

U.S. Department of Labor Employment and Training Administration Apprenticeship Training, Employer and Labor Services(OATELS) Washington, D.C. 20210	<u>Distribution:</u>  A-541 Headquarters A-544 All Field Tech A-547 SD+RD+SAC+; Lab.Com	<u>Subject:</u> New Apprenticeable Occupation - Maintenance Technician Municipal (Roadway Technician)  <u>Code:</u> 200
Symbols: DSNIP/FDK		Action: Immediate

**PURPOSE:** To transmit to the Office of Apprenticeship Training, Employer and Labor Services (OATELS), Bureau of Apprenticeship and Training (BAT) Staff the recognition of a new apprenticeable occupation:

Maintenance Technician  
Municipal(Roadway Technician)  
O\*NET/SOC Code: 47-2061.00  
RAIS Code: 1049  
Training Term: 2 years (4000 hours)  
Type of Training: Time - based

**BACKGROUND:** Cindy Durant, a Florida SAC Apprenticeship Representative submitted this occupation on behalf of the City of Dunedin Florida. The OATELS Administrator approved the Maintenance Technician Municipal as a new apprenticeable occupation on March 12, 2003.

A suggested work process schedule and related instruction outline is attached for your information.

The Maintenance Technician Municipal will be added to the list of occupations recognized as apprenticeable by OATELS when the list is reissued.

**ACTION:** OATELS staff should familiarize themselves with this new occupation.

If you have any additional questions please contact (202)693-3813.

Attachment

**WORK PROCESSES**  
**MAINTENANCE TECHNICIAN, MUNICIPAL (ROADWAY TECHNICIAN)**

ONET/SOC CODE: 47-2061.00 RAIS Code: 1049

**Description:** Maintain highway, municipal and rural roads, airport runways, and other rights-of-way. Responsible for repair to road base materials, concrete forming and finishing, utilizing various asphalt mixes and equipment, and road drainage systems. Duties include patching small and large sections of broken or eroded pavement, installing and repairing guard rails, installing pavement markings, utilizing medium duty maintenance equipment, repair and maintenance of drainage catch basins, swales, and erosion control. May also mow or clear brush from along roads, plow snow, or sweep streets with mechanical sweeping equipment. Must understand and be able to utilize maps, grade stakes, surveys, and DOT road standard documents. Must be familiar with work zone safety, flagging, and safety standards applicable to road maintenance.

*These duties will be performed within road Right-of-Way (streets and sidewalks), parking lots, and walkways.*

**Approximate Hours**

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**A. GENERAL KNOWLEDGE AND WORK SKILLS**

**Applicable to All Areas**

1. Health and Safety
2. Driving Safety
3. Environmental Protection
4. Surveying Principals
5. Plan Reading, Quantity Take Off
6. Communication Skills
7. Customer Relations
8. Hand Tool Operation and Maintenance
9. Emergency/Disaster Clean Up

**B. ASPHALT MAINTENANCE AND REPAIR**

**1000**

1. Application
2. Rolling
3. Tamping

**C. CONCRETE MAINTENANCE AND REPAIR**

**1000**

1. Forming
2. Base Compaction
3. Mixing
4. Placing/Pouring
5. Finishing

**D. USE OF EQUIPMENT**

**1000**

1. **Light Duty Equipment Operation.** Operates gasoline, diesel, and electric powered equipment such as walk-behind rollers, jack hammer/air compressor, trenchers, pumps, oxy-acetylene torch, vibratory compactors, chain saw, chipper/stump grinder, concrete/asphalt saws, circular saw, generator, lawn mowers, portable cement mixer, hand tools, and other similar equipment.

2. **General Duty Equipment Operation.** Operates equipment such as dump trucks, flatbed trucks, skid steer loaders, forklift, water truck, tack truck, small roadway materials reclaimer, paving equipment, tractor operation (pull behind mowers, box blade, slope mower), pavement rollers, bucket truck, and other related equipment.
3. **Introduction to Heavy Equipment.** Recognize and understand operation
4. **Of heavy equipment** such as motor-grader; Gradeall; bucket loaders, bulldozers, backhoes, and other similar heavy equipment.

<b>E. RIGHT-OF-WAY GROUND AND TREE MAINTENANCE</b>	<b>1000</b>
1. Site Cleaning	
2. Landscaping	
3. Mowing	
4. Maintenance	
5. Herbicide/Pesticide Application	

*Prepares site for landscaping. Plants and mulches landscape vegetation. Waters, fertilizes, applies herbicides/pesticides, and trims plants and trees. Trims and removes tree branches obstructing pedestrian or vehicular traffic or signage. Removes dead, unsafe, or condemned trees from Right-of-Way. Operates edgers, clippers, trimmers, mowers, sod cutters, and various hand tools.*

<b>TOTAL</b>	<b>4000</b>
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**RELATED INSTRUCTION OUTLINE**

MAINTENANCE TECHNICIAN, MUNICIPAL (ROADWAY TECHNICIAN)  
ONET/SOC CODE: 47-2061.00 RAIS Code: 1049

**FIRST YEAR**

<b>Description</b>	<b>Approximate Hours</b>
<b>A. HEALTH AND SAFETY</b>	<b>34</b>
1. Work Zone Safety	
a. Types of Signs	
b. Types of Markings	
c. Work Area Housekeeping	
2. CPR	
3. First Aid	
4. Drivers Safety	
5. OSHA Regulations	
a. First Responder Awareness	
b. Work Site Environmental Protection	
c. Personal Protective Equipment (PPE)	
d. Personal Safety	
e. Hearing Protection	
f. Confined Space	
6. Utility Locating	
7. Emergency Operational Procedures	
a. Environmental and Weather Disasters	

**B. STREET MAINTENANCE – LIGHT EQUIPMENT OPERATION 36**

1. Rollers – walk behind
2. Jack Hammer/Air Compressor
3. Trenchers
4. Pumps
5. Oxy-Acetylene Torches
6. Vibratory Compactors
7. Skid Steer Loader
8. Saws
  - a. Chain Saw
  - b. Concrete/asphalt Saw
  - c. Circular
9. Generators
10. Lawn Mowers
11. Cement mixer - portable
12. Hand Tools
  - a. Cleaning, sharpening
  - b. Proper Use and Care

**C. STREET MAINTENANCE –GENERAL DUTY EQUIPMENT, OPERATIONAL AND SAFETY PROCEDURES 40**

1. Dump truck
2. Flat bed truck
3. Skid steer loader
4. Forklift
  - a. OSHA Certificate
5. Water truck
6. Tack truck
7. Small roadway materials reclaimer
8. Roadway paving equipment
9. Tractor operations
  - a. pull behind mowers
  - b. box blade
  - c. slope mower
10. Pavement rollers
  - a. steel
  - b. rubber
11. Bucket truck

**INTRODUCTION TO HEAVY EQUIPMENT SAFETY PRACTICES**

1. Hand Signals
2. Motor graders
3. Gradeall
4. Bucket loader
5. Bulldozer
6. Backhoe
7. Road Grader

**D. BASIC FORM CARPENTRY 12**

1. Nails (Types)
2. Power Actuated Fastening Tool (Certificate)
3. Saws (Types)
4. Lumber (Types/Sizes)

<b>E.</b>	<b>ROADWAY MAINTENANCE AND REPAIR</b>	<b>36</b>
1.	<b>Concrete</b>	
a.	Use of Tools	
b.	Mixing	
c.	Forming	
d.	Placing/Pouring	
e.	Finishing	
2.	<b>Asphalt</b>	
a.	Use of Tools	
b.	Application / Types of Asphalt	
c.	Math	
d.	Preparation	
	1. Cutting Edges	
	2. Compaction	
	3. Tacking	
e.	Rolling / Tamping Procedure	
<b>F.</b>	<b>COMMUNICATION SKILLS</b>	<b>4</b>
a.	Use of Two-Way Radio	
b.	Oral Communication Skills	
c.	Communicating with the Public	
d.	Written Communication Skills	

**FIRST YEAR TOTAL** **156**

**SECOND YEAR**

<b>Description</b>	<b>Approximate Hours</b>
<b>G. HEALTH AND SAFETY</b>	<b>24</b>
1. Setting up a Safe Traffic Work Zone	
2. Competent Person Training	
<b>H. SURVEYING PRINCIPLES</b>	<b>32</b>
1. Construction Plan Reading	
2. Cut Sheets	
3. Map Reading	
4. Use of Survey Equipment Instruments	
<b>I. ROADWAY CONCRETE REPAIR</b>	<b>36</b>
1. Math (Quantities)	
2. Americans with Disabilities Act - Curb, Sidewalk, and Handrail Requirements	
3. Forming	
4. Reinforcing	
a. Wire	
b. Steel	
c. Fibre Mesh	
5. Specifications	
a. Slumps	
b. Pumping	
c. Pounds per Square Inch	
d. Additives	

6.	Grinding	
7.	Sealing	
8.	Repair	
9.	Utility Cuts	
10.	Distress Identification	
	a.	Types
	b.	Causes
<b>J.</b>	<b>ROADWAY ASPHALT REPAIR</b>	<b>28</b>
1.	Math (Quantities)	
2.	Grinding	
3.	Sealing	
4.	Repair	
5.	Utility Cuts	
6.	Distress Identification	
	a.	Types
	b.	Causes
<b>K.</b>	<b>RIGHT-OF-WAY GROUND AND TREE MAINTENANCE AND RESTORATION</b>	<b>30</b>
1.	Trees	
	a.	Identification
	b.	Trimming
	c.	Removal
2.	Brush	
	a.	Trimming
	b.	Removal
3.	Ground Cover – Restoration	
	a.	Compaction
	b.	Leveling
	c.	Sodding
	d.	Seeding
4.	Herbicide/Pesticide Application	
	<b>SECOND YEAR TOTAL</b>	<b>156</b>