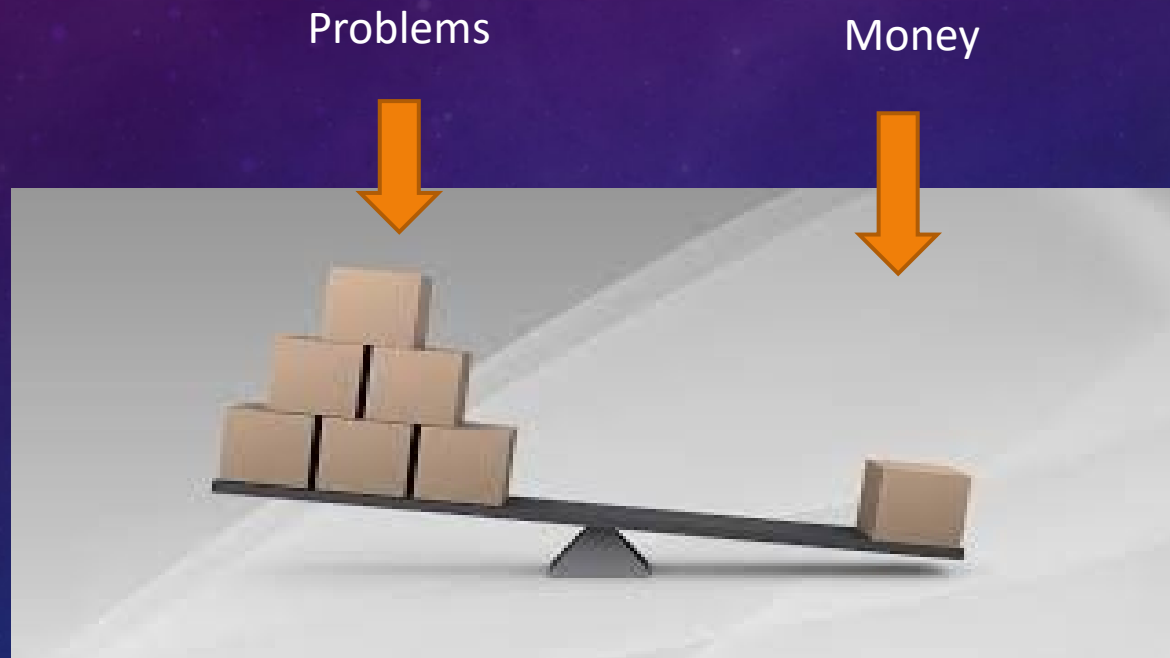




Asset Management

Timothy Hunt,
Lewis County Highway Superintendent

Highway Superintendent



Asset Management

1. Know what it is your managing
2. Have an accurate inventory
3. Have a condition rating/assessment
4. Know your budget
5. Prioritize maintenance tasks over capital expenditures
6. Look at what you do, what you can afford to-do and where there might be gaps

Asset

- Capital Item
- Usually valued at over \$5,000 dollars
 - Know your procedures
- Capital has a defined life span
 - Know what that is?
- Capital is useful over many operating budget cycles

Types of Asset

- Depreciating asset
 - Value is decreasing every year
 - What is it's life span
 - Need to budget for it's replacement
- Appreciating Asset
 - Value is increasing every year
 - Defined life span
 - Need to budget to maintain it's value

Capital Vs. Operating Expenses

- Replacement (planned depreciation)
- Maintenance (extend life & customer service)
 - Add value and changes depreciation schedule
- Repair (Keep in good condition)

NPV (Life Cycle Cost)

- NPV(life cycle cost) (capital cost + repair cost/life span)=
Annual budget number

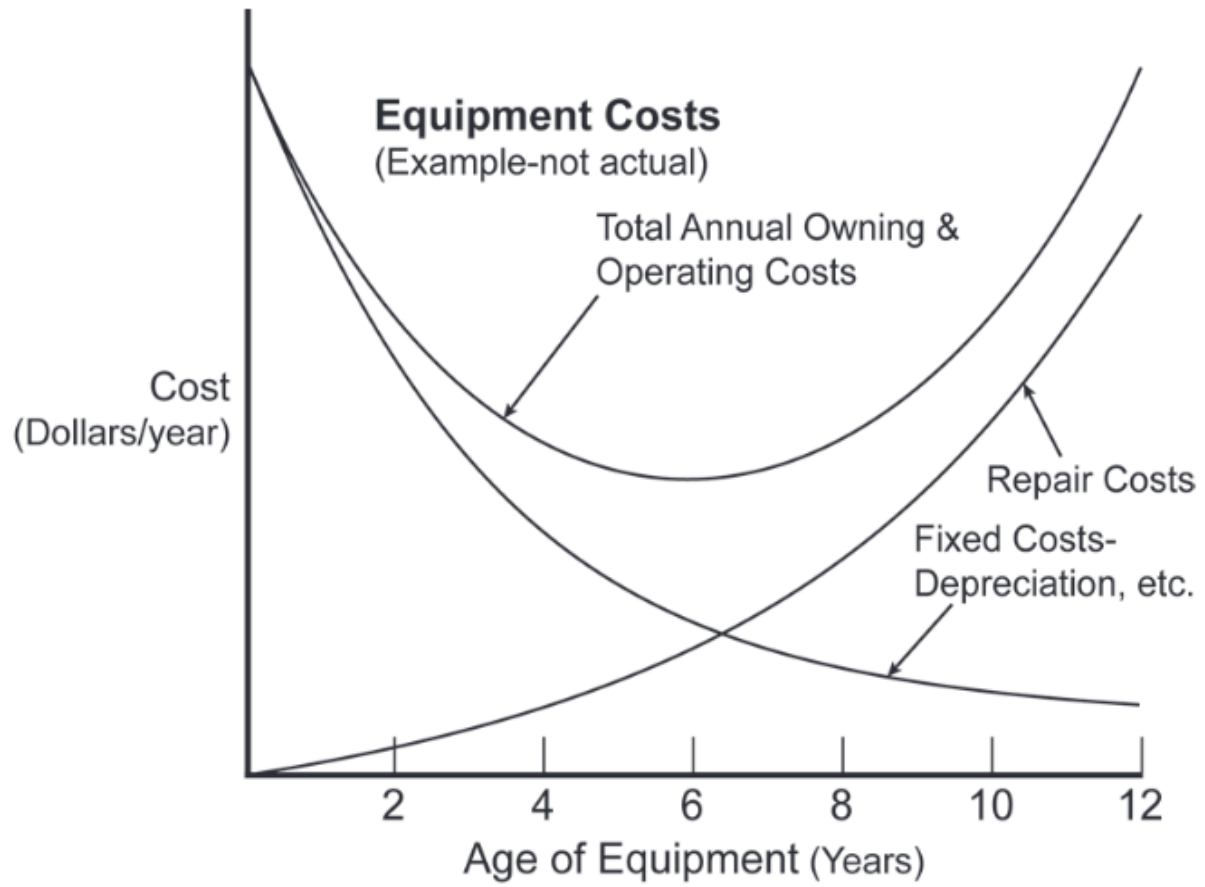
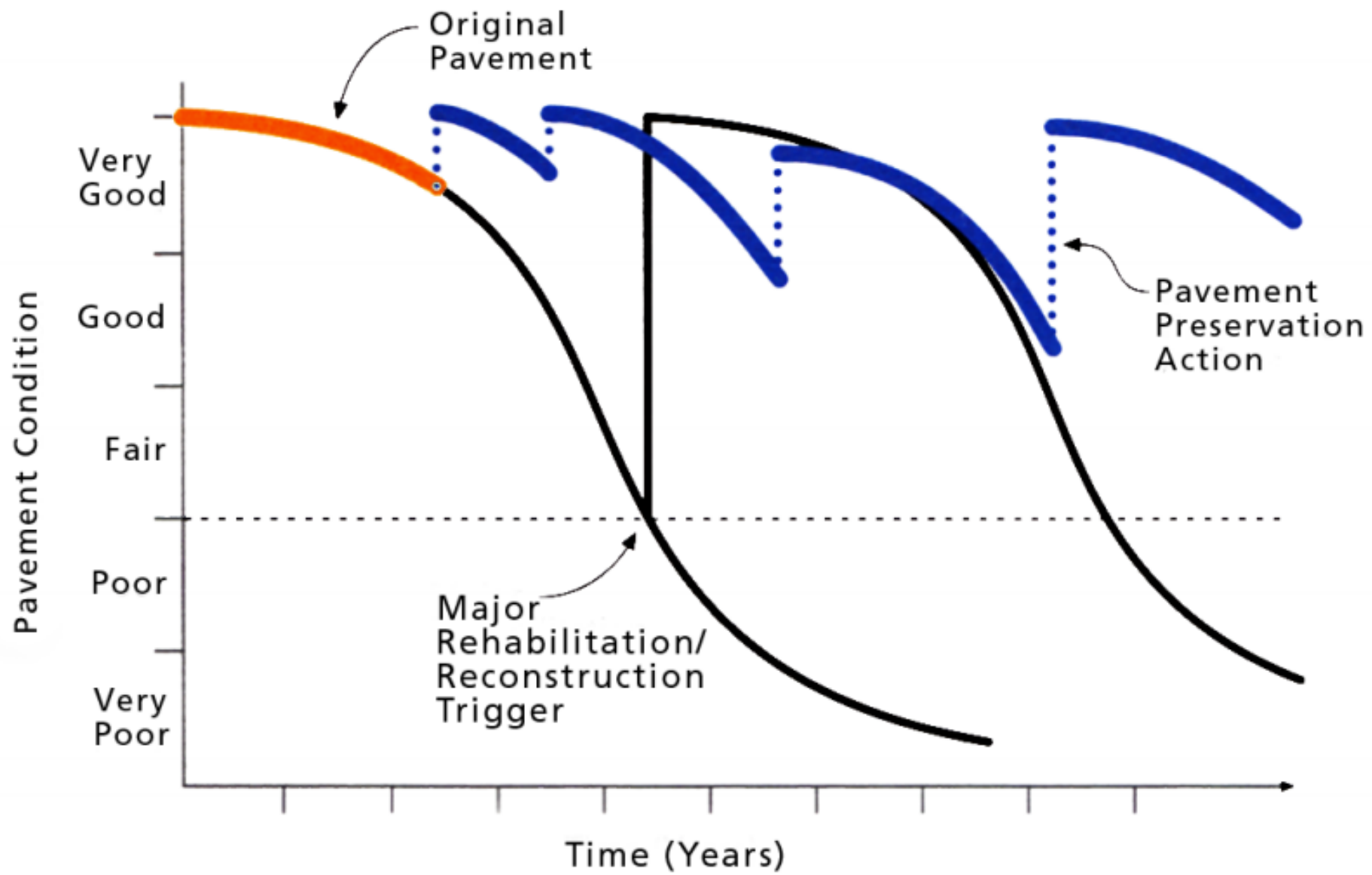


Figure 7. Equipment Cost Example



Asset Management

1. Know what it is your managing
2. Have an accurate inventory
3. Have a condition rating/assessment
4. Know your budget
5. Prioritize maintenance tasks over capital expenditures
6. Look at what you do, what you can afford todo and where there might be gaps

Know what your managing (Roads)

- Roads
 - Paving (Capital)
 - Sealing
 - Repairing
- Shoulders
- Ditches (drainage)
- Signs
- Brush
- Trees

Know what your managing (Bridges)

- Washing
- Drainage
- Brush
- Joints
- Decks
- Bearings
- Concrete (repair)
- Steel (Painting & Repair)
- Replacement

Know what your managing (Water)

- Wells
- Pumps
- Chlorinators
- Tanks
- Pipe
- Service Connections
- Valves

Capital & Operating

- Maintenance (extend life & customer service)
- Repair (Keep in good condition)
- Replacement (planned depreciation)

Asset Inventory

- [Local Highway Inventory – Local Roads \(ny.gov\)](#)
- [Highway Inventory \(arcgis.com\)](#)
- [Vaisala RoadAI Map \(vionice.io\)](#)
- [Roads Master Spreadsheet](#)
- [Bridges Master Spreadsheet](#)

Identify the maintenance strategies

- Roads
 - Crack filling (7 Years)
 - Sealing (7 Years)
 - Paving (20 Years)
 - Pot hole repair (Annually)
- Shoulders
 - Cutting (10 Years)
- Ditches
 - Cleaning (10 Years)
- Signs (10 Years)
- Brush (Annually)
- Trees (10 Years)

Summary Report Card

- Roads - 250

- 100 miles in poor condition

- Bridges - 89

- Rating 1-7 (7 being Excellent)
- 5.79 Average

- Box Culverts – 32

- 28 are good
- 3 Poor
- 1 Repair

- Signs – 3159

- 347 Excellent

- 2571 good

- 82 fair

- 46 Replace

- Guiderail – 85,967

- 37,895 Good

- Culverts

- Unknown

- Equipment – 51 Pieces

- 44 are good

- 7 are fair/poor

Asset Value

- Roads 250 miles x \$300,000 = \$75,000,000 (20Years)
- Signs 3,159 x \$300 = \$947,700 (10years)
- Bridges 89 x 1.5 million = \$133,500,000 (75 Years)
- Box Culverts 36 x \$600,000 = \$21,600,000 (75Years)
- Guiderail 85,967 feet of x \$140 per foot = \$12,035,380 (20 Years)
- Heavy Equipment/Trucks 35 pieces = \$6,632,624 (6 years)
- Culverts 1,128 =
- **Total Asset Value** = **249,715,704**

Cyclical Need (Capital)

- Roads (Paving) 250 miles x \$300,000 = \$75,000,000 (20 Years) = \$3,750,000 (Chips)
- Bridges 89 x 1.5 million = \$133,500,000 (75 Years) = \$1,780,000 (TIP)
- Signs 3,159 x \$300 = \$947,700 (10 years) = \$94,770
- Box Culverts 36 x \$600,000 = \$21,600,000 (75 Years) = \$288,000
- Guiderail 85,967 feet x \$140 = \$12,035,380 (20 Years) = \$601,769
- Equipment/Trucks 35 pieces = 6,632,624 (12 years) = \$552,718
- Culverts 1,128 =
- **Annual Need =**

Operating budget as a percentage of assets

- Total asset value = \$ 249,715,704
- Annual budget = \$8,700,000
 - Capital Budget = 3,400,000
 - O & M = 5,300,000
- Percentage of asset value = 3.5%
- Example \$200,000 home @ 3.5% = \$7,000 (capital and maintenance)

Report Card(Roads) 248.26 Miles

<u>Maintenance Activity</u>	<u>Goal</u> <small>(Center line miles)</small>	<u>Actual</u>
• Sealing	41.4 _(6y)	47.15
• Striping	83 _(3y)	79
• Shoulders	41.4 _(6y)	24.57
• Ditching	41.4 _(6y)	10.30
• Trees	25 ₍₁₀₎	10.30
• Brush _(boom mower)	83 _(3y)	
• Paving	12.4 _(20Y)	10.30

2022 Report Card (Bridges) ⁽⁸⁸⁾ Bridge Master

<u>Maintenance Activity</u>	<u>Goal</u> <small>(Center line miles)</small>	<u>Actual</u>
• Washing	89	89
• Sealing <small>(Every other year)</small>	88	0
• inspection	89	89
• Brush	89	89
• Drainage	89	89
• Flags	0	1
• Decks	?	?
• Joints	?	?
• Replacement	1	1

2022 Report Card (Signs) (3,000)

<u>Maintenance Activity</u>	<u>Goal</u> <small>(Center line miles)</small>	<u>Actual</u>
Inventory	3159	
inspection	3159	
Straighten	?	
Replaced	316	

• Good	2619
Excellent	278
Fair	186
Replace	53

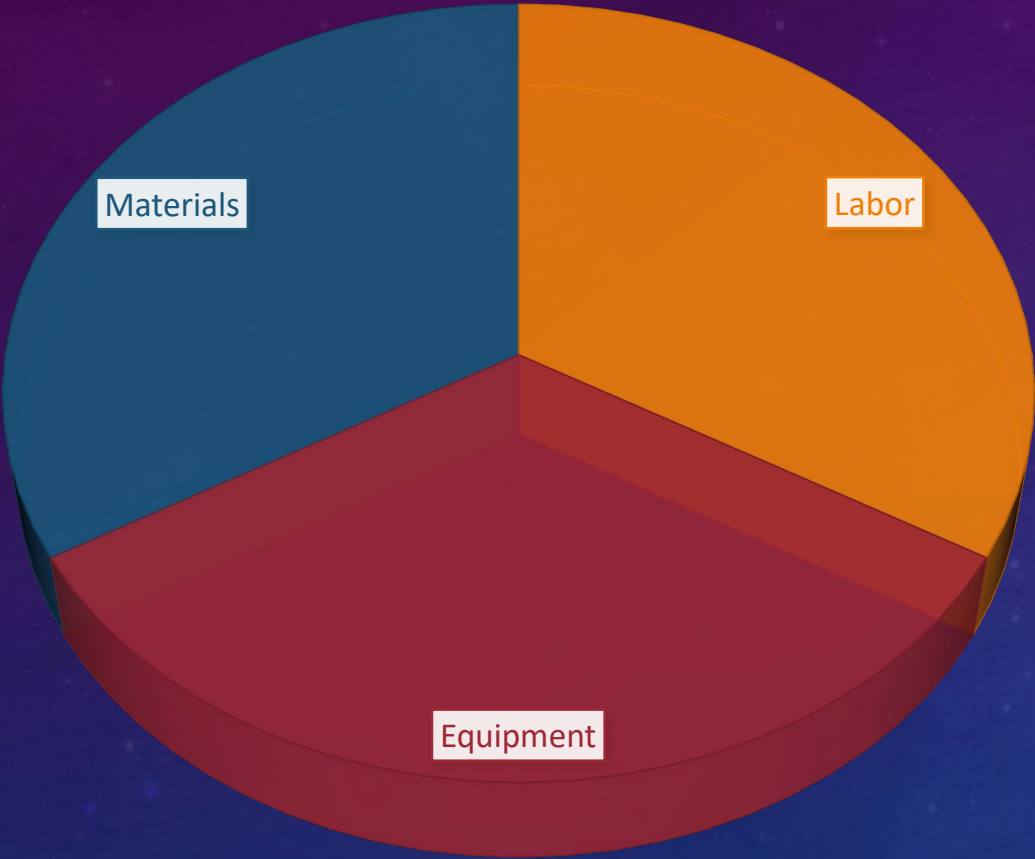
2022 Report Card Guiderails

<u>Maintenance Activity</u>	<u>Goal</u>	<u>Actual</u>
Inventory	All	85,967 feet
inspection	All	All

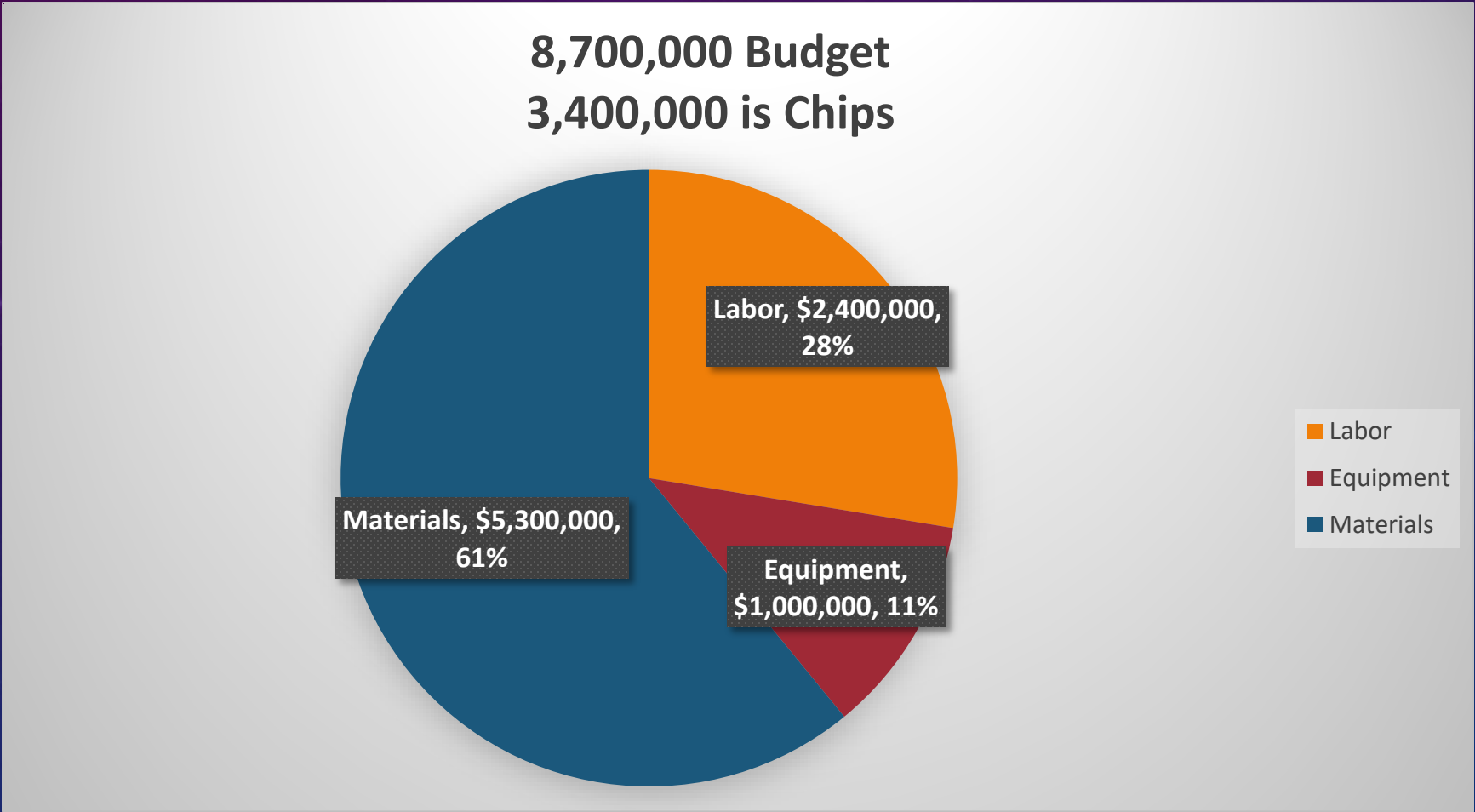


Highway Budget = Roads

EXPENSES



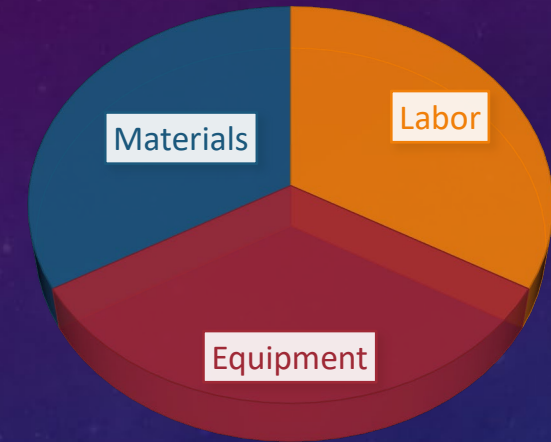
Highway Expenditure



Is equipment and labor balanced

- Do you have people with no equipment
- Do you have equipment and no people
- Would you rather have 10 people with shovels
 - 1 person with an excavator
- It is not perfect, but it will evolve
- Equipment and attachments should help us with the report card

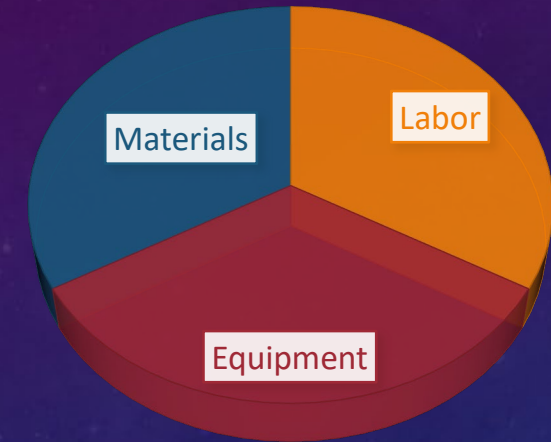
EXPENSES



Managing Materials

- Are we getting what we pay for
 - Better Specs
 - Material Testing
- Purchase the highest quality material
 - State spec material vs. bank run

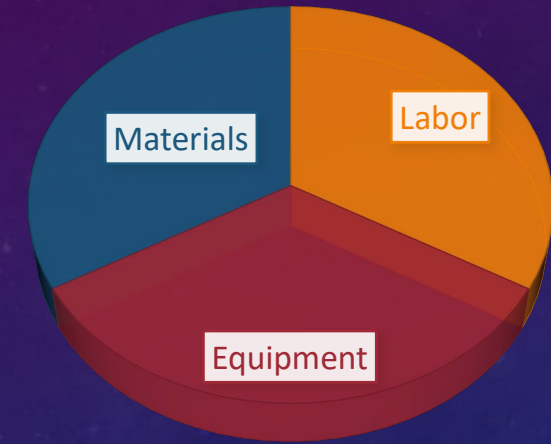
EXPENSES



Managing Equipment

- Pieces need high utilization
- Buy the Swiss army knife
 - Loader with quick attach
- Buy the highest quality product
- Focus on uptime and labor efficiency

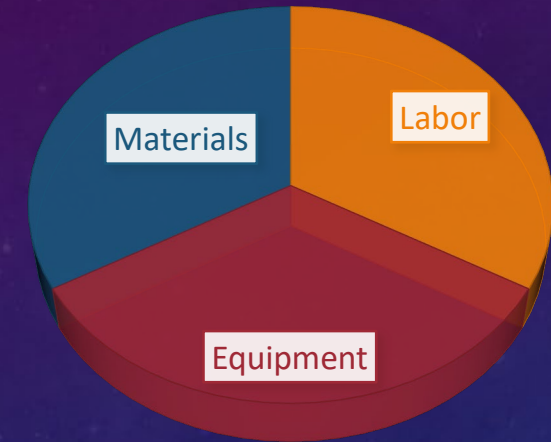
EXPENSES



Managing Labor

- It is doing the right tasks
- Having the right tools
- Having good working conditions
- Being focused on safety
- Continuing education

EXPENSES





• timhunt@lewiscounty.ny.gov