



Bike The Woodlands Coalition
Jutting Curb Inventory and Repair
Prioritization
May 2015



Executive Summary

- The ultimate goal of this report is to provide safe cycling opportunities for residents of the Woodlands by reducing potential interactions of cars and bicycles and enabling cyclists to ride in a more predictable pattern along road shoulders.
- Bicycling is a growing activity in The Woodlands and *more* cyclists would like to use their bikes for recreational and commuting purposes as businesses increasingly establish offices and shops in the community.
- Road with shoulders are a primary option for cyclists to get to their destinations in the Woodlands. However, curb juts (curb intersections that protrude into road shoulders) force cyclists into lanes used by cars. Many cyclists have been seriously injured by cars or by inadvertently hitting these curb juts with their bicycles. Some shoulders also have hazards such as potholes and cracks that are dangerous for cyclists.
- There are an estimated 400-500 curb juts at intersections along thoroughfares (car corridors) in The Woodlands, and recognizing the cost of removing all such hazards would be prohibitive, this report identifies and prioritizes 271 curb juts along 12 roads that are most popular with cyclists.
- This priority ranking is based on routes favored by cyclists for riding within (or heading outside of) The Woodlands and roads that have the greatest potential to provide broader north-south and east-west connectivity throughout the community.
- The 271 curb juts identified in this report are further prioritized to the top 127 juts along 6 corridors that may provide the greatest cost-effective measure toward establishing safe cycling in The Woodlands.
- A north-south and east-west connectivity concept map is presented that illustrates the tie-in to most areas in The Woodlands and potential connection to The Woodlands Town Center and Hughes Landing via Lake Woodlands Drive.

Introduction (The Problem)

Bicycle riding is a growing activity in The Woodlands. Although most bicyclists ride for the health benefits, there is also a growing interest in using bicycles (bikes) for commuting, particularly as more businesses move into the area. There are more residents of The Woodlands who would like to ride their bikes for recreation but feel there are few safe routes for them to do so other than pathways¹. Streets with shoulders are an option but hazards exist – most notably *curb juts*, which are portions of the curb at intersections that jut out into the shoulder forcing cyclists (or runners) into the car lanes (Figs 1 and 2). Many cyclists have been seriously injured by inadvertently hitting these curb juts. The only way to avoid the curbs is to simply ride in the street or swerve into the street from the shoulder at all intersections. This forces greater car-cycle interactions and poses a serious safety concern for both – particularly the unprotected bike rider as cars are rapidly approaching behind and not expecting a cyclist to swerve off the shoulder and into the road. Bad things happen when bikes and cars must share the same lane, and many cyclists are indeed hit by cars. Twenty one cyclists were struck by cars in The Woodlands during a August 25 to November 15 in 2014². These incidents can be greatly reduced by removing hazards that force bicyclists into car lanes.

Purpose of this report (A Solution)

There are an estimated 450-500 juts on thoroughfares³ in The Woodlands and all cannot be removed immediately. **The purpose of this report is to identify and prioritize curb juts along roads that are most popular with cyclists, where dangers from bicycle-car interactions may be the highest, and identify roads that could ultimately be used for broader east-west and north-south bicycle connectivity throughout The Woodlands community.**

This report identifies 271 curb juts along thoroughfares most frequently used by both cyclists and cars. Of these 271 juts, 127 of these have been identified as the having the highest priority in order to most expediently increase bicycle safety in The Woodlands and take steps toward achieving connectivity for cyclists in The Woodlands. The Township staff has estimated an average curb jut out removal cost of roughly \$3,000/jut out. Thus, the 127 curb juts identified in this report as having the highest priority would cost a total of approximately \$240,000.

The priority ranking presented here is based in part on roads that have already been identified in the *South Montgomery County Mobility Study* as likely east-west and north-south bicycle corridors. Priorities were also considered from:

¹ The 200+ miles of Hike/Bike trails in The Woodlands are wonderful perks for young family bike outings, joggers, strollers, and dog walkers, but it has long been recognized that these trails are not safe for cycling speeds in excess of about 7 mph due to the abundance of other users and the reduced line of sight by their winding path design.

² *Community Impact Newspaper*, The Woodlands Edition. Vol 4, Issue 6, Feb 12-March 11, 2015.

³ Defined as non-residential streets enabling ingress and egress into residential areas.

- conversations with members of the *Bike The Woodlands Coalition*,
- logical E-W and N-S connectivity that could provide access to the Waterway and Town Center
- conversations with other cyclists in The Woodlands,

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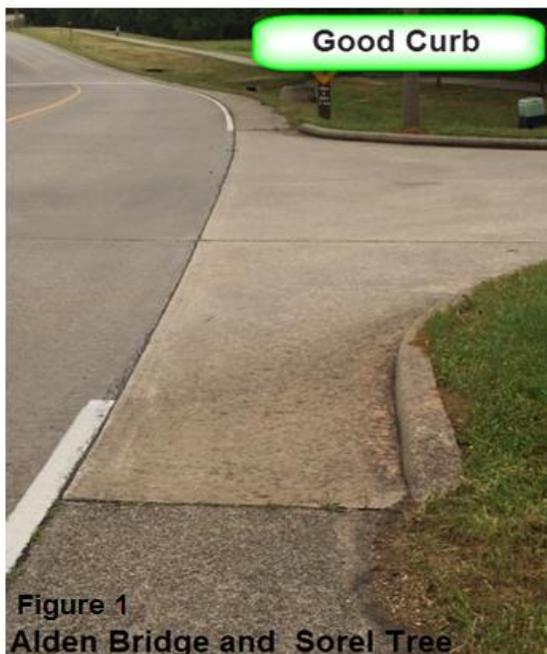


Figure 1 and 2. Example of a curb just along W. Alden Bridge. These two different curb styles are only 0.2 miles apart along the same road suggesting that the juts do not seem to have a functional purpose. Similar observations along other roads are common.

Priority Ranking

A summary ranking of roads is presented in the following table, and details of shoulder-jut intersections are itemized in the remainder of this report. The roads have been prioritized under the assumption that if the county or township is able to muster the funds to bring safe cycling to The Woodlands, they will not likely fund removal of *all* hazardous road conditions. The prioritization allows for the most critical areas to be addressed and to most efficiently provide mobility and safer cycling to residents of The Woodlands as soon as possible. Gosling Road is included in the prioritization only because it is in the original 2014 mobility plan. Gosling Road could indeed be a strategic part of the mobility network enabling a N-S conduit from 242 to Creekside Forest, but only 2 miles of this 6 mile interval even has shoulders so major reconstruction would be required to open this as an avenue for safe cycling.

In addition to the Gosling Road shoulder issue is the uncertainty of whether existing road shoulders will be maintained in future plans to widen Woodlands Parkway from Kuykendahl to

FM 2978. As a result, this report also includes a conceptualized map that includes other N-S and E-W street combinations that should be considered in any bicycle improvement plan for The Woodlands (Fig 3). This map illustrates a network of existing streets that could be improved to increase connectivity and also allow the greatest number of cycling residents to reach the Town Center and Hughes Landing areas as potential destination sites via Lake Woodlands Drive. This network would also allow more cyclists to safely ride within the confines of The Woodlands or exit the area to ride on outlying county and farm roads.

Initially, the goal of this curb jut study was to prioritize individual curbs along certain roads but it soon became apparent that removing some juts and not others was not necessarily contributing to the overall safety of any particular route. While it may be possible to fine tune a curb ranking based on intersection traffic and the extent to which some curbs protrude into the shoulder, any concrete obstacle jutting into a bicycle pathway, whether whole or in part, is a hazard. So, a curb jutting partway into the shoulder was treated as equal to a curb jut cutting off the entire shoulder.

The E-W and N-S connectivity map (Fig. 3) illustrates the potential network and flow of cycling in The Woodlands with the minimal amount of curb jut removal. Such a network, if made safe for cyclists, would enable safe pathways for cyclist throughout most portions of The Woodlands and provide access to the Water Front, Hughes Landing, and the Town Centre via Lake Woodlands to Lake Front Drive. With a few road modifications along Grogan's Mill and Panther Creek the entire community could be connected to the commercial center. However, many portions of these routes contain shoulders in serious disrepair (Shadowbend, Cochran's Crossing, portions of Lake Woodlands) rendering them unsafe and therefore unusable for cyclists even if the curb juts were removed. If the shoulder restoration work is performed, it is recommended that asphalt be removed and replaced by concrete. (Asphalt patch repairs have been attempted in some areas in the past but the quality of the repair work was very poor and no increase in bicycle safety was achieved.)

Table 1. A suggested ranking of road segments in The Woodlands showing the number of curb juts that need to be addressed and a brief reason for each ranking.

Road	Total Juts (# Intersects)	Reason for Priority	Comments
1. Lake Woodlands Dr	7 (4)	Identified in mobility plan as major E-W route. Also, with a little work this could be made very bicycle-friendly.	Popular for cyclists with few shoulder issues, but shoulder surfaces in many places have deteriorated. No shoulder for last half mile approaching Woodland Pkwy from the east.
2. Woodlands Parkway (from Lake Woodlands to FM 2978)	29 (11)	Identified in mobility plan as major E-W route.	Wide shoulders in good condition, but high speed traffic, shoulder juts, and debris reduce usage by cyclists. Could be a good route if juts are removed, shoulder width is maintained with future construction, and shoulders are occasionally swept of debris.
3. Gosling Road	6 (4)	Identified in mobility plan as major N-S route.	Only 2 of the 6 miles have shoulders. The 2 miles of shoulders are in pretty good condition, and apparently widening of Gosling Rd to 4 lanes with shoulders is planned, including over Spring Ck bridge.
4. Branch Crossing Dr	22 (10)	Popular cycle route and good N-S connector on western side of TW.	Shoulders fair to good, but shoulder-less bridge over Branch Creek is hazardous due to moderate to heavy car traffic.
5. Sterling Ridge Dr	16 (8)	An alternate E-W route extension from Lake Woodlands if Woodlands Pkwy will one day widen to 6 lanes without shoulders.	Popular with cyclists, shoulders in fair to good condition, and only moderate car traffic flow. There are no shoulders approaching the roundabout in front of Carlton Woods entrance.
6. Flintridge	47 (19)	Alternate E-W route and easy access to Creekside via Gosling.	Allows bicycle access to the Mitchell Preserve. Fairly popular with cyclists due to “hills” for training and has moderate car use. Also connects to Creekside via N-bound Gosling shoulder. Good E-W connector along the southern edge of The Woodlands.
The following roads are lower in priority			
7. Research Forest Dr	35 (12)	Good E-W corridor in western half of The Woodlands. Lower in rank due to 1.5 miles without east-bound shoulder	Can be an excellent bicycle corridor when the entire road goes to 4 lanes IF current shoulder design is maintained.
8. Cochran’s Crossing	1 (1)	Good N-S corridor in central part of TW. Only 1 shoulder.	Shoulders are in very poor condition and need to be replaced.
9. Alden Bridge	28 (11)	Connects Research Forest to Branch Crossing	Heavily used by bikes and cars, though shoulders are in poor condition. Good connect from Branch Cr to Research as there is no east-bound Research shoulder.
10. Shadowbend Dr	6 (4)	Potential N-S corridor if Gosling is not widened.	Relatively few curb juts but shoulder are in very poor condition
11. Terramont Dr	32 (16)	Supplemental corridor that roughly parallels Branch Crossing.	Current shoulders in pretty good condition (a newer road) and already heavily used by cyclists to exit/enter TW from 2978
12. Grogan’s Mill	42 (13)	A critical N-S corridor in easternmost section of TW	Heavy car traffic, but shoulders south of Woodlands Pkwy are wide and in pretty good shape. Several sections have no shoulder (see map)

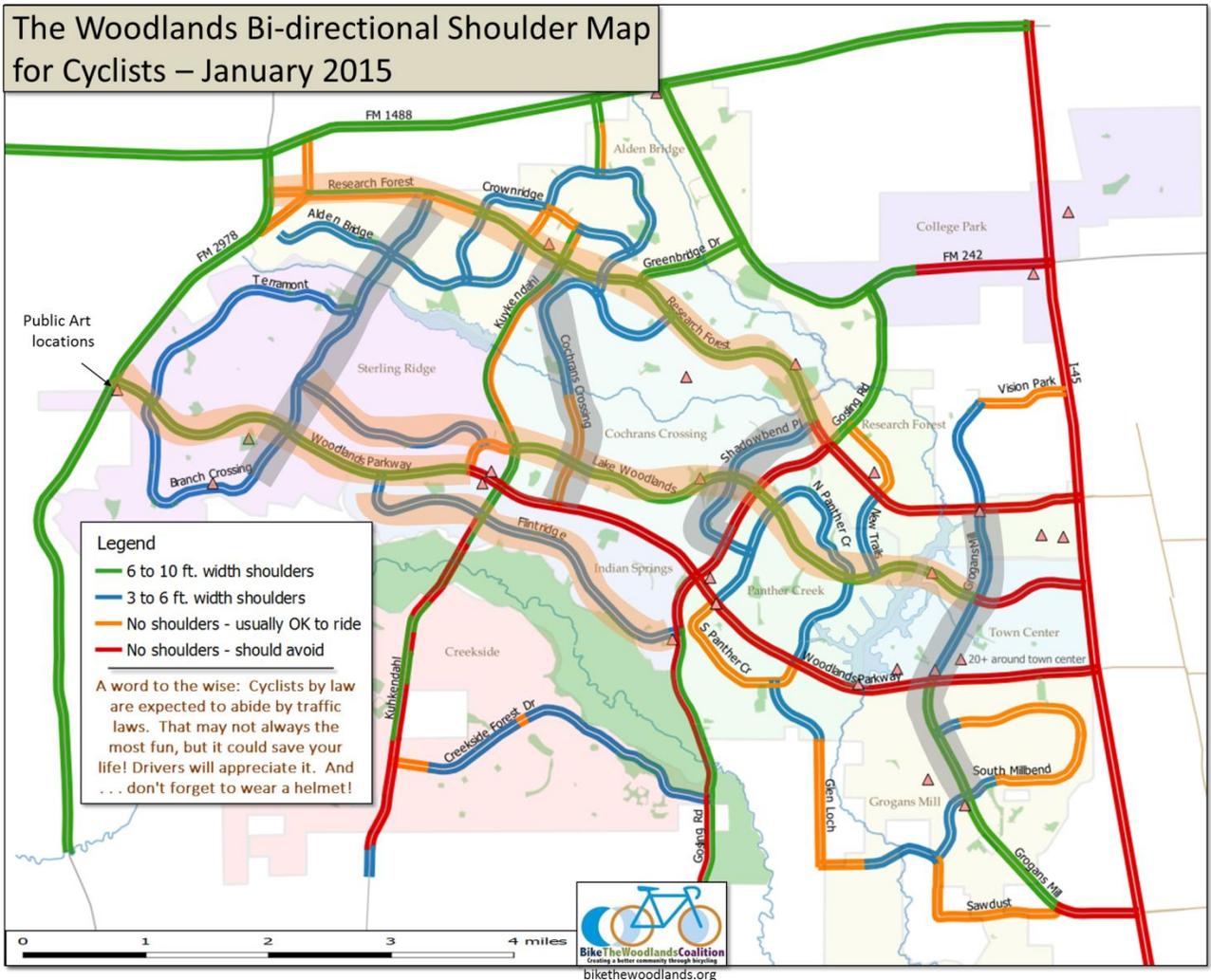


Figure 3. Conceptualized connectivity map illustrating E-W (orange) and N-S (gray) potential flow pathways for cycling in The Woodlands with minimum amount of curb modification. The Town Center and Hughes Landing can be best accessed from most villages in The Woodlands with safe connections to Lake Woodlands Drive.

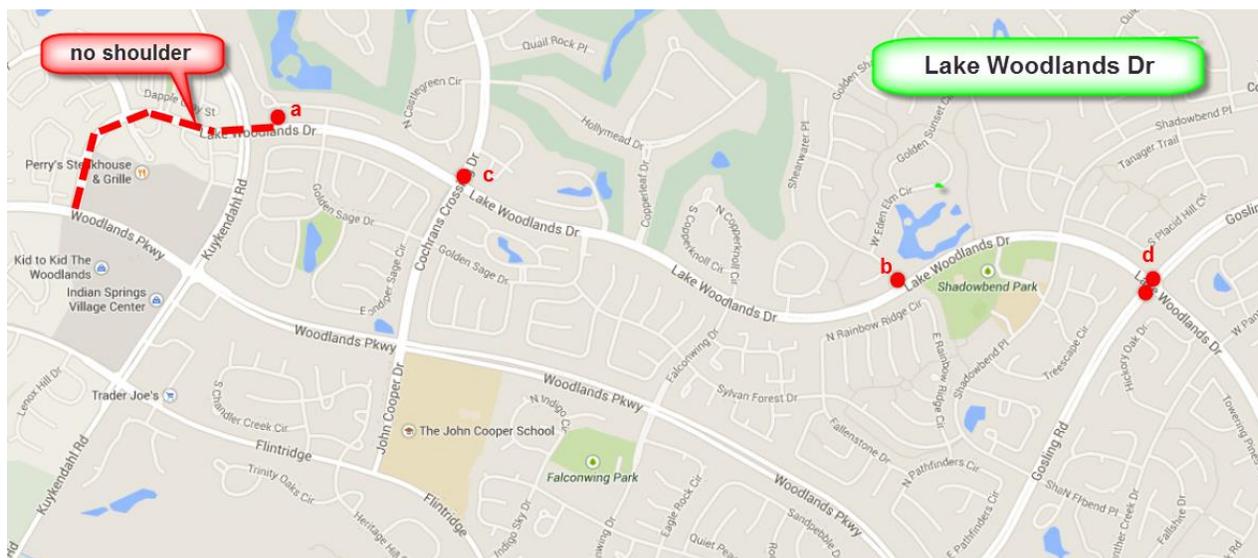
The E-W roots are, starting from the north side: Research Forest, Sterling Ridge/Lake Woodlands, Woodlands Parkway/Flintridge.

The N-S roots starting from the west side are: Branch Crossing, Kuykendahl/Bay Branch/Cochrans Crossing, Shadowbend, Grogan Mill

Description of specific road segments

This section presents more detail from the priority listing in Table 1. Each road section begins with a map showing locations of curb juts, considerations comprised of bulleted comments about the road section, and a listing of specific intersections with curb juts. Initially the intention was to prioritize all the juts along a each road, but it became apparent that all juts are equally hazardous and should be removed to maximize safety along any given corridor.

1. **Lake Woodlands Drive** (total of 7 curb juts at 4 intersections)



Considerations

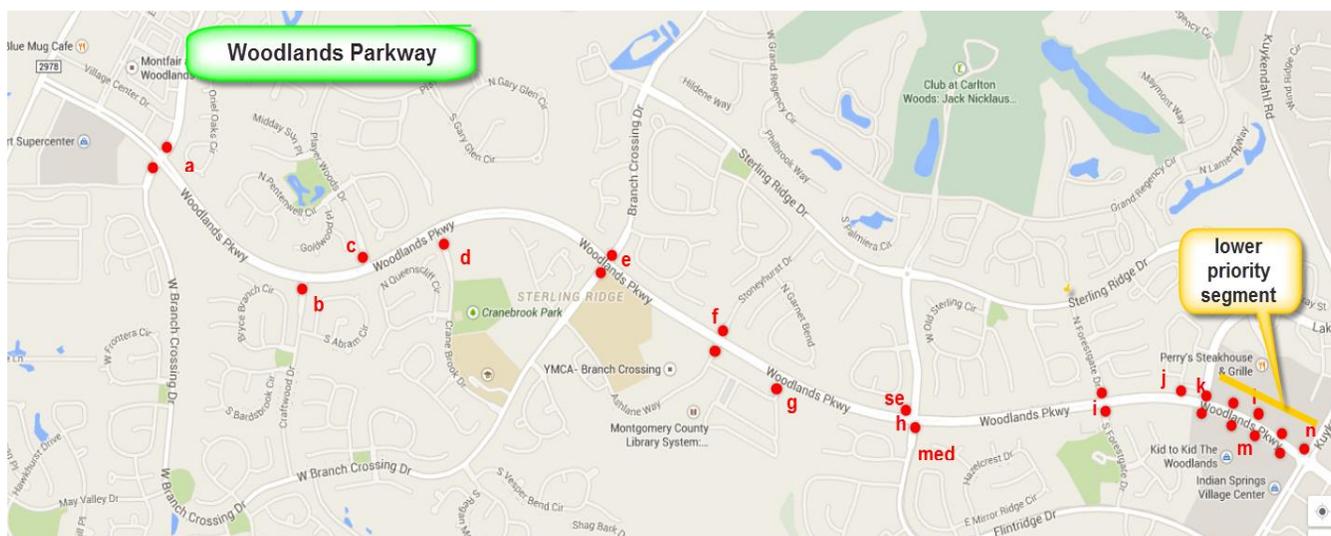
- 4.7 miles from Lake Front Drive to Woodlands Pkwy with the last 0.6 miles with no shoulder.
- Making this road bicycle friendly is foundational to any bike plan in The Woodlands and would also enable access to the Town Center area.
- A popular bike route (with heavy car use) and with only 4 curb areas to be addressed is pretty low hanging fruit for this project. However, curbs should only be addressed if money is available to fix/replace road shoulders as in many areas asphalt deterioration renders shoulders unsafe.
- There is **no shoulder** between Kuykendahl and Woodlands Pkwy. **A bicycle lane should be considered for this short, 0.6 mile section** to complete the Lake Woodlands – Woodlands Parkway combo as a major bicycle E-W corridor from Lake Front Drive to 2978. (But having 4 lanes without shoulders, which this section has, is safer for cyclists than 2 lanes.)

- Recommend replacing asphalt with concrete, using as a standard the section of Lake Woodlands between Lake Front to W. Panther Creek (see shoulder hazard report for the most serious asphalt areas in need of repair)
- Making Lake Woodlands bicycle friendly as far to the east as Lake Front – just east of N. Shore Park – will enable easy access to the Waterway area once Lake Front is extended south of Lake Woodlands. This is a big step toward achieving better access to the Town Center and the Hughes Landing retail and office area.

Listing of curb juts

- Palmer Green**, including extension of shoulder west to Kuykendahl (on both east and westbound lanes of Lake Woodlands). (2 curbs)
- Golden Shadow** (north side). Has beveled curb, but still is a hazard. (2 curbs)
- Cochran's Crossing** (corner curbs okay, but need to remove 1 median just on north side of intersection). (1 median curb)
- Gosling** (curbs okay but intersection medians on both east and west bound lanes should be cut back about 2 feet. Easy fix.). (2 median curbs)

- Woodlands Parkway** (about 55 curb juts between Kuykendahl and 2978, but only **29** of these are between Lake Woodlands and 2978 which is part of the mobility plan for cyclists.)



Woodlands Parkway Considerations

- 3.7 miles from Kuykendahl to 2978.
- If widening of Woodlands Pkwy will occur in the next few years then it should be removed as a priority for curb jut removal because either the current shoulders will be lost, as was unfortunately done east of Kuykendahl, or bike paths will be constructed to accommodate cyclists.
- Woodlands Pkwy has heavy use by cars and low to moderate use by bikes. Cyclists enjoy the wide shoulders that are in relatively good condition, but the high speed car traffic, frequent curb juts, and occasional debris/gravel on shoulders push many cyclists to less-risky routes.
- Woodlands Pkwy is a significant part of E-W mobility plan corridor for bicycles, but curb work is mandatory for this to be effective.
- The short segment between Lake Woodlands and Kuykendahl (*k-n* on map) should likely be considered *lower priority* due to 3 sets of curbs on north and south sides for village shopping areas and there is seemingly little use by cyclists anyway because to east of this area Kuykendahl and Woodlands Pkwy have no shoulders and are thus bicycle-unfriendly. The high turn traffic by cars into and out of the shopping areas renders this segment risky for cyclists even if curb juts were removed. This segment is not part of the mobility plan.

Woodlands Parkway Ranking (no priority ranking of **a** through **j** as all of these curb juts need to be removed for this segment of Woodlands Pkwy to be considered as a bicycle corridor. Curbs presented here simply from west to east.)

- a. Terramont / W Branch Crossing** (4 curbs)
- b. Craftwood** (2 curbs)
- c. Player Woods** (2 curbs)
- d. Crane Brook** (2 curbs)
- e. Branch Crossing / W. Branch Crossing** (4 curbs)
- f. Ashlane / Stoneyhurst** (4 curbs)
- g. McBeth Way** (2 curbs)
- h. Flintridge / Carlton Woods** (4 curbs, 1 med)
- i. N/S Forestgate** (4 curbs)
- j. Apartment entrance on north side** (2 curbs)

This segment, **k-n**, has very high car use with turn-in lanes to shopping villages on north and south sides of Woodlands Parkway. There is little cycle use that I have seen. This section should be considered **low priority** for curb jut removal due to low cycle use and many curb juts, lots of commercial traffic.

- k. Lake Woodlands / Ind. Spgs Village entrance (4 curbs, 2 medians)
- l. 3 entrances into Sterling Ridge shopping (~ 6 curbs and 1 median)
- m. 3 entrances into Ind Spgs shopping (~ 6 curbs and 1 median)
- n. Kuykendahl, SE corner (1 curb)

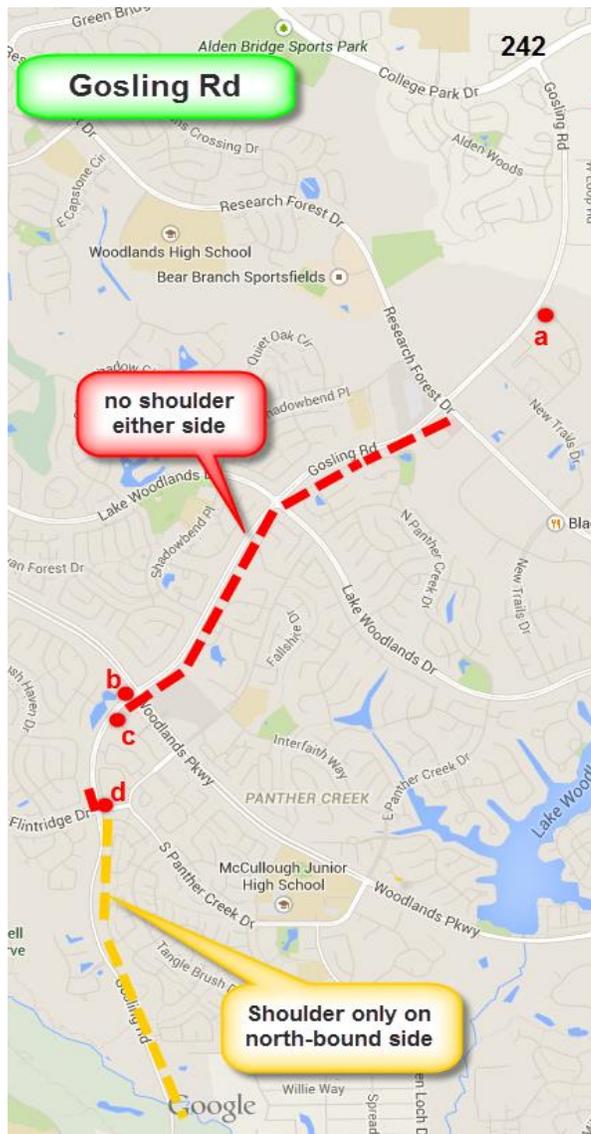
3. Gosling Road (6 curbs, but two-thirds of this segment lack shoulders for bicycles)

Considerations

- 6.2 miles from 242 to Creekside drive, but only 2 miles have shoulders on both sides.
- Gosling is ranked 3rd in priority, but only because it has been identified as a major N-S bicycle corridor on the mobility plan. There are only 6 curb juts on 4 intersections, but no shoulders exist between Research Forest and Woodlands Pkwy. However, plans for Gosling include widening to 4 lanes with shoulder, including widening over Spring Creek bridge. If this is completed then Gosling would be a major N-S bicycle corridor and connect Creekside to The Woodlands proper.
- Segment between Research Forest and 242 is nice, with only 1 shoulder jut at New Trails. Too bad all of Gosling wasn't constructed by this same model.

Ranking

- a. **New Trails** (north-bound). This is the only jut between 242 and Research Forest. (2 curbs)
- b. **Woodlands Pkwy**, SE corner (1 curb)
- c. **Panther Creek Pines** (2 curbs)
- d. **Flintridge**, NE corner (1 curb)



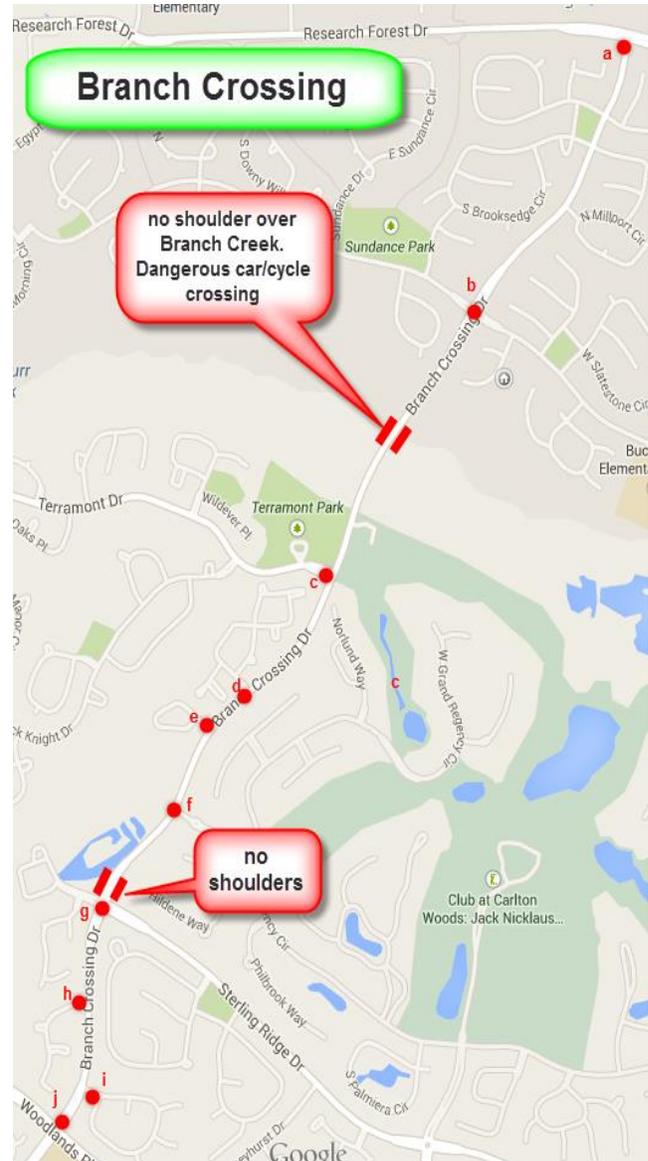
4. **Branch Crossing** (20 curb juts between Research Forest and Woodlands Pkwy)

Considerations

- 2.4 miles from Research Forest to Woodlands Pkwy.
- Popular route for cyclists riding in the Woodlands and for exiting to 2978 to ride outside The Woodlands (via Terramont or Woodlands Parkway).
- Heavy car traffic with opening of Research Forest to 2978, especially in late afternoon and evening rush hours.
- The bridge over Branch Creek (Nickabur Ck?) has no shoulder and is a common hazard for car-cycle near-misses. Cars often have to accelerate around cyclists to avoid an oncoming traffic. There is a street-level pathway on the south-bound lane but this not accessible to road cyclists due to railing and concrete abutment.

Listing of curb juts (from north to south.)

- Research Forest** (2 curbs on SE and SW).
- Alden Bridge** (4 curbs)
- Terramont** (2 curbs)
- Player Trail** (2 curbs)
- Knight Crossing** (2 curbs)
- Longbourne Dr** (2 curbs)
- Sterling Ridge** (2 curbs) no shoulder for a short segment north of Sterling Ridge, but wider car lanes help
- Silvermont** (2 curbs)



- i. **Dulcett Hollow** (2 curbs)
- j. **Woodlands Pkwy** (2 curbs)

5. **Sterling Ridge Drive** (total of 16 curb juts at 8 intersections)



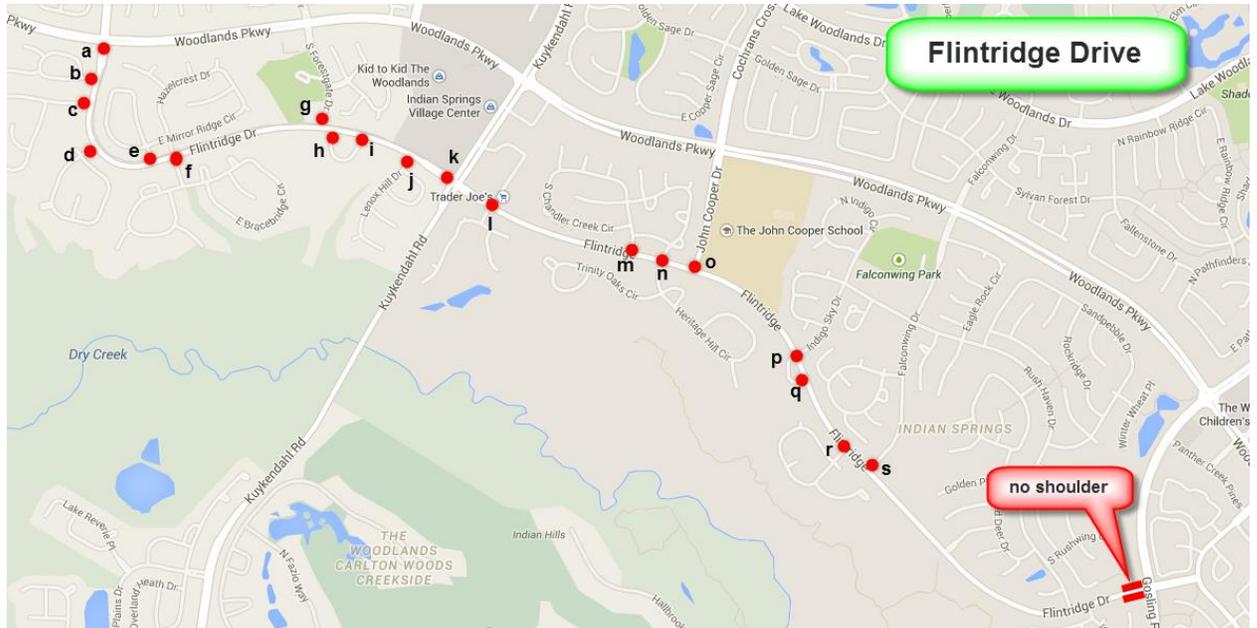
Considerations

- 1.9 miles Branch Crossing to Lake Woodlands Dr.
- Popular route for cyclists and moderate car traffic flow. Shoulders in fairly good shape.
- Could move up in priority as a major E-W corridor pending timing and construction design for Woodland Parkway widening.
- Short sections near Branch Crossing, Carlton Woods, and Lake Woodlands do not have shoulders but wider car lanes reduce bicycle-car hazard.
- Roundabout at Carlton road can be tricky for cyclists and cars, but manageable when cars recognize bikes as vehicles.

Listing of curb juts (from west to east).

- a. **Bantam Woods Cir** (2 curbs), partial jut but included here for safety
- b. **W. Beckonvale Cir** (2 curbs)
- c. **Stoneyhurst Dr.** (2 curbs)
- d. **Southern Garden Pl.** (2 curbs)
- e. **Old Sterling Cir** (2 curbs)
- f. **N. Chantsong** (2 curbs)
- g. **N. Forestgate Dr** (2 curbs)
- h. **N. Warbler Bend Cir** (2 curbs)

6. Flintridge Drive (total of 47 curb juts)



Considerations

- 3.3 miles from Woodlands Parkway to Gosling Road.
- With the loss of Woodlands Parkway for cycling, Flintridge is the *only* E-W corridor south of Lake Woodlands and is the only connection to Creekside Village via Gosling. For these reasons Flintridge could be moved up in priority.
- West of Kuykendahl shoulders are in fair condition but east of Kuykendahl the shoulders are in generally poor condition.
- Popular cycling route due to moderate to low traffic flow and is the only road in The Woodlands with hills (due to N-S drainages into Spring Creek)

Listing of curb juts (from west to east).

- Woodlands Parkway (2 curbs)**
- S. Altwood Cir (2 curbs)**
- N. Landsdowne Cir (2 curbs)**
- Shawnee Ridge Dr (2 curbs)**
- Mirror Ridge Dr (2 curbs)**
- Cascade Canyon – Hazel Crest Dr (4 curbs)**
- S. Forestgate Dr (2 curbs)**
- W. Legacy Point Cir (2 curbs)**
- E. Legacy Point Cir (2 curbs)**

- j) **Lenox Hill Dr** (2 curbs)
- k) **Kuykendahl** (2 curbs, west side of Kuykendahl)
- l) **Stellar Point – shopping entrance** (5 curbs, including island)
- m) **N. Chandler Creek Cir** (2 curbs)
- n) **S. Frosted Pond – Heritage Hill** (4 curbs)
- o) **John Cooper Dr** (2 curbs)
- p) **Tealbriar Cir – Indigo Sky** (4 curbs)
- q) **Tealbriar Cir** (2 curbs)
- r) **Hunters Crossing Dr** (2 curbs)
- s) **Falconwing Dr** (2 curbs)

7. **Research Forest Drive** (total of 35 curb juts between Egypt and Gosling)



Considerations

- 5.4 miles from Egypt Lane to Gosling Road.
- 2 mile segment between Egypt and W. Alden Bridge has only west-bound shoulder
- In spite of heavy car traffic, this is a popular cycle route (where shoulders exist) due to good condition and 8-foot width of shoulders.
- No shoulder in either direction between Egypt Lane and 2978 which is unfortunate as this section is used by cyclists to and from The Woodlands to 2978.
- No shoulder, west-bound on approach to E. Alden Bridge due to right turn lanes into the Alden Bridge shopping area.

Curb jut listing (from west to east).

- a) **Branch Crossing** (2 curbs)
- b) **Crownridge** (4 curbs)
- c) **W. Alden Bridge** (4 curbs)
- d) **West entrance to Alden Bridge Village** (2 curbs)
- e) **Central entrance to Alden Bridge Village – Alden Bend Dr** (4 curbs)
- f) **East entrance to Alden Bridge Village** (2 curbs)
- g) **Kuykendahl Road** (4 curbs)
- h) **E. Alden Bridge Dr** (3 curbs)
- i) **Green Bridge Dr** (2 islands)
- j) **Cochran's Crossing** (4 curbs)
- k) **Cochran's Crossing – E. Trillim** (2 curbs at Cochran's Crsg)
- l) **Bear Branch Park** (2 curbs, north side)

8. **Cochran's Crossing** (only 4 juts)

Considerations

- 2.9 miles from Research Forest to Lake Woodlands
- Could be a significant N-S connection between Research and Lake Woodlands
- Bridge over Branch Creek has shoulders – a rarity in TW.
- Only 4 curb juts
- Shoulders in poor condition
- Moderate traffic
- Could be considered for higher priority due to lack of curb juts, but shoulder resurfacing mandatory.
- This road accesses 2 schools and 1 park (a 3rd school, St. Anthony, is only 0.2 miles west along Bay Branch).
- No shoulders north of Lake Woodlands for about 0.4 miles



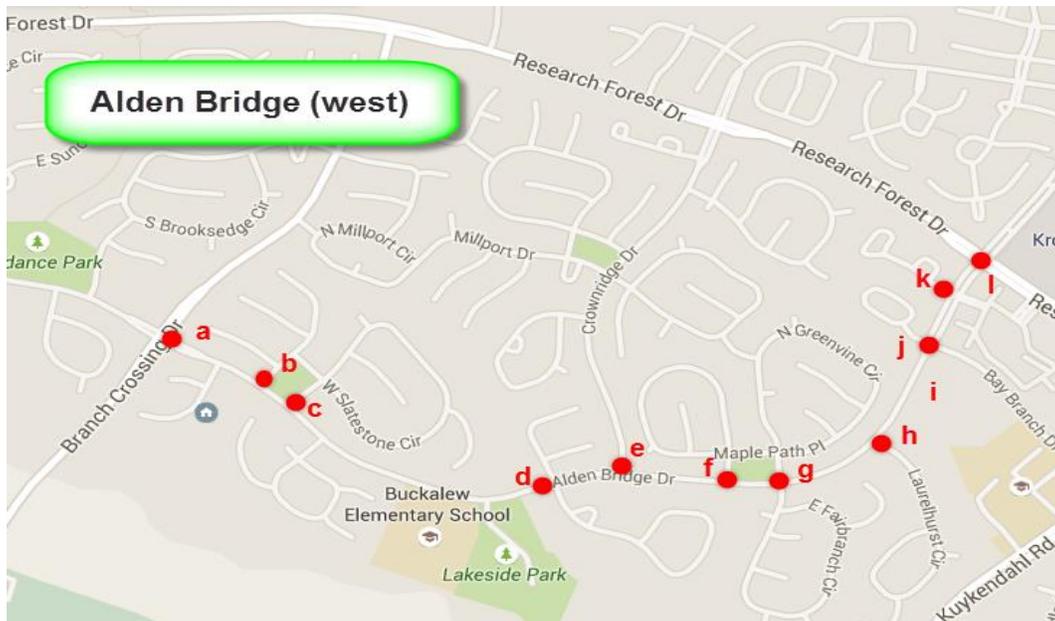
Ranking (Curbs listed from south to north).

- a) **Stonecroft Pl** (2 partial curb juts)
- b) **Research Forest** (2 curbs)

9. **Alden Bridge** (28 juts, 11 intersections)

Considerations

- 1.5 miles between Branch Crossing and Research Forest
- Connects Branch Crossing to Research Forest towards the east (no east-bound shoulder on Research between Branch Crossing and Alden Bridge)
- Heavily used by both cars and bikes
- Shoulders are in poor condition
- Could be moved to higher priority due to heavy use and connectivity to Research Forest

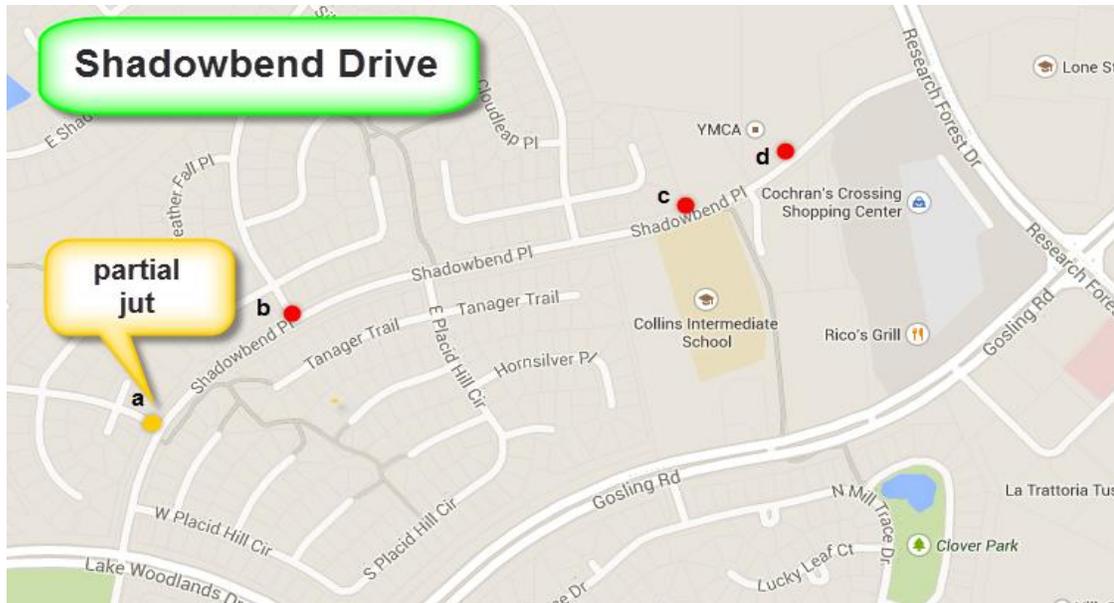


Listing (Curbs listed from west to east).

- a) **Branch Crossing** (2 curb juts)
- b) **Clingstone Place** (2 curb juts)
- c) **Slatestone Cir** (2 curb juts)
- d) **Benton Woods – Webb Creek** (4 curb juts)
- e) **Crownridge** (2 curb juts)
- f) **Maple Glade** (2 curb juts)
- g) **Greenvine – W. Fairbranch** (4 curb juts)

- h) **Laurelhurst Cir** (2 curb juts)
- i) **Bay Branch – Wintergreen Tr** (4 curb juts)
- j) **Auburn Path** (2 curb juts)
- k) **Research Forest** (2 curb juts)

10. Shadowbend Drive (6 juts, not including partials at Golden Shadow Cir.)



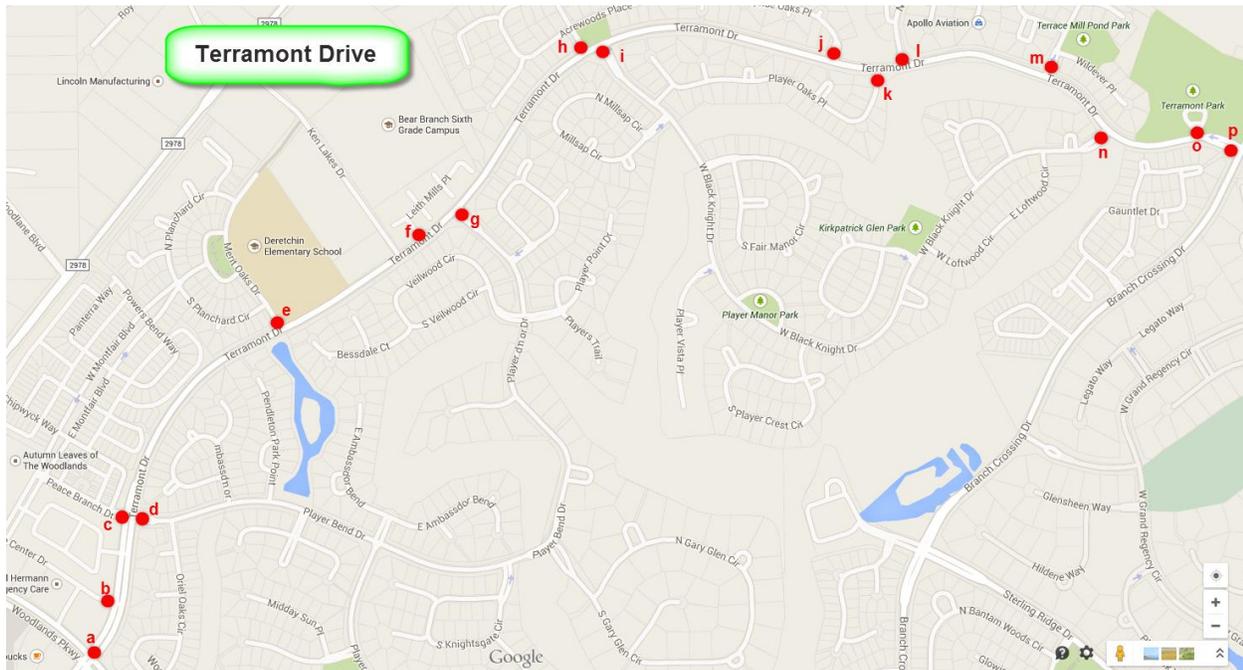
Considerations

- 0.9 miles from Research Forest to Lake Woodlands.
- Easternmost N-S connection between Research Forest and Lake Woodlands Dr. which would be important if Gosling Road is not widened for bicycle lanes.
- Only 6 priority juts (partial at Golden Shadow Cir)
- Moderate traffic
- Shoulders in very poor condition
- Shadowbend YMCA could be accessible by bike if shoulders were replaced
- Only curbs on west side of Shadowbend have juts

Listing of curb juts (from west to east).

- l) **Golden Shadow Cir** (2 partial curb juts)
- m) **Quiet Oak Cir** (2 curbs)
- n) **W. Entrance to Shadowbend YMCA** (2 curbs)
- o) **E. Entrance to Shadowbend YMCA** (2 curbs)

11. Terramont Drive (32 curb juts, including Woodlands Pkwy and Branch Crossing Dr)



Considerations

- 2.1 miles from Branch Crossing to Woodlands Parkway
- Low-moderate traffic and 3' shoulders in pretty good condition.
- Very popular for cyclists riding loops in The Woodlands (crossing over Woodlands Pkwy to W. Branch Crossing) or exiting to 2978 via Ken Lakes Dr.

Curb jut listing (Curbs listed from west to east).

- Woodlands Pkwy** (2 curbs)
- Village Center Dr** (2 curbs)
- Peach Branch Dr** (2 curbs)
- Player Bend Dr** (2 curbs)
- Merit Oaks Dr** (2 curbs)
- Innerwoods Pl** (2 curbs)
- Player Bend Dr** (2 curbs)
- E. Green Pastures Dr** (2 curbs)
- W. Black Knight Dr** (2 curbs)

- j) **Marquise Oaks Pl** (2 curbs)
- k) **Player Oaks Pl** (2 curbs)
- l) **Nocturne Woods Pl** (2 curbs)
- m) **S. Terrace Mill Cir** (2 curbs)
- n) **W. Black Knight Dr** (2 curbs)
- o) **Terramont park entrance** (2 curbs)
- p) **Branch Crossing Dr** (2 curbs)

12. **Grogan's Mill** (42 curb juts, including several long ones.)

Considerations

- 3.2 miles from Research Forest to Sawmill road
- South of Woodlands Pkwy the shoulders are wide and seem to be in pretty good shape
- Several long sections without curbs
- Although car traffic is heavy, Grogan's Mill could be an important N-S connector that could bring cyclists from the southeastern neighborhoods of The Woodlands to the Town Center and Hughes Land.
- If seriously considered for bicycle access, Grogan's Mill should be examined closer as the curbs can be prioritized, and with a little creativity the amount of road work can be minimized.

Curb jut listing (Curbs listed from west to east).

- a) **Research Forest** (1 curb, sw corner, no shoulder on northbound approach)
- b) **Lake Front Drive** (4 curbs)
- c) **Evergreen Cir** (1 median)
- d) **Evergreen Cir** (1 median)
- e) **Lake Woodlands** (N-bound: 1 curb, loss of shoulder but have pathway. S-bound: 2 curbs and loss of shoulder)
- f) **HEB 2 entrances** (4 curbs)
- g) **Riva Row** (2 curbs)
- h) **Timberloch Pl** (4 curbs)
- i) **Woodlands Pkwy** (S-Bound: 3 curbs plus shoulder loss. N-bound: no shoulders)
- j) **N. Millbend** (S-bound: 1 median. N-bound has 3 medians but can use cross walk)
- k) **S. Millbend** (S-bound: 2 curbs (1 long one); can use crosswalk. N-bound 4 curbs (2 long))
- l) **Millpark** (2 curbs)
- m) **Timberwild** (3 curbs)

- n) Sawmill Rd (2 curbs)
- o) Crystal lake Ln (2 curbs)

