



PLANNING COMMISSION REGULAR MEETING
Zoom Webinar and/or Town Council Chamber
3 S. Timber Ridge Parkway, Severance, CO 80550

AGENDA
PLANNING COMMISSION REGULAR MEETING
Wednesday, February 19, 2025, at 6:00 PM

A. CALL TO ORDER

1. Roll Call
2. Pledge of Allegiance
3. Approval of Agenda
4. Public Comment

The purpose of the Public Comment is for members of the public to speak to the Planning Commission on any subject not scheduled on the agenda. To accomplish scheduled agenda items, comments should be limited to three minute for those attending in person or an appropriate time as deemed by the Chair. The Planning Commission shall make no decisions or take action on comments, but may choose to schedule the matter for a decision later. Those addressing the Planning Commission, please state your name and address. and sign-in.

5. Approval of Minutes

B. REGULAR MEETING

1. Appointment of Chair and Vice-Chair
 - Legislative
 - Staff Presentation: Shani Porter, Planning Director
2. PUBLIC HEARING
Resolution No. PC 2025-04R: Preliminary Plat for Northgate Lake
 - Quasi-Judicial
 - Staff Presentation: Shani Porter, Planning Director
3. PUBLIC HEARING
Resolution No. PC 2025-05R: Text Amendments to the Land Use Code - Chapter 16 of the Severance Municipal Code for purposes of reorganizing Article 3
 - Legislative
 - Staff Presentation: Shani Porter, Planning Director

C. COMMUNICATIONS

Commission approval may be sought for administrative actions in association with staff reports.

1. Town Attorney
2. Town Staff
3. Town Management
4. Council Members
5. Chair

D. ADJOURN

Planning Commission MEETING

Wednesday, February 19, 2025, 6:00 PM (MDT)

Registration URL

https://us02web.zoom.us/webinar/register/WN_OCx-DpESRialWI915_tEgg

The Town of Severance does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in the provision of services. For disabled persons needing reasonable accommodation to attend or participate in a town service, program, public meeting, or activity, call 970-686-1218 at least 72 hours in advance. Disabled access is available from the front entrance of the Town Hall.



PLANNING COMMISSION REGULAR MEETING
Zoom Webinar and/or Town Council Chamber
3 S. Timber Ridge Parkway, Severance, CO 80550

REGULAR MEETING MINUTES

Wednesday, January 15, 2025, at 6:00 PM

Present:

Chair:

Julie Stout

Vice-Chair:

Derek Grimes

Commissioners:

Joe Pirrone

David Rau

Kris Quandt

Kevin Udy

Absent:

Dan Spykstra

Audience:

Josh Olhava, Ayres

Staff:

Shani Porter, Planning Director

Sarah Jacobsen, Town Clerk

Mary Lynn Macsalka, Town Attorney

Nicholas Wharton, Town Manager

A. CALL TO ORDER

1. Roll Call

2. Pledge of Allegiance

3. Approval of Agenda

Chair Stout requested that the appointments of the Chair and Vice-Chair be added to the agenda stating appointments are typically made at the beginning of the year.

MOTION WAS MADE BY Commissioner Pirrone, seconded by Commissioner Quandt to Approve the of Agenda with the addition of Chair and Vice-Chair appointments. All Commissioners present voting Yes.

MOTION PASSED

4. Public Comment

The purpose of the Public Comment is for members of the public to speak to the Planning Commission on any subject not scheduled on the agenda. To accomplish scheduled agenda items, comments should be limited to three minute for those attending in person or an appropriate time as deemed by the Chair. The Planning Commission shall make no decisions or take action on comments, but may choose to schedule the matter for a decision later. Those addressing the Planning Commission, please state your name and address. and sign-in.

5. Approval of December 18, 2024 Minutes

MOTION WAS MADE BY Commissioner Pirrone, seconded by Commissioner Rau to Approve the December 18, 2024, Minutes with the amendment of Commissioner Quandt being absent. Five Commissioners voted yes, and Commissioner Quandt abstained.

MOTION PASSED

B. REGULAR MEETING

1. PUBLIC HEARING

Resolution No. PC 2025-01R: Text Amendments to the Land Use Code - Chapter 16 of the Severance Municipal Code for purposes of reorganizing Articles 1

- Legislative
- Staff Presentation: Shani Porter, Planning Director

The public hearing opened at 6:04 p.m., no public comment was made, and the public hearing closed at 6:25 p.m.

MOTION WAS MADE BY Commissioner Pirrone, seconded by Commissioner Grimes to Approve Resolution No. PC 2025-01R: Text Amendments to the Land Use Code - Chapter 16 of the Severance Municipal Code for purposes of reorganizing Articles 1. All Commissioners present voting Yes.

MOTION PASSED

2. PUBLIC HEARING

Resolution No. PC 2025-02R: Text Amendments to the Land Use Code - Chapter 16 of the Severance Municipal Code for purposes of reorganizing Articles 2

- Legislative
- Staff Presentation: Shani Porter, Planning Director

The public hearing opened at 6:26 p.m., no public comment was made, and the public hearing closed at 7:14 p.m.

MOTION WAS MADE BY Commissioner Pirrone, seconded by Commissioner Grimes to Approve Resolution No. PC 2025-02R: Text Amendments to the Land Use Code - Chapter 16 of the Severance Municipal Code for purposes of reorganizing Articles 2. All Commissioners present voting Yes.

MOTION PASSED

3. PUBLIC HEARING

Resolution No. PC 2025-03R: Text Amendment to the Land Use Code requiring two points of vehicular access for a subdivision

- Legislative
- Staff Presentation: Shani Porter, Planning Director

The public hearing opened at 7:15 p.m., no public comment was made, and the public hearing closed at 7:19 p.m.

MOTION WAS MADE BY Commissioner Pirrone, seconded by Commissioner Grimes to Approve Resolution No. PC 2025-03R: Text Amendment to the Land Use Code requiring two points of vehicular access for a subdivision. All Commissioners present voting Yes.

MOTION PASSED

C. COMMUNICATIONS

Commission approval may be sought for administrative actions in association with staff reports.

1. Town Attorney

2. Town Staff

3. Town Management

Town Manager Wharton discussed the option of Chair Stout stepping down and Vice-Chair Grimes running the next meeting for all members to be present for appointments of new positions. The Commission agreed and will discuss Chair and Vice-Chair appointments at the next meeting.

D. ADJOURN

The meeting adjourned at 7:29 p.m.



AGENDA ITEM SUMMARY

AGENDA ITEM	SUBMITTED BY	PRESENTED BY
Appointment of Chair and Vice-Chair	Shani Porter, Planning Director	Shani Porter
ACTION REQUESTED		
Management asks that the Planning Commission discuss the Chair and Vice-Chair appointments and take action. • Actions that may be taken: ○ Move to appoint a Chair for a one-year term ○ Move to appoint a Vice-Chair for a one-year term		<u>Action Requested</u> <u>Attorney Approved</u>
BRIEF SUMMARY		
Per Chapter 2, Article 5, Section 2-5-70 of the Severance Municipal Code: <i>The Planning Commission shall select a Chair who shall serve a term of one (1) year with eligibility for reelection. A Vice Chair may be selected from the entire membership of the Planning Commission. However, no alternate member shall be eligible to serve as an officer of the Planning Commission. In the absence of both the Chair and Vice Chair, any member of the Planning Commission may conduct the meeting.</i> (Ord. 2001-04 §1; Ord. 2007-07 §1; Ord. 2019-03 §3)		
PUBLIC SUPPORT/CONCERN		
None at this time.		
ANALYSIS AND RECOMMENDATION		
Planning Staff and Management recommends that the Planning Commission take action and move to appoint a Chair and Vice-Chair for a one-year term.		
MATERIALS SUBMITTED		
The following materials were submitted and included in this packet: None		



AGENDA ITEM SUMMARY

AGENDA ITEM	SUBMITTED BY	PRESENTED BY
PUBLIC HEARING Resolution No. PC 2025-04R: Preliminary Plat for Northgate Lake	Shani Porter, Planning Director	Shani Porter, Planning Director
ACTION REQUESTED		
Town Staff asks that the Severance Planning Commission review and discuss the Northgate Lake Preliminary Plat and forward a recommendation to the Town Council. Actions that may be taken: 1. Approve Resolution PC-2025- 04R and forward a recommendation of approval to the Town Council for Northgate Lake Preliminary Plat with conditions 2. Take No Action		<u>Resolution</u> <u>Action Requested</u> <u>Attorney Approved</u>
BRIEF SUMMARY		
The Northgate Lake Preliminary Plat is approximately 315 acres in size. The property is located North of CR 74/Harmony Road and East of CR 21/Teller Street. The property was annexed into the Town of Severance as the Moody Annexation in September of 2022. The Preliminary Plat is the first step in the major subdivision process which will be followed by a Final Plat. The Preliminary Plat process provides a detailed planning review of development patterns, street networks, block and lot layout, and preliminary engineering for future development prior to the preparation of detailed construction and engineering plans that is part of the Final Plat application and review. The Northgate Lake Preliminary Plat proposes 671 single-family lots on 123 acres, a 10-acre school site, 13 acres of multi-family, 25 acres of commercial, and approximately 70 acres of open space. Criteria for review and approval of a Preliminary Plat is in Section 16.19.100(d)(3) of the Land Use Code as follows: a. The subdivision complies with all applicable use, development and design standards b. The mix of land uses within the project area conforms with the existing zoning and objectives: 1. The proposal promotes the Town's adopted plans, goals and policies 2. The proposed residential adds diversity to the Town's housing supply 3. The proposed commercial will benefit the Town's economic base 4. Parks and open space are incorporated into the site design. c. The transportation designs are adequate and meet the standards set by the Severance Transportation Master Plan d. Negative impacts on adjacent land uses have been identified and addressed e. The subdivision does not create unusable lots f. The preliminary grading and drainage reports have been reviewed and comments provided for the Final Plat submittal g. The preliminary water and sewer plans have been reviewed and comments provided for the Final Plat submittal		

- h. The existing town utility facilities and services have been reviewed and comments provided for the Final Plat submittal
- i. Water capacity has been evaluated by the Town Engineer and recommendations have been provided for the Final Plat submittal
- j. The phasing plan for the development will be evaluated at time of Final Plat

PUBLIC SUPPORT/CONCERN

Please see attachments

ANALYSIS AND RECOMMENDATION

Town staff is asking for the Planning Commission to review, discuss, and take action on PC-2025-04R for the Northgate Lake Preliminary Plat and forward a recommendation to the Town Council with the following conditions:

1. All landscaping and other irrigable areas within all lots and common areas of the subdivision shall be irrigated with non-potable water;
2. Applicant shall design, construct and install an on-site non-potable water system that is adequate to fully meet all of the irrigation demands and requirements for all end uses of the proposed subdivision and which is in compliance with the Severance Municipal Code;
3. The Applicant shall obtain and submit to the Town will-serve letters for all dry utility companies.
4. The Applicant must provide proof that that the Town's or other utility service providers' potable and non-potable water supply and distribution systems are or will be adequate to deliver the projected treated and non-potable water needs of the proposed development, including pressure and flow for normal operation of plumbing fixtures, water using appliances, requirements set by the responsible fire protection agency, and irrigation;
5. The Applicant must provide proof that the Town's or other utility service providers' sanitary sewage collection system is or will be adequate to accommodate the sewage disposal needs of the proposed development,
6. The Applicant must provide proof that the Town's or other utility service provider's storm drainage collection system is or will be adequate to accommodate the projected flows of the proposed development;
7. The Applicant must revise the Preliminary Construction Drawings and Traffic Impact Study to match the dimensions in variance request Item 4.b. in the Traffic Variance Letter dated September 23, 2024 prepared by Avant Civil Group, Inc.
8. The Applicant shall acquire and dedicate additional public right-of-way for CR 21 if required by Weld County or the Town;
9. The Applicant shall obtain drainage easements from downstream property owners and complete off-site drainage improvements as necessary per the requirements of the Severance Municipal Code, Mile High Flood District Urban Storm Drainage Criteria Manual, and other applicable standards and specifications;
10. All remaining technical corrections to the Northgate Lake Preliminary Plat, preliminary construction plans, preliminary drainage report, and preliminary utility report requested by Town staff shall be made to the Town staff's satisfaction;
11. All final water plan and reports, final sanitary sewer plan and reports, and final grading and drainage plans and reports shall conform to the preliminary plat report content requirements set forth in the Severance Municipal Code, as amended; and
12. The Applicant shall address all of the Town's outstanding engineering and planning comments on the Preliminary Plat; and

13. At the Final Plat stage, the Town and the Applicant shall execute a subdivision agreement, in a form to be approved by the Town Attorney;

MATERIALS SUBMITTED

The following materials were submitted and included in this packet:

1. PC-2025-04R - Recommend Approval of Northgate Lake Preliminary Plat
2. Submittal 1_Vicinity Map
3. Moody Property_Concept Plan_2024-01-08
4. Submittal 4_Preliminary Plat
5. Submittal 1_Draft Management Plan
6. Submittal 1_TIS
7. SOPS-RE-MEMO-MoodyDevelopmentTOSMemo-20250106.docx (1)
8. 0042.0014.03 NGL-PP 5th review comments_(2025.01.03)
9. Abigail Riley 2.6.25
10. Hoss Johnson 2.4.25
11. Jackie Middleton 2.3.25

**TOWN OF SEVERANCE PLANNING COMMISSION
RESOLUTION NO. PC-2025-04R**

**A RESOLUTION OF THE PLANNING COMMISSION OF THE TOWN OF
SEVERANCE, COLORADO, MAKING A RECOMMENDATION TO THE
TOWN COUNCIL TO APPROVE A PRELIMINARY SUBDIVISION PLAT
FOR THE NORTHGATE LAKE SUBDIVISION**

WHEREAS, Hidden Lake Investments, LLC (“Applicant”), as owner of certain real property located within the Moody Annexation generally located in the northeast corner of Teller Street and East Harmony Road and as more particularly described in **Exhibit A** attached hereto (the “Property”), has submitted a proposed preliminary subdivision plat (“Preliminary Plat”) for the Property; and

WHEREAS, the Town of Severance Planning Commission (“Planning Commission”), after conducting a public hearing on February 19, 2025,¹ and after considering the testimony, evidence, and argument presented at the public hearing, finds and determines that the proposed Preliminary Plat is in substantial conformance with the technical requirements of the Severance Municipal Code, and that the proposed subdivision meets the applicable requirements and standards set forth in the Severance Municipal Code; and

WHEREAS, the Planning Commission desires to make a recommendation to the Town Council for approval of the Preliminary Plat.

**NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING COMMISSION
OF THE TOWN OF SEVERANCE, COLORADO, AS FOLLOWS:**

Section 1. The Planning Commission recommends approval of the Preliminary Plat of Northgate Lake, attached hereto as **Exhibit A** and incorporated herein by this reference, with the following conditions:

- (a) All landscaping and other irrigable areas within all lots and common areas of the subdivision shall be irrigated with non-potable water;
- (b) Applicant shall design, construct and install an on-site non-potable water system that is adequate to fully meet all of the irrigation demands and requirements for all end uses of the proposed subdivision and which is in compliance with the Severance Municipal Code;
- (c) The Applicant shall obtain and submit to the Town will-serve letters for all dry utility companies.
- (d) The Applicant must provide proof that that the Town’s or other utility service providers’ potable and non-potable water supply and distribution systems are or will be adequate to deliver the projected treated and non-potable water needs of the

¹ Notice of the Planning Commission’s public hearing on the Preliminary Plat was published on February 1st, 2025, on the Town of Severance’s website, <https://www.townofseverance.org/256/Public-Notices>, in accordance with Section 16.19.40(b)(4) and Tables 19.10 and 19.40 in Article 19 of the Land Use Code.

proposed development, including pressure and flow for normal operation of plumbing fixtures, water using appliances, requirements set by the responsible fire protection agency, and irrigation;

- (e) The Applicant must provide proof that the Town's or other utility service providers' sanitary sewage collection system is or will be adequate to accommodate the sewage disposal needs of the proposed development,
- (f) The Applicant must provide proof that the Town's or other utility service provider's storm drainage collection system is or will be adequate to accommodate the projected flows of the proposed development;
- (g) The Applicant must revise the Preliminary Construction Drawings and Traffic Impact Study to match the dimensions in variance request Item 4.b. in the Traffic Variance Letter dated September 23, 2024 prepared by Avant Civil Group, Inc.
- (h) The Applicant shall acquire and dedicate additional public right-of-way for CR 21 if required by Weld County or the Town;
- (i) The Applicant shall obtain drainage easements from downstream property owners and complete off-site drainage improvements as necessary per the requirements of the Severance Municipal Code, Mile High Flood District Urban Storm Drainage Criteria Manual, and other applicable standards and specifications;
- (j) All remaining technical corrections to the Northgate Lake Preliminary Plat, preliminary construction plans, preliminary drainage report, and preliminary utility report requested by Town staff shall be made to the Town staff's satisfaction;
- (k) All final water plan and reports, final sanitary sewer plan and reports, and final grading and drainage plans and reports shall conform to the preliminary plat report content requirements set forth in the Severance Municipal Code, as amended; and
- (l) The Applicant shall address all of the Town's outstanding engineering and planning comments on the Preliminary Plat; and
- (m) At the Final Plat stage, the Town and the Applicant shall execute a subdivision agreement, in a form to be approved by the Town Attorney;

RESOLVED AND APPROVED this 19th day of February, 2025.

PLANNING COMMISSION OF THE
TOWN OF SEVERANCE, COLORADO

Julie Stout, Chair

ATTEST:

Town Clerk

APPROVED AS TO FORM:

Town Attorney

Exhibit A Legal Description of Property

A parcel of land being the Eaton-Law Reservoir as described in a Bargain and Sale Deed recorded May 23, 2013 as Reception No. 3934637 of the Records of Weld County, Lot B, Amended Recorded Exemption No. 0705-35-2 1AMRECX18-02-3293 recorded June 6, 2019 as Reception No. 4495105 of the Records of Weld County, and Lot A and Lot B, Recorded Exemption No. 0705-35-3 RECX18-0146 recorded June 6, 2019 as Reception No. 4495106 of the Records of Weld County, all situate within Section Thirty-five (35), Township Seven North (T.7N.), Range Sixty-seven West (R.67W.) of the Sixth Principal Meridian (6th P.M.), Town of Severance, County of Weld, State of Colorado being more particularly described as follows;

BEGINNING at the Southwest Corner of said Section 35 and assuming the West line of the Southwest Quarter of Section 35 as bearing North 00° 15' 17" West a distance of 2675.16 feet, and being monumented on the South by a #6 Rebar with a 2.5" Aluminum Cap stamped LS 12374 and on the North by a #6 Rebar with a 2.5" Aluminum Cap stamped LS 28??? (last three numbers illegible) with all other bearings contained herein relative thereto:

THENCE North 00° 15' 17" West a distance of 2675.16 feet to the West Quarter Corner of said Section 35;

THENCE North 00° 01' 47" East continuing along the West line of the Northwest Quarter of said Section 35 a distance of 2345.47 feet to the intersection of the said West line and a Northerly line of said Lot B, Amended Recorded Exemption No. 0705-35-2 1AMRECX18-02-3293;

The following Forty (40) courses are along the Northerly, Westerly and Easterly lines of Lot B, Amended Recorded Exemption No. 0705-35-2 1AMRECX18-02-3293.

THENCE North 89° 43' 41" East a distance of 404.00 feet; THENCE North 00° 01' 47" East a distance of 330.00 feet to the North line of the Northwest Quarter of said Section 35; THENCE North 89° 42' 39" East along said North line of the Northwest Quarter of Section 35 a distance of 1531.28 feet; THENCE South 36° 15' 22" West a distance of 81.53 feet; THENCE South 14° 46' 49" West a distance of 22.77 feet; THENCE South 02° 03' 26" East a distance of 30.76 feet; THENCE South 33° 15' 31" East a distance of 115.46 feet; THENCE South 36° 37' 49" East a distance of 132.58 feet; THENCE South 41° 09' 32" East a distance of 130.51 feet; THENCE South 40° 01' 53" East a distance of 139.86 feet; THENCE South 35° 02' 09" East a distance of 145.64 feet; THENCE South 19° 38' 05" East a distance of 143.14 feet; THENCE South 21° 19' 29" West a distance of 59.29 feet; THENCE South 16° 39' 59" East a distance of 142.09 feet; THENCE South 14° 24' 46" West a distance of 71.95 feet; THENCE South 04° 06' 29" West a distance of 86.34 feet; THENCE South 24° 00' 55" West a distance of 356.21 feet; THENCE South 40° 10' 05" West a distance of 12.24 feet; THENCE South 40° 31' 16" East a distance of 100.34 feet; THENCE South 56° 50' 15" East a distance of 57.98 feet; THENCE South 40° 59' 20" East a distance of 59.88 feet; THENCE South 33° 40' 24" East a distance of 67.70 feet; THENCE South 31° 37' 54" East a distance of 70.95 feet; THENCE South 30° 37' 57" East a distance of 85.04 feet; THENCE South 29° 34' 41" East a distance of 107.35 feet; THENCE South 32° 35' 12" East a distance of 115.72 feet; THENCE South 33° 05' 56" East a distance of 128.81 feet; THENCE South 31° 44' 30" East a distance of 146.49 feet; THENCE South 09° 09' 37" West a distance of 158.11 feet; THENCE South 26° 21' 47" East a distance of 150.21 feet; THENCE South 06° 10' 17" East a distance of 136.36 feet; THENCE South 00° 13' 21" West a distance of 637.13 feet; THENCE South 05° 51' 39" East a distance of 485.00 feet; THENCE South 10° 26' 39" East a distance of 425.00 feet; THENCE South 24° 41' 39" East a distance of 139.00 feet; THENCE South 26° 13' 21" West a distance of 262.00 feet; THENCE South 40° 16' 39" East a distance of 209.41 feet; THENCE South 40° 16' 39" East a distance of 145.59 feet; THENCE South 21° 18' 21" West a distance of 175.00 feet;

THENCE South 17° 56' 39" East a distance of 340.00 feet to the South line of the Southeast Quarter of said Section 35; THENCE South 89° 03' 21" West along said South line of the Southeast Quarter of Section 35 a distance of 460.00 feet to the South Quarter corner of said Section 35; THENCE South 89° 06' 25" West along the South line of the Southwest Quarter of Section 35 a distance of 238.00 feet to the Easterly line of Lot A, Recorded Exemption No. 0705-35-3-RE1022;

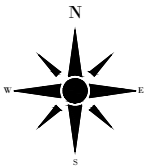
The following Five (5) courses are along the Easterly, Northerly and Westerly lines of said Lot A. THENCE North 04° 06' 13" West a distance of 370.14 feet; THENCE South 88° 07' 15" West a distance of 210.84 feet; THENCE South 46° 38' 40" West a distance of 72.01 feet; THENCE South 32° 58' 40" East a distance of 315.51 feet; THENCE South 00° 53' 35" East a distance of 50.00 feet to the South line of the Southwest Quarter of said Section 35; THENCE South 89° 06' 25" West along said South line of the Southwest Quarter of Section 35 a distance of 2276.42 feet to the **POINT OF BEGINNING**.

Said described tract of land contains 13,721,668 square feet or 315.01 acres, more or less and may be subject to rights-of-way or other easements as granted or reserved by instruments of record or as now existing on said described parcel of land.

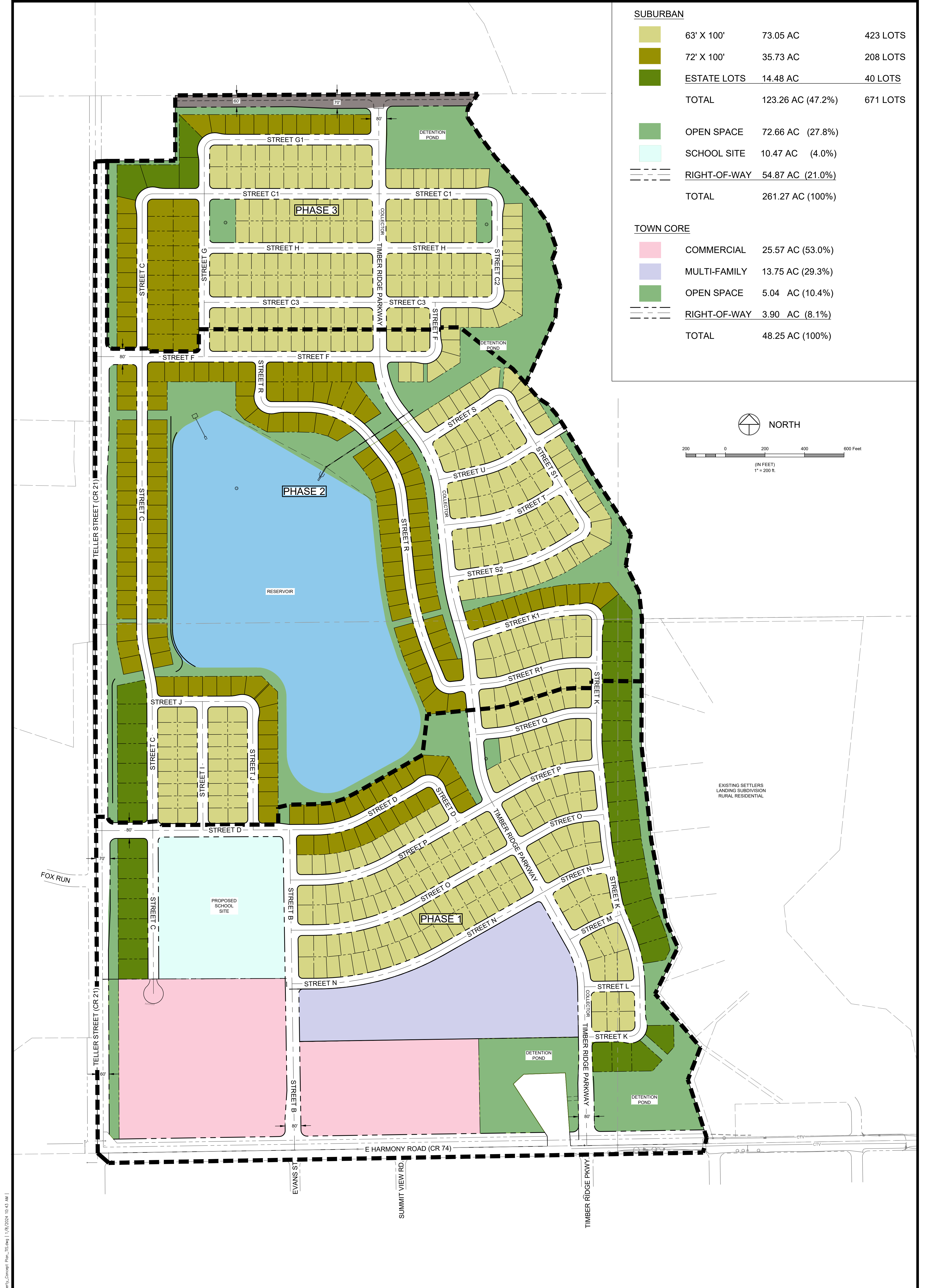


VICINITY MAP

SCALE: N.T.S.



\\cmiller\1\Projects\2023\033-Dwg\Northgate Lake\Concept Plan\GIS\Map 11/29/2024 10:43 AM



NORTHGATE LAKE

CONCEPT PLAN

SEVERANCE, CO

January 8, 2024

PRELIMINARY PLAT OF
NORTHGATE LAKE

A TRACT OF LAND LOCATED IN SECTION 35, TOWNSHIP 7 NORTH, RANGE 67 WEST OF THE
6TH PRINCIPAL MERIDIAN, TOWN OF SEVERANCE, COUNTY OF WELD, STATE OF COLORADO

PROPERTY DESCRIPTION

A parcel of land being the Eaton-Law Reservoir as described in a Bargain and Sale Deed recorded May 23, 2013 as Reception No. 3934637 of the Records of Weld County, Lot B, Amended Recorded Exemption No. 0705-35-2 1AMRECX18-02-3293 recorded June 6, 2019 as Reception No. 4495105 of the Records of Weld County, and Lot A and Lot B, Recorded Exemption No. 0705-35-3 RECX18-0146 recorded June 6, 2019 as Reception No. 4495106 of the Records of Weld County, all situate within Section Thirty-five (35), Township Seven North (T.7N.), Range Sixty-seven West (R.67W.) of the Sixth Principal Meridian (6th P.M.), Town of Severance, County of Weld, State of Colorado being more particularly described as follows;

BEGINNING at the Southwest Corner of said Section 35 and assuming the West line of the Southwest Quarter of Section 35 as bearing North 00° 15' 17" West a distance of 2675.16 feet, and being monumented on the South by a #6 Rebar with a 2.5" Aluminum Cap stamped LS 12374 and on the North by a #6 Rebar with a 2.5" Aluminum Cap stamped LS 2877? (last three numbers illegible) with all other bearings contained herein relative thereto;
THENCE North 00° 15' 17" West a distance of 2675.16 feet to the West Quarter Corner of said Section 35;
THENCE North 00° 01' 47" East continuing along the West line of the Northwest Quarter of said Section 35 a distance of 2345.47 feet to the intersection of the said West line and a Northerly line of said Lot B, Amended Recorded Exemption No. 0705-35-2 1AMRECX18-02-3293;

The following Forty (40) courses are along the Northerly, Westerly and Easterly lines of Lot B, Amended Recorded Exemption No. 0705-35-2 1AMRECX18-02-3293.
THENCE North 89° 43' 41" East a distance of 404.00 feet; THENCE North 00° 01' 47" East a distance of 330.00 feet to the North line of the Northwest Quarter of said Section 35;
THENCE North 89° 42' 39" East along said North line of the Northwest Quarter of Section 35 a distance of 1531.28 feet; THENCE South 36° 15' 22" West a distance of 81.53 feet; THENCE South 14° 46' 49" West a distance of 22.77 feet; THENCE South 02° 03' 26" East a distance of 30.76 feet; THENCE South 33° 15' 31" East a distance of 115.46 feet; THENCE South 36° 37' 49" East a distance of 132.58 feet; THENCE South 41° 09' 32" East a distance of 130.51 feet; THENCE South 40° 01' 53" East a distance of 139.86 feet; THENCE South 35° 02' 09" East a distance of 145.64 feet; THENCE South 19° 38' 05" East a distance of 143.14 feet; THENCE South 21° 19' 29" West a distance of 59.29 feet; THENCE South 16° 39' 59" East a distance of 142.09 feet; THENCE South 14° 24' 46" West a distance of 71.95 feet; THENCE South 04° 06' 29" West a distance of 86.34 feet; THENCE South 24° 00' 53" West a distance of 356.21 feet; THENCE South 40° 10' 05" West a distance of 12.24 feet; THENCE South 40° 31' 16" East a distance of 100.34 feet; THENCE South 56° 50' 15" East a distance of 57.98 feet; THENCE South 40° 59' 20" East a distance of 59.88 feet; THENCE South 33° 40' 24" East a distance of 67.70 feet; THENCE South 31° 37' 54" East a distance of 70.95 feet; THENCE South 30° 37' 57" East a distance of 85.04 feet; THENCE South 29° 34' 41" East a distance of 107.35 feet; THENCE South 32° 35' 12" East a distance of 115.72 feet; THENCE South 33° 05' 56" East a distance of 128.81 feet; THENCE South 31° 44' 30" East a distance of 146.49 feet; THENCE South 09° 09' 37" West a distance of 158.11 feet; THENCE South 26° 21' 47" East a distance of 150.21 feet; THENCE South 06° 10' 17" East a distance of 136.36 feet; THENCE South 00° 13' 21" West a distance of 637.13 feet; THENCE South 05° 51' 39" East a distance of 485.00 feet; THENCE South 10° 26' 39" East a distance of 425.00 feet; THENCE South 24° 41' 39" East a distance of 139.00 feet; THENCE South 26° 13' 21" West a distance of 262.00 feet; THENCE South 40° 16' 39" East a distance of 209.41 feet; THENCE South 40° 16' 39" East a distance of 145.59 feet; THENCE South 21° 18' 21" West a distance of 175.00 feet; THENCE South 17° 56' 39" East a distance of 340.00 feet to the South line of the Southeast Quarter of said Section 35; THENCE South 89° 03' 21" West along said South line of the Southeast Quarter of Section 35 a distance of 460.00 feet to the South Quarter corner of said Section 35; THENCE South 89° 06' 25" West along the South line of the Southwest Quarter of Section 35 a distance of 238.00 feet to the Easterly line of Lot A, Recorded Exemption No. 0705-35-3-RE1022;

The following Five (5) courses are along the Easterly, Northerly and Westerly lines of said Lot A.
THENCE North 04° 06' 13" West a distance of 370.14 feet; THENCE South 88° 07' 15" West a distance of 210.84 feet; THENCE South 46° 38' 40" West a distance of 72.01 feet;
THENCE South 32° 58' 40" East a distance of 315.51 feet; THENCE South 00° 53' 35" East a distance of 50.00 feet to the South line of the Southwest Quarter of said Section 35;
THENCE South 89° 06' 25" West along said South line of the Southwest Quarter of Section 35 a distance of 2276.42 feet to the **POINT OF BEGINNING**.

Said described tract of land contains 13,721,668 square feet or 315.01 acres, more or less and is subject to any rights-of-way or other easements as granted or reserved by instruments of record or as now existing on said described parcel of land.

OWNER'S APPROVAL AND DEDICATION

The undersigned, being the landowners of the land described herein, do hereby vacate the platting of the above described parcel of land and have laid out, subdivided, and replatted the same into lots, tracts, outlots, blocks, streets and easements, as shown hereon under the name of NORTHGATE LAKE PRELIMINARY PLAT. The undersigned hereby dedicate to the Town of Severance all Rights-of-Way, alleys, drainage, utility and lot line easements as indicated herein.

In witness whereof, we have hereunto set our hands and seals this the _____ day of _____, 20 ____.

OWNER: Hidden Lake Investments, LLC, a Colorado limited liability company

By: _____

NOTARIAL CERTIFICATE

STATE OF _____)
COUNTY OF _____) ss

The foregoing instrument was acknowledged before me by _____, as _____ of Hidden Lake Investments, LLC,

a Colorado limited liability company this _____ day of _____, 20 ____.

My commission expires: _____

Notary Public

OWNER: Journey Homes, LLC, a Colorado limited liability company

By: _____

NOTARIAL CERTIFICATE

STATE OF _____)
COUNTY OF _____) ss

The foregoing instrument was acknowledged before me by _____, as _____ of Journey Homes, LLC, a

Colorado limited liability company, this _____ day of _____, 20 ____.

My commission expires: _____

Notary Public

OWNER: Eaton-Law Reservoir Co.

By: _____

NOTARIAL CERTIFICATE

STATE OF _____)
COUNTY OF _____) ss

The foregoing instrument was acknowledged before me by _____, as _____ of

Eaton-Law Reservoir Co., this _____ day of _____, 20 ____.

My commission expires: _____

Notary Public

THE FINLEY LATERAL DITCH COMPANY

REVIEWED THIS _____ DAY OF _____, 20 ____

THE FINLEY LATERAL DITCH COMPANY REPRESENTATIVE

LARIMER AND WELD IRRIGATION COMPANY

REVIEWED THIS _____ DAY OF _____, 20 ____

LARIMER AND WELD IRRIGATION COMPANY REPRESENTATIVE

TOWN COUNCIL CERTIFICATE

This is to certify that this final plat for NORTHGATE LAKE was approved on the _____ day of _____, 20 ____, by Resolution No. _____, passed and adopted at the regular meeting of the Town Council of the Town of Severance, held on this _____ day of _____, 20 ____, and may be filed with the Clerk and Recorder of Weld County. All public dedications shown thereon are accepted by the town, subject to the provision that neither approval nor acceptance obligates the Town of Severance for the financing or construction of improvements on land or easements dedicated to the town except as specifically agreed to by the Town Council.

Mayor

ATTEST: _____
Town Clerk

BASIS OF BEARINGS:

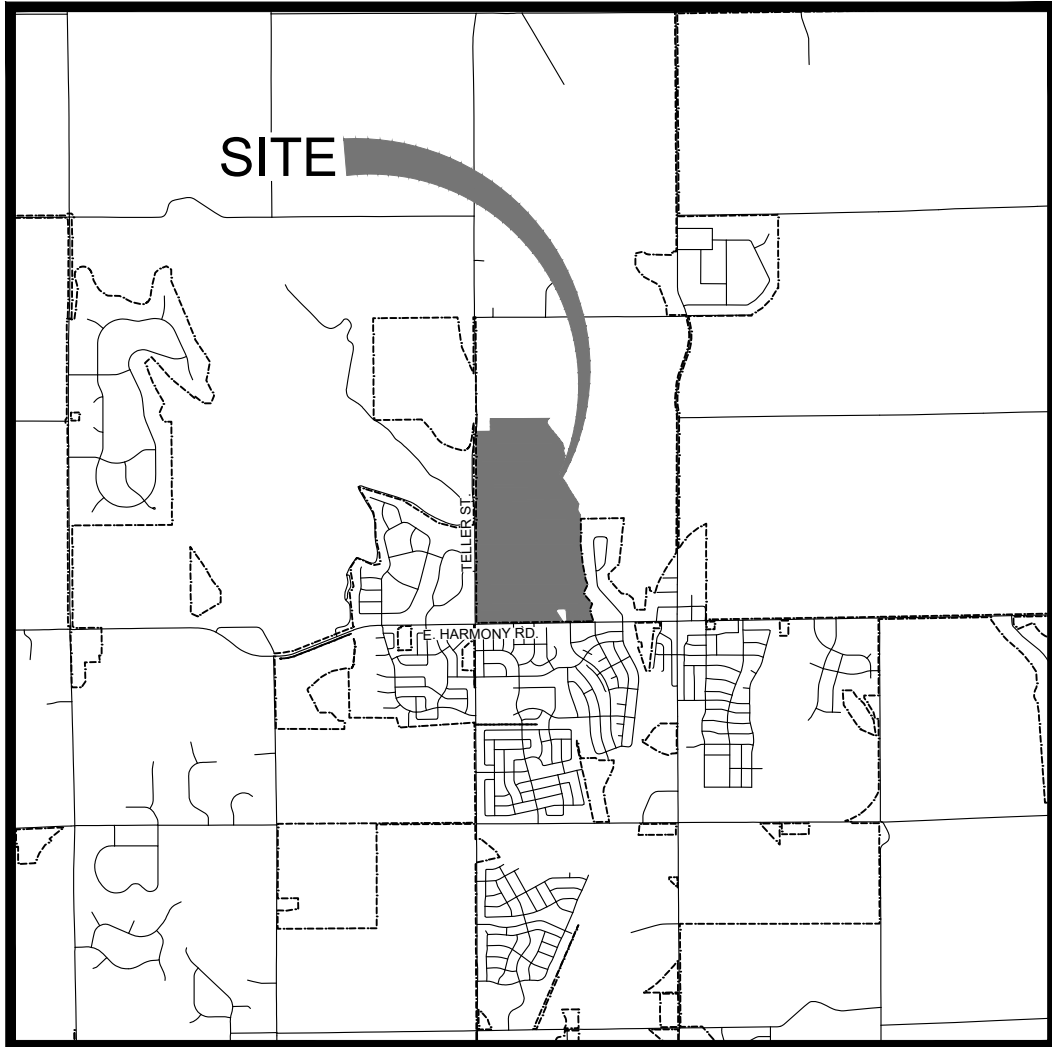
Basis of Bearings is the West line of the Southwest Quarter of Section 35 as bearing North 00° 15' 17" West for a distance of 2675.16 feet with the West Quarter corner of Section 35 being a 2.5" aluminum cap on #6 rebar in monument box with illegible stamp and the Southwest corner of Section 35 being a 2.5" aluminum cap on #6 rebar in monument box, stamped LS 12374 "1999".

SURVEYOR NOTES:

- The lineal unit of measurement for this plat is U. S. Survey Feet.
- For all information regarding easements, right-of-way or title of record, Northern Engineering relied upon Commitment No. 459-H0646933-820-GRO, Amendment No. 2, dated August 1, 2023, prepared by Heritage Title Company; Commitment No. 459-H06644301-820-GRO, Amendment No. 2, dated August 1, 2023, prepared by Heritage Title Company; and Commitment No. 459-H0587798-084-LL9, Amendment No. 3, dated August 1, 2023, prepared by Heritage Title Company.
- The word "certify" or "certification" as shown and used hereon is an expression of professional opinion regarding the facts of the survey, and does not constitute a warranty or guaranty, expressed or implied. DORA Bylaws and Rules (4 CCR 730-1).
- Northern Engineering or the Professional Land Surveyor listed hereon, does not have the expertise to address mineral rights, and recommends the owner retain an expert to address these matters. Northern Engineering or the Professional Land Surveyor listed heron assumes no responsibility for the mineral rights upon the subject property.
- For easements created by separate document and shown hereon refer to record document for specific terms.
- A copy of the title commitment and the documents contained therein were provided to the owners and client listed hereon for their use and review.
- Not all documents listed in the title commitments are plottable or definable by their terms. All easements that are definable by their descriptions are shown hereon. Owner, Client, attorney and others should refer to the title commitment and those documents listed therein for a true understanding of all rights of way, easements, encumbrances, interests and title of record concerning the subject property.
- Easements and other record documents shown or noted hereon were examined as to location and purpose and were not examined as to restrictions, exclusions, conditions, obligations, terms, or as to the right to grant the same.
- Adjacent property owner information per the Weld County Property Portal.
- Oil and gas information shown on the table on Sheet 2 is per the Colorado Oil & Gas Conservation Commission.
- Per CRS 38-51-105 (3)(a), (3)(b), (4)(b), (4)(c), & 5, the Developer/Owner of the subdivision plat has the requirement of providing monumentation of the interior corners created by this platting procedure within one year of the effective date of a sales contract. The Surveyor of record of said subdivision plat has only the required responsibility of providing for the on the ground monumentation of the external boundary of the subdivision plat.
- The subject property is in flood zone 'X', "areas determined to be outside the 0.2% annual chance of floodplain" per FEMA floodmap 08123C1213E effective January 20, 2016.
- Those Rights, Easements or Rights of way, granted to Poudre Valley Rural Electric Association, Inc (PVREA) as described in instruments recorded at Reception Number 4030343 are undefinable by their terms and cannot be plotted but, appear to affect the subject property. PVREA should provide documentation clarifying the locations of those Rights, Easements or Rights of way that they believe to be a part of the subject property. PVREA may also be required to be a signer of this plat.

TOWN OF SEVERANCE NOTES:

- All or portions of the property described hereon may be subject to the Development Agreement recorded contemporaneously herewith in the Office of the Clerk and Recorder of Weld County, Colorado.
- The owner(s) of each tract, outlot and lot will maintain any and all grading and approved private drainage improvements or facilities located within their respective tract, lot or outlot. The drainage easements dedicated to the Town across such areas are for access, use, operation and maintenance of any and all stormwater detention ponds, storm drains and concrete pans installed within such areas and for access, maintenance and repair services only in the event that the owner(s) of the tract(s), lot(s) or outlot(s) fail or refuse to perform any maintenance of private drainage improvements or facilities required to serve the subdivision or a particular lot. In the event that the owner(s) fail or refuse to perform any required maintenance, the Town shall have the right, but not the obligation, to enter said easement and perform any necessary work, and shall bill the owner(s) for the costs of any maintenance or repair work. In the event the Town is not fully reimbursed for all such costs incurred within 30 days after mailing of the bill, the Town shall have the right to place liens against the property to the full extent of all costs incurred. The Town's acceptance of the drainage easements as shown on this plat shall not obligate the Town to construct or maintain any drainage improvements, nor relieve the owner(s) of any tract(s), lot(s) or outlot(s) of its/their obligation and primary responsibility to construct or maintain any private drainage improvements or facilities required to serve the subdivision or each lot.
- Tracts A, B, C, D, E, F, G, H, I, J, K, P and Q are not intended for building or future development and no portion of any such tracts shall be divided or conveyed as developable lots.
- Tracts L, M, N and O are subject to restrictions that limit their use, as more particularly described on the Moody Annexation Agreement, as recorded as Reception No. 4877243 of the Records of Weld County.
- A perpetual easement over and across all open space areas and associated elements, including pedestrian trails, walkways, or paths, located or installed upon, across, over, through and within any tracts is hereby dedicated to the Town for the purpose of public access to and use of such open space areas and related improvements, at any time and from time to time, for active and passive recreational uses.
- A perpetual easement over and across all parks, park equipment, park facilities and associated park elements installed upon, across, over, through and within any tracts is hereby dedicated to the Town for the purpose of public access to and use of such park areas and related improvements, at any time and from time to time, for active and passive recreational uses.
- Sight distance easements shall be free from shrubs, ground covers, berms, fences, signs, structures, parked vehicles, or other materials. trees within the sight distance easement (whether in the public right-of-way or on private property) must not impair sight distance.



VICINITY MAP
1" = 5000'

DEVELOPER/APPLICANT

Journey Homes
Larry Buckendorf
7251 W. 20th Street, L-200
Timnath, CO 80547
(970) 674-1109
Larry@journeyhomes.com

SITE SURVEYOR

Northern Engineering Services, Inc.
Robert C. Tessely, PLS
301 North Howes Street, Suite 100
Fort Collins, Colorado 80521
(970) 221-4158
Bob.Tessely@epsgruoinc.com

SITE ENGINEER

Avant Civil Group, Inc.
Robbie Lauer
1337 Riverside Ave., Suite 2
Fort Collins, Colorado 80524
(970) 286-7995
rlauer@avantcivilgroup.com

TOWN ENGINEER'S REVIEW

Reviewed this the _____ day of _____, 20 ____.

Town Engineer

PLANNING COMMISSION REVIEW

Reviewed this the _____ day of _____, 20 ____.

Chairman
Severance Planning Commission

TOWN PLANNER'S REVIEW

Reviewed this the _____ day of _____, 20 ____.

Town Planner

WINDSOR-SEVERANCE FIRE

Reviewed this the _____ day of _____, 20 ____.

Fire Marshall

SURVEYOR'S STATEMENT

I certify that this plat accurately represents the results of a survey made by me or under my direct supervision.

DRAFT
7-1-24
PRELIMINARY - NOT FOR CONSTRUCTION,
RECORDING PURPOSES OR IMPLEMENTATION
Robert C. Tessely
Colorado Registered Professional Land Surveyor No. 38470
For and on Behalf of Northern Engineering

NOTICE:

According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years after the date of the certificate shown herein.

SECTION:
35

TOWNSHIP:
7N

RANGE:
67 W of the 6th PM

NORTHERN ENGINEERING
SURVEY | MUNICIPAL | LAND DEVELOPMENT
FORT COLLINS | GREELEY
970.221.4188
NORTHERNENGINEERING.COM

DATE:
7/1/24

SCALE:
As shown

REVIEWED BY:
R. Tessely

PROJECT:
1158-003

CLIENT:
L. Smith

NORTHGATE LAKE PRELIMINARY PLAT
TOWN OF SEVERANCE
WELD COUNTY, COLORADO

Sheet
1
Of 18 Sheets

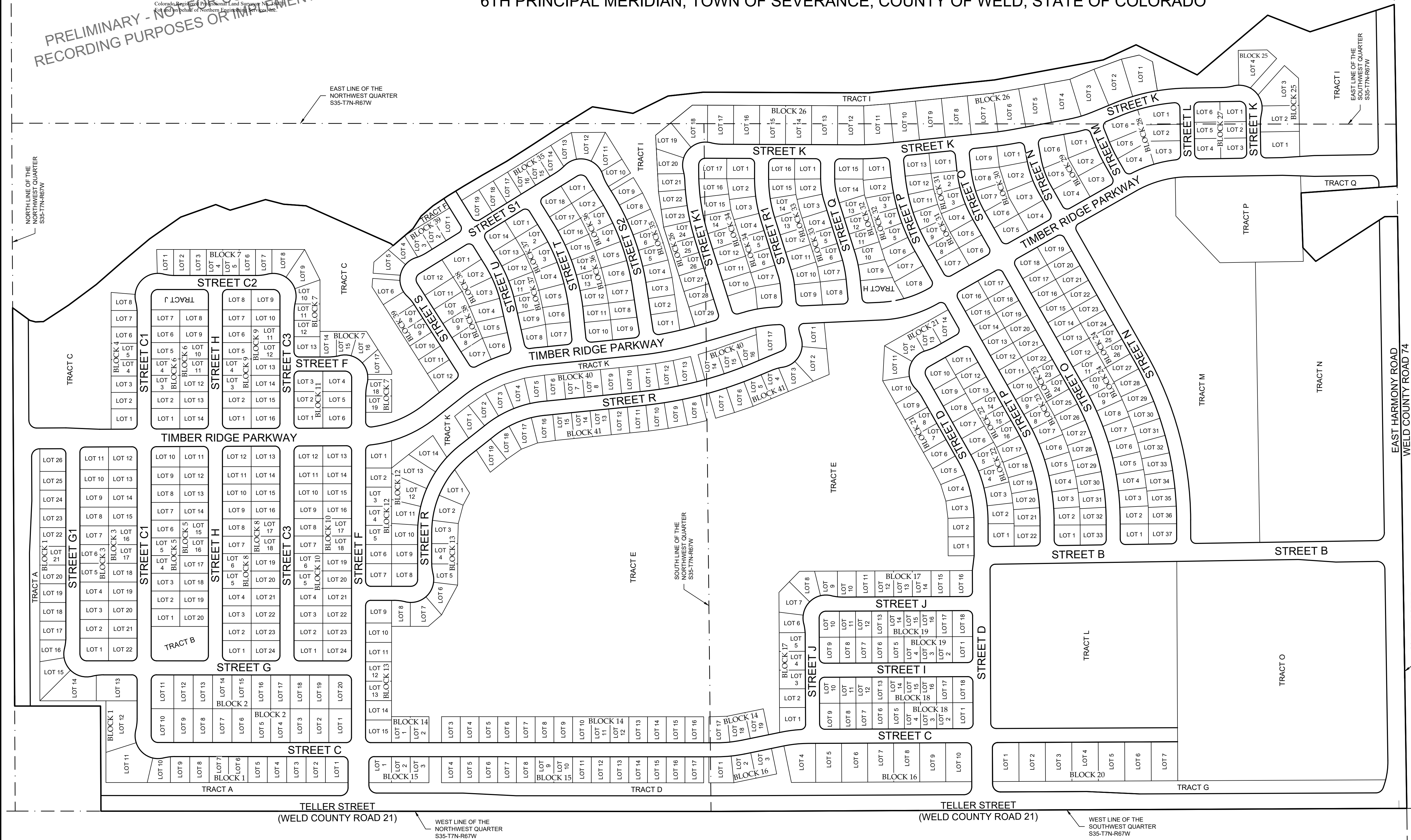
DRAFT

7-1-24
PRELIMINARY
PRELIMINARY - NOT FOR CONSTRUCTION,
RECORDING PURPOSES OR IMPLEMENTATION

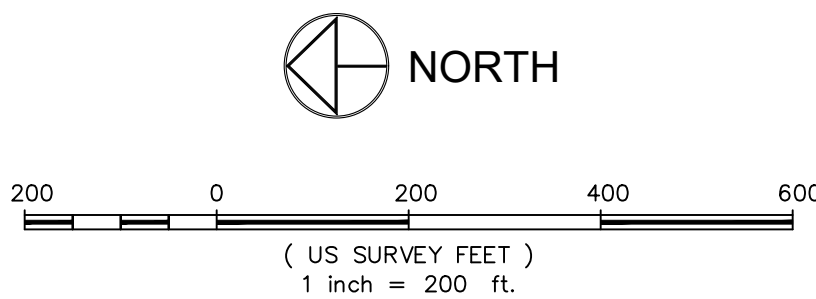
Robert C. Tossy
Colorado Registered Professional Land Surveyor No. 14001
Professional Seal of Northern Engineering, Inc.

PRELIMINARY PLAT OF NORTHGATE LAKE

A TRACT OF LAND LOCATED IN SECTION 35, TOWNSHIP 7 NORTH, RANGE 67 WEST OF THE
6TH PRINCIPAL MERIDIAN, TOWN OF SEVERANCE, COUNTY OF WELD, STATE OF COLORADO

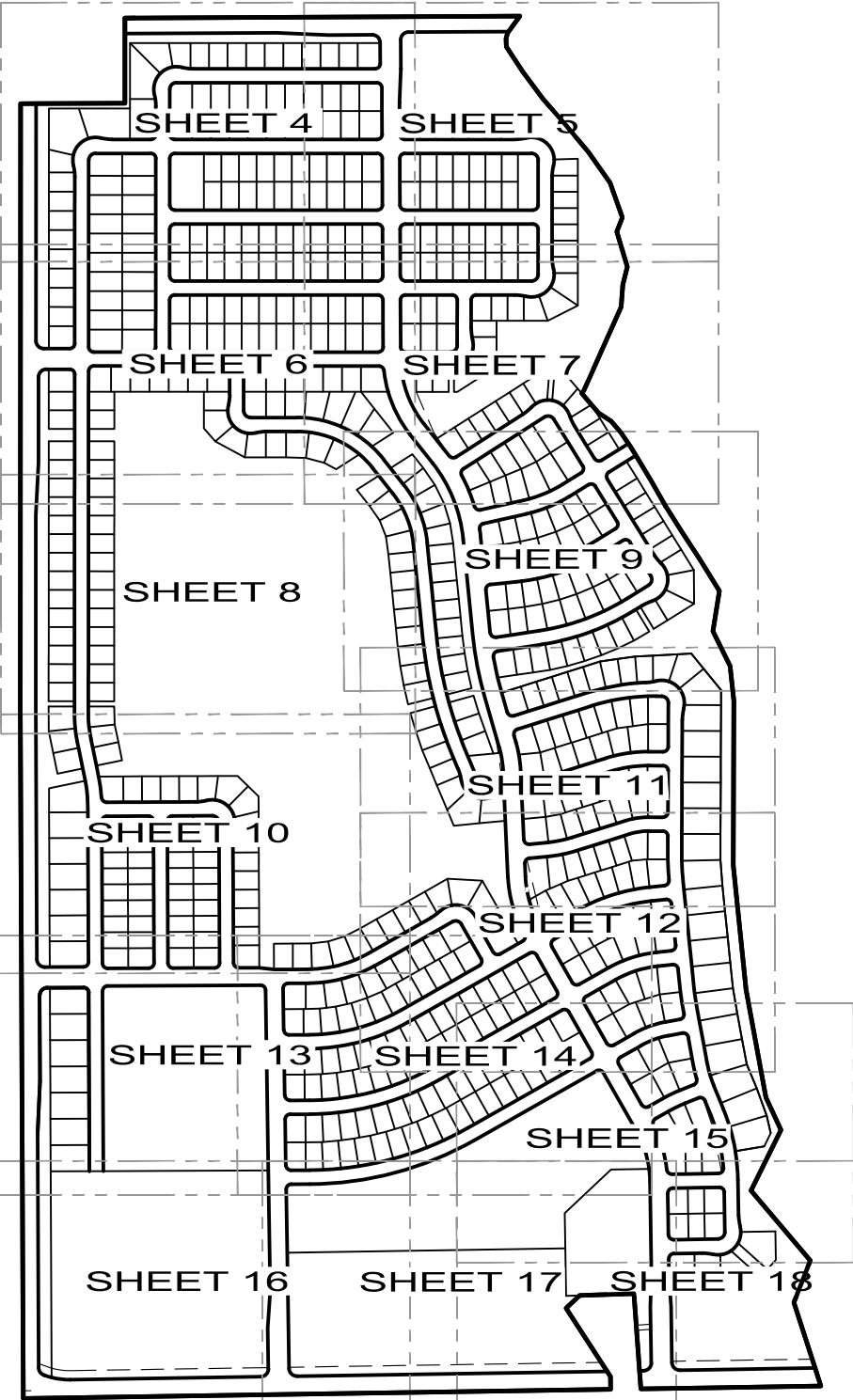


LAND USE SUMMARY TABLE/TRACT SUMMARY CHART					
PARCEL	AREA	PERCENT	USE	OWNED BY	MAINTAINED BY
TRACT A	94,075 S.F.	2.16 AC.	0.69%	Open Space, Utility, Drainage & Access Easement	Metro District
TRACT B	28,948 S.F.	0.66 AC.	0.21%	Open Space, Drainage & Access Easement	Metro District
TRACT C	427,703 S.F.	9.82 AC.	3.12%	Open Space, Utility, Drainage & Access Easement	Metro District
TRACT D	127,302 S.F.	2.92 AC.	0.93%	Open Space, Utility, Drainage & Access Easement	Metro District
TRACT E	1,937,007 S.F.	44.47 AC.	14.12%	Open Space, Utility, Drainage & Access Easement	Metro District
TRACT F	5,288 S.F.	0.12 AC.	0.04%	Open Space, Utility, Drainage & Access Easement	Metro District
TRACT G	70,261 S.F.	1.61 AC.	0.51%	Open Space, Utility, Drainage & Access Easement	Metro District
TRACT H	12,580 S.F.	0.29 AC.	0.09%	Open Space, Drainage & Access Easement	Metro District
TRACT I	417,678 S.F.	9.59 AC.	3.04%	Open Space, Drainage & Access Easement	Metro District
TRACT J	16,928 S.F.	0.39 AC.	0.12%	Open Space, Drainage & Access Easement	Metro District
TRACT K	75,000 S.F.	1.70 AC.	0.57%	Open Space, Drainage & Access Easement	Metro District
TRACT L	456,151 S.F.	10.47 AC.	3.32%	School Site	Property Owner
TRACT M	513,387 S.F.	11.79 AC.	3.74%	Multi-Family Residential	Property Owner
TRACT N	536,828 S.F.	12.32 AC.	3.91%	Commercial Site	Property Owner
TRACT O	678,472 S.F.	15.58 AC.	4.94%	Commercial Site	Property Owner
TRACT P	145,895 S.F.	3.34 AC.	1.06%	Drainage Easement	Metro District
TRACT Q	16,198 S.F.	0.37 AC.	0.12%	Open Space/Future Commercial	Metro District
ROW	2,804,267 S.F.	64.38 AC.	20.44%	Right of Way	Town of Severance
LOTS (671)	5,354,898 S.F.	122.93 AC.	39.03%	Single-Family Residential	Property Owner
TOTAL	13,721,667 S.F.	315.01 AC.	100.00%		



LAND DEDICATION REQUIREMENTS					
PARK LAND DEDICATION	CODE REQUIREMENT	TOTAL REQUIRED AREA (ACRES)	PROVIDED AREA (ACRES)	REMAINING AREA CASH-IN-LIEU (ACRES)	REMAINING AREA FOR FUTURE FILINGS
POCKET PARKS	0.5 ACRES/1000 RESIDENTS				
NEIGHBORHOOD PARK	3 ACRES/1000 RESIDENTS				
COMMUNITY PARK	5 ACRES/1000 RESIDENTS				
OPEN SPACE DEDICATION	14 ACRES/1000 RESIDENTS				

SHEET INDEX



LOT & BLOCK TABLE		LOT & BLOCK TABLE	
BLOCK	# OF LOTS	BLOCK	# OF LOTS
1	26	22	22
2	20	23	33
3	22	24	37
4	8	25	4
5	20	26	29
6	14	27	6
7	19	28	6
8	24	29	6
9	16	30	9
10	24	31	13
11	6	32	15
12	14	33	16
13	15	34	17
14	19	35	19
15	17	36	18
16	10	37	14
17	16	38	12
18	18	39	12
19	18	40	17
20	7	41	19
21	14	TOTAL LOTS	671

WELL INFORMATION TABLE			
WELL NAME	API#	CLASSIFICATION	STATUS
GRESS #1	05-123-08549	DA	PA - 2/1/1989
BROWNELL #1	05-123-05300	ERIW	PA - 4/20/1989
EATON-LAW #1	05-123-05289	ERIW	PA - 1/20/1990
EATON-LAW #2	05-123-08237	DA	PA - 5/31/96

NORTHGATE LAKE PRELIMINARY PLAT
TOWN OF SEVERANCE
WELD COUNTY, COLORADO

Sheet
2
Of 18 Sheets

PROJECT: 1159-003
DATE: 7/1/24
SCALE: As shown
CLIENT: R. ressey
DRAWN BY: L. Smith
REVIEWED BY: R. ressey

NORTHERN
ENGINEERING
SURVEY | MUNICIPAL | LAND DEVELOPMENT
FORT COLLINS | GREELEY 970.221.4188
NORTHERNENGINEERING.COM

SECTION: 35
TOWNSHIP: 7N
RANGE: 67 W of the 6th PM

NOTICE:
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DRAFT
7/1/24
PRELIMINARY
FOR PRELIMINARY PURPOSES ONLY

Robert C. Tossy
Colorado Registered Professional Land Surveyor No. 12456
Principal of Northern Engineering, Inc.

PRELIMINARY PLAT OF NORTHGATE LAKE

A TRACT OF LAND LOCATED IN SECTION 35, TOWNSHIP 7 NORTH, RANGE 67 WEST OF THE
6TH PRINCIPAL MERIDIAN, TOWN OF SEVERANCE, COUNTY OF WELD, STATE OF COLORADO

CURVE TABLE				
CURVE	DELTA	RADIUS	LENGTH	BEARING
C1	0°00'00"	500.00'	4.82'	N00°35'18"W
C2	37°24'16"	450.00'	293.77'	N19°35'50"W
C3	5°44'40"	600.00'	60.16'	N35°25'38"W
C4	19°56'42"	600.00'	208.86'	N22°34'57"W
C5	6°52'32"	600.00'	72.00'	N09°10'19"W
C6	1°59'44"	1309.00'	45.59'	N06°43'55"W
C7	8°16'33"	1309.00'	189.07'	N11°52'04"W
C8	13°25'31"	450.00'	105.44'	N09°17'35"W
C9	27°09'25"	447.76'	212.23'	N16°05'24"W
C10	26°42'22"	450.00'	225.46'	N15°14'47"W
C11	89°58'13"	53.00'	83.25'	S45°00'53"W
C12	89°58'13"	53.00'	83.22'	N45°00'53"E
C13	90°00'00"	53.00'	83.25'	S45°00'00"W
C14	90°00'00"	53.00'	83.25'	S45°00'00"W
C15	90°00'00"	53.00'	83.25'	S45°01'47"W
C16	89°58'13"	53.00'	83.22'	N44°59'07"W
C17	51°40'15"	400.00'	360.73'	N64°08'06"W
C18	32°33'55"	399.00'	226.78'	N22°01'01"W
C19	16°57'44"	1510.00'	447.03'	N14°12'55"W
C20	72°49'21"	53.00'	67.36'	N50°06'28"W
C21	11°57'00"	250.00'	52.14'	S78°30'22"W
C22	17°41'29"	529.00'	163.34'	S81°22'36"W
C23	90°48'48"	53.00'	84.00'	S77°08'54"W
C24	90°00'00"	53.00'	83.25'	S13°15'30"W
C25	23°08'11"	922.50'	372.51'	S69°49'36"W
C26	19°07'54"	520.00'	173.63'	N67°49'27"E
C27	26°00'27"	774.00'	351.33'	N71°15'43"E
C28	17°41'29"	860.00'	265.54'	N81°22'56"W
C29	90°00'00"	53.00'	83.25'	N44°46'39"W
C30	6°05'00"	1050.00'	111.48'	N49°49'09"W
C31	4°35'00"	1050.00'	83.95'	N08°09'09"W
C32	11°26'50"	445.00'	88.91'	N16°10'04"W
C33	0°25'04"	445.00'	3.25'	N22°06'01"W
C34	21°24'58"	730.00'	272.86'	N11°36'04"W
C35	90°00'00"	53.00'	83.25'	N44°06'25"E
C36	11°57'00"	504.00'	105.12'	S78°30'22"W
C37	17°41'29"	275.00'	84.91'	S81°22'36"W
C38	23°44'19"	704.00'	291.68'	N72°16'11"E
C39	23°44'19"	450.00'	186.44'	S72°16'11"W
C40	19°09'19"	365.00'	122.03'	S69°58'41"W
C41	7°42'29"	550.00'	73.99'	N64°15'16"E
C42	11°53'31"	500.00'	101.65'	N05°47'40"W
C43	11°21'49"	500.00'	99.17'	N05°56'11"W
C44	90°00'00"	53.00'	83.25'	N45°05'17"W
C45	29°20'41"	500.00'	256.08'	N75°04'23"E
C46	90°00'00"	53.00'	83.25'	S74°35'58"E
C47	29°20'41"	754.00'	386.17'	N75°04'23"E
C48	29°20'41"	1008.00'	516.28'	S75°04'23"W
C49	29°20'41"	1278.00'	655.06'	S75°04'23"W
C50	90°00'26"	30.00'	47.13'	S45°17'08"E
C51	90°16'55"	20.00'	31.51'	S44°51'33"W
C52	14°02'05"	180.00'	44.09'	N82°58'58"W
C53	118°02'23"	88.00'	181.30'	S45°00'53"W
C54	14°02'05"	180.00'	44.09'	S06°59'16"E
C55	89°58'13"	20.00'	31.41'	S45°00'53"W
C56	14°02'05"	180.00'	44.09'	N82°58'58"W
C57	118°02'23"	88.00'	181.30'	S45°00'53"W
C58	14°02'05"	180.00'	44.09'	S06°59'16"E
C59	90°00'00"	20.00'	31.42'	S45°01'47"W
C60	90°00'00"	30.00'	47.12'	N44°58'13"W
C61	89°58'13"	26.00'	40.83'	N45°00'53"E
C62	89°43'05"	20.00'	31.42'	S45°08'27"E
C63	90°16'55"	20.00'	31.51'	S44°51'33"W
C64	90°01'47"	20.00'	31.43'	N44°59'07"W
C65	89°58'13"	26.00'	40.83'	N45°00'53"E
C66	90°01'47"	20.00'	31.43'	S44°59'07"E
C67	90°00'00"	20.00'	31.42'	S45°01'47"W
C68	90°00'00"	20.00'	31.42'	N44°58'13"W
C73	89°58'13"	20.00'	31.41'	N45°00'53"E
C74	89°43'05"	20.00'	31.32'	S45°08'27"E
C75	90°16'55"	20.00'	31.51'	S44°51'33"W
C76	90°01'47"	20.00'	31.43'	N44°59'07"W
C77	89°58'13"	20.00'	31.41'	N45°00'53"E
C78	89°43'05"	20.00'	31.32'	S45°08'27"E
C79	90°18'42"	20.00'	31.52'	S44°52'26"W
C80	90°00'00"	20.00'	31.42'	N44°58'13"W
C81	89°59'34"	30.00'	47.12'	N44°42'52"E
C82	2°38'35"	20.00'	0.92'	N01°02'23"E
C83	2°38'35"	20.00'	0.92'	N01°02'23"E
C84	89°43'05"	20.00'	31.32'	N45°08'27"W

CURVE TABLE				
CURVE	DELTA	RADIUS	LENGTH	BEARING
C85	14°02'05"	180.00'	44.09'	S82°58'58"W
C86	118°04'09"	88.00'	181.34'	N45°00'00"W
C87	12°30'22"	180.00'	39.29'	N07°46'54"E
C88	14°02'05"	180.00'	44.09'	N07°01'02"W
C89	118°04'09"	88.00'	181.34'	N45°00'00"E
C90	14°02'05"	180.00'	44.09'	S82°58'58"E
C91	89°58'13"	20.00'	31.41'	N45°00'53"E
C92	14°02'05"	180.00'	44.09'	N06°59'16"W
C93	118°04'09"	88.00'	181.34'	N45°01'47"E
C94	14°02'05"	180.00'	44.09'	S82°57'11"E
C95	97°52'33"	20.00'	34.17'	N41°05'30"E
C96	30°27'12"	416.00'	221.11'	N23°04'22"W
C97	84°15'20"	20.00'	29.41'	N80°25'38"W
C98	14°02'05"	180.00'	44.09'	S50°25'40"W
C99	118°52'57"	88.00'	182.59'	N77°08'54"W
C100	14°02'05"	180.00'	44.09'	N24°43'27"W
C101	90°00'00"	20.00'	31.42'	N76°44'30"W
C102	90°16'55"	20.00'	31.51'	N44°51'33"E
C103	90°00'00"	26.00'	40.84'	S45°00'00"E
C104	90°00'00"	20.00'	31.42'	S45°00'00"W
C105	89°43'05"	20.00'	31.32'	N45°08'27"W
C106	90°16'55"	20.00'	31.51'	N44°51'33"E
C107	90°00'00"	20.00'	31.42'	S45°00'00"E
C108	90°00'00"	26.00'	40.84'	S45°00'00"W
C109	89°43'05"	20.00'	31.32'	N45°08'27"W
C110	90°16'55"	20.00'	31.51'	N44°51'33"E
C111	90°01'47"	20.00'	31.43'	S44°59'07"E
C112	90°00'00"	26.00'	40.84'	S45°01'47"W
C113	89°41'18"	20.00'	31.31'	N45°07'34"W
C114	73°19'23"	20.00'	25.59'	S85°53'58"E
C115	90°00'00"	30.00'	47.12'	N45°01'47"E
C116	90°00'00"	20.00'	31.42'	S44°58'13"E
C117	79°39'02"	20.00'	27.80'	S31°58'45"W
C118	89°58'13"	20.00'	31.41'	S44°59'07"E
C119	14°02'05"	180.00'	44.09'	S07°01'02"W
C120	12°31'22"	180.00'	39.34'	N82°15'23"E
C121	11°38'53"	527.00'	107.14'	S05°47'40"E
C122	51°40'15"	373.00'	336.38'	S64°08'06"E
C123	32°33'55"	372.00'	211.43'	S22°01'01"E
C124	16°57'44"	1537.00'	455.03'	S14°12'55"E
C125	14°02'05"	180.00'	44.09'	S15°40'45"E
C126	9°03'48"	180.00'	28.47'	N75°21'36"E
C127	97°32'36"	20.00'	34.05'	S51°21'36"E
C128	51°23'14"	20.00'	17.94'	S55°17'35"E
C129	27°29'13"	484.00'	232.19'	S16°19'11"E
C130	32°40'10"	20.00'	11.40'	S68°08'47"W
C131	90°00'00"	20.00'	31.42'	N74°35'58"W
C132	14°02'05"	180.00'	44.09'	N22°34'57"W
C133	14°02'05"	180.00'	44.09'	S53°23'00"W
C134	61°30'11"	20.00'	21.47'	S76°43'03"E
C135	29°20'41"	473.00'	242.25'	S75°04'23"W
C136	64°47'53"	20.00'	22.62'	S48°59'44"W
C137	90°00'00"	20.00'	31.42'	N45°15'17"W
C138	14°02'05"	180.00'	44.09'	N06°45'46"E
C139	118°04'09"	88.00'	181.34'	N45°15'17"W
C140	14°02'05"	180.00'	44.09'	S82°43'41"W
C141	86°54'38"	20.00'	30.34'	N46°47'58"W
C142	8°16'28"	527.00'	76.11'	N07°28'52"W
C143	11°38'53"	473.00'	96.16'	N05°47'40"W
C144	85°52'44"	20.00'	29.98'	N14°30'20"E
C145	90°48'48"	26.00'	41.21'	S77°08'54"E
C146	90°00'00"	20.00'	31.42'	S13°15'30"W
C147	19°07'54"	493.00'	164.62'	S67°49'27"W
C148	85°52'44"	20.00'	29.98'	N59°40'14"W
C149	11°42'10"	634.00'	129.50'	N22°34'57"W
C150	85°52'44"	20.00'	29.98'	N34°27'02"E
C151	19°07'54"	547.00'	182.65'	N67°49'27"E
C152	90°00'00"	20.00'	31.42'	S44°54'35"W
C153	90°00'00"	20.00'	31.42'	S13°15'30"W
C154	26°00'27"	747.00'	339.07'	S71°15'43"W
C155	90°00'00"	20.00'	31.42'	N50°44'03"W
C156	2°45'16"	634.00'	30.48'	N07°06'41"W
C157	90°00'00"	20.00'	31.42'	N39°15'57"E
C158	26°00'27"	801.00'	363.59'	N71°15'43"E
C159	90°00'00"	20.00'	31.42'	S76°44'30"E
C160	90°00'00"	26.00'	40.84'	S13°15'30"W
C161	23°08'11"	895.50'	361.61'	S69°49'36"W
C162	92°52'16"	20.00'	32.42'	N52°10'11"W
C163	2°38'35"	20.00'	0.92'	S73°08'05"W
C164	14°02'05"	180.00'	44.09'	N38°45'32"W

CURVE TABLE					
CURVE	DELTA	RADIUS	LENGTH	BEARING	CHORD
C165	83°14'55"	88.00'	127.86'	N30°40'08"E	116.91'
C166	14°02'05"	180.00'	44.09'	N65°16'33"E	43.98'
C167	23°08'11"	949.50'	383.41'	N69°49'36"E	380.81'
C168	91°13'58"	20.00'	31.85'	N35°46'42"E	26.59'
C169	6°10'03"	1275.00'	137.25'	N12°55'19"W	137.18'
C170	91°27'48"	20.00'	31.93'	N61°44'14"W	28.64'
C171	15°09'40"	887.00'	234.71'	S80°06'42"W	234.03'
C172	12°23'38"	180.00'	38.94'	S81°29'43"W	38.86'
C173	118°57'32"	88.00'	182.71'	N45°13'21"W	151.61'
C174	14°02'05"	180.00'	44.09'	N07°14'23"E	43.98'
C175	6°05'00"	1023.00'	108.62'	N02°49'09"W	108.56'
C176	4°35'00"	1023.00'	81.83'	N08°09'09"W	81.81'
C177	11°51'54"	418.00'	86.56'	N16°22'36"W	86.41'
C178	21°24'58"	757.00'	282.95'	N11°36'04"W	281.31'
C179	14°02'05"	180.00'	44.09'	N07°54'38"W	43.98'
C180	118°04'09"	88.00'	181.34'	N44°06'25"E	150.92'
C181	14°02'05"	180.00'	44.09'	S83°52'33"E	43.98'
C182	90°00'00"	20.00'	31.42'	N44°06'25"E	28.28'
C183	90°00'00"	30.00'	47.12'	N45°53'36"W	42.43'
C184	90°01'47"	20.00'	31.43'	N45°00'53"E	28.28'
C185	83°49'10"	20.00'	29.26'	S48°03'38"E	26.72'
C186	32°08'55"	484.00'	271.57'	S22°13'01"E	288.02'
C187	32°33'55"	566.00'	321.70'	S34°11'01"E	317.39'
C188	10°16'17"	1343.00'	240.76'	S10°52'12"E	240.44'
C189	13°25'31"	416.00'	97.47'	S09°17'35"E	97.25'
C190	87°03'41"	20.00'	30.39'	S40°57'01"W	27.55'
C191	72°49'21"	26.00'	33.05'	N59°06'28"W	30.87'
C192	16°57'44"	1483.00'	439.04'	N14°12'55"W	437.44'
C193	32°33'55"	426.00'	242.13'	N22°01'01"W	238.88'
C194	51°40'15"	427.00'	385.08'	N64°08'06"W	372.16'
C195	89°58'13"	26.00'	40.83'	N44°59'07"W	36.76'
C196	88°32'12"	20.00'	30.91'	N28°15'46"E	27.92'
C197	11°57'00"	223.00'	46.51'	S78°30'22"W	46.43'
C198	92°56'19"	20.00'	32.44'	N49°02'59"W	29.00'
C199	13°25'31"	484.00'	113.41'	N09°17'35"W	113.05'
C200	16°53'31"	833.00'	245.58'	N81°46'35"E	244.70'
C203	90°00'00"	26.00'	40.84'	S44°56'39"E	28.28'
C204	11°57'00"	277.00'	57.77'	N78°30'22"E	57.63'
C205	9°11'29"	502.00'	80.53'	N85°37'36"E	80.45'
C206	90°00'00"	20.00'	31.42'	S44°56'39"E	28.28'
C207	90°00'00"	20.00'	31.42'	S45°13'21"W	28.28'
C208	17°41'29"	302.00'	93.25'	N81°22'36"E	92.88'
C209	11°57'00"	223.00'	46.51'	S78°30'22"W	96.31'
C210	92°56'19"	20.00'	32.44'	N49°02'59"W	29.00'
C211	87°03'41"	20.00'	30.39'	N40°57'01"E	27.55'
C212	11°21'49"	473.00'	93.81'	S05°56'11"E	93.66'
C213	20°38'19"	282.00'	101.58'	N80°34'26"W	101.03'
C214	90°00'00"	20.00'	31.42'	S44°44'43"E	28.28'
C215	90°00'00"	30.00'	47.12'	N45°15'17"E	42.43'
C216	90°00'00"	30.00'	47.12'	N45°53'35"W	42.43'
C217	70°00'00"	30.00'	36.65'	N35°15'17"W	32.43'
C218	90°00'00"	20.00'	31.42'	N44°44'43"E	28.28'
C219	90°00'00"	20.00'	31.42'	N45°15'17"E	28.28'
C220	90°00'00"	20.00'	31.42'	S44°44'43"E	28.28'
C221	90°00'00"	20.00'	31.42'	N45°15'17"W	28.28'
C222	90°00'00"	20.00'	31.42'	N44°44'43"E	28.28'
C223	90°00'00"	26.00'	40.84'	S45°15'17"E	36.77'
C224	90°00'00"	20.00'	31.42'	S44°44'43"W	28.28'
C225	90°00'00"	20.00'	31.42'	N45°15'17"W	27.55'
C226	87°03'41"	20.00'	30.39'	N40°57'01"E	28.28'
C227	11°57'00"	531.00'	110.75'	N78°30'22"E	110.55'
C228	16°46'17"	248.00'	72.59'	N80°55'00"E	72.33'
C229	90°00'00"	20.00'	31.42'	S44°46'39"E	28.28'
C230	5°26'46"	1077.00'	102.37'	S02°30'03"E	102.34'
C231	89°21'47"	20.00'	31.19'	S39°27'27"W	28.13'
C232	23°44'19"	731.00'	302.86'	S72°16'11"W	300.70'
C233	90°00'00"	20.00'	31.42'	N74°35'58"W	28.28'
C234	27°33'49"	416.00'	200.13'	N16°21'24"W	198.20'
C235	90°00'00"	30.00'	47.12'	N44°44'43"E	42.43'
C236	90°00'00"	20.00'	31.42'	S45°15'17"E	28.28'
C237	90°00'00"	20.00'	31.42'	N44°44'43"E	28.28'
C238	89°21'41"	20.00'	31.19'	S45°34'26"E	28.13'
C239	90°00'00"	30.00'	47.12'	S44°06'25"W	42.43'
C240	26°16'23"	88.00'	40.35'	N41°54'49"E	40.40'
C241	90°38'19"	20.00'	31.64'	N44°25'34"E	28.44'
C242	29°20'41"	527.00'	269.91'	N75°04'23"E	266.97'
C243	90°00'00"	26.00'	40.84'	N74°35'58"E	36.77'
C244	90°00'00"	20.00'	31.42'	S15°24'02"W	28.28'
C245	25°28'06"	727.00'	323.16'	S73°08'05"W	320.50'
C246	89°21'41"	20.00'	31.19'	N43°34'26"W	28.13'

DRAFT

PRELIMINARY - NOT FOR CONSTRUCTION,
RECORDING PURPOSES OR IMPLEMENTATION

PRELIMINARY

Robert C. Tossy
Colorado Registered Professional Land Surveyor No. 14541
1000 North Lincoln Avenue, Suite 100
Fort Collins, Colorado 80504

80.00' WITNESS CORNER
TO NW COR S35-T7N-R67W
FOUND #6 REBAR WITH
2.5" ALUMINUM CAP
LS 12374 "1999"

N89°42'39"E 2645.23'

LOT A
RE-3293

FOUND #4 REBAR WITH
BLUE PLASTIC CAP
LS ILLEGIBLE

FOUND #4 REBAR WITH
RED PLASTIC CAP
LS 30162

N89°43'39"E 404.00'

N90°00'00"E 314.13'

10' D&UE

15' D&UE

10' D&UE

15' D&UE

10' D&UE

15' D&UE

10' D&UE

15' D&UE

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15' D&UE

PRELIMINARY PLAT OF NORTHGATE LAKE

A TRACT OF LAND LOCATED IN SECTION 35, TOWNSHIP 7 NORTH, RANGE 67 WEST OF THE
6TH PRINCIPAL MERIDIAN, TOWN OF SEVERANCE, COUNTY OF WELD, STATE OF COLORADO

LOT B
AMENDED RE 961
REC. NO. 2086016

NORTH LINE OF THE
NORTHWEST QUARTER
S35-T7N-R67W

N89°42'39"E 1531.28'



50 0 50 100 150
(U.S. SURVEY FEET)
1 inch = 50 ft.

**SEE LINE & CURVE TABLE & LEGEND ON SHEET 3 OF 17

PARCEL NO. 070534000019
UNPLATTED WELD COUNTY

30' ROW PER
ROAD VIEWER REPORT
BOOK 40, PAGE 200
30' ADDITIONAL
ROW DEDICATED
BY THIS PLAT

30' EXISTING ROW

WEST LINE OF THE
WATER
S35-T7N-R67W

30' ROW PER
ROAD VIEWER REPORT
BOOK 40, PAGE 200
30' ADDITIONAL
ROW DEDICATED
BY THIS PLAT

30' EXISTING ROW

WEST LINE OF THE
WATER
S35-T7N-R67W

30' ROW PER
ROAD VIEWER REPORT
BOOK 40, PAGE 200
30' ADDITIONAL
ROW DEDICATED
BY THIS PLAT

30' EXISTING ROW

WEST LINE OF THE
WATER
S35-T7N-R67W

30' ROW PER
ROAD VIEWER REPORT
BOOK 40, PAGE 200
30' ADDITIONAL
ROW DEDICATED
BY THIS PLAT

NOTICE:
According to Colorado law, you must compensate any legal action
based upon any defect in this survey within three years after you
discover such defect. In no event may any action based upon any
defect in this survey be commenced more than ten years after the
date of the certificate shown hereon.

SECTION:
35
TOWNSHIP:
7N
RANGE:
67 W of the 6th PM

NORTHERN
ENGINEERING
SURVEY | MUNICIPAL | LAND DEVELOPMENT
FORT COLLINS | GREELEY 970.221.4188 NORTHERNENGINEERING.COM

PROJECT:
1159-003
DATE:
7/1/24
CLIENT:
TOWN OF SEVERANCE
SCALE:
1"=50'
DRAWN BY:
L. Smith
REVIEWED BY:
R. Tossy

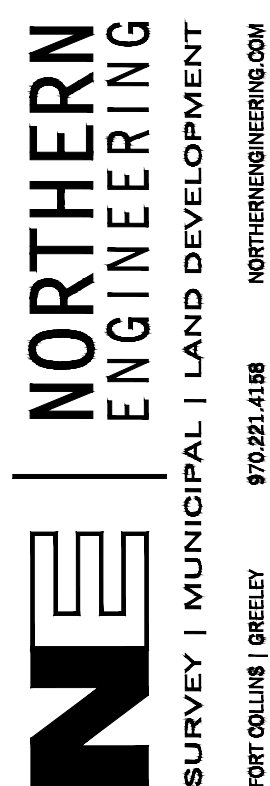
NORTHGATE LAKE PRELIMINARY PLAT
TOWN OF SEVERANCE
WELD COUNTY, COLORADO

Sheet
4
Of 18 Sheets

SEE SHEET 4-

SEE SHEET 7

**TOWN OF SEVERANCE
WELD COUNTY, COLORADO**

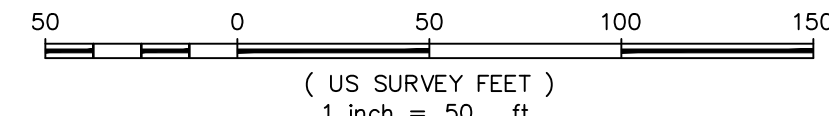


Sheet
5
Of 18 Sheets

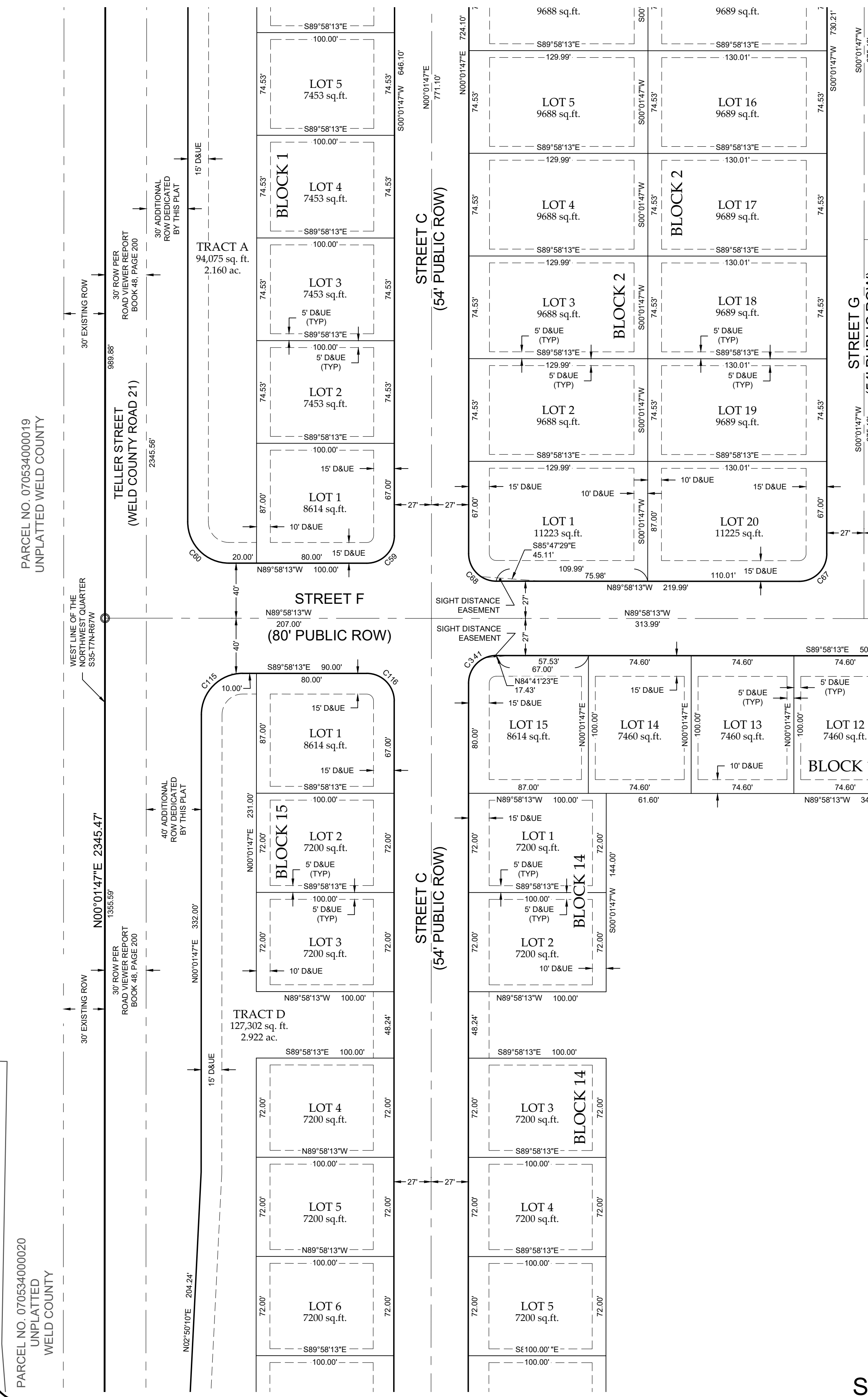
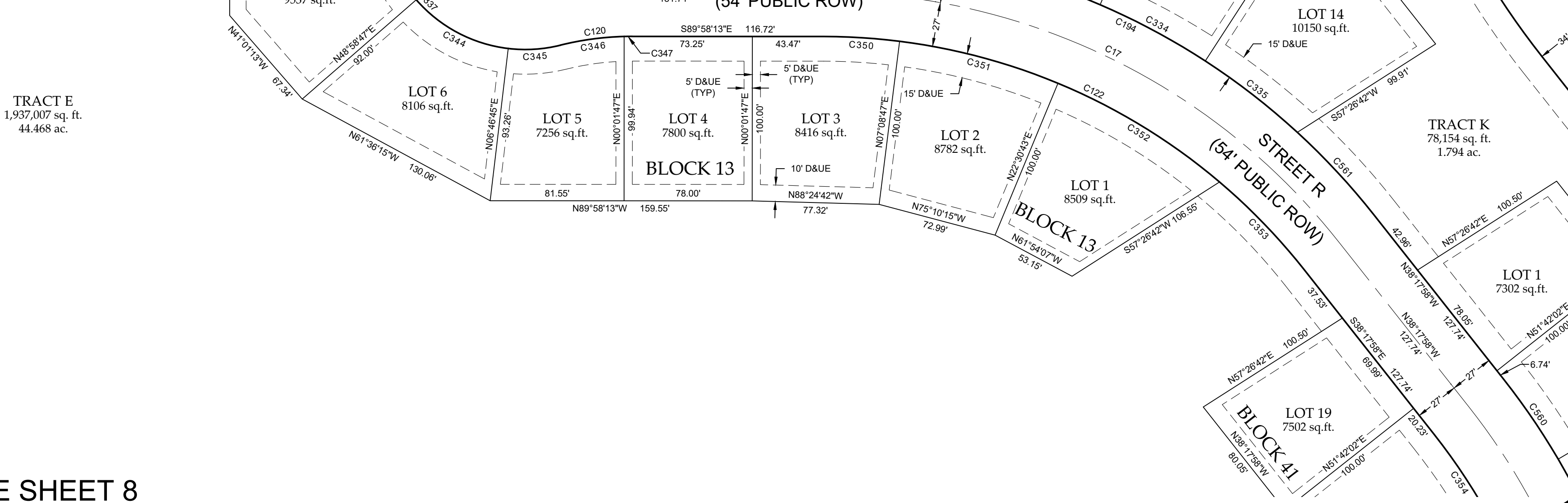
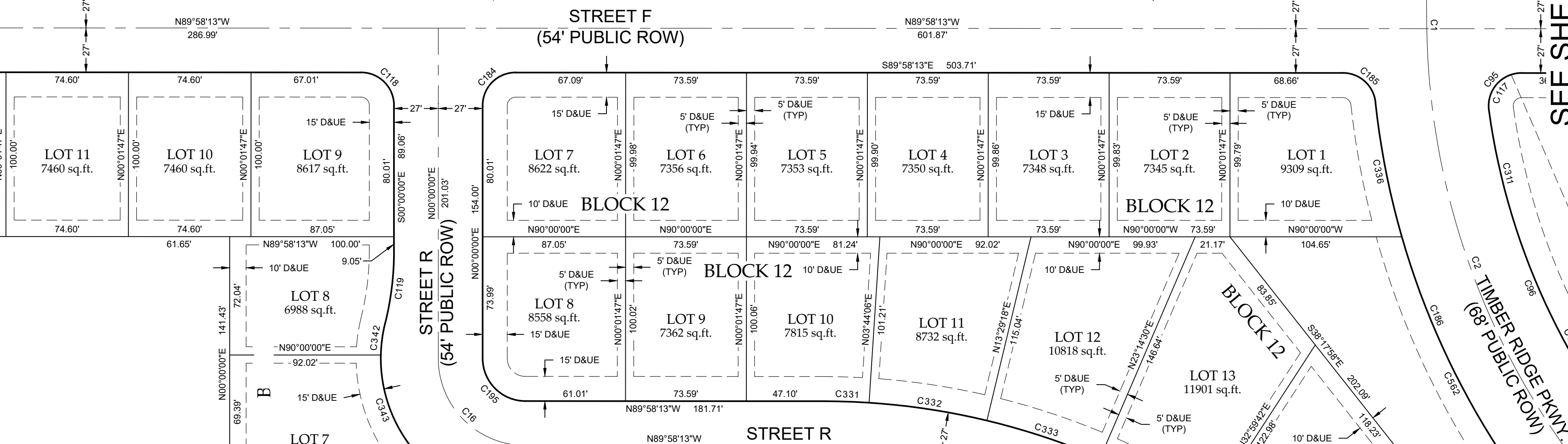
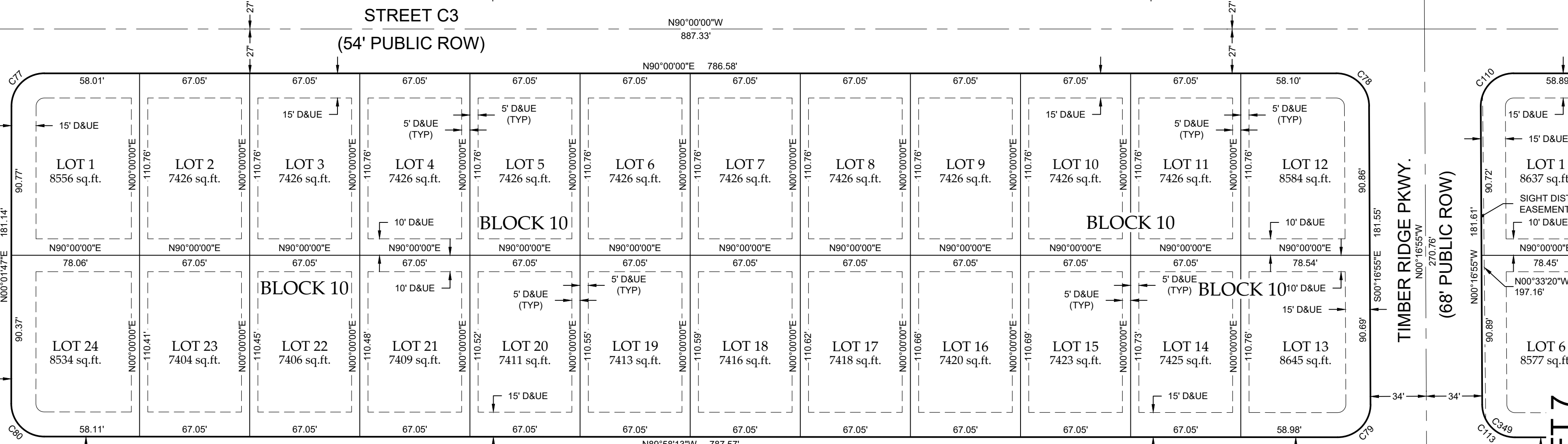
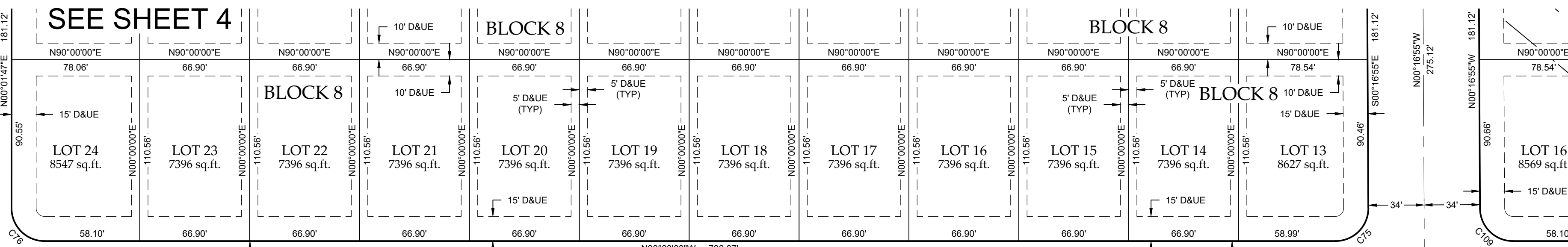
Page 21 of 268

PRELIMINARY PLAT OF
NORTHGATE LAKE

A TRACT OF LAND LOCATED IN SECTION 35, TOWNSHIP 7 NORTH, RANGE 67 WEST OF THE
6TH PRINCIPAL MERIDIAN, TOWN OF SEVERANCE, COUNTY OF WELD, STATE OF COLORADO



**SEE LINE & CURVE TABLE & LEGEND ON SHEET 3 OF 17



NOTICE:

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SECTION:

35

TOWNSHIP:

7N

RANGE:

67 W of the 6th PM

NORTHERN ENGINEERING

SURVEY | MUNICIPAL | LAND DEVELOPMENT

DATE:

7/1/24

PROJECT:

1159-003

CLIENT:

DRAWN BY:

L. Smith

REVIEWED BY:

R. ressey

NORTHGATE LAKE PRELIMINARY PLAT

TOWN OF SEVERANCE

WELD COUNTY, COLORADO

Sheet

6

Of 18 Sheets

PARCEL NO. 070534000019
UNPLATTED WELD COUNTY

PARCEL NO. 070534000020
UNPLATTED WELD COUNTY

SEE SHEET 8

SEE SHEET 7

SEE SHEET 4

DRAFT
7-1-24
PRELIMINARY
RECORDING PURPOSE OR IMPLEMENTATION

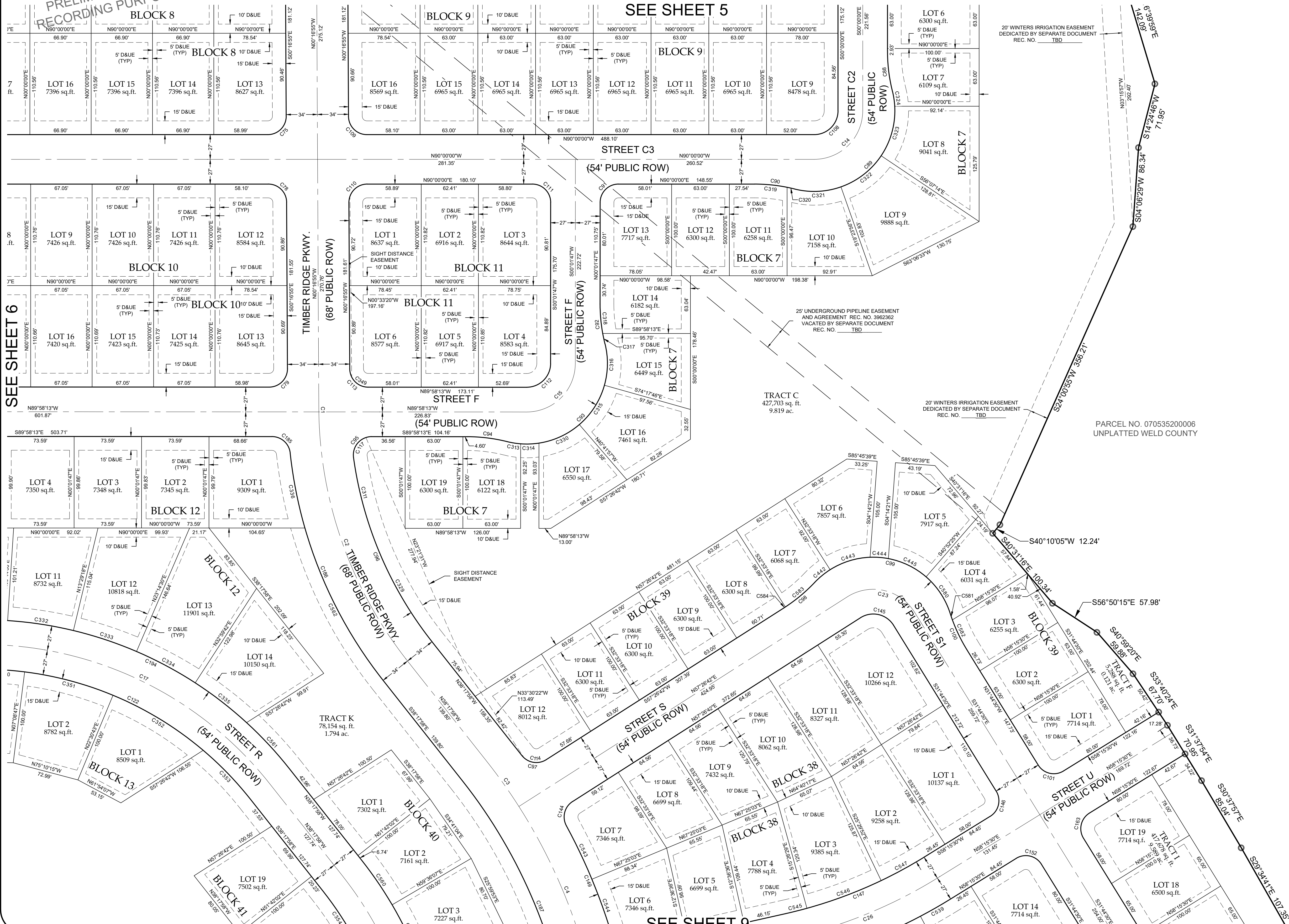
PRELIMINARY PLAT OF
NORTHGATE LAKE

A TRACT OF LAND LOCATED IN SECTION 35, TOWNSHIP 7 NORTH, RANGE 67 WEST OF THE
6TH PRINCIPAL MERIDIAN, TOWN OF SEVERANCE, COUNTY OF WELD, STATE OF COLORADO



50 0 50 100 150
(US SURVEY FEET)
1 inch = 50 ft.

**SEE LINE & CURVE TABLE & LEGEND ON SHEET 3 OF 17



NOTICE:

According to Colorado law you must compensate any legal action based upon any defect in this survey within three years after you discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years after the date of the certificate shown hereon.

SECTION:
35

TOWNSHIP:
7N

RANGE:
67 W of the 6th PM

NORTHERN
ENGINEERING
SURVEY | MUNICIPAL | LAND DEVELOPMENT
FORT COLLINS | GREELEY 970.221.4188 NORTHERNENGINEERING.COM

PROJECT:
1158-003

CLIENT:

DRAWN BY:
R. ressey

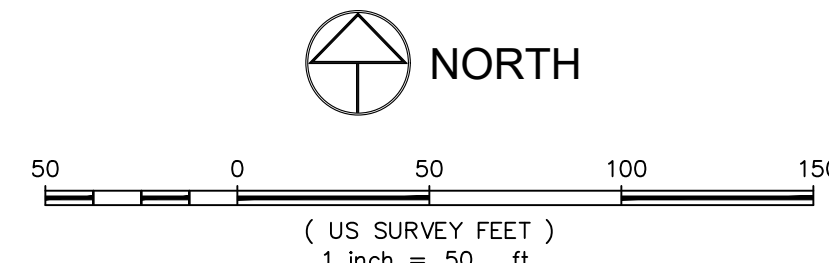
NORTHGATE LAKE PRELIMINARY PLAT
TOWN OF SEVERANCE
WELD COUNTY, COLORADO

Sheet
7
Of 18 Sheets

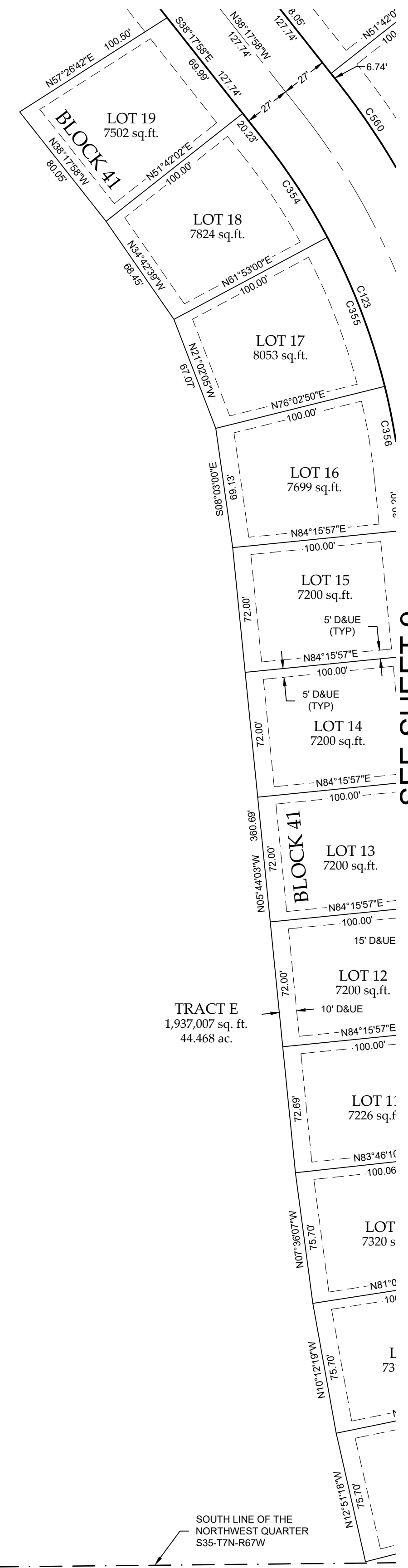
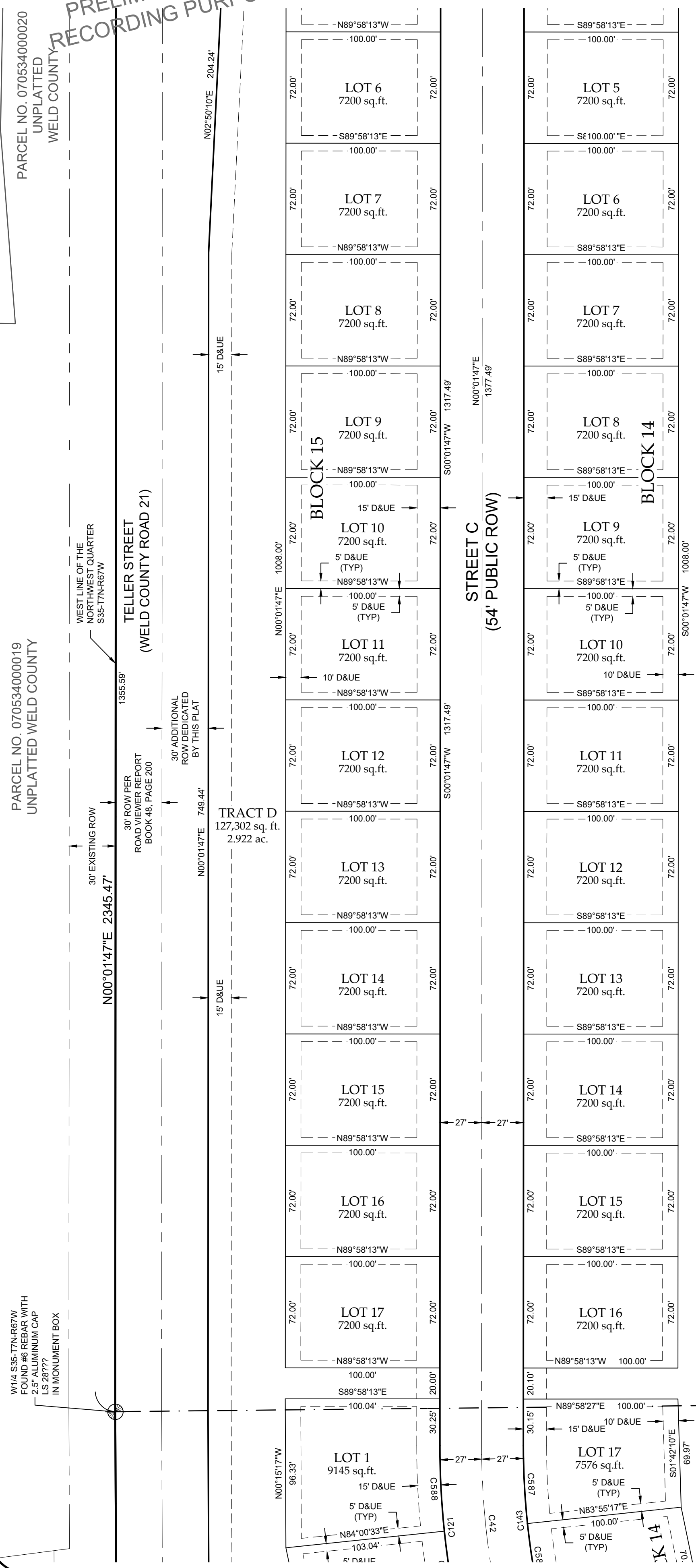
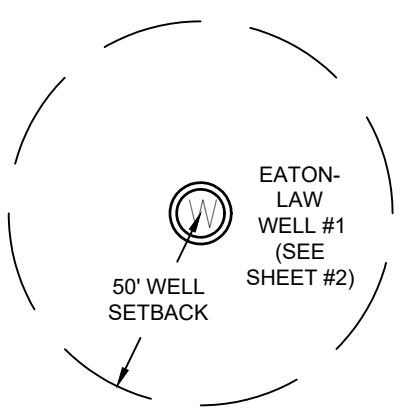
DRAFT
7-1-24
PRELIMINARY
RECORDING PURPOSES OR IMPLEMENTATION

PRELIMINARY PLAT OF
NORTHGATE LAKE

A TRACT OF LAND LOCATED IN SECTION 35, TOWNSHIP 7 NORTH, RANGE 67 WEST OF THE
6TH PRINCIPAL MERIDIAN, TOWN OF SEVERANCE, COUNTY OF WELD, STATE OF COLORADO
SEE SHEET 6



**SEE LINE & CURVE TABLE & LEGEND ON SHEET 3 OF 17



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SECTION:
35

TOWNSHIP:
7N

RANGE:
67 W of the 6th PM

NORTHERN ENGINEERING
SURVEY | MUNICIPAL | LAND DEVELOPMENT
FORT COLLINS | GREELEY 970.221.4188
NORTHERNENGINEERING.COM

PROJECT: 1158-003	DATE: 7/1/24
CLIENT:	SCALE: 1"=50'
DRAWN BY: L. Smith	REVIEWED BY: R. Resbey

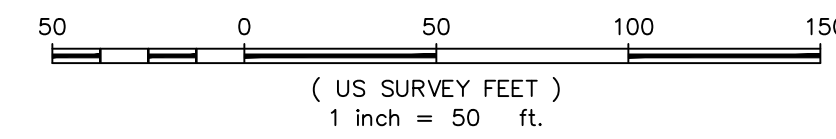
NORTHGATE LAKE PRELIMINARY PLAT
TOWN OF SEVERANCE
WELD COUNTY, COLORADO

SEE SHEET 10

SEE SHEET 8

A TRACT OF LAND LOCATED IN SECTION 35, TOWNSHIP 7 NORTH, RANGE 67 WEST OF THE 6TH PRINCIPAL MERIDIAN, TOWN OF SEVERANCE, COUNTY OF WELD, STATE OF COLORADO

SEE SHEET 11



**SEE LINE & CURVE TABLE & LEGEND ON SHEET 3 OF 17

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TOWNSHIP
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**TOWN OF SEVERANCE
WELD COUNTY, COLORADO**

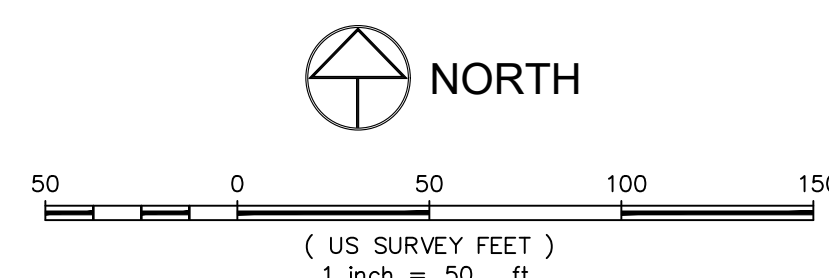
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PRELIMINARY
RECORDING PURPOSES OR IMPLEMENTATION

PRELIMINARY PLAT OF
NORTHGATE LAKE

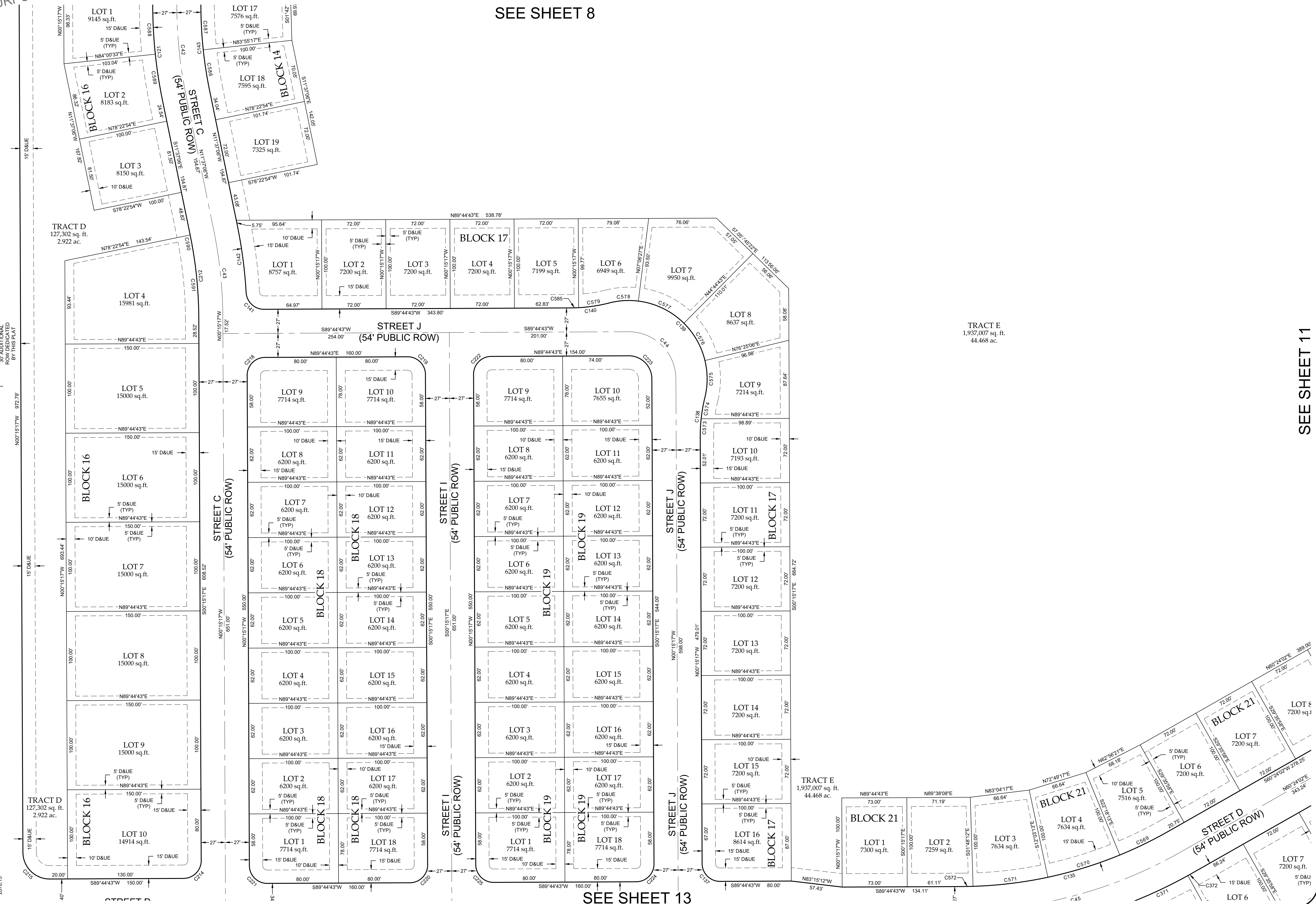
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SEE SHEET 8



**SEE LINE & CURVE TABLE & LEGEND ON SHEET 3 OF 17

Colorado Registered Professional Land Surveyor No. 38470
Northern Engineering Services, Inc.



SEE SHEET 11

SEE SHEET 13

NORTHGATE LAKE PRELIMINARY PLAT
TOWN OF SEVERANCE
WELD COUNTY, COLORADO

Sheet
10
Of 18 Sheets

PROJECT: 1158-003
CLIENT:
DRAWN BY: L. Smith
REVIEWED BY: R. Resbey

DATE: 7/1/24
SCALE: 1"=50'
TOWNSHIP: 7N
RANGE: 67 W of the 6th PM

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PRELIMINARY
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RECORDING PURPOSES OR IMPLEMENTATION

PRELIMINARY PLAT OF NORTHGATE LAKE

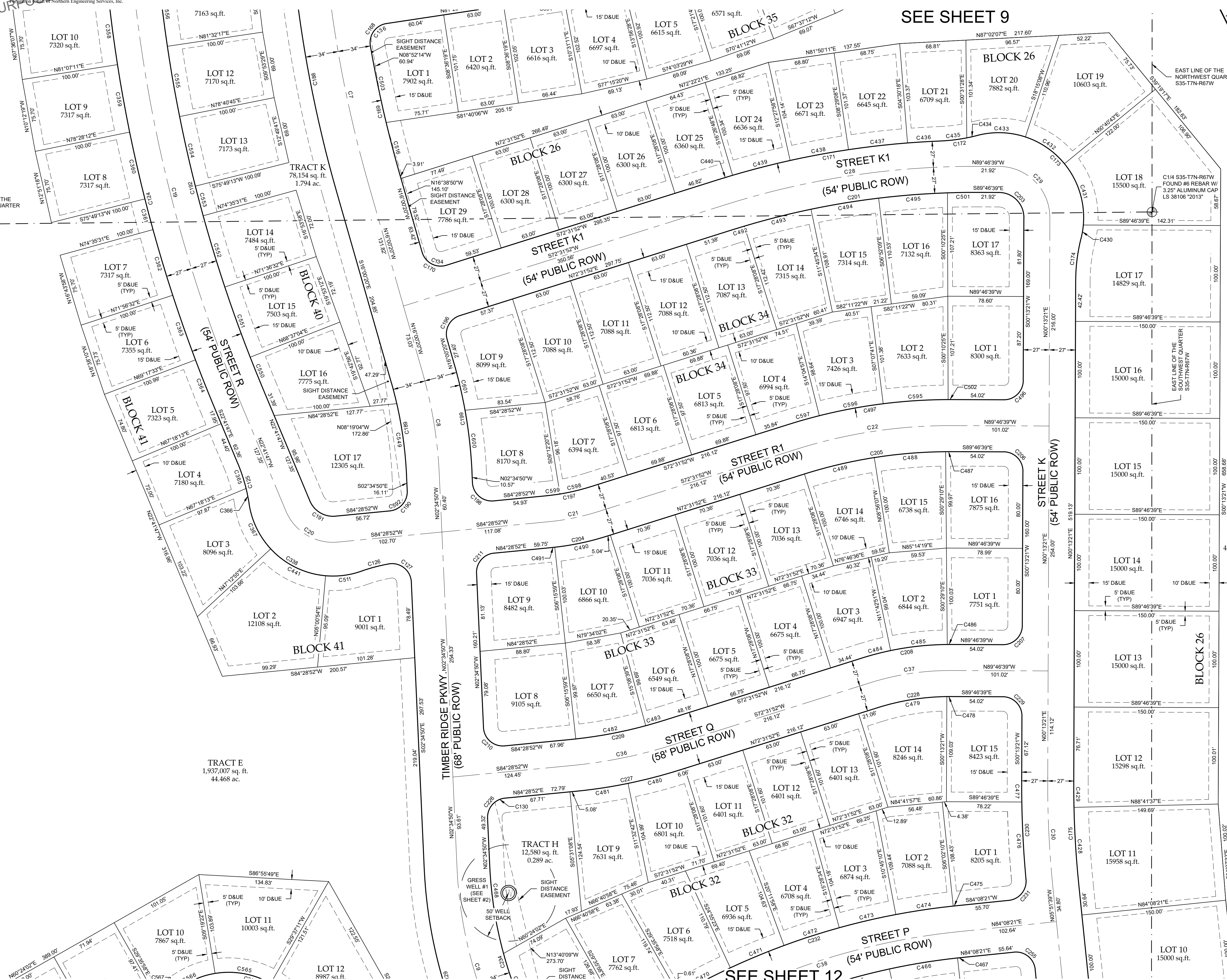
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(U.S. SURVEY FEET)
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SEE SHEET 10



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DATE:

7/1/24

SCALE:

1"=50'

REVIEWED BY:

R. Resseby

PROJECT:

1158-003

CLIENT:

L. Smith

DRAWN BY:

L. Smith

NORTHGATE LAKE PRELIMINARY PLAT
TOWN OF SEVERANCE
WELD COUNTY, COLORADO

Sheet
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Of 18 Sheets

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PROJECT:
1158-003
CLIENT:
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REVIEWED BY:
R. ressey
DRAWN BY:
L. Smith

NORTHGATE LAKE PRELIMINARY PLAT
TOWN OF SEVERANCE
WELD COUNTY, COLORADO

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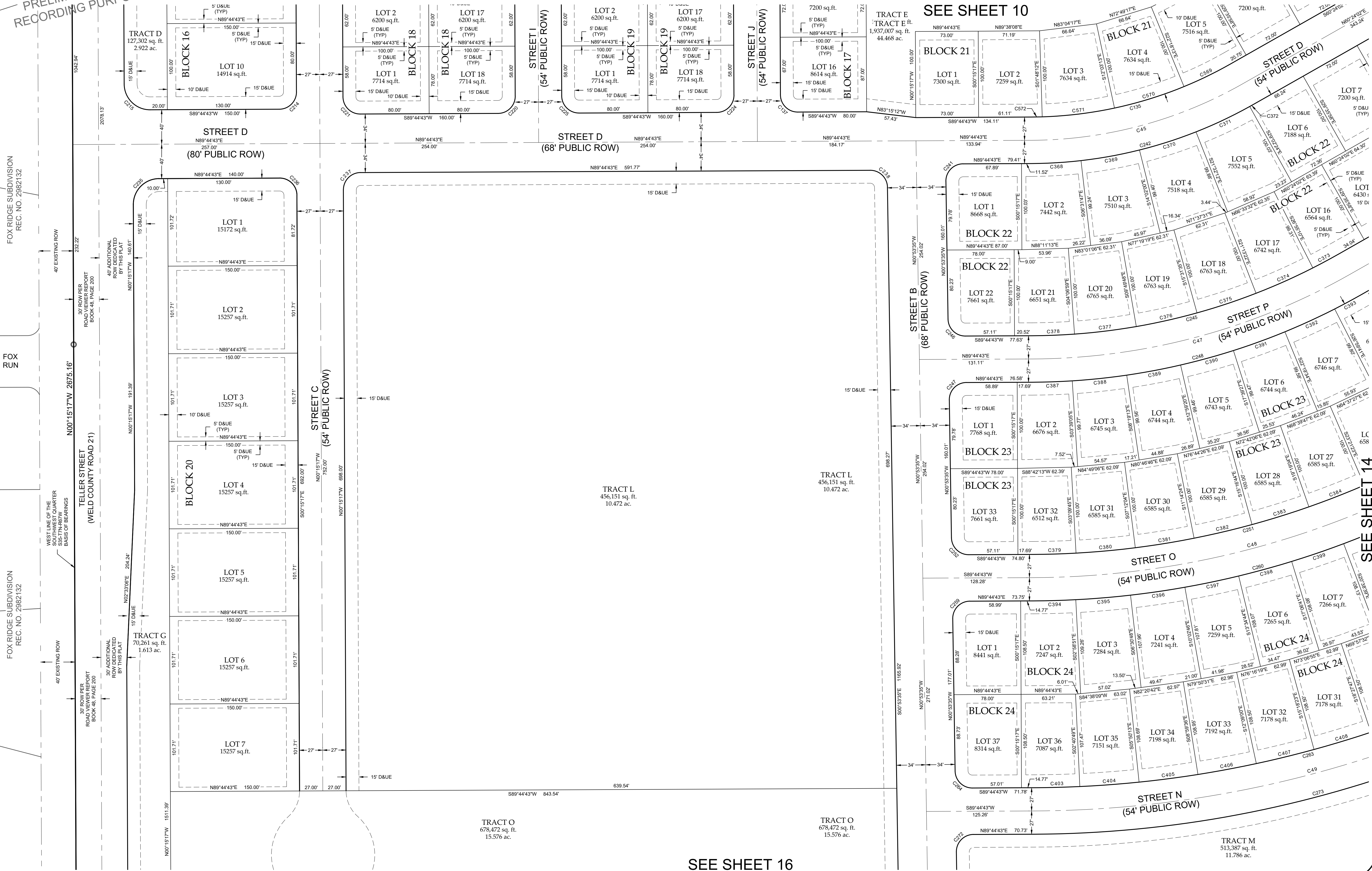
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DATE:

7/1/24

PROJECT:

1159-003

CLIENT:

DRAWN BY:

L. Smith

REVIEWED BY:

R. Resseby

SCALE:

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DATE:

7/1/24

PROJECT:

1159-003

CLIENT:

DRAWN BY:

L. Smith

REVIEWED BY:

R. Resseby

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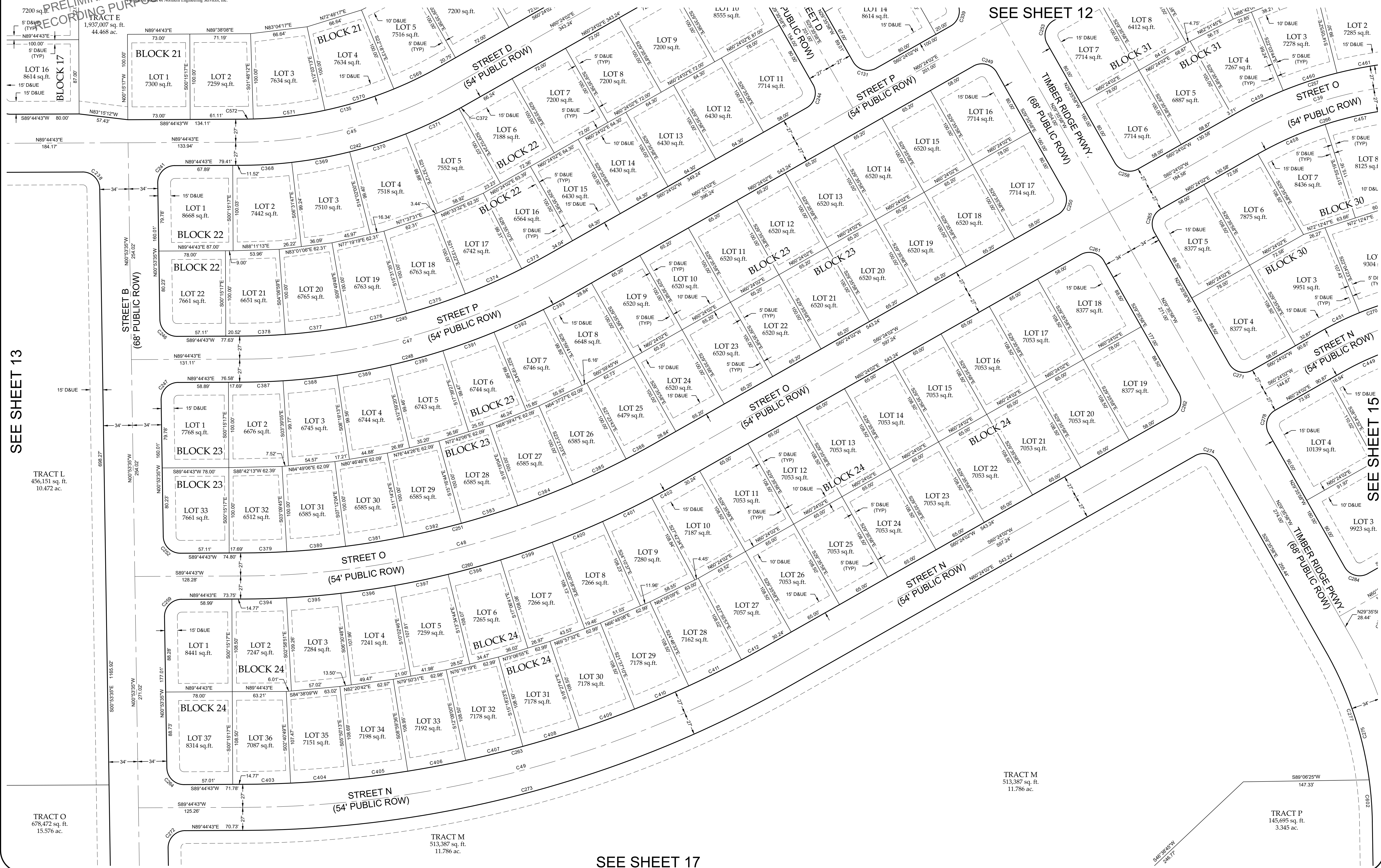
PRELIMINARY PLAT OF NORTHGATE LAKE

A TRACT OF LAND LOCATED IN SECTION 35, TOWNSHIP 7 NORTH, RANGE 67 WEST OF THE
6TH PRINCIPAL MERIDIAN, TOWN OF SEVERANCE, COUNTY OF WELD, STATE OF COLORADO



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(U.S. SURVEY FEET)
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**SEE LINE & CURVE TABLE & LEGEND ON SHEET 3 OF 17



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SECTION:

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TOWNSHIP:

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PROJECT:
1158-003

DATE:
7/1/24

CLIENT:
TOWN OF SEVERANCE

SCALE:
1"=50'

DRAWN BY:
L. Smith

REVIEWED BY:
R. Ressey

NORTHGATE LAKE PRELIMINARY PLAT
TOWN OF SEVERANCE
WELD COUNTY, COLORADO

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A TRACT OF LAND LOCATED IN SECTION 35, TOWNSHIP 7 NORTH, RANGE 67 WEST OF THE 6TH PRINCIPAL MERIDIAN, TOWN OF SEVERANCE, COUNTY OF WELD, STATE OF COLORADO



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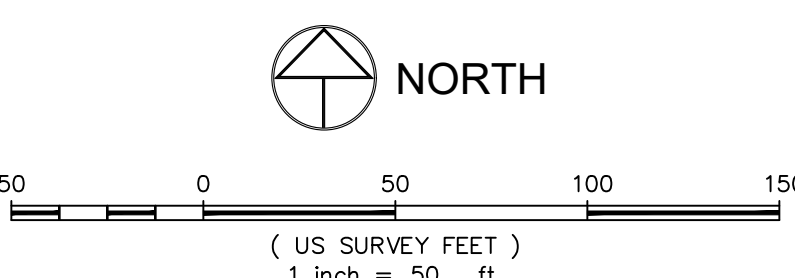
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PRELIMINARY PLAT OF
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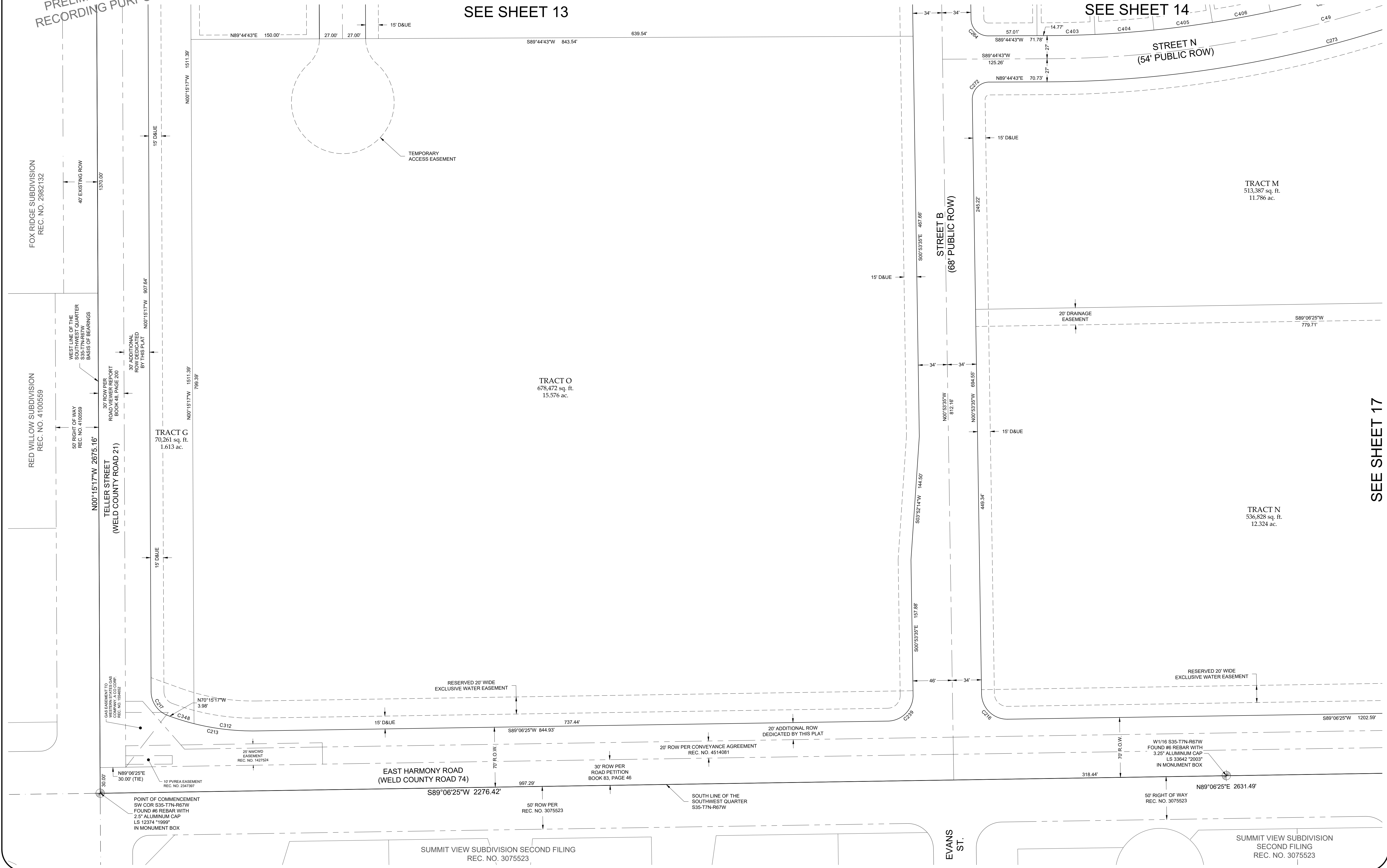
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PROJECT:	DATE:
1159-003	7/1/24
CLIENT:	SCALE:
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DRAWN BY:	REVIEWED BY:
L. Smith	R. Irschky

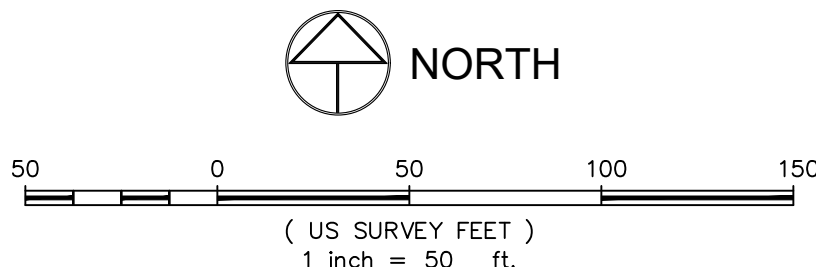
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WELD COUNTY, COLORADO

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7-1-24
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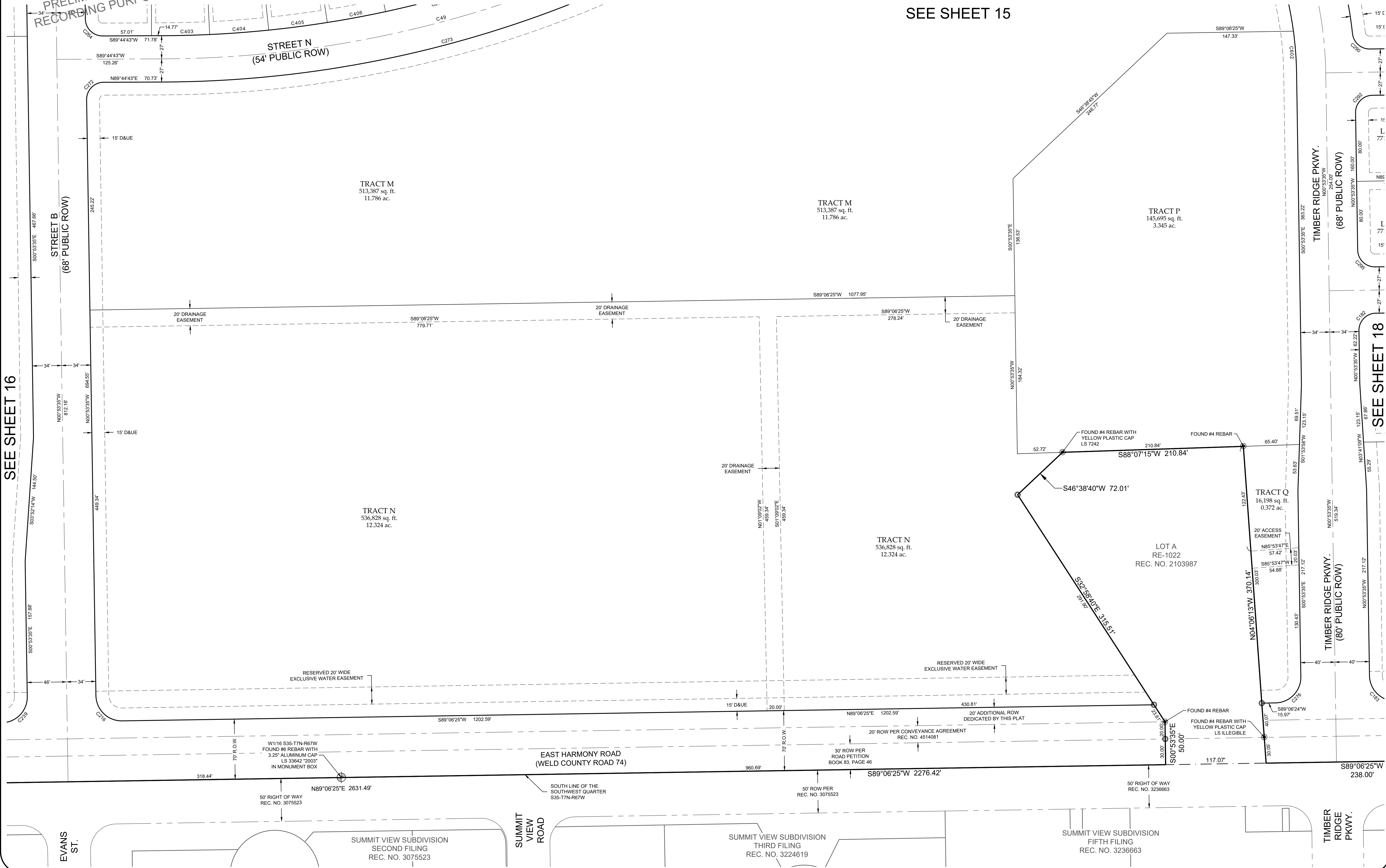
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SEE SHEET 15



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R. Irschler

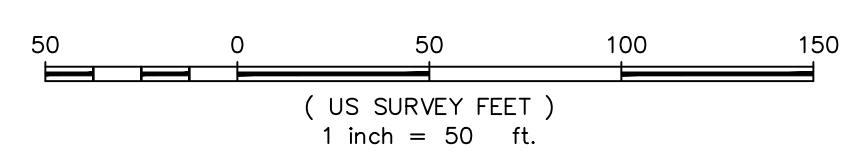
NORTHGATE LAKE PRELIMINARY PLAT
TOWN OF SEVERANCE
WELD COUNTY, COLORADO

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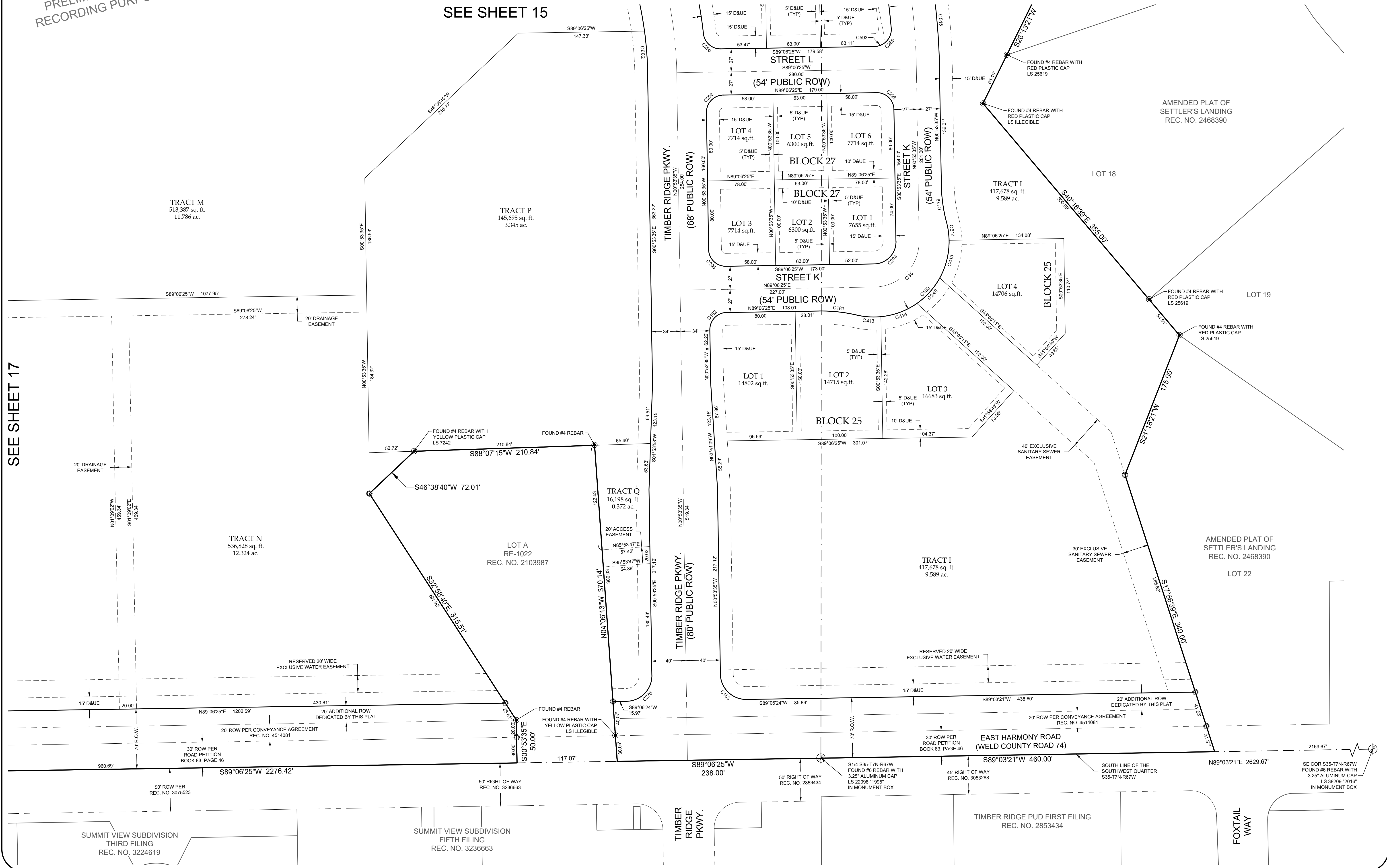
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DRAWN BY:	REVIEWED BY:
L. Smith	R. Irsch

NORTHGATE LAKE PRELIMINARY PLAT
TOWN OF SEVERANCE
WELD COUNTY, COLORADO

Moody Property

Severance, Colorado



DRAFT MANAGEMENT PLAN

February 27, 2023



VICINITY MAP



SITE DATA

LAND USE STATISTICS*

SINGLE FAMILY LOT AREA	123.40 AC	47.0%
OPEN SPACE	72.65 AC	27.7%
SCHOOL SITE	10.69 AC	4.1%
DEDICATED RIGHT-OF-WAY	55.75 AC	21.2%
TOTAL SUBURBAN PERIMETER AREA	262.49 AC	100%

COMMERCIAL PARCEL	30.66 AC	65.2%
MULTIFAMILY PARCEL	13.79 AC	29.3%
DEDICATED RIGHT-OF-WAY	2.58 AC	5.5%
TOTAL TOWN CORE AREA	47.03 AC	100.0%

DENSITY

63' X 100'	423 UNITS	1.61 DU/AC
72' X 100'	207 UNITS	0.79 DU/AC
ESTATE LOTS	40 UNITS	0.15 DU/AC
SINGLE FAMILY	670 UNITS	2.55 DU/AC

SETBACKS**

FRONT YARD GARAGE	20 FT
FRONT YARD BUILDING	15 FT
SIDE YARD	5 FT
REAR YARD	15 FT

LOT DIMENSIONS*

SINGLE FAMILY HOME	
TYPICAL WIDTH	63 FT to 100 FT
TYPICAL DEPTH	100 FT to 150 FT
TYPICAL LOT AREA	6,300 SF to 21,000 SF

* Lot dimensions and land use statistics are approximate.
** Allowable encroachments include bay windows, window wells, and eave overhangs.

TOWN QUESTIONS

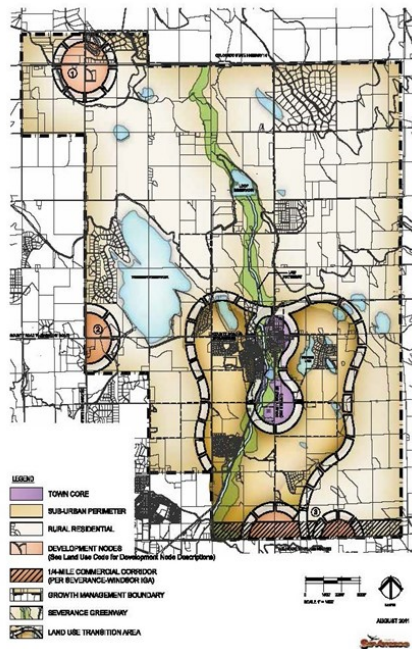
WHAT IS THE THEME OF THE DEVELOPMENT?

Moody Property is a single family detached residential neighborhood with commercial and multi-family developable parcels located east of WCR 21 and north of WCR 74. The development will provide additional housing and commerce within the Town of Severance, and provide easy, convenient access to most of the cities and towns across Northern Colorado. Moody Property will provide a welcoming, residential neighborhood that takes advantage of fantastic views and a family friendly walk and trail system. The development will be an asset to the Town of Severance and will attract new residents and businesses.

HOW DOES THE DEVELOPMENT THEME AND PATTERN SUPPORT THE COMPREHENSIVE PLAN AND ZONE DISTRICT?

The Moody Property is aligning with the Town’s Comprehensive Plan Physical Vision Statement of being a strong commercial and residential core surrounded by sub-urban residential neighborhoods. The site lies within the Suburban perimeter shown on the Comprehensive Plan’s Future Land Use Map, advancing, and enhancing the vision for the Town to continue to develop into a diverse, economically sustainable community. There are several subdivision layout standards that have been incorporated into the site plan:

- 1. Three-way intersections represent most street intersections within the neighborhood.
- 2. The layout incorporates a modified grid with looped and interrupted streets to discourage through traffic.
- 3. Views toward the distant mountain views are accommodated along trail corridors.
- 4. Direct driveway access onto connector streets has been eliminated.
- 5. Commercial and multifamily development pads are located along WCR 74.



HOW DOES THE DEVELOPMENT THEME AND PATTERN SUPPORT DIVERSITY, LAND USE, AND OPEN SPACE?

The development theme and pattern support Diversity, Land Use, and Open Space by providing quality homes at an affordable price- point in a visually appealing and user-friendly setting. The community plan outlines attractive home designs which honor the existing environment while incorporating buffers, easy access to existing parks, and walkways.

HOW DOES THE DEVELOPMENT THEME AND PATTERN SUPPORT THE ZONING DISTRICT AND DENSITY?

The Moody Property community has been rezoned to Town Core and Suburban Perimeter. The development will support the zoning district and density by providing a suburban residential development within the suburban perimeter (while not encroaching on the town-core perimeter) as shown on the Future Land Use Map. Commercial and multifamily will be provided along WCR 74 to transition into the town-core. The community fits perfectly between the town core and rural zones, allowing for patronage within the town core, involvement within the suburban community itself, and easy access to other municipalities or travel on Intersate-25 to the west. The minimum density required is 2.0 dwelling units per acre. The Moody Property site plan incorporates 2.55 dwelling units per acre and exceeds the minimum lot size by providing lots with a minimum size of 6,300 square feet and an average size of 6,300 square feet. Larger 15,000 square feet lots, along the southwest and southeast edges, will provide a more natural transition with Settler’s Landing and Fox Ridge Subdivisions.

WHAT IS THE ROADWAY NETWORK ASSOCIATED WITH THIS DEVELOPMENT?

Moody Property is bordered to the west by WCR 21, south by WCR 74 and by private property on all other sides. Timber Ridge Parkway, a collector street, will be continued to the north through the Moody Property Development. Evans Street is extended into the subdivision to provide an additional connection for the Moody Property Development. This will provide increased access for the surrounding property owners to WCR 74. The internal streets of the neighborhood will be classified as suburban local residential. Street sections and locations are shown in further details on page 4 of this Management Plan.

WHAT TREATMENTS ARE APPLIED TO THE PERIMETER AND INTERIOR ROADWAYS IN THE DEVELOPMENT?

The perimeter treatment along WCR 21 and WCR 74 will consist of a landscaped buffer zone between the lots and the roadway with some intermittent trees. The entrance to the neighborhood will be lined with trees, entry signage, and pedestrian walkways. The interior roadways will include detached sidewalks and trails promoting convenient and safe pedestrian movement.

WHAT IS THE LOT LAYOUT ASSOCIATED WITH THIS DEVELOPMENT AND HOW DOES IT INTERFACE WITH THE ROADWAY NETWORK?

The mid-ranged single-family homes slated for this neighborhood allow for a medium-density layout while preserving individual lots’ uniqueness. The interior roadways will be placed to effectively serve one row of houses on either side, allowing for smooth movement from the neighborhood streets to the main roadways. The simple roadway design will make it easy to navigate into and within the development.

HOW IS THE LOT SIZE AND DIVERSITY ACCOMPLISHED?

The lot sizes vary from 63 feet to 100 feet with a minimum of 63-feet wide. Most of the lots are between 63 feet to 75 feet, but the larger 100 feet wide lots are along the Settler’s Landing and Fox Ridge edges. The subdivision provides a modest diversity of small to medium sized single-family homes, but the lots in the surrounding subdivisions provide increased diversity.

WHAT ARE THE PROPOSED SETBACKS FOR EACH LOT?

The proposed setbacks are shown in the Site Data table on page 2 of this Management Plan and meet or exceed the Town’s standards.

HOW DO THE STREET DESIGNS, LOT SIZES AND SETBACK ENHANCE THE STREETScape?

The street layout was planned to provide for easy access, facilitate pedestrian movement, and aesthetic appeal of an existing irrigation reservoir on the property. The streetscape is enhanced through the local and connector cross sections that incorporate detached sidewalks. The short blocks allow for a variety of ways to reach connector roads, parks, and mail kiosk areas.

TOWN QUESTIONS

WHERE ARE THE COMMON AREAS IN THE SUBDIVISION AND WHAT IS THE PURPOSE OF THE COMMON AREAS?

The common areas in the subdivision include entries, buffers along roads and at the rear of lots, and the existing detention area. There are also many parks close-by in the surrounding neighborhoods including the existing The Overlook Subdivision and Hunters Crossing Subdivision.

HOW ARE COMMON AREAS FINISHED?

Common area finishing will be based on the usage of the individual areas. Entries will be finished with trees and other formal planting. Buffer zones will be finished with native plant species that are drought resistant and which require minimal maintenance. Also, in compliance with the Suburban Perimeter land use zone, open space areas will have landscape irrigation.

HOW ARE THE COMMON AREAS MANAGED?

Common areas will be maintained and managed by a new Metro District.

WHAT IS THE FENCING PLAN FOR THE DEVELOPMENT?

The fencing plan will include solid, cedar, privacy fencing throughout the neighborhood and between homes. Additionally, stone pillars will be incorporated at set distances along the outer perimeter of the development. Fencing will match existing Town of Severance communities.



WHAT AMENITIES ARE INCLUDED IN THE DEVELOPMENT AND WHAT AMENITIES WILL BE MANAGED?

Amenities provided through the community include entry features and signage, and buffer zones. These amenities will be managed by a new Metro District. A school parcel is provided in the southwest corner of the development.

HOW ARE THE ENTRIES TO THE DEVELOPMENT ENHANCED?

The entries off WCR 21 will be enhanced by signage depicting the name of the neighborhood and formal planting along the sides of the main roads. There will be pedestrian walkways along the entries that connect with neighborhood walkways. The entries will feature adequate lighting for visibility at night.

HOW IS CONNECTIVITY WITHIN AND OUTSIDE OF THE DEVELOPMENT ACHIEVED?

There are three entrances from WCR 21 and two entrances from WCR 74 provided for the development. The entrances from WCR 74 are continuing existing town streets (Evans Street and Timber Ridge Parkway). Most of the interior roadways lead to Timber Ridge Parkway, a proposed collector from WCR 21, for easy ingress and egress. Timber Ridge Parkway is extended through the site to provide a future connection north of the Moody Property Development. Evans Street will provide additional connectivity for the proposed school parcel and southwest corner of the site. Pedestrian walkways also follow this design, connecting internal streets with the main road and the parks in other subdivisions. Detached walks along the county roads will facilitate connections to regional trail systems.

HOW ARE THE ARCHITECTURAL AND LANDSCAPE DESIGNS ON INDIVIDUAL LOTS MANAGED?

A new Metro District will establish and control design guidelines for exterior architectural and landscape design elements. Conceptual representations of architectural styles of the neighborhood are included in this management plan and can be seen to the right.



WHAT IS THE IRRIGATION SYSTEM, INCLUDING SOURCES OF WATER?

Irrigation systems for both individual lots and the common areas will be provided by a new Metro District.

HOW IS POTABLE WATER SUPPLIES TO THE PROJECT AND IS THERE ADEQUATE POTABLE WATER AVAILABLE TO SERVE THE PROJECT?

The potable water system will be designed based on the lot layout and existing connection points to the Town’s water system outside of the development. The system will be looped internally to provide redundancy and fire flows. The internal potable water system will connect to the Town of Severance’s system in WCR 21 and WCR 74. Standard engineering practices will be utilized in the design of the potable water system. Utility plans will be completed for the Town to review and approve.

TOWN QUESTIONS

HOW IS STORM WATER BEING MANAGED?

Stormwater design will follow standard engineering practices, identifying grading and drainage patterns and conveying flows to the adjacent existing site detention pond by means of the internal street system and subterranean sewer. The detention ponds were designed to contain the site runoff and release at the historic rate. Drainage design will be submitted to the Town for review.

HOW WILL COMMON AREA LANDSCAPE BE MAINTAINED?

Common area landscaping will be maintained and managed by a new Metro District.

HOW WILL THE DEVELOPMENT HANDLE SANITARY SEWER?

The internal sanitary sewer system will drain via gravity to the southeast corner of the development. As requested by the Town of Severance, an offsite sanitary sewer interceptor will convey flows east along WCR74 and south along the Great Western Trail. The existing sanitary was designed to convey flows from the Moody Property Subdivision. All sanitary sewers will be designed following standard engineering practice and will be submitted to the Town for review and approval.

HOW IS EXTERIOR LIGHTING BEING ADDRESSED?

Each residence will have adequate, non-polluting exterior lighting that complements the neighborhood architecture. Street lighting will be spaced to minimize light pollution and maintain the suburban nature of the neighborhood while still providing adequate lighting of the interior streets.

WHAT IS THE POTENTIAL IMPACT ON ADJACENT NEIGHBORHOODS?

The Moody Property will provide commercial opportunity along WCR 74 near the Severance town core while maintaining the suburban perimeter. Local access for the residential areas of the Moody Property will be located on WCR 21. Pedestrian trails within the Subdivision and walks along the county and local roads will facilitate connections to regional trail systems.

IF NOISE OR SMELLS ARE ASSOCIATED WITH THE DEVELOPMENT,WHATARETHEPLANSFORMITIGATION?

Construction will take place only during normal working hours. All standard best management practices, including noise, dust, and erosion control, will be followed during development. Individual issues will be mitigated on a case-by-case basis.

OIL AND GAS DEVELOPMENT?

According to the Colorado Oil and Gas Conservation Commission, there are four plugged and abandoned wells on within the Moody Property Development. There are additional plugged and abandoned oil and gas wells on the adjacent properties.

HOW IS OFF-STREET PARKING BEING ADDRESSED?

Each residence will have an attached 2- car garage as well as a driveway adequate for parking while avoiding blocking pedestrian traffic on the detached walkways.

MOODY PROPERTY
TRANSPORTATION IMPACT STUDY
SEVERANCE, COLORADO
MAY 2023

Prepared for:

Journey Homes LLC
7251 W. 20th Street, L-200
Greeley, CO 80634

Prepared by:



DELICH ASSOCIATES
2272 Glen Haven Drive
Loveland, CO 80538
Phone: 970-669-2061
FAX: 970-669-5034

Project #2313

TABLE OF CONTENTS

I. INTRODUCTION	1
II. EXISTING CONDITIONS	2
Land Use	2
Streets	2
Existing Traffic	5
Existing Operation	5
III. PROPOSED DEVELOPMENT	9
Trip Generation	9
Trip Distribution	9
Background Traffic Projections	9
Trip Assignment/Total Traffic	15
Signal Warrants	15
Geometry	15
Operation Analysis	22
IV. CONCLUSIONS	28

LIST OF TABLES

1. Current Peak Hour Operation	8
2. Trip Generation	11
3. Short Range (2030) Background Peak Hour Operation	23
4. Long Range (2045) Background Peak Hour Operation	24
5. Short Range (2030) Total Peak Hour Operation	25
6. Long Range (2045) Total Peak Hour Operation	26

LIST OF FIGURES

1. Site Location	3
2. Existing Intersection Geometry	4
3. Recent Peak Hour Traffic	6
4. Balanced/Adjusted Recent Peak Hour Traffic	7
5. Site Plan.....	10
6. Trip Distribution	12
7. Short Range (2030) Background Peak Hour Traffic.....	13
8. Long Range (2045) Background Peak Hour Traffic.....	14
9. Short Range (2030) Site Generated Peak Hour Traffic.....	16
10. Long Range (2045) Site Generated Peak Hour Traffic.....	17
11. Short Range (2030) Total Peak Hour Traffic	18
12. Long Range (2045) Total Peak Hour Traffic.....	19
13. Short Range (2030) Geometry	20
14. Long Range (2045) Geometry.....	21

APPENDICES

- A. Peak Hour Traffic Counts
- B. Current Peak Hour Operation/Level of Service Descriptions
- C. Short Range (2030) Background Peak Hour Operation
- D. Long Range (2045) Background Peak Hour Operation
- E. Short Range (2030) Total Peak Hour Operation
- F. Long Range (2045) Background Peak Hour Operation

I. INTRODUCTION

This Transportation Impact Study (TIS) addresses the capacity, geometric, and control requirements for the proposed Moody Property. The proposed Moody Property is located in the Northeast quadrant of the East Harmony/Teller intersection in Severance, Colorado.

During the course of the analysis, numerous contacts were made with the Project Engineer Consultant (Northern Engineering), project owner (Journey Homes LLC), and the Severance Engineering consultant. The study involved the collection of data, a review of previous developments and studies in the area, trip generation, trip distribution, trip assignment, and the operation analyses of the key intersections in the area. The operation analyses were performed for the existing conditions and the short range (2030) and long range (2045) futures.

The limits of the study were determined by reviewing traffic counts at nearby intersections, determining the relative impact of site generated traffic on these intersections, and discussions with Severance staff. It was determined that the key intersections should be the E Harmony/Teller, E. Harmony/Evans, E. Harmony/Timber Ridge, Teller/Fox Run, and the Site Access intersections. The scope of the traffic impact study for the Moody Property was discussed with the Severance Engineering consultant.

THE INITIAL SUBMITTAL OF THE TRANSPORTATION IMPACT STUDY IS NOT SIGNED/STAMPED. THE FINAL TRANSPORTATION IMPACT STUDY WILL BE SIGNED/STAMPED REFLECTING COMMENTS FROM SEVERANCE.

II. EXISTING CONDITIONS

The location of the Moody Property is shown in Figure 1. It is important that a thorough understanding of the existing conditions be presented.

Land Use

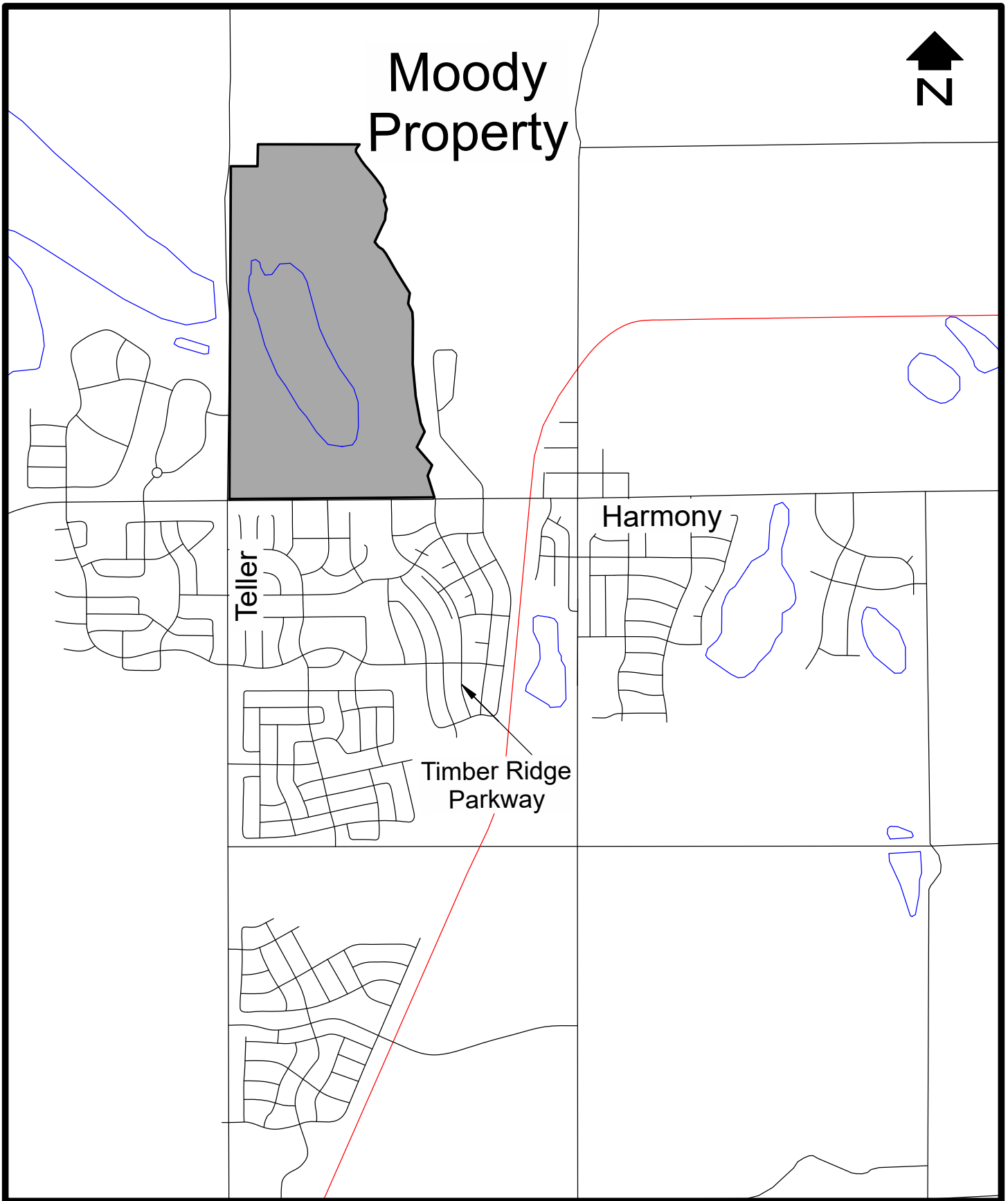
Land uses in the area are primarily residential or commercial. There are residential uses to the south, east, and west of the site. There are commercial uses in the northwest quadrant of the E. Harmony/Teller intersection. The proposed Moody Property is northwest of the central part of Severance.

Streets

The primary streets near the Moody Property are East Harmony Road, Teller Street, Evans Street, and Timber Ridge Parkway. Figure 2 shows a schematic of the existing geometry at the E Harmony/Teller, E. Harmony/Evans, E. Harmony/Timber Ridge, and Teller/Fox Run intersections.

East Harmony Road is to the south of (adjacent to) the proposed Moody Property. It is an east-west street classified as a Major Arterial street on the Severance Transportation Masterplan. Currently, East Harmony Road has a two-lane cross section with center median lane west of Teller Street. East of Teller Street, East Harmony Road has a two-lane (no center lane) cross section with auxiliary lanes at some intersections. At the E Harmony/Teller intersection, East Harmony Road has eastbound and westbound left-turn lanes, one through lane in each direction, and an eastbound right-turn lane. The E Harmony/Teller intersection has signal control. At the E Harmony/Evans intersection, East Harmony Road has a westbound left-turn lane, one through lane in each direction, and an eastbound right-turn lane. At the E Harmony/Timber Ridge intersection, East Harmony Road has one through lane in each direction and an eastbound right-turn lane. The E Harmony/Evans and E Harmony/Timber Ridge intersections have stop sign control on Evans Street and Timber Ridge Parkway, respectively. It is important to note that a westbound left-turn lane is required at the E Harmony/Timber Ridge intersection with the existing traffic volumes. The posted speed limit on East Harmony Road is 40 mph.

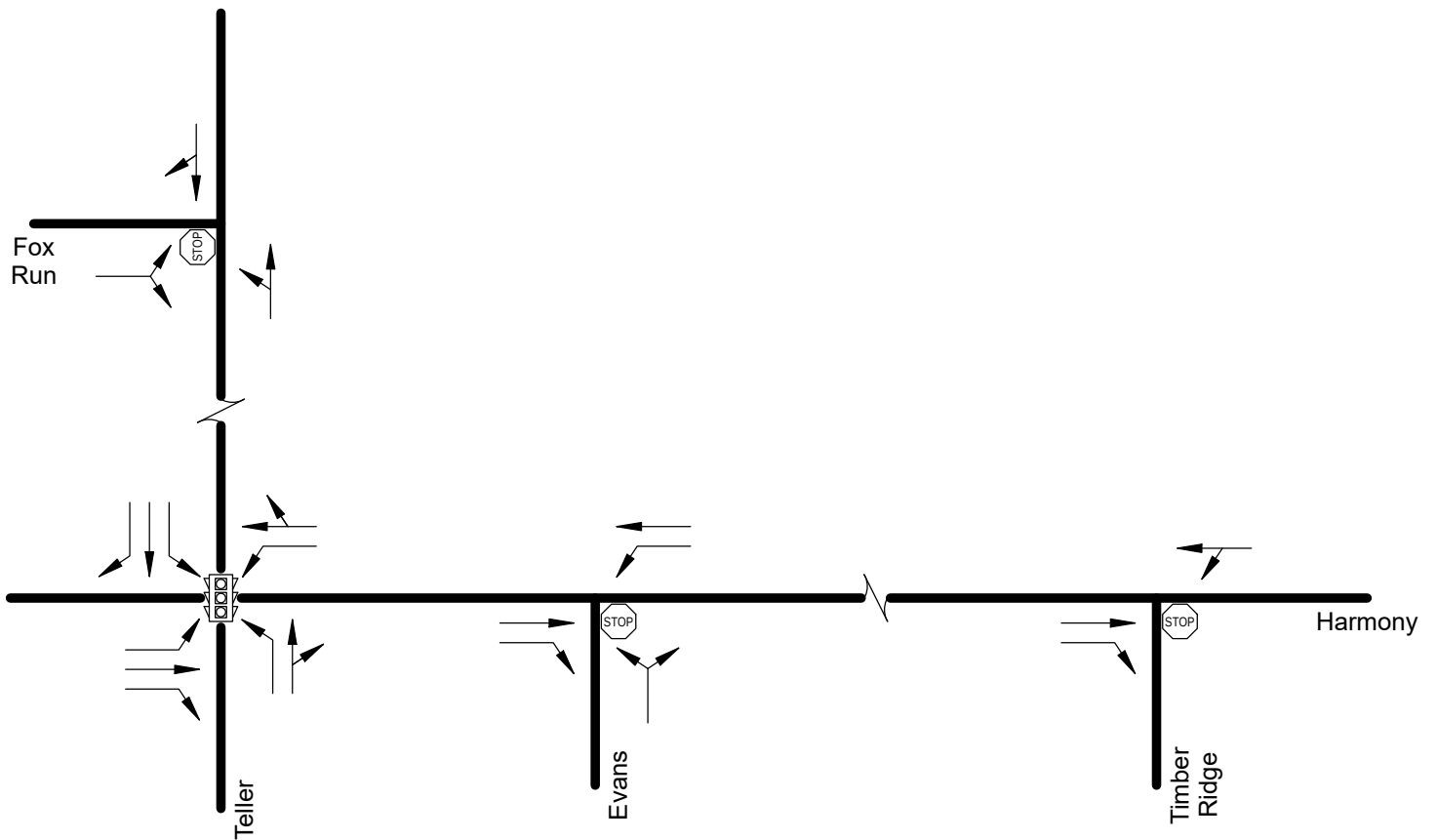
Teller Street is west of (adjacent to) the proposed Moody Property. It is a north-south street classified as a Minor Arterial street on the Severance Transportation Masterplan. Currently, Teller Street has a two-lane cross section with a center median lane south of East Harmony Road. North of East Harmony Road, Teller Street has a rural two-lane (no center lane) cross section with minimal shoulders. At the E Harmony/Teller intersection, Teller Street has northbound and southbound left-turn lanes, one through lane in each direction, and a southbound right-turn lane. At the



SCALE: 1"=2000'

SITE LOCATION

Figure 1



← - Denotes Lane

EXISTING INTERSECTION GEOMETRY

Figure 2

Teller/Fox Run intersection, Teller Street has all northbound and southbound movements combined into single lanes. The Teller/Fox Run intersection has stop sign control on Fox Run. The posted speed limit on Teller Street is 35 mph.

Evans Street is south of the proposed Moody Property. It is a north-south street classified as a Local street on the Severance Transportation Masterplan. Currently, Evans Street has a two-lane cross section with no center median lane. At the E Harmony/Evans intersection, Evans Street has all northbound movements combined into a single lane. There is no posted speed limit on Evans Street.

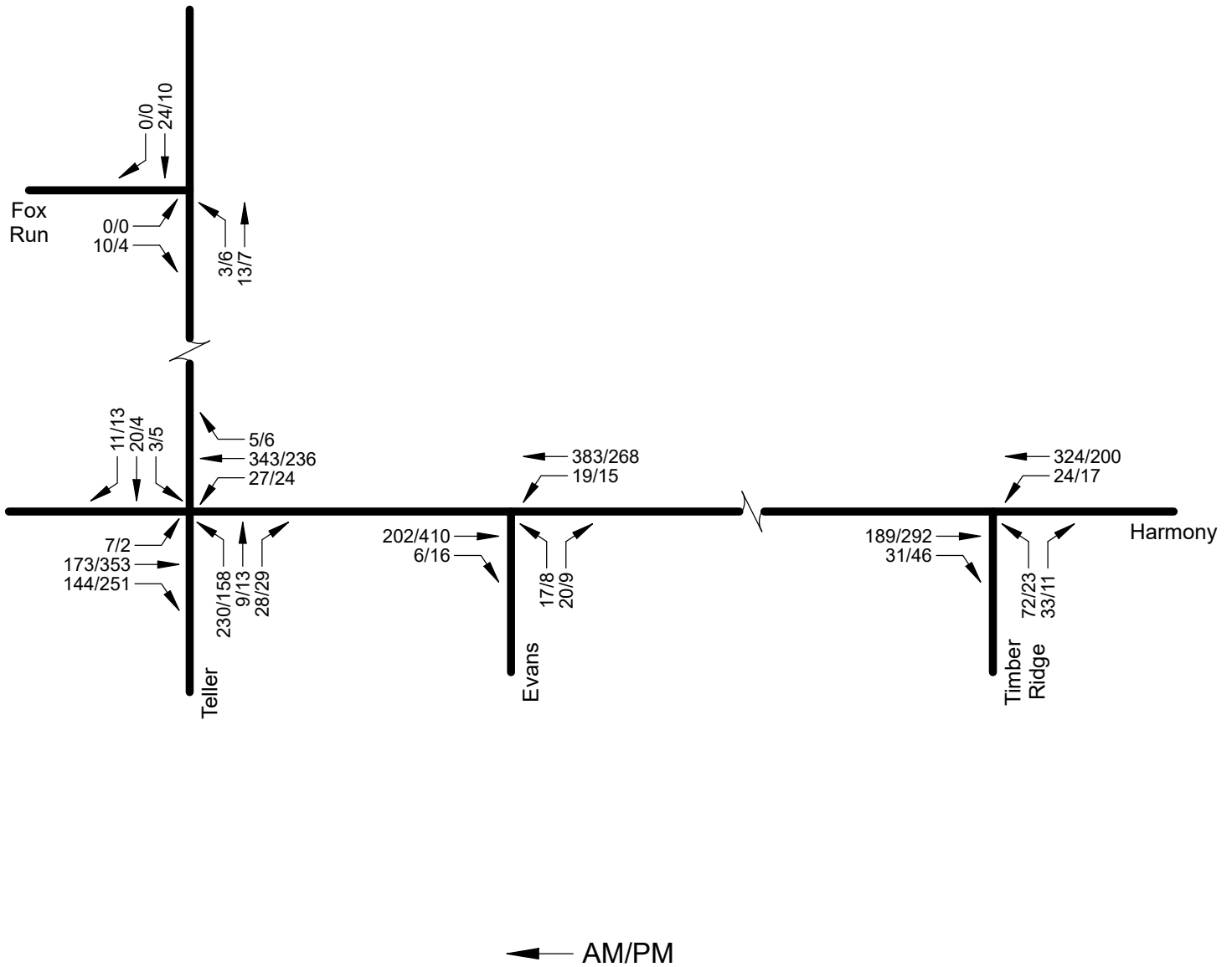
Timber Ridge Parkway is south of the proposed Moody Property. It is a north-south street classified as a Local street on the Severance Transportation Masterplan. Currently, Timber Ridge Parkway has a two-lane cross section with no center median lane. At the E Harmony/Timber Ridge intersection, Timber Ridge Parkway has a northbound left-turn lane and a northbound right-turn lane. The posted speed limit on Timber Ridge Parkway is 25 mph.

Existing Traffic

Recent peak hour traffic volumes at the E Harmony/Teller, E. Harmony/Evans, E. Harmony/Timber Ridge, and Teller/Fox Run intersections are shown in Figure 3. The counts at the key intersections were obtained in April 2023. Raw traffic count data is provided in Appendix A. Since the counts were collected on different days, the volumes were averaged/balanced and are shown in Figure 4.

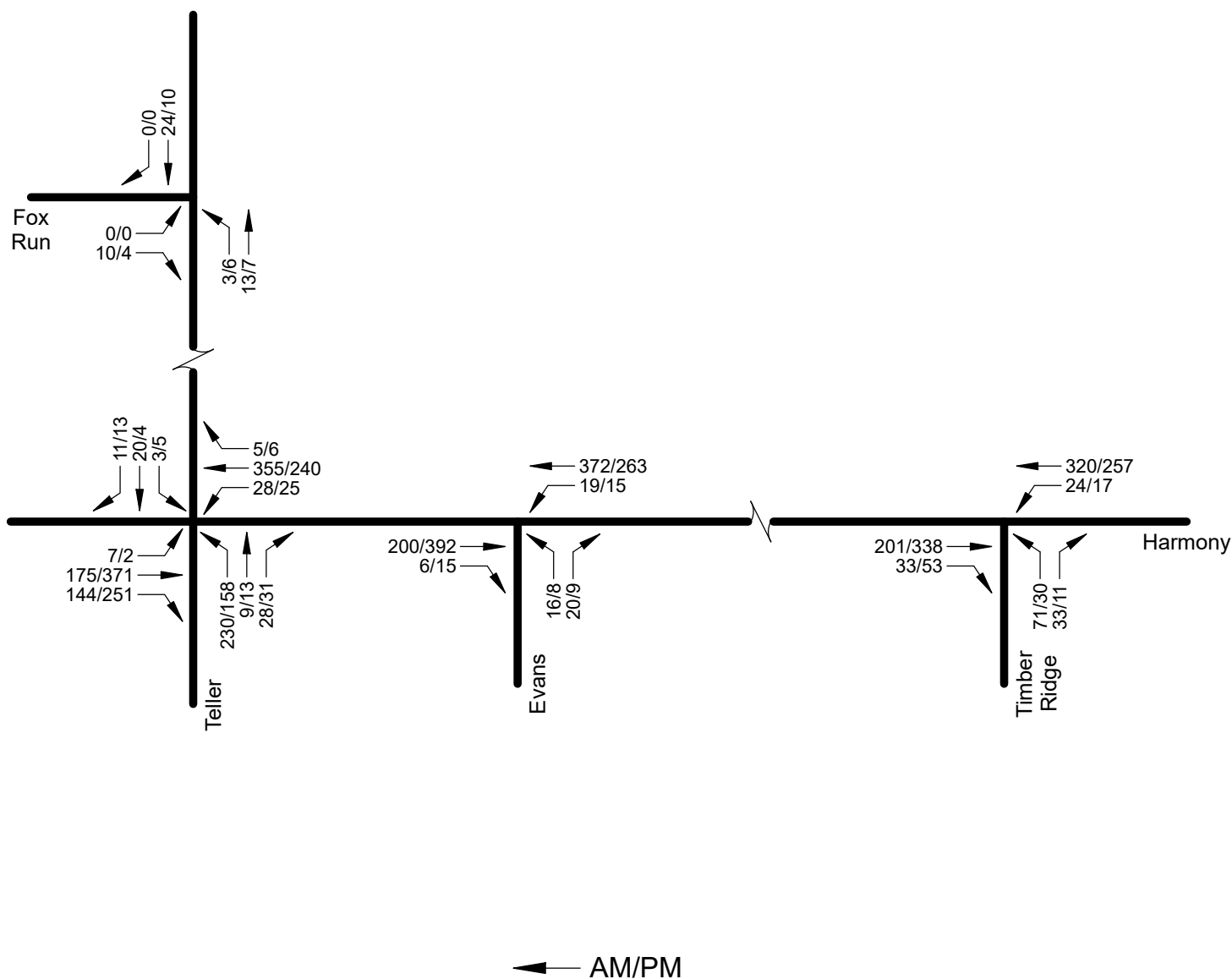
Existing Operation

The E Harmony/Teller, E. Harmony/Evans, E. Harmony/Timber Ridge, and Teller/Fox Run intersections were evaluated and the peak hour operation is displayed in Table 1. Calculation forms are provided in Appendix B. The key intersections currently meet the Severance level of service criteria with existing control and geometry during the peak hours. The intersections were evaluated using techniques provided in the Highway Capacity Manual, 6th Edition. A description of level of service for signalized and unsignalized intersections from the Highway Capacity Manual, 6th Edition is also provided in Appendix B. Acceptable operation is defined as level of service D or better, overall, during the peak hours. At stop sign controlled intersections, minor street left turns may operate at LOS E/F during the peak hours. This is considered to be normal in urban areas during the peak hours.



RECENT PEAK HOUR TRAFFIC

Figure 3



AVERAGED/BALANCED RECENT PEAK HOUR TRAFFIC

Figure 4

TABLE 1 Current Peak Hour Operation			
Intersection	Movement	Level of Service	
		AM	PM
E Harmony/Teller (signal)	EB LT	A	A
	EB T	A	A
	EB RT	A	A
	EB APPROACH	A	A
	WB LT	A	A
	WB T/RT	B	A
	WB APPROACH	B	A
	NB LT	C	C
	NB T/RT	C	C
	NB APPROACH	C	C
	SB LT	C	C
	SB T	C	C
	SB RT	C	C
	SB APPROACH	C	C
	OVERALL	B	B
E. Harmony/Evans (stop sign)	NB LT/RT	B	B
	WB LT	A	A
	OVERALL	A	A
E. Harmony/Timber Ridge (stop sign)	NB LT	C	B
	NB RT	A	B
	NB APPROACH	B	B
	WB LT/T	A	A
	OVERALL	A	A
Teller/Fox Run (stop sign)	EB LT/RT	A	A
	NB LT/T	A	A
	OVERALL	A	A

III. PROPOSED DEVELOPMENT

The Moody Property is a residential development with 670 single family detached dwelling units, 150 multifamily dwelling units, an elementary school site, and approximately 150,000 square feet of commercial. Figure 5 shows a site plan of the Moody Property. The Moody Property will be built in two phases. Phase 1 will include only the residential portion of the site. Phase 2 includes the elementary school and the commercial uses. The short range analysis (Year 2030) includes development of Phase 1 of the Moody Property and an appropriate increase in background traffic due to normal growth and other developments in the area. The site plan shows that the Moody Property will have access to/from East Harmony Road via one full-movement access that lines up with Evans Street and one full-movement access that lines up with Timber Ridge Parkway. The Moody Property will have access to/from Teller Street via three full-movement accesses (South Access, Middle Access, North Access). The long range future is considered to be the year 2045.

Trip Generation

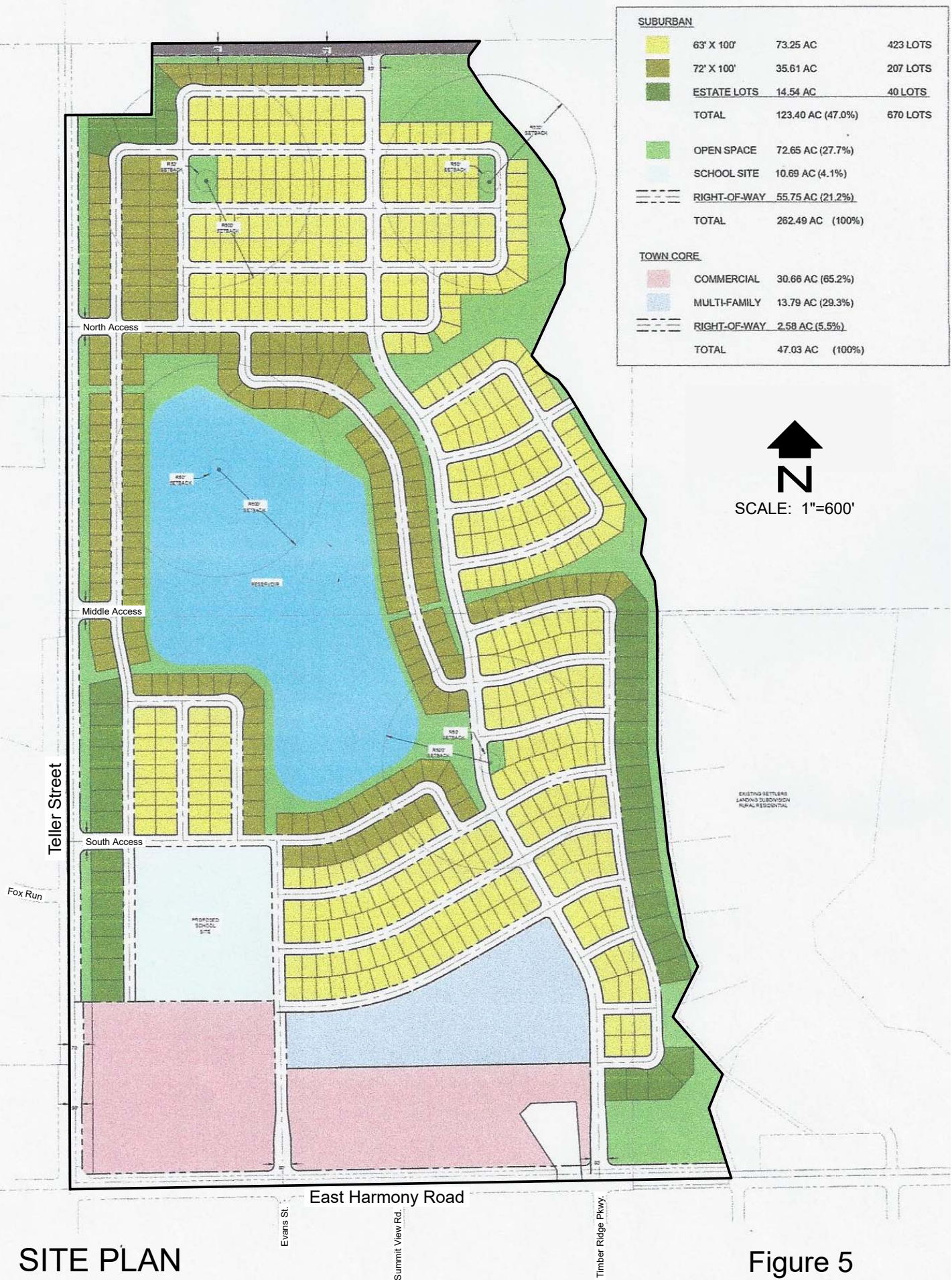
Trip generation is important in considering the impact of a development such as this upon the existing and proposed street system. A compilation of trip generation information contain in Trip Generation, 11th Edition, ITE is customarily used to estimate the trips that would be generated by the proposed/expected uses at a site. A trip is defined as a one-way vehicle movement from origin to destination. Table 2 shows the expected trip generation on a daily and peak hour basis. The trip generation for Phase 1 of the Moody Property resulted in 6,842 daily trip ends, 490 morning peak hour trip ends, and 679 afternoon peak hour trip ends. The trip generation for full development of the Moody Property resulted in 19,624 daily trip ends, 997 morning peak hour trip ends, and 1,374 afternoon peak hour trip ends. The internal trip capture and passby trips were determined using the Trip Generation Handbook, 3rd Edition. The trip generation worksheets are provided in Appendix D.

Trip Distribution

Trip distribution for the Moody Property site was based on existing/future travel patterns, land uses in the area, consideration of trip attractions in Severance, and engineering judgment. Figure 6 shows the trip distribution for the Moody Property site.

Background Traffic Projections

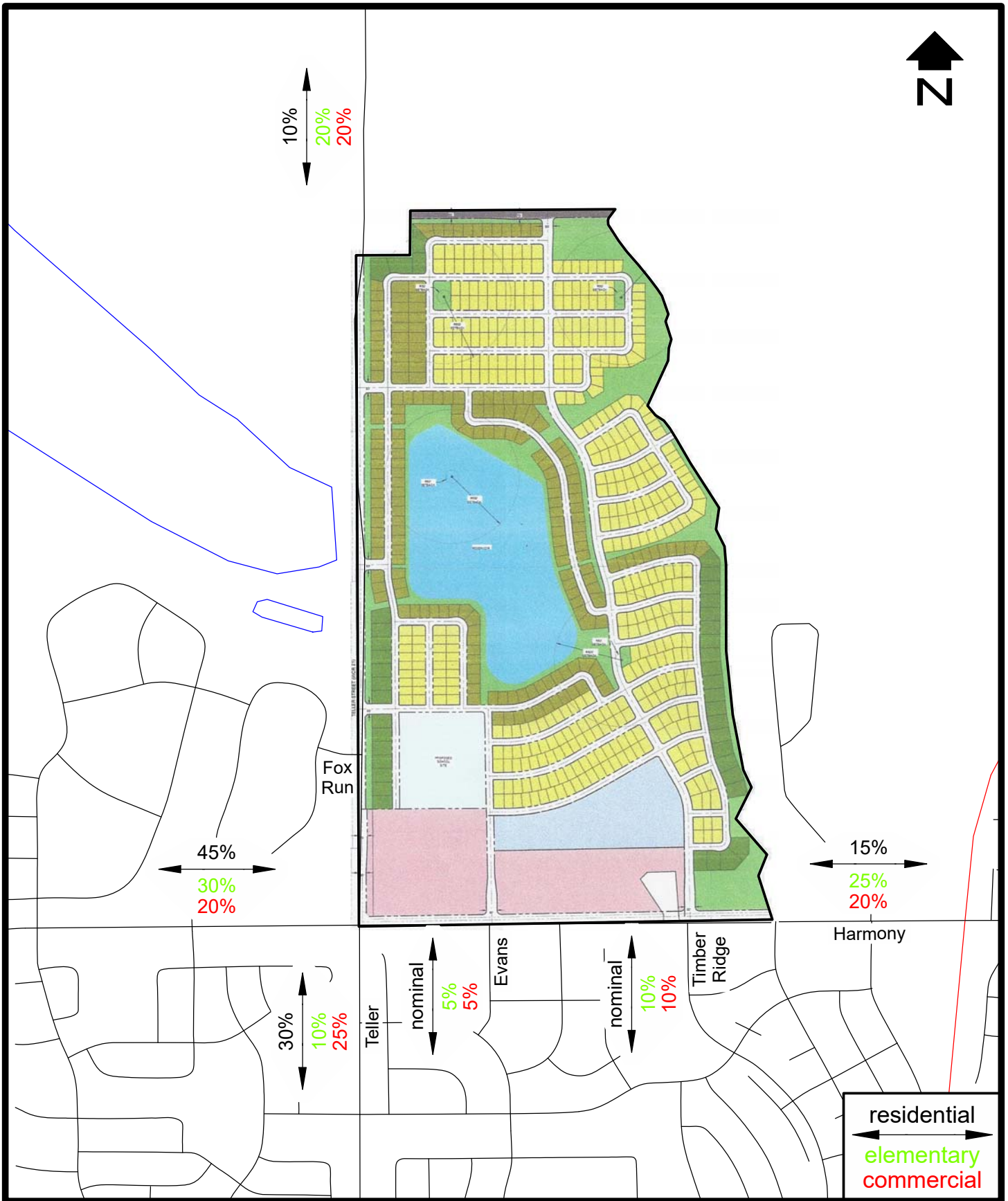
Figures 7 and 8 show the short range (2030) and long range (2045) background traffic projections. Background traffic projections for the short range (2030) future horizon were calculated by factoring the existing traffic at the E. Harmony/Teller intersection by three percent per year. In addition to this, site generated traffic from



SITE PLAN

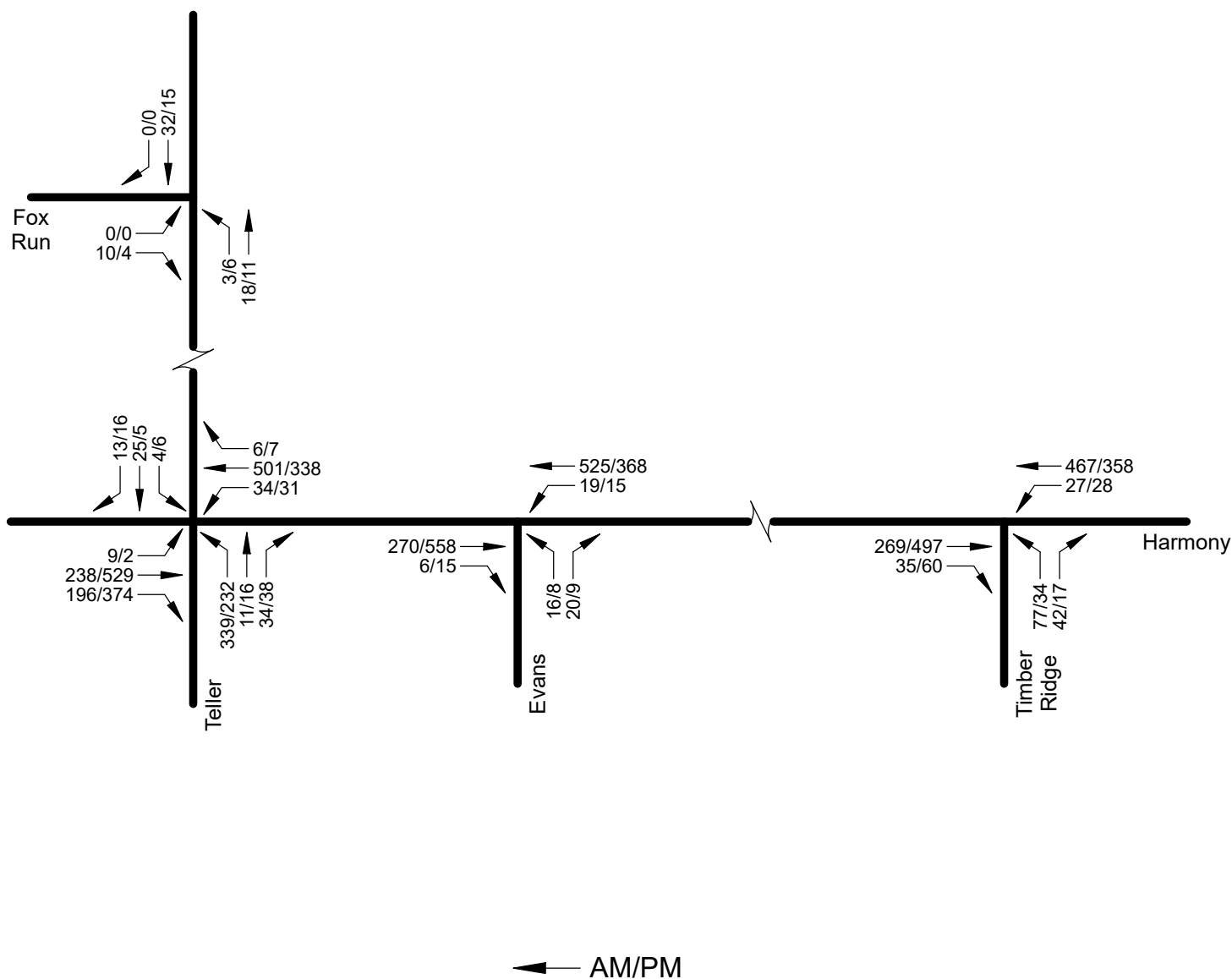
Figure 5

TABLE 2 Trip Generation												
Code	Use	Size	AWDTE		AM Peak Hour				PM Peak Hour			
			Rate	Trips	Rate	In	Rate	Out	Rate	In	Rate	Out
Phase 1 - 2030												
210	Single-Family Detached Housing	670 DU	EQ	5806	EQ	105	EQ	316	EQ	374	EQ	220
220	Multifamily Housing (Low-Rise)	150 DU	EQ	1036	EQ	17	EQ	52	EQ	54	EQ	31
Phase 1 Subtotal				6842		122		368		428		251
Phase 2 - 2045												
520	Elementary School	500 Students	2.27	1136	0.40	200	0.34	170	0.07	35	0.09	45
821	Shopping Plaza (40-150 KSF)	150.0 KSF	87.52	13,128	1.07	161	0.66	99	2.54	381	2.65	398
Phase 2 Subtotal				14,264		361		269		416		443
Subtotal				21,106		483		637		844		694
Elementary School Internal Residential			30%	340	30%	60	30%	51	30%	10	30%	14
Internal (Commercial/Residential)			5.7%	1142	2.1%	6	1.3%	6	8.7%	70	10.8%	70
Total Assigned Trips				19,624		417		580		764		610



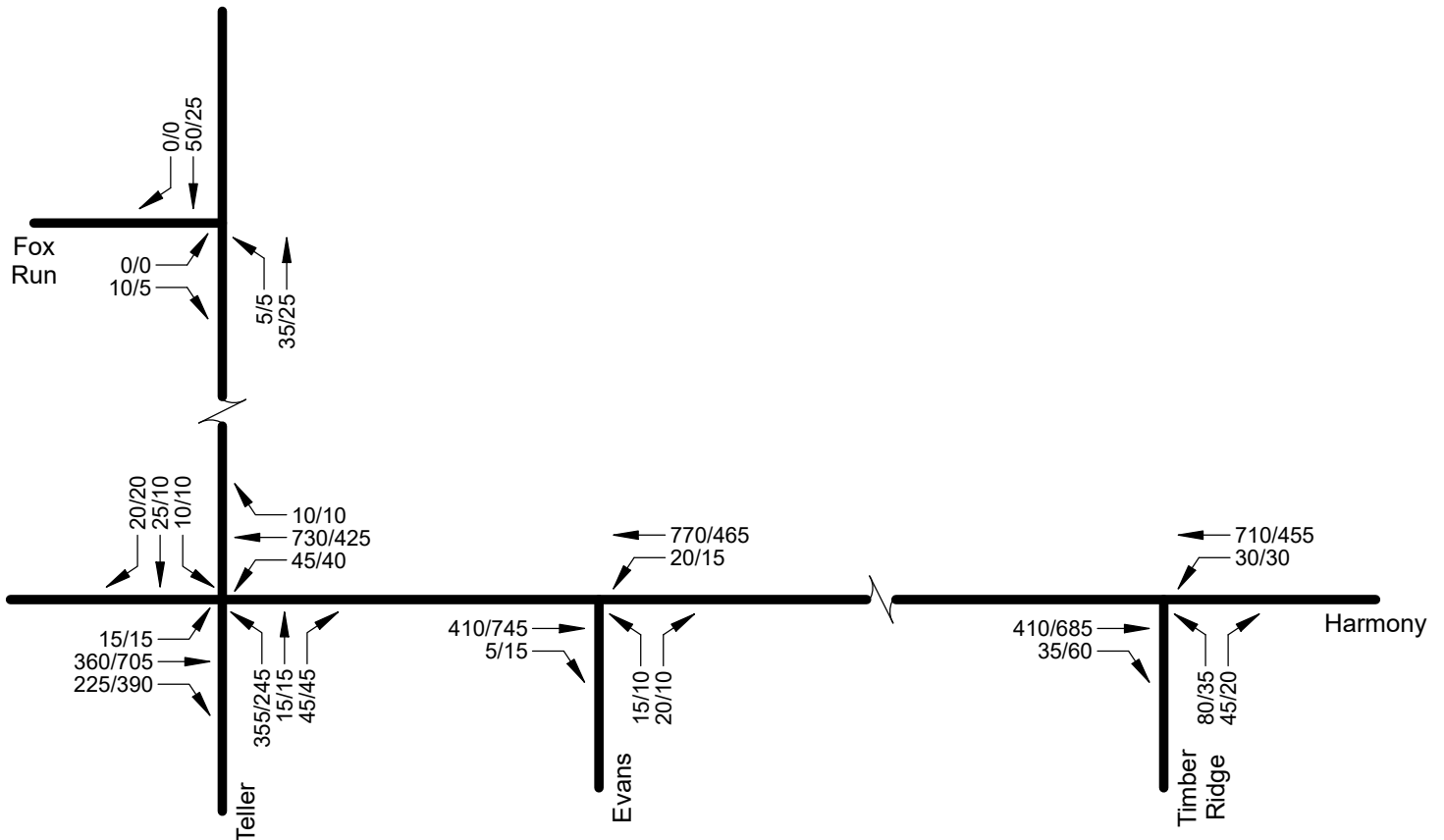
TRIP DISTRIBUTION

Figure 6



SHORT RANGE (2030) BACKGROUND PEAK HOUR TRAFFIC

Figure 7



← AM/PM
Rounded to Nearest
5 Vehicles

LONG RANGE (2045) BACKGROUND PEAK HOUR TRAFFIC

Figure 8

proposed Tailholt elementary school; the unbuilt portions of Tailholt 2nd Filing development; unbuilt portions of Tailholt 4th Filing; and unbuilt portions of the Hidden Park Subdivision were included in the background traffic forecasts. This results in a short range (2030) background traffic factor of 5.2 percent for E. Harmony Road (west of Teller Street), 4.3 percent for E. Harmony Road (east of Teller Street), and 5.1 percent for Teller Street (south of E. Harmony Road). The long range (2045) background forecast was calculated in accordance with the 2040 Daily Traffic Forecasts contained in the Severance Transportation Masterplan.

Trip Assignment/Total Traffic

Trip assignment is how the generated and distributed trips are expected to be loaded on the street system. The assigned trips are the resultant of the trip distribution process. Figure 9 shows the short range (2030) site generated peak hour traffic assignment for Phase 1 of the Moody Property. Figure 10 shows the long range (2045) site generated peak hour traffic for full development of the Moody Property. Figure 11 shows the short range (2030) total (site plus background) peak hour traffic. Figure 12 shows the long range (2045) total (site plus background) peak hour traffic.

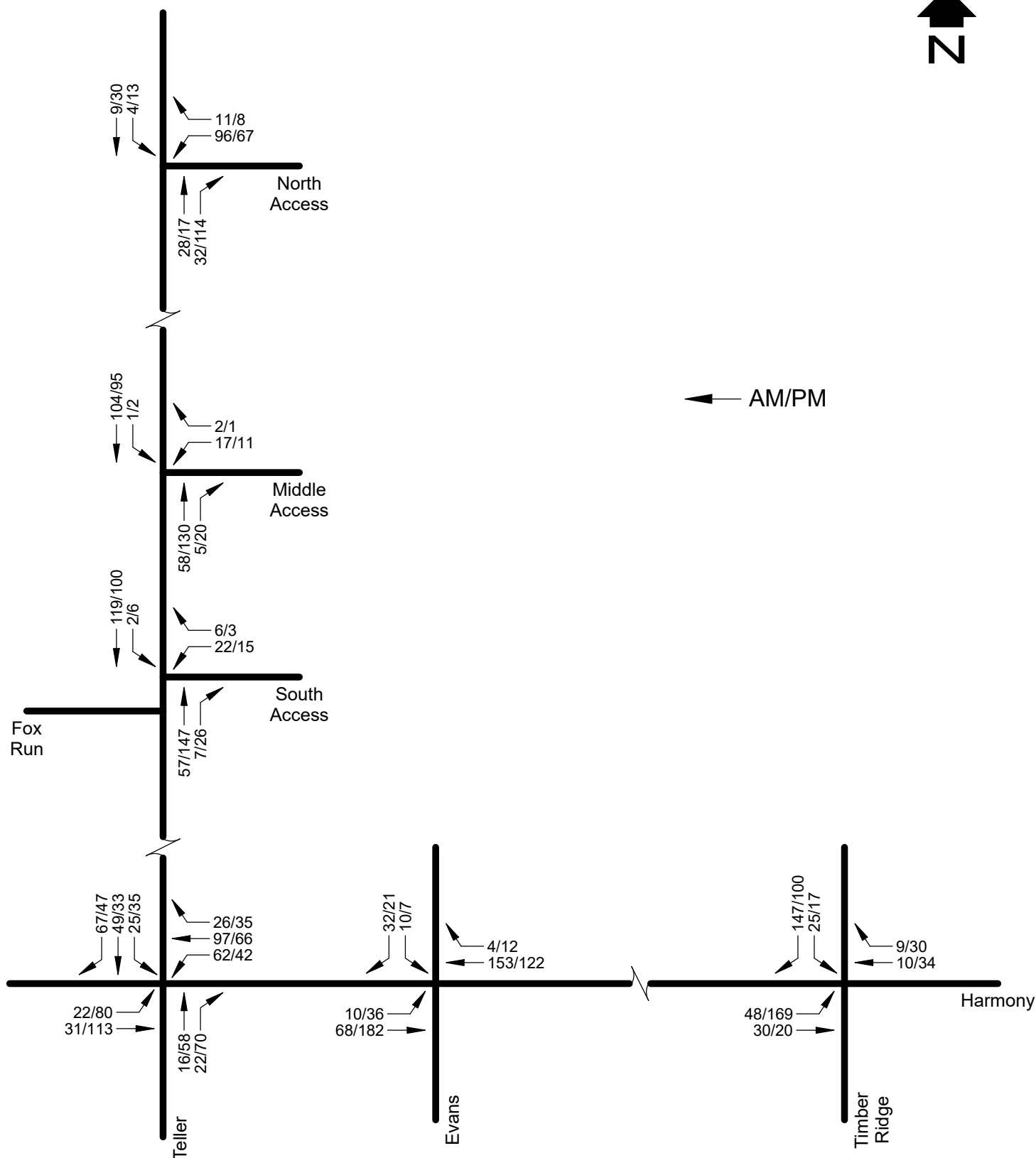
Signal Warrants

As a matter of policy, traffic signals are not installed at any location unless warrants are met according to the Manual on Uniform Traffic Control Devices. For the roads in the vicinity of the Moody Property development, four hour and/or eight hour signal warrants are applicable. These warrants require much data and are applied when the traffic is actually on the area road system. It is acknowledged that peak hour signal warrants should not be applied, but since the peak hour forecasts are readily available in a traffic impact study, it is reasonable to use them to estimate whether other signal warrants may be met. If peak hour signal warrants will not be met at a given intersection, it is reasonable to conclude that it is not likely that other signal warrants would be met. If peak hour signal warrants are met, it merely indicates that further evaluation should occur in the future as the development occurs. However, a judgment can be made that some intersections will likely meet other signal warrants.

Peak hour signal warrants will be met at the E. Harmony/Timber Ridge intersection during both peak hours using the short range (2030) total traffic (Figure 11). Using the long range (2045) total peak hour traffic (Figure 12), peak hour signal warrants will not be met at the E. Harmony/Timber Ridge and E. Harmony/Evans intersections. Peak hour signal warrants are provided in Appendix D.

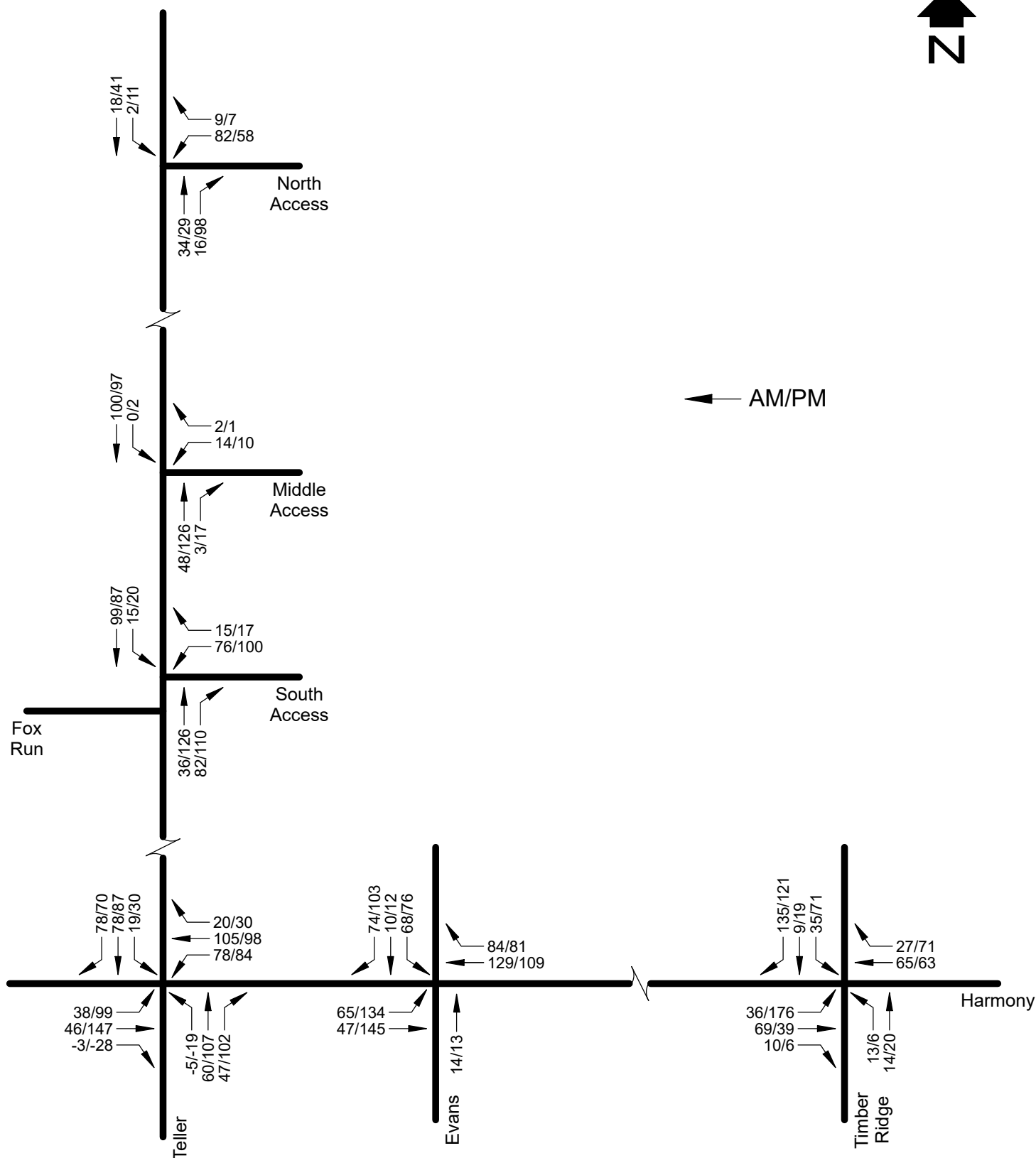
Geometry

Figures 13 and 14 show a schematic of the respective short range (2030) and long range (2045) geometry. The Town of Severance uses the State Highway Access Code (SHAC) for auxiliary lane evaluation. East Harmony Road and Teller Street are



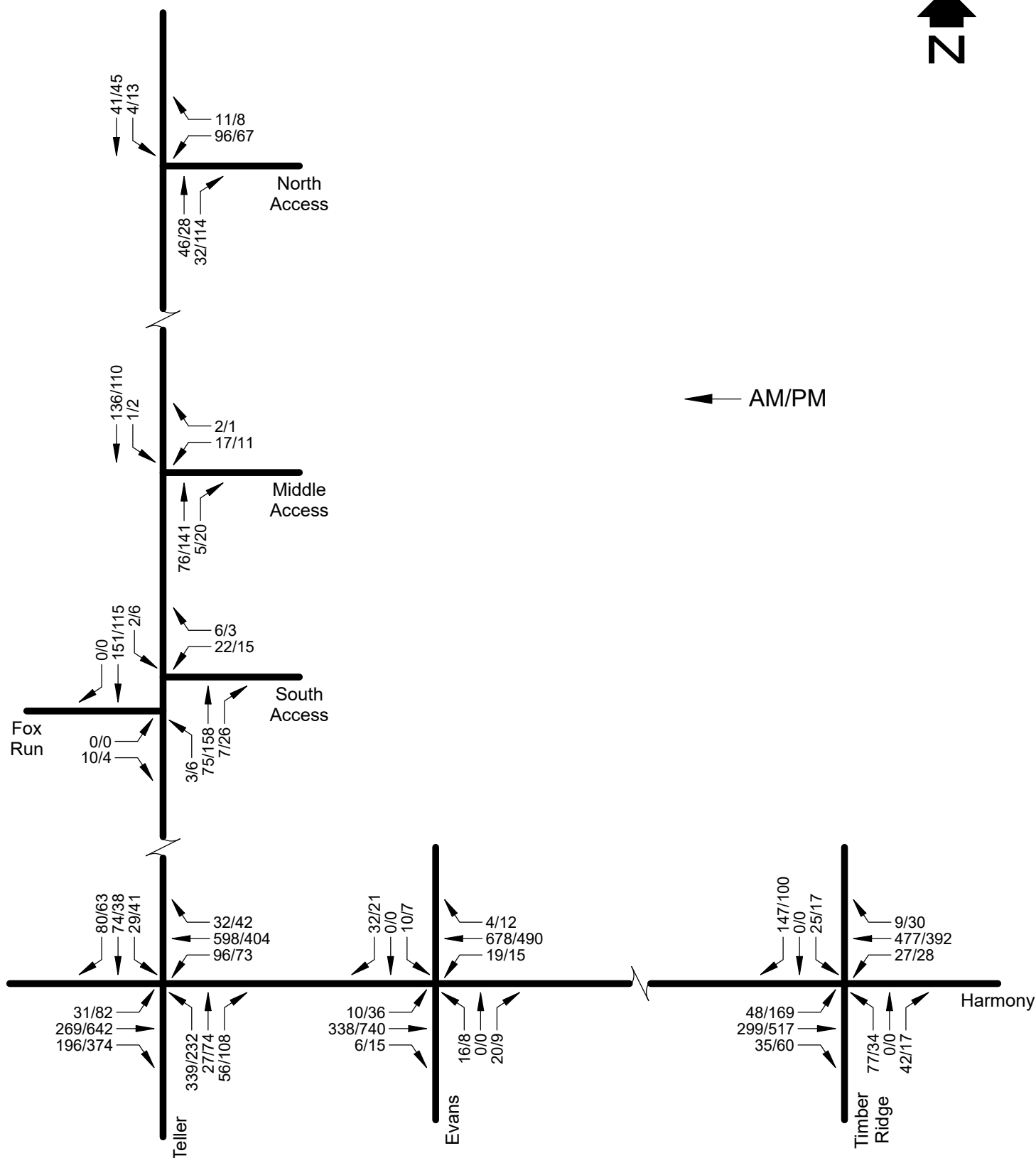
SHORT RANGE (2030) SITE GENERATED PEAK HOUR TRAFFIC

Figure 9



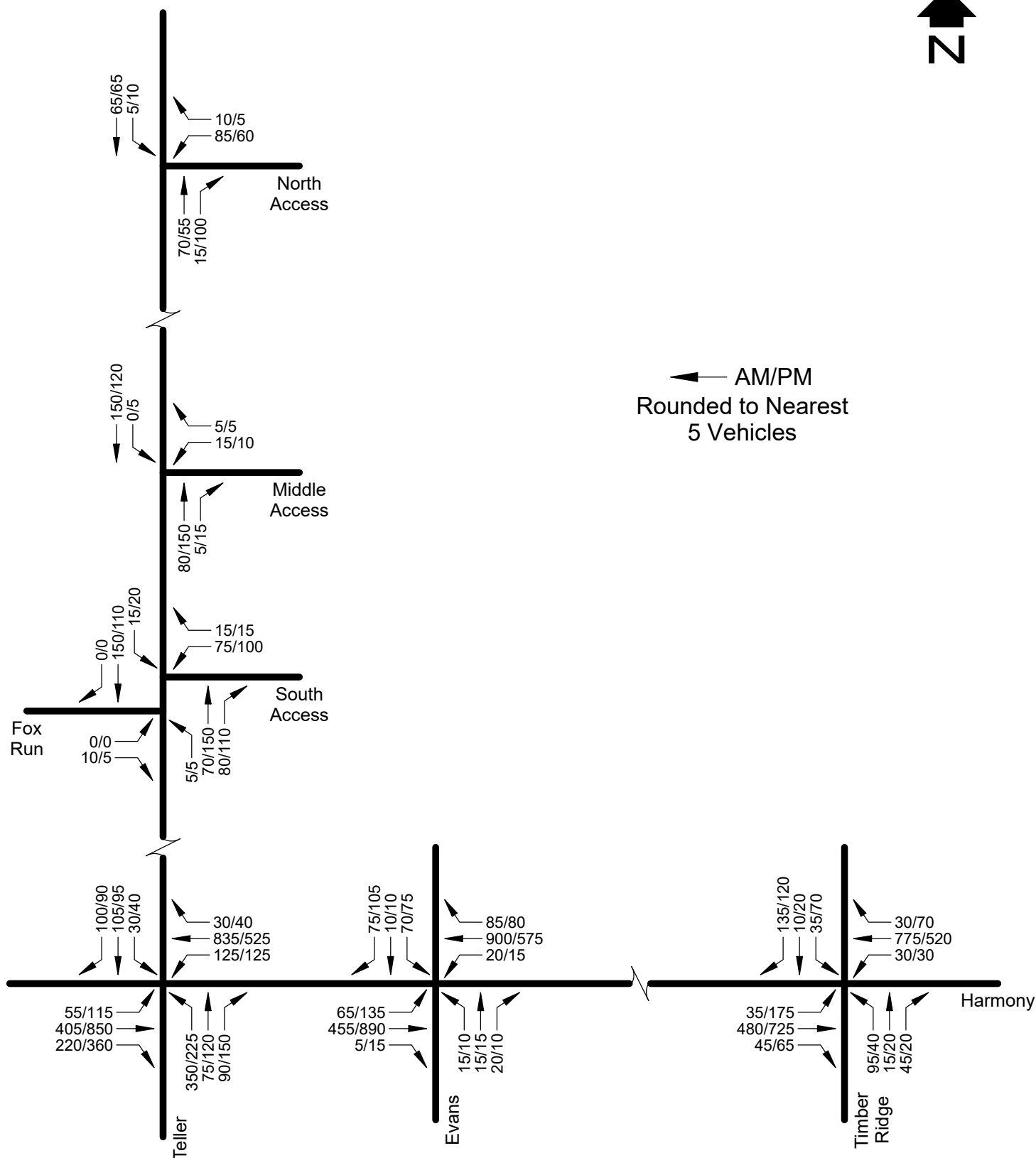
LONG RANGE (2045) SITE GENERATED PEAK HOUR TRAFFIC

Figure 10



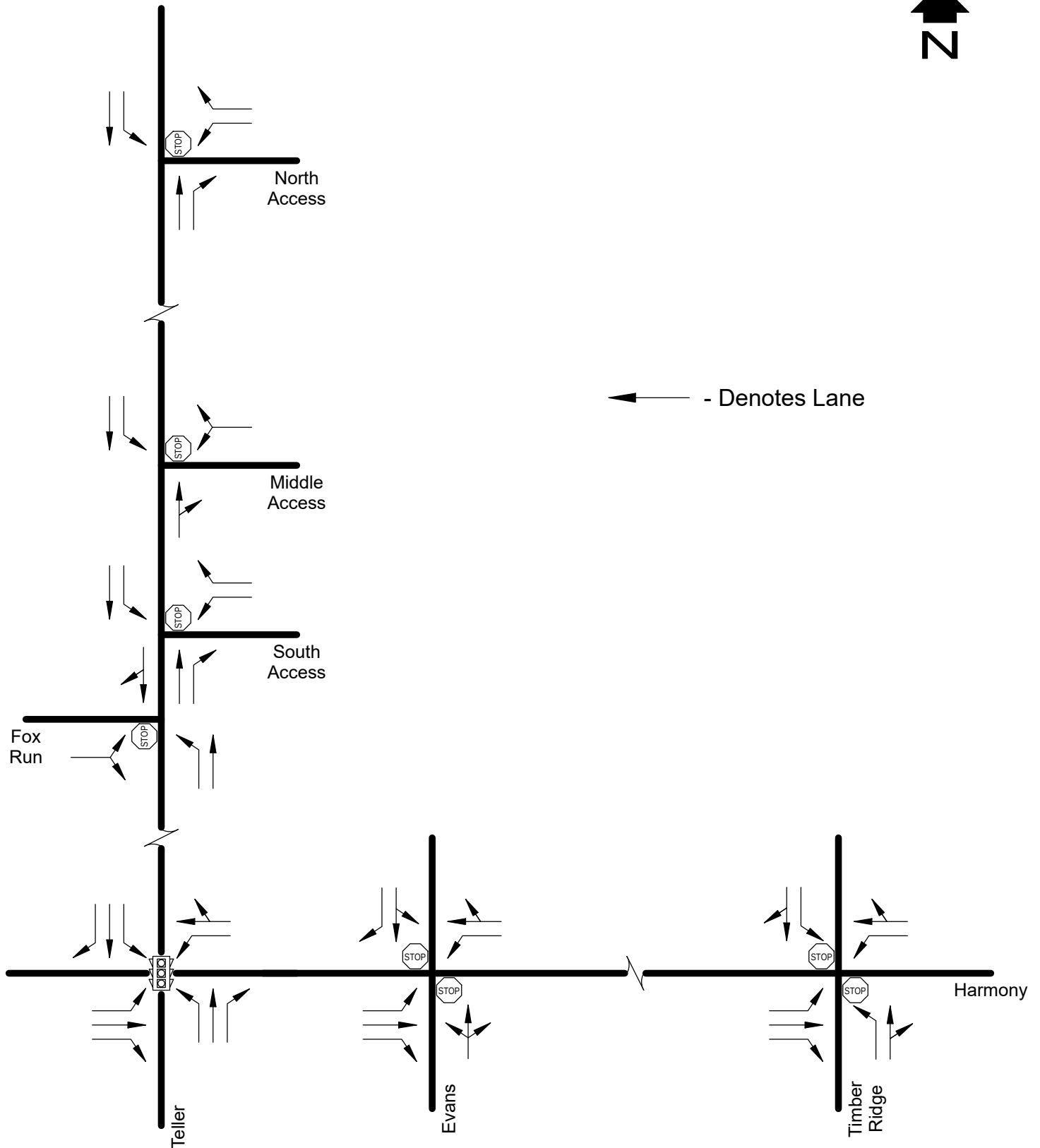
SHORT RANGE (2030) TOTAL PEAK HOUR TRAFFIC

Figure 11



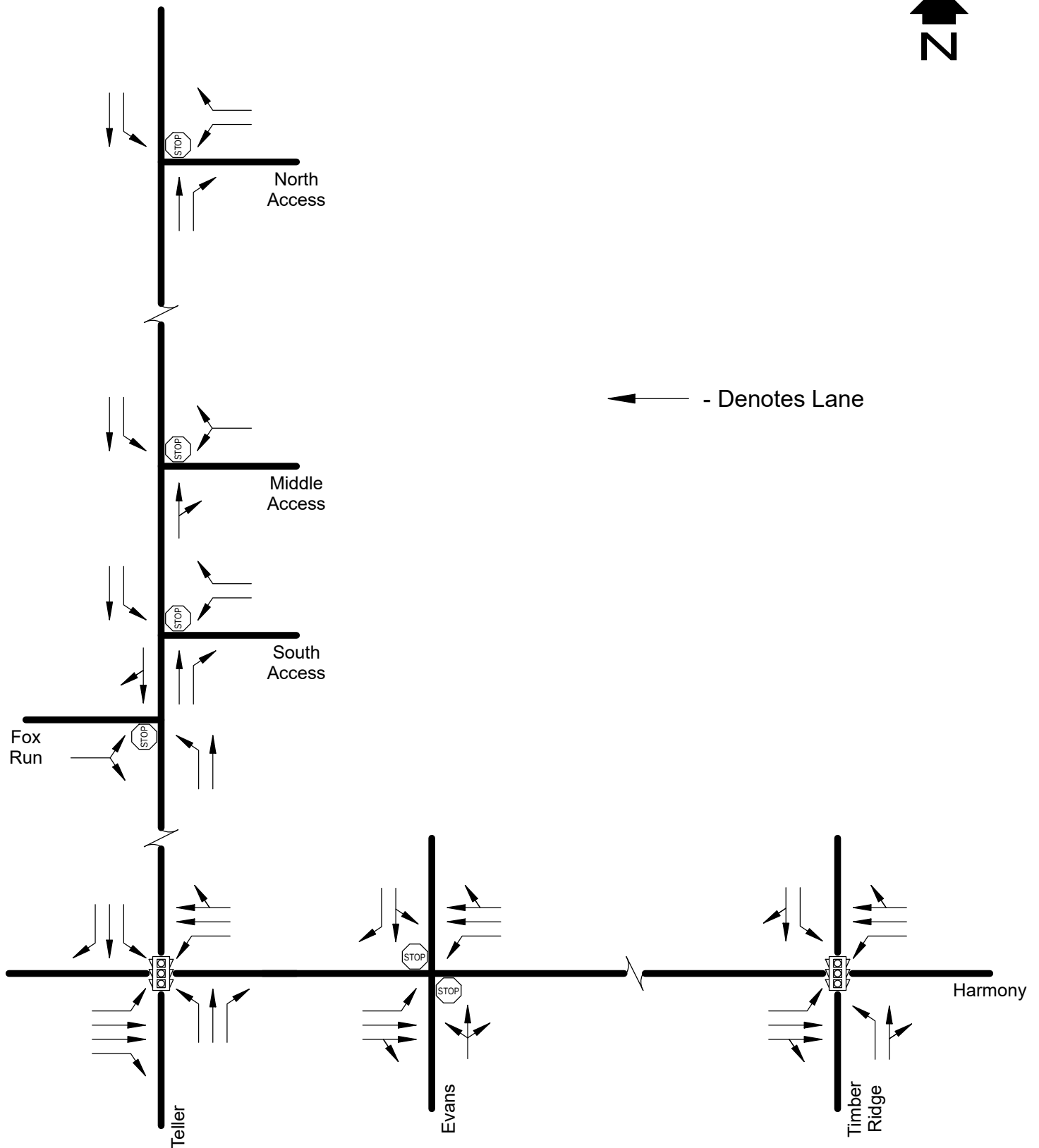
LONG RANGE (2045) TOTAL PEAK HOUR TRAFFIC

Figure 12



SHORT RANGE (2030) GEOMETRY

Figure 13



LONG RANGE (2045) GEOMETRY

Figure 14

categorized as NR-B roads in the SHAC. At the E Harmony/Teller intersection, a northbound right-turn lane is required. In the long range (2045) future, it is assumed that E. Harmony Road will have two through lanes in each direction.

Operation Analysis

Operation analyses were performed at the E Harmony/Teller, E. Harmony/Evans, E. Harmony/Timber Ridge, Teller/Fox Run, Teller/South Access, Teller/Middle Access, and Teller/North Access intersections. The operation analyses were conducted for the short range future, reflecting year 2030 conditions and long range future, reflecting year 2045 conditions.

Using the traffic volumes shown in Figure 7, the E Harmony/Teller, E. Harmony/Evans, E. Harmony/Timber Ridge, and Teller/Fox Run intersections operate in the short range (2030) background traffic future as indicated in Table 3. Calculation forms for these analyses are provided in Appendix E. The key intersections will meet the Severance level of service criteria during the peak hours.

Using the traffic volumes shown in Figure 8, the E Harmony/Teller, E. Harmony/Evans, E. Harmony/Timber Ridge, and Teller/Fox Run intersections operate in the long range (2045) background traffic future as indicated in Table 4. Calculation forms for these analyses are provided in Appendix F. The key intersections will meet the Severance level of service criteria during the peak hours.

Using the traffic volumes shown in Figure 11, the E Harmony/Teller, E. Harmony/Evans, E. Harmony/Timber Ridge, Teller/Fox Run, Teller/South Access, Teller/Middle Access, and Teller/North Access intersections operate in the short range (2030) total traffic future as indicated in Table 5. Calculation forms for these analyses are provided in Appendix G. The key intersections will meet the Severance level of service criteria during the peak hours with the required auxiliary lanes. At the E Harmony/Timber Ridge intersection, the calculated delay in the morning and afternoon peak hours for the northbound approach was commensurate with level of service F. This is considered to be normal in urban areas during the peak hours.

Using the traffic volumes shown in Figure 12, the E Harmony/Teller, E. Harmony/Evans, E. Harmony/Timber Ridge, Teller/Fox Run, Teller/South Access, Teller/Middle Access, and Teller/North Access intersections operate in the long range (2045) total traffic future as indicated in Table 6. Calculation forms for these analyses are provided in Appendix H. The key intersections will meet the Severance level of service criteria during the peak hours with the required auxiliary lanes, except for the E. Harmony/Timber Ridge intersection with stop sign control. With signal control, the E. Harmony/Timber Ridge intersection will operate acceptably.

TABLE 3 Short Range (2030) Background Peak Hour Operation			
Intersection	Movement	Level of Service	
		AM	PM
E Harmony/Teller (signal)	EB LT	A	A
	EB T	B	B
	EB RT	B	A
	EB APPROACH	B	B
	WB LT	A	A
	WB T/RT	B	A
	WB APPROACH	B	A
	NB LT	C	C
	NB T/RT	C	C
	NB APPROACH	C	C
	SB LT	C	C
	SB T	C	C
	SB RT	C	C
	SB APPROACH	C	C
	OVERALL	B	B
E. Harmony/Evans (stop sign)	NB LT/RT	B	C
	WB LT	A	A
	OVERALL	A	A
E. Harmony/Timber Ridge (stop sign)	NB LT	C	C
	NB RT	B	B
	NB APPROACH	C	C
	WB LT/T	A	A
	OVERALL	A	A
Teller/Fox Run (stop sign)	EB LT/RT	A	A
	NB LT/T	A	A
	OVERALL	A	A

TABLE 4 Long Range (2045) Background Peak Hour Operation			
Intersection	Movement	Level of Service	
		AM	PM
E Harmony/Teller (signal)	EB LT	B	A
	EB T	B	B
	EB RT	B	B
	EB APPROACH	B	B
	WB LT	A	A
	WB T/RT	B	B
	WB APPROACH	B	A
	NB LT	C	C
	NB T	B	C
	NB RT	B	C
	NB APPROACH	C	C
	SB LT	C	C
	SB T	C	C
	SB RT	C	C
	SB APPROACH	C	C
	OVERALL	B	B
E. Harmony/Evans (stop sign)	NB LT/RT	B	C
	WB LT	A	A
	OVERALL	A	A
E. Harmony/Timber Ridge (stop sign)	NB LT	C	D
	NB RT	B	B
	NB APPROACH	C	C
	WB LT/T	A	A
	OVERALL	A	A
Teller/Fox Run (stop sign)	EB LT/RT	A	A
	NB LT/T	A	A
	OVERALL	A	A

TABLE 5
Short Range (2030) Total Peak Hour Operation

Intersection	Movement	Level of Service	
		AM	PM
E Harmony/Teller (signal)	EB LT	B	A
	EB T	B	B
	EB RT	B	A
	EB APPROACH	B	B
	WB LT	A	A
	WB T/RT	B	B
	WB APPROACH	B	B
	NB LT	D	D
	NB T	C	C
	NB RT	C	C
	NB APPROACH	D	D
	SB LT	C	C
	SB T	D	C
	SB RT	C	C
	SB APPROACH	C	C
	OVERALL	C	B
E. Harmony/Evans (stop sign)	NB LT/T/RT	C	D
	SB LT/T	D	E
	SB RT	B	B
	SB APPROACH	C	C
	EB LT	A	A
	WB LT	A	A
	OVERALL	A	A
E. Harmony/Timber Ridge (stop sign)	NB LT	F	F
	NB T/RT	B	B
	NB APPROACH	F	F
	SB LT	D	F
	SB T/RT	B	B
	SB APPROACH	C	C
	EB LT	A	A
	WB LT	A	A
	OVERALL	A	A
Teller/Fox Run (stop sign)	EB LT/RT	A	A
	NB LT	A	A
	OVERALL	A	A
Teller/South Access (stop sign)	WB LT	B	B
	WB RT	A	A
	WB APPROACH	A	B
	SB LT	A	A
	OVERALL	A	A
Teller/Middle Access (stop sign)	WB LT/RT	A	B
	SB LT	A	A
	OVERALL	A	A
Teller/North Access (stop sign)	WB LT	A	A
	WB RT	A	A
	WB APPROACH	A	A
	SB LT	A	A
	OVERALL	A	A

TABLE 6 Long Range (2045) Total Peak Hour Operation			
Intersection	Movement	Level of Service	
		AM	PM
E Harmony/Teller (signal)	EB LT	B	A
	EB T	B	B
	EB RT	B	B
	EB APPROACH	B	B
	WB LT	B	A
	WB T/RT	C	B
	WB APPROACH	C	B
	NB LT	C	C
	NB T	C	C
	NB RT	C	C
	NB APPROACH	C	C
	SB LT	C	C
	SB T	D	D
	SB RT	C	C
	SB APPROACH	C	C
	OVERALL	C	B
E. Harmony/Evans (stop sign)	NB LT/T/RT	E	F
	SB LT/T	F	F
	SB RT	B	B
	SB APPROACH	F	F
	EB LT	B	A
	WB LT	A	B
	OVERALL	B	C
E. Harmony/Timber Ridge (stop sign)	NB LT	F	F
	NB T/RT	C	F
	NB APPROACH	F	F
	SB LT	F	F
	SB T/RT	C	D
	SB APPROACH	D	F
	EB LT	A	A
	WB LT	A	A
	OVERALL	B	C

Continued on next page

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TABLE 6 Long Range (2045) Total Peak Hour Operation			
Intersection	Movement	Level of Service	
		AM	PM
E. Harmony/Timber Ridge (signal)	EB LT	B	B
	EB T/RT	B	B
	EB APPROACH	B	B
	WB LT	B	B
	WB T/RT	B	B
	WB APPROACH	B	B
	NB LT	C	C
	NB T/RT	C	C
	NB APPROACH	C	C
	SB LT	C	C
	SB T/RT	C	C
	SB APPROACH	C	C
	OVERALL	B	C
Teller/Fox Run (stop sign)	EB LT/RT	A	A
	NB LT	A	A
	OVERALL	A	A
Teller/South Access (stop sign)	WB LT	B	B
	WB RT	A	A
	WB APPROACH	B	B
	SB LT	A	A
	OVERALL	A	A
Teller/Middle Access (stop sign)	WB LT/RT	A	B
	SB LT	A	A
	OVERALL	A	A
Teller/North Access (stop sign)	WB LT	A	A
	WB RT	A	A
	WB APPROACH	A	A
	SB LT	A	A
	OVERALL	A	A

IV. CONCLUSIONS

This study assessed the impacts of the Moody Property on the street system in the vicinity of the proposed development in the short range (2030) and long range (2045) futures. As a result of this analysis, the following is concluded:

- The development of the Moody Property site is feasible from a traffic engineering standpoint. The trip generation for Phase 1 of the Moody Property resulted in 6,842 daily trip ends, 490 morning peak hour trip ends, and 679 afternoon peak hour trip ends. The trip generation for full development of the Moody Property resulted in 19,624 daily trip ends, 997 morning peak hour trip ends, and 1,374 afternoon peak hour trip ends.
- The E Harmony/Teller, E. Harmony/Evans, E. Harmony/Timber Ridge, and Teller/Fox Run intersections currently meet the Severance level of service criteria with the existing traffic and geometry. It is important to note that a westbound left-turn lane is required at the E Harmony/Timber Ridge intersection with the existing traffic volumes.
- Peak hour signal warrants will be met at the E. Harmony/Timber Ridge intersection during both peak hours using the short range (2030) total traffic (Figure 11). Using the long range (2045) total peak hour traffic (Figure 12), peak hour signal warrants will not be met at the E. Harmony/Timber Ridge and E. Harmony/Evans intersections.
- In the short range (2030) future, given development of Phase 1 of the Moody Property and an increase in background traffic, the key intersections will meet the Severance level of service criteria during the peak hours with the required auxiliary lanes. At the E Harmony/Timber Ridge intersection, the calculated delay in the morning and afternoon peak hours for the northbound approach was commensurate with level of service F. This is considered to be normal in urban areas during the peak hours.
- In the long range (2045) future, given full development of the Moody Property and an increase in background traffic, the key intersections will meet the Severance level of service criteria during the peak hours with the required auxiliary lanes, except for the E. Harmony/Timber Ridge intersection with stop sign control. With signal control, the E. Harmony/Timber Ridge intersection will operate acceptably.
- The short range (2030) and long range (2045) geometry is shown in Figures 13 and 14, respectively. At the E Harmony/Teller intersection, a northbound right-turn lane is required. In the long range (2045) future, it is assumed that E. Harmony Road will have two through lanes in each direction.

APPENDIX A

DELICH ASSOCIATES
2272 GLEN HAVEN DRIVE
LOVELAND, CO 80538
Phone: (970) 669-2061

TABULAR SUMMARY OF VEHICLE COUNTS

Date: 4/6/2023

Observer: Vickie

Day: Thursday

Jurisdiction: Severance

Intersection: Harmony/Evans

R = right turn
S = straight
L = left turn

Time Begins	Northbound: Evans				Southbound:				Total north/south	Eastbound: Harmony				Westbound: Harmony				Total east/west	Total All
	L	S	R	Total	L	S	R	Total		L	S	R	Total	L	S	R	Total		
7:00	2		2	4				0	4		39	2	41	2	54		56	97	101
7:15	10		3	13				0	13		36	2	38	1	103		104	142	155
7:30	6		5	11				0	11		39	3	42	4	111		115	157	168
7:45	7		10	17				0	17		52	2	54	11	100		111	165	182
8:00	0		4	4				0	4		49	1	50	4	83		87	137	141
8:15	4		1	5				0	5		62	0	62	0	89		89	151	156
8:30	1		1	2				0	2		39	2	41	0	87		87	128	130
8:45	2		1	3				0	3		46	5	51	2	60		62	113	116

7:30-8:30	17	0	20	37	0	0	0	0	37	0	202	6	208	19	383	0	402	610	647
PHF	0.61	n/a	0.5	0.54	n/a	n/a	n/a	n/a	0.54	n/a	0.81	0.5	0.84	0.43	0.86	n/a	0.87	0.92	0.89

4:00	1		2	3				0	3		112	4	116	1	68		69	185	188
4:15	3		5	8				0	8		83	6	89	3	66		69	158	166
4:30	4		6	10				0	10		94	3	97	1	66		67	164	174
4:45	4		3	7				0	7		79	5	84	0	60		60	144	151
5:00	2		1	3				0	3		99	4	103	5	67		72	175	178
5:15	1		1	2				0	2		115	6	121	6	73		79	200	202
5:30	3		5	8				0	8		104	2	106	0	65		65	171	179
5:45	2		2	4				0	4		92	4	96	4	63		67	163	167

5:00-6:00	8	0	9	17	0	0	0	0	17	0	410	16	426	15	268	0	283	709	726
PHF	0.67	n/a	0.45	0.53	n/a	n/a	n/a	n/a	0.53	n/a	0.89	0.67	0.88	0.63	0.92	n/a	0.9	0.89	0.9

DELICH ASSOCIATES
2272 GLEN HAVEN DRIVE
LOVELAND, CO 80538
Phone: (970) 669-2061

TABULAR SUMMARY OF VEHICLE COUNTS

Date: 4/5/2023

Observer: Vickie

Day: Wednesday

Jurisdiction: Severance

Intersection: Harmony/Teller

R = right turn
S = straight
L = left turn

Time Begins	Northbound: Teller				Southbound: Teller				Total north/south	Eastbound: Harmony				Westbound: Harmony				Total east/west	Total All
	L	S	R	Total	L	S	R	Total		L	S	R	Total	L	S	R	Total		
7:00	52	6	5	63	0	1	1	2	65	3	17	18	38	0	67	3	70	108	173
7:15	68	1	7	76	1	9	2	12	88	0	33	14	47	3	112	0	115	162	250
7:30	73	2	5	80	0	5	5	10	90	2	46	30	78	7	89	0	96	174	264
7:45	49	2	11	62	1	6	0	7	69	2	45	32	79	7	80	4	91	170	239
8:00	63	1	9	73	0	2	6	8	81	2	37	34	73	7	80	1	88	161	242
8:15	45	4	3	52	2	7	0	9	61	1	45	48	94	6	94	0	100	194	255
8:30	70	2	6	78	0	0	1	1	79	2	41	32	75	1	83	2	86	161	240
8:45	40	2	2	44	0	0	1	1	45	2	36	20	58	3	45	0	48	106	151

7:30-8:30	230	9	28	267	3	20	11	34	301	7	173	144	324	27	343	5	375	699	1000
PHF	0.79	0.56	0.64	0.83	0.38	0.71	0.46	0.85	0.84	0.88	0.94	0.75	0.86	0.96	0.91	0.31	0.94	0.9	0.95

4:00	69	3	10	82	1	0	2	3	85	2	94	48	144	5	57	0	62	206	291
4:15	41	0	8	49	1	1	3	5	54	2	76	51	129	6	72	0	78	207	261
4:30	34	3	3	40	0	1	4	5	45	0	84	59	143	6	68	1	75	218	263
4:45	37	3	4	44	2	2	3	7	51	1	86	61	148	6	58	0	64	212	263
5:00	31	3	13	47	2	0	1	3	50	0	84	61	145	8	67	1	76	221	271
5:15	43	1	8	52	1	1	7	9	61	0	97	56	153	7	58	0	65	218	279
5:30	40	3	3	46	2	2	2	6	52	1	79	66	146	4	41	4	49	195	247
5:45	44	6	5	55	0	1	3	4	59	1	93	68	162	5	70	1	76	238	297

5:00-6:00	158	13	29	200	5	4	13	22	222	2	353	251	606	24	236	6	266	872	1094
PHF	0.9	0.54	0.56	0.91	0.63	0.5	0.46	0.61	0.91	0.5	0.91	0.92	0.94	0.75	0.84	0.38	0.88	0.92	0.92

DELICH ASSOCIATES
2272 GLEN HAVEN DRIVE
LOVELAND, CO 80538
Phone: (970) 669-2061

TABULAR SUMMARY OF VEHICLE COUNTS

Date: 4/4/2023

Observer: Vickie

Day: Tuesday

Jurisdiction: Severance

Intersection: Harmony/Timber Ridge

R = right turn
S = straight
L = left turn

Time Begins	Northbound: Timber Ridge				Southbound:				Total north/south	Eastbound: Harmony				Westbound: Harmony				Total east/west	Total All
	L	S	R	Total	L	S	R	Total		L	S	R	Total	L	S	R	Total		
7:00	15		6	21				0	21		30	5	35	1	72		73	108	129
7:15	20		7	27				0	27		43	5	48	5	92		97	145	172
7:30	19		8	27				0	27		47	9	56	8	83		91	147	174
7:45	24		13	37				0	37		60	8	68	8	77		85	153	190
8:00	9		5	14				0	14		39	9	48	3	72		75	123	137
8:15	16		8	24				0	24		50	3	53	2	67		69	122	146
8:30	9		5	14				0	14		36	5	41	8	53		61	102	116
8:45	4		1	5				0	5		21	3	24	1	35		36	60	65

7:15-8:15	72	0	33	105	0	0	0	0	105	0	189	31	220	24	324	0	348	568	673
PHF	0.75	n/a	0.63	0.71	n/a	n/a	n/a	n/a	0.71	n/a	0.79	0.86	0.81	0.75	0.88	n/a	0.9	0.93	0.89

4:00	6		3	9				0	9		73	13	86	4	54		58	144	153
4:15	5		2	7				0	7		74	12	86	9	57		66	152	159
4:30	6		2	8				0	8		78	10	88	0	52		52	140	148
4:45	6		4	10				0	10		67	11	78	4	37		41	119	129
5:00	15		2	17				0	17		65	21	86	2	36		38	124	141
5:15	5		0	5				0	5		77	9	86	2	62		64	150	155
5:30	9		4	13				0	13		68	10	78	0	44		44	122	135
5:45	4		3	7				0	7		54	16	70	3	42		45	115	122

4:00-5:00	23	0	11	34	0	0	0	0	34	0	292	46	338	17	200	0	217	555	589
PHF	0.96	n/a	0.69	0.85	n/a	n/a	n/a	n/a	0.85	n/a	0.94	0.88	0.96	0.47	0.88	n/a	0.82	0.91	0.93

DELICH ASSOCIATES
2272 GLEN HAVEN DRIVE
LOVELAND, CO 80538
Phone: (970) 669-2061

TABULAR SUMMARY OF VEHICLE COUNTS

Date: 4/5/2023

Observer: Diane

Day: Wednesday

Jurisdiction: Severance

Intersection: Teller/Fox Run

R = right turn
S = straight
L = left turn

Time Begins	Northbound: Teller				Southbound: Teller				Total north/south	Eastbound: Fox Run				Westbound:				Total east/west	Total All
	L	S	R	Total	L	S	R	Total		L	S	R	Total	L	S	R	Total		
7:00	0	2		2		2	0	2	4	0		1	1				0	1	5
7:15	0	1		1		4	0	4	5	0		1	1				0	1	6
7:30	0	3		3		6	0	6	9	0		4	4				0	4	13
7:45	2	4		6		6	0	6	12	0		1	1				0	1	13
8:00	0	4		4		5	0	5	9	0		3	3				0	3	12
8:15	1	2		3		7	0	7	10	0		2	2				0	2	12
8:30	1	5		6		1	0	1	7	0		0	0				0	0	7
8:45	0	3		3		0	0	0	3	0		0	0				0	0	3

7:30-8:30	3	13	0	16	0	24	0	24	40	0	0	10	10	0	0	0	0	10	50
PHF	0.38	0.81	n/a	0.67	n/a	0.86	n/a	0.86	0.83	n/a	n/a	0.63	0.63	n/a	n/a	n/a	n/a	0.63	0.96

4:00	3	2		5		2	1	3	8	0		1	1				0	1	9
4:15	0	2		2		3	1	4	6	0		0	0				0	0	6
4:30	1	3		4		5	0	5	9	0		1	1				0	1	10
4:45	0	4		4		4	0	4	8	0		2	2				0	2	10
5:00	1	4		5		3	0	3	8	0		0	0				0	0	8
5:15	1	0		1		4	0	4	5	0		3	3				0	3	8
5:30	4	2		6		2	0	2	8	0		1	1				0	1	9
5:45	0	1		1		1	0	1	2	0		0	0				0	0	2

5:00-6:00	6	7	0	13	0	10	0	10	23	0	0	4	4	0	0	0	0	4	27
PHF	0.38	0.44	n/a	0.54	n/a	0.63	n/a	0.63	0.72	n/a	n/a	0.33	0.33	n/a	n/a	n/a	n/a	0.33	0.75

APPENDIX B

HCM 6th Signalized Intersection Summary 3: Teller Street & Harmony Road

Recent AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	175	144	28	355	5	230	9	28	3	20	11
Future Volume (veh/h)	7	175	144	28	355	5	230	9	28	3	20	11
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	7	184	68	29	374	5	242	9	5	3	21	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	552	937	794	692	963	13	457	224	124	214	99	84
Arrive On Green	0.02	0.50	0.50	0.05	0.52	0.51	0.16	0.20	0.18	0.02	0.05	0.05
Sat Flow, veh/h	1781	1870	1585	1781	1841	25	1781	1130	628	1781	1870	1585
Grp Volume(v), veh/h	7	184	68	29	0	379	242	0	14	3	21	1
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	0	1866	1781	0	1757	1781	1870	1585
Q Serve(g_s), s	0.1	3.7	1.5	0.5	0.0	8.2	8.0	0.0	0.4	0.1	0.7	0.0
Cycle Q Clear(g_c), s	0.1	3.7	1.5	0.5	0.0	8.2	8.0	0.0	0.4	0.1	0.7	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	552	937	794	692	0	976	457	0	349	214	99	84
V/C Ratio(X)	0.01	0.20	0.09	0.04	0.00	0.39	0.53	0.00	0.04	0.01	0.21	0.01
Avail Cap(c_a), veh/h	693	937	794	794	0	976	533	0	674	364	524	444
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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.0	9.4	8.8	7.0	0.0	9.7	22.3	0.0	22.1	29.3	30.8	30.4
Incr Delay (d2), s/veh	0.0	0.5	0.2	0.0	0.0	1.2	1.0	0.0	0.0	0.0	1.0	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	0.0	1.4	0.5	0.2	0.0	3.0	3.2	0.0	0.2	0.0	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.0	9.8	9.0	7.0	0.0	10.8	23.3	0.0	22.2	29.3	31.8	30.5
LnGrp LOS	A	A	A	A	A	B	C	A	C	C	C	C
Approach Vol, veh/h		259			408			256			25	
Approach Delay, s/veh		9.6			10.6			23.2			31.4	
Approach LOS		A			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.1	39.0	14.1	8.6	4.6	40.5	4.3	18.5				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	6.0	33.0	13.0	18.0	6.0	33.0	6.0	25.0				
Max Q Clear Time (g_c+I1), s	2.5	5.7	10.0	2.7	2.1	10.2	2.1	2.4				
Green Ext Time (p_c), s	0.0	1.2	0.2	0.0	0.0	2.1	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			14.3									
HCM 6th LOS			B									

Timing Report, Sorted By Phase

3: Teller Street & Harmony Road

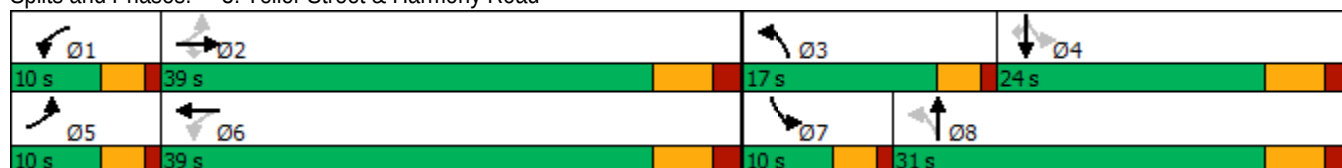
Recent AM

								
Phase Number	1	2	3	4	5	6	7	8
Movement	WBL	EBTL	NBL	SBTL	EBL	WBTL	SBL	NBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	10	39	17	24	10	39	10	31
Maximum Split (%)	11.1%	43.3%	18.9%	26.7%	11.1%	43.3%	11.1%	34.4%
Minimum Split (s)	10	24	10	24	10	24	10	24
Yellow Time (s)	3	4	3	4	3	4	3	4
All-Red Time (s)	1	2	1	2	1	2	1	2
Minimum Initial (s)	5	5	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	10	49	66	0	10	49	59
End Time (s)	10	49	66	0	10	49	59	0
Yield/Force Off (s)	6	43	62	84	6	43	55	84
Yield/Force Off 170(s)	6	32	62	73	6	32	55	73
Local Start Time (s)	80	0	39	56	80	0	39	49
Local Yield (s)	86	33	52	74	86	33	45	74
Local Yield 170(s)	86	22	52	63	86	22	45	63

Intersection Summary

Cycle Length	90
Control Type	Semi Act-Uncoord
Natural Cycle	70

Splits and Phases: 3: Teller Street & Harmony Road



Queues

Recent AM

3: Teller Street & Harmony Road

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	7	184	152	29	379	242	38	3	21	12
v/c Ratio	0.01	0.17	0.16	0.04	0.35	0.58	0.11	0.01	0.10	0.04
Control Delay	6.7	11.0	2.0	6.5	10.7	26.1	12.6	18.3	31.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.7	11.0	2.0	6.5	10.7	26.1	12.6	18.3	31.4	0.2
Queue Length 50th (ft)	1	22	0	3	50	70	2	1	6	0
Queue Length 95th (ft)	6	99	22	16	207	151	28	6	30	0
Internal Link Dist (ft)		831			885		820		1208	
Turn Bay Length (ft)	250		300	270		125		210		210
Base Capacity (vph)	673	1052	973	810	1098	466	689	291	554	599
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	0.01	0.17	0.16	0.04	0.35	0.52	0.06	0.01	0.04	0.02
Intersection Summary										

HCM 6th Signalized Intersection Summary

3: Teller Street & Harmony Road

Recent PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	371	251	25	240	6	158	13	31	5	4	13
Future Volume (veh/h)	2	371	251	25	240	6	158	13	31	5	4	13
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	2	403	158	27	261	6	172	14	2	5	4	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	699	1026	869	546	1047	24	391	238	34	206	81	69
Arrive On Green	0.02	0.55	0.55	0.04	0.58	0.56	0.13	0.15	0.13	0.02	0.04	0.04
Sat Flow, veh/h	1781	1870	1585	1781	1821	42	1781	1601	229	1781	1870	1585
Grp Volume(v), veh/h	2	403	158	27	0	267	172	0	16	5	4	1
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	0	1863	1781	0	1829	1781	1870	1585
Q Serve(g_s), s	0.0	8.4	3.4	0.4	0.0	4.8	5.8	0.0	0.5	0.2	0.1	0.0
Cycle Q Clear(g_c), s	0.0	8.4	3.4	0.4	0.0	4.8	5.8	0.0	0.5	0.2	0.1	0.0
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	699	1026	869	546	0	1071	391	0	272	206	81	69
V/C Ratio(X)	0.00	0.39	0.18	0.05	0.00	0.25	0.44	0.00	0.06	0.02	0.05	0.01
Avail Cap(c_a), veh/h	852	1026	869	652	0	1071	456	0	624	352	527	446
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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.4	8.8	7.6	6.0	0.0	7.1	23.9	0.0	24.7	29.6	30.9	30.9
Incr Delay (d2), s/veh	0.0	1.1	0.5	0.0	0.0	0.6	0.8	0.0	0.1	0.0	0.2	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	0.0	2.9	1.1	0.1	0.0	1.6	2.3	0.0	0.2	0.1	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.4	9.9	8.1	6.0	0.0	7.7	24.7	0.0	24.8	29.6	31.2	31.0
LnGrp LOS	A	A	A	A	A	A	C	A	C	C	C	C
Approach Vol, veh/h		563			294			188			10	
Approach Delay, s/veh		9.4			7.5			24.7			30.4	
Approach LOS		A			A			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	42.0	11.6	7.9	4.2	43.8	4.4	15.0				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	6.0	36.0	10.0	18.0	6.0	36.0	6.0	22.0				
Max Q Clear Time (g_c+I1), s	2.4	10.4	7.8	2.1	2.0	6.8	2.2	2.5				
Green Ext Time (p_c), s	0.0	2.9	0.1	0.0	0.0	1.5	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			11.8									
HCM 6th LOS			B									

Timing Report, Sorted By Phase

3: Teller Street & Harmony Road

Recent PM

								
Phase Number	1	2	3	4	5	6	7	8
Movement	WBL	EBTL	NBL	SBTL	EBL	WBTL	SBL	NBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	10	42	14	24	10	42	10	28
Maximum Split (%)	11.1%	46.7%	15.6%	26.7%	11.1%	46.7%	11.1%	31.1%
Minimum Split (s)	10	24	10	24	10	24	10	24
Yellow Time (s)	3	4	3	4	3	4	3	4
All-Red Time (s)	1	2	1	2	1	2	1	2
Minimum Initial (s)	5	5	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	10	52	66	0	10	52	62
End Time (s)	10	52	66	0	10	52	62	0
Yield/Force Off (s)	6	46	62	84	6	46	58	84
Yield/Force Off 170(s)	6	35	62	73	6	35	58	73
Local Start Time (s)	80	0	42	56	80	0	42	52
Local Yield (s)	86	36	52	74	86	36	48	74
Local Yield 170(s)	86	25	52	63	86	25	48	63

Intersection Summary

Cycle Length	90
Control Type	Semi Act-Uncoord
Natural Cycle	70

Splits and Phases: 3: Teller Street & Harmony Road

 Ø1	 Ø2	 Ø3	 Ø4
10 s	42 s	14 s	24 s
 Ø5	 Ø6	 Ø7	 Ø8
10 s	42 s	10 s	28 s

Queues

Recent PM

3: Teller Street & Harmony Road

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	2	403	273	27	268	172	48	5	4	14
v/c Ratio	0.00	0.35	0.25	0.04	0.23	0.49	0.16	0.02	0.02	0.05
Control Delay	5.5	10.5	2.4	5.1	7.9	27.1	14.6	20.2	31.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.5	10.5	2.4	5.1	7.9	27.1	14.6	20.2	31.5	0.3
Queue Length 50th (ft)	0	47	0	2	28	52	4	2	1	0
Queue Length 95th (ft)	3	198	37	13	126	116	35	9	11	0
Internal Link Dist (ft)		831			885		820		1208	
Turn Bay Length (ft)	250		300	270		125		210		210
Base Capacity (vph)	819	1139	1074	681	1184	368	598	273	532	547
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	0.00	0.35	0.25	0.04	0.23	0.47	0.08	0.02	0.01	0.03
Intersection Summary										

HCM 6th TWSC 8: Evans Street & Harmony Road

Recent AM

Intersection

Int Delay, s/veh	0.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	200	6	19	372	16	20
Future Vol, veh/h	200	6	19	372	16	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	240	205	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	225	7	21	418	18	22

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	232
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1336
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1336
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	11.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	564	-	-	1336	-
HCM Lane V/C Ratio	0.072	-	-	0.016	-
HCM Control Delay (s)	11.9	-	-	7.7	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

HCM 6th TWSC 8: Evans Street & Harmony Road

Recent PM

Intersection

Int Delay, s/veh 0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	392	15	15	263	8	9
Future Vol, veh/h	392	15	15	263	8	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	240	205	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	436	17	17	292	9	10

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	453
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1108
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1108
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	13
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	468	-	-	1108	-
HCM Lane V/C Ratio	0.04	-	-	0.015	-
HCM Control Delay (s)	13	-	-	8.3	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

HCM 6th TWSC

10: Timber Ridge Parkway & Harmony Road

Recent AM

Intersection

Int Delay, s/veh	2.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑		↑	↑	↑
Traffic Vol, veh/h	201	33	24	320	71	33
Future Vol, veh/h	201	33	24	320	71	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	-	-	60	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	226	37	27	360	80	37

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	263
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1301
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1301
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	13.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	429	813	-	-	1301	-
HCM Lane V/C Ratio	0.186	0.046	-	-	0.021	-
HCM Control Delay (s)	15.3	9.6	-	-	7.8	0
HCM Lane LOS	C	A	-	-	A	A
HCM 95th %tile Q(veh)	0.7	0.1	-	-	0.1	-

HCM 6th TWSC
10: Timber Ridge Parkway & Harmony Road

Recent PM

Intersection

Int Delay, s/veh	1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑		↑	↑	↑
Traffic Vol, veh/h	338	53	17	257	30	11
Future Vol, veh/h	338	53	17	257	30	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	-	-	60	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	363	57	18	276	32	12

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	420	0	675	363
Stage 1	-	-	-	-	363	-
Stage 2	-	-	-	-	312	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1139	-	419	682
Stage 1	-	-	-	-	704	-
Stage 2	-	-	-	-	742	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1139	-	411	682
Mov Cap-2 Maneuver	-	-	-	-	411	-
Stage 1	-	-	-	-	704	-
Stage 2	-	-	-	-	728	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	13.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	411	682	-	-	1139	-
HCM Lane V/C Ratio	0.078	0.017	-	-	0.016	-
HCM Control Delay (s)	14.5	10.4	-	-	8.2	0
HCM Lane LOS	B	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-

HCM 6th TWSC 6: Teller Street & Fox Run

Recent AM

Intersection

Int Delay, s/veh	2.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	10	3	13	24	0
Future Vol, veh/h	0	10	3	13	24	0
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	3	14	25	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	45	25	25	0	0
Stage 1	25	-	-	-	-
Stage 2	20	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	965	1051	1589	-	-
Stage 1	998	-	-	-	-
Stage 2	1003	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	963	1051	1589	-	-
Mov Cap-2 Maneuver	963	-	-	-	-
Stage 1	996	-	-	-	-
Stage 2	1003	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	1.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1589	-	1051	-	-
HCM Lane V/C Ratio	0.002	-	0.01	-	-
HCM Control Delay (s)	7.3	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th TWSC
6: Teller Street & Fox Run

Recent PM

Intersection

Int Delay, s/veh 2.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
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Lane Configurations						
Traffic Vol, veh/h	0	4	6	7	10	0
Future Vol, veh/h	0	4	6	7	10	0
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	-	-	-	-	-
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	0	5	7	8	12	0

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	34	12	12	0	-	0
Stage 1	12	-	-	-	-	-
Stage 2	22	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	979	1069	1607	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	1001	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	975	1069	1607	-	-	-
Mov Cap-2 Maneuver	975	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	1001	-	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s	8.4	3.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
-----------------------	-----	-----	-------	-----	-----

Capacity (veh/h)	1607	-	1069	-	-
HCM Lane V/C Ratio	0.004	-	0.004	-	-
HCM Control Delay (s)	7.2	0	8.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

APPENDIX C

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:		Organization:	
Project Location:		Performed By:	
Scenario Description:		Date:	
Analysis Year:		Checked By:	
Analysis Period:	AM Street Peak Hour	Date:	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail				260	161	99
Restaurant				0		
Cinema/Entertainment				0		
Residential				490	122	368
Hotel				0		
All Other Land Uses ²				0		
				750	283	467

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	2	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	4	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	750	283	467
Internal Capture Percentage	2%	2%	1%
External Vehicle-Trips ⁵	738	277	461
External Transit-Trips ⁶	0	0	0
External Non-Motorized Trips ⁶	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	2%	2%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	2%	1%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	0
Analysis Period:	AM Street Peak Hour

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	161	161	1.00	99	99
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	122	122	1.00	368	368
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	29		13	0	14	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	7	4	74	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		52	0	0	0	0
Retail	0		0	0	2	0
Restaurant	0	13		0	6	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	27	0	0		0
Hotel	0	6	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	4	157	161	157	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	2	120	122	120	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	2	97	99	97	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	4	364	368	364	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:		Organization:	
Project Location:		Performed By:	
Scenario Description:		Date:	
Analysis Year:		Checked By:	
Analysis Period:	PM Street Peak Hour	Date:	

Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail				779	381	398
Restaurant				0		
Cinema/Entertainment				0		
Residential				679	428	251
Hotel				0		
All Other Land Uses ²				0		
				1,458	809	649

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	103	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	38	0	0		0
Hotel	0	0	0	0	0	

	Total	Entering	Exiting
All Person-Trips	1,458	809	649
Internal Capture Percentage	19%	17%	22%
External Vehicle-Trips ⁵	1,176	668	508
External Transit-Trips ⁶	0	0	0
External Non-Motorized Trips ⁶	0	0	0

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	10%	26%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	24%	15%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	0
Analysis Period:	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	381	381	1.00	398	398
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	428	428	1.00	251	251
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	8		115	16	103	20
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	10	105	53	0		8
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		30	0	0	17	0
Retail	0		0	0	197	0
Restaurant	0	191		0	68	0
Cinema/Entertainment	0	15	0		17	0
Residential	0	38	0	0		0
Hotel	0	8	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	38	343	381	343	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	103	325	428	325	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	103	295	398	295	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	38	213	251	213	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

²Person-Trips

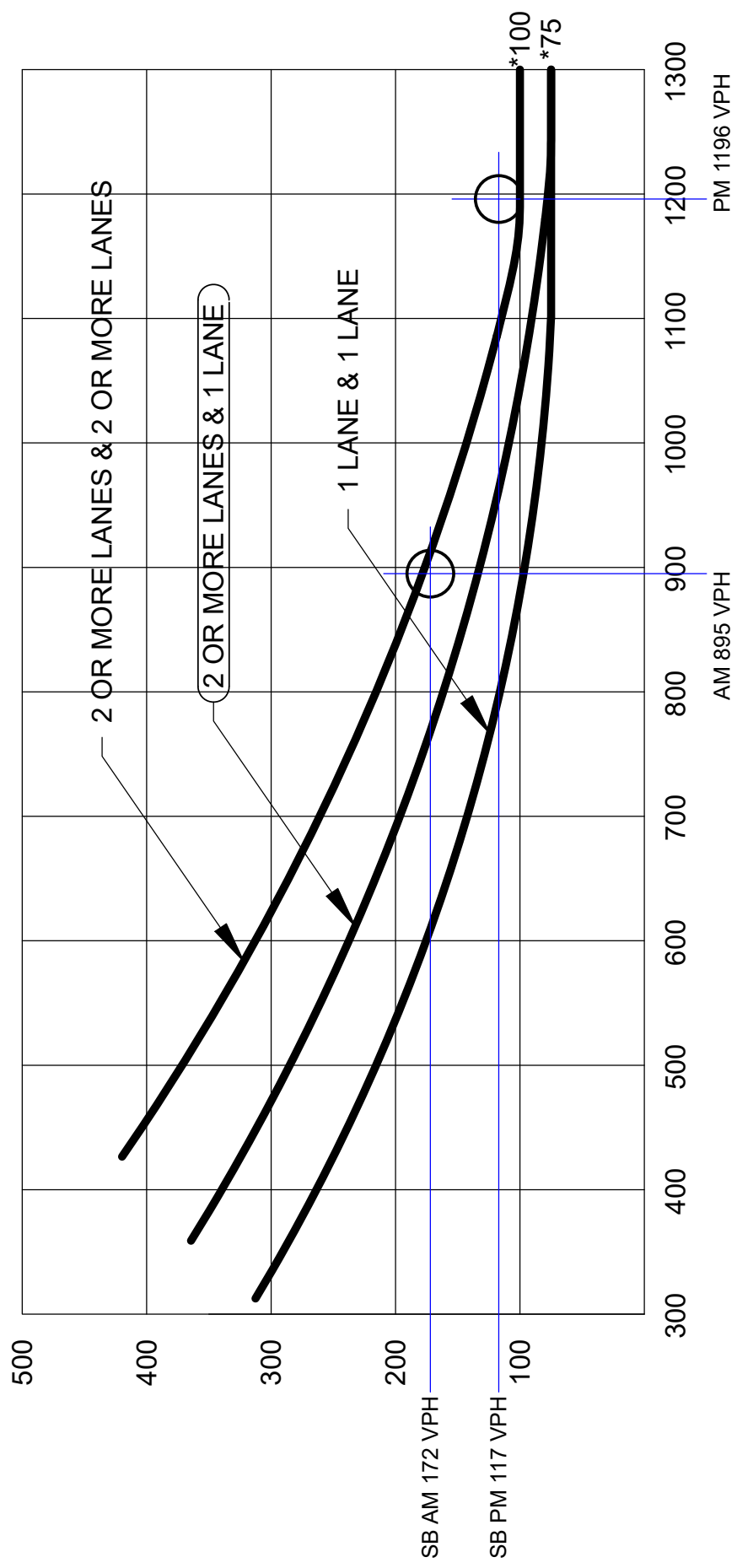
³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

APPENDIX D

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)
 (COMMUNITY LESS THAN 10,000 POPULATION OR
 ABOVE 70 KM/H (40 MPH) ON MAJOR STREET)

MUTCD, 2003 EDITION, PAGE 4C-7



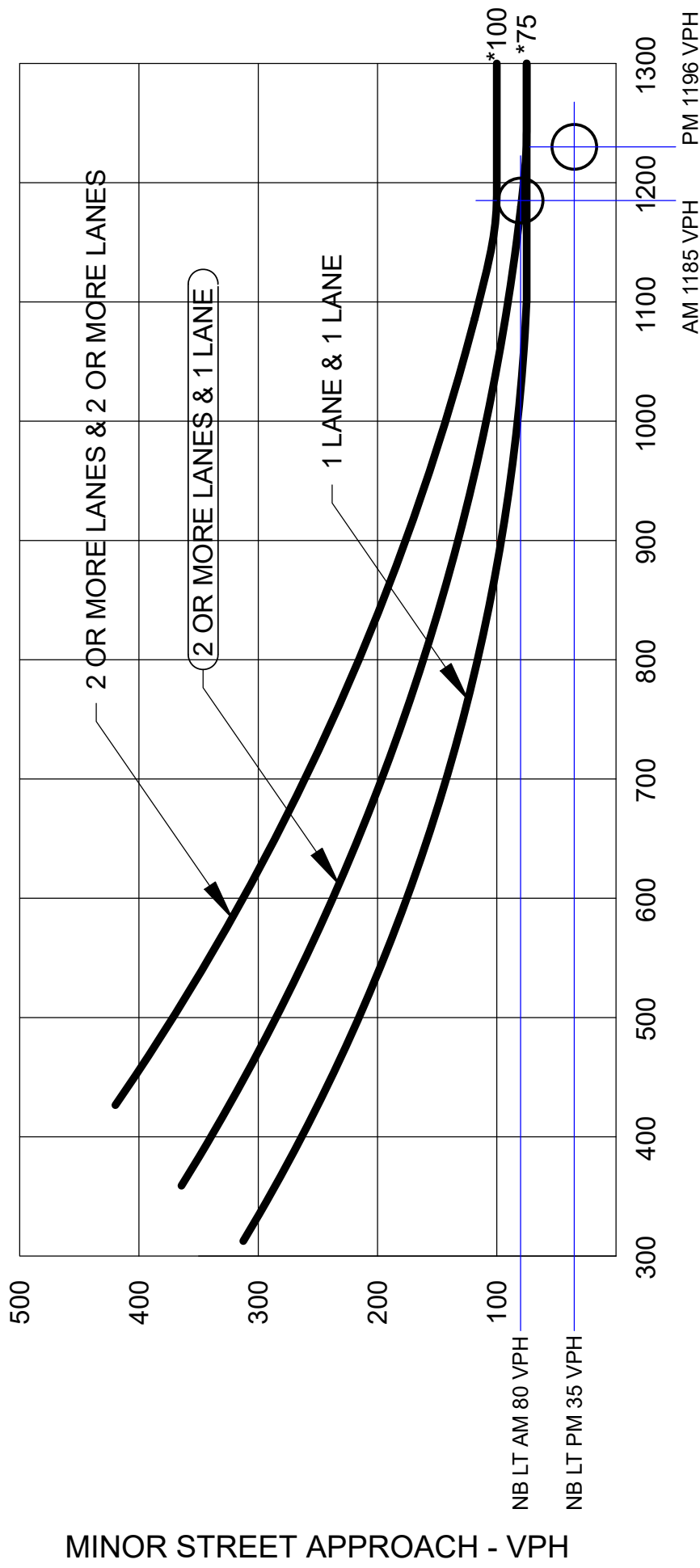
**MAJOR STREET - TOTAL OF BOTH APPROACH -
 VEHICLES PER HOUR (VPH)**

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

**SHORT RANGE (2030) TOTAL PEAK HOUR
 WARRANT AT E. HARMONY/TIMBER RIDGE INTERSECTION**

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)
 (COMMUNITY LESS THAN 10,000 POPULATION OR
 ABOVE 70 KM/H (40 MPH) ON MAJOR STREET)

MUTCD, 2003 EDITION, PAGE 4C-7



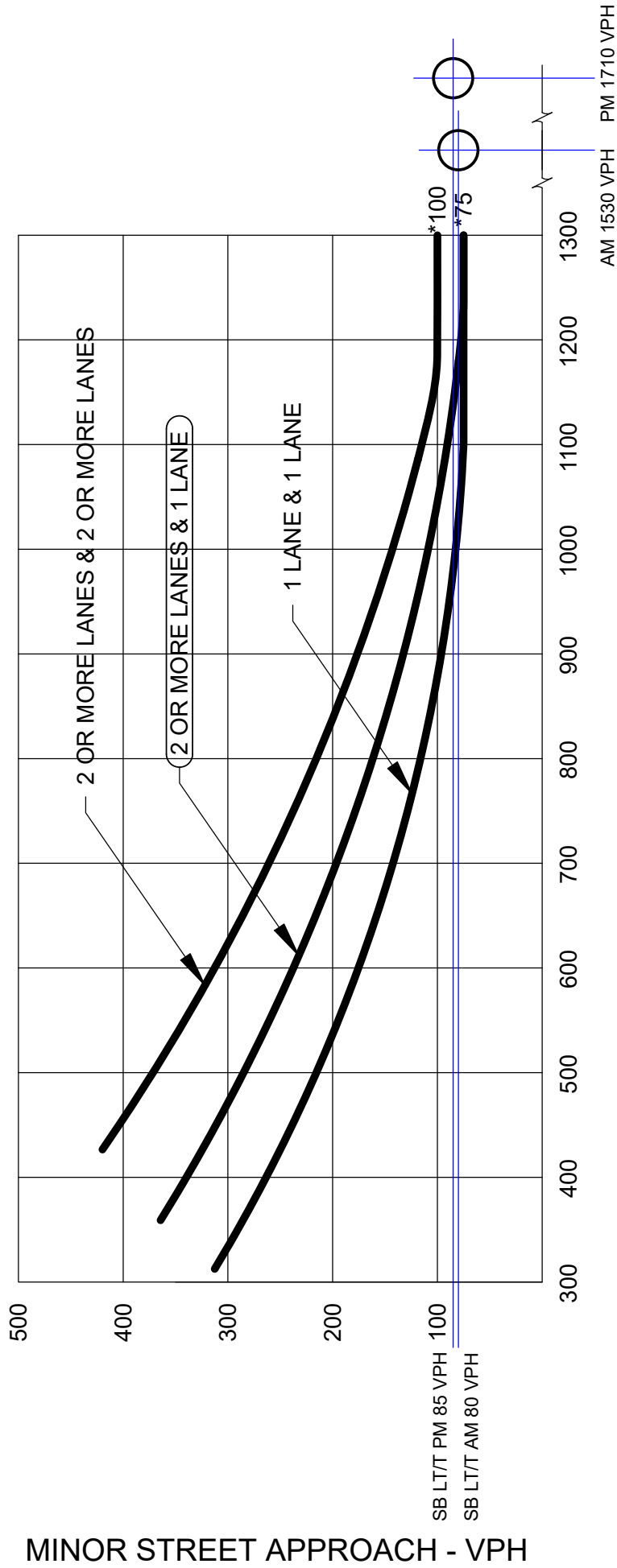
**MAJOR STREET - TOTAL OF BOTH APPROACH -
 VEHICLES PER HOUR (VPH)**

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

**LONG RANGE (2045) BACKGROUND PEAK HOUR
 WARRANT AT E. HARMONY/TIMBER RIDGE INTERSECTION**

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)
 (COMMUNITY LESS THAN 10,000 POPULATION OR
 ABOVE 70 KM/H (40 MPH) ON MAJOR STREET)

MUTCD, 2003 EDITION, PAGE 4C-7



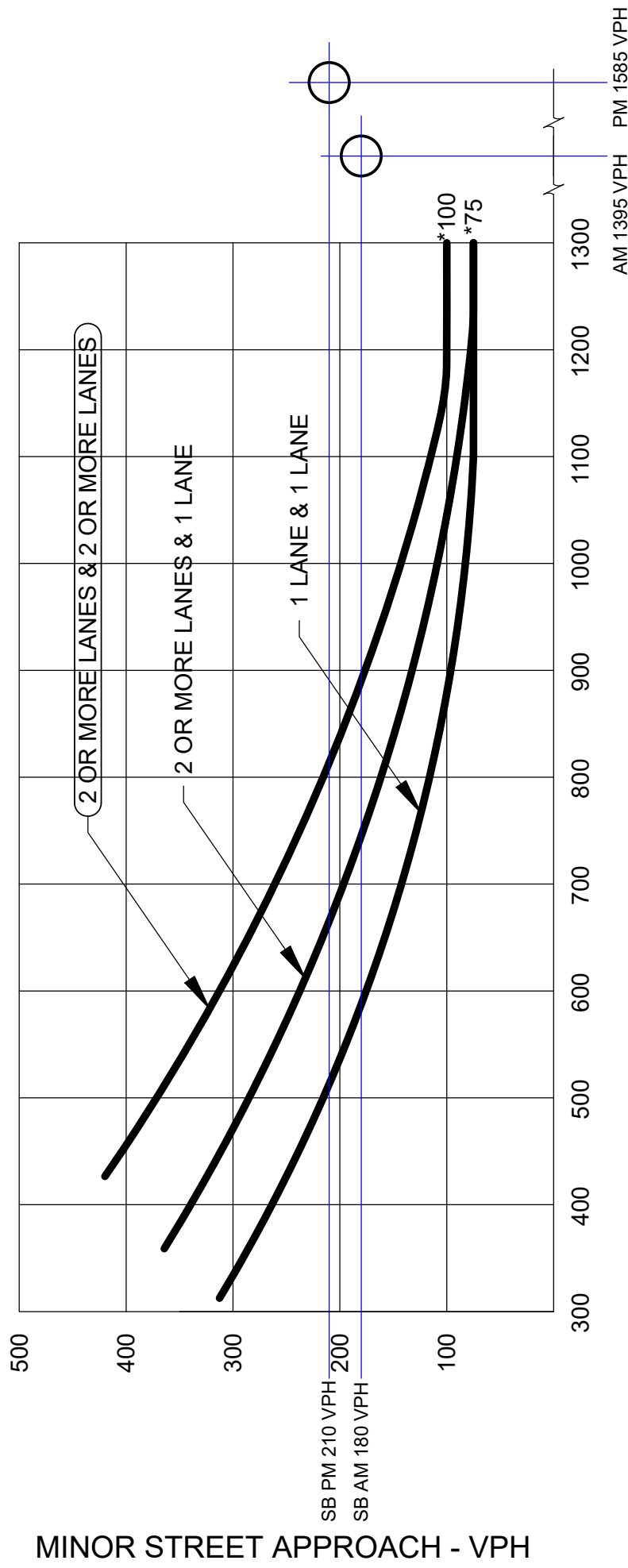
**MAJOR STREET - TOTAL OF BOTH APPROACH -
 VEHICLES PER HOUR (VPH)**

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

**LONG RANGE (2045) TOTAL PEAK HOUR
 WARRANT AT E. HARMONY/EVANS INTERSECTION**

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)
 (COMMUNITY LESS THAN 10,000 POPULATION OR
 ABOVE 70 KM/H (40 MPH) ON MAJOR STREET)

MUTCD, 2003 EDITION, PAGE 4C-7



**MAJOR STREET - TOTAL OF BOTH APPROACH -
 VEHICLES PER HOUR (VPH)**

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

**LONG RANGE (2045) TOTAL PEAK HOUR
 WARRANT AT E. HARMONY/TIMBER RIDGE INTERSECTION**

APPENDIX E

HCM 6th Signalized Intersection Summary 3: Teller Street & Harmony Road

Short Bkgrd AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	238	196	34	501	6	339	11	34	4	25	13
Future Volume (veh/h)	9	238	196	34	501	6	339	11	34	4	25	13
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	9	251	102	36	527	6	357	12	7	4	26	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	422	913	774	609	945	11	485	244	142	215	108	92
Arrive On Green	0.03	0.49	0.49	0.05	0.51	0.50	0.18	0.22	0.21	0.02	0.06	0.06
Sat Flow, veh/h	1781	1870	1585	1781	1846	21	1781	1108	646	1781	1870	1585
Grp Volume(v), veh/h	9	251	102	36	0	533	357	0	19	4	26	1
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	0	1867	1781	0	1754	1781	1870	1585
Q Serve(g_s), s	0.2	5.7	2.5	0.7	0.0	14.0	13.0	0.0	0.6	0.1	1.0	0.0
Cycle Q Clear(g_c), s	0.2	5.7	2.5	0.7	0.0	14.0	13.0	0.0	0.6	0.1	1.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	422	913	774	609	0	956	485	0	386	215	108	92
V/C Ratio(X)	0.02	0.27	0.13	0.06	0.00	0.56	0.74	0.00	0.05	0.02	0.24	0.01
Avail Cap(c_a), veh/h	551	913	774	694	0	956	485	0	611	355	496	420
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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.6	10.9	10.0	7.8	0.0	11.9	24.2	0.0	22.2	30.6	32.3	31.8
Incr Delay (d2), s/veh	0.0	0.7	0.4	0.0	0.0	2.3	5.8	0.0	0.1	0.0	1.1	0.0
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	2.2	0.8	0.2	0.0	5.4	5.9	0.0	0.2	0.1	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.6	11.6	10.4	7.8	0.0	14.3	30.0	0.0	22.3	30.6	33.4	31.9
LnGrp LOS	A	B	B	A	A	B	C	A	C	C	C	C
Approach Vol, veh/h		362			569			376			31	
Approach Delay, s/veh		11.2			13.9			29.6			33.0	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.6	40.0	16.0	9.2	4.8	41.7	4.4	20.8				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	6.0	34.0	12.0	18.0	6.0	34.0	6.0	24.0				
Max Q Clear Time (g_c+I1), s	2.7	7.7	15.0	3.0	2.2	16.0	2.1	2.6				
Green Ext Time (p_c), s	0.0	1.7	0.0	0.0	0.0	3.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			18.0									
HCM 6th LOS			B									

Timing Report, Sorted By Phase

3: Teller Street & Harmony Road

Short Bkgrd AM

								
Phase Number	1	2	3	4	5	6	7	8
Movement	WBL	EBTL	NBL	SBTL	EBL	WBTL	SBL	NBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	10	40	16	24	10	40	10	30
Maximum Split (%)	11.1%	44.4%	17.8%	26.7%	11.1%	44.4%	11.1%	33.3%
Minimum Split (s)	10	24	10	24	10	24	10	24
Yellow Time (s)	3	4	3	4	3	4	3	4
All-Red Time (s)	1	2	1	2	1	2	1	2
Minimum Initial (s)	5	5	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	10	50	66	0	10	50	60
End Time (s)	10	50	66	0	10	50	60	0
Yield/Force Off (s)	6	44	62	84	6	44	56	84
Yield/Force Off 170(s)	6	33	62	73	6	33	56	73
Local Start Time (s)	80	0	40	56	80	0	40	50
Local Yield (s)	86	34	52	74	86	34	46	74
Local Yield 170(s)	86	23	52	63	86	23	46	63

Intersection Summary

Cycle Length	90
Control Type	Semi Act-Uncoord
Natural Cycle	70

Splits and Phases: 3: Teller Street & Harmony Road



Queues

Short Bkgrd AM

3: Teller Street & Harmony Road

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	9	251	206	36	533	357	48	4	26	14
v/c Ratio	0.02	0.26	0.22	0.05	0.50	0.84	0.12	0.01	0.13	0.04
Control Delay	6.9	13.3	2.9	6.9	13.6	42.3	12.4	18.5	33.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	13.3	2.9	6.9	13.6	42.3	12.4	18.5	33.5	0.2
Queue Length 50th (ft)	2	76	0	7	142	146	4	1	12	0
Queue Length 95th (ft)	7	131	36	18	311	#277	33	8	35	0
Internal Link Dist (ft)		831			885		820		1208	
Turn Bay Length (ft)	250		300	270		125		210		210
Base Capacity (vph)	520	964	918	707	1057	429	630	291	521	574
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	0.26	0.22	0.05	0.50	0.83	0.08	0.01	0.05	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 3: Teller Street & Harmony Road

Short Bkgrd PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	529	374	31	338	7	232	16	38	6	5	16
Future Volume (veh/h)	2	529	374	31	338	7	232	16	38	6	5	16
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	2	575	239	34	367	7	252	17	3	7	5	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	613	1030	873	424	1065	20	392	235	41	210	89	76
Arrive On Green	0.02	0.55	0.55	0.05	0.58	0.57	0.13	0.15	0.14	0.02	0.05	0.05
Sat Flow, veh/h	1781	1870	1585	1781	1829	35	1781	1548	273	1781	1870	1585
Grp Volume(v), veh/h	2	575	239	34	0	374	252	0	20	7	5	1
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	0	1864	1781	0	1821	1781	1870	1585
Q Serve(g_s), s	0.0	14.1	5.7	0.5	0.0	7.4	9.0	0.0	0.7	0.3	0.2	0.0
Cycle Q Clear(g_c), s	0.0	14.1	5.7	0.5	0.0	7.4	9.0	0.0	0.7	0.3	0.2	0.0
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	613	1030	873	424	0	1086	392	0	276	210	89	76
V/C Ratio(X)	0.00	0.56	0.27	0.08	0.00	0.34	0.64	0.00	0.07	0.03	0.06	0.01
Avail Cap(c_a), veh/h	759	1030	873	513	0	1086	392	0	540	344	502	425
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(l)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.8	10.3	8.4	7.1	0.0	7.7	26.3	0.0	25.8	30.7	32.2	32.1
Incr Delay (d2), s/veh	0.0	2.2	0.8	0.1	0.0	0.9	3.6	0.0	0.1	0.1	0.3	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	0.0	5.2	1.8	0.2	0.0	2.5	4.1	0.0	0.3	0.1	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.8	12.5	9.2	7.1	0.0	8.6	29.9	0.0	25.9	30.7	32.4	32.2
LnGrp LOS	A	B	A	A	A	A	C	A	C	C	C	C
Approach Vol, veh/h		816			408			272			13	
Approach Delay, s/veh		11.5			8.5			29.6			31.5	
Approach LOS		B			A			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.4	44.0	12.0	8.4	4.2	46.2	4.6	15.7				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	6.0	38.0	8.0	18.0	6.0	38.0	6.0	20.0				
Max Q Clear Time (g_c+I1), s	2.5	16.1	11.0	2.2	2.0	9.4	2.3	2.7				
Green Ext Time (p_c), s	0.0	4.4	0.0	0.0	0.0	2.2	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			14.1									
HCM 6th LOS			B									

Timing Report, Sorted By Phase

3: Teller Street & Harmony Road

Short Bkgrd PM

								
Phase Number	1	2	3	4	5	6	7	8
Movement	WBL	EBTL	NBL	SBTL	EBL	WBTL	SBL	NBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	10	44	12	24	10	44	10	26
Maximum Split (%)	11.1%	48.9%	13.3%	26.7%	11.1%	48.9%	11.1%	28.9%
Minimum Split (s)	10	24	10	24	10	24	10	24
Yellow Time (s)	3	4	3	4	3	4	3	4
All-Red Time (s)	1	2	1	2	1	2	1	2
Minimum Initial (s)	5	5	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	10	54	66	0	10	54	64
End Time (s)	10	54	66	0	10	54	64	0
Yield/Force Off (s)	6	48	62	84	6	48	60	84
Yield/Force Off 170(s)	6	37	62	73	6	37	60	73
Local Start Time (s)	80	0	44	56	80	0	44	54
Local Yield (s)	86	38	52	74	86	38	50	74
Local Yield 170(s)	86	27	52	63	86	27	50	63

Intersection Summary

Cycle Length	90
Control Type	Semi Act-Uncoord
Natural Cycle	75

Splits and Phases: 3: Teller Street & Harmony Road

 Ø1	 Ø2	 Ø3	 Ø4
10 s	44 s	12 s	24 s
 Ø5	 Ø6	 Ø7	 Ø8
10 s	44 s	10 s	26 s

Queues

Short Bkgrd PM

3: Teller Street & Harmony Road

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	2	575	407	34	375	252	58	7	5	17
v/c Ratio	0.00	0.49	0.36	0.06	0.31	0.79	0.21	0.03	0.03	0.06
Control Delay	4.5	11.5	2.3	4.6	7.9	43.2	15.4	21.3	31.4	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.5	11.5	2.3	4.6	7.9	43.2	15.4	21.3	31.4	0.4
Queue Length 50th (ft)	0	65	0	2	36	84	5	2	2	0
Queue Length 95th (ft)	3	303	43	14	174	174	40	12	12	0
Internal Link Dist (ft)		831			885		820		1208	
Turn Bay Length (ft)	250		300	270		125		210		210
Base Capacity (vph)	747	1163	1141	561	1209	318	563	280	542	554
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	0.00	0.49	0.36	0.06	0.31	0.79	0.10	0.03	0.01	0.03
Intersection Summary										

HCM 6th TWSC
8: Evans Street & Harmony Road

Short Bkgrd AM

Intersection

Int Delay, s/veh 0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	270	6	19	525	16	20
Future Vol, veh/h	270	6	19	525	16	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	240	205	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	303	7	21	590	18	22

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	310
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	4.12	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	2.218	-
Pot Cap-1 Maneuver	-	1250	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1250	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	14.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	437	-	-	1250	-
HCM Lane V/C Ratio	0.093	-	-	0.017	-
HCM Control Delay (s)	14.1	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

HCM 6th TWSC
8: Evans Street & Harmony Road

Short Bkgrd PM

Intersection

Int Delay, s/veh 0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	558	15	15	368	8	9
Future Vol, veh/h	558	15	15	368	8	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	240	205	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	620	17	17	409	9	10

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	637
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	947
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	947
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	16.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	331	-	-	947	-
HCM Lane V/C Ratio	0.057	-	-	0.018	-
HCM Control Delay (s)	16.5	-	-	8.9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

HCM 6th TWSC
10: Timber Ridge Parkway & Harmony Road

Short Bkgrd AM

Intersection

Int Delay, s/veh 2.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑		↑	↑	↑
Traffic Vol, veh/h	269	35	27	467	77	42
Future Vol, veh/h	269	35	27	467	77	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	-	-	60	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	302	39	30	525	87	47

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	341
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1218
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1218
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	17.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	304	738	-	-	1218	-
HCM Lane V/C Ratio	0.285	0.064	-	-	0.025	-
HCM Control Delay (s)	21.5	10.2	-	-	8	0
HCM Lane LOS	C	B	-	-	A	A
HCM 95th %tile Q(veh)	1.1	0.2	-	-	0.1	-

HCM 6th TWSC
10: Timber Ridge Parkway & Harmony Road

Short Bkgrd PM

Intersection

Int Delay, s/veh	1.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑		↑	↑	↑
Traffic Vol, veh/h	497	60	28	358	34	17
Future Vol, veh/h	497	60	28	358	34	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	-	-	60	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	534	65	30	385	37	18

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	599
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	978
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	978
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	17.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	266	546	-	-	978	-
HCM Lane V/C Ratio	0.137	0.033	-	-	0.031	-
HCM Control Delay (s)	20.7	11.8	-	-	8.8	0
HCM Lane LOS	C	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0.1	-

HCM 6th TWSC
6: Teller Street & Fox Run

Short Bkgrd AM

Intersection

Int Delay, s/veh 1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
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Lane Configurations						
Traffic Vol, veh/h	0	10	3	18	32	0
Future Vol, veh/h	0	10	3	18	32	0
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	3	19	33	0

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	58	33	33	0	-	0
Stage 1	33	-	-	-	-	-
Stage 2	25	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	949	1041	1579	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	998	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	947	1041	1579	-	-	-
Mov Cap-2 Maneuver	947	-	-	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	998	-	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s	8.5	1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
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Capacity (veh/h)	1579	-	1041	-	-
HCM Lane V/C Ratio	0.002	-	0.01	-	-
HCM Control Delay (s)	7.3	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th TWSC
6: Teller Street & Fox Run

Short Bkgrd PM

Intersection

Int Delay, s/veh 2.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
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Lane Configurations						
Traffic Vol, veh/h	0	4	6	11	15	0
Future Vol, veh/h	0	4	6	11	15	0
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	-	-	-	-	-
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	0	5	7	13	18	0

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	45	18	18	0	-	0
Stage 1	18	-	-	-	-	-
Stage 2	27	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	965	1061	1599	-	-	-
Stage 1	1005	-	-	-	-	-
Stage 2	996	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	961	1061	1599	-	-	-
Mov Cap-2 Maneuver	961	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	996	-	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s	8.4	2.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
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Capacity (veh/h)	1599	-	1061	-	-
HCM Lane V/C Ratio	0.004	-	0.004	-	-
HCM Control Delay (s)	7.3	0	8.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

APPENDIX F

HCM 6th Signalized Intersection Summary

3: Teller Street & Harmony Road

Long Bkgrd AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	15	360	225	45	730	10	355	15	45	10	25	20
Future Volume (veh/h)	15	360	225	45	730	10	355	15	45	10	25	20
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	16	379	102	47	768	10	374	16	1	11	26	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	1516	676	531	1617	21	575	488	391	237	114	97
Arrive On Green	0.03	0.43	0.43	0.06	0.45	0.44	0.23	0.26	0.25	0.03	0.06	0.06
Sat Flow, veh/h	1781	3554	1585	1781	3592	47	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	16	379	102	47	380	398	374	16	1	11	26	1
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1862	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.3	4.8	2.8	1.0	10.5	10.5	12.8	0.4	0.0	0.4	0.9	0.0
Cycle Q Clear(g_c), s	0.3	4.8	2.8	1.0	10.5	10.5	12.8	0.4	0.0	0.4	0.9	0.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	370	1516	676	531	800	838	575	488	391	237	114	97
V/C Ratio(X)	0.04	0.25	0.15	0.09	0.47	0.48	0.65	0.03	0.00	0.05	0.23	0.01
Avail Cap(c_a), veh/h	488	1516	676	607	800	838	624	798	654	365	505	428
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(l)	1.00	1.00	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	10.9	12.9	12.4	9.5	13.5	13.5	20.8	19.4	20.0	29.4	31.4	31.0
Incr Delay (d2), s/veh	0.0	0.4	0.5	0.1	2.0	1.9	2.1	0.0	0.0	0.1	1.0	0.0
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	1.7	1.0	0.3	4.0	4.2	5.2	0.2	0.0	0.2	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.0	13.3	12.8	9.6	15.5	15.5	23.0	19.4	20.0	29.4	32.4	31.1
LnGrp LOS	B	B	B	A	B	B	C	B	B	C	C	C
Approach Vol, veh/h		497			825			391			38	
Approach Delay, s/veh		13.2			15.2			22.8			31.5	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	35.0	19.0	9.3	5.3	36.7	5.0	23.4				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	6.0	29.0	17.0	18.0	6.0	29.0	6.0	29.0				
Max Q Clear Time (g_c+I1), s	3.0	6.8	14.8	2.9	2.3	12.5	2.4	2.4				
Green Ext Time (p_c), s	0.0	2.6	0.3	0.0	0.0	4.1	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			16.7									
HCM 6th LOS			B									

Timing Report, Sorted By Phase

3: Teller Street & Harmony Road

Long Bkgrd AM

								
Phase Number	1	2	3	4	5	6	7	8
Movement	WBL	EBTL	NBL	SBTL	EBL	WBTL	SBL	NBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	10	35	21	24	10	35	10	35
Maximum Split (%)	11.1%	38.9%	23.3%	26.7%	11.1%	38.9%	11.1%	38.9%
Minimum Split (s)	10	24	10	24	10	24	10	24
Yellow Time (s)	3	4	3	4	3	4	3	4
All-Red Time (s)	1	2	1	2	1	2	1	2
Minimum Initial (s)	5	5	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	10	45	66	0	10	45	55
End Time (s)	10	45	66	0	10	45	55	0
Yield/Force Off (s)	6	39	62	84	6	39	51	84
Yield/Force Off 170(s)	6	28	62	73	6	28	51	73
Local Start Time (s)	80	0	35	56	80	0	35	45
Local Yield (s)	86	29	52	74	86	29	41	74
Local Yield 170(s)	86	18	52	63	86	18	41	63

Intersection Summary

Cycle Length	90
Control Type	Semi Act-Uncoord
Natural Cycle	70

Splits and Phases: 3: Teller Street & Harmony Road

 Ø1	 Ø2	 Ø3	 Ø4
10 s	35 s	21 s	24 s
 Ø5	 Ø6	 Ø7	 Ø8
10 s	35 s	10 s	35 s

Queues

Long Bkgrd AM

3: Teller Street & Harmony Road

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	16	379	237	47	779	374	16	47	11	26	21
v/c Ratio	0.04	0.23	0.28	0.08	0.43	0.73	0.03	0.09	0.04	0.12	0.06
Control Delay	9.3	14.8	3.6	9.2	13.7	27.6	19.8	0.3	16.2	33.4	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.3	14.8	3.6	9.2	13.7	27.6	19.8	0.3	16.2	33.4	0.3
Queue Length 50th (ft)	3	65	0	10	118	138	5	0	3	12	0
Queue Length 95th (ft)	12	101	43	27	217	220	21	0	13	35	0
Internal Link Dist (ft)		831			885		820			1208	
Turn Bay Length (ft)	250		300	270		125		250	210		210
Base Capacity (vph)	441	1634	858	606	1811	582	860	780	304	544	591
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.23	0.28	0.08	0.43	0.64	0.02	0.06	0.04	0.05	0.04
Intersection Summary											

HCM 6th Signalized Intersection Summary 3: Teller Street & Harmony Road

Long Bkgrd PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	15	705	390	40	425	10	245	15	45	10	10	20
Future Volume (veh/h)	15	705	390	40	425	10	245	15	45	10	10	20
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	16	742	212	42	447	10	258	16	1	11	11	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	576	1743	777	410	1817	41	475	367	288	228	99	84
Arrive On Green	0.03	0.49	0.49	0.05	0.51	0.50	0.17	0.20	0.18	0.03	0.05	0.05
Sat Flow, veh/h	1781	3554	1585	1781	3553	79	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	16	742	212	42	223	234	258	16	1	11	11	1
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1856	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.3	9.3	5.5	0.8	4.9	4.9	8.8	0.5	0.0	0.4	0.4	0.0
Cycle Q Clear(g_c), s	0.3	9.3	5.5	0.8	4.9	4.9	8.8	0.5	0.0	0.4	0.4	0.0
Prop In Lane	1.00		1.00	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	576	1743	777	410	909	949	475	367	288	228	99	84
V/C Ratio(X)	0.03	0.43	0.27	0.10	0.25	0.25	0.54	0.04	0.00	0.05	0.11	0.01
Avail Cap(c_a), veh/h	696	1743	777	493	909	949	530	701	572	358	513	434
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	1.00	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	8.0	11.4	10.4	7.9	9.5	9.5	22.7	22.6	23.2	29.4	31.3	31.1
Incr Delay (d2), s/veh	0.0	0.8	0.9	0.1	0.6	0.6	1.0	0.0	0.0	0.1	0.5	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	3.2	1.8	0.2	1.7	1.8	3.5	0.2	0.0	0.2	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.0	12.1	11.3	8.0	10.1	10.1	23.6	22.6	23.2	29.5	31.7	31.1
LnGrp LOS	A	B	B	A	B	B	C	C	C	C	C	C
Approach Vol, veh/h		970			499			275			23	
Approach Delay, s/veh		11.9			9.9			23.6			30.7	
Approach LOS		B			A			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.8	39.0	14.9	8.7	5.3	40.4	5.0	18.6				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	6.0	33.0	13.0	18.0	6.0	33.0	6.0	25.0				
Max Q Clear Time (g_c+I1), s	2.8	11.3	10.8	2.4	2.3	6.9	2.4	2.5				
Green Ext Time (p_c), s	0.0	5.7	0.2	0.0	0.0	2.5	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			13.4									
HCM 6th LOS			B									

Timing Report, Sorted By Phase

3: Teller Street & Harmony Road

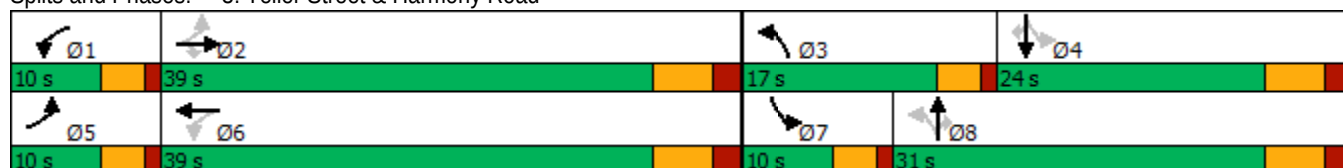
Long Bkgrd PM

								
Phase Number	1	2	3	4	5	6	7	8
Movement	WBL	EBTL	NBL	SBTL	EBL	WBTL	SBL	NBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	10	39	17	24	10	39	10	31
Maximum Split (%)	11.1%	43.3%	18.9%	26.7%	11.1%	43.3%	11.1%	34.4%
Minimum Split (s)	10	24	10	24	10	24	10	24
Yellow Time (s)	3	4	3	4	3	4	3	4
All-Red Time (s)	1	2	1	2	1	2	1	2
Minimum Initial (s)	5	5	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	10	49	66	0	10	49	59
End Time (s)	10	49	66	0	10	49	59	0
Yield/Force Off (s)	6	43	62	84	6	43	55	84
Yield/Force Off 170(s)	6	32	62	73	6	32	55	73
Local Start Time (s)	80	0	39	56	80	0	39	49
Local Yield (s)	86	33	52	74	86	33	45	74
Local Yield 170(s)	86	22	52	63	86	22	45	63

Intersection Summary

Cycle Length	90
Control Type	Semi Act-Uncoord
Natural Cycle	70

Splits and Phases: 3: Teller Street & Harmony Road



Queues

Long Bkgrd PM

3: Teller Street & Harmony Road

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	16	742	411	42	458	258	16	47	11	11	21
v/c Ratio	0.02	0.39	0.39	0.09	0.22	0.62	0.04	0.12	0.04	0.06	0.06
Control Delay	6.5	12.2	2.9	6.5	8.6	28.6	23.7	0.6	19.7	32.2	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.5	12.2	2.9	6.5	8.6	28.6	23.7	0.6	19.7	32.2	0.3
Queue Length 50th (ft)	2	88	0	4	30	96	5	0	4	4	0
Queue Length 95th (ft)	10	182	49	21	107	161	22	0	14	20	0
Internal Link Dist (ft)		831			885		820			1208	
Turn Bay Length (ft)	250		300	270		125		250	210		210
Base Capacity (vph)	664	1920	1046	492	2110	452	735	683	279	537	585
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.39	0.39	0.09	0.22	0.57	0.02	0.07	0.04	0.02	0.04
Intersection Summary											

HCM 6th TWSC
8: Evans Street & Harmony Road

Long Bkgrd AM

Intersection

Int Delay, s/veh 0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑	
Traffic Vol, veh/h	410	5	20	770	15	20
Future Vol, veh/h	410	5	20	770	15	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	205	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	432	5	21	811	16	21

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	437
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.14
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.22
Pot Cap-1 Maneuver	-	-	1119
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1119
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	13.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	443	-	-	1119	-
HCM Lane V/C Ratio	0.083	-	-	0.019	-
HCM Control Delay (s)	13.9	-	-	8.3	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

HCM 6th TWSC
8: Evans Street & Harmony Road

Long Bkgrd PM

Intersection

Int Delay, s/veh 0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	745	15	15	465	10	10
Future Vol, veh/h	745	15	15	465	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	205	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	784	16	16	489	11	11

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	800
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.14
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.22
Pot Cap-1 Maneuver	-	-	819
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	819
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	17.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	313	-	-	819	-
HCM Lane V/C Ratio	0.067	-	-	0.019	-
HCM Control Delay (s)	17.3	-	-	9.5	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

HCM 6th TWSC
10: Timber Ridge Parkway & Harmony Road

Long Bkgrd AM

Intersection

Int Delay, s/veh 2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	↘
Traffic Vol, veh/h	410	35	30	710	80	45
Future Vol, veh/h	410	35	30	710	80	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	432	37	32	747	84	47

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	469
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.14
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.22
Pot Cap-1 Maneuver	-	-	1089
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1089
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	18.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	275	767	-	-	1089	-
HCM Lane V/C Ratio	0.306	0.062	-	-	0.029	-
HCM Control Delay (s)	23.8	10	-	-	8.4	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	1.3	0.2	-	-	0.1	-

HCM 6th TWSC
10: Timber Ridge Parkway & Harmony Road

Long Bkgrd PM

Intersection

Int Delay, s/veh	1.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	↘
Traffic Vol, veh/h	685	60	30	455	35	20
Future Vol, veh/h	685	60	30	455	35	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	721	63	32	479	37	21

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	784
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.14
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.22
Pot Cap-1 Maneuver	-	-	830
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	830
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	20.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	211	607	-	-	830	-
HCM Lane V/C Ratio	0.175	0.035	-	-	0.038	-
HCM Control Delay (s)	25.6	11.1	-	-	9.5	-
HCM Lane LOS	D	B	-	-	A	-
HCM 95th %tile Q(veh)	0.6	0.1	-	-	0.1	-

HCM 6th TWSC
6: Teller Street & Fox Run

Long Bkgrd AM

Intersection

Int Delay, s/veh 1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
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Lane Configurations						
Traffic Vol, veh/h	0	10	5	35	50	0
Future Vol, veh/h	0	10	5	35	50	0
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	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	5	37	53	0

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	100	53	53	0	-	0
Stage 1	53	-	-	-	-	-
Stage 2	47	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	899	1014	1553	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	975	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	896	1014	1553	-	-	-
Mov Cap-2 Maneuver	896	-	-	-	-	-
Stage 1	967	-	-	-	-	-
Stage 2	975	-	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s	8.6	0.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
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Capacity (veh/h)	1553	-	1014	-	-
HCM Lane V/C Ratio	0.003	-	0.01	-	-
HCM Control Delay (s)	7.3	-	8.6	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th TWSC
6: Teller Street & Fox Run

Long Bkgrd PM

Intersection

Int Delay, s/veh 1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
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Lane Configurations						
Traffic Vol, veh/h	0	5	5	25	25	0
Future Vol, veh/h	0	5	5	25	25	0
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	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	5	26	26	0

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	62	26	26	0	-	0
Stage 1	26	-	-	-	-	-
Stage 2	36	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	944	1050	1588	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	986	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	941	1050	1588	-	-	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	986	-	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s	8.4	1.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
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Capacity (veh/h)	1588	-	1050	-	-
HCM Lane V/C Ratio	0.003	-	0.005	-	-
HCM Control Delay (s)	7.3	-	8.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

APPENDIX G

HCM 6th Signalized Intersection Summary 3: Teller Street & Harmony Road

Short Total AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	269	196	96	598	32	339	27	56	29	74	80
Future Volume (veh/h)	31	269	196	96	598	32	339	27	56	29	74	80
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	33	283	95	101	629	32	357	28	1	31	78	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	918	778	625	911	46	407	337	264	285	148	125
Arrive On Green	0.05	0.49	0.49	0.07	0.52	0.50	0.15	0.18	0.17	0.04	0.08	0.08
Sat Flow, veh/h	1781	1870	1585	1781	1764	90	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	33	283	95	101	0	661	357	28	1	31	78	1
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	0	1854	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.7	6.8	2.4	1.9	0.0	20.2	11.0	0.9	0.0	1.2	3.0	0.0
Cycle Q Clear(g_c), s	0.7	6.8	2.4	1.9	0.0	20.2	11.0	0.9	0.0	1.2	3.0	0.0
Prop In Lane	1.00		1.00	1.00		0.05	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	370	918	778	625	0	957	407	337	264	285	148	125
V/C Ratio(X)	0.09	0.31	0.12	0.16	0.00	0.69	0.88	0.08	0.00	0.11	0.53	0.01
Avail Cap(c_a), veh/h	453	918	778	663	0	957	407	571	463	370	472	400
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(l)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.5	11.5	10.4	7.7	0.0	13.7	27.7	25.7	26.2	29.4	33.3	32.0
Incr Delay (d2), s/veh	0.1	0.9	0.3	0.1	0.0	4.1	19.0	0.1	0.0	0.2	2.9	0.0
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	2.7	0.8	0.6	0.0	8.1	3.0	0.4	0.0	0.5	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.6	12.4	10.7	7.8	0.0	17.8	46.6	25.8	26.2	29.6	36.2	32.0
LnGrp LOS	B	B	B	A	A	B	D	C	C	C	D	C
Approach Vol, veh/h		411			762			386			110	
Approach Delay, s/veh		11.8			16.5			45.1			34.3	
Approach LOS		B			B			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	42.0	14.0	11.0	6.5	43.9	6.4	18.6				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	6.0	36.0	10.0	18.0	6.0	36.0	6.0	22.0				
Max Q Clear Time (g_c+I1), s	3.9	8.8	13.0	5.0	2.7	22.2	3.2	2.9				
Green Ext Time (p_c), s	0.0	1.9	0.0	0.2	0.0	3.6	0.0	0.1				
Intersection Summary												
HCM 6th Ctrl Delay			23.1									
HCM 6th LOS			C									

Timing Report, Sorted By Phase

3: Teller Street & Harmony Road

Short Total AM

								
Phase Number	1	2	3	4	5	6	7	8
Movement	WBL	EBTL	NBL	SBTL	EBL	WBTL	SBL	NBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	10	42	14	24	10	42	10	28
Maximum Split (%)	11.1%	46.7%	15.6%	26.7%	11.1%	46.7%	11.1%	31.1%
Minimum Split (s)	10	24	10	24	10	24	10	24
Yellow Time (s)	3	4	3	4	3	4	3	4
All-Red Time (s)	1	2	1	2	1	2	1	2
Minimum Initial (s)	5	5	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	10	52	66	0	10	52	62
End Time (s)	10	52	66	0	10	52	62	0
Yield/Force Off (s)	6	46	62	84	6	46	58	84
Yield/Force Off 170(s)	6	35	62	73	6	35	58	73
Local Start Time (s)	80	0	42	56	80	0	42	52
Local Yield (s)	86	36	52	74	86	36	48	74
Local Yield 170(s)	86	25	52	63	86	25	48	63

Intersection Summary

Cycle Length	90
Control Type	Semi Act-Uncoord
Natural Cycle	80

Splits and Phases: 3: Teller Street & Harmony Road

 Ø1	 Ø2	 Ø3	 Ø4
10 s	42 s	14 s	24 s
 Ø5	 Ø6	 Ø7	 Ø8
10 s	42 s	10 s	28 s

Queues

Short Total AM

3: Teller Street & Harmony Road

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	33	283	206	101	663	357	28	59	31	78	84
v/c Ratio	0.08	0.31	0.23	0.15	0.66	0.87	0.07	0.13	0.09	0.33	0.27
Control Delay	7.5	15.0	3.0	7.8	19.5	46.9	26.4	0.6	19.8	36.4	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.5	15.0	3.0	7.8	19.5	46.9	26.4	0.6	19.8	36.4	4.1
Queue Length 50th (ft)	6	87	0	19	198	152	10	0	11	37	0
Queue Length 95th (ft)	18	153	37	42	#486	#284	34	0	29	77	15
Internal Link Dist (ft)		831			885		820			1208	
Turn Bay Length (ft)	250		300	270		125		250	210		210
Base Capacity (vph)	395	922	887	655	1009	411	576	562	335	473	501
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.31	0.23	0.15	0.66	0.87	0.05	0.10	0.09	0.16	0.17

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 3: Teller Street & Harmony Road

Short Total PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	642	374	73	404	42	232	74	108	41	38	63
Future Volume (veh/h)	82	642	374	73	404	42	232	74	108	41	38	63
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	89	698	208	79	439	42	252	80	1	45	41	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	572	1026	870	388	918	88	340	219	165	294	146	124
Arrive On Green	0.07	0.55	0.55	0.07	0.55	0.53	0.09	0.12	0.10	0.05	0.08	0.08
Sat Flow, veh/h	1781	1870	1585	1781	1681	161	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	89	698	208	79	0	481	252	80	1	45	41	1
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	0	1841	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.5	20.2	5.1	1.3	0.0	12.1	7.0	3.0	0.0	1.7	1.6	0.0
Cycle Q Clear(g_c), s	1.5	20.2	5.1	1.3	0.0	12.1	7.0	3.0	0.0	1.7	1.6	0.0
Prop In Lane	1.00		1.00	1.00		0.09	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	572	1026	870	388	0	1006	340	219	165	294	146	124
V/C Ratio(X)	0.16	0.68	0.24	0.20	0.00	0.48	0.74	0.36	0.01	0.15	0.28	0.01
Avail Cap(c_a), veh/h	614	1026	870	434	0	1006	340	473	380	365	473	401
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(l)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.9	12.2	8.8	8.9	0.0	10.5	29.4	30.6	30.2	29.0	32.6	31.9
Incr Delay (d2), s/veh	0.1	3.6	0.6	0.3	0.0	1.6	8.4	1.0	0.0	0.2	1.0	0.0
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	0.5	7.8	1.7	0.4	0.0	4.5	1.7	1.3	0.0	0.7	0.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.0	15.8	9.5	9.2	0.0	12.1	37.8	31.6	30.2	29.3	33.7	32.0
LnGrp LOS	A	B	A	A	A	B	D	C	C	C	C	C
Approach Vol, veh/h		995			560			333			87	
Approach Delay, s/veh		13.7			11.7			36.3			31.4	
Approach LOS		B			B			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	46.2	10.0	10.8	8.2	46.0	7.0	13.8				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	6.0	40.0	6.0	18.0	6.0	40.0	6.0	18.0				
Max Q Clear Time (g_c+I1), s	3.3	22.2	9.0	3.6	3.5	14.1	3.7	5.0				
Green Ext Time (p_c), s	0.0	5.0	0.0	0.1	0.0	3.0	0.0	0.2				
Intersection Summary												
HCM 6th Ctrl Delay			17.7									
HCM 6th LOS			B									

Timing Report, Sorted By Phase

3: Teller Street & Harmony Road

Short Total PM

								
Phase Number	1	2	3	4	5	6	7	8
Movement	WBL	EBTL	NBL	SBTL	EBL	WBTL	SBL	NBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	10	46	10	24	10	46	10	24
Maximum Split (%)	11.1%	51.1%	11.1%	26.7%	11.1%	51.1%	11.1%	26.7%
Minimum Split (s)	10	24	10	24	10	24	10	24
Yellow Time (s)	3	4	3	4	3	4	3	4
All-Red Time (s)	1	2	1	2	1	2	1	2
Minimum Initial (s)	5	5	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	10	56	66	0	10	56	66
End Time (s)	10	56	66	0	10	56	66	0
Yield/Force Off (s)	6	50	62	84	6	50	62	84
Yield/Force Off 170(s)	6	39	62	73	6	39	62	73
Local Start Time (s)	80	0	46	56	80	0	46	56
Local Yield (s)	86	40	52	74	86	40	52	74
Local Yield 170(s)	86	29	52	63	86	29	52	63

Intersection Summary

Cycle Length	90
Control Type	Semi Act-Uncoord
Natural Cycle	80

Splits and Phases: 3: Teller Street & Harmony Road

 Ø1	 Ø2	 Ø3	 Ø4
10 s	46 s	10 s	24 s
 Ø5	 Ø6	 Ø7	 Ø8
10 s	46 s	10 s	24 s

Queues

Short Total PM

3: Teller Street & Harmony Road

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	89	698	407	79	485	252	80	117	45	41	68
v/c Ratio	0.16	0.68	0.39	0.20	0.48	0.84	0.29	0.36	0.14	0.18	0.22
Control Delay	6.3	19.5	2.5	6.8	14.7	51.5	34.2	8.5	23.0	33.5	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.3	19.5	2.5	6.8	14.7	51.5	34.2	8.5	23.0	33.5	2.0
Queue Length 50th (ft)	14	263	0	12	152	108	38	0	17	19	0
Queue Length 95th (ft)	33	434	44	30	256	#215	78	37	41	47	4
Internal Link Dist (ft)		831			885		820			1208	
Turn Bay Length (ft)	250		300	270		125		250	210		210
Base Capacity (vph)	558	1021	1051	391	1010	301	466	476	322	466	495
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.68	0.39	0.20	0.48	0.84	0.17	0.25	0.14	0.09	0.14

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th TWSC
8: Evans Street & Harmony Road

Short Total AM

Intersection

Int Delay, s/veh 1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	338	6	19	678	4	16	0	20	10	0	32
Future Vol, veh/h	10	338	6	19	678	4	16	0	20	10	0	32
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	250	-	240	205	-	-	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	89	89	89	89	92	89	92	89	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	380	7	21	762	4	18	0	22	11	0	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	766	0	0	387	0	0	1226	1210	380	1223	1215	764
Stage 1	-	-	-	-	-	-	402	402	-	806	806	-
Stage 2	-	-	-	-	-	-	824	808	-	417	409	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	847	-	-	1171	-	-	155	183	667	156	181	404
Stage 1	-	-	-	-	-	-	625	600	-	376	395	-
Stage 2	-	-	-	-	-	-	367	394	-	613	596	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	847	-	-	1171	-	-	138	177	667	147	175	404
Mov Cap-2 Maneuver	-	-	-	-	-	-	138	177	-	147	175	-
Stage 1	-	-	-	-	-	-	617	592	-	371	388	-
Stage 2	-	-	-	-	-	-	329	387	-	585	588	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.2	22.4	18.7
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	247	847	-	-	1171	-	-	147	404
HCM Lane V/C Ratio	0.164	0.013	-	-	0.018	-	-	0.074	0.086
HCM Control Delay (s)	22.4	9.3	-	-	8.1	-	-	31.4	14.7
HCM Lane LOS	C	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.6	0	-	-	0.1	-	-	0.2	0.3

HCM 6th TWSC
8: Evans Street & Harmony Road

Short Total PM

Intersection

Int Delay, s/veh 1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	740	15	15	490	12	8	0	9	7	0	21
Future Vol, veh/h	36	740	15	15	490	12	8	0	9	7	0	21
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	250	-	240	205	-	-	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	822	17	17	544	13	9	0	10	8	0	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	557	0	0	839	0	0	1498	1493	822	1501	1504	551
Stage 1	-	-	-	-	-	-	902	902	-	585	585	-
Stage 2	-	-	-	-	-	-	596	591	-	916	919	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1014	-	-	796	-	-	101	123	374	100	121	534
Stage 1	-	-	-	-	-	-	332	356	-	497	498	-
Stage 2	-	-	-	-	-	-	490	494	-	326	350	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1014	-	-	796	-	-	92	116	374	93	114	534
Mov Cap-2 Maneuver	-	-	-	-	-	-	92	116	-	93	114	-
Stage 1	-	-	-	-	-	-	319	342	-	478	488	-
Stage 2	-	-	-	-	-	-	459	484	-	305	336	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.3			31.8			20.8		
HCM LOS							D			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	153	1014	-	-	796	-	-	93	534
HCM Lane V/C Ratio	0.123	0.039	-	-	0.021	-	-	0.084	0.044
HCM Control Delay (s)	31.8	8.7	-	-	9.6	-	-	47.2	12
HCM Lane LOS	D	A	-	-	A	-	-	E	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1	-	-	0.3	0.1

HCM 6th TWSC
10: Timber Ridge Parkway & Harmony Road

Short Total AM

Intersection

Int Delay, s/veh 8.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	299	35	27	477	9	77	0	42	25	0	147
Future Vol, veh/h	48	299	35	27	477	9	77	0	42	25	0	147
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	250	-	130	250	-	-	60	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	89	89	89	89	92	89	92	89	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	336	39	30	536	10	87	0	47	27	0	160

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	546	0	0	375	0	0	1121	1046	336	1084	1080	541
Stage 1	-	-	-	-	-	-	440	440	-	601	601	-
Stage 2	-	-	-	-	-	-	681	606	-	483	479	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1023	-	-	1183	-	-	183	228	706	194	218	541
Stage 1	-	-	-	-	-	-	596	578	-	487	489	-
Stage 2	-	-	-	-	-	-	440	487	-	565	555	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1023	-	-	1183	-	-	122	211	706	171	202	541
Mov Cap-2 Maneuver	-	-	-	-	-	-	122	211	-	171	202	-
Stage 1	-	-	-	-	-	-	566	549	-	462	477	-
Stage 2	-	-	-	-	-	-	302	475	-	500	527	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.4	59.4	16.7
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	122	706	1023	-	-	1183	-	-	171	541
HCM Lane V/C Ratio	0.709	0.067	0.051	-	-	0.026	-	-	0.159	0.295
HCM Control Delay (s)	86.1	10.5	8.7	-	-	8.1	-	-	30	14.4
HCM Lane LOS	F	B	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	3.9	0.2	0.2	-	-	0.1	-	-	0.6	1.2

HCM 6th TWSC
10: Timber Ridge Parkway & Harmony Road

Short Total PM

Intersection

Int Delay, s/veh 5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	169	517	60	28	392	30	34	0	17	17	0	100
Future Vol, veh/h	169	517	60	28	392	30	34	0	17	17	0	100
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	250	-	130	250	-	-	60	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	182	556	65	30	422	32	37	0	18	18	0	108

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	454	0	0	621	0	0	1472	1434	556	1460	1483	438
Stage 1	-	-	-	-	-	-	920	920	-	498	498	-
Stage 2	-	-	-	-	-	-	552	514	-	962	985	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1107	-	-	960	-	-	105	134	531	107	125	619
Stage 1	-	-	-	-	-	-	325	350	-	554	544	-
Stage 2	-	-	-	-	-	-	518	535	-	308	326	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1107	-	-	960	-	-	74	109	531	88	101	619
Mov Cap-2 Maneuver	-	-	-	-	-	-	74	109	-	88	101	-
Stage 1	-	-	-	-	-	-	272	293	-	463	527	-
Stage 2	-	-	-	-	-	-	415	518	-	249	273	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2	0.6	66.7	18.4
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	74	531	1107	-	-	960	-	-	88	619
HCM Lane V/C Ratio	0.494	0.034	0.164	-	-	0.031	-	-	0.208	0.174
HCM Control Delay (s)	94	12	8.9	-	-	8.9	-	-	56.3	12
HCM Lane LOS	F	B	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	2	0.1	0.6	-	-	0.1	-	-	0.7	0.6

HCM 6th TWSC
6: Teller Street & Fox Run

Short Total AM

Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
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Lane Configurations						
Traffic Vol, veh/h	0	10	3	82	173	0
Future Vol, veh/h	0	10	3	82	173	0
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	3	85	180	0

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	271	180	180	0	-	0
Stage 1	180	-	-	-	-	-
Stage 2	91	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	718	863	1396	-	-	-
Stage 1	851	-	-	-	-	-
Stage 2	933	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	717	863	1396	-	-	-
Mov Cap-2 Maneuver	717	-	-	-	-	-
Stage 1	849	-	-	-	-	-
Stage 2	933	-	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s	9.2	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
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Capacity (veh/h)	1396	-	863	-	-
HCM Lane V/C Ratio	0.002	-	0.012	-	-
HCM Control Delay (s)	7.6	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th TWSC
6: Teller Street & Fox Run

Short Total PM

Intersection

Int Delay, s/veh 0.2

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations						
Traffic Vol, veh/h	0	4	6	184	130	0
Future Vol, veh/h	0	4	6	184	130	0
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	-	-	-	-	-
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	0	5	7	216	153	0

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	383	153	153	0	-	0
Stage 1	153	-	-	-	-	-
Stage 2	230	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	620	893	1428	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	808	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	616	893	1428	-	-	-
Mov Cap-2 Maneuver	616	-	-	-	-	-
Stage 1	870	-	-	-	-	-
Stage 2	808	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s	9.1	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1428	-	893	-	-
HCM Lane V/C Ratio	0.005	-	0.005	-	-
HCM Control Delay (s)	7.5	0	9.1	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th TWSC
14: Teller Street & South Access

Short Total AM

Intersection

Int Delay, s/veh 1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	5	75	7	2	151
Future Vol, veh/h	22	5	75	7	2	151
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	250	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	5	82	8	2	164

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	250	82	0
Stage 1	82	-	-
Stage 2	168	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	739	978	-
Stage 1	941	-	-
Stage 2	862	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	738	978	-
Mov Cap-2 Maneuver	738	-	-
Stage 1	941	-	-
Stage 2	861	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	738	978	1505	-
HCM Lane V/C Ratio	-	-	0.032	0.006	0.001	-
HCM Control Delay (s)	-	-	10	8.7	7.4	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	0	-

HCM 6th TWSC
14: Teller Street & South Access

Short Total PM

Intersection

Int Delay, s/veh 0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	3	158	26	6	115
Future Vol, veh/h	15	3	158	26	6	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	250	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	3	172	28	7	125

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	311	172	0
Stage 1	172	-	-
Stage 2	139	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	681	872	-
Stage 1	858	-	-
Stage 2	888	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	678	872	-
Mov Cap-2 Maneuver	678	-	-
Stage 1	858	-	-
Stage 2	884	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	678	872	1372	-
HCM Lane V/C Ratio	-	-	0.024	0.004	0.005	-
HCM Control Delay (s)	-	-	10.4	9.1	7.6	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	0	-

HCM 6th TWSC
16: Teller Street & Middle Access

Short Total AM

Intersection

Int Delay, s/veh 0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	2	76	5	1	136
Future Vol, veh/h	17	2	76	5	1	136
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	-	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	2	83	5	1	148

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	236	86	0
Stage 1	86	-	-
Stage 2	150	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	752	973	-
Stage 1	937	-	-
Stage 2	878	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	751	973	-
Mov Cap-2 Maneuver	751	-	-
Stage 1	937	-	-
Stage 2	877	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	769	1508
HCM Lane V/C Ratio	-	-	0.027	0.001
HCM Control Delay (s)	-	-	9.8	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 6th TWSC
16: Teller Street & Middle Access

Short Total PM

Intersection

Int Delay, s/veh 0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	1	141	20	2	110
Future Vol, veh/h	11	1	141	20	2	110
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	-	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	1	153	22	2	120

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	288	164	0
Stage 1	164	-	-
Stage 2	124	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	702	881	-
Stage 1	865	-	-
Stage 2	902	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	701	881	-
Mov Cap-2 Maneuver	701	-	-
Stage 1	865	-	-
Stage 2	901	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	713	1401
HCM Lane V/C Ratio	-	-	0.018	0.002
HCM Control Delay (s)	-	-	10.1	7.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 6th TWSC
18: Teller Street & North Access

Short Total AM

Intersection

Int Delay, s/veh 4.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	96	11	46	32	4	41
Future Vol, veh/h	96	11	46	32	4	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	250	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	104	12	50	35	4	45

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	103	50	0
Stage 1	50	-	-
Stage 2	53	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	895	1018	-
Stage 1	972	-	-
Stage 2	970	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	892	1018	-
Mov Cap-2 Maneuver	892	-	-
Stage 1	972	-	-
Stage 2	967	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	0.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	- 892 1018 1512	-	-
HCM Lane V/C Ratio	-	- 0.117 0.012 0.003	-	-
HCM Control Delay (s)	-	- 9.6 8.6 7.4	-	-
HCM Lane LOS	-	- A A A	-	-
HCM 95th %tile Q(veh)	-	- 0.4 0 0	-	-

HCM 6th TWSC
18: Teller Street & North Access

Short Total PM

Intersection

Int Delay, s/veh 2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	67	8	28	114	13	45
Future Vol, veh/h	67	8	28	114	13	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	250	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	73	9	30	124	14	49

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	107	30	0
Stage 1	30	-	-
Stage 2	77	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	891	1044	-
Stage 1	993	-	-
Stage 2	946	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	882	1044	-
Mov Cap-2 Maneuver	882	-	-
Stage 1	993	-	-
Stage 2	937	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	1.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	-	882	1044
HCM Lane V/C Ratio	-	-	0.083	0.008
HCM Control Delay (s)	-	-	9.4	8.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0

APPENDIX H

HCM 6th Signalized Intersection Summary 3: Teller Street & Harmony Road

Long Total AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	55	405	220	125	835	30	350	75	90	30	105	100
Future Volume (veh/h)	55	405	220	125	835	30	350	75	90	30	105	100
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	58	426	80	132	879	30	368	79	1	32	111	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	338	1433	639	518	1475	50	527	499	402	305	186	158
Arrive On Green	0.06	0.40	0.40	0.08	0.42	0.41	0.21	0.27	0.25	0.05	0.10	0.10
Sat Flow, veh/h	1781	3554	1585	1781	3506	120	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	58	426	80	132	445	464	368	79	1	32	111	1
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1849	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.4	6.3	2.4	3.2	14.9	14.9	13.3	2.5	0.0	1.2	4.4	0.0
Cycle Q Clear(g_c), s	1.4	6.3	2.4	3.2	14.9	14.9	13.3	2.5	0.0	1.2	4.4	0.0
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	338	1433	639	518	747	778	527	499	402	305	186	158
V/C Ratio(X)	0.17	0.30	0.13	0.26	0.60	0.60	0.70	0.16	0.00	0.10	0.60	0.01
Avail Cap(c_a), veh/h	395	1433	639	543	747	778	542	705	577	387	462	392
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	1.00	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	12.8	15.6	14.4	11.4	17.2	17.3	21.6	21.6	21.4	28.6	33.1	31.2
Incr Delay (d2), s/veh	0.2	0.5	0.4	0.3	3.5	3.4	3.8	0.1	0.0	0.1	3.0	0.0
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	0.5	2.4	0.9	1.1	6.1	6.3	5.7	1.1	0.0	0.5	2.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.0	16.1	14.8	11.6	20.7	20.6	25.4	21.7	21.4	28.8	36.2	31.2
LnGrp LOS	B	B	B	B	C	C	C	C	C	C	D	C
Approach Vol, veh/h		564			1041			448			144	
Approach Delay, s/veh		15.6			19.5			24.7			34.5	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.9	36.0	19.3	12.7	7.6	37.3	6.5	25.5				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	6.0	30.0	16.0	18.0	6.0	30.0	6.0	28.0				
Max Q Clear Time (g_c+I1), s	5.2	8.3	15.3	6.4	3.4	16.9	3.2	4.5				
Green Ext Time (p_c), s	0.0	2.8	0.1	0.3	0.0	4.5	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay			20.6									
HCM 6th LOS			C									

Timing Report, Sorted By Phase

3: Teller Street & Harmony Road

Long Total AM

								
Phase Number	1	2	3	4	5	6	7	8
Movement	WBL	EBTL	NBL	SBTL	EBL	WBTL	SBL	NBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	10	36	20	24	10	36	10	34
Maximum Split (%)	11.1%	40.0%	22.2%	26.7%	11.1%	40.0%	11.1%	37.8%
Minimum Split (s)	10	24	10	24	10	24	10	24
Yellow Time (s)	3	4	3	4	3	4	3	4
All-Red Time (s)	1	2	1	2	1	2	1	2
Minimum Initial (s)	5	5	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	10	46	66	0	10	46	56
End Time (s)	10	46	66	0	10	46	56	0
Yield/Force Off (s)	6	40	62	84	6	40	52	84
Yield/Force Off 170(s)	6	29	62	73	6	29	52	73
Local Start Time (s)	80	0	36	56	80	0	36	46
Local Yield (s)	86	30	52	74	86	30	42	74
Local Yield 170(s)	86	19	52	63	86	19	42	63

Intersection Summary

Cycle Length	90
Control Type	Semi Act-Uncoord
Natural Cycle	70

Splits and Phases: 3: Teller Street & Harmony Road

 Ø1	 Ø2	 Ø3	 Ø4
10 s	36 s	20 s	24 s
 Ø5	 Ø6	 Ø7	 Ø8
10 s	36 s	10 s	34 s

Queues

Long Total AM

3: Teller Street & Harmony Road

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	58	426	232	132	911	368	79	95	32	111	105
v/c Ratio	0.19	0.32	0.31	0.27	0.60	0.66	0.13	0.16	0.09	0.44	0.28
Control Delay	12.0	19.2	4.0	12.2	21.4	25.0	21.7	2.7	16.2	37.9	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.0	19.2	4.0	12.2	21.4	25.0	21.7	2.7	16.2	37.9	2.3
Queue Length 50th (ft)	14	80	0	33	202	139	26	0	10	53	0
Queue Length 95th (ft)	35	124	46	68	290	217	65	18	26	102	5
Internal Link Dist (ft)		831			885		820			1208	
Turn Bay Length (ft)	250		300	270		125		250	210		210
Base Capacity (vph)	312	1351	747	492	1529	566	676	641	365	436	509
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.32	0.31	0.27	0.60	0.65	0.12	0.15	0.09	0.25	0.21
Intersection Summary											

HCM 6th Signalized Intersection Summary 3: Teller Street & Harmony Road

Long Total PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	115	850	360	125	525	40	225	120	150	40	95	90
Future Volume (veh/h)	115	850	360	125	525	40	225	120	150	40	95	90
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	121	895	160	132	553	36	237	126	26	42	100	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	551	1754	782	399	1675	109	381	323	253	302	176	149
Arrive On Green	0.07	0.49	0.49	0.07	0.49	0.48	0.13	0.17	0.16	0.05	0.09	0.09
Sat Flow, veh/h	1781	3554	1585	1781	3387	220	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	121	895	160	132	290	299	237	126	26	42	100	1
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1831	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.4	13.1	4.4	2.7	7.6	7.6	8.8	4.6	1.1	1.6	3.9	0.0
Cycle Q Clear(g_c), s	2.4	13.1	4.4	2.7	7.6	7.6	8.8	4.6	1.1	1.6	3.9	0.0
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	551	1754	782	399	879	905	381	323	253	302	176	149
V/C Ratio(X)	0.22	0.51	0.20	0.33	0.33	0.33	0.62	0.39	0.10	0.14	0.57	0.01
Avail Cap(c_a), veh/h	583	1754	782	452	879	905	381	535	433	372	462	392
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	1.00	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	8.2	13.2	11.0	9.2	11.7	11.8	25.2	28.2	27.6	28.7	33.3	31.6
Incr Delay (d2), s/veh	0.2	1.1	0.6	0.5	1.0	1.0	3.1	0.8	0.2	0.2	2.9	0.0
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	0.8	4.7	1.5	0.9	2.8	2.9	3.8	2.0	0.4	0.7	1.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.4	14.2	11.6	9.7	12.7	12.8	28.3	29.0	27.8	28.9	36.2	31.6
LnGrp LOS	A	B	B	A	B	B	C	C	C	C	D	C
Approach Vol, veh/h		1176			721			389			143	
Approach Delay, s/veh		13.3			12.2			28.5			34.0	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	42.9	13.0	12.2	8.6	43.0	7.0	18.3				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	7.0	36.0	9.0	18.0	6.0	37.0	6.0	21.0				
Max Q Clear Time (g_c+I1), s	4.7	15.1	10.8	5.9	4.4	9.6	3.6	6.6				
Green Ext Time (p_c), s	0.1	6.6	0.0	0.3	0.0	3.5	0.0	0.5				
Intersection Summary												
HCM 6th Ctrl Delay			16.6									
HCM 6th LOS			B									

Timing Report, Sorted By Phase

3: Teller Street & Harmony Road

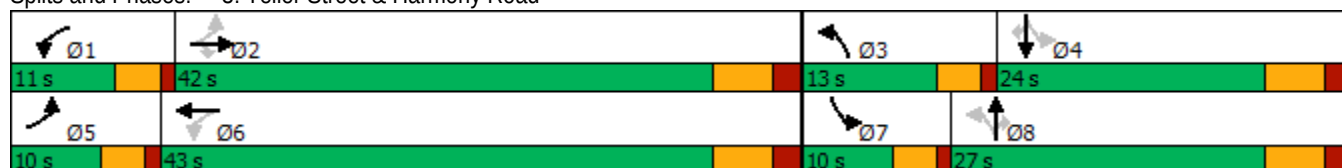
Long Total PM

								
Phase Number	1	2	3	4	5	6	7	8
Movement	WBL	EBTL	NBL	SBTL	EBL	WBTL	SBL	NBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	11	42	13	24	10	43	10	27
Maximum Split (%)	12.2%	46.7%	14.4%	26.7%	11.1%	47.8%	11.1%	30.0%
Minimum Split (s)	10	24	10	24	10	24	10	24
Yellow Time (s)	3	4	3	4	3	4	3	4
All-Red Time (s)	1	2	1	2	1	2	1	2
Minimum Initial (s)	5	5	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	11	53	66	0	10	53	63
End Time (s)	11	53	66	0	10	53	63	0
Yield/Force Off (s)	7	47	62	84	6	47	59	84
Yield/Force Off 170(s)	7	36	62	73	6	36	59	73
Local Start Time (s)	79	0	42	55	79	89	42	52
Local Yield (s)	86	36	51	73	85	36	48	73
Local Yield 170(s)	86	25	51	62	85	25	48	62

Intersection Summary

Cycle Length	90
Control Type	Semi Act-Uncoord
Natural Cycle	70

Splits and Phases: 3: Teller Street & Harmony Road



Queues

Long Total PM

3: Teller Street & Harmony Road

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	121	895	379	132	595	237	126	158	42	100	95
v/c Ratio	0.24	0.56	0.41	0.36	0.35	0.57	0.31	0.35	0.12	0.41	0.30
Control Delay	8.5	18.4	3.2	10.1	14.3	28.1	30.9	7.8	20.5	37.7	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.5	18.4	3.2	10.1	14.3	28.1	30.9	7.8	20.5	37.7	5.1
Queue Length 50th (ft)	23	169	0	25	96	95	58	0	15	48	0
Queue Length 95th (ft)	50	245	49	54	147	158	108	49	37	93	21
Internal Link Dist (ft)		831			885		820			1208	
Turn Bay Length (ft)	250		300	270		125		250	210		210
Base Capacity (vph)	511	1606	925	367	1720	416	503	526	347	434	471
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.56	0.41	0.36	0.35	0.57	0.25	0.30	0.12	0.23	0.20
Intersection Summary											

HCM 6th TWSC
8: Evans Street & Harmony Road

Long Total AM

Intersection

Int Delay, s/veh 12

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	65	455	5	20	900	85	15	15	20	70	10	75
Future Vol, veh/h	65	455	5	20	900	85	15	15	20	70	10	75
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	250	-	-	205	-	250	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	68	479	5	21	947	89	16	16	21	74	11	79

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1036	0	0	484	0	0	1139	1696	242	1373	1609	474
Stage 1	-	-	-	-	-	-	618	618	-	989	989	-
Stage 2	-	-	-	-	-	-	521	1078	-	384	620	-
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	667	-	-	1075	-	-	156	92	759	105	104	537
Stage 1	-	-	-	-	-	-	443	479	-	265	323	-
Stage 2	-	-	-	-	-	-	507	293	-	611	478	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	667	-	-	1075	-	-	110	81	759	79	92	537
Mov Cap-2 Maneuver	-	-	-	-	-	-	110	81	-	79	92	-
Stage 1	-	-	-	-	-	-	398	430	-	238	317	-
Stage 2	-	-	-	-	-	-	410	287	-	514	429	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0.2	43.7	113.8
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	144	667	-	-	1075	-	-	80	537
HCM Lane V/C Ratio	0.365	0.103	-	-	0.02	-	-	1.053	0.147
HCM Control Delay (s)	43.7	11	-	-	8.4	-	-	208.3	12.9
HCM Lane LOS	E	B	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	1.5	0.3	-	-	0.1	-	-	5.9	0.5

HCM 6th TWSC
8: Evans Street & Harmony Road

Long Total PM

Intersection

Int Delay, s/veh 18.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	135	890	15	15	575	80	10	15	10	75	10	105
Future Vol, veh/h	135	890	15	15	575	80	10	15	10	75	10	105
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	250	-	-	205	-	250	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	142	937	16	16	605	84	11	16	11	79	11	111

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	689	0	0	953	0	0	1569	1950	477	1398	1874	303
Stage 1	-	-	-	-	-	-	1229	1229	-	637	637	-
Stage 2	-	-	-	-	-	-	340	721	-	761	1237	-
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	901	-	-	717	-	-	75	64	534	100	71	693
Stage 1	-	-	-	-	-	-	188	248	-	432	470	-
Stage 2	-	-	-	-	-	-	648	430	-	364	246	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	901	-	-	717	-	-	47	53	534	~ 66	58	693
Mov Cap-2 Maneuver	-	-	-	-	-	-	47	53	-	~ 66	58	-
Stage 1	-	-	-	-	-	-	158	209	-	364	460	-
Stage 2	-	-	-	-	-	-	520	421	-	278	207	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.2	108.3	162.2
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	68	901	-	-	717	-	-	65	693
HCM Lane V/C Ratio	0.542	0.158	-	-	0.022	-	-	1.377	0.159
HCM Control Delay (s)	108.3	9.7	-	-	10.1	-	-	\$ 348.8	11.2
HCM Lane LOS	F	A	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	2.2	0.6	-	-	0.1	-	-	7.5	0.6

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
10: Timber Ridge Parkway & Harmony Road

Long Total AM

Intersection

Int Delay, s/veh 10.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	480	45	30	775	30	95	15	45	35	10	135
Future Vol, veh/h	35	480	45	30	775	30	95	15	45	35	10	135
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	250	-	-	250	-	-	60	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	505	47	32	816	32	100	16	47	37	11	142

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	848	0	0	552	0	0	1081	1515	276	1231	1522	424
Stage 1	-	-	-	-	-	-	603	603	-	896	896	-
Stage 2	-	-	-	-	-	-	478	912	-	335	626	-
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	785	-	-	1014	-	-	172	118	721	134	117	579
Stage 1	-	-	-	-	-	-	453	487	-	301	357	-
Stage 2	-	-	-	-	-	-	537	351	-	653	475	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	785	-	-	1014	-	-	113	109	721	105	108	579
Mov Cap-2 Maneuver	-	-	-	-	-	-	113	109	-	105	108	-
Stage 1	-	-	-	-	-	-	432	464	-	287	346	-
Stage 2	-	-	-	-	-	-	380	340	-	562	453	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.3			85.4			25		
HCM LOS							F			D		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	113	300	785	-	-	1014	-	-	105	445
HCM Lane V/C Ratio	0.885	0.211	0.047	-	-	0.031	-	-	0.351	0.343
HCM Control Delay (s)	126.5	20.2	9.8	-	-	8.7	-	-	56.8	17.3
HCM Lane LOS	F	C	A	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	5.4	0.8	0.1	-	-	0.1	-	-	1.4	1.5

HCM 6th TWSC
10: Timber Ridge Parkway & Harmony Road

Long Total PM

Intersection

Int Delay, s/veh 24.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	175	725	65	30	520	70	40	20	20	70	20	120
Future Vol, veh/h	175	725	65	30	520	70	40	20	20	70	20	120
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	250	-	-	250	-	-	60	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	184	763	68	32	547	74	42	21	21	74	21	126

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	621	0	0	831	0	0	1513	1850	416	1408	1847	311
Stage 1	-	-	-	-	-	-	1165	1165	-	648	648	-
Stage 2	-	-	-	-	-	-	348	685	-	760	1199	-
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	956	-	-	797	-	-	82	74	585	99	74	685
Stage 1	-	-	-	-	-	-	206	267	-	425	464	-
Stage 2	-	-	-	-	-	-	641	447	-	364	257	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	956	-	-	797	-	-	~ 40	57	585	~ 57	57	685
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 40	57	-	~ 57	57	-
Stage 1	-	-	-	-	-	-	166	216	-	343	445	-
Stage 2	-	-	-	-	-	-	478	429	-	256	208	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.8	0.5	187.6	135
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	40	104	956	-	-	797	-	-	57	266
HCM Lane V/C Ratio	1.053	0.405	0.193	-	-	0.04	-	-	1.293	0.554
HCM Control Delay (s)	\$ 313.7	61.4	9.7	-	-	9.7	-	-	\$ 336.7	34.1
HCM Lane LOS	F	F	A	-	-	A	-	-	F	D
HCM 95th %tile Q(veh)	4.1	1.7	0.7	-	-	0.1	-	-	6.4	3.1

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
6: Teller Street & Fox Run

Long Total AM

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
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Lane Configurations						
Traffic Vol, veh/h	0	10	5	150	225	0
Future Vol, veh/h	0	10	5	150	225	0
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	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	5	158	237	0

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	405	237	237	0	-	0
Stage 1	237	-	-	-	-	-
Stage 2	168	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	602	802	1330	-	-	-
Stage 1	802	-	-	-	-	-
Stage 2	862	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	600	802	1330	-	-	-
Mov Cap-2 Maneuver	600	-	-	-	-	-
Stage 1	799	-	-	-	-	-
Stage 2	862	-	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s	9.5	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
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Capacity (veh/h)	1330	-	802	-	-
HCM Lane V/C Ratio	0.004	-	0.013	-	-
HCM Control Delay (s)	7.7	-	9.5	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th TWSC
6: Teller Street & Fox Run

Long Total PM

Intersection

Int Delay, s/veh 0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
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Lane Configurations						
Traffic Vol, veh/h	0	5	5	260	210	0
Future Vol, veh/h	0	5	5	260	210	0
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	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	5	274	221	0

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	505	221	221	0	-	0
Stage 1	221	-	-	-	-	-
Stage 2	284	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	527	819	1348	-	-	-
Stage 1	816	-	-	-	-	-
Stage 2	764	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	525	819	1348	-	-	-
Mov Cap-2 Maneuver	525	-	-	-	-	-
Stage 1	813	-	-	-	-	-
Stage 2	764	-	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s	9.4	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
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Capacity (veh/h)	1348	-	819	-	-
HCM Lane V/C Ratio	0.004	-	0.006	-	-
HCM Control Delay (s)	7.7	-	9.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th TWSC
14: Teller Street & South Access

Long Total AM

Intersection

Int Delay, s/veh 2.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	75	15	70	80	15	150
Future Vol, veh/h	75	15	70	80	15	150
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	250	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	79	16	74	84	16	158

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	264	74	0
Stage 1	74	-	-
Stage 2	190	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	725	988	-
Stage 1	949	-	-
Stage 2	842	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	717	988	-
Mov Cap-2 Maneuver	717	-	-
Stage 1	949	-	-
Stage 2	833	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	717	988	1422	-
HCM Lane V/C Ratio	-	-	0.11	0.016	0.011	-
HCM Control Delay (s)	-	-	10.6	8.7	7.6	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0	0	-

HCM 6th TWSC
14: Teller Street & South Access

Long Total PM

Intersection

Int Delay, s/veh 2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	100	15	150	110	20	110
Future Vol, veh/h	100	15	150	110	20	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	250	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	105	16	158	116	21	116

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	316	158	0
Stage 1	158	-	-
Stage 2	158	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	677	887	-
Stage 1	871	-	-
Stage 2	871	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	666	887	-
Mov Cap-2 Maneuver	666	-	-
Stage 1	871	-	-
Stage 2	857	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	1.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	-	666	887
HCM Lane V/C Ratio	-	-	0.158	0.018
HCM Control Delay (s)	-	-	11.4	9.1
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1

HCM 6th TWSC
16: Teller Street & Middle Access

Long Total AM

Intersection

Int Delay, s/veh 0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	5	80	5	0	150
Future Vol, veh/h	15	5	80	5	0	150
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	-	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	5	84	5	0	158

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	245	87	0
Stage 1	87	-	-
Stage 2	158	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	743	971	-
Stage 1	936	-	-
Stage 2	871	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	743	971	-
Mov Cap-2 Maneuver	743	-	-
Stage 1	936	-	-
Stage 2	871	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	789	1506
HCM Lane V/C Ratio	-	-	0.027	-
HCM Control Delay (s)	-	-	9.7	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 6th TWSC
16: Teller Street & Middle Access

Long Total PM

Intersection

Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	5	150	15	5	120
Future Vol, veh/h	10	5	150	15	5	120
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	-	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	5	158	16	5	126

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	302	166	0
Stage 1	166	-	-
Stage 2	136	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	690	878	-
Stage 1	863	-	-
Stage 2	890	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	687	878	-
Mov Cap-2 Maneuver	687	-	-
Stage 1	863	-	-
Stage 2	886	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	741	1403
HCM Lane V/C Ratio	-	-	0.021	0.004
HCM Control Delay (s)	-	-	10	7.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 6th TWSC
18: Teller Street & North Access

Long Total AM

Intersection

Int Delay, s/veh 3.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	85	10	70	15	5	65
Future Vol, veh/h	85	10	70	15	5	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	250	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	11	74	16	5	68

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	152	74	0
Stage 1	74	-	-
Stage 2	78	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	840	988	-
Stage 1	949	-	-
Stage 2	945	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	837	988	-
Mov Cap-2 Maneuver	837	-	-
Stage 1	949	-	-
Stage 2	942	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	0.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	-	837	988
HCM Lane V/C Ratio	-	-	0.107	0.011
HCM Control Delay (s)	-	-	9.8	8.7
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0

HCM 6th TWSC
18: Teller Street & North Access

Long Total PM

Intersection

Int Delay, s/veh 2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	60	5	55	100	10	65
Future Vol, veh/h	60	5	55	100	10	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	250	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	5	58	105	11	68

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	148	58	0
Stage 1	58	-	-
Stage 2	90	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	844	1008	-
Stage 1	965	-	-
Stage 2	934	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	837	1008	-
Mov Cap-2 Maneuver	837	-	-
Stage 1	965	-	-
Stage 2	927	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	- 837 1008 1416	-	-
HCM Lane V/C Ratio	-	- 0.075 0.005 0.007	-	-
HCM Control Delay (s)	-	- 9.7 8.6 7.6	-	-
HCM Lane LOS	-	- A A A	-	-
HCM 95th %tile Q(veh)	-	- 0.2 0 0	-	-

APPENDIX I



Weld RE-4 School District

**1020 Main Street
Windsor, Colorado 80550
970-686-8000
weldre4.org**

February 06, 2025

Town of Severance Planning Department
3 South Timber Ridge Parkway
Severance, CO 80546

RE: Moody Development

Dear Planning Department Staff:

The above referenced major subdivision application is now proposed for a total of 670 single family homes and an undisclosed number of multi-family units. This letter summarizes the implications for school sites and facilities, solely based on the planned single family units.

The Town of Severance and Weld County School District RE-4 entered into an initial Intergovernmental Agreement Concerning Fair Contribution For Public School Sites on April 11, 2001. Since that time the exhibits of the agreement have been updated with both parties to include current land values, and will once again be updated very shortly.

Weld RE-4 School District has three schools within the Town of Severance, RangeView Elementary School, Severance Middle School, and Severance High School. All three of these schools have exceeded their capacity. There are subdivisions within the Town of Severance that are within 1.5 miles of the elementary school, however, due to space and capacity limitations students are bussed approximately 6 miles to Windsor to attend school and unable to attend their local school within the Town of Severance.

The proposed Moody Development is estimated to bring approximately 221 elementary students to the boundaries of RangeView Elementary, with a core capacity of 600 students and enrollment currently at 710. The proposed development will also bring an estimated 148 secondary students to Severance Middle (107) and Severance High Schools (141) respectively. All three schools are already beyond their capacity limits due to accelerated residential growth within the Town of Severance.

With the proposed development numbers and estimated growth and calculations, Weld RE-4 School District is requesting a 10 acre parcel dedicated to the district for a future elementary school to meet the needs of the Town of Severance. The developer and the District have agreed upon a location for a future school which is 10.69 acres.

The calculations call for a 12.5 acre site based on a buildout of 670 single family homes. By providing this 10.69 acres, this meets the site dedication requirements for 572 of the single family homes. For the remaining 98 single family homes, a cash-in-lieu in the amount that is



Weld RE-4 School District

**1020 Main Street
Windsor, Colorado 80550
970-686-8000
weldre4.org**

agreed upon with the Town of Severance at time of permitting is provided. In regards to the cash in lieu portion of fees, the District is willing to explore/negotiate site development costs not already included in the agreement as payment towards the fee. None of these calculations include any future multi-family housing in the development.

Recommendations

The District requests that the developer continue to work with the District to address the student growth caused by additional homes within this development through site dedication, cash in lieu as well as continued support of local schools.

Your continuing cooperation is sincerely appreciated, as is the opportunity to comment upon issues of interest to the County, the School District and our mutual constituents. The School District requests to be notified of any proposed land use changes. Should you have questions or desire further information, please contact me at your convenience.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael McCullar", with a long, sweeping horizontal line extending from the end of the signature.

Michael McCullar
Chief Operating Officer

TO: Ms. Shani Porter, Severance Planning Director
Ms. Regina Olson, Severance Town Planner
Mr. Nick Wharton, Severance Town Manager

FROM: Chris Messersmith, Colorado Civil Group, Inc.
Amber Messersmith, Colorado Civil Group, Inc.
Ed Jansury, Colorado Civil Group, Inc.

DATE: January 3, 2025

SUBJECT: Northgate Lake (Moody) Preliminary Plat

CCG PROJECT NO: 0042.0014.03

TOWN CUSTOMER ID: 233

We have completed our engineering review of the Northgate Lake (Moody) Preliminary Plat 5th submittal package received on October 22, 2024 and on December 2, 2024. The following items were included with the submittal package:

- Preliminary Plat
- Preliminary Drainage Report & Plan
- Preliminary Utility Plans (Construction Drawings)
- Preliminary Utility Report
- Variance Letter Request – Traffic
- Variance Letter Request - Drainage
- Draft Management Plan
- Preliminary Landscape & Open Space Plan
- Title Commitment (1)
- Soils (Non-Hazardous Manifest documents)
- Response to Comments (CCG Memo, Redlines (7))
- Traffic Calming Memo (received 12/2/2024)

We offer the following engineering comments:

General:

1. Road names acceptable to the Town of Severance and emergency services will need to be selected during the Final Plat process. Coordinate road names and where road names change with Planning and Emergency Services.
2. Potable Water – The water service for this project will be provided by the Town of Severance. To provide service to this development, the Town needs to purchase Additional Standard Plant Investment Taps (ASPITs) from the North Weld County Water District (NWCWD). Additional ASPITs are not available for purchase at this time. The Town is working with the NWCWD on a new Water Service Agreement to resolve this issue. There is no estimate on when this



Agreement will be executed. Engineering will address the utility capacity issue(s) per Severance Municipal Code (SMC) Sec. 16.19.100.(d).(3).h-i.

3. Sanitary Sewer – The sanitary sewer service for this project will be provided by the Town of Severance, however the Town does not have infrastructure in place to serve this development. The project will need to install a sanitary sewer main from the project to the existing 18" interceptor pipe south of the existing Severance Wastewater Treatment Facility (WWTF). The wastewater will be treated at the Town of Windsor WWTF. The Town of Windsor has indicated that they are limited on treatment capacity at their WWTF and cannot accommodate the agreed amount of wastewater. Both municipalities are working on this item and both Town Managers have met multiple times. Engineering will address the utility capacity issue(s) per Severance Municipal Code (SMC) Sec. 16.19.100.(d).(3).h-i.
4. The Off-Site Sanitary Sewer CD's were re-submitted on July 30, 2024 as a separate application. The applicant is evaluating alternative route(s) for the off-site sanitary sewer and this review is on hold.
5. Teller St (CR 21) existing ROW – The Applicant's surveyor has researched and updated the existing ROW for CR 21 based on Reception No. 34222 aka Book 48 Page 200 the Road Viewers' Report and a phone call with a Weld County Surveyor, with this submittal. Town staff will meet with Weld County to confirm if they are in agreement with the exiting road ROW on CR 21 as shown with this preliminary plat submittal (i.e. more specially that both the ROW adjacent to the section line exists in addition to the 60' of ROW along the centerline of the existing gravel road which veers to the west of the section line). As shown, there is a small gap between the existing ROW's west of the section line where roadway grading is shown. The Town will provide additional comments after the exiting CR 21 ROW meeting with Weld County is held. This item can be resolved at the time of Final Plat. Refer to COA #22.i.
6. The Applicant shall obtain and submit to the Town Will Serve Letters for all dry utility companies.
7. A Variance Letter titled Northgate Lake – A Traffic Variance Letter dated September 23, 2024 prepared by Avant Civil Group, Inc. was reviewed. The dimensions in the variance request Item 4.b. need to match the Preliminary Construction Drawings and Traffic Impact Study (*repeat*). Refer to redlines.
8. Early/Preliminary Grading is no longer allowed after the Preliminary Plat approval per SMC 16.19.100.d.7.a. This does not apply to the Eaton-Law Reservoir improvements.

Land Use Application

9. The land use application from the 1st submittal stated the following:
 - a. Proposed Use: Single Family, Multi-Family, and Commercial
 - b. Proposed Zoning: Suburban Perimeter, Town Core
 - c. Proposed Residential Lots: 670
 - d. Proposed Commercial Lots: varies
 - e. Total Development Area: 305 ± acres
 - f. Total Residential Area: 286 ± acres
 - g. Total Non-Residential Area: 19 ± acres
 - h. Total Open Space Area: 78 ± acres
10. Several of these values have changed as the project has progressed through the Preliminary Plat process.

Letter of Intent

11. The Letter of Intent included with the 1st submittal, indicated the size of the 670 residential lots ranging in size from 6,300 square feet to 1/3 acres, the Commercial space is 30.66 acres, the future multi-family space is 13.79 acres and a school site for Weld RE-4 School District of 10.69 acres.
12. Several of these values have changed as the project has progressed through the Preliminary Plat process.

Title Commitment:

13. The Title Commitment prepared by Heritage Title Company, Issuing Office File Number 459-H0646933-820-GRO, Amendment No. 3 with Commitment Date of June 11, 2024 lists the vested owner as:
Hidden Lake Investments, LLC, a Colorado limited liability company

The aliquot legal descriptions are for Lot B, Recorded Exemption No. 0705-35-3 RECS18-0146 (Parcel #070535300004) and for Lot B, Amended Recorded Exemption No. 0705-35-2 1AMRECX18-02-3293 (Parcel #070535200008).

14. The Title Commitment prepared by Heritage Title Company, Issuing Office File Number 459-H0587798-084-LL9, Amendment No. 2 with Commitment Date of May 1, 2023 lists the vested owner as:
The Eaton-Law Reservoir Company (incorporated March 17, 1980)

The legal description appears to be for Parcel #70535300002 per Sale Deed Rec. No. 3934637.

15. The Title Commitment prepared by Heritage Title Company, Issuing Office File Number 459-H0664301-820-GRO, Amendment No. 3 with Commitment Date of October 3, 2024 lists the vested owner as:

Journey Homes, LLC, a Colorado limited liability company

The aliquot legal description is for Lot A, Recorded Exemption No. 0705-35-3 RECX18-0146 (Parcel #70535300003).

Legal Description:

16. The separately provided 8.5"x11" metes and bounds outer boundary legal description for the Plat was checked and closes. The legal description can be used for publication of hearings.

Oil & Gas:

17. According to the COGCC website, there are 4 existing Plugged and Abandoned (PA'ed) Wells on the property. The Applicant needs to confirm that Severances Municipal Code Section 16.11.80.b.5 has been met:

(5) Plugged and abandoned wells that are not visible shall be exposed, with the facility owner's permission, and their exact location shall be surveyed by a Professional Land Surveyor. The plugged and abandoned well shall be backfilled and compacted. The

location of the plugged and abandoned wells shall be permanently marked with a visible post indicating the COGCC well API number.

The Applicant confirmed in a meeting on October 31, 2023 that the wells have been surveyed and will be marked after agricultural activities have been completed. The Applicant shall confirm that the proposed cut or fill over these PA'ed wells is acceptable. *(repeat) We understand from the response to comments that the Developer is working with the oil and gas operators on this item.* The Town requests a statement from the oil/gas companies regarding this item, which may or may not be provided.

Draft Management Plan (DMP):

18. Planning to confirm allowable encroachments.

19. Roadway, Trail, and Fence Exhibit were removed from DMP with this submittal.

Subdivision Improvements Agreement (SIA) and Conditions of Approval (COA) for Final Plat:

20. The Applicant will be required to install the traffic signal at E Harmony Rd/Timber Ridge Pkwy when it is warranted. *Per the Applicant's response, they will bore the entire cost of the traffic signal for installation when warranted if the Town will agree to reimbursement or waiver of transportation fees on single family or multi-family permits.* The applicant can discuss the details of this item with the Town Manager.

21. We recommend that the lot building setbacks be added to the SIA.

22. The following items can be addressed during the Final Plat application process and will be conditions of approval of the Final Plat. *The Applicant has acknowledged the majority of these conditions, unless otherwise noted.*

- a. The existing Xcel Energy pressure regulating station in the northeast quadrant of the E Harmony Road – Teller Street intersection shall be removed from the Town's ROW and relocated with this development.
- b. The Applicant needs to obtain 40' of property in fee for Town ROW and a 15' drainage and utility easement along E Harmony Road from the Weld County property owner at 10435 WCR 74 for this project's required arterial road improvements and for pedestrian connectivity per Town Management.
- c. The existing irrigation ditches throughout the property shall be accommodated as required by the ditch company(s).
- d. The existing Winters Farm 25' Pipeline Irrigation easement shall be vacated by separate document and referenced on the Final Plat as it is located over proposed public ROW. The relocation of the pipeline and dedication of the easement shall be done by separate document and referenced on the Final Plat. The relocation of the pipeline on the property may require Crossing Agreements with the Town when crossing public ROW.
- e. Town Management may add conditions of approval related to the retaining walls proposed with this project. *Per the Applicant's response, they have committed to installing safety railings.*
- f. The Town requires the Applicant to provide a 20' wide (estimated) exclusive Potable Water Easement behind the proposed 15' dry utility easement along E Harmony Rd per COG VIII

Section 2.06.A.1 for a future line. The Cobb Lake Regional Water Treatment Authority will be contacting the Town of Severance to discuss this requirement in greater detail.

- g. Groundwater encountered and noted in the Geotechnical Report may be lowered with the proposed improvements and will no longer impact the proposed structures. The applicant will need to install piezometer(s) to check groundwater levels to confirm this. **This can possibly be deferred until after the earthwork and grading activities are completed and the Eaton-Law Reservoir is reconstructed but prior to any utility installations.** If groundwater is present, then an underdrain system with a gravity outfall will be required to mitigate this issue where needed. If groundwater is not present, then this comment will be addressed.
- h. Prior to earthwork and grading activities, the applicant shall submit a procedural plan to the Town of Severance for review and approval, indicating fill and compaction material testing procedures including lift thickness, testing frequency, testing locations, etc. The Geotechnical Report provides some general procedural parameters and additional details will be required. At the end of the earthwork and grading activities, a report shall be submitted to the Town of Severance for review and approval. The report shall be prepared by, and the earthwork and grading activities shall be observed by a licensed engineer. *The applicant has responded that a procedural plan will not be provided as requested.* This item has been discussed with Town Management and the Public Works Department and is a condition of approval for Final Plat. This project includes a substantial amount of earthwork and Town staff is requesting a procedural plan (excluding the reservoir improvements) for review and approval prior to the earthwork activities commencing.
- i. Teller St (CR 21) existing ROW – This development requires improvements to Teller St. (CR 21) which include relocating the Finley Ditch in a pipeline and re-aligning the roadway on the section line. Additional public Right-of-Way (ROW) dedication for CR 21 and possibly partial ROW vacation may be required outside the project limits for the project improvements. We will clarify this COA after meeting with Weld County to discuss the existing CR 21 ROW, refer to Comment #5.
- j. An off-site sanitary sewer main will need to be installed and accepted from the project to the existing 18" interceptor pipe south of the existing Severance Wastewater Treatment Facility (WWTF).
- k. The applicant shall obtain drainage easements from downstream property owners and complete off-site drainage improvements as necessary per the following references:
 - a. Severance Municipal Code Section 16.19.100.d.3.f.4.
 - b. City of Greeley Design Criteria and Construction Specifications Volume II Storm Drainage Section 1.01.C.
 - c. Mile High Flood District Urban Storm Drainage Criteria Manual Volume 1, Chapter 2, Section 1.2.

This applies to the detention pond outlet structure(s) and is due to anticipated changes in discharge location, increase in discharge frequency, and the increase in volume of stormwater runoff. *Per the Applicant's response, offsite drainage will enter historic drainage patterns, no off-site drainage easements or improvements will be built.* The proposed development will change the historic drainage patterns from sheet flow to concentrated flow at the proposed discharge locations. These requirements will remain for Final Plat approval. Off-site drainage easements are not being requested where historic drainage patterns are generally being maintained.
- l. Potable Water – refer to general comment #2.

m. Sanitary Sewer – refer to general comment #3.

Preliminary Plat:

- 23. Sheet 3 (Curve Table) – Curve Data is missing for Curves C1-C60 with this submittal.
- 24. Sheets 4, 6, 8 (Teller St (CR 21) ROW) – Refer to General Comment #5.
- 25. See Plat Redlines for any additional comments.

Preliminary Construction Drawings (PCD):

- 26. Sheets 8, 11, 14, 17, 20, 24, 28 (Grading Plan, Teller St) – A drainage swale along the west side of Teller Street will likely be required to accommodate existing drainage patterns. These details can be addressed with the Final Plat submittal.
- 27. Sheet 30 (Grading) – Proposed grading is shown across Weld County property (10435 WCR 74). Modify grading to exclude this “off-site” property. *(repeat, not addressed)*
- 28. Sheet 60-124 (Street P&P) – The profile grid lines need to be fixed on all Street sheets with this submittal.
- 29. Sheet 124 (E Harmony Rd, P&P) – Label turn lanes per redlines.
- 30. See Construction Redlines for any additional comments.

Preliminary Landscape Plan:

- 31. We have no further comments on the Preliminary Landscape Plans. All previous comments have been addressed.

Preliminary Drainage Report (PDR) & Plan:

- 32. The preliminary drainage report titled Northgate Lake Severance, Colorado prepared by Avant Civil Group, LLC and dated September 20, 2024 was submitted and reviewed.
- 33. The Northgate Lake – Drainage Design Criteria Variance Request prepared by Avant Civil Group was dated September 20, 2024 was reviewed. Approval of this variance request is recommended by Engineering and shall be stamped/sealed. The variance request shall be documented in the PDR Waivers/Variance/Modifications from Criteria section and included in the PDR for reference.
- 34. Refer to Drainage Report for minor redlines. These can be addressed with Final Plat.

Preliminary Utility Report (PUR):

- 35. The preliminary utility report titled Northgate Lake Severance, CO prepared by Avant Civil Group and dated September 23, 2024 was submitted and reviewed.
- 36. The estimated Average Day Demand (ADD) is approximately 193,698 gallons per day (GPD) and the Peak Hour Demand (PHD) is 480 gallons per minute (GPM) for the entire development based on information provided by the applicant. The expectation is that the ADD and the Max Day Demand (MDD) are similar, since there is no potable water irrigation used by the development. This entire development will use approximately 18% of the remaining 1.09 MG

(million gallons) of water storage available. Refer to General Comment #2, related to potable water system capacity issues.

37. This entire development will contribute approximately 204,698 gallons per day to the 18" interceptor pipe south of the existing Severance Wastewater Treatment Facility. The 18" interceptor has an anticipated maximum wastewater flowrate of 639,138± gallons per day (572,000 GPD existing/67,138 GPD for approved developments), providing 360,862± gallons per day remaining capacity. The Town of Windsor has indicated that they are limited on treatment capacity at their WWTF and cannot accommodate the agreed amount of wastewater. Both municipalities are working on this item and both Town Managers have attended multiple meetings. Refer to General Comment #3, related to sanitary sewer system capacity issues.
38. The extents of the 16" PVC water line in Timber Ridge Parkway will be confirmed during the Final Plat submittal review.
39. Refer to minor redlines in the Preliminary Utility Report; which can be addressed at time of Final Plat.

Geotechnical Report:

40. The geotechnical report titled "2nd Revised Preliminary Subsurface Exploration Report Moody Property – Approximately 315 Acres North of Weld County Road (WCR) 74 and East of WCR 21 Severance, Colorado EEC Project No. 1202001" prepared by Earth Engineering Consultants, LLC and dated May 17, 2024 revised from February 22, 2024 and revised from April 15, 2020 was submitted and previously reviewed.
41. Contaminated clay was encountered at a depth of approximately 4-feet in Boring B-5 and the drilling was terminated. With this submittal, the applicant has provided Non-Hazardous Manifest documents.
42. An additional geotechnical report will be required after the Eaton-Law Reservoir is reconstructed to address the single family and multi-family lots that are planned to be constructed over the existing Eaton-Law Reservoir.
43. Groundwater was encountered at approximate depths of 7.5-25-feet below existing site grades. The soil borings were completed in January of 2020. The Geotechnical Report states, "If lower-level construction or full-depth basements are being considered for the site, we would suggest that the lower level subgrade(s) be placed a minimum of 3 feet above the maximum anticipated rise in groundwater levels and a combination exterior and interior perimeter drainage system(s) be installed. Foundations for slab-on-grade buildings should also be placed at least 3 feet above maximum groundwater levels..." An underdrain system is recommended. There are multiple lots adjacent to the Eaton-Law Reservoir with basements that would be below the NORMAL POOL ELEVATION of 4925. The applicant shall indicate how groundwater will be mitigated with the development. (*repeat*) The groundwater approximate elevations were compared to the cut-fill map. Based on the information provided, shallow groundwater may exist near Borings B-8, B-9, B-12, B-13, and B-19. Groundwater level determinations need to be completed between May 1st and October 1st (COG VI 2.01.B.1). Refer to COA #22.g.

Traffic Impact Study (TIS):

44. The Traffic Impact Study (TIS) titled Northgate Lake prepared by Delich Associates with Project #2313 and dated May 2023 and revised February 2024 was previously reviewed. A Memorandum dated May 31, 2024 was previously reviewed.

45. In lieu of addressing the Town Traffic Engineer's comments from August 19, 2024 on Street F, a traffic calming memo for Street F prepared by Delich Associates was submitted on December 2, 2024 and reviewed by the Town's Traffic Engineer (Eli Farney with JR Engineering, LLC).

- a. The Town will not allow the following traffic calming measures given in the memo: "raised or change of pavement/color crosswalks" or "speed humps for a length of ~8 feet".
- b. Eli Farney's comments (below in black) and [CCG's comments \(below in blue\)](#) on the memo are as follows:

Neck Downs and Chokers

- These may not be feasible in front of single-family homes with driveways and on-street parking. I don't understand the developer's intent for these.

Striping

- Narrowed travel lanes are a good option ([for Street F](#)). If narrowed travel lanes are used, the striping shall be included in the construction plans/ documents [for final design](#).
- [All Collector roadways sections should include striping \(Timber Ridge Parkway, etc.\) and shall be included in the construction plans/documents for final design.](#)

All-Way Stop Control (AWSC) at [Street F/Street G](#)

- AWSC is a good option, but the developer should provide an AWSC warrant analysis or justification per the MUTCD. AWSC is not supposed to be utilized for traffic calming alone.
- If warranted/justified, the AWSC shall be included in the [final](#) construction plans/documents along with supplemental "All-Way" plaques and advanced warning signage.

Phase I Environmental Site Assessment (ESA):

46. The Phase I Environmental Site Assessment (ESA) Report titled Moody Property 10201 County Road 74 Severance, Colorado 80550 prepared by National Inspection Services with NIS Project No. 2302-023. and dated February 23, 2023 and updated with the 4th submittal (still dated February 23, 2023) was previously reviewed.
47. The assessment revealed no evidence of recognized environmental conditions (RECs), historical REC's, controlled REC's, business environmental risks.

Additional comments can be found on the document redlines, which are listed below and included in the dropbox link below:

https://www.dropbox.com/scl/fo/cli4dhw3umi99q38a5ige/AOm_iR1MeJ1qtau6V564rpA?rlkey=gsowokna3y267n9ke9cjo5r3b&st=fle1ve3x&dl=0

- 0042.0014.03 PP 5thRedlines_(2025.01.03).pdf
- 0042.0014.03 PCD 5thRedlines_(2025.01.03).pdf
- 0042.0014.03 PDR 5thRedlines_(2025.01.03).pdf
- 0042.0014.03 PUR 5thRedlines_(2025.01.03).pdf
- 0042.0014.03 TRAFFIC LTR-Variance Redlines_(2025.01.03).pdf
- 0042.0014.03 DRAINAGE LTR-Variance Redlines_(2025.01.03).pdf

Please let us know if you have any questions regarding this memo. We request that the Applicant provide written responses to our comments with the next submittal. We are willing to meet with the Applicant to review these comments. **These comments can be addressed with the Final Plat process.**

From: [Shani Porter](#)
To: ["Abigail Riley"](#)
Subject: RE: New home development
Date: Thursday, February 6, 2025 1:22:00 PM
Attachments: [image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[Northgate Lake PP SPO Public Hearing letter.pdf](#)

Hello Abigail and thank you for your email.

Attached, please find the public notice for Northgate Lake Preliminary Plat which details the Planning Commission and Town Council meetings, which will be your opportunity to hear about the development and speak to the decision-makers who vote on the project. The Planning Commission is a volunteer board, and the Town Council is your elected officials

Please let me know if you have additional questions or comments.



Shani Porter
Planning Director
Office: 970-686-1218
Web: www.townofseverance.org
3 S. Timber Ridge Parkway, Severance, CO 80550

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From: Abigail Riley <abigailhriley@gmail.com>
Sent: Wednesday, February 5, 2025 8:33 PM
To: Shani Porter <sporter@townofseverance.org>
Subject: New home development



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Hello,

Regarding the building of the new 671 home development in Severance - will there be a vote on this? Does one need to attend the meeting to vote? If not, how can one vote or can this be done virtually? Our town does not have the infrastructure nor schools to support this.

Thank you,
Abigail Riley

From: [Shani Porter](#)
To: [Hoss Johnson](#); [Hoss](#)
Subject: RE: Northgate Lake Project
Date: Tuesday, February 4, 2025 4:38:00 PM
Attachments: [Traffic Impact Study.pdf](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)

Mr. Johnson – thank you for your email. My responses are in red below. If you have additional questions, please feel free to reach back out.

Thank you -



Shani Porter
Planning Director
Office: 970-686-1218
Web: www.townofseverance.org
3 S. Timber Ridge Parkway, Severance, CO 80550

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From: Hoss Johnson <Hoss.Johnson@nutrien.com>
Sent: Tuesday, February 4, 2025 6:55 AM
To: Shani Porter <sporter@townofseverance.org>; Hoss Johnson <Hoss.Johnson@nutrien.com>; Hoss <bulletorhook@gmail.com>
Subject: Northgate Lake Project



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Can you provide additional info for the proposed housing project?

- Traffic report/impact **see attached**

- Number of roof tops **671 single family homes are planned.**
- Number of housing units in the Multi Family units **the future multi-family area will be required to go through a site plan for further review. The zoning allows for 15 units to the acre.**
- Timing of project from start to finish by phase **the phasing of the project will be determined/outlined during the Final Plat as part of the subdivision improvement agreement**
- Any additional info that may be of interest. **After the completion of the Preliminary Plat a Final Plat will still need to be submitted and reviewed and approved by Town Council prior to any development. The commercial and multi family area will need to have site plans submitted, reviewed, and approved by Town Council prior to any development.**

Pls send via email to:

Hoss.Johnson@nutrien.com

bulletorhook@gmail.com

or

mail

1425 Red Fox Circle

Severance, CO 80550

Thank you in advance for you cooperation.

Hoss

Sent from [Mail](#) for Windows

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<https://www.nutrien.com/important-notice>

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From: [Shani Porter](#)
To: [Jackie Middleton](#)
Subject: RE: Northgate Lake Preliminary Plat
Date: Monday, February 3, 2025 9:11:00 AM
Attachments: [Submittal 5 Preliminary Plat.pdf](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)

Good morning, Jackie – I have attached the Preliminary Plat for your review. As you will note on sheet 13, the west entrance to Northgate Lake from Teller Street has been moved north of the east entrance of Fox Run.

Please let me know if you have additional questions.



Shani Porter
Planning Director
Office: 970-686-1218
Web: www.townofseverance.org
3 S. Timber Ridge Parkway, Severance, CO 80550

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From: Jackie Middleton <jacmid762@aol.com>
Sent: Sunday, February 2, 2025 10:06 AM
To: Shani Porter <sporter@townofseverance.org>
Subject: Northgate Lake Preliminary Plat



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Dear Shani Porter,

With reference to your letter dated 1.27.2025 regarding the Preliminary Plat of Northgate Lake, I am hoping you can answer the following question.

On a previous Plat of Northgate Lake the Fox Ridge sub division was shown with the east entrance to Fox Ridge directly opposite the west entrance to the school site at Northgate.

Please could you tell me if that is still the case, or if the east school entrance has been moved either north or south of the Fox Ridge entrance?

Sincerely,
Jackie Middleton
1415 Red Fox



AGENDA ITEM SUMMARY

AGENDA ITEM	SUBMITTED BY	PRESENTED BY
PUBLIC HEARING Resolution No. PC 2025-05R: Text Amendments to the Land Use Code - Chapter 16 of the Severance Municipal Code for purposes of reorganizing Article 3	Shani Porter, Planning Director	Shani Porter, Planning Director
ACTION REQUESTED		
Planning Staff ask that the Planning Commission review, discuss, and take action on Resolution PC-2025-05R and forward a recommendation to the Town Council on amendments to the Land Use Code regarding amendments to Article 3 of Chapter 16 "Land Use Code". Actions that may be taken: 1. Approve PC-2025-05R and forward a recommendation of approval to Town Council. 2. Deny Resolution PC-2025-05R 3. Take No Action.		<u>Resolution</u> <u>Action Requested</u> <u>Attorney Approved</u>
BRIEF SUMMARY		
Various amendments have been made to Section 16 of the Town of Severance Land Use Code over the last two years. The codification of these changes identified that the reorganization of Section 16 would be necessary for a user-friendly and cohesive implementation of the Land Use Code		
PUBLIC SUPPORT/CONCERN		
None at this time.		
ANALYSIS AND RECOMMENDATION		
Town staff is asking for the Planning Commission to review, discuss, and approve PC-2025-05R for the proposed amendments to the Land Use Code		
MATERIALS SUBMITTED		
The following materials were submitted and included in this packet: 1. PC-2025-05R PC Recommend Approval Art 3 LUC Text Amendments 2. Exhibit A - Article 3 - Zoning v3 (Clean for PC Packet) (2.14.2025 Ayres +MLM) 3. Article 3 - Zoning v3 (Redline for PC Packet) (2.14.2025 Ayres +MLM) 4. PC Public Notice Land Use Code 2-19-25		

**TOWN OF SEVERANCE PLANNING COMMISSION
RESOLUTION NO. PC-2025-05R**

**A RESOLUTION OF THE PLANNING COMMISSION OF THE TOWN OF
SEVERANCE, COLORADO, MAKING A RECOMMENDATION TO THE TOWN
COUNCIL TO APPROVE AMENDMENTS TO ARTICLE 3 OF CHAPTER 16, “LAND
USE CODE,” OF THE SEVERANCE MUNICIPAL CODE REGARDING ZONING**

WHEREAS, in accordance with Section 16.19.120 of the Severance Municipal Code, Town staff may initiate amendments to the text of the regulations in Chapter 16, “Land Use Code,” of the Severance Municipal Code (“Code”); and

WHEREAS, Town staff has proposed amendments to Article 3 of the Land Use Code (the “Proposed Amendments”) regarding regulations for the Town’s zoning districts and supplemental use regulations, in the form attached to this resolution as **Exhibit A** and incorporated herein by this reference; and

WHEREAS, in accordance with Section 16.19.120 and 16.19.10, the Planning Commission shall review text amendments to the Land Use Code at a public hearing; and

WHEREAS, on February 19th, 2025, the Planning Commission held a duly noticed public hearing¹ to consider the Proposed Amendments; and

WHEREAS, after considering any public testimony at the public hearing and the presentation by Town staff, and after reviewing the Proposed Amendments according to the criteria in Section 16.19.120(b) of the Land Use Code, the Planning Commission desires to recommend the Town Council approve the Proposed Amendments as presented.

**NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING COMMISSION
OF THE TOWN OF SEVERANCE, COLORADO, AS FOLLOWS:**

1. The Planning Commission recommends the Town Council approve the proposed amendments to Article 3 of Chapter 16, “Land Use Code,” of the Severance Municipal Code, regarding regulations for the Town’s zoning districts and supplemental use regulations, in substantially the same form attached to this resolution as **Exhibit A**.

RESOLVED AND APPROVED this ____ day of _____, 2025.

PLANNING COMMISSION OF THE
TOWN OF SEVERANCE, COLORADO

Julie Stout, Chair

¹ Notice of the Planning Commission’s public hearing on the Proposed Amendments was published on February 1st, 2025, on the Town of Severance’s website, <https://www.townofseverance.org/256/Public-Notices>, in accordance with Section 16.19.40(b)(4) and Tables 19.10 and 19.40 in Article 19 of the Land Use Code.

ATTEST:

Town Clerk

APPROVED AS TO FORM:

Town Attorney

Article 3 – Zoning (*Chapter 16, Articles 3 & 6*)

Section 16.3.10. Zoning districts and boundaries. (*Sec. 16.3.30*)

(a) *Zoning districts.* To carry out the provisions of this Code and the Comprehensive Plan, the Town is divided into the following zoning districts:

1. Rural Residential (RR)
 - i. Rural Residential Conservation (RR-C)
 - ii. Rural Residential Agricultural (RR-A)
2. Suburban Perimeter (SP)
3. Town Core (TC)
4. Development Nodes (DN)
 - i. Development Node Industrial (DN-I)

(b) *Official zoning map.* The boundaries and classifications of established districts are as depicted on the "Town of Severance Zoning Map," which may from time to time be revised, updated, or redrafted. The zoning map adopted and to be used for reference shall be that map bearing the most recent date of publication and approval by the Town.

1. Interpretation of zoning district boundaries. In the event that uncertainty exists on the zoning map, district boundaries shall be on section lines, lot lines, the centerlines of highways, streets, alleys, railroad rights-of-way or such lines extended; municipal corporation lines; natural boundary lines such as streams or other lines to be determined by the use of scales shown on the map.
2. Amendment upon zoning or modification. Upon enactment of any ordinance annexing and establishing zoning or modifying existing zoning for any property and upon final passage thereof, the Town shall amend the prior existing zoning map to include the annexed area with the proper zoning classification or show the amended classification. Such updated official map shall contain, in table form, the date and number of the ordinance amending it, the title of the change, the date the map was amended to reflect each amendment and the initials of the person who checked and approved the change to the map.
3. Cost of amending zoning. Any person who proposes zoning for property being annexed or proposes modifying existing zoning shall bear the entire cost of amending the zoning map, including all notification costs. The Town shall provide applicants with a copy of the current fee schedule and a fee agreement form upon request.
4. Public inspection; storage of original. A copy of the zoning map shall be available and on display on the Town's official website and at Town Hall during normal business hours.

Section 16.3.20. Principal and conditional uses permitted by zoning district. (Sec. 16.3.40)

(a) General application of land uses.

1. Uses designated as "uses by right" are allowed in a zone district as a matter of right but shall be required to conform to all requirements of this Code. If Code requirements are not met the Town reserves the right to deny a project based on non-compliance.
2. Uses classified as "uses by special review" are not allowed as a matter of right but may be approved by the Town Council with additional review and certain justification above and beyond the requirements of this Code consistent with the review criteria in Article 2 of this Code for the use by special review process.
3. Land uses not otherwise identified in this Code may be proposed. In order to allow such uses, the new or unlisted land use must be determined to be similar to either a use by right or a use by special review listed within that zone district. The term "similar" shall mean that the use can be reasonably interpreted to fit into a similar use category as identified in this Code. Town Staff will make a written determination regarding any request for a land use not listed in this Code. If a determination is made that the proposed use is similar to either a listed use by right or a use by special review, it will be processed as a use by special review under the provisions of this Code.

Section 16.3.30. Private property agreements and covenants.

This Code is not intended to revoke, repeal, abrogate, or impair any easement, covenant, condition, restriction, or other private property agreement applicable to the underlying real property. In no case shall the Town be obligated to enforce the provisions of any easements, covenants, conditions, restrictions, or agreements between private parties or between a private party and a homeowners' association or metropolitan district. It is the responsibility of the property owner to comply with private property agreements and requirements such as covenants, design guidelines, and homeowners' association or metropolitan district rules and regulations. In no instance shall the private property requirements be less restrictive than the requirements of this Code and any other adopted codes of the Town.

Section 16.3.40. Management plans required. (Sec. 16.6.10.5)

A management plan is required for any project and / or development proposal within the Town of Severance. Examples of management plans and criteria for submitting a management plan are available from the Town.

Section 16.3.50. Zone district design standards overview. ([Sec. 16.6.30.4](#))

The Town's adopted development and design criteria can be found in Articles 5 and 6 of this Code. The intent of these standards is to promote creative and unique developments and projects throughout the Town.

DRAFT

Division 1 Rural Residential

Section 16.3.100. Intent. (Sec. 16.6.10.1)

- (a) The intent of the rural residential zone district is to provide large lot, low-density, single-family detached residential development. Development in this district requires centralized water but may not be served by central sewer. Other municipal infrastructure services may be limited.
- (b) The Rural Residential Zone District includes two (2) sub-zoning categories as outlined below. Further specifics on these sub-zonings is outlined in Sections 16.3.150 and 16.3.155 of this Code.
 - 1. Rural residential agricultural development can occur within or outside designated rural residential areas. The type of development, referred to as Agricultural (Ag) Residential, is characterized by large-lot residential subdivisions that include an agricultural component. The agricultural component may be:
 - i. associated with each individual lot,
 - ii. shared among a select number of lots, or
 - iii. comprised of a stand-alone agricultural parcel.

Similar to rural residential development, Ag residential development is limited by the availability or feasibility of infrastructure. The lot size in Ag residential areas is determined by the agricultural use associated with the land rather than by a fixed minimum acreage per lot. For additional details, refer to **Section 16.____.____** of this Code.

- 2. Rural residential conservation development can occur within designated rural residential areas. This type of development emphasizes preserving large portions of land for open space, agricultural, or conservation easements, which complement the layout of rural subdivision lots. The specific requirements for densities, open space allocation, and design standards are detailed in Section 16.4.145 of this Code.

Section 16.3.105. Lot and building standards. (Sec. 16.6.10.2)

- (a) *Gross maximum density.* Two and one-half (2.5) acres per dwelling unit (e.g., 50 acres divided by 2.5 acres equals 20 lots).
 - 1. Lot sizes may be smaller than two and one-half (2.5) acres if the development contains managed open space or preserved agricultural land with clustered lots to achieve the maximum density.
 - 2. Final lot count may be limited by infrastructure or geographic constraints.
- (b) *Minimum lot sizes.* One and one-quarter (1.25) acres.
 - 1. Diversity and flexibility of lot sizes is highly encouraged.

- (c) *Setbacks.* For areas not governed by building envelopes, the minimum setback shall be as shown on the following Table 16.3.105.

Table 16.3.105 - Rural Residential Setback Criteria.

	Principal Residence	Accessory Building
Front setback	25'	25'
Side setback	7.5'	5'
Rear setback	30'	5'

Section 16.3.110. Land uses. (Sec. 16.6.10.3)

- (a) *Uses by right. (may require a site plan at the direction of Town staff based on the intensity and potential impacts of the proposal)*
1. Residential land uses:
 - Accessory dwelling
 - Home-based business
 - Single-family attached and detached dwellings
 2. Commercial, retail, or service land uses:
 - Agriculture, commercial
 - Agriculture, noncommercial
 3. Public, quasi-public, other land uses:
 - Golf courses
 - Outdoor recreation
 - Places of worship and assembly
 - Public and private parks
 - Schools
- (b) *Uses by special review.* Land uses not identified may be considered with additional review as determined by Town staff.

Section 16.3.115. Layout standards. (Sec. 16.6.10.6)

- (a) *Typical subdivision layout.*
1. Individual lots shall be accessed by an internal rural roadway system.
 2. Each lot shall have frontage onto a roadway.
 3. Fencing shall be open and maintained along the perimeter street frontage.
 4. The main entrance to a subdivision shall have a monument sign and landscaping.
 5. The perimeters adjacent to major roadways shall be landscaped and shall provide pathways for pedestrian linkages.
 6. Open space and drainage corridors within the subdivision shall provide opportunities for pedestrian linkage to adjacent subdivisions.

- (b) Typical single-family lot layout. The vision for a typical single-family lot is to create a buildable area and identify septic envelopes and open/landscape areas.
- (c) Individual wastewater treatment systems (such as underground septic and leach fields and above ground ponds) must be shown on building permit plot plan.

Section 16.3.125. Fencing. (Sec. 16.6.10.10)

- (a) Fencing along major roadways and public areas shall be of a rural character. The treatment should be consistent within the entire development. Fencing located along collector or arterial roads shall be open rail/open character, wood and set back from the right-of-way a minimum of twenty (20) feet. Fencing shall be made visually interesting and shall avoid creating a "tunnel" effect. Style of fencing for neighborhood should strive for consistency with surroundings and intended design. Compliance with this standard may be accomplished by integrating architectural elements such as brick or stone columns and incorporating articulation or openings into the design. Varying the alignment or setback of the fence and softening the appearance of fence lines with plantings or similar techniques is also encouraged. Privacy fences should not be used along major roadways and public areas. For agriculture uses, T-post fences, wire fences and electric fences are allowed as per the management plan.
- (b) Perimeters not associated with major roadways shall be fenced by the developer with T-post and wire fencing or better. Internal common areas, including pedestrian connectivity pathways and drainage conveyance channels, shall be fenced by the developer using materials consistent with the development. Management and maintenance of all fencing shall be addressed in the developer's management plan.

Section 16.3.130. Entries and signage. (Sec. 16.6.10.11)

Entry signs and entry features should be a visual and attractive focal point for the development. The type and size of signs should be appropriate for the size of the subdivision. Rural character is highly encouraged.

Section 16.3.135. Managed individual wastewater treatment system standards. (Sec. 16.6.10.14)

- (a) Owners and/or applicants are required to submit documentation of approval for individual wastewater treatment systems (such as underground septic and leach fields and above ground ponds) from Weld County as part of a development or permit application with the Town. The Town does not regulate individual wastewater treatment standards.
- (b) Any screening or buffering required for above ground systems shall be provided in accordance with the Town's landscaping and buffering standards of this Code.
 - 1. The location and extents of such systems shall be reflected on the development application and building permit plot plan drawings when submitted to the Town.

Section 16.3.140. Rural residential agriculture sub-zoning. (Sec. 16.6.10.15)

The rural residential agricultural sub-zoning is intended to allow private property owners to annex existing agricultural operations into the Town and continue operations. The process for receiving the rural residential agricultural sub-zoning is the same as any other zoning request and may either come through the annexation process or a rezoning of an existing annexed property. The following are characteristics of the agriculture sub-zoning design:

- (a) Agriculture component retained.
- (b) Served by domestic water.
- (c) Joint access points to and from county roads to reduce driveways where practical. (Existing agricultural accesses permitted in Weld County may be maintained if no further subdivision is taking place).
- (d) No HOA required.
- (e) No interior fencing required.
- (f) Density:
 - 1. Minimum lot size (septic): Ten (10) acres.
 - 2. Gross density: one (1) dwelling unit per fifteen (15) acres.
- (g) Perimeter treatment:
 - 1. Fencing to be addressed on fencing plan.
 - 2. Road right-of-way: same as rural residential.
 - 3. Connectivity to adjacent subdivisions not required.
 - 4. Landscaping that can be native.

Section 16.3.145. Rural residential conservation sub-zoning. (Sec. 16.6.10.16)

The rural residential conservation sub-zoning is intended to allow private property owners to annex large, existing agricultural or open lands into the Town with a restriction on a portion of the property that conserves the land as farmland or open space in perpetuity. As an incentive to the property owner, the owner will be allowed to develop the unencumbered lands into a greater number of lots with more diverse sizes than the rural residential agriculture sub-zoning.

The following are characteristics of the conservation sub-zoning design:

- (a) Conservation component retained (conservation easement, dedicated open space, agricultural operation).

- (b) Served by domestic water
- (c) Joint access points to and from county roads to reduce driveways where practical
- (d) Reserved.
- (e) HOA (required) on developed lands with provisions for management and maintenance of private lots, improvements, common areas, livestock, infrastructure and other elements of the developed areas (HOA not required on the conservation land)
- (f) No interior fencing required (Fencing along public roadways may be required adjacent to residential lots.)
- (g) Density: defined by the following example and based on percentage of open space
 EXAMPLE: Minimum initial land size = sixty (60) acres (gross). A minimum of sixty percent (60%) (thirty-six [36] acres) shall be perpetually conserved, and on the remaining land (twenty-four [24] acres), two (2) lots will be allowed. If a farmstead already exists, it can be platted as a third lot. With each additional ten (10) acres of contiguous land, sixty percent (60%) (six [6] acres) shall adjoin the original conserved land, and one (1) additional lot shall be allowed. Once platted and developed, no future plats of the initial land that increase the number of lots or reduce the amount of the conserved land will be allowed.

Examples:

1. 70 acres X 60% = 42 acres conserved and 3 lots on 28 acres
2. 80 acres X 60% = 48 acres conserved and 4 lots on 32 acres
3. 100 acres X 60% = 60 acres conserved and 6 lots on 40 acres
4. 120 acres X 60% = 72 acres conserved and 8 lots on 48 acres
5. 160 acres X 60% = 96 acres conserved and 12 lots on 64 acres
6. 180 acres X 60% = 108 acres conserved and 14 lots on 72 acres
7. (Any single home or farmstead can be platted as one [1] additional lot.)

Conservation land shall be contiguous and available for large areas of farming or rural open space. Lots may be clustered or scattered. Minimum lot size = three (3) acres. Diversity of lot sizes is encouraged. Any grouping of lots using a shared access and exceeding four (4) lots shall have an internal roadway designed and shall be built to rural residential specifications of the Town. Groups of two (2), three (3) or four (4) lots shall have a hard-surface shared-access pad connected to the perimeter public roadway. Each shared-access pad shall be concrete measuring forty (40) feet' wide x one hundred (100)' feet long x six (6)" inches thick, with private drives serving individual lots from the shared-access pad. Any shared-access pad shall be owned and maintained by the HOA. Driveways serving individual lots shall be contained within the lot and shall be owned and maintained by the lot owner. Single lot access to the roadways will be discouraged.

(h) Perimeter treatment:

1. Fencing adjacent to right-of-way shall be addressed in fencing Plan. Criteria and maintenance responsibilities shall be described in the HOA documents.
2. Road right-of-way: Right-of-way dedication shall adhere to the Severance Transportation Master Plan. Maintenance of public roadways shall be the responsibility of the Town.
3. Road cross section may be modified at Staff discretion based on proposed number of lots and anticipated traffic. Letter from licensed traffic engineer shall be required in cases in which proposed changes differ from transportation Plan. A minimum dirt road cross section of thirty-two (32) feet will be required adjacent to proposed residential lots for any rural residential conservation development.
4. Connectivity to adjacent subdivisions or undeveloped lands shall be reviewed on a case-by-case basis.
5. Landscaping between the fencing (if applicable) or property line of any lot (excluding conservation lots) and the public roadway shall be native, drought-tolerant grasses. Management and maintenance responsibilities of these areas shall be described in the HOA documents.

Division 2 Suburban Perimeter

Section 16.3.210. Intent. (Sec. 16.6.20.1)

- (a) The suburban perimeter residential land use category includes a mix of residential densities with access to public water, sewer, streets, and open spaces. This district is meant for residential homes and excludes large industries and other large intense uses. Home businesses, civic organizations, and some types of commercial and agricultural uses are allowed but will be limited in size and density. The main purpose of this district is to meet a wide range of housing choices, and to provide neighborhoods that invite walking to gathering places, services and conveniences that are integrated into the rest of the community by a pattern of streets, blocks, and other linkages.

Section 16.3.220. Lot and building standards. (Sec. 16.6.20.2)

- (a) *Density, height, and setback criteria.* The following Table 16.3.220 includes the minimum density, lot size, setback criteria, and maximum height allowed within the Suburban Perimeter zone district. Supplemental criteria is included below the table.

Table 16.3.220. Suburban Perimeter Lot and Building Standards.

	Minimum Gross Density	Minimum Lot Size	Minimum Front Setback	Minimum Side Setback	Minimum Corner Side Setback	Minimum Rear Setback	Maximum Height
Residential							
Single-family detached	2 units per acre	6,000 square feet	20 feet	7.5 feet	15 feet	15 feet	2 stories
Single-family attached (duplex)	2 units per acre	4,000 square feet	20 feet	7.5 feet	15 feet	15 feet	2 stories
Townhomes	2 units per acre	1,400 square feet	20 feet	7.5 feet	15 feet	15 feet	2 stories
Multi-family	2 units per acre	1,600 square feet	20 feet	20 feet	20 feet	20 feet	2 stories
Accessory dwelling unit	n/a	n/a	Behind front of principal dwelling	7.5 feet	15 feet	15 feet	2 stories
Accessory Structure	n/a	n/a	25 feet	5 feet	15 feet	5 feet	2 stories
Non-Residential	n/a	n/a	20 feet	10 feet	20 feet	15 feet	2 stories

1. Accessible building elements (e.g., elevator shafts and stairways) are permitted to extend above the maximum building height.
2. An attached dwelling unit with a shared party wall may have a zero (0) foot side yard setback on the side of the lot where the dwelling units combine.

3. The rear setback for an alley loaded attached dwelling unit project may have a reduced rear setback, at the discretion and approval of the Town.
 4. The corner side setback requirement applies to a side lot line bordering a public road or street that is not designated as the front yard. This does not apply to a designated alleyway.
 5. Attached accessory structures shall meet the requirements of the main structure.
 6. Detached accessory structures shall maintain a minimum separation from the main structure as required by adopted building and fire codes.
 7. Steeples, chimneys, roof-mounted mechanical equipment, and similar architectural and mechanical elements may exceed the maximum height by no more than twenty (20) percent.
- (b) *Lot Diversity.* Development Plans shall include a diversity of lot sizes. On projects of one hundred fifty (150) acres or less, a minimum of four (4) lot sizes is required. On projects of one hundred fifty (150) acres or more, a minimum of six (6) lot sizes is required. This may be met through additional housing types outlined in the following Section C.
- (c) *Product Diversity.* A mix of permitted housing types shall be included in any individual development plan to the extent reasonably feasible, depending on the size of the parcel. To promote such variety, the following minimum standards shall be met:
1. The following minimum number of housing types is required on any project development plan:
 - i. A minimum of two (2) housing types is required on any project development plan containing less than one hundred and fifty (150) acres, including such plans that are part of a phased overall development.
 - ii. A minimum of three (3) housing types is required on any project development plan containing one hundred and fifty (150) acres or more.
 2. Housing types.
 - i. Single-family attached dwellings.
 - A. Duplex units
 - B. Townhome units
 - ii. Alley loaded design.
 - iii. Patio home design.
 - iv. Multi-family dwellings, by additional review.

Section 16.3.230. Land uses. (*Sec. 16.6.20.3*)

- (a) *Uses by right. (may require a site plan at the direction of Town staff based on the intensity and potential impacts of the proposal)*
1. Residential land uses:
 - Accessory dwelling
 - Bed and breakfast establishments

- Home-based business
 - Single family attached and detached, townhomes, multi-family, and senior housing.
2. Commercial, retail, or service land uses:
 - Adult day centers
 - Child care centers
 - Long-term care facilities
 - Neighborhood shopping centers
 - Office, financial, medical services, and clinics
 3. Public, quasi-public, other land uses:
 - Golf courses
 - Neighborhood parks
 - Outdoor recreation
 - Places of worship and assembly
 - Schools
- (b) Uses by special review.
- Workshops/small custom industry

Note: Land uses not identified may be considered with additional review as determined by Town staff.

Section 16.3.240. Layout standards. ([Sec. 16.6.20.6](#))

- (a) *Typical layout.* Each subdivision proposal should address the appropriate elements of the Comprehensive Plan, as suggested by the following. Subdivisions in the suburban perimeter shall be designed with an internal urban roadway system to serve lots within the subdivision. The edges adjacent to major roadways shall be landscaped and shall provide community pathways for pedestrian linkages. Landscape buffers adjacent to major roadways should vary in width, and perimeter fencing shall be visually interesting. The main entrance to the subdivision typically will have appropriately scaled monument sign and landscaping. Open space, drainage corridors and roadways within the subdivision can provide opportunities for pedestrian linkage to adjacent subdivisions, the Town Core, and the Severance Greenway. See Articles 5 and 6 for additional criteria, as applicable.

Note: Roadway Plans must identify collector roadways and adhere to requirements set forth in the Transportation Plan.

1. The spacing and frequency of connector streets are to be determined with each application. Connector streets shall connect neighborhoods to perimeter arterial streets and adjacent properties. Please refer to the Transportation Plan.
2. Internal street design should incorporate the following whenever possible:
 - i. Three- and four-way intersections.

- ii. The use of a grid or modified grid.
- iii. View corridors.
- iv. Focal points.

(b) Typical single-family lot layout. Each lot in the suburban perimeter will identify a buildable area (building envelope) and setbacks on the construction drawings in order to achieve an appropriate building coverage/landscape ratio. Diversity of lot sizes is highly encouraged. An overall fence plan shall be reviewed by the Town.

Section 16.3.270. Fencing. (Sec. 16.6.20.10)

- (a) Lots adjoining greenbelts shall have common area fencing. Common area fencing shall be "articulated" with fence columns, fence details, varying depths of greenbelts, etc.
- (b) All subdivisions shall submit master fence plans that will include fence locations, details and criteria, including:
 - 1. Perimeter fence/common area fencing, all perimeter fencing shall be wood unless otherwise approved by Board.
 - 2. Encourage fence height is six (6) feet. Maximum fence height eight (8) feet along arterial and connector streets by variance.
 - 3. Fence amenities/columns/walls.
 - 4. Rear and side yard fencing (private).
 - 5. Side and front-yard fencing visible from right-of-way/greenbelt/common areas.
 - 6. Master fence Plan, which shall show where in a subdivision each type of fence shall be located.
 - 7. Terminations of common area fencing (encouraged to have a column/fence amenity).
 - 8. Fencing ornamented with details that shall be uniform throughout the development (standard dog-eared privacy fence not allowed).
 - 9. All common area fencing and private fencing that is visible from right-of-way/greenbelt/common areas shall have a common fence color, as identified on the master fence Plan.

Section 16.3.280. Entries and signage. (Sec. 16.6.20.11)

Entries shall contain the following features:

- (a) Located adjacent to arterial/connector street intersections or primary access to the project.
- (b) Appropriately scaled monument/signage at primary access to identify the project.
- (c) Adequate landscaping on both sides of primary project access to create an enhanced entry experience.

- (d) Access to subdivisions that is limited to main entry roads adjoining arterial or collector roads.

The number accesses may vary, depending on size and location of development and results from traffic impact study. See Article 4 for minimum access point requirements. Driveways shall not have access directly onto adjacent county roads. The entries to the development should provide a focal point with signage and landscaping. Signage shall be designed to be appropriate to the scale of the development and in conformance with the sign regulations of this Code.

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Division 3 Town Core

Section 16.3.310. Intent. (Sec. 16.6.30.1)

- (a) The Town Core district serves as the heart of the community with a broad range of complimentary land uses. It is desirable to encourage a variety of commercial, retail, service, restaurant, entertainment and other uses interspersed with residential homes, lofts and apartments.

Section 16.3.320. Lot and building standards. (Sec. 16.6.30.2)

- (a) *Density, height, and setback criteria.* The following Table 16.3.320 includes the maximum density, lot size, setback criteria, and maximum height allowed within the Town Core zone district. Supplemental criteria is included below the table.

Table 16.3.320. Town Core Lot and Building Standards.

	Maximum Gross Density	Minimum Lot Size	Minimum Front Setback	Minimum Side Setback	Minimum Corner Side Setback	Minimum Rear Setback	Maximum Height
Residential							
Single-family detached	15 units per acre	6,000 square feet	20 feet	7.5 feet	15 feet	15 feet	3 stories
Single-family attached (duplex)	15 units per acre	4,000 square feet	20 feet	7.5 feet	15 feet	15 feet	3 stories
Townhomes	15 units per acre	1,400 square feet	20 feet	7.5 feet	15 feet	15 feet	3 stories
Multi-family	15 units per acre	1,600 square feet	20 feet	20 feet	20 feet	20 feet	3 stories
Accessory dwelling unit	n/a	n/a	Behind front of principal dwelling	7.5 feet	15 feet	15 feet	2 stories
Accessory Structure	n/a	n/a	25 feet	5 feet	15 feet	5 feet	2 stories
Non-Residential	n/a	n/a	20 feet	10 feet	20 feet	15 feet	3 stories

1. Accessible elements are permitted to extend above the maximum building height.
2. An attached dwelling unit with a shared party wall may have a zero (0) foot side yard setback on the side of the lot where the dwelling units combine.

3. The rear setback for an alley loaded attached dwelling unit project may have a reduced rear setback, at the discretion and approval of the Town.
4. The corner side setback requirement applies to a side lot line bordering a public road or street that is not designated as the front yard. This does not apply to a designated alleyway.
5. Attached accessory structures shall meet the requirements of the main structure.
6. Detached accessory structures shall maintain a minimum separation from the main structure as required by adopted building and fire codes.
7. Steeples, chimneys, roof-mounted mechanical equipment, and similar architectural and mechanical elements may exceed the maximum height by no more than twenty (20) percent.
8. A height and shadow study may be required by the Town as part of the review of a three-story structure and shall be required for any requests over three stories.
9. Where applicable, building heights shall transition to adjacent residential properties and be no greater than two (2) stories taller than the tallest adjacent residential structure. Appropriate buffering and landscaping shall be incorporated as required in this Code.

Section 16.3.330. Land uses. (Sec. 16.6.30.3)

(a) Uses by right *(may require a site plan at the direction of Town staff based on the intensity and potential impacts of the proposal)*.

1. Residential land uses:
 - Accessory dwelling
 - Bed and breakfast establishments
 - Family child care homes
 - Adult day centers
 - Home-based business
 - Long-term care facilities
 - Multi-family dwellings
 - Senior/age-restricted housing
 - Single-family dwellings, attached or detached
2. Mixed land uses:
 - Flex buildings (start as residential and shift to commercial over time)
 - Live/work units and buildings
 - Mixed-use buildings (residential, commercial, office, workshops, etc.)
3. Commercial, retail, or service land uses:
 - Administrative, office, and research facilities
 - Appliance sales and service facilities
 - Automobile service and repair—minor facilities
 - Banks and financial institutions
 - Bars/taverns/microbreweries

- Business offices (contractors, electronic repair, small engine, motorcycle)
 - Car/motor vehicle washes
 - Child care centers
 - Commercial and retail businesses, indoor sales, and service
 - Entertainment facilities, commercial theaters, etc.
 - Equipment (small) rental establishments without outdoor sales
 - Gasoline/fueling stations
 - Greenhouses, whether public or private
 - Grocery stores
 - Hospitals
 - Hotels/motels (no room limit)
 - Inns (up to twelve (12) rooms)
 - Laundromats and dry-cleaning retail outlets
 - Medical and dental offices and clinics
 - Movie theaters
 - Office building
 - Parking lots and parking garages (as principal use)
 - Passenger terminals or park-n-rides
 - Personal and business service shops
 - Professional offices
 - Push carts (sidewalk vending)
 - Restaurants
 - Retail sales stores
 - Vehicle sales facilities, including sales of automobiles, motorcycles, RVs, boats, and trucks
 - Veterinary clinics
 - Workshops and custom small industries, including art studios with/without sales
4. Public, quasi-public, other land uses:
- Accessory buildings and uses incidental to the principal use
 - Clubs and lodges
 - Community gardens
 - Conference/convention center
 - Farmer's markets
 - Fire stations
 - Municipal use facilities
 - Museums
 - Parks and open spaces
 - Parks and playgrounds—neighborhood
 - Outdoor amphitheaters
 - Places of worship and assembly

- Public or other nonprofit recreational use facilities
- Public utility main lines and substations
- Rest stops
- Schools (all types)

(b) Uses by special review.

1. Residential land uses:

- Boarding and rooming houses
- Group homes
- Safe houses for adults or children with up to eight (8) persons
- Single-room occupancy boarding houses

2. Commercial, retail or service land uses:

- Agricultural, noncommercial
- Agriculture, commercial
- Automobile service and repair—major facilities
- Cremation facilities
- Dry cleaning facilities
- Equipment rental (heavy) establishments with outdoor sales
- Fireworks sales—temporary
- Kennels small animal
- Mini-storage facilities—enclosed
- Recycling processing and sales Facilities (including biofuel)
- Retail and supply yard establishments with outdoor storage
- Roadside or temporary retail stands/tents
- Farm implement, heavy equipment, and mobile/manufactured home sales facilities
- Storage facilities for outdoor storage of RVs, boats, trailers, etc
- Truck depots
- Truck maintenance facilities

3. Public, quasi-public, other land uses:

- Alternative power generation facilities
- Bus shelters
- Cemeteries
- Wireless telecommunications facilities

4. Industrial land uses:

- Heavy industrial facilities

Note: Land uses not identified may be considered with additional review as determined by Town staff.

Section 16.3.360. Fencing. (Sec. 16.6.30.9)

Front-yard fencing in the Town Core shall be open wood picket or wrought iron and shall not exceed forty-two (42) inches in height. Brick or stone columns are encouraged. Privacy fencing between lots or to screen users shall be allowed per review and approval as a part of a final plat or site plan approval. Privacy fencing shall not exceed six (6) feet in height and shall be minimized and placed so that the visual impact to surrounding uses and the public right-of-way is minimized. Landscape buffering in place of or associated with privacy fencing is encouraged. Privacy fencing, if located adjacent to the public right-of-way, shall be separated from the public right-of-way by a landscape buffer.

Section 16.3.370. Entries and signage. (Sec. 16.6.30.10)

Entries to commercial areas shall be identified by high-quality, ground-mounted signs and/or monumentation. Landscaping shall identify entries with enhanced plantings as shown (flower beds, ornamental trees, etc.). Signage shall be designed to be appropriate to the scale of the development and in conformance with the sign regulations of this Code.

Division 4 Development Node

Section 16.3.410. Intent. (Sec. 16.6.40.1)

- (a) The Development Node Zone District captures key intersections within the Town's Growth Management Area (GMA) but outside the Town Core Zone District area. These nodes are important to the future economic vitality of the community and are planned to be served by urban infrastructure, which may offer the opportunity for higher intensity land uses.
- (b) Development Node Industrial Sub-zoning (see **Section 16.3.440**) is intended for the concentration of industrial land uses and will include separate requirements intended to provide adequate mitigation to potential impacts.
- (c) The Town expects that future development within these areas will be a collective vision created through collaboration between the landowner/developer and the Town, incorporating the guiding principles of the comprehensive plan and other adopted Town plans. The Town shall adhere to these guiding principles while evaluating the development proposals within the development nodes.
- (d) The uses, development patterns, and standards for this zone district are intended to promote and guide development that is suitable to the location, aesthetically complementary to the overall vision of the Town, economically viable, and conforming to the Comprehensive Plan.

Section 16.3.420. Lot and building standards. (Sec. 16.6.40.2)

- (a) *Density, height, and setback criteria.* The following Table 16.3.420 includes the minimum density, lot size, setback criteria, and maximum height allowed within the Development Node zone district. Supplemental criteria is included below the table.

Table 16.3.420. Development Node Lot and Building Standards

	Minimum Gross Density	Minimum Lot Size	Minimum Front Setback	Minimum Side Setback	Minimum Corner Side Setback	Minimum Rear Setback	Maximum Height
Residential							
Single-family detached	8 units per acre	6,000 square feet	20 feet	7.5 feet	15 feet	15 feet	3 stories
Single-family attached (duplex)	8 units per acre	4,000 square feet	20 feet	7.5 feet	15 feet	15 feet	3 stories

Townhomes	8 units per acre	1,400 square feet	20 feet	7.5 feet	15 feet	15 feet	3 stories
Multi-family	8 units per acre	1,600 square feet	20 feet	20 feet	20 feet	20 feet	3 stories
Accessory dwelling unit	n/a	n/a	Behind front of principal dwelling	7.5 feet	15 feet	15 feet	2 stories
Accessory Structure	n/a	n/a	25 feet	5 feet	15 feet	5 feet	2 stories
Non-Residential	n/a	n/a	20 feet	10 feet	20 feet	15 feet	3 stories

1. Accessible elements are permitted to extend above the maximum building height.
2. An attached dwelling unit with a shared party wall may have a zero (0) foot side yard setback on the side of the lot where the dwelling units combine.
3. The rear setback for an alley loaded attached dwelling unit project may have a reduced rear setback, at the discretion and approval of the Town.
4. The corner side setback requirement applies to a side lot line bordering a public road or street that is not designated as the front yard. This does not apply to a designated alleyway.
5. Attached accessory structures shall meet the requirements of the main structure.
6. Detached accessory structures shall maintain a minimum separation from the main structure as required by adopted building and fire codes.
7. Steeples, chimneys, roof-mounted mechanical equipment, and similar architectural and mechanical elements may exceed the maximum height by no more than twenty (20) percent.
8. A height and shadow study may be required by the Town as part of the review of a three-story structure and a use by special review approval shall be required for any requests over three stories.
9. Where applicable, building heights shall transition to adjacent residential properties and be no greater than two (2) stories taller than the tallest adjacent residential structure. Appropriate buffering and landscaping shall be incorporated as required in this Code. See Article 5 – Development Standards and Article 6 – Design Criteria.
10. The Town may approve a reduced side and rear setback through a use by special review process in the Development Node Zone District when the following criteria are met:
 - a. The reduced setback shall be no less than ten (10) feet from all property lines;
 - b. The reduced setback is not adjacent to the Suburban Perimeter Zone District containing single-family housing;
 - c. The height of the building within the reduced setback area is no more than a single story in height; and

- d. Required easements, utilities, and landscaping and buffering criteria can be accommodated within the reduced setback area.

Section 16.3.430. Land uses. (Sec. 16.6.40.3)

(a) Uses by right. *(may require a site plan at the direction of Town staff based on the intensity and potential impacts of the proposal)*

1. Residential land uses:

- Bed and breakfast establishments
- Family child care homes
- Adult day centers
- Long-term care facilities
- Multi-family dwellings
- Senior housing
- Single-family attached dwellings and townhomes

2. Mixed land uses:

- Flex buildings (that start as residential and shift to commercial over time)
- Live/work units and buildings
- Mixed-use buildings (residential, commercial, office, workshops, etc.)

3. Commercial, retail, or service land uses:

- Administrative, office, and research facilities
- Appliance sales and service facilities
- Automobile service and repair (minor) facilities
- Banks and financial institutions
- Bars/taverns/microbreweries
- Business offices (for contractors, electronic repair, small engine, motorcycle)
- Car/motor vehicle washes
- Child care centers
- Commercial and retail businesses with indoor sales and service
- Entertainment facilities, commercial theaters, etc.
- Equipment (small) rental establishments without outdoor sales
- Gasoline/fueling stations
- Greenhouses, whether public or private
- Grocery stores
- Hospitals
- Hotels/motels (no room limit)
- Inns (no room limit)
- Laundromats and dry-cleaning retail outlets
- Medical and dental offices and clinics
- Movie theaters
- Office buildings

- Parking lots and parking garages (principal use)
 - Passenger terminals or park-n-rides
 - Personal and business service shops
 - Professional offices
 - Restaurants
 - Retail sales—general stores
 - Retail sales buildings
 - Vehicle sales businesses, including automobiles, motorcycles, RVs, boats, and trucks
 - Veterinary clinics for small animals with no outside kennels
 - Veterinary hospitals for large animals
4. Public, quasi-public, other land uses:
- Accessory buildings and uses incidental to the principal use
 - Clubs and lodges.
 - Community gardens
 - Conference/convention centers.
 - Farmer's markets
 - Fire stations
 - Municipal use facilities
 - Museums
 - Outdoor amphitheaters
 - Parks and open spaces
 - Parks and playgrounds—neighborhood
 - Places of worship and assembly
 - Public or other nonprofit recreational use facilities
 - Public utility main lines and substations
 - Rest stops
 - Schools, public and private

(b) Uses by special review.

1. Residential land uses:
- Boarding and rooming houses
 - Group homes
 - Safe houses for adults or children with up to eight (8) persons
 - Single-family detached dwellings
 - Single-room occupancy boarding houses
2. Commercial, retail or service land uses:
- Agriculture, commercial
 - Agriculture, noncommercial

- Automobile service and repair (major) facilities
 - Cremation facilities
 - Dry cleaning Plants
 - Equipment rental (heavy) establishments with outdoor sales
 - Kennels for small animals
 - Roadside or temporary retail stands/tents
 - Sales of farm implements, heavy equipment, mobile/manufactured homes
3. Public, quasi-public, other land uses:
- Alternative power generation facilities
 - Bus shelters
 - Wireless telecommunications facilities (no antenna)

Note: Land uses not identified may be considered with additional review as determined by Town staff.

Section 16.3.440. Development node industrial sub-zoning. (Sec. 16.6.40.4)

Development node industrial sub-zoning is contemplated and approved at the time of annexation for a specific property. Upon approval of an annexation and zoning with this designation, the following land uses become allowed rather than by additional review. The following list of uses is not necessarily comprehensive, and during the annexation and zoning process, additional uses may be included by annexation agreement. Additional standards for setbacks, landscaping, fencing, and infrastructure are outlined as follows. Any other requirements are determined through development review.

(a) Industrial land uses:

- Laboratory and/or research facilities
- Light industrial facilities
- Manufacturing Plants, including assembly, sales, and service of commodities
- Retail supply yards and storage facilities
- Recycling facilities (including biofuel) processing and sales facilities
- Solar facilities (see Article 9 for Solar Facilities Development)
- Storage facilities (both indoor and outdoor)
- Truck depots and truck maintenance facilities
- Warehouse, distribution, and wholesale use facilities
- Workshops and custom small industry facilities, including art studios with/without sales

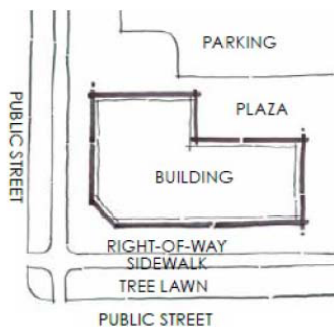
(b) Architectural Standards.

Architectural standards within the development node industrial zone shall mimic the materials and type shown for standard development node uses such as commercial (see Article 6 of this Code).

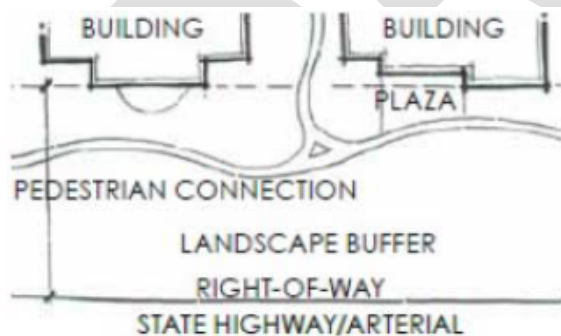
Section 16.3.450. Layout standards. (Sec. 16.6.40.5)

The Town's adopted development and design criteria can be found in Article 5 – Development Standards and Article 6 – Design Criteria. The intent of these regulations are to promote creative and unique developments and projects within the Development Node district. Examples of the intended character represented by the criteria in Articles 5 and 6 are illustrated below.

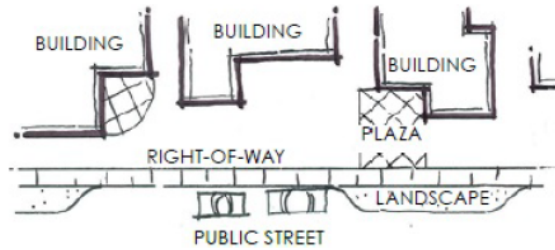
- (a) *Public Street Orientation Diagram.* In areas where a state highway or arterial street is not present, buildings shall be oriented toward the public right-of-way to keep parking lots behind the buildings.



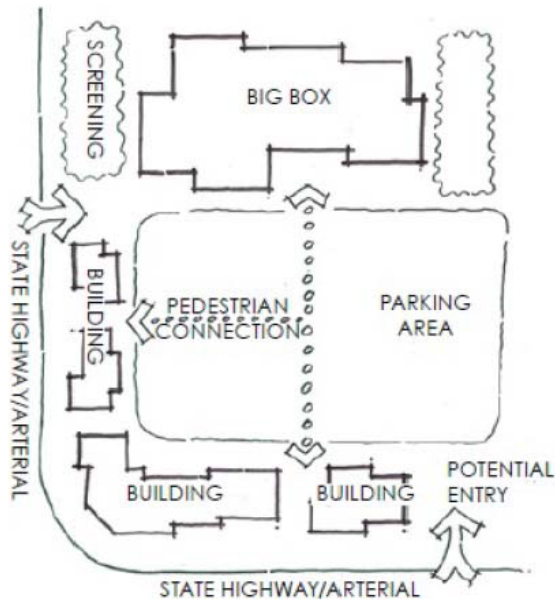
- (b) *State Highway/Arterial Orientation Diagram.* Where property abuts a state highway or arterial street, large landscape buffers are required. Delivery areas and trash enclosures shall be screened from the public right-of-way.



- (c) *On-Street Parking Diagram.* In areas where the right-of-way is narrow, on-street parking, a variety of building setbacks and building edges articulated toward the street are encouraged.



- (d) *Big Box Orientation Diagram.* Big box retailers shall be oriented away from the right-of-way with frontage buildings to screen parking.



Section 16.3.460. Fencing. (Sec. 16.6.40.10)

Front-yard fencing in the development nodes shall be open wood picket or wrought iron and shall not to exceed forty-two (42) inches in height. Brick or stone columns are encouraged. Privacy fencing between users or to screen users shall be allowed per review and approval as a part of a final plat or site plan approval. Privacy fencing shall not exceed six (6) feet in height and shall be minimized and placed so that the visual impact to surrounding uses and the public right-of-way is minimized. Landscape buffering in place of or associated with privacy fencing is encouraged. Privacy fencing, if located adjacent to the public right-of-way, shall be separated from the public right-of-way by a landscape buffer.

Section 16.3.470. Entries and signage. (Sec. 16.6.40.11)

Entries to commercial areas shall be identified by high-quality, ground-mounted signs and/or monumentation. Landscaping shall identify entries with enhanced plantings as shown (flower beds, ornamental trees, etc.). Signage shall be designed to be appropriate to the scale of the development and consistent with the sign regulations of this Code.

Division 5 Supplemental Use Regulations

Section 16.3.510. Reserved.

Section 16.3.520. Home-based businesses. ([Sec. 16.9.20](#))

Home-based businesses must meet the following standards:

- (a) In addition to the family occupying the dwelling containing the home-based business, there shall not be more than one (1) outside employee working at the site of the home-based business.
- (b) The home-based business shall not exceed one thousand (1,000) square feet or thirty percent (30%) of the total floor area of the dwelling, whichever is less, or can be located in an accessory building not to exceed five hundred (500) square feet. The home-based business shall be conducted entirely within the dwelling or designated accessory building, except as required for state-licensed in-home family child-care.
- (c) The home-based business shall be clearly incidental and secondary to the use of the dwelling for dwelling purposes and must not change the residential character thereof.
- (d) There shall be no change in the outside appearance of the building or premises or other visible evidence of the conduct of such home-based business, including advertising signs larger than two (2) square feet in total size. No other displays or advertising that solicit or direct persons to the address other than the single sign limited to two (2) square feet in total area are permitted.
- (e) There must be no exterior storage on the premises of material or equipment used as a part of the home-based business unless it is enclosed and lot coverage requirements for accessory uses are met.
- (f) No equipment or process shall be used in such home-based business that creates any glare, fumes, odors, or other objectionable conditions detectable to the normal senses off the lot if the occupation is conducted in a single-family dwelling or outside the dwelling unit if conducted in other than a single-family dwelling.
- (g) The following uses, because of their tendency to go beyond the limits permitted for home-based businesses and thereby impair the use and value of the residential area, shall not be permitted as home-based businesses: medical marijuana center, medical marijuana optional premises cultivation operation, medical marijuana-infused products manufacturing; auto repair or motorized implement repair; dance, music or other types of instruction (if more than four [4] students are instructed at one [1] time); the painting of vehicles, trailers or boats; private schools with organized classes; welding shops; nursing homes and any retail or wholesale sales to consumers upon the premises not incidental to the home-based business (e.g., hair care products at a hair stylist).

- (h) All exterior aspects of the home-based business operation shall not disrupt the residential character of the area.
- (i) No traffic, services, or deliveries shall be generated by the home occupation that is abnormal to a residential neighborhood. In general, this shall be limited to:
 - 1. No more than one customer vehicle parked at the property at a time, except for drop off of children for childcare or instruction.
 - 2. No more than ten client visits per week, except for drop off of children for childcare or instruction.
 - 3. Delivery of products or materials is limited to that normally associated with residential purposes.
 - 4. All parking necessary for the use shall meet the neighborhood design standards, and be confined to the garage, driveway or street directly in front of the dwelling.
- (j) The property shall comply with all Town building codes and property maintenance standards.
- (k) Use of utilities shall be limited to that typically associated with residential purposes.
- (l) Any home-based business not meeting these criteria or otherwise denied a permit by the Town may only be approved by a special use permit.

Section 16.3.530. Accessory dwellings.

- (a) *Intent.* The regulations in this section are intended to address the construction, conversion, expansion, or improvement of accessory dwellings within the Town and to ensure all accessory dwellings are constructed, converted, expanded or improved, and occupied, in compliance with the Town's adopted life safety codes and building regulations, including but not limited to, building, fire, utility, or stormwater codes.
- (b) *Administrative approval required.* To ensure compliance with the regulations in this section, an application and administrative approval shall be required to construct, convert, expand, or improve any accessory dwelling within the Town. For purposes of this section, "improve" or "improvements" means any alteration, repair, addition, expansion, reconstruction, replacement, renovation, or any work in or upon a building or structure for which a building permit is required pursuant to the Town's adopted building regulations.
- (c) *Application requirements; fees.* Applications for the construction, conversion, expansion, or improvement of any accessory dwelling shall be made in writing and shall include all information, documents, and plans necessary for the Town to determine whether the accessory dwelling complies with the standards set forth in this section. The applicant shall pay all fees established by resolution of the Town Council.

- (d) *Town Staff review and decision.* When the Town Staff has determined the application for the construction, conversion, expansion, or improvement of an accessory dwelling to be complete, the Town Staff shall review the application to determine if the application complies with the standards set forth in this section, and shall approve, approve with conditions, or deny the application. Upon the Town Staff's approval of the application, any building permits required for the accessory dwelling shall be issued to the applicant.
- (e) *Standards.* The following standards apply to all accessory dwellings for which construction, conversion, expansion, or improvements commences on or after the effective date of this ordinance.
1. There shall be no more than one (1) accessory dwelling on a residential lot.
 2. No portion of a lot on which an accessory dwelling is located may be subdivided from, or legally described differently than, the lot containing the principal residential unit.
 3. No portion of a structure containing an accessory dwelling may have ownership different from the ownership of the principal dwelling unit.
 4. The accessory dwelling shall be affixed to an engineered permanent foundation.
 5. An internal or attached accessory dwelling shall be separated from the principal dwelling by a firewall meeting building and fire codes.
 6. Accessory dwelling utilities shall be connected through the principal residential dwelling. Additional water dedication or water or sanitary sewer tap upsize may be required to account for increase in demand beyond the expectation of the original dedication or capacity of the original tap.
 7. Prior to issuance of any building permit for an accessory dwelling, the applicant shall furnish to the Town a statement by the water service provided and wastewater service provider confirming each provider's capacity to service the property upon the construction of the proposed accessory dwelling. If the property is served by a well or onsite wastewater treatment system, the applicant shall furnish information sufficient for the Town to determine that such facilities are adequate to service the accessory dwelling.
 8. The accessory dwelling shall comply with any application residential design standard.
 9. For purposes of calculating residential density, each accessory dwelling shall count as one-half (1/2) dwelling unit.
 10. The size of an accessory dwelling unit shall be no larger than the size of the principal dwelling unit on the same lot as the accessory dwelling unit.

Section 16.3.540. Reserved.

Article 3 – Zoning ~~Regulations and Standards~~ (Chapter 16, Articles 3 & 6)

Section 16.3.10. Zoning districts and boundaries. (Sec. 16.3.30)

- (a) *Zoning districts.* ~~In order to~~To carry out the provisions of this Code and the Comprehensive Plan, the Town is divided into the following zoning districts, ~~which are further defined in Article 6 of this Code:~~

1. Rural Residential (RR)
 - i. Rural Residential Conservation (RR-C)
 - ii. Rural Residential Agricultural (RR-A)
2. Suburban Perimeter (SP)
3. Town Core (TC)
4. Development Nodes (DN)
 - i. Development Node Industrial (DN-I)

- (b) *Official zoning map.* The boundaries and classifications of established districts are as depicted on the "Town of Severance ~~Official~~ Zoning Map," which may from time to time be revised, updated, or redrafted. The zoning map adopted and to be used for reference shall be that map bearing the most recent date of publication and approval by the Town, which has been signed by the chair of the Planning Commission and the Mayor.

1. Interpretation of zoning district boundaries. In the event that uncertainty exists on the zoning map, district boundaries shall be on section lines, lot lines, the centerlines of highways, streets, alleys, railroad rights-of-way or such lines extended; municipal corporation lines; natural boundary lines such as streams or other lines to be determined by the use of scales shown on the map.
2. Amendment upon zoning or modification. Upon enactment of any ordinance annexing and establishing zoning or modifying existing zoning for any property and upon final passage thereof, the Town shall amend the prior existing zoning map to include the annexed area with the proper zoning classification or show the amended classification. Such updated official map shall contain, in table form, the date and number of the ordinance amending it, the title of the change, the date the map was amended to reflect each amendment and the initials of the person who checked and approved the change to the map.
3. Cost of amending zoning. Any person who proposes zoning for property being annexed or proposes modifying existing zoning shall bear the entire cost of amending the zoning map, including all notification costs. The Town shall provide applicants with a copy of the current fee schedule and a fee agreement form upon request.
4. Public inspection; storage of original. A copy of the zoning map shall be available and on display on the Town's official website and at Community Development Town Hall

during normal business hours. ~~In addition, one (1) copy of the current zoning map and all prior zoning maps that have been adopted shall be held in a secure place by the Town Clerk, who shall act as custodian thereof, and the map shall not be amended, changed, updated or otherwise modified or let out of direct control of the Town Clerk for any reason whatsoever. The secured map is to be released for inspection only upon authorization of the Town Clerk.~~

Section 16.3.20. Principal and conditional uses permitted by zoning district. (Sec. 16.3.40)

(a) General application of land uses.

1. Uses designated as "uses by right" are allowed in a zone district as a matter of right but shall be required to conform to all requirements of this Code. If Code requirements are not met the Town reserves the right to deny a project based on non-compliance.

1.2. ~~Uses classified as "encouraged uses" are uses that are generally compatible and encouraged in a zoning district, but not allowed as a matter of right. These uses will be approved based on compliance with the Code as well as compatibility with adjacent land uses.~~ Uses classified as "uses requiring additional reviewuses by special review" are not allowed as a matter of right but may be approved by the Town Council with additional review and certain justification above and beyond the requirements of this Code consistent with the review criteria ofin Article 2 of this Code these regulations for the use by special review process. ~~All uses must meet the requirements of this Code or be allowed as a legal non-conforming use with approval by the Town Council, otherwise they are not permitted.~~

2.3. Land uses not otherwise identified in this Code may be proposed. In order to allow such uses, the new or unlisted land use must be determined to be similar to either an encouraged useuse by right or a use by special~~requiring additional~~ review listed within that zone district. The term "similar" shall mean that the use can be reasonably interpreted to fit into a similar use category as identified in this Code. Town Staff will make a written determination regarding any request for a land use not listed in this Code. If a determination is made that the proposed use is similar to either a listed use by rightencouraged use or a use by special reviewrequiring additional review, it will be processed as a use by special reviewrequiring additional review under the provisions of this Code. ~~Requirements of zone districts. Uses and requirements of zone districts are defined in Article 4 of this Code.~~

Section 16.3.30. Private property agreements and covenants.

This Code is not intended to revoke, repeal, abrogate, or impair any easement, covenant, condition, restriction, or other private property agreement applicable to the underlying real property. In no case shall the Town be obligated to enforce the provisions of any easements, covenants, conditions, restrictions, or agreements between private parties or between a private party and a homeowners' association or metropolitan district. It is the responsibility of the property owner to comply with private

property agreements and requirements such as covenants, design guidelines, and homeowners' association, or metropolitan district rules and regulations. In no instance shall the private property requirements be less restrictive than the requirements of this Code and any other adopted codes of the Town.

Section 16.3.40115. Management plans required. (Sec. 16.6.10.5)

A management plan is required for any project and / or development proposal within the Town of Severance. Examples of management plans and criteria for submitting a management plan are available from the Town.

Section 16.3.50. Zone district design standards overview. (Sec. 16.6.30.4)

The Town's adopted development and design criteria can be found in Articles 5 and 6 of this Code. The intent of these standards is to promote creative and unique developments and projects throughout the Town.

Division 1 Rural Residential



Section 16.3.100. Intent. (Sec. 16.6.10.1)

(a) The intent of the rural residential ~~land use category~~ zone district is to provide large lot, low-density, single-family detached residential development, within the Town's outer fringe. The ~~current land is predominantly rural and agricultural, with some existing residential subdivision developments that are consistent with the future vision of the Comprehensive Plan. These areas may have~~ Development in this district requires centralized water but are may not be served by central sewer. Other municipal infrastructure services may be limited. Typically, the existing roadway network is limited to rural roads spaced in one (1)-mile intervals that correspond to section lines. Rural residential development in this Planning Area is intended to be large-lot residential subdivisions with a predetermined number of acres per lot combined with the limitations of infrastructure that may be accessible or obtainable.

(a)(b) The Rural Residential ~~Zoning~~ District includes two (2) sub-zoning categories as outlined below. Further ~~detail specifics~~ on these sub-zonings is outlined in Sections 16.3.150 and 16.3.155 of this Code.

1. Rural residential agricultural ~~development can occur~~ may be within or outside ~~designated~~ the rural residential areas. The type of development, referred to as Agricultural (Ag) Residential, is characterized by residential development is intended to be large-lot residential subdivisions that include with an agricultural component. The agricultural component may be: that is either
 - i. associated with each individual lot,
 - ii. shared among or a select number of lots, or
 - iii. comprised of a stand-alone agricultural parcel.

~~As with rural~~ Similar to rural residential development, Ag residential development is limited by the ~~availability~~ accessibility or ~~feasibility~~ obtainability of infrastructure.

~~However, the~~ The lot size in Ag residential areas is determined by the agricultural use

associated with the land rather than by a fixed minimum acreage per lot. number of acres per lot is relative to the agricultural land use component rather than a predetermined quantity of acres per lot. (For additional details, refer to See Ag Residential Design Option, [Section 16.4.140](#) of this Code).

2. Rural residential conservation ~~development can occur~~ may be within ~~designated~~ the rural residential areas. ~~This type of development emphasizes preserving large portions of land for Conservation residential development focuses on large percentages of dedicated open space, agricultural, or conservation easements, which complement the layout land area that complements a subdivision of rural subdivision lots. The specific requirements for breakdown of densities, open space allocation, and design standards requirements is are detailed in further described in~~ Section 16.4.140 ~~145~~ of this Code.

Section 16.3.105. Density-Lot and building standards. (Sec. 16.6.10.2)

- (a) Gross ~~minimum-maximum~~ density. Two and one-half (2.5) acres per dwelling unit (e.g., 50 acres divided by 2.5 acres equals= 20 lots).
 1. ~~Density can be higher~~ Lot sizes may be smaller than two and one-half (2.5) acres if the development contains managed open space or preserved agricultural land with clustered lots to achieve the maximum density, and/or remaining land is managed.
 2. Final lot count may be limited by infrastructure or geographic constraints.
- (b) Minimum lot sizes. One and one-quarter (1.25) acres ~~due to septic limitations~~.
 1. Diversity and flexibility of lot sizes is highly encouraged.
- (c) ~~Setbacks. For previously approved subdivisions within the boundaries of the rural residential land use zone that are areas not governed by building envelopes, the minimum setback shall be as shown on the following Table 16.3.105.:~~

Table 16.3.105 - Rural Residential Setback Criteria.

	Principal Residence	Accessory Building
Front setback	25'	25'
Side setback	7.5'	5'
Rear setback	30'	5'

Section 16.3.110. Land uses. (Sec. 16.6.10.3)

- (a) Uses by right. ~~(may require a site plan at the direction of Town staff based on the intensity and potential impacts of the proposal):~~
 1. Residential land uses:
 - Accessory dwelling
 - ~~Home-Home~~-based business (Type-I)

- Single-family attached and detached dwellings residential.
- 2. Commercial, retail, or service land uses:
 - Agriculture, commercial
 - Agriculture, noncommercial
- 3. Public, quasi-public, other land uses:
 - Golf courses
 - Outdoor recreation
 - Places of worship and assembly
 - Public and private parks:
 - Schools
- (b) Uses by special review. Land uses not identified may be considered with additional review as determined by Town staff.

Schools:

(b) Encouraged Uses:

 1. Home-based business (Type II).
 2. Agriculture commercial (Type II).
 3. Golf courses.
 4. Churches.
 5. Outdoor recreation.

Agriculture hobby (Type I) noncommercial, focused (management Plan template).

(b) Uses requiring additional review Uses by special review. Note: Land uses not herein identified may be considered with additional review to be determined by Planning Staff at the pre-application meeting conference. See Section 16.3.4 of this chapter.

(c) Section 16.4.115. Management plans (Sec. 16.6.10.5)

(a) Each project in the rural residential district shall have a Management Plan addressing the following:

 - (a) HOA protective covenants for architectural control.
 - (b) Fencing.
 - (c) Irrigation system, including sources of water.
 - (d) Stormwater facilities.
 - (e) Roads.
 - (f) Trails.
 - (g) Common areas.
 - (h) Privately owned open space.
 - (i) Landscape maintenance fund.
 - (j) Managed individual wastewater treatment systems.
 - (k) Peak season design and annual water requirements (if using agricultural water source).
 - (l) Livestock management Plan (if applicable).

(b) Livestock Management Plans shall address the following:

 1. Perimeter fencing and containment areas.

- ~~2.—Gates.~~
- ~~3.—Lighting.~~
- ~~4.—Landscaping.~~
- ~~5.—Barn or outbuilding materials and construction.~~
- ~~6.—Maintenance of pasture areas.~~
- ~~7.—Treatment of manure.~~
- ~~8.—Storage of feed, trailers, equipment, etc.~~

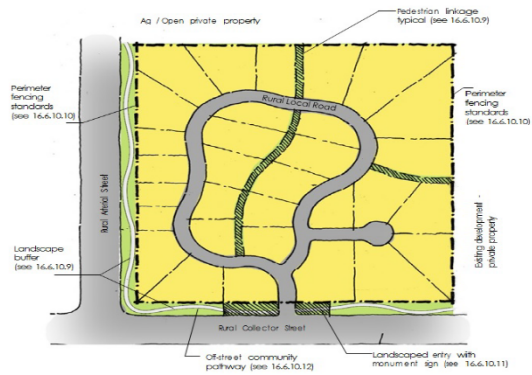
~~(c) In addition to the written Livestock Management Plan, a plot plan is required indicating locations and types of fencing, barns and outbuildings, corrals, pastures, arenas and any other information deemed necessary by the Planning Department.~~

~~Examples of Management Plans and plot plans are available in the Planning Department.~~

Section 16.3.115. ~~Layout Standards standards.~~ (Sec. 16.6.10.6)

(a) Typical subdivision layout.

- ~~1. Individual lots shall be accessed by an internal rural roadway system. Subdivisions in the rural residential area shall be designed with an internal rural roadway system to serve lots within the subdivision.~~
- ~~2. Each lot shall have frontage onto a roadway.~~
- ~~3. The perimeters adjacent to major roadways shall be landscaped and shall provide pathways for pedestrian linkages. Fencing shall be open and visually interesting maintained along the perimeter street frontage.~~
- ~~4. The main entrance to the a subdivision will typically shall have a monument sign and landscaping.~~
- ~~5. The perimeters adjacent to major roadways shall be landscaped and shall provide pathways for pedestrian linkages.~~
- ~~6. Open space and drainage corridors within the subdivision will shall provide opportunities for pedestrian linkage to adjacent subdivisions. Each subdivision proposal should reflect the Comprehensive Plan.~~

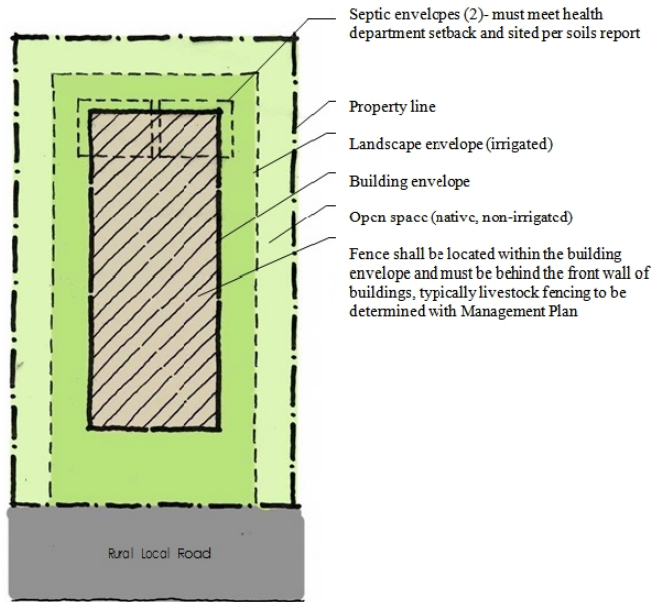


(b) Typical single-family lot layout. The vision for a typical single-family lot is to create a buildable area and identify septic envelopes and open/landscape areas.

(a)(c) Individual wastewater treatment systems (such as underground septic and leach fields and above ground ponds) must be shown on building permit plot plan. Just outside of the building envelope is a landscape envelope, intended to be planted with irrigated turf and plantings. The area between the landscape envelope and the property line consists of native, non-irrigated landscaping in order to create a feeling of openness and uniformity between lots. Fencing shall be reviewed and approved by the HOA/Metro District and the Town.

(c) For previously approved subdivisions within the boundaries of the rural residential land use zone that are not governed by building envelopes, the minimum setback shall be as follows:

	Principal Residence	Accessory Building
Front setback	25'	25'
Side setback	7.5'	5'
Rear setback	30'	5'



Notes:

1. Building and landscape envelopes are intended to be conceptual and may vary. Envelopes shall be established on the site Plan, approved by the Architectural Review Committee (ARC), and submitted with the initial building permit application for each lot. Modification to any approved building envelope shall require HOA and Town Planning Department approvals.
2. Minimum side and rear setback to any improvement, including irrigated turf, shall be twenty-five (25) feet. (Trees and shrubs with drip irrigation are excluded).
3. Final location of septic envelopes shall be identified on plot Plan; location and size shall be determined by health department and soils analysis.
4. Maximum amount of irrigated area—twenty five thousand (25,000) square feet. The area between the landscape envelope and the property line consists of native, non-irrigated landscaping in order to create a feeling of openness and uniformity between lots.
5. Ag/livestock fencing may vary per management Plan.

Sec. 16.6.10.7. Street standards—Severance Transportation Master Plan.

Reserved.

Section 16.3.120. HOA documents and architectural standards (Sec. 16.6.10.8)

Review of architecture shall be by developer's covenants, design guidelines, homeowner's association, or Metro District. Building permit applications must be accompanied by a letter from said entity stating architectural approval.

Covenants will be recorded with the subdivision plat.

Sec. 16.4.130. Edges/landscape (Sec. 16.6.10.9 and 16.6.10.12)

- (a) The perimeter treatment adjacent to major roadways should include a landscape buffer of varying width with a minimum width of twenty (20) feet. A developer-installed fence should be placed inside the property line within an easement on each lot or tract. The landscape should be complementary to the rural character of the surrounding area. The use of shade trees is encouraged along greenbelt community pathways.

Section 16.3.125. Fencing (Sec. 16.6.10.10)

- (a) Fencing along major roadways and public areas shall be of a rural character. The treatment should be consistent within the entire development. Fencing located along collector or arterial roads shall be open rail/open character, wood and set back from the right-of-way a minimum of twenty (20) feet. Fencing shall be made visually interesting and shall avoid creating a "tunnel" effect. Style of fencing for neighborhood should strive for consistency with surroundings and intended design. Compliance with this standard may be accomplished by integrating architectural elements such as brick or stone columns and incorporating articulation or openings into the design. Varying the alignment or setback of the fence and softening the appearance of fence lines with Plantings-plantings or similar techniques is also encouraged. Privacy fences should not be used along major roadways and public areas. For agriculture uses, T-post fences, wire fences and electric fences are allowed as per the management Planplan.
- (b) Perimeters not associated with major roadways shall be fenced by the developer with T-post and wire fencing or better. Internal common areas, including pedestrian connectivity pathways and drainage conveyance channels, shall be fenced by the developer using materials consistent with the development. Management and maintenance of all fencing shall be addressed in the developer's management Planplan.



Section 16.3.130. Entries and signage. (Sec. 16.6.10.11)

Entry signs and entry features should be a visual and attractive focal point for the development. The type and size of signs should be appropriate for the size of the subdivision. Rural character is highly encouraged.



Section 16.4.145. Connectivity (Sec. 16.6.10.12)

Pedestrian connectivity within and adjacent to the subdivision is highly encouraged. Each development shall provide a combination of trails, sidewalks or widened streets to accomplish connectivity. Off-street pedestrian linkage can be accomplished with the use of open greenways and drainage conveyance corridors with meandering trails or paths. Refer to Typical Subdivision Layout for examples. Each subdivision must contain a twenty (20) foot minimum perimeter landscape buffer with a minimum six (6) foot wide community pathway. Where a subdivision either borders or includes portions of the Great Western Trail the developer will be required to pave the trail with a minimum ten (10) foot concrete cross section for the entirety of the trail within or adjacent to the property. Sidewalks adjacent to all school sites and parks require a minimum width of five (5) feet or wider. Projects shall connect to Severance trail network whether that be through newly dedicated neighborhood trails or connections to a previously established Severance trail network.



Sec. 16.6.10.13. -- Lighting.

All lighting within the Rural Residential Zoning District shall comply with the Dark Skies Ordinance Lighting Zone 1 requirements:
(Ord. 2021-08-52)

Section 16.3.135. Managed individual wastewater treatment system standards. (Sec. 16.6.10.14)

- (a) Owners and/or applicants are required to submit documentation of approval for individual wastewater treatment systems (such as underground septic and leach fields and above ground ponds) from Weld County as part of a development or permit application with the Town. The Town does not regulate individual wastewater treatment standards.
- (b) Any screening or buffering required for above ground systems shall be provided in accordance with the Town's landscaping and buffering standards of this Code.
- (a) The location and extents of such systems shall be reflected on the development application and building permit plot plan drawings when submitted to the Town. ~~Design. Prior to submitting for a managed individual wastewater treatment system permit with the county Department of Public Health and Environment, each owner shall submit his or her design Plans to the Town for review and approval.~~
 - ~~1. All systems must be designed and installed in accordance with all applicable county individual sewage disposal system regulations and the Colorado Weld County Department of Public Health and Environment guidelines. The county Weld County Department of Public Health and Environment has final approval of all managed individual wastewater treatment system designs.~~
 - ~~2. All systems must be designed to meet the minimum requirements of the development's managed individual wastewater treatment system design as described in the Town's Environmental Management Handbook.~~
 - ~~3. All managed individual wastewater treatment systems shall be designed for site-specific conditions, including but not limited to maximum seasonal high groundwater, poor soils, and shallow bedrock.~~
 - ~~4. Once the managed individual wastewater treatment system has been approved by the Town, the permit application may be submitted to the county Department of Public Health and Environment.~~
 - ~~5.1. Activities such as landscaping (i.e., the Planting of shrubs and trees) and construction (i.e., auxiliary structures, dirt mounds, etc.) are expressly prohibited in the designated leach field sites. These areas should be maintained through the use of grass.~~
- (b) Inspection:
 - ~~1. Prior to backfilling the installed managed individual wastewater treatment system and after final inspection and approval by the county, each owner shall notify the Town in writing and submit to the Town a copy of such county approval.~~

Section 16.3.140. Rural residential agriculture sub-zoning. *(Sec. 16.6.10.15)*

The rural residential agricultural sub-zoning is intended to allow private property owners to annex existing agricultural operations into the Town and continue operations. The process for receiving the rural residential agricultural sub-zoning is the same as any other zoning request and may either come through the annexation process or a rezoning of an existing annexed property. The following are characteristics of the Ag-residential agriculture sub-zoning design-option:

- (a) Agriculture component retained.
- (b) Served by domestic water.
- (c) Joint access points to and from county roads to reduce driveways where practical. (Existing agricultural accesses permitted in Weld County may be maintained if no further subdivision is taking place).
- (d) No HOA required.
- (e) No interior fencing required.
- (f) Density:
 - 1. Minimum lot size (septic): Ten (10) acres.
 - 2. Gross density: one (1) dwelling unit per fifteen (15) acres.
- (g) Perimeter treatment:
 - 1. Fencing to be addressed on fencing Planplan.
 - 2. Road right-of-way: same as rural residential.
 - 3. Connectivity to adjacent subdivisions not required.
 - 4. Landscaping that can be native.
- ~~(h) Management Plans should address the following:~~
 - ~~1. Agricultural operations.~~
 - ~~2. Roadway connections.~~
 - ~~3. Maintenance.~~
 - ~~4. Stormwater management report, including release rates and water quality (only required if subdivided or changed from historical usage).~~
 - ~~5. Livestock management Plan.~~
 - ~~6. Road/dust mitigation.~~
 - ~~7. Fencing.~~

Section 16.3.145. Rural residential conservation sub-zoning. (Sec. 16.6.10.16)

The rural residential conservation sub-zoning is intended to allow private property owners to annex large, existing agricultural or open lands into the Town with a restriction on a portion of the property that conserves the land as farmland or open space in perpetuity. As an incentive to the property owner, the owner will be allowed to develop the unencumbered lands into a greater number of lots with more diverse sizes than the rural residential agriculture sub-zoning.

The following are characteristics of the **Ag-residential conservation sub-zoning** design-option:

- (a) Conservation component retained (conservation easement, dedicated open space, agricultural operation).
- (b) Served by domestic water
- (c) Joint access points to and from county roads to reduce driveways where practical
- (d) Reserved.
- (e) HOA (required) on developed lands with provisions for management and maintenance of private lots, improvements, common areas, livestock, infrastructure and other elements of the developed areas (HOA not required on the conservation land)
- (f) No interior fencing required (Fencing along public roadways may be required adjacent to residential lots.)
- (g) Density: defined by the following example and based on percentage of open space
 EXAMPLE: Minimum initial land size = sixty (60) acres (gross). A minimum of sixty percent (60%) (thirty-six [36] acres) shall be perpetually conserved, and on the remaining land (twenty-four [24] acres), two (2) lots will be allowed. If a farmstead already exists, it can be platted as a third lot. With each additional ten (10) acres of contiguous land, sixty percent (60%) (six [6] acres) shall adjoin the original conserved land, and one (1) additional lot shall be allowed. Once platted and developed, no future plats of the initial land that increase the number of lots or reduce the amount of the conserved land will be allowed.

Examples:

1. 70 acres X 60% = 42 acres conserved and 3 lots on 28 acres
2. 80 acres X 60% = 48 acres conserved and 4 lots on 32 acres
3. 100 acres X 60% = 60 acres conserved and 6 lots on 40 acres
4. 120 acres X 60% = 72 acres conserved and 8 lots on 48 acres
5. 160 acres X 60% = 96 acres conserved and 12 lots on 64 acres
6. 180 acres X 60% = 108 acres conserved and 14 lots on 72 acres
7. (Any single home or farmstead can be platted as one [1] additional lot.)

Conservation land shall be contiguous and available for large areas of farming or rural open space. Lots may be clustered or scattered. Minimum lot size = three (3) acres. Diversity of lot sizes is encouraged. Any grouping of lots using a shared access and exceeding four (4) lots shall have an internal roadway designed and shall be built to rural residential specifications of the Town. Groups of two (2), three (3) or four (4) lots shall have a hard-surface shared-access pad connected to the perimeter public roadway. Each shared-access pad shall be concrete measuring forty (40) feet' wide x one hundred (100)' feet long x six (6)" inches thick, with private drives serving individual lots from the shared-access pad. Any shared-access pad shall be owned and maintained by the HOA. Driveways serving individual lots shall be contained within the lot and shall be owned and maintained by the lot owner. Single lot access to the roadways will be discouraged.

(h) Perimeter treatment:

1. Fencing adjacent to right-of-way shall be addressed in fencing Plan. Criteria and maintenance responsibilities shall be described in the HOA documents.
2. Road right-of-way: Right-of-way dedication shall adhere to the Severance Transportation Master Plan. Maintenance of public roadways shall be the responsibility of the Town.
3. Road cross section may be modified at Staff discretion based on proposed number of lots and anticipated traffic. Letter from licensed traffic engineer shall be required in cases in which proposed changes differ from transportation Plan. A minimum dirt road cross section of thirty-two (32) feet will be required adjacent to proposed residential lots for any rural residential conservation development.
4. Connectivity to adjacent subdivisions or undeveloped lands shall be reviewed on a case-by-case basis.
5. Landscaping between the fencing (if applicable) or property line of any lot (excluding conservation lots) and the public roadway shall be native, drought-tolerant grasses. Management and maintenance responsibilities of these areas shall be described in the HOA documents.

(i) ~~Management Plans or other HOA documents shall address the following:~~

- ~~1. Conservation method.~~
- ~~2. Land uses.~~
- ~~3. Roadway connections, including public and adjacent property roads.~~
- ~~4. Private and common land management and maintenance.~~
- ~~5. Stormwater management report, including detention on any lot (if applicable), release rates and water quality.~~
- ~~6. Livestock management Plan (if applicable).~~
- ~~7. Maintenance of public roads.~~
- ~~8. Fencing.~~

9.—Architectural design review (required) for any improvements, including but not limited to homes, outbuildings, livestock corrals or paddocks, internal or perimeter fencing, play equipment, storage facilities, etc.

10. Inclusion of Windsor-Severance Fire District as a review agency for any proposed improvements to evaluate emergency access, fire sprinkler requirements or other site and/or building requirements.

~~Sec. 16.6.10.17. Parking standards.~~

~~The number of required parking spaces shall be based on the requirements Section 16.9.40.~~

Division 2 Suburban Perimeter



Section 16.3.210. Intent. (Sec. 16.6.20.1)

- (a) The suburban perimeter residential land use category ~~has a predominance of lower density housing that has~~includes a mix of residential densities with access to public water, sewer, streets, and open spaces. This district is meant for residential homes and excludes large industries and other large intense uses. Home businesses, civic organizations, and some types of commercial and agricultural uses are allowed but will be limited in size and density. The main purpose of this district is to meet a wide range of housing choices, and to provide neighborhoods that invite walking to gathering places, services and conveniences that are integrated into the rest of the community by a pattern of streets, blocks, and other linkages.
- (b) ~~The Comprehensive Plan can be fulfilled by encouraging creativity. For example, new neighborhoods are typically designed with meandering streets with a diversity of product. Neighborhood edges adjacent to major roadways include landscaping, meandering pathways, and attractive entry features. Pedestrian connections to the Severance Greenway are encouraged as a part of the roadway system or in greenbelt corridors. Additionally, the suburban perimeter also acts as a transitional land use between the lower density rural residential land uses and the more urbanized Town core.~~

Section 16.3.220. ~~D~~Lot and building standards.ensity (Sec. 16.6.20.2)

- (a) ~~Generally~~Density, height, and setback criteria. The following Table 16.3.220 includes the minimum density, lot size, setback criteria, and maximum height allowed within the Suburban Perimeter zone district. Supplemental criteria is included below the table.
 - 1.—Gross minimum density: two (2) dwelling units per acre.
 - 2.—Maximum density: determined by market.
 - 3.—Minimum lot sizes: six thousand (6,000) square feet (see typical single family lot layout).

- i. — Six thousand (6,000) square feet for Single-Family Detached.
 - ii. — Four thousand (4,000) square feet for Single-Family Attached (Duplex units).
 - iii. — One thousand and four hundred (1,400) square feet for Townhomes.
 - iv. — One thousand and six hundred (1,600) square feet for Multi-Family.
4. — Building height not to exceed two (2) stories without additional review.

Table 16.3.220. Suburban Perimeter Lot and Building Standards.

	Minimum Gross Density	Minimum Lot Size	Minimum Front Setback	Minimum Side Setback	Minimum Corner Side Setback	Minimum Rear Setback	Maximum Height
Residential							
Single-family detached	2 units per acre	6,000 square feet	20 feet	7.5 feet	15 feet	15 feet	2 stories
Single-family attached (duplex)	2 units per acre	4,000 square feet	20 feet	7.5 feet	15 feet	15 feet	2 stories
Townhomes	2 units per acre	1,400 square feet	20 feet	7.5 feet	15 feet	15 feet	2 stories
Multi-family	2 units per acre	1,600 square feet	20 feet	20 feet	20 feet	20 feet	2 stories
Accessory dwelling unit	n/a	n/a	Behind front of principal dwelling	7.5 feet	15 feet	15 feet	2 stories
Accessory Structure	n/a	n/a	25 feet	5 feet	15 feet	5 feet	2 stories
Non-Residential	n/a	n/a	20 feet	10 feet	20 feet	15 feet	2 stories

Commented [JO1]: This includes criteria from this section of code and the Multifamily and Non-Residential Design Standards (moved here)

1. Accessible building elements (e.g., elevator shafts and stairways) are permitted to extend above the maximum building height.
2. An attached dwelling unit with a shared party wall may have a zero (0) foot side yard setback on the side of the lot where the dwelling units combine.
3. The rear setback for an alley loaded attached dwelling unit project may have a reduced rear setback, at the discretion and approval of the Town.
4. The corner side setback requirement applies to a side lot line bordering a public road or street that is not designated as the front yard. This does not apply to a designated alleyway.
5. Attached accessory structures shall meet the requirements of the main structure.
6. Detached accessory structures shall maintain a minimum separation from the main structure as required by adopted building and fire codes.
7. Steeples, chimneys, roof-mounted mechanical equipment, and similar architectural and mechanical elements may exceed the maximum height by no more than twenty (20) percent.

- (b) **Floorplan-Lot Diversity.** Development Plans shall include a diversity of lot sizes ~~and floorplans~~. On projects of one hundred fifty (150) acres or less, a minimum of four (4) lot sizes is required. On projects of one hundred fifty (150) acres or more, a minimum of six (6) lot sizes is required. This may be met through additional housing types outlined in the following Section C.
- (c) **Product Diversity.** A mix of permitted housing types shall be included in any individual development plan, ~~as defined in section 16.6.20.2 (2)~~, to the extent reasonably feasible, depending on the size of the parcel. To promote such variety, the following minimum standards shall be met:
1. The following minimum number of housing types is required on any project development plan:
 - i. A minimum of two (2) housing types is required on any project development plan containing less than one hundred and fifty (150) acres, including such plans that are part of a phased overall development.
 - ii. A minimum of three (3) housing types is required on any project development plan containing one hundred and fifty (150) acres or more.
 2. Housing types.
 - i. Single-family attached dwellings.
 - A. Duplex units
 - B. Townhome units
 - ii. Alley loaded design.
 - iii. Patio home design.
 - iv. Multi-family dwellings, by additional review.

~~(d) Open space/parks and connectivity requirements. (See Article 6 – Design Standards).~~

Section 16.3.230. Land uses. (Sec. 16.6.20.3)

- (a) **Uses by right.** ~~(may require a site plan at the direction of Town staff based on the intensity and potential impacts of the proposal)~~
1. Residential ~~land~~ uses:
 - ~~Accessory dwelling (limited)~~
 - ~~Bed and breakfast establishments~~
 - ~~Home-based business~~
 - ~~Single family attached and detached, townhomes, multi-family, and senior housing.~~
 2. Commercial, retail, or service land uses:
 - ~~Adult day/respite centers~~
 - ~~Child care centers~~
 - ~~Long-term care facilities~~
 - ~~Neighborhood shopping centers~~
 - ~~Office, financial, medical services, and clinics~~
 2. ~~Home-based business (Type-I)~~

Commented [MLM2]: An Adult Day Center is a certified center that provides Basic and Specialized Adult Day Services to participants, in accordance with a “care plan,” on a regularly scheduled basis, and promote social, recreational, physical, and emotional well-being that encompasses the supportive services needed to ensure the optimal wellness of the participant. Specialized adult day services may also be provided to participants who require extensive rehabilitative therapies.

Adult Day Centers are regulated and overseen by the CDPHE.

Commented [MLM3]: Per Colorado regulations, a long-term care facility is a health facility that holds itself out as a nursing home, nursing facility, nursing care facility or intermediate care facility or a health facility that is planned, organized, operated, and maintained to provide supportive, restorative, and preventive services to persons who, due to physical and/or mental disability, require continuous or regular inpatient care.

3. Public, quasi-public, other land uses:

- Golf courses
- Neighborhood parks
- Outdoor recreation
- Places of worship and assembly
- Schools

3.—Schools

4.—Outdoor recreation

(b)—Encouraged Uses

- 1.—Bed and breakfast establishments
- 2.—Churches
- 3.—Childcare centers
- 4.—Adult day/respice centers
- 5.—Long-term care facilities
- 6.—Office, financial, medical services, and clinics
- 7.—Neighborhood shopping centers
- 8.—Golf courses

(c)—Uses requiring additional reviewUses by special review.

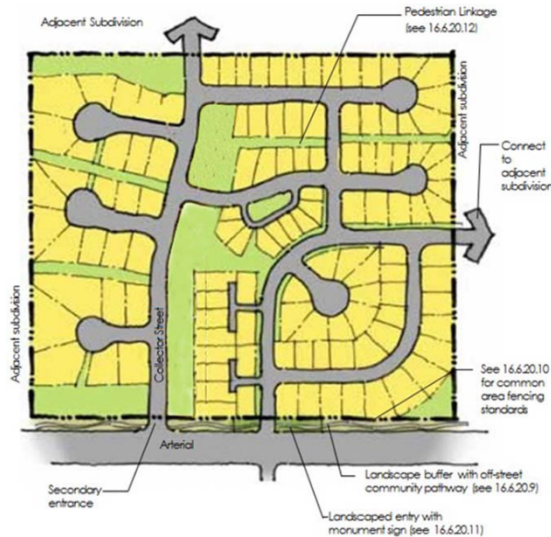
•(b) Home-based business (Type II)—See Article 9, Supplemental Regulations

- Workshops/small custom industry

Note: Land uses not identified may be considered with additional review to be determined by Planning Staff Town staff at pre-application meeting. See Section 16.3.4.3 of this chapter.

Section 16.3.240. Standards—Layout standards. (Sec. 16.6.20.6)

- (a) Typical subdivision layout. Each subdivision proposal should address the appropriate elements of the Comprehensive Plan, as suggested by the following. Subdivisions in the suburban perimeter shall be designed with an internal urban roadway system to serve lots within the subdivision. Streets shall be designed with a curved, linear pattern; grid streets should be avoided. Each lot shall have frontage onto a roadway. The edges adjacent to major roadways shall be landscaped and shall provide community pathways for pedestrian linkages. Landscape buffers adjacent to major roadways should vary in width, and perimeter fencing shall be visually interesting. The main entrance to the subdivision typically will have appropriately scaled monument sign and landscaping. Open space, drainage corridors and roadways within the subdivision can provide opportunities for pedestrian linkage to adjacent subdivisions, the Town Core, and the Severance Greenway. See Articles 5 and 6 for additional criteria, as applicable.



Note: Roadway Plans must identify collector roadways and adhere to requirements set forth in the Transportation Master Plan.

1. The spacing and frequency of connector streets are to be determined with each application. Connector streets shall connect neighborhoods to perimeter arterial streets and adjacent properties. Please refer to the Severance Transportation Plan.
2. Limited driveway access and parking to connector streets may be allowed in specific locations. Traffic study may determine the need for a higher-volume street design.
- 3.2 Internal street design should incorporate the following whenever possible:
 - i. Three and four-way intersections.
 - ii. The use of a curves (non-grid) grid or modified grid.
 - iii. View corridors.
 - iv. Focal points.

- (b) Typical single-family lot layout. Each lot in the suburban perimeter will identify a buildable area (building envelope) and setbacks on the construction drawings in order to achieve an appropriate building coverage/landscape ratio. The minimum lot size shall be six thousand (6,000) square feet, and diversity-Diversity of lot sizes is highly encouraged. An overall fence Plan-plan shall be reviewed by the Town and administered by the HOA or Metro District.

	Principal Residence	Accessory Building
Front setback	20'	25'
Side setback	7.5'	5'
Rear setback	15'	5'
Street-Side Setback	15'	15'

For uses other than single family, setbacks are case-by-case and at the discretion of the Planning Commission and Town Council. Setbacks will be considered and approved through the platting process and indicated on the recorded plat.

~~Sec. 16.6.20.7. Street standards—Refer to Severance Transportation Master Plan. (Municipal Code; Sec. 16.6.20.7)~~

Reserved.

~~Section 16.3.250. HOA/Metro documents and architectural standards. (Sec. 16.6.20.8)~~

- ~~(a) Review of architecture shall be by developer's covenants, design guidelines, homeowner's association, or Metro District. Building permit applications must be accompanied by a letter from said entity stating architectural approval.~~
- ~~(b) Covenants will be recorded with the subdivision plat.~~
- ~~(c) A management Plan for common areas shall be submitted to the Town for review.~~

~~Sec. 16.4.260. Edges/landscape (Sec. 16.6.20.9)~~

~~The perimeter treatment adjacent to roadways should include a landscape buffer that of varying width with a minimum width of twenty (20) feet. A meandering community pathway that is a minimum of ten (10) feet wide shall be located within the buffer. The use of shade trees is encouraged along greenbelt community pathways.~~

Section 16.3.270. Fencing. (Sec. 16.6.20.10)

- (a) Lots adjoining greenbelts shall have common area fencing. Common area fencing shall be "articulated" with fence columns, fence details, varying depths of greenbelts, etc.
- (b) All subdivisions shall submit master fence Plans-plans that will include fence locations, details and criteria, including:
 - 1. Perimeter fence/common area fencing, all perimeter fencing shall be wood unless otherwise approved by Board.
 - 2. Encourage fence height is six (6) feet. Maximum fence height eight (8) feet along arterial and connector streets by variance.
 - 3. Fence amenities/columns/walls.
 - 4. Rear and side yard fencing (private).
 - 5. Side and front-yard fencing visible from right-of-way/greenbelt/common areas.
 - 6. Master fence Plan, which shall show where in a subdivision each type of fence shall be located.

7. Terminations of common area fencing (encouraged to have a column/fence amenity).
8. Fencing ornamented with details that shall be uniform throughout the development (standard dog-eared privacy fence not allowed).
9. All common area fencing and private fencing that is visible from right-of-way/greenbelt/common areas shall have a common fence color, as identified on the master fence Plan.



Section 16.3.280. Entries and signage. (Sec. 16.6.20.11)

Entries shall contain the following features:

- (a) Located adjacent to arterial/connector street intersections or primary access to the project.
- (b) Appropriately scaled monument/signage at primary access to identify the project.
- (c) Adequate landscaping on both sides of primary project access to create an enhanced entry experience.
- (d) Access to subdivisions that is limited to main entry roads adjoining arterial or collector roads.

The number accesses may vary, depending on size and location of development and results from traffic impact study. [See Article 4 for minimum access point requirements.](#) Driveways shall not have access directly onto adjacent county roads. The entries to the development should provide a focal point with signage and landscaping.



Commented [MLM4]: Staff to confirm this is the correct article as the Code reorganization process continues.

Sec. 16.4.290. Connectivity (~~Sec. 16.6.20.12~~)

Pedestrian connectivity within and adjacent to the subdivision is required. Each development shall provide a combination of trails and sidewalks within the subdivision to provide connections to the Severance Greenway and trail corridor. Off-street pedestrian linkage can be accomplished by the use of open greenway/corridors with meandering trails or paths. Refer to Typical Subdivision Layout for example. Each subdivision adjacent to arterial streets must contain a perimeter landscape buffer with an off-street community path that is a minimum of six (6) feet wide. Where a subdivision either borders or includes portions of the Great Western Trail the developer will be required to pave the trail with a minimum ten (10) feet concrete cross section for the entirety of the trail within or adjacent to the property. Sidewalks adjacent to all school sites and parks require a minimum width of five (5) feet or wider.



~~Sec. 16.6.20.13. -- Lighting.~~

~~All lighting within the Suburban Perimeter Zoning District shall comply with the Dark Skies Ordinance Lighting Zone 2 requirements.~~

~~Sec. 16.6.20.14. Parking standards.~~

~~The number of required parking spaces shall be based on the requirements in Section 16.9.40.~~

Division 3 Town Core



Section 16.3.310. Intent. (Sec. 16.6.30.1)

- (a) The Town ~~core~~ Core district serves as the heart of the community with a broad range of complimentary land uses. ~~will be the heart of the community and will continue to include a diversity of uses.~~ It is desirable to encourage a variety of commercial, retail, service, restaurant, entertainment and other uses interspersed with residential homes, lofts and apartments.
- (b) ~~The vision of the Town core is to develop/redevelop into a vibrant and somewhat eclectic place for residents and visitors to live, shop, work, dine, recreate and gather while supporting a theme reminiscent of a charming and active small Town. To achieve this, the Town recognizes the importance of allowing the market to direct development with minimal regulatory and/or design constraints. Concurrently, property owners and developers must recognize the importance of supporting the overall theme of the Town core area and employ design elements, materials and site Planning techniques that reinforce this vision. All participants need to acknowledge that the Town core area will continue to be a dynamic place where uses may change and properties may be altered to reflect changes in the marketplace and in response to the growth of the community that coincide with the Comprehensive Plan.~~

Section 16.3.320. Lot and building standards. ~~Density.~~ (Sec. 16.6.30.2)

- (a) Density, height, and setback criteria. The following Table 16.3.320 includes the maximum density, lot size, setback criteria, and maximum height allowed within the Town Core zone district. Supplemental criteria is included below the table.
- (a) ~~Density shall not exceed fifteen (15) units per acre.~~
- (b) ~~Building height shall not exceed three (3) stories without additional review.~~
- (c) ~~Setbacks shall adhere to the standards as follows:~~

1. Single-family residential dwellings shall match the criteria set forth in the Suburban Perimeter section of this Code.
2. Multi-family residential dwellings shall match the criteria set forth in the multi-family design and development standards of this Code.
3. Non-residential commercial and office uses shall match the criteria set forth in the non-residential commercial and office design and development standards of this Code.
4. Instances where setback criteria are not explicitly stated or for all other uses not identified in this section, setback criteria shall be determined through the platting and/or site plan review process.

Table 16.3.320. Town Core Lot and Building Standards.

	Maximum Gross Density	Minimum Lot Size	Minimum Front Setback	Minimum Side Setback	Minimum Corner Side Setback	Minimum Rear Setback	Maximum Height
Residential							
Single-family detached	15 units per acre	6,000 square feet	20 feet	7.5 feet	15 feet	15 feet	3 stories
Single-family attached (duplex)	15 units per acre	4,000 square feet	20 feet	7.5 feet	15 feet	15 feet	3 stories
Townhomes	15 units per acre	1,400 square feet	20 feet	7.5 feet	15 feet	15 feet	3 stories
Multi-family	15 units per acre	1,600 square feet	20 feet	20 feet	20 feet	20 feet	3 stories
Accessory dwelling unit	n/a	n/a	Behind front of principal dwelling	7.5 feet	15 feet	15 feet	2 stories
Accessory Structure	n/a	n/a	25 feet	5 feet	15 feet	5 feet	2 stories
Non-Residential	n/a	n/a	20 feet	10 feet	20 feet	15 feet	3 stories

Commented [JO5]: This includes criteria from this section of code and the Multifamily and Non-Residential Design Standards (moved here)

1. Accessible elements are permitted to extend above the maximum building height.
2. An attached dwelling unit with a shared party wall may have a zero (0) foot side yard setback on the side of the lot where the dwelling units combine.
3. The rear setback for an alley loaded attached dwelling unit project may have a reduced rear setback, at the discretion and approval of the Town.

Commented [JO6]: Language relocated from Article 6 - Design Standards

4. The corner side setback requirement applies to a side lot line bordering a public road or street that is not designated as the front yard. This does not apply to a designated alleyway.
5. Attached accessory structures shall meet the requirements of the main structure.
6. Detached accessory structures shall maintain a minimum separation from the main structure as required by adopted building and fire codes.
7. Steeple, chimneys, roof-mounted mechanical equipment, and similar architectural and mechanical elements may exceed the maximum height by no more than twenty (20) percent.
8. A height and shadow study may be required by the Town as part of the review of a three-story structure and shall be required for any requests over three stories.
9. Where applicable, building heights shall transition to adjacent residential properties and be no greater than two (2) stories taller than the tallest adjacent residential structure. Appropriate buffering and landscaping shall be incorporated as required in this Code.

Section 16.3.330. Land uses. (Sec. 16.6.30.3)

- (a) Uses by right (may require a site plan at the direction of Town staff based on the intensity and potential impacts of the proposal).
 1. Residential land uses:
 - Accessory dwelling (including "carriage units") associated with a permitted use
 - Bed and breakfast establishments
 - Family child care homes- care, day care and elderly day care homes
 - Adult day centers
 - Home-based business
 - Long-term care facilities
 - Multi-family dwellings
 - Senior/age-restricted housing
 - Single-family dwellings, attached or detached
 2. Mixed land uses:
 - Flex buildings (start as residential and shift to commercial over time)
 - Live/work units and buildings
 - Mixed-use buildings (residential, commercial, office, workshops, etc.)
 3. Commercial, retail, or service land uses:
 - Administrative, office, and research facilities
 - Appliance sales and service facilities
 - Automobile service and repair—minor facilities
 - Banks and financial institutions
 - Bars/taverns/microbreweries
 - Business offices (contractors, electronic repair, small engine, motorcycle)
 - Car/motor vehicle washes

- Child day-care centers
- Commercial and retail businesses, indoor sales, and service
- Entertainment facilities, commercial theaters, etc.
- Equipment (small) rental establishments without outdoor sales
- Gasoline/fueling stations
- Greenhouses, whether public or private
- Grocery stores
- Hospitals
- Hotels/motels (no room limit)
- Inns (up to twelve (12)} rooms)
- Laundromats and dry-cleaning retail outlets
- Medical and dental offices and clinics
- Movie theaters
- Office building
- Parking lots and parking garages (as principal use)
- Passenger terminals or park-n-rides
- Personal and business service shops
- Professional offices
- Push carts (sidewalk vending)
- Restaurants
- Retail sales stores
- Vehicle sales facilities, including sales of automobiles, motorcycles, RVs, boats, and trucks
- Veterinary clinics
- Workshops and custom small industries, including art studios with/without sales

2.4. Public, quasi-public, other land uses:

- Accessory buildings and uses incidental to the principal use
- Clubs and lodges
- Community gardens
- Conference/convention center
- Farmer's markets
- Fire stations
- Municipal use facilities
- Museums
- Parks and open spaces
- Parks and playgrounds—neighborhood
- Outdoor amphitheaters
- Places of worship and assembly
- Public or other nonprofit recreational use facilities
- Public utility main lines and substations

- Rest stops
- Schools (all types)

(d) Encouraged Uses:

Residential or mixed uses:

- Senior housing
- Bed and breakfast establishments
- Family care, day care and elderly day care homes
- Flex buildings (start as residential and shift to commercial over time)
- Long term care facilities
- Mixed-use buildings (residential, commercial, office, workshops, etc.)
- Live/work units and buildings

3. Commercial, retail or service land uses:

- Administrative, office and research facilities
- Appliance sales and service facilities
- Automobile service and repair—minor facilities
- Banks and financial institutions
- Bars/taverns/microbreweries
- Business offices (contractors, electronic repair, small engine, motorcycle)
- Car/motor vehicle washes
- Child day care centers
- Commercial and retail businesses, indoor sales, and service
- Entertainment facilities, commercial theaters, etc
- Equipment (small) rental establishments without outdoor sales
- Gasoline/fueling stations
- Greenhouses, whether public or private
- Grocery stores
- Home based business Type I
- Hospitals
- Hotels/motels (no room limit)
- Inns (up to twelve [12] rooms)
- Laundromats and dry-cleaning retail outlets
- Medical and dental offices and clinics
- Movie theaters
- Office building
- Parking lots and parking garages (as principal use)
- Passenger terminals or park-n-rides
- Personal and business service shops
- Professional offices
- Push carts (sidewalk vending)
- Restaurants

- ~~Retail sales stores~~
- ~~Vehicle sales facilities, including sales of automobiles, motorcycles, RVs, boats, and trucks~~
- ~~Veterinary clinics~~
- ~~Workshops and custom small industries, including art studios with/without sales~~
- 4. ~~Public, quasi-public, other land uses:~~
 - ~~Accessory buildings and uses incidental to the principal use~~
 - ~~Clubs and lodges~~
 - ~~Conference/convention center~~
 - ~~Religious institutions~~

(b) ~~Uses requiring additional review~~ Uses by special review.

1. Residential land uses:
 - Boarding and rooming houses
 - Group homes
 - Safe houses for adults or children with up to eight (8) persons
 - Single-room occupancy boarding houses
 - ~~Two-family (duplex) dwellings.~~
 - ~~Zero-lot-line single- or two-family dwellings.~~
2. Commercial, retail or service land uses:
 - ~~Agricultural, noncommercial~~
 - ~~and a Agriculture, commercial uses (ranching, farming, grazing, etc.)~~
 - Automobile service and repair—major facilities
 - Cremation facilities
 - Dry cleaning ~~facilities~~ Plants
 - Equipment rental (heavy) establishments with outdoor sales
 - Fireworks sales—temporary
 - Kennels small animal
 - Mini-storage facilities—enclosed
 - Recycling processing and sales Facilities (including biofuel)
 - Retail and supply yard establishments with outdoor storage
 - Roadside or temporary retail stands/tents
 - Farm implement, heavy equipment, and mobile/manufactured home sales facilities
 - Storage facilities for outdoor storage of RVs, boats, trailers, etc
 - Truck depots
 - Truck maintenance facilities
 - ~~Home-Based Business Type II~~
3. Public, quasi-public, other land uses:
 - Alternative power generation facilities

- Bus shelters
 - Cemeteries
 - Wireless telecommunications facilities
4. Industrial land uses:
- Heavy industrial facilities

Note: Land uses not identified may be considered with additional review as determined by Town staff.

~~(c) Open space/parks and connectivity requirements (see section 16.12.250).~~

~~Note: Land uses not identified may be considered with additional review to be determined by Planning Staff at pre-application meeting. See Section 16.3.40 of this Code.~~

~~Sec. 16.3.340. Design standards (Sec. 16.6.30.4)~~

~~The following design standards including applicable Corridor Plan standards shall apply within the Town Core.~~



~~(a)~~

~~(b)~~

- ~~(c) Plazas and outdoor gathering spaces are encouraged. Pedestrian walks and spaces shall be provided as necessary to ensure that projects are easily navigated and enjoyable for the pedestrian. Site amenities, such as seating, outdoor dining, trash receptacles and bike racks for public use, shall be required.~~



~~(d)~~



(e) —
(f) —

(g) Varied setbacks to buildings are encouraged to create interest along the streetscape. Gathering spaces, outdoor dining, patios, etc., are encouraged. Buildings on the south side of the road are encouraged to be set back from the right-of-way to reduce shading on the public sidewalk and street.



(h) —
(i) —

(j) Sidewalk Plantings, outdoor seating and activity on the public sidewalk is encouraged. A minimum of a four (4)-foot clear walkway needs to be maintained. Sidewalks adjacent to all school sites and parks require a minimum width of five (5) feet or wider. Street trees are encouraged. Creative pedestrian-scale signage and displays of art are encouraged.



(k) —
(l) —

(m) Utility pedestals and trash enclosures shall be buffered with landscaping. Trash enclosures shall be located in locations that have the least impact on views from the public right-of-way as practical. Trash enclosures shall be masonry with steel gates to match building architecture.

Sec. 16.6.30.5. Parking standards.

The number of required parking spaces shall be based on the requirements in Section 16.9.40.

Sec. 16.6.30.6. Street standards—Refer to the Town of Severance Transportation Plan. (Municipal Code; Sec. 16.6.30.6)

Reserved.

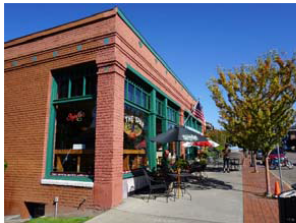
Sec. 16.4.350. Architectural standards (Sec. 16.6.30.7)

The following shall be the architectural standards for the Town core:

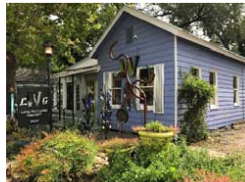
Creative and unique architectural and site design are encouraged.



Where there are large windows and/or entries facing the public right-of-way, awnings are encouraged. Architecture that is reflective of the regional character of urban buildings is encouraged, including red or tan brick, sandstone, awnings, etc. Varied building heights, styles, colors and building details are encouraged.



Residential-scale buildings that have the appearance of a historic home that has been renovated for commercial use are encouraged. These types of building are strongly recommended on the south side of the street and at the edges of the urban core to act as a transition to adjacent land uses.



In the southern part of the Town core, it is expected that the buildings will be adjacent to the public right-of-way with parking behind or beside the building.

In the Town core, it is expected that deliveries, utilities and some parking will be behind the buildings and accessed by alleys. The transition from the Town core to surrounding land uses needs to be addressed carefully on an as-needed basis.

Architectural design of homes should reflect early twentieth (20th) century traditional, dominated by porches, steeper roofs, mixed materials, etc.

New residential development in the Town core should have detached sidewalks with a minimum six (6)-foot tree lawn. Alleys are encouraged and may be gravel, not paved.

Sec. 16.4.350. Edge/landscape/connectivity (Sec. 16.6.30.8)

- (a) Edges of commercial developments shall have high-quality landscaping. Berms, meandering walks, a mix of irrigated turf, shrub beds, ornamental trees, evergreen trees and shade trees are encouraged. The ends of parking bays shall have landscape islands, which shall be strategically placed to ensure that there are no more than twenty (20) contiguous parking spaces. Parking lot landscaping shall be review by Town Staff, be appropriate depending on proposed land use and adhere to any Corridor Plan standards.

Parking lots shall be buffered from view from the public right-of-way with practical landscaping.

Entryways and areas visible from public streets shall have some type of landscape component. Examples could include window boxes, hanging baskets, large pots and Planting beds.

- (b) Where a subdivision either borders or includes portions of the Great Western Trail the developer will be required to pave the trail with a minimum ten (10) foot concrete cross section for the entirety of the trail within or adjacent to the property.

Section 16.3.360. Fencing. (Sec. 16.6.30.9)

Front-yard fencing in the Town ~~core~~ Core shall be open wood picket or wrought iron and shall not exceed forty-two (42) inches in height. Brick or stone columns are encouraged. Privacy fencing between ~~users-lots~~ or to screen users shall be allowed per review and approval as a part of a final plat or site ~~Plan~~ plan approval. Privacy fencing shall not exceed six (6) feet in height and shall be minimized and placed so that the visual impact to surrounding uses and the public right-of-way is minimized. Landscape buffering in place of or associated with privacy fencing is encouraged. Privacy fencing, if located adjacent to the public right-of-way, shall be separated from the public right-of-way by a landscape buffer.



Section 16.3.370. Entries and signage. (Sec. 16.6.30.10)

Entries to commercial areas shall be identified by high-quality, ground-mounted signs and/or monumentation. Landscaping shall identify entries with enhanced ~~Plantings-plantings~~ as shown (flower beds, ornamental trees, etc.). Signage shall be designed to be appropriate to the scale of the development and in conformance with ~~16.9.30~~ the sign regulations of this Code.

~~Sec. 16.6.30.11. -- Lighting.~~

~~Lighting shall be consistent with the architecture and should consist of pedestrian-scale cut-off lighting so that no light spills beyond the boundary of the project. Parking lots, pedestrian ways and building entries shall be appropriately lit. All lighting within the Town Core Zoning District shall comply with the Dark Skies Ordinance Lighting Zone 3 requirements. Neighboring uses shall be considered through the review process.~~

~~(Ord. 2021-08 §2)~~

DRAFT

Division 4 Development Nodes



Section 16.3.410. Intent. (Sec. 16.6.40.1)

- (a) The Development Nodes Zone District (see the end of Section 16.6.40.4 for locations and descriptions) captures are surrounding key intersections in areas within the Town's Growth Management Area (GMA) but outside the Town Core Zone District area core area. These development nodes are important to the future economic vitality of the community and are planned have the potential to be served by urban infrastructure, which may offer the opportunity for higher intensity land uses. The development node zoning includes one (1) sub-zoning as outlined below, allowing for more specific industrial uses and intending to be contemplated at the time of annexation and zoning:
- (b) Development Node Industrial Sub-zoning (see Sections 16.6.40.4 16.3.440) is intended for the concentration of more industrial land uses and will include separate requirements intended to provide adequate mitigation to potential impacts.
- (c) It is recognized that the development node areas are not presently served with full urban infrastructure, and it could take several years for this infrastructure to reach each node. However, it is desirable to promote development of these areas and, therefore, development of these areas could occur in stages. The Town expects that future development within these development nodes areas will would be a collective vision created through collaboration between the landowner/developer and the Town, incorporating the guiding principles of the comprehensive plan and other adopted Town plans Severance: HomeTown Vision Comprehensive Plan. The Town shall adhere to these guiding principles while evaluating the development proposals within the development nodes.
- (d) Ultimately, tThe uses, development patterns, and standards for this zone district presented in this division are expected to result in are intended to promote and guide development that is

suitable to the location, aesthetically complementary to the overall vision of the Town, economically viable, and conforming to the Comprehensive Plan. ~~Until the marketplace, combined with appropriate levels of infrastructure, supports the full implementation of this division, flexibility and real-time assessments will guide the review and approval of developments within the development node areas.~~

Section 16.3.420. ~~Density Lot and building standards.~~ (Sec. 16.6.40.2)

(a) ~~Density, height, and setback criteria.~~ The following Table 16.3.420 includes the minimum density, lot size, setback criteria, and maximum height allowed within the Development Node zone district. Supplemental criteria is included below the table.

Table 16.3.420. Development Node Lot and Building Standards

	<u>Minimum Gross Density</u>	<u>Minimum Lot Size</u>	<u>Minimum Front Setback</u>	<u>Minimum Side Setback</u>	<u>Minimum Corner Side Setback</u>	<u>Minimum Rear Setback</u>	<u>Maximum Height</u>
Residential							
<u>Single-family detached</u>	<u>8 units per acre</u>	<u>6,000 square feet</u>	<u>20 feet</u>	<u>7.5 feet</u>	<u>15 feet</u>	<u>15 feet</u>	<u>3 stories</u>
<u>Single-family attached (duplex)</u>	<u>8 units per acre</u>	<u>4,000 square feet</u>	<u>20 feet</u>	<u>7.5 feet</u>	<u>15 feet</u>	<u>15 feet</u>	<u>3 stories</u>
<u>Townhomes</u>	<u>8 units per acre</u>	<u>1,400 square feet</u>	<u>20 feet</u>	<u>7.5 feet</u>	<u>15 feet</u>	<u>15 feet</u>	<u>3 stories</u>
<u>Multi-family</u>	<u>8 units per acre</u>	<u>1,600 square feet</u>	<u>20 feet</u>	<u>20 feet</u>	<u>20 feet</u>	<u>20 feet</u>	<u>3 stories</u>
<u>Accessory dwelling unit</u>	<u>n/a</u>	<u>n/a</u>	<u>Behind front of principal dwelling</u>	<u>7.5 feet</u>	<u>15 feet</u>	<u>15 feet</u>	<u>2 stories</u>
<u>Accessory Structure</u>	<u>n/a</u>	<u>n/a</u>	<u>25 feet</u>	<u>5 feet</u>	<u>15 feet</u>	<u>5 feet</u>	<u>2 stories</u>
<u>Non-Residential</u>	<u>n/a</u>	<u>n/a</u>	<u>20 feet</u>	<u>10 feet</u>	<u>20 feet</u>	<u>15 feet</u>	<u>3 stories</u>

1. Accessible elements are permitted to extend above the maximum building height.
2. An attached dwelling unit with a shared party wall may have a zero (0) foot side yard setback on the side of the lot where the dwelling units combine.
3. The rear setback for an alley loaded attached dwelling unit project may have a reduced rear setback, at the discretion and approval of the Town.

4. The corner side setback requirement applies to a side lot line bordering a public road or street that is not designated as the front yard. This does not apply to a designated alleyway.
 5. Attached accessory structures shall meet the requirements of the main structure.
 6. Detached accessory structures shall maintain a minimum separation from the main structure as required by adopted building and fire codes.
 7. Steeple, chimneys, roof-mounted mechanical equipment, and similar architectural and mechanical elements may exceed the maximum height by no more than twenty (20) percent.
 8. A height and shadow study may be required by the Town as part of the review of a three-story structure and a use by special review approval shall be required for any requests over three stories.
 9. Where applicable, building heights shall transition to adjacent residential properties and be no greater than two (2) stories taller than the tallest adjacent residential structure. Appropriate buffering and landscaping shall be incorporated as required in this Code. See Article 5 – Development Standards and Article 6 – Design Criteria.
 10. The Town may approve a reduced side and rear setback through a use by special review process in the Development Node Zone District when the following criteria are met:
 - a. The reduced setback shall be no less than ten (10) feet from all property lines;
 - b. The reduced setback is not adjacent to the Suburban Perimeter Zone District containing single-family housing;
 - c. The height of the building within the reduced setback area is no more than a single story in height; and
 - d. Required easements, utilities, and landscaping and buffering criteria can be accommodated within the reduced setback area.
- (a) ~~Density in residential areas is encouraged to be a minimum of eight (8) units per acre.~~
- (b) ~~Building height shall not exceed three (3) stories without additional review.~~
- (c) ~~Setbacks shall adhere to the standards set forth by the following:~~
1. ~~Single family residential dwellings shall match the criteria set forth in the Suburban Perimeter section of this Code.~~
 2. ~~Multi-family residential dwellings shall match the criteria set forth in the multi-family design and development standards of this Code.~~
- ~~Non-residential commercial and office uses shall match the criteria set forth in the non-residential commercial and office design and development standards of this Code.~~
- ~~Instances where setback criteria are not explicitly stated or for all other uses not identified in this section, setback criteria shall be determined through the platting and/or site plan review process.~~

Section 16.3.430. Land uses. (Sec. 16.6.40.3)

(a) Uses by right. (may require a site plan at the direction of Town staff based on the intensity and potential impacts of the proposal)

1. Residential land uses:

- Bed and breakfast establishments
- ~~Family child care homes-care,~~
- ~~Adult day centers-care and elderly day-care home~~
- ~~Flex buildings (that start as residential and shift to commercial over time);~~
- Long-term care facilities
- Multi-family dwellings ~~(four [4] or more units);~~
- ~~Multi-family dwellings (less than four [4] unit~~Senior housing
- ~~Single-family attached dwellings and townhomes~~

2. Mixed land uses:

- Flex buildings (that start as residential and shift to commercial over time)
- Live/work units and buildings
- Mixed-use buildings (residential, commercial, office, workshops, etc.)

3. Commercial, retail, or service land uses:

- Administrative, office, and research facilities
- Appliance sales and service facilities
- Automobile service and repair (minor) facilities
- Banks and financial institutions
- Bars/taverns/microbreweries
- Business offices (for contractors, electronic repair, small engine, motorcycle)
- Car/motor vehicle washes
- Child day-care centers
- Commercial and retail businesses with indoor sales and service
- Entertainment facilities, commercial theaters, etc.
- Equipment (small) rental establishments without outdoor sales
- Gasoline/fueling stations
- Greenhouses, whether public or private
- Grocery stores
- Hospitals
- Hotels/motels (no room limit)
- Inns (no room limit)
- Laundromats and dry-cleaning retail outlets
- Medical and dental offices and clinics
- Movie theaters
- Office buildings
- Parking lots and parking garages (principal use)
- Passenger terminals or park-n-rides

- Personal and business service shops
- Professional offices
- Restaurants
- Retail sales—general stores
- Retail sales buildings
- Vehicle sales businesses, including automobiles, motorcycles, RVs, boats, and trucks
- Veterinary clinics for small animals with no outside kennels
- Veterinary hospitals for large animals

4. Public, quasi-public, other land uses:

- Accessory buildings and uses incidental to the principal use
- Clubs and lodges.
- Community gardens
- Conference/convention centers.
- Farmer's markets
- Fire stations
- Municipal use facilities
- Museums
- Outdoor amphitheaters
- Parks and open spaces
- Parks and playgrounds—neighborhood
- Places of worship and assembly~~Religious assembly facilities.~~
- Public or other nonprofit recreational use facilities
- Public utility main lines and substations
- Rest stops
- Schools, public and private

~~(a) Encouraged Uses.~~

~~4. Commercial, retail or service land uses:~~

- ~~• Administrative, office and research facilities.~~
- ~~• Appliance sales and service facilities.~~
- ~~• Automobile service and repair (minor) facilities.~~
- ~~• Banks and financial institutions.~~
- ~~• Bars/taverns/microbreweries.~~
- ~~• Business offices (for contractors, electronic repair, small engine, motorcycle).~~
- ~~• Car/motor vehicle washes.~~
- ~~• Child day care centers.~~
- ~~• Commercial and retail businesses with indoor sales and service.~~
- ~~• Entertainment facilities, commercial theaters, etc.~~
- ~~• Equipment (small) rental establishments without outdoor sales.~~

- ~~Gasoline/fueling stations.~~
- ~~Greenhouses, whether public or private.~~
- ~~Grocery stores.~~
- ~~Hospitals.~~
- ~~Hotels/motels (no room limit).~~
- ~~Inns (no room limit).~~
- ~~Laundromats and dry-cleaning retail outlets.~~
- ~~Medical and dental offices and clinics.~~
- ~~Movie theaters.~~
- ~~Office buildings.~~
- ~~Parking lots and parking garages (principal use).~~
- ~~Passenger terminals or park-n-rides.~~
- ~~Personal and business service shops.~~
- ~~Professional offices.~~
- ~~Restaurants.~~
- ~~Retail sales—general stores.~~
- ~~Retail sales buildings.~~
- ~~Vehicle sales businesses, including automobiles, motorcycles, RVs, boats, and trucks.~~
- ~~Veterinary clinics for small animals with no outside kennels.~~
- ~~Veterinary hospitals for large animals.~~

2. ~~Public, quasi-public, other land use~~ ~~Accessory buildings and uses incidental to the principal use.~~

~~Clubs and lodges.~~

~~Reserved.~~

~~Conference/convention centers.~~

~~Religious assembly facilities.~~

(b) ~~Uses requiring additional review~~ Uses by special review.

1. Residential land uses:

- Boarding and rooming houses
- Group homes
- Safe houses for adults or children with up to eight (8) persons
- Single-family detached dwellings
- Single-room occupancy boarding houses
- ~~Two-family (duplex) dwellings.~~
- ~~Zero-lot-line single- or two-family dwellings.~~

2. Commercial, retail or service land uses:

- ~~Agriculture~~ al, commercial and a

- ~~Agriculture, noncommercial uses (ranching, farming, grazing, etc.)~~
 - Automobile service and repair (major) facilities
 - Cremation facilities
 - Dry cleaning Plants
 - Equipment rental (heavy) establishments with outdoor sales
 - Kennels for small animals
 - Roadside or temporary retail stands/tents
 - Sales of farm implements, heavy equipment, mobile/manufactured homes
3. Public, quasi-public, other land uses:
- Alternative power generation facilities
 - Bus shelters
 - Wireless telecommunications facilities (no antenna)

~~(a) Open spaces/parks and connectivity requirements (see section 16.12.250).~~

~~Note: Land uses not identified may be considered with additional review as determined by Town staff. Land uses not identified may be considered with additional review to be determined by Planning Staff at pre-application meeting. See Section 16.3.40 of this Code.~~

Section 16.3.440. Development node industrial sub-zoning. (Sec. 16.6.40.4)

Development node industrial sub-zoning is contemplated and approved at the time of annexation for a specific property. Upon approval of an annexation and zoning with this designation, the following land uses become allowed rather than by additional review. The following list of uses is not necessarily comprehensive, and during the annexation and zoning process, additional uses may be included by annexation agreement. Additional standards for setbacks, landscaping, fencing, and infrastructure are outlined as follows. Any other requirements are determined through development review.

(a) Industrial land uses:

- Laboratory and/or research facilities
- Light industrial facilities
- Manufacturing Plants, including assembly, sales, and service of commodities
- Retail supply yards and storage facilities
- Recycling facilities (including biofuel) processing and sales facilities
- Solar facilities (see ~~Section 16.11.160, Article 9 for Solar Facility~~ Facilities Development)
- Storage facilities (both indoor and outdoor)
- Truck depots and truck maintenance facilities
- Warehouse, distribution, and wholesale use facilities
- Workshops and custom small industry facilities, including art studios with/without sales

(b) *Architectural Standards.*

Architectural standards within the development node industrial zone shall mimic the materials and type shown for standard development node uses such as commercial (see ~~Section~~

~~16.6.40.5 Article 6 of this Code~~). In some cases, with Town Council approval, architectural requirements may be waived.

~~(c) Landscape Requirements:~~

~~(d) For uses that do not already have specific setback requirements (such as oil and gas or solar), a boundary with a dissimilar land use is required at a minimum to incorporate a landscaped setback of twenty (20) feet. Setback design will be dependent on site constraints and proposed use intensity.~~

~~(d)(a) Parking requirements:~~

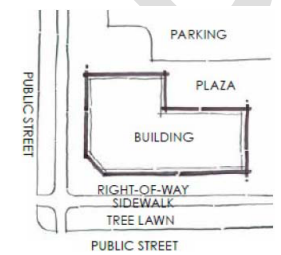
- ~~1. Parking requirements shall meet the standard of the parking table in Section 16.6.40.5. Parking is required to be screened and, where possible, shall be located away from the frontage of major roadways.~~

~~(e)(b) Lighting and sound: Industrial land uses that abut residential development will be required to submit both a lighting Plan (photometric) and sound study for proposed operations. Plans will be reviewed, and additional setbacks or requirements may be added to minimize impacts on neighboring properties. All lighting within the Development Node Zoning District shall comply with the Dark Skies Ordinance Lighting Zone 3 requirements.~~

Section 16.3.450. Design standards~~Layout standards~~. (Sec. 16.6.40.5)

The Town's adopted development and design criteria can be found in Article 5 – Development Standards and Article 6 – Design Criteria. The intent of these regulations are to promote creative and unique developments and projects within the Development Node district. Examples of the intended character represented by the criteria in Articles 5 and 6 are illustrated below.

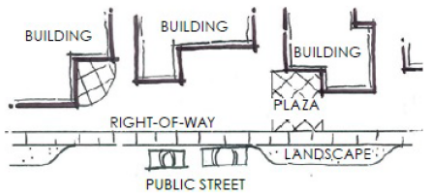
- (a) Public Street Orientation Diagram. In areas where a state highway or arterial street is not present, buildings shall be oriented toward the public right-of-way to keep parking lots behind the buildings.



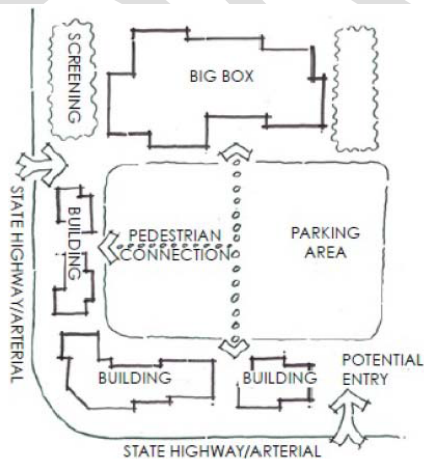
- (b) State Highway/Arterial Orientation Diagram. Where property abuts a state highway or arterial street, large landscape buffers are required. Delivery areas and trash enclosures shall be screened from the public right-of-way.



- (c) On-Street Parking Diagram. In areas where the right-of-way is narrow, on-street parking, a variety of building setbacks and building edges articulated toward the street are encouraged.



- (e)(d) Big Box Orientation Diagram. Big box retailers shall be oriented away from the right-of-way with frontage buildings to screen parking.



The following shall be the design standards for the development nodes:



Plazas and outdoor gathering spaces are encouraged. Mountain views will be preserved when applicable.



Creative and appropriately scaled building signage is encouraged.



Varied setbacks to buildings are encouraged to create interest along the streetscape. Gathering spaces, outdoor dining, patios, etc., are encouraged. Buildings on the south side of the road are encouraged to be set back from the right-of-way to reduce shading on the public sidewalk and street.



Sidewalk Plantings, outdoor seating and activity on the public sidewalk is encouraged. A minimum of four (4) feet clear walkway needs to be maintained.



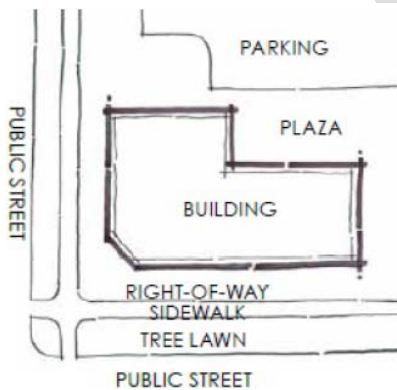
Street trees and dissection of large parking lots with landscaping are encouraged.



Condensed and creative pedestrian-scale signage is encouraged within projects.

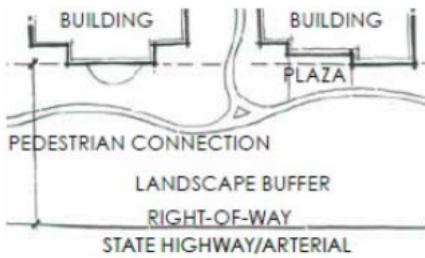


Pedestrian walks and spaces shall be provided as necessary to ensure that projects are easily navigated and enjoyable for the pedestrian. Sidewalks adjacent to all school sites and parks require a minimum width of five (5) feet or wider.



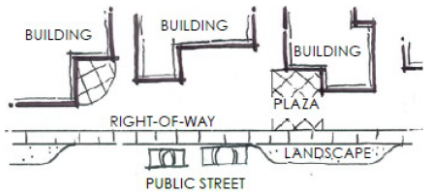
Public Street Orientation Diagram

In areas where a state highway or arterial street is not present, buildings shall be oriented toward the public right-of-way to keep parking lots behind the buildings.



State Highway/Arterial Orientation Diagram

Where property abuts a state highway or arterial street, large landscape buffers are required. Delivery areas and trash enclosures shall be screened from the public right-of-way.

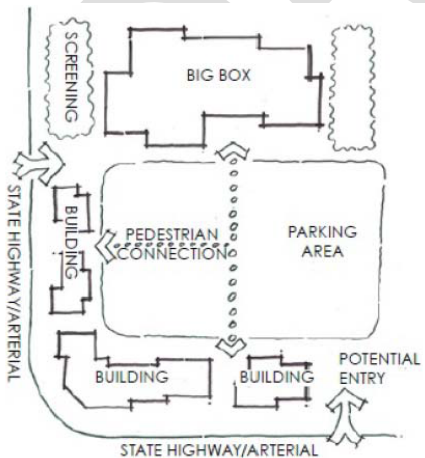


On-Street Parking Diagram

In areas where the right-of-way is narrow, on-street parking, a variety of building setbacks and building edges articulated toward the street are encouraged.

Big Box Orientation Diagram

Big box retailers shall be oriented away from the right-of-way with frontage buildings to screen parking.





Buildings that back to the public right-of-way, parking lots, utility pedestals and trash enclosures shall be buffered with landscaping. Trash enclosures shall be located in places that have the least impact on views from the public right-of-way, as practical. Trash enclosures shall be masonry with steel gates to match building architecture.

Sec. 16.6.40.5.1. Parking standards.

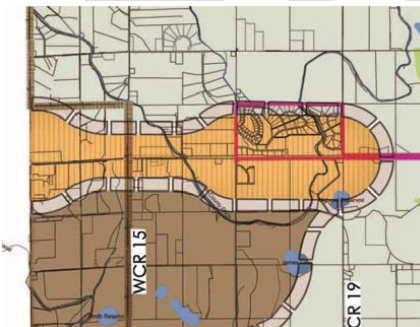
The number of required parking spaces shall be based on the requirements in Section 16.9.40.

Sec. 16.4.460. Street standards (Sec. 16.6.40.6)

Street standards within the development nodes that are not a state highway shall comply with the standards set forth in the Severance Transportation Master Plan.

Sec. 16.4.470. Description of nodes (Sec. 16.6.40.7)

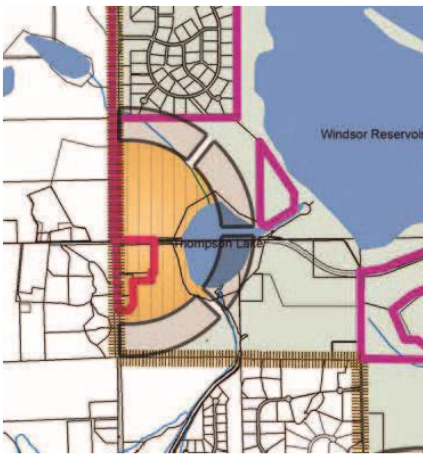
- (a) Corner of Colorado Highway 14 and Colorado Highway 257. This intersection of two (2) busy state highways has high traffic counts, good access into the north end of Fort Collins on Highway 14, south on Colorado Highway 257 to Severance and Windsor and east on Highway 14 to Ault and Highway 85. The landowner/developer shall meet with the Town and the Colorado Department of Transportation to determine allowable access points onto state highways located within the development nodes.



Corner of Colorado Highway 14 and Colorado Highway 257

- (b) Corner of Colorado Highway 257 and Weld County Road 74 (Harmony Road). The west side of this intersection is in the Town of Windsor GMA. The east side at the intersection is in the Town of Severance GMA. The properties adjacent to this intersection are within the boundaries of an

intergovernmental agreement with the Town of Windsor that further defines the land uses, etc. This intersection has high traffic counts, with Highway 257 being a key transportation link between Severance and Windsor and to Highway 14 to the north. Harmony Road is quickly becoming a very busy thoroughfare that becomes a key street in the Town core area of Severance. To the east, it connects to Eaton, and to the west, it is becoming a heavily developed corridor through Timnath and Fort Collins with an important link to Interstate 25. The majority of the traffic from the Severance area going to Fort Collins or Interstate 25 will utilize the Harmony Corridor. The landowner/developer shall meet with the Town, the Town of Windsor, the county and the Colorado Department of Transportation to determine allowable access points onto state highways and county roads located with the development node.



Corner of Colorado Highway 257 and Weld County Road 74 (Harmony Road)

- (c) Colorado Highway 392 Corridor (north side). The Highway 392 corridor development node is intended to be primarily commercial and industrial with surrounding higher intensity residential land uses. This corridor is governed by a land use and revenue sharing intergovernmental agreement between the Town of Severance and the Town of Windsor. Commercial and industrial land is a required use for a portion of the corridor. The landowner/developer shall meet with the Town, the Town of Windsor and the Colorado Department of Transportation to determine allowable access points onto Highway 392 within the development node.



Colorado Highway 392 Corridor (north side)

(Ord. 2021-08-52)

Sec. 16.4.480. Architectural standards (Sec. 16.6.40.8)

The following shall be the architectural standards for the development nodes in addition to Corridor Plan standards where appropriate:



Creative and unique architecture and site design are encouraged.



Distinctive architectural feature elements that create focal points and destination backdrops are encouraged.

Architecture that is reflective of the regional character of urban buildings is encouraged, including red or tan brick, sandstone, exaggerated roof overhangs, awnings, etc.



Varied building heights, styles, colors and building details are encouraged.



In the development nodes, it is expected that deliveries, utilities and some parking will be behind the buildings and accessed by alleys. The screening of these facilities and transition from the development nodes to surrounding land uses need to be addressed carefully on an as-needed basis.

Sec. 16.4.460. Edges/landscape (Sec. 16.6.40.9)

Edges of commercial development shall have high quality landscaping. Berms, meandering walks, a mix of irrigated turf, shrub beds, ornamental trees, evergreen trees and shade trees are encouraged. Parking lots are required to have landscaping per industry standards. The ends of parking bays shall have landscape islands, which shall be strategically placed to ensure that there are no more than twenty (20) contiguous parking spaces.



Parking lots shall be buffered from view from the public right-of-way with practical landscaping.



~~Entryways and areas visible from public streets shall have some type of landscape component. Examples include water features, fire pits, window boxes, hanging baskets, large pots and Planting beds.~~

Section 16.3.460. Fencing. (Sec. 16.6.40.10)

Front-yard fencing in the development nodes shall be open wood picket or wrought iron and shall not to exceed forty-two (42) inches in height. Brick or stone columns are encouraged. Privacy fencing between users or to screen users shall be allowed per review and approval as a part of a final plat or site [Plan-plan](#) approval. Privacy fencing shall not exceed six (6) feet in height and shall be minimized and placed so that the visual impact to surrounding uses and the public right-of-way is minimized. Landscape buffering in place of or associated with privacy fencing is encouraged. Privacy fencing, if located adjacent to the public right-of-way, shall be separated from the public right-of-way by a landscape buffer.

Section 16.3.470. Entries and signage. (Sec. 16.6.40.11)

Entries to commercial areas shall be identified by high-quality, ground-mounted signs and/or monumentation. Landscaping shall identify entries with enhanced [Plantings-plantings](#) as shown (flower beds, ornamental trees, etc.). Signage shall be designed to be appropriate to the scale of the development [and consistent with the sign regulations of this Code.](#)



~~Sec. 16.6.40.12. – Lighting.~~

~~Lighting shall be consistent with the architecture and should consist of pedestrian-scale cut-off lighting so that no light spills beyond the boundary of the project. Parking lots, pedestrian ways and building entries shall be appropriately lit.~~

~~Note: The Town of Severance would like to thank Fort Collins, Loveland, Niwot, Highlands, Erie, Frisco, Carbondale, Aspen, and Basalt for image examples used in this Code.~~

Sec. 16.4.480. Utility services. (Sec. 16.6.40.13)

The following is a list of utility services that are available at each development node:

- (a) Corner of Colorado Highway 14 and Colorado Highway 257: This intersection has a localized sanitary sewer Plant and is served by North Weld County Water District with potable water.
- (b) Corner of Colorado Highway 257 and Weld County Road 74 (Harmony Road): This intersection has Planned sanitary sewer provided by the Town of Windsor and is served with potable water from North Weld County Water District. Although sanitary sewer is Planned for this area, it is recognized by the Town that limited commercial and industrial uses may still occur prior to the extension of centralized sanitary sewer facilities.
- (c) Highway 392 Corridor (north side): This area will be served by the Town for sanitary sewer and by the North Weld County Water District for potable water.

Division 5 Supplemental Use Regulations

Section 16.3.510. Reserved.

Section 16.3.520. Home-based businesses ~~Type I and Type II.~~ (Sec. 16.9.20)

Home-based businesses must meet the following standards:

- (a) In addition to the family occupying the dwelling containing the home-based business, there shall not be more than one (1) outside employee working at the site of the home-based business.
- (b) The home-based business shall not exceed one thousand (1,000) square feet or thirty percent (30%) of the total floor area of the dwelling, whichever is less, or can be located in an accessory building not to exceed five hundred (500) square feet. The home-based business shall be conducted entirely within the dwelling or designated accessory building, except as required for state-licensed in-home family child-care.
- (c) The home-based business shall be clearly incidental and secondary to the use of the dwelling for dwelling purposes and must not change the residential character thereof.
- (d) There shall be no change in the outside appearance of the building or premises or other visible evidence of the conduct of such home-based business, including advertising signs larger than two (2) square feet in total size. No other displays or advertising that solicit or direct persons to the address other than the single sign limited to two (2) square feet in total area are permitted.
- (e) There must be no exterior storage on the premises of material or equipment used as a part of the home-based business unless it is enclosed and lot coverage requirements for accessory uses are met.
- (f) No equipment or process shall be used in such home-based business that creates any glare, fumes, odors, or other objectionable conditions detectable to the normal senses off the lot if the occupation is conducted in a single-family dwelling or outside the dwelling unit if conducted in other than a single-family dwelling.
- (g) The following uses, because of their tendency to go beyond the limits permitted for home-based businesses and thereby impair the use and value of the residential area, shall not be permitted as home-based businesses: medical marijuana center, medical marijuana optional premises cultivation operation, medical marijuana-infused products manufacturing; auto repair or motorized implement repair; dance, music or other types of instruction (if more than four [4] students are instructed at one [1] time); the painting of vehicles, trailers or boats; private schools with organized classes; welding shops; nursing homes and any retail or wholesale sales

to consumers upon the premises not incidental to the home-based business (e.g., hair care products at a hair stylist).

(h) All exterior aspects of the home-based business operation shall not disrupt the residential character of the area.

(i) The maximum number of vehicle trips per day for clients who may visit the home-based business per day is fifteen (15). No traffic, services, or deliveries shall be generated by the home occupation that is abnormal to a residential neighborhood. In general, this shall be limited to:

1. No more than one customer vehicle parked at the property at a time, except for drop off of children for childcare or instruction.
2. No more than ten client visits per week, except for drop off of children for childcare or instruction.
3. Delivery of products or materials is limited to that normally associated with residential purposes.
4. All parking necessary for the use shall meet the neighborhood design standards, and be confined to the garage, driveway or street directly in front of the dwelling.

(j) The property shall comply with all Town building codes and property maintenance standards.

(k) Use of utilities shall be limited to that typically associated with residential purposes.

(l) Any home-based business not meeting these criteria or otherwise denied a permit by the Town may only be approved by a special use permit.

Section 16.3.530. Accessory dwellings.

(a) Intent. The regulations in this section are intended to address the construction, conversion, expansion, or improvement of accessory dwellings within the Town and to ensure all accessory dwellings are constructed, converted, expanded or improved, and occupied, in compliance with the Town's adopted life safety codes and building regulations, including but not limited to, building, fire, utility, or stormwater codes.

(b) Administrative approval required. To ensure compliance with the regulations in this section, an application and administrative approval shall be required to construct, convert, expand, or improve any accessory dwelling within the Town. For purposes of this section, "improve" or "improvements" means any alteration, repair, addition, expansion, reconstruction, replacement, renovation, or any work in or upon a building or structure for which a building permit is required pursuant to the Town's adopted building regulations.

(c) Application requirements; fees. Applications for the construction, conversion, expansion, or improvement of any accessory dwelling shall be made in writing and shall include all

information, documents, and plans necessary for the Town to determine whether the accessory dwelling complies with the standards set forth in this section. The applicant shall pay all fees established by resolution of the Town Council.

(d) *Town Staff review and decision.* When the Town Staff has determined the application for the construction, conversion, expansion, or improvement of an accessory dwelling to be complete, the Town Staff shall review the application to determine if the application complies with the standards set forth in this section, and shall approve, approve with conditions, or deny the application. Upon the Town Staff's approval of the application, any building permits required for the accessory dwelling shall be issued to the applicant.

(e) *Standards.* The following standards apply to all accessory dwellings for which construction, conversion, expansion, or improvements commences on or after the effective date of this ordinance.

1. There shall be no more than one (1) accessory dwelling on a residential lot.
2. No portion of a lot on which an accessory dwelling is located may be subdivided from, or legally described differently than, the lot containing the principal residential unit.
3. No portion of a structure containing an accessory dwelling may have ownership different from the ownership of the principal dwelling unit.
4. The accessory dwelling shall be affixed to an engineered permanent foundation.
5. An internal or attached accessory dwelling shall be separated from the principal dwelling by a firewall meeting building and fire codes.
6. Accessory dwelling utilities shall be connected through the principal residential dwelling. Additional water dedication or water or sanitary sewer tap upsize may be required to account for increase in demand beyond the expectation of the original dedication or capacity of the original tap.
7. Prior to issuance of any building permit for an accessory dwelling, the applicant shall furnish to the Town a statement by the water service provided and wastewater service provider confirming each provider's capacity to service the property upon the construction of the proposed accessory dwelling. If the property is served by a well or onsite wastewater treatment system, the applicant shall furnish information sufficient for the Town to determine that such facilities are adequate to service the accessory dwelling.
8. The accessory dwelling shall comply with any applicable residential design standard.
9. For purposes of calculating residential density, each accessory dwelling shall count as one-half (1/2) dwelling unit.
10. The size of an accessory dwelling unit shall be no larger than the size of the principal dwelling unit on the same lot as the accessory dwelling unit.

Section 16.34.540. Reserved.

TOWN OF SEVERANCE, COLORADO
NOTICE OF PUBLIC HEARINGS

Notice is hereby given that the Planning Commission of the Town of Severance will hold a Public Hearing, on **Wednesday, February 19th, 2025, commencing at 6:00 p.m.**, or as soon as thereafter as each matter may be called, at the Town of Severance Town Hall, Council Chambers, 3 S. Timber Ridge Parkway, Severance, Colorado 80550. The purpose of the Public Hearing is to take testimony from the public on proposed amendments to the Town of Severance Land Use Code (Chapter 16 of the Severance Municipal Code), as follows:

1. Proposed text amendments to the Land Use Code for purposes of reorganizing Article 3.

No later than three (3) days prior to the Public Hearings date, all meeting materials and instructions for participation will be posted at <https://www.townofseverance.org> and available upon appointment at Severance Town Hall, 3 S. Timber Ridge Parkway, Severance, Colorado 80550, Tel. 970-686-1218. Written comments must be submitted to the Town no later than 5:00 pm on the day of the meeting to be considered by the Planning Commission. All written comments are to be sent to planning@townofseverance.org.

Any person may appear at the Public Hearings and be heard regarding the matters under consideration.

The Town of Severance Land Use Code (Chapter 16 of the Severance Municipal Code) is on file with the Town of Severance and available online at https://library.municode.com/co/severance/codes/municipal_code. For questions or comments contact:

Shani Porter
970-686-1218
planning@townofseverance.org

TOWN OF SEVERANCE, COLORADO
Sarah Jabobsen
Town Clerk