

SCHEDULE OF BILLS PAYABLE
JULY 17, 2017
MONDAY
COMMON COUNCIL

10	GENERAL FUND	395,198.94
13	DEBT SERVICE FUND	0
14	CAPITAL PROJECTS FUND	12,940.31
26	FIRE SERVICE FUND	8,347.34
27	RIVER & BAY FUND	654.72
50	PARKING UTILITY FUND	20,044.00
53	SEWER FUND	196,625.25
52	WATER FUND	177,500.85
59	ELECTRIC FUND	741,887.82
	TOTAL	1,553,199.23

CITY OF WISCONSIN DELLS 2018 BUDGET TIMELINE	
DATE	ITEM
Tuesday, July 18, 2017	Distribute General Fund Operating Budget Worksheets
Friday, September 08, 2017	General Fund Operating Budget Worksheets Returned
Tuesday, October 3 & 10, 2017 (17th if needed)	Finance Committee Review & Approval: 5:30 PM General Fund Operating Budget Worksheets Debt Service Fund & Outlay/PRT Requests
Monday, October 16, 2017	Finance Committee Review & Approval - 6:30 PM Updates for Schedule of Fees
Wednesday, November 01, 2017	Publish General Fund, Debt Service Fund Budgets
Monday, November 20, 2017	Public Hearing on 2018 Budget - 7:00 PM



PROFESSIONAL SERVICES

Memo

To: David Holzem, Director of Public Works – City of Wisconsin Dells
From: Chad Wagner, P.E., and Kevin Ruhland, P.E., MSA
Date: July 5, 2017

The City of Wisconsin Dells has been coordinating with the Wisconsin DOT regarding an improved intersection at the primary street connection to the Woodside Dells Sports Complex on WIS 13. Traffic counts have been collected on different occasions in an attempt to assess the “typical” conditions at the site. At this point WisDOT believes an improved stop controlled intersection is sufficient, while the City may be interested in alternative designs that include more control on WIS 13.

In an attempt to rectify any differences in traffic data, the potential to install a continuous counting device was discussed at the May Public Works Meeting. It was requested that MSA review the options and cost for potential devices to collect this data. There are several products on the market to collect data however the following are the most prudent for this application.

GRIDSMART Camera:

GRIDSMART is a single camera with dual purpose; data collection and intersection detection. The immediate use of the camera would be providing turning movement counts. A single camera captures the entire intersection with one unit collecting turning movement counts, speed, and vehicle classification. All of the information collected is stored on the GRIDSMART Cloud for up to one year where the data can be extracted at any time.

In the future, the camera can be reused at any signalized intersection as a vehicle detection system. This is the same detection system currently used on the downtown traffic signals by WisDOT, and replaces the need for in-pavement loop detection. The future installation will also produce traffic data collection reports and has the capability to create historical reporting on performance data including intersection delays and cycle lengths. Repurposing the camera would be a cost savings to any proposed signalized intersection as in-pavement loops would not need to be cut or sawed into the existing pavement.

Total Cost for GRIDSMART Unit: \$16,636.00 plus pole and labor to install

2901 International Lane, Suite 300, Madison, WI 53704-3133
(608) 242-7779 (800) 446-0679
FAX: (608) 242-5664 WEB ADDRESS: www.msa-ps.com

MEMO

June 30, 2017

For an additional cost, this unit has the ability to provide a live video feed of the intersection, which can be viewed remotely or via a mobile device using a cellular connection. The camera allows for pan-tilt-zoom (PTZ) options to configure the view and manage the intersection. This may allow police or other City staff to keep watch on the delays/queues and monitor the area more closely. An additional cost to provide a cellular data connection would need to be verified if the City is interested in this feature.

Armadillo Tracker Stats Collector:

The Armadillo Tracker uses radar to detect individual time stamped vehicle counts, speeds, and class per direction with up to 97% accuracy. Unlike the GRIDSMART camera, the Armadillo collects ADT data rather than turning movement counts. The Armadillo includes on-board memory storage for up to 300,000+ individual vehicles and battery life for up to two weeks of run time. Data can be received either via direct connection to the unit or Bluetooth. Installation is a simple point and go setup; however, mounting height is 8-12 feet to clear parked vehicles. The unit can be banded to almost any pole up to 12 feet from the edge of traveled way.

One unit could be installed on the access to the Woodside Dells Sports Complex to get directional volume entering and leaving the site. An additional collector could be installed on WIS 13 to collect real time speed, class, and ADT data. Included with the unit, Windows Traffic Statistics Analysis software generates reports and graphs on counts and 50th and 85th percentile speeds. While this unit does not output the desired turning movement counts, this speed and ADT data could be used to supplement a case for traffic control at a less expensive price tag than the GRIDSMART camera.

In the future, because the unit can be banded to almost any pole within 12 feet of the edge of traveled lane, the Armadillo could be reused throughout the City as a means of collecting ADT, speed, and vehicle class data. It cannot be used at traffic signals to replace in pavement detection.

Cost for a single Armadillo Unit: \$2,865.00 plus pole and labor to install.

Add-on options for additional costs include a 5W solar panel to provide full autonomy and avoid battery recharging. Additionally, real time data could be collected via a 3G GSM modem as an alternative to the Bluetooth or direct connection, eliminating the need to visit the site to obtain the counts.

Summary:

From an upfront cost standpoint, the Armadillo provides useful total volume data for a lower cost than the GRIDSMART camera. However, the preferred data to support a case for alternative traffic control would be collecting intersection turning movement counts. In talking with the Armadillo vendor, a solar panel and wireless modem option is available. Their units are typically used for quick setup/takedown utilizing the internal battery and direct plug-in data retrieval. Given this information, the GRIDSMART camera is recommended if the City chooses to proceed with the data collection. It provides both the preferred type of data for the Woodside application and could be repurposed as the likely WisDOT required vehicle detection type should a signal go in at Eddy Street, or any other intersection in the future, making the equipment cost more nominal due to the repurposing of the device in the future.

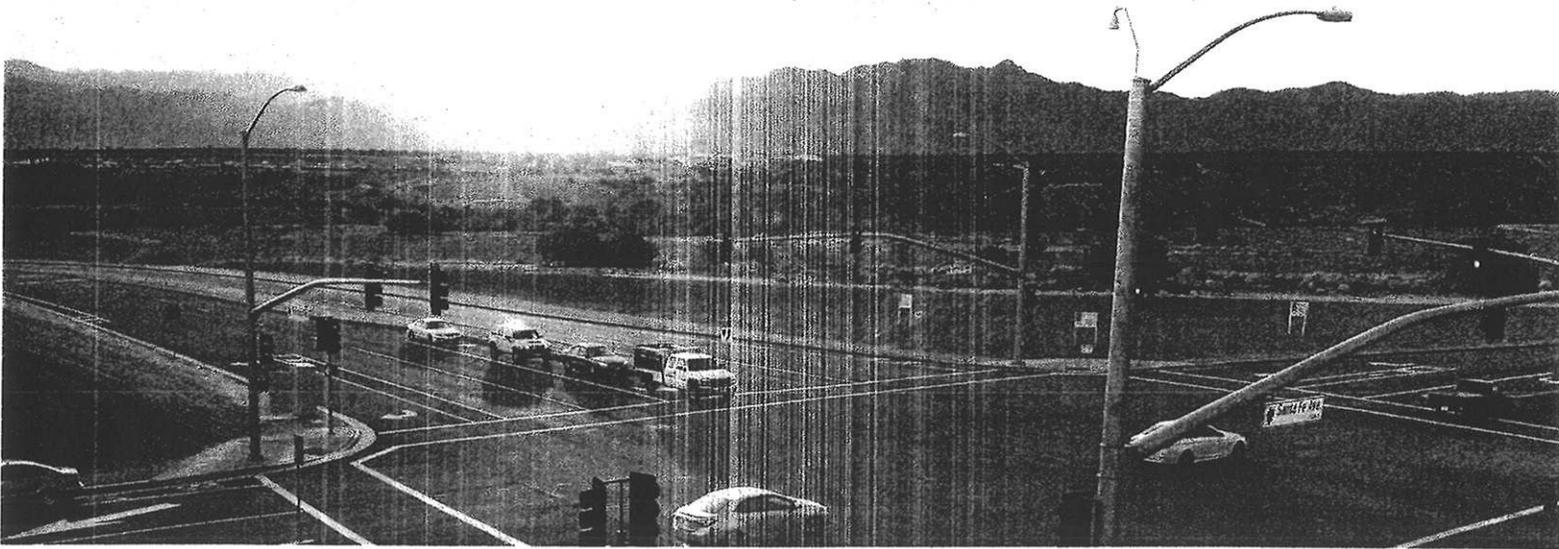
MEMO

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In addition to the equipment setup and data storage, if the City requests MSA's assistance in reviewing or downloading the data, MSA proposes an initial \$3,500 estimated fee not to exceed to assist with the GRIDS MART system. This effort could include assistance with the installation, initial download of data, and regular review of the system data as needed. Limited, if any, onsite assistance is anticipated since all data is directly uploaded into the GRIDS MART Cloud. Costs to assist with the Armadillo are anticipated to be higher due to the potential for multiple units, the need to collect the data from the site (without add-ons) and the need to provide additional data interpretation since the Armadillo units only provide directional volume, and not the more detail turning movements.

GRIDSMART®

GRIDSMART IS THE WORLD'S ONLY SINGLE CAMERA SOLUTION FOR INTERSECTION ACTUATION, TRAFFIC DATA COLLECTION, AND SITUATIONAL AWARENESS.



Built on uncompromising core principles - Simple, Flexible, and Transparent - GRIDSMART delivers intersection and highway solutions using three components: the iconic Bell Camera, the GS2 Processor powering vision-based tracking algorithms, and GRIDSMART Client software to configure and view your sites.

THE SIMPLE GRIDSMART INSTALLATION IS COMPLETED IN THREE HOURS OR LESS FROM START TO FINISH.

Hang your Power over Ethernet Camera, no focusing or aiming necessary. Connect the Camera to the GS2 with a single wire, no cards, no racks required. Configure with the GRIDSMART Client. If you know traffic, you can learn the Client in 30 minutes or less.

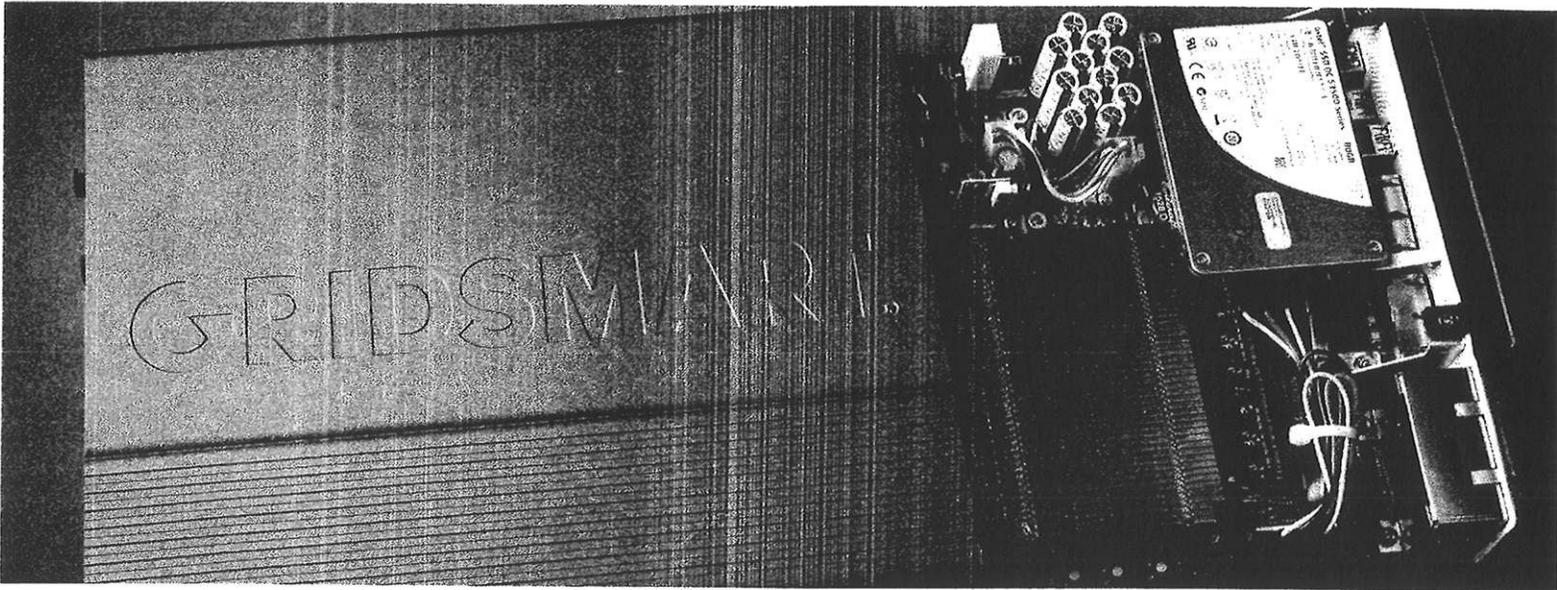
Once the Camera is in place, take advantage of GRIDSMART features like a virtual DVR, so you can see how your system performs, or access an open API to integrate GRIDSMART with any system you wish. Add modules that provide real time counts, performance data, and even email alerts to help analyze evolving traffic patterns.



CAMERA

GRIDSMART's iconic Bell Camera delivers the industry's only horizon to horizon view that includes the center of the intersection, where vehicles, bicycles, and pedestrians actually cross paths.

The familiar GRIDSMART Bell is rugged and tough, milled out of ¼ thick aluminum protecting the downward facing optics from the elements. Virtual pan-tilt-zoom of the camera is a click away in the Client where you can customize up to four different views, changing anytime you wish. No matter where you look, the camera still sees horizon to horizon. It is a view you just cannot get with first generation video.



GS₂

GS₂ is housed in an artisan-forged, single-piece, GRIDSMART-tough enclosure. Built with flexibility in mind, the 1U-high Processor can be rack-mounted, lie horizontally, or stand vertically. The GS₂ front panel shows phases, calls, and status with bright, multi-color LEDs.

The powerful GS₂ Processor runs the GRIDSMART Engine, a suite of vision-tracking algorithms that build a 3-dimensional model on objects approaching the intersection. The object trajectories are tracked through user defined zones through the center of the intersection and to each object's ultimate exit, delivering unmatched accuracy. It is hard to count what your camera can't see or track. GRIDSMART exclusively delivers enter to exit tracking.

CLIENT

Your GRIDSMART system is managed by the intuitive GRIDSMART Client software running on a laptop or at your Traffic Management Center. The Client empowers you to set up detection and counting zones, view intersections and highways, and even generate performance reports. Use the history functionality to revert between configurations or go back to a set-up you liked better. When linked to GRIDSMART Cloud, the Client will back up your site configurations securely online at no cost.



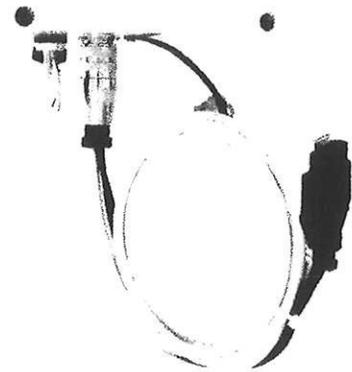
HOUSTON RADAR

ARMADILLO TRACKER STATS COLLECTOR

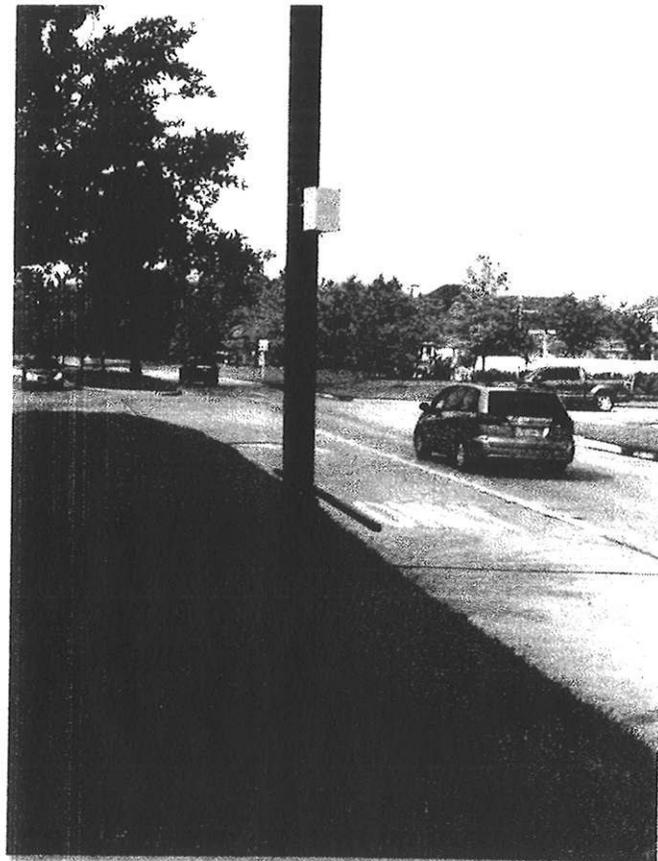
Armadillo Tracker is a fully integrated multi-lane bidirectional traffic statistics gathering device. Featuring small size and no-hassle field setup, it is the leading non-intrusive real-time and archiving statistics collector in the world.

Features and Benefits

- World's smallest radar-based stats collection box with target tracking, multi-lane and bi-directional capabilities
- Ultra-low power consumption allows **2 weeks of run time** on built-in batteries and full autonomy with a small 5W solar panel
- Collects **individual time stamped** vehicle counts, speeds and class (up to 3) per direction in up to 2+2 lanes making it a perfect fit for traffic monitoring and speed study applications
- Computes real-time, per direction **average speed** for incident detection applications
- Simple "point and go" installation. No measurements, no trigonometric computations, no computer required on the road
- Weatherproof security switch for turning unit on and off
- Beeper to indicate passing vehicles during setup facilitates high-confidence deployment
- Best-in-class 0.4% speed accuracy and up to 97% count accuracy
- Vehicle classification in up to 3 factory set size classes
- On-board memory to store **300,000+** individual vehicles
- High performance LiFePO4 rechargeable battery pack operates in wide temperature range and allows over 2000 recharge cycles
- High speed AC charger for a 3.5hr charge cycle or a standard USB charger for convenient 12VDC car plug or computer charging
- USB, long range (1000'+, line of sight) Bluetooth and RS232 interfaces
- Optional **GPS** for geo-tagging of collected data
- Optional high performance integrated **solar charger** with maximum power point (MPPT) technology and 5W **solar panel kit**
- **Optional 3G GSM modem for remote access to data/real time speeds**
- Certified for license free worldwide operation
- Windows Traffic Statistics Analysis program to generate reports and graphs of vehicle counts, averages and 85th percentile speeds
- Designed and manufactured in the USA at an ISO9001 certified facility



Armadillo Tracker Radar Stats Collector



Armadillo mounted on light pole collecting data



HOUSTON
RADAR

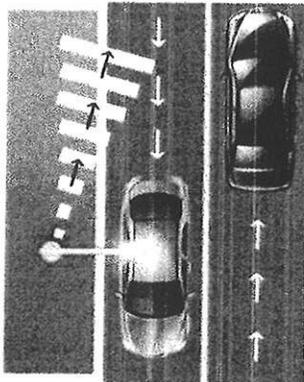
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12818 Century Drive, Stafford, TX 77477
<http://Houston-radar.com>
Toll Free: 1-888-602-3111

Typical Counting, Average Speed and 85 th Percentile Measurement Accuracy				
Radar Installation Location	Number of Incoming Lanes	Number of Outgoing Lanes	Typical Direction Count Accuracy	Average Speed and 85 th Percentile Accuracy
On Side of incoming lane	1	1	97+%	+/- 0.6 mph +/- 1 km/h
On Side of incoming lane	2	X	93+%	+/- 0.6 mph +/- 1 km/h
Median between two directions	1	1	97+%	+/- 0.6 mph +/- 1 km/h
Median between two directions	2	2	93+%	+/- 0.6 mph +/- 1 km/h

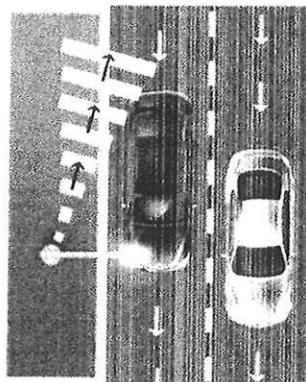
Notes:

1. Accuracy numbers are listed for typical free flowing traffic. Stop and go traffic will have worse accuracy that will depend on actual traffic conditions
2. Armadillo radar may be mounted with 0 to 12 feet offset to the side of the road or in middle of median that is no more than 12 feet wide
3. Armadillo radar is installed per suggested instructions in the installation manual

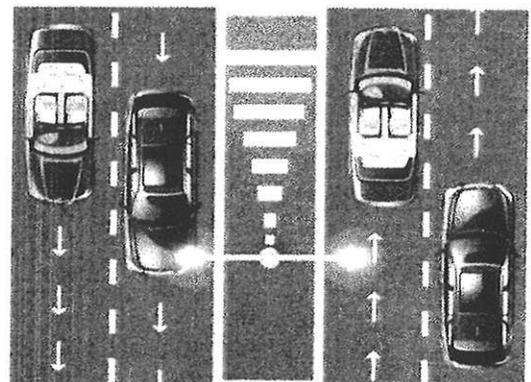
Three Possible Road Installation Options for the Armadillo Tracker



Armadillo on the side with 1 lane each direction



Armadillo on the side with 2 lanes incoming. No outgoing lanes can be detected



Armadillo on single lane median with up to 2 lanes on each side



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All specifications are subject to change. Accuracy figures are based on typical conditions.

Item # 6

Garbage Truck Vendors	2015 Quote	2017 Quote	Increase %	Existing Trucks	Model	~ HRS	Comments	Estimated Trade-in-Allowance
Bruce Municipal (Heil Body)				YR.				
Mack Chassis	\$ 187,200.00			2003	7400 Int.	12,500	motor problems	
International Chassis	\$ 181,152.00						Rebuild Costs ~\$20,000	
				1997	4700 Int.	20,000	Been rebuilt	
McNeilus							Less used truck	
Freightliner Chassis	\$ 169,612.00	\$ 174,279.00	1.56%				smaller single axle	
-Less trade-in of 2007								
V & H Inc. (New Way Cobra Body)								
Western Star	\$ 170,730.00	\$ 185,000.00						
Freightliner Chassis	\$ 163,000.00	\$ 175,000.00						