

May 17, 2024



Jolynn Becker
City Manager
City of Banks
13680 NW Main Street
Banks, OR 97106

**RE: Aerts Addition
 Design Exception Request (Technical Road Modification)
 Collector Cross-Section Modification**

Dear Jolynn Becker,

The following is a request for exception as per Section 2.20.12b to the City of Banks Public Works Design Standards, regarding the location of the bike lanes along two lane collector streets with parking in Drawing No. 102A of the Public Works Design Standards (Revised Feb. 2022) and the Washington County C-1 designated collector per the Road Design and Construction Standards (Feb. 2011). It is our understanding that the City is working on an agreement with Washington County to allow City review/approval, and eventually transfer Banks Road and Aerts Road to the City's jurisdiction.

Describe Request

This design exception requests to revise the standard cross section for Aerts Road to expand the 6' sidewalk to a 12' multi-use path and remove the 6' bike lanes.

Reason

Relocating the bike lane from the roadway to a multi-use path reduces the traffic impacts from road sharing, reduces risks of cyclist-motor vehicle incidents in a neighborhood setting, and adds to the City of Banks' local recreation and path network.

Comparison

The standard cross section as shown on exhibits A and B show the relocation of the bike lane from the outer edge of the travel lane to the multi-use path (behind the curb). The existing approach to bike lane has its design location shown on the outer edge of the travel lane; whereas, the raised location combines the 6' sidewalk with the 6' bike lane for a shared-use path behind the curb.

Documentation

The bike lane location change along with the creation of a multi-use path has been discussed with the City of Banks, its traffic consultant (DKS Associates), and the City Engineer (Kennedy Jenks) and is documented in the Development Agreement with the City and aligns with the recently adopted TSP. Relocating the bike lane off the roadway and combining with the sidewalk to create a separate parallel multi-use path is within the standards provided by the City of Banks per section 2.20.12.c.3 and Washington County's Multi-Use Off-Street Path per Washington County Bicycle Facility Design Toolkit.

Public Safety

The multi-use path physically separates cyclists from traffic and reduces conflicts between vehicle parking and bike users, which enhances safety for both motorists and bike users. The change in location of the bike lane from its current location within the road cross-section (roadway adjacent) to being sidewalk adjacent will provide positive impacts to bicyclist safety.

Performance

No performance impacts are expected.

Financial Effect

No financial effect is anticipated.

Other comments/arguments

None.

Exhibits

- Exhibit A displaying collector cross-section design and current cross-section standards from the City of Banks Public Works Design Standards (Feb. 2022).
- Exhibit B with collector cross-section comparison to Washington County Collector C-1 per County Road Design and Construction Standards (Feb. 2011).
- Washington County Multi-Use Off-Street Path design drawing.

We appreciate your time and consideration of this additional information regarding the design exception. If you have any questions regarding this letter or the Aerts Addition project in general, please do not hesitate to call or email with any questions.

Sincerely,

AKS ENGINEERING & FORESTRY, LLC

A handwritten signature in dark ink that reads "Paul A. Sellke". The signature is written in a cursive style with a large initial "P".

Paul Sellke, PE, GE

Project Engineer

(503) 563-6151 | PaulS@aks-eng.com

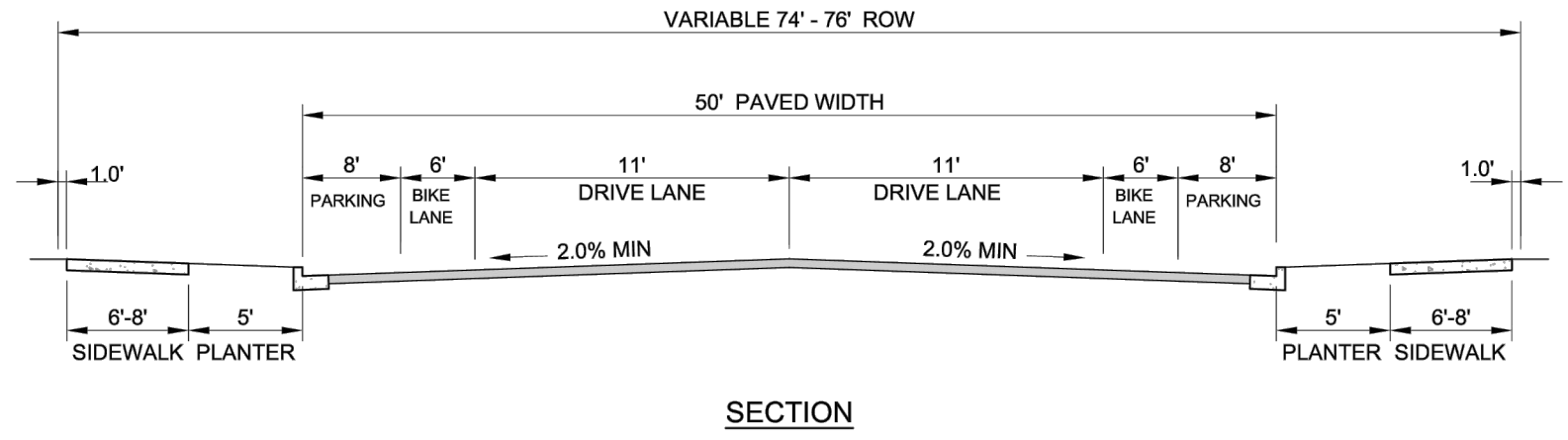
CC: Rob Peacock, PE, City Engineer (RobertPeacock@KennedyJenks.com)
Katie Vickers, City Planner (kvickers@migcom.com)



JUNE 2014 (REV FEB 2022)
APPROVAL DATE

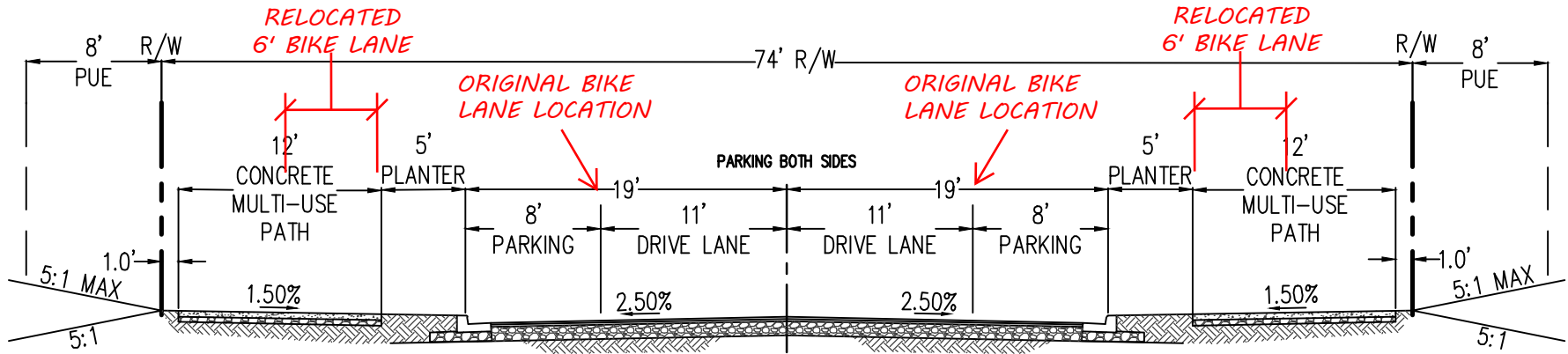
2 LANE COLLECTOR W/ PARKING
PUBLIC WORKS DEPARTMENT

102A
DWG. NO.



NOTES:

1. PAVED WIDTH AND PLANTER STRIP ARE MEASURED TO FACE OF CURB.
2. PROVIDE 1.0 FOOT FROM RIGHT-OF-WAY LINE TO THE BACK OF SIDEWALK FOR MAINTENANCE AND SURVEY MONUMENT PROTECTION.
3. STREET TREES AND STREET LIGHTS ARE REQUIRED.
4. 8' SIDEWALKS FOR FOR RESIDENTIAL STREETS AND 6' SIDEWALKS FOR COMMERCIAL/INDUSTRIAL AREAS.



SCALE 1" = 10'
ONSITE NORTH-SOUTH & EAST-WEST
COLLECTOR STREETS
TYPICAL SECTION
25 MPH DESIGN SPEED

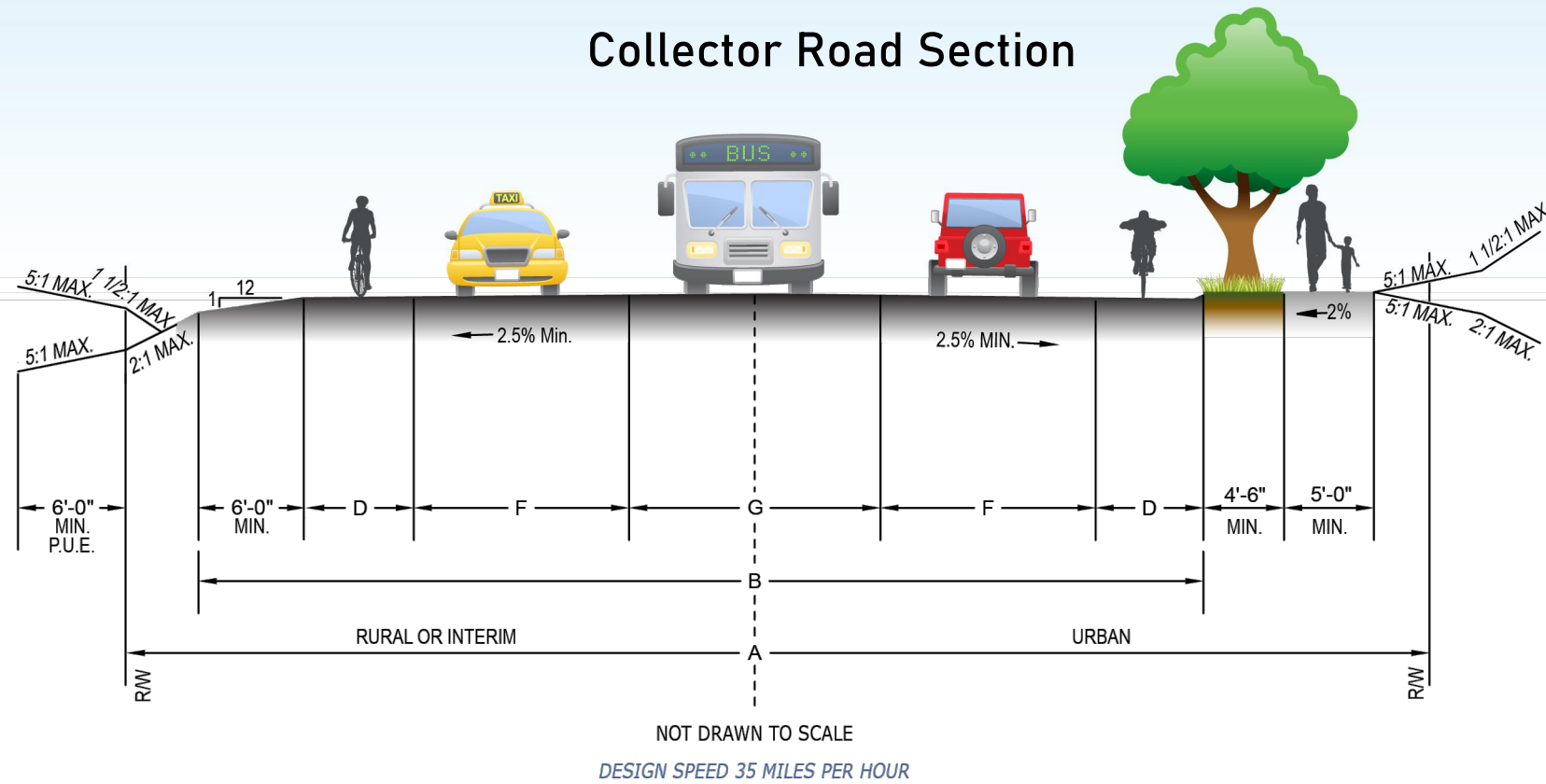
DATE: 5/17/2024

| | | |
|--|--|---|
| CROSS-SECTION MODIFICATION DESIGN EXCEPTION | | EXHIBIT |
| AERTS ADDITION | | A |
| AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM | | DRWN: SKC CHKD: CRH AKS JOB: 4920-01 |



DWG: 20240513_4920-01 MULTI-USE CROSS SECTIONS | A

Collector Road Section



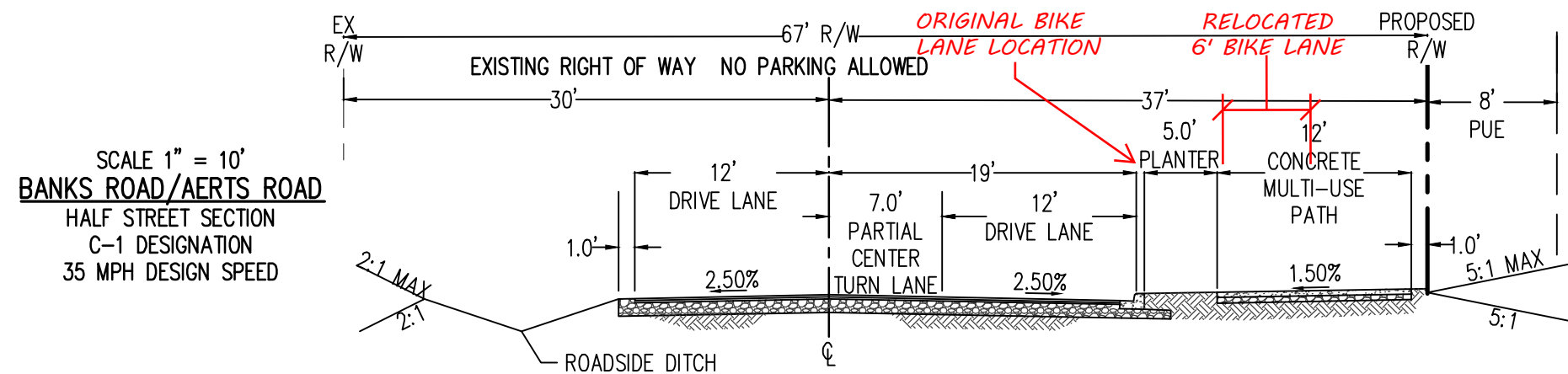
NOT DRAWN TO SCALE
DESIGN SPEED 35 MILES PER HOUR

| Road Classification | Washington County Designation | Right of Way (Feet) | Paved Width (Feet) | Number of Lanes | Bike Lane/ Paved Shoulder | Travel Lane | Center Turn Lane | Parking Allowed |
|---------------------|-------------------------------|---------------------|--------------------|-----------------|---------------------------|-------------|------------------|-----------------|
| Collectors | | A | B | | D | F | G | |
| | C-1 | 74 | 50 | 3 | 6 | 12 | 14 | NONE |
| | C-2 | ** | 36 ‡ | 2 | 6 | 12 | 0 | NONE |

*GRAVEL SHOULDERS AND DITCHES ALLOWED FOR THESE WIDTHS ONLY. STANDARD INTERIM SECTION
 ** USE ULTIMATE R/W FOR PAVED WIDTH IDENTIFIED IN THE TRANSPORTATION PLAN, IF NOT KNOWN USE 74 FOOT R/W, IN RURAL AREAS 60' OF RIGHT OF WAY IS REQUIRED.
 ‡ P.U.E.'S REQUIRED OUTSIDE OF R/W IF SHOULDERS AND DITCHES ARE USED.

The applied "Washington County Designation" is determined by the county's transportation plan and the land use decision. See Appendices C and D for maps of County collector roads.

Collector Road Section
 Washington County Exhibit #: 2
 Effective Date:
 Washington County
 Department of Land Use
 & Transportation
 Engineering Section



SCALE 1" = 10'
BANKS ROAD/AERTS ROAD
 HALF STREET SECTION
 C-1 DESIGNATION
 35 MPH DESIGN SPEED

DATE: 5/17/2024

| | |
|--|---|
| CROSS-SECTION MODIFICATION DESIGN EXCEPTION | EXHIBIT |
| AERTS ADDITION | B |
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DWG: 20240513_4920-01_MULTI-USE_CROSS_SECTIONS | B

DESIGN SUMMARY >>

Multi-use paths serve bicyclists and pedestrians and provide additional width over a standard sidewalk. Public Works only constructs paths within the existing ROW (eg., adjacent to roads). Paths constructed in other locations may provide transportation benefits, but would be constructed by the Parks Department. Paths constructed next to roads must have some type of vertical (e.g., curb or barrier) or horizontal (e.g., landscaped strip) buffer separating the path area from adjacent vehicle travel lanes. This treatment is allowed in the right-of-way under Washington County's existing Road Design Standards.

DIMENSIONS:

- 10' is the minimum allowed for a two-way shared-use path and is only recommended for low traffic situations
- 12' or greater is recommended for high-use areas, or in situations with high concentrations of multiple users such as joggers, bicyclists, rollerbladers and pedestrians. In some cases pavement markings/signage may be used to separate trail users

TYPICAL APPLICATION:

- Where there are few at-grade crossings such as driveways and alleyways
- Where the existing roadway context makes a completely separated bikeway the preferred alternative (i.e. high traffic speeds and volumes in a constrained right-of-way).

LAND USE CONTEXT:

- Urban, suburban, rural

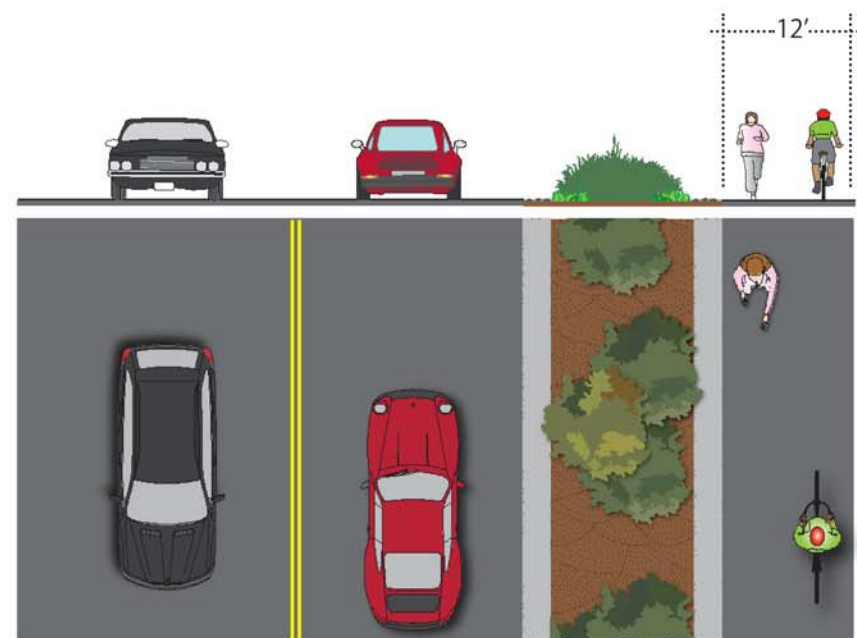
PEER COMMUNITIES/LOCAL EXAMPLES:

- Off-street multi-use paths are popular in communities both urban and rural across the country

ADDITIONAL GUIDANCE:

- AASHTO, Metro Greenway Trails

MULTI-USE PATH ADJACENT TO ROADWAY



May 17, 2024



Jolynn Becker
City Manager
City of Banks
13680 NW Main Street
Banks, OR 97106

**RE: Aerts Addition
Design Exception Request (Technical Road Modification)
Collector-Local and Local-Local Intersection Spacing**

Dear Jolynn Becker,

The following is a request for exception to section 2.20.5.b of the City's Public Works Design Standards (PWDS) (Revised Feb. 2022) for the minimum distances with regard to Intersection Spacing.

Describe Request

This design exception request is to allow a reduction to the minimum intersection spacing standards from the required minimums of 200' for local to local intersections and 250' for collector to local intersection distances of street intersections per the Public Works Design Standards (PWDS).

Reason

The placement of "Local Road X" as a parallel "frontage" road to Sunset Ave (Collector) reduces the need for individual lot driveway access onto the city collector. The same is true .in regard to "Local Road S" as a parallel "frontage" to Aerts Rd (County Collector). Providing the minimum distance required would result in lots deeper than needed.

Comparison

Removing Local Road X would result in the need for driveway access onto Sunset Ave, requires additional local road access (Local Road Z would extend north for another intersection), and increase lot depths which impact lot density and master plan layout. Removing the intersection at Local Road S and Local Road R would remove a secondary access on to Aerts Road from the subdivision, would require the creation of a cul-de-sac, the removal of one lot, and reduce the size of three additional lots.

Documentation

See attached drawing of intersection spacing measurements and street layout.

Public Safety

Creating Local Road X as a frontage road removes the need for driveway access to Sunset Avenue. This design limits conflicts with merging traffic on the collector due to driveways and maximizes the density for buildable lots within the project. The proposed intersection spacing of 174' still allows traffic to meet the minimum stopping sight distance (SSD) requirements per AASHTO standards and thereby does not result in additional safety concerns with respect to sight distance.

Similarly, creating Local Road S removes the need for driveway access to Aerts Rd and Banks Rd. This design limits conflicts with merging traffic on both collectors due to driveways and maximizes the density for buildable lots. The proposed intersection spacing of 194' still allows traffic to meet the minimum stopping sight distance (SSD) requirements per AASHTO standards and thereby does not result in additional safety concerns with respect to sight distance.

Performance

Minimizing local and driveway access on Aerts Road, Banks Road, and Sunset Avenue limits "intersection" conflicts on these collector streets.

Financial Effect

No financial effect is anticipated.

Other comments/arguments

None.

Exhibits

- Exhibit A displaying intersection distances between Local Road W/Collector A and Local Road X with respect to Sunset Avenue.
- Exhibit B displaying intersection distances between Local Road R and Local Road S with respect to Aerts Road.

We appreciate your time and consideration of this additional information regarding the design exception. If you have any questions regarding this letter or the Aerts Addition project in general, please do not hesitate to call or email with any questions.

Sincerely,

AKS ENGINEERING & FORESTRY, LLC

A handwritten signature in dark ink, reading "Paul A. Sellke". The signature is written in a cursive, flowing style.

Paul Sellke, PE, GE

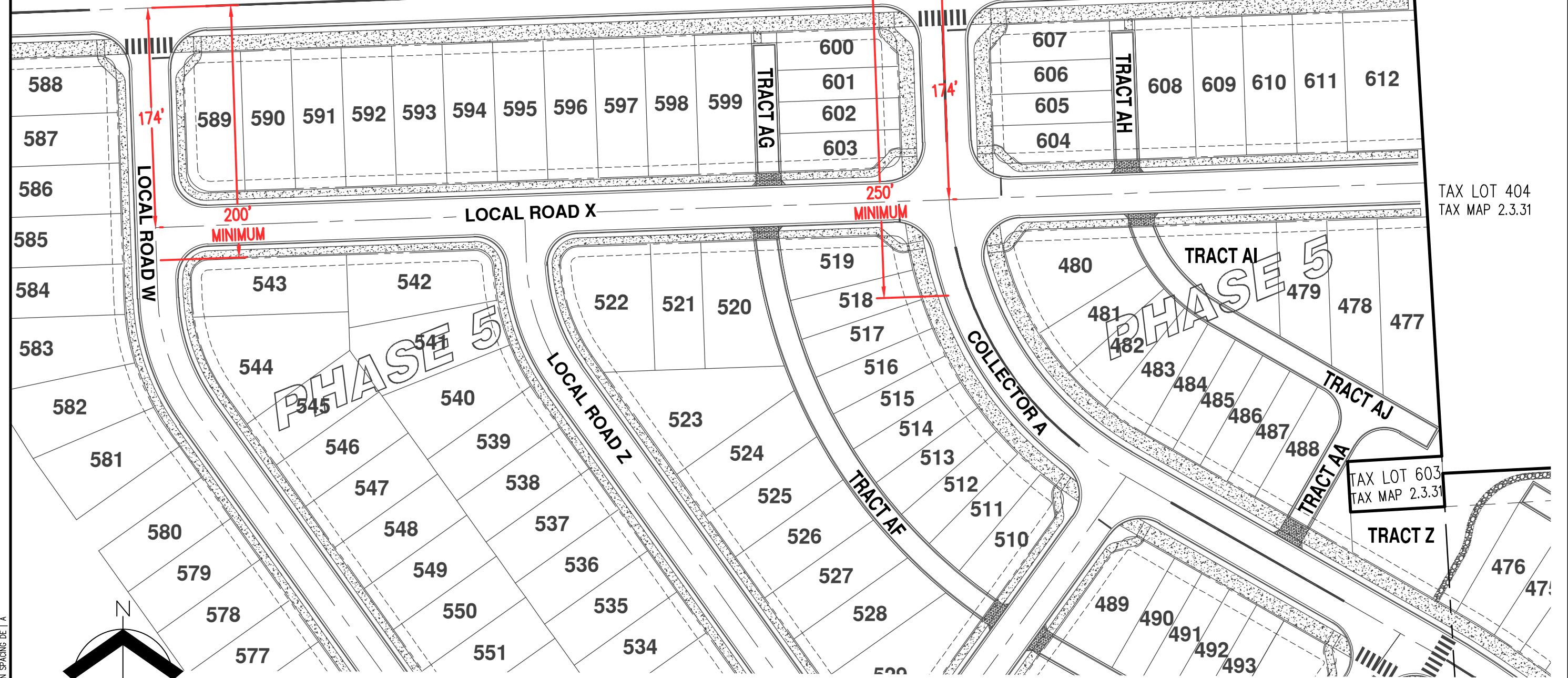
Project Engineer

(503) 563-6151 | PaulS@aks-eng.com

CC: Rob Peacock, PE, City Engineer (RobertPeacock@KennedyJenks.com)
Katie Vickers, City Planner (kvickers@migcom.com)

TAX LOT 400
TAX MAP 2.3.31

SUNSET AVENUE

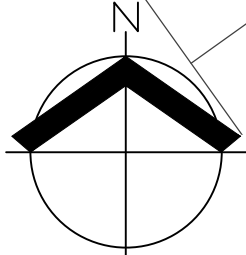


TAX LOT 404
TAX MAP 2.3.31

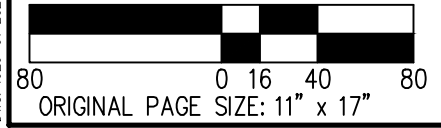
TAX LOT 603
TAX MAP 2.3.31

DATE: 5/17/2024

DWG: 4920-01 20240515 AERTS INTERSECTION SPACING DE | A

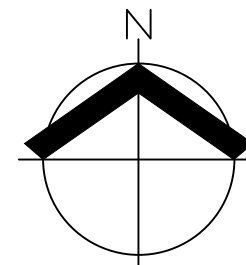
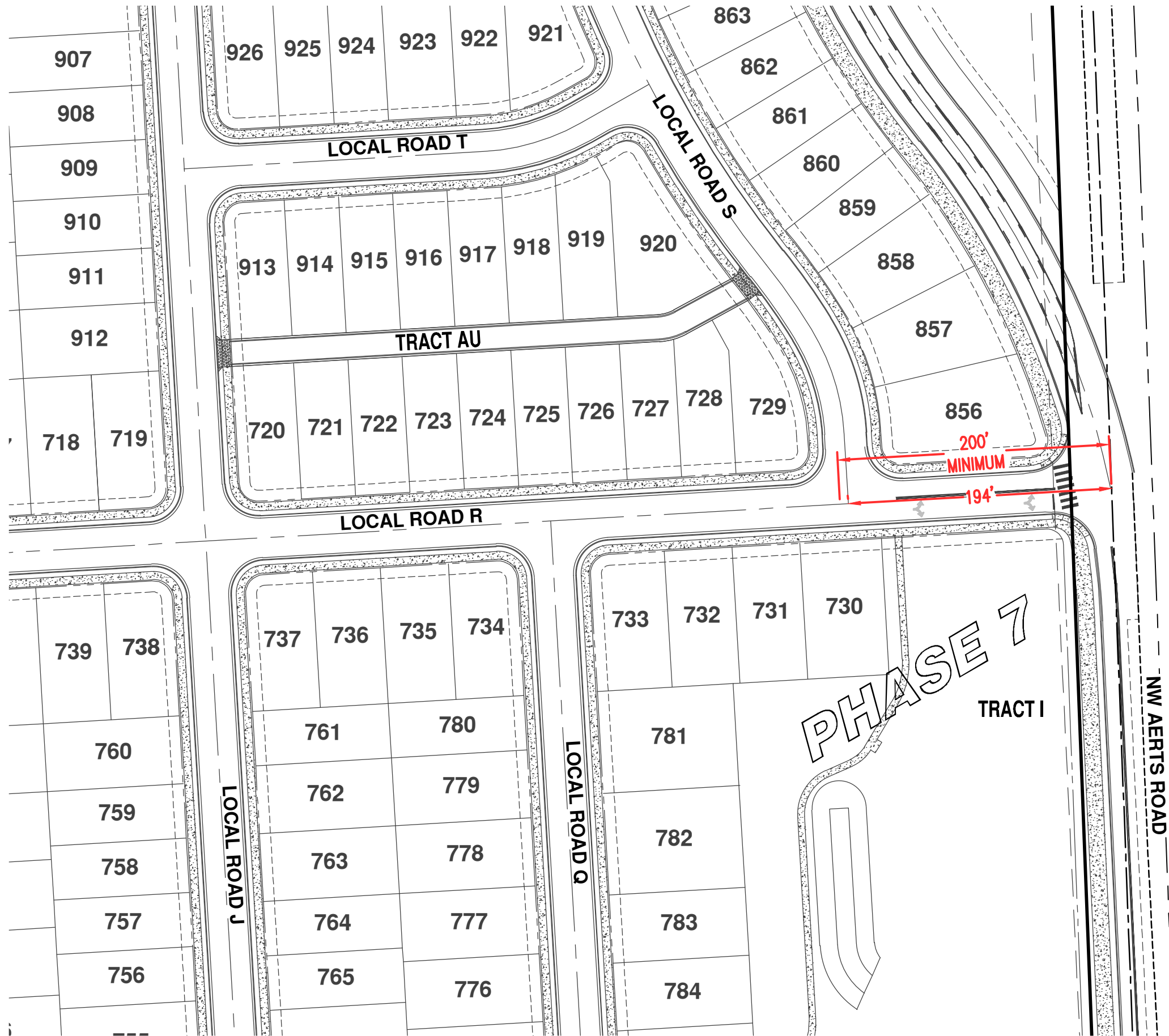


SCALE: 1" = 80 FEET

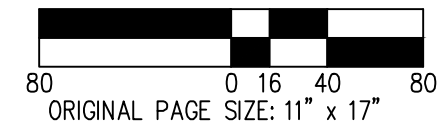


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| INTERSECTION SPACING DESIGN EXCEPTION | | EXHIBIT |
| AERTS ADDITION | | A |
| AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM | | DRWN: SKC CHKD: CRH AKS JOB: 4920-01 |
| | | |

DWG: 4920-01 20240515 AERTS INTERSECTION SPACING DE | B



SCALE: 1" = 80 FEET



TAX LOT 400
TAX MAP 2.3.32

DATE: 5/17/2024

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|--|--|---|
| INTERSECTION SPACING DESIGN EXCEPTION | | EXHIBIT |
| AERTS ADDITION | | B |
| AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM | | DRWN: SKC CHKD: CRH AKS JOB: 4920-01 |



May 17, 2024



Jolynn Becker
City Manager
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13680 NW Main Street
Banks, OR 97106

**RE: Aerts Addition
Design Exception Request (Technical Road Modification)
Collector-Local Sight Distance**

Dear Jolynn Becker,

The following is a request for exception for City Engineer approval of stopping sight distance (SSD) in lieu of removing street trees and on-street parking versus requiring intersection sight distance (ISD) for left turn and right turn movements at the Collector A and Local Road X intersection (braking distance requirements per AASHTO 3.2.2.2 (Table 3-1)).

Describe Request

The above referenced design exception requests to consider allowing for the intersection design to utilize stopping sight distance (SSD) in accordance to braking distance requirements for sight distance analysis to minimize street tree removal and retain temporary parked car locations adjacent to this intersection.

Reason

The request is solely for aesthetic reasons to retain street trees and to maximize on street parking available to the future residents.

Comparison

The use of ISD at this intersection will potentially remove street trees and limit on-street parking on the collector. It would require the removal of 6 on-street parking spaces to meet ISD guidelines. Using SSD at this intersection will allow for the retention of 6 parking spaces and 4 street trees.

Documentation

See attached Figure 1 for comparison between ISD and SSD versus street trees and on-street parking. The traffic movements requiring SSD (Braking Distance per AASHTO 3.2.2.2 (Table 3-1)) at this intersection of an eastbound left-hand turn from local Road X and a left or right turn movement from the westbound approach.

Public Safety

No impact to traffic safety is impacted as SSD is still maintained for vehicle turning movements at this intersection (allows vehicles to stop if needed for merging traffic). Having parking along travel lanes is an effective traffic calming method which tends to slow traffic down.

Performance

The restriction of ISD to the south at this intersection will result in traffic on Collector Road A being required to slow down to allow merging traffic from Local Road X to merge and turn onto the road. This will slow traffic down and thereby impact traffic flow.

Financial Effect

No financial effect is anticipated.

Other comments/arguments

None.

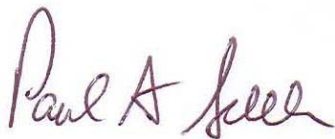
Exhibits

- Figure 1 displaying Intersection Sight Distance and Stopping Sight Distance evaluation at the subject intersection.

We appreciate your time and consideration of this additional information regarding the design exception. If you have any questions regarding this letter or the Aerts Addition project in general, please do not hesitate to call or email with any questions.

Sincerely,

AKS ENGINEERING & FORESTRY, LLC



Paul Sellke, PE, GE

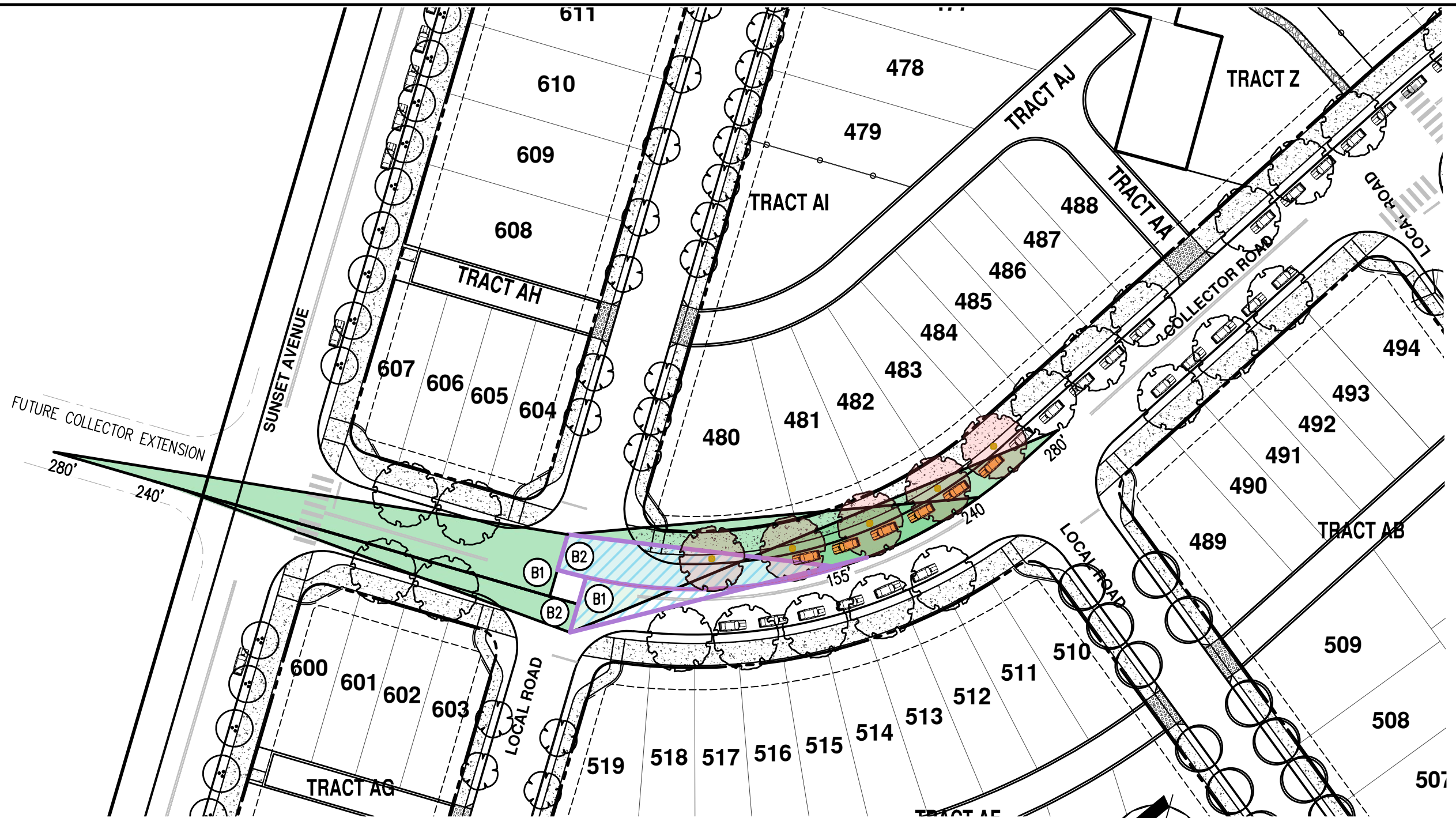
Project Engineer

(503) 563-6151 | PaulS@aks-eng.com

CC: Rob Peacock, PE, City Engineer (RobertPeacock@KennedyJenks.com)

Katie Vickers, City Planner (kvickers@migcom.com)

DWG: 4920-01_AERTS ADDITION 20240510 SSD COLLECTOR-LOCAL DE | DE



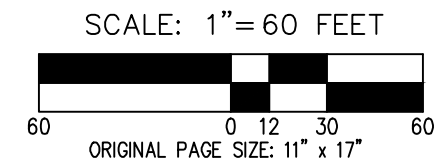
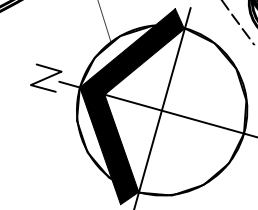
SIGHT DISTANCE ANALYSIS PARAMETERS

| DESIGN SPEED | ACTION (CASE) | DISTANCE FROM EYE TO EDGE OF TRAVEL | INTERSECTION SIGHT DISTANCE | STOPPING SIGHT DISTANCE |
|---------------|---------------------------------|-------------------------------------|-----------------------------|-------------------------|
| CITY OF BANKS | | | | |
| (B1) 25 MPH | LEFT TURN FROM MINOR ROAD (B1) | 14.5' | 280' | 155' |
| (B2) 25 MPH | RIGHT TURN FROM MINOR ROAD (B2) | 14.5' | 240' | 155' |

NOTE: ISD TRIANGLES PER 2018 AASHTO GREENBOOK CHAPTER 9.5 AND SSD IS PER TABLE 3-1.

LEGEND

- INTERSECTION SIGHT DISTANCE (ISD) TRIANGLE
- STOPPING SIGHT DISTANCE (SSD) TRIANGLE
- ON-STREET PARKING AVAILABLE
- ON-STREET PARKING CONFLICTS WITH ISD
- ON-STREET TREE CONFLICTS WITH ISD



DATE: 5/17/2024

| | |
|--|----------|
| INTERSECTION SIGHT DISTANCE DESIGN EXCEPTION | FIGURE |
| AERTS ADDITION | 1 |
| AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM | |
| | |
| DRWN: SKC CHKD: CRH AKS JOB: 4920-01 | |