



June 20, 2023

Project No. 21101

Emily Morgan  
City of Marysville  
Community Development Department  
80 Columbia Avenue  
Marysville WA 98270

**Re: PA22-024- Marysville 44th PRD – Technical Review 3  
7315 / 7417 44th St NE – APN(s) 30053500303700 / 30053500303600**

Dear Ms. Morgan,

This letter is provided as response to comments dated May 16, 2023. Each item has been carefully reviewed and considered and the following is a summary of how each item was addressed.

**Planning: Emily Morgan**

1. Please find attached the Snohomish County Traffic Mitigation Offer Form. Please complete and return to me for review. I will then forward along to Snohomish County Public Works for review and approval.

***Applicant will provide completed form.***

**Marysville First District: Thomas Maloney**

1. The project shall comply with the current fire code requirements (2015 IFC) including WA State and local City of Marysville amendments to the fire code. Any fire code required construction permits (IFC section 105.7) are obtained through Marysville Community Development at 501 Delta Avenue.

***NOTED.***

2. The city address committee will determine road names and address numbers for the lots.

***NOTED.***

3. Fire marshal approval for fire access and fire hydrant/water supply systems is required and will be part of the civil construction plan review and approval process for this project.

***NOTED.***

4. It is the developer's responsibility to see that adequate water for fire protection is attainable. Check with the City of Marysville Public Works Dept. for water system information. The minimum required fire flow for hydrants protecting SFR dwellings is 1,000 gpm.

***City fire flow tests were provided for the hydrant at 7315 44<sup>th</sup> ST NE dated Dec 27, 2022. The fire flow test indicated greater than 1,000 gpm was available from the system. See attached.***

5. Fire hydrant coverage shall be provided along all roads and at intersections. "Fire hydrants meeting city specifications shall be installed on all extensions of the city water system at the time such extensions are constructed. All hydrants shall be owned and maintained by the city. The location and frequency of fire hydrants shall be specified by the city utility department and fire department; provided, that fire hydrants in single-family residential zones shall be spaced not more than 600 feet apart" (MMC 14.03.050). The location

620 7th Ave  
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of fire hydrants requires fire marshal approval on civil construction plans. The current locations appear to be adequate.

**NOTED.**

6. Fire hydrants shall comply with city Water Design Standard 2-060 Hydrants, including 5" Storz fittings, with blue reflective hydrant markers to be provided in the roadways, located four inches off the centerline on the hydrant side of the road.

**NOTED.**

7. Future homes will be constructed with residential sprinkler installation for a number of reasons, including: if homes are three or more stories tall, if fire flow from hydrants does not meet fire code requirements, if there are access deficiencies, or if any part of homes is further than 200' from the public road ROW with no hydrant provided on-site.

**NOTED.**

8. The project does not meet the external access for development that meets municipal code requirement for at least two separate access roads for developments exceeding 30 dwellings, or provide fire sprinklers in all homes. This was discussed with design consults and relayed in an email December 8, 2022. The follow code applies:

MMC 9.04.503.1.5 Section 503.1.5 – One- or two-family dwelling residential developments. Developments of one- or two-family dwellings where the number of dwelling units exceeds 30 shall be provided with separate and approved, unobstructed fire apparatus access roads and shall be placed a distance apart equal to not less than one half of the length of maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses. Exceptions: 1. Where there are more than 30 dwelling units on a single public or private fire apparatus access road and all dwelling units are equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3 access from two directions shall not be required. 2. The number of dwelling units on a single fire apparatus access road shall not be increased unless fire apparatus access roads will connect with future development, as determined by the fire code official.

Sprinklers shall be provided in all homes to use exception 1, and future access road connections must be provided concurrently with this development to use exception 2. This needs to be stated on the civil plans as a requirement.

***Sprinklers shall be provided for all homes in order to utilize exception 1. A note to this effect has been added to the plans.***

9. Where residential fire sprinklers are required, the developer should install a water service per Standard Plan 2-090-001 Full 3/4" x 1" Meter Service. Under this plan a 1" tap is made at the water main and 1" piping is run to the 1" meter setter. If in the end a 3/4" water meter will suffice then all that is required is to install two reducer bushings with the 3/4" water meter. A single service tap should be used where sprinklers are required, not a double service installation.

***A typical callout for water service meeting this requirement has been added to the plans. Full reference to the required detail will be provided during the final engineering design of the plat.***

10. A minimum 20 feet wide fire apparatus access is required to extend to within 150' of all exterior portions of buildings. A minimum 26 feet wide fire apparatus access is required in the immediate vicinity of any building more than 30 feet in height for ladder truck operations, and within 20 feet on

both sides of fire hydrants. An adequate access route for fire apparatus must be in service prior to any building construction.

**NOTED.**

11. As part of the design discussion the applicant agreed to following requirements as well:

1. The auto court portion is 26 foot wide, but the sidewalk will be constructed level with pavement to allow for a wider section in case of obstruction by illegally parked cars.

***The auto court design and typical section has been revised to construct the sidewalk level with the pavement to provide a 26' wide driving surface.***

2. The HOA will provide signage and monetary fine signs along entire length of auto court.

***Noted. No parking signage will be designed and shown on the plans during the final engineering design of the plat.***

3. The portion of fire lane within open space tract will be free of any obstructions and will be blocked for vehicular access on both ends.

***The additional point of connection to 44<sup>th</sup> ST NE is no longer required or proposed. Comment is considered addressed.***

12. Access for firefighting operations along all sides of all buildings is required. A minimum 5' wide access around buildings is required. All parts of the buildings exteriors should be accessible for firefighting by an approved route around the building, and be within 150 feet of fire apparatus access. Formal review of access for approval is normally part of the civil and building plans review processes.

***Noted. A minimum 5' wide setback is provided around all buildings per code.***

**Public Works Operations: Kim Bryant, Tim King, Ryan Keefe**

1. No water details shown, including size of water main;

***Callouts of typical water main sizing has been added. Full detail design drawings will be provided during the final engineering design of the plat.***

2. Looking at road profiles air vacs will be necessary. Install in accordance with Design and Construction standards 2-070 part G;

***A callout for the air vac symbol located near the northern intersection of Road A and 75th Ave NE has been added. This is the only high point in the system that will require an air vac.***

3. Live tap on 44<sup>th</sup> Ave.

***Connection revised to show a hot tap into the existing main.***

**Transportation & Parks Maintenance: Jesse Birchman**

1. The roadway section frontage improvements shown are acceptable for establishing 44th St NE and 75th Ave NE right-of-way. The following additional requirements are necessary for final PA approval.

- a. The westbound right-turn deceleration lane on 44th St NE shall be consistent with WSDOT's Design Manual (DM) Exhibit 1310-21 to mitigate sight-distance. The multiplier for downgrade shall also be evaluated.

***Per consultation from Mark Jacobs, PE, PTOE, a right turn pocket, per WSDOT Exhibit 1310-20, is more appropriate for the situation. The existing design has been updated to meet the dimensional requirements of Ex 1310-20, right turn pocket, with a 60' pocket and***

**a 40' taper. A W2-2 side road warning sign is also proposed east of the Site to warn approaching vehicles of the intersection. See attached correspondence and guidance from Jake Traffic Engineering, Inc.**

- b. The westbound acceleration lane on 44th St NE west of 75th Ave NE shall be consistent with WSDOT's DM Exhibit 1310-22. The northern 44th St NE curb line shall be shifted south as feasible to create a planter strip up to the width shown in EDDS Plan 3-201-007.
  - i. The design speed for the southbound right-turn curve may be used to interpolate this lane length. The multiplier for downgrade shall also be evaluated. The taper rate in EDDS 3-406 should be used instead of 300'.

**The westbound acceleration lane has been updated to the design criteria of WSDOT Exhibit 1310-22. The intersection of 44<sup>th</sup> ST NE and 75<sup>th</sup> Ave NE will be stop controlled so a lane length of 280 ft will be provided. Since the design speed is 35 mph no adjustment multiplier for downgrade is required. The taper length was calculated per EDDS 3-406 at 209', for design a value of 210' will be used. The required acceleration lane and taper take up the majority of the frontage. There will be a portion where construction of a planter strip will not be feasible due to the required width for the acceleration lane and the critical area. At the far west end of the improvements the designer has elected to maintain the sidewalk position near the edge of the ROW and widen the planter strip to allow the PRV vaults and other transmission main infrastructure to be located within the planter strip and not within the sidewalk to the maximum extent feasible.**

- 2. Street lights, pavement markings, and signs as previously commented remain a condition of approval. Please see previous design guidance provided by Jesse Hannah's for civil plan approval requirements.

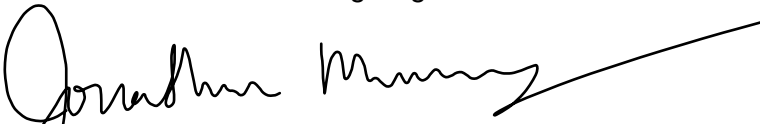
**NOTED. To be addressed during the final engineering design of the plat.**

- 3. TIA approval mitigation previously provided by Jesse Hannah's continue to apply.

**NOTED.**

Sincerely yours,

D. R. STRONG Consulting Engineers



Jonathan S. Murray, P.E.

Senior Project Engineer

JSM/dle

Enclosure

Fire Flow Test



**MARYSVILLE**  
**PUBLIC WORKS**

TO: Jonathan Murray, D.R. Strong Consulting Engineers  
FROM: Ryan Keefe, Water Operations Lead II  
DATE: December 27<sup>th</sup>, 2022  
SUBJECT: Fire Flow Test for Marysville 44, 7315 44<sup>th</sup> St NE

Water Operations has performed a fire flow test as requested for 7315 44<sup>th</sup> St NE. The results were as follows:

Static:	46 psi
Residual:	42 psi
Pitot:	38 psi
GPM:	1040
GPM @ 20 psi:	2858

The test was performed using Hose Monster equipment with the GPM taken from their flow chart. The GPM @ 20 psi was determined using the hydrant flow test calculator located on the Hose Monster website.

Any questions please contact me at 360-363-8168 or [rkeefe@marysvillewa.gov](mailto:rkeefe@marysvillewa.gov).

(360) 363-8100

Public Works  
80 Columbia Avenue  
Marysville, WA 98270

**Jonathan Murray**

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**From:** Mark J Jacobs, PE, PTO <JakeTraffic@comcast.net>  
**Sent:** Wednesday, June 7, 2023 9:47 AM  
**To:** Jonathan Murray  
**Cc:** Luay Joudeh  
**Subject:** RE: 2023.003 - Conceptual Channelization

Jonathan

Per Exhibit 1310-19 Right-Turn Lane Guidelines and the available traffic data and my experience the consideration of a right-turn pocket or taper is noted. In my Conceptual Plan I had noted a Right-Turn Taper. 44<sup>th</sup> St. NE is a 2-lane street with a 35 MPH speed limit

City comment #1 in the May 11, 2023 Memorandum identified to install a Right-Turn Deceleration Lane to mitigate sight distance.

A WB motorists slowing to turn right is not stopped thus the sight distance for a WB motorist behind the turning motorist is substantially less than what is needed for stopped motorist (for example a motorists waiting to turn left). Thus, I believe the City's requirement for a Right-Turn Deceleration Lane is not needed. However, based on my further review changing the Right Turn Taper to a Right Turn Pocket and adding a W2-2 Warning sign per applicable MUTCD requirements would make sense.

Contact me with any questions.

Thank you

Mark

Mark J Jacobs, PE, PTOE  
**JAKE TRAFFIC ENGINEERING, INC**  
2614 39<sup>th</sup> Ave. SW  
Seattle, WA 98116 . 2503  
**206.762.1978 o**  
206.799.5692 c



W2-2



## MEMORANDUM

TO: Emily Morgan, Senior Planner

FROM: Jesse Birchman, Transportation & Parks Maintenance Manager

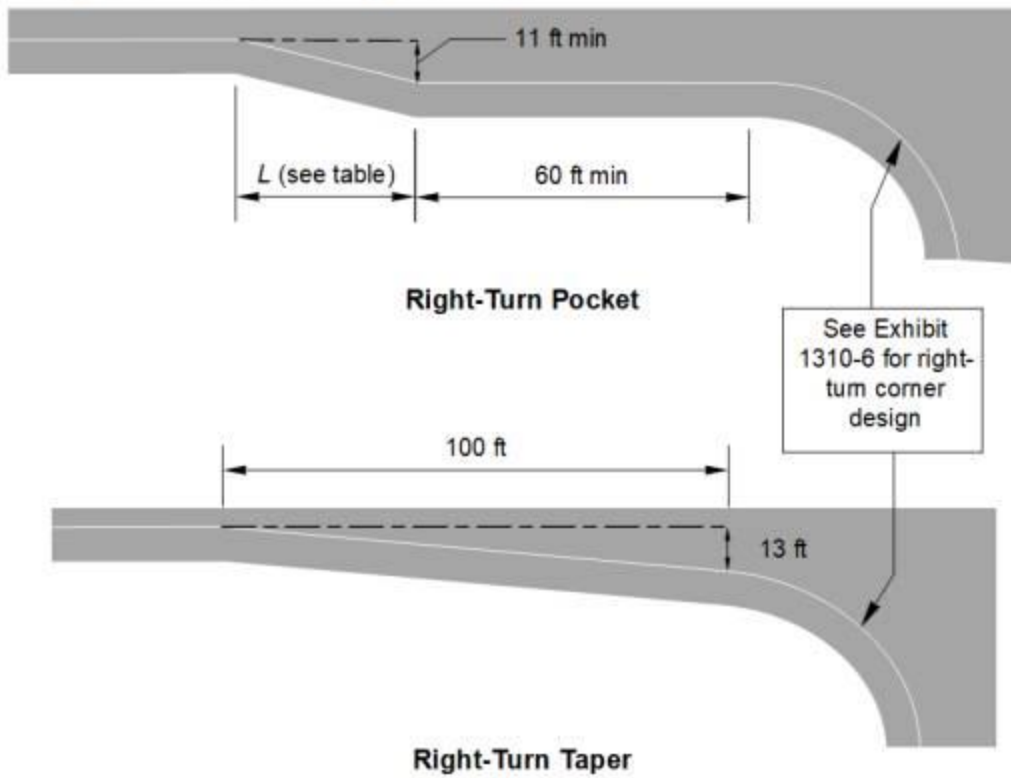
DATE: May 11, 2023

SUBJECT: PA 22-024 Marysville 44, Traffic Engineering Technical Review

The following comments are providing following review of the provided proposed Marysville 44 project; specifically the preliminary civil plan dated 4/25/23.

1. The roadway section frontage improvements shown are acceptable for 44th St NE and 75th Ave NE right-of-way. The following additional improvements necessary for final PA approval.
  - a. The westbound right-turn deceleration lane on 44th St NE shall be designed consistent with WSDOT's Design Manual (DM) Exhibit 1310-21 to mitigate safety concerns. The multiplier for downgrade shall also be evaluated.
  - b. The westbound acceleration lane on 44th St NE west of 75th Ave shall be consistent with WSDOT's DM Exhibit 1310-22. The northern line shall be shifted south as feasible to create a planter strip up to 10 feet wide as shown in EDDS Plan 3-201-007.
    - i. The design speed for the southbound right-turn curve may be 35 mph. Interpolate this lane length. The multiplier for downgrade shall be evaluated. The taper rate in EDDS 3-406 should be used in

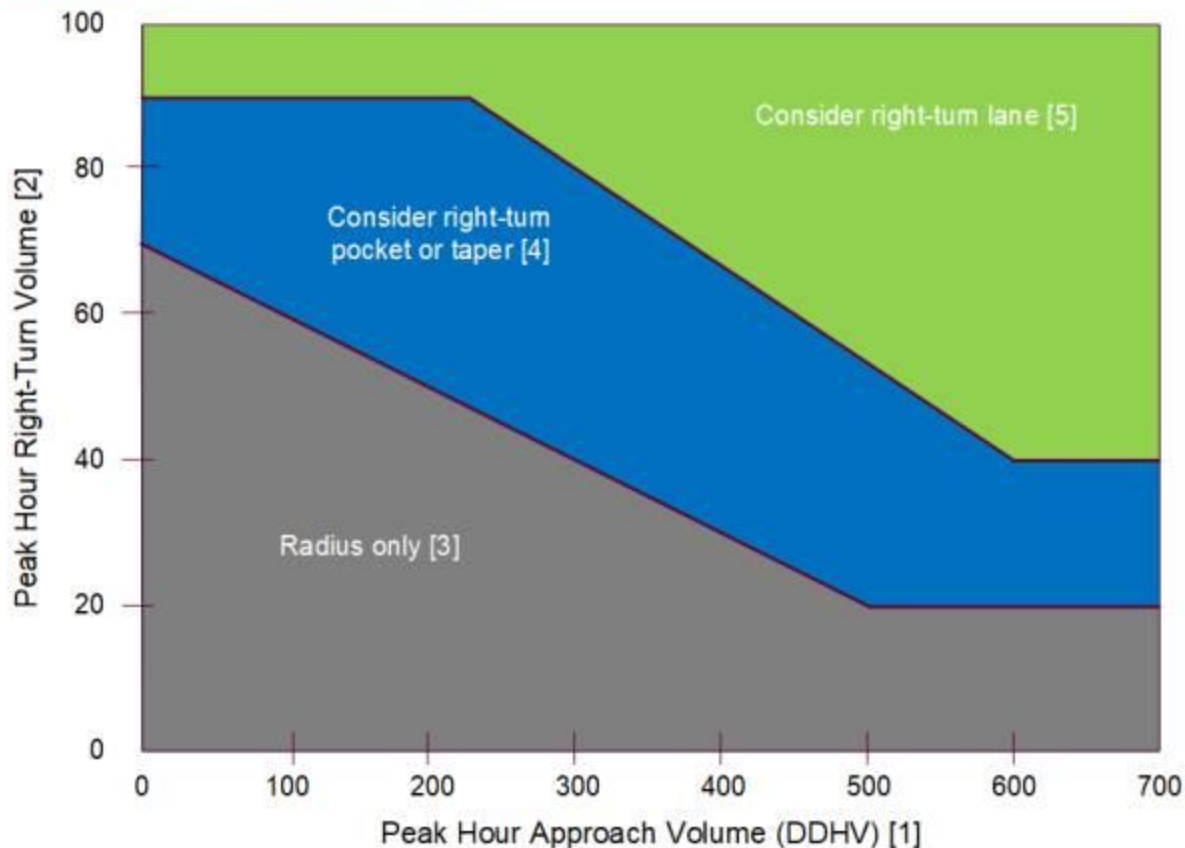
Exhibit 1310-20 Right-Turn Pocket and Right-Turn Taper



Posted Speed Limit	L
Below 40 mph	40 ft
40 mph or above	100 ft



## Exhibit 1310-19 Right-Turn Lane Guidelines



## Notes:

- [1] For two-lane highways, use the peak hour DDHV (through + right-turn).  
For multilane, highways (posted speed 45 mph or above), use the right-lane peak hour approach volume (through + right-turn).
- [2] When all three of the following conditions are met, reduce the right-turn DDHV by 20:
  - The posted speed is 45 mph or below
  - The right-turn volume is greater than 40 VPH
  - The peak hour approach volume (DDHV) is less than 300 VPH
- [3] For right-turn corner design, see Exhibit 1310-6.
- [4] For right-turn pocket or taper design, see Exhibit 1310-20.
- [5] For right-turn lane design, see Exhibit 1310-21.

**From:** Jonathan Murray [mailto:jonathan.murray@drstrong.com]

**Sent:** Tuesday, June 06, 2023 2:55 PM

**To:** 'Mark J Jacobs, PE, PTO'

**Cc:** Luay Joudeh

**Subject:** RE: 2023.003 - Conceptual Channelization

Mark,

We received the attached comments from the City of Marysville, see page 7 of 7 for the transportation comments. They came back with wanting the right turn deceleration lane to meet WSDOT design manual 1310-21, right turn lane instead

of right-turn taper 1310-20 (in the 2022 manual). They also wanted us to meet the length requirements of 1310-22 for the acceleration lane. Can you review and advise?

The lengths of the lanes meeting the WSDOT standards seem very excessive for the situation that we have. The acceleration lane is less of a concern as we were anticipating paving that area regardless but the deceleration/right turn pocket getting longer is a major issue.

<https://www.dropbox.com/sh/iv40s2no0nnogy/AACLNnVUvnyr9F08TZpbSVpMa?dl=0>

Thanks,



**Jonathan S. Murray, P.E.**  
Senior Project Engineer  
620 - 7th Avenue  
Kirkland, WA 98033  
Office: (425) 827-3063  
Fax: (425) 827-2423  
Website: <https://drstrong.com>

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**From:** Mark J Jacobs, PE, PTO <JakeTraffic@comcast.net>  
**Sent:** Saturday, January 28, 2023 2:43 PM  
**To:** Jonathan Murray <jonathan.murray@drstrong.com>; Luay Joudeh <luay.joudeh@drstrong.com>  
**Subject:** 2023.003 - Conceptual Channelization

Luay/Jonathan

A Conceptual Channelization plan is attached.

Thank you

Mark