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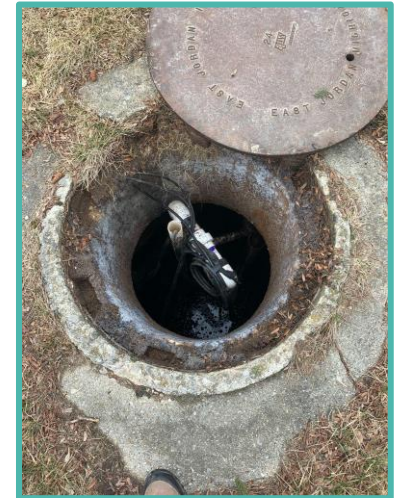
# Rod Leviora

— Founder: Shelby Satkowiak —  
Co-Founder: Manny McMillian

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# The Problem

- **Accuracy**
  - Current Accuracy is to the nearest 1/2 foot
- **Time**
  - On Average it takes 10 minutes
- **Safety**
  - 4,764 Work Related Deaths in US (2020)



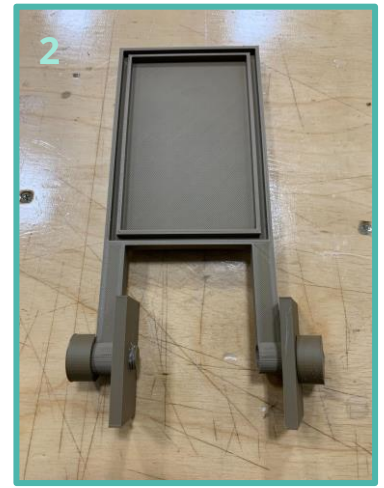
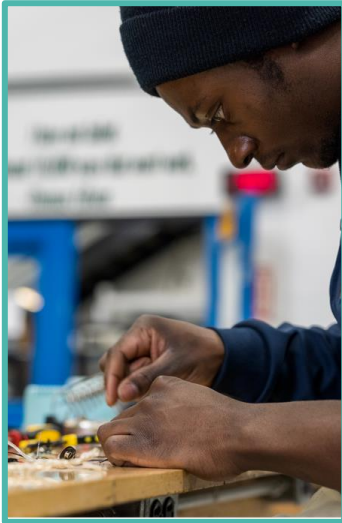
# The Solution

- **Accuracy**
  - Increase by .05 of a foot
- **Time**
  - Cut time in  $\frac{1}{2}$
  - 5 minute in road time
- **Safety**
  - Decrease deaths by 10%



# The Process

- Started as an **idea**
- **Hours** Spent in NMC Makerspace
- 6 **“failed”** attempts
- The **“Perfect”** Product







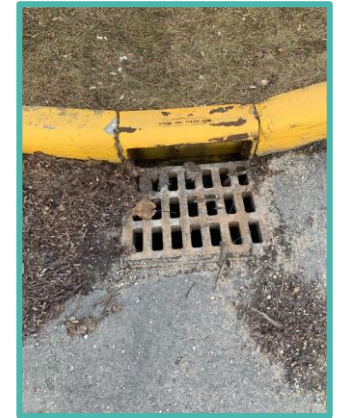
## Our Success

- Level Rod numbers are readable
  - In 10 ft deep manhole
- Rod Leviora is lightweight
  - 2 lbs
- Rod Leviora is durable & waterproof
  - Sanitary manholes
  - Storm manholes



## What's Next?

- Making Rod Leviora Easily Adjustable on the Level Rod
- Self tightening Clamp





# Business Model For 10,000 Units

ITEM	BUDGET
Injection Mold	\$20,000
Cost (per unit \$8.5)	\$85,000
Labor Cost (per unit \$8)	\$80,000
<b>Total</b>	<b>\$185,000</b>

**PRICE:** \$150.00 per unit

**Profit Margin** (per unit): 87.7%

**Total Profit:** \$1,315,000



## The Market

- 43,710 Surveyors in US (2020)
- 304,310 Civil Engineers in US (2020)
- 980 of Surveyor Employment is Road construction based (2020)
- 5 Survey Supply Stores in Michigan

**GOAL:** 1 unit per field personal



# Competition

- **Traditional Survey Methods**
  - Flashlight
  - Tying ribbon to Grade Rod
  - Engineering Plan Sets

**OLD WAY**



**NEW WAY**



# Meet the Team

## Shelby Satkowiak - Founder

- Marine Technology Major
- Survey Engineering Minor
- Survey Technician II - Spicer Group
- 3 years experience in Land Surveying

## Contact Information:

Phone Number: (517) 899 - 2564  
Email: [satkow2@mail.nmc.edu](mailto:satkow2@mail.nmc.edu)

## Manny McMillian - CoFounder

- Engineering Technology
- Unmanned Aerial System
- Experience with 2d/3d modeling
- 4+ years experience in construction

## Contact Information:

Phone Number: (734) 419 - 4536  
Email: [emcmillan412@gmail.com](mailto:emcmillan412@gmail.com)

# The Ask

- Help to Continue Rod Leviora Development
  - New Ideas
  - Next Steps
- Scholarship Sponsorship
  - Educational Support

