

PROJECT TITLE:
COLUMBIA MEADOWS

Box Project # 18-7484 Issue Date: 08/12/2020

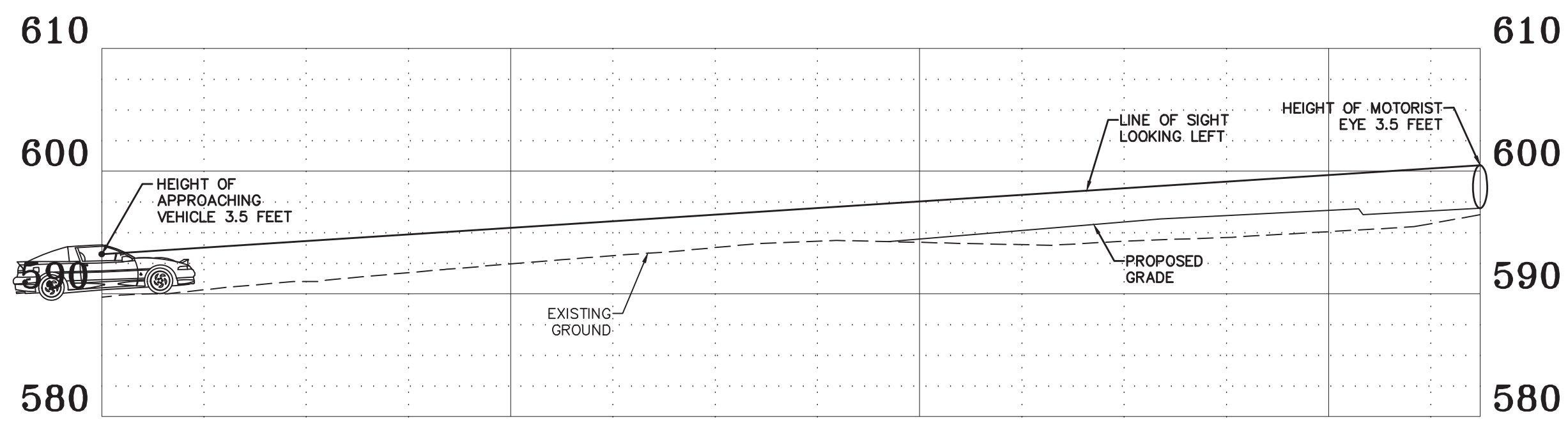
ENGINEERING PLANNING SURVEYING
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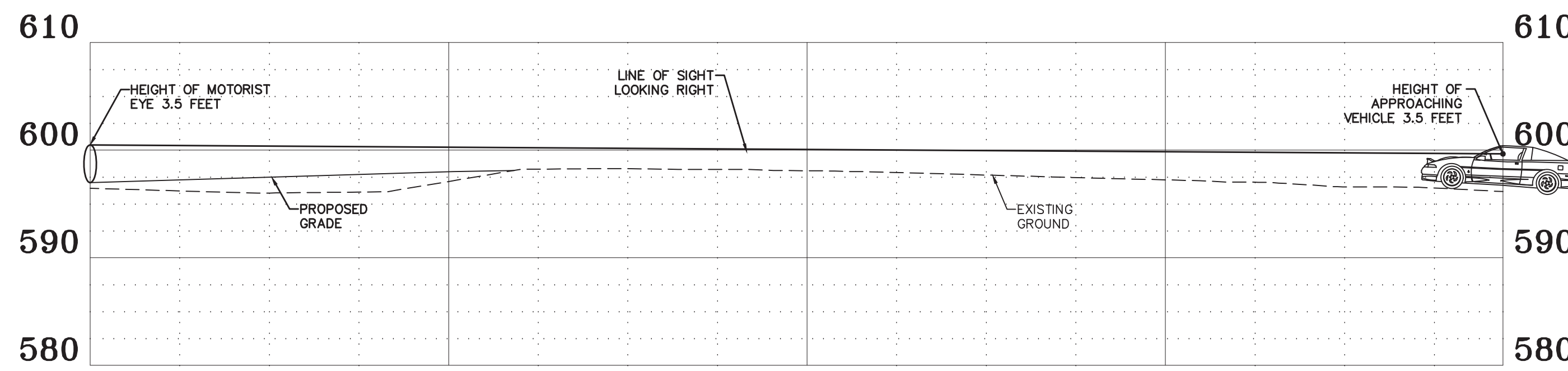
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 CIVIL ENGINEER
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REVISIONS

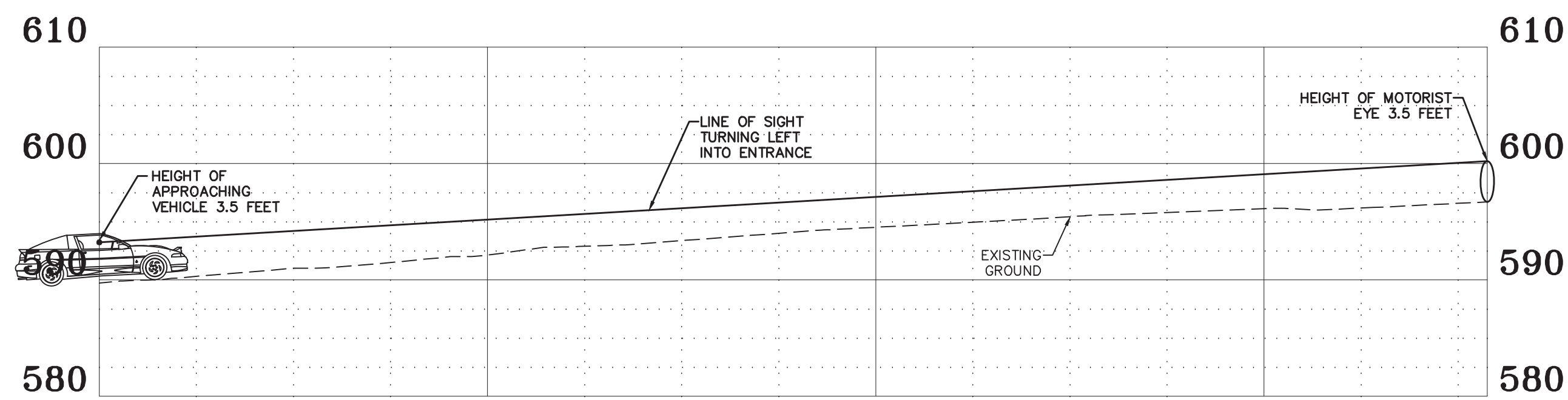
DATE	CITY COMMENTS
10/13/20	CITY COMMENTS
01/08/21	CITY COMMENTS
02/10/21	CITY COMMENTS
02/23/21	CITY COMMENTS



ENTRANCE LOOKING LEFT
 (POSTED SPEED OF 30 MPH - DESIGN SPEED 35 MPH)
 SCALES:
 HORIZ. 1"=40'
 VERT. 1"=10'



ENTRANCE LOOKING RIGHT
 (POSTED SPEED OF 30 MPH - DESIGN SPEED 35 MPH)
 SCALES:
 HORIZ. 1"=40'
 VERT. 1"=10'



LEFT TURN IN AT ENTRANCE
 (POSTED SPEED OF 30 MPH - DESIGN SPEED 35 MPH)
 SCALES:
 HORIZ. 1"=40'
 VERT. 1"=10'

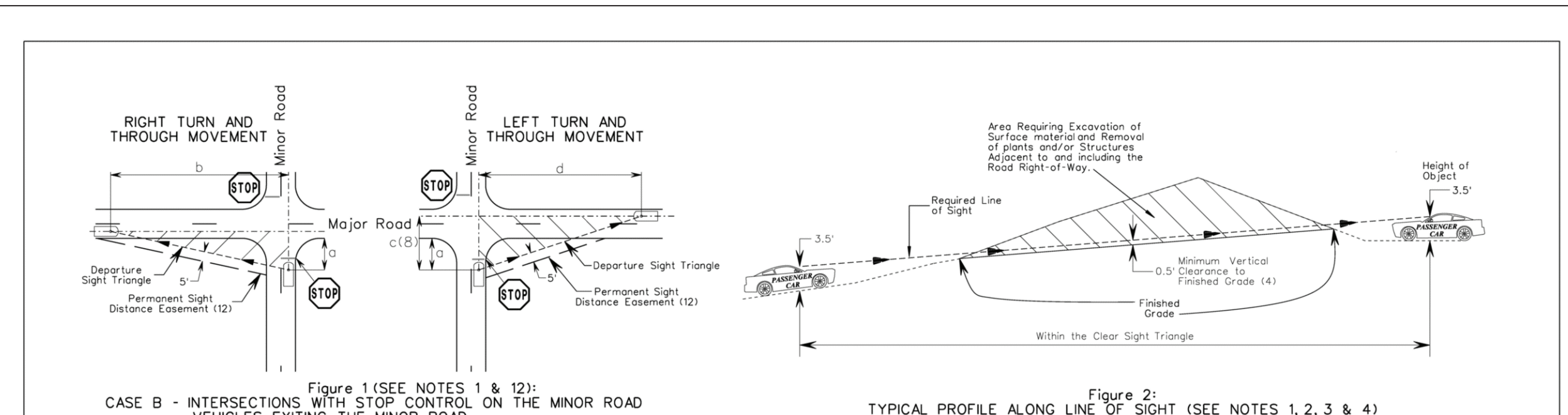


Figure 1 (SEE NOTES 1 & 12):
 CASE B - INTERSECTIONS WITH STOP CONTROL ON THE MINOR ROAD
 CASE D - SIGNALIZED INTERSECTIONS
 CASE E - INTERSECTIONS WITH ALL-WAY STOP CONTROL
 CASE F - LEFT TURNS FROM THE MAJOR ROAD

Figure 2:
 TYPICAL PROFILE ALONG LINE OF SIGHT (SEE NOTES 1, 2, 3 & 4)

SIGHT DISTANCE FOR VEHICLE EXITING MINOR ROAD ASSOCIATED WITH NEW DEVELOPMENT (SEE NOTES 3, 5, 6 & 13)

MAJOR ROAD DESIGN SPEED (M.P.H.) (T)	LENGTH OF DEPARTURE SIGHT TRIANGLE LEG (6)			CASE F CROSSING NUMBER OF LANE ADJUSTMENT	SIGHT DISTANCE ADJUSTMENT FOR APPROACH GRADE (11)		
	a(B)	b	d		(S)(9)	W(10)	+4% +5% +6%
15	145	170	125	15	15	20	25
20	195	225	165	15	20	25	35
25	240	280	205	20	30	35	40
30	290	335	245	25	35	40	50
35	335	390	285	30	40	50	60
40	385	445	325	30	45	55	70
45	430	500	365	35	50	65	80
50	480	555	405	40	60	70	85
55	530	610	445	45	65	80	95

GENERAL NOTES

- Do not scale drawings, follow dimensions provided.
- Height of motorist eye in a vehicle - 3.5 feet. Height of the object - 3.5 feet.
- The determination of whether an object constitutes a sight obstruction shall consider both the horizontal and vertical alignment of both intersection roadways, as well as the height, position and location of the object.
- Within the sight triangle, any object at a height above the elevation of the adjacent roadway that would obstruct the driver's view shall be removed or lowered to a minimum of 0.5 feet below the required line of sight. Such objects may include, but are not limited to, barns, buildings, parked vehicles, highway structures, hedges, trees, bushes, unweeded grass, tall crops, walls, fences, and the terrain itself.
- All intersections with signals or all-way stop control, the first stopped vehicle on one approach should be visible to the drivers of the first stopped vehicles on each of the other approaches. At signalized intersections, left-turning vehicles should have sufficient sight distance to select gaps in oncoming traffic and complete left-turn intersection sight distance for intersections with signalization is based on the departure sight triangle for left and right turns if the signals to be placed on two-way flashing operation (i.e., flashing yellow on the major-road approaches and flashing red on the minor road approaches) under off-peak or nighttime conditions.
- This table shows the intersection sight distance for a stopped passenger car to turn or pass through an intersection from the minor road where the cross traffic on the major road does not stop. Refer to Figure 1 to determine the appropriate leg "a", "b", "c", or "d" of the departure sight triangle for passenger cars. Sight triangle legs for the different approaches will vary based on design speed intersection sight distance for intersections with stop control on the minor road is based on the departure sight triangle for left and right turns exiting the minor road for right turns and through movements exiting the minor road. Departure sight triangle leg lengths "a" and "b" are required. For left turns exiting the minor road, departure sight triangle leg lengths "c" and "d" are required. The lengths of the sight triangle legs are based on approach grades of -3% to +3%.
- On existing roadways the design speed shall be the 85th percentile speed of motorists on the roadway as established by radar studies, or 5 m.p.h. greater than the posted speed limit, whichever is greater. On new roadways the design speed shall be 5 m.p.h. greater than the anticipated posted speed limit.
- Departure sight triangle leg length "b" is measured from the edge of shoulder to the passenger car driver and is assumed to be 14.5 feet minimum, 18 feet desirable.
- Departure sight triangle leg length "c" is measured from the center of the farthest crossed lane to the passenger car driver and includes all shoulder, median and lanes crossed plus departure sight triangle leg length "b".
- For left turns from the major road, sufficient sight distance should be provided to accommodate the maneuver. The Intersection Sight Distance (ISD) is dependent on the minor road design speed. The ISD provided assumes making a left turn across one opposing lane with no median. Add W to ISD for each additional lane or median crossed.
- The departure sight triangle leg "a" shown in the table is based on a passenger car crossing one lane of traffic. For crossing multiple lanes, add "W" to the length "a" for the corresponding design speed for each additional lane and/or median crossing.
- The adjustment for departure triangle leg length "b" and "d" based on approach grade shall be used when the minor road approach grade exceeds 3%. Round the minor road approach grade up to the next whole percent and add the length to the departure sight triangle leg length for the appropriate design speed. DO NOT INTERPOLATE THE TABLE.
- Permanent sight distance easements shall be provided at a minimum of 5 feet beyond the sight triangle measured perpendicular from the sight line for all four legs of the intersection.
- This methodology is based on AASHTO, A Policy on Geometric Design of Highways and Streets, 2008, 7th Edition. For intersections where there is anticipated to be a large volume of single unit trucks, 45 degrees from 60 degrees, see "AASHTO, A Policy on the Geometric Design of Highways and Streets, 2018, 7th Edition" for adjustments to the departure sight triangle leg lengths.

SEAL OF SAINT LOUIS COUNTY PUBLIC WORKS
 THIS IS NOT A CERTIFIED DOCUMENT

DESIGN CRITERIA MANUAL
SIGHT DISTANCE INTERSECTION PASSENGER CARS
 EFFECTIVE 05/01/2020 SHEET 2 OF 3 DRAWING 5.2

Developer / Owner:
 Alpha Land Development Two, L.L.C.
 612 Trade Center Boulevard
 Chesterfield, MO 63005
 314-721-7779

LINE OF SIGHT EXHIBIT

P+Z No. #19-004868
 Approval Date: 07/23/2020

City No. #?

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