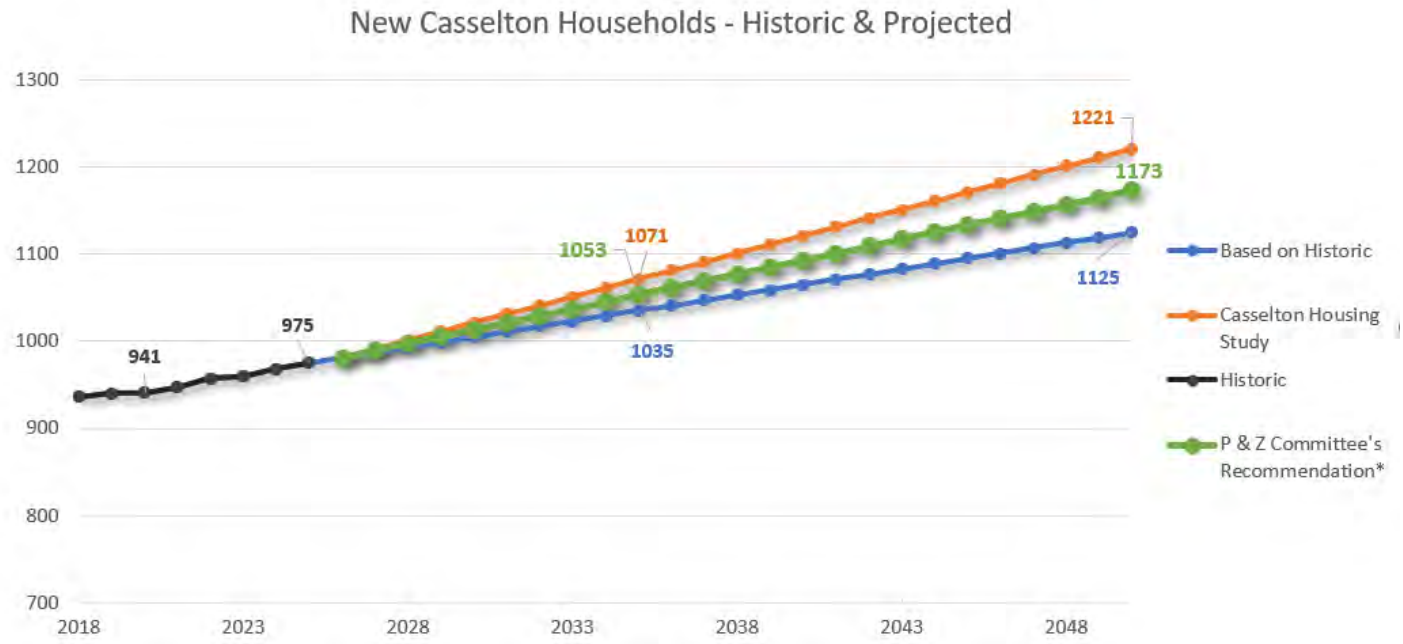
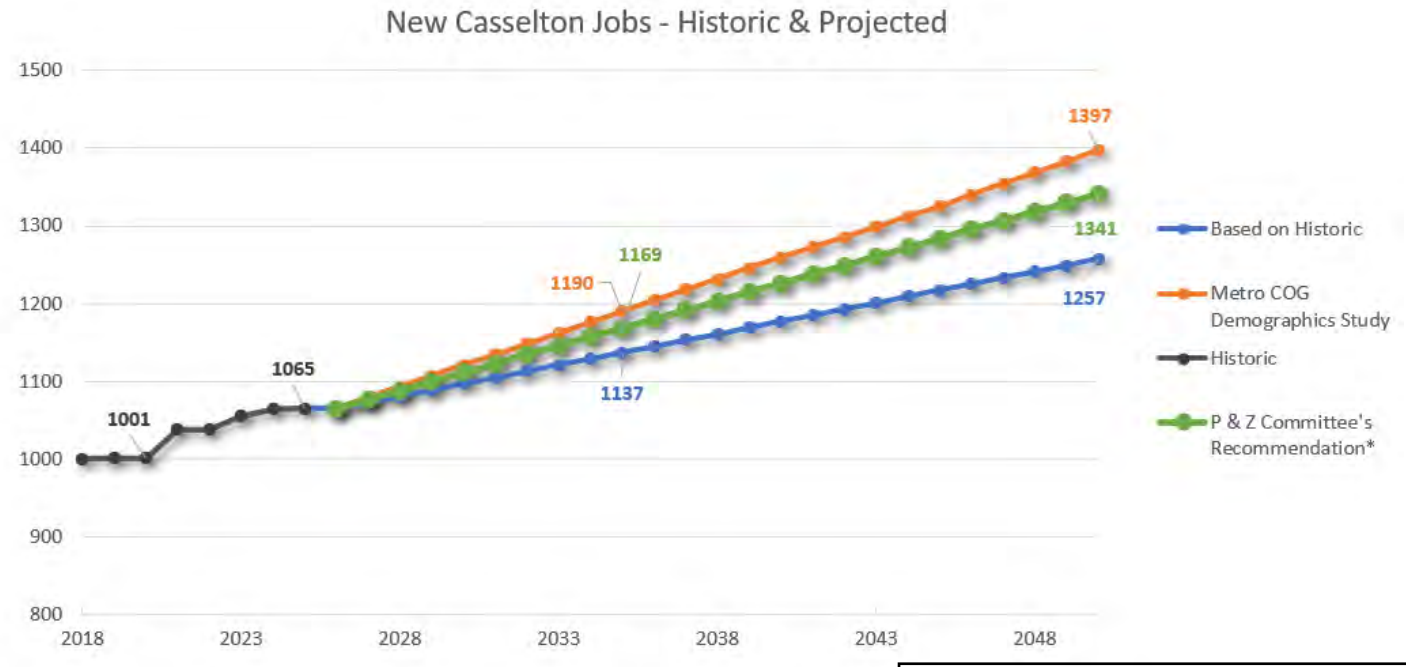
Appendix A:

2035, 2050, & Full Build Forecast Development



Forecasted new Households after 2025			
Year	Based on Historic	**P&Z Committee's** Recommendation	Casselton Housing Study
2035	60	78	96
2050	160	198	246

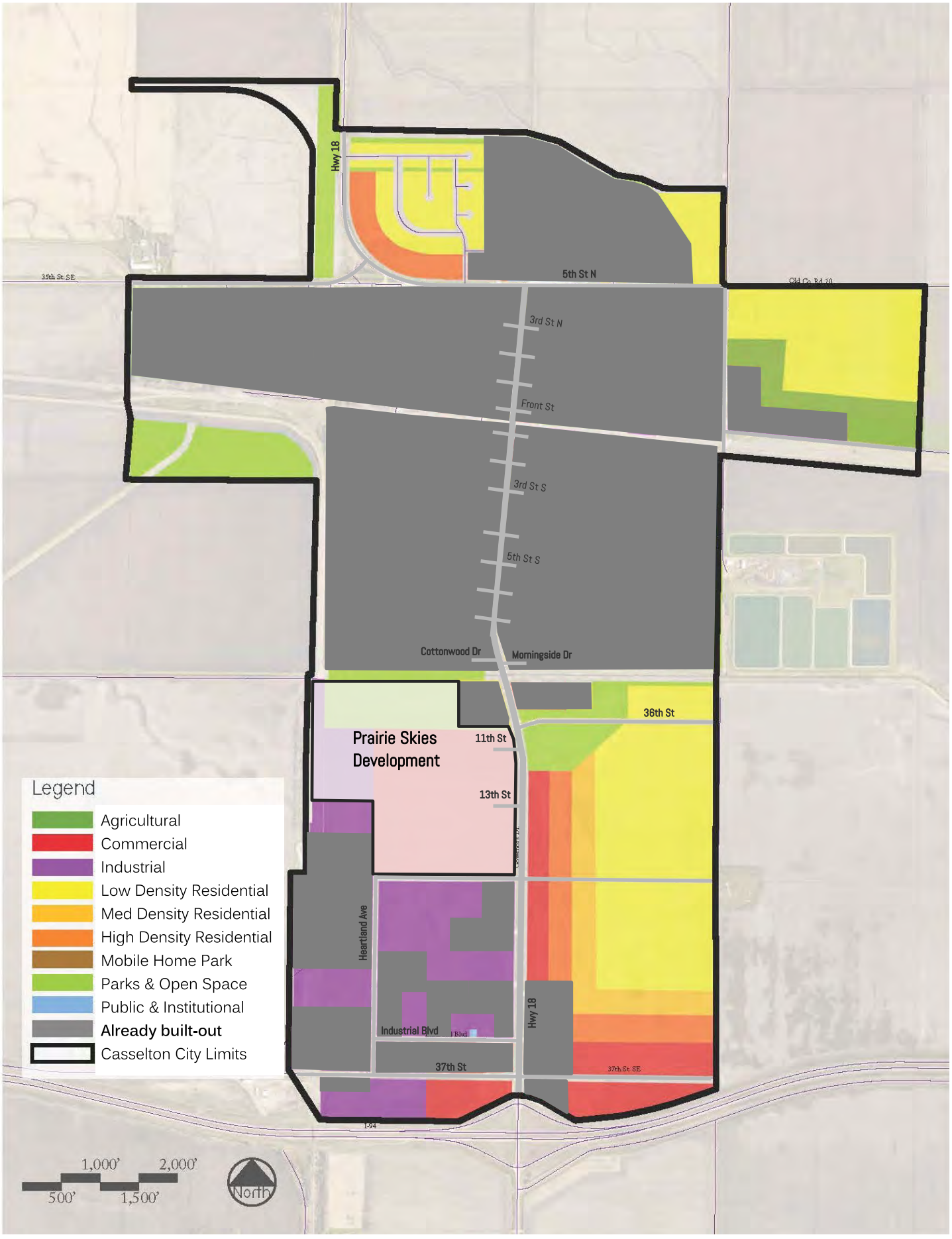
* Metro COG met with the Casselton Planning & Zoning Committee on 4/15/26 to get their recommendation on which growth projections should be used for this study. For future household numbers they recommended forecasting household numbers midway between the historic trend and the Casselton Housing Study projections.



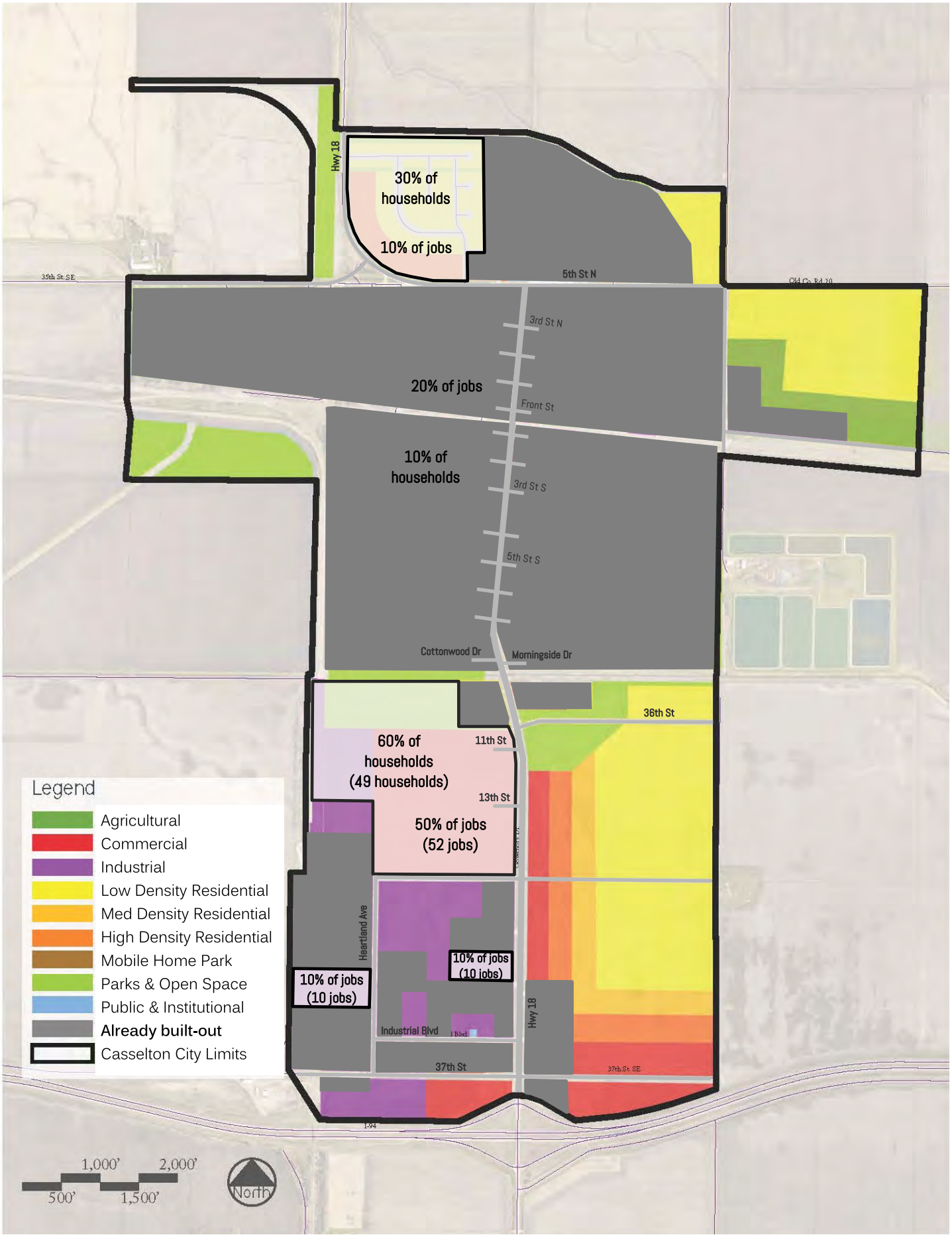
Forecasted new Jobs after 2025			
Year	Based on Historic	**P&Z Committee's** Recommendation	Metro COG Demographics Study
2035	72	104	125
2050	192	276	332

*Metro COG met with the Casselton Planning & Zoning Committee on 4/15/26 to get their recommendation on which growth projections should be used for this study. For future jobs, they recommended forecasting job numbers between the historic trend and the Metro COG Demographics Forecasts projections, but they would like to see the projection closer to the Demographics Forecast than the historic trend numbers.

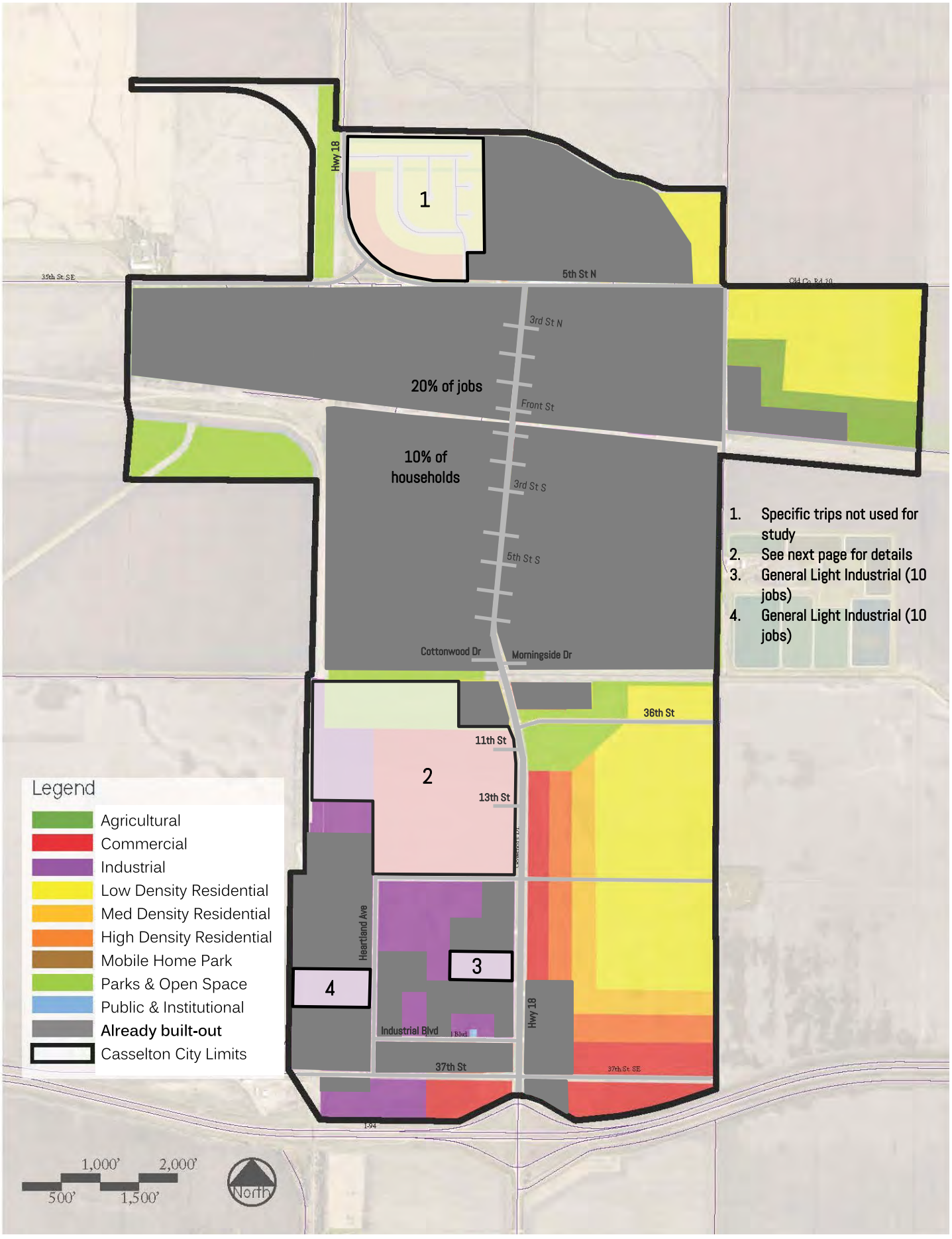
Existing Land Use Conditions



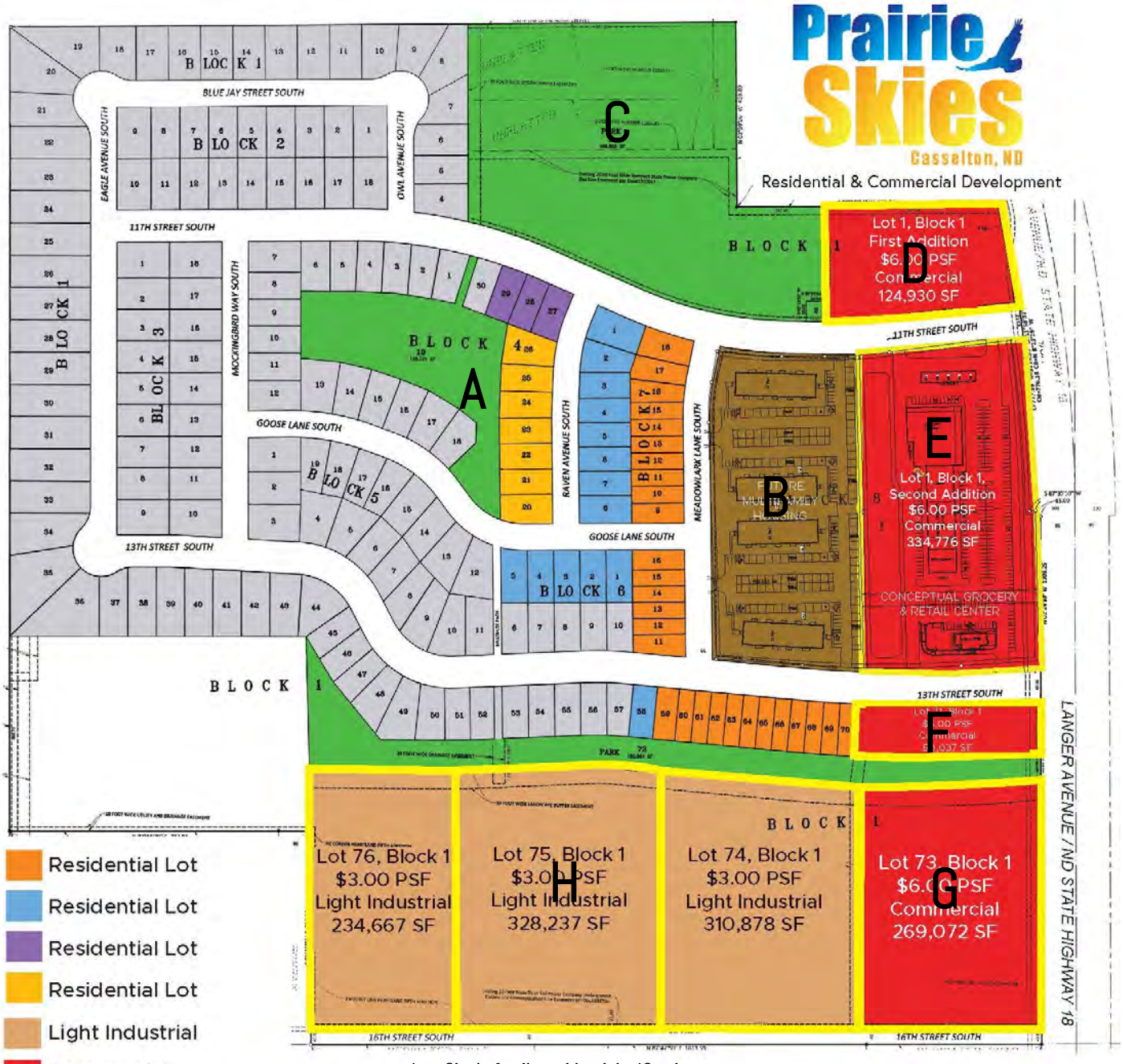
2035 Households & Jobs Allocation



2035 Households & Jobs Allocation



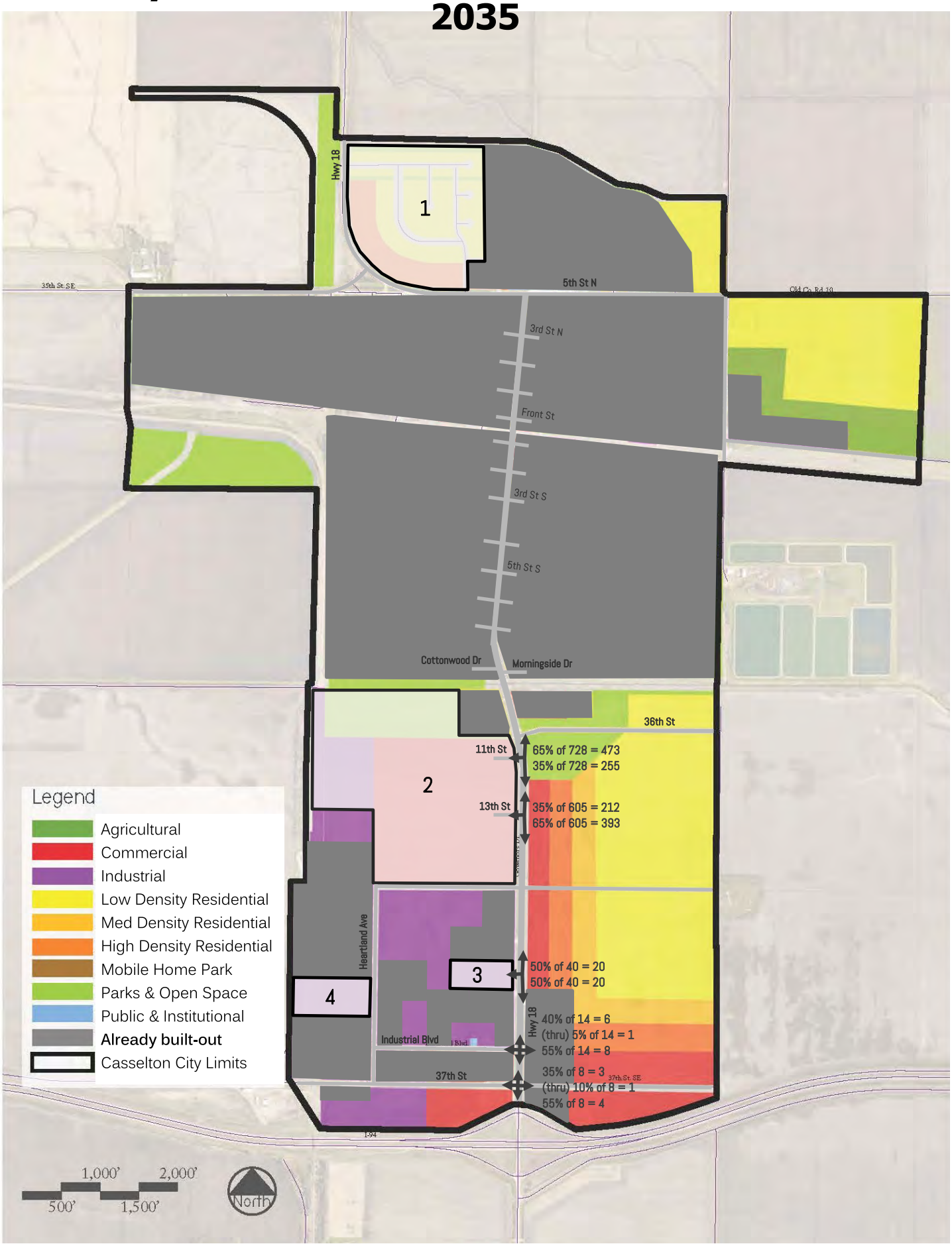
2035 Households & Jobs Allocation



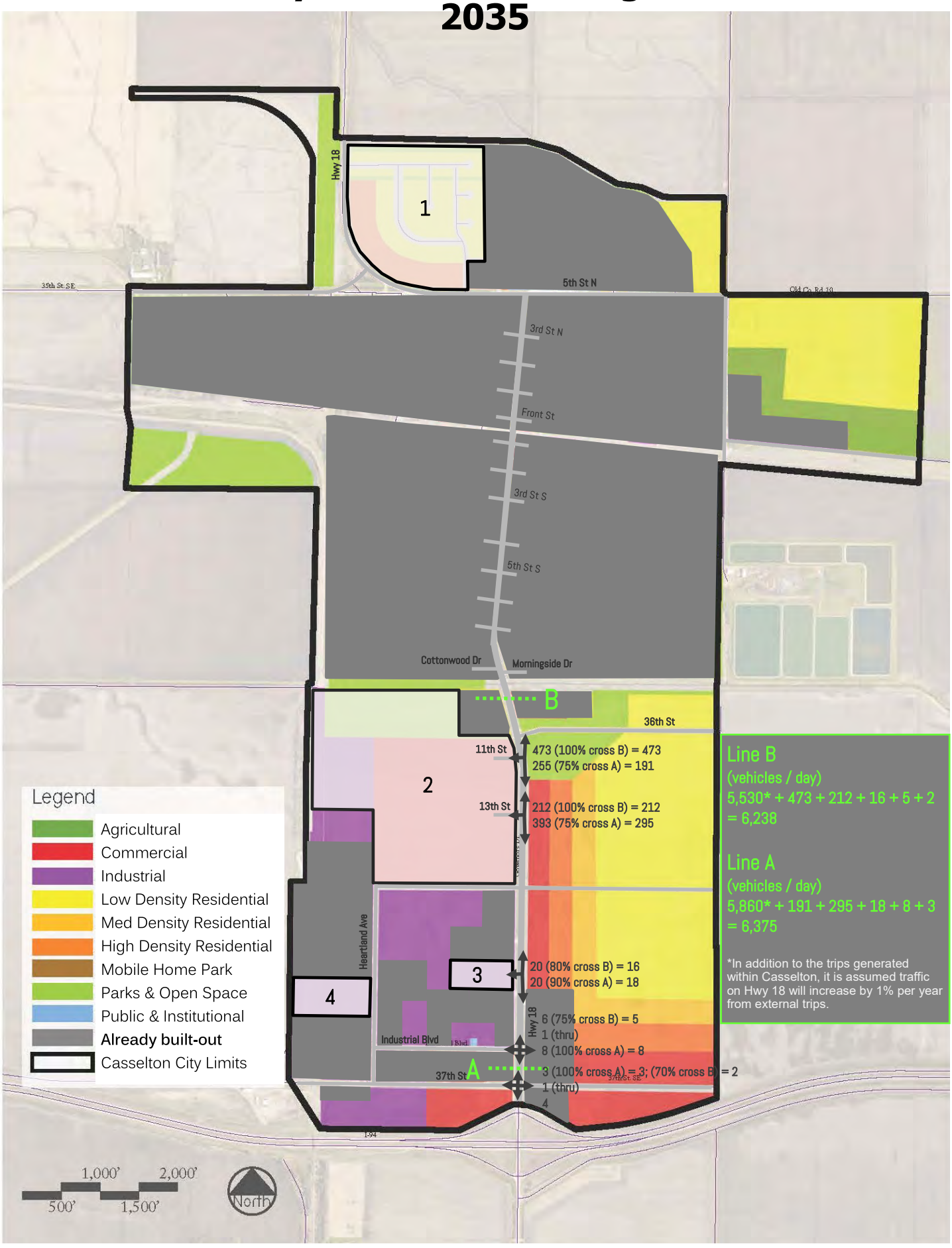
- Residential Lot
- Residential Lot
- Residential Lot
- Residential Lot
- Light Industrial
- Commercial
- Multi-Family Housing
- Green Space/Park
- Future Proposed Development

A. Single family residential: 49 units
B. Undeveloped
C. Undeveloped
D. Strip retail: 15 jobs
E. Strip retail: 22 jobs
F. Small office building: 15 jobs
G. Undeveloped
H. Undeveloped

Daily Traffic Intersection direction allocation 2035



Daily traffic from new growth 2035

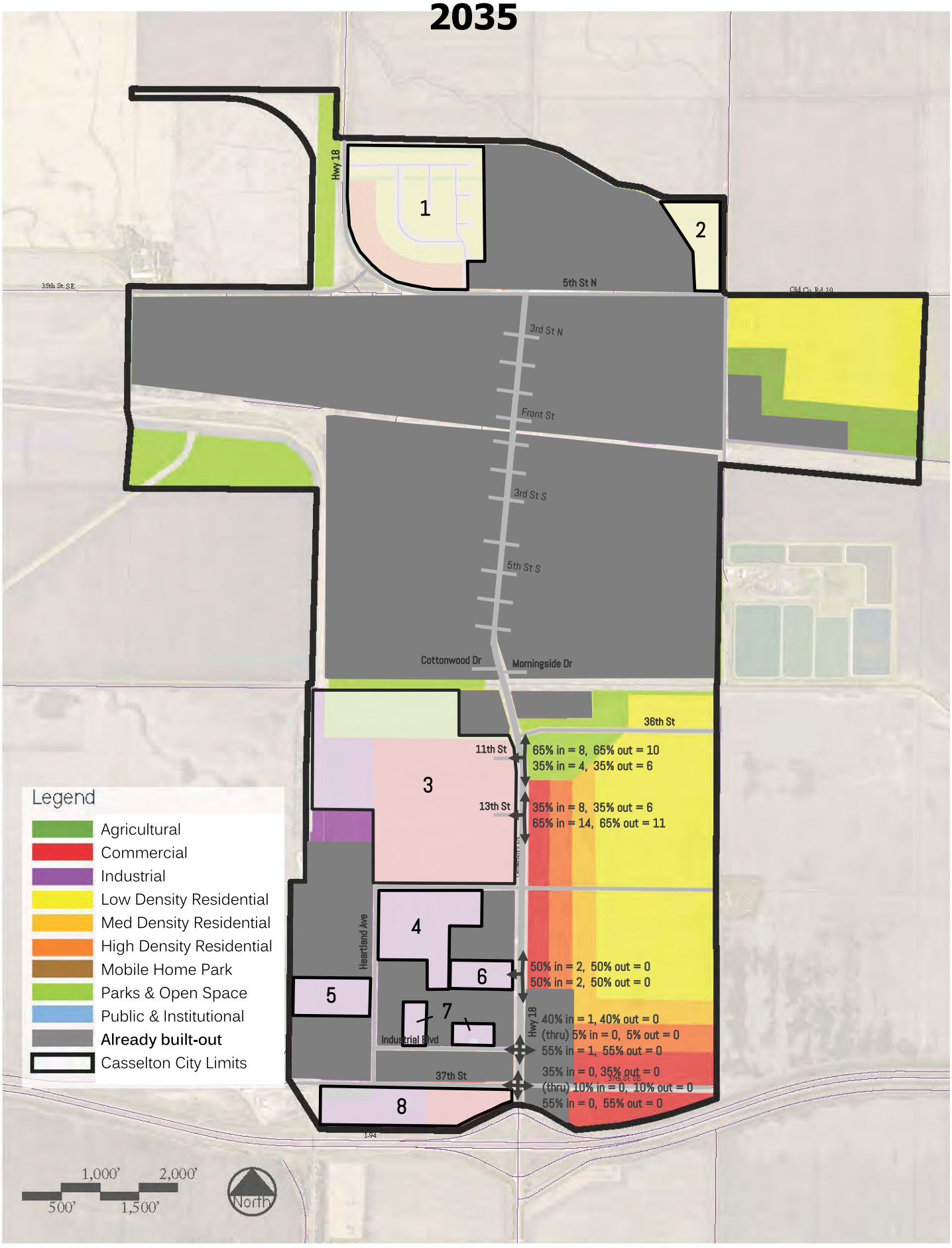


Line B
(vehicles / day)
5,530* + 473 + 212 + 16 + 5 + 2 = 6,238

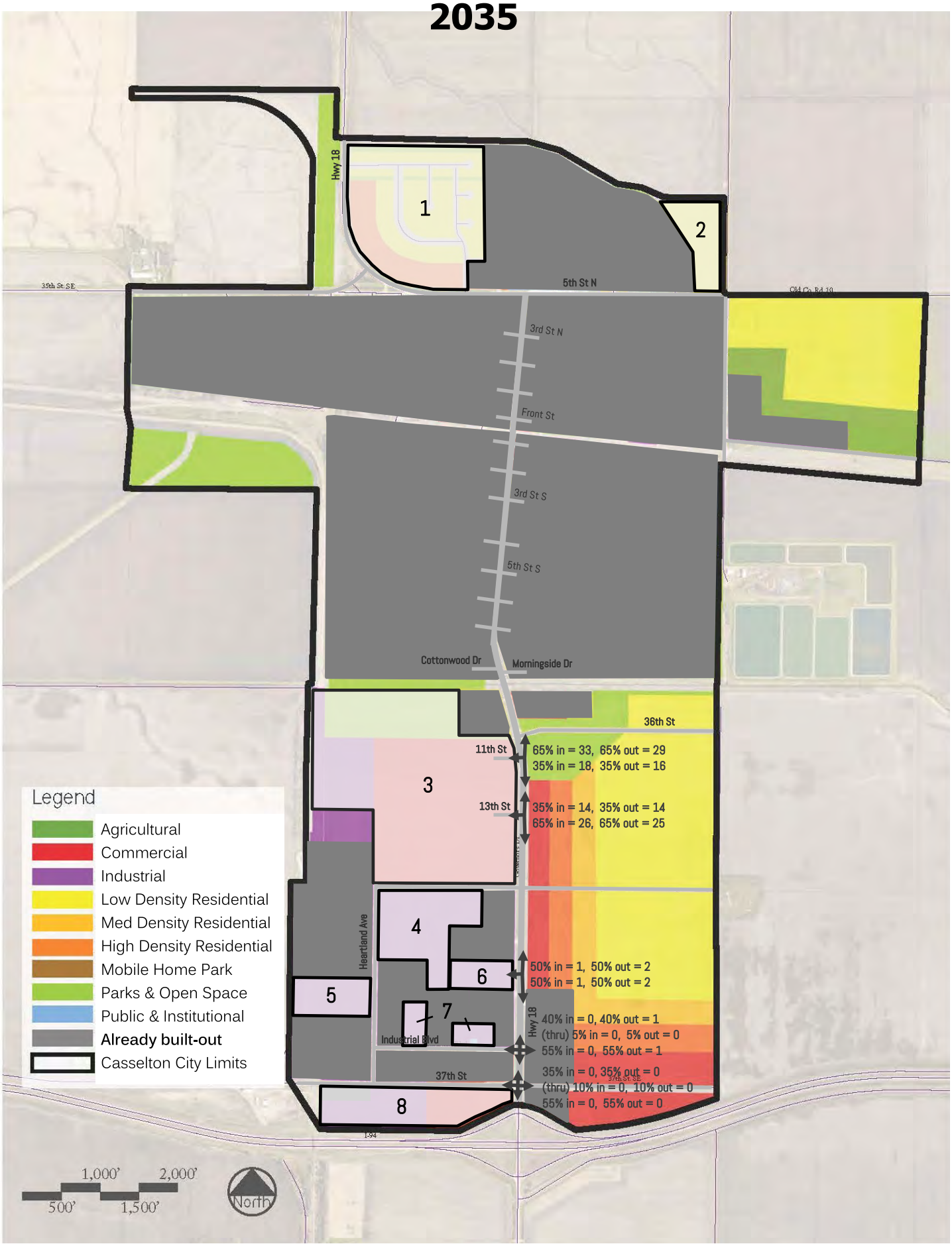
Line A
(vehicles / day)
5,860* + 191 + 295 + 18 + 8 + 3 = 6,375

*In addition to the trips generated within Casselton, it is assumed traffic on Hwy 18 will increase by 1% per year from external trips.

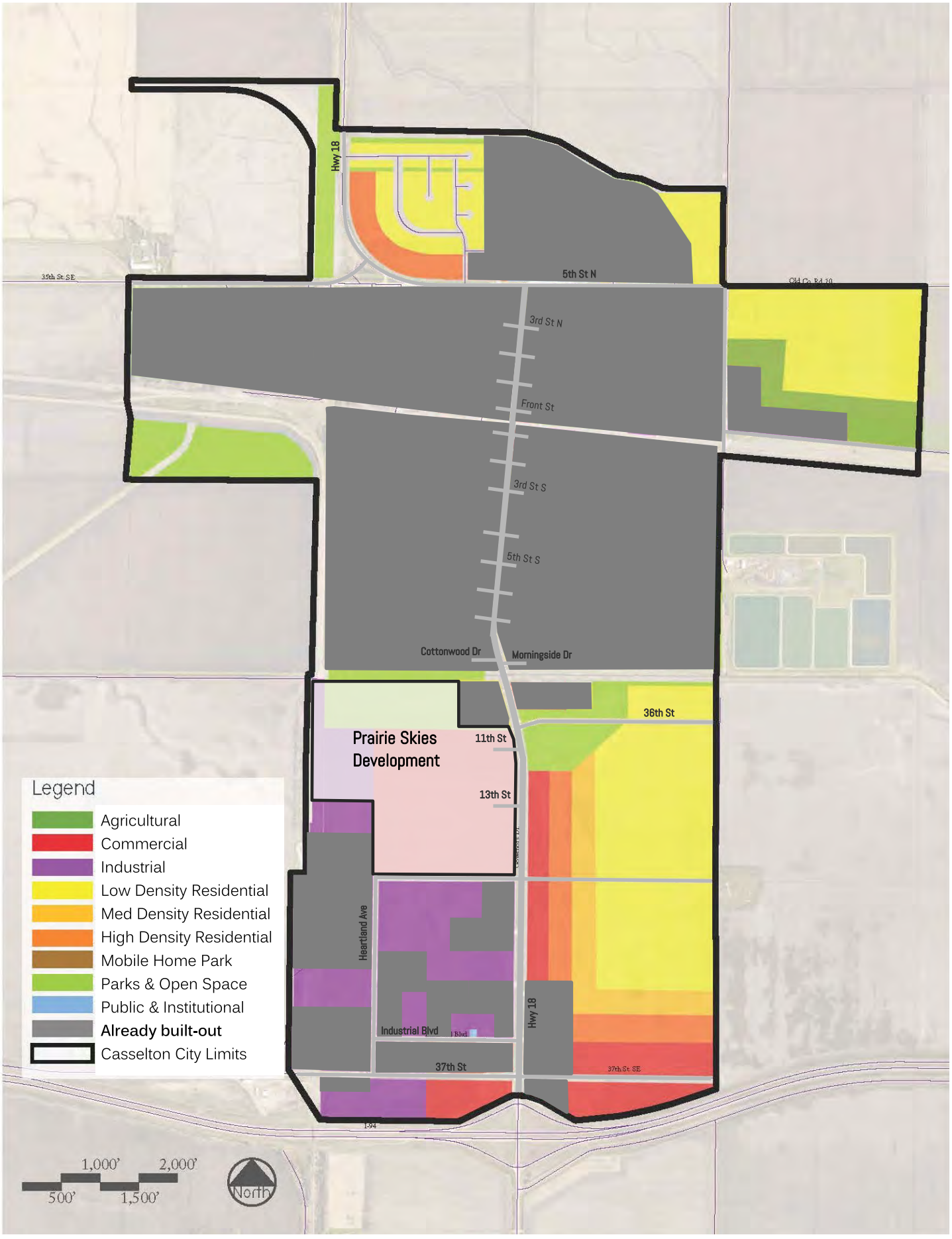
AM Peak Intersection direction allocation 2035



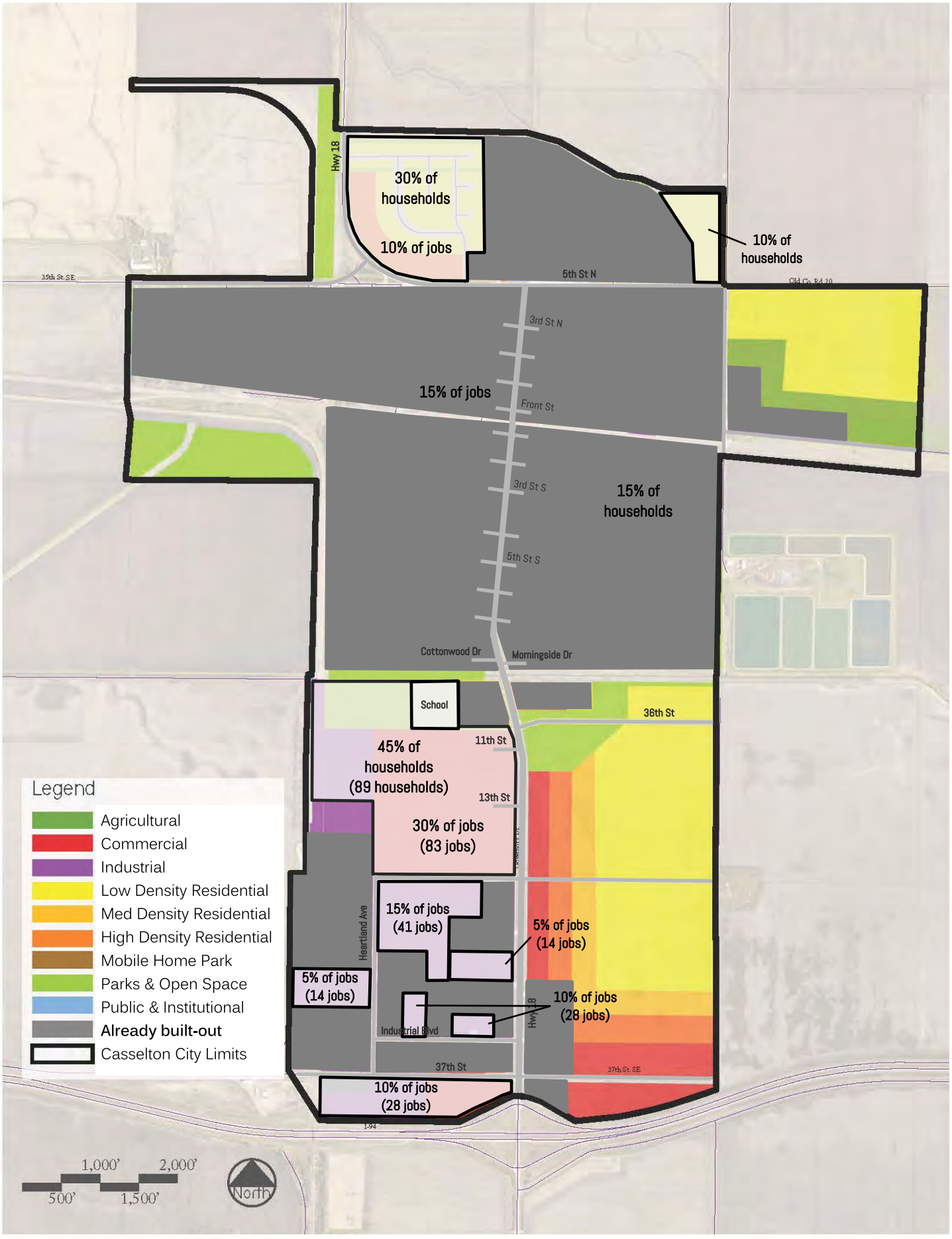
PM Peak Intersection direction allocation 2035



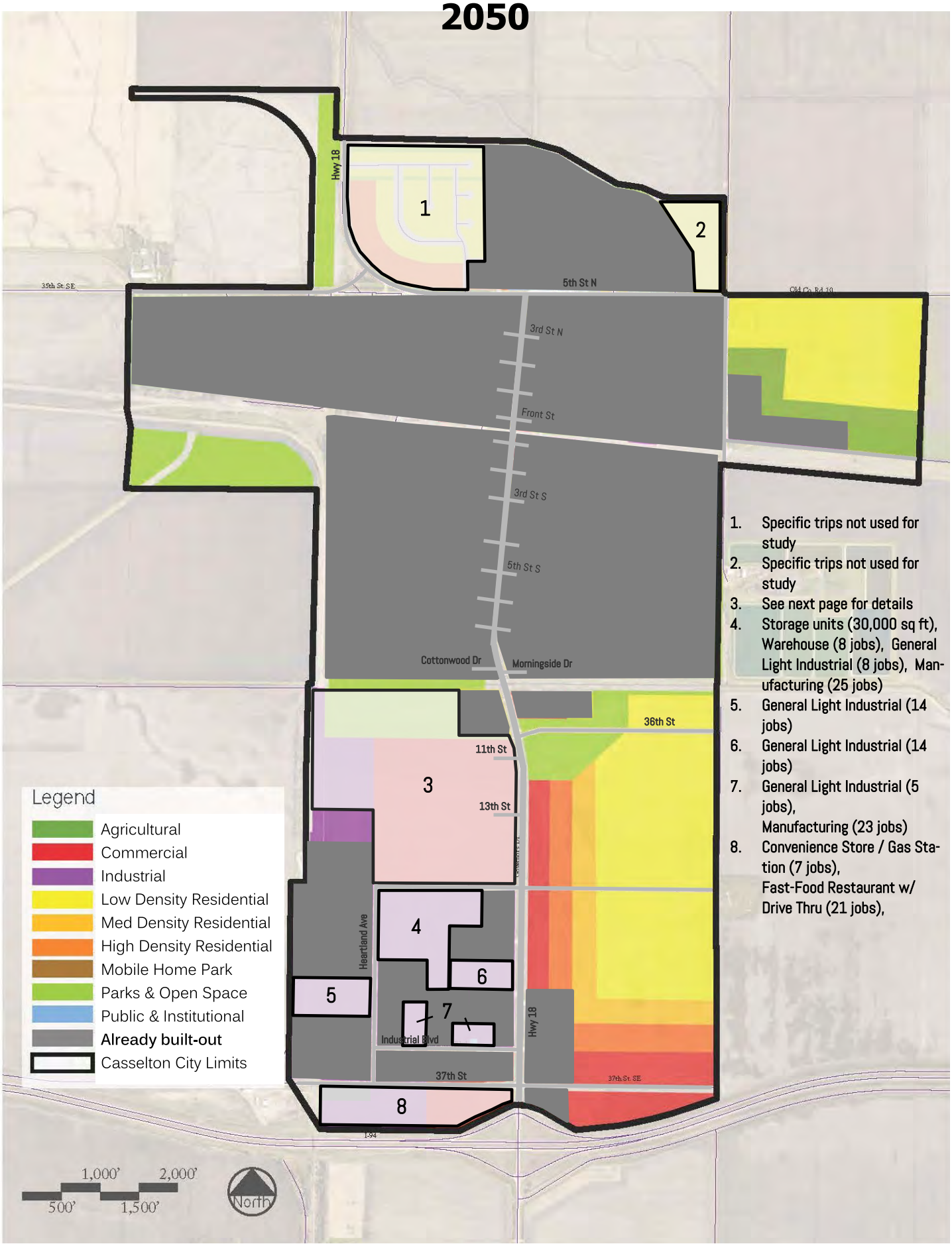
Existing Land Use Conditions



2050 Households & Jobs Allocation

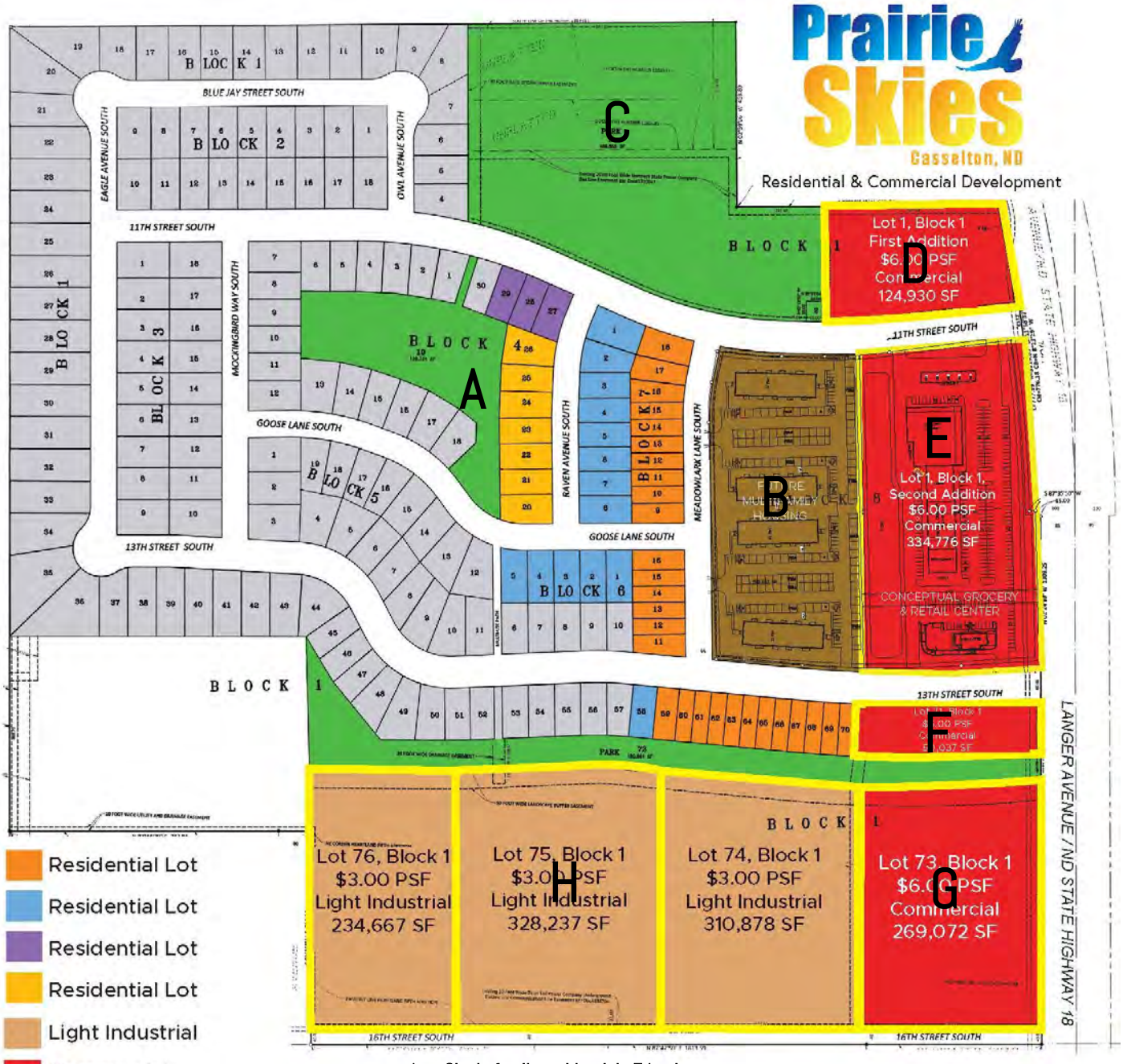


Estimated future land use 2050



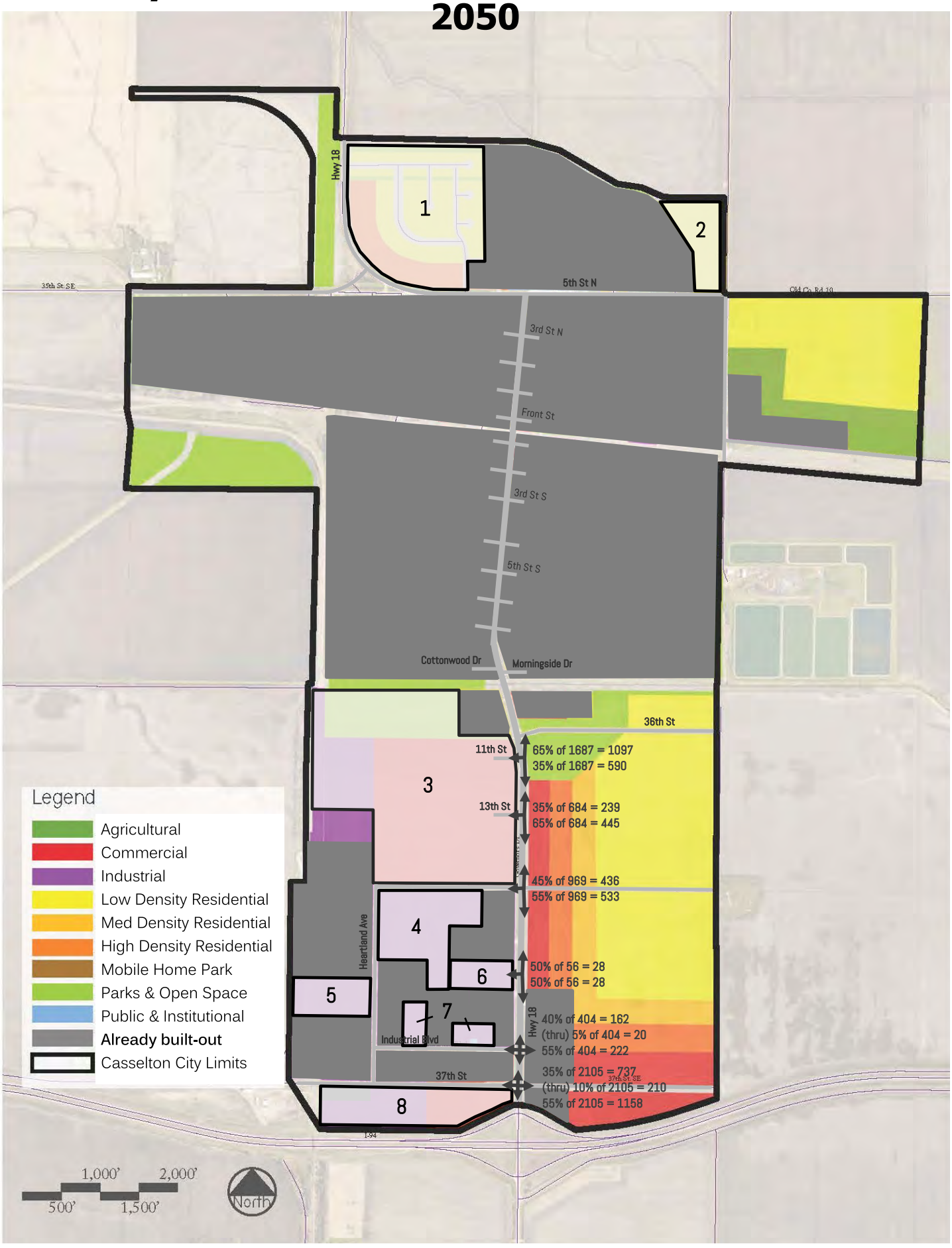
1. Specific trips not used for study
2. Specific trips not used for study
3. See next page for details
4. Storage units (30,000 sq ft), Warehouse (8 jobs), General Light Industrial (8 jobs), Manufacturing (25 jobs)
5. General Light Industrial (14 jobs)
6. General Light Industrial (14 jobs)
7. General Light Industrial (5 jobs), Manufacturing (23 jobs)
8. Convenience Store / Gas Station (7 jobs), Fast-Food Restaurant w/ Drive Thru (21 jobs),

2050 Households & Jobs Allocation

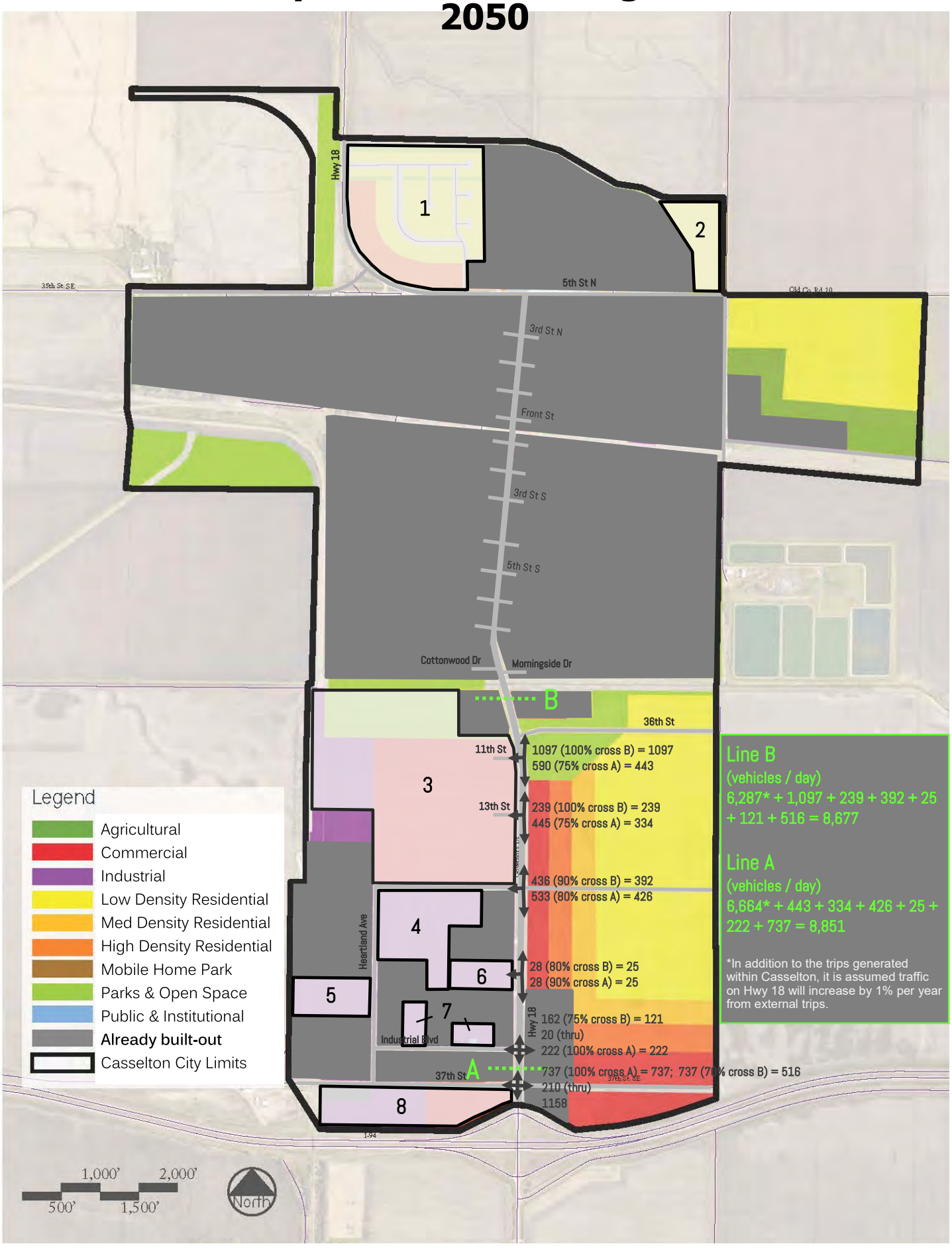


A. Single family residential: 74 units
B. Multi family residential: 15 units
C. Elementary School: 500 students
D. Strip retail: 16 jobs
E. Strip retail: 35 jobs
F. Small office building: 8 jobs
G. Fast food with drive thru: 20 jobs
H. General industrial: 5 jobs

Daily Traffic Intersection direction allocation 2050



Daily traffic from new growth 2050

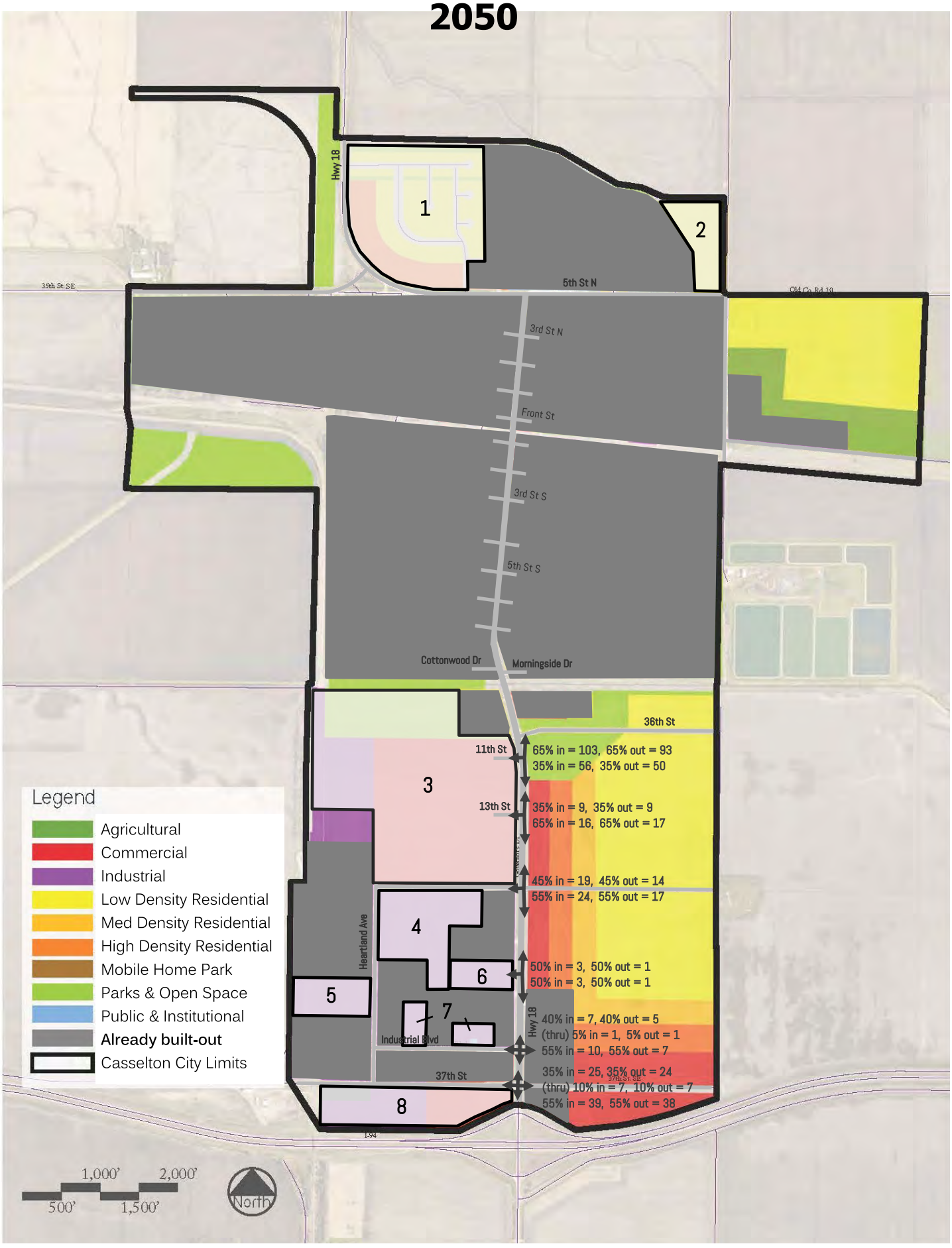


Line B
(vehicles / day)
6,287* + 1,097 + 239 + 392 + 25 + 121 + 516 = 8,677

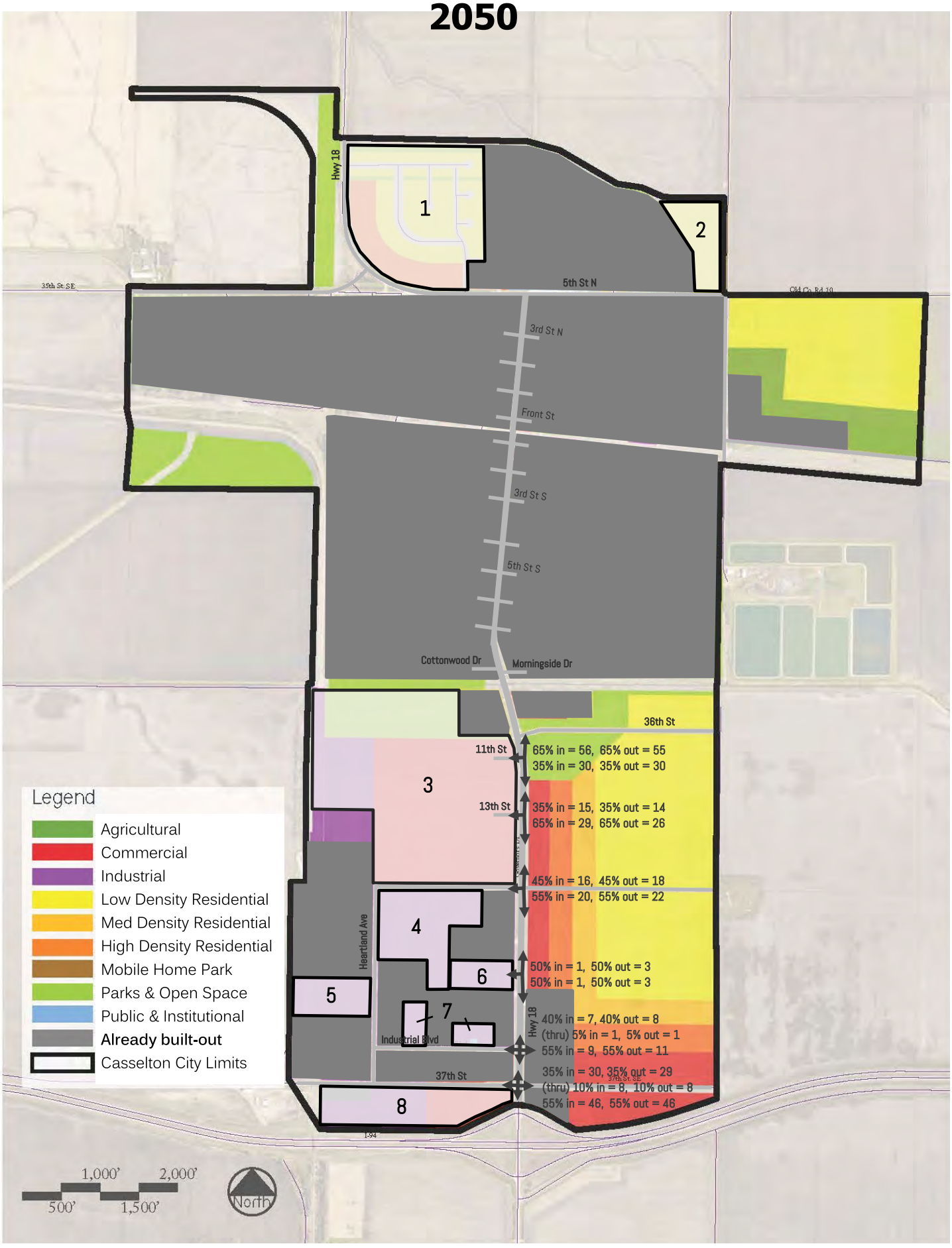
Line A
(vehicles / day)
6,664* + 443 + 334 + 426 + 25 + 222 + 737 = 8,851

*In addition to the trips generated within Casselton, it is assumed traffic on Hwy 18 will increase by 1% per year from external trips.

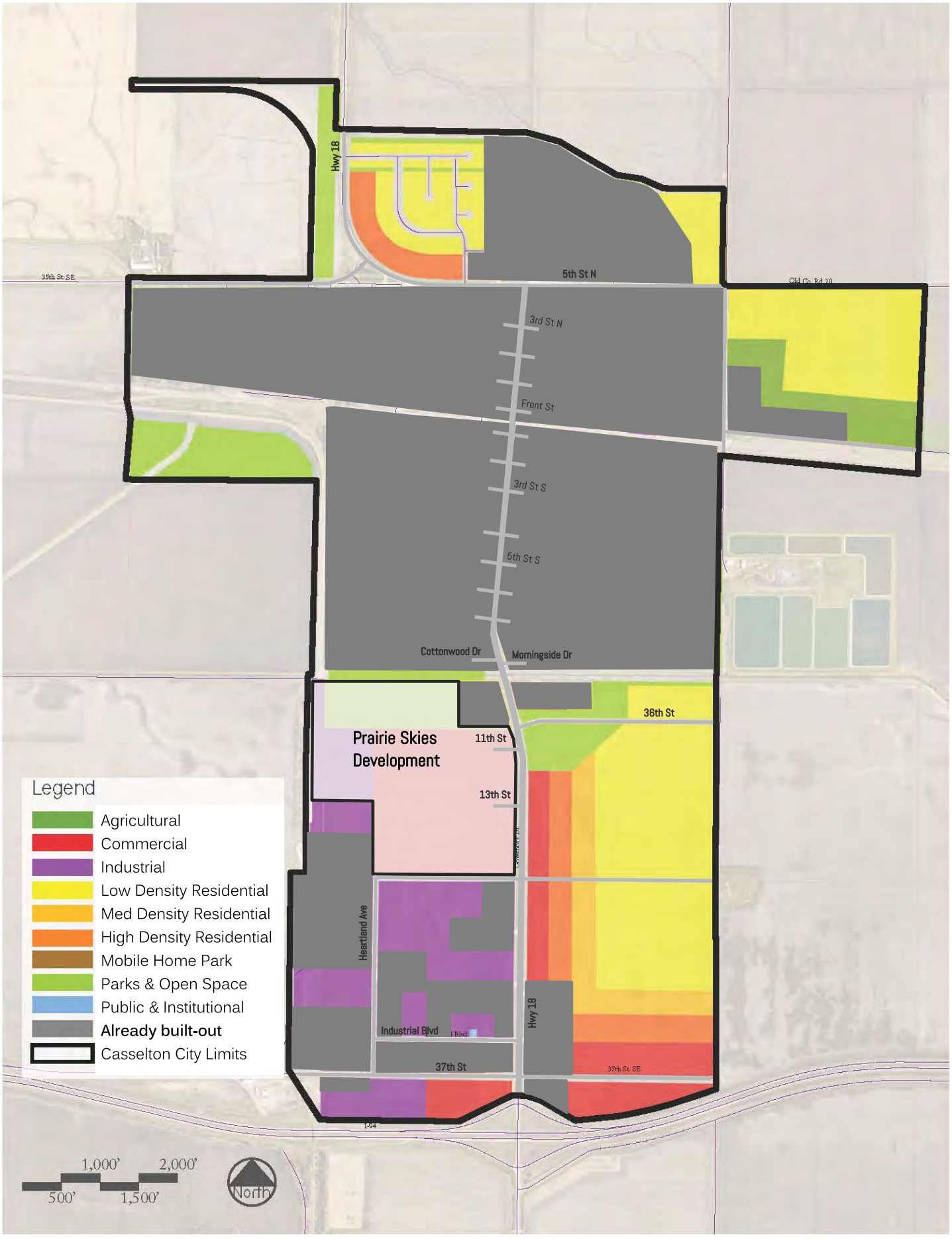
AM Peak Intersection direction allocation 2050



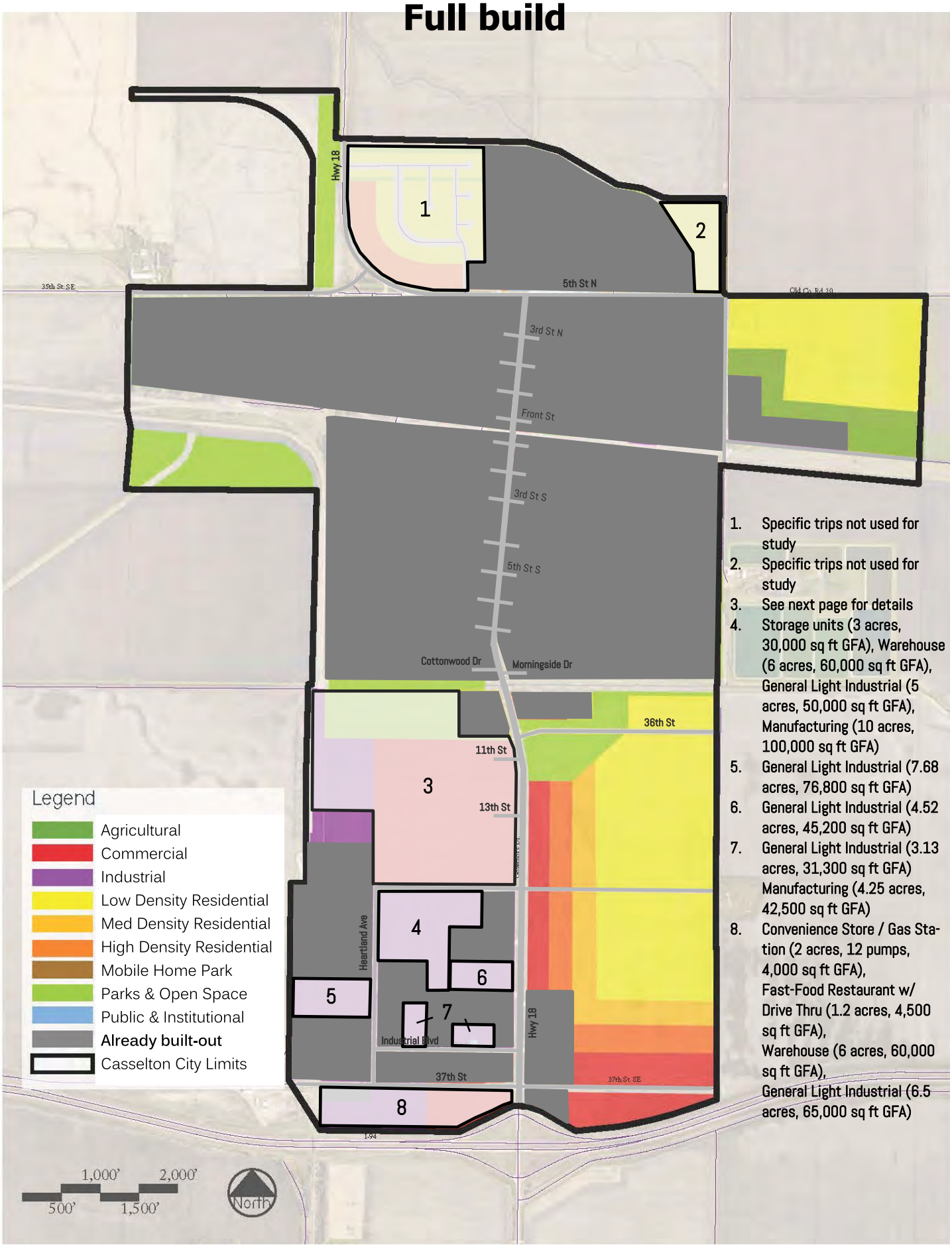
PM Peak Intersection direction allocation 2050



Existing Land Use Conditions

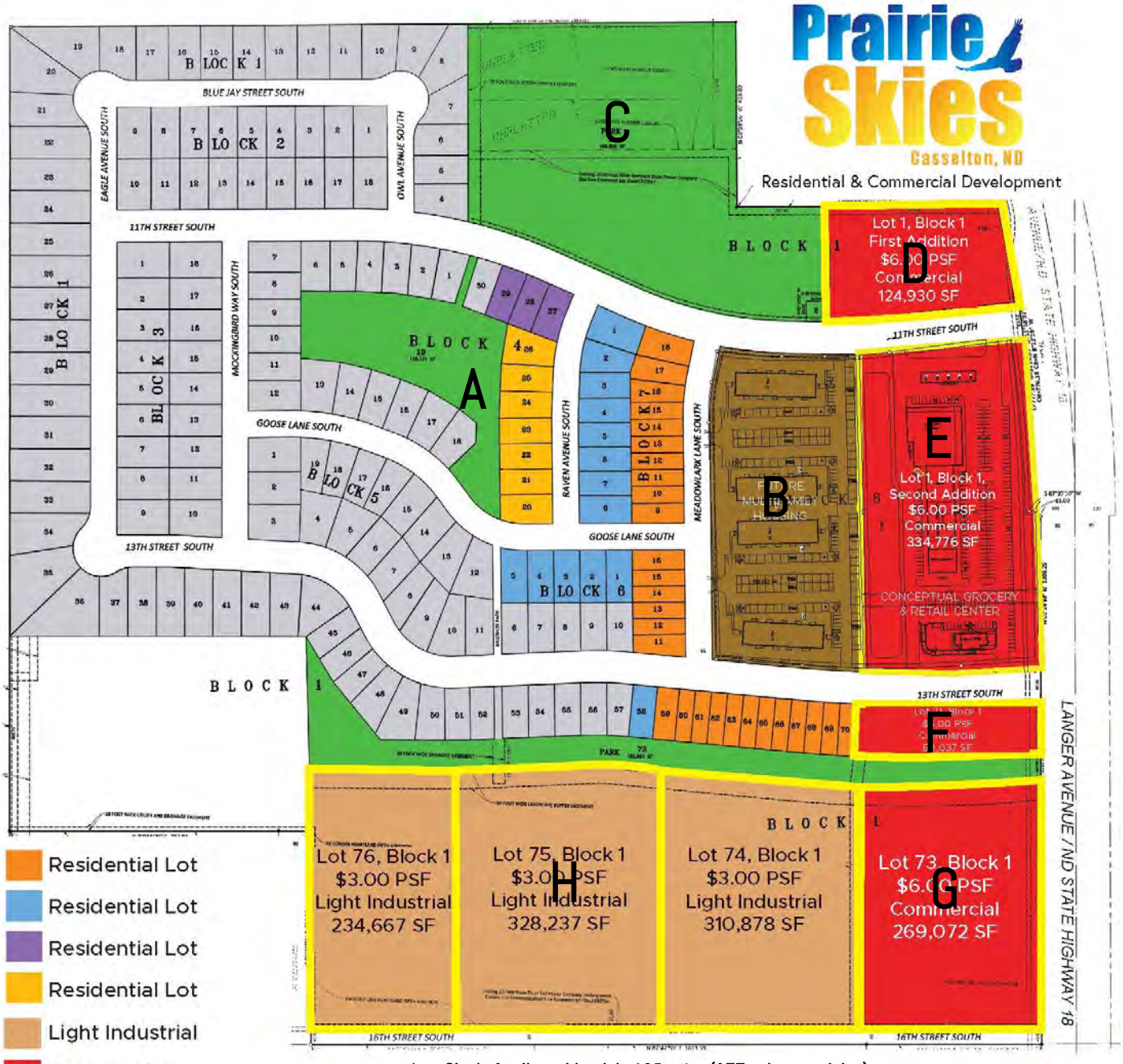


Estimated future land use
Full build



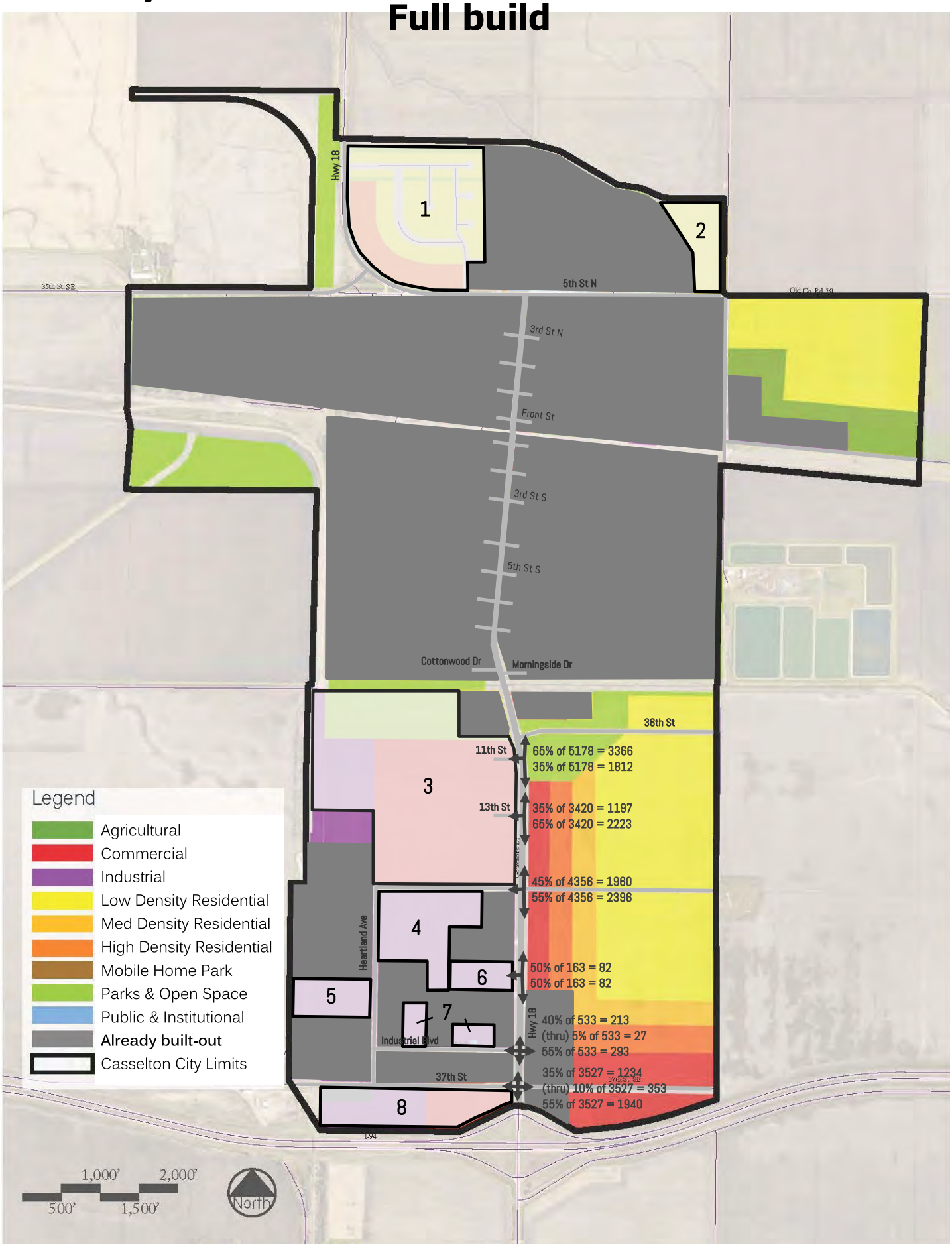
1. Specific trips not used for study
2. Specific trips not used for study
3. See next page for details
4. Storage units (3 acres, 30,000 sq ft GFA), Warehouse (6 acres, 60,000 sq ft GFA), General Light Industrial (5 acres, 50,000 sq ft GFA), Manufacturing (10 acres, 100,000 sq ft GFA)
5. General Light Industrial (7.68 acres, 76,800 sq ft GFA)
6. General Light Industrial (4.52 acres, 45,200 sq ft GFA)
7. General Light Industrial (3.13 acres, 31,300 sq ft GFA) Manufacturing (4.25 acres, 42,500 sq ft GFA)
8. Convenience Store / Gas Station (2 acres, 12 pumps, 4,000 sq ft GFA), Fast-Food Restaurant w/ Drive Thru (1.2 acres, 4,500 sq ft GFA), Warehouse (6 acres, 60,000 sq ft GFA), General Light Industrial (6.5 acres, 65,000 sq ft GFA)

Full build Households & Jobs Allocation

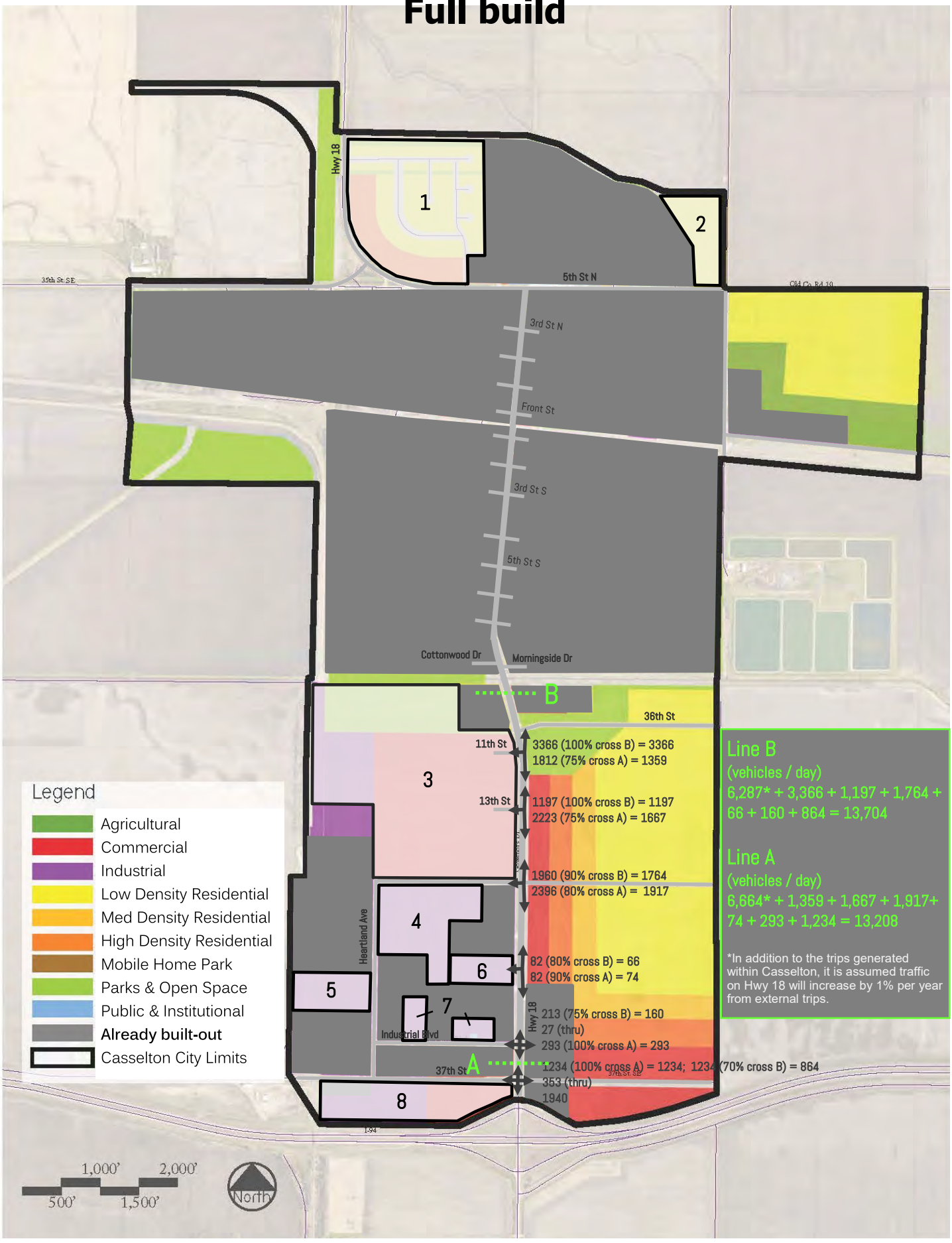


A. Single family residential: 185 units (177 units remaining)
B. Multi family residential: 108 units (assume 27-unit buildings)
C. Elementary School: 500 students
D. Strip retail: 28,700 sq ft GFA (2.87 acres)
E. Shopping plaza with supermarket: 76,800 sq ft GFA (7.68 acres)
F. General office building: 11,500 sq ft GFA (1.15 acres)
G. Nursery (garden center): 12,500 sq ft GFA (2.5 acres)
   Bank (drive in): 5,000 sq ft GFA (0.5 acres)
   Fast food with drive thru: 4,500 sq ft GFA (1.2 acres)
   Walk-in clinic: 20,000 GFA (2 acres)
H. Lumber store: 40,000 sq ft GFA (4 acres)
   General industrial: 160,000 sq ft GFA (16 acres)

Daily Traffic Intersection direction allocation
Full build



Daily traffic from new growth
Full build

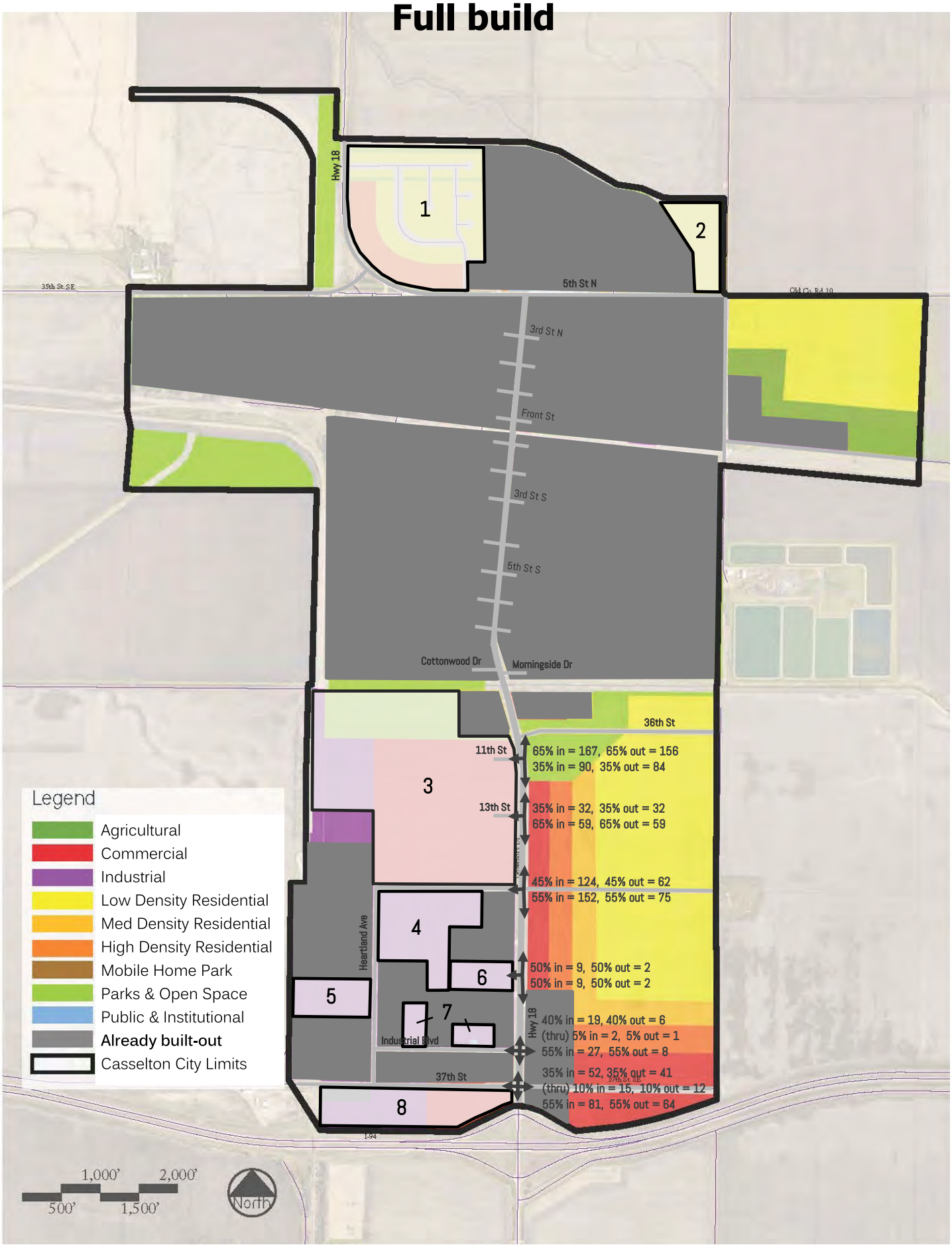


Line B
(vehicles / day)
6,287* + 3,366 + 1,197 + 1,764 + 66 + 160 + 864 = 13,704

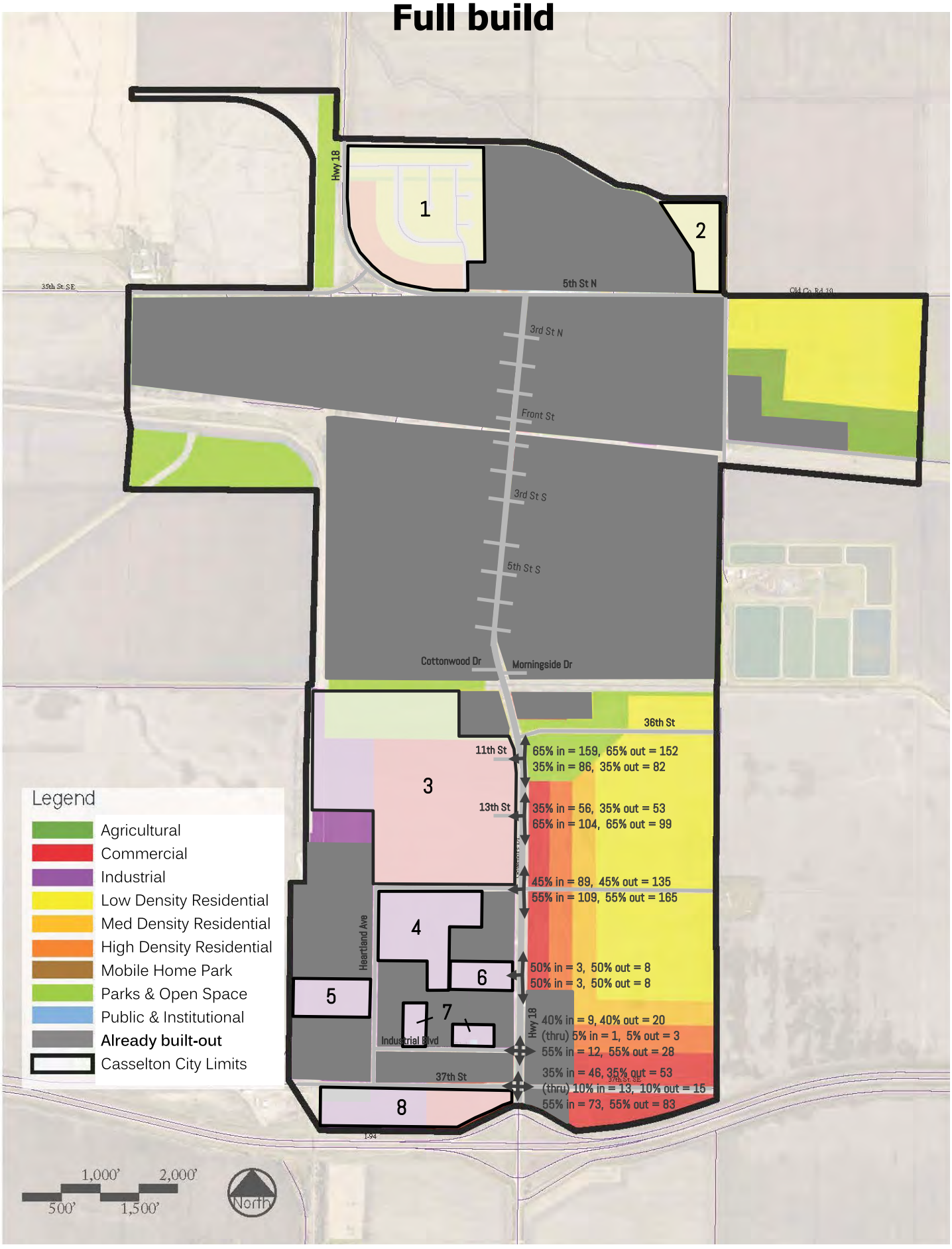
Line A
(vehicles / day)
6,664* + 1,359 + 1,667 + 1,917+ 74 + 293 + 1,234 = 13,208

*In addition to the trips generated within Casselton, it is assumed traffic on Hwy 18 will increase by 1% per year from external trips.

AM Peak Intersection direction allocation
Full build



PM Peak Intersection direction allocation
Full build



Appendix B:

Lighting Analysis

Roadway Lighting Analysis

Based on NDDOT Traffic Operations Manual

Southern Segment (I-94 to 700 ft north of Industrial Blvd)

Roadway Segment (non-freeway) Lighting Warrant
If one of the lighting warrants below is satisfied, then roadway segment lighting may be installed at the option of NDDOT.

Criteria:

- 4A. Sections where curb and gutter are present on at least one side of the road.
  - *Criteria met?:* ***NO***
  - *Reason: No curb & gutter on roadway*
- 4B. Sections through cities where substantial development is present on both sides of the road and one of the below criteria is also satisfied:
  - 1. The highway's Highway Performance Classification System is Interregional or State Corridor, or
    - *Criteria met?:* ***YES***
    - *Reason: Substantial development is present on both sides of road and Hwy 18 is State Corridor per NDDOT's Highway Performance Classification System*
  - 2. The major road current AADT (two-way volume) is 1,000 or more
    - *Criteria met?:* ***YES***
    - *Reason: AADT is greater than 1,000 and Hwy 18 is State Corridor per NDDOT's Highway Performance Classification System*
- 4C. Sections between two fully illuminated intersections that are spaced 0.75 mile apart or less
  - *Criteria met?:* ***NO***
  - *Reason: The current spacing between lighted segments is greater than 0.75 mile.*
- 4D. Sections where lighting is recommended based on engineering judgment as part of a traffic operations study.
  - *Criteria met?:* ***NO***
  - *Reason: No traffic operations study (including this study) has specifically recommended roadway lighting.*
- 4E. Sections where an existing roadway segment lighting is removed due to a roadway construction project.
  - *Criteria met?:* ***NO***
  - *Reason: No construction project has taken place which has removed roadway lighting.*
- 4F. Sections where a local government agency agrees to pay 50% of the installation costs and 100% of the maintenance operating costs.
  - *Criteria met?:* ***NO***

- *Reason: No agreement from a local jurisdiction has been put together to pay for lighting installation or maintenance operating costs.*

Since criteria 4B is met, roadway lighting is warranted for the Southern Segment.

Northern Segment (700 ft north of Industrial Blvd to Cottonwood Dr)

Roadway Segment (non-freeway) Lighting Warrant
If one of the lighting warrants below is satisfied, then roadway segment lighting may be installed at the option of NDDOT.

Criteria:

- 4A. Sections where curb and gutter are present on at least one side of the road.
  - *Criteria met?: **NO***
  - *Reason: No curb & gutter on roadway*
- 4B. Sections through cities where substantial development is present on both sides of the road and one of the below criteria is also satisfied:
  - 1. The highway's Highway Performance Classification System is Interregional or State Corridor, or
    - *Criteria met?: **NO***
    - *Reason: Substantial development is not present on both sides of road*
  - 2. The major road current AADT (two-way volume) is 1,000 or more
    - *Criteria met?: **NO***
    - *Reason: Substantial development is not present on both sides of road*
- 4C. Sections between two fully illuminated intersections that are spaced 0.75 mile apart or less
  - *Criteria met?: **NO***
  - *Reason: The current spacing between lighted segments is greater than 0.75 mile.*
- 4D. Sections where lighting is recommended based on engineering judgment as part of a traffic operations study.
  - *Criteria met?: **NO***
  - *Reason: No traffic operations study (including this study) has specifically recommended roadway lighting.*
- 4E. Sections where an existing roadway segment lighting is removed due to a roadway construction project.
  - *Criteria met?: **NO***
  - *Reason: No construction project has taken place which has removed roadway lighting.*
- 4F. Sections where a local government agency agrees to pay 50% of the installation costs and 100% of the maintenance operating costs.
  - *Criteria met?: **NO***

- *Reason: No agreement from a local jurisdiction has been put together to pay for lighting installation or maintenance operating costs.*

Since none of the criteria is met, roadway lighting is not warranted for the Northern Segment.

Study Intersections

- **Hwy 18 & Cottonwood Dr/Morningside Dr**
- **Hwy 18 & 11th St S**
- **Hwy 18 & 13th St S**
- **Hwy 18 & Industrial Blvd**
- **Hwy 18 & 37th St SE**

Intersection Lighting Warrant
If one of the lighting warrants below is satisfied, then intersection lighting may be installed at the option of NDDOT.

Criteria:

- 5A. All signalized intersections.
  - *Criteria met?:* ***NO***
- 5B. All roundabout intersections and all reduced conflict intersections.
  - *Criteria met?:* ***NO***
- 5C. Where raised channelizing islands/medians are present.
  - *Criteria met?:* ***NO***
- 5D. Where roadway segment lighting is installed.
  Hwy 18 & 37th St, Industrial Blvd, 13th St, 11th St:
  - *Criteria met?:* ***YES*** *(lighting already installed)*
  - *Reason: No roadway segment lighting is installed at this location*

  Hwy 18 & Cottonwood Dr/Morningside Dr:
  - *Criteria met?:* ***NO***
  - *Reason: Roadway segment lighting is installed at this location*
- 5E. Rural and suburban intersections where the current traffic volume cross product (Major AADT x Minor AADT) is 10,000,000 or more.
  Hwy 18 & 37th St:
  - *Criteria met?:* ***YES*** *(lighting already installed)*
  - *Reason: Current traffic greater than 10,000,000 (5,331 x 2197 = 11,712,207)*

  Hwy 18 & Industrial Blvd:
  - *Criteria met?:* ***NO***
  - *Reason: Current traffic less than 10,000,000 (5,331 x 833 = 4,440,723)*

  Hwy 18 & 13th St:
  - *Criteria met?:* ***NO***
  - *Reason: Current traffic less than 10,000,000 (5,030 x 38 = 191,140)*

Hwy 18 & 11th St:

- *Criteria met?:* ***NO***
- *Reason: Current traffic less than 10,000,000 (5,030 x 21 = 105,630)*

Hwy 18 & Cottonwood Dr/Morningside Dr:

- *Criteria met?:* ***NO*** *(lighting currently installed here as part of criteria 5D)*
- *Reason: Current traffic less than 10,000,000 (5,030 x 688 = 3,460,640)*

- 5F. Where lighting is recommended based on engineering judgment as part of a traffic operations study.
  - *Criteria met?:* ***NO***
  - *Reason: No traffic operations study (including this study) has specifically recommended roadway lighting.*
- 5G. Where an existing lighting system is removed due to a roadway construction project.
  - *Criteria met?:* ***NO***
  - *Reason: No construction project has taken place which has removed roadway lighting.*
- 5H. Where a local government agency agrees to pay 50% of the installation costs and 100% of the maintenance operating costs.
  - *Criteria met?:* ***NO***
  - *Reason: No agreement from a local jurisdiction has been put together to pay for lighting installation or maintenance operating costs.*

Appendix C:

Turn Lane Warrant Analysis

Turn Lane Warrant Calculations

Existing Conditions

Intersection of Hwy 18 & Cottonwood Dr. / Morningside Dr.

Existing Conditions:

- Left turning vehicles (northbound Hwy 18 to Cottonwood Dr): 53 veh/day
- Right turning vehicles (northbound Hwy 18 to Morningside Dr): 151 veh/day or 31 veh/hr (highest hour)
- Left turn truck percentage: Unknown (assume 2%)
- Terrain: Flat
- Speed limit: 25 mph
- Major road AADT: 5,030 veh/day

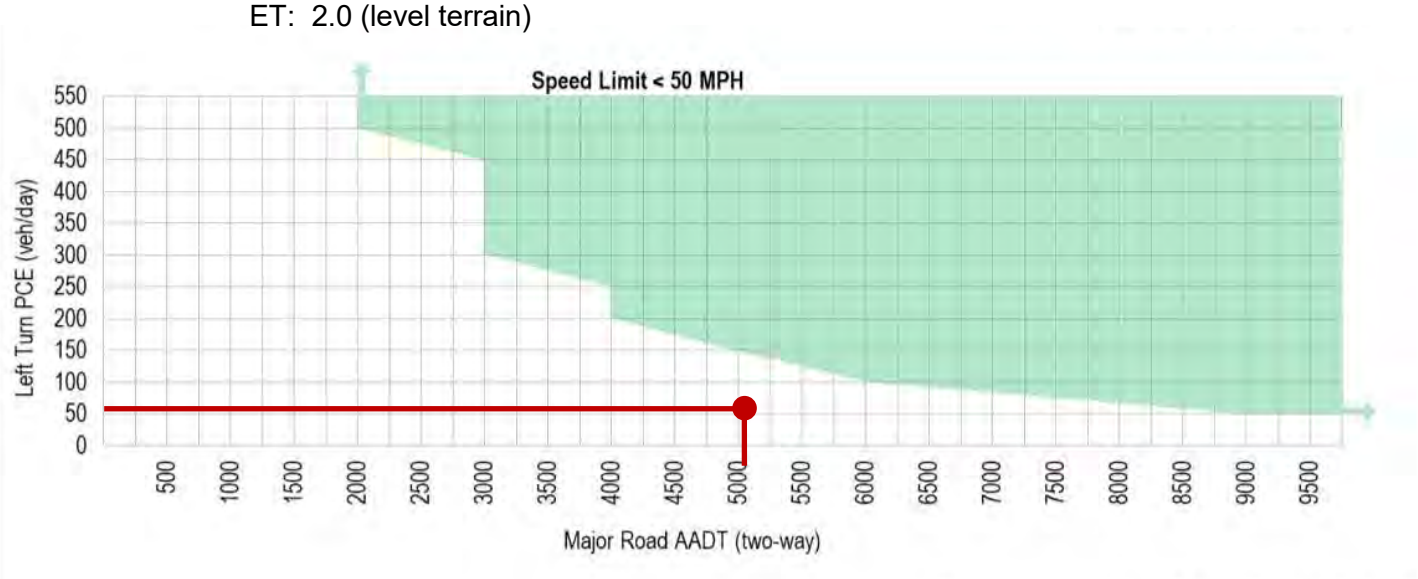
LEFT Turn Lane Analysis - Northbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 53 veh/day
PT: 2% or 0.02
ET: 2.0 (level terrain)

PCE = 53 (1 + 0.02 (2.0 - 1)) = **54 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane is not warranted for northbound Hwy 18 at Cottonwood Dr**.

RIGHT Turn Lane Analysis - Northbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for northbound Hwy 18 at Morningside Dr**.

Turn Lane Warrant Calculations
Existing Conditions
Intersection of Hwy 18 & Cottonwood Dr. / Morningside Dr.

Existing Conditions:

- Left turning vehicles (southbound Hwy 18 to Morningside Dr): 197 veh/day
- Right turning vehicles (southbound Hwy 18 to Cottonwood Dr): 76 veh/day or 11 veh/hr (highest hour)
- Left turn truck percentage: Unknown (assume 2%)
- Terrain: Flat
- Speed limit: 25 mph
- Major road AADT: 5,030 veh/day

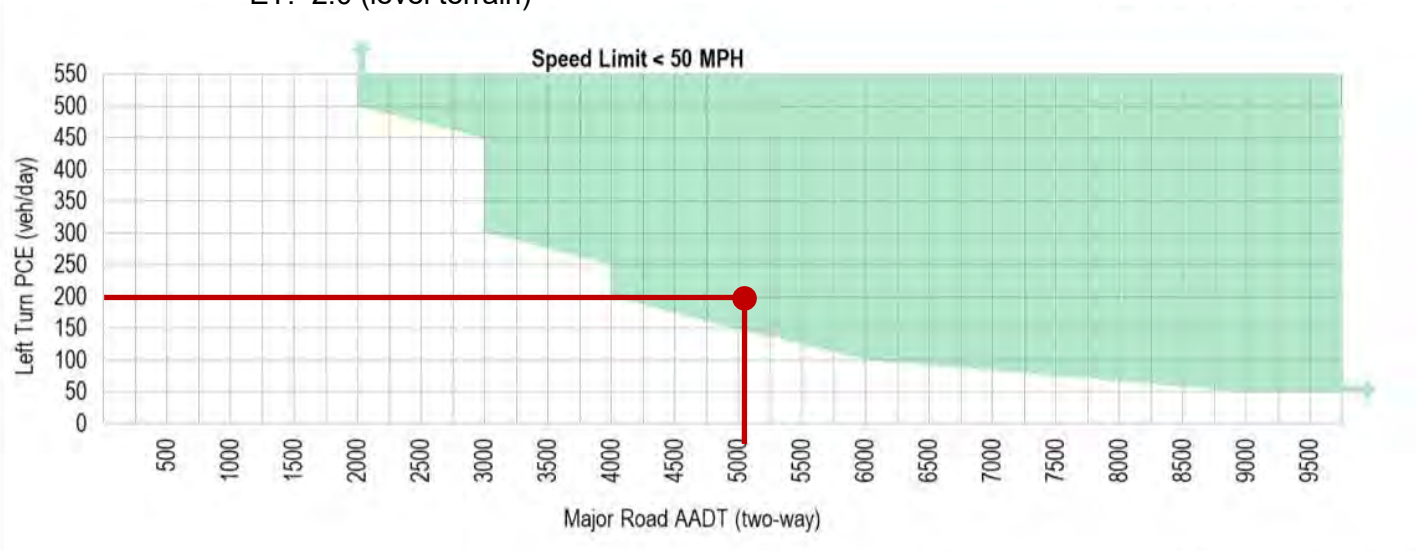
LEFT Turn Lane Analysis - Southbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 197 veh/day
PT: 2% or 0.02
ET: 2.0 (level terrain)

PCE = 197 (1 + 0.02 (2.0 - 1)) = **201 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane is warranted for the southbound Hwy 18 at Morningside Dr**.

RIGHT Turn Lane Analysis - Southbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for southbound Hwy 18 at Cottonwood Dr**.

Turn Lane Warrant Calculations
Existing Conditions
Intersection of Hwy 18 & 11th St

Existing Conditions:
- Left turning vehicles (northbound Hwy 18 to 11th St): 2 veh/day
- Right turning vehicles (southbound Hwy 18 to 11th St): 10 veh/day or 3 veh/hr (highest hour)
- Left turn truck percentage: Unknown (assume 2%)
- Terrain: Flat
- Speed limit: 45 mph
- Major road AADT: 5,030 veh/day

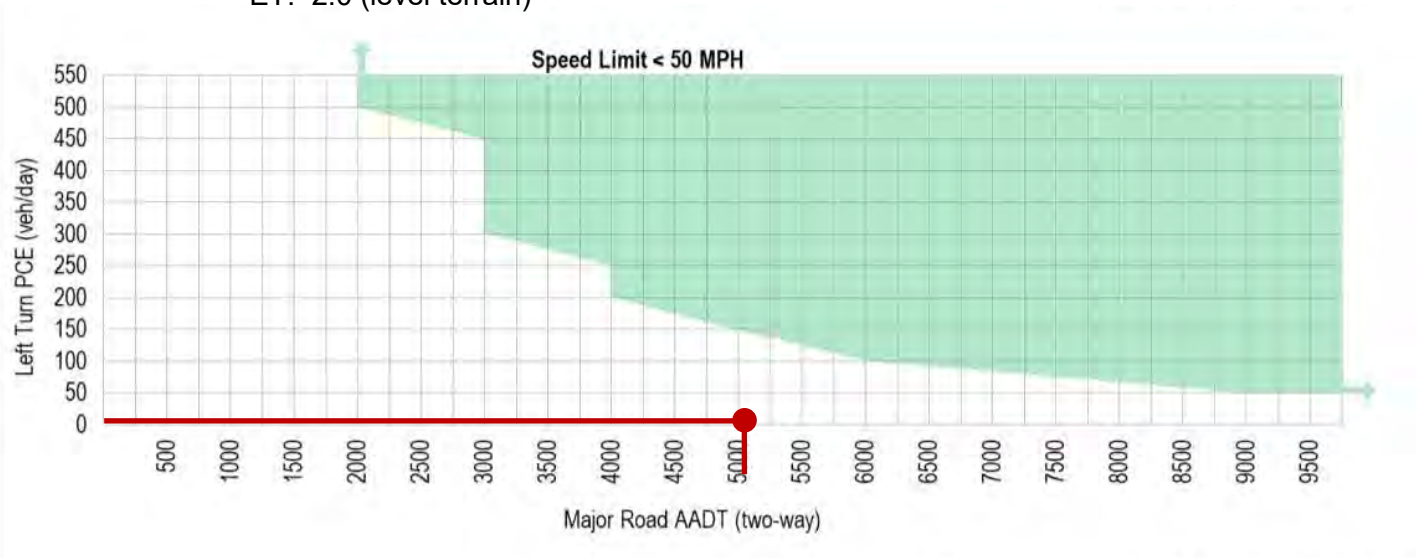
LEFT Turn Lane Analysis

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 2 veh/day
PT: 2% or 0.02
ET: 2.0 (level terrain)

PCE = 2 (1 + 0.02 (2.0 - 1)) = **2 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane is not warranted**.

RIGHT Turn Lane Analysis

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted**.

Turn Lane Warrant Calculations

Existing Conditions

Intersection of Hwy 18 & 13th St

Existing Conditions:

- Left turning vehicles (northbound Hwy 18 to 13th St): 13 veh/day
- Right turning vehicles (southbound Hwy 18 to 13th St): 4 veh/day or 2 veh/hr (highest hour)
- Left turn truck percentage: Unknown (assume 2%)
- Terrain: Flat
- Speed limit: 45 mph
- Major road AADT: 5,030 veh/day

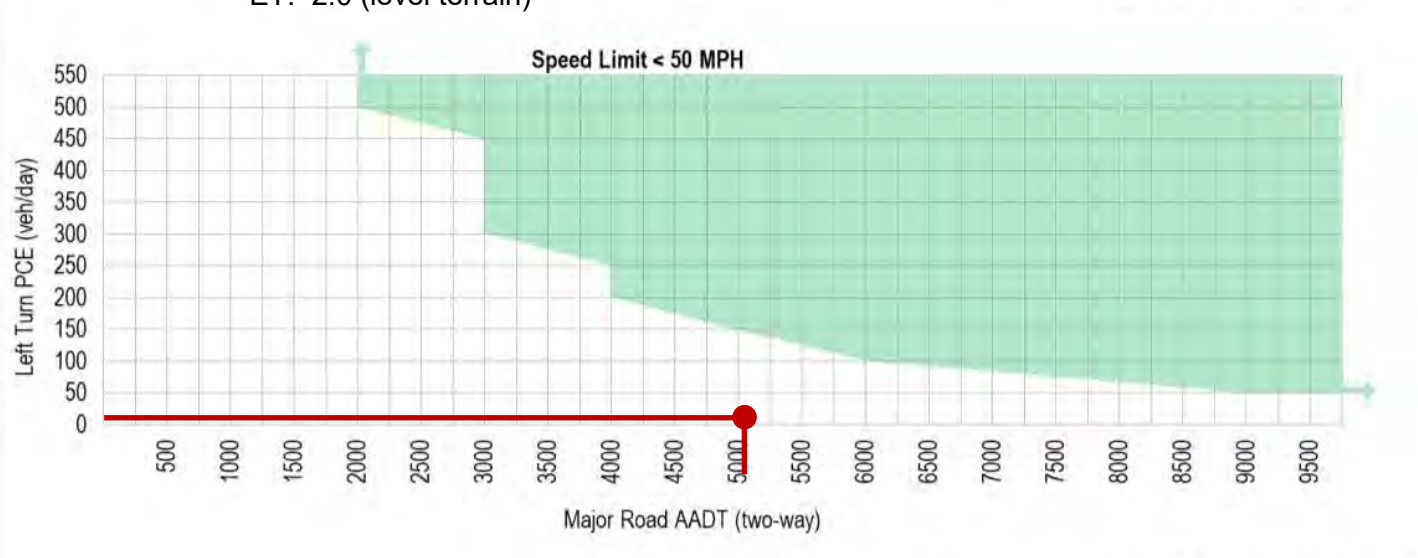
LEFT Turn Lane Analysis

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 13 veh/day
PT: 2% or 0.02
ET: 2.0 (level terrain)

PCE = 13 (1 + 0.02 (2.0 - 1)) = **13 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane is not warranted**.

RIGHT Turn Lane Analysis

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted**.

Turn Lane Warrant Calculations
Existing Conditions
Intersection of Hwy 18 & Industrial Blvd

Existing Conditions:

- Left turning vehicles (northbound Hwy 18 to Industrial Blvd): 124 veh/day
- Right turning vehicles (northbound Hwy 18 to Industrial Blvd): 91 veh/day or 12 veh/hr (highest hour)
- Left turn truck percentage: Unknown (assume 5%)
- Terrain: Flat
- Speed limit: 45 mph
- Major road AADT: 5,331 veh/day

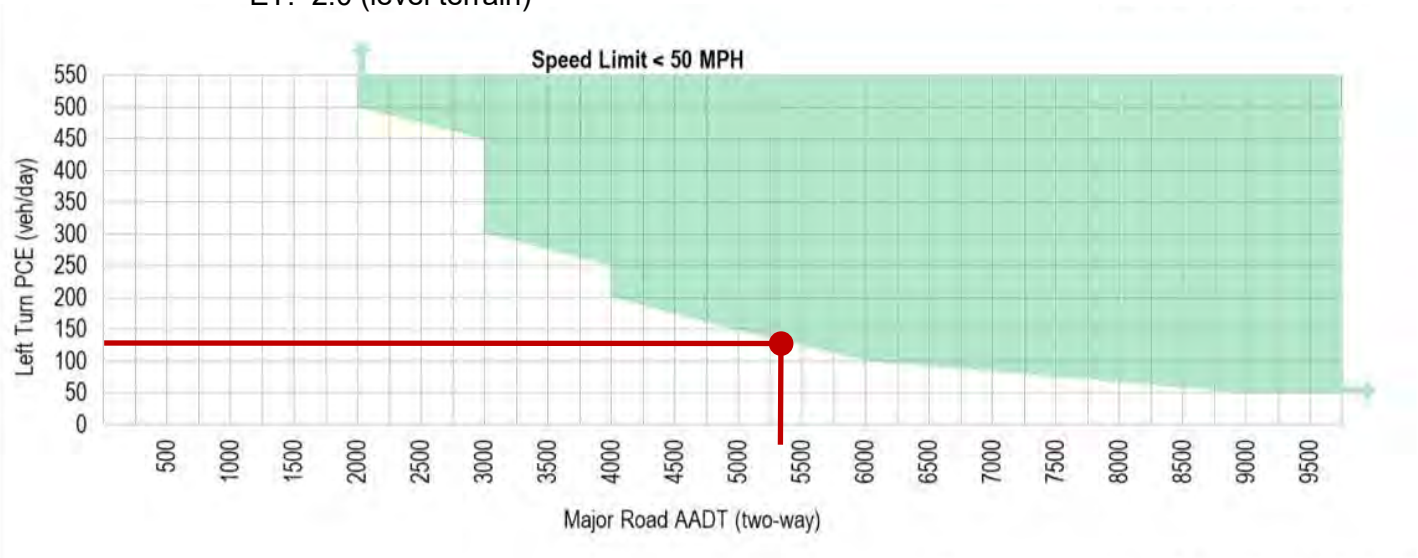
LEFT Turn Lane Analysis - Northbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 124 veh/day
PT: 5% or 0.05
ET: 2.0 (level terrain)

PCE = 124 (1 + 0.05 (2.0 - 1)) = **130 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane might be warranted for northbound Hwy 18 at Industrial Blvd.**

RIGHT Turn Lane Analysis - Northbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for northbound Hwy 18 at Industrial Blvd.**

Turn Lane Warrant Calculations
Existing Conditions
Intersection of Hwy 18 & Industrial Blvd

Existing Conditions:

- Left turning vehicles (southbound Hwy 18 to Industrial Blvd): 90 veh/day
- Right turning vehicles (southbound Hwy 18 to Industrial Blvd): 245 veh/day or 27 veh/hr (highest hour)
- Left turn truck percentage: Unknown (assume 5%)
- Terrain: Flat
- Speed limit: 45 mph
- Major road AADT: 5,331 veh/day

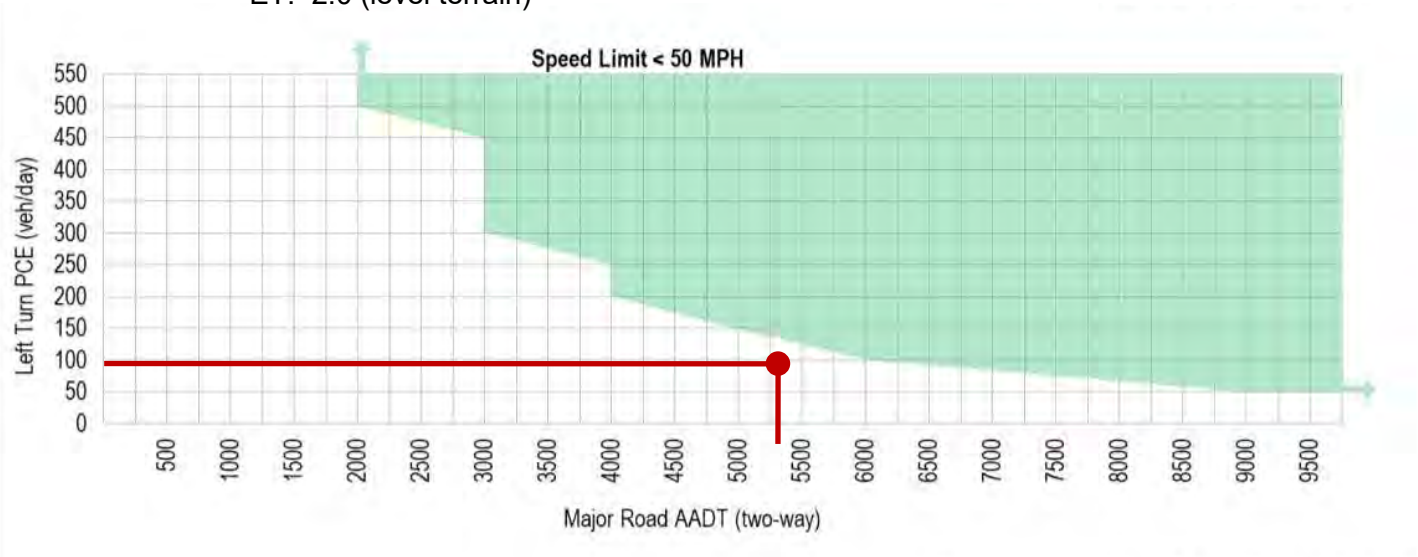
LEFT Turn Lane Analysis - Southbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 90 veh/day
PT: 5% or 0.05
ET: 2.0 (level terrain)

PCE = 90 (1 + 0.05 (2.0 - 1)) = **95 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane is not warranted for the southbound Hwy 18 at Industrial Blvd**

RIGHT Turn Lane Analysis - Southbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for southbound Hwy 18 at Industrial Blvd.**

Turn Lane Warrant Calculations
Existing Conditions
Intersection of Hwy 18 & 37th St

Existing Conditions:

- Left turning vehicles (northbound Hwy 18 to 37th St): 252 veh/day
- Right turning vehicles (northbound Hwy 18 to 37th St): 671 veh/day or 67 veh/hr (highest hour)
- Left turn truck percentage: Unknown (assume 15%)
- Terrain: Flat
- Speed limit: 45 mph
- Major road AADT: 5,331 veh/day

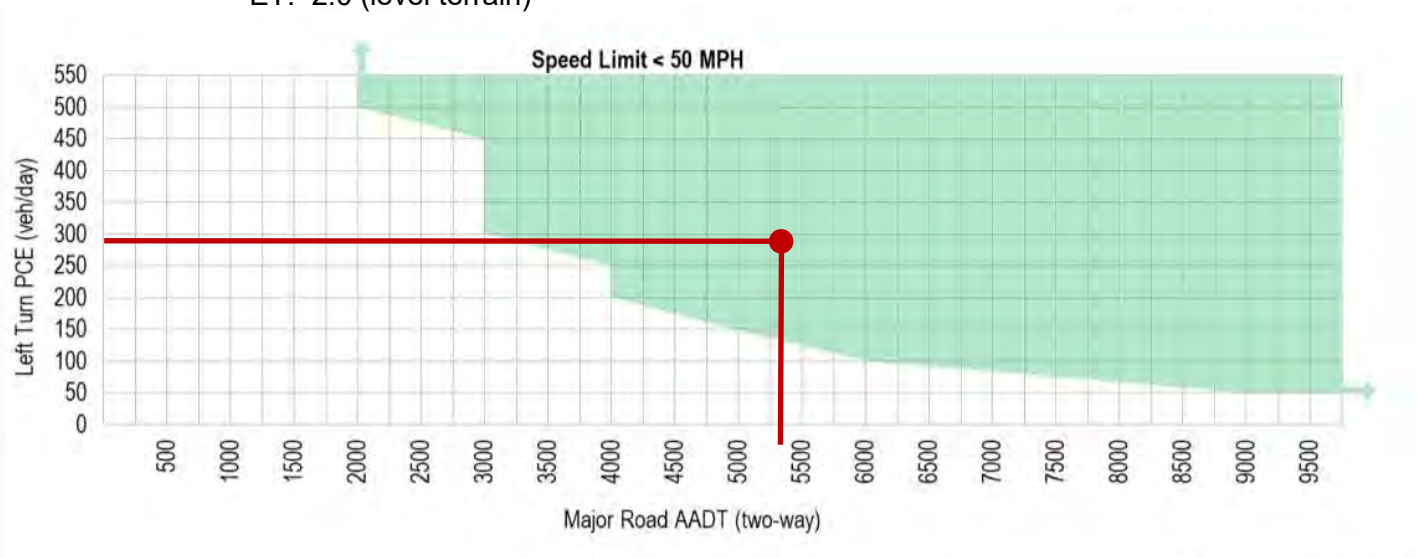
LEFT Turn Lane Analysis - Northbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 252 veh/day
PT: 15% or 0.15
ET: 2.0 (level terrain)

PCE = 252 (1 + 0.15 (2.0 - 1)) = **290 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, a left turn lane is warranted for northbound Hwy 18 at 37th St. A left turn lane is already in-place.

RIGHT Turn Lane Analysis - Northbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for northbound Hwy 18 at 37th St.**

Turn Lane Warrant Calculations
Existing Conditions
Intersection of Hwy 18 & 37th St

Existing Conditions:
- Left turning vehicles (southbound Hwy 18 to Industrial Blvd): 323 veh/day
- Right turning vehicles (southbound Hwy 18 to Industrial Blvd): 124 veh/day or 13 veh/hr (highest hour)
- Left turn truck percentage: Unknown (assume 15%)
- Terrain: Flat
- Speed limit: 45 mph
- Major road AADT: 5,331 veh/day

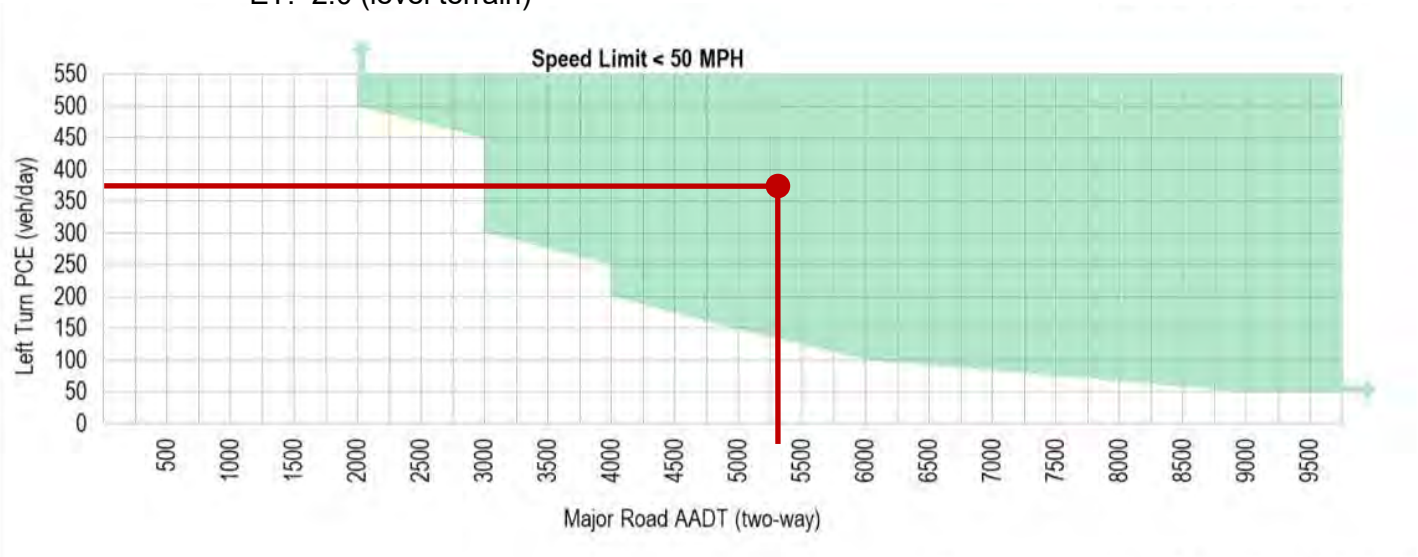
LEFT Turn Lane Analysis - Southbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 323 veh/day
PT: 15% or 0.15
ET: 2.0 (level terrain)

PCE = 323 (1 + 0.15 (2.0 - 1)) = **371 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, a left turn lane is warranted for northbound Hwy 18 at 37th St. A left turn lane is already in-place.

RIGHT Turn Lane Analysis - Southbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for southbound Hwy 18 at 37th St.**

Turn Lane Warrant Calculations

2035 Conditions

Intersection of Hwy 18 & Cottonwood Dr. / Morningside Dr.

Existing Conditions:

- Left turning vehicles (northbound Hwy 18 to Cottonwood Dr): 53 veh/day
- Right turning vehicles (northbound Hwy 18 to Morningside Dr): 151 veh/day or 31 veh/hr (highest hour)
- Left turn truck percentage: Unknown (assume 2%)
- Terrain: Flat
- Speed limit: assume 25 mph
- Major road AADT: 6,238 veh/day

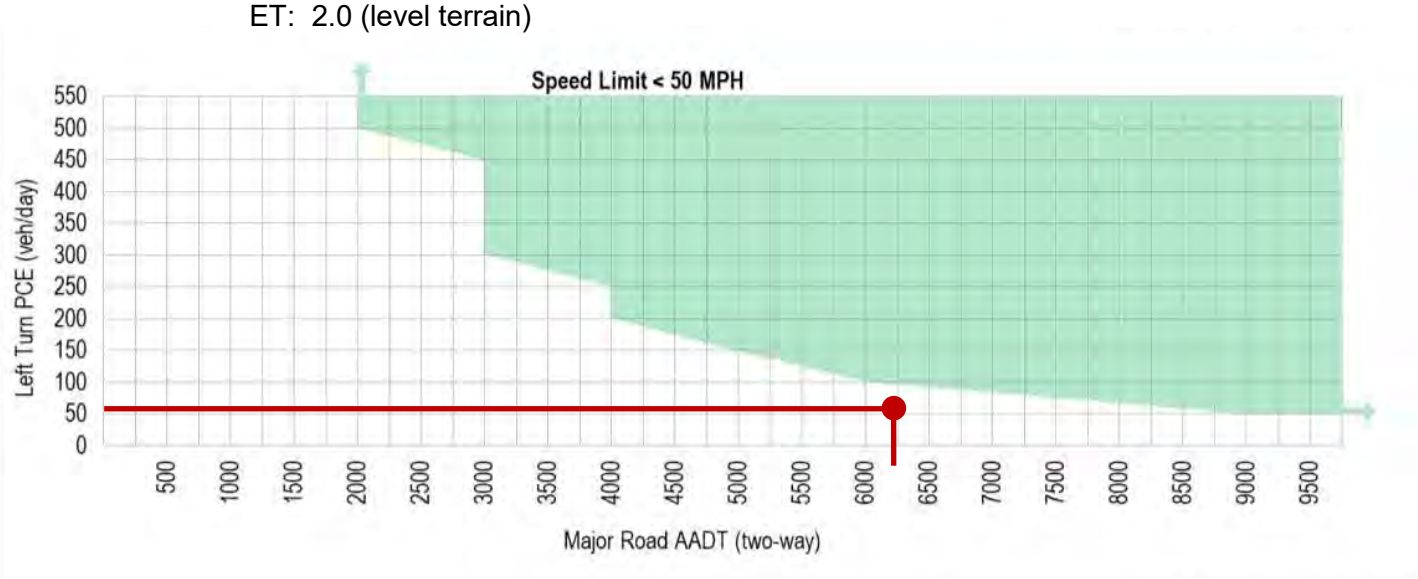
LEFT Turn Lane Analysis - Northbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 53 veh/day
PT: 2% or 0.02
ET: 2.0 (level terrain)

PCE = 53 (1 + 0.02 (2.0 - 1)) = **54 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane is not warranted for northbound Hwy 18 at Cottonwood Dr**.

RIGHT Turn Lane Analysis - Northbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for northbound Hwy 18 at Morningside Dr**.

Turn Lane Warrant Calculations
2035 Conditions
Intersection of Hwy 18 & Cottonwood Dr. / Morningside Dr.

Existing Conditions:

- Left turning vehicles (southbound Hwy 18 to Morningside Dr): 197 veh/day
- Right turning vehicles (southbound Hwy 18 to Cottonwood Dr): 76 veh/day or 11 veh/hr (highest hour)
- Left turn truck percentage: Unknown (assume 2%)
- Terrain: Flat
- Speed limit: assume 25 mph
- Major road AADT: 6,238 veh/day

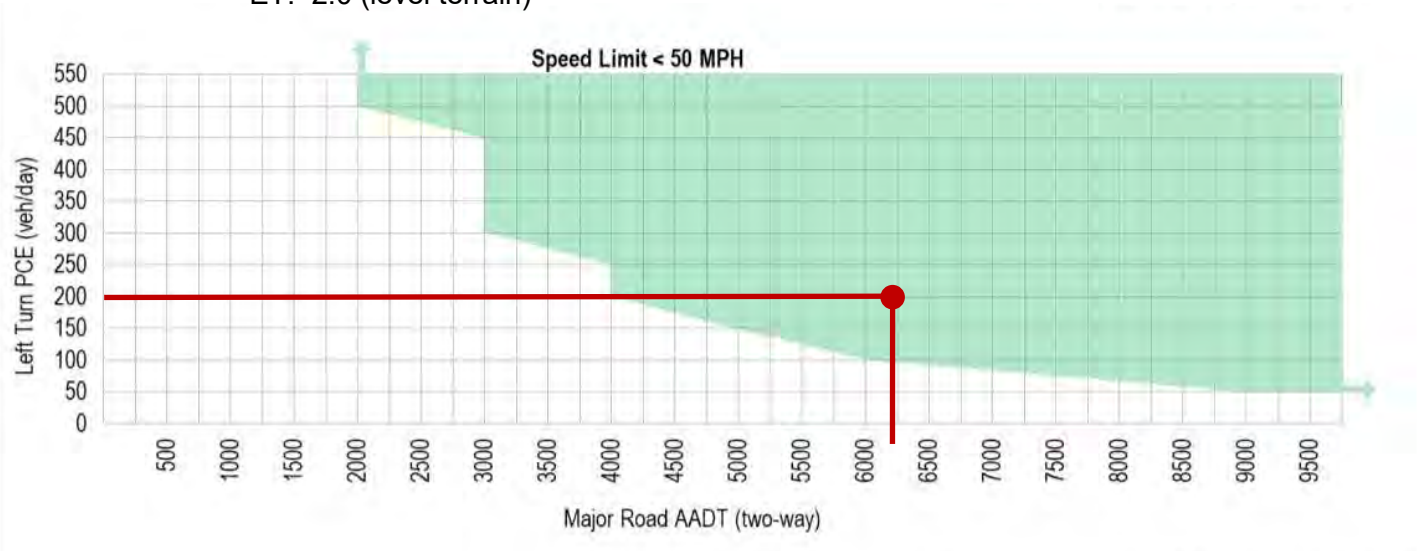
LEFT Turn Lane Analysis - Southbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 197 veh/day
PT: 2% or 0.02
ET: 2.0 (level terrain)

PCE = 197 (1 + 0.02 (2.0 - 1)) = **201 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane is warranted for the southbound Hwy 18 at Morningside Dr**.

RIGHT Turn Lane Analysis - Southbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for southbound Hwy 18 at Cottonwood Dr**.

Turn Lane Warrant Calculations
2035 Conditions
Intersection of Hwy 18 & 11th St

Existing Conditions:

- Left turning vehicles (northbound Hwy 18 to 11th St): 2 (existing) + 127 (new) = 129 veh/day
- Right turning vehicles (southbound Hwy 18 to 11th St): 10 (existing) + 236 (new) = 246 veh/day
- Left turn truck percentage: Unknown (assume 2%)
- Terrain: Flat
- Speed limit: assume 45 mph
- Major road AADT: 6,238 veh/day

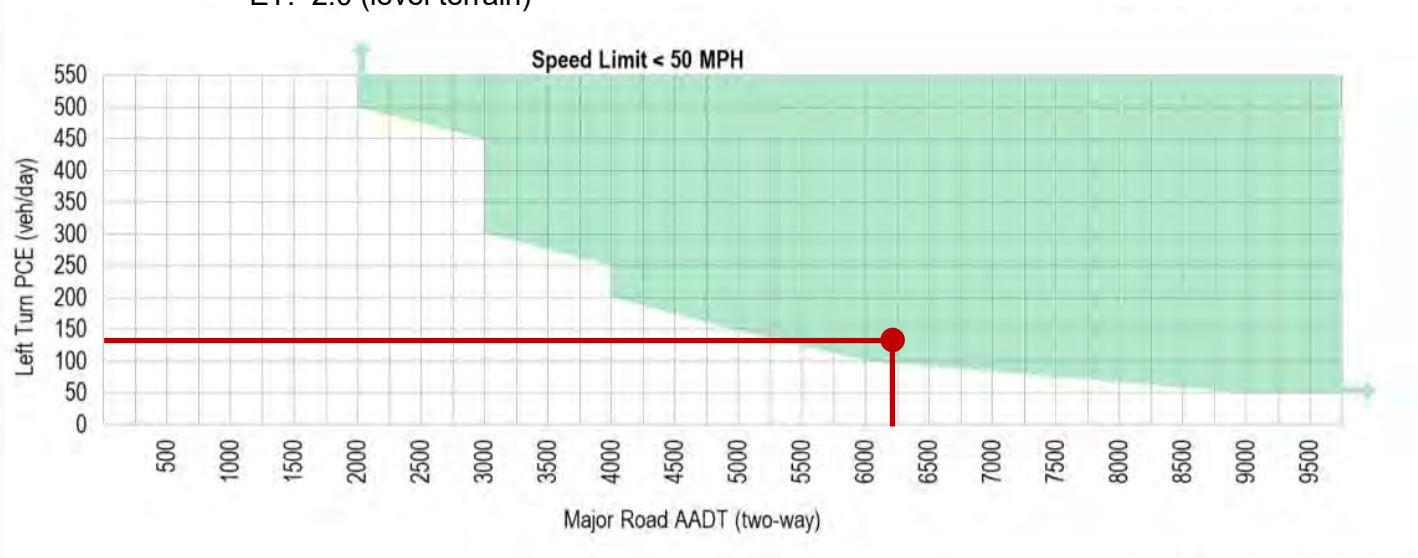
LEFT Turn Lane Analysis

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 129 veh/day
PT: 2% or 0.02
ET: 2.0 (level terrain)

PCE = 129 (1 + 0.02 (2.0 - 1)) = **132 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane is warranted**.

RIGHT Turn Lane Analysis

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted**.

Turn Lane Warrant Calculations
2035 Conditions
Intersection of Hwy 18 & 13th St

Existing Conditions:

- Left turning vehicles (northbound Hwy 18 to 13th St): 13 (existing) + 197 (new) = 210 veh/day
- Right turning vehicles (southbound Hwy 18 to 13th St): 4 (existing) + 106 (new) = 110 veh/day
- Left turn truck percentage: Unknown (assume 2%)
- Terrain: Flat
- Speed limit: assume 45 mph
- Major road AADT: 6,238 veh/day

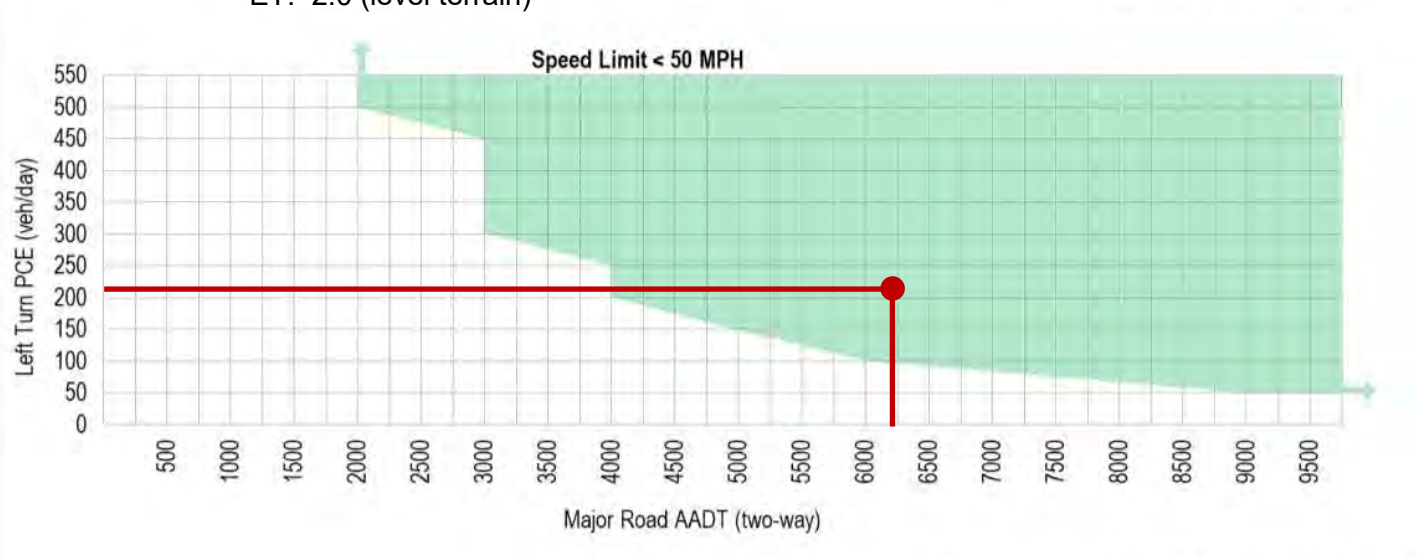
LEFT Turn Lane Analysis

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 210 veh/day
PT: 2% or 0.02
ET: 2.0 (level terrain)

PCE = 210 (1 + 0.02 (2.0 - 1)) = **214 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane is warranted**.

RIGHT Turn Lane Analysis

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted**.

Turn Lane Warrant Calculations
2035 Conditions
Intersection of Hwy 18 & Industrial Blvd

Existing Conditions:

- Left turning vehicles (northbound Hwy 18 to Industrial Blvd): 124 (existing) + 4 (new) = 128 veh/day
- Right turning vehicles (northbound Hwy 18 to Industrial Blvd): 91 (existing) + 0 (new) = 91 veh/day
- Left turn truck percentage: Unknown (assume 5%)
- Terrain: Flat
- Speed limit: assume 45 mph
- Major road AADT: 6,375 veh/day

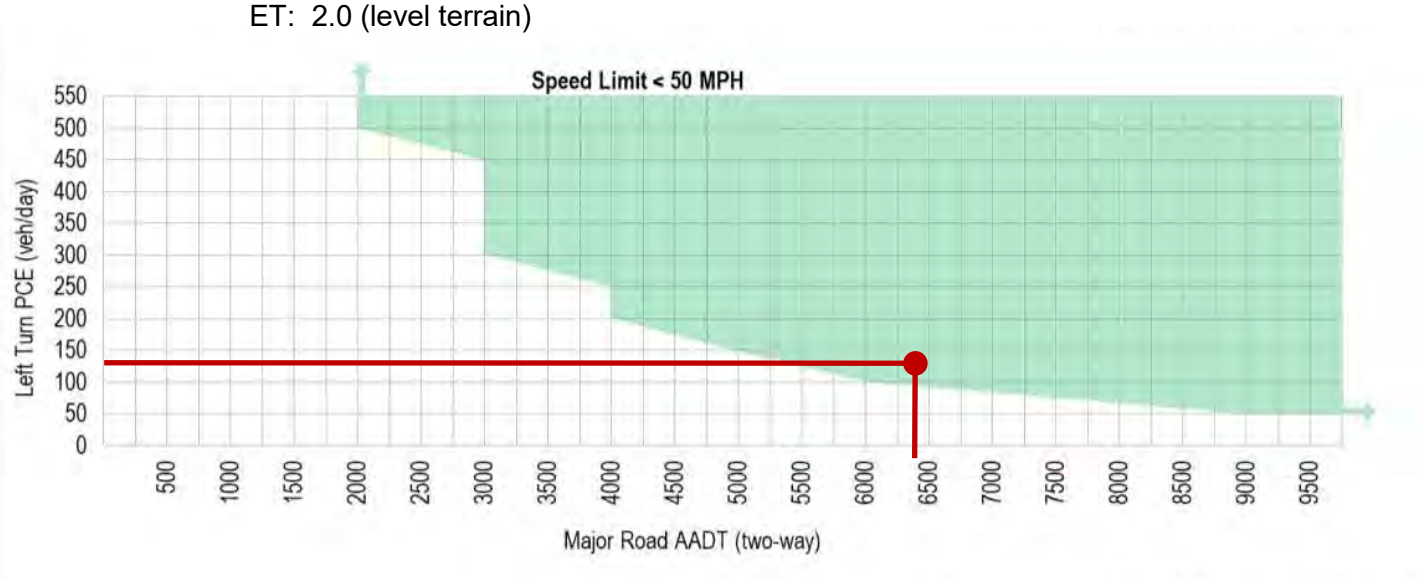
LEFT Turn Lane Analysis - Northbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 128 veh/day
PT: 5% or 0.05
ET: 2.0 (level terrain)

PCE = 128 (1 + 0.05 (2.0 - 1)) = **134 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane is warranted for northbound Hwy 18 at Industrial Blvd.**

RIGHT Turn Lane Analysis - Northbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for northbound Hwy 18 at Industrial Blvd.**

Turn Lane Warrant Calculations
2035 Conditions
Intersection of Hwy 18 & Industrial Blvd

Existing Conditions:

- Left turning vehicles (southbound Hwy 18 to Industrial Blvd): 90 (existing) + 0 (new) = 90 veh/day
- Right turning vehicles (southbound Hwy 18 to Industrial Blvd): 245 (existing) + 3 (new) = 248 veh/day
- Left turn truck percentage: Unknown (assume 5%)
- Terrain: Flat
- Speed limit: assume 45 mph
- Major road AADT: 6,375 veh/day

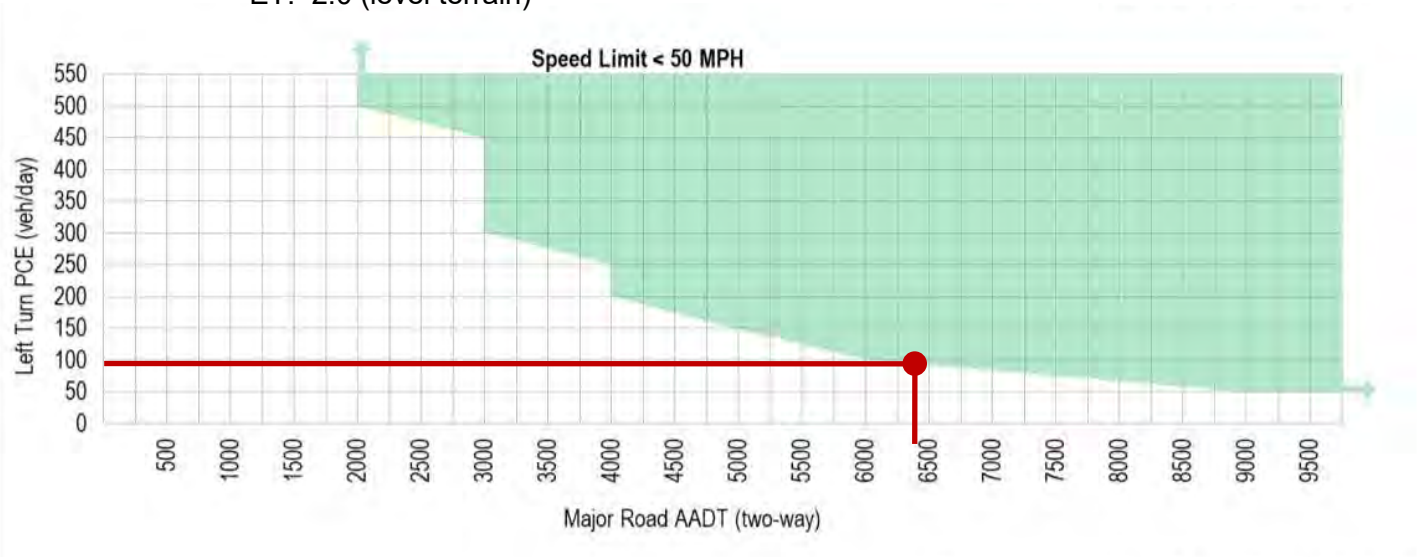
LEFT Turn Lane Analysis - Southbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 90 veh/day
PT: 5% or 0.05
ET: 2.0 (level terrain)

PCE = 90 (1 + 0.05 (2.0 - 1)) = **95 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane might be warranted for the southbound Hwy 18 at Industrial Blvd.**

RIGHT Turn Lane Analysis - Southbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for southbound Hwy 18 at Industrial Blvd.**

Turn Lane Warrant Calculations
2035 Conditions
Intersection of Hwy 18 & 37th St

Existing Conditions:

- Left turning vehicles (northbound Hwy 18 to 37th St): 252 (existing) + 2 (new) = 254 veh/day
- Right turning vehicles (northbound Hwy 18 to 37th St): 671 (existing) + 0 (new) = 671 veh/day
- Left turn truck percentage: Unknown (assume 15%)
- Terrain: Flat
- Speed limit: assume 45 mph
- Major road AADT: 6,375 veh/day

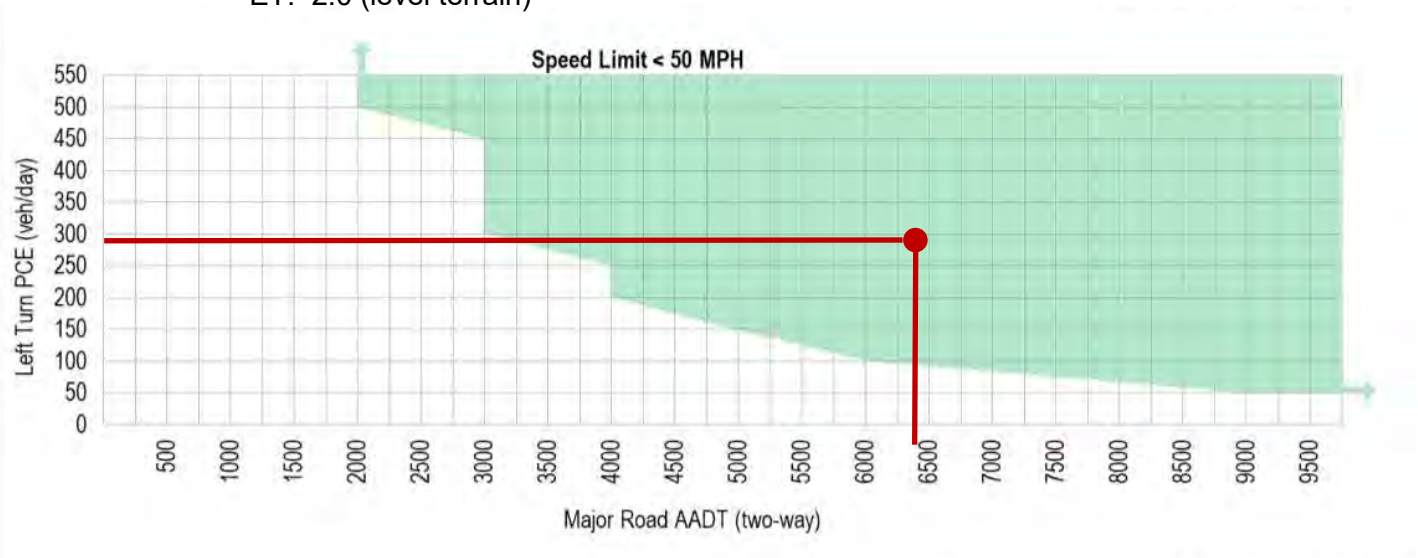
LEFT Turn Lane Analysis - Northbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 254 veh/day
PT: 15% or 0.15
ET: 2.0 (level terrain)

PCE = 254 (1 + 0.15 (2.0 - 1)) = **292 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, a left turn lane is warranted for northbound Hwy 18 at 37th St. A left turn lane is already in-place.

RIGHT Turn Lane Analysis - Northbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for northbound Hwy 18 at 37th St.**

Turn Lane Warrant Calculations
2035 Conditions
Intersection of Hwy 18 & 37th St

Existing Conditions:

- Left turning vehicles (southbound Hwy 18 to Industrial Blvd): 323 (existing) + 0 (new) = 323 veh/day
- Right turning vehicles (southbound Hwy 18 to Industrial Blvd): 124 (existing) + 1 (new) = 124 veh/day
- Left turn truck percentage: Unknown (assume 15%)
- Terrain: Flat
- Speed limit: assume 45 mph
- Major road AADT: 6,375 veh/day

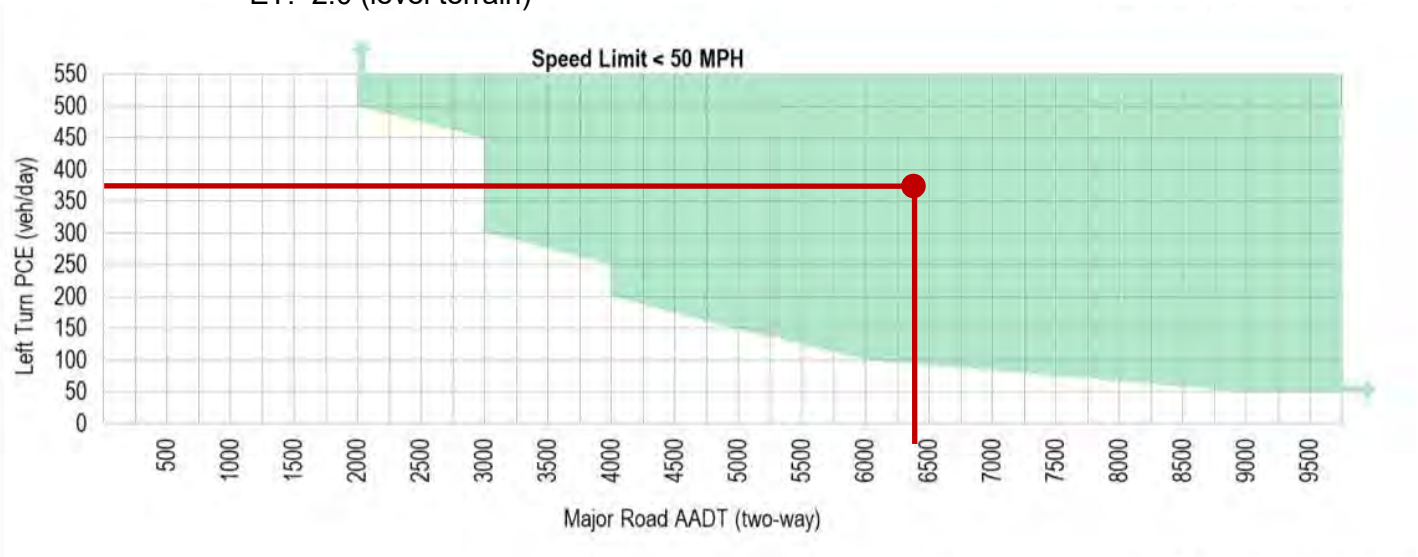
LEFT Turn Lane Analysis - Southbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 323 veh/day
PT: 15% or 0.15
ET: 2.0 (level terrain)

PCE = 323 (1 + 0.15 (2.0 - 1)) = **371 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, a left turn lane is warranted for northbound Hwy 18 at 37th St. A left turn lane is already in-place.

RIGHT Turn Lane Analysis - Southbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for southbound Hwy 18 at 37th St.**

Turn Lane Warrant Calculations
2050 Conditions
Intersection of Hwy 18 & Cottonwood Dr. / Morningside Dr.

Existing Conditions:

- Left turning vehicles (northbound Hwy 18 to Cottonwood Dr): 53 veh/day
- Right turning vehicles (northbound Hwy 18 to Morningside Dr): 151 veh/day
- Left turn truck percentage: Unknown (assume 2%)
- Terrain: Flat
- Speed limit: assume 25 mph
- Major road AADT: 8,677 veh/day

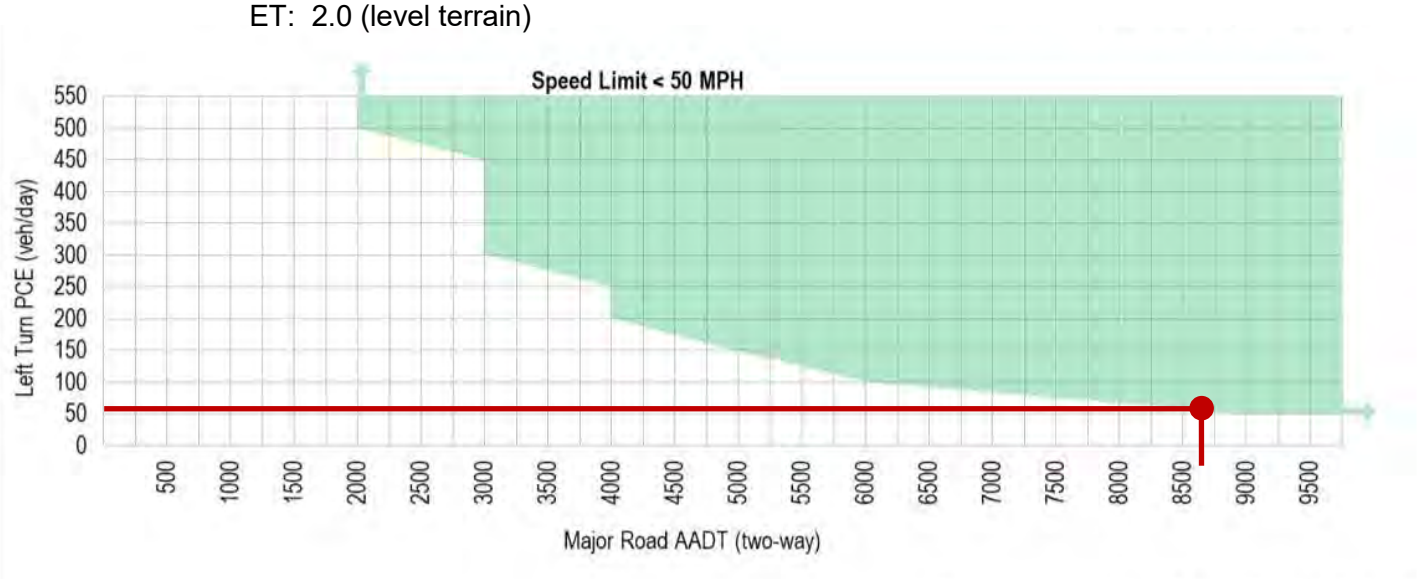
LEFT Turn Lane Analysis - Northbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 53 veh/day
PT: 2% or 0.02
ET: 2.0 (level terrain)

PCE = 53 (1 + 0.02 (2.0 - 1)) = **54 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane might be warranted for northbound Hwy 18 at Cottonwood Dr**.

RIGHT Turn Lane Analysis - Northbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for northbound Hwy 18 at Morningside Dr**.

Turn Lane Warrant Calculations
2050 Conditions
Intersection of Hwy 18 & Cottonwood Dr. / Morningside Dr.

Existing Conditions:

- Left turning vehicles (southbound Hwy 18 to Morningside Dr): 197 veh/day
- Right turning vehicles (southbound Hwy 18 to Cottonwood Dr): 76 veh/day
- Left turn truck percentage: Unknown (assume 2%)
- Terrain: Flat
- Speed limit: assume 25 mph
- Major road AADT: 8,677 veh/day

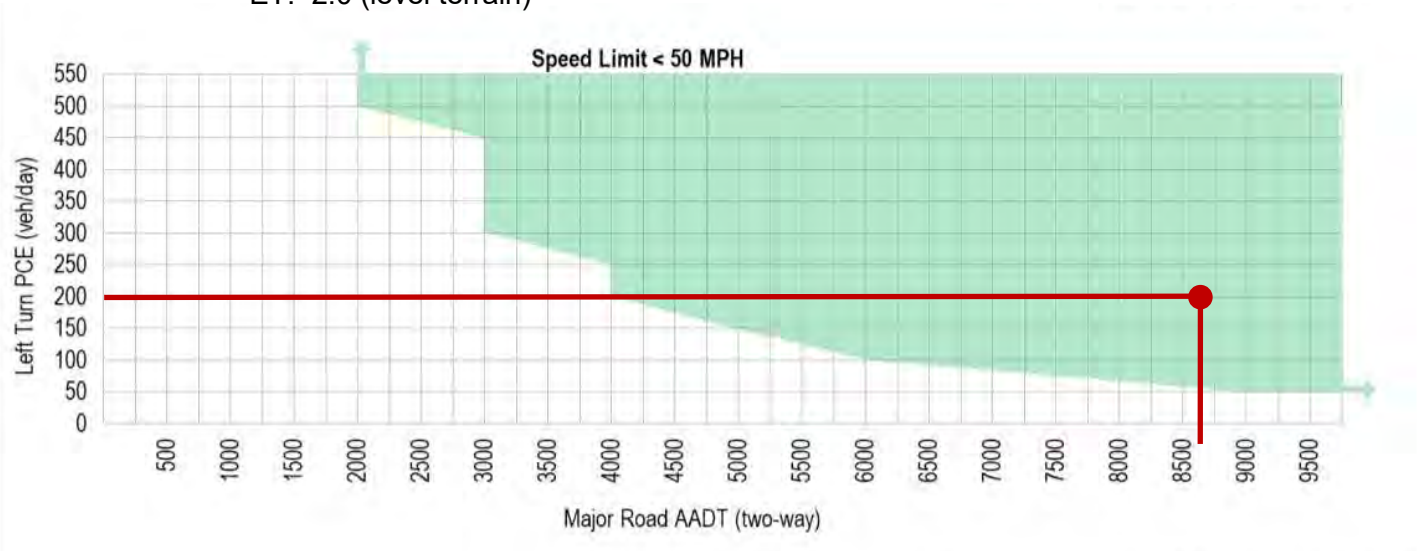
LEFT Turn Lane Analysis - Southbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 197 veh/day
PT: 2% or 0.02
ET: 2.0 (level terrain)

PCE = 197 (1 + 0.02 (2.0 - 1)) = **201 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane is warranted for the southbound Hwy 18 at Morningside Dr**.

RIGHT Turn Lane Analysis - Southbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for southbound Hwy 18 at Cottonwood Dr**.

Turn Lane Warrant Calculations
2050 Conditions
Intersection of Hwy 18 & 11th St

Existing Conditions:

- Left turning vehicles (northbound Hwy 18 to 11th St): 2 (existing) + 295 (new) = 297 veh/day
- Right turning vehicles (southbound Hwy 18 to 11th St): 10 (existing) + 548 (new) = 568 veh/day
- Left turn truck percentage: Unknown (assume 2%)
- Terrain: Flat
- Speed limit: assume 45 mph
- Major road AADT: 8,677 veh/day

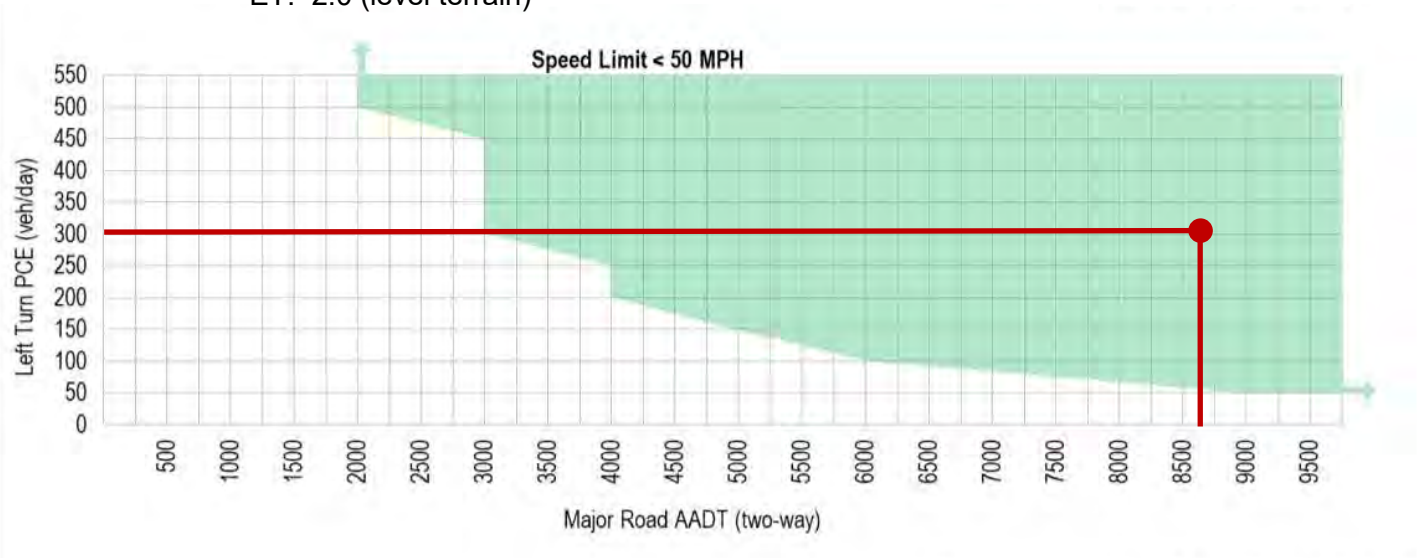
LEFT Turn Lane Analysis

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 297 veh/day
PT: 2% or 0.02
ET: 2.0 (level terrain)

PCE = 297 (1 + 0.02 (2.0 - 1)) = **303 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane is warranted**.

RIGHT Turn Lane Analysis

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted**.

Turn Lane Warrant Calculations
2050 Conditions
Intersection of Hwy 18 & 13th St

Existing Conditions:

- Left turning vehicles (northbound Hwy 18 to 13th St): 13 (existing) + 222 (new) = 235 veh/day
- Right turning vehicles (southbound Hwy 18 to 13th St): 4 (existing) + 120 (new) = 124 veh/day
- Left turn truck percentage: Unknown (assume 2%)
- Terrain: Flat
- Speed limit: assume 45 mph
- Major road AADT: 8,677 veh/day

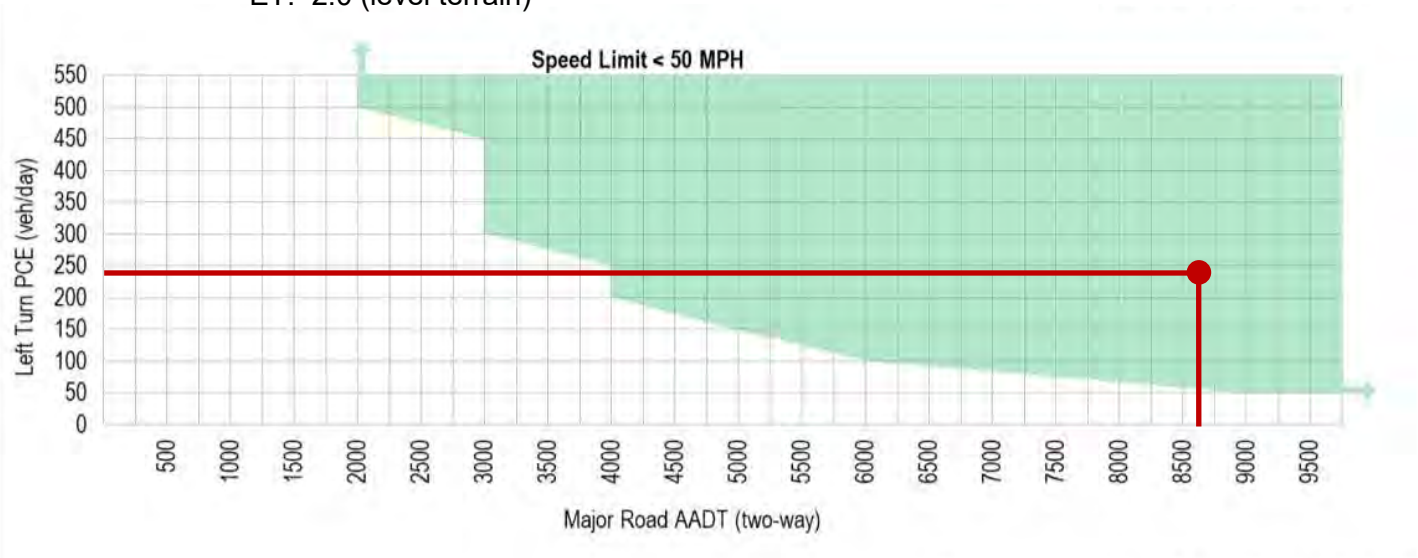
LEFT Turn Lane Analysis

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 235 veh/day
PT: 2% or 0.02
ET: 2.0 (level terrain)

PCE = 235 (1 + 0.02 (2.0 - 1)) = **240 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane is warranted**.

RIGHT Turn Lane Analysis

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted**.

Turn Lane Warrant Calculations
2050 Conditions
Intersection of Hwy 18 & Industrial Blvd

Existing Conditions:

- Left turning vehicles (northbound Hwy 18 to Industrial Blvd): 124 (existing) + 111 (new) = 235 veh/day
- Right turning vehicles (northbound Hwy 18 to Industrial Blvd): 91 (existing) + 0 (new) = 91 veh/day
- Left turn truck percentage: Unknown (assume 5%)
- Terrain: Flat
- Speed limit: assume 45 mph
- Major road AADT: 8,851 veh/day

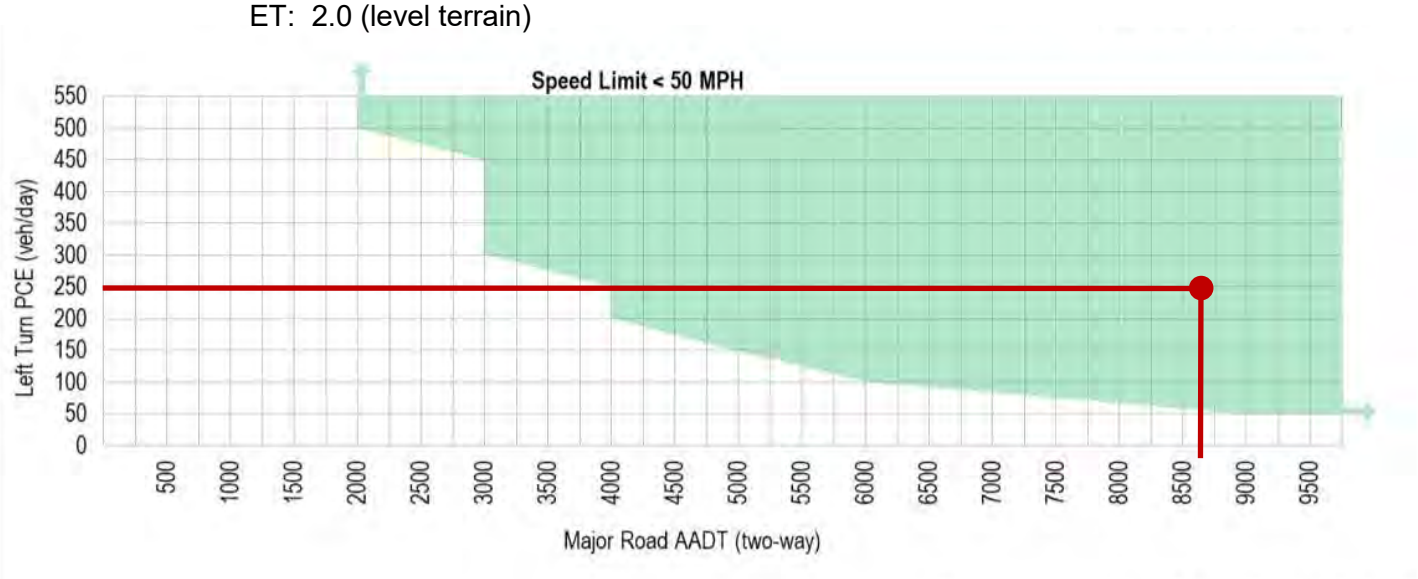
LEFT Turn Lane Analysis - Northbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 235 veh/day
PT: 5% or 0.05
ET: 2.0 (level terrain)

PCE = 235 (1 + 0.05 (2.0 - 1)) = **247 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane is warranted for northbound Hwy 18 at Industrial Blvd.**

RIGHT Turn Lane Analysis - Northbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for northbound Hwy 18 at Industrial Blvd.**

Turn Lane Warrant Calculations
2050 Conditions
Intersection of Hwy 18 & Industrial Blvd

Existing Conditions:

- Left turning vehicles (southbound Hwy 18 to Industrial Blvd): 90 (existing) + 0 (new) = 90 veh/day
- Right turning vehicles (southbound Hwy 18 to Industrial Blvd): 245 (existing) + 81 (new) = 326 veh/day
- Left turn truck percentage: Unknown (assume 5%)
- Terrain: Flat
- Speed limit: assume 45 mph
- Major road AADT: 8,851 veh/day

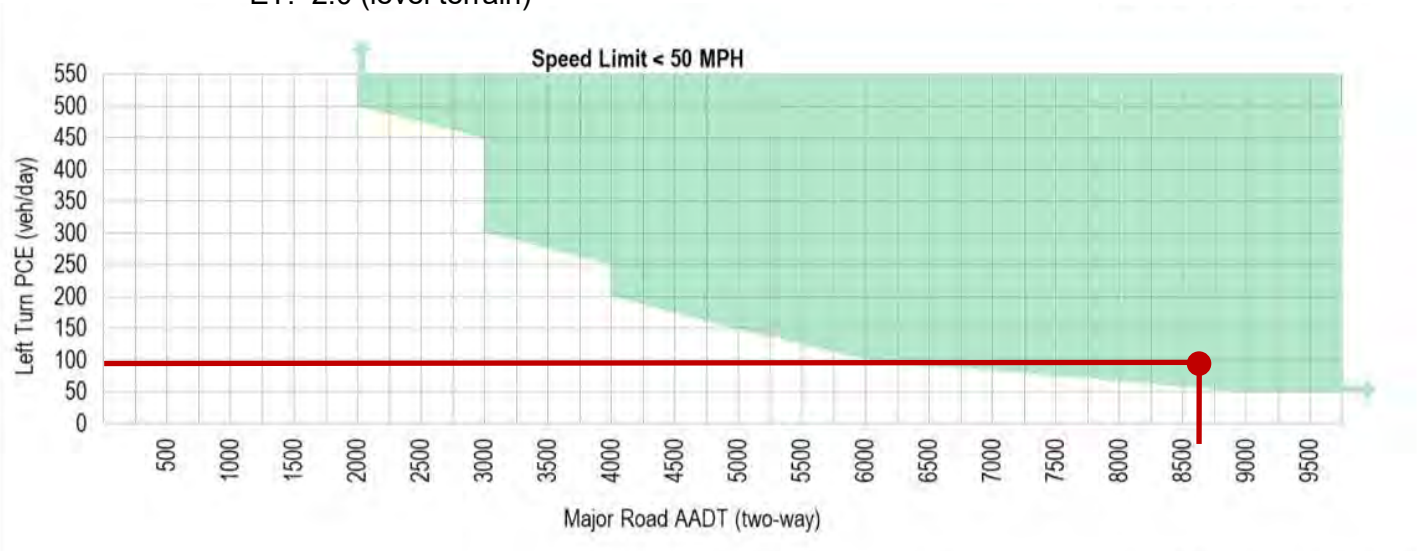
LEFT Turn Lane Analysis - Southbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 90 veh/day
PT: 5% or 0.05
ET: 2.0 (level terrain)

PCE = 90 (1 + 0.05 (2.0 - 1)) = **95 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane is warranted for the southbound Hwy 18 at Industrial Blvd.**

RIGHT Turn Lane Analysis - Southbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for southbound Hwy 18 at Industrial Blvd.**

Turn Lane Warrant Calculations
2050 Conditions
Intersection of Hwy 18 & 37th St

Existing Conditions:

- Left turning vehicles (northbound Hwy 18 to 37th St): 252 (existing) + 579 (new) = 831 veh/day
- Right turning vehicles (northbound Hwy 18 to 37th St): 671 (existing) + 0 (new) = 671 veh/day
- Left turn truck percentage: Unknown (assume 15%)
- Terrain: Flat
- Speed limit: assume 45 mph
- Major road AADT: 8,851 veh/day

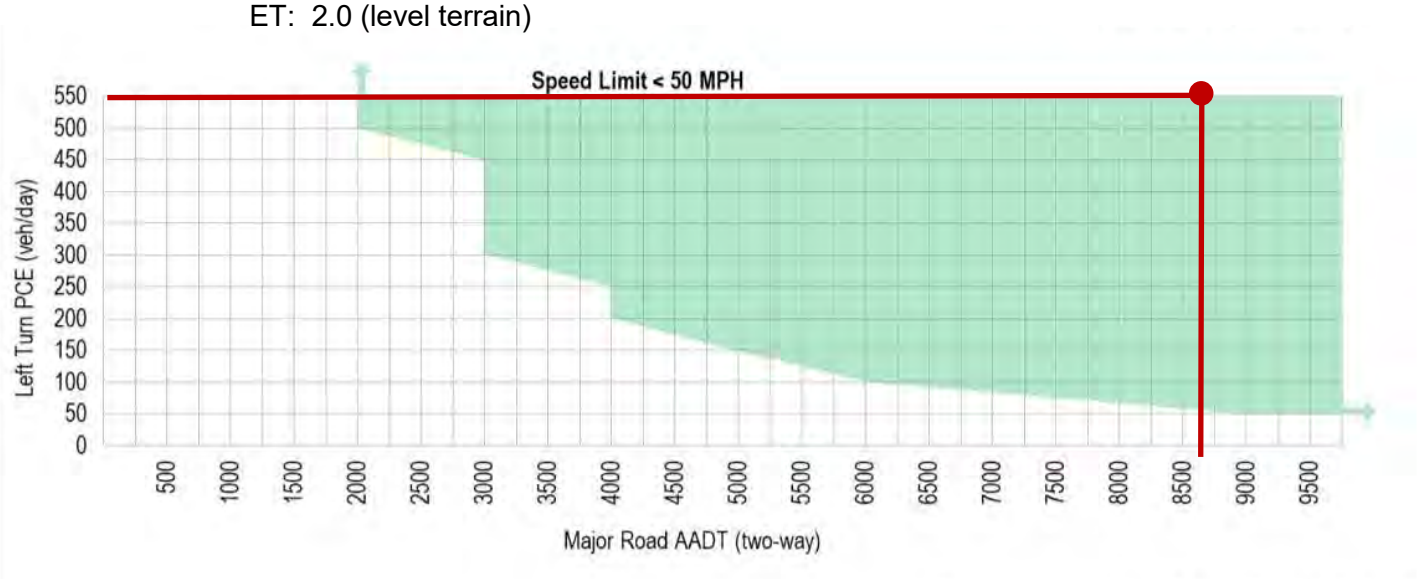
LEFT Turn Lane Analysis - Northbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 831 veh/day
PT: 15% or 0.15
ET: 2.0 (level terrain)

PCE = 831 (1 + 0.15 (2.0 - 1)) = **956 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, a left turn lane is warranted for northbound Hwy 18 at 37th St. A left turn lane is already in-place.

RIGHT Turn Lane Analysis - Northbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for northbound Hwy 18 at 37th St.**

Turn Lane Warrant Calculations
2050 Conditions
Intersection of Hwy 18 & 37th St

Existing Conditions:

- Left turning vehicles (southbound Hwy 18 to Industrial Blvd): 323 (existing) + 0 (new) = 323 veh/day
- Right turning vehicles (southbound Hwy 18 to Industrial Blvd): 124 (existing) + 368 (new) = 492 veh/day
- Left turn truck percentage: Unknown (assume 15%)
- Terrain: Flat
- Speed limit: assume 45 mph
- Major road AADT: 8,851 veh/day

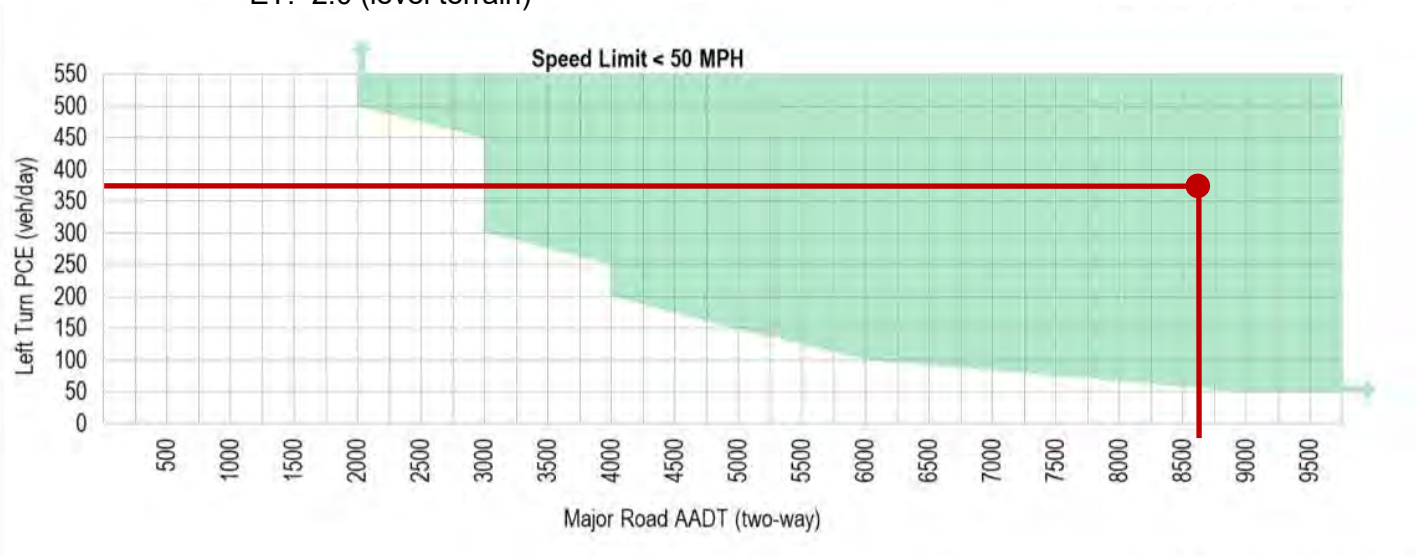
LEFT Turn Lane Analysis - Southbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 323 veh/day
PT: 15% or 0.15
ET: 2.0 (level terrain)

PCE = 323 (1 + 0.15 (2.0 - 1)) = **371 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, a left turn lane is warranted for northbound Hwy 18 at 37th St. A left turn lane is already in-place.

RIGHT Turn Lane Analysis - Southbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for southbound Hwy 18 at 37th St.**

Turn Lane Warrant Calculations
Full Build Conditions
Intersection of Hwy 18 & Cottonwood Dr. / Morningside Dr.

Existing Conditions:

- Left turning vehicles (northbound Hwy 18 to Cottonwood Dr): 53 veh/day
- Right turning vehicles (northbound Hwy 18 to Morningside Dr): 151 veh/day
- Left turn truck percentage: Unknown (assume 2%)
- Terrain: Flat
- Speed limit: assume 25 mph
- Major road AADT: 13,704 veh/day

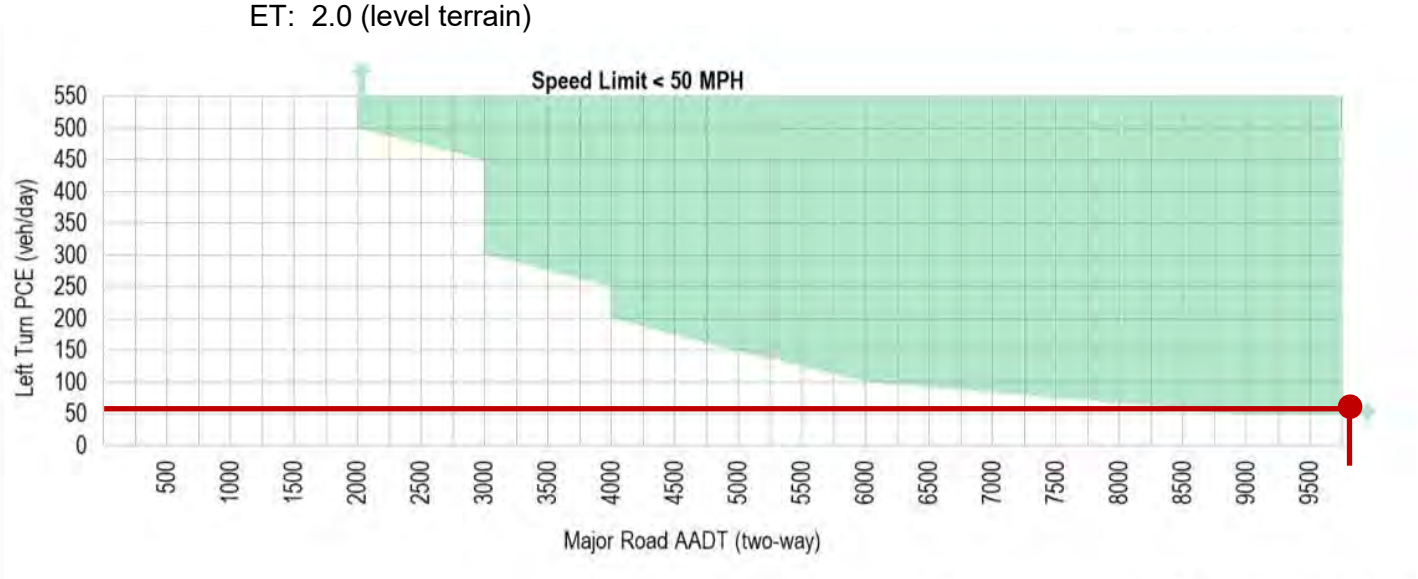
LEFT Turn Lane Analysis - Northbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 53 veh/day
PT: 2% or 0.02
ET: 2.0 (level terrain)

PCE = 53 (1 + 0.02 (2.0 - 1)) = **54 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane might be warranted for northbound Hwy 18 at Cottonwood Dr**.

RIGHT Turn Lane Analysis - Northbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for northbound Hwy 18 at Morningside Dr**.

Turn Lane Warrant Calculations
Full Build Conditions
Intersection of Hwy 18 & Cottonwood Dr. / Morningside Dr.

Existing Conditions:

- Left turning vehicles (southbound Hwy 18 to Morningside Dr): 197 veh/day
- Right turning vehicles (southbound Hwy 18 to Cottonwood Dr): 76 veh/day
- Left turn truck percentage: Unknown (assume 2%)
- Terrain: Flat
- Speed limit: assume 25 mph
- Major road AADT: 13,704 veh/day

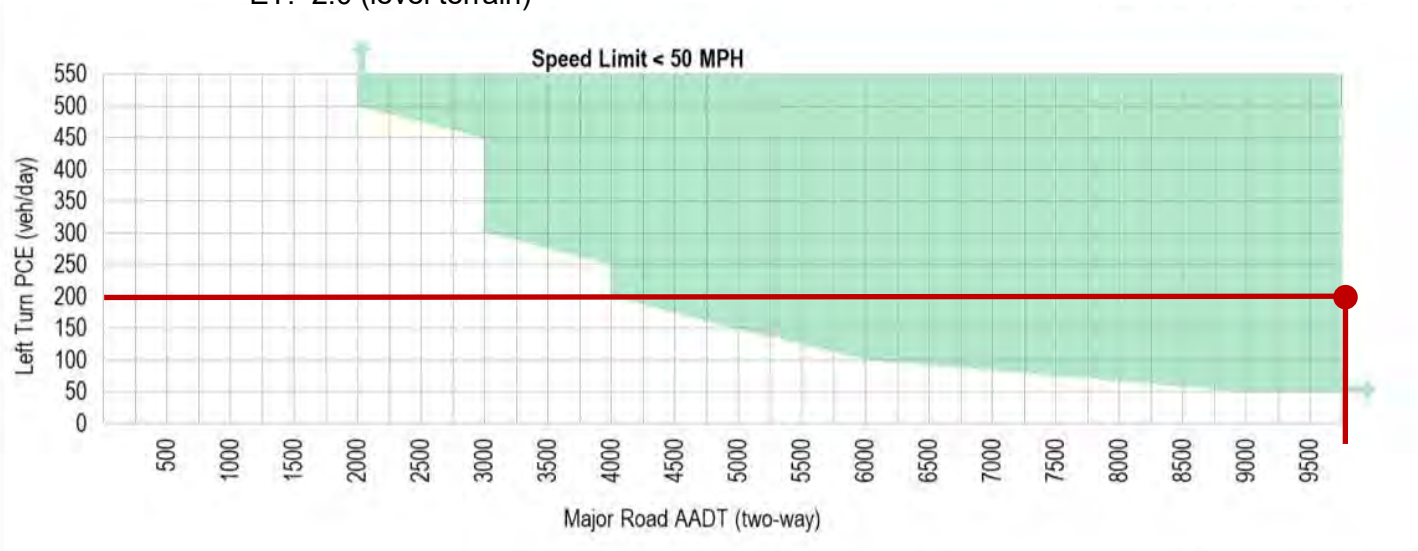
LEFT Turn Lane Analysis - Southbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 197 veh/day
PT: 2% or 0.02
ET: 2.0 (level terrain)

PCE = 197 (1 + 0.02 (2.0 - 1)) = **201 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane is warranted for the southbound Hwy 18 at Morningside Dr**.

RIGHT Turn Lane Analysis - Southbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for southbound Hwy 18 at Cottonwood Dr**.

Turn Lane Warrant Calculations
Full Build Conditions
Intersection of Hwy 18 & 11th St

Existing Conditions:

- Left turning vehicles (northbound Hwy 18 to 11th St): 2 (existing) + 906 (new) = 908 veh/day
- Right turning vehicles (southbound Hwy 18 to 11th St): 10 (existing) + 1683 (new) = 1693 veh/day
- Left turn truck percentage: Unknown (assume 2%)
- Terrain: Flat
- Speed limit: assume 45 mph
- Major road AADT: 13,704 veh/day

LEFT Turn Lane Analysis

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 908 veh/day
PT: 2% or 0.02
ET: 2.0 (level terrain)

PCE = 908 (1 + 0.02 (2.0 - 1)) = **926 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane is warranted**.

RIGHT Turn Lane Analysis

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is warranted** (if speed limit remains at 45 mph).

Turn Lane Warrant Calculations
Full Build Conditions
Intersection of Hwy 18 & 13th St

Existing Conditions:

- Left turning vehicles (northbound Hwy 18 to 13th St): 13 (existing) + 1111 (new) = 1124 veh/day
- Right turning vehicles (southbound Hwy 18 to 13th St): 4 (existing) + 598 (new) = 602 veh/day
- Left turn truck percentage: Unknown (assume 2%)
- Terrain: Flat
- Speed limit: assume 45 mph
- Major road AADT: 13,704 veh/day

LEFT Turn Lane Analysis

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 1124 veh/day
PT: 2% or 0.02
ET: 2.0 (level terrain)

PCE = 1124 (1 + 0.02 (2.0 - 1)) = **1146 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane is warranted**.

RIGHT Turn Lane Analysis

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted**.

Turn Lane Warrant Calculations
Full Build Conditions
Intersection of Hwy 18 & Industrial Blvd

Existing Conditions:

- Left turning vehicles (northbound Hwy 18 to Industrial Blvd): 124 (existing) + 147 (new) = 271 veh/day
- Right turning vehicles (northbound Hwy 18 to Industrial Blvd): 91 (existing) + 0 (new) = 91 veh/day
- Left turn truck percentage: Unknown (assume 5%)
- Terrain: Flat
- Speed limit: assume 45 mph
- Major road AADT: 13,208 veh/day

LEFT Turn Lane Analysis - Northbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 271 veh/day
PT: 5% or 0.05
ET: 2.0 (level terrain)

PCE = 271 (1 + 0.05 (2.0 - 1)) = **285 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane is warranted for northbound Hwy 18 at Industrial Blvd.**

RIGHT Turn Lane Analysis - Northbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for northbound Hwy 18 at Industrial Blvd.**

Turn Lane Warrant Calculations
Full Build Conditions
Intersection of Hwy 18 & Industrial Blvd

Existing Conditions:

- Left turning vehicles (southbound Hwy 18 to Industrial Blvd): 90 (existing) + 0 (new) = 90 veh/day
- Right turning vehicles (southbound Hwy 18 to Industrial Blvd): 245 (existing) + 107 (new) = 352 veh/day
- Left turn truck percentage: Unknown (assume 5%)
- Terrain: Flat
- Speed limit: assume 45 mph
- Major road AADT: 13,208 veh/day

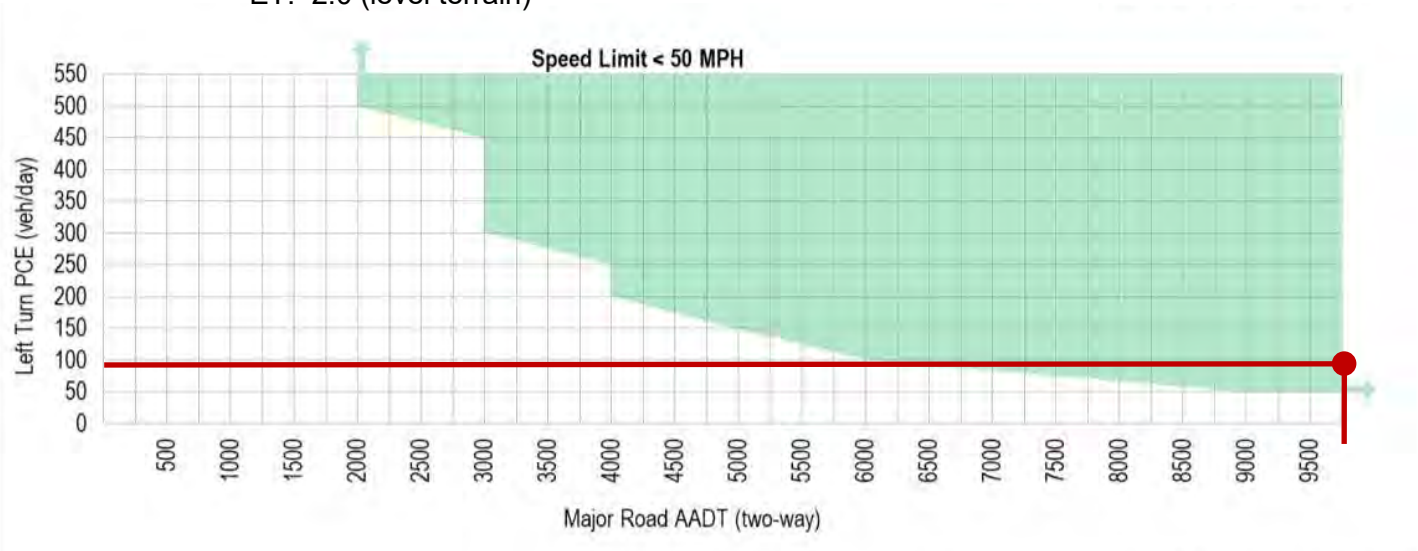
LEFT Turn Lane Analysis - Southbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 90 veh/day
PT: 5% or 0.05
ET: 2.0 (level terrain)

PCE = 90 (1 + 0.05 (2.0 - 1)) = **95 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, **a left turn lane is warranted for the southbound Hwy 18 at Industrial Blvd.**

RIGHT Turn Lane Analysis - Southbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for southbound Hwy 18 at Industrial Blvd.**

Turn Lane Warrant Calculations
Full Build Conditions
Intersection of Hwy 18 & 37th St

Existing Conditions:

- Left turning vehicles (northbound Hwy 18 to 37th St): 252 (existing) + 970 (new) = 1222 veh/day
- Right turning vehicles (northbound Hwy 18 to 37th St): 671 (existing) + 0 (new) = 671 veh/day
- Left turn truck percentage: Unknown (assume 15%)
- Terrain: Flat
- Speed limit: assume 45 mph
- Major road AADT: 13,208 veh/day

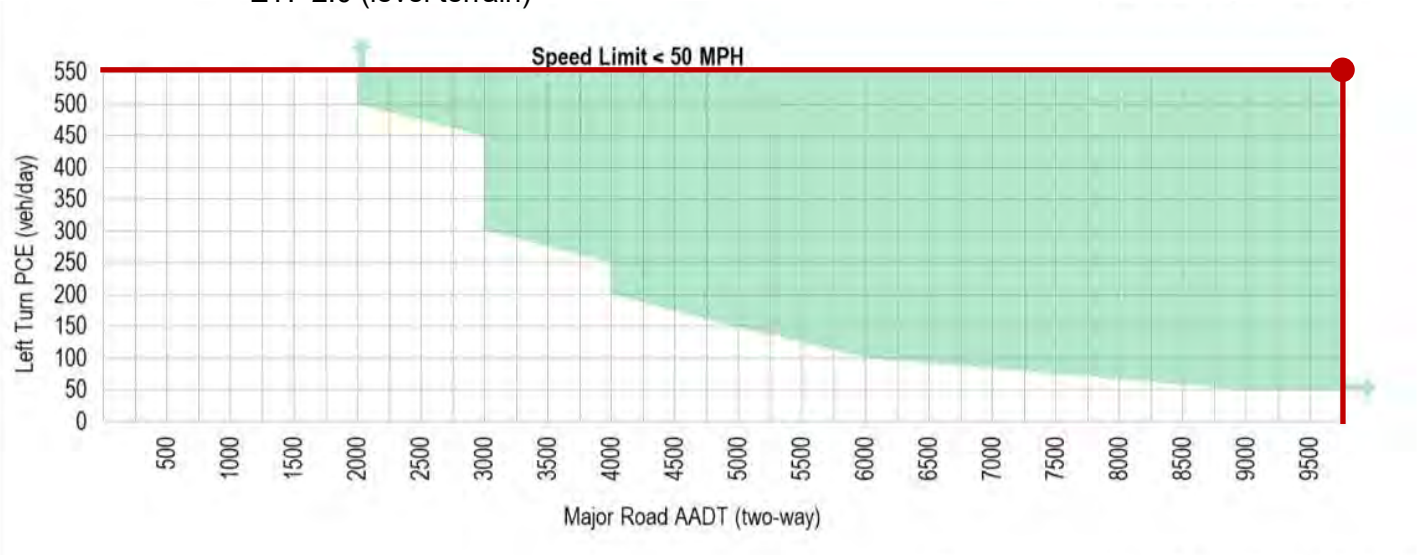
LEFT Turn Lane Analysis - Northbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 1222 veh/day
PT: 15% or 0.15
ET: 2.0 (level terrain)

PCE = 1222 (1 + 0.15 (2.0 - 1)) = **1405 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, a left turn lane is warranted for northbound Hwy 18 at 37th St. A left turn lane is already in-place.

RIGHT Turn Lane Analysis - Northbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for northbound Hwy 18 at 37th St.**

Turn Lane Warrant Calculations
Full Build Conditions
Intersection of Hwy 18 & 37th St

Existing Conditions:

- Left turning vehicles (southbound Hwy 18 to Industrial Blvd): 323 (existing) + 0 (new) = 323 veh/day
- Right turning vehicles (southbound Hwy 18 to Industrial Blvd): 124 (existing) + 617 (new) = 741 veh/day
- Left turn truck percentage: Unknown (assume 15%)
- Terrain: Flat
- Speed limit: assume 45 mph
- Major road AADT: 13,208 veh/day

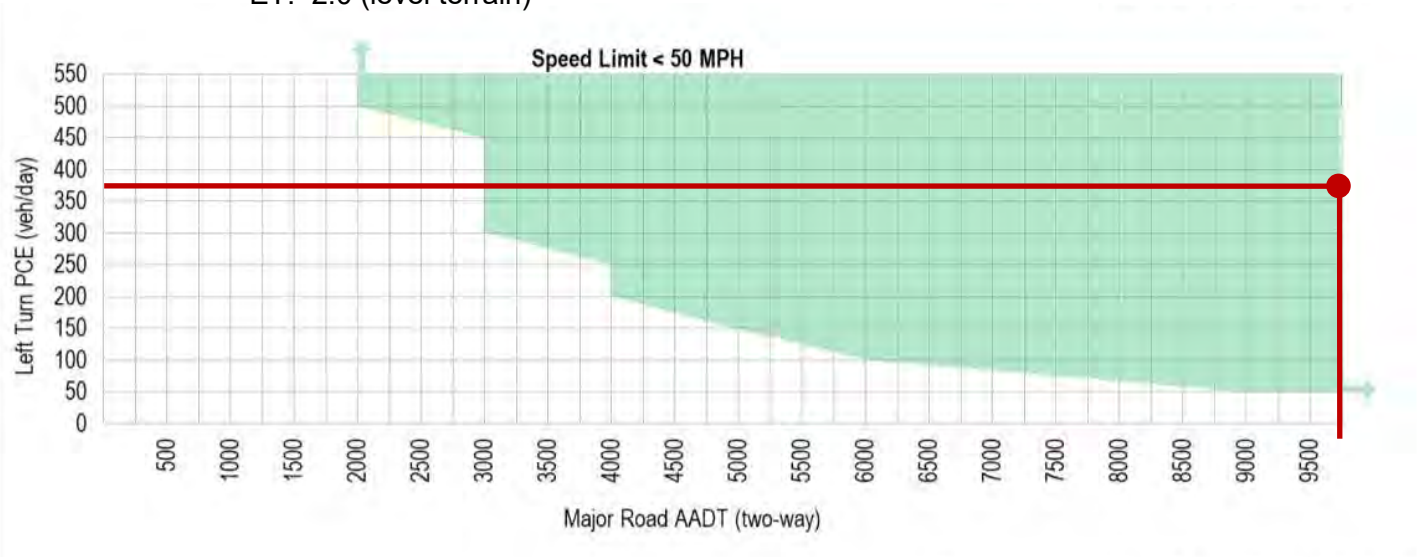
LEFT Turn Lane Analysis - Southbound

Calculations based on chart on page 31 of NDDOT Traffic Operations manual.

Passenger Car Equivalent (PCE)

PCE = VLT (1 + PT (ET - 1))
VLT: 323 veh/day
PT: 15% or 0.15
ET: 2.0 (level terrain)

PCE = 323 (1 + 0.15 (2.0 - 1)) = **371 veh/day**



Based on the data gathered and per the NDDOT Traffic Operations manual, a left turn lane is warranted for northbound Hwy 18 at 37th St. A left turn lane is already in-place.

RIGHT Turn Lane Analysis - Southbound

Calculations based on chart on page 32 of NDDOT Traffic Operations manual.

If the number of right Turning Vehicles is greater than the value shown below, then a right turn lane is recommended:

Speed Limit (mph)	Right turns (veh/day)	Right turns (veh/hr)
20	3000	300
25	3000	300
30	2500	250
35	2000	200
40	1500	150
45	1000	100
50	50	5
55	50	5

Based on the data gathered and per the NDDOT Traffic Operations manual, **a right turn lane is not warranted for southbound Hwy 18 at 37th St.**

Appendix D:

Signal Warrant Analysis

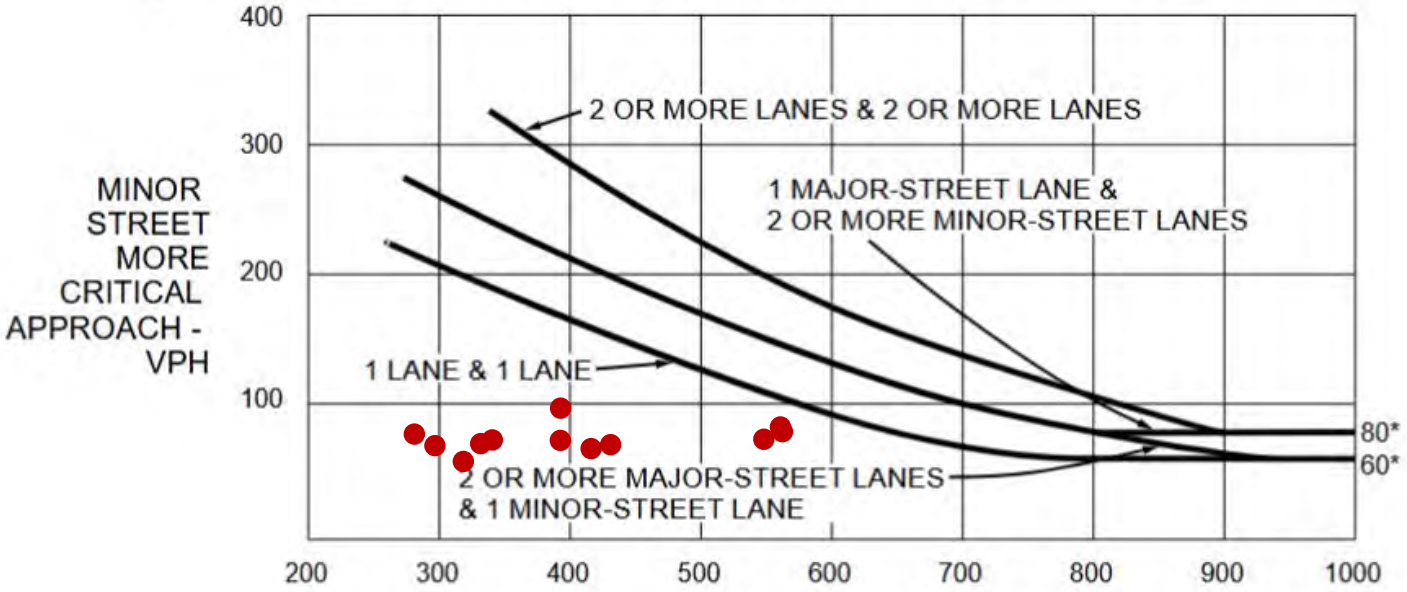
Traffic Signal Warrant Analysis
Existing Conditions
Intersection of Hwy 18 & 37th St

Warrant 1 Evaluation Eight-Hour Vehicle Volume				
Warrant with 1 lane approach major street, 1 lane approach minor street				
	Warrant 1 Condition A		Warrant 1 Condition B	
Major Street	500	350	750	525
Minor Street	150	105	75	53
Hour	100% of traffic	70% of traffic	100% of traffic	70% of traffic
7:00 AM	No	No	No	Yes
8:00 AM	No	No	No	No
9:00 AM	No	No	No	No
10:00 AM	No	No	No	No
11:00 AM	No	No	No	No
12:00 PM	No	No	No	No
1:00 PM	No	No	No	No
2:00 PM	No	No	No	No
3:00 PM	No	No	No	No
4:00 PM	No	No	No	Yes
5:00 PM	No	No	No	Yes
6:00 PM	No	No	No	No
7:00 PM	No	No	No	No
No. of hours met	0	0	0	3
Satisfied >= 8 hrs	No	No	No	No

Warrant 1 not met

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane

Warrant 2 not met

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*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

Warrant 3 not met

Warrant 4
Pedestrian warrant

Due to modest number of pedestrian use along corridor, no pedestrian counts taken.

Warrant 5
School Crossing

Not applicable. No school near intersection.

Warrant 6
Coordinated Signal System

Not applicable. No signals along study corridor.

Warrant 7
Crash Experience

Conditions A, B, and C must all be met to meet warrant.

Start with Condition C:

(due to low pedestrian volumes, pedestrians not evaluated under Condition C).

Warrant 7 Condition C Evaluation		
Warrant with 1 lane approach major street, 1 lane approach minor street		
	Cond A	Cond B
Major Street	280	420
Minor Street	84	42
Hour	56% of traffic	56% of traffic
7:00 AM	Yes	Yes
8:00 AM	No	Yes
9:00 AM	No	No
10:00 AM	No	No
11:00 AM	No	No
12:00 PM	Yes	No
1:00 PM	No	No
2:00 PM	No	No
3:00 PM	No	No
4:00 PM	No	Yes
5:00 PM	Yes	Yes
6:00 PM	No	No
7:00 PM	No	No
No. of hours met	3	4
Satisfied >= 8 hrs	No	No

Condition C not met.
Therefore, **Warrant 7 not met**.

Warrant 8
Roadway Network

Not applicable. Not multiple major routes intersecting.

Warrant 9
Intersection Near a Grade Crossing

Not applicable. No grade crossing near intersection.

Traffic Signal Warrant Analysis
2035 Conditions

Methodology
Since future traffic was only projected for ADT and peak hours, the only time period analyzed for future conditions is the 1-hour evaluation (Warrant 3). Warrant 1 (8-hour traffic) and Warrant 2 (4-hour traffic) are not evaluated.

Furthermore, other warrants are note being evaluated for future conditions for the following reasons:

- Warrant 4 - Not being analyzed since future number of pedestrians is unknown.
- Warrant 5 - While this study assumes a school near one of the intersections by 2050, student crossing numbers are difficult to predict.
- Warrant 6 - It's unknown if signals will be installed or coordinated in the future.
- Warrant 7 - Future crashes are not reasonably possible to predict.
- Warrant 8 - Multiple routes currently don't intersect at study intersections. Future routes are not predicted in the future.
- Warrant 9 - No existing grade crossings along study corridor. Future grade crossings not anticipated.

Intersection: Hwy 18 & 37th St
Warrant 3 Evaluation

Hour	Year	SB Major Street	NB Major Street	Both Dir. Major Street	WB Minor Street	EB Minor Street
AM Peak	2035	313	343	656	86	19
PM Peak	2035	260	391	651	84	33
AM Peak	2050	446	480	926	93	88
PM Peak	2050	374	563	937	92	119
AM Peak	Full Build	666	696	1362	101	136
PM Peak	Full Build	540	813	1353	97	184

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*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

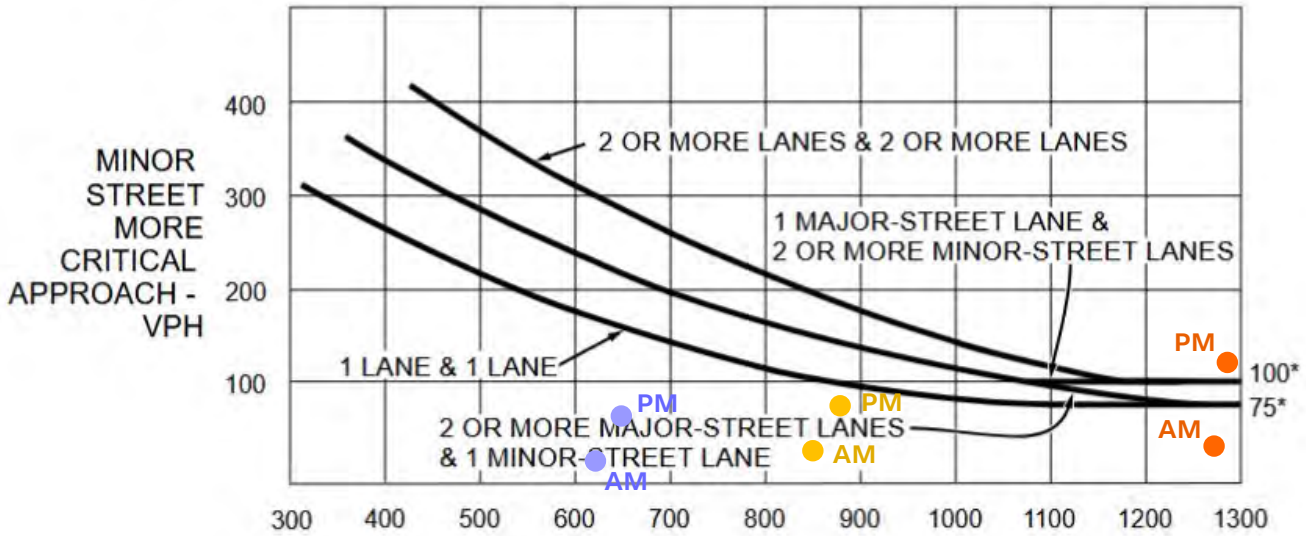
For 2035: Warrant 3 not met
For 2050: Warrant 3 is met
For Full Build: Warrant 3 is met

Intersection: Hwy 18 & Industrial Blvd
Warrant 3 Evaluation

Hour	Year	SB Major Street	NB Major Street	Both Dir. Major Street	WB Minor Street	EB Minor Street
AM Peak	2035	326	289	615	13	17
PM Peak	2035	277	367	644	11	63
AM Peak	2050	449	401	850	13	29
PM Peak	2050	378	508	886	11	80
AM Peak	Full Build	669	609	1278	13	31
PM Peak	Full Build	547	745	1292	11	109

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*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

For 2035: Warrant 3 not met
For 2050: Warrant 3 not met
For Full Build: Warrant 3 is met

Intersection: Hwy 18 & 13th St
Warrant 3 Evaluation

Hour	Year	SB Major Street	NB Major Street	Both Dir. Major Street	WB Minor Street	EB Minor Street
AM Peak	2035	316	300	616	-	19
PM Peak	2035	233	551	784	-	39
AM Peak	2050	437	414	851	-	28
PM Peak	2050	320	758	1078	-	41
AM Peak	Full Build	702	681	1383	-	93
PM Peak	Full Build	534	1242	1776	-	153

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*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

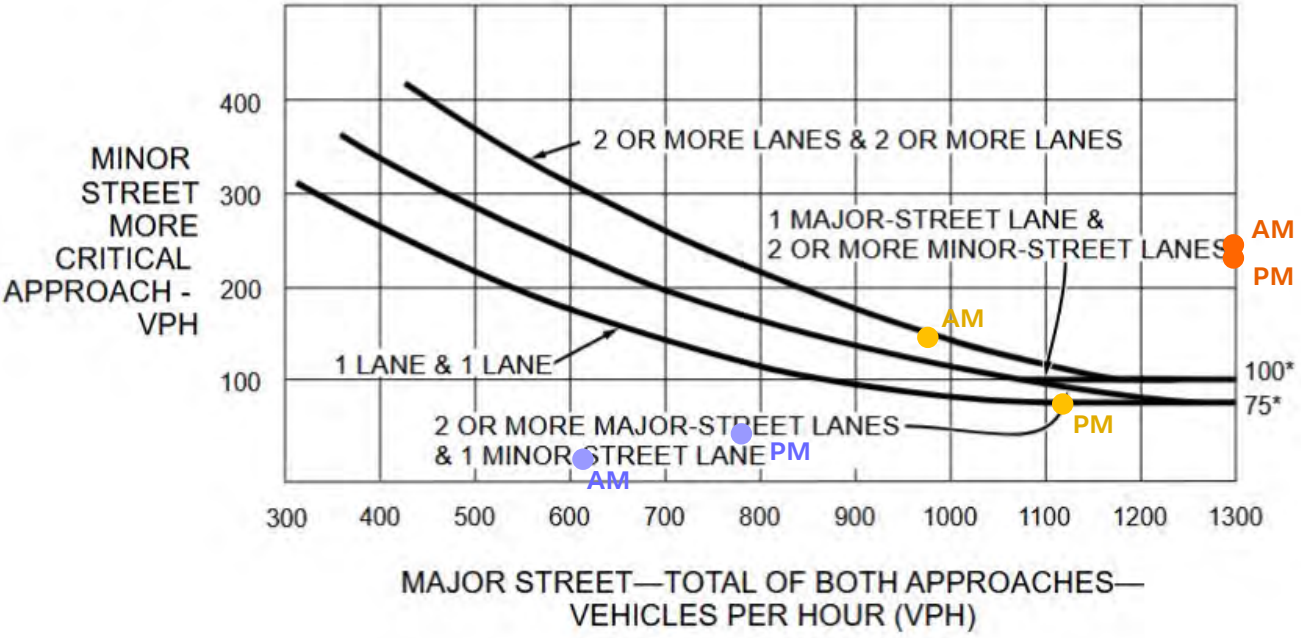
For 2035: Warrant 3 not met
For 2050: Warrant 3 not met
For Full Build: Warrant 3 is met

Intersection: Hwy 18 & 11th St
Warrant 3 Evaluation

Hour	Year	SB Major Street	NB Major Street	Both Dir. Major Street	WB Minor Street	EB Minor Street
AM Peak	2035	316	289	605	-	17
PM Peak	2035	252	539	791	-	45
AM Peak	2050	531	453	984	-	144
PM Peak	2050	361	755	1116	-	85
AM Peak	Full Build	621	711	1548	-	241
PM Peak	Full Build	1134	1220	1857	-	234

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*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

For 2035: Warrant 3 not met
For 2050: Warrant 3 is met
For Full Build: Warrant 3 is met

Intersection: Hwy 18 & Cottonwood Dr / Morningside Dr
Warrant 3 Evaluation

Hour	Year	SB Major Street	NB Major Street	Both Dir. Major Street	WB Minor Street	EB Minor Street
AM Peak	2035	257	285	542	68	24
PM Peak	2035	238	512	750	27	8
AM Peak	2050	355	396	751	68	24
PM Peak	2050	316	697	1013	27	8
AM Peak	Full Build	556	617	1173	68	24
PM Peak	Full Build	475	1069	1544	27	8

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*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

For 2035: Warrant 3 not met
For 2050: Warrant 3 not met
For Full Build: Warrant 3 not met

Appendix E:

Study Review Committee Meeting Notes

Study Review Committee Meeting #1 – Casselton Hwy 18 Corridor Study
March 16, 2026 – 1:00 pm
Hybrid Meeting – Virtual / In-person (Agveris Building – 51 6th Ave N, Casselton)

Participants
Dan Farnsworth, Metro COG
Aiden Jung, Metro COG
Adrienne Olson, Casselton Community & Economic Development Director
Will Lipp, Casselton Public Works Supervisor
Dyland Dunn – Casselton Engineer (Moore Engineering)
Aaron Murra – NDDOT Fargo District
Will Hutchings – NDDOT Local Governments Diversion

1. **Welcome and Introductions**

   Both in-person and virtual attendees introduced themselves.

2. **Study Review Committee members list**

   D. Farnsworth reviewed the list of SRC members for this study. All members were present. Mayor Faught is listed as a member that will participate as needed.

3. **Study background, purpose, and objectives**

   D. Farnsworth went over the background of the study, the purpose and objectives (tasks).

4. **Schedule**

   D. Farnsworth then went over the proposed schedule for this study process. The study was kicked off at the beginning of 2026 with a final document planned for December of 2026. Presentations to Casselton and any other entities will occur in early 2027.

   The schedule shows two stakeholder/public input opportunities – one in May/June and one in Aug/Sept. D. Dunn asked if two public input opportunities are necessary. D. Farnsworth mentioned that the May/June opportunities could focus on stakeholders while the Aug/Sept could be geared for the general public.

5. **Existing Conditions**

   Existing conditions that Metro COG collected were then reviewed. These included: the study area, roadway typical section, 9-year crash history, and traffic conditions. D. Farnsworth pointed out that while there weren't a lot of crashes on Hwy 18, there were a number of crashes at the intersection of Hwy 18 & Cottonwood Dr/Morningside Dr. This intersection is on a curve and has offset side streets, which might contribute to the number

of crashes. There were also a few questions about crash details. Metro COG is currently analyzing the crash details and will provide those to the SRC at the next meeting and will show those in the document.

D. Farnsworth also discussed the traffic volumes since 2017. Vehicular traffic has increased from 4,170 to 5,030 veh/day since 2017 and truck traffic has increased from 515 to 1,085 during that time. Metro COG is in the process of processing turning movement counts at five intersections within the study area.

Metro COG then had a few questions to ask the SRC:

- What are the limits of the street names Governors Dr and Langer Ave?
    - Answer: Governors Dr extends from I-94 to Swan Creek. Langer Ave extends from Swan Creek north through Casselton.
- Who maintains Hwy 18 through Casselton?
    - Answer: It depends. The city maintains: the lighting, the shared use path, RRFBs (crosswalk lights), and mows ditches. NDDOT owns the roadway and plows south of Swan Creek. Plowing north of Swan Creek seems to be a mix of city and NDDOT..it's not very clear.
- What name should we use for 8th St / Cottonwood Dr and 8th Ave / Morningside Dr?
    - Answer: We should use Cottonwood Dr (west side of Hwy 18) and Morning side Dr (east side).

6. Future Conditions

An important component of this study is trying to estimate what future growth may be in Casselton. The future growth will determine the traffic on Hwy 18 and the study intersections. Metro COG plans to look at future planning horizon years – 2035 and 2050.

D. Farnsworth asked the SRC what future growth may be expected in Casselton, particularly between I-94 and Swan Creek. Adrianne & Will L. discussed the recently plated Prairie Skies development which is plated for residential, commercial, and park space. Thus far, seven homes have been constructed and there is talk of a possible school and clinic being located within the development.

A. Murra noted that the Prairie Skies development doesn't have any connectivity to other areas of Casselton except via Hwy 18. As the development fills in, all the traffic using Hwy 18 may cause some real issues with Hwy 18. He encouraged the city to look into additional routes to connect into the city.

After some discussion, it was noted that it may not be feasible to connect the Prairie Skies development with a north-south route to the north since there is no undeveloped land to the north. However, the city will look into the possibility of purchasing lots 41 and 42 and extending Mockingbird Way to connect with Heartland Ave to the south. A. Murra also encouraged the city to consider intracity connectivity in future developments.

It was noted that there is currently growth in the city, specifically Maple River Grain which recently completed a major expansion that will increase the truck traffic to/from the facility.

D. Farnsworth would like to meet with city staff soon to discuss future growth between now and 2050. Adrienne mentioned that she could meet but also suggested meeting with the Planning and Zoning Committee. The next P & Z Committee meeting will be held on April 15th (7:00 am). Adrianne can coordinate this with Metro COG. Metro COG can develop future land use assumptions and bring it to Adrienne & the P & Z Committee.

7. Next steps & additional business

There was then some discussion about access control. Will H. asked if Casselton had an access control plan. Casselton wasn't aware of one, however it could be noted in their land development or zoning code.

There was also some discussion about the speed limit of Hwy 18 through Casselton. The city would like to see the 25 mph speed zone moved further south. Metro COG may look into this as part of the study. A. Murra noted the steps needed for a speed zone change.

Meeting adjourned.

Study Review Committee Meeting #2 – Casselton Hwy 18 Corridor Study
May 15, 2026 – 10:30 pm
Hybrid Meeting – Virtual / In-person (Agveris Building – 51 6th Ave N, Casselton)

Participants
Dan Farnsworth, Metro COG
Aiden Jung, Metro COG
Adrienne Olson, Casselton Community & Economic Development Director
Will Lipp, Casselton Public Works Supervisor
Dyland Dunn – Casselton Engineer (Moore Engineering)
Aaron Murra – NDDOT Fargo District
Will Hutchings – NDDOT Local Governments Diversion

1. Welcome and Introductions

Both in-person and virtual attendees introduced themselves.

2. Schedule

D. Farnsworth reviewed the project schedule with the group. He noted that Metro COG is behind on the project schedule by a month but hopes to make up time in the next few months.

3. Existing Conditions

Crash History

D. Farnsworth went over some of the existing conditions with the group, starting with crash history. He noted that of the 11 crashes reported along Hwy 18 between 2016-2025, five occurred at the intersection of Hwy 18 / Cottonwood Dr / Morningside Dr. Of those crashes, two were run-off-the-road, two were collision with another vehicle, and one was unknown. It was difficult to determine a specific reason for the crashes, but some factors that were discuss could have been: nearby speed limit transition, curve in roadway, nearby bridge with guardrail or other obstructions, or stopped traffic due to turning vehicles.

Metro COG will look further into the crash data to see if any patterns can be found and if any improvements can be recommended to the roadway/intersection.

D. Farnsworth also reviewed the other crash data with the group. Fortunately, most of the crashes resulted in property damage only with only one crash reported as a minor injury.

Lighting Analysis

Farnsworth went over the existing lighting conditions with the group. He noted that current lighting exists and the intersection with Cottonwood Dr/Morningside Dr and to the north

and current lighting exists at the intersection with 37th St and to the south. Both areas meet NDDOT's lighting warrants.

However, Farnsworth noted that per NDDOT's Traffic Operations Manual, criteria 4B is likely met for lighting north of 37th St.

Turn Lane Analysis

Turn lane analysis was then discussed. The two turn lanes currently in-place along the study corridor are northbound and southbound left turn lanes at 37th St. These turn lanes were found to meet warrants per NDDOT's Traffic Operations Manual.

Turn lane warrants were also run along the study corridor. It was found that a southbound left turn lane met NDDOT warrants at Morningside Dr.

When asked how/when a turn lane might be installed, A. Murra, responded that NDDOT could install it as part of a future full reconstruction project, or the city could install it if they wished to pay for it before a full reconstruction project. There are currently no full reconstruction projects planned in this area.

4. Casselton Comprehensive Plan Considerations

Next, the Casselton Comprehensive Plan was reviewed to discuss which recommendations should be considered as part of this plan. The recommendations were as follows:

- *Recommendation: Construct a prominent community gateway near I-94.*
  Discussion: Gateways and signs were discussed. W. Lipp noted that there is an existing Casselton sign along Hwy 18 at Swan Creek. There was discussion about whether another sign should be installed closer to I-94. It was pointed out that gateways can help slow down traffic.
- *Recommendation: Coordinate with NDDOT on access management along the entirety of ND Hwy 18.*
  Discussion: NDDOT has the ultimate say about access management since it's their corridor. Casselton noted that they have a future access plan for Hwy 18 on the west side of the roadway. There is one more roadway planned to connect to Hwy 18 from the west. Said roadway would be just north of Ace Hardware. When asked what future access might look like to Casselton on the east side of Hwy 18, the city believes it would mirror the west side. Casselton has some access guidelines found here:
  https://static1.squarespace.com/static/5a5fc163d55b412c123050d6/t/692620cae5557372bcea47c9/1764106442217/344+Land+Use+Ordinance.pdf
- *Recommendation: Coordinate with NDDOT to conduct a corridor study along the entirety of ND Hwy 18/Governors Dr/Langer Ave.*
  Discussion: This study is studying Hwy 18 in the south half of Casselton.
- *Recommendation: Coordinate with NDDOT to install striped crosswalks as needed along Hwy 18…*

Discussion: Some crosswalks were recently installed along Hwy 18 as part of the Hwy 18 shared use path project. Farnsworth felt that these crosswalks are installed at good locations and are sufficient for pedestrians' current needs along Hwy 18.

- *Recommendation: Construct new roadway with box culvert over Drain 64 connecting 156th Ave/15th Ave to Willow Bend Dr.*
  Discussion: D. Farnsworth misread this recommendation initially. However, there was discussion about another north-south road connection in Casselton which would connect Willow Bend Dr with 36th St over Swan Creek. This connection would require a road to be constructed on or adjacent to an old landfill. However, this corridor is city-owned. It was decided that conversations of this connection should continue.

5. Future Conditions

Jobs & household projections

D. Farnsworth went over the projected jobs and households with the group. Farnsworth met with the Casselton Planning & Zoning Committee in April to discuss projected jobs and households.

Two scenarios for households were presented to the P&Z Committee. They preferred to move forward with a projection between the two scenarios.

Two scenarios for jobs were also presented to the P&Z Committee. Similarly, they preferred moving forward with a projection between the two scenarios but closer to the higher scenario.

Estimated land use

Metro COG then used the future land use map and projected jobs & households to estimate where the future growth may occur. Estimated growth locations were also reviewed by the P&Z Committee during the April meeting. Horizon years included 2035 and 2050.

Projected traffic conditions

Using the estimated jobs, households, and land use, trips could be estimated to generate traffic projections. Draft traffic projections were then shared with the group. After reviewing the draft projections, many felt that the projections were underestimating future traffic. Metro COG will revisit the traffic projections.

Also, given the infrastructure being installed for new developments in the Casselton Farms and Prairie Skies developments, several in the group felt that the current household projections are underestimating the likely households in 2050. It was decided to also show a full buildout scenario which would include full buildout of Casselton Farms and Prairie Skies developments. This full buildout scenario could be used in place of the current 2050 projection or could be used in addition to it.

Prairie Skies development / Discussion on Heartland Ave connection

D. Farnsworth asked if there have been any talks yet with the developer or within the City regarding using two platted lots to extend Heartland Ave into the Prairie Skies development. This would allow for better north-south connectivity within the city. This would lesson the need for all trips in Prairies Skies to use Hwy 18. W. Lipp mentioned that there haven't been any discussions yet with city officials or the developer. He mentioned that it should go to the Public Works Committee.

There was also some discussion on how best to keep truck traffic from taking this connection through Prairie Skies. It was suggested that the roadway could be built such that it discourages truck traffic, also this connection could be signed for no trucks. It was recommended that this connection be considered sooner than later because as the residential neighborhood gets more built-out, there could be pushback for such a connection.

6. Stakeholder Engagement

D. Farnsworth asked the group which stakeholders Metro COG should reach out to as part of this study process. It was suggested that the Casselton School District would be a good stakeholder. Metro COG will plan to reach out to the School District.

Farnsworth also considered reaching out to some of the larger fright generators in Casselton, such as MRGA and Abbiamo Pasta.

7. Next steps & additional business

D. Farnsworth noted that the next SRC meeting will likely be in September or October. Metro COG is also planning public input in the Aug/Sept timeframe

Meeting adjourned.

Study Review Committee Meeting #3 – Casselton Hwy 18 Corridor Study
July 15, 2026 – 10:30 pm
Hybrid Meeting – Virtual / In-person (Agveris Building – 51 6th Ave N, Casselton)

Participants
Dan Farnsworth, Metro COG
Adrienne Olson, Casselton Community & Economic Development Director
Will Lipp, Casselton Public Works Supervisor
Brandon Oye – Casselton Engineer (Moore Engineering)
Aaron Murra – NDDOT Fargo District
Will Hutchings – NDDOT Local Governments Division

1. Welcome and Introductions

Both in-person and virtual attendees introduced themselves.

2. Existing Conditions

Crash data at Hwy 18 & Cottonwood Dr/Morningside Dr

D. Farnsworth went over the five crashes reported at this intersection. He noted that only two of the crashes seem to show a similar trend. The other three don't seem to follow any type of a trend.

Existing intersection traffic level of service

D. Farnsworth showed the existing intersection LOS and noted that all intersections and approaches in 2025 operate at a LOS of C or better during the AM and PM peak hours. These all operate at acceptable LOS.

3. Stakeholder engagement

D. Farnsworth discussed the stakeholder meeting he had recently with Central Cass Public Schools superintendent.

It was also suggested that additional stakeholder meetings could be scheduled with the Prairie Skies developer, Property Resource Group. Another stakeholder could be Jack Dalrymple, owner of the land east of Hwy 18 in Casselton. Dan will work with Adrienne in scheduling these meetings.

4. Future conditions

D. Farnsworth showed the future traffic forecasts numbers to the SRC, including the LOS of the intersections. D. Farnsworth also showed the turn lane analysis for future conditions. More turn lanes will likely be needed even by 2035.

5. Roadway & intersection alternatives

D. Farnsworth showed the suggested intersection types that should be considered based on side street traffic and mainline traffic volumes. These suggested intersection types come from NDDOT's Traffic Operations Manual.

There was then discussion about access management along the corridor.

- Casselton staff mentioned that they would like to see 36th St (gravel road on the S side of the vet clinic) to someday align with 11th St. This should be shown in the study.
- Ideally, the Abbiamo Pasta driveway could be removed and 19th St (road to DQ) could become new access point to Abbiamo. This should be shown in the study.
- The driveway to Titan Machinery could line up with the Abbiamo Pasta driveway.

Casselton has access management guidelines/ordinances which should be used for this study.

The future road (between 13th St & 19th St) will be located just N of the tree row.

6. Public Engagement

Metro COG is looking to hold public engagement sometime in the Aug/Sept timeframe. It was discussed what type of engagement would be appropriate for this type of study. With no imminent need for improvements to the roadway and with major intersection improvements not needed for a while, it was decided not to ask the public about their preference of intersection types.

The best type of input would be to have the public share their experiences/concerns of the corridor on an input map. A survey could also be considered.

Since no imminent changes to the corridor will be occurring, it's not worth getting the public excited about nothing big. So it would be best to have a booth at a pre-existing event. Adrienne mentioned that there will likely be a grill-out at Governors Park on August 20th. Metro COG could set up a tent and table at this event. D. Farnsworth and Adrienne will coordinate.

7. Next steps & additional business

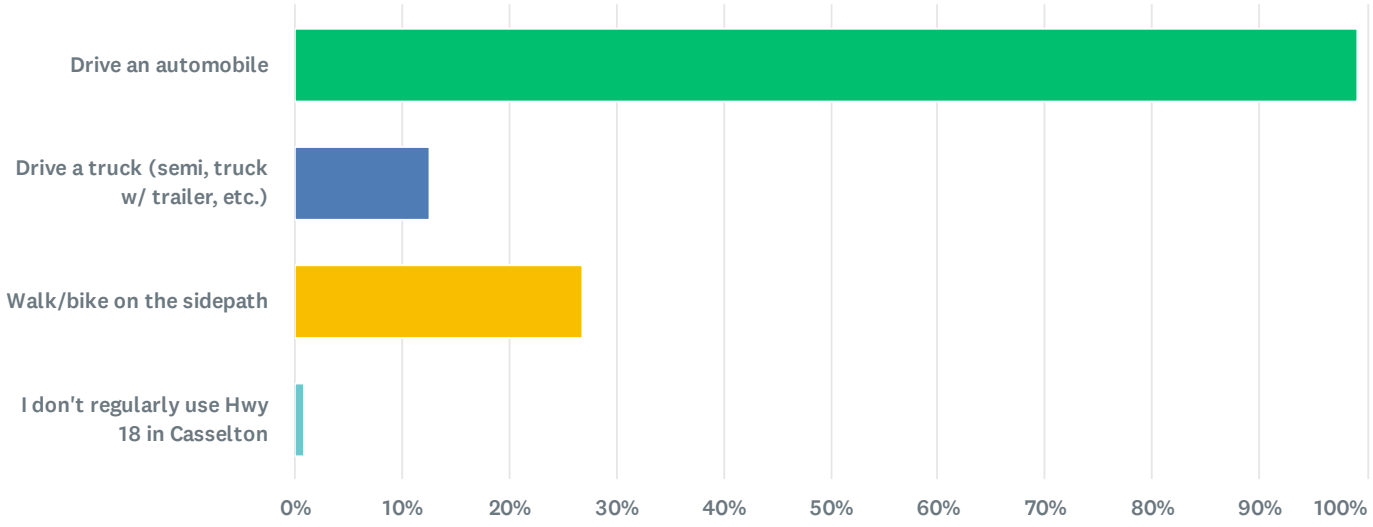
Meeting adjourned.

Appendix F:

Public Survey Results

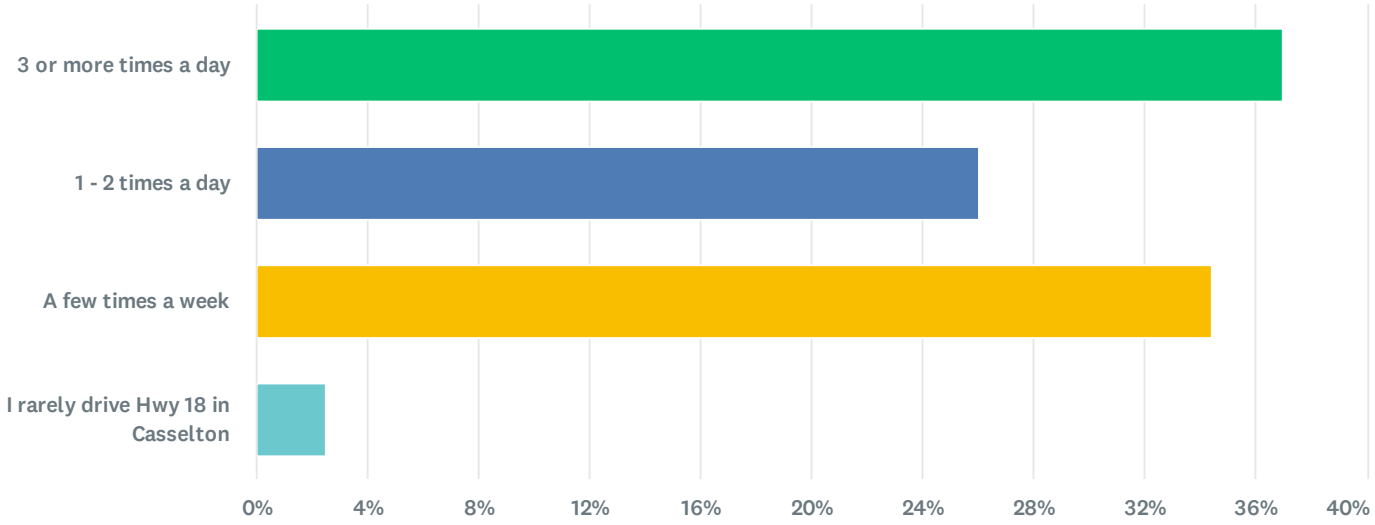
Q1 119 responses

How do you regularly use Hwy 18 in Casselton? (Check all that apply)



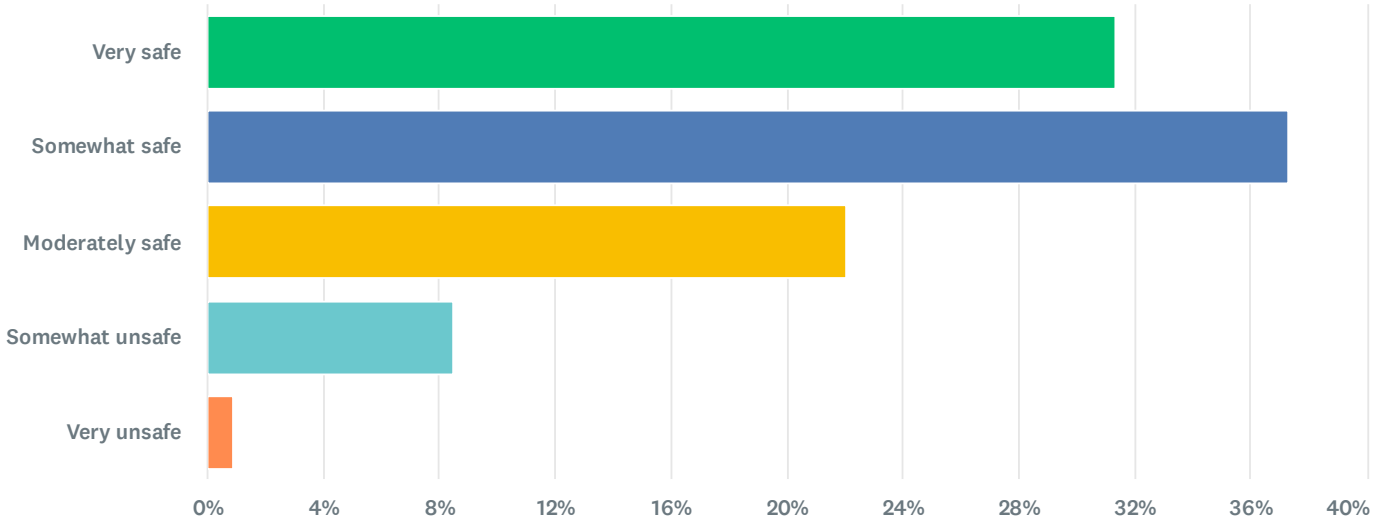
Q2 119 responses

How often do you drive on Hwy 18 in Casselton?



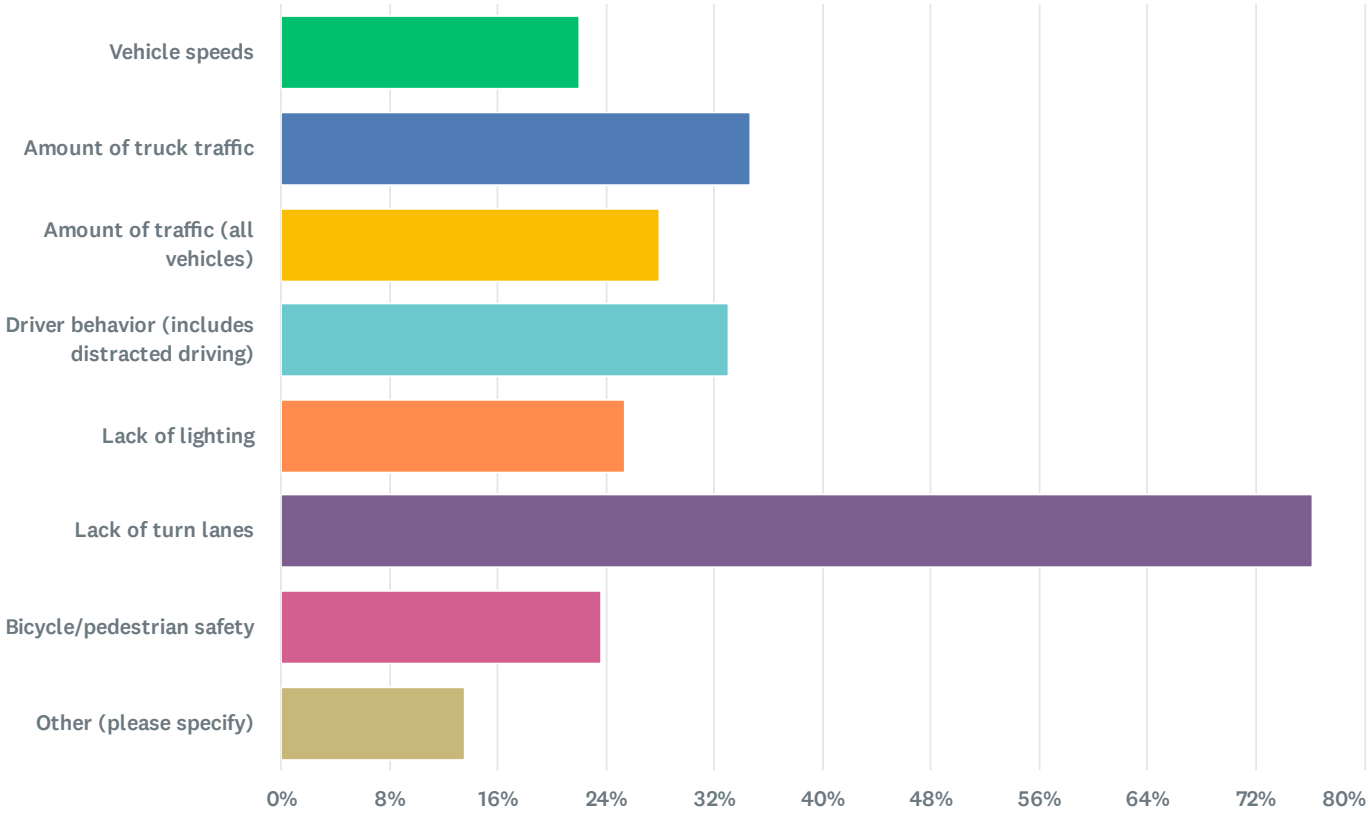
Q3 118 responses

How safe do you feel when driving on Hwy 18 in Casselton?



Q4 118 responses

What are the biggest concerns you have with Hwy 18 in Casselton? (Check all that apply)

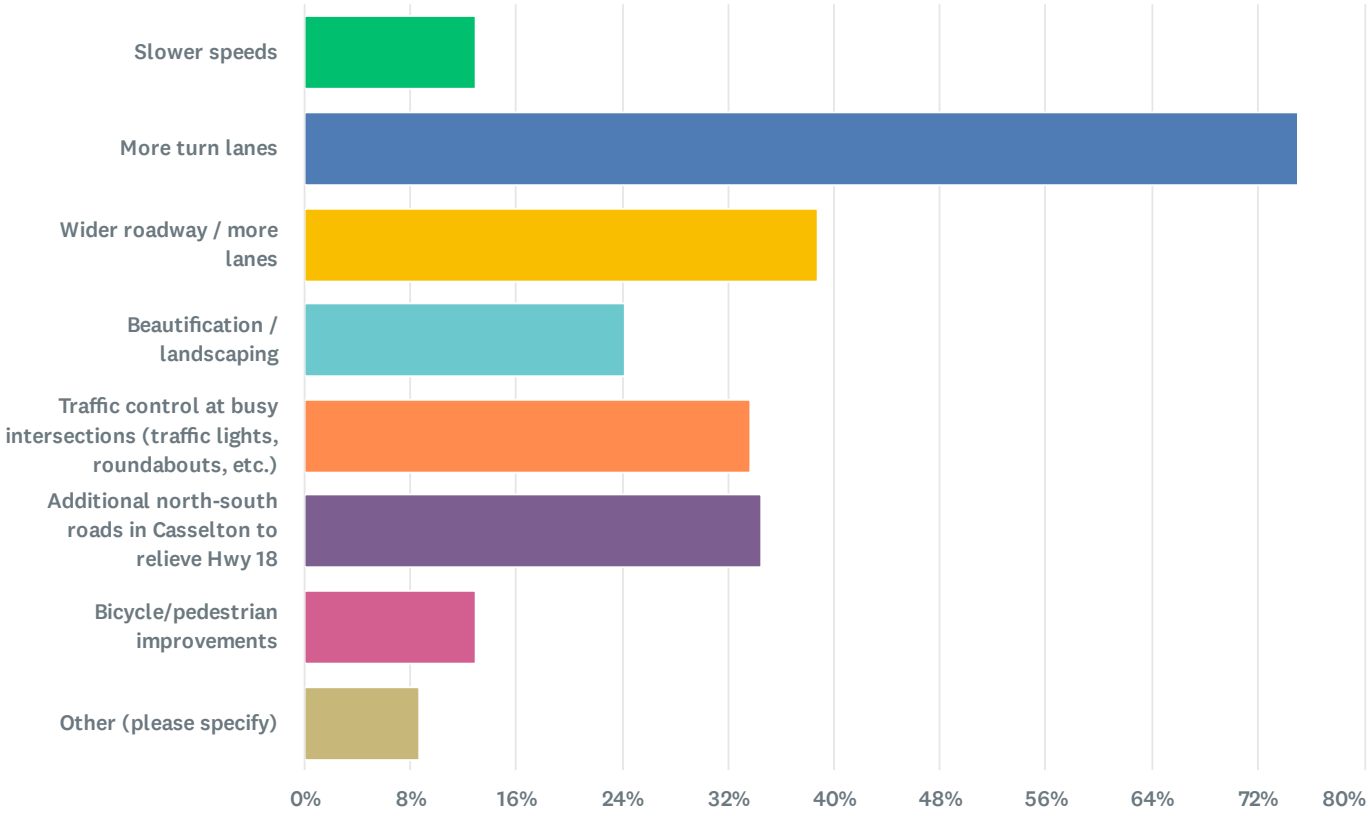


Answer Choices	Percentage	Responses
Vehicle speeds	22.03%	26
Amount of truck traffic	34.75%	41
Amount of traffic (all vehicles)	27.97%	33
Driver behavior (includes distracted driving)	33.05%	39
Lack of lighting	25.42%	30
Lack of turn lanes	76.27%	90
Bicycle/pedestrian safety	23.73%	28
Other (please specify)	13.56%	16
Total		**303**

#	OTHER (PLEASE SPECIFY)	DATE
1	Need stop lights on north end and south end	8/27/2026 3:47 PM
2	truck traffic levels once you are "in town" (north of Swan Creek)	8/21/2026 9:36 AM
3	Should be left and right hand turn lands	8/24/2026 8:01 PM
4	scooters & bicycles and the kids not paying attention	8/24/2026 5:22 PM
5	Scooters	8/23/2026 6:14 PM
6	Kids crossing the road by the gas station.	8/22/2026 7:58 PM
7	Could use wider shoulders for farm equipment to pull over to when they try to let traffic pass	8/21/2026 10:28 PM
8	Traffic coming over the overpass from the south going too fast to avoid traffic and pedestrians at the intersection by the hotel and convenience store	8/21/2026 9:06 PM
9	Tremendous congestion around gordys backing into the on off ramp and improper room for emergency vehicles	8/21/2026 8:25 PM
10	Intersection near the hotel and gas station is crazy	8/21/2026 5:02 PM
11	Corner at cottonwood and morningside that is not at the same spot which causes traffic buildup when cars turn each way	8/21/2026 12:46 PM
12	The Gordys truck stop and street bounaries are unclear	8/21/2026 12:38 PM
13	Need a traffic light at Gordy’s/Governor’s Inn	8/21/2026 12:03 PM
14	Oversized loads	8/21/2026 11:20 AM
15	Intersection at Gordy’s/Hotel and speed at Swan Creek bridge	8/21/2026 10:30 AM
16	none	8/20/2026 8:52 PM

Q5 116 responses

What priorities should be considered for Hwy 18 in Casselton in the future? (Check all that apply)



Answer Choices	Percentage	Responses
Slower speeds	12.93%	15
More turn lanes	75.00%	87
Wider roadway / more lanes	38.79%	45
Beautification / landscaping	24.14%	28
Traffic control at busy intersections (traffic lights, roundabouts, etc.)	33.62%	39
Additional north-south roads in Casselton to relieve Hwy 18	34.48%	40
Bicycle/pedestrian improvements	12.93%	15
Other (please specify)	8.62%	10
Total		**279**

#	OTHER (PLEASE SPECIFY)	DATE
1	More lanes would be great, but I fear for the bikes & walkers near the business driveways	8/27/2026 3:47 PM
2	Get all the trees the same and spaced evenly rather than the mess they currently have out there.	8/24/2026 8:01 PM
3	I would like to see a frontage road on the west side of highway 18. Then only having a couple of access points to 18. Having roundabouts at the access points. I also think a light is needed at Gordys.	8/21/2026 4:01 PM
4	US-18 Bus and US-18 Bypass	8/21/2026 3:51 PM
5	Lighting	8/21/2026 12:40 PM
6	PLEASE no roundabouts! They are the worst for adults and kids who get carsick and it’s one of the reasons we love living in Casselton is because there aren’t any!	8/21/2026 12:32 PM
7	Truck route through dalrymple land with a grocery store	8/21/2026 11:25 AM
8	Truck traffic should use Lynchburg exit to head north and south	8/21/2026 11:20 AM
9	less truck traffic	8/21/2026 10:16 AM
10	none	8/20/2026 8:52 PM

Q6 Please provide any comments you have regarding Hwy 18 in Casselton:

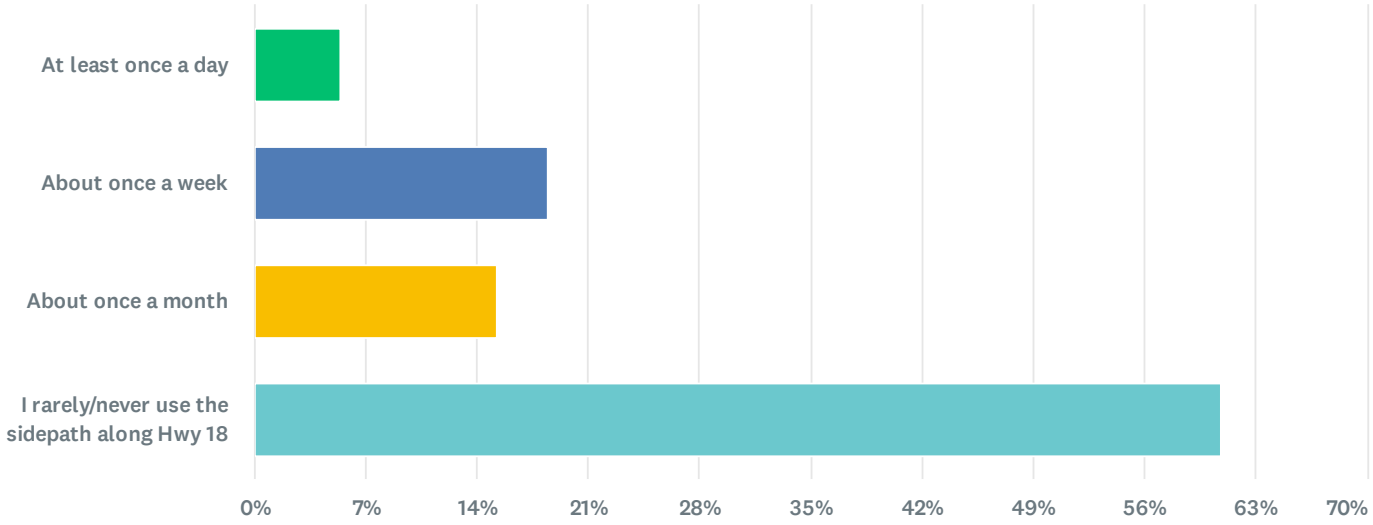
Answered: 38 Skipped: 81

#	RESPONSES	DATE
1	Important to look toward future. Today we are fine.	9/17/2026 3:13 PM
2	I think today we are fine, but it's good to look ahead.	9/17/2026 3:11 PM
3	Super important thoroughfare for the city and state. Se need a north-south route across the tracks east of Hwy 18.	9/17/2026 3:09 PM
4	If anyone turns left onto another road, the entire line of vehicles has to stop driving 45 mph.	9/4/2026 8:50 AM
5	We need an exit at the Durbin overpass on I94 to relieve the traffic on 18 coming into Casselton. Anyone that lives north of the tracks or going to the school would use that route.	9/1/2026 5:51 PM
6	Cottonwood & Morningside corners need a stop light or stop sign to definitely slow the speeds down and enable vehicles to turn onto Highway 18. The same is needed just off the interstate on the Gordy's and Days Inn corner.	8/27/2026 3:47 PM
7	I have never had to wait to turn or for someone else to turn. I realize that could change in the future. My biggest concern is that there is only one road that connects town to the interstate. That will cause a real problem someday.	8/21/2026 9:36 AM
8	I think the real issue is no turn lanes for dollar general and Dairy Queen, ace hardware. Not gordys intersection	8/24/2026 11:25 PM
9	Turning left/south from morningside drive with >80 homes and this being the only outlet, gets backed up at peak travel hours. The bike path is amazing south of Swan creek. There will need to be stoplights installed soon for east west traffic to be able to gain access to the highway. Particularly on front street, morningside drive, exit out of Gordy, and at the school.	8/23/2026 9:50 PM
10	I live in Casselton and drive semi for a living. I park my truck at Gordys truck stop every night. Getting out of Gordys (or any business along there really) onto 18 can be a challenge during peak traffic times. Especially on the south end where people are coming off of westbound I94 to go north. I dont know that traffic control devices would be the correct solution as its literally about 2 hours or less out of the day that its a pain. I also believe that widening the highway to 3 lanes with a common left and right hand turn lanes for the higher traffic cross streets/access points would be very beneficial.	8/23/2026 7:46 AM
11	People begin speeding out of town before they even hit the bridge by the vet clinic.	8/22/2026 7:58 PM
12	When you are trying to enter hwy 18 from gordys or from the hotel, the is signage that blocks the view to see any of the traffic that already exists in hwy 18.	8/22/2026 11:57 AM
13	We need the speed on Highway 18 to the south, but to accommodate those speeds, more turn lanes are needed, especially for the pasta plant.	8/22/2026 9:43 AM
14	There is no reason to slow down the speed limits especially if turn lanes are provided.	8/22/2026 8:13 AM
15	Walkway is wonderful for pedestrians and bikers!	8/21/2026 10:37 PM
16	Over the years, with amazing growth, there has become more traffic congestion by Gordy's and the hotel. So much happening at that intersection from all directions with so many different speeds!	8/21/2026 9:47 PM
17	2nd lane or turning lane south bound for the entire stretch. Unsure but additional infrastructure needed north bound from off ramp to gordys.	8/21/2026 8:25 PM
18	With the future build out of Prairie Skies, there is concern for queuing for northbound left turners on the highway. It is not an issue now, but at the current pace of 9 homes a year and the next phases, there will be more traffic at the peak times that may justify a left turn lane or	8/21/2026 7:22 PM

	two. I also think the path & bridge are excellent additions to address the increasing pedestrian activity, plus providing a recreational opportunity.	
19	People not getting up to speed or reducing when coming into or heading out of town. Also make it a no passing zone as someone almost hit me head on trying to pass someone in that short stretch	8/21/2026 6:12 PM
20	Beautification would be the biggest waste of tax dollars and already is within casselton that should not be an answer in this survey	8/21/2026 2:43 PM
21	My parents live at 641 S Langer Ave. The speeds between the Vet Clinic and their house is consistently above 25mph. A digital radar coming into town perhaps to slow speeds into town?	8/21/2026 2:19 PM
22	Trucks consistently impede traffic flow by taking up the entire roadway when turning	8/21/2026 12:26 PM
23	Make it obvious the Sheriff's office is present. Perhaps something like a welcome sign with a fun slogan.	8/21/2026 12:15 PM
24	There are two implement dealers so there is wide equipment traveling on the road. Wider access would make it easier for safer travel. During prime time , it can be hard to get onto 18 from a business. Some way to make traffic have intermittent blank spaces would be nice. The overhead bridge needs to change, you can not see traffic coming over and can be dangerous to get onto 18 when exiting from interstate.	8/21/2026 12:10 PM
25	The crosswalk near Gordys is located in too high of a speed zone.	8/21/2026 11:40 AM
26	Should be widened to include turning lanes.	8/21/2026 11:22 AM
27	All semi loads should be using the Lynchburg exit for north and south travel. Semis going through a small community with a school and young kids. I feel over the past 10 years there has been and increase in semi traffic. Everything can be accessed using the Lynchburg exit road. Elevators, bean processing facility etc...	8/21/2026 11:20 AM
28	The farmers and elevator trucks need either a light or a roundabout to help keep traffic flowing for their safety and the safety of other vehicle traffic at the intersection by the hotel & Gordys.	8/21/2026 11:06 AM
29	Would like to see truck rerouted, with the exception of trucks coming to elevator in town	8/21/2026 11:02 AM
30	Add a third lane for a turn lane!!!!!! Even the local NDDOT head man at Casselton shop has said that for years!!!!	8/21/2026 10:43 AM
31	Both north and south intersections of this stretch are dangerous for cars AND pedestrians. The offset at Cottonwood & Morningside is also a need for improvement	8/21/2026 10:30 AM
32	A truck route to divert from going through the center of town would be beneficial for pedestrian safety, less congestion, and noise.	8/21/2026 10:21 AM
33	Right by Gordys and the hotel can get very scarey coming of the interstate as I have had many semis and cars pull out infront of me turning onto 18	8/21/2026 10:23 AM
34	Not really an issue yet. But when the new development is full and more business move in, there will be a big issue if something isn't done.	8/21/2026 10:13 AM
35	Public education re: existing pedestrian crosswalks. (Stop when a pedestrian is at the crosswalk even if lights aren't flashing) Consider roundabout or light at intersection of DQ/Dollar general	8/21/2026 8:30 AM
36	Even with the addition of the bike path and individual was walking on the side of 18 walking their dog this week.	8/20/2026 8:52 PM
37	Truck traffic from 18 and 10 is excessive. This is drive through traffic and not helping the local economy. High speeds, traffic congestion, reduced safety for kids and foot/bike traffic during school.	8/20/2026 11:30 AM
38	Really appreciate being able to use the new shared use path, and the amount of space between the highway and the path. Especially considering I have small children that I use the path with.	8/20/2026 9:13 AM

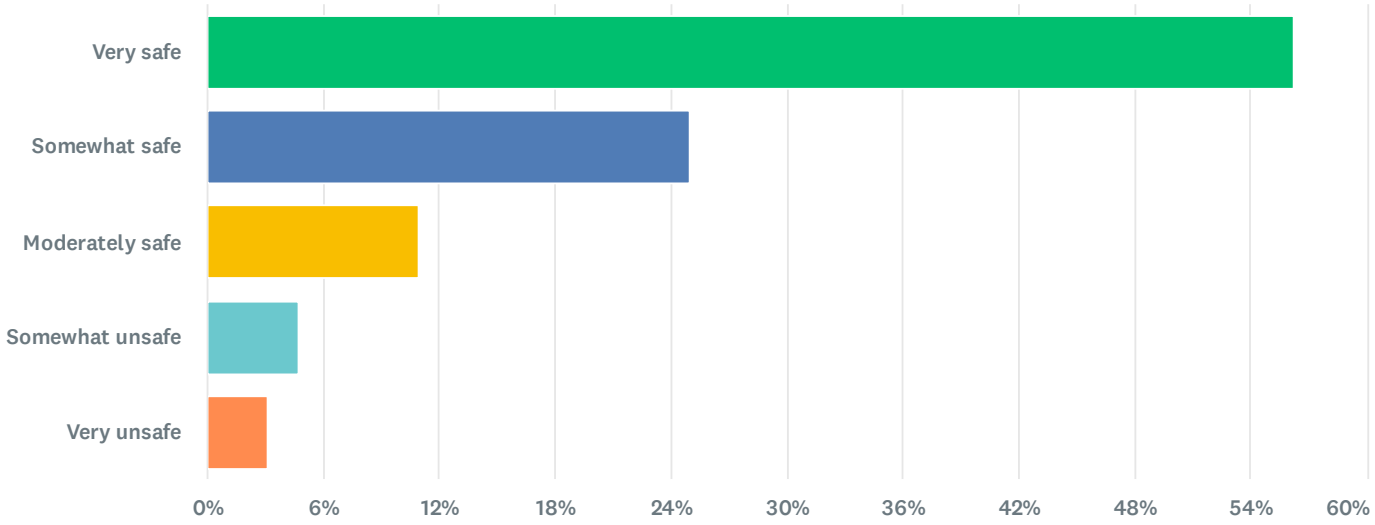
Q7 92 responses

How often do you use the sidepath along Hwy 18 in Casselton?



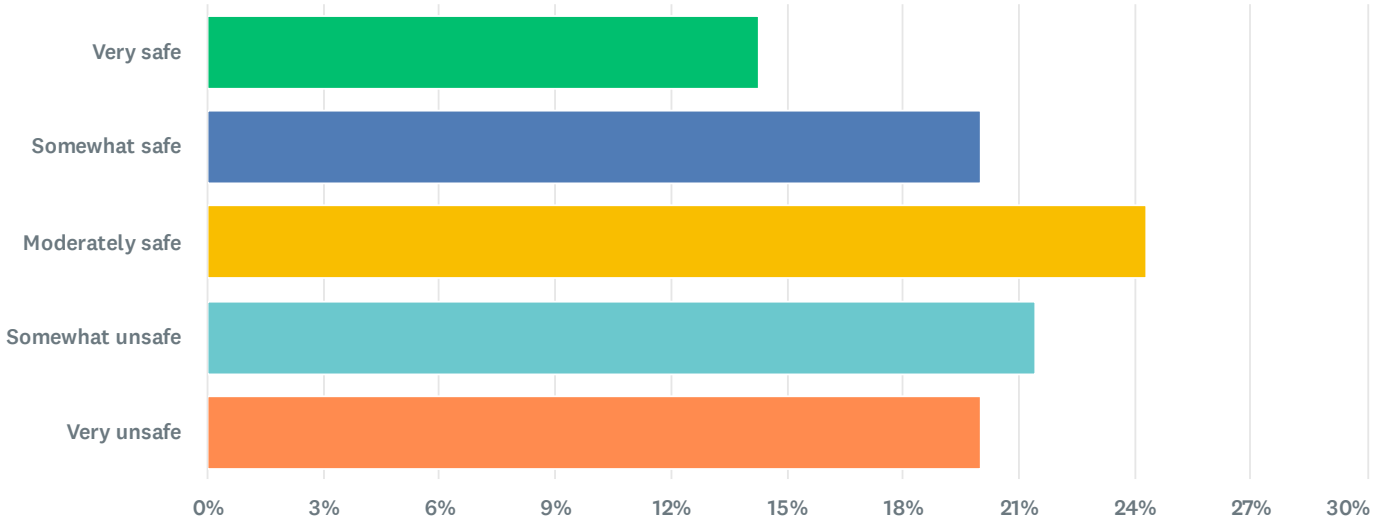
Q8 64 responses

How safe do you feel when using the sidepath along Hwy 18 in Casselton?



Q9 70 responses

How safe do you feel when crossing Hwy 18 as a pedestrian or bicyclist Casselton?



Q10 Feel free to provide any comments regarding using Hwy 18 in Casselton as a pedestrian or bicyclist.

Answered: 15 Skipped: 104

#	RESPONSES	DATE
1	It's very dark, especially at the intersections to safely be seen while crossing.	9/4/2026 8:53 AM
2	The shared use path has made it much safer by removing the pedestrians and bicyclists from highway 18.	9/1/2026 5:53 PM
3	People in ND treat pedestrian crossings as a slight suggestion and not the law. Even while walk lights are flashing I've seen cars go through them without yielding at all.	9/1/2026 4:35 PM
4	Cars are not used to pedestrians on sidepath yet when they are turning. Alerting drivers that a pedestrian could be there, when they are turning off of hwy 18 would be great. Crossing hwy 18 as a pedestrian or as a car is treacherous. Cars not ready to slow down, and are treating it as a highway. Even with the pedestrian lights/cross walk, they do not stop.	8/23/2026 9:52 PM
5	I don't use 18 as a pedestrian or bicyclist.	8/23/2026 7:47 AM
6	Love the crosswalk with lights flashing, but still so much traffic coming at all directions and different speeds.	8/21/2026 9:49 PM
7	Crossing is hazardous	8/21/2026 8:25 PM
8	the speed limit is fine, just the traffic that doesn't pay attention is scary.	8/21/2026 7:25 PM
9	The push buttons work to get drivers attention, providing a safe crossing. The north crossing has the curb bumpout but the south is much wider and more truck traffic, but still safe due to the signals.	8/21/2026 7:24 PM
10	Safer to drive	8/21/2026 2:35 PM
11	Signage for pedestrian or cyclists for safer crossing	8/21/2026 12:02 PM
12	Crossing 18 to businesses is unsafe. High traffic flow and large semis. Lots of kids going to Gordon and vibe	8/21/2026 11:22 AM
13	I'm thankful for the pedestrian crosswalk from Morningside to Cottonwood, but in my experiences people of the older generation do not stop and believe they still have the right if way.	8/21/2026 10:25 AM
14	none. comment on highway 18 when signs are put up for athletes going to a state competition a vehicle was park on the edge - that is dangerous for them and other motorists.	8/20/2026 8:54 PM
15	Lighting would be helpful to use more often into the fall months when there is less daylight.	8/20/2026 9:13 AM