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## LESSON 5: KEY CONCEPTS

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### Protocol and Procedures – D.R.A.I.N.S.

- **Documentation** – property description and inspection details/limitations
- **Run Water** – slow stream of cold water
- **Access** – best point of access; record property access
- **Inspect** – investigate conditions
- **Notate Deficiencies** – capture condition, implication, recommendation
- **Sanitize & Secure** – sanitize equipment and secure drain access

### Locating Access Points

#### Cleanouts

- One or Two – front or back (note limitations)
- Clues – HSO Valve, city access, alignment of interior rooms
- Buried – how long do you look before moving on?

#### Sidewall

- Kitchen Sink
- Laundry Room

#### Floor Drains & Toilets

#### Roof Top Access – Sewer Vent

##### **Safety First**

- Ladder Access - carrying equipment
- Maintain 3 points of Contact
- Roof Pitch – over 4 or 6
- Company Policy

##### **Length of Drop**

- How far to bottom? Snake Length?
- Making the Turn? Camera Head?

#### Septic Systems

##### **House to Tank**

- Cleanouts
- Anerobic vs. Conventional

##### **Tank Walls**

- Utilize camera to view interior walls

##### **Tanks to Drain Field**

- Drain Field Cleanout

### Cautions and Limitations

#### Cautions

- Do not push through large clogs or root intrusions
- Do not drop into the city sewer main
- Do not push through severely channeled or rusted pipes
- Do not force snake greater than combined 360 degrees
- Do not push through back flow preventors

## Helpful Tips

- Ride the Wave – flush the toilet and ride the wave (both directions)
- Corkscrewing - unwind and untwist cord before pushing
- Push Caution – pushing the first 10-15 feet; 9-12 inches at a time
- Dirty Lens - flush clean toilet to remove debris on camera lens
- Reversing - Move camera back and forward to navigate or position
- Orientation - Be aware of camera orientation (both directions)
- Don't Panic - Stay calm and float the camera

## Types of Cables



### Features

- flexible; semi-rigid; cores or wrapping
- waterproof, loop and kink free

### Lengths

- 20M = 65 feet
- 30M = 100 feet
- 50M = 160 feet

## Types of Camera Heads

### Camera Features:

- Number of Pixels – image clarity
- Lens Cover – plastic or glass (scratch resistant)
- Self-Leveling – weighted heads
- Pan & Tilt – additional applications
- Lighting – number and adjustable

### Accessories

- Guide/Skid Kits – navigation and height
- Flexible Necks – navigation
- Transmitter or Sonde – for tracking



## Types of Video Screens

### Features

- Size – visibility, determination
- Wi-Fi Projection to Phone
- Color or Black and White
- Date, Time, Distance, Text
- Audio Capture
- Picture Capture

### Accessories

- Light Tents or Shades
- Video Capture
- Hard Drive
- SD Card



## Recommended Equipment Features

- 1 ¼ to 1 ½ inch camera head for 2-inch drains (stainless)
- Self-Leveling for high volume
- Built-in Counter (mark cable with colored tape – 25-foot increments)
- 10 mm cable for pushing greater distances
- 100 to 140 foot cable
- Battery Operated
- USB and/or Wi Fi recording
- Under 45 lbs. and Backpack straps
- Torpedo Shaped Skid with Flexible Spring Neck