

Evaluation and Recommendations for High Crash Locations

In Somerset County

Prepared by Kennebec Valley Council of Governments

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ANSON: State Route 43 (Starks Road) from Parkwoods Drive to West Mills Road

Element # 3112387

This is a rural road segment of about 1/5 mile extending west from Anson village.

Route Description:

Route 43 is a major collector carrying roughly 2,100 vehicles per day between Anson village and Starks. Traffic is primarily local and commuter. AADT has remained within a limited range for several years. The road is fairly level and straight and pavement width is narrow. There is very little development along the segment.

Route 43	
Func.Class/ jurisdiction	Major collector, state aid
Priority	4
AADT (2014)	2,100
Speed Limit	45
CSL Levels	
Safety	C, rutting, width
Service	A
Condition	B

Crash Summary (Diagram page 16):

There were eight crashes between 2014-16, with two resulting in serious injury. Four of the crashes were with deer. Two were from unsafe speed and one ran off the road in snow. Four of the crashes were rollover, three going off the narrow shoulder.

Crash History – Element 3112387	
Total Crashes	8
CRF	1.62
Rank in County	6

On-Site Assessment:

Viewed with town manager and fire chief. This is a wide-open stretch of rural roadway, with open fields and a very slight curvature into an intersection. Snow can drift off the fields during the winter. It was noted that deer commonly graze in the adjacent fields, leading to the conflicts with vehicles. There is also a snowmobile crossing at the eastern end of the segment.



Recommendations:

Improve signage for curve, with possible chevrons for eastbound traffic at West Mills Road intersection. Add sign for snowmobile crossing. Consider signage for deer.


CORNVILLE: State Route 150 (Beckwith Road) from Hidden Valley Lane to Wood Road

Element # 3112289

This is a rural road segment running for approximately 1.4 miles through western Cornville.

Route Description:

Route 150 is a major collector carrying an AADT of roughly 2,600 between Skowhegan and central Somerset County. Traffic volumes have been increasing slowly, consisting of commercial and commuter traffic. The road segment is slightly curved through most of its length, with slight hills. Even though the CSL data shows issues with pavement strength and width, the surface is reasonably solid, with 2-3 foot shoulders striped on both sides. There is very light residential development along the road.

Route 150	
Func.Class/ jurisdiction	Major collector
Priority	3
AADT	2,600 
Speed Limit	55
CSL Levels	
Safety	C, rutting, width
Service	A
Condition	B, pavement

Crash Summary (Diagram, page 16):

There were a total of 15 crashes along this segment between 2014-16. Two of these resulted in injury. Eight crashes were with deer, the majority between 5:30 and 7:30 in the evening. Three were driveway conflicts – one entering, two turning. All of these were northbound traffic. Two were OUI. Four resulted in vehicles leaving the road.

Crash History – Element 3112289	
Total Crashes	15
CRF	1.13
Rank in County	14

On-Site Assessment:

No local officials were available for site visit. It is apparent that the intermittent fields and woods along the road, plus several stream and power line crossings, yield themselves to increased animal crossings, though no one place in particular stood out. Speeding is a factor along the road, even though there are a number of residential driveways.



Recommendations:

- Evaluate area for deer crossing signage.
- Improve speed enforcement and winter maintenance.

EMBDEN: State Route 16 (New Portland Road) from Katie Crotch Road to Wentworth Road

Element # 3119052

This is a rural road segment running for approximately 1.5 miles through southwestern Embden.

Route Description:

Route 16 is a minor arterial carrying traffic of roughly 1,900 per day. Traffic counts have fluctuated over the past decade within a range of about 10 percent. Traffic includes local traffic and heavy trucks. The alignment includes several broad curves and slight hills, as it parallels the Carrabassett Stream. Portions of the roadside are heavily wooded, and there is very little development along the segment.

Crash Summary (Diagram, page 17):

There were a total of 11 crashes along the segment between 2014 and 2016, including six injuries and one fatal, head-on accident. Three of the crashes were attributed to OUI and four to winter weather conditions. Six of the nine were westbound vehicles, including four of five deer hits.

Route 16	
Func.Class/ jurisdiction	Minor arterial
Priority	3
AADT	1,900
Speed Limit	50
CSL Levels	
Safety	F, crashes, width
Service	A
Condition	B, pavement

Crash History – Element 3119052	
Total Crashes	11
CRF	1.19
Rank in County	11

On-Site Assessment:

The site was viewed with the first selectman and two fire dept. personnel. The road was viewed from a turnout just southeast of the Katie Crotch Road intersection. This is a shaded area adjacent to the river with curves and steep banks. It was felt that excessive speed around the curves (eastbound and downhill), by trucks and in winter road conditions, was the chief preventable hazard. There also appeared to be some stretches striped as suitable for passing where visibility was inadequate.



Recommendations:

- Improve visibility of advance curve signs.
- Increase clearing on south side of road.
- Evaluate pavement striping (dashed lines) for suitable passing sight distance.

FAIRFIELD: State Route 139, I95 off-ramp to Sheridan Drive

Element # 3112387

This is a segment of road within an urban compact immediately adjacent to and west of Exit 132 of I95.

Route Description:

Route 139 is a minor arterial carrying traffic of roughly 10,000 per day. Traffic counts have risen steadily over the years, and more dramatically with the upgrade to the truck stop. Heavy trucks constitute a large component between the ramps and the truck stop. The segment is only 800 feet long, and is straight, but with a significant vertical curve. (The curve was reduced as part of an improvement project several years ago, but is still an issue.) The segment is fully developed, with a tractor dealership and CMP shop in addition to the truck stop.

Route 139	
Func.Class/ jurisdiction	Minor arterial
Priority	2
AADT	9,830 ↑
Speed Limit	35
CSL Levels	
Safety	A
Service	B, congestion
Condition	D, pavement

Crash Summary (Diagram, page 17):

There were a total of 8 crashes along the segment between 2014 and 2016, including two minor injuries. Five of them were associated with the truck entrance to the truck stop, with the other three from the auto entrance. An equal number were from entering and exiting movements.

Crash History – Element 3112387	
Total Crashes	8
CRF	1.53
Rank in County	8

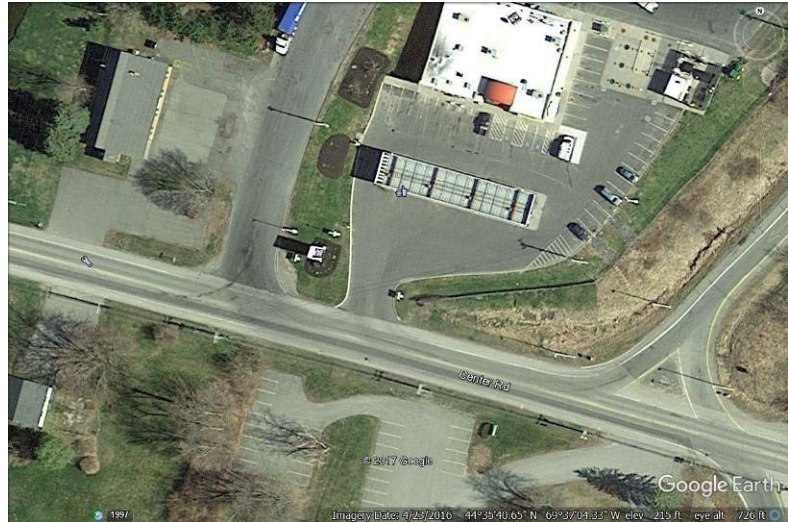
On-Site Assessment:

The site was viewed with the local road commissioner, police chief and fire chief. The crashes, as well as congestion, are the result of the entrance design. The curb radii on both sides of the truck entrance are too narrow, forcing trucks to slow down and swing wide on both entrance and exit. There is poor sight distance to the west (over a slight rise), and the entrances are just west of the interstate ramps on a slight grade, causing trucks to move very slowly, as well as forcing backups as trucks wait for others to clear the entrance. This cascades into the auto entrance, as cars dash in and out among the truck movements. The narrow entrance also does not drain properly, causing winter snow/ice buildup and erosion of the road and shoulder.



Recommendations:

- Work with the business owner to improve the driveway entrance, including consideration of an island for separation at the entrance.
- Improve drainage to stormwater grate at northeast corner of entrance.
- Long-term: a westbound deceleration lane would provide more room for entering and exiting traffic to maneuver and for through traffic to avoid conflicts.



HARTLAND: State Route 43 (Athens Road) from Commodore Road to Old Ferry Road

Element # 3112373

This is a rural road segment running for about 1.5 miles through western Hartland.

Route Description:

Route 43 is a major collector carrying roughly 700 vehicles per day between Hartland village and Athens. Traffic is mostly local/commuter and heavy trucks, also feeding some camp roads. The alignment is mostly straight, with a slight grade. The roadside is mostly wooded, with light residential development.

Route 43	
Func.Class/ jurisdiction	Major collector, state aid
Priority	4
AADT	740
Speed Limit	45
CSL Levels	
Safety	B, rutting, width
Service	A
Condition	D, structural bridge

Crash Summary (Diagram, page 18):

There were a total of nine crashes on this segment between 2014-16 two with minor injury. Three of the crashes were deer hits; one from avoiding a deer. Four were the result of poor weather conditions. A total of five went off the road.

Crash History – Element 3112373	
Total Crashes	9
CRF	1.14
Rank in County	13

On-Site Assessment:

The site was viewed with the town manager and fire chief. The segment of highway had been recently re-paved (2017). It is narrow, with no paved shoulders and close overhang of trees. The road is heavily used by log and construction trucks. While most of the roadside is wooded, there are some open fields that would be attractive to deer. According to the town manager, the road accumulates slush on the curve in winter.



Recommendations:

- Improve winter maintenance procedures.
- Investigate deer crossing patterns with possible signage.
- Remove some vegetation along south roadsides for more winter sun.

HARTLAND: State Route 43 (Main/Academy Street) at Intersection of Commercial and Elm Streets (State Route 151).

Node 46154 (Area of local concern – not a high crash location)

This is a relatively busy intersection in Hartland village. This is the primary safety concern expressed by the town.

Route Descriptions:

Route 43 is the principal road through downtown Hartland, carrying close to 3,000 vehicles per day, primarily local traffic. From west to east, it ascends a slight grade.

Commercial (north) and Elm (south) Streets are the crossroads of this intersection. Commercial Street is a town way serving the original downtown block, although much of it is no longer active. Elm Street serves the south end of town and passes through to Palmyra.

The intersection is bounded by active development. One corner is a popular café, another corner is the town office, and a third is a church.

Crash History:

This is not a high crash location. This intersection experienced only two crashes in the three-year period, both in late 2016 and both labelled simply “intersection movement.” No further information is available.

On-site Assessment:

The intersection is not designed for contemporary traffic patterns, primarily due to the Commercial Street leg. Commercial Street has head-in parking on both sides almost all the way up to the corner. The north- and south-bound lanes are separated by an island only about ten feet long and supporting the STOP sign, which regularly gets knocked over. Even though the mouth of Commercial Street is over-wide, trucks have problems negotiating the turn. The curb on the northwest corner is poorly defined and has a storm drain grate in a poor location.

Recommendations:

Reconfigure the mouth of Commercial Street. Possible improvements include: reduce head-in parking stalls, extend northwest curb corner to protect parking and provide space for STOP sign, eliminate center island, and shift alignment slightly east to line up better with Elm Street.

Route 43	
Func.Class/ jurisdiction	Major collector, state aid
Priority	3
AADT	3,000
Speed Limit	25
CSL Levels	
Safety	A
Service	A
Condition	A

Route 151	
Func.Class/ jurisdiction	Minor collector, state aid
Priority	4
AADT	1,310
Speed Limit	25
CSL Levels	
Safety	B, rutting, width
Service	C, posting
Condition	C, ride quality

Commercial Street	
Func.Class/ jurisdiction	townway
Priority	4
AADT	1290
Speed Limit	45
CSL Levels – n/a	
Safety	
Service	
Condition	



NEW PORTLAND: State Route 27 (Carrabasset Road) from Chick Road to Old Kingfield Road

Element # 3112220

This is a rural road segment running for approximately ½ mile through western New Portland.

Route Description:

Route 27 is a minor arterial linking the Kingfield/Carrabasset recreational area with southern destinations. At this point, it carries fewer than 2,500 vehicles per day, but it is one of the least travelled segments of the road, and is heavily influenced by seasonal fluctuations – summer plus ski season. The segment is a broad curve, with a slight grade. The roadside is almost entirely forested.

Route 27	
Func.Class/ jurisdiction	Minor arterial
Priority	2
AADT	2,485
Speed Limit	55
CSL Levels	
Safety	C, crashes, width
Service	A
Condition	B, pavement

Crash Summary (Diagram, page 18):

This segment ranks as the highest priority crash location in Somerset County, and #13 statewide. However, 18 of the 23 crashes between 2014-2016 were deer hits. The deer hits do appear to be at specific locations along the road. Of the 5 non-hits, one ran off the road avoiding a deer and 4 went off the road in wet or snowy conditions. All of the cars going off the road were on the east (outer curve) side.

Crash History – Element 3112220	
Total Crashes	23
CRF	5.49
Rank in County	1

On-Site Assessment:

The site was viewed after meeting with the town manager and assistant fire chief. The primary purpose was to determine the source of the deer hits. The West New Portland Village is adjacent to the road segment, and people in town have fed the deer over the years. On the west side of the road, trees right to the ditch line provide good cover. There is already a deer crossing sign posted in the northbound segment and an enhanced one southbound.



Recommendations:

- Improve visibility of northbound deer crossing sign, possible lighting.
- Clear vegetation along west side to edge of right-of-way.

NEW PORTLAND: State Route 27 (Lemon Stream Road) from Chick Road to Colegrove Road

Element # 3123433

This is a rural road segment extending approximately 1.2 miles through southwestern New Portland.

Route Description:

Route 27 links the recreational area of Kingfield/Carrabassett with destinations to the south. It carries an average ADT of 2,880, but traffic volumes are heavily seasonal. This segment is immediately to the south of HCL 3112220. The segment is mostly flat and open, with slight residential development and one industrial operation.

Route 27	
Func.Class/ jurisdiction	Minor arterial
Priority	1
AADT	2,880
Speed Limit	55
CSL Levels	
Safety	B, crash history
Service	A
Condition	B, pavement

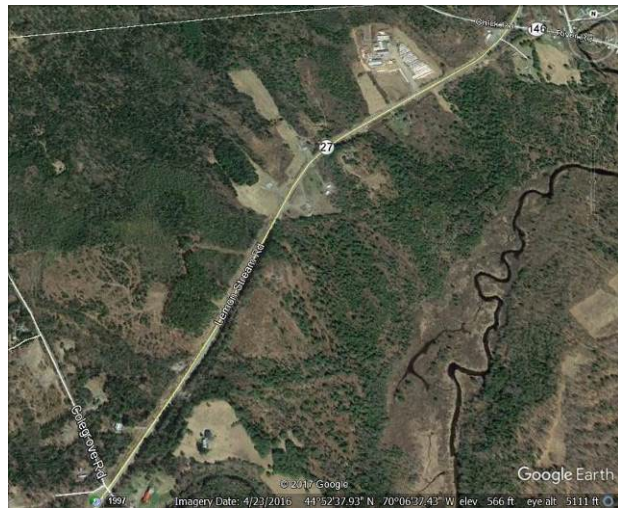
Crash Summary (Diagram, page 19):

There have been 11 crashes along this segment of the road from 2014-16, with one fatality. Six of them resulted from deer hits, four northbound in close proximity. Two of the southbound crashes were rear-enders, but for different reasons. The one fatal crash occurred at the ITS trail crossing on a snowmobile.

Crash History – Element 3123433	
Total Crashes	11
CRF	1.08
Rank in County	16

On-Site Assessment:

The site was viewed after meeting with the town manager and assistant fire chief. It is a continuation of the Carrabassett Road (element 3112220) segment. We identified the location of the snowmobile trail, which is signed but at a distance of over 600 feet from the crossing itself. There are a few open fields, which could be gathering points for deer.



Recommendations:

Move the snowmobile crossing signs closer to the crossing itself.

NORRIDGEWOCK: Winding Hill Road – Continuation of Upper Main Street to Betterment Road

Element # 225446

This is a local road segment of approximately 1.15 mile leading northwest out of Norridgewock village.

Route Description:

Winding Hill Road is a lightly-travelled local road accessing gravel pits and farms north of Norridgewock along the west bank of the Kennebec. The southern half of the road is straight along the bank of the river. The road then takes several sharp turns as it climbs to the high land above the river. The road is very lightly developed except for a gravel pit at the northern end.

Winding Hill Road	
Func.Class/ jurisdiction	Town way
Priority	6
AADT	200
Speed Limit	45
CSL Levels	
Safety	
Service	
Condition	

Crash Summary (Diagram, page 19):

This segment experienced eight crashes from 2014-16, making it the second-highest CRF ranking in Somerset County during the period. Of the eight crashes, two resulted in serious injury. Four were attributed to inattention and three to unsafe speed. It is possible that these were all in the hilly, curvy segment, but the collision diagram does not show. Two were prompted by cars drifting into the opposing lane.

Crash History – Element 225446	
Total Crashes	8
CRF	3.45
Rank in County	2

On-Site Assessment:

The site was viewed with the town manager and fire chief. The lower portion of the road is flat and straight, but ends in an abrupt hill and set of sharp curves. The road is poorly marked; the curve signs have been vandalized, the curve chevrons are too small, and there is no centerline striping.

Recommendations:

- Upgrade chevron signs at upper curve.
- Paint centerline stripe



NORRIDGEWOCK: Intersection of Route 2/201A, Route 139, and Hotel Street

Node: 46604

This is an intersection of federal highway US 2/201A and State Route 139 at the southern end of Norridgewock village.

Route Description:

US Route 2/201A includes the principal east-west arterial through central Maine. AADT east of the intersection is at 6,090 and declining. West of the intersection, it is estimated at 9,800. The road carries commercial and commuter traffic between Skowhegan and western Maine.

State Route 139 extends south from Norridgewock village towards Waterville. Its average AADT is 6,540, making it a more heavily-travelled leg than east towards Skowhegan. Traffic consists of commercial traffic and commuters bound for Waterville and I-95.

The intersection is located in the heavily-developed southern end of the village. The intersection is bounded on three sides by commercial development with poor access controls and on the fourth by a private home. The intersection is controlled by a flashing yellow/red light and signs. Additional commercial development, including one recently built, are adjacent, and the intersection movements are complicated by the Mechanic Street intersection just a dozen yards to the north. Movements are also complicated by the fact that the through flow takes a left turn (eastbound) at the corner rather than a straight line.

Crash Summary (Diagram, page 20):

There have been 14 crashes at this intersection between 2014 and 2016. Only two resulted in slight injuries. The crashes resolve into two types:

- Six crashes are of the rear-end type, incoming on the Route 139 leg, resulting from following too closely. This is a steep grade into the intersection. Two came on slick road surfaces.
- Six crashes occurred with vehicles westbound from Skowhegan Road attempting to pass through the intersection either straight (Hotel Road/Cumberland Farms) or left onto Route 139. All of these movements are technically a left turn at the intersection.

Route 2/201A	
Func.Class/ jurisdiction	NHS principal arterial
Priority	1
AADT	6,090 ↘
Speed Limit	25
CSL Levels	
Safety	F, crashes, width
Service	B, congestion
Condition	D, ride quality

Route 139	
Func.Class/ jurisdiction	Minor arterial
Priority	2
AADT	6,540
Speed Limit	25
CSL Levels	
Safety	D, crashes, width
Service	A
Condition	B

Crash History – Node 46604	
Total Crashes	14
CRF	3.7
Rank in County	2



On-Site Assessment:

This intersection has been problematic for many years, with multiple attempts to ease traffic flow. The flashing lights are a relatively recent introduction.

The site was viewed with the town manager, fire chief and sheriff's deputy. There are a lot of turn movements in a small area, complicated by confusion on the part of eastbound drivers as to whether or not to signal to stay on Route 2, which is a left turn. The convenience store has access problems, with one onto Hotel Street and another right at the corner of Main Street and Mechanic Street. (The town has discussed closing off Hotel Street, which would force store traffic onto Mechanic Street.) The auto service store is increasing its business.



Traffic entering the intersection on Route 139, controlled by the STOP sign, alternately backs up to the top of the hill and moves freely.

Recommendations:

The current conditions differ from past work in that there is now more traffic on the Route 139 leg east from the intersection than on Route 2 north. That makes the straight line through the intersection the “preferred” flow. In theory, the STOP control should be moved from Route 139 to the southbound leg of Route 2. The intersection should be subject to further analysis to see if this change is appropriate.

Additional recommendations, contingent on results of analysis:

- Place a STOP AHEAD sign on Route 139 approaching the intersection.
- Improve visibility of route directional signage.
- Remove or scale back the parking and curb extension on the south side of Main Street at the Mechanic Street intersection, to provide enough room to create dual lanes at the 139 intersection – one for straight through, one for left turn only. This will eliminate uncertainty on the part of Route 139 traffic as to whether oncoming traffic is turning or not.
- Add a STOP bar on Mechanic Street.
- Move STOP sign and add a bar on Hotel Road.
- Clear vegetation on northeast corner of intersection.

SKOWHEGAN: Intersection of Route 2 (Commercial St.), Route 201 (Madison Ave.), and Elm St.

Node: P46702

This is an urban intersection of two principal arterials in downtown Skowhegan.

Route Description:

Madison Avenue (Route 201) is an arterial and principal commercial corridor in Skowhegan, in addition to being a major north-south route between Quebec and New England. The road receives all manner of traffic, from local to interstate commerce, but traffic volumes have been declining over time.

Commercial Street (Route 2) is one leg of the “flatiron block” rotary that makes up downtown Skowhegan. It is a one-way street leading into the intersection, carrying westbound Route 2 as well as northbound Route 201 traffic. It is two lanes, flaring out into three at the intersection.

The intersection is configured so that traffic southbound along Madison Ave. goes straight through without stopping. South of the intersection, Madison Ave. is one-way southbound, so that there is no northbound traffic movement. Traffic entering from Commercial Street may turn left or right (Route 2 goes left, 201 goes right); some vehicles may pass straight through to Elm Street. The intersection is controlled only by a stop sign at Elm Street and Yield signs at Commercial Street.

Crash Summary (Diagram, page 20):

There have been a total of 12 crashes at this node between 2014-16, making it the number three priority location in Somerset County. One crash resulted in serious injury. Virtually all of the crashes occurred as a result of entering Commercial Street traffic turning left or proceeding straight. Five crashes came from left-turning traffic hitting (or being hit by) southbound vehicles on Madison Ave. There does not seem to be any road conditions or time-of-day affecting these crashes. Three crashes came as a result of vehicles in the center (straight) lane on Commercial Street attempting to turn left, impacting a vehicle to their left. Two crashes occurred with vehicles attempting to cross straight through into Elm Street, and one was a pedestrian incident on the crosswalk just south of the intersection.

On-site Assessment:

The site was viewed with the Skowhegan police chief and public works director. The intersection flows fairly well, except that the numerous large tractor-trailers must use two out of the three lanes to make a turn, because both curb radii are too tight. Vehicles coming out of Commercial Street either straight or

Route 201 (Madison Ave.)	
Func.Class/ jurisdiction	principal arterial
Priority	2
AADT	14,530 ↘
Speed Limit	25
CSL Levels	
Safety	A/C, crashes
Service	B, congestion
Condition	B

Route 2 (Commercial St.)	
Func.Class/ jurisdiction	principal arterial
Priority	1
AADT	9,950 ↘
Speed Limit	25
CSL Levels	
Safety	C, crashes
Service	C, congestion
Condition	F, ride quality

Elm Street	
Func.Class/ jurisdiction	Town way
Priority	6
AADT	1,650
Speed Limit	25
CSL Levels	
Safety	
Service	
Condition	

Crash History – Node P46702	
Total Crashes	12
CRF	1.94
Rank in County	3

left can have a hard time judging the speed of traffic coming down Madison Ave., and Madison Ave. traffic is shifting lanes preparing to turn either left or right at the oncoming US Route 2 split. One vehicle attempted to turn left into one-way Commercial street while we were watching.

The crosswalk just south of the intersection is a hazard because of its proximity to traffic turning left, where drivers are focused on trying to judge oncoming traffic from the right.

Recommendations:

It was recommended to the Town that they apply for Planning Partnership Initiative funding from DOT to study the intersection as well as the one immediately to the south. (Traffic flow around the flatiron block has been studied a number of times in the past in the context of overall flow.) Ideally, the right-turn-only lane from Commercial street should have a broader curb radius or a slip lane to accommodate trucks.

- Improve advance route notification signage on Madison Ave – possible overhead signage indicating no turn onto Commercial Street and the lane preference for Route 2 east vs. 2/201 west/south.
- The crosswalk just south of the intersection should be moved or eliminated.



