent optical performance is achieved with Nichia brand LED's and engineered discrete optics. LED life is assured through efficient thermal coupling and dissipation via a durable, pressure die cast, low-copper alloy, aluminum housing. Engineered to last, all gaskets are anti-UV, anti-aging with no harmful out-gassing. All models come standard with a universal pole mount bracket or an optional wall surface box. Luminaries are available with a number of options including alternate CCT choices, finishes, photocells and occupancy sensors.

FEATURES

- LED Brand: Nichia
- Color Temperatures: 4000K & 5000K (Other CCT's are available upon request)
- CRI: 70
- Lumen Maintenance: L70 = 50,000 hours
- Full Cutoff (meets IDA criteria)
- Operating Temperature: -40˚C (-40˚F) to 40˚C (104˚F)
- Durable All Aluminum Pressure Die Cast Housing
- Powder Coat Finish
- Salt Fog Tested to 2500 hours / per ASTM B117
- IP65 Rated (wet listed / NEMA IEC 60529)
- Mounting: Universal Round or Square Pole, Wall Surface Box

ELECTRICAL SPECIFICATIONS

- Power Input: 120-277V (347-480V Optional)
- Power Factor: > 0.95
- THD: < 15%
- Surge Protection: 20 kV
- Control Options: 0-10V Dimming standard (Photocell and Occupancy Sensors Optional)

TESTS & CERTIFICATIONS

- ETL (UL 1598, UL 8750, NEMA C82.77)
- CSA (C22.2 No.250.0)
- RoHS Compliant
- Design Lights Consortium (Premium)
- 3G Vibration tested (ANSI C136.31)

WARRANTY

- 10-Year Warranty (parts or replacement)

PERFORMANCE SPECIFICATIONS

Distribution	Model / Wattage	Lumens		Bug Rating		
		4000K	5000K	B	U	G
Type 2	OLA1-080	10,801	10,960	3 *	0	1
	OLA1-120	15,840	16,200	3 *	0	2
	OLA1-150	19,800	20,250	3 *	0	2
Type 3	OLA1-080	11,600	11,760	2 *	0	2
	OLA1-120	16,561	16,920	3 *	0	2
	OLA1-150	20,549	21,000	3 *	0	2
Type 3L	OLA1-080	10,799	10,960	3 *	0	3
	OLA1-120	15,960	16,199	3 *	0	3
	OLA1-150	19,800	20,249	4 *	0	3
Type 3R	OLA1-080	10,799	10,960	3 *	0	3
	OLA1-120	15,960	16,198	3 *	0	3
	OLA1-150	19,800	20,250	4 *	0	3
Type 4	OLA1-080	10,596	10,794	2 *	0	2
	OLA1-120	15,472	15,712	2 *	0	2
	OLA1-150	19,046	19,349	3 *	0	2
Type 4L	OLA1-080	10,800	10,960	3 *	0	3
	OLA1-120	16,080	16,320	3 *	0	3
	OLA1-150	19,800	20,250	4 *	0	4
Type 4R	OLA1-080	10,800	10,960	3 *	0	3
	OLA1-120	16,080	16,320	3 *	0	3
	OLA1-150	19,781	20,250	4 *	0	4
Type 5	OLA1-080	10,032	10,185	4	0	3
	OLA1-120	15,049	15,278	4	0	3
	OLA1-150	18,811	19.097	5	0	4

* Backlight = 1 when BC (Backlight Control System) is applied.

Voltage (V)	Current (A)		
	80W	120W	150W
120	0.67	1.00	1.25
208	0.38	0.58	0.72
240	0.33	0.50	0.63
277	0.29	0.43	0.54
347	0.23	0.35	0.43
480	0.17	0.25	0.31



Area Series (Small)

ORDERING INFORMATION

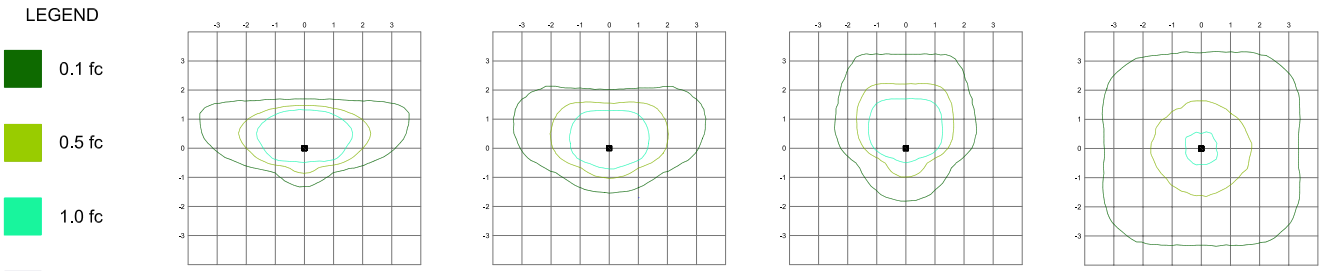
EXAMPLE: OLA1-120-UNVL-50-4-SQ-BZ-PR-TL12

SERIES	WATTAGE	VOLTAGE	COLOR TEMP	DISTRIBUTION	MOUNTING	FINISH	CONTROLS / OPTIONS
OLA1 = Optec LED Area Light	080 = 80W 120 = 120W 150 = 150W	UNVL = 120-277V UNVH =347-480V	30 = 3000K 40 = 4000K 50 = 5000K	2 = Type 2 3 = Type 3 3L = Type 3 Left 3R = Type 3 Right 4 = Type 4 4L = Type 4 Left 4R = Type 4 Right 5 = Type 5	SQ = Square Pole[1] RD = Round Pole[1] WM = Wall Mount[1,2] TA = Tenon Adapter[1] LK = Leveling Kit[3]	WH = White BZ = Dark Bronze BL = Black NA = Natural Aluminum GM = Graphic Metallic CF = Custom Finish	OSWS = Occupancy Sensor (WattStopper)[4] PR3 = Photocell Receptacle 3-pin PR5 = Photocell Receptacle 5-pin PR7 = Photocell Receptacle 7-pin WCS = Wireless Control (Synapse)[5] BCS = Backlight Control System SF = Single Fuse (120V, 277V, 347V) DF = Double Fuse (220V, 240V, 480V) TLSC = Twist Lock Shorting Cap 924 = UL924 Relay TL12 = Twist Lock Photocell 120V[6] TL24 = Twist Lock Photocell 240V[6] TL27 = Twist Lock Photocell 277V[6] TL28 = Twist Lock Photocell 208V[6] TL34 = Twist Lock Photocell 347V[6] TL48 = Twist Lock Photocell 480V[6]

1 - For details, reference accessory data sheet.
2 - WM option requires SQ pole mount bracket (ordering example: SQ-WM)
3 - Leveling kit adjusts up by 5 degrees or down by 5 degrees
4 - OSWS = For Wattstopper PIR sensor information and options contact factory
5 - WCS = for Synapse wireless controls information and options contact factory for details
6 - Photocell default = Fail in "ON" mode (unless otherwise specified)

PHOTOMETRIC PERFORMANCE

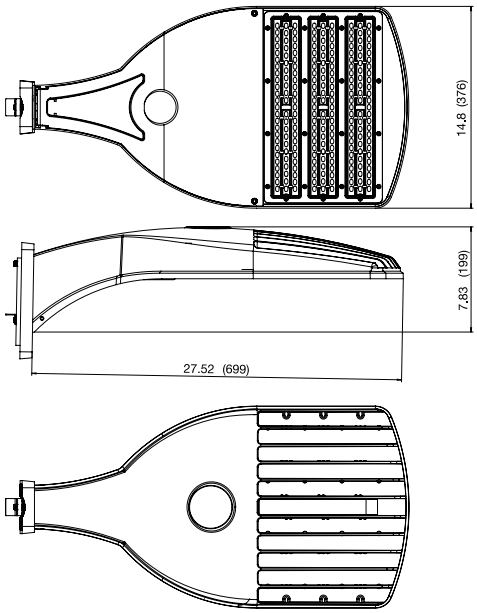
Isofootcandle plots = OLA1 120W model in 5000K CCT @ 30' mounting height. Distances are in units of mounting height.



120W (Type 2) Plot | 120W (Type 3) Plot | 120W (Type 4) Plot | 120W (Type 5) Plot

Published luminaire photometric testing performed to IESNA-79-08 standards

DIMENSIONS, WEIGHTS & EPA



Wattage	80W	120W	150W
Length (inches / mm)	27.52 / 699	27.52 / 699	27.52 / 699
Width (inches / mm)	14.8 / 376	14.8 / 376	14.8 / 376
Height (inches / mm)	7.83 / 199	7.83 / 199	7.83 / 199
Weight (lbs / kg)	19.4 / 8.8	19.4 / 8.9	20 / 9.1

Wattage	Effective Projected Area (EPA) in ft²				
					
80	0.96	1.92	1.81	2.77	3.63
120	0.96	1.92	1.81	2.77	3.63
150	0.96	1.92	1.81	2.77	3.63

FWPC™

PacLights



CCT selectable full-cut off
LED Wall Mount

PROJECT:

DATE:

TYPE:

PREPARED BY:

5 YEAR WARRANTY

KEY FEATURES
100,000-Hour LED lifespan
1-10V dimming standard on all models
Selected models **3000K/4000K/5000K field-selectable**
Optional **photocell and motion control**
Emergency backup option provided

c UL us LISTED

DLC PREMIUM

1-10V DIMMING

CCT FIELD ADJUSTABLE *

EMERGENCY BACKUP OPTION

*available on selected models

TECHNICAL SPECIFICATIONS

COMPLIANCE

UL Listed
Suitable for wet locations

IESNA LM79 & LM-80 Testing
Paclights LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

DLC Qualification
Selected models of this product are on the Design Lights Consortium (DLC) Qualified Products List and are eligible for rebates from DLC Member Utilities. To view our DLC qualified products, please consult the DLC Qualified Products List at www.designlights.org/qpl

LED CHARACTERISTICS

LEDS
Long-life, high-efficacy, surface-mount LEDs

Lifespan
100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations

Color Rendering Index
>80

Beam Angel & BUG
100° beam; B2-U0-G1

Field-selectable Color Temperature
On selected models (3CCT), 3000K/4000K/5000K, selectable by a dip switch

Color Uniformity
PacLights' range of Correlated Color Temperature follows the guidelines of the American National Standard for Specications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2017

ELECTRICAL

Drivers
1-10V Dimmable
Input Voltage: 120-277V, 50-60 Hz
Power Factor > 0.9; THD <20%
Surge Protection 6kA

CONSTRUCTION

IP Rating
IP 65 Rated

Ambient Temperature
Suitable for up to 50° C (122° F) ambient temperature

Cold Weather Starting
The minimum starting temperature is -40 F°/-40° C

Housing
Die-cast aluminum housing

Gaskets
Silicon Gaskets

Finish
Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color, and contain no VOC or toxic heavy metals.

Mounting Methods
Surface mount

Green Technology
Mercury and UV free, and RoHS compliant. Polyester powder coat finish formulated without the use of VOC or toxic heavy metals.

Lens
Polycarbonate

OTHER

5-Year Limited Warranty**
The PacLights 5-year, limited warranty covers light output, driver performance and paint finish.
**PacLights's warranty is subject to all terms and conditions found at paclights.com/warranty

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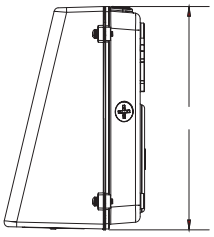
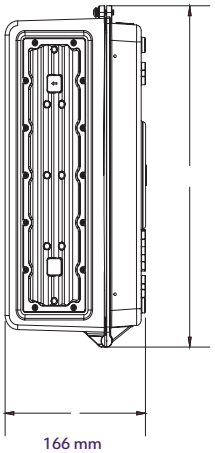
TECHNICAL SPECIFICATIONS Continued

FWPC-040/060/080

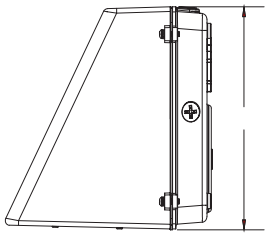
Weight 7.5 lbs

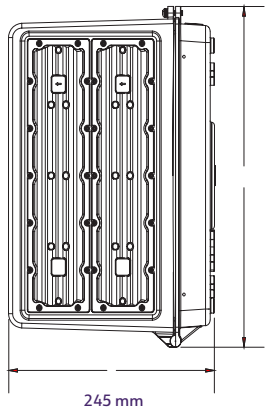




FWPC-100/120/150

Weight 11.3 lbs



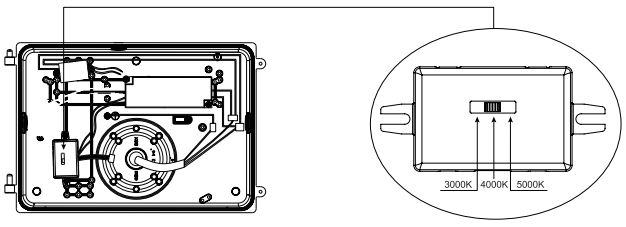


FINISHES	
all models	Dark Bronze

LIGHT MODULES	
FWPC-040/060/080	1
FWPC-100/120/150	2



CCT SELECTABLE on selected models



CCT SELECTABLE ON FIXTURE

Selected models (3CCT) are equipped with color temperature settings ranging from: 3000K (Warm White), 4000K (Neutral White) and 5000K (Daylight). Simply use the switch directly on the fixutre to select the desired color temperature and then install. Selectable color temperature technology removes the guesswork of choosing the correct color temperature for your space. Select 3000K in applications requiring warm and inviting light, select 4000K for a slightly cooler light appearance, select 5000K in areas requiring bright, crisp light.

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ACCESSORIES Optional

EMERGENCY BATTERY BACKUP

Emergency Battery Backup generates a bright illumination even in emergency environments, such as power outages, blackouts, and fires, thanks to its UL924 approved battery for backup lighting. In addition, with intelligent emergency detection function automatically, it can provide 90 minutes ~ 180 minutes continuously work time under power-off mode.

SECONDARY SURGE PROTECTOR

Secondary surge protector can act as the second line of defense, in addtional to the LED driver's intergrated lightning arrester.

CONTROLS

Photocell Control allows ON/OFF switching the luminaries, to be determined by the amount of daylight present. Specified low light levels at dusk will turn lights ON. When sufficient daylight returns at dawn, the lights automatically turn OFF. Automatic lighting controls save energy.

Bi-level Motion Control uses passive infrared sensing strategies option (up to 18ft) to provide the ability of sensing occupancy or vacancy on luminaries, to bi-level dimming and automatically turn ON and OFF the lighting fixture. Or, select microwave sensing strategies option to provide extended range of sensing (up to 60ft).

PERFORMANCE

FWPC™ 040

40W	3000K Warm white	4000K Neutral	5000K Daylight
LUMENS	4,880	5,680	5,040
LM/W	122	142	126

FWPC™ 060

60W	3000K Warm white	4000K Neutral	5000K Daylight
LUMENS	7,320	8,640	7,620
LM/W	122	144	127

FWPC™ 080

80W	3000K Warm white	4000K Neutral	5000K Daylight
LUMENS	9,680	11,360	10,080
LM/W	121	142	126

FWPC™ 100

100W	3000K Warm white	4000K Neutral	5000K Daylight
LUMENS	12,600	14,600	13,000
LM/W	126	146	130

FWPC™ 120

120W	3000K Warm white	4000K Neutral	5000K Daylight
LUMENS	14,520	16,800	15,240
LM/W	121	140	127

FWPC™ 150

150W	3000K Warm white	4000K Neutral	5000K Daylight
LUMENS	18,000	21,300	18,900
LM/W	120	142	126

ORDERING INFORMATION

FWPC™

Family	Model	Color Temp	Options
FWPC			

Model	
040	40w
060	60w
080	80w
100	100w
120	120w
150	150w

Color Temp	
30	3000K (warm white)
40	4000K (neutral)
50	5000K (daylight)
3CCT	3000/4000/5000K Selectable

Options	
SP	secondary surge protector
PC	photocell control
MC	motion control (PIR)
MW	motion control (microwave)
EM	emergency battery backup

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WCED-4S(U)D-LCT

4" Wall Mount Square Cylinder Down and Up/Down Light
120/277V, 3 Power/Lumens & 5 CCT Selectable

DoB
Driver on Board
AC Direct Module

Catalog #		Type
Project		
Prepared by		Date

4" Square LED Cylinder

SELECTABLE 5 CCT 2700K · 3000K · 3500K 4000K · 5000K

SELECTABLE 3 WATTS

Buy American Act COMPLIANT

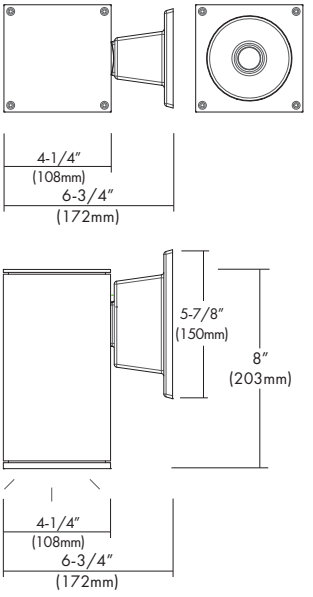
Dimmable



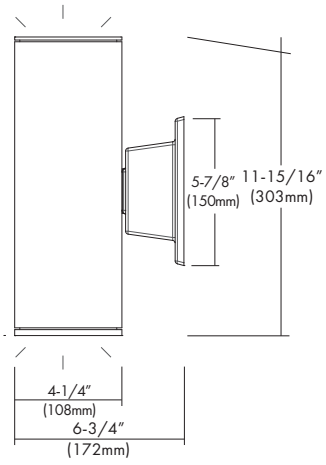
[**WCED-4SD-LCT** : DOWN TYPE]



[**WCED-4SUD-LCT** : UP/DOWN TYPE]



[**WCED-4SD-LCT** : DOWN TYPE]



[**WCED-4SUD-LCT** : UP/DOWN TYPE]

DESCRIPTION

The WCED-4S(U)D-LCT 4" Square Cylinders are Wet Location and IP65 rated for outdoor use. These wall mount cylinders come in two versions : down light and up & down light. The fixtures are offered in 15W, 20W and 30W LED, DoB modules with a customized IC, highbred circuit on board with dimming down to 5% with most of Triac and ELV dimmers or 0-10V dimming. Non-Isolated DOB, Direct AC technology has low heat, great reliability and has been designed for these fixtures to operate environments between -22˚ F to 104˚ F (-30˚C to 40˚C). Optional Photo Cell is available for Dusk to Dawn operation and EM drivers for emergency lighting.

DESIGN FEATURES

Features

- Weatherproof aluminum powder coated white & black finish for outdoor & indoor applications.
- 15W, 20W & 30W Selectable power.
- 2700K, 3000K, 3500K, 4000K & 5000K Selectable CCT.
- 90 CRI Standard.
- Universal 120-277V 50/60 Hz Input.
- Triac, ELV & 0-10V dimming.

Mounting

- Mount completely assembled fixture directly onto wall surface using appropriate anchor bolts or screws (supplied by others).

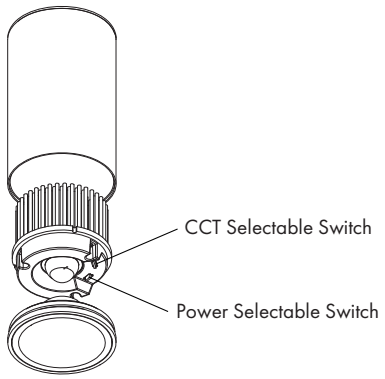
Limited Warranty

- LED Module & Product: 3 years

Listing

- ETL cETL Listed
- State of California Title 24
- Wet location (IP65 Rated)

Drawing



SPECIFICATION			
Input Voltage	120/277V		
Wattage	15W	20W	30W
Lumen	1,050	1,400	2,100
Efficacy (LPW)	70 lm/W	70 lm/W	70 lm/W
Beam Angle	48˚		
CRI (Standard)	90		
CCT (Color +/-5%)	2700K, 3000K, 3500K, 4000K, 5000K		
Dimming	Triac, ELV & 0-10V Dimming*		
LED Module	3 years		
Environment	Wet location		

*Double wattage for Up/Down Type
*Contact factory for custom beam angles

120V Approved Dimmers

* Lutron: Skylark S-600
: MRF2-6DN-120
: MACL-153M
: DVLV-600P
: SELV-300P
: CTCL-153P
: DVELV-303P
: DVCL-153P
* Leviton: D600R, Acenti: Ate06,
Trimatron #705W
* Cooper Devine incandescent dimmer 600W
* Pass&seymour harmony incandescent 600W

For 0-10V Driver**

* Lutron: Nova 0-10V : NTFTV
Diva 0-10V : DVTV
* Leviton: Decora 0-10V : IP710DL

*Consult tech. service or factory for additional dimmers
***Consult with factory if you are not using the approved dimmers*

OPTIONS



- PCELL = Photocell for Dusk to Dawn operation. Outdoor use ONLY.

Model	-Housing Finish*	-Options
WCED-4SD-LCT = 4" Wall Square Cylinder Down Light **WCED-4SUD-LCT** = 4" Wall Square Cylinder Up/Down Light	**-WH** = White **-BK** = Black	**-PCELL** = Photocell for Outdoor use ONLY **-EM** = Emergency Driver

Example : **WCED-4SUD-LCT-WH**

* Consult factory for other Color Temperatures and Finishes

Camray™ LED Series

Die-cast aluminum LED emergency lighting – interior or exterior



Housing
- Indoor/outdoor suitable for wet location
- Die-cast aluminum housing
- UV-resistant (3" x 1.5") polycarbonate lens

Mounting
- Wall mount
- 1/2" rigid conduit top entry
- Universal J-box mounting patern

Lamp Type
- Patent-pending light engine: four power LEDs with redundant connections
- 400-640 lumens
- Color temperature: 4000K
- Optional forward-throw light distribution, for applications of outdoor egress
- Optional high-lumen output
- Optional dual-mode operation: normal and emergency LED lighting with separate AC inputs
- Pulse plus charger
- Low voltage disconnect
- Automatic brownout protection
- Battery lock-out
- Fused output circuit
- Standard Improved Diagnostics
- 120/277 60Hz

Approval
- UL 924 listed
- Nema-3R rated for indoor/outdoor cold-weather wet and damp locations: -4°F to 104°F (-20°C to 40°C)

Warranty (subject to proper installation and maintenance)

Unit: five-year full warranty

Detailed warranty terms located on **page 197 or online at: www.lightalarms.com**

NEMA-3R UL

Unit color

Platinum gray



Black

White



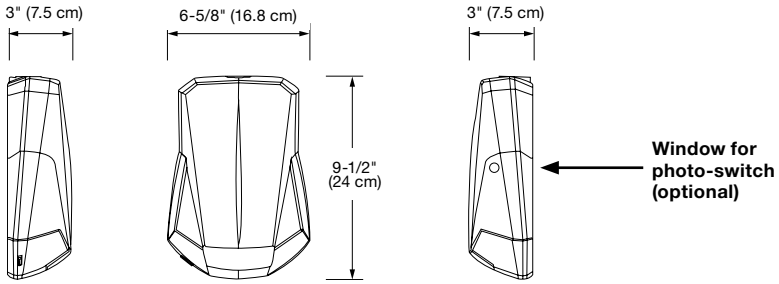
Dark bronze (painted)

Power consumption chart

			AC Specs		DC Specs
	Normal lighting		Emergency lighting		6-12V[1]
Model	Current (maximum)	Power (maximum)	Current (maximum)	Power (maximum)	Power (maximum)
AC, 2AC, ACDC, DC	0.12/0.08A	12W	0.11/0.08A	12W	8W
All above, -H	0.18/0.11A	18W	0.18/0.11A	18W	14W (VDC only)
ACSD, SD, SD-H	0.12/0.06A	12W	0.05/0.02A	5W	
SD-CW	–	–	0.15/0.07A	16W	N/A[1]
ACSD-CW-P, -FT		N/A[1]	0.22/0.10A	24W	

[1] Only unswitched AC input; normal lighting with photo-switch or remote control

Dimensions (Dimensions are approximate and subject to change)



Photometric performance

Table A – Spacing for NFPA101 (average = 1FC) – Average of 1 foot-candle

Model type	Mounting height	Lumen	Color temperature	Width X length (ft) Single unit	Width X length (ft) Center-to-center
Standard	9'	400	4000K	6' X 50'	6' X 50'
With option -H	11'	550		6' X 60'	6' X 60'
With option -FT	12'	460			3' X 70'
With option -FTH	15'	640		6' X 40'	–
				6' X 50'	–

Indoor reflectance: 80/50/20 and 10-ft wide corridor. Outdoor reflectance: 0/30/10
Note: The illumination level meets ALL the requirements of the Life Safety Code (NFPA 101):
1) Average of 1 foot-candle or more
2) Minimum at any point of 0.1 foot-candle or more
3) Maximum-to-minimum illumination uniformity ratio of 40:1 or less

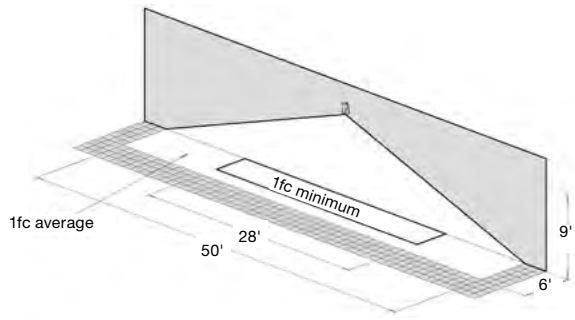
Table B – Spacing for minimum illumination = 1FC – Minimum of 1 foot-candle

Model type	Mounting height	Lumen	Color temperature	Width X length (ft) Single unit	Width X length (ft) Center-to-center
Standard	9'	400	4000K	4' X 28'	6' X 32'
With option -H	11'	550		4' X 32'	6' X 40'
With option -FH	12'	460		4' X 22'	–
With option -FTH	15'	640		4' X 27'	–

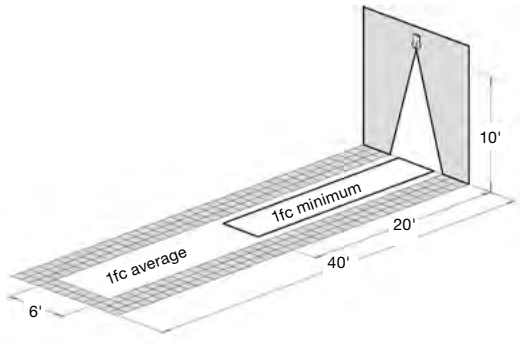
Photometry performance

Whether installed indoors or outdoors, with spacing measurements for a single unit or between two units center-to-center, the Camray® Series LED delivers a stable and consistent illumination making it easy to specify in a wide range of applications. The outstanding spacing of illumination ranges from 50 to 70 feet for standard units (wide beam) and from 40 to 50 feet with the forward-throw beam option.

Photometry performance – Wide beam



Photometry performance – Forward throw



Ordering format – Battery unit

Series	Model	Color	Options
CAM= Camray LED battery unit	**Nickel-Metal Hydride Battery Units (standard with Self-Diagnostics)** **SD**= Self-Powered & Self-Diagnostic (-4°F + 122°F)(-20°C + 50°C) **ACSD**= Dual-Mode AC/Self-Powered & Diagnostics (-4°F + 104°F) (-20°C + 40°C)	**B**= Black **DB**= Dark bronze **OW**= Off white **PG**= Platinum gray	**-CW**= Cold weather (-40°F - 86°F) (-40°C - 30°C); not available with option -H **-FT**= Forward throw lighting **-H**= High lumen output (32... 86°F / 0... 30°C; model SD only) **-P**= Photo-switch, (model models ACSD only) **-T3**= Time delay: 15 minutes (models ACSD, SD only) **-RC**= Remote control - infrared[1]

Example: CAMSDOW-RC

[1] For ACSD Model only, with -RC option, order the remote control keypad (TB-RC1-L) separately

LEGEND

- SET 5/8" X 24" REBAR W/ CAP STAMPED OWN LC-62, UNLESS OTHERWISE NOTED
- FOUND MONUMENT AS NOTED
- X FENCE LINE
- (91/387) BK/PG OF RECORD PLAT/SURVEY
- M MEASURED DISTANCE
- R RECORD DISTANCE
- BENCHMARK
- CONTROL POINT
- ELECTRICAL PEDESTAL
- ELECTRICAL TRANSFORMER
- ELECTRICAL VAULT
- WATER METER
- WATER VALVE
- FIRE HYDRANT
- OHP OVERHEAD POWER
- G GAS LINE
- SAN SEWER LINE
- (XX) SCHEDULE B EXCEPTION NUMBER
- RIGHT OF WAY MARKER
- AIR CONDITIONING UNIT
- GUY WIRE ANCHOR
- POWER POLE
- SANITARY CLEAN OUT
- SANITARY MANHOLE
- SECTION CORNER MONUMENT
- SET MONUMENT
- SIGN
- STORM MANHOLE
- STREET LIGHT
- STREET LIGHT CONTROLLER
- STREET LIGHT VAULT
- STUMP
- TANK
- FIBER OPTIC MARKER
- FIBER OPTIC MANHOLE
- FIBER OPTIC PEDESTAL
- FIBER OPTIC VAULT
- SURVEY BOUNDARY
- CHAIN LINK FENCE
- UNDERGROUND TELEPHONE LINE
- UNDERGROUND FIBER OPTIC LINE
- UNDERGROUND POWER LINE
- UNDERGROUND WATER LINE
- OVERHEAD POWER LINE
- OVERHEAD TELEPHONE LINE
- OVERHEAD TELEVISION LINE
- BUILDING SETBACK
- SECTION OR 1/4 SECTION LINE
- EASEMENT LINE
- SANITARY LINE
- STORM CENTERLINE

OWNERS:

TOWNSEND SUMMIT LLC, A MISSOURI LIMITED LIABILITY COMPANY

LEGAL DESCRIPTION:

LOT 10A, SUMMIT FAIR, LTOS 10A-10C, A SUBDIVISION IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, ACCORDING TO THE RECORDED PLAT THEREOF

ZONING:

NO ZONING LETTER WAS PROVIDED TO THE SURVEYOR

TRACT ZONED PMIX "PLANNED MIXED USE" PER CITY OF LEE'S SUMMIT ONLINE ZONING MAP

LIST OF POSSIBLE ENCROACHMENTS:

1. SOME UTILITY STRUCTURES ARE NOT LOCATED IN PUBLIC EASEMENTS. IT IS UNKNOWN IF UTILITY STRUCTURES ARE PUBLIC OR PRIVATE.

2. THE EAST CURB AND INLET OF NW WARD ROAD ENCROACH ONTO SUBJECT TRACT.

UTILITY NOTES:

1. MANHOLE ON WEST SIDE OF SITE WAS MARKED BY ONECALL AS SEWER WITH LINES GOING NORTH AND SOUTH. UPON FIELD INVESTIGATION, ONLY ONE DUCTILE IRON PIPE WAS FOUND IN THE MANHOLE HEADING EAST. NO SANITARY SEWER PIPES WERE OBSERVED.

GENERAL NOTES:

THE BASIS OF BEARINGS IS MISSOURI STATE PLANE GRID SYSTEM, WEST ZONE, NAD 83 ZONE.

THIS SURVEY WAS EXECUTED TO COMPLY WITH THE ALLOWABLE RELATIVE POSITIONAL ACCURACY FOR MEASUREMENTS CONTROLLING LAND BOUNDARIES ON ALTA/NSPS LAND TITLE SURVEYS [0.07 FEET (OR 20 MM) + 50 PPM]

THE PROPERTY DESCRIBED HEREON IS THE SAME AS THE PROPERTY DESCRIBED AS EXHIBIT "A" IN THAT CERTAIN TITLE COMMITMENT ISSUED BY CHICAGO TITLE INSRUANCE COMPANY, HAVING AN EFFECTIVE DATE OF NOVEMBER 28, 2025, COMMITMENT NUMBER KCC252655. ALL EASEMENTS, COVENANTS & RESTRICTIONS REFERENCED IN SAID TITLE COMMITMENT OR APPARENT FROM A PHYSICAL INSPECTION OF THE SITE OR OTHERWISE KNOWN TO ME HAVE BEEN PLOTTED HEREON OR OTHERWISE NOTED AS TO THEIR EFFECT ON THE SUBJECT PROPERTY.

SOME OF THE EXISTING WATER, SEWER, ELECTRIC, GAS, & TELEPHONE UTILITIES ARE LOCATED IN PUBLIC RIGHT OF WAY OR IN THE PUBLIC UTILITY CORRIDOR, APPROXIMATE LOCATION AS MARKED BY MISSOURI ONE-CALL ARE SHOWN HEREON. MO ONE-CALL TICKET# 260053187, 260053189, 260161744. NO ADDITIONAL UTILITY MAPS WERE PROVIDED TO THE SURVEYOR.

RECENT EARTHWORK WAS OBSERVED ON THE PROPERTY. (SHOWN HEREON)

NO CHANGES IN STREET RIGHTS OF WAY LINES ARE PROPOSED BY THE CONTROLLING JURISDICTION TO OUR KNOWLEDGE, AND NO EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS WERE OBSERVED.

THERE WERE NO OBSERVED PERMANENT BUILDINGS/STRUCTURES ON THE SUBJECT TRACT.

THERE WERE NO OBSERVED PARKING STALLS ON THE SUBJECT TRACT.

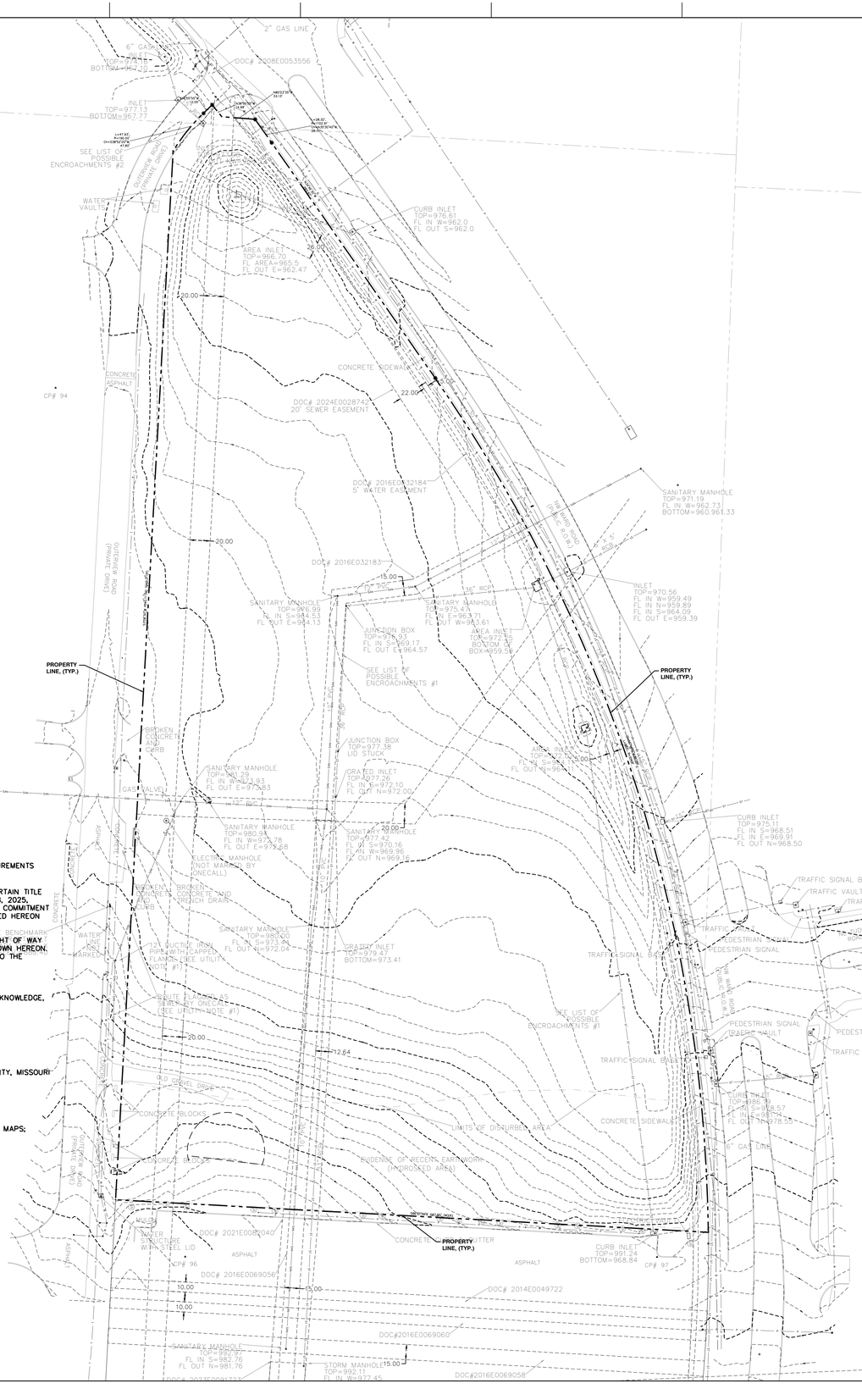
THE PHYSICAL ADDRESS FOR THIS SITE IS 900 NW WARD ROAD, LEE'S SUMMIT, JACKSON COUNTY, MISSOURI.

THE NAMES OF ADJOINING OWNERS ARE PER CURRENT TAX RECORDS FOUND ONLINE ON THE JACKSON COUNTY, MISSOURI GIS MAP.

PROFESSIONAL LIABILITY INSURANCE WILL BE PROVIDED UPON REQUEST.

FLOOD PLAIN NOTE:

NO PART OF THIS TRACT IS LOCATED IN THE 100 YEAR FLOOD PLAIN AS SHOWN BY THE FIRM FLOOD PLAIN MAPS; COMMUNITY-PANEL# 29095C0417G. DATED JANUARY 20, 2017.



SCHEDULE B-SECTION II SPECIAL EXCEPTIONS:

1. NOT SURVEY RELATED.
2. NOT SURVEY RELATED.
3. NOT SURVEY RELATED.
4. NOT SURVEY RELATED.
5. NOT SURVEY RELATED.
6. NOT SURVEY RELATED.
7. NOT SURVEY RELATED.
8. COVENANTS AND RESTRICTIONS, TOGETHER WITH A RIGHT OF ACCESS IN FAVOR OF THE MISSOURI DEPARTMENT OF NATURAL RESOURCES, PURSUANT TO DECLARATION RECORDED APRIL 24, 2007 AS A DOCUMENT NO. 2007E0054314, (AFFECTS SUBJECT TRACT, RESTRICTIVE COVENANTS APPLY TO PARENT TRACT "DESENDORF ACRES" PRIOR TO THE PLATTING OF LOT 10A) AS AFFECTED BY THE CERTIFICATE OF COMPLETION RECORDED AUGUST 8, 2007 AS DOCUMENT NO. 2007E0104283. (NOT PLOTTABLE)
9. TERMS, PROVISIONS, COVENANTS, CONDITIONS, RESTRICTIONS, EASEMENTS, AND PROVISIONS FOR CREATION OF A PROPERTY OWNERS ASSOCIATION WITH THE POWER TO LEVY ASSESSMENTS, ESTABLISHED PURSUANT TO STORM WATER DRAINAGE AND DETENTION EASEMENT AGREEMENT RECORDED JUNE 5, 2007 AS DOCUMENT NO. 2007E0074477. (EASEMENT AREAS DESCRIBED ARE NOT LOCATED ON THE SUBJECT TRACT)
10. COVENANTS, EASEMENTS, AND RESTRICTIONS, INCLUDING ACTIVITY AND USE LIMITATIONS, PURSUANT TO CERTIFICATE OF COMPLETION RECORDED AUGUST 8, 2007 AS DOCUMENT NO. 2007E0104283. (NOT PLOTTABLE)
11. RIGHT OF WAY GRANTED TO THE CITY OF LEE'S SUMMIT, RECORDED MAY 16, 2008 AS DOCUMENT NO. 2008E0053556. (LOCATED NORTH OF THE SUBJECT TRACT, AFFECTS PROPERTY, PROVIDES ACCESS FROM WARD ROAD TO OUTERVIEW ROAD, DEPICTED HEREON)
12. TERMS AND PROVISIONS OF CITY OF LEE'S SUMMIT ORDINANCE 6622, ACCEPTING THE FINAL PLAT OF SUMMIT FAIR 2ND PLAT, LOTS 8, 10-14 & TRACT C, RECORDED AUGUST 7, 2008 AS DOCUMENT NO. 2008E0085123. (BLANKET IN NATURE, NOT PLOTTED, AFFECTS SUBJECT TRACT)
13. UTILITY EASEMENTS, SANITARY SEWER EASEMENT AND PROPOSED SIDEWALKS, ESTABLISHED BY THE PLAT RECORDED AUGUST 7, 2008 AS DOCUMENT NO. 2008E0085124, IN PLAT BOOK I-122, PAGE 1, EXCEPT THOSE EASEMENTS TERMINATED BY INSTRUMENTS RECORDED AS DOCUMENT NO. 2016E0069054; AND 2016E0069059. (DOCUMENT 2016E0069054 TERMINATES THE PRIVATE EASEMENT DESCRIBED IN DOCUMENT 2007E0106563, DOCUMENT 2016E0069059 TERMINATES THE PRIVATE EASEMENT DESCRIBED IN DOCUMENT 2007E0106564, THE EASEMENTS DEPICTED ON THE PLAT RECORDED AUGUST 7, 2008 AS DOCUMENT NUMBER 2008E0085124 APPEAR TO BE COEXTENSIVE WITH THE PREVIOUSLY IDENTIFIED TERMINATED EASEMENTS, THE PLAT LACKS SUFFICIENT DETAIL TO DISTINGUISH BETWEEN PREVIOUSLY TERMINATED EASEMENTS AND THOSE INTENDED FOR NEW PUBLIC DEDICATION. MAY AFFECT SUBJECT TRACT.
14. THE NON-EXCLUSIVE EASEMENT, IF ANY, TOGETHER WITH THE NON-EXCUSIVE RIGHTS FOR THE BENEFIT OF KC SUMMIT TECHNOLOGY LLC, A DELAWARE LIMITED LIABILITY COMPANY, DESCRIBED BY INSTRUMENT RECORDED AUGUST 14, 2007 AS DOCUMENT NO. 2007E0106562; SUBJECT TO TERMINATION OF SANITARY SEWER EASEMENT RECORDED JULY 28, 2016 AS DOCUMENT NO. 2016E0069055; AND FURTHER SUBJECT TO ANY APPURTENANCES AND OR FACILITIES LYING THEREIN. (EASEMENT HAS BEEN TERMINATED, DOES NOT AFFECT)
15. THE NON-EXCLUSIVE EASEMENT, IF ANY, TOGETHER WITH THE NON-EXCLUSIVE RIGHTS TO BENEFIT KC SUMMIT TECHNOLOGY LLC, A DELAWARE LIMITED LIABILITY COMPANY, DESCRIBED BY INSTRUMENT RECORDED AUGUST 14, 2007 AS DOCUMENT NO. 2007E0106563; SUBJECT TO THE TERMINATION OF ELECTRIC UTILITY EASEMENT RECORDED JUNE 28, 2016 AS DOCUMENT NO. 2016E0069054; AND FURTHER SUBJECT TO ANY APPURTENANCES AND OR FACILITIES LYING THEREIN. (EASEMENT HAS BEEN TERMINATED, DOES NOT AFFECT)
16. SANITARY SEWER EASEMENT GRANTED TO THE CITY OF LEE'S SUMMIT, RECORDED APRIL 13, 2016 AS DOCUMENT NO. 2016E0032183. (AFFECTS SUBJECT TRACT, SHOWN HEREON)
17. WATER LINE EASEMENT GRANTED TO THE CITY OF LEE'S SUMMIT, RECORDED APRIL 13, 2016 AS DOCUMENT NO. 2016E0032184. (AFFECTS SUBJECT TRACT, SHOWN HEREON)
18. AN EASEMENT GRANTED TO THE CITY OF LEE'S SUMMIT, MISSOURI, DESCRIBED BY INSTRUMENT RECORDED JULY 28, 2016 AS DOCUMENT NO. 2016E0069056; SUBJECT TO ORDINANCE NO. 9787 OF PARTIAL VACATION, RECORDED NOVEMBER 20, 2023 AS DOCUMENT NO. 2023E0091723. (AFFECTS SUBJECT TRACT, SHOWN HEREON, VACATED PORTION LIES SOUTH OF LOT 10A)
19. AN EASEMENT GRANTED TO THE CITY OF LEE'S SUMMIT, MISSOURI, DESCRIBED BY INSTRUMENT RECORDED JULY 28, 2016 AS DOCUMENT NO. 2016E0069058; SUBJECT TO FIRST AMENDMENT RECORDED NOVEMBER 13, 2017 AS DOCUMENT NO. 2017E0102347. (DOES NOT AFFECT SUBJECT TRACT, LIES SOUTH OF LOT 10A)
20. AN EASEMENT GRANTED TO KANSAS CITY POWER & LIGHT COMPANY RECORDED JULY 8, 2016 AS DOCUMENT NO. 2016E0069060; SUBJECT TO FIRST AMENDMENT TO EASEMENT RECORDED MAY 9, 2017 AS DOCUMENT NO. 2017E0040340. (DOES NOT AFFECT SUBJECT TRACT, LIES SOUTH OF LOT 10A)
21. THE NON-EASEMENT, IF ANY, TOGETHER WITH THE NON-EXCLUSIVE RIGHTS GRANTED BY TOWNSEND SUMMIT, LLC, TO SAINT LUKE'S HEALTH SYSTEM, INC., DESCRIBED BY INSTRUMENT RECORDED FEBRUARY 23, 2017 AS DOCUMENT NO. 2017E0016699; SUBJECT TO THE FIRST AMENDMENT TO EASEMENT RECORDED JUNE 5, 2017 AS DOCUMENT NO. 2017E0049722. (DOES NOT AFFECT SUBJECT TRACT, LIES SOUTH OF LOT 10A)
22. AN EASEMENT GRANTED TO CITY OF LEE'S SUMMIT, MISSOURI, DESCRIBED BY INSTRUMENT RECORDED NOVEMBER 13, 2017 AS DOCUMENT NO. 2017E0102348. (DOES NOT AFFECT SUBJECT TRACT, LIES SOUTH OF LOT 10A)
23. TERMS AND PROVISIONS OF THE SUMMIT ORCHARDS CID COOPERATIVE AGREEMENT, INCLUDING BY NOT LIMITED TO ANY ASSESSMENTS, AND OR LIENS, NOTICE OF WHICH IS PROVIDED BY THE MEMORANDUM RECORDED JULY 8, 2019 AS DOCUMENT NO. 2019E0021682. (AFFECTS SUBJECT TRACT, BLANKET IN NATURE, NOT PLOTTED)
24. AN EASEMENT GRANTED TO THE CITY OF LEE'S SUMMIT, MISSOURI DESCRIBED BY INSTRUMENT RECORDED SEPTEMBER 29, 2021 AS DOCUMENT NO. 2021E0082040; SUBJECT TO ORDINANCE NO. 9787 OF PARTIAL VACATION, RECORDED NOVEMBER 20, 2023 AS DOCUMENT NO. 2023E0091723. (AFFECTS SUBJECT TRACT SHOWN HEREON, VACATED PORTION LIES SOUTH OF LOT 10A)
25. AN EASEMENT GRANTED TO THE CITY OF LEE'S SUMMIT, MISSOURI DESCRIBED BY INSTRUMENT RECORDED SEPTEMBER 29, 2021 AS DOCUMENT NO. 2021E0107450. (AFFECTS SUBJECT TRACT, SHOWN HEREON, THIS EASEMENT IS NOT VACATED BY PARTIAL VACATION ORDINANCE NO. 9798, DOC NO. 2023E0091723 AS MENTIONED IN EXCEPTION 18 AND 24)
26. BUILDING LINES, RESTRICTIONS, UTILITY, DRAINAGE, STORM SEWER, SANITARY SEWER, AND WATERLINE EASEMENTS SHOWN ON THE PLAT RECORDED JANUARY 10, 2023 AS DOCUMENT NO. 2023E0001734 IN BOOK 208 AT PAGE 26; SUBJECT TO ORDINANCE NO. 9847, PROVIDING A NEW PERMANENT EASEMENT; AND PROVIDING NOTICE OF ELECTRIC EASEMENT GRANTED TO MISSOURI PUBLIC SERVICE COMPANY, AND GAS EASEMENT GRANTED TO THE GAS SERVICE COMPANY, AND FURTHER VACATING WATER SYSTEM EASEMENT RECORDED IN BOOK I-1154 AT PAGE 1961, SAID ORDINANCE RECORDED MARCH 11, 2024 AS DOCUMENT NO. 2024E0014842. (THE PLAT RECORDED IN BOOK 208, PAGE 26 CREATES LOT 10A, AFFECTS SUBJECT TRACT, SHOWN HEREON, THE VACATED EASEMENT DESCRIBED IN DOCUMENT NUMBER 2024E0014842 LIES SOUTH OF SUBJECT TRACT, NOT PLOTTED)
27. TERMS AND PROVISIONS OF THE SUMMIT ORCHARDS COMMUNITY IMPROVEMENT DISTRICT AND COOPERATIVE AGREEMENT, NOTICE OF WHICH IS GIVEN BY MEMORANDUM THEREOF RECORDED JULY 8, 2019 AS DOCUMENT NO. 2019E0051682. (AFFECTS SUBJECT TRACT, BLANKET IN NATURE, NOT PLOTTED)
28. AN EASEMENT GRANTED TO THE CITY OF LEE'S SUMMIT, MISSOURI, DESCRIBED BY INSTRUMENT RECORDED MAY 9, 2024 AS DOCUMENT NO. 2024E0028742. (AFFECTS SUBJECT TRACT, SHOWN HEREON)
29. NOT SURVEY RELATED.
30. NOT SURVEY RELATED.

TO:

TOWNSEND CAPITAL LLC, A MISSOURI LIMITED LIMITED LIABILITY COMPANY, CHICAGO TITLE INSURANCE COMPANY, THEIR SUCCESSORS AND ASSIGNS;

THAT I MADE AN ON THE GROUND SURVEY PER RECORD DESCRIPTION OF THE LAND SHOWN HEREON LOCATED IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY SECTION 36, TOWNSHIP 48 NORTH, RANGE 32 WEST ON THIS 14TH DAY OF JANUARY, LAND TITLE SURVEY, AS DEFINED IN THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS.

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS IN 2016, AND INCLUDES ITEMS 1, 2, 3, 4, 5, 6A, 6B, 8, 11A, 11B, 13, & 16 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON JANUARY 14, 2026.

ANTHONY DERBOVEN, P.L.S. 2016019005
DATE FEBRUARY 04, 2026

60 30 0 60
SCALE IN FEET

SAL
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Kansas City, Missouri • Omaha, Nebraska
888-756-1958
slaggie.com

NOT FOR CONSTRUCTION

The Rush Funplex
New Entertainment Center

Lot 10A - Summit Orchards West
Lee's Summit, MO

#	Revisions:

Project #: 251203-C

Preliminary Development Plan

13 March 2026

EXISTING CONDITIONS

C100

U:\2025\25-194\01-DWGs\C100 - EXISTING CONDITIONS.dwg Plotted: Apr 10, 2026 - 9:03am by chamman

LEGEND:

- NEW ASPHALT PAVEMENT (DRIVES) RE: --/C--
- NEW ASPHALT PAVEMENT (AISLES) RE: --/C--
- NEW PORTLAND CEMENT CONCRETE PAVEMENT RE: --/C--
- NEW TYPE CG-1 CURB & GUTTER RE: --/C--
- OPEN SPACE

LOT NOTES:

TOTAL LOT AREA = 438938 SF (10.08 AC)

LOT 1 AREA = 262105 SF (6.02 AC)
LOT 2 AREA = 89202 SF (2.05 AC)
LOT 3 AREA = 87625 SF (2.01 AC)
LOT 1 FLOOR AREA RATIO: = .29
LOT 2 FLOOR AREA RATIO: = .15
LOT 3 FLOOR AREA RATIO: = .13

THERE ARE NO ACTIVE, INACTIVE, OR CAPPED OIL NOR GAS WELLS LOCATED ON THE PROPERTY, PER MODNR GIS INFO.

ALL NEIGHBORING SITES WITHIN 185' ARE DESIGNATED PMIX ZONING AND ACTIVITY CENTER SUMMIT LAND USE PER LS GIS.

FDP WILL COMPLY WITH NOTE 14 OF CITY COMMENTS REGARDING SITE LIGHTING.

PARKING NOTES:

PARKING WILL BE DESIGNATED "SHARED" WITH CROSS USE EASEMENT(S)
REQUIRED STANDARD SPACES = 256
PROVIDED STANDARD SPACES = 306
REQUIRED ADA SPACES = 11
PROVIDED ADA SPACES = 12
TOTAL STALLS = 318

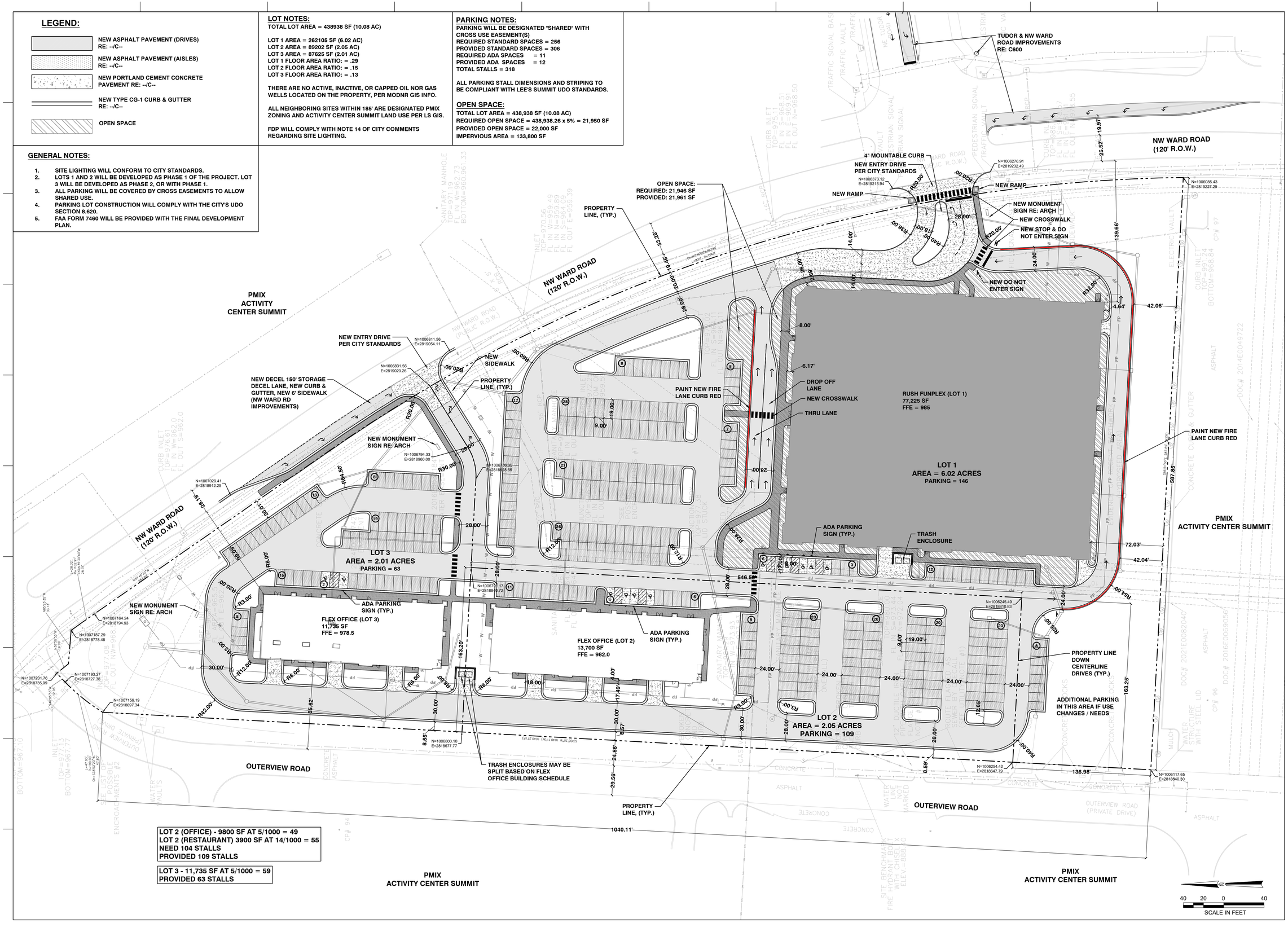
ALL PARKING STALL DIMENSIONS AND STRIPING TO BE COMPLIANT WITH LEE'S SUMMIT UDO STANDARDS.

OPEN SPACE:

TOTAL LOT AREA = 438,938 SF (10.08 AC)
REQUIRED OPEN SPACE = 438,938.26 x 5% = 21,950 SF
PROVIDED OPEN SPACE = 22,000 SF
IMPERVIOUS AREA = 133,800 SF

GENERAL NOTES:

1. SITE LIGHTING WILL CONFORM TO CITY STANDARDS.
2. LOTS 1 AND 2 WILL BE DEVELOPED AS PHASE 1 OF THE PROJECT. LOT 3 WILL BE DEVELOPED AS PHASE 2, OR WITH PHASE 1.
3. ALL PARKING WILL BE COVERED BY CROSS EASEMENTS TO ALLOW SHARED USE.
4. PARKING LOT CONSTRUCTION WILL COMPLY WITH THE CITY'S UDO SECTION 8.620.
5. FAA FORM 7460 WILL BE PROVIDED WITH THE FINAL DEVELOPMENT PLAN.



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NOT FOR CONSTRUCTION

The Rush Funplex
New Entertainment Center

Lot 10A - Summit Orchards West
Lee's Summit, MO

#	Revisions:

Project #: 251203-C

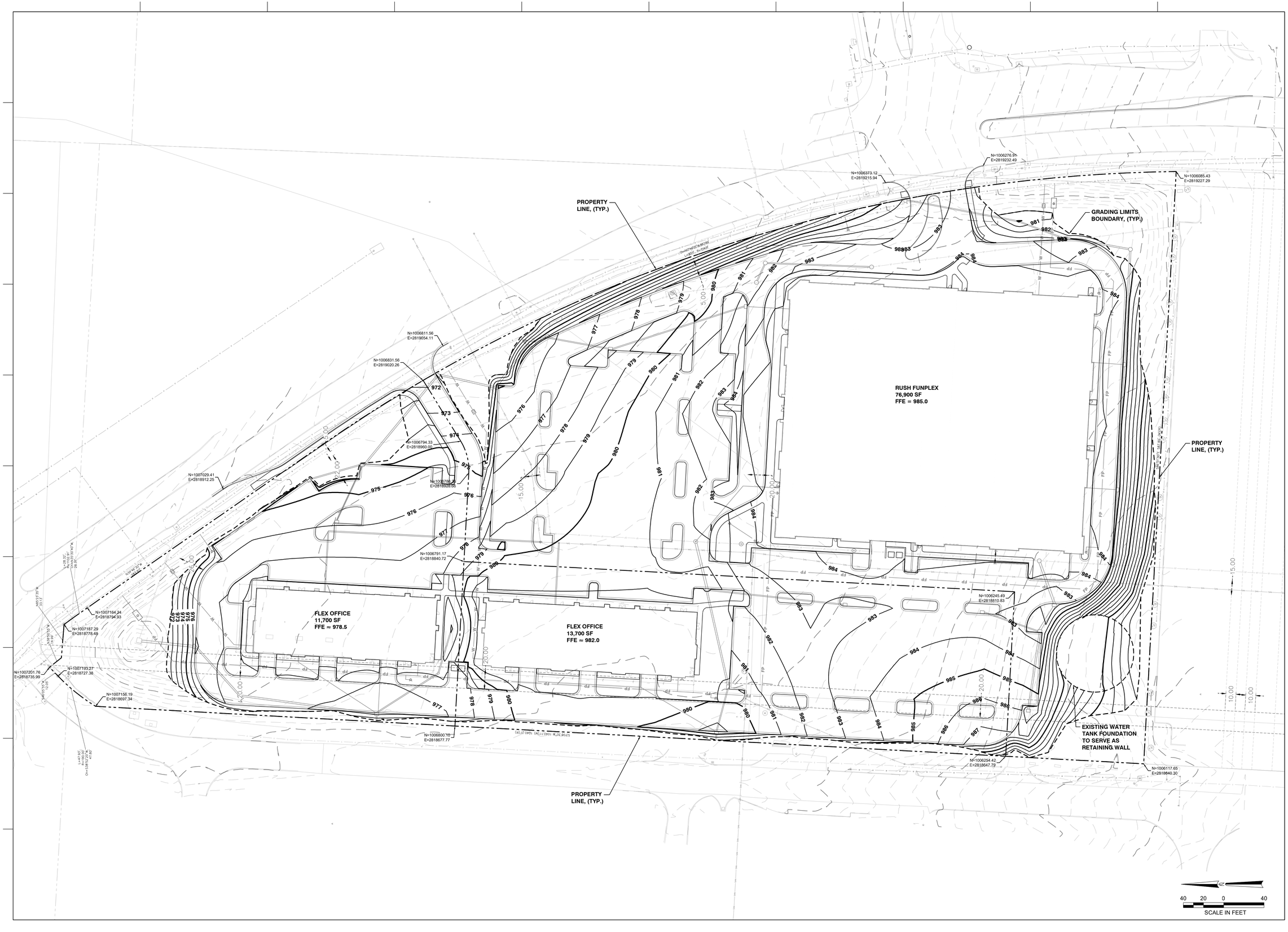
Preliminary Development Plan

13 March 2026

SITE LAYOUT PLAN

C200

U:\2025\25-194\01-DWGs\C200 - SITE LAYOUT PLAN.dwg Plotted: Apr 13, 2026 - 3:10pm by chamman



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SITE GRADING PLAN

C300

U:\2025\25-194\01-DWGs\C300-GRADING PLAN.dwg Plotted: Apr 10, 2026 - 9:03am by chammon

LEGEND

- W — W — PROPOSED DOMESTIC WATER LINE
- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER
- FP — FP — PROPOSED FIRE PROTECTION LINE
- E — PROPOSED ELECTRICAL
- UD — UD — PROPOSED UNDERDRAIN

STANDARD ABBREVIATIONS:

JB	JUNCTION BOX
CI	CURB INLET
AI	AREA INLET
RD	ROOF DRAIN
EX	EXISTING STRUCTURE
MH	MANHOLE
CO	CLEANOUT
FH	FIRE HYDRANT
WM	WATER METER
BFP	BACKFLOW PREVENTER
FDC	FIRE DEPARTEMENT CONNECTION

PROPERTY LINE, (TYP.)

N=1006373.12
E=2819215.94

N=1006276.91
E=2819232.49

N=1006085.43
E=2819227.29

NW WARD ROAD
(PUBLIC R.O.W.)

RUSH FUNPLEX
76,900 SF
FFE = 985.0

20.00' SAN EASEMENT
UTIL ABANDONED

N=1006811.56
E=2819054.11

N=1006831.56
E=2819020.26

N=1006794.33
E=2818960.00

N=1006786.35
E=2818928.66

15.00' SAN EASEMENT

N=1007029.41
E=2818912.25

PROP SAN MAIN

SAN WYE CONNECTION

EX SAN MAIN

15.00' SAN EASEMENT

PROP FIRE PROTECTION LINE

FLEX OFFICE
11,700 SF
FFE ≈ 978.5

20.00' EASEMENT
UTILITY ABANDONED

FLEX OFFICE
13,700 SF
FFE ≈ 982.0

20.00' SAN EASEMENT
W/ PRIVATE LINE

20.00' EASEMENT
UTILITY ABANDONED

N=1007164.24
E=2818794.93

N=1007187.29
E=2818778.48

N=1007193.27
E=2818727.38

N=1007201.76
E=2818735.99

N=1007156.19
E=2818697.34

N=1006791.17
E=2818840.72

N=1006800.10
E=2818677.77

N=1006245.49
E=2818810.83

N=1006254.42
E=2818647.79

N=1006117.65
E=2818640.30

VAR. ±13.82' STORM EASEMENT

PROPERTY LINE, (TYP.)

OUTERVIEW ROAD
(PRIVATE DRIVE)

PROPERTY LINE, (TYP.)

SCALE IN FEET
40 20 0 40

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SITE UTILITY PLAN

C400

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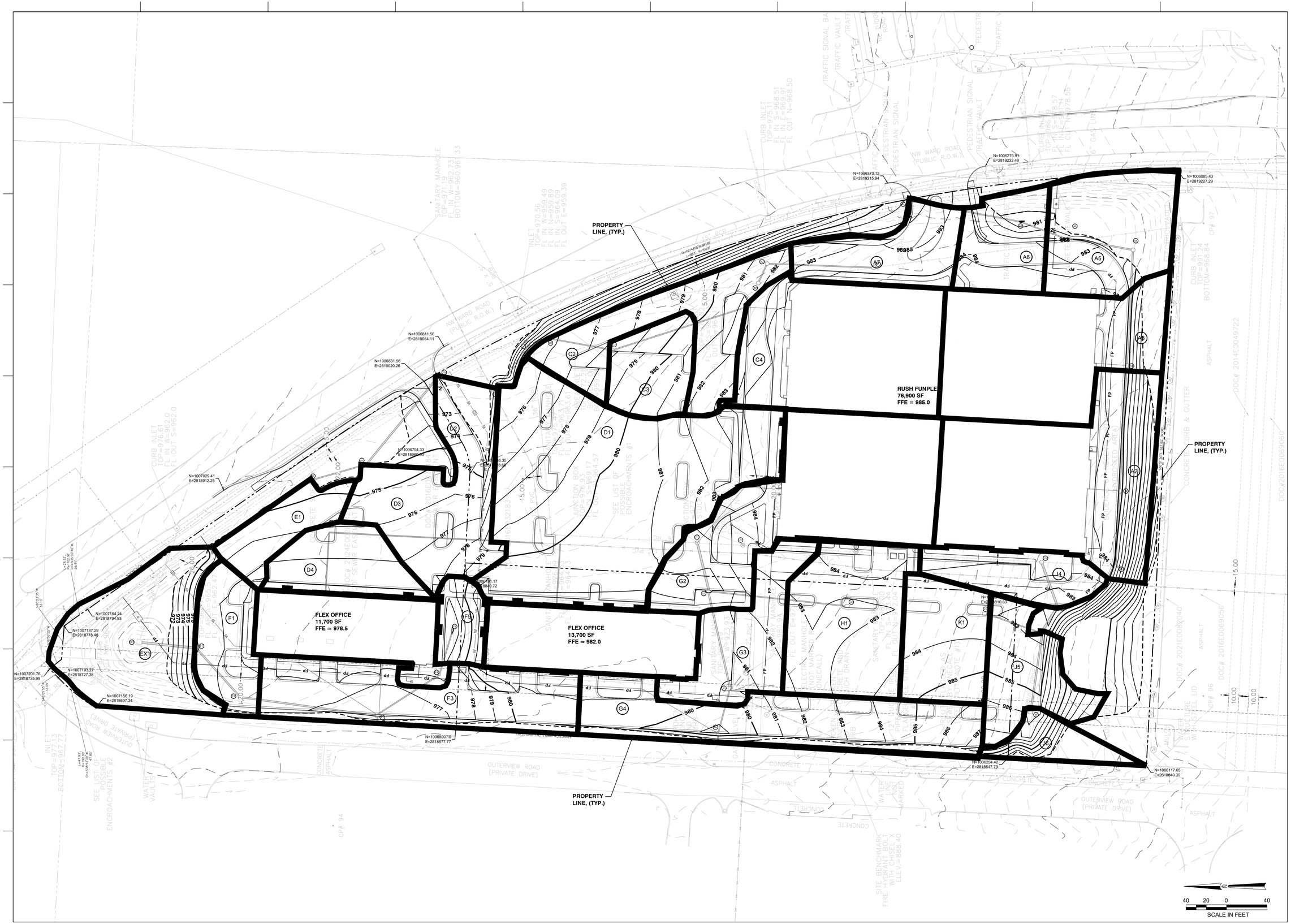

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DRAINAGE AREA MAP

C500

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Sub Area	Total Sub Area (sf)	Total Sub Area (ac)
A7	9620.54	0.22
A6	8222.20	0.19
A5	14314.90	0.33
A3	25108.86	0.58
A2	31959.24	0.73
C4	25271.71	0.58
C3	7260.16	0.17
C2	14379.04	0.33
D4	8542.82	0.20
D3	12497.85	0.29
D2	5401.47	0.12
D1	46531.93	1.07
E1	5931.57	0.14
EX1	18289.11	0.42
F5	3855.33	0.09
F3	18416.62	0.42
F1	7943.32	0.18
G4	20497.95	0.47
G3	11522.62	0.26
G2	30379.50	0.70
H1	17374.76	0.40
J6	4170.60	0.10
J5	9399.39	0.22
J4	7605.44	0.17
K1	10049.32	0.23

Line	Cumulative Area (acres)	Time in Line	Length of Line	Cumulative C	Tc Cumulative (min)	I -10 (in/hr)	Q -10 (cfs)	Pipe Dia (inches)	Pipe n	Grade %	Capacity (cfs)
A7-A6	0.22	0.00	1.00	0.81	5.0	7.35	1.32	12	0.013	1.00	3.57
A6-A5	0.41	0.00	1.00	0.81	5.0	7.35	2.44	12	0.013	1.00	3.57
A5-A4	0.74	0.00	1.00	0.81	5.0	7.35	4.40	15	0.013	1.00	6.48
A4-A3	1.31	0.00	1.00	0.81	5.0	7.35	7.83	18	0.013	1.00	10.53
A3-A2	0.73	0.00	1.00	0.81	5.0	7.35	4.37	18	0.013	1.00	10.53
A2-A1	0.73	0.00	1.00	0.81	5.0	7.35	4.37	18	0.013	1.00	10.53
B3-B2	0.00	0.00	1.00	0.81	5.0	7.35	0.00	12	0.013	1.00	3.57
B2-B1	0.00	0.00	1.00	0.81	5.0	7.35	0.00	36	0.013	1.00	66.88
C4-C3	0.58	0.00	1.00	0.81	5.0	7.35	3.46	36	0.013	1.00	66.88
C3-C2	0.75	0.00	1.00	0.81	5.0	7.35	4.45	18	0.013	1.00	10.53
C2-C1	1.08	0.00	1.00	0.81	5.0	7.35	6.41	18	0.013	1.00	10.53
D4-D3	0.20	0.00	1.00	0.81	5.0	7.35	1.17	12	0.013	1.00	3.57
D3-D2	0.48	0.00	1.00	0.81	5.0	7.35	2.88	12	0.013	1.00	3.57
D2-D1	0.61	0.00	1.00	0.81	5.0	7.35	3.62	15	0.013	1.00	6.48
D1-C1	1.68	0.00	1.00	0.81	5.0	7.35	9.98	18	0.013	1.00	10.53
F5-F4	0.09	0.00	1.00	0.81	5.0	7.35	0.53	18	0.013	1.00	10.53
F4-F3	0.09	0.00	1.00	0.81	5.0	7.35	0.53	18	0.013	1.00	10.53
F3-F2	0.51	0.00	1.00	0.81	5.0	7.35	3.05	18	0.013	1.00	10.53
F2-F1	0.69	0.00	1.00	0.81	5.0	7.35	4.13	18	0.013	1.00	10.53
F1-EX1	1.11	0.00	1.00	0.81	5.0	7.35	6.63	18	0.013	1.00	10.53
G4-G3	0.47	0.00	1.00	0.81	5.0	7.35	2.80	12	0.013	1.00	3.57
G3-G2	0.74	0.00	1.00	0.81	5.0	7.35	4.38	15	0.013	1.00	6.48
G2-G1	1.43	0.00	1.00	0.81	5.0	7.35	8.53	18	0.013	1.00	10.53
J6-J5	0.10	0.00	1.00	0.81	5.0	7.35	0.57	12	0.013	1.00	3.57
K1-J5	0.23	0.00	1.00	0.81	5.0	7.35	1.37	12	0.013	1.00	3.57
J5-J4	0.54	0.00	1.00	0.81	5.0	7.35	3.23	12	0.013	1.00	3.57
J4-J3	0.72	0.00	1.00	0.81	5.0	7.35	4.27	15	0.013	1.00	6.48
A1-J3	0.73	0.00	1.00	0.81	5.0	7.35	4.37	15	0.013	1.00	6.48
J3-J2	0.73	0.00	1.00	0.81	5.0	7.35	4.37	15	0.013	1.00	6.48
J2-J1	0.73	0.00	1.00	0.81	5.0	7.35	4.37	15	0.013	1.00	6.48
J1-G1	0.73	0.00	1.00	0.81	5.0	7.35	4.37	15	0.013	1.59	8.17

SUB Area	Total Sub Area sf	Total Sub Area acres	Pervious Area sf	Impervious Area sf	Pervious Area acres	Impervious Area acres	Impervious %	Pervious %	Composite C	Composite CN
EXISTING	443271	10.18	443271	0	10.18	0.00	0.00	100.00	0.30	74.0
PROPOSED	443271	10.18	163399	279872	3.75	6.42	63.14	36.86	0.68	89.2

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DRAINAGE CALCULATIONS

C501

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LEGEND:

- NEW ASPHALT PAVEMENT (DRIVES) RE: --/C--
- NEW ASPHALT PAVEMENT (AISLES) RE: --/C--
- NEW PORTLAND CEMENT CONCRETE PAVEMENT RE: --/C--
- NEW TYPE CG-1 CURB & GUTTER RE: --/C--

GENERAL NOTES:

1. TRAFFIC SIGNAL DESIGN SHALL CONFORM TO THE CITY OF LEE'S SUMMIT STANDARDS.
2. SCOPE SHALL CONFORM TO THE APPROVED TRAFFIC IMPACT STUDY AND INCLUDES NEW SIGNAL POLE (SE CORNER), NEW SIGNAL HEAD (WESTBOUND TUDOR), REVISED STRIPING INCLUDING NEW CROSSWALK (WEST SIDE), AND PEDESTRIAN SIGNALS / CONTROLS FOR THE ADDED INTERSECTION LEG.

RELOCATE EXISTING STREET LIGHT TO CENTER OF REDUCED MEDIAN

TUDOR ROAD (110' R.O.W.)

250.00'

RELOCATE EXISTING STREET LIGHT TO CENTER OF REDUCED MEDIAN

PAVE REMAINING MEDIAN PER CITY STANDARDS

RELOCATE EXISTING STREET LIGHT TO CENTER OF REDUCED MEDIAN

CONSTRUCT TRAFFIC SIGNAL POLE FOR NEW EASTBOUND TRAFFIC MOVEMENT

PAINT EXISTING "U" PAVEMENT MARKINGS BLACK. PAINT NEW LEFT TURN ARROWS PER LS STANDARDS.

14.00'

INCREASE LANE STORAGE FROM 100' TO 200' WITH NEW TAPER

13.00'

NW WARD ROAD (120' R.O.W.)

ADJUST TRAFFIC SIGNAL HEADS AS NEEDED. ADD LEFT-TURN SIGNAL HEAD ON EXISTING MAST ARM. ADD PEDESTRIAN SIGNAL EQUIPMENT FOR NEW PEDESTRIAN CROSSING.

PROPERTY LINE, (TYP.)

NW WARD ROAD (120' R.O.W.)

30 15 0 30
SCALE IN FEET

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NW WARD & TUDOR PUBLIC IMPROVEMENTS

C600

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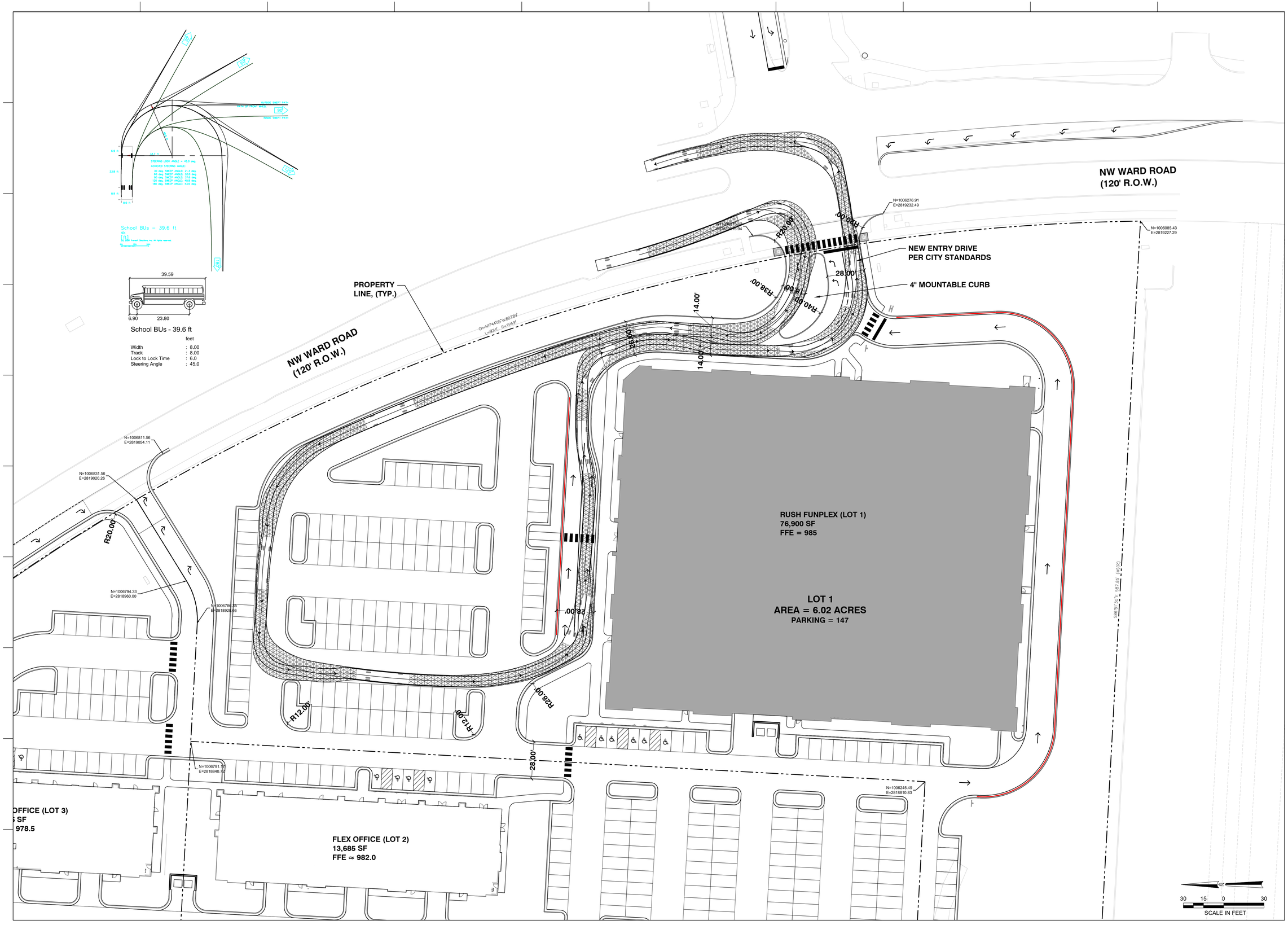

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BUS TURN STUDY

C700

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LEE'S SUMMIT LANDSCAPE REQUIREMENTS

STREET FRONTAGE LANDSCAPING

CODE REQUIREMENT	
	PER SEC. 8.790-A(1-3) 1 TREE SHALL BE PLANTED FOR EACH 30 FT OF STREET FRONTAGE, PUBLIC OR PRIVATE, WITHIN THE LANDSCAPED SETBACK ABUTTING SAID STREET FRONTAGE. 1 SHRUB SHALL BE PROVIDED FOR EACH 20 FEET OF STREET FRONTAGE, OR PORTION THEREOF, WITHIN THE LANDSCAPED SETBACK ABUTTING SUCH FRONTAGE. SUCH SHRUBS MAY BE CLUSTERED OR ARRANGED WITHIN THE SETBACK.

REQUIREMENT AREA	CALCULATION	PLANTING REQUIRED	PLANTING PROVIDED
1,100 LF OUTERVIEW RD FRONTAGE	1,100 / 30 = 37 1,100 / 20 = 55	37 TREES & 55 SHRUBS	37 TREES & 56 SHRUBS
1,213 LF NW WARD RD FRONTAGE	1,213 / 30 = 41 1,213 / 20 = 61	41 TREES & 61 SHRUBS	32 TREES & 113 SHRUBS (TREE PLACEMENT ALONG NW WARD RD LIMITED DUE TO PRESENSE OF UNDERGROUND UTILITIES & UTILITY EASEMENTS. ADDITIONAL TREES PROVIDED WITHIN OPEN YARD AREAS.

OPEN YARD AREAS

CODE REQUIREMENT	
	PER SEC. 8.790-B(1-3) PROVIDE TWO SHRUBS PER 5,000 SQUARE FEET OF TOTAL LOT AREA- EXCLUDING BUILDING FOOTPRINT AREA. ALL PORTIONS OF THE SITE NOT COVERED WITH PAVING OR BUILDINGS SHALL BE LANDSCAPED. OPEN AREAS NOT COVERED WITH OTHER MATERIALS SHALL BE COVERED WITH SOD. GROUND COVER SHALL BE UTILIZED ON ALL SLOPES IN EXCESS OF 3:1 SLOPE. IN ADDITION TO THE TREES REQUIRED BASED UPON STREET FRONTAGE, ADDITIONAL TREES SHALL BE REQUIRED AT A RATIO OF 1 TREE FOR EVERY 5,000 SF OF LOT AREA NOT COVERED BY BUILDINGS/STRUCTURES.

REQUIREMENT AREA	CALCULATION	PLANTING REQUIRED	PLANTING PROVIDED
333,612 SF TOTAL LOT AREA (NOT INCLUDING BUILDING)	333,612 / 5,000 = 67 67 x 2 = 134 SHRUBS	67 TREES + 134 SHRUBS	86 TREES + 423 SHRUBS

INTERIOR PARKING LOT LANDSCAPING

CODE REQUIREMENT	
	PER SEC. 8.810 (A-C) LANDSCAPE ISLANDS, STRIPS OR OTHER PLANTING AREAS SHALL BE LOCATED WITHIN THE PARKING LOT AND SHALL CONSTITUTE AT LEAST FIVE PERCENT OF THE ENTIRE AREA DEVOTED TO PARKING SPACES, AISLES AND DRIVEWAYS. EVERY FOUR ROWS OF PARKING SHALL INCLUDE A LANDSCAPE ISLAND OF AT LEAST TEN FEET IN WIDTH,THE ISLAND SHALL BE PLANTED IN TREES, SHRUBS, GRASS, OR GROUND COVER, EXCEPT FOR THOSE AREAS THAT ARE MULCHED.

REQUIREMENT AREA	CALCULATION	PLANTING REQUIRED	PLANTING PROVIDED
163,659 SF INTERIOR PARKING LOT AREA	163,659 X .05 = 8,183	163,659 X .05 = 8,183 SF PARKING LOT ISLANDS	12,268 SF PARKING LOT ISLANDS

PARKING LOT SCREENING

CODE REQUIREMENT	
	PER SEC. 8.820 (A-C) PROVIDE A HEDGE BETWEEN THE EDGE OF THE PARKING LOT PARALLEL TO A STREET CONSISTING OF AT LEAST 12 SHRUBS PER 40 LF THAT WILL SPREAD INTO A CONTINUOUS VISUAL SCREEN WITHIN 2 GROWING SEASONS. SHRUBS MUST BE AT LEAST 18" TALL AT THE TIME OF PLANTING AND BE OF A SPECIES THAT WILL NORMALLY GROW TO AT LEAST 2.5' IN HT AT MATURITY AND BE SUITABLE FOR THE PARKING LOT APPLICATION. THE STREET-SIDE SCREENING TREATMENT MAY BE LOCATED WITHIN THE LANDSCAPE STRIP REQUIRED UNDER THIS DIVISION ALONG THE FRONT YARD OF THE PROPERTY.

REQUIREMENT AREA	CALCULATION	PLANTING REQUIRED	PLANTING PROVIDED
867 LF NW WARD RD PARKING LOT FRONTAGE	867 / 40 = 21.67 21.67 x 12 = 260	260 PARKING LOT SCREENING SHRUBS REQUIRED ALONG NW WARD RD	260 PARKING LOT SCREENING SHRUBS REQUIRED ALONG NW WARD RD

LANDSCAPE BUFFERS

CODE REQUIREMENT	
	PER SEC. 8.870 PROVIDE A LANDSCAPE BUFFER ALONG THE SOUTH AND EAST PROPERTY LINES ABUTTING OR SEPARATED BY A RIGHT OF WAY FROM RESIDENTIAL DISTRICTS. LANDSCAPE BUFFER SHALL BE CONSISTENT WITH THE APPROVED PLAN.

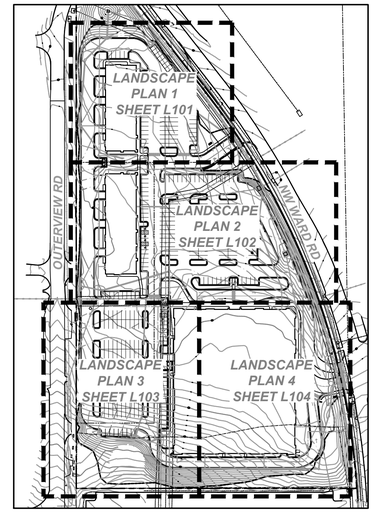
REQUIREMENT AREA	CALCULATION	PLANTING REQUIRED	PLANTING PROVIDED
PROVIDE LANDSCAPE BUFFER ALONG 588 LF SOUTH PROPERTY LINE AND SOUTHERN-MOST 216 LF OF EAST PROPERTY LINE.	N/A	LANDSCAPE BUFFER SHALL BE CONSISTENT WITH APPROVED SUMMIT ORCHARDS PLAN	20 SHADE TREES, 16 ORNAMENTAL TREES, 50 EVERGREEN TREES, 52 SHRUBS

PLANTING REQUIREMENTS

PLANT SIZE (PER LEE'S SUMMIT)	SIZE REQUIREMENT (AT TIME OF PLANTING)
TREES	
LARGE DECIDUOUS TREES	MINIMUM 2.5" CALIPER MEASURED AT 6" ABOVE THE GROUND OR TOP OF THE ROOT BALL
ORNAMENTAL TREES	MINIMUM 1.5" CALIPER MEASURED AT 6" ABOVE THE GROUND OR TOP OF THE ROOT BALL
EVERGREEN TREES	MINIMUM 8' HT.
SHRUBS	
MEDIUM SHRUBS	18- TO 24-INCH BALLED AND BURLAPPED OR TWO-GALLON CONTAINER
LARGE SHRUBS	24- TO 30-INCH BALLED AND BURLAPPED OR 5-GALLON CONTAINER
GROUNDCOVER	
GROUND COVER (ALL TYPES)	TWO AND ONE-HALF-INCH PEAT POT

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
EVERGREEN TREES					
	JC	Juniperus virginiana 'Canaerti'	Canaerti Juniper	8' Ht.	B&B
	JT	Juniperus virginiana 'Taylor'	Taylor Juniper	6'-8' ht.	B&B
	TA	Thuja occidentalis 'Wintergreen'	Wintergreen Arborvitae	6'-8' ht.	B&B
ORNAMENTAL TREES					
	CO	Cercis canadensis	Eastern Redbud	2" Cal.	B&B
	MS	Malus x 'Sutyzam'	Sugar Tyme® Crabapple	2" Cal.	B&B
SHADE TREES					
	AB	Acer saccharum 'Ballsta'	Fall Fiesta® Sugar Maple	2.5" Cal.	B&B
	PM	Platanus x acerifolia 'Morton Circle'	Exclamation!± London Plane Tree	2" Cal.	B&B
	QS	Quercus shumardii	Shumard Oak	2.5" Cal.	B&B
	QM	Quercus x 'Scarlet Letter'	Scarlet Letter Oak	2.5" Cal.	B&B
	TS	Tilia tomentosa 'Sterling'	Sterling Silver Linden	2.5" Cal.	B&B
	UC	Ulmus x 'Frontier'	Frontier Elm	2.5" Cal.	B&B
DECIDUOUS SHRUBS					
	DK	Diervilla x Kodiak Orange	Kodiak Orange Bush Honeysuckle	---	5 gal.
	FB	Fothergilla x intermedia 'Blue Shadow'	Blue Shadow Fothergilla	---	5 gal.
	HE	Hydrangea macrophylla 'Ballmer'	Endless Summer® The Original Hydrangea	---	5 gal.
	PL	Physocarpus opulifolius 'Little Devil'	Little Devil± Dwarf Ninebark	---	3 gal.
	PM2	Physocarpus opulifolius 'Mindia'	Coppertina® Ninebark	---	5 gal.
	RG	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	---	3 gal.
	RR	Rosa x 'Red Drift'	Red Drift Rose	---	3 gal.
	SM	Syringa meyeri 'Palibin'	Dwarf Korean Lilac	---	3 gal.
	VM	Viburnum dentatum 'Blue Muffin'	Blue Muffin Arrowwood Viburnum	---	3 gal.
	VD	Viburnum plicatum tomentosum 'Mariesii'	Marie Doubletile Viburnum	---	5 gal.
EVERGREEN SHRUBS					
	IS	Ilex glabra 'Shamrock'	Shamrock Inkberry Holly	---	5 gal.
	JF	Juniperus chinensis 'Sea Green'	Sea Green Juniper	---	5 gal.
	JG	Juniperus virginiana 'Grey Owl'	Grey Owl Juniper	---	5 gal.
	TH	Taxus x media 'Hicksii'	Hicks Yew	48" ht. min.	
ORNAMENTAL GRASSES					
	CK	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	---	1 gal.
	SS	Schizachyrium scoparium 'Standing Ovation'	Standing Ovation Little Bluestem	---	1 gal.
	ST	Sporobolus heterolepis 'Tara'	Tara Prairie Dropseed	---	1 gal.
PERENNIALS					
	LB	Liriope muscari 'Big Blue'	Big Blue Lilyturf	---	1 gal.
	NW	Nepeta x faassenii 'Walker's Low'	Walker's Low Catmint	---	2 gal.



KEY PLAN

SAL
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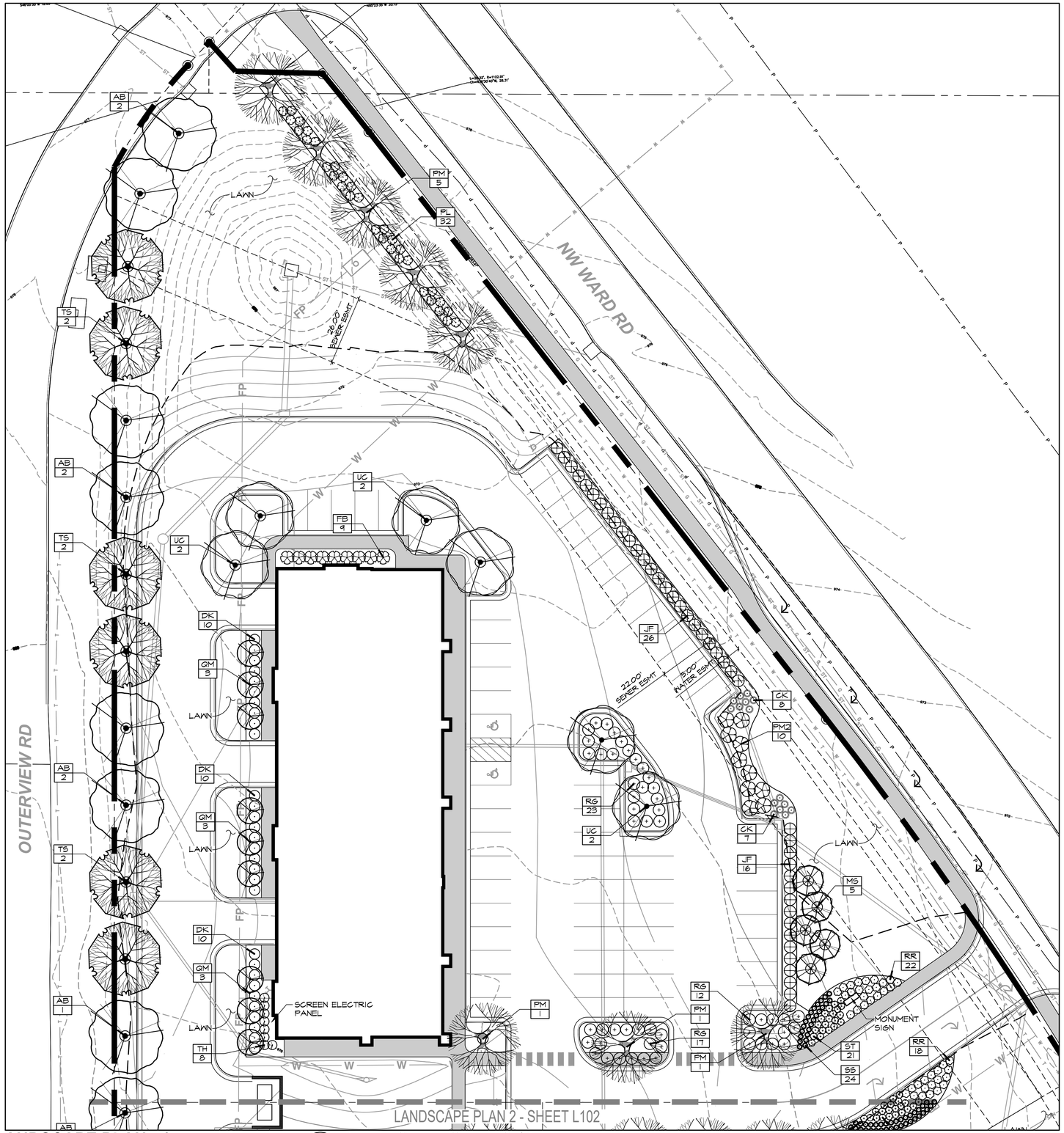
14 April 2026

LANDSCAPE SCHEDULES

L-100



LANDSCAPE PLAN - 1

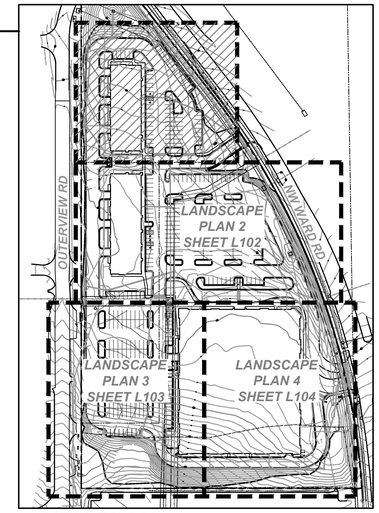
SCALE:1"=20'

0 20 20 60 feet

SCALE: 1" = 20'

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL / COMMON NAME
EVERGREEN TREES		
	JC	Juniperus virginiana 'Canaertii' Canaerti Juniper
	JT	Juniperus virginiana 'Taylor' Taylor Juniper
	TA	Thuja occidentalis 'Wintergreen' Wintergreen Arborvitae
ORNAMENTAL TREES		
	CO	Cercis canadensis Eastern Redbud
	MS	Malus x 'Sutyzam' Sugar Tyme® Crabapple
SHADE TREES		
	AB	Acer saccharum 'Ballsta' Fall Fiesta® Sugar Maple
	PM	Platanus x acerifolia 'Morton Circle' Exclamation!± London Plane Tree
	QS	Quercus shumardii Shumard Oak
	QM	Quercus x 'Scarlet Letter' Scarlet Letter Oak
	TS	Tilia tomentosa 'Sterling' Sterling Silver Linden
	UC	Ulmus x 'Frontier' Frontier Elm
DECIDUOUS SHRUBS		
	DK	Diervilla x Kodiak Orange Kodiak Orange Bush Honeysuckle
	FB	Fothergilla x intermedia 'Blue Shadow' Blue Shadow Fothergilla
	HE	Hydrangea macrophylla 'Ballmer' Endless Summer® The Original Hydrangea
	PL	Physocarpus opulifolius 'Little Devil' Little Devil± Dwarf Ninebark
	PM2	Physocarpus opulifolius 'Mindia' Coppertina® Ninebark
	RG	Rhus aromatica 'Gro-Low' Gro-Low Fragrant Sumac
	RR	Rosa x 'Red Drift' Red Drift Rose
	VM	Viburnum dentatum 'Blue Muffin' Blue Muffin Arrowwood Viburnum
	VD	Viburnum plicatum tomentosum 'Mariesii' Marie Doublefile Viburnum
EVERGREEN SHRUBS		
	IS	Ilex glabra 'Shamrock' Shamrock Inkberry Holly
	JF	Juniperus chinensis 'Sea Green' Sea Green Juniper
	JG	Juniperus virginiana 'Grey Owl' Grey Owl Juniper
	TH	Taxus x media 'Hicksii' Hicks Yew
ORNAMENTAL GRASSES		
	CK	Calamagrostis x acutiflora 'Karl Foerster' Karl Foerster Feather Reed Grass
	SS	Schizachyrium scoparium 'Standing Ovation' Standing Ovation Little Bluestem
	ST	Sporobolus heterolepis 'Tara' Tara Prairie Dropseed
PERENNIALS		
	LB	Liriope muscari 'Big Blue' Big Blue Lilyturf



KEY PLAN

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The Rush Funplex
New Entertainment Center

Lot 10A - Summit Orchards West
Lee's Summit, MO

#	Revisions:

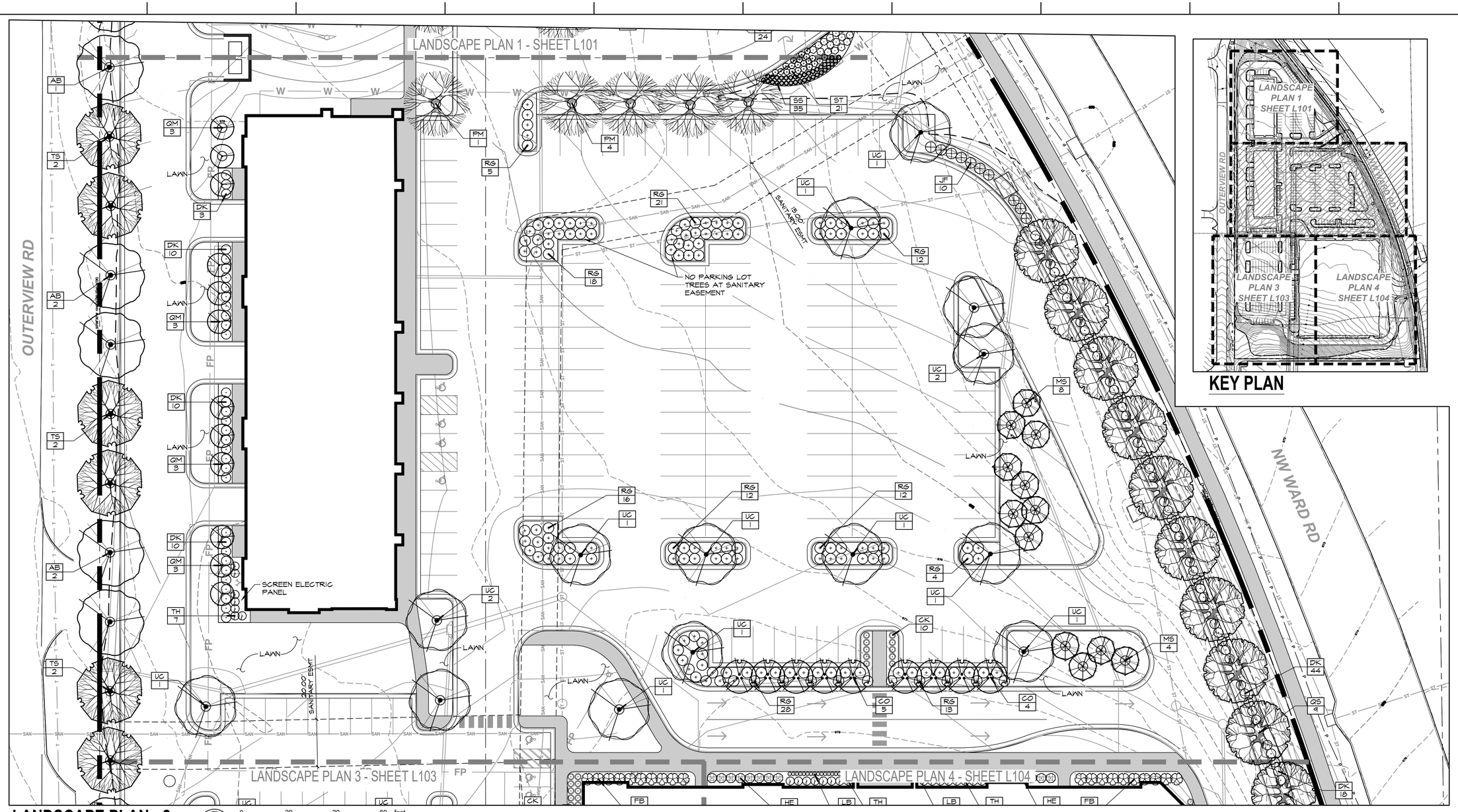
Project #: 251203-C

Preliminary Development Plan

14 April 2026

LANDSCAPE PLAN

L-101



KEY PLAN

LANDSCAPE PLAN - 2

SCALE: 1"=20'

0 20 20 60 feet

SCALE: 1" = 20'

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL / COMMON NAME
EVERGREEN TREES		
	JC	Juniperus virginiana 'Canaerti' Canaerti Juniper
	JT	Juniperus virginiana 'Taylor' Taylor Juniper
	TA	Thuja occidentalis 'Wintergreen' Wintergreen Arborvitae
ORNAMENTAL TREES		
	CO	Cercis canadensis Eastern Redbud
	MS	Malus x 'Sutyzam' Sugar Tyme® Crabapple
SHADE TREES		
	AB	Acer saccharum 'Ballsta' Fall Fiesta® Sugar Maple
	PM	Platanus x acerifolia 'Morton Circle' Exclamation!® London Plane Tree
	QS	Quercus shumardii Shumard Oak
	QM	Quercus x 'Scarlet Letter' Scarlet Letter Oak
	TS	Tilia tomentosa 'Sterling' Sterling Silver Linden
	UC	Ulmus x 'Frontier' Frontier Elm
DECIDUOUS SHRUBS		
	DK	Diervilla x Kodiak Orange Kodiak Orange Bush Honeysuckle
	FB	Fothergilla x intermedia 'Blue Shadow' Blue Shadow Fothergilla
	HE	Hydrangea macrophylla 'Ballmer' Endless Summer® The Original Hydrangea
	PL	Physocarpus opulifolius 'Little Devil' Little Devil® Dwarf Ninebark
	PM2	Physocarpus opulifolius 'Mindia' Coppertina® Ninebark
	RG	Rhus aromatica 'Gro-Low' Gro-Low Fragrant Sumac
	RR	Rosa x 'Red Drift' Red Drift Rose
	VM	Viburnum dentatum 'Blue Muffin' Blue Muffin Arrowwood Viburnum
	VD	Viburnum plicatum tomentosum 'Mariesii' Marie Doublefile Viburnum
EVERGREEN SHRUBS		
	IS	Ilex glabra 'Shamrock' Shamrock Inkberry Holly
	JF	Juniperus chinensis 'Sea Green' Sea Green Juniper
	JG	Juniperus virginiana 'Grey Owl' Grey Owl Juniper
	TH	Taxus x media 'Hicksii' Hicks Yew
ORNAMENTAL GRASSES		
	CK	Calamagrostis x acutiflora 'Karl Foerster' Karl Foerster Feather Reed Grass
	SS	Schizachyrium scoparium 'Standing Ovation' Standing Ovation Little Bluestem
	ST	Sporobolus heterolepis 'Tara' Tara Prairie Dropseed
PERENNIALS		
	LB	Liriope muscari 'Big Blue' Big Blue Lilyturf

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Lee's Summit, MO

#	Revisions:

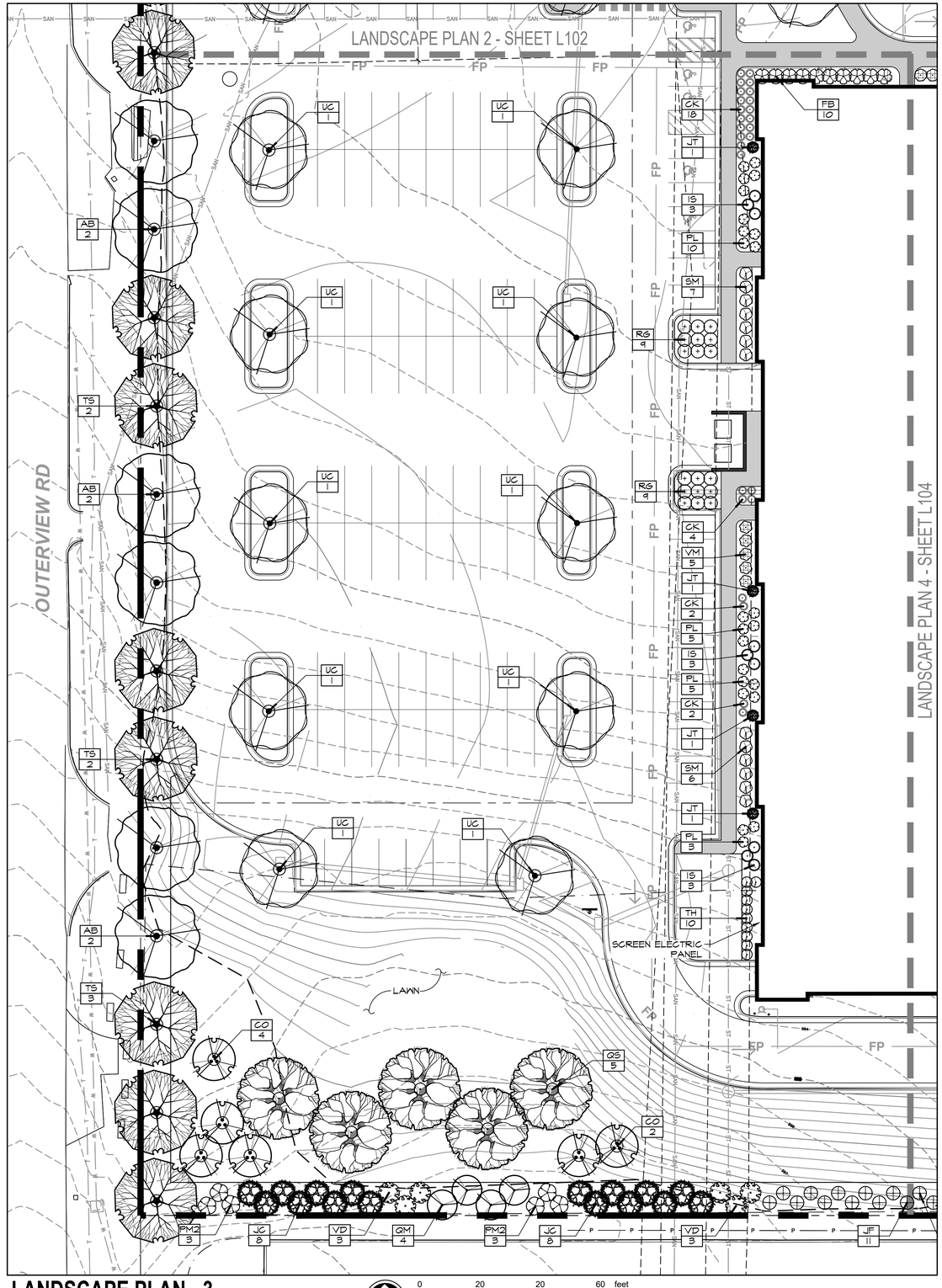
Project #: 251203-C

Preliminary Development Plan

14 April 2026

LANDSCAPE PLAN

L-102



LANDSCAPE PLAN - 3

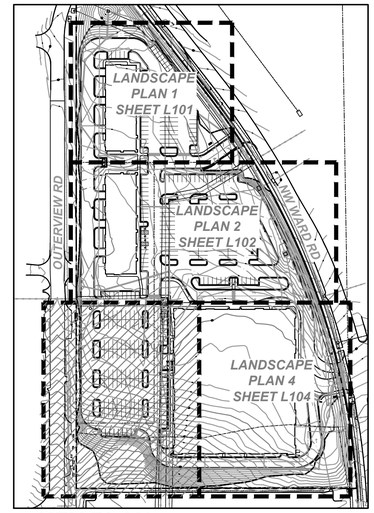
SCALE: 1"=20'

0 20 20 60 feet

SCALE: 1" = 20'

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL / COMMON NAME
EVERGREEN TREES		
	JC	Juniperus virginiana 'Canaertil' Canaerti Juniper
	JT	Juniperus virginiana 'Taylor' Taylor Juniper
	TA	Thuja occidentalis 'Wintergreen' Wintergreen Arborvitae
ORNAMENTAL TREES		
	CO	Cercis canadensis Eastern Redbud
	MS	Malus x 'Sutyzam' Sugar Tyme® Crabapple
SHADE TREES		
	AB	Acer saccharum 'Ballsta' Fall Fiesta® Sugar Maple
	PM	Platanus x acerifolia 'Morton Circle' Exclamation!‡ London Plane Tree
	QS	Quercus shumardii Shumard Oak
	QM	Quercus x 'Scarlet Letter' Scarlet Letter Oak
	TS	Tilia tomentosa 'Sterling' Sterling Silver Linden
	UC	Ulmus x 'Frontier' Frontier Elm
DECIDUOUS SHRUBS		
	DK	Diervilla x Kodiak Orange Kodiak Orange Bush Honeysuckle
	FB	Fothergilla x intermedia 'Blue Shadow' Blue Shadow Fothergilla
	HE	Hydrangea macrophylla 'Ballmer' Endless Summer® The Original Hydrangea
	PL	Physocarpus opulifolius 'Little Devil' Little Devil® Dwarf Ninebark
	PM2	Physocarpus opulifolius 'Mindia' Coppertina® Ninebark
	RG	Rhus aromatica 'Gro-Low' Gro-Low Fragrant Sumac
	RR	Rosa x 'Red Drift' Red Drift Rose
	VM	Viburnum dentatum 'Blue Muffin' Blue Muffin Arrowwood Viburnum
	VD	Viburnum plicatum tomentosum 'Mariesii' Mariesii Doubletile Viburnum
EVERGREEN SHRUBS		
	IS	Ilex glabra 'Shamrock' Shamrock Inkberry Holly
	JF	Juniperus chinensis 'Sea Green' Sea Green Juniper
	JG	Juniperus virginiana 'Grey Owl' Grey Owl Juniper
	TH	Taxus x media 'Hicksii' Hicks Yew
ORNAMENTAL GRASSES		
	CK	Calamagrostis x acutiflora 'Karl Foerster' Karl Foerster Feather Reed Grass
	SS	Schizachyrium scoparium 'Standing Ovation' Standing Ovation Little Bluestem
	ST	Sporobolus heterolepis 'Tara' Tara Prairie Dropseed
PERENNIALS		
	LB	Liriope muscari 'Big Blue' Big Blue Lilyturf



KEY PLAN

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#	Revisions:

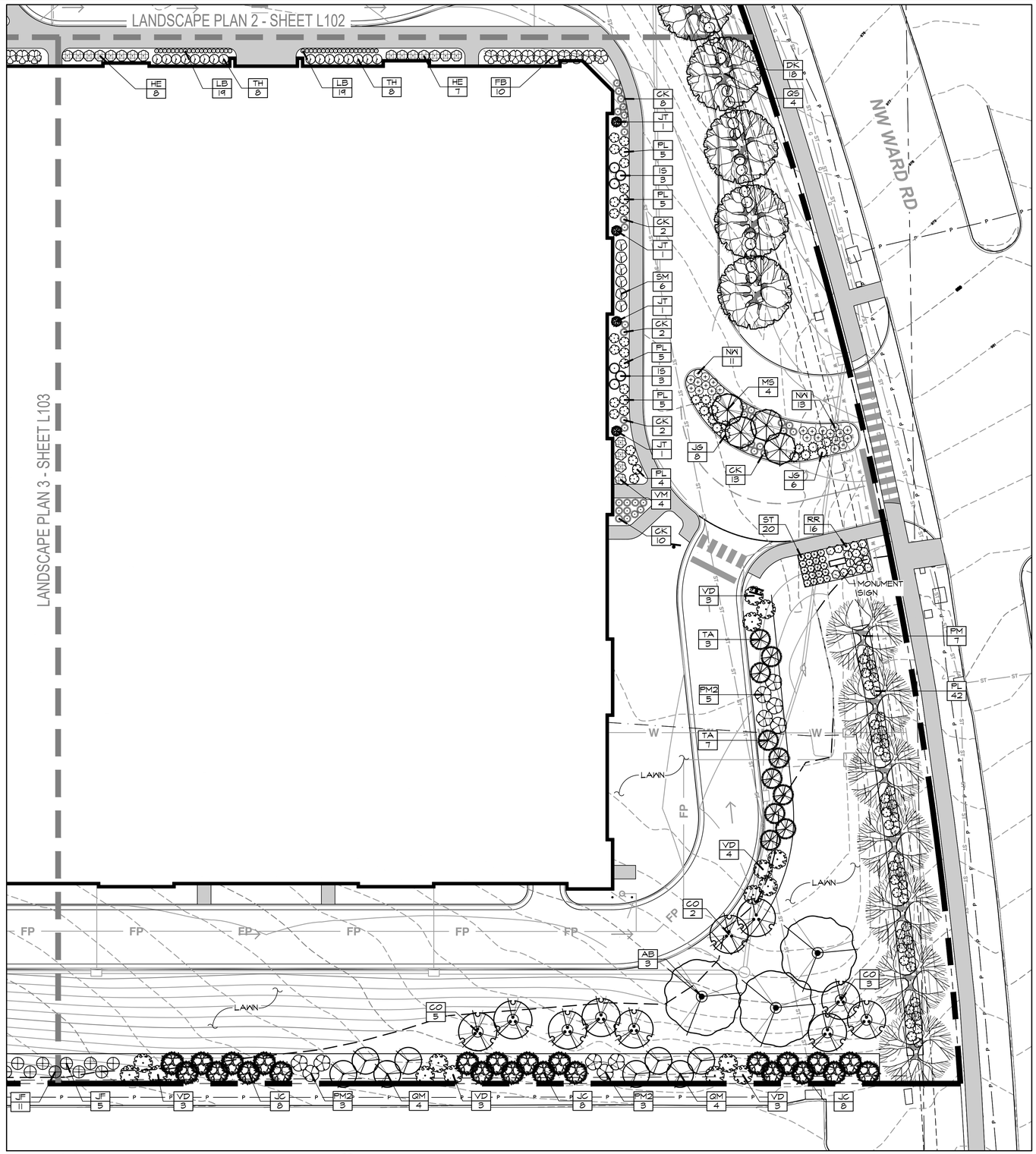
Project #: 251203-C

Preliminary Development Plan

14 April 2026

LANDSCAPE PLAN

L-103



LANDSCAPE PLAN - 4
SCALE: 1"=20'

0 20 20 60 feet
SCALE: 1" = 20'

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL / COMMON NAME
EVERGREEN TREES		
	JC	Juniperus virginiana 'Canaerti' Canaerti Juniper
	JT	Juniperus virginiana 'Taylor' Taylor Juniper
	TA	Thuja occidentalis 'Wintergreen' Wintergreen Arborvitae
ORNAMENTAL TREES		
	CO	Cercis canadensis Eastern Redbud
	MS	Malus x 'Sutyzam' Sugar Tyme® Crabapple
SHADE TREES		
	AB	Acer saccharum 'Ballsta' Fall Fiesta® Sugar Maple
	PM	Platanus x acerifolia 'Morton Circle' Exclamation!± London Plane Tree
	QS	Quercus shumardii Shumard Oak
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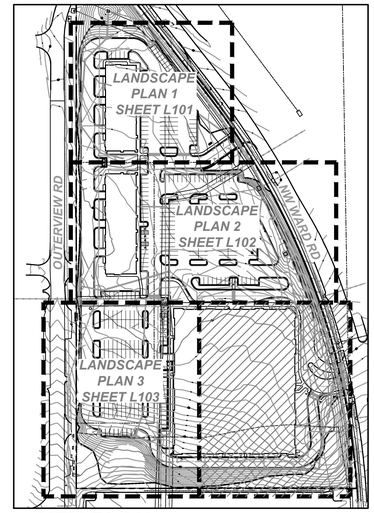
DECIDUOUS SHRUBS		
	DK	Diervilla x Kodiak Orange Kodiak Orange Bush Honeysuckle
	FB	Fothergilla x intermedia 'Blue Shadow' Blue Shadow Fothergilla
	HE	Hydrangea macrophylla 'Ballmer' Endless Summer® The Original Hydrangea
	PL	Physocarpus opulifolius 'Little Devil' Little Devil± Dwarf Ninebark
	PM2	Physocarpus opulifolius 'Mindia' Coppertina® Ninebark
	RG	Rhus aromatica 'Gro-Low' Gro-Low Fragrant Sumac
	RR	Rosa x 'Red Drift' Red Drift Rose
	VM	Viburnum dentatum 'Blue Muffin' Blue Muffin Arrowwood Viburnum
	VD	Viburnum plicatum tomentosum 'Mariesii' Marie Doublefile Viburnum
EVERGREEN SHRUBS		
	IS	Ilex glabra 'Shamrock' Shamrock Inkberry Holly
	JF	Juniperus chinensis 'Sea Green' Sea Green Juniper
	JG	Juniperus virginiana 'Grey Owl' Grey Owl Juniper
	TH	Taxus x media 'Hicksii' Hicks Yew
ORNAMENTAL GRASSES		
	CK	Calamagrostis x acutiflora 'Karl Foerster' Karl Foerster Feather Reed Grass
	SS	Schizachyrium scoparium 'Standing Ovation' Standing Ovation Little Bluestem
	ST	Sporobolus heterolepis 'Tara' Tara Prairie Dropseed
PERENNIALS		
	LB	Liriope muscari 'Big Blue' Big Blue Lilyturf



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#	Revisions:

Project #: 251203-C

Preliminary Development Plan

14 April 2026

LANDSCAPE PLAN

L-104

LEE'S SUMMIT
MISSOURI

DEVELOPMENT REVIEW FORM
TRANSPORTATION IMPACT

DATE:	April 27, 2026	**CONDUCTED BY:**	Erin Ralovo, PE, PTOE
SUBMITTAL DATE:	March 11, 2026	**PHONE:**	816.969.1800
APPLICATION #:	2026070	**EMAIL:**	Erin.Ralovo@cityofls.net
PROJECT NAME:	RUSH FUNPLEX	**PROJECT TYPE:**	Prel Dev Plan (PDP)

SURROUNDING ENVIRONMENT *(Streets, Developments)*

The proposed development is located at the northwest corner of NW Tudor Road and NW Ward Road. This development is surrounded by commercial development on the south and east. Directly south and to the east are existing apartments.

ALLOWABLE ACCESS

The proposed development will be accessed from two access points along NW Ward Road. The north most access will be a right-in/right-out access approximately 490 feet south of NW Outerview Road. The main entrance will be full access and create the fourth leg of the intersection of NW Ward Road and NW Tudor Road. NW Outerview Road is directly to the west of the development but there will not be any access from NW Outerview to this development.

EXISTING STREET CHARACTERISTICS *(Lanes, Speed limits, Sight Distance, Medians)*

NW Tudor Road is a generally four-lane divided Minor Arterial roadway with a speed limit of 35 MPH. NW Tudor Road has sidewalk, shared-use path, curb and gutter, a dividing median, and turn lanes at NW Ward Road. NW Ward Road is generally a four-lane divided Major Arterial roadway with a speed limit of 35 MPH. Ward Road has sidewalk, shared-use path, curb and gutter, a dividing median, and turn lanes at NW Tudor Road and NW Outerview Drive. There is no sidewalk on the east side of Ward north of Tudor Road as this is mostly undeveloped land. Outerview Drive is a private undeveloped road. Outerview Drive does not have any improvements and a speed limit of 20 MPH. Outerview Drive has right-in/right-out access at Chipman Road.

ACCESS MANAGEMENT CODE COMPLIANCE? **YES** ☒ **NO** ☐

All intersection spacing, turn lanes and other applicable criteria required by the Access Management Code have been satisfied as shown on the development plans.

TRIP GENERATION

PHASE 1: Time Period	Total	In	Out
Weekday	N/A	N/A	N/A
A.M. Peak Hour	0	0	0
P.M. Peak Hour	257	144	113

PHASE 2: Time Period	Total	In	Out
Weekday	746	N/A	N/A
A.M. Peak Hour	79	58	21
P.M. Peak Hour	88	30	58

Trips were generated using ITE Codes in the ITE Trip Generation Manual 12th Edition using ITE code 435 - Multipurpose Recreational Facility for Phase 1 and codes 710 - General Office Building and 932 - High-Turnover (Sit-Down) Restaurant for Phase 2. No trips are generated for the AM peak in Phase 1 since the Rush Funplex does not open until 10:00 am.

TRANSPORTATION IMPACT STUDY REQUIRED? **YES** ☒ **NO** ☐

The proposed development likely will generate more than 100 peak hour trips, a minimum condition in the Access Management Code for Traffic Impact Studies. A Traffic Impact Study was prepared by McCurdy Engineers dated April 7, 2026, to assess the traffic impacts of the development on the existing infrastructure and provide public improvement recommendations for the subject development. The study made the following recommendations for the development:

1. Construct a southbound right turn lane with a minimum storage Length of 150 feet plus taper on NW Ward Road at the right-in/right-out access. Maintain a minimum driveway throat length of 75 feet.
2. Lengthen the northbound left turn lane on NW Ward Road at NW Tudor Road to provide a minimum of 200 feet of storage plus taper. Maintain a minimum driveway throat length of 75 feet.
3. Construct a westbound left-turn Lane on Tudor Road with minimum length of 250 feet plus taper.
4. Convert the existing east leg of the Tudor Road intersection to three lanes, a left, through, and right.
5. The west leg of the Tudor Road intersection should be configured with one receiving lane and two exiting lanes consisting of a left-turn lane and a shared through/right turn lane.

LIVABLE STREETS *(Resolution 10-17)* **COMPLIANT** ☒ **EXCEPTIONS** ☐

The proposed development plan will provide required sidewalks and all elements otherwise required by ordinances and standards, including but not limited to property landscaping, lighting, parking, and ADA accessibility. No exceptions to the Livable Streets Policy adopted by Resolution 10-17 are requested.

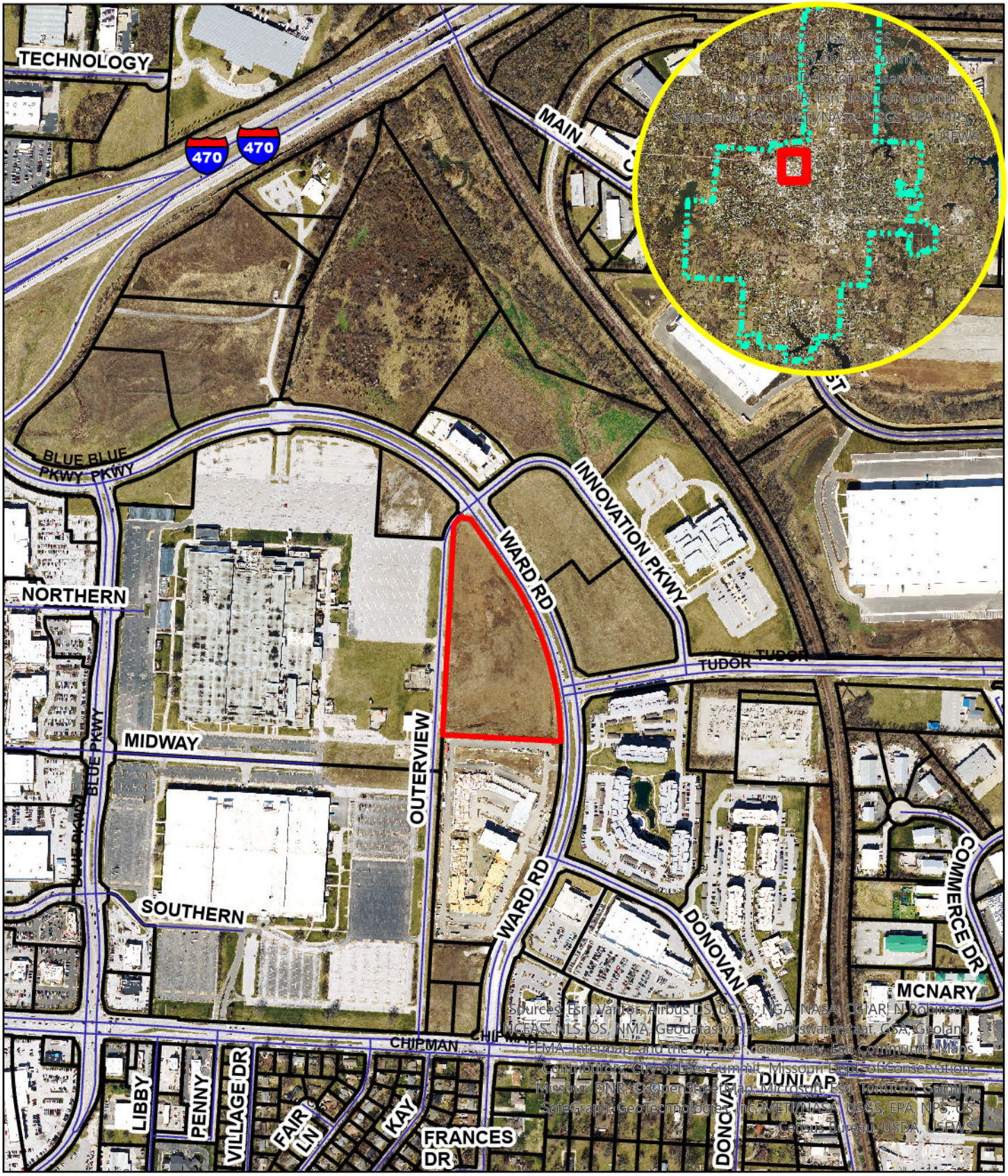
RECOMMENDATION: **APPROVAL** ☒ **DENIAL** ☐ **N/A** ☐ **STIPULATIONS** ☐

Recommendations for Approval refer only to the transportation impact and do not constitute an endorsement from City Staff.

Staff recommends approval of the proposed preliminary development plan subject to the conditions noted below and any such public improvements shall be substantially completed prior to any issued occupancy permit associated with Phase 1 of the development described therein:

1. Construct a southbound right turn lane with a minimum storage Length of 150 feet plus taper on NW Ward Road at the right-in/right-out access. Maintain a minimum driveway throat length of 75 feet.
2. Lengthen the northbound left turn lane on NW Ward Road at NW Tudor Road to provide a minimum of 200 feet of storage plus taper. Maintain a minimum driveway throat length of 75 feet.
3. Construct a westbound left-turn Lane on Tudor Road with minimum length of 250 feet plus taper.
4. Convert the existing east leg of the Tudor Road intersection to three lanes, a left, through, and right.
5. The west leg of the Tudor Road intersection should be configured with one receiving lane and two exiting lanes consisting of a left-turn lane and a shared through/right turn lane.

Appl. #PL2026-070 PRELIMINARY DEVELOPMENT PLAN
900 NW Ward Rd



N

0 0.13 0.25 0.5 Miles