

Draft Pine Avenue Study

Background

Over the years, the City of Holland has taken great pride in preserving, maintaining and improving the central neighborhoods. With the creation and implementation of several programs, such as the OurStreet Program, Historic Districts, and the Home Repair Program, the City has continuously participated in the preservation and upkeep of private property while at the same time making large investments in public amenities that further help define the neighborhood as a place.

In recent history the city has successfully completed several street improvement projects in the central neighborhoods. Most all of the streets from 7th to 17th Street were substantially improved in the form of either a resurfacing, reconstructing or redesigning project. The investment in streets and infrastructure is an ongoing process, with the city currently in planning phases for the reconstruction of the River Avenue Bridge, the reconstruction of River Avenue from 28th to 9th Street, and improvements to River and Pine Avenues from 7th Street north to the bridge. Each of these street improvement projects has had at least a temporary impact, and possibly a longer term impact, on traffic flows throughout the neighborhood.

In addition to street improvements, the City and other entities are making investments in a new police/court complex, an updating and possible expansion of the civic center, and an expanded public market area. The City has also recognizes that potential changes with institutions such as the Hospital and Community Education Building, and with the vacant lot at 16th Street and River Avenue each have potential for future impacts on Pine Avenue traffic as well. Further, continued growth and redevelopment beyond the neighborhood boundaries further may influence traffic in this corridor.

Pine Avenue is a two-way road that passes through the City's Historic District and the OurStreet Target Area and is parallel to River Avenue. The convergence of River and Pine at the Macatawa River marks one of only three River crossings in the Holland area, crossings vital to the linkage between the City and Townships to the north. Some residents living in the vicinity of Pine Avenue have voiced concern that the road, while an integral part of the neighborhoods, is a thoroughfare for people coming from the north and going south. They suggest that the amount of traffic on Pine Avenue is unnecessarily more than other residential streets due mostly to the one way design of River and Pine Avenues north of 9th Street. In general, some residents have stated that there is too much traffic on Pine Avenue and it is too fast and too loud, that it compromises pedestrian and bicycle safety, and that there are too many accidents or near-accidents leading to the overall deterioration of the neighborhood.

Response

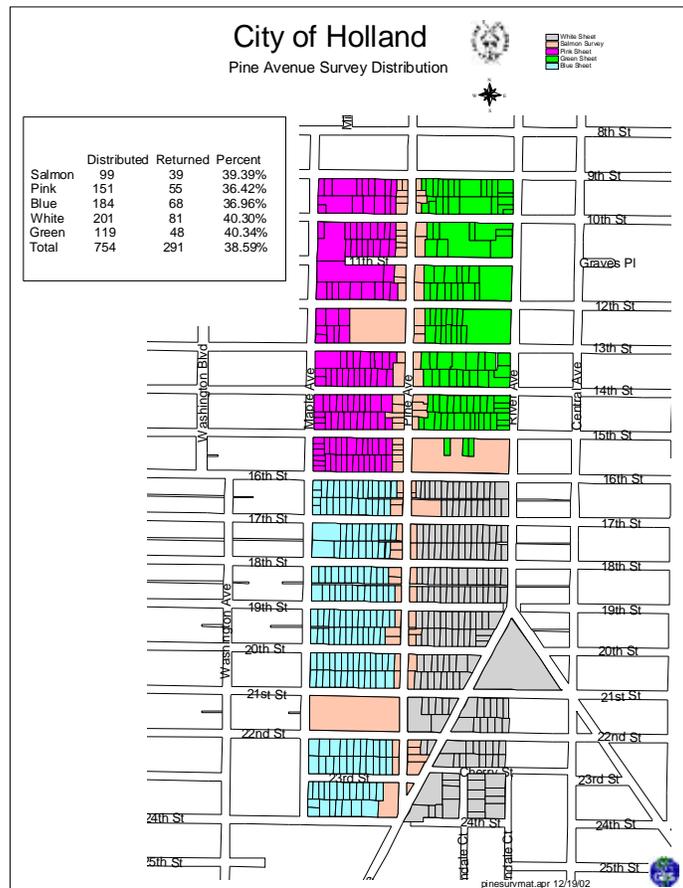
In response to these concerns, and to direction from the City Council, Planning Commission and the Central Neighborhoods Plan, the City Manager convened an ad hoc staff committee to address Pine Avenue and related traffic concerns. This committee is comprised of representatives of the Police, Planning, Engineering, and Street Departments. Work has included gathering data (“statistics” below) regarding traffic volumes, traffic speed, accidents, and other issues as well as conducting a survey of residents and property owners in this area. Also examining principles and methods of traffic calming, the committee began to review alternatives for traffic calming and improving aesthetics in this corridor.

The survey of residents and property owners was sent out to every address located between River Avenue and Maple Avenue from 9th to 24th Streets. A total of 754 surveys were distributed with 39% of the surveys being returned. The survey sought information to assist the committee in understanding how people in the area use Pine Avenue and their perception of Pine Avenue. The survey showed that while a third of the respondents were new to the area (0-5 years), a third was also well established in the area (16 or more years). When traveling from one place to another, 60% stated that they used Pine Avenue two times or more a day with 50% stating that they drive when going to neighborhood attractions (i.e. Moran Park, Library, Civic Center, etc.).

Traffic Counts

Survey Results

As mentioned earlier, a concern frequently voiced by the public is that there is just too much traffic on Pine Avenue. However, over two thirds of the respondents to the survey felt there was a tolerable amount of traffic on Pine Avenue, though those living directly along Pine Avenue felt otherwise (a theme seen throughout the survey responses) as only 42% of those living on Pine Avenue felt the amount of traffic on Pine was acceptable.



Statistics

Our traffic counts show that while Pine Avenue has slightly more traffic than Lincoln Avenue, it has significantly less traffic than residential portions of both 16th and 32nd Streets (two other City streets serving multiple travel needs that have significant residential populations). Furthermore, it has been found that for the past twenty years or so traffic counts have remained steady on Pine Avenue and have even decreased in the recent past. The most recent count taken on January 29, 2003 shows that 6,425 cars traveled on Pine Avenue just south of 15th Street. This count compares with 8,248 cars on July 10, 2002 and 10,956 cars in July of 1976. *Note: In the early 1970's Pine Ave was converted to one way south from the Bridge to 7th St and River Ave was converted one way north from 7th St to the Bridge.*

Conclusion

Understanding that there is some concern from residents on the amount of traffic on Pine Avenue, the majority of the residents feel the amount is acceptable. The traffic has remained steady since the 1970's and the amount is still relatively less than 16th or 32nd Streets. The data does not show a clear need to reduce the amount of traffic on Pine Avenue, however because one third of the respondents in the neighborhood, including a majority of those right along Pine Avenue do find problems with the number of vehicles, there should be an effort to identify opportunities to divert some of the traffic off of Pine Avenue and onto other streets only if those other streets are not negatively impacted, and to find ways to make existing volumes more tolerable.

Traffic Speeds

Survey Results

In regard to the speed traffic moves on Pine Avenue, a majority of the respondents (70%) felt the speeds were appropriate. Again, however, only 42% of those who lived on Pine Avenue felt the traffic speeds were appropriate.

Statistics

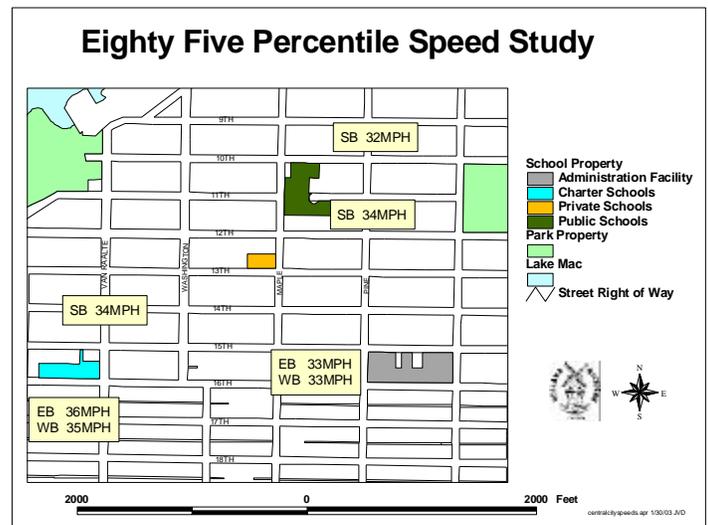
The posted Speed Limit on Pine Avenue is 25mph. During the fall of 2002, the Police Department conducted several speed studies in an unmarked car to establish the 85 percentile speed, in other words 85% of the speeds recorded were traveling at or below this speed. Below are the results of that endeavor.

Pine Avenue 85 Percentile Speed

Southbound Pine Ave at 9th St: 32 mph
Southbound Pine Ave at 12th St: 34 mph

85 Percentile Speed on Other Streets:

Southbound on Van Raalte at 14th St: 34 mph
Eastbound on 16th St at Maple Ave: 33 mph



Westbound on 16th St at Maple Ave: 33 mph
Eastbound on 17th St at Harrison Ave: 36 mph
Westbound on 17th St at Harrison Ave: 35 mph

Conclusions

Although a majority of the residents felt the traffic speeds on Pine Avenue were appropriate the study conducted by the Police clearly shows that an 85% number to be 7mph to 9mph higher than the posted speed limit. While this is typical around the city, it is desirable that steps should be taken to reduce this number. Enforcement is often the simplest request, however as the Police will indicate, drivers will travel at a speed with which they are comfortable given the physical conditions (road design, traffic, adjacent uses, street “character”). Physical changes should be examined that will cause drivers to travel more slowly, such as at the posted speed.

Accidents and Safety

Survey Results

In regard to the safety of Pine Avenue, 70% of respondents stated that they were comfortable crossing Pine Avenue on bike or foot and 80% felt Pine Avenue was a safe road to drive on. This is the only area where those who lived on Pine Avenue were in agreement with the majority.

Statistics

To look at the safety of Pine Avenue, the number of accidents for the past five years were compiled and compared to other north/south streets in the area. The numbers show that while the accidents on Pine Avenue are less than River Avenue except at 11th Street where Pine experienced two more wrecks over a five year period and at 23rd Street where Pine experienced a 6 more accidents over a five year period. The number of accidents on Pine Avenue is one accident for every 60,800 cars at 9th Street, one accident for every 52,000 cars at 16th Street and one accident for every 38,000 cars in the area where Pine and Michigan intersect; these three intersections averaged an accident about once every month. *Note: Accidents that occur within 150’ of an intersection are recorded as occurring at the intersection.*

Conclusions

While a majority of residents felt Pine Ave was a safe street to cross or travel on, it may be prudent to look at certain intersections, such as Pine Avenue and Michigan, to consider either regulatory or structural changes that could lead to less accidents. In general, it also would be anticipated that accidents would tend to decrease if efforts were made that decreased travel speeds.

Noise

Survey Results

Noise from a road can be directly attributed to the amount and speed of the traffic on the

road, the areas in which traffic is accelerating or decelerating, as well as the proximity of the road to the sidewalks or homes. A majority of the residents did not feel that the noise from Pine Avenue was intrusive, yet 60% of those responding who live along Pine Avenue felt that the noise was too intrusive, more than likely because of their immediate proximity to Pine Avenue.

Statistics

No data was collected for this item

Conclusion

If it is desired to reduce the noise generated from Pine Avenue, then it is necessary to reduce the speed and/or the amount of traffic on Pine Avenue. Alternatively, the City could work with property owners along Pine Avenue to enhance landscape buffering, increase home insulation, add storm windows and/or air conditioning, etc., to reduce the negative impacts of existing noise levels.

In Conclusion

In regard to how Pine Avenue compares to other streets in the city, 60% of the respondents felt Pine Avenue is comparable to other streets in Holland and is tolerable. Yet a majority of those living directly on Pine Avenue felt traffic was too much, too fast and too loud. Those living north of 16th Street felt less comfortable than those living south of 16th Street. The range of suggestions for improvements received on the survey responses that appear consistent with some or all goals described below included opposition to closing Pine Avenue at 9th Street, turning Pine Avenue into a boulevard with a median, eliminating the intersection with Michigan Avenue, and strategically place speed bumps. Additional comments received appear to run counter to some or all goals described below for improving conditions. Those suggestions included support for closing Pine Avenue at 9th Street, widening Pine Avenue, making it one way south with River Avenue one way north, and adding a turning lane down the middle.

Process for Improvements

If it is determined to move forward with regulatory or structural improvements to Pine Avenue in response to this report it is important the following ideas be followed in identifying a work plan.

Goals:

- Be clear about the multiple roles Pine Avenue plays
 - Significant north-south connector for residents and commuters.
 - Significant linking route between major central neighborhood institutions and public facilities.
 - Important connection for local, neighborhood circulation.
 - Serves vehicular, bicycle and pedestrian users.
 - Is not a designated truck route.

- Increase Safety
- Assure Reasonable Speeds
- Reduce Traffic Volumes Where Other Residential Streets Are Not Negatively Impacted
- Improve Aesthetics
- Educate Drivers and Property Owners

Approach:

- Incremental, with opportunities for “trial” or “experimental” solutions
- Additive, with ability to make one improvement, evaluate impact, then add another as necessary
- A Part of Larger Plan for Street
- A Part of Larger Plan for Central Neighborhood Traffic

Identification of Menu of Traffic Impact Options

Implementing Traffic Calming techniques in the city is not a new initiative. Over the past years, the City has successfully calmed traffic through regulatory and structural changes throughout the City. A list of past successes include Washington Square roundabouts, Downtown bump outs and angled parking, 16th/17th Street bump outs, a raised crosswalk at Hope College, 16th Street/Central Place paving and bumpout street design and strategic placement of the Speed Wagon and other Police presence.

When considering Traffic Calming on Pine Avenue, the following options have been identified as having potential to address the identified conclusions and reach the stated goals:

Systematic Changes

- Changes to River Avenue
 - Timing on Lights
 - Number of Lanes
 - Location of Allowable Left Hand Turns
 - Potential SB Traffic South of 7th Street
 - Traffic signal locations
- Bridge and Northside changes (over time improve capacity to go north, increased desire to return south)

Changes along Pine Avenue

- Calm Pine Avenue
 - Gateway Block between 9th and 10th Streets
 - Reconfigure Pine/Michigan intersection (with potential traffic signal)
 - Introduce crosswalks
 - Introduce speed tables with crosswalks
 - Introduce roundabouts with crosswalks

- Allow and encourage on street parking
- Introduce more trees along the curb (green approach)
- OR
- Close Pine Avenue (not recommended)

Education

- People Calming
 - Neighborhood Pace car
 - Information, Brochures, Driver's Ed instruction, etc.
 - Signage

Aesthetics

- Enhance Character
 - Additional street trees
 - Special treatment at corners
 - Possible boulevard

Proposed Course of Action

When viewing traffic issues we need to keep in mind that changes we make to one street have a direct effect on surrounding streets. North/south traffic through Holland's Central Neighborhoods will not vanish; if we move traffic off of Pine Avenue it will either go to River Avenue or Van Raalte Avenue and to a lesser extent possibly Maple Avenue. With the recently completed 7th Street transition we can already see an increase in the amount of cars traveling on Van Raalte Avenue and a decrease in the amount of cars traveling on Pine Avenue. However as noted earlier there are several means to calming the traffic, which is the process of assuring that existing traffic volumes do not take away from the livability of the neighborhood.

The next step in this process is to meet with the public to discuss the survey, data and identify the appropriate modifications that could be utilized to calm the traffic on Pine Avenue. Results of this meeting will be integrated within this report and meetings with the Planning Commission and City Council will be scheduled. A work plan will be put together laying out a time line and cost to implement the recommended modifications. It is important to remember that the approach as laid out above calls for this process to be incremental, additive, part of a larger plan for streets and part of larger plan for central neighborhood traffic.

Exhibits

Maps

1. Traffic Counts
2. Posted Speed Limits
3. Accident History
4. Parking Restrictions
5. Traffic Controls

City of Holland

Traffic Counts

Pine - River Ave. Corridor

Text Street Right of Way Names

Traffic counts.shp

1340 - 2670

2671 - 6745

6746 - 11410

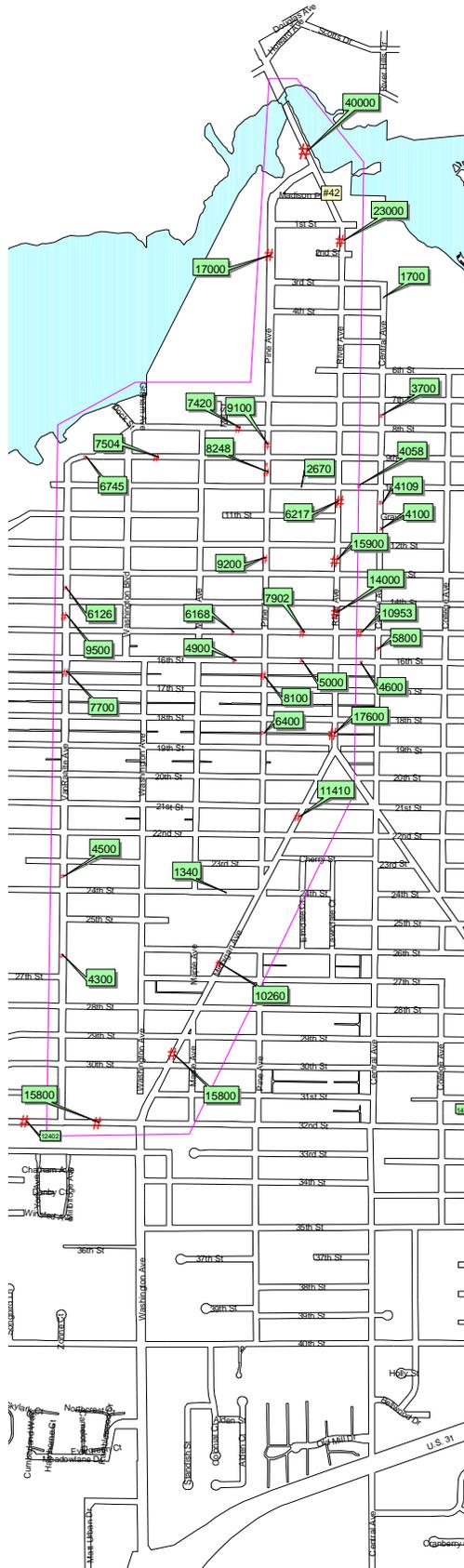
11411 - 23000

23001 - 40000

Traffic counts.shp

Street Right of Way

Lake Mac



Historical Traffic Counts

Station #	Location	Date	Count	Date	Count
42	River Ave. @ Madison	07-67	16,480	06-75	14,344
43	@ Bridge	02-74	12,570	06-88	33,184
320	@ 7th	09-67	15,090	07-77	16,678
288	9th-10th	1979	19,200	05-89	16,500
450	15th-16th	08-75	18,622	1988	18,011
51	@ 19th	10-82	18,300	1986	19,400
Michigan Ave.					
347	Cherry-23rd	04-75	13,414	1980	12,756
34	31st-32nd	1982	14,068	1986	15,000
Pine Ave.					
41	@ Madison	11-60	3,681	06-75	13,276
313	@ 8th	05-60	7,900	08-67	11,520
289	9th-10th	08-67	4,680	08-84	7,200
269	11th-12th	08-67	4,920	07-76	10,956
243	16th-17th	05-60	3,630	07-76	6,707
346	22nd-24th	08-67	2,770	08-76	6,642

Prior to 1971 River and Pine Avenue north of 8th Street were 2-way directional roads.

Other Traffic Counts

Intersection	Count
Pine Ave North of 12th St	9,088
Pine Ave North of 20th St	6,968
16th St West of Lincoln Ave	11,130
24th St West of Lincoln Ave	7,282
32nd St West of Van Raalte	12,644
32nd St East of College Ave	14,266
Lincoln Ave North of 16th St	6,241
State Ave North of 30th St	6,340
Van Raalte North of 9th St	6,649

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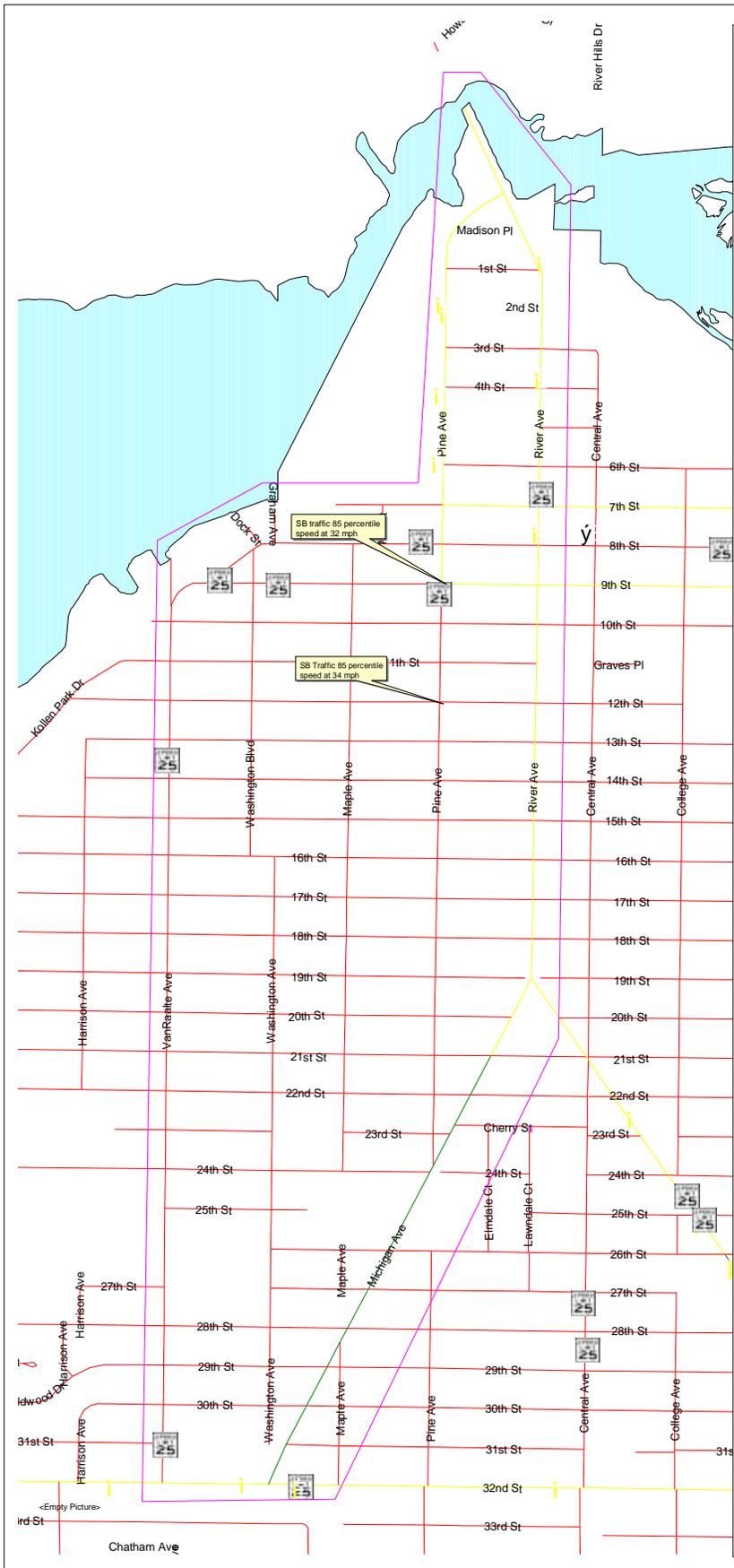


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City of Holland

Posted Speed Limits Pine - River Ave. Corridor



Signs.shp

- # Advisory Speed Plate
- # Reduced Speed 25 mph Ahead
- # Reduced Speed Ahead
- # Signals Set for Speed Sign
- # Speed Limit
- 25 Speed Limit 25 mph
- 30 Speed Limit 30 mph
- 35 Speed Limit 35 mph
- 45 Speed Limit 45 mph
- # Speed Radar Controlled
- Ÿ Watch for Pedestrians
- Text Street Right of Way Names

Speed Limits

- 25
- 30
- 35
- Lake Mac

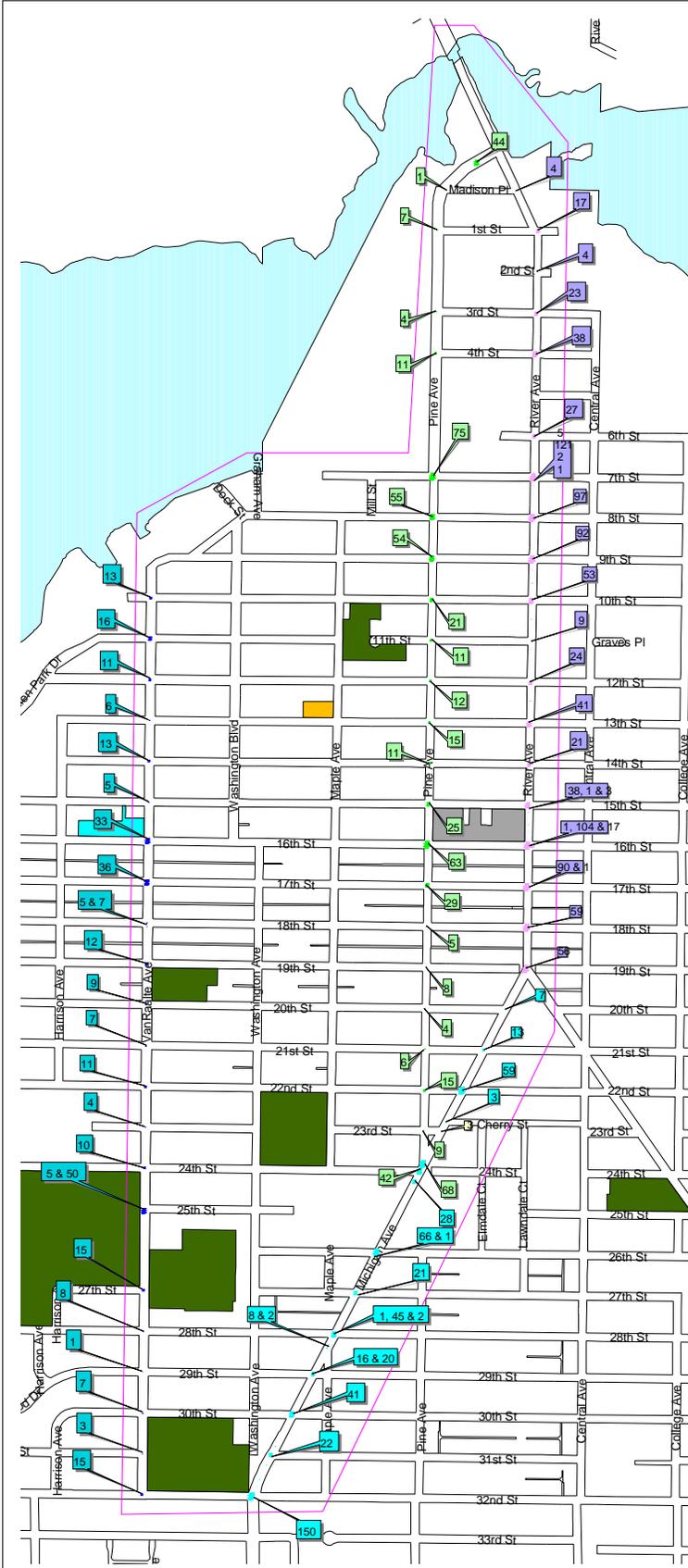


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Created 10-02 Tg



City of Holland

Accident History Pine - River Ave. Corridor



- 19972002riveravaccidents.shp
 - 1 - 9
 - 10 - 15
 - 16 - 29
 - 30 - 55
 - 56 - 200
- 19972002michiganavaccidents.shp
 - 1 - 9
 - 10 - 15
 - 16 - 29
 - 30 - 55
 - 56 - 200
- 19972002vanraalteaccidents.shp
 - 1 - 9
 - 10 - 15
 - 16 - 29
 - 30 - 55
 - 56 - 200
- 19972002pineaveaccidents.shp
 - 1 - 9
 - 10 - 15
 - 16 - 29
 - 30 - 55
 - 56 - 200
- School Property
 - Administration Facility
 - Charter Schools
 - Private Schools
 - Public Schools
- Text Street Right of Way Names
- Street Right of Way
- Lake Mac

Percentage of Accidents N. of 9th St.	42.09%
Percentage of Accidents from 10th to 15th	15.99%
Percentage of Accidents from 16th to 22nd	21.89%
Percentage of Accidents from 23rd to Michigan	20.03%



Accident markers at intersections include all accidents within 150 feet of the intersection.

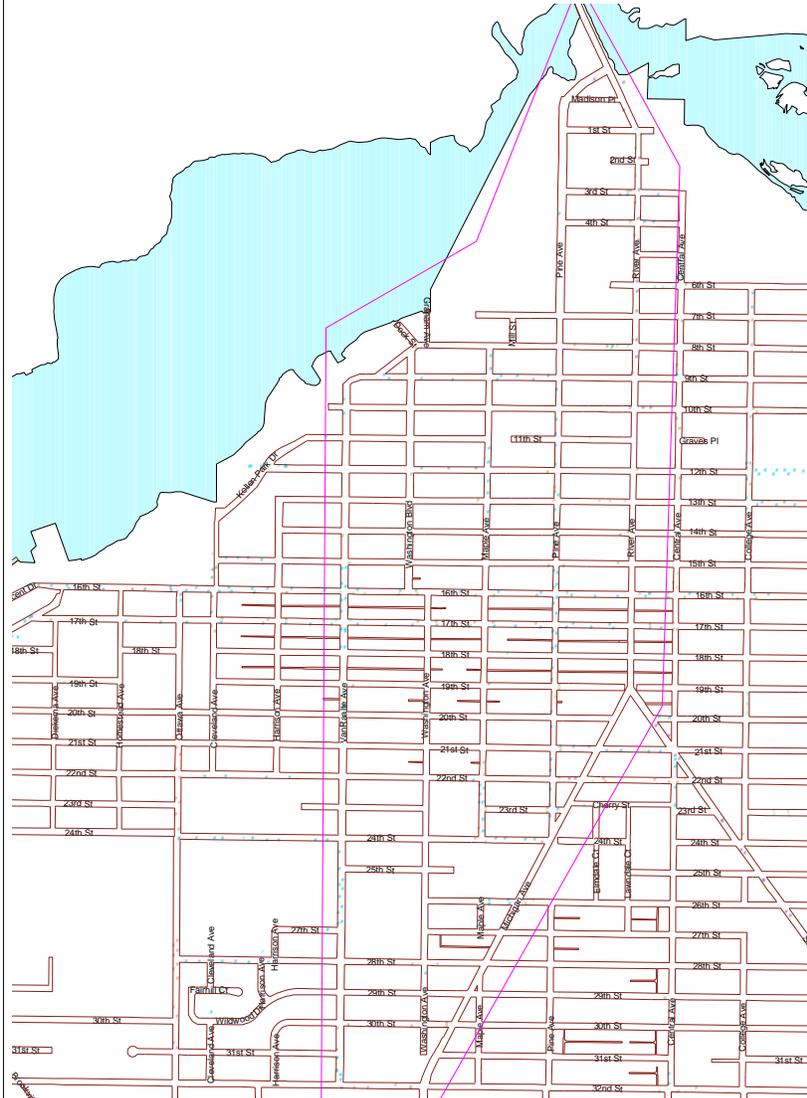
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Exhibit 3



City of Holland

Parking Restrictions Pine - River Ave. Corridor



- Street Right of Way
- Text Street Right of Way Names
- Signs.shp
- No Parking
- No Parking Anytime
- No Parking Here to Corner
- No Parking This Block
- No Parking This Side of Street
- No Stopping, Standing, Parking
- Parallel Parking Only

Lake Mac



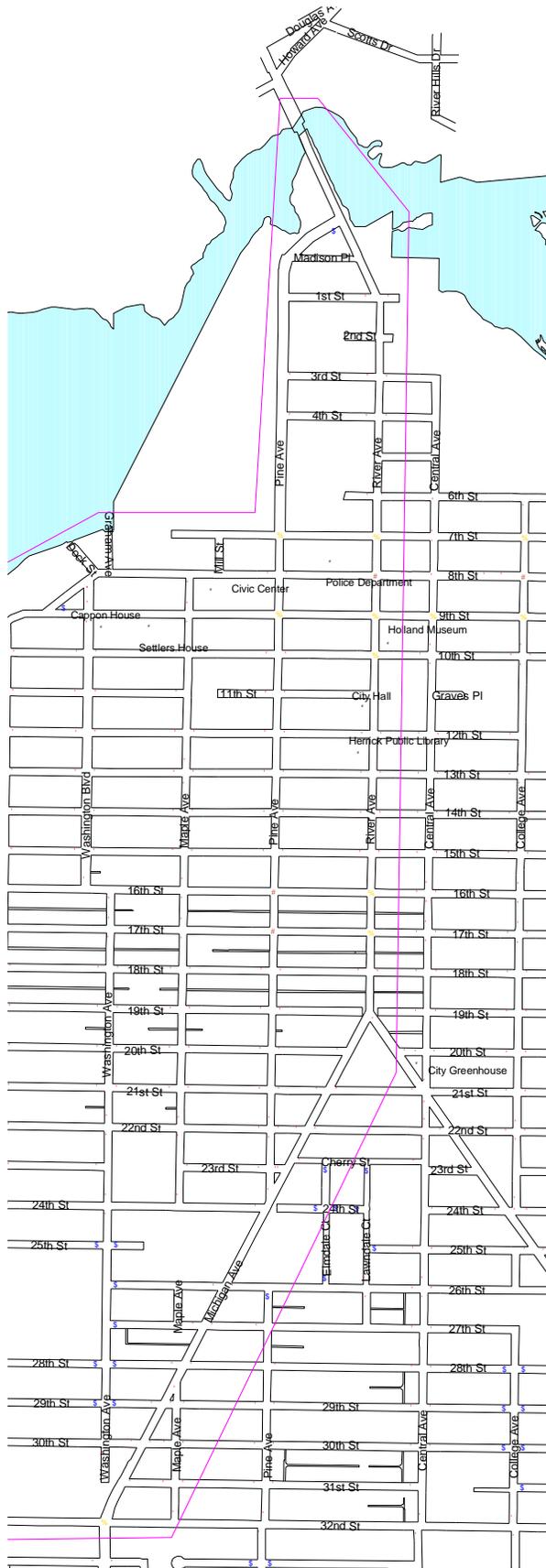
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Exhibit 4



City of Holland

Traffic Control Devices Pine - River Ave. Corridor



- Text City Site Name
- City Sites
- Text Street Right of Way Names
- Traffic Control
 - CITY
 - MDOT
 - STOP
 - YIELD
- Street Right of Way
- Lake Mac



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