



**Mini Innovative Vehicle Design Racing – Noted by Yellow Flag**

Students start with a 1/10<sup>th</sup> scale off the shelf 2-wheel drive RC vehicle, conduct a series of performance tests, collect and analyze their data and then convert the vehicle to 4-wheel drive, with an emphasis on the physics at work, programming, and tuning the vehicle for optimal performance along with skilled driving. Many teams have added a sensor innovation this year.

Full Scale IVD Custom Division:	Safety Check	Figure 8	City Scope
1.	8:15	10:00	1:00
2. Macomb Academy Arts/Sciences	8:15	10:00	1:00
3. Wm. D Ford Career Center	8:15	10:00	1:00
4. Williamston HS	8:30	10:30	1:00
5. University HS	8:30	10:30	1:00
6. Southfield HS	8:30	10:30	1:00
7. Oxford High School Team 1	8:45	11:00	1:00
8. Branch Area Career Center	8:45	11:00	1:00
9. Manoogian School	8:45	11:00	2:15
10. Flex Tech HS	9:30	11:30	2:15
11. Lapeer Technical Center	9:30	11:30	2:15
12. Kenowa Hills, Grand Rapids	9:30	11:30	2:15
13. Pioneer HS Ann Arbor	9:15	12:00	2:15
14. Huron County	9:15	12:00	2:15
15. Wilson Talent Center	9:15	12:00	2:15
16. Oxford High School Team 2	9:30	12:30	2:15

**Full Scale IVD Noted by Green Flag**

Teams of high school students design, engineer, and build a fully functional one-person vehicle. Each car must have a unique component that sets it apart from its competitors. Students' projects have included innovations from across the spectrum of automobile engineering disciplines: safety features, body styling, driver comforts and more. Teams were encouraged to look at "Light-weighting" and sensor technology for this year's challenge. Full Scale IVD cars compete on two courses: Figure 8 for 30 minutes and the Ford Cityscape for one hour. Project Specialist Doug Ward with support from Specialist Jim Schirmer. Sponsors include **Planet M, Washtenaw Community College and TATA Technologies!**

You can find photos and video from today on Square One Education Network's **Facebook and Twitter @SquareOneNet** or website **www.squareonenetwork.org**  
**Instagram, Snapchat, Tweet #IVD2018 #MiGirlsInSTEM #Mobility**

Mini IVD	School Name	Agility	Pit Stop Challenge **	Top Speed	Michigan Mini Oval
1A	Roseville	10:00	11:00	12:00	2:00*
2A	Chippewa Valley	10:00	11:00	12:00	2:00*
3A	Clinton HS 1	10:00	11:00	12:00	2:00*
4A	Huron Tech 1	10:00	11:00	12:00	2:00*
5A		10:00	11:00	12:00	2:00*
6A	Waterford Kettering	10:00	11:00	12:00	2:00*
7A	Saline	10:00	11:00	12:00	2:00*
1B	Flex Tech	10:30	11:30	12:30	2:00*
2B	Grand Traverse Academy	10:30	11:30	12:30	2:00*
3B	Portage Central	10:30	11:30	12:30	2:00*
4B	Clinton HS 2	10:30	11:30	12:30	2:00*
5B	Huron Tech 2	10:30	11:30	12:30	2:00*
6B	St. Louis HS	10:30	11:30	12:30	2:00*
1C	Frederick Douglass Academy	11:00	12:00	1:00	2:00*
2C	Kenowa Hills	11:00	12:00	1:00	2:00*
3C	Lakeview	11:00	12:00	1:00	2:00*
4C	Lapeer Ed Tech	11:00	12:00	1:00	2:00*
5C	Oak Park	11:00	12:00	1:00	2:00*
6C	Waterford Mott	11:00	12:00	1:00	2:00*
7D	Sanilac	11:00	12:00	1:00	2:00*
1D	ACATEC	11:30	12:30	1:30	2:00*
2D	Reese HS	11:30	12:30	1:30	2:00*
3D	Ufca CSI	11:30	12:30	1:30	2:00*
4D	Vassar	11:30	12:30	1:30	2:00*
5D	Hazel Park	11:30	12:30	1:30	2:00*
6D	WD Ford Career Center	11:30	12:30	1:30	2:00*

Project specialist is Joe Hart, Mini IVD Racing is sponsored by **Nissan**



Many thanks to the students, teachers, parents, volunteers, partners and community members who make these projects a reality.

## Welcome to the Square One Education Network 2018 Innovative Vehicle Design Mobility Challenge Competition

Square One prepares students with the essential skillset for higher learning institutions and the rapidly evolving needs of STEM related jobs. We strive to empower teachers with a complete set of resources for students to engage, using hands-on learning tools and modern learning fundamentals, with the intent of developing skills needed for the next generation technical workforce. Programs like IVD develop the talent needed to drive our economy forward!

Proud Partners in



Visit our great exhibitors in the Big Warming Tent!

### Today's Program of Events

- 9:15am Kick Off at the Main stage pavilion
- 10:00am ~ Performances (weather permitting) begin
- 11:45am to 1pm ~ Team lunch available in the Warming Tent
- 12:00pm begins the High Speed Challenge on the southeast corner
- 2:15pm kicks off the exciting Michigan Mini Oval
- 1-2pm and 2:15-3:15pm ~ Full Scale City Scape course – Pedestrian traffic will be limited
- 3:15-4:15 ~ Teams help disassemble courses, stack cones, etc.
- 4:15-5:00 – Ice Cream/Dance Party
- 5:00pm – 6:00pm ~ Awards & Scholarship Presentation - Speakers from P3
- Ongoing – Visit the warming tent to check out exhibits, student video presentations  
We welcome Kettering University, Aquinas College, MIAT, Washtenaw Community College, and Lawrence Tech,
- Square One's board of directors is generously sponsoring an Ice Cream Treat for teams today!

Autonomous IVD	Performance Round 1	Performance Round 2
1. Divine Child, Livonia	11:30	2:30
2.	11:30	2:30
3. Grand Traverse Academy, Traverse City	11:30	2:30
4. Glenbrook South, IL	11:30	2:30
5. Roseville HS, Roseville	11:00	2:00
6. Kalamazoo Central, Kalamazoo	11:00	2:00
7. Oak Park HS, Oak Park	11:00	2:00
8. Waterford Mott HS	11:00	2:00
9. Clinton High School, Clinton	10:30	1:30
10. Hazel Park HS	10:30	1:30
11. Wilson Talent Center	10:30	1:30
12. Portage Central HS, Portage	10:30	1:30
13. Northwest HS, Jackson	10:00	1:00
14. Saline HS, Saline	10:00	1:00
15. Vassar HS	10:00	1:00
16. Waterford Kettering, Waterford	10:00	1:00

#### **Autonomous IVD – Noted by Pink Flag**

Building upon a toddler "jeep" platform, students are introduced to C+ programming, GPS technologies, Arduino chips, and motion sensors as they re-tool it to perform various tasks autonomously with a connected vehicle theme. The teams' vehicle performance scores are based upon the level of autonomy, number and complexity of tasks they are able to achieve. Specialist Bill Grimm and P3 specialists Cody McNeill & Nate Bezanson

Autonomous Innovative Vehicle Design is sponsored by **P3**

#### **V2X means Vehicle to Everything - Noted by Red Flag**

This exploration of real world, relevant technologies connects our vehicles wirelessly to each other and to the infrastructure. It is an effort to create a crashless society with traffic that moves safely and effortlessly. These teams will demonstrate their efforts thus far. Specialists JC Irvine and Bob Jones

V2X Masters of Mobility	Competitions
William D. Ford Career Technical Center, Westland	9:30-12
Oak Park High School	9:30-12
Hazel Park High School	9:30-12

V2X Masters of Mobility schools are sponsored by **Washtenaw Community College, CTN, and the Michigan Department of Talent and Economic Development!**

**Thanks for supporting our event today!**