



PARKING COMMITTEE MEETING AGENDA

Tuesday, November 29, 2016 at 8:00 AM.
Sister Bay-Fire Station, 2258 Mill Road

For additional information check: www.sisterbaywi.gov

In order for everyone to hear the discussion please, turn off your cell phone. Thank you.

Call Meeting to Order

Deviations from the agenda order shown may occur.

Roll Call

1	Chair – Denise Bhirdo		2	Nate Bell
3	Chris Milligan		4	Britt Unkefer
*	Village Administrator – Zeke Jackson		5	Chad Kodonko

Comments, correspondence and concerns from the public

Approval of minutes as published

Approval of Agenda

Business Items

1. Discussion with Door County Sheriff’s Department regarding parking enforcement capabilities, and assessment of Parking from a Law Enforcement Perspective; consider relevant motions for action.
2. Review of Village Parking/Traffic Ordinances, parking policies. Discussion on metering, time of use limits, and employee parking mandates.
3. Review of Village Parking assets and properties.
4. Review of Village Zoning Codes related to Parking.
5. Discussion on funding of public parking:
 - Business Improvement District Formation
 - Special Assessments
 - Voluntary Contributions from the Business Community
 - Financing and general taxation
 - Metered Parking
 - Parking Citations
6. Discussion on Pedestrian access and bicycle parking in the Village; consider relevant motions for action.
7. Review of Parking requirements for existing properties and uses in the B-3 Zoning District; consider relevant motions for action.
8. Discussion on Public Transportation:
 - Trolley
 - Hotel Shuttle
 - Employee Shuttle
 - Other options
9. Items to refer to a Committee, Official, or Employee.

Adjournment

Public Notice

Questions regarding the nature of the agenda items or more detail on the agenda items listed above scheduled to be considered by the governmental body listed above can be directed to Zeke Jackson, Village Administrator at 920-854-4118 or at zeke.jackson@sisterbaywi.gov.

It is possible that members of and possibly a quorum of members of other governmental bodies of the municipality may be in attendance at the above-stated meeting to gather information; no action will be taken by any governmental body at the above-stated meeting other than the governmental body specifically referred to above in this notice. Upon reasonable notice, a good faith effort will be made to accommodate the needs of disabled individuals through sign language interpreters or other auxiliary aid at no cost to the individual to participate in public meetings. Due to the difficulty in finding interpreters, requests should be made as far in advance as possible preferably a minimum of 48 hours. For additional information or to request this service, contact the Sister Bay Village Administrator at 854-4118, (FAX) 854-9637, or by writing to the Village Administrator at the Village Administration Building, 2383 Maple Drive, PO Box 769, Sister Bay, WI 54234. Copies of reports and other supporting documentation are available for review at the Village Administration Building during operating hours. (8 a.m. – 4 p.m. weekdays).

I hereby certify that I have posted a copy of this agenda at the following locations:		
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Name	Date	



*SUSTAINABLE
ENVIRONMENT
for QUALITY of LIFE*



EFFICIENT PARKING STRATEGIES

What is it?

Actions to make more efficient use of parking can range from ordinance changes that rely on maximum numbers of parking spaces rather than minimum numbers, to encouraging shared parking by adjacent uses. These actions are aimed at reducing the “seas of asphalt” that seem to have taken over many of our communities. Because many of our local land use regulations concerning parking standards are modeled on outdated principles, in many areas the architectural adage: “form follows function” has been challenged by the modern reality: “form follows parking.” Devoting excessive land to parking is expensive, wastes resources, and degrades the environment by adding to urban heat islands and increasing water runoff. State-of-the-art parking management employs a variety of strategies that result in more efficient use of parking resources, address a range of transportation issues, and reduce impervious area without negatively impacting access to goods, services and activities.



This Action Item can be implemented as a

- POLICY
- ORDINANCE
- PROGRAM

How long does this take to implement?

While some items require a change in ordinance or coordination with state transportation departments, many actions can be initiated quickly.

Shared Impact and Benefits

- Reducing impervious surface, particularly heat-absorbing surfaces, decreases urban heat islands, slowing the production of ozone and reducing energy cooling costs.
- More efficient use of parking may encourage use of other forms of transportation rather than the single-occupant vehicle, and thus reduce emissions through reduced vehicle miles traveled.
- Decreased impervious surface reduces storm water runoff and peak flow rates, thus reducing surface pollution going into streams and rivers.
- Reducing the amount of land required for parking frees land for more profitable uses, enhancing economic development.
- Less impervious surface and more landscaping dramatically enhances the visual and environmental character of streets and communities.

Costs

Costs vary greatly depending on which strategies are employed. In many cases, the strategies may save money rather than adding cost.

The Bottom Line

- Efficient parking strategies may help create a positive experience for living, working, shopping and recreation, and may improve the environment.
- There are many tools and tactics available to initiate smart parking management, ranging from policy reform to site specific physical improvements. Many of them are inexpensive and easy to implement.

Interested? Read on!



Who needs to be involved in implementation?

- Local governing boards and planning boards
- Local departments of planning, engineering, or property management
- Experts: transportation planners, landscape architects, etc.
- Residential and commercial developers and other business leaders
- Citizens informed and encouraged to use new parking strategies

Action Steps

1. Read the Basic Information section below.
2. Assess the local problem. Inventory existing parking resources and overall impervious surface. Look at parking usage compared to capacity. These sites may prove helpful:
<http://www.dca.state.ga.us/toolkit/printable.asp?ID=8>
<http://www.lcd.state.or.us/tgm/pub/pdfs/ParkingGuide.pdf>
3. Assemble a local project team made up of planners, traffic engineers, design consultants, business leaders, members of the planning board and citizen volunteers. Some municipalities create a formal downtown parking district board to manage central business district parking issues.
4. Have the team review efficient parking strategies and practices and develop a Parking Management Policy for the municipality describing the intentions of the local governing body regarding parking in all new and existing development.
5. Draft revisions to various planning documents (zoning ordinance, historic overlay, etc.) congruent with the revised policy and present them to appropriate governing bodies for public review and comment.
6. Finalize, enact and publish the revised ordinance documents and distribute them to local planners, engineers, designers, and developers prior to implementation.
7. Initiate programs for training developers, designers and business owners about new parking management strategies.

Resources

- City/County transportation planner or planning staff position or consultant position. Staffing needs will vary with the size of the municipality.
- Cost of implementation varies widely with strategies employed. Some jurisdictions use public/private ventures. Some jurisdictions use developer fees to fund public parking instead of requiring individual facilities to provide off-street parking.
- Use public and private resources to build parking facilities. This can include direct government funding, free or discounted land provided to developers, tax exemptions and other favorable tax policies, and public parking facilities incorporated into public-private-partnership projects.
- On private lands the property owner or developer absorbs the costs.

Who's doing this?

Cities such as Rock Hill, SC and Lexington, NC have found effective ways to employ efficient parking management strategies. For comment about the success of Efficient Parking Strategy programs, contact: Mr. Dwight Bassett - Downtown Development Manager, City of Rock Hill, SC ph. 803-329-7090



This action item is primarily aimed at local jurisdictions whose zoning ordinance and development policies address the approval of parking facilities can use some of the strategies outlined below. The private sector may also consider these strategies in developing site plans for responsive new businesses.

Basic Information

- In most communities, multiple agencies are responsible for various aspects of parking management. These agencies are not always effectively integrated. Information about parking assets and regulations must exist in an accessible format that can be updated and easily shared across organizational lines. Where multiple agencies are involved in parking implementation (for example, one agency decides where parking goes and another enforces parking regulations), there should be frequent communication about issues, strategies, and plans.
- While simply limiting parking might seem like a good way to control the number of single-occupant cars in an area, this practice may entice developers to flee to the suburbs to get the parking opportunities they desire. The key is to pay attention to the quality of parking opportunities rather than to focus only on quantity.

Consider how a combination of some of these parking management strategies from the *Pavement Busters Guide* could help improve conditions in your community:

- ☞ Reduce minimum parking requirements and impose maximum parking limits.
- ☞ Provide for more on-street parking and minimize barriers against it. Enhance the pedestrian character of streets by converting traffic lanes to parking lanes, which is also a means of calming traffic. In smaller commercial centers, on-street parking may provide most of the parking supply needed.
- ☞ Limit on-street parking duration (maximum amount of time that a vehicle can be left in one space), to encourage turnover and discourage owners from using on-street parking for long-term vehicle storage.
- ☞ Limit use of on-street parking to area residents.
- ☞ Prohibit on-street parking of large vehicles to ease traffic flow.
- ☞ Prohibit on-street parking on certain routes at certain times (such as on arterials during rush hour), to increase the number of traffic lanes.
- ☞ Encourage shared parking between adjoining uses.
- ☞ Reserve parking for groups of employees or residents, rather than assigning to individuals. For example, 50 employees or residents can usually share 30-40 parking spaces without problem, particularly if implemented in conjunction with flexible work schedules.
- ☞ Start "cash out" parking programs, which provide the cash equivalent of free parking to commuters who use alternative transportation modes. <http://www.commuterchoice.gov/pdf/parkingcash.pdf>
- ☞ Provide means and incentives for vanpool, carpool, and bicycle parking.
- ☞ Install bicycle and/or shower facilities to encourage bicycle and pedestrian commuting.
- ☞ Limit front yard parking and move toward more rear-yard parking.
- ☞ Unbundle parking. Unpriced parking is usually "bundled" with building costs, which means that a certain number of spaces are automatically included with building purchases or leases. It is more efficient and fair to rent or sell parking separately, so that building occupants pay for just the number of spaces they require, and can adjust their parking supply as their needs change.
- ☞ Require a percentage of spaces to be constructed of pervious pavement materials.
- ☞ Develop Overflow Parking Plans to reduce parking requirements. Excessive parking is often designed to meet infrequent peak demand that occurs during special events or holiday shopping.
- ☞ Use developer fees to fund public parking instead of requiring individual facilities to provide off-street parking.
- ☞ Use public and private resources to build shared parking facilities. This can include direct government funding, free or discounted land provided to developers, tax exemptions and other favorable tax policies, and public parking facilities incorporated into public-private-partnership projects.
- ☞ Develop additional parking where land is relatively inexpensive and available and provide information and incentives to encourage longer-term parkers (particularly commuters) to use the more remote parking. This can include signs, brochures, pedestrian improvements, shuttle services, free transit zones, regulations (particularly limits on the length of time a vehicle can be parked at more convenient spaces) and pricing (remote parking is free or relatively inexpensive).
- ☞ Provide pedestrian improvements to encourage walking and remote parking use.
- ☞ Increase the number of spaces in existing parking facilities by using currently wasted areas (corners, edges, undeveloped land, etc.). Motorcycle parking can sometimes be located in an area that is too small for automobile parking spaces.



Tracking Progress

- **Let Centralina Council of Governments know when you've implemented these actions by contacting Carol Lewis at 704-348-2730 or clewis@centralina.org.**
- An inventory of parking spaces and overall impervious surface, obtained through aerial photography or satellite imagery will provide a base line for tracking results.

FAQ's

Q: *Won't these measures cost taxpayers and businesses more than they are worth?*

A: While some measures may incur implementation and maintenance costs, other measures will not. The cost of parking is really more expensive than most people realize. Costs average around \$10,000 per space for a downtown area. But few consumers purchase a parking space as an independent item. Instead parking costs are incorporated into the costs of buildings and property, as a hidden surcharge for virtually any good or service we buy. This is reflected in higher rents to tenants and higher taxes to owners. If the parking spaces aren't really needed or used (such as is the case in many large "power centers"), then reducing parking saves not only open space but also money.

Q: *Why should employers be concerned about parking?*

A: At first glance, parking management may not seem like a very important topic. But efficient parking management can save them money. For employers who own their own lot, efficient parking management can help them recoup the cost of their initial investment in parking. Employers who lease their lots and do not pay a separate charge for parking in their leases may gain more control over the number of parking spaces assigned to them by developers or building management. This change can lead to more competitive rents. Efficient parking management can help employers avoid the need to build new parking spaces or lease additional parking.

Intersecting Interests



AIR AWARENESS

Many parking management practices offer incentives to motorists to utilize alternative means of transportation, thus reducing the overall volume of automobile emissions.



CLEAN AIR POLICY

Parking management practices are an important factor of overall transportation issues, which makes them essential to clean air policy.



ENHANCED OZONE AWARENESS

As efficient parking strategies are employed, fewer cars are on the road, which helps to reduce the amount of ozone emitted.



PARKING TAX BENEFITS

As a parking management strategy, employers can use the money they would otherwise spend on parking costs to offer it to employees as a transit pass or van-pool subsidy.



Intersecting Interests



TRANSIT CONNECTIVITY

Making communities more convenient to pedestrians and alternative transportation users means parking needs will decrease. Such improvements encourage motorists to use parking spaces distributed over a larger geographic area. This also encourages "park once" shopping patterns, where visitors park their vehicles and walk to several destinations, rather than driving to, and parking at, each destination.



PEDESTRIAN- FRIENDLY STREETSCAPES

Parallel parking along curbs provides a physical buffer between the sidewalk and moving automobile traffic, providing a measure of safety and reducing the level of perceived noise for the pedestrian. Pedestrian related improvements encourage motorists to use parking spaces distributed over a larger geographic area.



GREENWAYS & OPEN SPACE

Using efficient parking strategies, land currently devoted to meeting perceived parking needs may be converted to open space and credited toward meeting open space requirements.



SEDIMENTATION & EROSION CONTROL

Decreasing the overall area of impervious surface allows more rainwater to percolate into the ground, reducing erosion and driving down storm water management costs.



CARPOOLING/ VANPOOLING

Parking requirements are obviously significantly reduced with the use of carpools and vanpools.



FLEXIBLE WORK HOURS

Flexible schedules mean more opportunity to share parking spaces. This increases parking efficiency and thus reduces the overall area needed for parking.

For More Information

- Pavement Busters Guide – *Why and How to Reduce the Amount of Land Paved for Roads and Parking Facilities* – Victoria Transport Policy Institute, Land Use and Parking Management - http://www.vtpi.org/0_land.htm
- Parking Management Made Easy: *A Guide to Taming the Downtown Parking Beast* <http://www.nctr.usf.edu/clearinghouse/parking.htm>
- Planning for Residential Parking: A Guide For Housing Developers - <http://dcrp.ced.berkeley.edu/students/russo/parking/Developer%20Manual/index.htm>
- Smart Growth Online <http://www.smartgrowth.org/library/article.asp?resource=168>
- National Transportation Library *Managing Employee Parking in a Changing Market* <http://ntl.bts.gov/DOCS/sdd.html> <http://www.dca.state.ga.us/toolkit/printable.asp?ID=8>
- Georgia Quality Growth Partnership <http://www.dca.state.ga.us/toolkit/printable.asp?ID=8>

Prepared by Centralina Council of Governments in collaboration with Catawba Regional Council of Governments, August, 2003.

Parking Management

Strategies for More Efficient Use of Parking Resources

TDM Encyclopedia

Victoria Transport Policy Institute

Updated 11 May 2016

This chapter describes various management strategies that result in more efficient use of parking resources, including sharing, regulating and pricing of parking facilities, more accurate requirements, use of off-site parking facilities, improved user information, and incentives to use alternative modes. For more information see [Parking Management: Strategies, Evaluation and Planning](#).

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Description

Parking Management includes a variety of strategies that encourage more efficient use of existing parking facilities, improve the quality of service provided to parking facility users and improve parking facility design. Parking Management can help address a wide range of transportation problems (see [Parking Evaluation](#) and [Parking Solutions](#)), and help achieve a variety of transportation, land use development, economic, environmental objectives.

Specific parking management strategies are described below.

Share Parking

Sharing parking spaces typically allows 20-40% more users compared with assigning each space to an individual motorist, since some potential users are usually away at any particular time. For example, 100 employees can typically share 60-80 parking spaces, since at any particular time some employees are on leave, away on business, or

using an alternative commute mode. Even greater reductions are possible with mixed land uses, since different activities have different peak demand times. For example, a restaurant can share parking with an office complex, since restaurant parking demand peaks in the evening while office parking demand peaks during the middle of the day. Public parking facilities, including on-street parking spaces, can usually be shared efficiently among many destinations.

In lieu fees allow developers to pay into a fund for off-site municipal parking facilities instead of providing their own on-site parking (Shoup 1999a). This results in more efficient [Shared Parking](#) facilities, and allows parking facilities to be located where they most optimal for urban design.

The appropriate number of motorists that can be assigned to a particular number of parking spaces depends on several factors. In general, the more diverse the users and the larger the facility, the more parking spaces can be shared.

Regulate Parking Use

Parking facilities can be managed and regulated to encourage more efficient use of parking resources and more efficient travel. This often involves making the most convenient parking spaces available to certain higher-value uses. Below are typical strategies.

- Regulate based on the type of vehicles or users. For example, during peak periods dedicate the most convenient spaces for service vehicles, customers, [Rideshare](#) vehicles, and vehicles used by [Disabled People](#).
- Limit parking duration (5-minute loading zones, 30-minutes adjacent to shop entrances, 1- or 2-hour limits for on-street parking in commercial areas), to encourage turnover and favor shorter-term users (since higher priority trips, such as deliveries and shopping, tend to park for shorter duration than lower priority trips).
- Encourage employees to use less convenient parking spaces (such as parking lots at the urban fringe) during peak periods, in order to leave the most convenient spaces for customers. Develop a system to monitor use of parking facilities and send reminders to employees who violate these guidelines.
- Charge higher [Parking Prices](#) and shorter payment periods for more convenient spaces. For example, in prime central locations charge 25¢ for each 15-minute period with a two-hour maximum, while at the fringe charge \$2.00 for 4-hours, with no smaller time periods available.
- Implement more flexible [Pricing Methods](#) which allow motorists to pay for only the amount of time they park, which makes shorter parking periods relatively attractive.
- Limit use of on-street parking to area residents, or provide discounts to residents for priced parking.
- Limit on-street parking of large vehicles (e.g., vehicles over 22 feet long or trailers) to ease traffic flow and discourage use of public parking for storage of commercial vehicles.
- Prohibit on-street parking on certain routes at certain times (such as on arterials during rush hour), to increase traffic lanes.

More Accurate and Flexible Parking Standards

Current parking requirements are often inflexible and generous, applied with little consideration to specific geographic and demographic factors that affect parking demand at a particular location (Cervero and Arrington 2009; CTR 1999; Engel-Yan and Passmore 2010; Litman 1999; Millard-Ball 2002; Rowe, et al. 2013; Shoup 1999). Parking requirements are based on parking generation studies that are mostly performed at new, suburban sites with unpriced parking, resulting in standards that tend to be excessive in urban areas with more multi-modal transportation, where parking is priced, and at sites with TDM programs (Shoup 2002). Current minimum parking standards are often inflexible, applied with little consideration to specific geographic, demographic, economic and management conditions.

In many situations, parking standards for new facilities, and the supply of parking at existing facilities, can be reduced without creating significant parking problems, particularly if implemented as part of an integrated parking

without creating significant parking problems, particularly if implemented as part of an integrated parking management program. *More accurate and flexible parking requirements* means that parking standards reflect the parking demand and costs at a particular location, taking into account geographic, demographic, economic and management factors. This allows parking requirements to be reduced in exchange for implementation of specific parking and mobility management strategies, such as:

- [Shared Parking](#).
- Regulations that encourage more efficient parking facility use.
- [Priced Parking](#) and [Parking Cash Out](#).
- Overflow parking plans to deal with occasional peaks.
- [Transit](#) and [Rideshare](#) improvements.
- [Smart Growth](#) that increases land use [Accessibility](#).
- Other TDM strategies that affect [Parking Demand](#)

Reduce Residential Street Width Requirements

Most jurisdictions require wide residential streets in order to provide on-street parking. This practice is not justified for safety or by consumer demands, since many households would not choose to pay for parking if it were unbundled, and so represents a hidden subsidy of automobile ownership and use (Guo, et al. 2012). Reducing minimum residential street widths in municipal zoning codes and development policies allows developers to build *new urbanist* communities with narrower streets and less parking, and rely more on efficient parking management.

Parking Maximums

Some communities limit on the maximum amount of parking capacity allowed at particular sites or within a particular area, particularly in growing [Commercial Centers](#) (Millard-Ball 2002; Manfille and Shoup 2004). This can be in addition to, or instead of, minimum parking requirements that are commonly imposed. Below are some examples (K.T. Analytics 1995):

- *Portland*. In 1975, the City of Portland set an overall cap of approximately 40,000 parking spaces downtown, including existing and new parking facilities. The cap was increased to about 44,000 spaces by the 1980's and increased again in the 1990's. The City is generally satisfied with its parking policies and believes it has helped increase transit use from 20-25% in the early 1970's to 48% in the mid-1990's.
- *San Francisco*. The city of San Francisco's "Transit First" policy allows parking to consume only up to seven percent of a building's gross floor and new buildings must have an approved parking plan prior to receiving an occupancy permit. In some cases, only short term parking is approved; in another, a mix of long, short and carpool parking was approved. This policy has helped prevent increased peak vehicle traffic despite considerable office growth.
- *Boston*. In 1977, the City of Boston adopted a freeze on commercial parking open to the public, but not parking reserved for individuals or a company use within office buildings. While the number of commercial spaces have not increased, there was a 26% increase in exempt spaces between 1984 and 1987 alone and motor vehicle traffic increased dramatically along major corridors to the city.
- *Seattle*. The City of Seattle allows a maximum of one parking space per 1,000 sq. ft. of downtown office space.

Remote Parking and Park & Ride

Remote Parking involves encouraging motorists (particularly commuters and residents) to use off-site or fringe parking facilities (typically located a few blocks from a [Commercial Center](#)), so the most convenient spaces are available for priority users (such as service vehicles and customers). Motorists usually prefer the closest parking location, but given a choice some will park further away to save on parking fees. In some situations (airports, large entertainment centers, and large commercial centers), [Shuttle Services](#) may allow longer distances between parking facilities and destinations. Strategies to accomplish this include:

- Information (signs, maps and brochures) on remote parking availability.
- Regulations and pricing that encourages long-term parkers to use urban fringe facilities
- Shuttle services, free transit zones and pedestrian facilities to improve access to remote parking facilities.

[Park & Ride](#) consists of parking facilities at transit stations, bus stops and highway onramps, particularly at the urban

fringe, to facilitate transit and rideshare use. Parking is generally free or significantly less expensive than in urban centers.

Improve User Information and Marketing

Many parking problems result, in part, from inadequate user information and [Marketing](#). Motorists need convenient and accurate information on parking availability and price, including what parking facilities exist near a destination, whether spaces are available in a particular facility at a particular time, the price they will need to pay, and whether there are less expensive alternatives nearby. Produce a [Transportation Access Guide](#) that provides concise information on how to access a particular destination by various modes, including parking availability and price. Parking information can include maps, signs, brochures and various types of [Electronic Communication](#) systems to provide information to motorists on parking facility location, availability (whether a parking lot is full), service options, and price (FHWA 2007). This can help improve user convenience and security, increase the functional supply of parking, address many objections to specific parking management strategies. For example, motorists may be less resistant to parking regulation, pricing and reduced supply in a particular location if they can easily obtain information on alternatives parking and travel options that can meet their needs.

Smart Growth and Location Efficient Development

[Smart Growth](#) (also called [New Urbanism](#)) is a general term for policies that integrate transportation and land use decisions, for example by encouraging more development within existing urban areas where additional growth is desirable, and discouraging low-density, automobile dependent development at the urban fringe. Smart Growth can help create more accessible, less automobile-dependent land use patterns. Smart Growth is an alternative to urban sprawl. Smart Growth tends to reduce per capita vehicle ownership and encourage use of alternative travel modes, and so it can reduce parking requirements and support other parking management strategies.

[Location Efficient Development](#) means development that is designed and managed to take advantage of more [Accessible](#), multi-modal locations (good walking, cycling and transit). Parking requirements can be reduced in such areas due to reduced automobile ownership and use. Location Efficient Mortgage (LEM) means that lenders take into account transportation cost savings by households that choose more accessible locations when evaluating borrowing ability (Hoeveler 1997). This encourages infill, multi-modal development.

Improve Walkability

The usable parking supply serving a destination can often be increased by improving [Walkability](#) (the quality of the walking environment). Walkability takes into account sidewalk, path and roadway conditions; land use patterns; social acceptance; security and comfort for walking. Improved walking conditions expands the range of [Shared Parking](#), and encourages *park once* trips, which means that visitors park their vehicles and walk to several destinations, rather than driving to, and parking at, each destination. There are many specific ways to [Improved Walkability](#):

- Improved sidewalks, crosswalks and paths.
- Creating pedestrian shortcuts, such as mid-block paths and connections between dead-end streets.
- Improve facility designs to accommodate special needs, including people using wheelchairs, walkers, strollers and hand carts.
- Provide covered walkways, loading and waiting areas with shade from hot sun and protection from rain.
- Street furniture (e.g., benches) and design features (e.g., human-scale street lights).
- Implement traffic calming, speed reductions and vehicle restrictions.
- Address pedestrian [Security Concerns](#).
- Creating more attractive, interesting and clean walking areas.

Transportation Management Associations and Parking Brokerage

[Transportation Management Associations](#) (TMAs) are private, non-profit, member-controlled organizations that provide transportation services in a particular area, such as a commercial district, mall, medical center or industrial park. Transportation Management Associations can provide a variety of services that encourage more efficient use of transportation and parking resources. TMAs allow small employers to provide [Commute Trip Reduction](#) services comparable to those offered by large companies. They are usually more cost effective than programs managed by individual businesses.

Transportation management associations can provide parking brokerage services, allowing businesses to share, trade, lease, rent and sell parking facilities. For example, a TMA can match businesses that have extra parking supply at a particular time with nearby businesses that need parking at that time. This helps businesses deal with changing parking demands, and allows businesses that implement successful trip reduction programs to save money if they end up with unused parking spaces.

Increase Capacity of Existing Parking Facilities

Increase the number of spaces in existing parking facilities by:

- Using currently wasted areas (corners, edges, undeveloped land, etc.).
- Changing from parallel to angled parking.
- Sizing a portion of spaces for motorcycles and compact cars. Small size stalls (275 square feet) require about 20% less space than average stalls (325 square feet). Up to 25% of spaces can typically be sized for compact vehicles, resulting in a 5% increase in total parking capacity compared with all spaces being average size. Motorcycle parking can sometimes be located in an area that is too small for automobile parking spaces.
- Car stackers and mechanical garages use various types of lifts and elevators to increase the number of vehicles that can fit in a parking structure. They can nearly double the number of vehicles that can be parked in a given area, although they are only suitable for cars (most trucks, vans and SUVs are too high), and require an attendant to operate.
- Using valet parking services. This can increase parking capacity by 20-40% compared with self-park.

Implement TDM Programs

Implement TDM programs to reduce vehicle trips, and reduce parking requirements at sites that implement such programs. For example, parking requirements can usually be reduced 10-30% at sites with [Commuter Trip Reduction](#) programs. [Parking Cash Out](#) is particularly effective at reducing parking demand. [Carfree](#) and [Location Efficient Development](#) may provide parking spaces for [Carsharing](#) vehicles, each of which can substitute for several private automobiles, and therefore reduce total parking requirements.

Price Parking

[Parking Pricing](#) means that motorists pay directly for using parking facilities. Parking Pricing may be implemented as a parking management strategy (to reduce parking problems in a particular location), as a mobility management strategy (to reduce vehicle traffic in an area), to recover parking facility costs, to generate revenue for other purposes (such as a local transportation program or downtown improvement district), or for a combination of these objectives. *Performance-based parking pricing* means that prices are set so that about 15% of parking spaces are unoccupied during peak periods, with higher rates for peak locations and times (Shoup, 2006 and 2008). Use [Improved Pricing Methods](#) to improve user convenience, pricing flexibility and cost efficiency.

Cost-based parking pricing (i.e., prices set to recover the full cost of parking facilities) typically reduces parking demand 10-30% compared with unpriced parking. Pricing of commuter parking, and time variable-rates (higher rates during peak periods) is particularly effective at reducing peak use. Pricing of commuter parking, and time variable-rates (higher rates during peak periods) is particularly effective at reducing peak use. Charging motorists directly for parking is more economically efficient and fair (horizontal equity) than unpriced parking that results in cross-subsidies from consumers who drive less to those who drive more than average.

When parking is priced, it is often leased by the month, with significant discounts compared with short-term pricing. This encourages motorists who pay the fee to drive in order to get their money's worth. It is more efficient to rent parking in smaller time blocks (hourly or daily rates), or to prorate monthly leases by the portion of days parking facilities are used. For example, if full-time parking costs \$50 per month, commuters who only drive 3 days a week should only pay \$30. This gives motorists more options and a financial incentive to use alternative modes when possible. Similarly, some parking facilities offer "Early Bird Specials," which favors long-term parking – such discounts are appropriate for less convenient parking facilities, but not for parking at prime locations, which should be reserved for people parking for short-term errands.

Shoup (2005) provides the following guidelines for efficient parking pricing:

- Price parking for full cost recovery: at a minimum, all costs of building and operating parking facilities should be recovered from users. Prices may be higher to reflect the opportunity cost of land and to provide profits.
- Price the most convenient parking, such as on-street spaces, so occupancy averages 85-90%. Use variable fees, with higher rates during peak periods and lower rates during off-peak periods.
- Dedicate some or all of the revenue from on-street parking to benefit local businesses and residents.
- Unbundle parking from building rents, so occupants only pay for the number of parking spaces they want.
- Allow private developers and building managers to decide how much parking to provide at each destination, rather than relying on rigid regulations.

Commuter Financial Incentives (Parking Cash Out and Transit Benefits)

[Commuter Financial Incentives](#) means that commuters are offered financial incentives to use alternative travel modes and reduce their use of parking facilities, particularly the most convenient parking spaces during peak periods.

Parking Cash Out means that commuters who are offered a free or subsidized parking space have the option of choosing the cash equivalent, and *Transit Benefits* means that employers help fund their employees' transit and rideshare fares. For example, employees might be able to choose between a free parking space, a monthly transit pass, a vanpool subsidy, or \$50 cash per month. These payments may be prorated, so for example, employees who drive 30% of the time receive a 70% cash-out payment. This creates a more neutral benefit with respect to travel mode, letting commuters decide which commute subsidy they prefer. These incentives tend to reduce automobile commuting by 15-25%, and are fairer, since they give non-drivers benefits comparable to those offered motorists.

Commuter Financial Incentive benefits represent the savings that result from reduced parking costs. Businesses that own adequate parking may perceive little short-term savings from reduced parking demand. For example, if Commuter Financial Incentives convince 20 employees to shift from driving to alternative modes the employer may simply have 20 unused parking spaces. However, over time most firms have opportunities to benefit financially from reduced parking demand: by reducing the amount of parking they lease with their building, to provide additional parking to accommodate growth, to lease or sell to other businesses, or to use the land for a new building, equipment storage, or greenspace. To make it easier for businesses to save from reduced employee parking demand, commercial leases can unbundle parking (parking spaces are leased separately rather than automatically included with building space), and list parking as a separate line item (parking rents are listed separately from building rents). Parking brokerage services, provided by a Transportation Management Association or other local business organization, can help employers capture financial savings from reduced parking use.

Unbundle Parking

Unpriced parking is often "bundled" with building costs, which means that a certain number of spaces are automatically included with building purchases or leases. *Unbundling Parking* means that parking is sold or rented separately. For example, rather than renting an apartment for \$1,000 per month with two parking spaces at no extra cost, each apartment can be rented for \$850 per month, plus \$75 per month for each parking space. Occupants only pay for the parking spaces they actually need. This is more efficient and fair, since occupants save money when they reduce parking demand, are not forced to pay for parking they do not need, and can adjust their parking supply as their needs change.

For this to function efficiently, building owners must be able to lease or sell excess parking spaces (such as parking brokerage services described below), and local officials should regulate nearby on-street parking to avoid spillover problems that could result if residents use onstreet parking to avoid paying rents for parking spaces.

Tax Parking Facilities or Their Use

If governments must tax something, it may be appropriate to tax parking as a way to control demand and correct existing distortions that underprice parking. Taxes can be applied to parking spaces, parking subsidies and parking rental transactions. For example, a municipality can charge a special property tax of \$5 annually per parking space

owned by businesses, \$10 annually per space provided free to employees, or a special sales tax of 20% on commercial parking transactions. For example, the city of San Francisco charges a 25% tax on commercial parking transactions (www.ci.sf.ca.us/tax/parking.htm). Municipalities could also charge a tax on curbcuts comparable to potential revenue foregone had the same curb area been devoted to priced on-street parking. This would encourage property owners to minimize the number and width of curb cuts, through access management and consolidation of driveways and parking facilities, which helps improve traffic flow and create more pedestrian friendly streetscapes.

2. It would encourage consolidation of curb cuts between property owners.

Parking tax reform can also be used to correct existing policies that undertax parking. For example, land devoted to parking is sometimes assessed at a lower rate than if the same land were used for buildings, on the assumption that rents are paid on buildings, while parking is an ancillary use. Taxing land devoted to parking at the same rate as building land gives businesses an incentive to reduce parking supply.

Control Parking Passes

Parking passes sold or allocated to employees, officials or visitors should have clear limitations regarding where, when and by whom they may be used, and these limitations should be enforced. For example, it is often appropriate to limit parking pass use to a specific vehicle, individual, and area.

Employees, officials and volunteers are often allocated parking passes for use on official business. Such passes are sometimes abused, such as being used for personal trips, or loaned to other motorists. Such passes should be carefully controlled, with regular audits of their need and use.

Bicycle Parking

[Bicycle Parking](#), storage and changing facilities are important ways to provide convenience and security for cyclists at destinations. Bicycle parking improvements can reduce automobile parking and travel demand if inadequate bike storage is major deterrents to cycling. Effective bicycle parking requires a properly designed rack in an appropriate location for the type of use. There are many types of bicycle racks and lockers available.

Develop Overflow Parking Plans

Excessive parking is often provided to meet infrequent peak demand that occurs during [Special Events](#) or other limited time periods. Parking requirements can be reduced by developing an overflow parking plan. This can include:

- [Shared Parking](#) arrangements during peak periods.
- Use of remote parking facilities with [Shuttle Services](#).
- Promotion and pricing to encourage peak-period motorists to use remote parking.
- Promotion of alternative modes such as public transit and ridesharing to major events.
- Encourage employees to use remote parking sites or alternative modes during peak periods.
- Special parking regulation to favor priority vehicles (emergency, service, HOV, disabled, etc.)
- Improved walkability between destinations and nearby parking facilities.

Address Spillover Problems

Generous and free parking is often justified in order to avoid “spillover” parking problems in nearby areas. Spillover problems can be addressed directly with management, pricing and enforcement strategies. On-street parking can be limited to residents, which can be enforced by issuing permits to residents, or simply in response to complaints. Residential neighborhoods can be designated “Parking Benefit Districts,” where on-street parking is priced (residents can be exempt), with revenues used for neighborhood enhancement or to reduce property taxes (Shoup, 1994 and 1995).

Another approach is to provide some sort of compensation to residents who experience parking problems. For example, a high school can send complementary sport event tickets to residents of nearby streets who bear spillover parking problems. Shoup (1995) proposes using revenues from on-street parking in ways that directly benefit neighborhood residents.

Parking Facility Design

Parking facility design changes can address a variety of problems and concerns (Mukhija and Shoup 2006):

- *User information.* Add signs and wayfinding information within parking facilities.
- *User convenience.* Improve walkability within parking facilities, for example, by adding walkways, shading and covered shelter areas.
- *Aesthetics.* Create more attractive parking facilities, with landscaping, building, quality building materials, public art and other attractive design features (Smith, 1988).
- *Cleanliness.* Keep parking facilities clean and in good repair.
- *Stormwater management.* Use state-of-the-art stormwater management and pollution controls. Use on-site stormwater retention. Reduce total impervious surface and maximize greenspace. Use permeable pavement surfaces. (*Center for Watershed Protection; NEMO; Booth and Leavitt 1999*)
- *Safety.* Design parking facilities with state-of-the-art safety design features and speed controls (Hamilton Associates 1998)
- *Security Concerns.* Design parking facilities for maximum natural surveillance (i.e., visibility from the street or nearby buildings), adequate lighting, patrols, emergency alarms and closed circuit video observation.
- *Disabled Access.* Use state-of-the-art accessibility standards for parking and pedestrian facilities.

Summary of Parking Management Strategies

Table 1 summarizes these parking management strategies, indicates their typical reduction in parking requirements, and whether they tend to reduce vehicle traffic and therefore provide additional benefits (such as reductions in congestion, accidents, energy consumption, pollution emissions and consumer costs).

Table 1 Parking Management Strategies

Strategy	Description	Typical Reduction	Traffic Reduction
Shared Parking	Parking spaces serve multiple users and destinations.	10-30%	
Parking Regulations	Regulations favor higher-value uses such as service vehicles, deliveries, customers, quick errands, and people with special needs.	10-30%	
More Accurate and Flexible Standards	Adjust parking standards to more accurately reflect demand in a particular situation.	10-30%	
Parking Maximums	Establish maximum parking standards.	10-30%	
Remote Parking	Provide off-site or urban fringe parking facilities.	10-30%	
Smart Growth	Encourage more compact, mixed, multi-modal development to allow more parking sharing and use of alternative modes.	10-30%	X
Walking and Cycling Improvements	Improve walking and cycling conditions to expand the range of destinations serviced by a parking facility.	5-15%	X
Increase Capacity of Existing Facilities	Increase parking supply by using otherwise wasted space, smaller stalls, car stackers and valet parking.	5-15%	X
Mobility Management	Encourage more efficient travel patterns, including changes in mode, timing, destination and vehicle trip frequency.	10-30%	X
Parking Pricing	Charge motorists directly and efficiently for using parking facilities.	10-30%	X
Improve Pricing Methods	Use better charging techniques to make pricing more convenient and cost effective.	Varies	X
Financial Incentives	Provide financial incentives to shift mode, such as cash out.	10-30%	X
Unbundle Parking	Rent or sell parking facilities separately from building space.	10-30%	X
Parking Tax Reform	Change tax policies to support parking management objectives.	5-15%	X
Bicycle Facilities	Provide bicycle storage and changing facilities.	5-15%	X
Improve User Information and Marketing	Provide convenient and accurate information on parking availability and price, using maps, signs, brochures and electronic communication.	5-15%	X
Improve Enforcement	Insure that parking regulation enforcement is efficient, considerate and fair.	Varies	
Transportation Management Associations	Establish member-controlled organizations that provide transport and parking management services in a particular area.	Varies	X

Overflow Parking Plans	Establish plans to manage occasional peak parking demands.	Varies	
Address Spillover Problems	Use management, enforcement and pricing to address spillover problems.	Varies	
Parking Facility Design and Operation	Improve parking facility design and operations to help solve problems and support parking management.	Varies	

This table summarizes the parking management strategies described in this chapter. It indicates the typical reduction in the amount of parking required at a destination, and whether a strategy helps reduce vehicle traffic, and so also provides congestion, accident and pollution reduction benefits.

[Wit and Humor](#)

"If every place worth visiting had enough parking for all the people who wanted to visit, there would be no places left worth visiting."

"I have sometimes thought of the modern university as a series of individual faculty entrepreneurs held together by a common grievance over parking."

- *University of California president Clark Kerr*

"The chancellor's job has come to be defined as providing parking for the faculty, sex for the students, and athletics for the alumni."

-*A UC Berkeley chancellor*

How It Is Implemented

Parking Management is usually implemented by local governments or individual businesses in response to specific parking and traffic problems. Some Parking Management programs are coordinated by regional governments. Concerns over an immediate parking problem will instigate development of a comprehensive parking planning process. Transportation engineers and planners, either within public agencies or hired as consultants, are usually responsible for performing parking studies, evaluating parking solutions and developing parking management plans.

Below is the typical process for developing a [Contingency-Based](#) parking management plan ([TDM Planning](#)):

1. Define general problems to be addressed (parking congestion, traffic congestion, excessive parking facility costs, poor pedestrian environments, etc.) and the geographic areas to be considered.
2. Perform the following studies:
 - A parking supply inventory (how many spaces exist of each type of parking: public and private, on- and off-street, short- and long-term, free and paid, etc.) for each geographic area.
 - A parking utilization study (what portion of each type of parking is used at various time, particularly peak-periods) for each geographic area.
 - Projections of how parking supply and demand are likely to change in the future, taking into account expected changes in land use, population, commercial activity, travel patterns, etc.
 - Use this information to identify when and where parking supply is or will be inadequate or excessive.
3. Identify potential solutions ([Parking Solutions](#)).
4. Work with stakeholders to evaluate the effectiveness, benefits, costs, equity impacts, feasibility and barriers of each potential solution. Use this information to prioritize these options.
5. Develop an integrated parking plan that identifies changes in policies and practices, tasks, responsibilities, budgets, schedules, etc.

Travel Impacts

Abundant, free parking encourages driving and helps create dispersed, automobile-dependent land use patterns. Many Parking Management strategies significantly reduce automobile travel, as indicated in Table 1.

Automobile travel tends to be quite sensitive to parking supply and price. The [Price Elasticity](#) of parking is -0.1 to -0.3 , meaning that a 10% increase in parking charges reduces driving by 1-3%. Charging cost-recovery prices (i.e., rates that recover the full costs of providing parking facilities) typically reduces drive alone commuting by 10-30%, particularly if implemented with other [Commute Trip Reduction](#) strategies (Analytics, 1995; Shaw, 1997).

Parking Management can help shift automobile travel to alternative modes, and improves access by creating more clustered, multi-modal land use patterns. As the number of parking spaces per employee in a commercial center declines, use of alternative modes tends to increase (Morrall and Bolger 1996; Mildner, Strathman and Bianco 1997). See [Transport Elasticities](#) and [Land Use Impacts on Transport](#) for additional information on how parking policies can affect travel decisions.

Table 2 Travel Impact Summary

Travel Impact	Rating	Comments
Reduces total traffic.	3	Reduces total driving.
Reduces peak period traffic.	3	
Shifts peak to off-peak periods.	1	If prices are higher during peak-periods.
Shifts automobile travel to alternative modes.	3	
Improves access, reduces the need for travel.	3	Allows higher-density, mixed land use.
Increased ridesharing.	3	
Increased public transit.	3	
Increased cycling.	3	
Increased walking.	3	
Increased Telework.	3	
Reduced freight traffic.	1	

Rating from 3 (very beneficial) to -3 (very harmful). A 0 indicates no impact or mixed impacts.

Benefits And Costs

Parking Management can provide several types of benefits, described below. For additional information see [Parking Evaluation](#).

Parking Management Benefits

Efficiency and Savings

Parking Management that reduces parking requirements can provide cost savings and increase consumer [Affordability](#). Parking is one of the largest transportation costs (Litman, 2002; www.vtpi.org/tca/tca0504.pdf). A comprehensive Parking Management program that includes several strategies ([Shared Parking](#), more accurate parking requirements, pricing, [Cash Out](#), etc.) can often reduce parking requirements by 30-50% compared with generous minimum parking requirements, unpriced parking, and each space assigned to an individual motorist. With appropriate Parking Management motorists still have adequate parking, although they may need to walk somewhat farther, and pay directly rather than indirectly for parking.

The magnitude of savings that result from Parking Management depends on specific conditions, including the cost per parking space and how much parking can be reduced. Below are some examples of potential savings, assuming that a comprehensive Parking Management program can reduce parking requirements by a third, and annualized parking facility costs average \$1,200 in urban conditions and \$600 in suburban conditions:

- Cashing Out free parking is equivalent to a 3% wage increase for an employee earning \$40,000 per year at an urban location, and a 1.5% wage increase for suburban employees.
- If building rent represents 20% of a business's total costs, and parking represents 25% of rent costs, reducing parking costs by 40% results in a 2% reduction in total costs. If the business has a 10% profit margin, this increases profits by 20%.
- If two parking spaces are currently included with housing, decoupling parking (renting parking spaces separately) provides \$100 monthly savings for an urban household that only owns one vehicle, and \$200 monthly savings if it owns no vehicles.

This represents a 12-25% reduction from a \$800 per month rent or mortgage payment. Suburban households save half this amount, a 10-20% savings from a \$500 per month rent or mortgage payment.

- If standard practices result in an average of two parking spaces per vehicle in urban areas and four spaces per vehicle in suburban areas, a 33% reduction in total parking requirements results in total annualized savings of \$800 per vehicle.
- Parking cost savings depend on the ability of facility managers to sell, lease or rent excess parking capacity. For example, if a business has 100 parking spaces, and its [Commuter Trip Reduction](#) program reduces demand to 60 parking spaces, it will have 40 parking spaces that are no longer needed. The business will need to sell, lease or rent these spaces, or convert the land to other uses, in order to benefit from this reduced demand. Parking brokerage services, perhaps through a [Transportation Management Association](#), a chamber of commerce or other organization can help businesses capture parking cost savings.

Reduced Automobile Use

Parking Management is one of the most effective ways to reduce motor vehicle traffic and achieve TDM objectives. Parking Management (Parking Pricing, Cashing Out parking, unbundling parking from housing) can reduce total automobile trips by 10-30%, and more if implemented as part of a comprehensive TDM program (see discussion of travel impacts above). This helps reduce traffic congestion, road and parking facility costs, road risk, pollution emissions and urban sprawl, and can increase [Transportation Diversity](#).

Improved Design

Parking Management allows greater flexibility in facility location and site design. It gives building managers and developers more options for dealing with parking problems. It gives communities more control over land use, allowing higher density, more walkable urban areas. It can facilitate the preservation of historic buildings and districts, and allows designers to position buildings to meet access, aesthetic and environmental objectives in ways that are impossible if parking requirements are inflexible. Such design flexibility is particularly important for infill development and areas with high land costs, allowing redevelopment of central business districts and urban communities. Parking Management is an important component of efforts to create more efficient and attractive urban conditions ([New Urbanism](#)).

Business Impacts

Parking restrictions and pricing can reduce business activity in an area and shift travel to more suburban locations (Shiftana 1999), although these impacts depend on specific conditions, including how prices are structured, and the quality of travel and location alternatives. When parking revenues are used to improve local streetscape conditions or to fund transportation alternatives they can increase business activity in a downtown (Kolozsvari and Donald Shoup, 2003).

Reduced Environmental Impacts

Pavement imposes environmental impacts including reduced groundwater recharge, increased stormwater management requirements, reduced greenspace and wildlife habitat, and heat island effects ([Land Use Evaluation](#)). Parking consumes a significant portion of urban land, particularly in commercial and high-density residential areas. Parking Management can reduce urban sprawl and the environmental impacts that result (Willson 2015).

Parking Management Costs

Increased Management and Transaction Costs

Parking Management often increases administrative responsibilities for public officials and facility managers, and additional responsibilities and inconvenience on motorists.

Spillover Impacts

Parking charges and restrictions in one area may cause motorists to park in other areas where they create congestion problems. This may increase management and enforcement costs, and create conflicts between neighbors.

Table 3 Benefit Summary

Objective	Rating	Comments
Congestion Reduction	3	Reduces vehicle travel, particularly in urban areas.
Road & Parking Savings	3	Reduces vehicle travel and parking requirements.
Consumer Savings	0	Mixed, depending on strategy. Reduces driving affordability but

Consumer Savings	0	Mixed, depending on strategy. Reduces driving affordability but reduces indirect parking costs through taxes and rents.
Transport Choice	0	Mixed, depending on strategy. Reduces driving affordability and convenience but improves other modes.
Road Safety	3	Reduces vehicle travel.
Environmental Protection	3	Reduces vehicle travel and the amount of land paved for parking.
Efficient Land Use	3	Reduces vehicle travel and allows higher-density development.
Community Livability	3	Reduces vehicle travel and the amount of land paved for parking.

Rating from 3 (very beneficial) to -3 (very harmful). A 0 indicates no impact or mixed impacts.

Equity Impacts

The [Equity](#) impacts of Parking Management depend on the type of strategies used, where and how they are applied, and the quality of transport alternatives. Strategies that reduce subsidies and charge motorists directly for the parking costs they impose tend to increase fairness (horizontal equity).

Some Parking Management strategies, such as parking [Cash Out](#) and [Location Efficient Development](#) can provide significant benefits to lower income and transportation-disadvantaged people. Most Parking Management strategies benefit people who are transportation disadvantaged by helping to create less automobile-dependent land use patterns, and reducing the parking costs they bear through taxes, rents and employment benefits.

[Parking Pricing](#) can be regressive, but overall equity impacts depend on how revenues are used and the quality of travel choices. If revenues are used to benefit lower-income households and there are good travel alternatives to driving, pricing and taxes can be progressive overall ([Pricing Evaluation](#)).

The table below summarizes the major equity impacts of various Parking Management strategies. Most tend to increase equity overall.

Table 4 Equity Analysis of Parking Management Strategies

	Treats everybody equally	Individuals bear the costs they impose	Progressive with respect to income	Benefits transport disadvantaged	Improves basic mobility
More flexible requirements	1	3	3	3	0
Shared Parking	0	0	0	Yes	0
Priced Parking	2	3	-2*	2	2
Cash Out free parking	3	0	3	3	0
Unbundled parking	3	3	3	3	0
Favor short-term parking	0	0	0	0	0
Address spillover problems	3	3	1	3	0
Location Efficient Development	3	3	3	3	3
Restrict parking	2	2	1	3	1
Tax Parking	1*	1*	1*	1*	0

Rating from 3 (very beneficial) to -3 (very harmful). A 0 indicates no impact or mixed impacts.

* Depends on who bears the cost, how revenues are used, and the quality of alternative modes.

Applications

Parking Management can be applied in many situations ([Evaluating Parking](#)). It is particularly appropriate where:

- A specific parking problem exists.
- Land values and parking facility costs are high.
- [Smart Growth](#) and [Transit Oriented Development](#) are desired.
- Dense development and urban redevelopment are desired.
- Traffic congestion or vehicle pollution are significant problems.
- Excessive pavement is undesirable.

Table 5 Application Summary

Geographic	Rating	Organization	Rating
Large urban region.	2	Federal government.	1

High-density, urban.	3	State/provincial government.	2
Medium-density, urban/suburban.	3	Regional government.	3
Town.	2	Municipal/local government.	3
Low-density, rural.	1	Business Associations/TMA.	3
Commercial center.	3	Individual business.	3
Residential neighborhood.	3	Developer.	3
Resort/recreation area.	3	Neighborhood association.	3
		Campus	3

Ratings range from 0 (not appropriate) to 3 (very appropriate).

Category

Incentive to Reduce Driving and Land Use Management

Relationships With Other TDM Strategies

Parking Management supports and is supported by most other TDM strategies. Parking Management includes many [Parking Solutions](#). It is often implemented as part of [TDM](#), [Commuter Trip Reduction](#), [Transportation Management Associations](#) and [Campus Trip Reduction](#) programs, based on [Contingency-Based Planning](#). It supports and is

supported by [Pedestrian and Cycling Improvements](#), [Transit Improvements](#), [Smart Growth](#), [New Urbanism](#), [Transportation Pricing Reforms](#) and [Context Sensitive Design](#). It is important for [Location Efficient Development](#).

Stakeholders

Parking Management programs are primarily implemented by local government policies and agencies, and by individual businesses. Implementation often involves changing current planning, enforcement and design practices, sometimes with the support of professional organizations. [Transportation Management Associations](#) can provide Parking Management and parking facility brokerage services (for example, maintaining a system to match businesses that have excess parking capacity with those that need additional spaces and arranging for parking facilities to be shared when appropriate).

Barriers To Implementation

Parking Management often represents a significant change from current practices, and so requires overcoming various institutional and political barriers. Current parking policies are based on the assumption that maximum parking capacity is desirable. Current parking standards tend to be applied inflexibly, for administrative convenience, with little consideration of demographic, geographic and management practices that may affect parking requirements. Parking Management requires public officials, planners and business leaders to become familiar with the many Parking Management strategies and their potential benefits. Parking Management requires changing current development, zoning and design practices. It requires an institutional framework (such as [TMAs](#) and [TDM Programs](#)) and addressing concerns over spillover impacts.

Best Practices

Best practices for Parking Management are described below, and in various documents listed in *References and Resources*. For more information see [Evaluating Parking Policy](#).

- Parking policies should emphasize efficient use of resources. User information services, [Shared Parking](#), [Parking Pricing](#) and overflow parking plans allow more efficient use of existing capacity and avoid the need for excessive requirements.
- The most convenient parking spaces should be managed and priced to favor priority users, such as people with disabilities, [Rideshare](#) vehicles, delivery vehicles, business customers and clients.
- Parking prices should be higher during peak-periods. There should be little or no discount for long-term leases.

- Parking should be considered a high-quality service. Signs, maps and brochures should be used to provide accurate information to users. Facilities should be attractive and safe. Users needs and potential problems should be anticipated.
- Parking services need not be one-size-fits-all. A parking facility may provide a variety of services tailored to different users, including valet services for premium users, convenient short-term parking for shoppers and delivery vehicles, longer-term parking for commuters and residents, and special arrangements when appropriate for commercial users.
- Parking facilities should be integrated with overall facility and district design and style.
- Parking Management policies and programs should be coordinated through a district or region, so prices and management practices are consistent in comparable areas.
- Stakeholders should be consulted and involved in [Planning](#) parking policies and programs.
- New technologies should be used to improve user information, convenience and safety, and for control revenue.
- Parking management planning should anticipate potential spillover problems, and respond with appropriate regulations and enforcement programs. Enforcement should be adequate to maintain a high level of compliance, predicable and courteous.

[Wit and Humor](#)

A Texan with a big cowboy hat, boots and plenty of jewelry parks his sparkling new limousine in front of a bank in New York city, walks in, and says, "I'd like to borrow \$500 immediately."

The loan officer hands him an application form. For an address he writes, "Ritz Hotel." For collateral he writes, "Cadillac, estimated value \$100,000." The loan is approved and the satisfied customer hands the limousine keys to the bank in exchange for a \$500 check.

Two weeks later the Texan returns and returns the check, plus a \$5 bill for interest. Curious about this strange transaction, the loan officer inquires, "Sir, you are obviously rich. You have a valuable car. You stay at the fanciest hotel. You wear thousands of dollars worth of jewelry. Why did you borrow such a small sum and not even bother to cash the check?"

The man replies. "I didn't need the money. But where else can I park my car in central New York for two weeks for just five dollars."

Examples and Case Studies

For more examples see the [Parking Solutions](#) chapter.

[Commercial District Parking Management \(Gibbs 2012\)](#)

In his book *Principles of Urban Retail*, Gibbs (2013) describes various ways to create more attractive urban retail centers, including ways to manage parking for shopper convenience. The book describes various types of urban shopping demands and the types of retail centers that serve them. It emphasizes the importance of convenience and secure parking that accommodates various types of customers. The book points out that accepted parking ratios for regional centers have declined significantly in recent decades, from 10 cars per 1,000 square feet of building area during the 1960s to 4.0 to 4.5 per today, and that this can be further reduced in urban centers, particularly if parking supply is efficiently managed. Gibbs recommends pricing the most convenient parking spaces to insure that parking spaces are always available to shoppers in a hurry, and that the parking meters be convenient to use.

[Tri-Met Parking Management \(www.tri-met.org\)](#)

The Tri-County Metropolitan Transportation District, which manages transportation in the Portland, Oregon area, has implemented various parking management strategies around transit stations to minimize costs and support [Transit Oriented Development](#). These include:

- Arranging [Shared Parking](#) with Park & Ride and other types of land uses, including apartments, churches, movie theaters and government buildings near transit stations.
- Using lower minimum parking requirements around transit stations.
- Allowing Park & Ride capacity near transit stations to be reduced if the land is used for Transit Oriented Development, thus allowing car trips to access transit to be replaced by walk/bike trips

allowing car trips to access transit to be replaced by walk/bike trips.

More Accurate Parking Requirements (www.sfu.ca/~ssbc/Resources.htm)

The City of Vancouver is developing a more flexible approach to parking requirements for multi-family dwellings to support efficient transportation, smart growth and affordable housing planning objectives. City staff have proposed a Sustainable Transportation Credit Program that allows developers more flexibility based on their specific location and circumstances. The program is loosely based on the LEED TM Green building rating system. Developers receive credits for reducing the number of parking stalls, providing parking spaces for carshare vehicles, and providing annual transit passes to building occupants.

Reducing Parking Requirements (Marshall and Garrick, 2006)

Researchers Marshall and Garrick compared parking supply and demand in three new urbanist and three conventional small city centers. In general, the three mixed-use study sites provided much less parking per square foot than the conventional control sites. The study sites thrived by making much more efficient use of land for parking. The study sites also furnished a significant amount of on-street parking and relied more on shared municipal parking lots and parking garages. However, the towns with mixed-use centers still demanded almost as much parking for new construction as did the towns in which the conventional sites are located. On average, the amount of parking mandated by base regulation in these six towns is about two and a half times more than the peak use.

Centralized Parking (USEPA 2006)

To encourage downtown development the Chattanooga Area Regional Transit Authority developed peripheral parking garages with free shuttle service. By constructing parking facilities at either end of the business district, the system intercepts commuters and visitors before they drive into the city center, reducing traffic problems. Free shuttle buses are financed through the garages' parking revenues. They depart from each garage every five minutes all day, every day, and pass within walking distance of most downtown destinations. The electric-powered shuttles transport approximately one million riders each year, making shuttle-served property attractive to businesses. Since 1992, when the shuttle service began, over \$400 million has been invested in the downtown, including a major freshwater aquarium, over 100 retail shops and 60 restaurants.

San Francisco Parking Policy Reforms (www.livablecity.org/campaigns/c3.html)

The following policy reforms were implemented by the city of San Francisco in 2006:

- Eliminate minimum parking requirements for downtown housing. This allows developers to decide how much parking to provide at each location, based on market demand.
- Establish a maximum of 1 space for every 4 units, with additional parking allowed if more affordable units are provided.
- Establish a maximum parking ratio for dwelling units of 3 spaces for every 4 units. One space per unit is allowed for units with two or more bedrooms. Developers and individual tenants are free to secure additional parking spaces off-site.
- Provide flexibility in configuring off-street parking to give developers the flexibility they need to create space-efficient parking through the use of tandem, valet, and stacked mechanical parking.
- Require off-street parking to be below ground, or on the ground floor with active uses on all public frontages to prevent ugly, multi-story concrete parking garages and blank building fronts in the downtown area; some exceptions are allowed with a conditional use authorization by the planning commission, which is appealable to the Board of Supervisors.
- Establish limits on width of garage openings to off-street parking and loading to reduce vehicle exit speeds and conflicts with pedestrians.
- Prohibit residential portes-cochere (covered areas) for loading or parking, and prohibit garage entrances on important pedestrian, bicycle and transit streets. Driveways and narrowed sidewalks for portes-cochere and garage entrances create conflicts between autos and other modes.
- Require secure bicycle parking citywide for residential buildings of four or more units. 1 space is required for every 2 units in projects up to 50 units, and 1 space per 4 units in projects larger than 50 units.

- Require that parking spaces be sold/leased separately from dwellings in projects of more than 10 units, and provides exceptions for affordable housing projects. By “unbundling” the price charged for housing from the price charged for parking, people have the choice to purchase only as much parking as they need, people without cars aren’t forced to pay for parking they don’t need, and everyone pays less for their housing.
- Require car share spaces citywide at the ratio of 1 dedicated space for car sharing vehicles for each 200 dwelling units. Studies show that car-sharing services in the Bay Area are proven to reduce the number of vehicles people own and the number of car trips taken, while providing a car when needed.

Market Commons Unbundled Parking (Wilbur Smith Associates, et al, 2006)

Residents in 300 apartment units at Market Common in Arlington Virginia have no assigned parking – spaces are “unbundled” from rent. Residents pay \$25 per month for one space and \$75 to \$100 for a second (in contrast, owners of 87 townhouses at Market Common get two parking stalls as part of purchase, no choice). They use a parking structure that is shared with retail and restaurant patrons. Retail patrons and tenants share about 1,100 spaces in a parking structure, though there also is some on street parking for shoppers (36 spaces are referenced in one web page summary of the project).

Residents pay building management (not the parking operator) for swipe cards used at structure gates. Shoppers buy short term permits to access the garage (\$1-4/hr depending on length of stay, with merchant validation allowed). Because retail is at ground floor and resident units at upper floors (10 story building), residents generally park on the upper levels where spaces are generally available. Elevators in the parking structure leading to residential areas are opened only by tenant pass key to maintain security.

City of Ventura Downtown Parking District (www.ci.ventura.ca.us)

Ventura, California created a Downtown Parking Management Program based on the principle that parking facilities should set prices at municipal on- and off-street parking facilities to achieve a 15% vacancy rate. Parking meter revenues may be used to defray city parking and transportation service expenses, including funding alternative transportation programs, projects and enhancements that reduce the demand for, or increase supply of parking resources in the parking district.

Redwood City Parking Management Plan (Redwood City 2007)

Redwood City (2007), a San Francisco suburb, sponsored a parking planning workshop which lead to the following policies, which they call *performance-based pricing*:

- Installed new, electronic parking meters.
 - Eliminated meter limits. Motorists may stay in one space as long as they pay for it.
 - Structured parking prices to achieve about 85% occupancy (called the *Goldilocks Principle*: not too high and not too low). More popular spaces have higher prices and less popular spaces are cheaper, with price adjustments as needed.
 - An education campaign to inform motorists of their parking options.
 - Monthly permits for municipal parking lots, marketed to downtown commuters.
1. Additional revenue finances additional downtown area services, providing about \$1 million annually for increased policing and cleaning.

Urban Parking Restrictions (Martens, 2006)

A study comparing various cities found that:

- Many European cities restrict commercial building parking supply, ranging from 270 to 500 square meters of office floor area per parking space (approximately 0.2 to 0.37 parking spaces per 1,000 square feet).
- Management of on-street and off-street public parking spaces is a natural complement of restrictive norms with regard to private parking places.
- Restrictive parking policies and public transport improvements support each other, but major transit service improvements need not precede adoption of parking restrictions.
- Restrictive city center parking policies have been introduced without strict regulations preventing unwanted suburbanization of economic activities.
- These case studies suggest that parking restrictions will not have negative economic impacts if implemented in cities with a strong and vibrant economic structure.

Campus Parking Management (Isler, Hoel, Fontaine 2005)

A survey of university campuses indicate that many are converting parking lots to buildings, fewer are adding parking capacity, and many are implementing various parking and transportation management strategies in order to devote more campus land to academic facilities rather than parking lots. Typical parking management strategies include permits, meters, cash-out program, prohibitive policy for freshmen, and eligibility based on residential location. Annual permit fees varied by location of campus and location of a parking space within the campus. Various strategies are used to deal with spillover parking problems.

Lloyd District, Portland (<http://downtownaustin.com/downloads/RickWilliamsLloydTMA0509.pdf>)

The Lloyd District is a TOD in East of downtown Portland, Oregon, across Willamette River. As of 2008 it had 275 acres, 600+ businesses, 23,000 employees and 1,000 residential units. It has achieved the following:

- Reduced the number of parking spaces required in the area from 12,000 (conventional requirements) to 3,120 (actual requirements), reducing estimated parking facility costs from \$360 million to just \$94 million. The average built ratio of parking is 1.8 stalls per 1,000 SF, compared with 3.5+ for typical commercial development.
- Public transit service improvements. 3 new bus lines since 1997, rerouting of existing service to the commercial core, and a Fareless Square (area with free transit service).
- Over \$1.5 million annual private investment in transit program.
- Revenue sharing of meters and transit pass sales.
- Employee transit passes from 1,250 (1997) to 6,000+ (2008).
- Transit Commute Mode Splits from 21% (1997) to 41% (2008).
- Bicycle Mode Splits from 1% (1997) to 5% (2008).
- Pedestrian commute trips up 46% over three years.
- Commercial office vacancy rate 12% (2001) to 4% (2008)
- Over 1.75 million SF of new public/private development since 1995, no net increase in total parking supply (includes Convention Center expansion).

Parking Facility Design Guidelines (Toronto, 2007)

The city of Toronto developed parking facility design guidelines to deal with common urban design and environmental challenges found within and around surface parking lots. 'Greening' the surface parking lot involves:

- Planting trees.
- Providing good quality soil and generous landscaped areas.
- Enhancing pedestrian and cycling infrastructure.
- Managing stormwater on-site.
- Reducing the urban heat island effect.
- Using sustainable materials and technologies.

Less Parking, More Healthy Food (www.streetsblog.org/2009/06/19/less-parking-more-healthy-food) StreetBlog, Sarah Goodyear, June 19, 2009

We're taking another look at urban supermarket planning, specifically the issue of how to get quality food markets built in underserved neighborhoods (so-called food deserts) -- where people often walk or take transit to the store. They write about how cities like New York and Washington, DC, can encourage supermarket construction by relaxing onerous zoning requirements for parking spaces.

The New York Times mentioned that one of the strategies New York City is using to attract more supermarkets into food deserts is to change the city's zoning laws that would "free smaller supermarkets from having to supply parking spaces." Reducing or eliminating parking minimums for new development is good urbanism. But if it can help provide affordable, accessible, and nutritious food to low-income residents of the District -- which is already a District goal -- the planning commission has one more very good reason to wean us off of cars. The District is taking steps to achieve this. Anita Hairston, the Chief of Staff of the Office of Planning, assures me by e-mail that:

- Any commercial building (this would include supermarkets) located in the central employment area of the city and is connected to a Metrorail station can have their parking requirements reduced or eliminated.
- Any commercial buildings that are less than 800 feet from a Metrorail station can have their parking requirements reduced by one-quarter.
- Any planned unit development project (regardless of location) can work with staff in our office to propose

potential reduction or elimination of parking requirements.

San Francisco On-Street Parking Management and Pricing Study (www.sfcta.org/content/view/303/149)

The 2004 San Francisco Countywide Transportation Plan identified the need for better parking management at the neighborhood level. It called for improved on-street parking management through a variety of strategies to support policy goals and improve on-street parking conditions. In response the Transportation Authority undertook the *On-Street Parking*

Management and Pricing Study to assess on-street parking conditions and investigate innovative approaches for more efficiently managing San Francisco's curbside parking. The study:

- Reviews San Francisco's existing on-street parking management programs and neighborhood parking conditions.
- Considers various strategies for improved management of on-street spaces.
- Investigates the potential for using innovative technologies and approaches, including variable pricing of on-street parking, more widely to manage demand and increase availability.
- Discusses residential parking management issues and explore the use of potential new parking revenues to support neighborhood transportation enhancements.
- Describes peer city parking management case studies.
- Makes recommendations for comprehensive neighborhood parking management to improve parking conditions and support policy goals.

The study reached the following key conclusions:

Effective parking management requires a neighborhood-level approach. On-street parking management should be planned and coordinated at the neighborhood level, with attention to the tradeoffs associated with any strategy and the interactions between component parts of the parking supply (i.e., individual block faces and off-street supplies). Neighborhood-level parking management requires flexible approaches that can be tailored to an area's conditions, needs, and priorities, which must evolve over time to reflect changing land use and travel patterns.

Existing management strategies are ill-suited for confronting key parking challenges. On-street parking regulations have developed incrementally over time, such that many neighborhoods are subject to an uncoordinated management regime that is misaligned with parking conditions and management needs. Existing strategies cannot address parking availability when there is an imbalance between supply and demand.

The most promising management approach for addressing imbalances between supply and demand is pricebased regulation, which also has significant secondary benefits. Variable pricing of on-street spaces according to parking demand is a strategy to ensure sufficient availability, improve utilization, and value on-street space appropriately. Addressing availability—within the confines of finite supply in an urban environment—is the central purpose and benefit of parking pricing. Secondary benefits include a reduction in “cruising” behavior and the opportunity to reinvest new parking revenues in transportation improvements.

Underpriced parking represents a significant source of untapped revenue that could be dedicated to transit-first uses; attempts to close this pricing gap must be planned and executed carefully, in a manner that the public will understand and support. Given that on-street parking in many areas is currently minimally regulated, future revenue gains have the potential to be substantial. It is doubtful that the public will support widespread parking charge increases without a clear link to tangible transportation improvements in the city's neighborhoods. The “user fee” principle is also supported by providing a high-quality parking experience through improved payment options, real-time information, and flexible time limits. Currently, parking revenues are a crucial source of locally-generated and locally-controlled funding, which is prioritized to support Muni operations. Reinvestment of a portion of future new revenues will encourage neighborhood-level support for parking pricing, thus increasing the overall pool of funds from which transit stands to benefit.

Current parking policies contradict other planning objectives and warrant significant reform. Reforms to residential parking management are warranted to better value on-street space, create a more multimodal program, and provide more equitably distributed costs and benefits. Neighborhoods should have the ability to utilize pricing strategies to manage parking demand while returning benefits to the area in which revenues are collected.

The report made the following recommendations:

Re-balance the allocation of on-street spaces. The goal of re-balancing is to better accommodate varying demands within the confines of scarce supply. Examples of rebalancing include periodic consideration of the demand for commercial loading zones and evaluation of the appropriateness of various time limitations. This assessment should be done in cooperation with

and evaluation of the appropriateness of various time limitations. This assessment should be done in cooperation with neighborhood residents and merchants, and other strategies and tools should be considered along with conventional regulatory strategies.

Regulate unregulated or under-regulated spaces. Where warranted, currently metered areas could be expanded, or unregulated spaces could be otherwise regulated. For example, studies in the Glen Park and Balboa Park neighborhoods revealed a substantial number of unregulated spaces that contributed to parking shortages and low turnover; these issues have since been remedied or are in the process of being addressed. A technical evaluation is required to identify the best regulatory design (e.g., meter vs. time limit vs. color curb). Typically, meters have been confined to the downtown area and neighborhood commercial corridors (and some adjoining blocks). Extending metering hours into the evening (until 10:00 p.m., for example) is appropriate in those areas with evening parking generators, such as restaurants or nightlife, where turnover is desirable, provided that adequate enforcement can be provided. Extension of metering into evening hours can provide a significant benefit to local commercial activity, by prioritizing metered spaces during high demand periods for shorter-term uses (rather than overnight storage).

Reform residential parking permit management. The existing RPP program provides benefits to a small group—eligible permit holders that store their car(s) on-street during weekday middays.

Establish a policy on the use of new incremental parking revenue. SFMTA has not articulated a clear policy on the use of any revenue gains associated with implementation of demand-responsive pricing. It is important to affirm the policy of applying the revenues to parking improvements and transit-first uses. SFMTA should clarify this policy and allow for public review and input into this decision.

Share some portion of net new revenues with the areas in which the monies are collected. By investing in the neighborhoods affected by parking pricing, tangible benefits will accrue to the areas that are priced and local impacts are mitigated. The public will be skeptical of any program that simply provides incremental revenue to an opaque budget that funds programs across the entire city. Specifically, it is recommended that if demand-responsive pricing results in at least 50% growth in parking revenue in a neighborhood, at least 25% of the net new revenue should be returned directly to the area in which it was collected. The affected community should have an opportunity to provide input into the program of projects funded by the parking revenue. This will help generate support for pricing programs, as well as increase the overall pool of funds from which Muni stands to benefit.

Pursue data-driven pricing policy, in support of articulated performance objectives. Ongoing system monitoring is a crucial component of demand-responsive parking pricing. This monitoring and analysis facilitates ongoing management and operation of the system guided by street-level outcomes.

Adjust parking rates systematically. In order to be effective, demand-responsive pricing requires periodic adjustments to parking rates. These adjustments must be performed frequently enough to seek the desired availability target but not so frequently as to obscure the behavior response. Overly frequent rate changes are also likely to engender public consternation and confusion. Monthly adjustments are appropriate for the first several months of implementation in a given area to allow for program managers to find the necessary price structure to meet performance objectives. Following the initial period, less frequent adjustments (such as quarterly) are warranted.

Coordinate demand-responsive pricing implementations in metered areas with the regulations in place on unmetered blocks, including warranted expansions of metered areas. The implementation of demand-responsive pricing is a unique opportunity to better manage parking on a neighborhood or area level. Current policies create an artificial distinction between blocks designated as commercial and residential. As demand-responsive pricing is implemented in neighborhoods, an assessment of parking conditions in metered and unmetered blocks is necessary. This assessment may reveal a need to expand the metered areas and/or metered time periods as new payment technologies and pricing strategies are implemented.

A Recommended Approach to Neighborhood Management: Parking Benefit Districts

Pricing is the most efficacious means of managing on-street parking when occupancy routinely exceeds practical capacity. A *Parking Benefit District* (PBD) program could be made available to neighborhoods facing parking challenges, regardless of whether the neighborhood is currently covered by an RPP. The PBD program would incorporate the following components:

- *Allow neighborhoods to opt-in.* Neighborhoods could elect (through an adopted administrative process) to create a PBD. If the neighborhood is currently covered by an RPP, the PBD would replace the RPP (or applicable portion thereof).

- *Employ price-based regulation and associated elements.* Variable pricing is necessary to effectively manage on-street parking in high-demand neighborhoods. New technology would be deployed to allow for variable pricing, user information, and enhanced enforcement. The hours during which parking is priced would be evaluated and modified as necessary. Conventional strategies, such as provision of loading zones, would be reevaluated and adjusted appropriately.
- *Expand metering to areas with peak parking demands in excess of 85%.* All blocks with practical capacity issues warrant price-based management. Expansion of metering into areas traditionally designated as “residential” could potentially be paired with an exemption for preferential permit holders (priced at higher than current rates, as discussed above) at all or some times of day.
- *Provide parking privileges to preferential permit holders at an appropriate price point.* Residents of the neighborhood would be permitted to purchase monthly permits for on-street parking on residential streets in the neighborhood. Permits should be priced at a high enough level to appropriately value on-street space and reduce demand for on-street parking (by encouraging offstreet parking, reduced vehicle ownership, etc.).
- *Invest a portion of net new revenues within the neighborhood and involve the community in prioritizing expenditures.* This is the central element of PBDs. By pairing the PBD concept with price-based regulation there is even greater opportunity for neighborhoods to reap the benefits of pricing—through improved parking reductions and a reduction in traffic volumes, as well as through funding available to invest in local transportation projects.
- *Recognize the limits of fully addressing peak demand in residential areas.* In many neighborhoods, demand for overnight on-street parking is especially high. Overnight parking demand is likely to be managed to some extent by higher preferential permit fees, but even a price-based PBD program must recognize the limits of using price during very late hours when enforcement is more of a challenge. It is important to note that on-street occupancies in excess of 85 percent may be more tolerable during the late-night periods, when traffic volumes are light, and businesses and other activities are less dependent on prioritizing short-term parking and ensuring sufficient availability.

These strategies represent a significant change for any neighborhood. As such, neighborhoods should be involved in choosing the amount and type of price-based regulation and supporting strategies that are desired in a given area. Because more aggressive strategies will provide more revenue, higher levels of benefit should be returned to those neighborhoods that are most willing to proactively manage on-street parking through price-based regulation and restructured residential permit parking.

Redeveloping Transit-Station Area Parking Lots (CNT, 2006)

The study, *Paved Over: Surface Parking Lots or Opportunities for Tax-Generating, Sustainable Development?*

(www.cnt.org/repository/PavedOver-Final.pdf), evaluates the potential economic and social benefits if surface parking lots around rail transit stations were developed into mixed-use, pedestrian friendly, transit-oriented developments. The analysis concludes that such development could help to meet the region’s growing demand for affordable, workforce, senior, and market rate housing near transit, and provide a variety of benefits including increased tax revenues and reduced per capita vehicle travel. The parking lots in nine case studies are estimated to be able to generate 1,188 new residential units and at least 167,000 square feet of new commercial space, providing additional tax revenues, plus significant reductions in trip generation and transportation costs compared with more conventional development.

Parking Policy Reforms (www.transalt.org/files/newsroom/reports/suburbanizing_the_city.pdf)

The report, *Suburbanizing the City: How New York City Parking Requirements Lead to More Driving* (Weinberger, Seaman and Johnson, 2008) recommends the following reforms for more sustainable parking management in New York City:

1. Fully assess the amount of existing and planned off-street parking.
 - Inventory existing and planned off-street parking. This will provide a baseline to assess the impact of additional parking.
 - Measure how much driving is created by new off-street parking.
 - Determine parking demand based on the assumption that off-street parking has a cost.
 - Measure the effect of increases in parking growth on neighborhood and citywide traffic congestion.
2. Consider measures to significantly reduce required parking.
 - Unbundle the price of parking from the cost of new residences

- Unbundle the price of parking from the cost of new residences.
- Eliminate minimum parking requirements.
- Reclassify minimum parking requirements as maximums.
- Peg the maximum parking requirement to the proximity to transit.
- Establish impact fees for new parking spaces.
- Prohibit curb cuts on key pedestrian and transit streets.
- Incentivize car-sharing spaces in new development.
- An interim strategy is to simply convert existing minimums to maximums.

3. Revise environmental laws to fully account for parking impacts.

- Revise CEQRA and the special permitting process so that the cumulative impact of new parking on neighborhoods is considered.

4. Stop directly subsidizing new parking and freeze special permits

- Place a moratorium on issuing new special parking permits in Manhattan's Clean Air Act Zone (the Manhattan Core) until an inventory of existing and planned parking is completed, and a study of the cumulative environmental impact of new parking is conducted.
- Freeze new city subsidies for building parking until a complete accounting of the extent and environmental impact of those subsidies is completed.
- Eliminate minimum parking requirements for affordable housing developments.

Seoul Parking Enforcement (<http://english.seoul.go.kr>)

Employees at the city of Seoul, South Korea TOPIS (Transport Operations and Information Service) traffic control center monitor major arterials using a closed circuit television network. If a vehicle stops or parks illegally, they record a time-stamped image of the vehicle and its license plate. After five minutes, if the vehicle has not moved, a second set of images are recorded, the license number automatically read using optical character recognition (OCR), and a parking ticket is sent to the motorist. After another ten minutes a tow truck is dispatched to remove the vehicle. This system has greatly reduced traffic delay and accident risk caused by illegally parked vehicles at relatively low cost and with few challenges (since motorists are sent photographic images of their illegally-parked vehicles).

Curbside/On-Street Parking Best Practices (Weinberger, Kaehny and Rufo 2009)

- *Enforcement:* Automated scanning enforcement as employed in Chicago, Illinois; parts of Virginia and Santa Barbara, California appears transformative, though in its early stages. Other technology, especially wireless, handheld devices with cameras have made traditional enforcement more efficient; as has software which automatically issues and tracks parking summonses.
- *Pricing Policy:* Variable or peak hour metering in which the price is set based on a curbside occupancy target of under 85% is a logical and consistent way of managing a congested curb. San Francisco's SFpark is the largest application of this approach, which is also employed in Redwood City, California, and in a flexible form by New York City's Parksmart. Another effective practice is to both restrict curb access to commercial vehicles and meter them. New York City does this and adds an escalating meter fee of \$2, \$3, \$4/hour to encourage short stays, high turnover and faster deliveries.
- *Payment Medium and Meters:* Pay-by-phone is growing rapidly in popularity. Industry experts believe that remote payment will eventually replace meters. In the meantime, the state of the art meters are solar powered, multi-space meters which are in wide use across the U.S.
- *Building support for metering via Parking Benefit Districts and revenue return.* In 20-30 special parking districts, in cities as varied as Boulder, Colorado, Los Angeles and San Diego, meter revenues support streetscape improvements to attract more retail business.

Montreal Parking Space Tax (<http://spacingmontreal.ca/2010/01/17/the-parking-lot-tax>)

The 2010 City of Montreal budget, one of the new measures it includes is a special tax on downtown parking spaces. Parking lots in residential areas are taxed at a lower rate than in the central business district (CBD), and surface parking is taxed at a higher rate than structured parking. The charges range from \$4.95 per square metre for neighborhood structured parking up to \$19.80 per square metre for CBD surface parking, or \$75 to \$300 annually for a three by five meter space. The city expects it to collect around \$20 million dollars per year which is earmarked for improving public transit.

[Nottingham Workforce Parking Levy \(www.nottinghamcity.gov.uk/index.aspx?articleid=2570\)](http://www.nottinghamcity.gov.uk/index.aspx?articleid=2570)

A *Workplace Parking Levy* (WPL) is a charge on employers that provide free or relatively cheap workplace parking. It is being introduced in the United Kingdom as a way to generate revenues and discourage automobile commuting. Starting April 2012 the City of Nottingham plans to implement a WPL on employers that provide 11 or more liable parking places. This is being implemented as an alternative to a road user charge. All WPL revenue will be invested into improving public transport. The pricing itself is expected to have only a small congestion reduction impact, since only a small portion of the fee is expected to be passed onto commuters, but the additional transit service funding is predicted to increase City Centre public transport travel by over 20% and reduce area traffic growth from 15% to only 8%, which should provide significant congestion reduction benefits.

[GreenTRIP \(www.transformca.org/GreenTRIP\)](http://www.transformca.org/GreenTRIP)

GreenTRIP is a Traffic Reduction + Innovative Parking certification program for new residential and mixed use developments. It rewards projects that reduce traffic and greenhouse gas emissions. GreenTRIP expands the definition of green building to include robust transportation standards for how people get to and from green buildings. Each certified project receives a *Project Evaluation Report* which describes the project location, details and inventories how the project meets GreenTRIP standards. This typically includes features such as an [Accessible](#) and multi-modal location (near shops and other services, good neighborhood walkability, near public transit), unbundled parking (parking spaces rented separately from building space), [Carshare services](#), discounted [Public Transit](#) passes, and [Affordable housing](#).

The GreenTRIP program provides the following support:

- *Tailored Traffic Reduction Strategies* – Experts work with developers, designers and operators to identify the most appropriate transportation and parking management strategies in a particular situation.
- *Public Hearing Testimony* - GreenTRIP staff will explain the traffic and greenhouse gas reducing benefits achieved by GreenTRIP Certified projects to decision-makers and the public.
- *Market Differentiation* - Use of the GreenTRIP name and logo in promotional materials, and a plaque to mount on the project when built.

As of March 2010 the following projects were certified:

The Crossings (www.transformca.org/files/SLCrossingsProjEvalRpt.pdf)

Parker Place (www.transformca.org/files/ParkerPlace_ProjEvalRpt.pdf)

Station Park Green (www.transformca.org/files/StationParkGreenProjEvalRpt.pdf)

The Ohlone (www.transformca.org/files/OhloneProjEvalRpt.pdf)

["Parklets" Pavement to Parks \(http://sfpavementtoparks.sfplanning.org\)](http://sfpavementtoparks.sfplanning.org)

The City of San Francisco is converting on-street parking and unused bits of streetspace into "parklets," small plazas and seating areas, by painting or treating the asphalt, placing protective barriers along the periphery, and installing moveable tables and chairs.

Why Do We Force Bars To Provide Parking? Drinking and mandatory parking shouldn't mix

Eric de Place, Sightline Institute (http://daily.sightline.org/daily_score/archive/2011/04/08/why-are-bars-forced-to-encourage-driving)

The front page of the *Seattle Times* has a story about a driver convicted of drunk driving 12 times, now going on 13. It's a tragic and horrifying story. It should also be an opportunity for broadening our analysis of the problem.

Serial drunk driving tends to be treated as either a failure of the judicial system or as a problem of addiction, both of which are partially right. We might also take a closer look at the design of our cities, because they help create this kind of thing. If we're going to sell alcohol widely -- a notoriously powerful drug that impairs motor skill and judgment, and that is lethal in large quantities -- then perhaps it's not a great idea for us to require by law that alcohol purveyors provide parking. But we do.

Seattle legally mandates parking at bars. So does Portland. So does virtually every community in North America.

Let that sink in. We don't let bar owners decide whether to provide parking for patrons or how much -- we force them to do it and we spell out the quantities. And in most every community in the Northwest, it's provided gratis for patrons. It's probably the single best example of land use code that is clearly not in the public interest, and yet it is nearly ubiquitous.

Luckily, reform is easy. All you need is a black magic marker in the hands of your city council. Here's how the proceedings might go:

Council president: "Please turn to the section of the land use code on "parking minimums at drinking establishments."

[sound of paper rustling]

Council president: "Okay, strike that section out. Next order of business?"

Or if we wanted to get really serious about discouraging drunk driving, we might add something back into the code: a prohibition against providing parking at bars.

Right Size Parking Project (<http://metro.kingcounty.gov/up/projects/right-size-parking>)

King County's *Right Size Parking Project* is developing practical tools for more accurately calculating parking demand, taking into account geographic and economic factors. The study found that parking demand per unit declines with increased transit proximity, local population and employment density, and parking price (the amount that residents must pay extra, if any, for a parking space), and increases with rents, unit size and number of bedrooms. The resulting model can be used to determine the parking supply needed in a particular development.

Seattle Parking Planning Tools (www.seattle.gov/transportation/parking/parkingplanning.htm)

King County's **Right Size Parking Project** (www.rightsizeparking.org) has developed practical tools for more accurately calculating parking demand, taking into account geographic and economic factors. The study found that parking demand per unit declines with increased transit proximity, local population and employment density, and parking price (the amount that residents must pay extra, if any, for a parking space), and increases with rents, unit size and number of bedrooms. The resulting model can be used to determine the parking supply needed in a particular development.

Underground Parking Profitably Converted To Storage

The *Broadway Store-All* (www.weblocal.ca/broadway-store-all-vancouver-bc.html) in Vancouver, British Columbia demonstrates that excess parking spaces have other profitable uses. This building was originally constructed with an extra 28 underground parking spaces to serve a nearby restaurant, but the restaurant soon found that these were not needed. In response, the building operator obtained municipal approval to convert parking spaces into commercial storage lockers. They constructed 28 wooden lockers, each with a sprinkler head, and installing heaters and fans for climate control. The lockers rent for about \$250 per month, more than twice the rate charged for parking spaces in that area. They are mostly used by nearby businesses to store archive files. Renters have access to the facility Tuesday through Saturday. The facility is fully occupied although virtually nothing is spent on advertising.

Parking Management in Rapidly Developing Cities

The *Parking Guidebook for Chinese Cities* (Weinberger, et al. 2013) identifies international strategies for efficiently managing parking resources in urban areas that are experiencing increased motorization and perceived parking shortages, in ways that support strategic, long-term goals. A special section focusing on Guangzhou serves as a case study of one particular Chinese city

coming to grips with how to approach growing motorization and the seemingly unyielding demand for parking in the best possible way. It recommends these eight strategies:

1. Establish a centralized management of all parking activities.
2. Implement performance standards for parking management.
3. Use Appropriate Technology for Payment and Data Collection.
4. Reduce or eliminate parking minimums, establish maximum allowances or area-wide parking caps.
5. Decouple land use from off-street parking requirements and implement shared parking.
6. Price or tax off-street parking according to market cost.
7. Enhance enforcement with electronic technology and physical design.
8. Provide clear information on parking supply to ensure its effective use.

[San Francisco Regional Value Pricing Parking Program \(http://regionalparking.mtc.ca.gov\)](http://regionalparking.mtc.ca.gov)

The Value Pricing Pilot (VPP) Parking Pricing Regional Analysis Project is part of Metropolitan Transportation Commission's (MTC) 2014-2015 Parking Initiative. The Project uses case studies, academic research, policy analysis and data analysis to address the relationship between parking pricing, policies, parking supply, and parking demand in cities around the Bay Area. As part of this project, eleven policy questions are addressed through a range of best practices, case studies, technical analysis, and expert panel review.

Key Findings:

1. Most of the study locations have significant amounts of unused parking, even during the peak use time. While there is excess parking demand and usage on particular streets during the peak in some locations, there are significant amounts of unused parking spaces in lots and structures within a few blocks in almost all the locations at almost all times.
2. Many locations do not have pricing policies that effectively balance parking demand across their area. There is a lack of coordination of prices between on-street and off-street parking. Prices for on-street parking are typically lower, or free, while lots and structures tend to have higher prices. This commonly results in drivers double parking and searching for on-street parking spaces, clogging up local business districts and resulting in excess vehicle miles of travel, while structures go underutilized.
3. Many parking requirements are not closely aligned with demand of the relevant population in the local context. Households that are younger or lower income and who have good walk/bike and transit access have lower automobile ownership rates. High parking requirements make housing less affordable. There is some movement toward reformed parking requirements based more on local populations, local land uses, transit access, and prices; regional support is valued.
4. When parking structures are included in transit projects, there is often a lack of analysis of relative cost and effectiveness of alternative modes of access and pricing on the need for or appropriate size of a structure. While parking structures can be a component of the transit system, their relative cost effectiveness and usefulness depends on local land use and transportation conditions. In some cases high density housing would provide higher transit ridership and more revenue to the transit agency.
5. Employee programs that charge for parking are the most effective in reducing driving to work. However, many employers are reluctant to charge employees for parking. Parking cash-out is an attempt to put charging for parking into a more favorable perspective, but is not being implemented in the Bay Area. Programs that provide subsidies for alternative modes are more expensive and less effective than charging for parking, but appear to be more acceptable; combinations of charging for parking and subsidies for other modes may be most effective and acceptable.
6. Regional parking policies are a logical policy approach as part of the Sustainable Community Strategy (SCS), as per SB 375. Regional policies can be effective by providing expertise, supporting local analyses and implementation, conditioning funds on local adoption of appropriate parking policies, new innovative programs and increased scrutiny on the use of regional funds.

The study used these results to develop recommended policy reforms and programs to support more efficient parking management.

[The High Price of Parking: Housing Costs Inflated by Minimum Requirements for Parking Spaces](#)

New York Times, 12 Nov. 2006

Spawned by suburban sprawl in the 1950s, local requirements for the minimum of one or more parking spaces per unit have abetted car dependency and - letting builders fold the \$30,000-\$40,000 per slot into unit prices - pushed housing costs especially high in big cities, some of which are now eliminating or revising parking space minimums to boost transit and lower housing costs, with University of California-Los Angeles Professor Donald Shoup saying, "In the future, we will look back at minimum parking requirements as a colossal mistake."

Author of "The High Cost of Free Parking" (American Planning Association, 2005), Professor Shoup tells *New York Times* writer Linda Baker that with its expensive housing and cheap parking, the nation "got it the wrong way around," but the change is under way. Condominiums without parking are already common in Manhattan and a few other East Coast city cores, the writer reports, but downtown Los Angeles still mandates 2.25 parking spaces for any unit, and Houston requires 1.33 spaces for a one-bedroom and 2 spaces for a three-bedroom, with a committee reconsidering these minimums along the light-rail line.

Portland, the writer continues, eliminated central city parking minimums six years ago; Seattle reduced the parking minimums for multifamily housing in three major commercial corridors last year and may eliminate them in six core districts and near light-rail stations next month; and San Francisco, which gained more downtown housing in the last few years than in the previous 20, replaced downtown minimums with a maximum of 0.75 parking space per unit.

"The city's modus operandi is 'transit first,'" stresses city planner Joshua Switzky, pointing out that now downtown builders must "unbundle" the price of parking from the price of a condo and adding, "Buyers aren't obligated to buy a parking space, and

developers don't have the incentive to build spaces they can't sell."

In downtown Seattle's neighborhood of Belltown, where the average condo has 1.5 parking spaces, the 251-condo Moda project, now under way, includes 83 units without parking, 125 with access to permit parking, and only 43 with assigned spaces, each priced at about \$30,000 more than the others, and all 251 sold within a week.

The same happened with 24 condos without parking in the 261-unit Civic project under construction near bus and light-rail stops six blocks from downtown Portland. The Gerding/Edlen Development Company "decided to test the water and see if there was a market for units without parking spaces," says project manager Tom Cody. "We're always looking for ways to promote smart growth."

European Parking Management (Kodransky and Hermann 2011)

European cities are reaping the rewards of innovative parking policies, including revitalized town centers; big reductions in car use; drops in air pollution and rising quality of urban life, according to *Europe's Parking U-Turn: From Accommodation to Regulation*, published by the Institute for Transportation and Development Policy. The report examines European parking over the last half century, through the prism of ten European cities: Amsterdam, Antwerp, Barcelona, Copenhagen, London, Munich, Paris, Stockholm, Strasbourg and Zurich. It found:

- European cities are ahead of the rest of the world in charging rational prices for on-street parking. In Paris, the on-street parking supply has been reduced by more than 9% since 2003, and of the remaining stock, 95% is paid parking. The result, along with other transport infrastructure improvements, has been a 13% decrease in driving.
- Parking reforms are becoming more popular than congestion charging. While London, Stockholm, and a few other European cities have managed to implement congestion charging, more are turning to parking. Parking caps have been set in Zurich and Hamburg's business districts to freeze the existing supply, where access to public transport is easiest.
- Revenue gathered from parking tariffs is being invested to support other mobility needs. In Barcelona, 100% of revenue goes to operate Bicing—the city's public bike system. Several boroughs in London use parking revenue to subsidize transit passes for seniors and the disabled, who ride public transit for free.
- Parking is increasingly linked to public transport. Amsterdam, Paris, Zurich and Strasbourg limit how much parking is allowed in new developments based on how far it is to walk to a bus, tram or metro stop. Zurich has made significant investments in new tram and bus lines while making parking more expensive and less convenient. As a result, between 2000 and 2005, the share of public transit use went up by 7%, while the share of cars in traffic declined by 6%.

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This Encyclopedia is produced by the Victoria Transport Policy Institute to help improve understanding of Transportation Demand Management. It is an ongoing project. Please send us your comments and suggestions for improvement.

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Victoria Transport Policy Institute

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 1250 Rudlin Street, Victoria, BC, V8V 3R7, CANADA
 Phone & Fax 250-360-1560
 "Efficiency - Equity - Clarity"

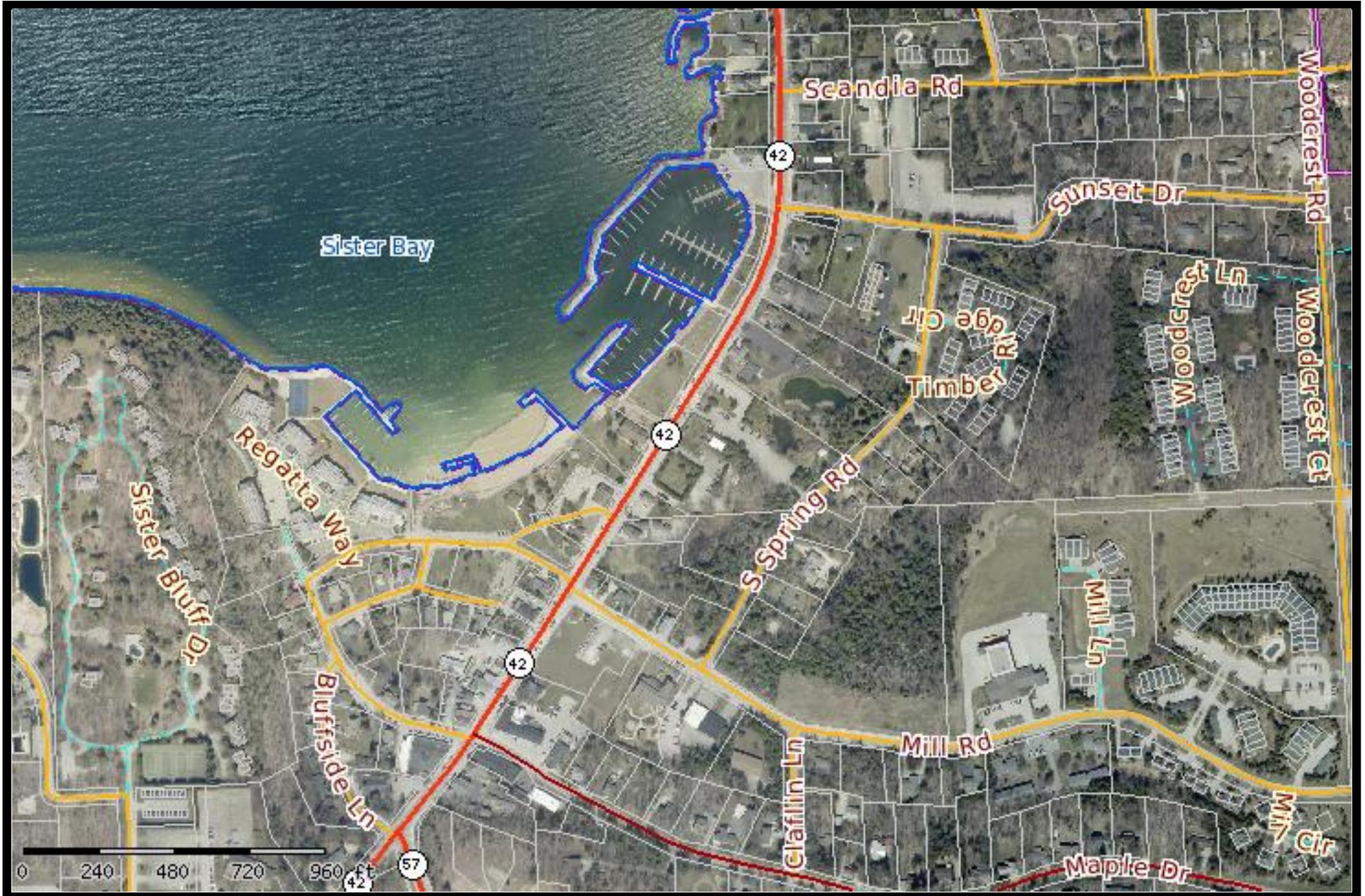
Map

Printed 11/23/2016 courtesy of Door County Land Information Office

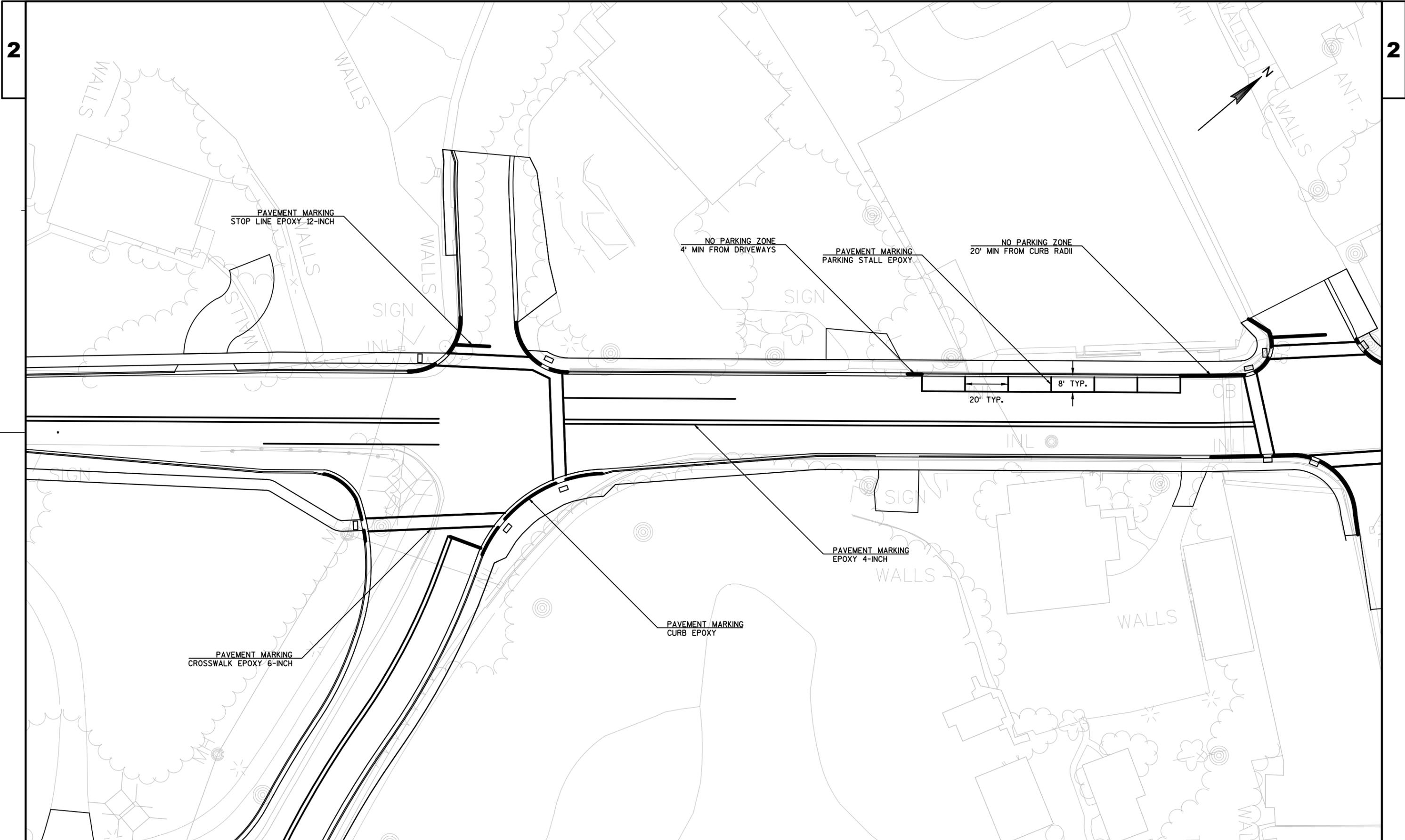
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(//www.co.door.wi.gov)

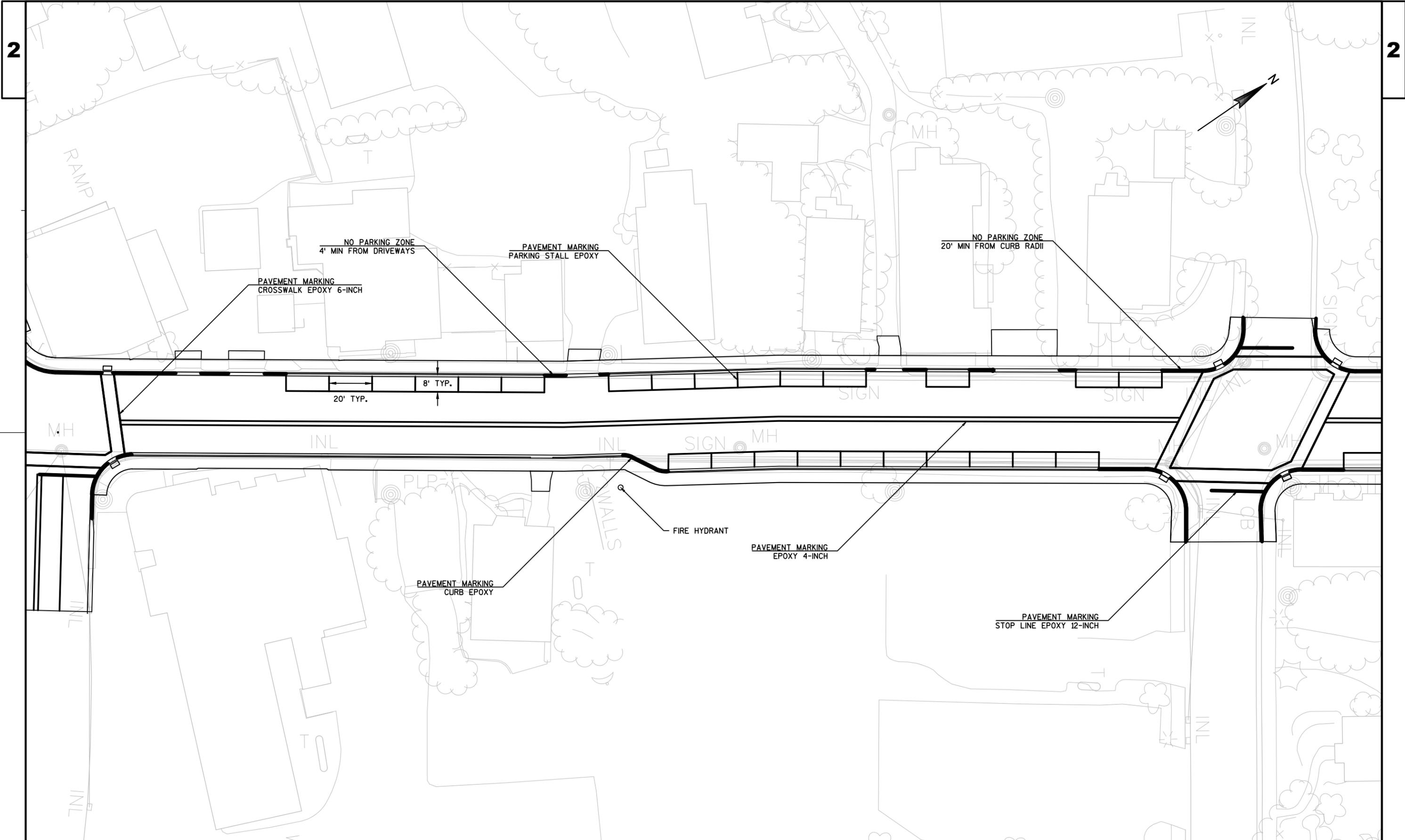


38
Door County, Wisconsin
... for all seasons!

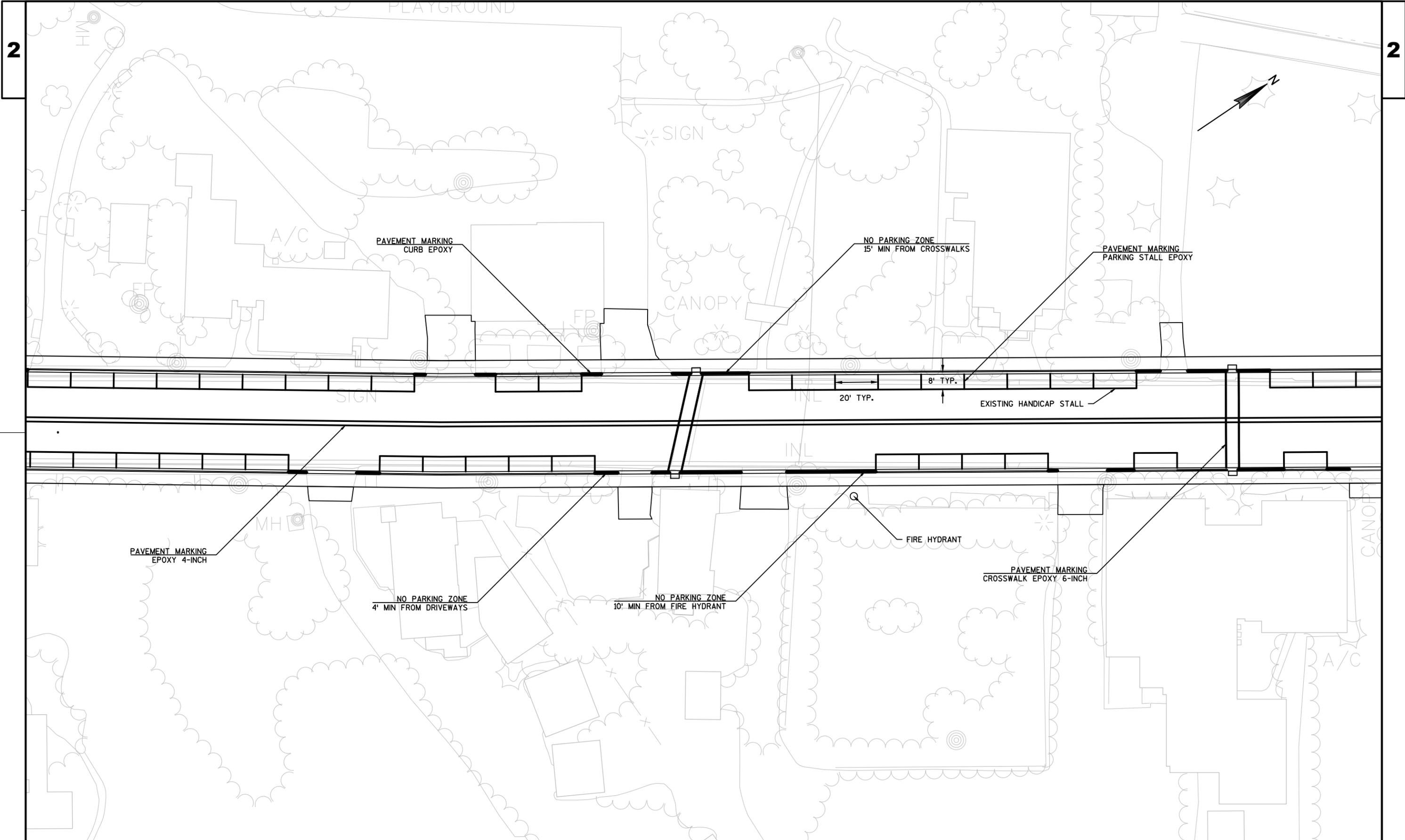


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PROJECT NO: 4610-06-71	HWY: STH 42	COUNTY: DOOR	PAVEMENT MARKING	SHEET E
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2

2

PROJECT NO: 4610-06-71

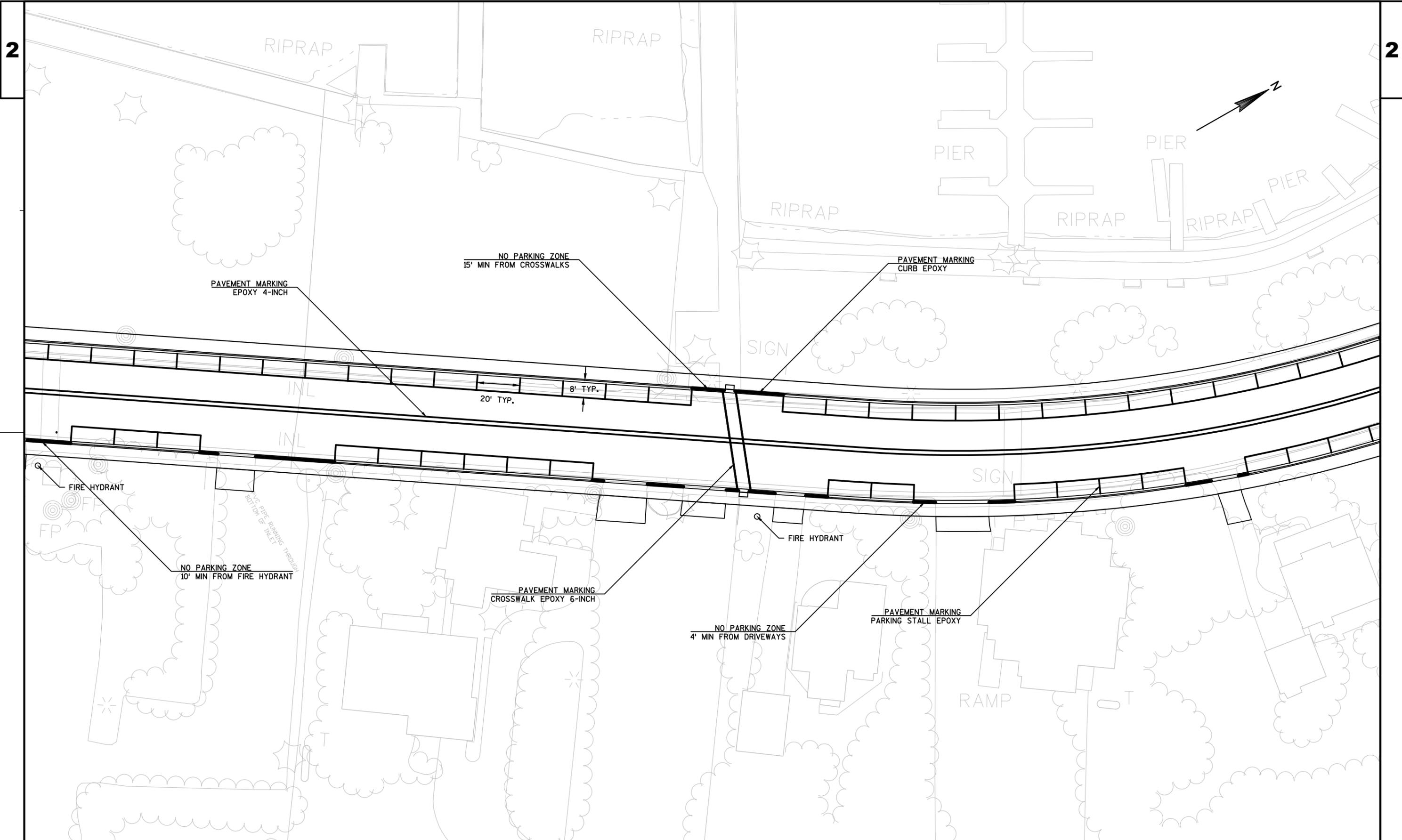
HWY: STH 42

COUNTY: DOOR

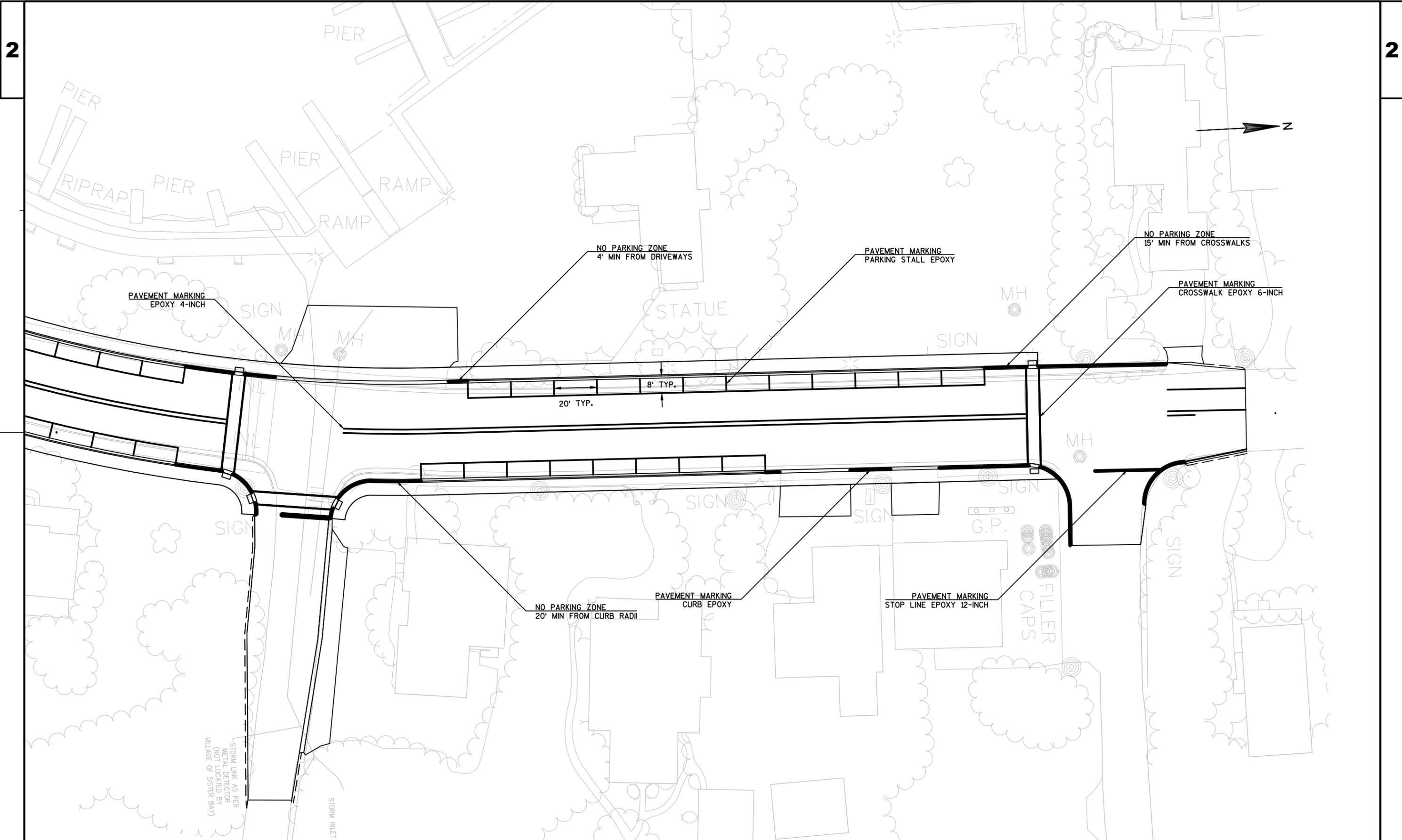
PAVEMENT MARKING

SHEET

E



PROJECT NO: 4610-06-71	HWY: STH 42	COUNTY: DOOR	PAVEMENT MARKING	SHEET E
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PROJECT NO: 4610-06-71

HWY: STH 42

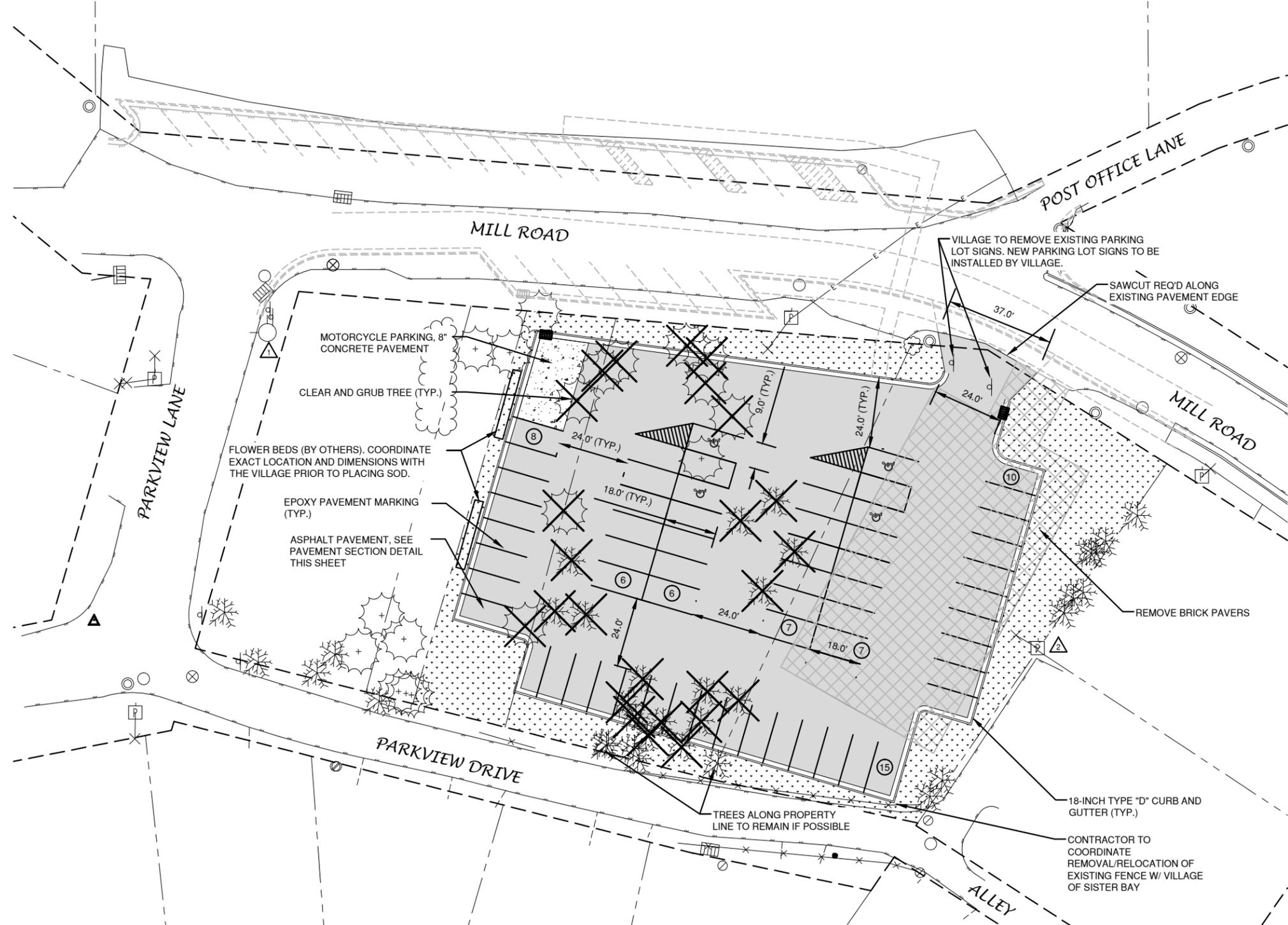
COUNTY: DOOR

PAVEMENT MARKING

SHEET

E

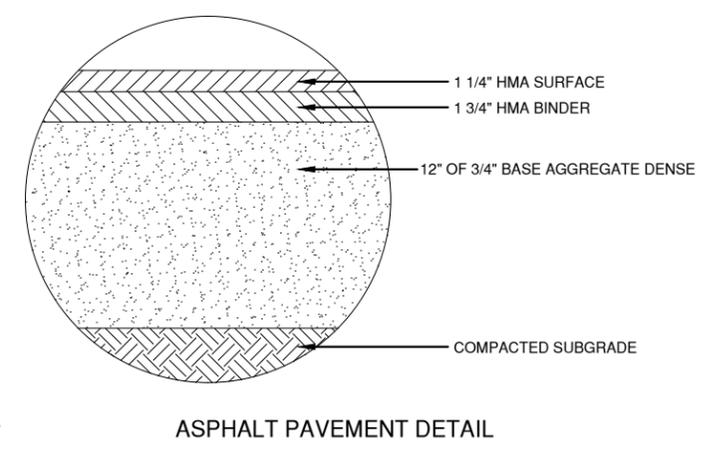
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FIELD VERIFY BENCHMARKS FOR ACCURACY.			
NO.	DESCRIPTION	EL.	
1	TAGBOLT ON HYDRANT	590.03	
2	NAIL IN POWER POLE #3128-5L79	590.73	

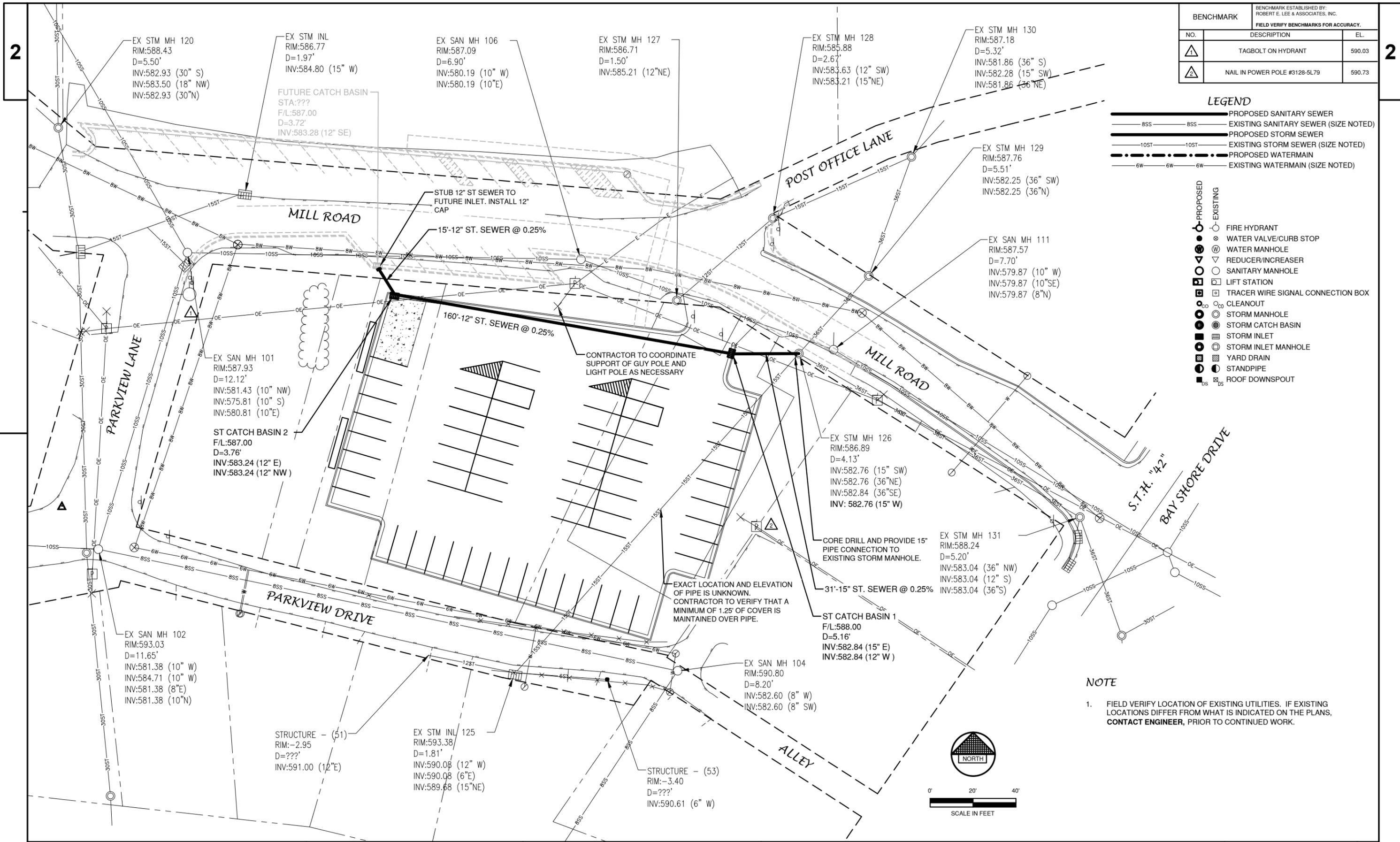


- LEGEND**
- CONCRETE PAVEMENT
 - ASPHALT PAVEMENT
 - REMOVE BRICK PAVERS
 - LANDSCAPE AREA
 - GREEN SPACE
 - PROPOSED 18" CURB & GUTTER (UNLESS OTHERWISE NOTED)
 - PROPOSED SHEDDING CURB & GUTTER
 - TRAFFIC FLOW ARROW
 - HANDICAPPED PARKING
 - INDICATES NUMBER OF PARKING STALLS
- *NOTE: ALL CURB RADII AND DIMENSIONS ARE TO THE FACE OF CURB.

NOTE
ALL AREAS DESIGNATED AS "GREEN SPACE" OR "LAWN", SHALL BE TOPSOILED TO A DEPTH OF 6 INCHES AND SODDED. AREA TO BE RAKED FREE OF STONES AND CLUMPS.

PARKING DATA
TOTAL PARKING SPACES PROVIDED = 59 + 8 MOTORCYCLES
HANDICAP ACCESSIBLE PARKING SPACES = 4





BENCHMARK		BENCHMARK ESTABLISHED BY: ROBERT E. LEE & ASSOCIATES, INC.
FIELD VERIFY BENCHMARKS FOR ACCURACY.		
NO.	DESCRIPTION	EL.
△	TAGBOLT ON HYDRANT	590.03
△	NAIL IN POWER POLE #3128-5L79	590.73

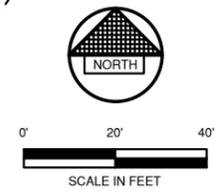
LEGEND

	PROPOSED SANITARY SEWER
	EXISTING SANITARY SEWER (SIZE NOTED)
	PROPOSED STORM SEWER
	EXISTING STORM SEWER (SIZE NOTED)
	PROPOSED WATERMAIN
	EXISTING WATERMAIN (SIZE NOTED)

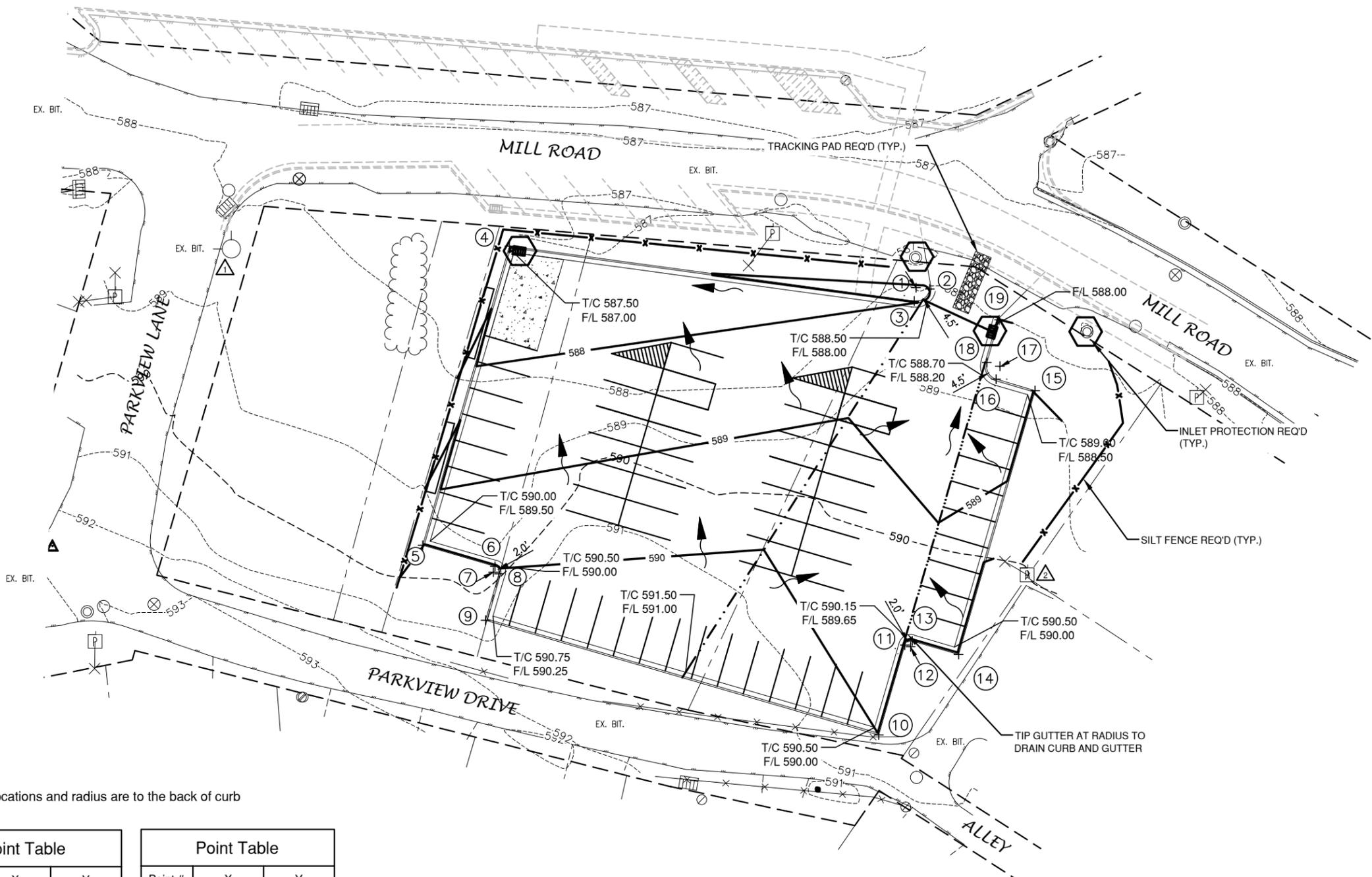
- PROPOSED**
- FIRE HYDRANT
 - WATER VALVE/CURB STOP
 - WATER MANHOLE
 - REDUCER/INCREASER
 - SANITARY MANHOLE
 - LIFT STATION
 - TRACER WIRE SIGNAL CONNECTION BOX
 - CLEANOUT
 - STORM MANHOLE
 - STORM CATCH BASIN
 - STORM INLET
 - STORM INLET MANHOLE
 - YARD DRAIN
 - STANDPIPE
 - ROOF DOWNSPOUT
- EXISTING**
- FIRE HYDRANT
 - WATER VALVE/CURB STOP
 - WATER MANHOLE
 - REDUCER/INCREASER
 - SANITARY MANHOLE
 - LIFT STATION
 - TRACER WIRE SIGNAL CONNECTION BOX
 - CLEANOUT
 - STORM MANHOLE
 - STORM CATCH BASIN
 - STORM INLET
 - STORM INLET MANHOLE
 - YARD DRAIN
 - STANDPIPE
 - ROOF DOWNSPOUT

NOTE

1. FIELD VERIFY LOCATION OF EXISTING UTILITIES. IF EXISTING LOCATIONS DIFFER FROM WHAT IS INDICATED ON THE PLANS, CONTACT ENGINEER, PRIOR TO CONTINUED WORK.



BENCHMARK		BENCHMARK ESTABLISHED BY: ROBERT E. LEE & ASSOCIATES, INC. FIELD VERIFY BENCHMARKS FOR ACCURACY.
NO.	DESCRIPTION	EL.
1	TAGBOLT ON HYDRANT	590.03
2	NAIL IN POWER POLE #3128-5L79	590.73



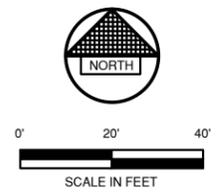
LEGEND

	T/C 999.99	TOP OF CURB ELEVATION
	F/L 888.88	FLOW LINE ELEVATION
	S/W 666.66	TOP OF SIDEWALK ELEVATION
	E/P 555.55	EDGE OF PAVEMENT ELEVATION
	R/W 444.44	TOP OF RETAINING WALL ELEVATION
	333.33	GROUND ELEVATION
		DRAINAGE SWALE
		DRAINAGE DIVIDE
		SILT FENCE
		BALE DITCH CHECK
		FLOW ARROW
		TRACKING PAD
		INLET PROTECTION

NOTE: Points locations and radius are to the back of curb

Point #	X	Y
1	559614.39	287682.35
2	559618.95	287681.90
3	559613.79	287677.89
4	559479.36	287696.09
5	559450.53	287597.00
6	559474.53	287590.02
7	559473.97	287588.10
8	559475.90	287587.54
9	559471.43	287572.18
10	559602.01	287534.18

Point #	X	Y
11	559610.67	287563.95
12	559612.59	287563.39
13	559613.15	287565.31
14	559628.51	287560.84
15	559653.93	287648.22
16	559640.97	287651.99
17	559642.23	287656.31
18	559637.91	287657.57
19	559642.01	287671.66



EROSION CONTROL

ALL EROSION CONTROL PRACTICES INDICATED ON THIS PLAN ARE APPROXIMATE LOCATIONS ONLY. THE ACTUAL SITE MAY REQUIRE MORE OR LESS EROSION CONTROL DEPENDING ON THE CURRENT CONDITION OF THE SITE.

1. SILT FENCE IS REQUIRED DOWNSLOPE OF ANY DISTURBED LAND THAT MAY CARRY SEDIMENTS OFF SITE.
2. A TRACKING PAD IS REQUIRED AT ANY INGRESS/EGRESS LOCATION, WHERE SEDIMENT MAY BE TRACKED OFF-SITE.
3. PROPER INLET PROTECTION SHALL BE USED DEPENDING ON THE INLET TYPE.
4. ALL NECESSARY SITE DEWATERING SHALL BE PERFORMED IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1061.

CLEAR AND GRUB

LOCATION	201.0120 CLEARING ID	201.0220 GRUBBING ID
MILL ROAD PARKING LOT	12	12
MILL ROAD PARKING LOT	8	8
MILL ROAD PARKING LOT	12	12
MILL ROAD PARKING LOT	12	12
MILL ROAD PARKING LOT	12	12
MILL ROAD PARKING LOT	18	18
MILL ROAD PARKING LOT	8	8
MILL ROAD PARKING LOT	8	8
MILL ROAD PARKING LOT	8	8
MILL ROAD PARKING LOT	12	12
MILL ROAD PARKING LOT	18	18
MILL ROAD PARKING LOT	12	12
MILL ROAD PARKING LOT	12	12
MILL ROAD PARKING LOT	8	8
MILL ROAD PARKING LOT	12	12
MILL ROAD PARKING LOT	8	8
MILL ROAD PARKING LOT	8	8
MILL ROAD PARKING LOT	8	8
MILL ROAD PARKING LOT	6	6
MILL ROAD PARKING LOT	6	6
MILL ROAD PARKING LOT	6	6
MILL ROAD PARKING LOT	8	8
MILL ROAD PARKING LOT	8	8
MILL ROAD PARKING LOT	12	12
MILL ROAD PARKING LOT	8	8
MILL ROAD PARKING LOT	8	8
MILL ROAD PARKING LOT	8	8
UNDISTRIBUTED	34	34
TOTAL	300	300

REMOVALS

LOCATION	SPV.0165.03 REMOVING BRICK PAVERS SF
MILL ROAD PARKING LOT	7050
TOTAL	7,050

CONCRETE PAVEMENT ITEMS

LOCATION	415.0080 CONCRETE PAVEMENT 8-INCH SY
MILL ROAD PARKING LOT	60
TOTAL	60

EARTHWORK SUMMARY

LOCATION	205.0100 EXCAVATION COMMON CY	205.0500 EXCAVATION BELOW SUBRAGE CY	COMMENTS
MILL ROAD PARKING LOT	1,350	-	
UNDISTRIBUTED	75	25	
TOTAL	1,425	25	

AGGREGATE

LOCATION	305.0115 BASE AGGREGATE DENSE 3/4- INCH CY	COMMENTS
MILL ROAD PARKING LOT	900	
TOTAL	900	

HMA

LOCATION	455.0122 ASPHALTIC MATERIAL PG64-34 TON	460.1101 HMA PAVEMENT TYPE E-1 TON
MILL ROAD PARKING LOT	22	410
UNDISTRIBUTED	2	20
TOTAL	24	430

CURB AND GUTTER

LOCATION	601.0405 18-INCH TYPE D LF
MILL ROAD PARKING LOT	600
TOTAL	600

SAWCUTTING

LOCATION	690.0150 SAWING ASPHALT LF
MILL ROAD PARKING LOT	40
TOTAL	40

RESTORATION

LOCATION	625.0100 TOPSOIL SY	631.1000 SOD LAWN SY	COMMENTS
MILL ROAD PARKING LOT	650	650	
TOTAL	650	650	

EROSION CONTROL

LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.7015 INLET PROTECTION TYPE C EACH	628.7560 TRACKING PAD EACH
MILL ROAD PARKING LOT	270	270	4	1
TOTAL	270	270	4	1

PAVEMENT MARKING

LOCATION	647.0656 *PAVEMENT MARKING PARKING STALL EPOXY 4-INCH (YELLOW) LF	647.0256 PAVEMENT MARKING SYMBOLS EPOXY (YELLOW) EACH
MILL ROAD PARKING LOT	1,700	4
TOTAL	1,700	4

*QUANTITY INCLUDES 4" DIAGONAL STRIPING FOR HANDICAP LOADING STALLS

CONSTRUCTION STAKING

LOCATION	650.4000 CONSTRUCTION STAKING STORM SEWER SYSTEM EACH	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB & GUTTER LF	COMMENTS
MILL ROAD PARKING LOT	2	150	150	600	
TOTAL	2	150	150	600	

STORM SEWER ITEMS

STRUCTURE INFORMATION						611.1230	611.0624	NOTES
STRUCTURE NO.	LOCATION	RIM / FLOW LINE ELEVATION	TOP OF STRUCTURE ELEVATION	STRUCTURE INVERT ELEVATION	STRUCTURE DEPTH	CATCH BASIN	INLET COVERS	
						2'x3'	TYPE H	
						EACH	EACH	
ST CATCH BASIN 1	NE CORNER OF PARKING LOT	588.00	587.17	582.84	4.33	1	1	
ST CATCH BASIN 2	NW CORNER OF PARKING LOT	587.00	586.17	583.24	2.93	1	1	
UNDISTRIBUTED						-	-	
PROJECT TOTAL						2	2	

- (A) TOP OF STRUCTURE ELEVATION MEASURED AS FOLLOWS:
INLETS: TYPE H COVERS = F/L ELEVATION - 4.0" CASTING - 6"ADJUSTMENT = 10" (0.83')
- (B) CATCH BASIN ELEVATION MEASURED FROM MINIMUM INVERT ELEVATION, INCLUDE 24" SUMP IN ADDITION
- (C) STRUCTURE DEPTH MEASURED AS TOP OF STRUCTURE ELEVATION - STRUCTUE INVERT ELEVATION.

STORM SEWER ITEMS

PIPE INFORMATION					608.0412	608.0415	NOTES
FROM STRUCTURE NO.	TO STRUCTURE NO.	% SLOPE	INVERT IN ELEVATION	DISCHARGE ELEVATION	STORM SEWER PIPE REINFORCED CONCRETE	STORM SEWER PIPE REINFORCED CONCRETE	
					CLASS IV 12-INCH LF	CLASS IV 15-INCH LF	
EX STM MH 126	ST CATCH BASIN 1	0.25	582.84	582.76	-	31'	
ST CATCH BASIN 1	ST CATCH BASIN 2	0.25	583.24	582.84	160'	-	
ST CATCH BASIN 2	FUTURE CATCH BASIN	0.25	583.28	583.24	15	-	
UNDISTRIBUTED					-	-	
PROJECT TOTAL					175'	31'	

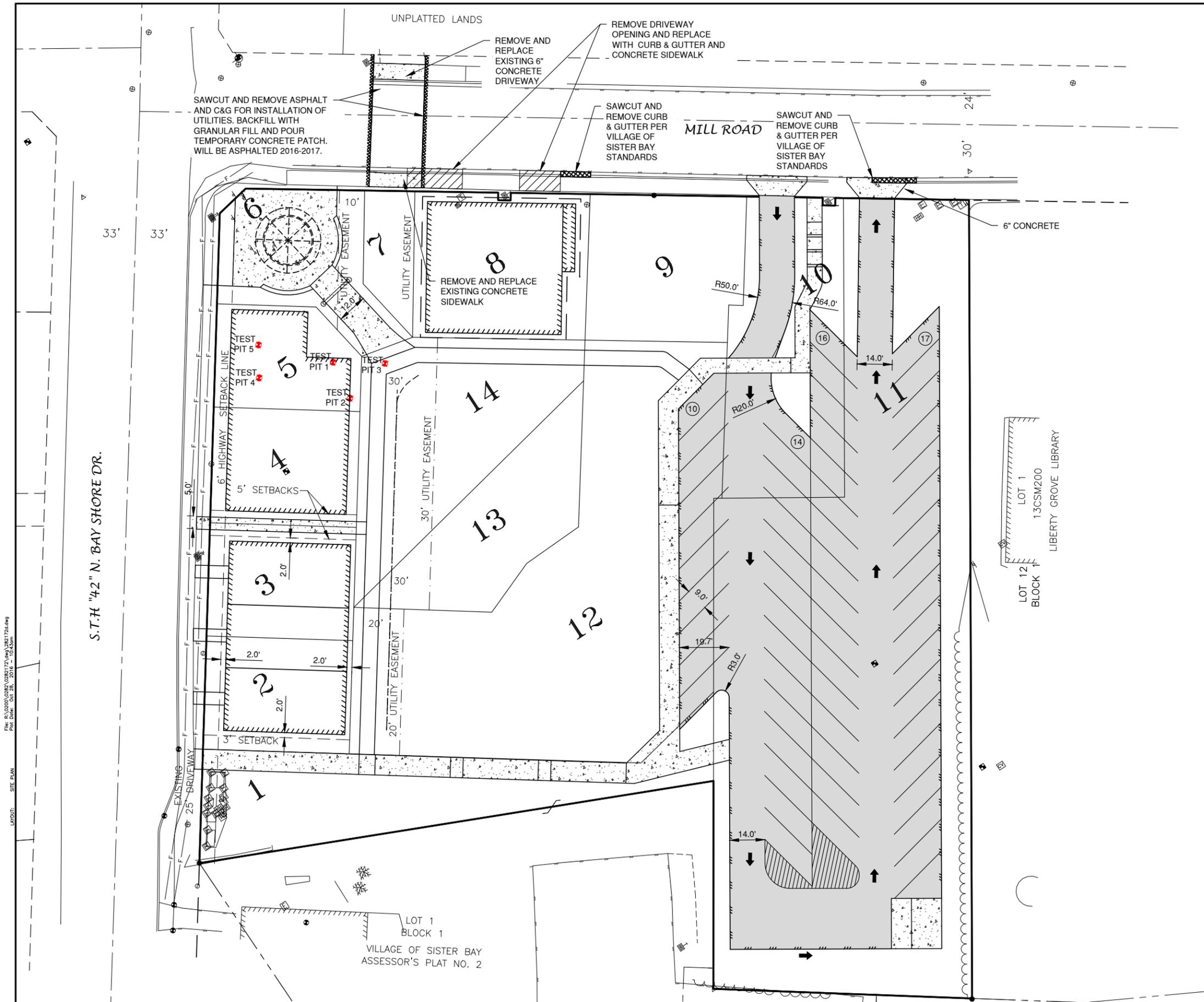
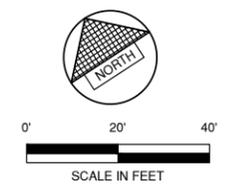
NOTE
 ALL AREAS DESIGNATED AS "GREEN SPACE" OR "LAWN", SHALL BE TOPSOILED TO A DEPTH OF 6 INCHES, SEEDED AND MULCHED. AREA TO BE RAKED FREE OF STONES AND CLUMPS.

PARKING DATA
 TOTAL PARKING SPACES PROVIDED = 57
 HANDICAP ACCESSIBLE PARKING SPACES = 2

- LEGEND**
- CONCRETE PAVEMENT
 - ASPHALT PAVEMENT
 - LANDSCAPE AREA
 - GREEN SPACE
 - PROPOSED 24" CURB & GUTTER (UNLESS OTHERWISE NOTED)
 - PROPOSED SHEDDING CURB & GUTTER
 - TRAFFIC FLOW ARROW
 - HANDICAPPED PARKING
 - INDICATES NUMBER OF PARKING STALLS

*NOTE: ALL DIMENSIONS ARE TO THE FACE OF CURB, UNLESS NOTED OTHERWISE

LOT NUMBER	LOT SQUARE FOOTAGE (S.F.)
1	9,732 S.F.
2	2,621 S.F.
3	2,621 S.F.
4	2,679 S.F.
5	2,210 S.F.
6	3,095 S.F.
7	951 S.F.
8	4,001 S.F.
9	5,763 S.F.
10	3,001 S.F.
11	26,136 S.F.
12	14,797 S.F.
13	3,429 S.F.
14	5,411 S.F.



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 LAYOUT: SITE PLAN

NO.	DATE	APPROV.	REVISION	NO.	DATE	APPROV.	REVISION

SISTER BAY PARKING LOT IMPROVEMENTS
 SISTER BAY MARKET PLACE
 VILLAGE OF SISTER BAY
 DOOR COUNTY, WISCONSIN

SITE PLAN

DATE: 08/24/2016
 FILE: 282172D
 JOB NO.: 0282172

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SHEET NO. 3

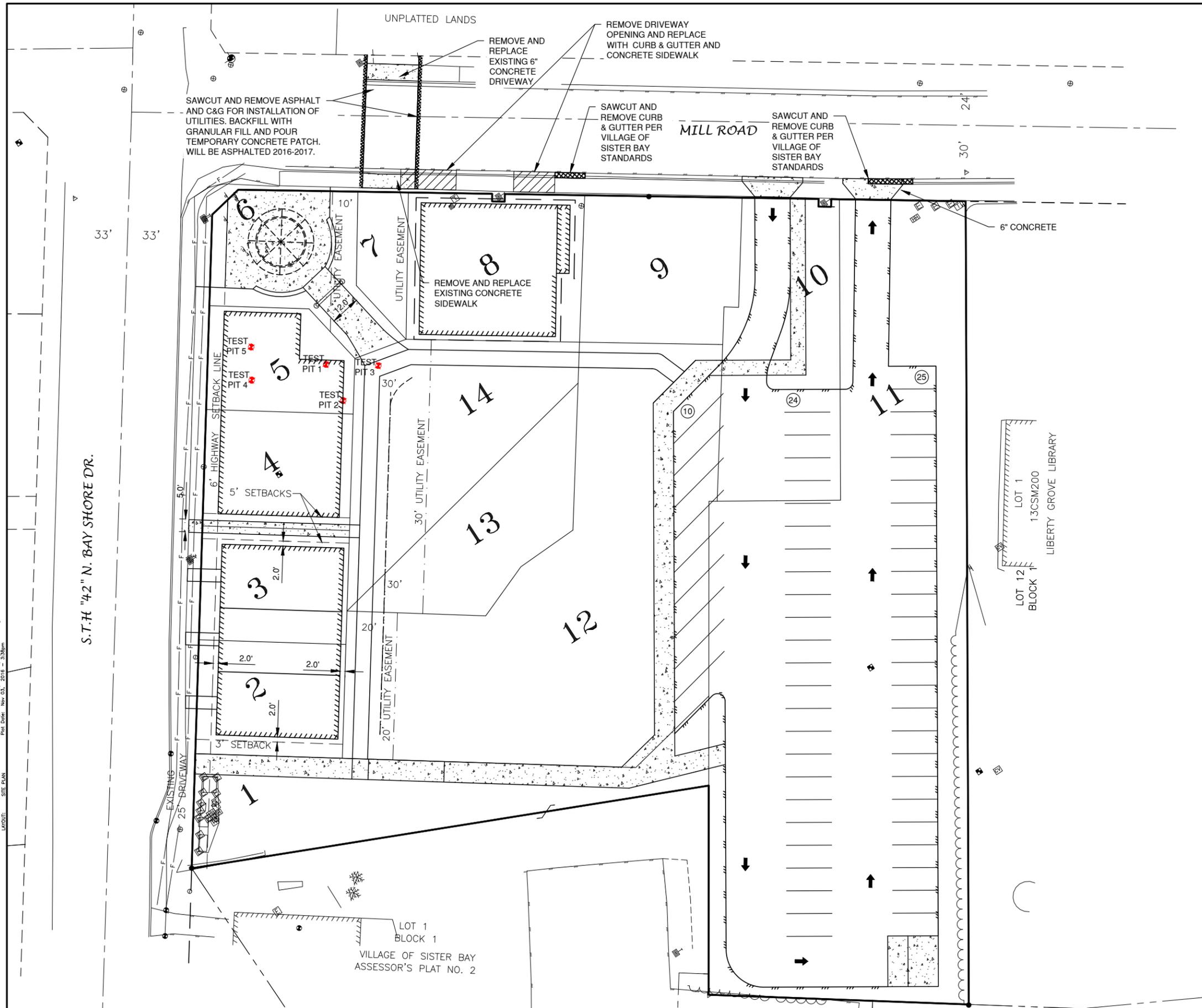
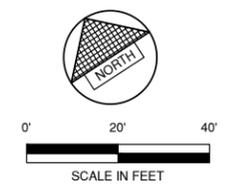
NOTE
 ALL AREAS DESIGNATED AS "GREEN SPACE" OR "LAWN", SHALL BE TOPSOILED TO A DEPTH OF 6 INCHES, SEEDED AND MULCHED. AREA TO BE RAKED FREE OF STONES AND CLUMPS.

PARKING DATA
 TOTAL PARKING SPACES PROVIDED = 59
 HANDICAP ACCESSIBLE PARKING SPACES = 2

- LEGEND**
- CONCRETE PAVEMENT
 - ASPHALT PAVEMENT
 - LANDSCAPE AREA
 - GREEN SPACE
 - PROPOSED 24" CURB & GUTTER (UNLESS OTHERWISE NOTED)
 - PROPOSED SHEDDING CURB & GUTTER
 - TRAFFIC FLOW ARROW
 - HANDICAPPED PARKING
 - INDICATES NUMBER OF PARKING STALLS

*NOTE: ALL DIMENSIONS ARE TO THE FACE OF CURB, UNLESS NOTED OTHERWISE

LOT NUMBER	LOT SQUARE FOOTAGE (S.F.)
1	9,732 S.F.
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5	2,210 S.F.
6	3,095 S.F.
7	951 S.F.
8	4,001 S.F.
9	5,763 S.F.
10	3,001 S.F.
11	26,136 S.F.
12	14,797 S.F.
13	3,429 S.F.
14	5,411 S.F.



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 Layout: SITE PLAN

NO.	DATE	APPROV.	REVISION	NO.	DATE	APPROV.	REVISION

SISTER BAY PARKING LOT IMPROVEMENTS
 SISTER BAY MARKET PLACE
 VILLAGE OF SISTER BAY
 DOOR COUNTY, WISCONSIN

SITE PLAN

DATE: 08/24/2016
 FILE: 282172D
 JOB NO.: 0282172

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SHEET NO. **3**

VILLAGE OF SISTER BAY ZONING CODE

SEC. 66.0401 TRAFFIC VISIBILITY

SEC. 66.0403 PARKING REQUIREMENTS

SECTION 400 -TRAFFIC, LOADING, PARKING AND ACCESS

1 Sec. 66.0401 Traffic Visibility

2 No obstructions, such as structures, parking, or
3 vegetation, shall be permitted in any district be-
4 tween the heights of two and one-half feet and ten
5 feet above the plane through the mean curb
6 grades (See Illustration No. 1) within the triangular
7 space formed by any two existing or proposed in-
8 tersecting street or alley right-of-way lines and a
9 line joining points on such lines located a mini-
10 mum of 15 feet from their intersection. (See Illus-
11 tration No. 2). In the case of arterial streets inter-
12 secting with other streets, the corner cut-off dis-
13 tances establishing the vision triangle clearance
14 space shall be increased to 50 feet. (See Illustration
15 No. 2).

16 Sec. 66.0402 Loading Requirements

17 On every lot on which a business use is hereafter
18 established, space with access to a public street or
19 alley shall be provided as specified below for the
20 loading and unloading of vehicles off the public
21 right-of-way.

22 (a) Number of loading and unloading spaces
23 required:

<i>Gross Floor Area of Building</i>	
<i>In Square Feet</i>	<i>Number of Spaces</i>
Under 5,000	1
5,000-24,999	2
25,000-49,999	3
50,000-99,999	4

24 (b) For each additional 25,000 square feet (or
25 fraction thereof) of gross floor area, one
26 additional loading and unloading space
27 shall be provided.

28 (c) Each loading and unloading space shall
29 have access to a public dedicated street or
30 alley.

31 (d) The minimum area for each loading and
32 unloading space, excluding the area need-
33 ed to maneuver, shall be 250 square feet.

34 (e) At no time shall any part of a truck or van
35 be allowed to extend into the right-of-way
36 of a public thoroughfare while the truck or
37 van is being loaded or unloaded.

38 Sec. 66.0403 Parking Requirements

39 In all districts and in connection with every use,
40 there shall be provided at the time any use is

41 erected, enlarged, extended or increased, off-
42 street parking spaces and lots for all vehicles in
43 accordance with the following:

44 (a) Access.

45 Adequate access to a public street shall be
46 provided for a parking space, and drive-
47 ways shall be at least ten feet wide for one
48 and two-family dwellings, and a minimum
49 of 24 feet wide at the property line for all
50 other uses. [See section 66.0406 Highway
51 Access page 89, for more detailed re-
52 strictions.]

53 (b) Parking space size.

54 The minimum dimensions of each parking
55 space shall be nine feet by 20 feet, except
56 for spaces provided for use by physically
57 disabled persons.

58 (c) Parking spaces for use by physically dis-
59 abled persons.

60 All open off-street parking areas providing
61 more than 20 parking spaces, except for
62 parking areas restricted to use by employ-
63 ees only, shall provide parking spaces for
64 use by motor vehicles, which transport
65 physically disabled persons in accordance
66 with the requirements of section 346.503
67 of the Wisconsin Statutes.

68 (d) Parking lot geometrics.

69 The minimum length of parking stalls shall
70 be modified in parking lots based on the
71 aisle width and the angle of parking. Park-
72 ing stalls shall conform to the following
73 minimum dimensions:
74

<i>Parking Angle</i>	<i>Minimum Stall Width</i>	<i>Minimum Perpendicular Stall Width</i>	<i>Minimum Aisle Width</i>
90°	9 ft.	20 ft.	22 ft.
75°	9 ft.	20 ft.	19 ft.
60°	9 ft.	19 ft. 6 in.	16 ft.
45°	9 ft.	19 ft. 6 in.	13 ft.
30°	9 ft.	66 ft.	10 ft.

75 (e) Location.

76 Location of parking spaces is to be on the
77 same lot as the principal use except as
78 provided in section 66.0405 [See page 88]
79 of this chapter. (NOTE: Residential parking
80 shall be located in a garage or carport or
81 on a driveway that does not exceed 24 feet
82 in width, except for a spur that is a maxi-
83 mum of ten feet by 20 feet or the flare to

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SEC. 66.0403 PARKING REQUIREMENTS

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1 access a parking area in the side or rear
 2 yard.)
 3 (NOTE: Business parking lots and drive-
 4 ways adjacent to a residential zoning dis-
 5 trict line shall, at a minimum, provide buff-
 6 er yards as required by section 66.0303
 7 [See page 6 of the Municipal Code.]
 8 (NOTE: Business and institutional parking
 9 lots and driveways shall be located no
 10 closer than 15 feet to a residential zoning
 11 district line.)
 12 (f) Surfacing.
 13 (1) Parking Lots and other areas. In all
 14 zoning districts other than P-1, R-1,
 15 R-3, R-4 and CS-1 all off-street park-
 16 ing lots, driveways, service roads,
 17 storage areas and such other areas
 18 determined by the Plan Commission
 19 shall be surfaced with an asphaltic
 20 concrete or Portland cement pave-
 21 ment; to provide a durable and
 22 dust-free surface and shall be so
 23 graded and drained as to dispose of
 24 all surface water in accordance with
 25 the requirements of the Municipal
 26 Code of the Village. Brick, block or
 27 open block or other materials de-
 28 signed to be permeable and de-
 29 signed to carry the load of the vehi-
 30 cles shall be allowed with the ap-
 31 proval of the Plan Commission. The
 32 required off-street parking lots,
 33 driveways, service roads, storage
 34 areas and such other areas shall be
 35 completely paved prior to the issua-
 36 nce of the occupancy permit for all
 37 new buildings and prior to the final
 38 inspection of all building additions.
 39 However if the new building or
 40 building addition is completed dur-
 41 ing the November to March period,
 42 the pavement shall be completed by
 43 July 1 of the following year.
 44 (Amended Ordinance 154-071409)
 45 (2) All driveways serving single-family
 46 residences in all zoning districts
 47 shall be surfaced with asphaltic
 48 concrete or Portland cement pave-
 49 ment from the edge of the pavement
 50 to edge of the right-of-way within
 51 one year of the issuance of the ini-
 52 tial occupancy permit. (Amended
 53 Ordinance 154-071409)
 54 (3) All Driveway Approaches shall be
 55 installed in accord with the provi-
 56 sions of the Municipal Code.

57 (g) Landscape area.
 58 All off-street parking lots, which serve four
 59 vehicles or more and are created or ex-
 60 tended subsequent to the adoption of this
 61 chapter, shall provide accessory land-
 62 scaped areas; which may be landscape is-
 63 lands, landscape peninsulas or peripheral
 64 plantings totaling not less than five percent
 65 of the surfaced area. For parking lots de-
 66 signed for 20 parking spaces or more, at
 67 least one-half of the minimum five percent
 68 landscaped area shall be within the park-
 69 ing lot. When parking lots are extended,
 70 these regulations shall apply only to the ex-
 71 tended portion of the parking lot. Location
 72 of landscape areas, plant materials and
 73 protection afforded the plantings, including
 74 curbing and provision for maintenance
 75 shall be subject to approval by the Plan
 76 Commission. Landscape islands or penin-
 77 sulas shall be dispersed throughout the off-
 78 street parking area. All plans for such pro-
 79 posed parking areas shall include a topo-
 80 graphic survey or grading plan, which
 81 shows existing and proposed grades and
 82 location of improvements. The preserva-
 83 tion of existing trees, shrubs, and other
 84 natural vegetation in the parking area may
 85 be included in the calculation of the re-
 86 quired minimum landscape area. (See Illus-
 87 trations No. 3 and No. 4)
 88 (h) Parking lot screening.
 89 Those parking areas for four or more vehi-
 90 cles, if adjoining a residential zoning dis-
 91 trict line or public right-of-way, shall be
 92 screened from casual view by an earth
 93 berm, a stonewall, fence, evergreen plant-
 94 ing of equivalent visual density or other ef-
 95 fective means approved by the Plan Com-
 96 mission. Such fence or berm and landscap-
 97 ing together shall be an average of three
 98 feet in height between the parking and the
 99 street right-of-way and six feet in height be-
 100 tween the parking and any adjacent resi-
 101 dential property line. All screening materi-
 102 als shall be placed and maintained at a
 103 minimum height of three feet. The Plan
 104 Commission may require greater screening
 105 requirements for parking of large trucks,
 106 semi-trailers and large equipment.
 107 (i) Residential parking.
 108 Single-family and two-family residential
 109 parking shall be limited to parking within
 110 garages and upon residential driveways.
 111 Paving beyond driveways to cover all or

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SEC. 66.0403 PARKING REQUIREMENTS

SEC. 66.0403 PARKING REQUIREMENTS

1 substantial portions of a residential front 57
 2 yard shall be prohibited. 58
 3 (j) Parking space requirements. 59
 4 The following guide specifies the minimum 60
 5 number of parking spaces required. In the 61
 6 case of structures or uses not specified 62
 7 herein, the number of spaces specified as 63
 8 the general standard for the use class or the 64
 9 number of spaces specified for similar use 65
 10 shall apply. In developments involving the 66
 11 establishment or addition of two or more 67
 12 uses on one lot or parcel, the cumulative 68
 13 number of spaces required for each use 69
 14 shall determine the total number of spaces 70
 15 required. (Amended Ordinance 128- 71
 16 061207) 72
 17 In the B-1, B-2 and B-3 districts, the num- 73
 18 ber of parking spaces required by this sec- 74
 19 tion shall be reduced by a credit of three 75
 20 spaces. In granting the credit, the Plan 76
 21 Commission will take into account, all of 77
 22 the proposed required parking for all of the 78
 23 businesses or uses on the parcel(s) or build- 79
 24 ing(s) that comprise the development. If a 80
 25 single development, building or parcel 81
 26 contains multiple businesses, the three 82
 27 parking space credit shall only be provided 83
 28 once. The credit shall be applicable to fu- 84
 29 ture business additions to existing busi- 85
 30 nesses. (Amended Ordinance 128-061207) 86
 31 In the B-3 district, the number of residen- 87
 32 tial parking spaces required by this section 88
 33 shall be reduced by a credit of one space. 89
 34 In granting the credit, the Plan Commission 90
 35 will take into account, all of the proposed 91
 36 required parking for all of the residential 92
 37 uses on the parcel(s) or building(s) that 93
 38 comprise the development. If a single de- 94
 39 velopment, building or parcel contains 95
 40 multiple residential units, the one parking 96
 41 space credit shall only be provided once. 97
 42 The credit shall be applicable to future res- 98
 43 idential unit additions to existing business- 99
 44 es. (Amended Ordinance 128-061207) 100
 45 (1) Residential Uses (including garage 101
 46 spaces): 102
 47 a. Single-family dwellings, two 103
 48 spaces per dwelling unit. 104
 49 b. Multiple-family dwellings: 105
 50 1. In the R-2 district, one 106
 51 and one-half spaces 107
 52 per efficiency and 108
 53 one-bedroom dwell- 109
 54 ing unit, two spaces 110
 55 per two-bedroom 111
 56 dwelling unit, and 112

two and one-half
 spaces per three-
 bedroom or larger
 dwelling unit.
 2. In the B-2 and B-3
 districts, one space
 per bedroom.
 (Amended Ordinance
 120-061306)
 c. Condominiums, Residential:
 One space per one bedroom
 unit, one and a half space
 per two-bedroom unit and
 two spaces per three-
 bedroom unit.
 (2) Retail sales and customer service
 uses, and places of entertainment,
 except as specifically set forth be-
 low, one space per 150 square feet
 of gross floor area of customer sales
 and service, plus one space per em-
 ployee for the work shift with the
 largest number of employees. In the
 B-3 district the requirement shall be
 one space per 300 square feet of
 gross floor area of customer sales
 and service, plus one space per em-
 ployee for the work shift with the
 largest number of employees:
 a. Financial Institutions, one
 space for each 150 square
 feet of gross floor area of cus-
 tomer service, plus one
 space per employee for the
 work shift with the largest
 number of employees. Fi-
 nancial institutions with
 drive-in facilities shall pro-
 vide sufficient space for at
 least four waiting vehicles at
 each drive-in service device
 and no queuing spaces shall
 preclude the use of any park-
 ing spaces, nor shall any
 queuing take place in the
 public right-of-way.
 b. Funeral Homes, one space
 for each four patrons at max-
 imum capacity, whichever is
 greater, plus one space per
 employee for the work shift
 with the largest number of
 employees.
 c. Grocery Stores, Food Stores
 or Supermarkets, one space
 per 150 square feet of gross

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1	floor area of customer sales	57	non-employee parking upon
2	and service area, plus one	58	request. (Amended Ordinance
3	space per employee for the	59	172-081010).
4	work shift with the largest	60	i. Restaurants, Fast Food,
5	number of employees.	61	Drive-in and Take-out, one
6	d. Convenience Grocery Stores,	62	space per 50 square feet of
7	one space per 150 square	63	gross dining area, plus one
8	feet of gross floor area of cus-	64	space per employee for the
9	tomers sales and service, plus	65	work shift with the largest
10	one space per employee for	66	number of employees.
11	the work shift with the largest	67	(Amended Ordinance 172-
12	number of employees.	68	081010)
13	(Amended Ordinance 120-	69	j. Repair Services, one space
14	061306)	70	per 300 square feet of gross
15	e. Condominiums Hotels, one	71	floor area, plus one space
16	space per one bedroom unit,	72	per employee for the work
17	one and a half spaces per	73	shift with the largest number
18	two bedroom unit and two	74	of employees.
19	spaces per three bedroom	75	k. Theaters, Auditoriums and
20	unit, plus one space per em-	76	Other Places of Public As-
21	ployee for the work shift with	77	sembly, one space per three
22	the largest number of em-	78	patrons based on the maxi-
23	ployees, plus one space per	79	mum capacity of the facility
24	three persons, based on max-	80	plus one space per employee
25	imum capacity for each pub-	81	for the work shift with the
26	lic meeting room and/or	82	largest number of employees.
27	banquet room.	83	l. Personal Services, one space
28	f. Motels and Hotels, one	84	per employee for the work
29	space per room or suite, plus	85	shift with the largest number
30	one space per employee for	86	of employees and one and a
31	the work shift with the largest	87	half space for every chair or
32	number of employees, plus	88	customer service location in
33	one space per three persons,	89	a barbershop, nail salon,
34	based on maximum capacity,	90	tanning salon, hair salon or
35	for each public meeting	91	beauty parlor. (Amended
36	room and/or banquet room.	92	Ordinance 061306)
37	g. Lodges and Clubs, one space	93	m. Taverns, Dance Halls, Night
38	per three persons, based on	94	Clubs and Lounges, one
39	the maximum capacity of the	95	space per 100 square feet of
40	facility, plus one space per	96	gross dining area or one
41	employee for the work shift	97	space per three seats, which-
42	with the largest number of	98	ever is greater, plus one
43	employees.	99	space per employee for the
44	h. Restaurants – General, one	100	work shift with the largest
45	space per 150 square feet of	101	number of employees.
46	gross dining space or one	102	n. Motor Vehicle Sales Estab-
47	space per four seats which-	103	lishments, two customer
48	ever is greater, plus one	104	parking spaces per salesper-
49	space per employee for the	105	son, plus one space per em-
50	work shift with the largest	106	ployee for the work shift with
51	number of employees. In the	107	the largest number of em-
52	B-2 and B-3, districts when	108	ployees.
53	the general restaurant is an	109	o. Motor Vehicle Repair,
54	accessory use to the retail	110	Maintenance, and Service
55	use on the property the Plan	111	Stations, four spaces per in-
56	Commission may waive the	112	door service bay, plus one

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1 space per employee for the 57
 2 work shift with the largest 58
 3 number of employees, plus 59
 4 parking for all vehicles used 60
 5 directly in the conduct of the 61
 6 business. 62
 7 p. Car Washes, one space per 63
 8 employee for the work shift 64
 9 with the largest number of 65
 10 employees. Car washes shall 66
 11 provide sufficient space for at 67
 12 least four waiting vehicles at 68
 13 each washing stall and suffi- 69
 14 cient space for drying two 70
 15 vehicles after each washing 71
 16 stall so as not to allow any 72
 17 queuing of vehicles to take 73
 18 place in the public right-of- 74
 19 way. 75
 20 q. Animal Hospitals, three pa- 76
 21 tron parking spaces per doc- 77
 22 tor, plus one space per em- 78
 23 ployee for the work shift with 79
 24 the largest number of em- 80
 25 ployees. 81
 26 r. Plant Nurseries, Lawn and 82
 27 Garden Supply Stores and 83
 28 Lumberyards, one space per 84
 29 200 square feet of gross in- 85
 30 door sales and display area, 86
 31 plus one space per 500 87
 32 square feet of gross outdoor 88
 33 sales and display area, plus 89
 34 one space per employee for 90
 35 the work shift with the largest 91
 36 number of employees. 92
 37 s. Shopping Centers (Gross 93
 38 Leasable Area of Less Than 94
 39 50,000 Square Feet), seven 95
 40 spaces per 1,000 square feet 96
 41 of gross leasable area plus 97
 42 one space per employee for 98
 43 the work shift with the largest 99
 44 number of employees in the 100
 45 B-1 district only. 101
 46 t. Shopping Centers (Gross 102
 47 Leasable Area of 50,000 103
 48 Square Feet or More), five 104
 49 and one-half spaces per 105
 50 1,000 square feet of gross 106
 51 leasable area, plus one space 107
 52 per employee for the work 108
 53 shift with the largest number 109
 54 of employees in the B-1 dis- 110
 55 trict only. 111
 56 112

- (3) Offices:
 - a. Medical, Dental and Similar Professional Health Service Offices, five patron spaces per doctor, plus one space per employee for the work shift with the largest number of employees.
 - b. Government, Professional and Business Offices, one space per 200 square feet of gross floor area, plus one space per employee for the work shift with the largest number of employees, plus one space for every three meeting room seats.
- (4) Business/Recreational Uses, except as specifically set forth below, one space per four patrons, plus one space per employee for the work shift with the largest number of employees.
 - a. Bowling Alleys, five spaces for each lane, plus one space per employee for the work shift with the largest number of employees.
 - b. Golf Courses, 90 spaces per nine holes plus one space per employee for the work shift with the largest number of employees.
 - c. Golf Driving Ranges, one space per tee, plus one space per employee for the work shift with the largest number of employees.
 - d. Marinas, one space per five boat berths, plus 15 spaces per boat launching ramp, plus one space per 500 square feet of dry boat storage area, plus one space per employee for the work shift with the largest number of employees. At least 20 percent of the spaces required for boat launching ramps shall be at least nine feet by 35 feet to accommodate cars with boat trailers.
 - e. Miniature Golf Course, one and one-half (1½) spaces per hole, plus one space per employee for the work shift with

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SEC. 66.0404 ADJUSTMENTS TO REQUIRED PARKING

SEC. 66.0404 ADJUSTMENTS TO REQUIRED PARKING

- 1 the largest number of em- 56
- 2 ployees. 57
- 3 f. Racquetball and Handball 58
- 4 Courts, three spaces per 59
- 5 court, plus one space per 60
- 6 employee for the work shift 61
- 7 with the largest number of 62
- 8 employees, plus parking for 63
- 9 other uses. 64
- 10 g. Skating Rinks, Ice or Roller, 65
- 11 one space per 200 square 66
- 12 feet of gross floor area, plus 67
- 13 one space per employee for 68
- 14 the work shift with the largest 69
- 15 number of employees. 70
- 16 h. Tennis Courts, four spaces 71
- 17 per court, plus one space per 72
- 18 employee for the work shift 73
- 19 with the largest number of 74
- 20 employees. 75
- 21 i. Volleyball Courts, 15 spaces 76
- 22 per court, plus one space per 77
- 23 employee for the work shift 78
- 24 with the largest number of 79
- 25 employees. 80
- 26 (5) Institutional and Related Uses: 81
- 27 a. Churches, one space per two 82
- 28 seats in the main worship ar- 83
- 29 ea. 84
- 30 b. Libraries, one space per 250 85
- 31 square feet of gross floor area 86
- 32 or one space per four seats 87
- 33 based on maximum capacity, 88
- 34 whichever is greater plus one 89
- 35 space per employee for the 90
- 36 work shift with the largest 91
- 37 number of employees. 92
- 38 c. Museums, one space per 250 93
- 39 square feet of gross floor area 94
- 40 plus one space per employee 95
- 41 for the work shift with the 96
- 42 largest number of employees. 97
- 43 d. Rooming and Boarding 98
- 44 Houses, Bed and Breakfasts, 99
- 45 one space per bedroom plus 100
- 46 two spaces per owner. 101
- 47 e. Convents, Rectories and 102
- 48 Monasteries, one space per 103
- 49 three residents plus one 104
- 50 space per employee for the 105
- 51 work shift with the largest 106
- 52 number of employees, plus 107
- 53 one space per five chapel 108
- 54 seats if the public may at- 109
- 55 tend. 110

- f. Nursing Homes, one space 61
- per five patient beds, plus 62
- one-half space per employee 63
- for the work shift with the 64
- largest number of employees, 65
- plus one per living unit. 66
- g. Hospitals, two spaces per 67
- three patient beds, plus one 68
- space per staff doctor, plus 69
- one space per employee, ex- 70
- cluding doctors, for the work 71
- shift with the largest number 72
- of employees. 73
- h. Children’s Nursery Schools 74
- and Day-Care Centers, one 75
- space per employee for the 76
- work shift with the largest 77
- number of employees, and 78
- one space for every seven 79
- students allowed under the 80
- State license. 81
- (6) Light Assembly and Light Manufac- 82
- turing Uses. 83
- a. Light Assembly and manu- 84
- facturing, one space per em- 85
- ployee for the work shift with 86
- the largest number of em- 87
- ployees plus one space for 88
- every 500 square feet of 89
- gross office space. (Amended 90
- Ordinance 128-061207). 91

Sec. 66.0404 Adjustments to Required Parking

The purpose of this section is to allow adjustments to the minimum number of parking spaces required to avoid constructing unneeded and excessive off-street parking facilities. Reducing the amount of excess off-street parking facilities is intended to provide for more cost-efficient site development, to eliminate constructing more impervious surface than necessary, to minimize storm water runoff, to avoid construction of unnecessarily large storm water management facilities, and to provide more landscape areas and open space on business sites. To achieve these purposes, the Plan Commission may reduce the minimum number of required off-street parking spaces in specific cases as described in this section.

- (a) Adjustments.
- In the R-2, B-1, B-2, B-3, P-1 and I-1 districts, the minimum number of required parking spaces may be adjusted by the Plan Commission on a case-by-case basis. The petitioner for such an adjustment shall show to the satisfaction of the Plan Com-

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SEC. 66.0404 ADJUSTMENTS TO REQUIRED PARKING

SEC. 66.0404 ADJUSTMENTS TO REQUIRED PARKING

1 mission that adequate parking will be pro-
 2 vided for customers, clients, visitors and
 3 employees. The following provisions and
 4 factors shall be used as a basis to adjust
 5 parking requirements: (Amended Ordina-
 6 nance 120-061306)

7 (1) Evidence that actual parking de-
 8 mands will be less than chapter re-
 9 quirements. The petitioner shall
 10 submit written documentation and
 11 data to the satisfaction of the Plan
 12 Commission that the operation will
 13 require less parking than the chapter
 14 requires. (Amended Ordinance 120-
 15 061306)

16 (2) Availability of shared parking.
 17 The petitioner shall submit written
 18 documentation to the satisfaction of
 19 the Plan Commission that off-site
 20 shared parking spaces are available
 21 within 400 feet of the lot line and
 22 within the same block to satisfy the
 23 parking demand. When a reduction
 24 of parking spaces attributable to
 25 shared parking is requested, the pe-
 26 titioner shall submit written verifica-
 27 tion that such parking is available
 28 and shall include copies of any con-
 29 tracts, joint lease agreements, pur-
 30 chase agreements and other such
 31 documentation to show that such
 32 shared parking can be accom-
 33 plished. All such agreements shall
 34 be recorded with the Door County
 35 Register of Deeds, at the applicant's
 36 expense, and a copy of the recorded
 37 agreement shall be filed with the
 38 Village Clerk. The off-site shared
 39 parking spaces shall be clearly post-
 40 ed for the joint use of employees,
 41 and/or tenants, or customers of each
 42 respective use sharing those spaces.
 43 (Amended Ordinance 120-061306)

44 (3) Use of optional modes of transpor-
 45 tation.
 46 Upon demonstration to the Plan
 47 Commission that effective alterna-
 48 tive transportation to the automobile
 49 will occur within 12 months follow-
 50 ing the issuance of the certificate of
 51 compliance, the Plan Commission
 52 may reduce parking requirements.
 53 Optional modes of transportation
 54 may include, but are not limited to,
 55 bus transit, vanpool operations, car
 56 pool/ride sharing, moped, scooters

57 and bicycles. (Amended Ordinance
 58 120-061306)

59 (b) Fee In Lieu of Creating Parking Spaces.
 60 A developer who chooses to not construct
 61 the required parking spaces on the parcel
 62 may be allowed to pay to the Village a
 63 one-time fee into a fund established by the
 64 Village to construct and maintain common
 65 transition parking spaces. A developer who
 66 cannot construct the required spaces on
 67 the parcel shall as a condition of approval
 68 pay to the Village a one-time fee into a
 69 fund established by the Village to construct
 70 and maintain common transition parking
 71 spaces. The payment of the fee to the Vil-
 72 lage in either instance shall absolve the
 73 developer from constructing the required
 74 number of spaces on their property. The
 75 fee shall be established annually by the
 76 Village Board of Trustees and reflect the
 77 cost of constructing and maintaining public
 78 parking lots. (Amended Ordinance 120-
 79 061306)

80 (c) Large vehicles.
 81 All businesses that cater to customers, who
 82 drive vehicles larger than what can be ac-
 83 commodated in a 9' X 20' parking space,
 84 shall provide the appropriate number of
 85 parking spaces and access aisles to ac-
 86 commodate these vehicles. (Amended Or-
 87 dinance 120-061306)

88 (d) Space to be set aside for reduced parking.
 89 The site plan for the business use in the R-
 90 2, B-1, P-1 and I-1 districts shall be de-
 91 signed to provide sufficient open space on
 92 the subject site to accommodate the addi-
 93 tional parking spaces otherwise required
 94 by this chapter. Such open space shall be
 95 in addition to required yards, setbacks,
 96 driveways, private streets, loading and ser-
 97 vice areas. Sufficient open space shall be
 98 provided which, if converted to parking
 99 spaces, would provide off-street parking to
 100 meet the full requirements of this chapter
 101 at the time of application. (Amended Ordi-
 102 nance 120-061306)

103 (e) Changes in occupancy or use.
 104 When the use of a building, structure, or
 105 land is changed to another use or occu-
 106 pancy that requires more parking spaces
 107 than required for the use existing immedi-
 108 ately prior to such change, additional park-
 109 ing spaces shall be constructed for the new
 110 use or occupancy in the amount necessary
 111 to conform to this chapter prior to the iss-
 112 uance of a Certificate of Occupancy for the

VILLAGE OF SISTER BAY ZONING CODE

SEC. 66.0405 PARKING OF VEHICLES IN RESIDENTIAL DISTRICTS

SEC. 66.0405 PARKING OF VEHICLES IN RESIDENTIAL DISTRICTS

1 new use. [See section 66.1532(a) page 55
2 156] (Amended Ordinance 120-061306) 56
3 (f) Changes in intensity of use. 57
4 When the intensity of use of a building, 58
5 structure or land is increased by an addition 59
6 of employees, gross floor area, seating 60
7 capacity, or other unit of measurement, 61
8 additional parking spaces shall be constructed 62
9 for such additions in the amount 63
10 necessary to conform to this chapter. [See 64
11 section 66.1532(b) page 156] (Amended 65
12 Ordinance 120-061306) 66
13 (g) Plan Commission review and verification. 67
14 The Plan Commission shall review the adequacy 68
15 of parking where an adjustment to 69
16 parking requirements has been granted 70
17 within one year following such parking 71
18 modification grant and periodically thereafter 72
19 to determine that the conditions justifying 73
20 the parking requirement still exist. If 74
21 the parking is found to be inadequate, the 75
22 Plan Commission shall order the use of the 76
23 property to comply with the parking requirements 77
24 set forth in section 66.0403 78
25 [See page 81] of this chapter. (Amended 79
26 Ordinance 120-061306) 80
27 (h) B-3 District Exemption. 81
28 The exemption from certain parking requirements 82
29 granted by this section shall automatically expire 83
30 48 months from the date of the adoption of the 84
31 enabling ordinance. 85
32 The parking exemption and related requirements 86
33 shall only apply to the B-3 district. (Amended 87
34 Ordinance 201-091112) 88
35 (1) Subject to the requirements of site 89
36 and zoning approval all proposed 90
37 new uses, new buildings, expansions 91
38 of existing buildings, expanded 92
39 uses, changes in intensity of use 93
40 or changes in occupancy shall be 94
41 evaluated for the required number 95
42 of customer and employee parking 96
43 spaces. 97
44 (2) A calculation would be done to determine 98
45 the amount of parking required to achieve 99
46 compliance with the open space and related 100
47 requirements. 101
48 (3) The business shall be given the option 102
49 of installing the required parking 103
50 or leaving the equivalent area as 104
51 landscaped open space except for: 105
52 a. All required parking for residential 106
53 dwelling units or mo- 107
54 108

tel/hotel spaces must be constructed.
b. All required parking spaces for more than four employees must be constructed.
c. All required parking in excess of forty (40) spaces must be constructed.
(4) Other credits and adjustments related to parking spaces provided for in the Code would also apply.
(i) B-2 District Exemption.
If a development project includes contiguous parcels zoned both B-3 and B-2 the exemption from certain parking requirements granted by section (h) shall apply to that portion of the project in the B-2 district in the same manner. (Amended Ordinance 157-120809)

Sec. 66.0405 Parking of Vehicles in Residential Districts

(a) General restrictions.
No car, truck, construction equipment or commercial truck shall be parked regularly upon a driveway or front yard in any residential zoning district except as provided herein. Properties currently zoned residential and still used for agricultural purposes shall be exempt from the provisions of this section.
(1) Vehicles that do not exceed 12,000 lb. manufacturer's gross vehicle weight may be parked on a driveway. Parking on lots that are used as a one or two-family residence shall be limited to parking within garages, carports and upon residential driveways consisting of crushed stone, asphalt, concrete, brick or other similar hard surface material.
(2) Additional vehicles may be parked or stored on the lot within a fully enclosed building.
(3) Vehicles shall be located outside of all ultimate right-of-ways, vision clearance triangles and drainage and utility easement areas.
(4) A semi-tractor or vehicles over 12,000 lb. manufacturer's gross vehicle weight may be parked in a residential district if it is parked on the owner's developed property and the property is located along and having access to a Class A highway.

VILLAGE OF SISTER BAY ZONING CODE

SEC. 66.0406 HIGHWAY ACCESS

SEC. 66.0406 HIGHWAY ACCESS

1 a. Vehicles over 12,000 lb. 57
 2 manufacturer’s gross vehicle 58
 3 weight which were parked 59
 4 prior to the adoption of this 60
 5 chapter or prior to the 61
 6 change in the class designa- 62
 7 tion of the highway on prop- 63
 8 erty fronting a road that had 64
 9 been changed from a Class A 65
 10 Highway to a Class B High- 66
 11 way or is changed in the fu- 67
 12 ture from a Class A Highway 68
 13 to a Class B Highway, may 69
 14 be parked on the owner’s 70
 15 property, subject to the regu- 71
 16 lations in this section. 72

17 (b) Boat and trailer parking. 73
 18 No boat, boat trailer, mobile home, motor 74
 19 home, motor coaches, truck campers, 75
 20 camping trailers, travel trailers, fifth-wheel 76
 21 trailers, large utility trailers, race cars and 77
 22 their trailers, sport aircraft and their trailer, 78
 23 canoes or kayaks and their trailers, all- 79
 24 terrain vehicles and their trailers, tent 80
 25 campers, folding campers, snow mobiles 81
 26 and their trailers, cases or boxes used to 82
 27 transport recreational vehicles or their 83
 28 equipment, yard maintenance equipment 84
 29 and similar equipment or vehicles shall be 85
 30 parked or stored outside on a residentially 86
 31 zoned lot for more than 24 hours, except 87
 32 as provided herein: 88

33 (1) They shall be located in the rear or 89
 34 side yard and not closer than ten 90
 35 feet to a side or rear lot line. 91

36 (2) Front yard location shall only be al- 92
 37 lowed on a driveway or turnaround, 93
 38 parked as close to the home as pos- 94
 39 sible except for the following which 95
 40 are prohibited in the front yard past 96
 41 the 24-hour limit: mobile homes, 97
 42 motor homes, motor coaches, truck 98
 43 campers and large utility trailers. 99

44 (3) They shall be located outside of all 100
 45 ultimate right-of-ways, vision clear- 101
 46 ance triangles and drainage and 102
 47 utility easement areas. 103

48 (4) The recreational vehicle shall be 104
 49 maintained in operable condition. 105

50 (5) Recreational vehicles that require 106
 51 registration shall be properly regis- 107
 52 tered. 108

53 (6) No recreational vehicles or equip- 109
 54 ment shall be stored in any open 110
 55 space outside a building unless such 111
 56 equipment is owned by the property

owner or children of the property
 owner or resident at the property in
 question. If the property is rented,
 such storage shall be permitted for
 the tenant only if such equipment is
 owned by the tenant.

(7) All equipment shall be parked or
 stored as inconspicuously as possi-
 ble on the property. The area
 around the equipment or vehicle
 must be kept weed-free and free of
 accumulation of other stored mate-
 rial.

(c) Recreation vehicle parking.
 One major recreational vehicle may be
 stored outside in the rear or side yard of an
 occupied residential or agricultural lot of
 20,000 square feet or more provided it
 shall not exceed 8.5 feet in width, 13 feet
 in height and 32 feet in overall length.

(d) Living in trailers.
 Except within an approved campground or
 mobile home park, no recreational vehicle
 shall be used for the purpose of permanent
 habitation, living or housekeeping purpos-
 es in the Village. Permanent habitation is
 defined as living in one place for more
 than ten consecutive days.

(e) Private parking restrictions.
 This chapter is not intended to allow park-
 ing and storage of recreational vehicles or
 equipment where they may be otherwise
 prohibited by deed restriction, covenant,
 prior orders, developer’s agreement, or
 otherwise limited to topography or envi-
 ronmental restrictions.

(f) Semi-trailer parking.
 No semi-trailers or tractors are allowed to
 be parked in any residential zoning district.

Sec. 66.0406 Highway Access

No direct private access (driveway) shall be per-
 mitted to the existing or proposed rights-of-way of
 any controlled access arterial street without per-
 mission of the Plan Commission and the highway
 agency that has access control jurisdiction. In ad-
 dition, direct public or private access (driveway)
 to streets and highways shall be permitted in ac-
 cordance with the following:

(a) Driveways on arterial streets.
 Driveways on arterial streets shall be locat-
 ed a minimum of 100 feet from a street in-
 tersection unless the lot width is less than
 100 feet, in which case the Plan Commis-
 sion shall determine the driveway location.
 The setback shall be measured from the in-

VILLAGE OF SISTER BAY ZONING CODE

SEC. 66.0407 OTHER PARKING RESTRICTIONS

SEC. 66.0407 OTHER PARKING RESTRICTIONS

1 tersection of the right-of-way on the two
2 streets.
3 (b) Driveways on collector or local streets.
4 Driveways on collector or local streets
5 shall be located a minimum of 50 feet from
6 a street intersection. The setback shall be
7 measured from the intersection of the right-
8 of-way on the two streets.
9 (c) Driveways on corner lots .
10 Driveways on corner lots shall be located
11 on the less traveled street based on the lo-
12 cal, collector or arterial designation of the
13 streets. (Amended Ordinance 202-091112)
14 (d) Driveway widths.
15 Driveways shall not exceed 24 feet in
16 width on residential lots and 35 feet in
17 width on business lots. Driveways on thru
18 lots shall be no less than 15 feet if they are
19 one way and not exceed 24 feet if they are
20 two way. (Amended Ordinance 202-
21 091112)
22 (e) Driveway locations. (Amended Ordinance
23 202-091112)
24 (1) Driveways for R-1, R-3, R-4 and CS-
25 1 parcels must be at least ten feet
26 away from the side lot line. Vehicle
27 parking on those parcels must be at
28 least ten feet away from the side lot
29 line.
30 (2) Driveways for all other zoned par-
31 cels must be at least five feet away
32 from the side lot line. Parking on
33 those parcels is not allowed within
34 the area defined as the side, rear or
35 front yard area on the lot, except as
36 specifically authorized.
37 (f) Numbers of driveways allowed.
38 Lots in the R-1, R-3, R-4, B-2 and B-3 dis-
39 tricts shall be limited to one driveway un-
40 less a second one is approved by the Plan
41 Commission. Lots in all other districts shall
42 be limited to two driveways.
43 (g) Access barriers.
44 Access barriers, such as curbing, fencing,
45 ditching, landscaping or other topographic
46 barriers, shall be placed to prevent unau-
47 thorized vehicular ingress or egress along
48 the segments of street frontage correspond-
49 ing to the minimum distances from street
50 intersections as specified above in items
51 (a), (b) and (c).
52 (h) Temporary access.
53 Temporary access to the above rights-of-
54 way may be granted by the Zoning Admin-
55 istrator and Village Engineer after review
56 and recommendation by the other highway

57 agencies having jurisdiction. Such access
58 permit shall be temporary, revocable, and
59 subject to any conditions required.
60 **Sec. 66.0407 Other Parking Restrictions**
61 (a) Vehicle and implements.
62 No visible unlicensed vehicle or unser-
63 viceable implements or equipment is per-
64 mitted within the Village limits.
65 (b) Business districts.
66 In the B-1, B-2, B-3, P-1 and I-1 districts no
67 part of the front yard and side yards shall
68 be used for the temporary or permanent
69 storage of boats, vehicles, equipment or
70 materials, except for the parking of li-
71 censed motor vehicles in permitted parking
72 lots. (Amended Ordinance 202-091112)
73
74



FREQUENTLY ASKED QUESTIONS (FAQs)

December 2007

WHAT ARE THE LEGAL REQUIREMENTS FOR MINIMUM AND MAXIMUM BID ASSESSMENTS?

The statute establishing Business Improvement Districts (BIDs) does not identify what assessment formula must be used by a BID, only that the Operating Plan/Annual Work Plan must disclose the formula in relation to the annual budget. Case law regarding special assessments in general requires them to be fair and equitable, which does not require them to be equal for each property owner. Even in the case of a special assessment for roadwork, for example, there is long established precedent that the assessment may be based on many factors, and it commonly happens that the formula includes a discount for corner lots which have frontage on two streets.

The BID Plans in existence in Wisconsin use many different assessment formulas. Many of them are based on a per thousand value of the property, some are a flat fee for each lot, some are based on frontage foot, and many of them have minimums and maximums. It is my opinion that minimums and maximums are quite fair, because some of the BID's benefits accrue pro rata, such as increasing the value of property in the district, but some of the BID's benefits accrue one to a property. For example, generally speaking each lot only has one listing in a directory no matter how large or small, receives only one copy of a newsletter, has only one invitation to a party or a meeting, and may also only benefit in other ways regardless of the size of the lot.

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1

Form BID Planning Committee

- insure adequate representation of affected parties
- survey/poll affected parties

2

BID Planning Committee Drafts Initial Operating Plan (and submits legal opinion that the following have been addressed)

- identifies BID goals and objectives and its relationship to any municipal master/comprehensive plan
- identifies district boundaries and whether manufacturing properties will be assessed
- identifies assessment methodology and actual rates
- identifies procedures for collection and the kind, number and location of all proposed expenditures

3

BID Planning Committee (i.e., real commercial property owners) Petitions Local Unit of Government for Permission to Create BID

4

Local Unit of Government (usually the Plan Commission) Makes Notice of Proposed BID and the Date and Times of Scheduled Public Hearing

- posted and published as a Class 2 Notice under Chapter 985.07(2)
- certified letters mailed to all affected property owners (this should include a map identifying the boundaries of the proposed district and a copy of the initial operation plan or location where one can be acquired)

5

Plan Commission Holds Public Hearing

- designates proposed BID and adopts Initial Operating Plan

30 Day

**Waiting
Period**

Proposed BID Can Be Rejected If:

- a) petition is signed by owners of properties representing more than 40% of the value of property to be assessed using the same method of valuation specified in the initial operating plan
- b) petition is signed by owners representing more than 40% of the value of property to be assessed in the proposed BID

6

Common Council Votes to Adopt Operating Plan and Establishes or Rejects Proposed BID

7

Mayor or Municipality's Chief Executive Officer Appoints BID Board Members

- must have a minimum of 5 members with a majority being district property owners
- members generally recommended by BID planning or ad hoc committee

For more information on Wisconsin's Business Improvement Districts go to:

<http://www.uwex.edu/lgc/cp&d/bidpage/bid.htm>



Wisconsin Business Improvement Districts - BIDs

*Charles S. Law, Ph.D., Community Planning and Design Specialist
September 2012*

This Fact Sheet is part of a publication series produced by UW-Extension's Local Government Center. More information about related local government topics can be found on the Center's website, <http://lgc.uwex.edu>.

Introduction

Since 1992, the University of Wisconsin-Extension (UWEX) has requested information on assessment methods, revenues, expenditures, district programs and activities, and staffing for all of the Business Improvement Districts (BIDs) operating in Wisconsin municipalities. Fifty-seven BID (71.2%) representatives responded to the latest request. This Fact Sheet summarizes the data collected from that effort.

What is a Business Improvement District-BID?

Wisconsin Act 184, signed into law in 1984, gives Wisconsin municipalities (i.e., cities, villages and towns) the power to establish one or more Business Improvement Districts within their community and an assessment methodology that allows properties within that geographic area to contribute to programs aimed at promotion, management, maintenance and development of that district. Assessments are restricted to commercial and industrial properties within a municipality that are subject to real estate tax. Tax-exempt properties (i.e., religious, public utility or government properties) or those used exclusively as residences cannot be included in the assessment district. *§ 66.1109 of the Wisconsin Statutes regulate Business Improvement Districts.*

How many BIDs operate in Wisconsin?

There are currently over 85 BIDs operating in the state. The City of Milwaukee is the latest Wisconsin municipality to create a BID and now has over 30 such districts in operation.

What is the value of BID property?

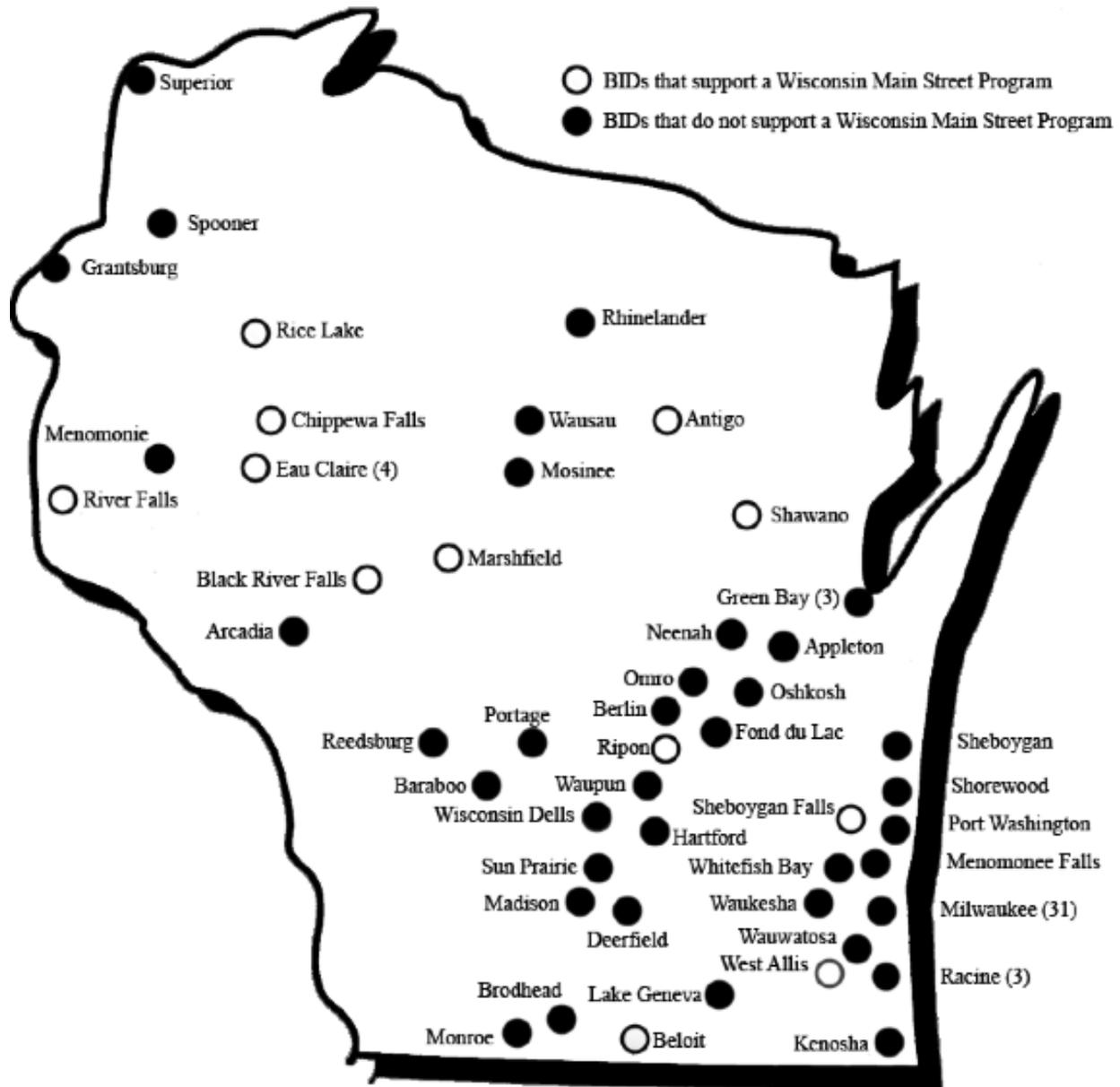
The average assessed value for all property within an individual BID (n=46) is \$ 137,856,341, with an average value per parcel (n=33) of \$1,155,485.

The total assessed value of all property has increased by 28.2% since 1998 while the average assessed value has increased by 9.6%. Multi-year comparisons should be made carefully, however, since data for all BIDs is not always available.

How large are BID's?

BID's vary greatly in size. The average number of tax parcels contributing to a district is 147. The smallest BID's, all located in Milwaukee (Downer Avenue, Schlitz Park, and Kinnickinnic River) have 9, 10, and 11 parcels, respectively. The largest BID, also located in Milwaukee (Historic King Drive) has 417 parcels.

The Wisconsin map below illustrates the location of BID's currently operating in the state.



How are BID's managed?

- More than half of the reporting BID's currently support a full-time Director/Manager, whose average salary is \$49,000 per year. Twelve BID's (27%) have part-time managers and six BID's (14%) do not employ either a full or part-

time manager. These six BIDs are generally managed by a member of the BID Board.

- BID Administration is handled by a Board of Directors. While the State Statutes only require five Board members, the average number of BID Board members is 9.
- Twelve BIDs currently support a Wisconsin Main Street Program.

How are BID Assessments Determined? *

It is important to note that the State Statutes do NOT dictate how property assessments are to be determined. BIDs use a variety of methods to determine the amount of district assessment. BID levies are generally based on a proportion of the individual property's assessed value but may also be based on parcel sizes or frontage footage.

- For those 38 BIDs responding that use a ratio methodology (based on each \$1,000 of assessed value), the average BID assessment is \$2.64/ \$1,000.
- The lowest district assessment at such a rate is Eau Claire BID #3 (Water St) at \$0.60 per \$1,000.
- The highest district assessment at such a rate is Milwaukee #32 (North Ave/ Fond du Lac Marketplace) at \$6.60 per \$1,000.

How much money do BIDs generate?

Total BID levies generate over 8.8 million dollars each year. The average district revenue generated from assessments is \$153,000 (n=57). Many districts supplement this revenue from a wide range of sources. The following table summarizes these external funding sources and average amount of extramural funds generated.

Are there other funding sources used to supplement the BID revenues?

The following types of sources contribute to BID activities and programs. The numbers correspond to how many BIDs obtained funding from these other sources. Many BID budgets rely solely on their BID assessments.

Investment Interest:	10
Private Donations:	4
Municipal Contributions:	11
Grant(s):	3
Member Fees:	3
Event/Program Revenue:	8
Other:	14

What is the average operating budget for a BID?

The average annual operating budget is \$194,494. Operating budgets range from a low of \$11,500 (Eau Claire – W. Grand Avenue) to a high of \$3,133,967 (Milwaukee BID # 21- Downtown Management District). Not counting the Downtown Management District, the average annual operating budget is \$136,857.

How are BID monies spent?

Business Improvement Districts often contract for a number of professional services to help administer BID programs and their operation.

12 (21%) of the Reporting BIDs Contracted	Graphic Design Services
28 (48%) of the Reporting BIDs Contracted	Accounting Services
9 (16%) of the Reporting BIDs Contracted	Litter Control Services
6 (10%) of the Reporting BIDs Contracted	Legal Services
7 (12%) of the Reporting BIDs Contracted	Secretarial Services
4 (7%) of the Reporting BIDs Contracted	Snow Removal Services
33 (59%) of the Reporting BIDs Contracted	Events Production

Other Types of BID Expenditures Include:

	<u>No. Bids</u>	<u>% Total</u>
Promotional Efforts (General)	35	60%
Assistance for Business Start-Up(s)	24	41%
Job Training Programs	2	4%
Advertising	35	60%
Marketing	51	88%
• Audiovisual Materials	3	5%
Physical Improvements	33	57%
Streetscape Development	414	76%
Public Safety	19	33%
Debt Service	11	19%

Additional Information:

For more information on Wisconsin BIDs, including a Directory of contact information for BID representatives, contact:

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Or visit <http://lgc.uwex.edu/cpd/bidpage/bid.html>.

Acknowledgments

The author wishes to express his gratitude to Matthew Straub, Masters Candidate in Urban and Regional Planning at UW-Madison, who was instrumental in gathering and analyzing the available data described in this publication.

<u>Parking Data for the B-3</u>												
Address	Name	Use	Sq Ft	Code Req	Actual	Deficit						
10748 BSD	Bhirdo's Shell	gas	2635	18	6	12						
10744 BSD	2nd Hand Sue	retail	3711	13	4	9						
10740 BSD	Ecologie Sports	retail	4211	14	24	-10						
2294 Sunset	Kellstrom	office	4002.7	20	12	8						
10722 BSD	Candy Church	residential	2698	2	2	0						
10716 BSD	Boathouse	restaurant	4272	75	16	59						
10712 BSD	Anika Johnson	house	1856	2	2	0						
10708 BSD	Casperson's House	residential	2242	2	2	0						
10710 BSD	Caspersons office	retail	2550	43	32	11						
10708 BSD	Casperson's Barn	storage	1592	4	4	0						
10698 BSD	Al Johnson's	restaurant	11245	75	55	20						
10698BSD	Al Johnson's STABUR	restaurant	13201	88	54	34						
10686 BSD	Johnson Family	office	1485	8	2	6						
10678 BSD	Freundt	retail	7546	25	13	12						
10668 BSD	Wiltse	office	3622	18	1	17						
2340 Mill	Pipkas	retail	2549	9	2	7						
2330 Mill	Pipkas Barn	storage	500	1	2	-1						
2328 Mill	Mill Rd Gallery	retail/residential	4100	9	5	4						
2322 Mill	Pipkas Studio	office	900	5	3	2						
10648 BSD	Rita's House	residential	4080	2	2	0						
10640 BSD	SB Bowl	rest/bowl/motel	10813	66	46	20						
10636 BSD	Ace Hardware	retail	8336	28	0	28						
2349 Mill	Ace Barn	storage	3780	8	8	0						

10628 BSD	Village View	hotel		15	13	2			
10733 BSD	Marina	marina	150slp/2 rmp	60	85	-25	48 trailer, 37 car		
10707 BSD	Marina Kiosk	marina	?	62	0	62			
10693 BSD	Village Hall	assembly	4242	22	19	3			
10685 BSD	Post Office	retail	2998	10	12	-2			
10677 BSD	Wild Tomato	restaurant	3343	23	0	23			
10667 BSD	Confectionary	retail	2500	9	3	6			
10663 BSD	Grasse's	restaurant	3570	24	9	15			
10659 BSD	Points North	retail	2600	11	0	11			
10659 BSD	Points N Barn	storage/residen	1100	2	2	0			
10653 BSD	Creamery	restaurant	2268	16	7	9			
10649 BSD	Drink	restaurant	820	6	0	6			
10647 BSD	Spot	retail	3824	13	5	8			
10641 BSD	Husby's	restaurant	2911	20	13	7			
10641 BSD	Husby's Garage	restaurant	3573	24	12	12			
10635 BSD	On Deck	retail	15483	51	0	51			
10627 BSD	Lure	restaurant	7017	75	14	61			
Unassign	CHOP	restaurant		75	0	75			
2350 Maple	Cellcom	mixed use	11320	25	11	14			
			Total:	1078	502	576			

