

NYCHA MOLD TRAINING

**Mold Inspector Refresher
Video-Conference Training
Presentation**

EEA

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EDUCATION ASSOCIATES**

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Welcome NYCHA Staff

- Registration & sign-in/out
- Training materials
- Training Agenda
- Training Goals
 - Understand importance of controlling mold & moisture
 - Be able to use the tools, practices & procedures
 - Be ready to get this done!



Welcome back NYCHA Staff

- This training is presented by EEA under contract to NYCHA
- EEA is an accredited asbestos, lead & mold training provider
- We look forward to working with you to provide this very important training
- It's critical to public housing in NYC
- NYCHA succeeds when YOU succeed!
- [General Manager's Intro](#)

Why Are We Here Today?

- Exposures from residential excessive moisture and mold have been associated with increased risks for respiratory symptoms, asthma, hypersensitivity pneumonitis, rhinosinusitis, bronchitis, and respiratory infections.
- NYCHA staff must take action to detect and correct leaks, condensation problems, and floods as soon as they are discovered. The potential for building structural damage, mold growth, and increased adverse health effects can and must be reduced by limiting the build-up of indoor moisture.



Allergic Responses

Asthma

- Molds can trigger asthma attacks in persons allergic (sensitized) to molds.
- Asthma is a major problem in New York City. In some low-income parts of New York City, as many as one in four children have asthma.
- [What is asthma](#)



Irritant Effects

Mold exposure can irritate the eyes, skin, nose, throat, and lungs of both mold-allergic and non-allergic people.



Degrees of Exposure

- "The dose makes the poison" (in [Latin](#): *sola dosis facit venenum*) – Paracelsus (1538 AD)
- a substance can produce the harmful effect associated with its toxic properties only if it reaches a susceptible biological system within the body in a high enough concentration
- Occupants or remediation workers disturbing large areas of mold growth face greater exposure potential, and thus, greater potential for adverse health effects.



Golden Rule for Mold Exposure Safety

Minimizing mold-related exposures will reduce the possibility of health impacts on occupants and workers.

- As the potential for exposure increases, the need for protective measures increases.
- Workers can reduce exposure potential by proper use of personal protective equipment (PPE).
 - Respirators (Minimum N-95)
 - Gloves
 - Protective clothing
 - Goggles

Health Issues for Workers

- Mold assessment and remediation employees with persistent health problems that appear related to mold should see a physician.
- Referrals to physicians trained in occupational, environmental or allergy medicine may be needed.

Common-Sense Approach

- **Small amounts of mold growth in homes and buildings are common occurrences, that for the majority of people present minimal health risks.**
 - The solution is to fix the moisture problem and clean up the mold quickly.
- **Large areas of mold growth present a more likely risk of exposure and adverse health effects for some people.**
 - Large areas of mold growth indicate more extensive water damage/moisture intrusion in the building.
 - Additional and more extensive measures should be used during remediation to protect both workers and occupants of the building.

How Mold Grows

- Finds suitable conditions
 - Water
 - Food
 - Temp (hot or cold)
- Grows
- Spreads

Public (Housing) Enemy #1



Localized Mold Contamination



Major Mold Infestation



Aerotech Laboratories, Inc.

NYCHA Facilities

- 2,413 buildings in 325 developments over five boroughs; 769 facilities; 177,666 apartments; 404,000 residents
- 70 percent of NYCHA buildings built before 1969.
- Building materials that can be affected by mold & moisture include:
 - Plaster
 - Sheetrock
 - Wood studs/framing
 - Cabinets
 - Caulking & grout

Where Does Mold Grow in NYCHA?

- The paint on plaster, concrete, and sheetrock walls/ceilings
- The paper covering of sheetrock walls/ceilings (front/back and top/bottom sides)
- The covering of pipe-wrap insulation in wall cavities
- Bathroom tile grout and caulking
- Kitchen and bathroom cabinetry
- Wood framing materials in wall cavities



Mold Root Causes – Changes Overview

Twenty-nine (29) Root Causes are organized by five (5) general categories how the problem was caused.

- I. Sealant Related Issues – Issues that can be resolved by removing and replacing old caulking.
Example: Caulking around a bathtub.
- II. Leak Issues – Issues caused by a leak other than an sealant issue.
Example: Crack in exterior (façade) is causing a water enter the unit.
- III. Resident-Caused – Issues that can be prevented due to adjustments to resident education and behavior.
Example: Resident is not opening a window after a shower.
- IV. Ventilation – Issues that are a result of inoperable roof fans and/or lateral duct issues.
Example: A clog in the lateral duct is preventing air from flowing into the apartment.
- V. Other – Issue(s) are being caused due to reasons outside of the four categories previously listed.
Example: Condensation (sweating on the pipes) due to the damaged or missing insulation.

Shower Vapor Condensation



Condensation on Cold Water Pipes In Wall Cavities



Missing insulation on cold water riser



Damaged insulation on cold water riser



Missing insulation on cold water supply t

Toilet Condensation - In Apartment



Plumbing Leaks/Flooding



Toilet Condensation - From Above



Perimeter Wall Condensation



Roof Leaks



Façade Leaks



Resident Related

- Boiling water or humidifier
- Not opening windows during/after shower
- Broken dishwasher
- Broken washing machine
- Blocked vent
- Other

Efflorescence



- Efflorescence is the residue that's left behind when water seeps through concrete, stone, or brick.
- Salt deposits leave a white residue that resembles mold.
- Won't grow or spread, and isn't a fungus.

Preventing Mold In NYCHA



- Mold growth is always associated with excessive moisture problems.
- How do we **prevent** or **control** excessive moisture and what are the **Root-Causes** of excessive moisture?

Preventing Mold Growth

Simple Steps

- keep exterior moisture out of the building
- control moisture from internal sources

Preventing Mold Growth

- It's important to establish a cooperative partnership between NYCHA staff and residents so that conditions that require attention are identified and dealt with promptly.
- NYCHA staff and residents should take action to detect and correct leaks, condensation problems, and floods as soon as they are discovered.
- The potential for building structural damage, mold growth, and increased adverse health effects can and should be reduced by limiting the buildup of indoor moisture.

UPDATED - Top Ten Things NYCHA Staff Should Know About Mold & Moisture

1. Potential health effects and symptoms associated with exposures to mold and excessive moisture include allergic reactions, asthma, and other respiratory complaints.
2. Mold can be found almost anywhere; it can grow on virtually any substance if moisture is present. For example, there are molds that can grow on sheetrock, painted plaster and concrete, wood, paper, carpet, foods, and even dusty inorganic building materials
3. There is no practical way to eliminate all mold and mold spores in the indoor environment; the way to control indoor mold growth is to control moisture.
4. If mold is a problem in an apartment or building, we must clean up the mold and eliminate sources of moisture.
5. Fix the source of the water problem or leak to prevent mold growth, including repairing leaky roofs.

Top Ten Things NYCHA Staff Should Know About Mold & Moisture

6. Reduce indoor humidity (to 30-60%) to decrease mold growth by: venting bathrooms and kitchens; using air conditioners and de-humidifiers; and increasing ventilation. Staff shall ensure that mechanical ventilation is functioning (clear lateral ductwork and operable roof fans). Further, staff can use a hygrometer to check the relative humidity in a resident's apartment
7. Clean and dry any damp or wet building materials and furnishings within 24-48 hours to prevent mold growth.
8. Clean minor levels off of hard surfaces with water and detergent, and dry completely. Absorbent materials, such as sheetrock, that are moldy will need to be replaced.

Top Ten Things NYCHA Staff Should Know About Mold & Moisture

- 9. Prevent condensation: reduce the potential for condensation on cold surfaces by assuring that cold water pipes in wall cavities are properly insulated.**
10. If needed as a result of asthma, individuals with mold and/or excessive moisture in their apartments are entitled to reasonable accommodations from NYCHA.

NYCHA MOLD TRAINING

**Review & Updates to
NYCHA Standard
Procedure 040:14:1
5/21/20**

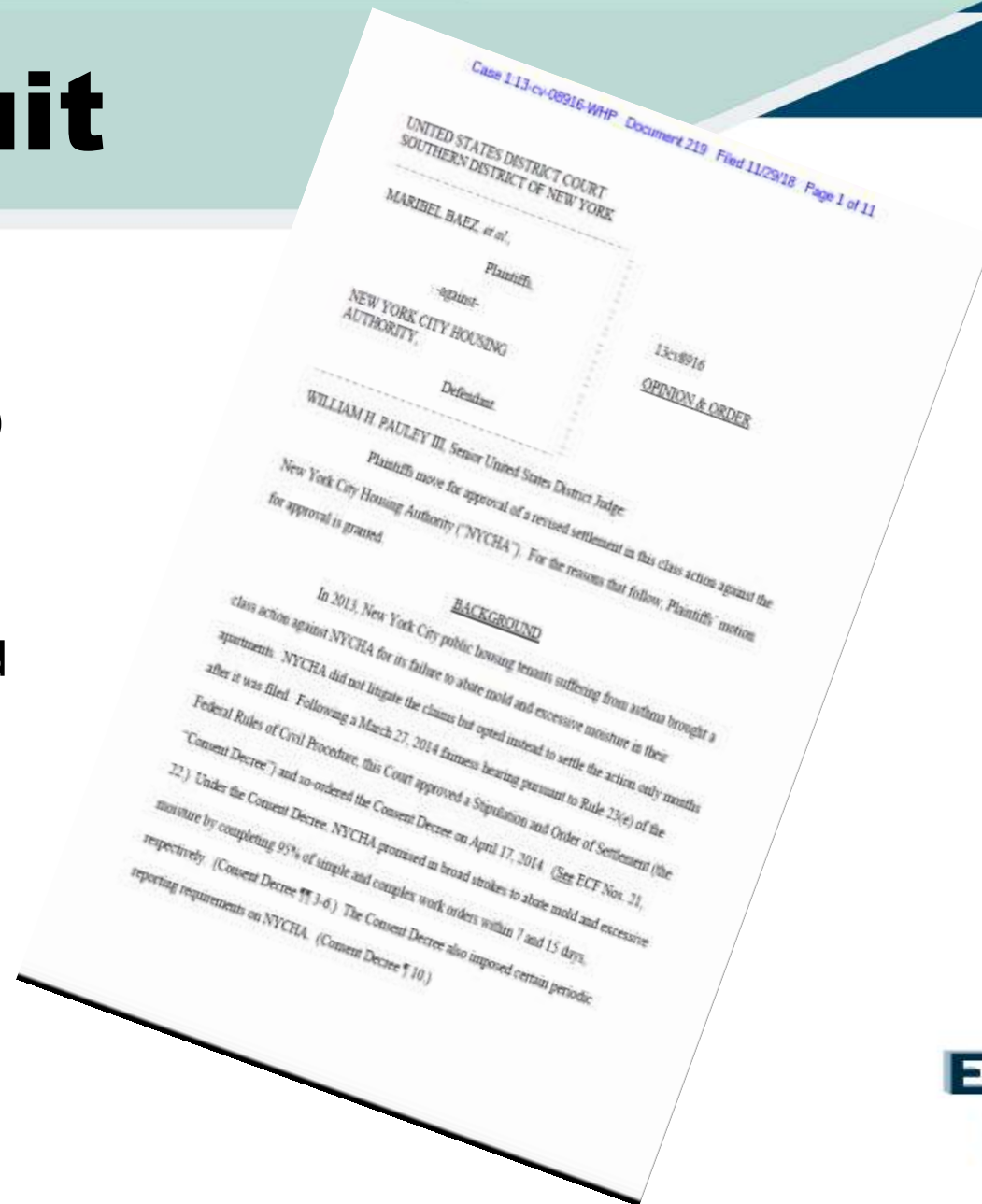
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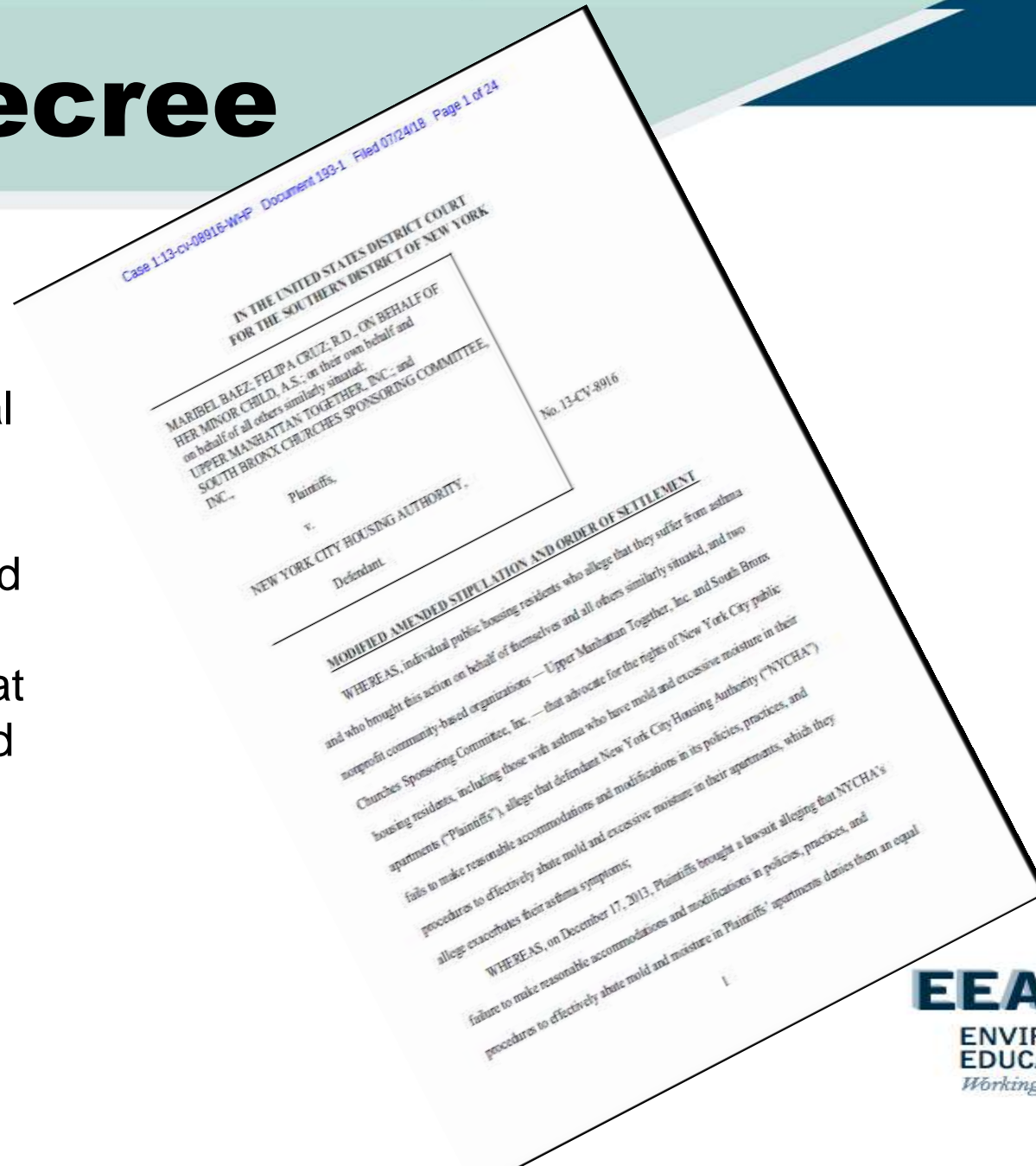
Baez Lawsuit

Maribel Baez vs NYCHA (“Baez”) is a class action lawsuit filed December 2013, as a violation the Americans with Disabilities Act for the conditions of mold and excessive moisture for residents suffering from asthma.



Consent Decree

- In partnership with the Special Master and Plaintiffs, NYCHA has revised its standard procedure for addressing mold complaints.
- These changes were piloted at 38 developments in 2017, and will be launching citywide in January 2019



NYCHA Purpose

- Standard Procedures establish responsive measures to mold and its root causes in NYCHA public housing locations, and creates protocols to protect the health of residents and staff when remediating mold and identifying and correcting its root causes.

Standard Procedures - Inspections

All inspection work must conform to the protocols in the following documents:

- GM 040:14:1, Mold/Mildew Control in NYCHA Residential Buildings
- NextGeneration NYCHA Informer Work Management (iWM) handheld application

Standard Procedures - Remediation

All remediation & related maintenance work must conform to the protocols in the following documents:

- GM 040:14:1, Mold/Mildew Control in NYCHA Residential Buildings, including Appendix A – Remediation Methods
- SP 040:18:2 Revised, Maintenance Tasks – Dust Control and Clean Up in Apartments, which establishes Work Area Preparation/Performance Levels
- Interim Guidance on Wall Breaks
- Interim Guidance on Pipe Insulation

Performance Metrics

- Average number of days to complete repairs and close mold work orders.
- Average number of days to complete initial inspections.
- Percent of mold work orders for reoccurring mold.

Non-compliance

- If unsatisfactory work is identified during a quality assurance inspection in Section VIII.H, or at any other time, supervisory staff must take one or more of the following actions:
 - Identify areas for follow up training for the employee and ensure training is scheduled and provided.
 - Reinforce with the employee(s) the job expectations, accountabilities, and the progressive discipline process.
- Failure to comply with the requirements of this Standard Procedure may result in disciplinary actions.

Quality Assurance Deficiencies

- As a result of a quality assurance review, NYCHA has found a small group of staff performance shortfall when it comes to mold inspections and remediation.

Inspectors Performance Shortfalls

- failure to use/properly use each of the Mold Busters tools during the inspection process (particularly Testo kit and app)
- failure to conduct a complete mold inspection (meaning accounting for all 3 indicators: signs of visible mold, water damage, moisture reading)
- failure to make accurate entries (square footage of mold)
- failure to use/properly use borescope to inspect wall cavities

Remediators Performance Shortfalls

- failure to use/properly use the anemometer and Testo app to measure exhaust vent output (bathrooms and kitchens)
- failure to use mold resistant paint as required based on the remediation methods and development construction
- failure to check/confirm that pipes are properly insulated when checking for excessive moisture/leaks in wall cavities
- failure to use/properly use the borescope to inspect wall cavities
- failure to ensure mold impacted surfaces are
 - 1. cleaned with the appropriate detergent solution/fungicide cleaner
 - 2. completely dry prior to moving forward in the mold remediation process.

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NYCHA Standard Procedures – Staff Responsibilities

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Office of Mold Assessment & Remediation (OMAR)

1. Monitor key development-level mold-related indicators including, but not limited to, parent mold work order completion time frames, and mold reoccurrence and unfounded inspection rates.
2. Perform random inspections at developments with high rates of mold reoccurrence or unfounded inspections and report findings to the neighborhood administrator.
3. Monitor the efficiency of mold work order scheduling and provide follow up recommendations to the neighborhood administrator or skilled trades deputy director, as applicable.

Property Management

Property management department director shall:

- a) Monitor key development-level mold-related indicators including, but not limited to, scheduled appointments, parent mold work order completion time frames, and mold reoccurrence and unfounded inspection rates.
- b) Assign supervisory staff to perform random inspections at developments, as needed.

Property Management

Neighborhood Administrator shall:

- a) Monitor development property management operations and hold property managers and property maintenance supervisors accountable for monitoring all mold related work orders in Maximo and addressing conditions in compliance with protocols established for remediating mold and identifying and correcting root causes.
- b) Investigate and respond to inspection reports prepared by centralized performance management staff.

Property Management

The Property Management Department skilled trades deputy director shall

- a. Monitor skilled trades administrators, borough schedulers, and skilled trades supervisors and hold them accountable for monitoring all mold-related work orders in Maximo and addressing conditions in compliance with protocols established for remediating mold and identifying and correcting root causes.
- b. Respond to recommendations from the Office of Mold Assessment & Remediation.
- c. Skilled trades administrators shall schedule skilled trades workers to complete complex repairs within 15 days.

Borough Scheduler

The Borough Scheduler shall:

- a. Review the Maximo scheduled appointments screen daily.
- b. Monitor Maximo daily for new parent mold and quality assurance inspection work orders.
- c. Monitor Maximo for the timely completion of parent and child mold work orders and immediately address delays

Borough Scheduler

The borough scheduler shall:

d. Ensure immediate scheduling of parent and child work orders to prevent delays.

- 1) Initial inspections must be scheduled for a date no more than 4 calendar days after the date of the parent work order creation.
- 2) Schedule child work orders for simple repairs to be completed by Property Management within 7 days.
- 3) Quality assurance inspections must be scheduled and completed between 30-45 days after the last child work order is closed

Borough Scheduler

The borough scheduler shall:

- a. Assign in Maximo the property maintenance supervisor, assistant property maintenance supervisor, or property manager to work orders to conduct initial and quality assurance inspections.
- b. Identify and schedule all work orders with the status of Waiting To Schedule and Failed to Schedule.
- c. Reschedule appointments for mold related work orders as needed.
- d. Coordinate the scheduling of skilled trades workers with the Property Management Department Planning Unit skilled trades administrator; the director of the Maintenance, Repair & Skilled Trades Department; and the Healthy Homes Lead Hazard Control Department Abatement and Clearance Unit.

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Property Management

Property manager shall:

- a) Closely monitor the customer service delivery aspects of this Standard Procedure to ensure NYCHA's commitments to residents are addressed.
- b) Work closely with the property maintenance supervisor to ensure that property management staff:
 - (1) Visit apartments for all mold work appointments as scheduled.
 - (2) Record resident outreach attempts in the Tenant Data System (TDS)

Property Management

Property maintenance supervisor shall:

- a. Conduct mold initial inspections and quality assurance inspections using mold-related tools and equipment.
- b. Work closely with property maintenance staff to ensure that property maintenance staff:
 - (1) Accompany the property maintenance supervisor during initial inspections and quality assurance inspections, as required.
 - (2) Visit apartments for all mold work order appointments as scheduled.

Property Management

The assistant property maintenance supervisor shall perform the tasks in Section 7.a-b directly above in addition to the property maintenance supervisor.

Maintenance Staff

- Accompanies inspectors on the initial inspection, or to be on call, to immediately remediate mold and related conditions or to identify and correct root causes, when possible.
- Must bring an anemometer, a borescope and tools appropriate for making wall-breaks, and a HEPA vacuum. If a wall break is required, the inspector must conduct the wall break with the assistance of a maintenance worker as part of the initial inspection.
- Completes child work orders for vent cleaning, roof fan repairs and other maintenance tasks.
- All simple repairs must be completed within 7 calendar days from the date the parent mold work order was created.

Skilled Trades Department

- Completes root cause repairs according to trade
- Utilizes Remediation Methods per SP 040:14:1 (Appendix A)
- Complex repairs must be completed within 15 calendar days from the date the parent mold work order was created.

Maintenance, Repair & Skilled Trades Department

The director shall

- a. Monitor MRST skilled trades administrators and MRST skilled trades supervisors and hold them accountable for monitoring all mold-related work orders in Maximo and addressing conditions in compliance with protocols established for remediating mold and identifying and correcting root causes.
- b. Respond to recommendations from the Office of Mold Assessment & Remediation.

Maintenance, Repair & Skilled Trades Department

The director shall

- a. Monitor MRST skilled trades administrators and MRST skilled trades supervisors and hold them accountable for monitoring all mold-related work orders in Maximo and addressing conditions in compliance with protocols established for remediating mold and identifying and correcting root causes.
- b. Respond to recommendations from the Office of Mold Assessment & Remediation.

MRST skilled trades administrators shall schedule skilled trades workers to complete complex repairs within 15 days.

Lead Hazard Control Department

The supervisor of the Abatement and Clearance Unit shall oversee staff for large remediation jobs and coordinate scheduling work with Environmental Field Operations in MRST and the borough scheduler

NOTE: Once abatement work is complete, Property Management Department staff is responsible for coordinating and scheduling remaining repairs.

Employees Who Remediate or Correct the Root Causes of Mold

- Employees shall follow the protocols in Section VIII.C and D, as applicable, when remediating mold and related conditions or correcting probable root causes.
- Any employee performing work in a resident apartment who observes a mold condition shall create a parent mold work order either on the handheld device or submit a paper mold work order to the property management office.

Maintenance & Skilled Trades

Employees must document the materials used in the Materials section of the mold-related child work order including, as applicable, the specific paint (mold resistant or standard) and sheetrock (mold resistant or standard).

SP-Update – Reasonable Accommodations

- If needed as a result of a medical disability or a breathing or respiratory disorder including asthma, residents in apartments with mold and/or excessive and/or uncontrolled moisture conditions are entitled to reasonable accommodations from NYCHA. Such accommodations may include, but are not limited to, the following:
 - a. The right to install and operate an additional air conditioning unit in their apartment if the electrical system permits an additional unit;
 - b. Temporary relocation during mold and moisture remediation;
 - c. Permanent relocation to other NYCHA housing if the apartment is uninhabitable and another apartment is available;
 - d. The use of enhanced dust suppression methods during mold remediation.

SP-Update – Reasonable Accommodations

- Property management staff or CCC customer information representatives must check the “reasonable accommodation” flag on the Maximo mold work order or Siebel service request if a resident asks for a reasonable accommodation.
- See Standard Procedure 040:12:1, Reasonable Accommodations in Housing for Applicants, Public Housing Residents, and Section 8 Voucher Holders, to learn more about the responsibilities of NYCHA staff to review reasonable accommodation requests, and the applicable terms, forms, and policies for reasonable accommodations.

NYCHA MOLD TRAINING

Initial Inspection Standard Procedures

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Standard Procedure Update – Creating Mold Work Orders

- When a resident calls the Customer Contact Center (CCC) to make a service request involving mold or mildew, a parent mold work order is created in Maximo. The resident is required to select a scheduled date for the initial inspection within 4 calendar days of the date of the call.
- If the resident is unable to schedule a date within 4 calendar days of the date of the call, the resident is advised that NYCHA will visit the apartment the same day in an attempt to conduct the inspection; and that NYCHA will return to the apartment within 48 hours to reattempt to conduct the inspection and may use its Right of Entry to access the apartment for that purpose.

Standard Procedure Update – Creating Mold Work Orders

NOTE: When residents are advised in the morning of a business day, the same day means that NYCHA will visit the apartment to attempt to conduct the inspection by that afternoon. When residents are advised in the afternoon of a business day or on weekends or holidays, the same day means that NYCHA will visit the apartment to attempt to conduct the inspection by the morning of the next business day.

SP Update – Supervisory Review of all Mold Work Orders

The borough scheduler must review all mold work orders in Maximo at least daily.

- If an initial inspection generated through a call to the CCC or via the My NYCHA App is not scheduled, the borough scheduler must assign an inspector to visit the apartment that same day to conduct the initial inspection, or issue NYCHA Form 042.727, 48 Hour Notice of Health and Safety Repairs to the apartment.

Scheduling Appointments at the Development – Note!

Initial inspections will be scheduled for a date within 4 days of the creation of the parent mold work order by the Borough Mold Scheduler

Scheduling Appointments at the Development

- Siebel compiles the list of residents to remind them through robocalls of their maintenance or inspection appointments. The day before scheduled maintenance or skilled trades appointments, Siebel makes these robocalls.

Scheduling Appointments at the Development

The property manager ensures that a housing assistant, receptionist, or other property management staff schedule the following appointments:

- Appointments for quality assurance inspections.
- Follow up appointments for any of the above.
- If the appointment is successfully scheduled, the property manager ensures that the appointment date is entered in Maximo.

Scheduling Appointments at the Development – Note!

All attempts to contact residents must be recorded in the Interview Details (Option 8) in the Tenant Data System (TDS).

Inspection Procedures

On the scheduled date provided on the parent mold work order, the inspector visits the resident's apartment to:

- inspect the mold condition
- identify the probable root cause(s)
- determine appropriate next steps to remediate the mold, any related conditions, and correct the root cause(s).

Inspection Procedures – NOTE!

Initial inspections are performed using the handheld device. If a handheld device is not operating during the initial inspection, the inspector must record the inspection results on a Maximo paper mold inspection work order and immediately enter the results into Maximo following the initial inspection.

Preparing For The Mold Initial Inspection

Prior to visiting the apartment on the day of the initial inspection appointment, the inspector:

- Reviews the Maximo work order history for the apartment to determine if there is a history of mold or moisture complaints.
- Checks the mold inspection tool kit to ensure that the following instruments are in working order: anemometer, hygrometer, and moisture meter.

Preparing For The Mold Initial Inspection

- Assigns a maintenance worker to accompany them on the initial inspection, or to be on call, to immediately remediate mold and related conditions or to identify and correct root causes, when possible. The maintenance worker must bring a borescope and tools appropriate for making wall-breaks.
- Must make a courtesy call to the resident via the handheld device on the way to the initial inspection to remind them of the inspection. If the resident does not answer the call, the inspector must still go to the apartment at the scheduled time.

Preparing For The Mold Initial Inspection – NOTE!

If the resident or other adult is not home to allow access to the apartment for a scheduled mold related appointment, see Section VIII.F, Tenant Not Home Policy.

Discussing The Mold Condition With The Resident

Upon arriving at the apartment, the inspector:

1. Makes best efforts to interview an adult listed on the household composition about any history of mold and moisture in the apartment
2. Adds the information to the handheld device if there is a history

Conducting The Initial Inspection

The inspector conducts the initial inspection using the handheld device. The inspector:

1. Visually inspects the room identified in the mold work order for mold growth and records the estimated square footage of mold on each wall (1-4), floor, ceiling, and any components.
2. Visually inspects the room for water damage and records the location of the water damage (e.g. the specific wall(s), floor, ceiling, or component).
3. Must use the moisture meter to measure the walls, floor, ceiling, and components in the room for subsurface moisture and records the measurement.
4. **NEW – Must take multiple measurements of each surface or component and record if a measurement is equal to greater than 599**

General Evaluation Of Room Conditions

If a mold, water damage, or moisture (i.e., a wet measurement) condition is found, the inspector must conduct a general evaluation of the room:

1. Records the surface structure (e.g. concrete, plaster, sheetrock) and framing structure (e.g. wood, steel) of the room's walls, floor, ceiling, and component(s).
2. Uses the hygrometer to take a humidity reading of the room and records the humidity level.

Standard Procedures – Update - Inspections

While the inspector is evaluating the opposing side of common walls in adjoining rooms and common areas, if mold conditions are identified in an adjoining room that are not likely from the same root cause, the inspector shall create a parent mold work order on the handheld device. The inspector should complete this mold work order for the adjoining room at the time of the initial inspection.

General Evaluation Of Room Conditions

If the room is a kitchen or bathroom:
Indicates if there is mechanical ventilation

- If there is mechanical ventilation:
 - The inspector checks the ventilation by using the anemometer to take an air flow measurement in cubic feet per minute (CFM) and records the result in the handheld device.
 - Maximo automatically generates child work orders:
 - To clean the horizontal vent ductwork.
 - To check the roof fan if the CFM is less than 25.



General Evaluation Of Room Conditions

If the room is a kitchen or bathroom: (Cont.)

If there is a window:

- The inspector checks that the window is operating properly and records the result in the handheld device.
- Maximo automatically generates a child work order to repair the window if it is not operating properly.

General Evaluation Of Room Conditions

If the room is a bathroom:

- Checks if the toilet base is caulked and records the result in the handheld device.
 - (a) Maximo automatically generates a child work order to caulk the toilet base if it is not caulked.

General Evaluation Of Room Conditions

Visually inspects the room for signs of pest infestation and records the results in the handheld device.

- Maximo automatically generates a child work order for an exterminator when there is evidence of pests.

Identifying The Probable Root Causes & Remediation Methods

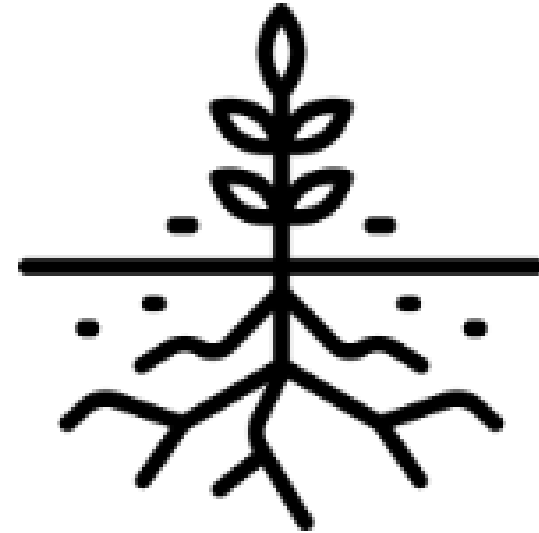
The inspector determines the probable root cause(s) for any wall, floor, ceiling, or component identified in Section VIII.B.3.a above as having mold, water damage, or moisture (i.e. a wet measurement).

- The inspector selects on the handheld device a probable root cause from the following options: (see next slide)

Mold Root Causes

The fundamental reason(s) for the occurrence of mold, water damage or moisture.

- Identify and select the most correct root cause(s) to ensure the condition does not reoccur – up to four (4) can be selected.
- Root cause(s) might often be not visible at first and require a comprehensive investigation to identify.



Mold Root Causes – Changes Overview

Twenty-nine (29) Root Causes are organized by five (5) general categories how the problem was caused.

- I. Sealant Related Issues – Issues that can be resolved by removing and replacing old caulking.
Example: Caulking around a bathtub.
- II. Leak Issues – Issues caused by a leak other than an sealant issue.
Example: Crack in exterior (façade) is causing a water enter the unit.
- III. Resident-Caused – Issues that can be prevented due to adjustments to resident education and behavior.
Example: Resident is not opening a window after a shower.
- IV. Ventilation – Issues that are a result of inoperable roof fans and/or lateral duct issues.
Example: A clog in the lateral duct is preventing air from flowing into the apartment.
- V. Other – Issue(s) are being caused due to reasons outside of the four categories previously listed.
Example: Condensation (sweating on the pipes) due to the damaged or missing insulation.

I. Mold Root Causes – Sealant Related Issues

Issues that can be resolved by removing and replacing old caulking or grouting.

Example: Caulking around a bathtub.

Caulking - Is a material used to seal joints or seams against leakage in various structures and piping. Maintenance and Plaster.

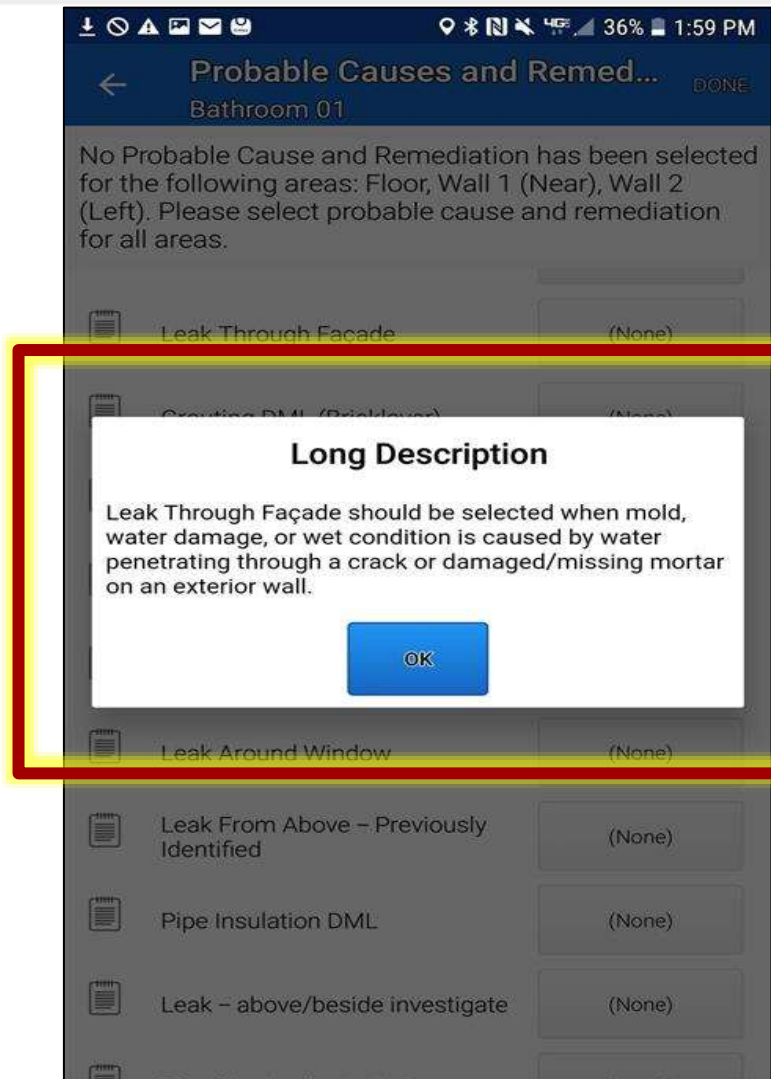
Grouting – A dense fluid which is used to fill gaps or used as reinforcement in existing structures. Grout is generally a mixture of water, cement, and sand. Grout is thin so it flows readily into gaps. Bricklayer.



I. Mold Root Causes – Sealant Related Issues

- Caulking DML (Maintenance)
The maintenance worker will follow-up on this work order and do the caulking.
- Grouting DML (Bricklayer)
A bricklayer, craft, will follow-up on this work order and do the grouting.
- Grouting DML (Plasterer)
A plasterer, craft, will follow-up on this work order and do the grouting.
- Grouting/ Caulking DML (Plasterer)
A plasterer, craft, will follow-up on this work order and do the grouting / caulking work.
- Grouting/ Caulking DML (Bricklayer)
A bricklayer, craft, will follow-up on this work order and do the grouting/ caulking.

Mold Root Causes



iWM App will have a pop-up option to view a definition of each Root Cause to help you made an informed decision.

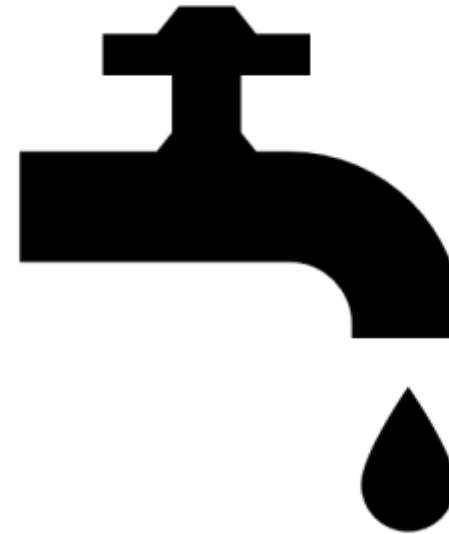
II. Mold Root Causes – Leak Issues

Issues caused by a leak other than a sealant issue.

- Leak Around Window
Lack of sealant around the window that causes water to penetrate.
- Leak Through Façade
A crack or damaged/missing mortar affecting the exterior wall.
- Leak From Above/Beside - Investigate
There is an active leak from a unit above or beside the unit with a mold condition.
- Leak From Above * – Previously Identified
There was a leak that was abated but mold/ water damage remain present.
- Plumbing Leak - In Unit
A pipe leaking within the wall cavity requiring a wall break.

II. Mold Root Causes – Leak Issues (*continued*)

- Roof Leak - Non Capital
Roof replacement or repair is required.
- Sink Supply Line Leak
Caused by a leak(s) in the supply line.
- Sink Waste Line Leak
Caused by a leak(s) in the waste line.
- Toilet Leak
Active leak coming from the toilet.



II. Mold Root Causes – **Leak Issues** (*continued*)

Leak From Above - Previously Identified

Previously Identified should be selected when the root cause or remediation work for the mold, water damage, or wet condition had been identified or abated by Property Maintenance staff or Skilled Trades on a prior work order.

A note and pictures are required for this root cause.

II. Mold Root Causes – **Leak Issues** (*continued*)

Leak From Above - Previously Identified *

- 1) Pre-inspection to look-up leak history for the specific unit.
- 2) Does not cancel or duplicate previous generated tickets.
- 3) Escalates the matter if root cause is being caused by something else if it keeps reoccurring.

Reoccurrences are signs that the root cause has not been found.

III. Mold Root Causes – Resident-Caused

Issues that can be prevented due to adjustments to resident education and behavior.

Examples:

- Not opening the window for ventilation during, or after, a shower.
- Covering the roof fan vent.
- Improper installation of a dishwasher or washing machine.
- Improper installation of a clothing dryer in the apartment.



Select this **ONLY** when there is proof that the resident's direct behavior is the cause.

III. Mold Root Causes – Resident-Caused

- Resident-Caused (Code 1)
Resident doesn't open the window or door after taking a shower
- Resident-Caused (Code 2)
Dishwasher was installed improperly.
- Resident-Caused (Code 3)
Washing machine was installed improperly.
- Resident-Caused (Code 4)
Vent is blocked or covered.



- Resident-Caused (Code 5)
Clothing dryer was installed improperly.
- Resident-Caused (Code 6) *
Other – the option was not listed.

III. Mold Root Causes – Resident-Caused. (continued)

Resident-Caused by Other Actions (Code 6) *

Mold Busters Education will be needed for the resident(s) for future prevention of mold. A mandatory inspection will be needed to find the exact reason(s).

A note and pictures are required for this root cause.

III. Mold Root Causes – Resident-Caused. (continued)

Resident-Caused by Other Actions (Code 6) *

Examples:

- Excessive boiling of pots.
- Unbalanced hot/cold temperatures in the unit and/or units above, below, or adjunct.

A picture and an explanation is needed for the reader to understand the reasoning for selecting this root cause.

V. Mold Root Causes – Other

- **Toilet Bowl/ Tank Needs Barrier**
Toilet tank is in direct contact with the surface of the wall, allowing condensation to transfer across surfaces.
- **Tub Surround DML**
Water is penetrating through missing or damaged areas of the tub surround.
- **Bathtub Shower Issues**
Bathtub is missing, faucet is leaking, faucet is running, and/or faucet is dripping.
- **Pipe Insulation DML**
Damaged or missing pipe insulation resulting in condensation (or sweating) on pipe surfaces. A wall-break is required to diagnose this problem.
- **Other *** This option should be selected if the root cause is not listed or not evident through the standard assessment practices.

SP-Update

Lead-safe work practices and RRP certified workers must be used if (i) Maximo identifies that RRP work is required (the apartment is presumed or known to contain lead-based paint) and (ii) any work would disturb more than 2 square feet of a painted surface per room, or more than 10 percent of the total surface area on an interior or exterior type of component with a small surface area.

Identifying the Probable Root Causes & Remediation Methods

- Selects the ceiling, wall(s), floor, or component(s) identified in Section VIII.B.3.a above that have the same probable root cause (e.g., both the mold on the ceiling and water damage on the wall have a probable root cause of Shower Moisture.)
- Indicates if a wall break is required to inspect or correct the probable root cause.
 - If a wall break is required, the inspector must conduct the wall break with the assistance of a maintenance worker as part of the initial inspection.

Identifying the Probable Root Causes & Remediation Methods

If the probable root cause *is not* Resident – Cause:

- Selects one or more Failure Class/Problem Codes, as applicable, from the limited set of options in the dropdown menu for that probable root cause.
- Selects the appropriate craft required to make the repair for each Failure Class/Problem Code selected.

Identifying the Probable Root Causes & Remediation Methods

If the probable root cause is Resident – Cause

- Selects on the handheld device the specific instruction provided to the resident in Section VIII.B.5 below for each probable root cause that is Resident – Cause.
- Selects the remediation method and craft from a dropdown menu of limited options for the selected wall(s), floor, ceiling, or component(s).

Identifying the Probable Root Causes & Remediation Methods

- Maximo automatically generates child work orders for the Failure Class/Problem Codes (except when the probable root cause is Resident – Cause) and the remediation methods selected.
- If there are any additional probable root causes, the inspector repeats the steps in Section VIII.B.3.c(1) above for each probable root cause.

Identifying the Probable Root Causes & Remediation Methods

If the inspector is unable to determine the probable root cause of a mold, water damage, or moisture (i.e. wet measurement) condition they must:

- First request trouble shooting assistance from the other inspectors at the development; and then
- Escalate the work order to the Property Management Department skilled trades deputy director if the probable root cause still cannot be determined.

The skilled trades deputy director assigns appropriate staff to assist the inspector.

Completing the Initial Inspection

To complete the initial inspection:

- The inspector must take multiple photo(s) of the condition(s) identified, including at least one close-up photo of the condition(s) and at least one photo of the larger area, using the handheld device and upload the photo(s) into Maximo.
- If the condition is unfounded (i.e., there was no mold, water damage, or wet measurement condition identified):

The inspector must take and upload photo(s) of the condition reported by the resident as mold or mildew.

SP-Update

- *For clarity, the inspector should record key information obtained during the inspection in the notes field of the iWM app on an unfounded work order.*

Reviewing the Work Plan

- Upon completion of the initial inspection, the inspector:
- Reviews the child work orders (i.e. the work plan) in the handheld device to confirm the work plan is correct and complete.
 - Identifies the outcomes of the inspection on *NYCHA Form 060.845, Mold Inspection Receipt*.

Reviewing the Initial Inspection Results with the Resident

When Mold, Water Damage, or a Moisture Condition is identified the inspector:

- Gives NYCHA Form 060.303, Controlling Mold in Your Apartment to the resident and reviews with the resident the general recommendations on the form for preventing and cleaning mold and the importance of identifying and correcting the root cause(s) of mold to avoid reoccurrence.

SP-Update - Reviewing the Initial Inspection Results with the Resident

When Mold, Water Damage, or a Moisture Condition is identified the inspector:

- Gives NYCHA Form 060.845, Mold Inspection Receipt to the resident and reviews the following with the resident
 - (a) The initial inspection outcome (founded or unfounded).
 - (b) The requirement that NYCHA conduct a quality assurance inspection between 30-45 days after all work is completed.
 - (c) The required timeframe for the completion of all work.
 - (d) the name and contact information of the ombudsperson.

SP-Update - Reviewing the Initial Inspection Results with the Resident

When Mold, Water Damage, or a Moisture Condition is identified the inspector:

- Indicates in the handheld device that both NYCHA Form 060.303, Controlling Mold in Your Apartment and NYCHA Form 060.845, Mold Inspection Receipt were provided to and discussed with the resident.
- Advises the resident that the property management office will contact them to schedule any additional appointments needed
- Advises the resident that NYCHA will mail them NYCHA Form 060.846, Mold Inspection Review which details the following information:

SP-Update - Reviewing the Initial Inspection Results with the Resident

Advises the resident that NYCHA will mail them NYCHA Form 060.846, Mold Inspection Review which details the following information:

- a) The initial inspection and probable root cause findings.
- b) The next step(s) to remediate the mold, excessive moisture, or related condition and correct the root cause.
- c) The specific instruction(s) on how to correct the probable root cause if the probable root cause is Resident – Cause
- d) The requirement that NYCHA conduct a quality assurance inspection between 30-45 days after all work is completed.
- e) The required timeframe for the completion of all work.
- f) The name and contact information of the ombudsperson

Reviewing the Initial Inspection Results with the Resident– NOTE!

See Management Manual, Chapter II, Rent and Rent Collection, Section XV.A and Appendix 8 for details on when and how to make a social service referral to the Family Partnerships Department if there are housekeeping or safety hazards in an apartment.

When Mold Condition is Unfounded

The inspector:

- (1) Discusses the initial inspection findings with the resident.
- (2) Gives NYCHA Form 060.303, Controlling Mold in Your Apartment to the resident and reviews with the resident the general recommendations on the form for preventing and cleaning mold and the importance of identifying and correcting the root cause(s) of mold to avoid reoccurrence.
- (3) Requests that the resident sign the unfounded work order on the handheld device.
- (4) Indicates in the handheld device if the resident refused to sign or if the resident disagrees that the mold condition is unfounded.
- (5) Provides the resident with NYCHA Form 060.845, Mold Inspection Receipt including the name and contact information of the ombudsperson.
- (6) Closes the mold work order as Unfounded.
- (7) Provides the name and contact information of the ombudsperson.

Records for Residents

- Mold Receipt – all projects (photo required)
- Controlling Mold in Your Apartment – projects where mold was found
- **Mold Inspection Review (Mold Remediation Plan)** – projects where mold was found. Must include:
 - The initial inspection and probable root cause findings.
 - The next step(s) to remediate the mold, excessive moisture, or related condition and correct the root cause.
 - The specific instruction(s) on how to correct the probable root cause if the probable root cause is Resident – Cause.
 - The requirement that NYCHA conduct a quality assurance inspection between 30-45 days after all work is completed.
 - The required timeframe for the completion of all work.
 - The name and contact information of the ombudsperson.

Controlling Mold Form

NEW YORK CITY HOUSING AUTHORITY
PUBLIC HOUSING DEPARTMENT

Controlling Mold in Your Apartment

What is Mold?

The New York City Department of Health and Mental Hygiene (DOHMH) defines mold as a fungus that grows in damp areas like bathrooms and kitchens. Mold comes in various colors and textures and produces a musty, stale, or earthy odor. Mold can cause allergic reactions or other health problems in some people and can trigger asthma attacks.

How to Clean Mold Safely in Your Home:

According to DOHMH, mold should be cleaned/remediated by trained building maintenance staff. Mold on bathroom tile grout (around bathtubs) is common. Residents can control this growth with thorough and frequent use of household cleaners. Residents can also clean minor discoloration (gold or light-brown spots) that forms on bathroom walls/ceilings after showering to help prevent mold growth.

- However, residents with asthma or mold allergies should **not** conduct this work.
- The use of bleach can be hazardous and should be used **only** in diluted solutions (1 part bleach to 10 parts water).

Tips for Preventing Mold:

Mold growth is **always** the result of excessive moisture, which can occur from:

- 1) Rainwater leaking through roofs or entering through building walls.
- 2) Plumbing leaks (either from within the apartment or from above).
- 3) Condensation (drops of water) that forms on surfaces when warm, moist (humid) air comes into contact with cooler surfaces.
- 4) Lack of adequate ventilation (air flow).

Rainwater, plumbing leaks, and broken rooftop fans are not within residents' control. These problems require repair by trained staff. However, **condensation (drops of water and steam) is a common cause** of excessive moisture that promotes mold, especially in bathrooms.

Here's what you can do to limit excessive moisture and the potential for mold in your bathroom:

- **Exhaust ventilation** is the key to controlling high humidity in bathrooms. Make sure your bathroom exhaust works by holding a piece of tissue to the bathroom exhaust grill to ensure there is suction (the tissue should stick to grill). If there is no suction, call the Customer Contact Center.



NYCHA 060-303 (Rev. 12/13/16v2) CLEAN RECOMMENDED CONTENT - CONTROLLING MOLD

1 of 2

- If your bathroom exhaust vent grill is clogged with dust, report the issue by calling the Customer Contact Center.
- Don't use shower racks/clothes lines above bathtubs.
- Open bathroom windows and doors after showering.
- In the summertime, use an air conditioner.
- Open windows slightly when the weather allows.
- Request repairs for leaky plumbing or other water leaks as soon as possible.

If you have mold growth, excessive moisture, or a plumbing or rainwater leak, please call the Customer Contact Center at 718-707-7771 to report the issue.

A translation of this document is available in your management office.

La traducción de este documento está disponible en la Oficina de Administración de su residencial.

Перевод этого документа находится в Вашем домоуправлении.

所居公用管理處備有文件譯本可供索取。

所居公用管理處備有文件譯本可供索取。

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Working to make our communities healthy

Mold Inspection Receipt

NEW YORK CITY HOUSING AUTHORITY
Public Housing Department
<<DEVELOPMENT NAME>>

Work Order #: _____
Date: _____

Mold Inspection Receipt

NYCHA has not found mold, water damage, and/or a moisture level indicating excessive moisture and/or a possible leak and is closing your work order as "unfounded".

NYCHA has found mold, water damage, and/or a moisture level indicating excessive moisture and/or a possible leak. NYCHA will send you the Mold Inspection Review form, which will include the findings of this inspection.

NYCHA is committed to completing all mold and excessive moisture work orders within 7 days for simple repairs and 15 days for complex repairs, starting from the date that the initial complaint is reported to the Customer Contact Center. If resident access is not provided for the scheduled follow-up appointments, NYCHA may use its right to access a tenant's apartment, immediately after providing 48 hours' notice, as indicated in the NYCHA Resident Lease Agreement.

A final Quality Assurance re-inspection will be conducted by NYCHA staff 30 to 45 days after the necessary work orders are completed to ensure that the mold and excessive moisture remediation work was done correctly and effectively.

A translation of this document is available in your management office.

La traducción de este documento está disponible en
la Oficina de Administración de su residencial.

所居公房管理處備有文件譯本可供索取。

Перевод этого документа находится в Вашем домоуправлении.



Must Take
Photo & Save
as "Mold
Receipt"

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Mold Inspection Review



11/04/18

JANE DOE
100-10 100TH STREET 3G
QUEENS, NEW YORK 11433

On 10/31/18 NYCHA conducted the initial inspection for work order # 40070080 NYCHA has found mold, water damage, and/or a moisture level indicating excessive moisture and/or a possible leak.

The likely root cause is: LEAK ABOVE OR ASIDE

Based on this root cause and the remediation method selected, follow-up work orders have been automatically generated. Below is a summary of the work that is needed to correct this root cause and remediate the mold or moisture condition:

Work Order #	Failure Class	Problem Code	Craft	Estimated Scheduled Date
62711365	Floor	Floor Tiles DML	Maintenance	
62711366	Floor	Needs Cleaning	Caretaker	11/11/18
62645326	Mildew Condition	Mildew	Painter	11/13/18

If you do not have a scheduled date listed above, NYCHA will contact you to schedule appointments needed to complete the repairs or to discuss next steps if capital repairs are needed to remediate mold or moisture in your unit.

NYCHA is committed to completing all mold and excessive moisture work orders within 7 days for simple repairs and 15 days for complex repairs, starting from the date that the initial complaint is reported to the Customer Contact Center. If resident access is not provided for the scheduled follow-up appointments, NYCHA may use its right to access a resident's apartment, immediately after providing 48 hours' notice, as indicated in the NYCHA Resident Lease Agreement.

A final quality assurance re-inspection will be conducted by NYCHA staff 30 to 45 days after the necessary work orders are completed to ensure that the mold and excessive moisture remediation work was done correctly and effectively.

If you have any concerns regarding this notice or repair, you can reach the Ombudsman Call Center (OCC) at 1-866-341-7152 or at <https://occbnyc.com/>. If OCC cannot resolve your concerns, they will contact Cesar De Castro, the Ombudsman, to resolve the issue.

A translation of this document is available in your management office.
La traducción de este documento está disponible en la Oficina de Administración de su residencial.
所居公寓管理處備有文件譯本可供索取。
Копия этого документа находится в офисе управления Вашего жилищного комплекса.

NYCHA MOLD TRAINING

Measurement
Equipment

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Measurement Equipment

- On-site testing equipment that indicates if moisture or ventilation problems may be present
- Used to help identify root causes
- Provides immediate information
- Inspector must be able to operate and understand data

Inspection Equipment

- Moisture Meter
- Hygrometer
- Anemometer
- Boroscope



Moisture Meters

- Moisture meters measure/monitor moisture levels in building materials, and may be helpful for measuring the moisture content in a variety of building materials following water damage.
- They also can be used to monitor the progress of drying damaged materials. These direct reading devices have a thin probe that is inserted into the material to be tested or pressed directly against the surface of the material.
- Pin-probe readings can provide additional information, but are not used during the root-cause assessment.



Hygrometer

- A hygrometer is used to measure moisture content in the atmosphere.
- Humidity measurement instruments usually rely on measurements of some other quantity such as temperature, pressure, mass or a mechanical or electrical change in a substance as moisture is absorbed.
- Results are reported in the App



Anemometers

- NYCHA uses **Testo Vane** instrument
- Must be set to Cubic Feet per Minute (CFM) - unit for Air Volume measurements.
- **NEW - Must be calibrated to 55% free air**



General Evaluation Of Room Conditions– NEW NOTE!

The user must ensure the anemometer is properly calibrated by:

- *Entering the correct size of the exhaust duct (i.e. the height and width in inches) in the IWM App.*
- ***NEW - Ensuring that the Free Air Percentage is set to 55% in the IWM App.***

See Appendix C for instructions on how to use the anemometer. Users must follow the manufacturer's instructions when using inspection tools.

Boroscope

- A boroscope is a hand-held tool that allows users to see potential mold problems inside walls, ceiling plenums, crawl spaces, and other tight areas.
- It consists of a video camera on the end of a flexible "snake."
- No major drilling or cutting of dry wall is required.



NYCHA MOLD TRAINING

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IWM App



IWM App

- Designed by & for NYCHA Housing
- Mold inspection procedures
- Used to determine remediation work orders
- Integrated into Maximo to create child work orders
- Provides Quality Assurance & Reinspection procedures



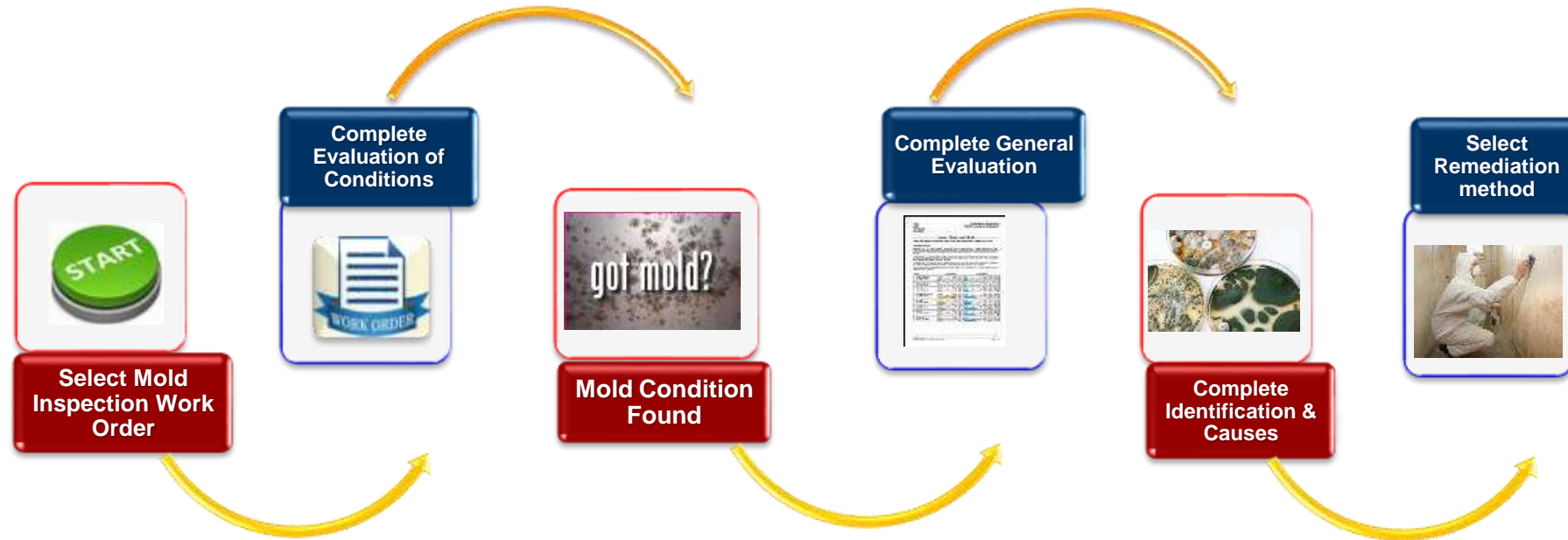
Welcome to the Handheld Informer Work Management (iWMM)

Training Course for Mold Inspection



MOLD/MILDEW WO Workflow - (Continued)

Mold is Found ...Doing the Work (Part 1)...



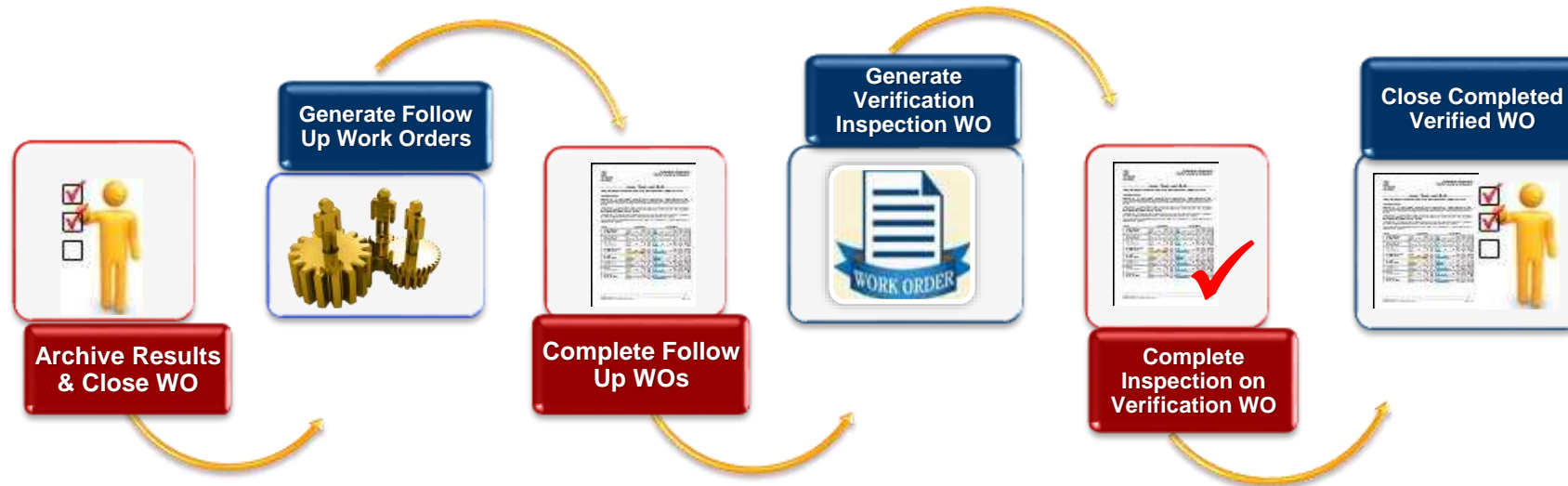
MOLD/MILDEW WO Workflow

NO Mold was Found...



MOLD/MILDEW WO Workflow - (Continued)

Mold is Found ...Doing the Work (Part 2)...



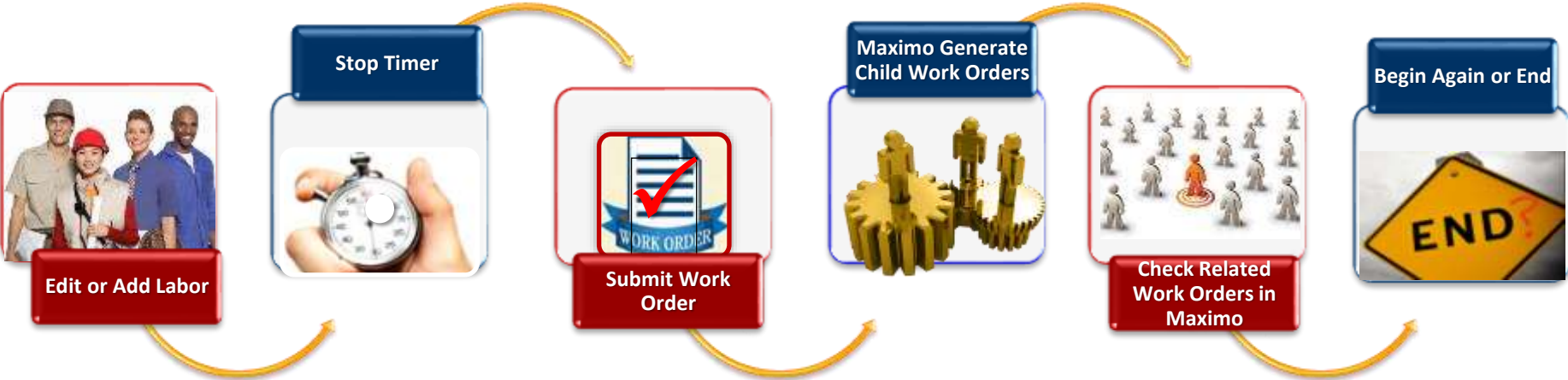
Work Order Workflow

Doing the work...



Work Order Workflow

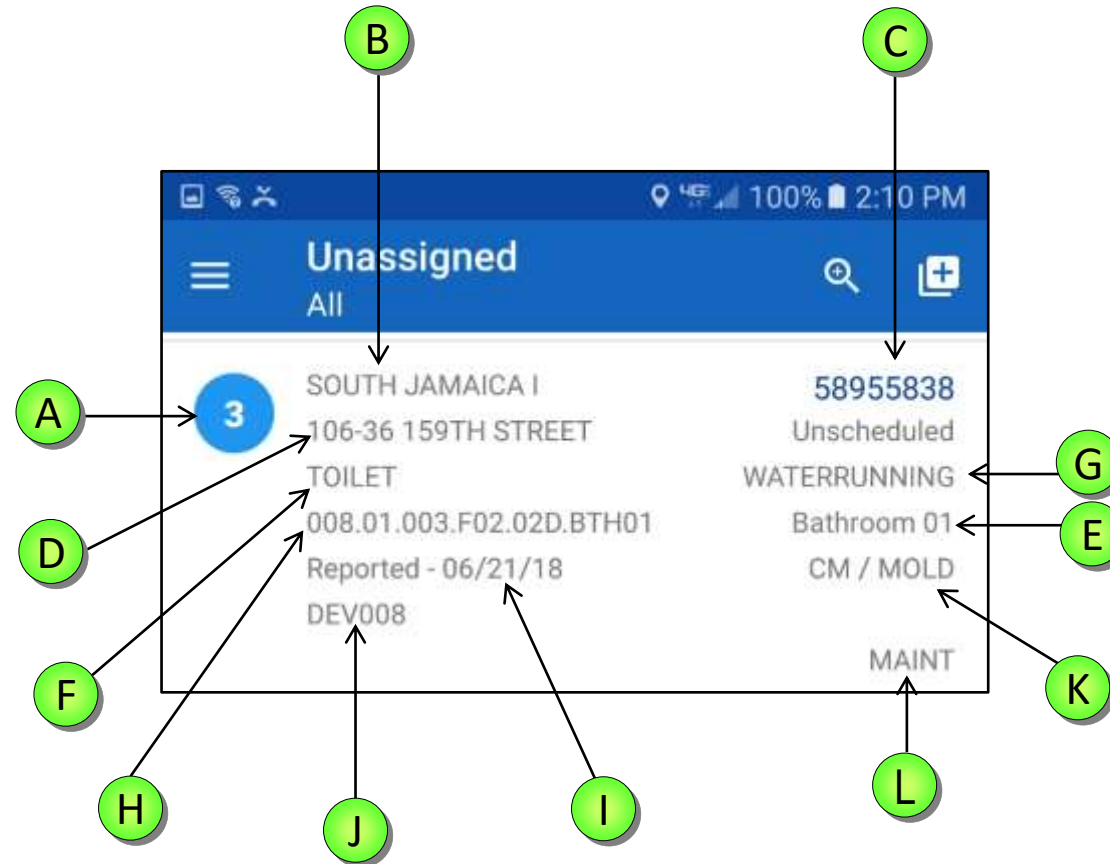
Ending the work...



View Work Order Details

The **WO** List screen shows a detailed summary about each WO.

- A** Priority
- B** Development
- C** WO Number
- D** Address
- E** Room/Location
- F** Failure Class
- G** Problem Code
- H** Location String
- I** Reported By Date
- J** Owner Group
- K** WO Type
- L** Craft



NYCHA Locations Explained

Examples of NYCHA Locations:

- Developments
- Buildings
- Stair Halls
- Floors
- Apartments
- Rooms (bedroom, bathroom, etc.)
- Heating Plumbing Line
- Grounds
- Elevators
- Community Centers

005.01.001.F02.02C.KIT01

Development #/ Building / Stair Hall / Floor / Apartment / Room
005. 01. 001. F02. 02C. KIT01

Samsung Galaxy S8 Buttons

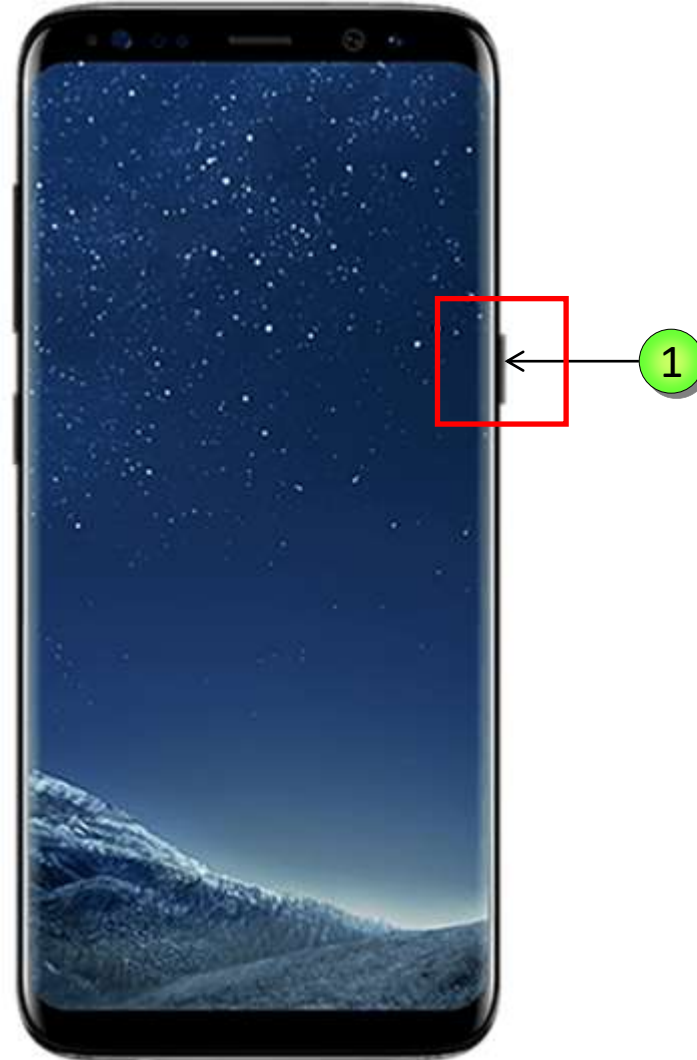


Log in to the device

1

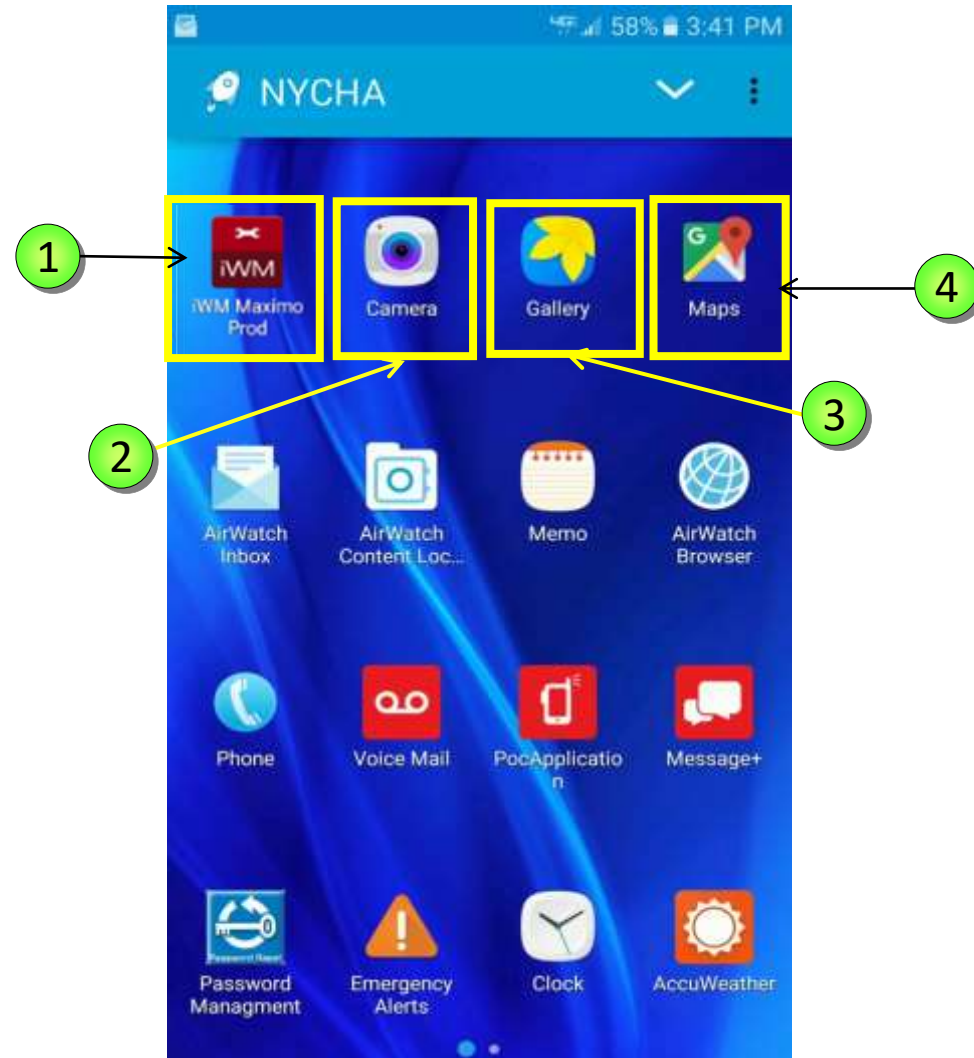
Press Power/Lock Button
Swipe across screen
Enter the default password
for the **Device**:

nycha90



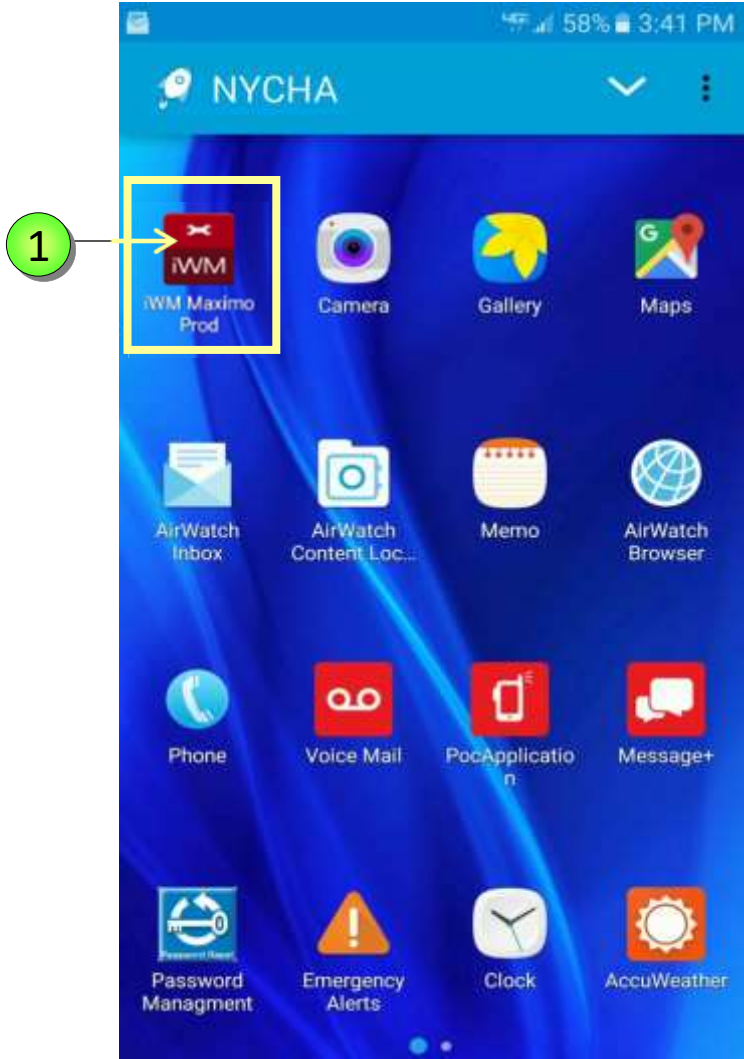
Display Settings

Term	Definition
1 iWM Maximo Prod	Informer Work Management allow, can search, work and close Work Orders.
2 Camera	User friendly, just point and shoot. Pictures taken are saved in the Gallery application.
3 Gallery	A place holder for all pictures taken. Can sort pictures by albums. Can easily search, upload and delete pictures.
4 Maps	Google maps reliable mapping service providing location information.



Launch the iWM Application

1 Tap on the **Work Management** Application to access the Log In screen.



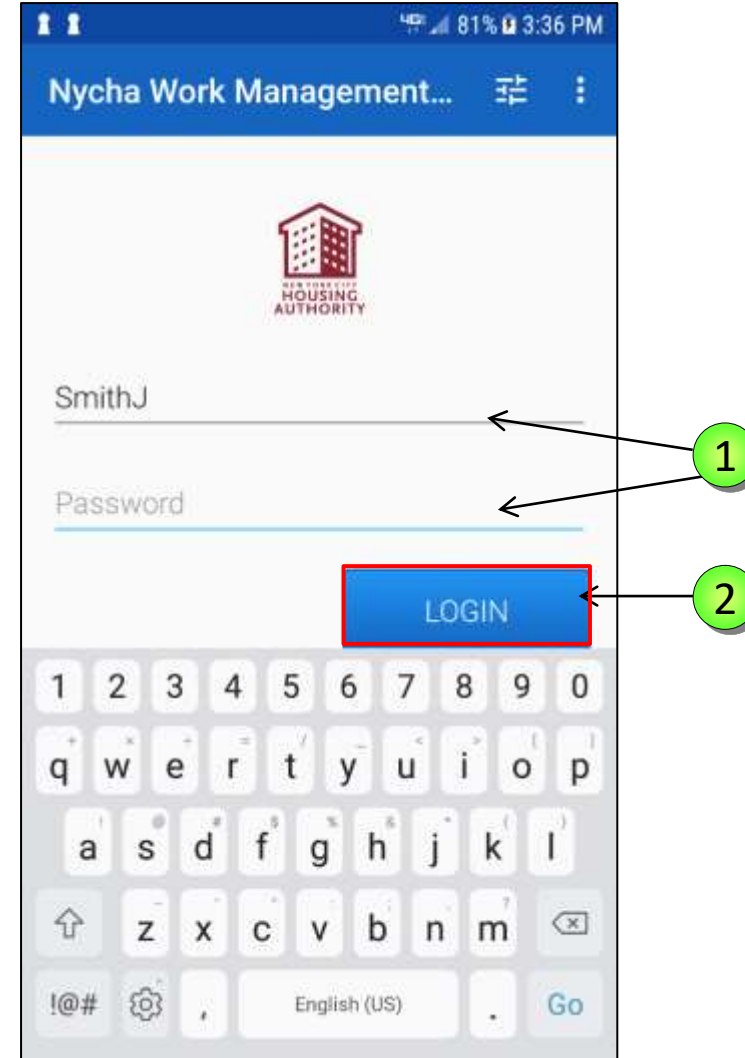
Log In To iWM Application

1 Enter **User Name** and **Password**

2 Tap **LOGIN**


* It is the same User Name and Password as **Maximo**, and Your Computer.

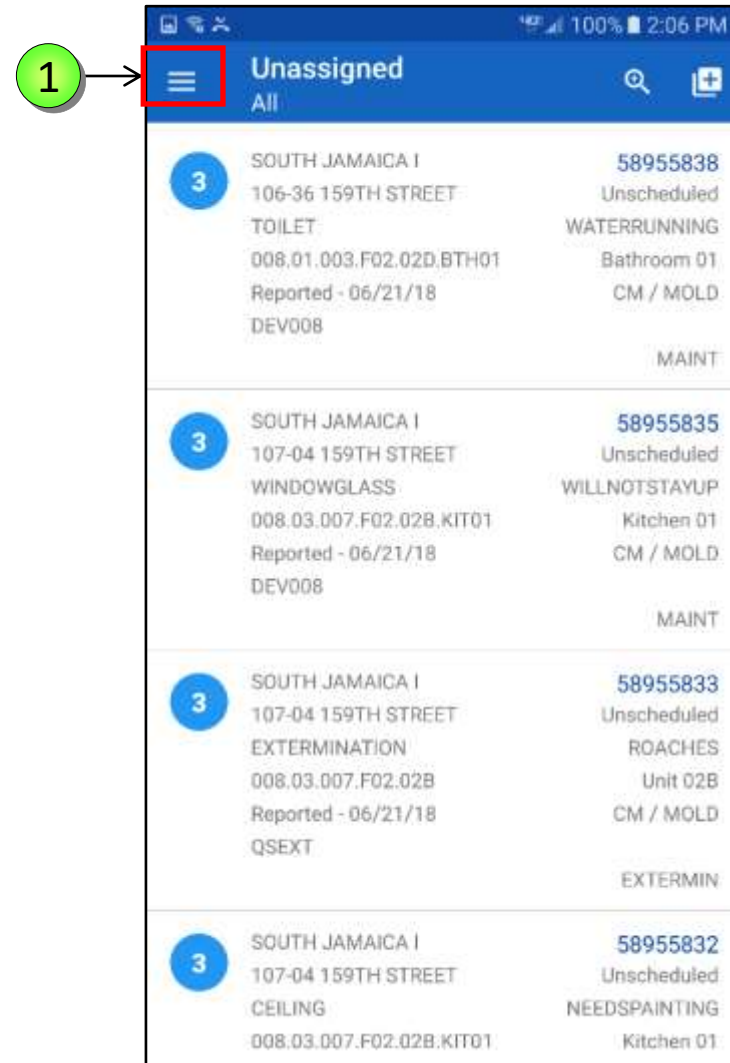
NOTE: Make sure you are in an area that has good cell service.



Viewing Work Orders

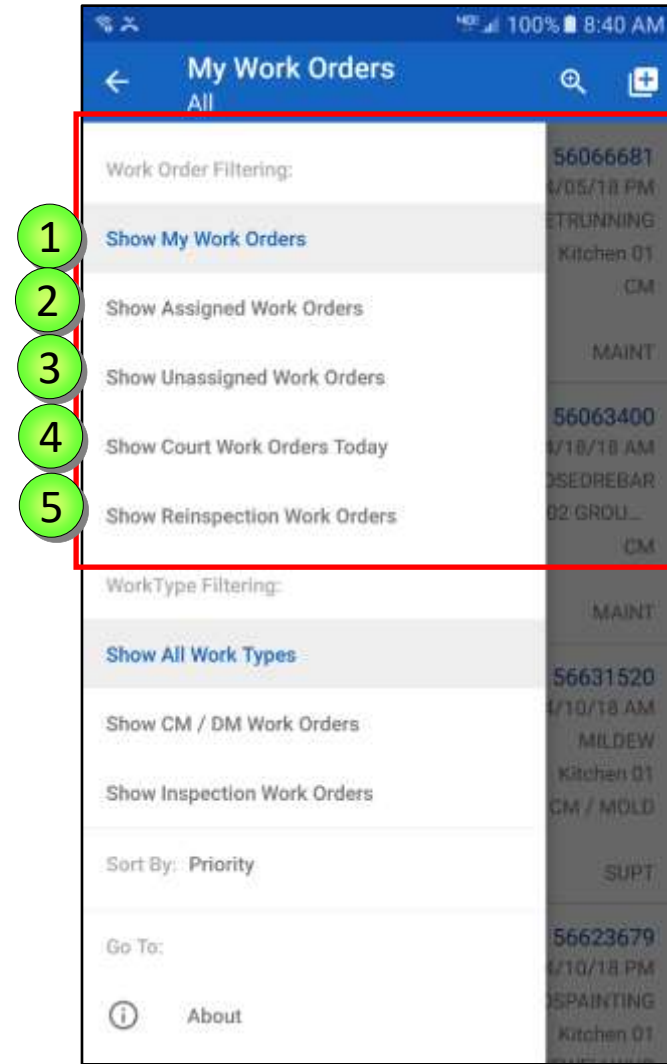
All of the WOs that you'll always see are in the user's area/location (**Borough Wide Development** / Managed BY).

1 Tap  the **Menu** Button to go to the **Menu** in order to sort the list of **Unassigned Work Orders** in a different way.



Menu

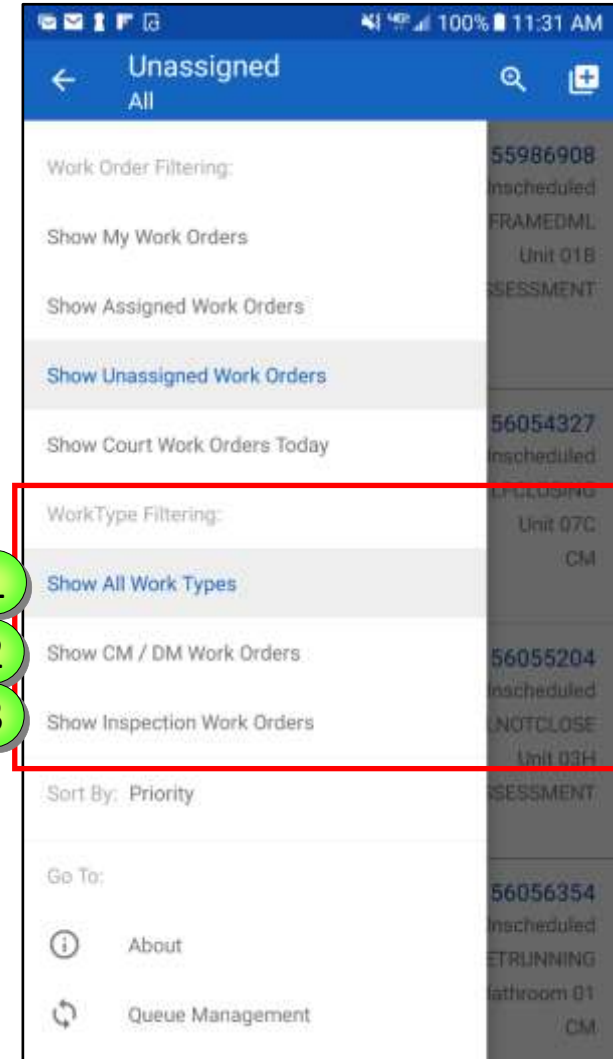
- 1 Show My Work Orders:** Shows open WOs assigned to the user who is logged-in.
- 2 Show Assigned Work Orders:** Shows Open WOs that are assigned to other users in the user's area (Development or Borough)
- 3 Show Unassigned Work Orders:** Shows Open WOs that are not assigned to any person.
- 4 Show Court Work Orders Today:** Shows Open WOs where resident has an appointment for today.
- 5 Show Reinspection Work Orders:** Shows all automatically generated WOs as a result of the completed QA Mold Inspection.



Viewing Work Orders - Types

Work Orders can be filtered and sorted by Work Order type, there is no default.

- 1 **Show All Work Types** displays all open Work Orders for the Development.
- 2 **Show CM / DM Work Orders** displays all **Corrective Maintenance** and **Deferred Maintenance** Work Orders.
- 3 **Show Inspection Work Orders** displays all the **Inspection** Work Orders.



Mold Work Orders Process - Inspection

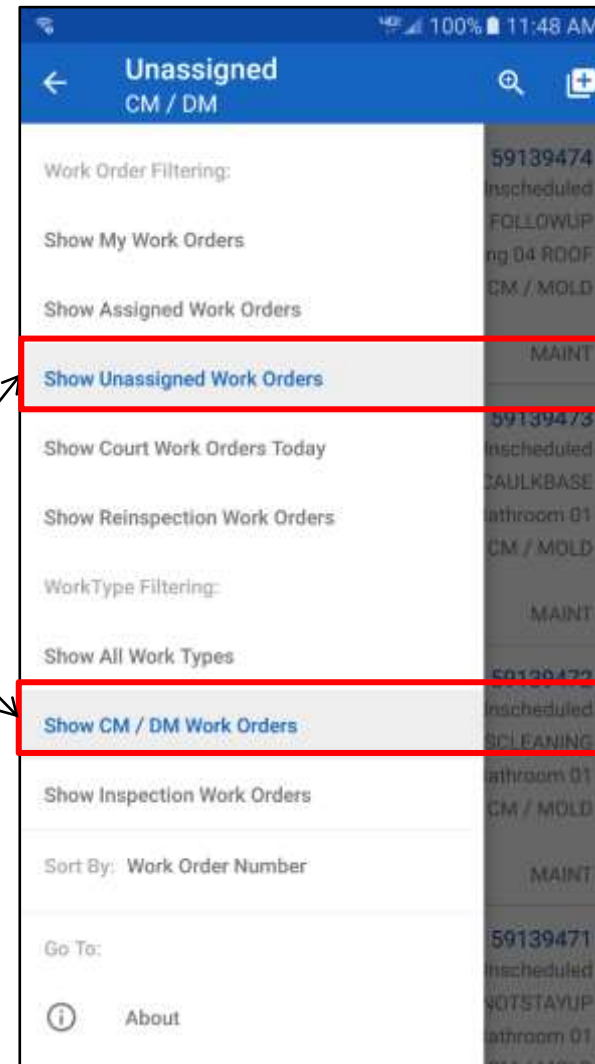
1

The first **Parent Work Order** appears in:

- **Show Unassigned Work Orders**
- **Show CM /DM Work Orders**

NOTE: If the Work Order is assigned to a worker it will appear in **Show Assigned Work Orders** or **Show My Work Orders**.

1



Mold Work Orders Process - QA

1

The first **QA Work Order** appears in:

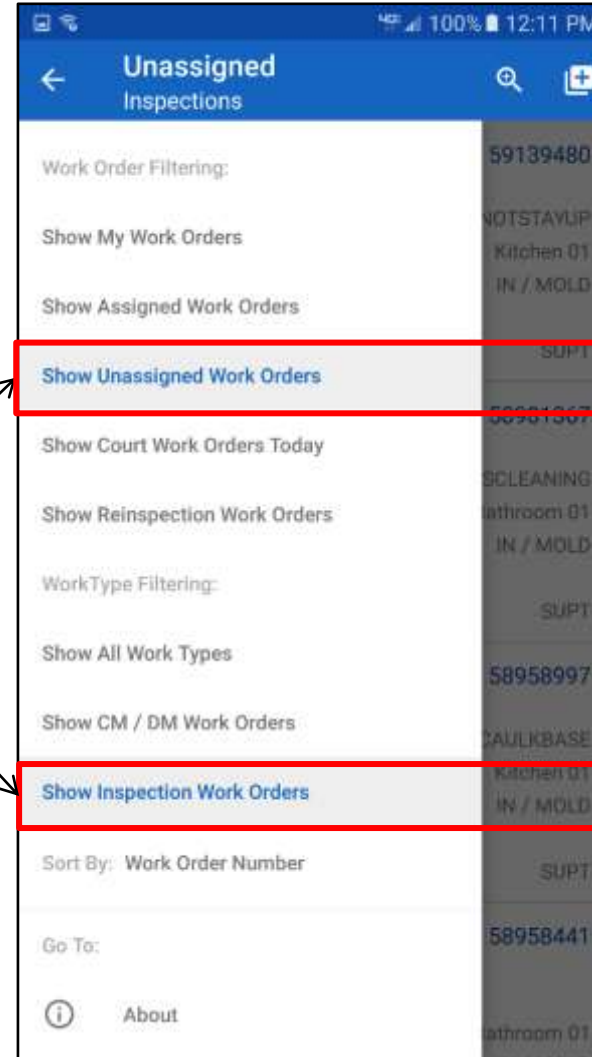
- **Show Unassigned Work Orders**
- **Show Inspection Work Orders**

NOTE: The **QA Work Order** is automatically generated in **Maximo 25-days**, and the new **Target Start Date** will be set to **30 days** after the last Child Work Order is closed (or **25-days** after the mold inspection gets closed if no children are created).

The **Target Finish Date** is set to **15 days** after the **Target Start Date**.

If either **Target Start Date** or **Target Finish Date** fall on a weekend or a holiday, then **next business day**.

1



Mold Re-Inspection Work Orders Process

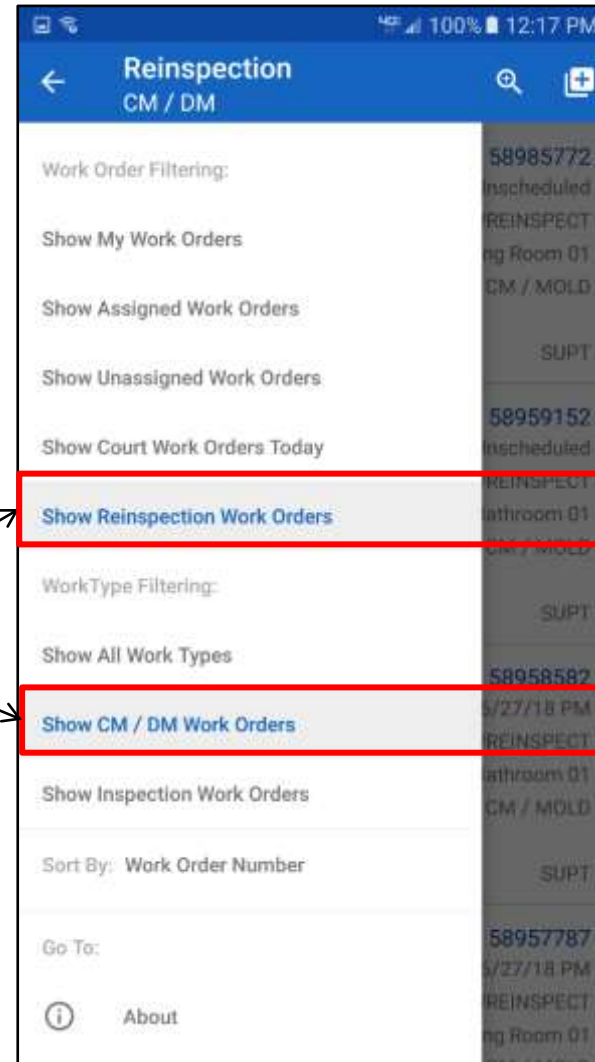
1

The first **Re-Inspection Work Order** appears in:

- **Show Reinspection Work Orders**
- **Show CM / DM Work Orders**

NOTE: Maximo creates the **Re-Inspection Work Order** **immediately** and the person who submits the QA Work Order, should see the **Reinspection Work Order** on his device and right there and then **complete** and **submit Re-Inspection results**.

1

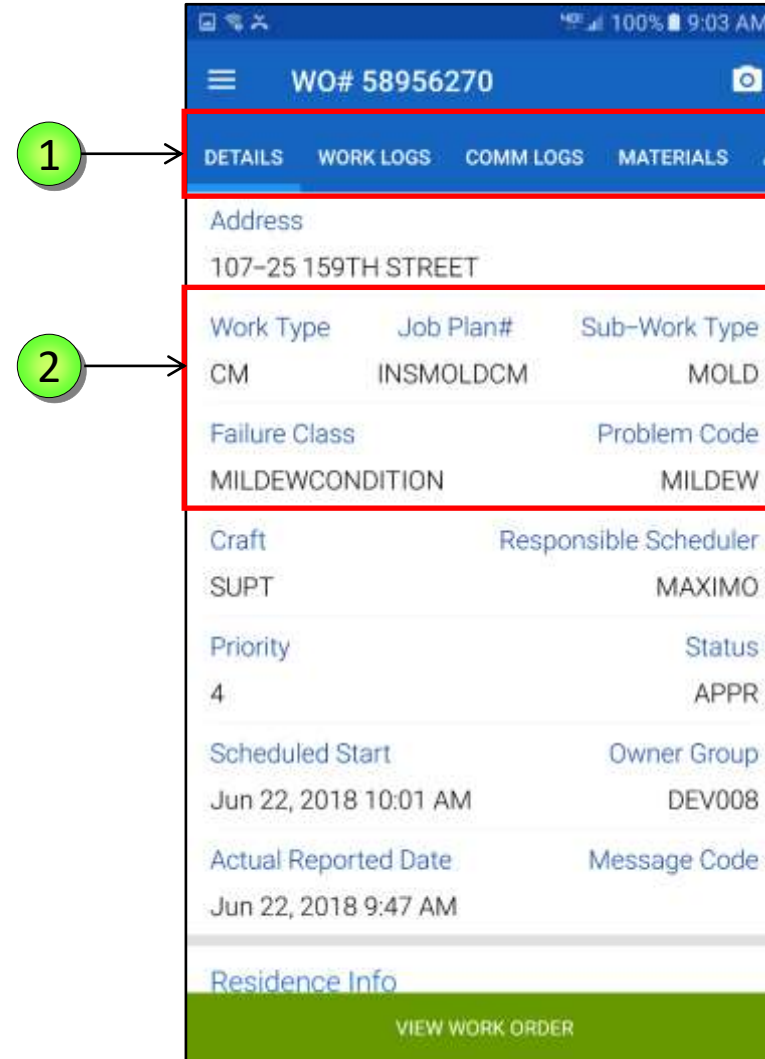


View Work Order Details

1 The user can review the **Work Order Details** by scrolling up and down on the **Details** tab.

The fields below are unique for the **Mold Inspection** Work Order:

2 **Work Type = CM**
Job Plan# = INSMOLDCM
Sub-work Type = MOLD
Failure Class = MILDEWCONDITION
Problem Code = MILDEW



View and Select Labor - Start the Timer

After reviewing the **Work Order Details** the user is now ready to begin the work. **START TIME** is displayed at the bottom of the screen.

- 1 Tap on **START TIME**
- 2 Select **Inspection**
- 3 Tap **NEXT**

Complete Work Order
WO #58957603

1 Select Labor Type 2 Perform Inspection 3 Materials Optional

Please select type of labor:

- Inspection (INSPECTION)
- Resident Not Home (RESNOTHOME)
- No Building Access (NOBLDGACCESS)
- No Adult (NOADULT)
- Unsafe Condition (UNSAFECOND)
- Resident Refused (RESREFUSED)
- No Floor Access (NOFLRACCESS)
- No Room Access (NORMACCESS)

PREVIOUS STOP TIME NEXT

Inspection Status

On **Perform Inspection** screen you can see the **WO Inspection State**. This is the current **State** of the Inspection.

- 1 **COMPLETE** – All required results have been entered.
- 2 **PARTIAL** – Some results have been entered, but not **All** required results.
- 3 **NONE** – No results have been entered.
- 4 **NOTE: WO Inspection State** of the whole WO will appear on this screen and on the **Work Order List** screen.

The screenshot shows the 'Complete Work Order' screen for WO #58957603. The interface includes a progress bar with four steps: 1. Perform Inspection (active), 2. Materials Optional, 3. Ad hoc Optional, and 4. Ad hoc Optional. The inspecting location is 008.01.003.F03.03A.KIT01 at 106-36 159TH STREET. The 'WO Inspection State' is 'PARTIAL', highlighted with a red box and a callout '4'. Below this are three evaluation sections, each with an 'Inspect' button: 'Evaluation of Conditions' (Kitchen 01, State: COMPLETE, callout '1'), 'General Evaluation' (Kitchen 01, State: PARTIAL, callout '2'), and 'Probable Causes and Remediation' (Kitchen 01, State: NONE, callout '3'). At the bottom are navigation buttons: '< PREVIOUS', 'STOP TIME', and 'NEXT >'.

Perform Inspection

The first task in a series of tasks is

Task 1: Evaluation of Conditions

1 The WO Inspection State is NONE.

2 Tap INSPECT

Complete Work Order
WO #58956270

2 Perform Inspection 3 Materials Optional 4 Ad hoc Optional

Inspecting Location:
008.10.028.F02.02D.BTH01
107-25 159TH STREET

1 → WO Inspection State: NONE

Evaluation of Conditions

Bathroom 01

State: NONE

Inspect → 2

< PREVIOUS STOP TIME NEXT >

Evaluation of Mold Growth – (Continued)

Items that must be inspected are marked by a red asterisks (*)

All questions that have an asterisk (*) are mandatory.

1 Evaluation of Conditions screen requires evaluation for:

- **Mold Growth** (Yes/No)
- **Water Damaged** (Yes/No)
- **Moisture Measurement \geq 599** (Yes/No)

2 Tap **NONE** next to **Is there mold growth?**

The screenshot shows the 'Evaluation of Conditions' screen for 'Bathroom 01'. The status bar at the top indicates 100% battery and 9:47 AM. The screen title is 'Evaluation of Conditions' with a back arrow and a 'DONE' button. Below the title, there are three mandatory questions, each marked with a red asterisk (*):
1. '* Is there mold growth?' with a '(None)' button highlighted by a red box and a green circle labeled '2'.
2. '* Is there Water Damage?' with a '(None)' button.
3. '* Is Moisture Measurement > or equal to 599?' with a '(None)' button.
A green circle labeled '1' points to the list of questions.

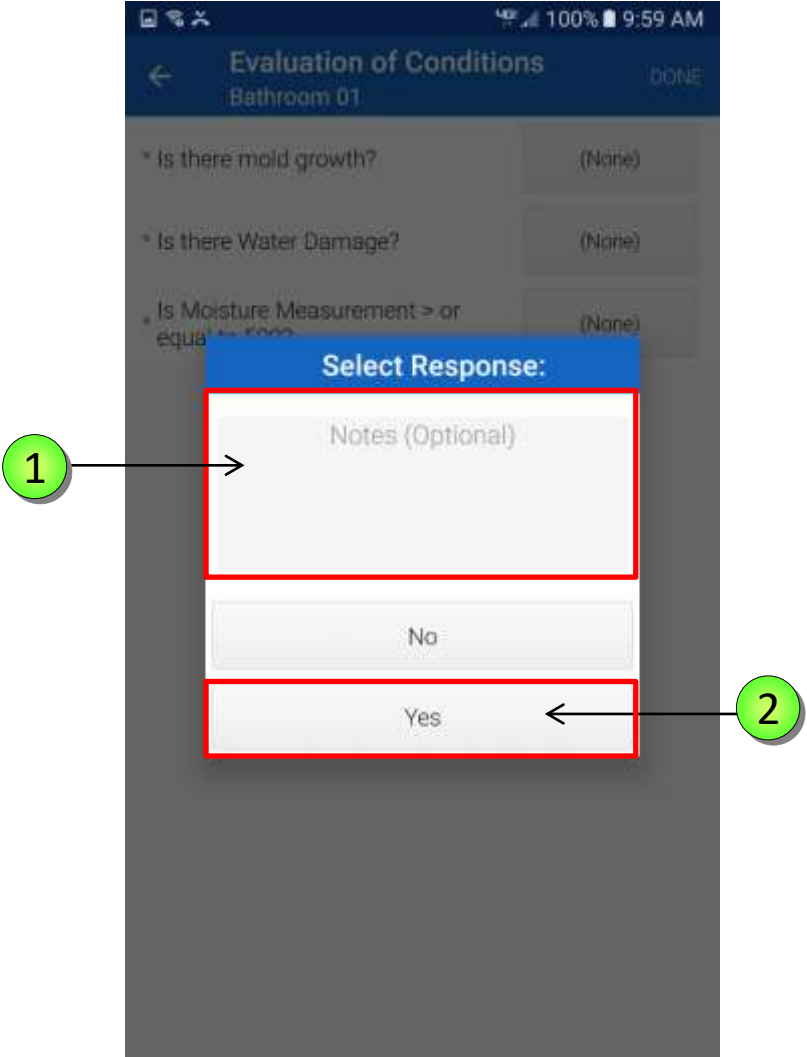
Evaluation of Mold Growth – (Continued)

The **Select Response** window display 3 options:

- **Notes** (optional)
- **No**
- **Yes**

1 In the **Notes** field, the user can input free-text information.

2 Tap **YES**



Evaluation of Mold Growth – (Continued)

1

The **Select Areas Affected** screen displays, all of the fields or areas to select.

To select an affected area tap on it, **iWM** then highlights the selected area in **Green** color.

To unselect an area tap on it again and the **Green** bar disappears.

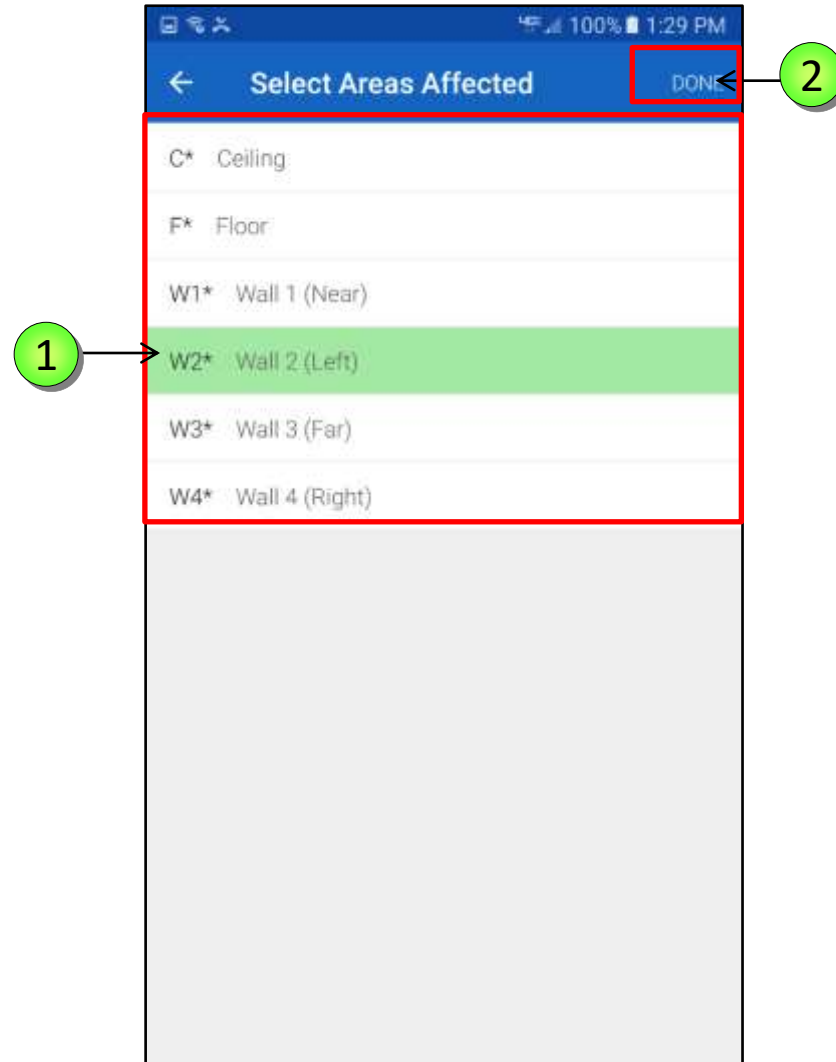
1



Evaluation of Mold Growth – (Continued)

1 Tap on **W2* Wall 2 (left)**, the system highlights it in Green.

2 Tap **DONE**



Evaluation of Mold Growth – (Continued)

The **FollowUp Info** screen displays, the **Square Footage** which is a **Mandatory** field:

1 Tap **SQUARE FOOTAGE**

NOTE: Square footage is the total of all areas added together.

Followup Info

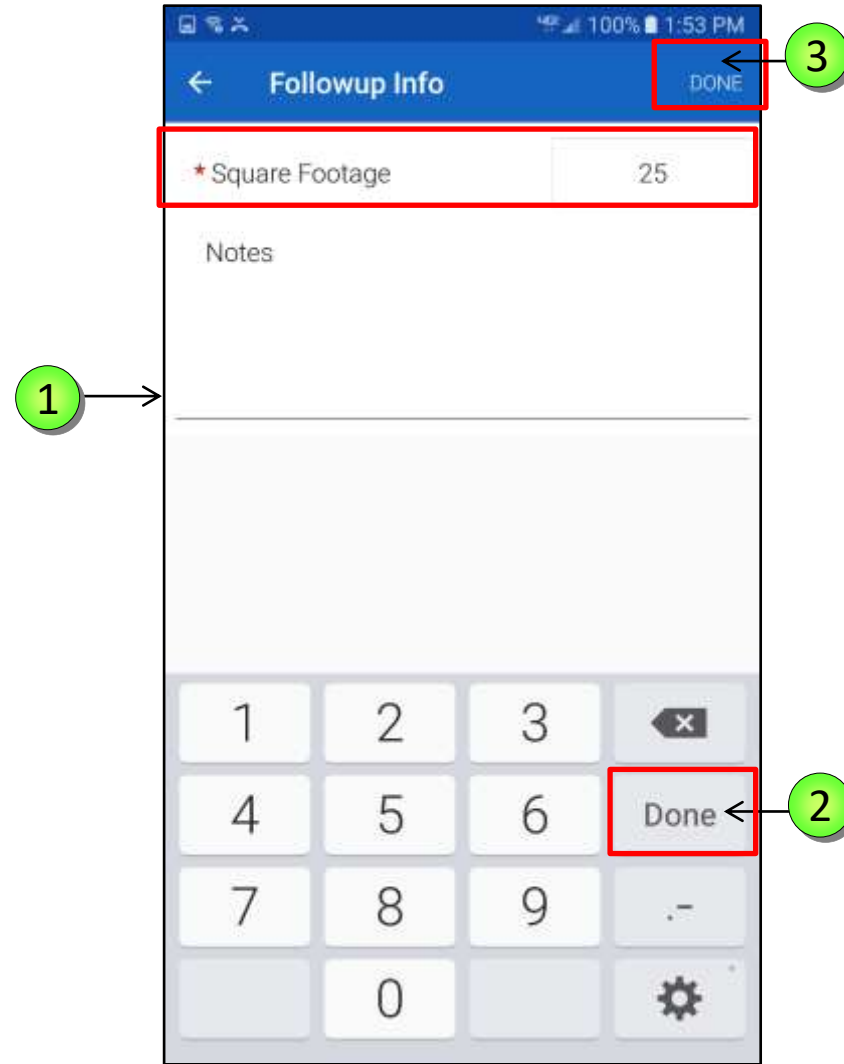
* Square Footage

Notes

Evaluation of Mold Growth – (Continued)

Tap inside the field and the device keyboard displays.

- 1 Type 25
- 2 Tap **DONE** on the device keyboard
- 3 Tap **DONE**



Evaluation of Mold Growth – (Continued)

Once the user completes the mold growth inspection, the **View Details** appear below the **Yes** button.


1 Tap on the **View Details** to see the summary of the **Inspection** that was performed.

The screenshot shows a mobile application interface titled "Evaluation of Conditions" for "Bathroom 01". The status bar at the top indicates 100% battery and 3:11 PM. The interface contains three questions, each with a corresponding button:


- Question: "Is there mold growth?" with a blue "Yes" button and a "View Details" link with a right-pointing arrow. A red box highlights the "Yes" button and "View Details" link, with a green circle containing the number "1" pointing to the "View Details" link.
- Question: "Is there Water Damage?" with a grey "(None)" button.
- Question: "Is Moisture Measurement > or equal to 599?" with a grey "(None)" button.

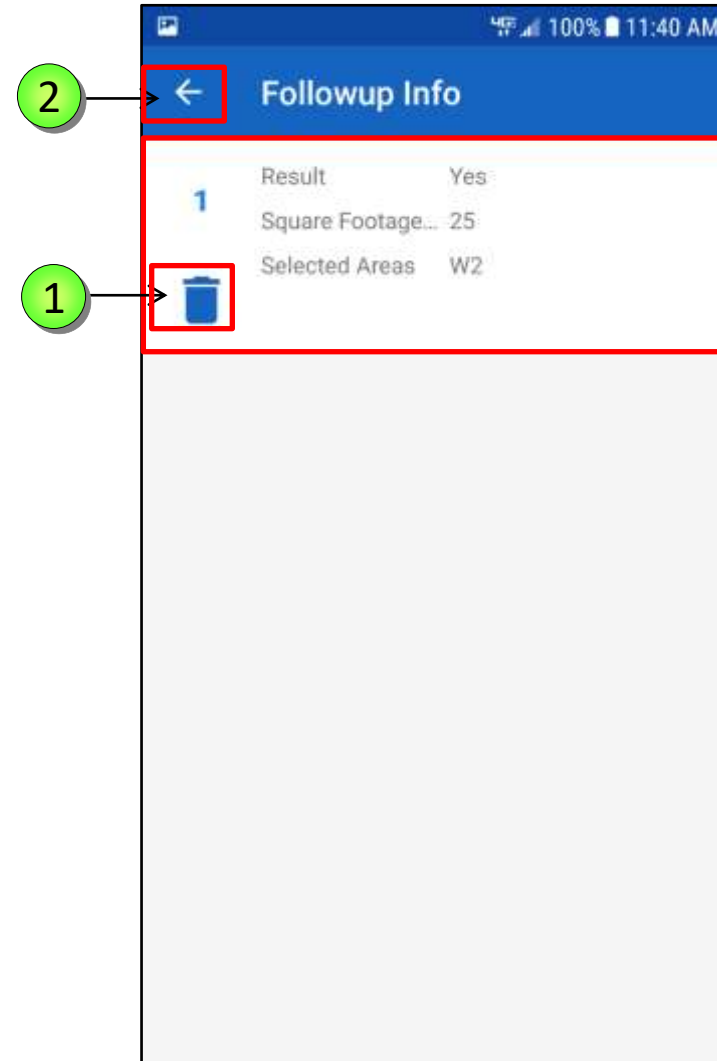
Evaluation of Mold Growth – (Continued)

The **View Details** screen displays a summary of the inspection performed.

NOTE: to change the answers entered, tap on the **Garbage Pail** icon , to erase the information entered.

Confirm the message in the Pop-up Window, **“Are you sure you want to delete this result?”** tap **Yes**.

Tap the **back arrow**  to return to the **Evaluation of Conditions** screen.



Evaluation of Water Damage

The second Mandatory question on the **Evaluation of Conditions** screen is: “**is there Water Damage?**”

1 Tap **NONE** next to **is there Water Damage?**

100% 3:36 PM

← Evaluation of Conditions Bathroom 01 DONE

* Is there mold growth? Yes View Details >

* Is there Water Damage? (None)

* Is Moisture Measurement > or equal to 599? (None)

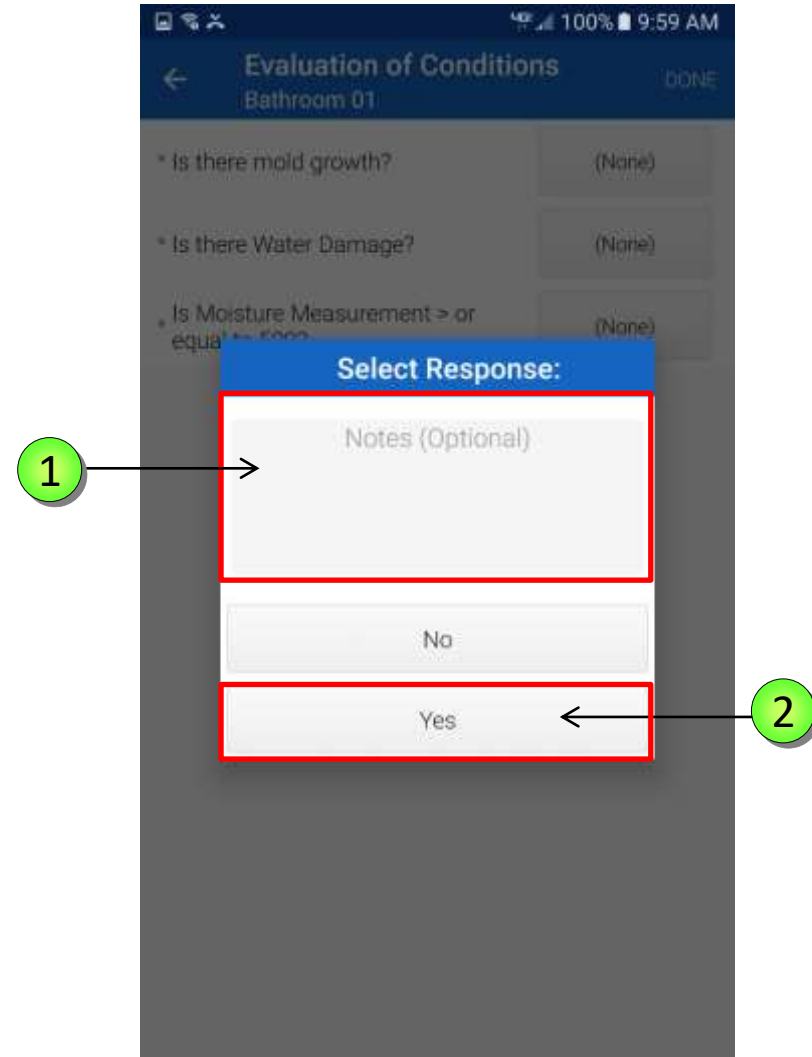
Evaluation of Water Damage – (Continued)

The **Select Response** window display 3 options:

- **Notes** (optional)
- **No**
- **Yes**

1 In the **Notes** field, the user can input free-text information.

2 Tap **YES**

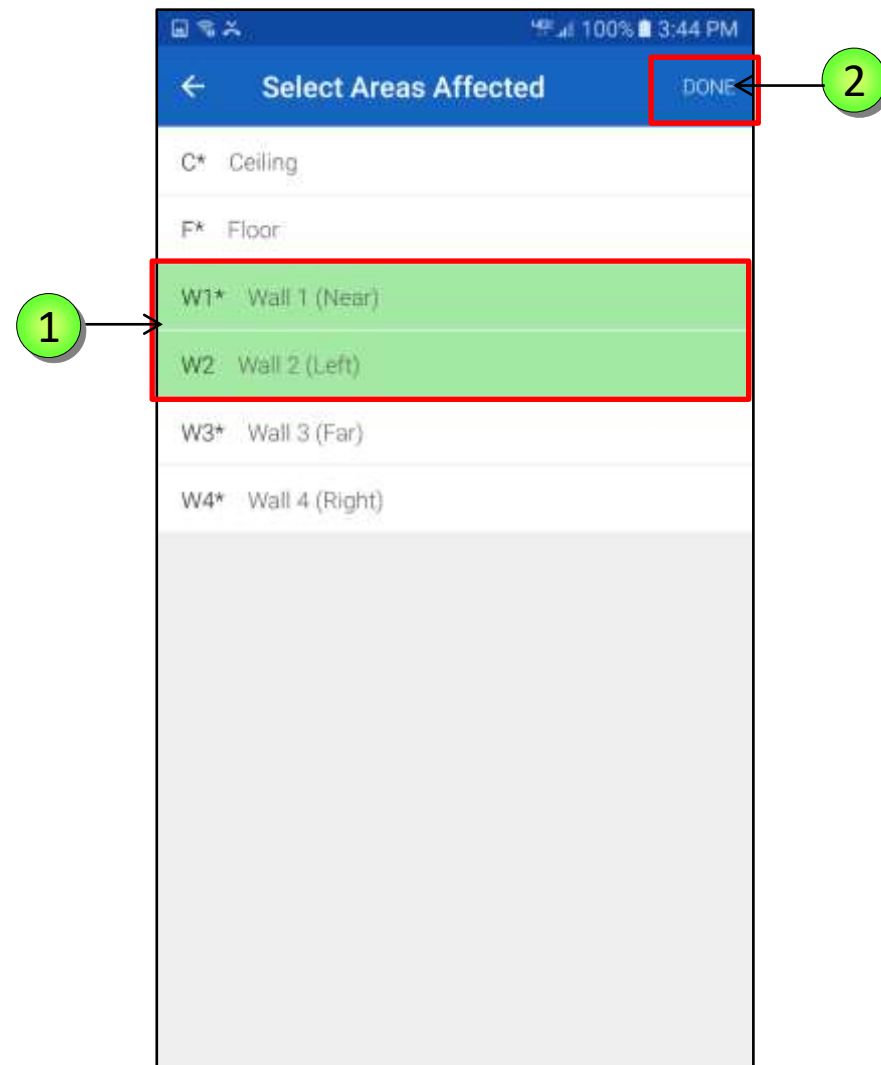


Evaluation of Water Damage – (Continued)

Tap and select two affected areas:

1 **W1* Wall 1 (Near)**
W2* Wall 2 (Left)

2 Tap **DONE**



Evaluation of Water Damage – (Continued)

The **Evaluation of Conditions** screen has now two mandatory questions answered.

- 1 Tap on the **View Details** to see the summary of the **Inspection** that was performed.


The screenshot shows the 'Evaluation of Conditions' screen for 'Bathroom 01'. The screen displays three mandatory questions with their respective answers and 'View Details' links. The 'View Details' link for the 'Is there Water Damage?' question is highlighted with a red box and a green circle with the number 1.

Question	Answer	Action
* Is there mold growth?	Yes	View Details
* Is there Water Damage?	Yes	View Details
* Is Moisture Measurement > or equal to 599?	(None)	

Evaluation of Water Damage – (Continued)

1

Review the entered Result in the **FollowUp Info** Screen.

Tap the **back arrow**  to return to the **Evaluation of Conditions** screen.

1



Evaluate Moisture Measurement Level

The last question on the **Evaluation of Conditions** is to evaluate the moisture level.

Evaluate the moisture measurement level (greater than) ≥ 599

1 Tap **NONE**

The screenshot shows the 'Evaluation of Conditions' app interface for 'Bathroom 01'. The app has a blue header with a back arrow, the title 'Evaluation of Conditions', and a 'DONE' button. Below the header, there are three questions, each with a 'Yes' button and a 'View Details' link. The third question, 'Is Moisture Measurement > or equal to 599?', is highlighted with a red box, and a green circle with the number '1' points to it. The answer '(None)' is selected for this question.

Evaluate Moisture Measurement Level – (Continued)

From the **Select Response** window box, select **YES** or **NO**.

1 Tap **YES**

If **YES** is selected, select the areas listed where the **Moisture Measurement Level** is greater than (≥ 25).

The screenshot shows a mobile application interface for 'Evaluation of Conditions' in 'Bathroom 01'. The background is dimmed, showing questions like 'Is there mold growth?' and 'Is there Water Damage?'. A 'Select Response:' dialog box is open, featuring a text input field for 'Notes (Optional)', a 'No' button, and a 'Yes' button. A red rectangular box highlights the 'Yes' button, and a green circle containing the number '1' has an arrow pointing to it.

Evaluate Moisture Measurement Level – (Continued)

Tap and select the **Affected Areas**:

1

- F* Floor
- W1* Wall 1 (Near)
- W2* Wall 2 (Left)

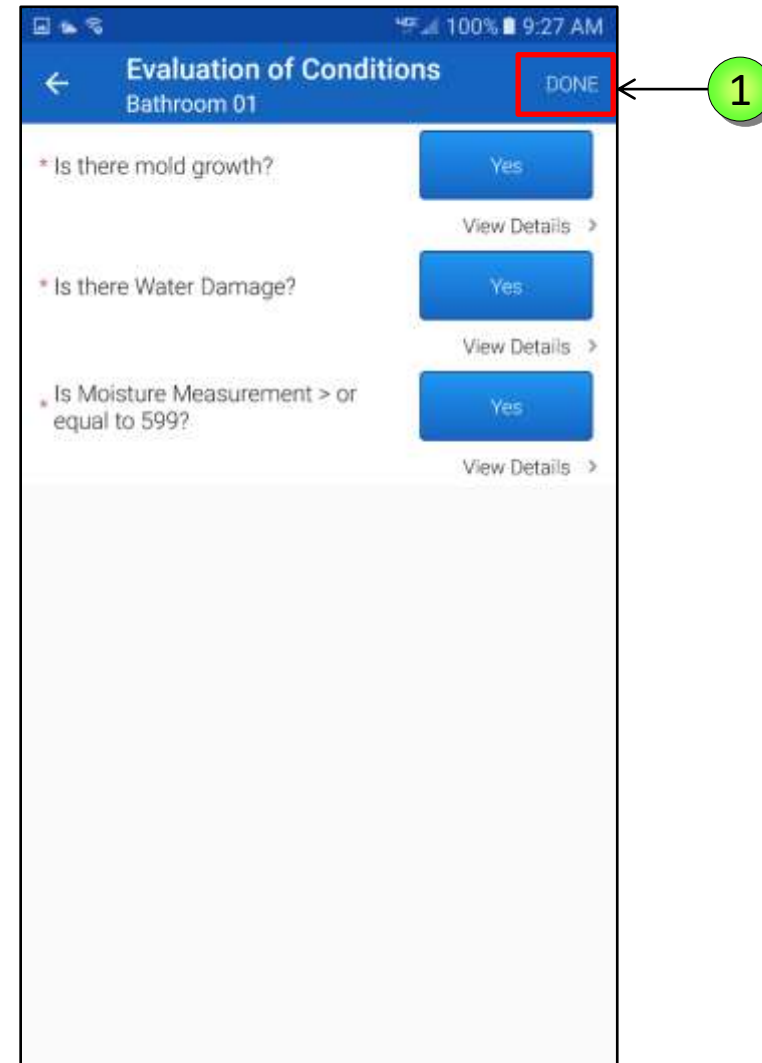
2 Tap **DONE**



Evaluate Moisture Measurement Level – (Continued)

The **Evaluation of Conditions** screen is now complete.

1 Tap **DONE**



Complete Evaluation of Conditions

- 1 The **Evaluation of Conditions** status is now **COMPLETE**, and **WO Inspection State** is **PARTIAL**.
- 2

NOTE: If the **Evaluation of Conditions (Task 1)** has all the answers as **NO** for **Mold Growth**, **Water Damage** and **Wet Reading** questions, then **do not** answer the rest of the inspection questions.

Inspection is complete.

The inspector can then take a **photo** and **submit** the inspection results to **Maximo**.

The screenshot displays a mobile application interface for a 'Complete Work Order' (WO #58956270). The interface is divided into sections for different inspection tasks. The 'Evaluation of Conditions' section is highlighted with a red box and a green circle '1' pointing to it. This section shows 'Bathroom 01' with a state of 'COMPLETE'. The 'WO Inspection State' is shown as 'PARTIAL', with a green circle '2' pointing to it. Other sections include 'General Evaluation' (Bathroom 01, State: NONE) and 'Probable Causes and Remediation' (Bathroom 01, State: NONE). At the bottom, there are navigation buttons: '< PREVIOUS', 'STOP TIME', and 'NEXT >'. The top of the screen shows a progress bar with four steps: '2 Perform Inspection', '3 Materials Optional', and '4 Ad hoc Optional'.

Perform General Evaluation Inspection

The second task in a series of tasks is

Task 2: General Evaluation

1 Tap **INSPECT**

The screenshot shows a mobile application interface for a 'Complete Work Order' (WO #58956270). The interface is divided into several sections. At the top, there is a progress indicator with four steps: '1. Inspect', '2. Perform Inspection', '3. Materials Optional', and '4. Ad hoc Optional'. The 'Perform Inspection' step is currently active. Below the progress indicator, the 'Inspecting Location' is listed as '008.10.028.F02.02D.BTH01' and '107-25 159TH STREET'. The 'WO Inspection State' is 'PARTIAL'. There are three main evaluation sections, each with an 'inspect' button: 'Evaluation of Conditions' (Bathroom 01, State: COMPLETE), 'General Evaluation' (Bathroom 01, State: NONE), and 'Probable Causes and Remediation' (Bathroom 01, State: NONE). A red box highlights the 'General Evaluation' section, and a green circle with the number '1' points to the 'inspect' button for this section. At the bottom, there are navigation buttons: '< PREVIOUS', 'STOP TIME', and 'NEXT >'.

Perform General Evaluation Inspection – (Continued)

Items that have to be inspected are marked by a red asterisks (*)

All questions that have an asterisk (*) are **mandatory**.

1 Tap **NONE**, next to **Interior Wall Finish**

General Evaluation
Bathroom 01

1 * Interior Wall Finish (None)

* Framing Type (None)

* Ceiling Type (None)

* Floor Finish (None)

* Cockroaches (None)

* Rodent Droppings (None)

* Relative Humidity

* Is there an exhaust fan? (None)

Is Window Operable? (None)

Is sealant/ caulking present around toilet bowl base?
* (None)

Perform General Evaluation Inspection – (Continued)

A **Select Response** window displays, select the finish: **Plaster** or **Sheetrock**

1 Tap **Sheetrock**

The screenshot shows a mobile application interface for a 'General Evaluation' of 'Bathroom 01'. The background is a list of inspection items, each with a '(None)' button. A 'Select Response:' dialog box is open, featuring a text input field for 'Notes (Optional)', a 'Plaster' button, and a 'Sheetrock' button. A green circle with the number '1' and a yellow arrow points to the 'Sheetrock' button.

Perform General Evaluation Inspection – (Continued)

The process is the same for the following items:

- **Framing Type: Steel or Wood**
- **Ceiling Type: Concrete or Sheetrock**
- **Floor Type: Ceramic, Vinyl or Wood**
- **Cockroaches: No or Yes**
- **Rodent Droppings: No or Yes**

1

Tap **NONE** next to **Framing Type**

1

General Evaluation
Bathroom 01

* Interior Wall Finish: Sheetrock

* Framing Type: (None)

* Ceiling Type: (None)

* Floor Finish: (None)

* Cockroaches: (None)

* Rodent Droppings: (None)

* Relative Humidity: 1

* Is there an exhaust fan?: (None)

Is Window Operable?: (None)

Is sealant/ caulking present around toilet bowl base?
(None)

Perform General Evaluation Inspection – (Continued)

The answers to the questions below determines the remediation methods used.

- Interior Wall Finish: Sheetrock
- Framing Type: Wood
- Ceiling Type: Sheetrock
- Floor Type: Ceramic
- Cockroaches: Yes
- Rodent Droppings: Yes

NOTE: Maximo will automatically generate **ONE** open Child Work Order for Exterminator for **every single Organism** found in the apartment. For example in the above, there would be 2 WOs 1 for **Cockroaches** and 1 for **Mice**.

General Evaluation
Bathroom 01

Interior Wall Finish: Sheetrock

Framing Type: Wood

Ceiling Type: Sheetrock

Floor Finish: Ceramic

Cockroaches: Yes

Rodent Droppings: Yes

Relative Humidity: |

Is there an exhaust fan? (None)

Is Window Operable? (None)

Is sealant/ caulking present around toilet bowl base? (None)

Perform General Evaluation Inspection – (Continued)

The Supervisor shall input the **Relative Humidity** of the room. Upon tapping the **Relative Humidity** field, the device keyboard appears.

- 1 Type **58**
- 2 Tap **DONE** on the device to remove the keyboard.

General Evaluation
Bathroom 01

Wood
Sheetrock
Ceramic
Yes
View Details >
Yes
View Details >

Relative Humidity 58

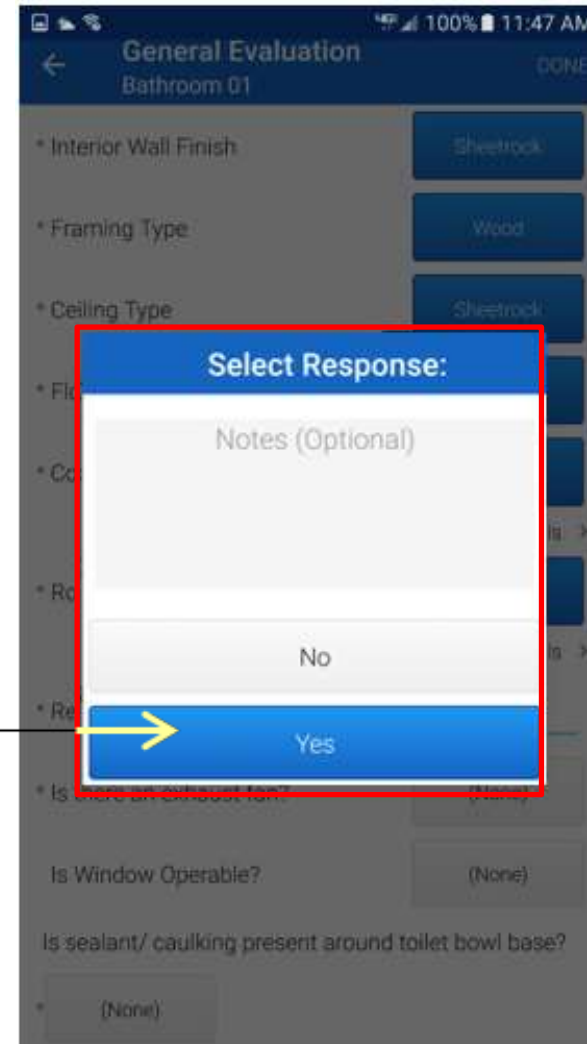
1 2 3 Done
4 5 6
7 8 9
0

Perform General Evaluation Inspection – (Continued)

If the location is a bathroom or a kitchen, the Supervisor shall answer “**Is there an exhaust fan?**” question as **YES** or **NO**.

If there is an **Exhaust Fan**, **Maximo will automatically generate** a Work Order to clean the vent upon submission of the inspection results.

1 Tap YES



Perform General Evaluation Inspection – (Continued)

The Supervisor shall enter the **CFMs (Cubic Feet Measurement)** at the exhaust vent in the appropriate field.

The CFM's measurement is a mandatory field.

- 1 Type **24** on the device keyboard.
- 2 Tap **DONE** on the device keyboard.
- 3 The **Notes** field is optional.

NOTE: If **CFM** is less than (**<25**), **Maximo** will **auto-generate** a Work Order to check the roof fan, upon submission of the inspection results.

- 4 Tap **DONE**

The screenshot shows a mobile application interface titled "Followup Info". At the top right, there is a "DONE" button highlighted with a red box and a green circle labeled "4". Below this, there is a text input field containing the number "24", with a red box around it and a green circle labeled "1". Underneath the input field is a "Notes" field, with a green circle labeled "3" pointing to it. At the bottom of the screen, a numeric keypad is visible, with the "Done" button highlighted by a red box and a green circle labeled "2".

Perform General Evaluation Inspection – (Continued)

The **View Details** below the **Exhaust Fan** field displays the information entered.

1 Tap on **View Details**

General Evaluation Bathroom 01

* Framing Type Wood

* Ceiling Type Sheetrock

* Floor Finish Ceramic

* Cockroaches Yes

View Details >

* Rodent Droppings Yes

View Details >

* Relative Humidity 58

* Is there an exhaust fan? Yes

View Details


Is Window Operable? (None)

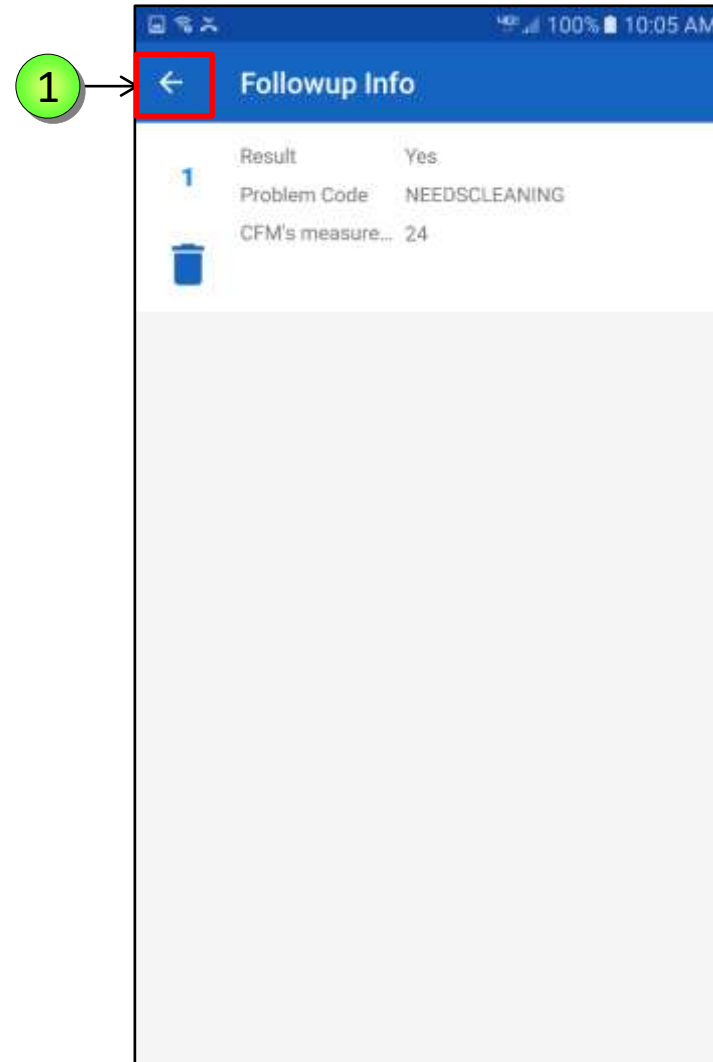
Is sealant/ caulking present around toilet bowl base?

(None)

Perform General Evaluation Inspection – (Continued)

Review the entered Result in the **FollowUp Info** Screen.

1 Tap the **back arrow**  to return to the **General Evaluation** screen.



Perform General Evaluation Inspection – (Continued)

If there was **NO** Exhaust Fan, the Supervisor shall answer “**Is Window Operable?**” question as **YES** or **NO**.

1

Tap on **View Details** below the **Window Operable** field to review information entered.

NOTE: If the Supervisor answers **NO** for **Window Operable** question, **Maximo** will **auto-generate** a Work Order **to fix the window**, upon submission of inspection results.

General Evaluation
Bathroom 01

• Framing Type: Wood

• Ceiling Type: Sheetrock

• Floor Finish: Ceramic

• Cockroaches: Yes

View Details >

• Rodent Droppings: Yes

View Details >

• Relative Humidity: 58

• Is there an exhaust fan?: Yes

View Details >

Is Window Operable?: No

View Details >

Is sealant/ caulking present around toilet bowl base?

(None)

1

Perform General Evaluation Inspection – (Continued)

If the location is a bathroom, the Supervisor must answer the question, “**Is sealant/caulking present around toilet bowl base?**” as **YES** or **NO**.

1 Tap **NONE** and select **NO** from the **Select Response** window.

NOTE: Maximo will auto-generate a Work Order, if the answer is **NO**, to fix the **caulking/sealant** with mold resistant caulking, upon submission of the inspection results.

2 Tap **DONE**

The screenshot shows the 'General Evaluation' form for 'Bathroom 01'. The form includes the following items and their current responses:

- Ceiling Type: Sheetrock
- Floor Finish: Ceramic
- Cockroaches: Yes
- Rodent Droppings: Yes
- Relative Humidity: 58
- Is there an exhaust fan?: Yes
- Is Window Operable?: No
- Is sealant/ caulking present around toilet bowl base?: No

The 'DONE' button is located in the top right corner of the form. The 'No' button for the question 'Is sealant/ caulking present around toilet bowl base?' is highlighted with a red box and a green circle '1' pointing to it. The 'DONE' button is highlighted with a red box and a green circle '2' pointing to it.

Probable Causes And Remediation

The third task in a series of tasks is

Task 3: Probable Causes and Remediation

1 Tap INSPECT

Complete Work Order
WO #58956270

2 Perform Inspection 3 Materials Optional 4 Ad hoc Optional

Inspecting Location:
008.10.028.F02.02D.BTH01
107-25 159TH STREET

WO Inspection State: PARTIAL

Evaluation of Conditions
Bathroom 01
State: COMPLETE

General Evaluation
Bathroom 01
State: COMPLETE

Probable Causes and Remediation
Bathroom 01
State: NONE

< PREVIOUS STOP TIME NEXT >

Probable Causes And Remediation – (Continued)

1 On the top of the screen, iWM is reminding the user to select a **Probable Cause and Remediation method** for the **Walls 1, Walls 2, and the Floor**. Those were the **Affected Areas** selected in **Task 1: Evaluation of Conditions**.

Selecting **Remediation** for all these walls is **mandatory**.

2 The **Wall-break** is a **Mandatory** question.

1

2

Probable Causes and Remediation	
Bathroom 01	
No Probable Cause and Remediation has been selected for the following areas: Floor, Wall 1 (Near), Wall 2 (Left). Please select probable cause and remediation for all areas.	
* Is Wall-break required?	(None)
Bathtub/Shower	(None)
Caulking	(None)
Exterior Wall (Winter)	(None)
Façade	(None)
Grouting	(None)
Pipe Insulation	(None)
Leak – above/beside investigate	(None)
Plumbing – In unit	(None)
Resident – Cause	(None)

Probable Causes And Remediation – (Continued)

The **Wall-break** is the only **Mandatory** question on the screen.

You must select **at least ONE** other **Probable Cause** on the **Probable Causes And Remediation** screen.

The Supervisor will answer **YES** for whichever causes are applicable. **Only select what's needed.**

1 Tap **NONE** next **Wall-break** question.

Probable Causes and Reme...
Bathroom 01

No Probable Cause and Remediation has been selected for the following areas: Floor, Wall 1 (Near), Wall 2 (Left). Please select probable cause and remediation for all areas.

* Is Wall-break required?	(None)
Bathtub/Shower	(None)
Caulking	(None)
Exterior Wall (Winter)	(None)
Façade	(None)
Grouting	(None)
Pipe Insulation	(None)
Leak – above/beside investigate	(None)
Plumbing – In unit	(None)
Resident – Cause	(None)

Probable Causes And Remediation – (Continued)

The **Select Response** window appears for the **Wall-break** question. The available answer is **YES** or **NO**.

1 Tap YES

Probable Causes and Reme...
Bathroom 01

No Probable Cause and Remediation has been selected for the following areas: Floor, Wall 1 (Near), Wall 2 (Left). Please select probable cause and remediation for all areas.

* Is Wall-break required? (None)

Bath...

Caul...

Exter...

Faq...

Grou...

Pipe Insulation (None)

Leak - above/beside Investigate (None)

Plumbing - In unit (None)

Resident - Cause (None)

Select Response:

Notes (Optional)

No

Yes

Probable Causes And Remediation – (Continued)

All the **Areas Affected** by the **Wall Break**.

Only the “**Areas Affected**” that were selected from **Task 1: Evaluation of Conditions** will show on the list.

1 Tap on each area separately and enter the remediation method.

1

Select Areas Affected

Areas with an asterisk (*) have not yet been selected for cause / remediation

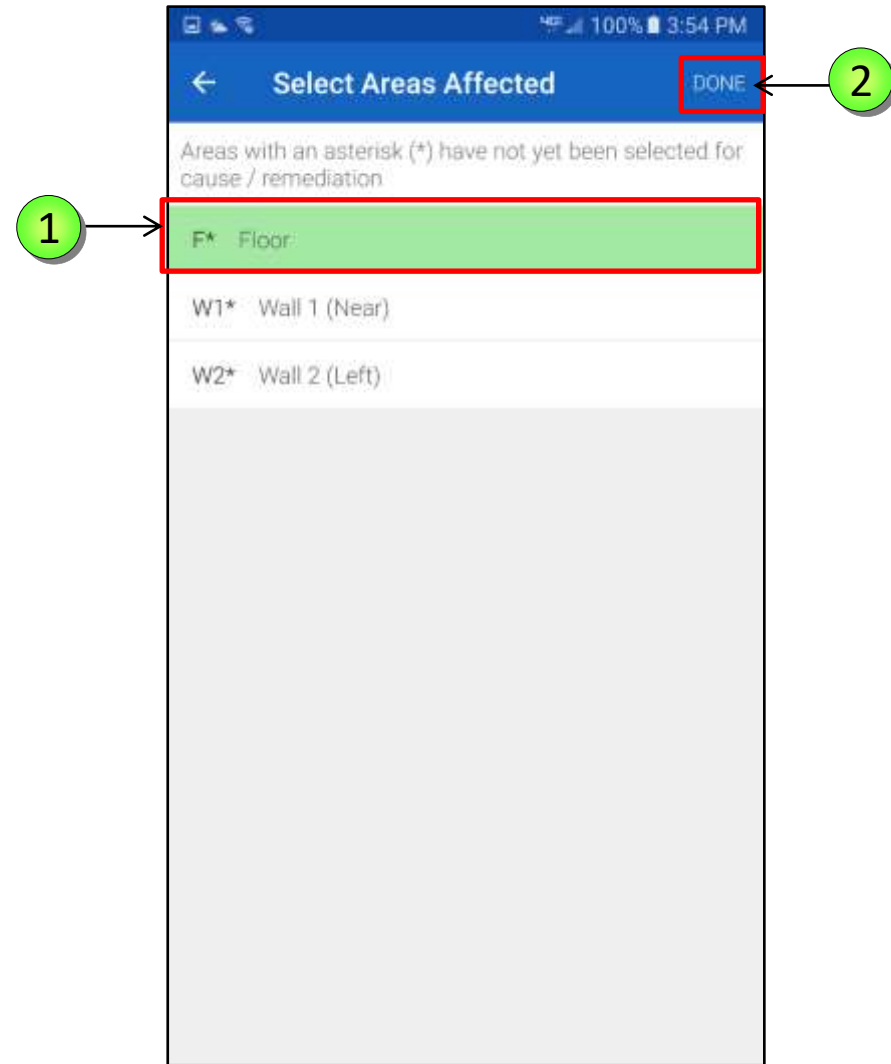
- F* Floor
- W1* Wall 1 (Near)
- W2* Wall 2 (Left)

Probable Causes And Remediation – (Continued)

Each **Probable Cause** for the selection will be listed as a question.

The Supervisor will answer **YES** for whichever causes are applicable. At least **ONE** cause must be answered **YES** (if an issue was found in **Task 1**).

- 1 Tap **FLOOR** to select it.
- 2 Tap **DONE**



Probable Causes And Remediation – (Continued)

If the Supervisor answered **YES** for the **Probable Root Cause**, select the **Areas Affected** by the specific cause.

NOTE: Only “**Areas Affected**” that were selected from **Task 1** will show in list. And **EACH** surface **Area Selected** from **Task 1** must be accounted for against a **Probable Cause**.

Multiple surface areas can be selected per **Probable Cause**.

1 Tap **NONE** next to **Bathtub/ Shower**

100% 4:19 PM

Probable Causes and Reme... DONE

Bathroom 01

No Probable Cause and Remediation has been selected for the following areas: Floor, Wall 1 (Near), Wall 2 (Left). Please select probable cause and remediation for all areas.

Is Wall-break required? Yes

Bathtub/Shower	(None)
Caulking	(None)
Exterior Wall (Winter)	(None)
Façade	(None)
Grouting	(None)
Pipe Insulation	(None)
Leak - above/beside investigate	(None)
Plumbing - In unit	(None)
Resident - Cause	(None)

Probable Causes And Remediation – (Continued)

The **Select Response** window appears, the available answers **YES** or **NO**.

1 Tap **YES**

Probable Causes and Reme...
Bathroom 01

No Probable Cause and Remediation has been selected for the following areas: Floor, Wall 1 (Near), Wall 2 (Left). Please select probable cause and remediation for all areas.

* Is Wall-break required? Yes

Bath...

Caul...

Exte...

Faç...

Group...

Pipe Insulation (None)

Leak - above/beside investigate (None)

Plumbing - In unit (None)

Select Response:

Notes (Optional)

No

Yes

Probable Causes And Remediation – (Continued)

The **FollowUp Info** screen displays, with 4 fields:

- **Failure Class**
- **Problem Code**
- **Location**
- **Notes (Optional)**

1 Tap Failure Class

Followup Info
Addressing Cause of Mold, Mildew o... DONE

Failure Class
Please select...

Problem Code
Please select...

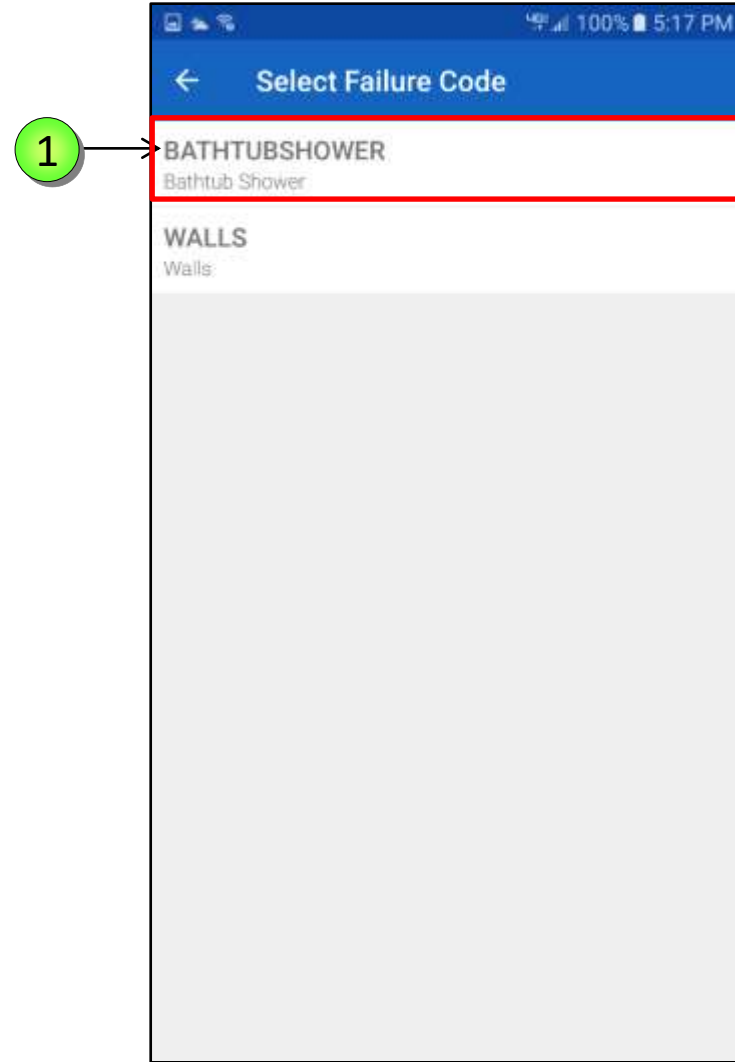
Location
Please select...

Notes

Probable Causes And Remediation – (Continued)

The **Failure Class** is a very limited list.

1 Tap **BATHTUBSHOWER**



Probable Causes And Remediation – (Continued)

The **FollowUp Info** screen reappears, select a **Problem Code** appropriate to the **Failure Class**.

1 Tap **Problem Code**

Followup Info
Addressing Cause of Mold, Mildew o... DONE

Failure Class
BATHTUBSHOWER

Problem Code
Please select...

Location
Please select...

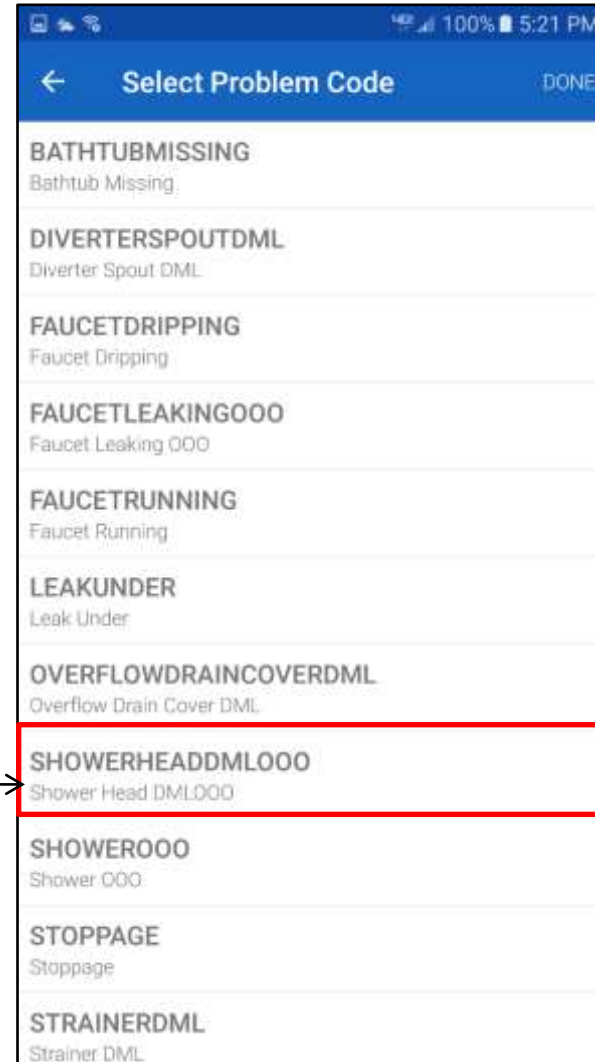
Notes

Probable Causes And Remediation – (Continued)

Scroll up and down and select the appropriate **Problem Code** from the list.

1

Tap **SHOWERHEADMLOOO**



Probable Causes And Remediation – (Continued)

The **FollowUp Info** screen reappears, select a **Location**.

1 Tap **Location**

Followup Info
Addressing Cause of Mold, Mildew o... DONE

Failure Class
BATHTUBSHOWER

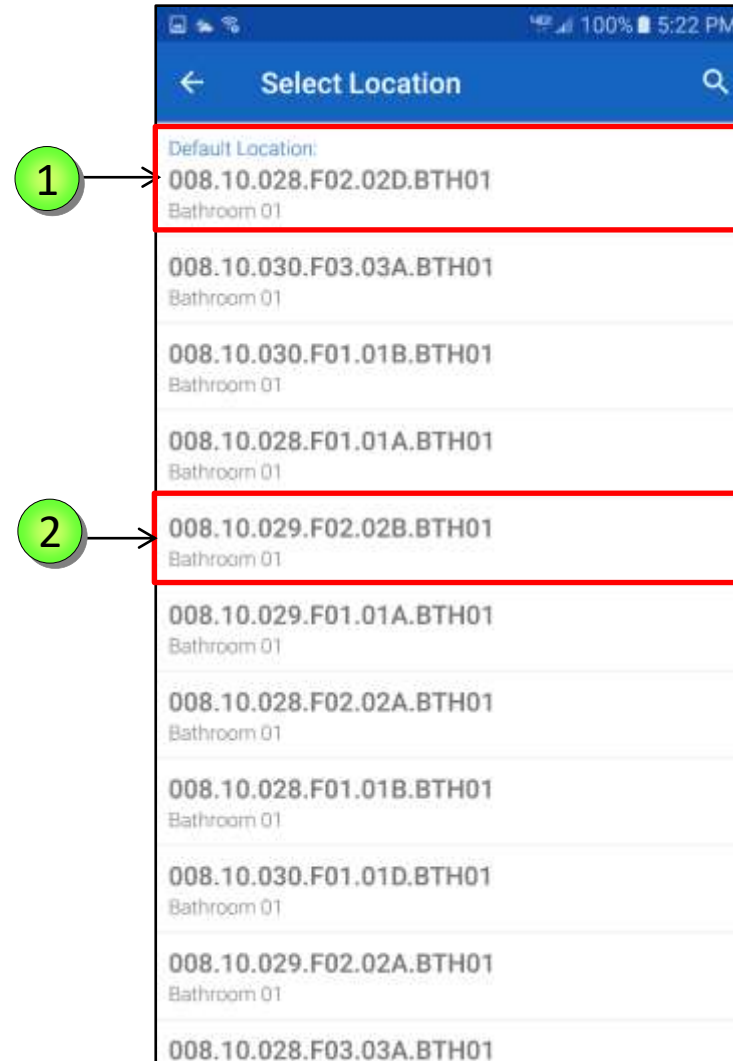
Problem Code
SHOWERHEADML000

Location
Please select...

Notes

Probable Causes And Remediation – (Continued)

- 1 The **Default Location** is where the inspection is happening.
- 2 Search for the other **Location** where it is the suspect of the problem.



Probable Causes And Remediation – (Continued)

The completed **FollowUp Info** screen, with all the fields.

1 Tap **DONE**

Followup Info
Addressing Cause of Mold,...

Failure Class
BATHTUBSHOWER

Problem Code
SHOWERHEADML000

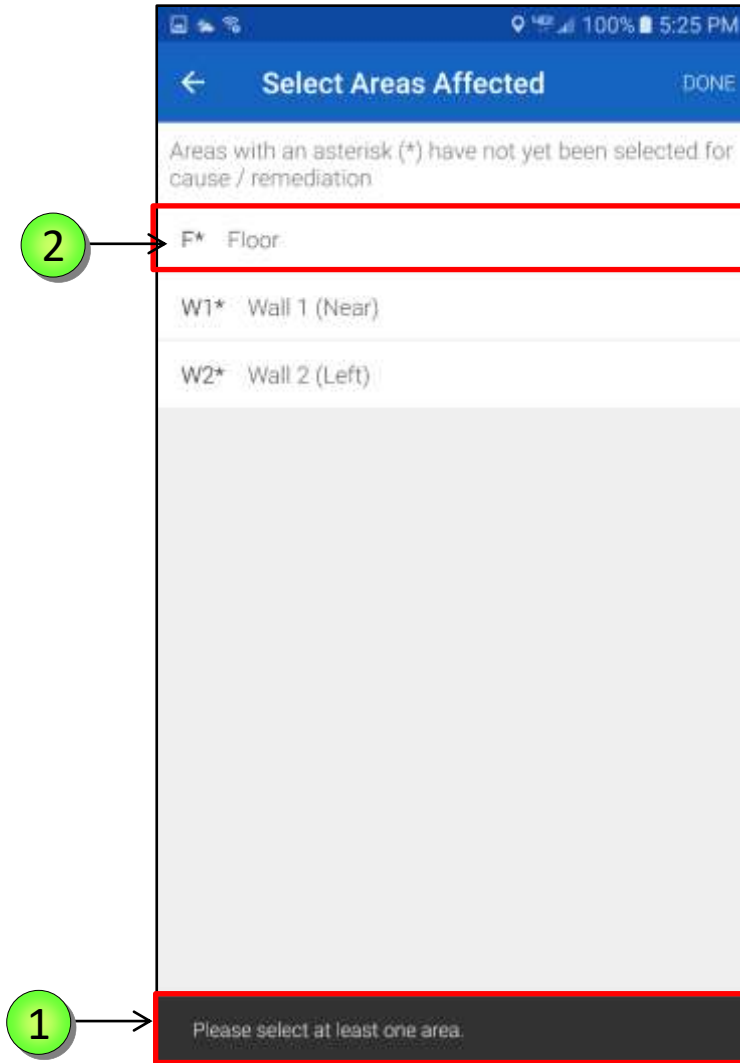
Location
008.10.029.F02.02B.BTH0
1

Notes
plumbing problems

Probable Causes And Remediation – (Continued)

1 Select the **Areas Affected** by the **Wall-Break**, One area at a time.

2 Tap **F* Floor**



Probable Causes And Remediation – (Continued)

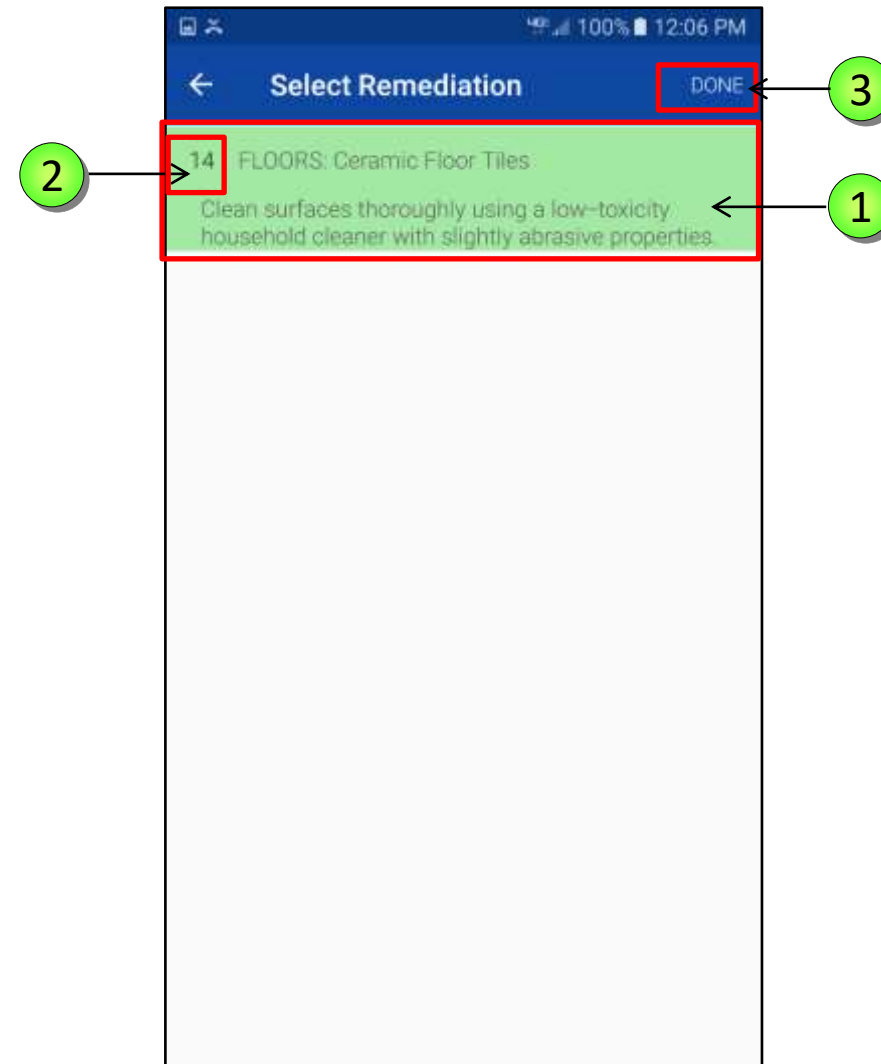
1 Select the **Floor** by tapping on it. Once selected **iWM** will highlight it in **green** color.

2 Tap **DONE**



Probable Causes And Remediation – (Continued)

- 1 The **Select Remediation** screen appears. Select the **Remediation Method** from the displayed list. Tap on **No. 14, Floors** by tapping on it. Once selected **iWM** will highlight in **green** color.
- 2 Notice the **Reference Number** associated with the Remedy as this what will display in the **View Details**.
- 3 Tap **DONE**



Probable Causes And Remediation – (Continued)


1 Tap on **View Details** below the **Bathtub/Shower** field to review information entered.

Probable Causes and Remediation
Bathroom 01

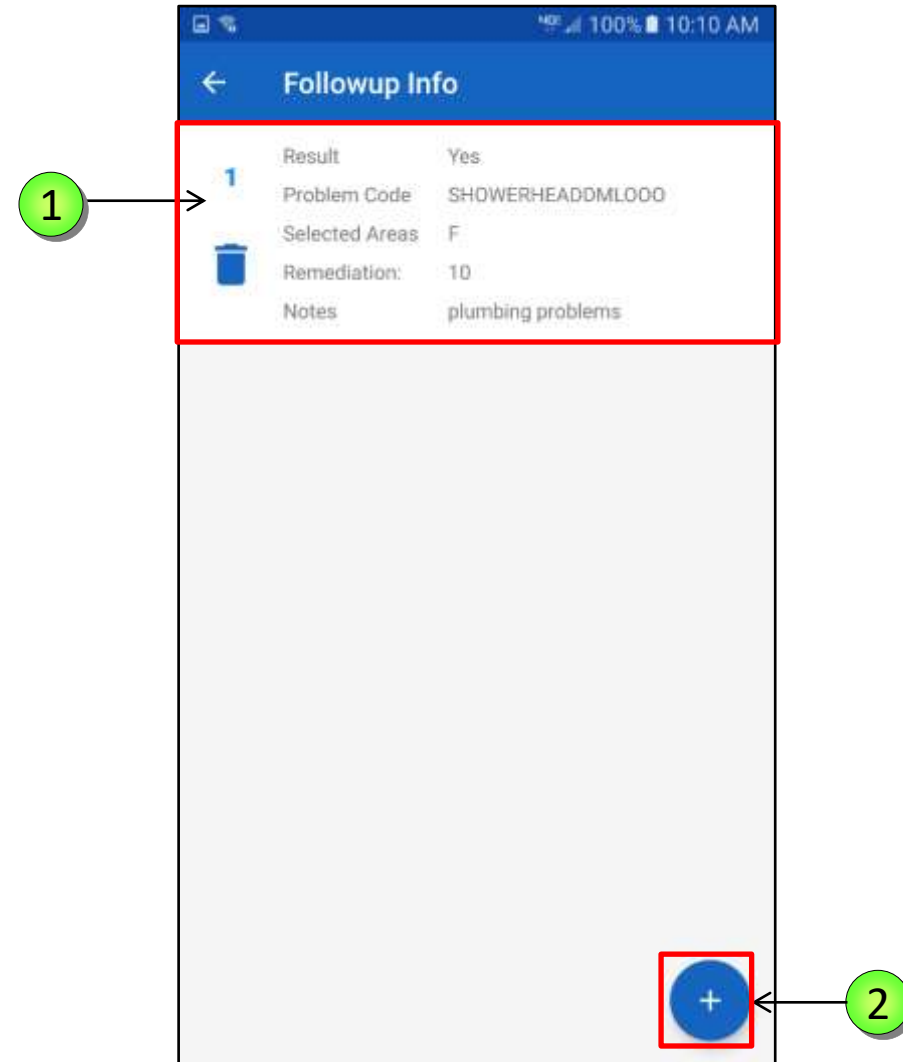
No Probable Cause and Remediation has been selected for the following areas: Wall 1 (Near), Wall 2 (Left). Please select probable cause and remediation for all areas.

* Is Wall-break required?	Yes
Bathtub/Shower	Yes View Details
Caulking	No
Exterior Wall (Winter)	(None)
Façade	(None)
Grouting	(None)
Pipe Insulation	(None)

Probable Causes And Remediation – (Continued)

- 1 Notice the corresponding number is replacing the **Remediation** method that was selected. In this case is number **10**.
- 2 Tap **plus sign** , to add more **Remediation** methods about the same wall.


Then follow the same process as before.




Probable Causes And Remediation – (Continued)

1

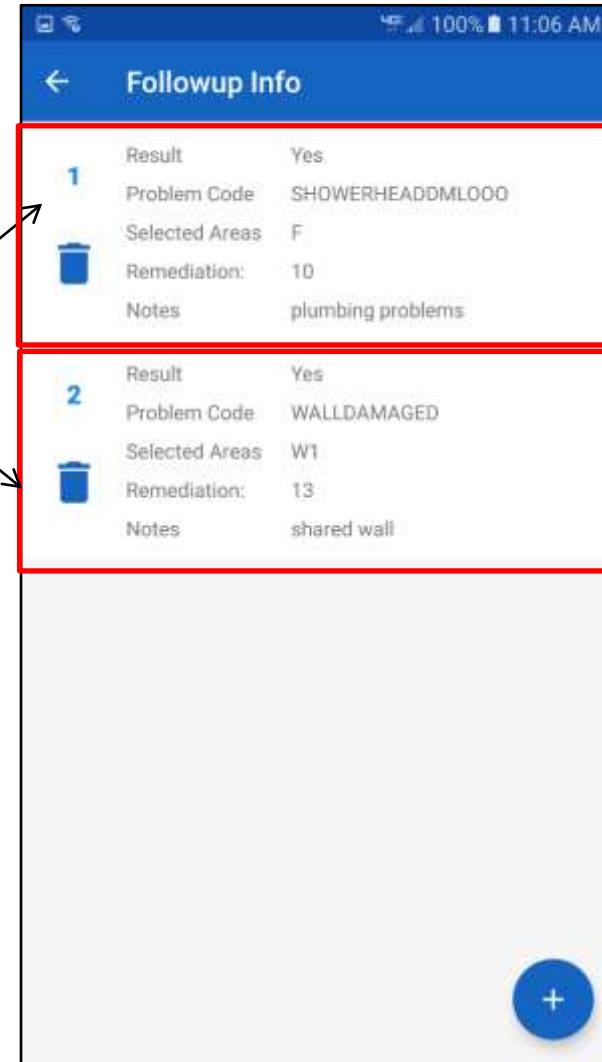
There are two **Remediation** methods for the same issue.

NOTE: to change the answers entered, tap on the **Garbage Pail** icon , to erase the information entered.


Confirm the message in the Pop-up Window, “**Are you sure you want to delete this result?**” tap **Yes**.


Tap the **back arrow**  to return to the **Evaluation of Conditions** screen.

1



Followup Info

1	Result	Yes
	Problem Code	SHOWERHEADMLOOD
	Selected Areas	F
	Remediation:	10
	Notes	plumbing problems

2	Result	Yes
	Problem Code	WALLDAMAGED
	Selected Areas	W1
	Remediation:	13
	Notes	shared wall

Probable Causes And Remediation – (Continued)

Repeat the same process for all the **Areas Affected** selected from the **Evaluation of Conditions**.

1 Complete a **Probable Cause and Remediation** methods for **Wall 1** and **Wall 2** selected in **Task 1**.

100% 3:26 PM

← Probable Causes and... DONE
Bathroom 01

No Probable Cause and Remediation has been selected for the following areas: Wall 1 (Near), Wall 2 (Left). Please select probable cause and remediation for all areas.

* Is Wall-break required? Yes

Bathtub/Shower Yes

View Details >

Caulking No

Exterior Wall (Winter) (None)

Façade (None)

Grouting (None)

Pipe Insulation (None)

Probable Causes And Remediation – (Continued)

Depending on the wall type the **Remediation** methods can vary.

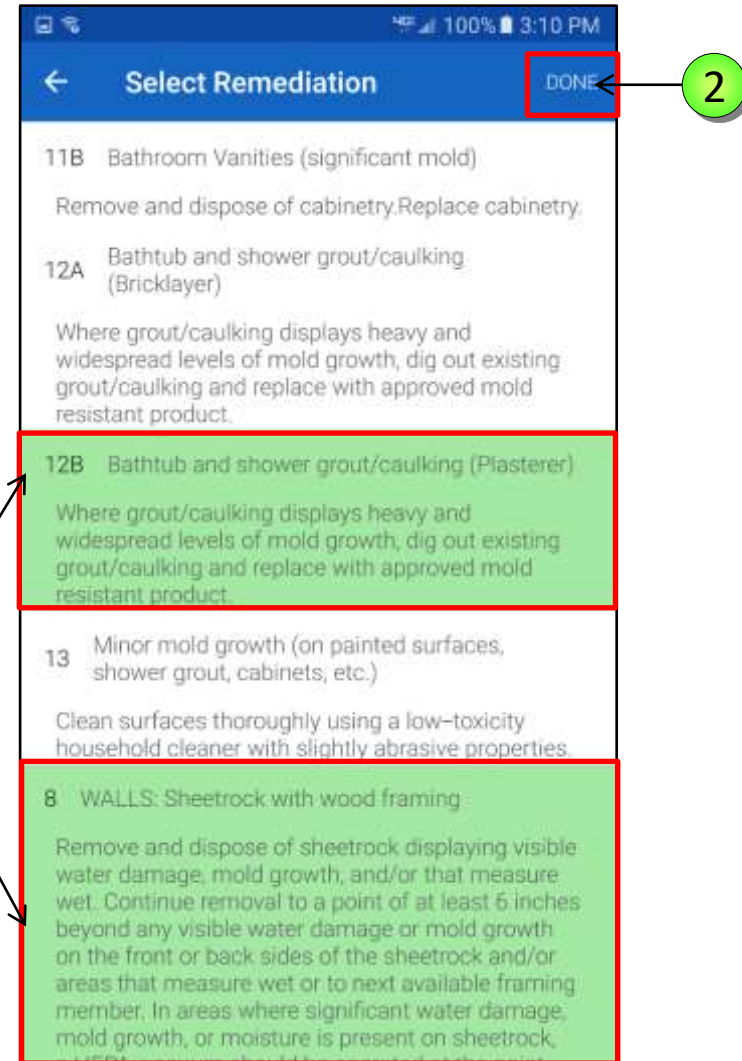
- 1 Choose what's the appropriate remedy by tapping on the different **Remediation** method.




1

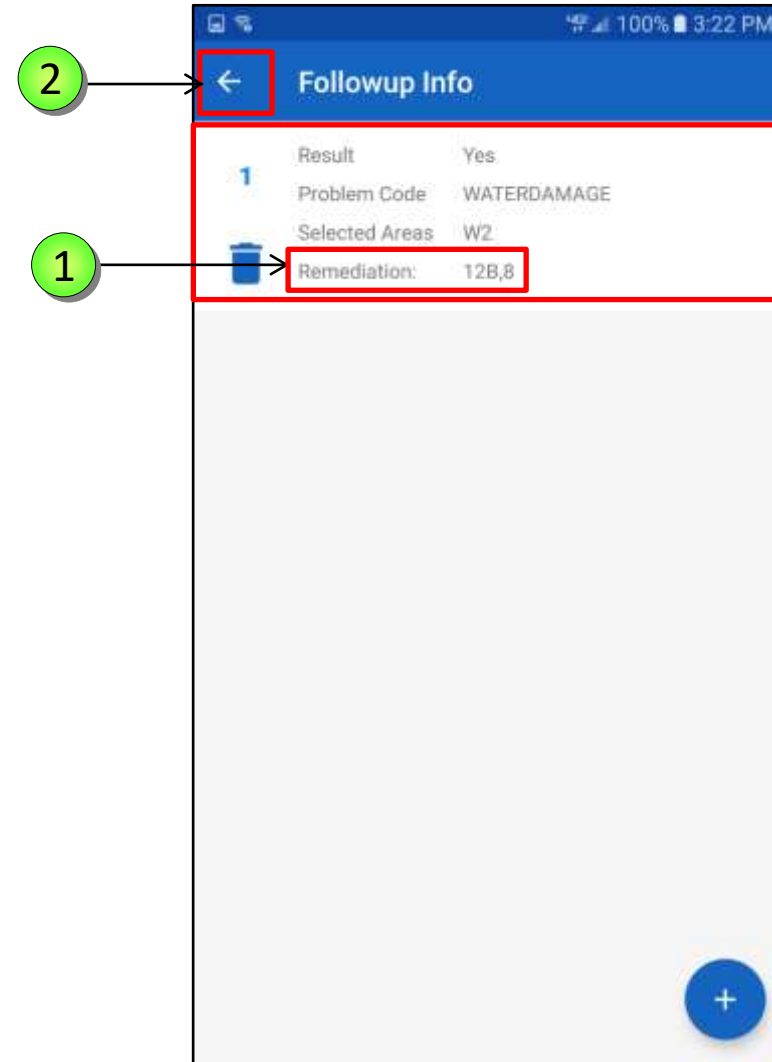
Probable Causes And Remediation – (Continued)

- 1 Tap on 1 or 2 Remediation Method. iWM will highlight them in Green.
 - 2 Tap **DONE**
- The Probable Causes and Remediation screen redisplay.
- Tap on **View Details**



Probable Causes And Remediation – (Continued)

- 1 The **FollowUp Info** screen displays the entered information. Notice the **Reference Numbers**.
- 2 Tap the **back arrow**  to go back to the **Probable Causes and Remediation** screen.



Probable Causes And Remediation – (Continued)

The remainder of the fields of **Probable Causes and Remediation** screen are the same.

Upon tapping on a field, the user **must** select a response, and follow the same process as before.

- 1 Tap **Resident – Cause**, there are different questions based upon whether an action is required by the **Resident**.

Category	Response
Caulking	(None)
Exterior Wall (Winter)	Yes
View Details	>
Façade	(None)
Grouting	(None)
Pipe Insulation	(None)
Leak – above/beside investigate	Yes
View Details	>
Plumbing – In unit	(None)
Resident – Cause	(None)
Roof	(None)
Shower Moisture	(None)
Sink	(None)

Probable Causes And Remediation – (Continued)

The remainder of the fields of **Probable Causes and Remediation** screen are the same.

Upon tapping on a field, the user must select a response, and follow the same process as before.

1 Tap on **NONE** next to the **Resident – Cause** field.

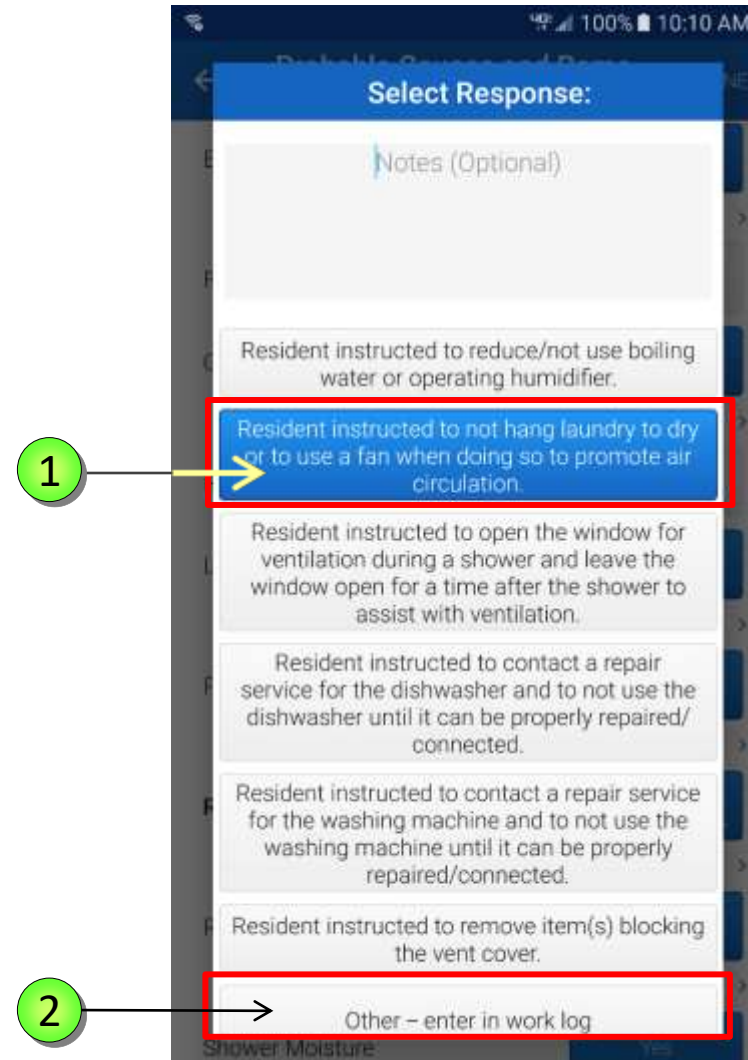
Probable Causes and Reme...
Bathroom 01

Caulking	(None)
Exterior Wall (Winter)	Yes
	View Details >
Façade	(None)
Grouting	(None)
Pipe Insulation	(None)
Leak – above/beside investigate	Yes
	View Details >
Plumbing – In unit	(None)
Resident – Cause	(None)
Roof	(None)
Shower Moisture	(None)
Sink	(None)

Probable Causes And Remediation – (Continued)

- 1 The **Select Response** screen displays all the possible causes that resulted from the Resident's actions.

You can select **One Action** at a time.
- 2 **NOTE:** if the user selected **Other** for the **Resident Cause**, the user must enter notes to explain this.



Probable Causes And Remediation – (Continued)

1 Select the **Floor** by tapping on it. Once selected **iWM** will highlight in **green** color.

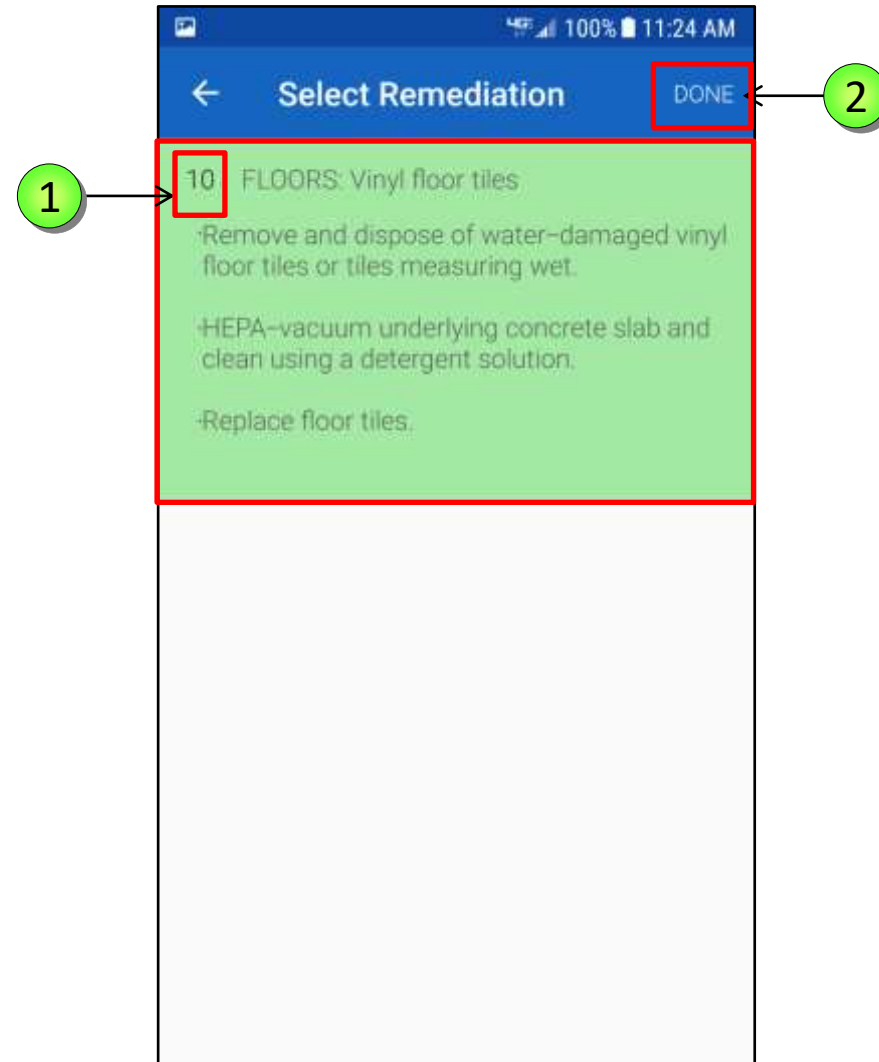
2 Tap **DONE**



Probable Causes And Remediation – (Continued)

1 The **Select Remediation** screen appears. Select the **Remediation Method** from the displayed list. Tap on **No. 10, Floors** by tapping on it. Once selected **iWM** will highlight it in **green color**.

2 Tap **DONE**



Probable Causes And Remediation – (Continued)

1

On the **Probable Causes and Remediation** screen, tap on **View Details** next to the **Resident - Cause**.


NOTE: Maximo Will Not generate any Child Work Orders for any **Resident Cause instructions.**

Cause	Remediation
Caulking	(None)
Exterior Wall (Winter)	Yes
View Details	>
Façade	(None)
Grouting	Yes
View Details	>
Pipe Insulation	(None)
Leak – above/beside investigate	Yes
View Details	>
Plumbing – In unit	Yes
View Details	>
Resident – Cause	Resident instructed to n...
View Details	>
Roof	Yes

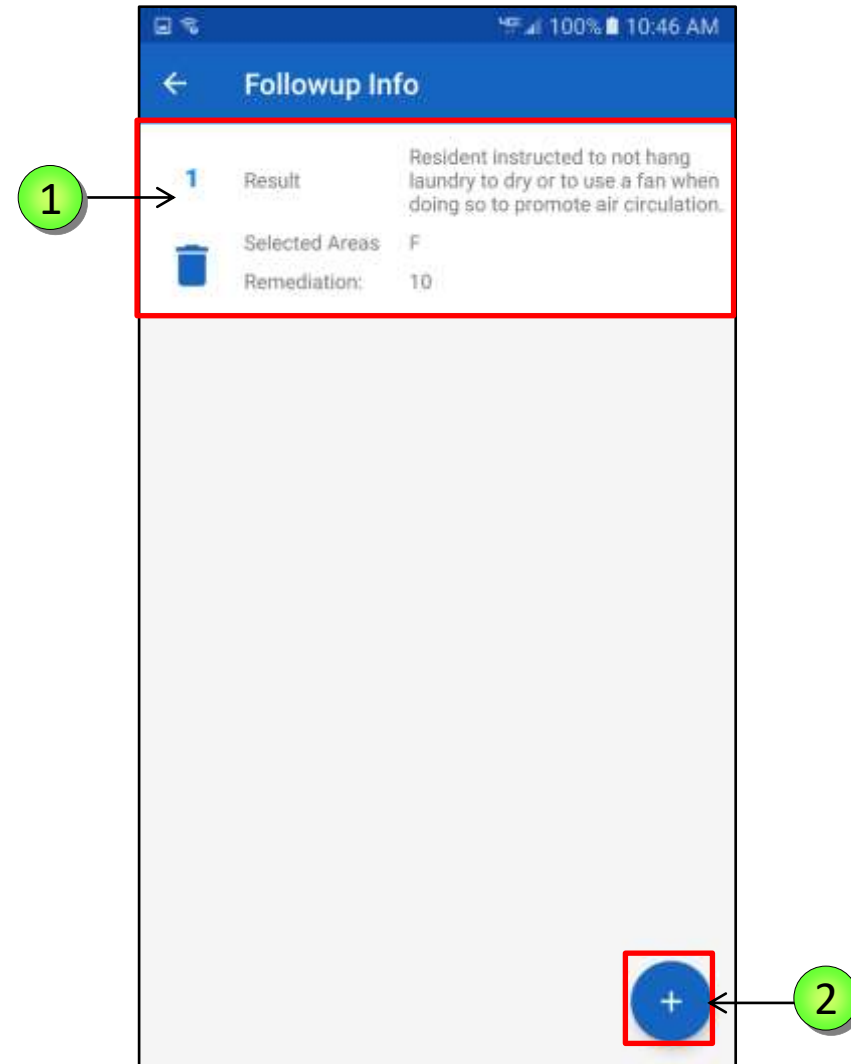
1

Probable Causes And Remediation – (Continued)

1 The **FollowUp Info** screen displays the entered results. You can add more **Resident** instructions from this screen.

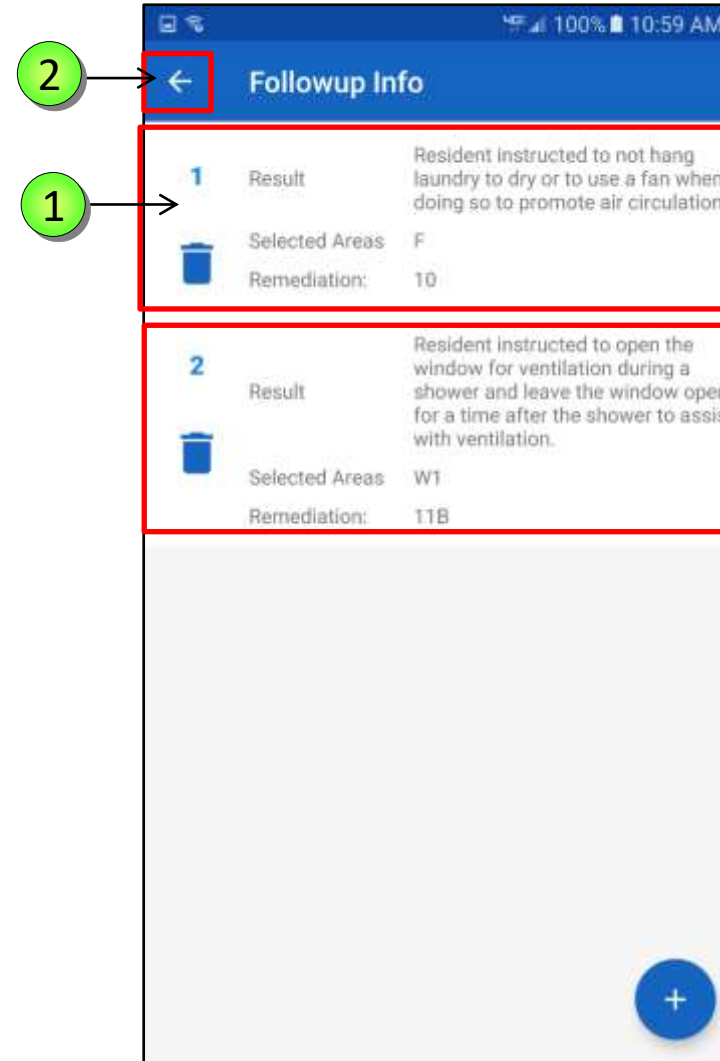
2 Tap the **plus sign**  to add more **Resident's** instructions.

Repeat the process again as before.



Probable Causes And Remediation – (Continued)

- 1 Notice the instructions that were given to the **Resident**.
- 2 Tap the **back arrow** ← to go back to the **Probable Causes and Remediation** screen.



Probable Causes And Remediation – (Continued)

Scroll **down** ↓ and select **Toilet**.

1 Tap **NONE** next to **Toilet**.

Probable Cause	Remediation Status
Caulking	(None)
Exterior Wall (Winter)	Yes
View Details >	
Façade	(None)
Grouting	Yes
View Details >	
Pipe Insulation	(None)
Leak – above/beside investigate	Yes
View Details >	
Plumbing – In unit	Yes
View Details >	
Toilet	(None)
Toilet Bowl/Tank Needs Barrier	(None)
Tub Surround	(None)

Probable Causes And Remediation – (Continued)

The **Select Response** displays tap **YES**.

The **FollowUp Info** screen displays, repeat the same process as before.

1 Tap **DONE** when complete.

Followup Info
Addressing Cause of Mold, Mildew o...

Failure Class
TOILET

Problem Code
BOWLCRACKED

Location
008.10.028.F02.02D.BTH01

Notes
needs a new toilet

DONE



Probable Causes And Remediation – (Continued)

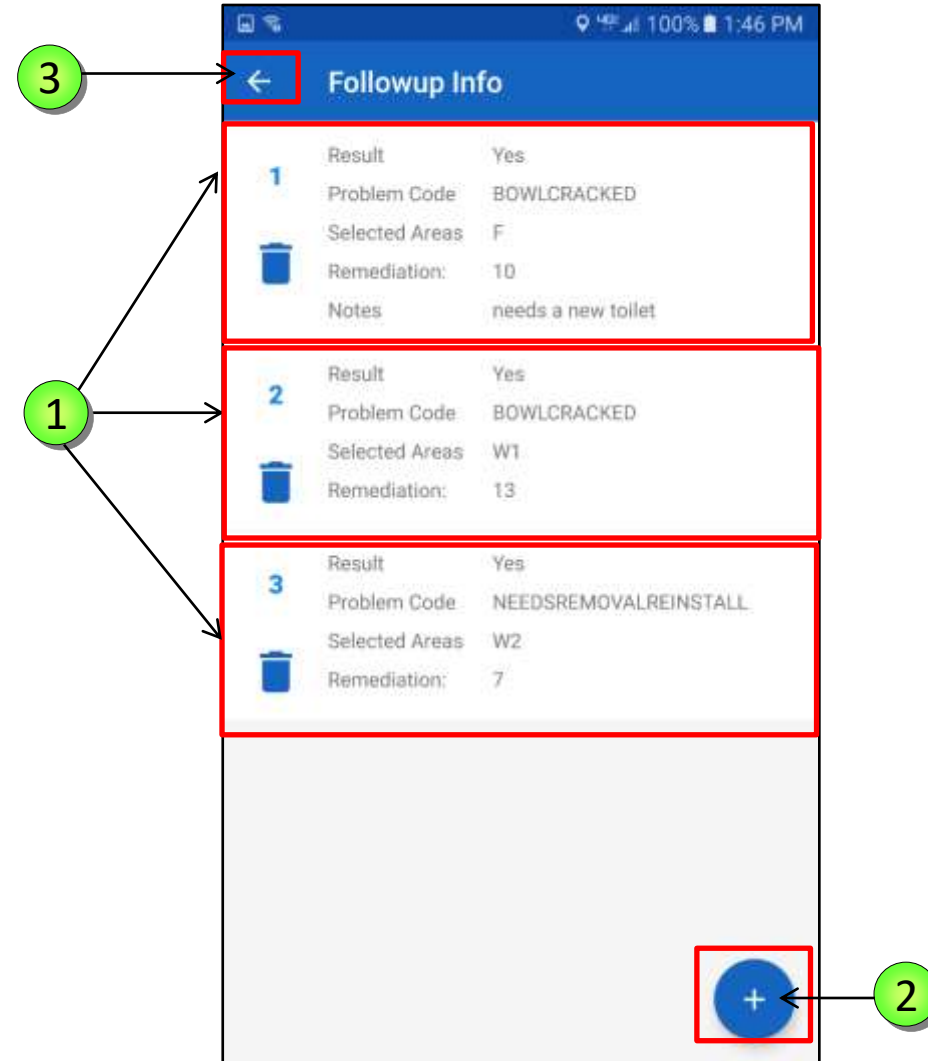
The **Probable Causes and Remediation** screen reappears.

1 Tap **View Details** by the **Toilet**.

Category	Response	Action
Plumbing – In unit	Yes	View Details >
Resident – Cause	Resident instructed to n...	View Details >
Roof	Yes	View Details >
Shower Moisture	Yes	View Details >
Sink	Yes	View Details >
Toilet	Yes	View Details >
Toilet Bowl/Tank Needs Barrier	Yes	View Details >
Tub Surround	(None)	

Probable Causes And Remediation – (Continued)

- The **Probable Causes and Remediation** screen reappears.
- 1 Tap **View Details** by the **Toilet**.
 - 2 Tap **plus sign** , to add more **Remediation** methods about the same wall.
- Then follow the same process as before.
- 3 Tap the **back arrow**  to go back to the **Probable Causes and Remediation** screen.



Probable Causes And Remediation – (Continued)

The **Probable Causes and Remediation** screen reappears.

1 Tap **Toilet Bowl/Tank Needs Barrier**

2 Tap **Tub Surround**

Repeat the same process for every **Affected Area** for **Toilet Bowl/Tank Needs Barrier** and **Tub Surround**, by selecting the **Failure class, Problem Code, Location,** and **Notes** when needed.

Item	Action
Is Wall-break required?	Yes
Bathtub/Shower	Yes
Caulking	(None)
Exterior Wall (Winter)	Yes
Façade	(None)
Grouting	Yes
Pipe Insulation	(None)
Toilet	Yes
Toilet Bowl/Tank Needs Barrier	Yes
Tub Surround	(None)

Probable Causes And Remediation – (Continued)

- 1 Now the **Probable Causes and Remediation** screen are the same.
- Tap **DONE** to save all the information the user entered.

100% 2:56 PM

← Probable Causes and Reme... Bathroom 01 DONE

* Is Wall-break required?	Yes
Bathtub/Shower	Yes
	View Details >
Caulking	(None)
Exterior Wall (Winter)	Yes
	View Details >
Façade	(None)
Grouting	Yes
	View Details >
Pipe Insulation	(None)
Leak – above/beside Investigate	Yes
	View Details >
Plumbing – In unit	Yes
	View Details >

Inspection Status

1 All the **three tasks** now have a Status of **COMPLETE**. The **WO Inspection State** is **COMP/UNSUBMITTED**.

The Supervisor has answered **all the required fields** after performing the inspection.

2 Tap **NEXT**

Complete Work Order
WO #58956270

2 Perform Inspection 3 Materials Optional 4 Ad hoc Optional

Inspecting Location:
008.10.028.F02.02D.BTH01
107-25 159TH STREET

WO Inspection State: COMP / UNSUBMITTED

Evaluation of Conditions Inspect
Bathroom 01
State: COMPLETE


General Evaluation Inspect
Bathroom 01
State: COMPLETE

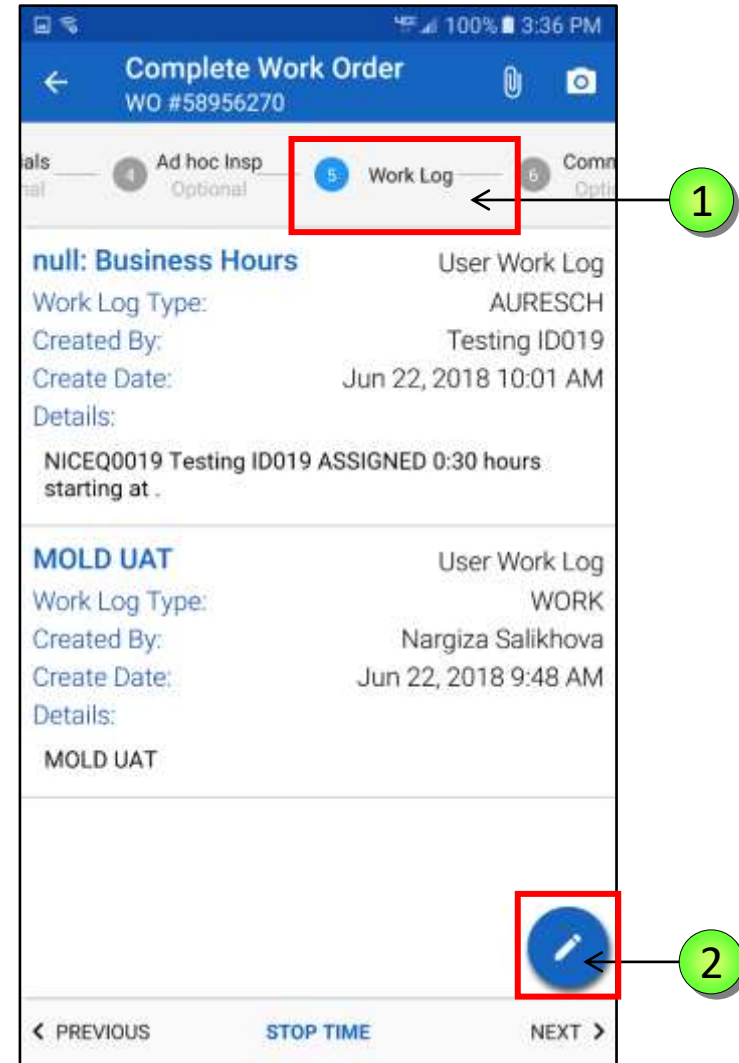
Probable Causes and Remediation Inspect
Bathroom 01
State: COMPLETE

PREVIOUS STOP TIME NEXT

Enter Work Log

1 The **Work Log** entries are displayed.

2 Tap the **pencil icon** to enter a summary of your work. 



Enter Work Log - (Continued)

Enter a **Summary** for the work completed in the **Work Order**.

1 Tap the **Summary** field, the keyboard will display.

1

Summary:

Details:

Log Type: WORK
Work

Created By: Testing ID019

Creation Date: Tue, Jul 3, 2018

Work Order: 58956270

Address: 107-25 159TH STREET

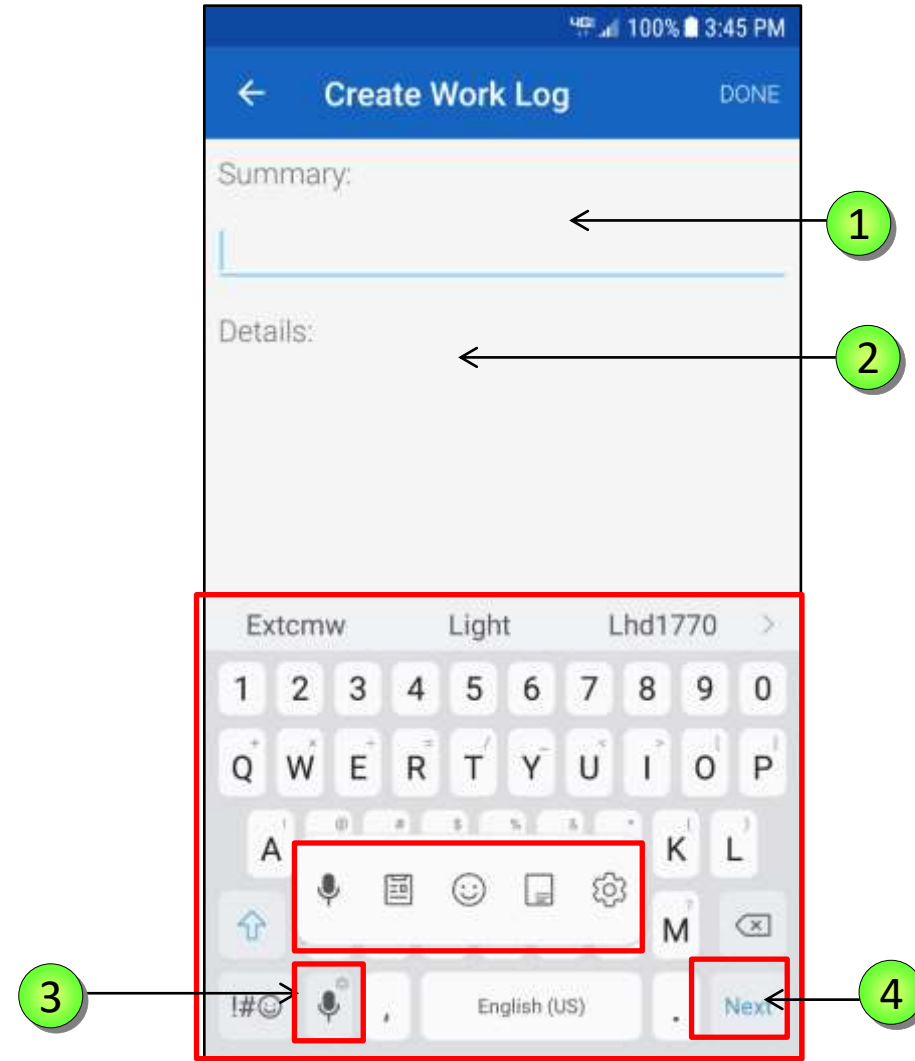
Site ID: QS

Enter Work Log - (Continued)

- 1 Using the keyboard, type a brief **Summary**.
- 2 Tap in the **Details** field notice the system will duplicate what you've typed in the Summary field to save you some typing.
- 3 Tap on the “**microdevice**” by “holding down the little gear ⚙” on the bottom left of the keyboard and select the microphone icon and speak to dictate what will be typed.

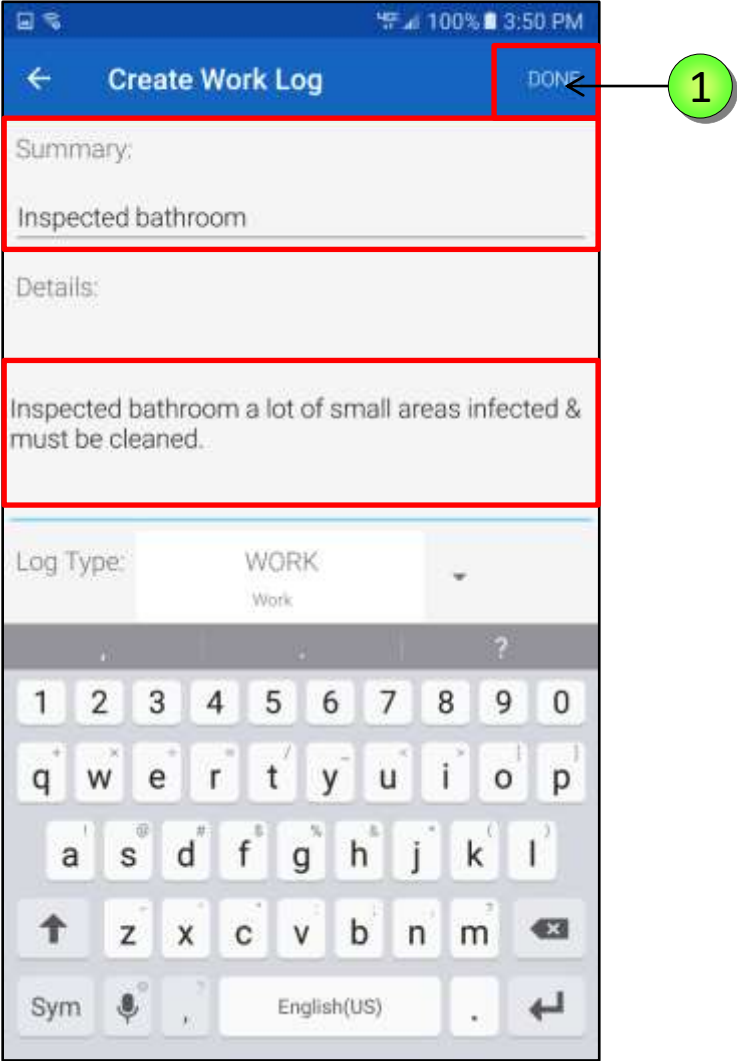
NOTE: Once it is used the system will remember the last time icon used and keep it selected.

- 4 Tap **NEXT**



Enter Work Log - (Continued)

1 When you are done reviewing your **Summary** and the **Details** fields, tap **DONE**.



Enter Work Log - (Continued)

1 Review the entered information. If you need to add information tap the **pencil** icon and repeat the process.

2 **Work Log** is completed, tap **NEXT**.

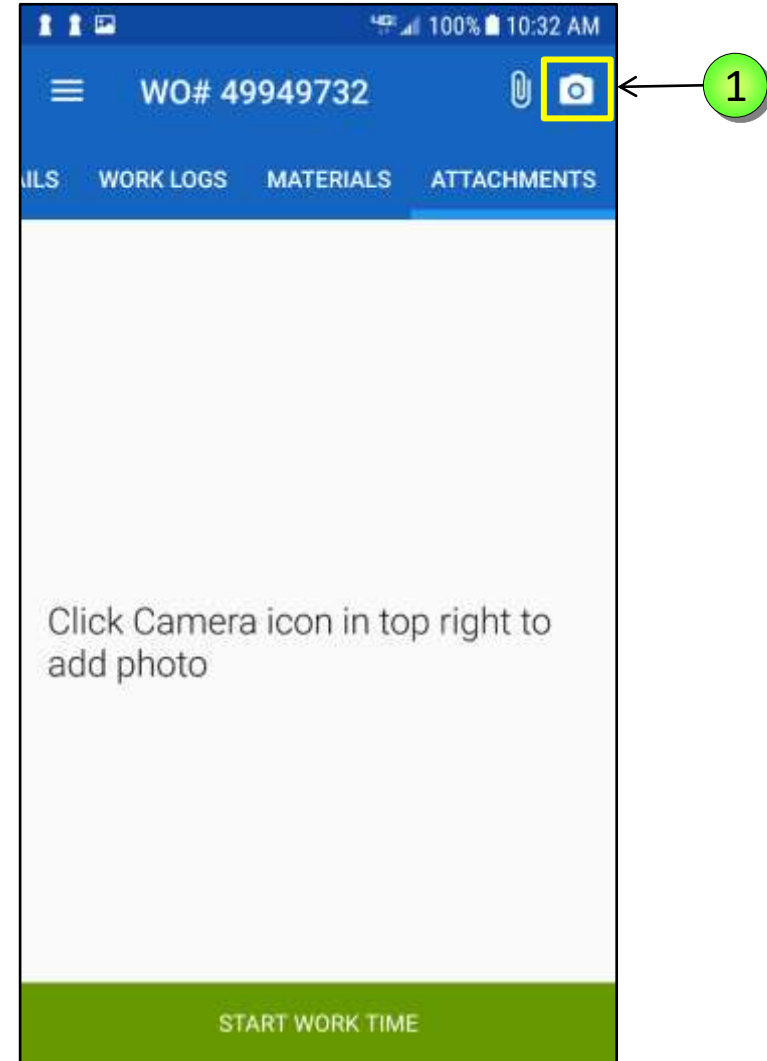
The screenshot shows a mobile application interface for 'Complete Work Order' (WO #58956270). At the top, there are navigation icons and a status bar showing 100% battery and 3:52 PM. Below the title, there are three tabs: 'Ad hoc Insp Optional', 'Work Log', and 'Comm Opti'. The 'Work Log' tab is selected and highlighted with a red box. Below the tabs, there are three work log entries, each with a red box around its details section. The first entry is 'Inspected bathroom' (User Work Log, WORK type, created by Testing ID019 on Jul 3, 2018 3:38 PM). Its details section contains the text 'Inspected bathroom a lot of small areas infected & must be cleaned.' and is pointed to by a callout '1'. The second entry is 'null: Business Hours' (User Work Log, AURESCH type, created by Testing ID019 on Jun 22, 2018 10:01 AM). Its details section contains the text 'NICEQ0019 Testing ID019 ASSIGNED 0:30 hours starting at .'. The third entry is 'MOLD UAT' (User Work Log, WORK type, created by Nargiza Sa on Jun 22, 2018 9:4). At the bottom of the screen, there are three buttons: 'PREVIOUS', 'STOP TIME', and 'NEXT'. The 'NEXT' button is highlighted with a red box and pointed to by a callout '2'.

Taking Photos for Work Orders

NYCHA has made it very easy to add photos to Work Orders. Photos can be taken anytime during the work flow and automatically attached to the Work Order.

NOTE: Photos are required for **Mold and Mildew Work Orders** as evidence for supervisors and courts to evaluate.

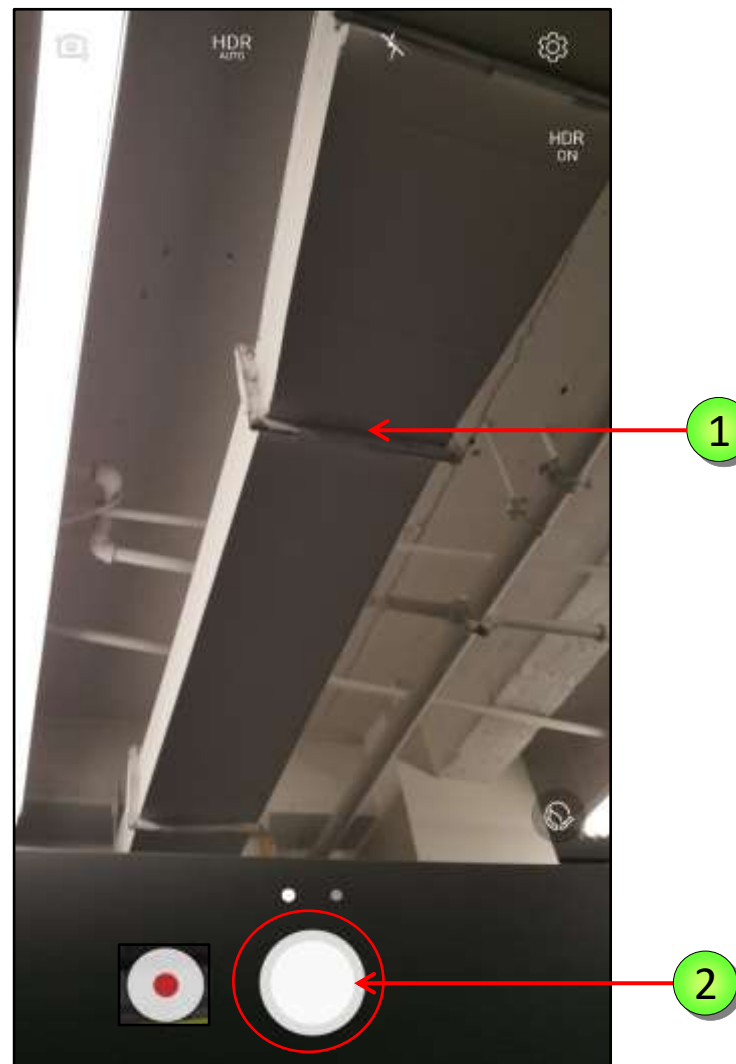
1 Tap on the **Camera icon** in the upper right corner to open the camera.



Taking Photos for Work Orders - (Continued)

- 1 Tap the image on the preview screen to focus the camera.
- 2 Then, tap the **Circle** icon at the bottom of the screen to take the photo.

NOTE: Once you save a picture you can not delete it.

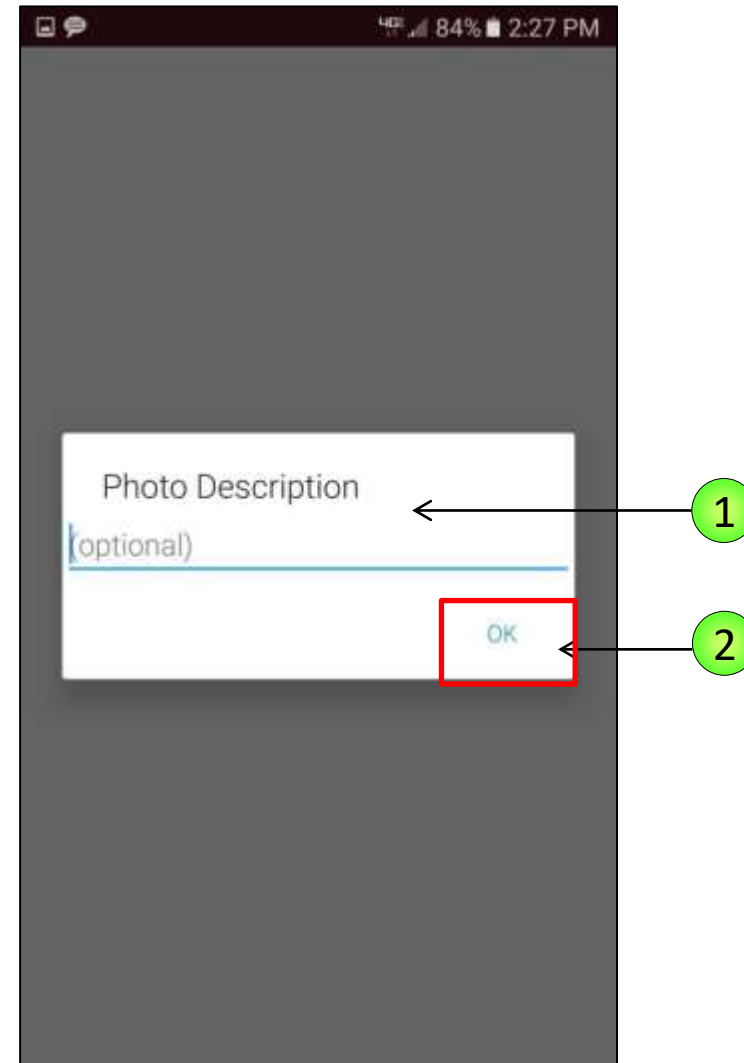


Taking Photos for Work Orders - (Continued)



1 You can then type a **Description** to the photo taken.

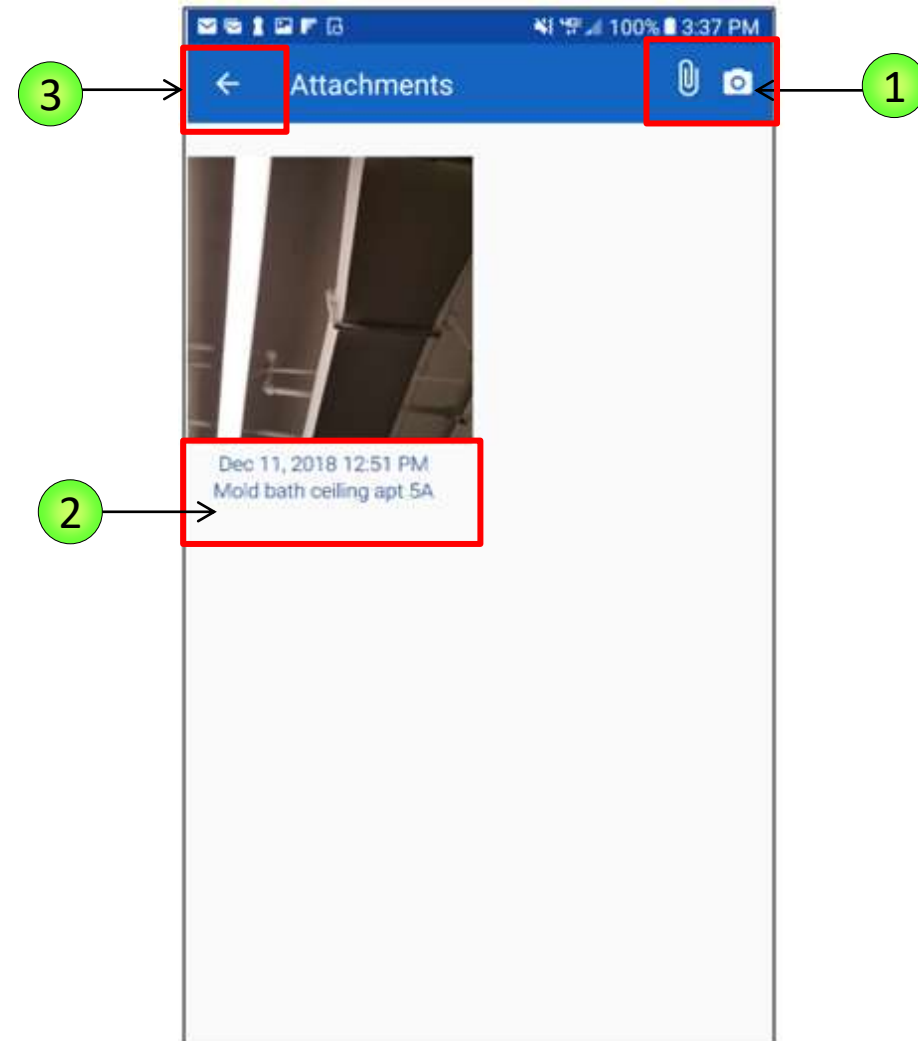
2 Tap **OK**

NOTE: All photos taken are automatically saved and stamped with date and time when taken and appear under the **“Attachments”** page of the work flow for evaluation.



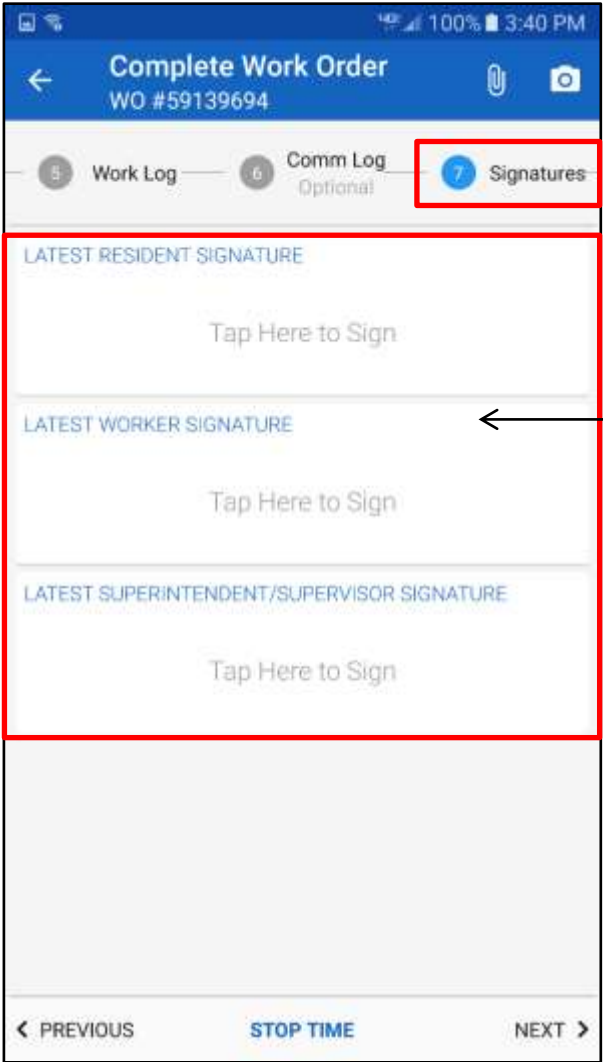
Taking Photos for Work Orders - (Continued)

- 1 Tap the **paper clip**  to see the picture taken.
- 2 All photos taken are automatically saved and stamped with date and time when taken and appear under the **“Attachments”** page of the work flow for evaluation.
- 3 Tap on the **back arrow**  to return to the Work Order.



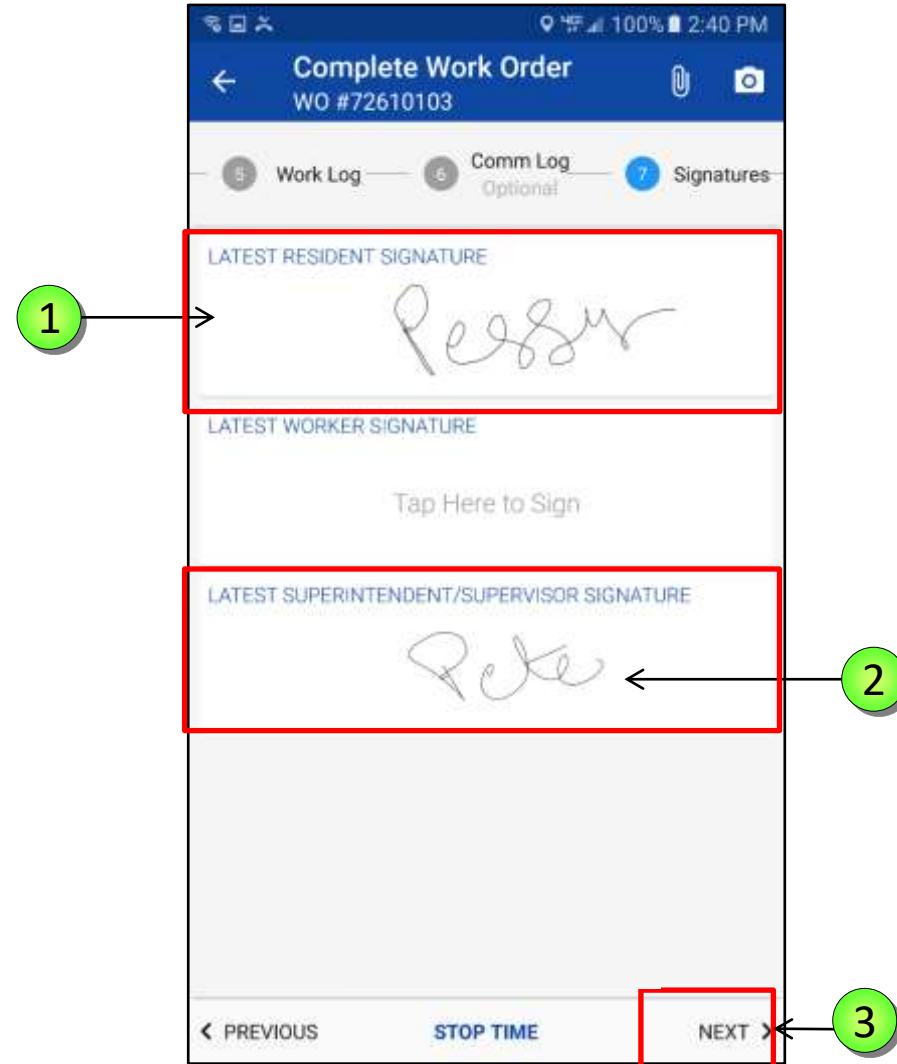
Capture Signatures

1 The **Signatures** screen will display three selections **RESIDENT, WORKER** and **SUPERINTENDENT**.
Worker Signature is Optional.



Capture Signatures – (Continued)

- 1 The **RESIDENT** signs the Work Order.
- 2 The **SUPERVISOR** signature if required.
- 3 Tap **NEXT**



Resident Satisfied?

The resident can fill out additional information.
The next screen asks if the **Resident is Satisfied YES/NO.**

1 The resident can select **YES** or **NO** by tapping on the radio button.

NOTE: This information is optional for the **Resident.**

Once the user answers the question, the **RESIDENT: WORK DATE** screen appears.

The screenshot shows a mobile application interface. At the top, there is a blue header with the text 'Capture Signature'. Below the header, the status bar shows '100%' battery and '11:16 AM'. The main content area has the title 'Resident: Satisfied' in a large, light blue font. Below the title, there are two radio button options: 'Yes' and 'No'. The 'Yes' radio button is selected and is highlighted with a red rectangular box. A green circle containing the number '1' is positioned above the 'Yes' radio button, with a black arrow pointing down to it. At the bottom of the screen, there are two buttons: 'PREVIOUS' on the left and 'NEXT' on the right.

Review Resident Signature

Review the resident **Name**,
Comments, and **Signature**.

1 Tap **FINISH**.

Capture Signature

Review

NAME (None)

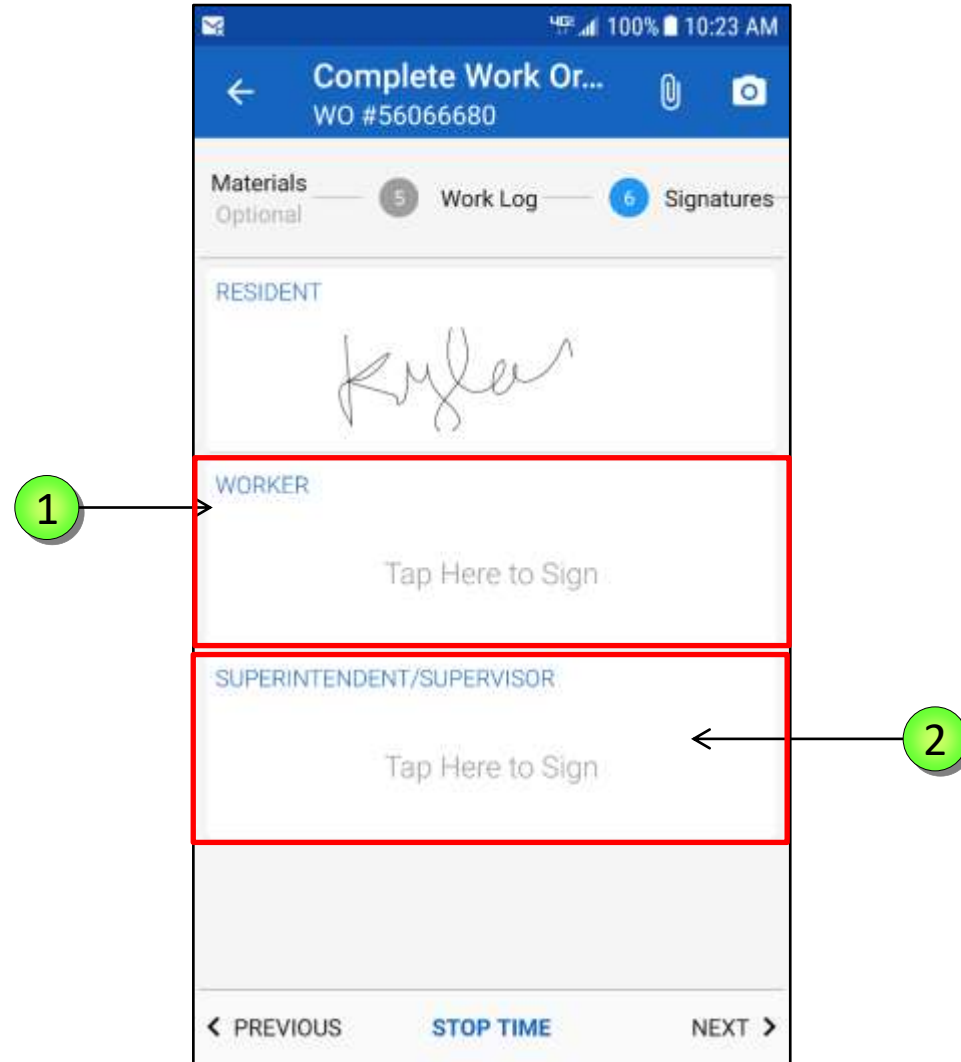
COMMENTS Best Worker Ever

SIGNATURE

PREVIOUS FINISH

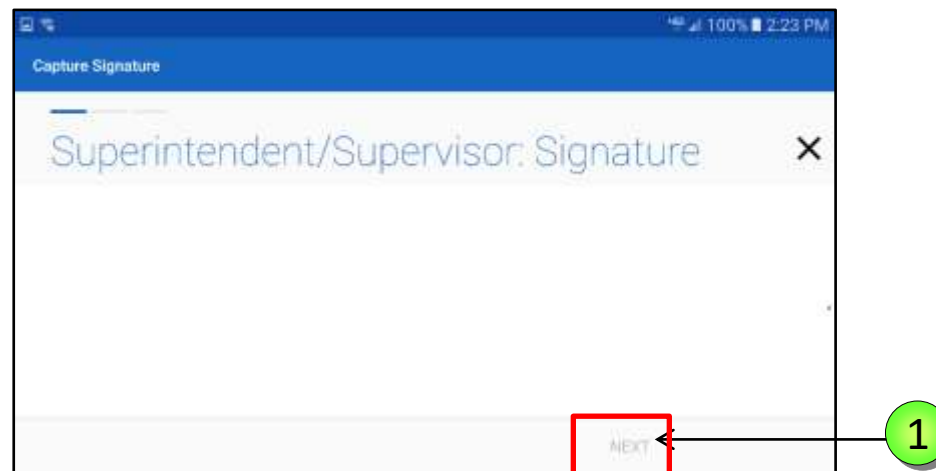
Worker Signature - Optional

- 1 **WORKER** signature is Optional.
- 2 The signature should be added in the same way as the **Resident's Signature**.



Supervisor Signature

- 1 If necessary obtain the **SUPERVISOR'S** signature if required.
- 2 This signature should be added in the **same** way as the **Resident Signature** was added.



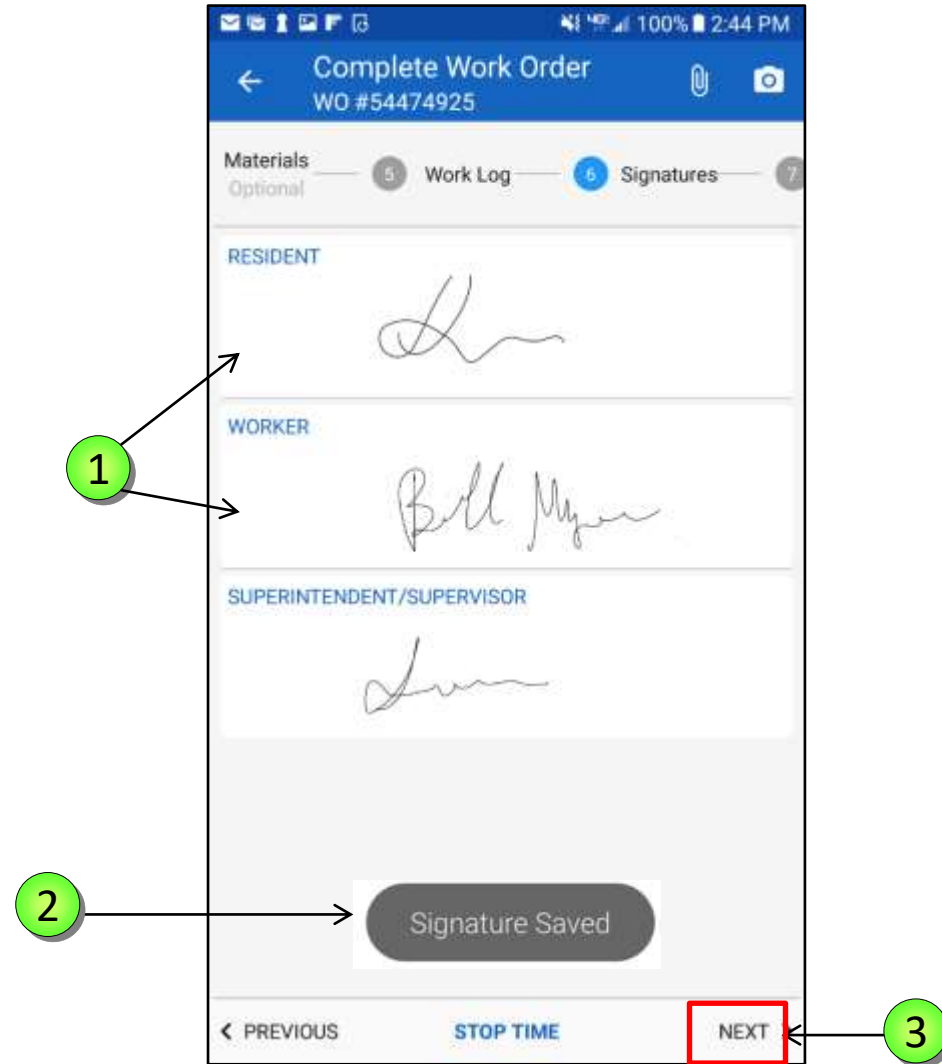
Review Captured Signatures

1 The **Resident and Worker Signatures** are displayed.

2 **NOTE: ALL** Signatures entered are saved.

3 Tap **NEXT**

NOTE: The **Supervisor's Signature** is **mandatory** in a **Mold/Mildew** Work Order in order to **Submit /Close** it.




Labor

- 1 **IN PROGRESS** Labor Record (in green) in the **Labor** tab, indicates the **Labor Timer** is running.
- 2 An **IN PROGRESS** Labor Record cannot be edited.




Additional Labor


This is your **Labor Log**: To add a helper or assistant that started work with you, you **must** add your helper's labor time.


1 Tap the **Plus icon**  .




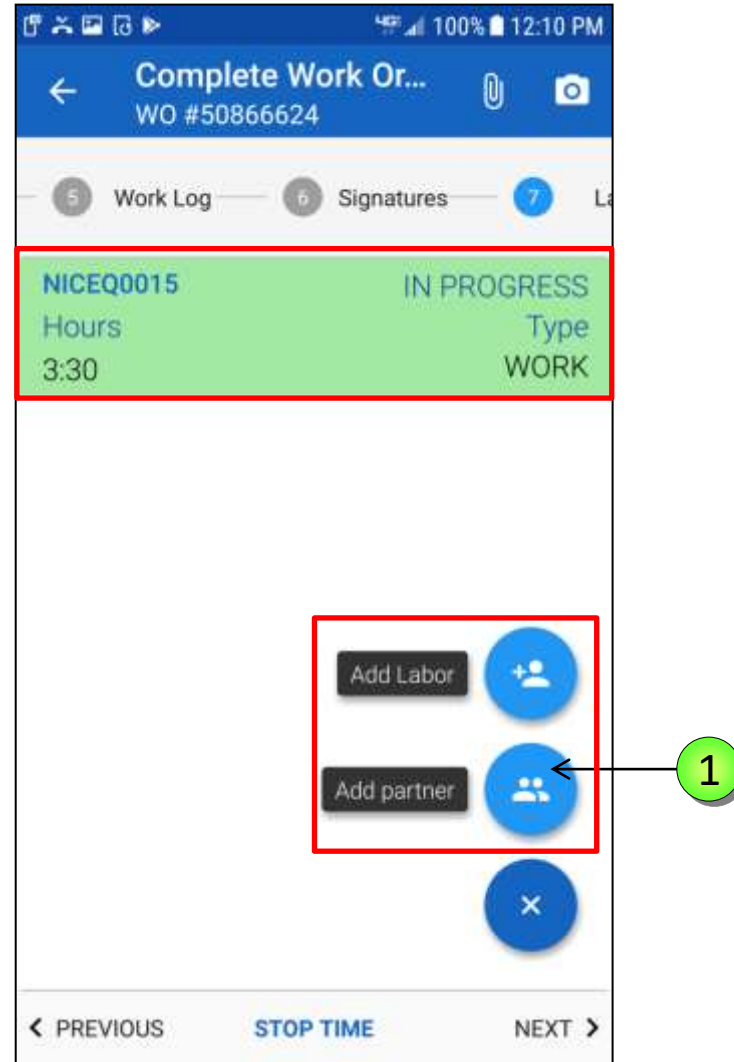
Reviewing and Adding Additional Labor

Add Labor  to add a helper that has a different work time duration.

Add Partner  if you and your helper have identical work time duration.

NOTE: To add a partner you must tap the **Add Partner**  icon while the timer is still running and the record is in green color.

1 Tap **Add Partner** 



Additional Labor - (Continued)

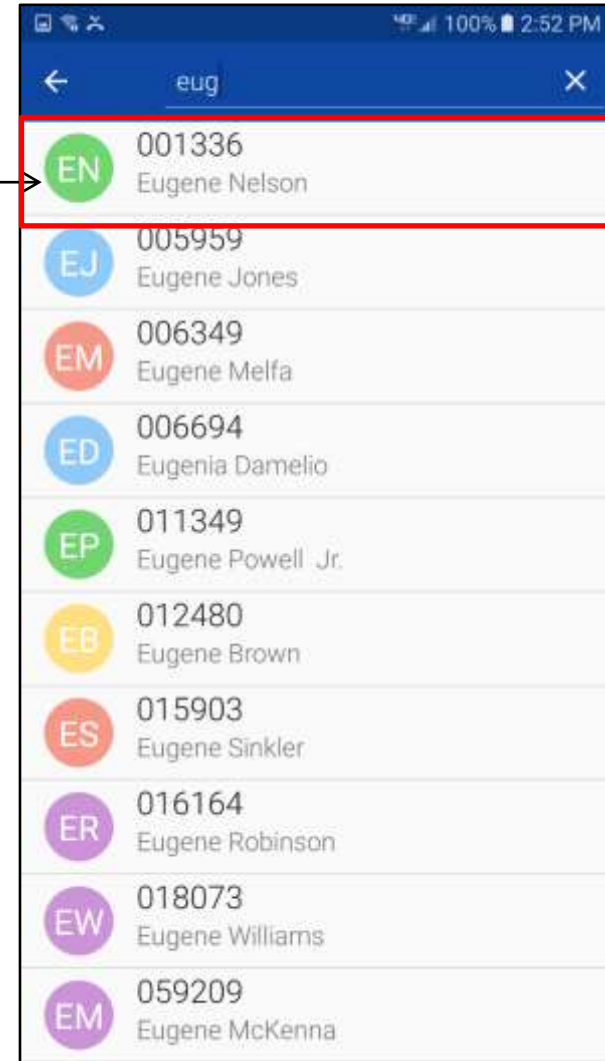
Select the name of an **Additional Laborer** to add as a contributor to this Work Order.

Search for your helper either by typing his badge ID or by first and last name.

1

Tap on the **selected name** to add the laborer name to the Work Order.

1



Additional Labor - (Continued)

- 1 Notice the **Labor** Record for you, and your partner are both colored green, and have an identical time duration.
- 2 To add an additional helper, that has a different work time, and contributed some labor to this Work Order, tap the **Plus icon** and tap **Add Labor**.



Additional Labor - (Continued)

- 1 At the top of screen you will see the **Employee Number** and the **Name**.
- 2 Tap on the **> symbol** to select the Name from the additional Labor screen.

The screenshot shows the 'Enter Time' screen in a mobile application. At the top, there is a blue header with a back arrow, the title 'Enter Time', and a 'DONE' button highlighted with a red box. Below the header, there is a list of labor entries. The first entry is 'Labor' with 'NICEQ0034' and 'Testing ID151' and a right arrow symbol. Below this, there are fields for 'Start Date' (12/11/18), 'Start Time' (3:27 PM), 'End Date', and 'End Time', each with a right arrow symbol. At the bottom, there are fields for 'Type' and 'Hours'. A green circle with the number '1' points to the right arrow symbol next to the 'Labor' field. Another green circle with the number '2' points to the 'DONE' button.

Additional Labor

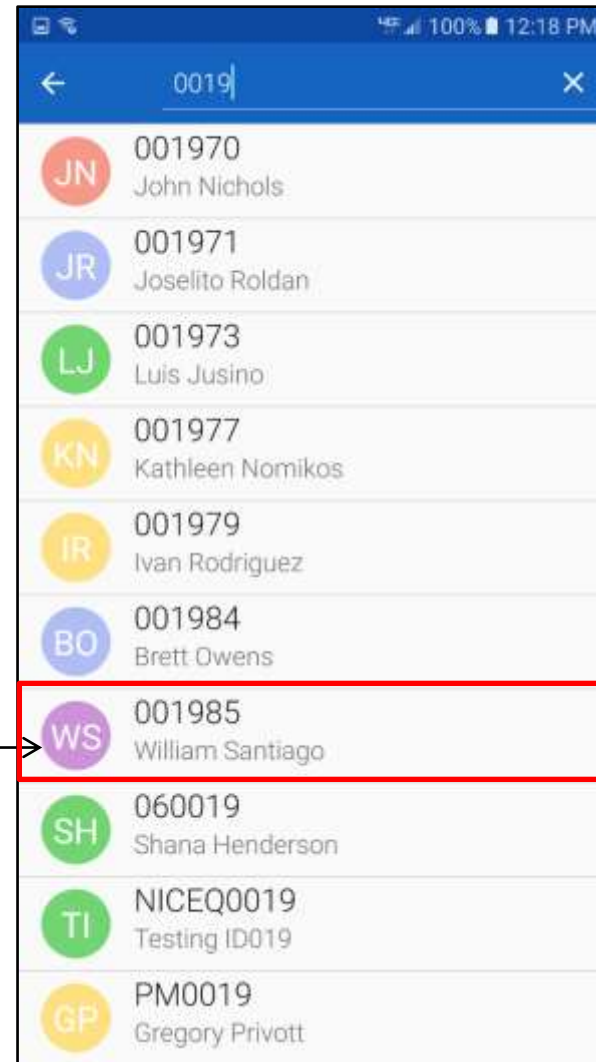
1

Select the name of the **Additional Laborer** to add as a contributor to this Work Order.

Search for your helper, either by typing your helper's badge ID, or by first and last name.

Tap on the **selected name**, to add the laborer name to the Work Order.

1



Additional Labor - (Continued)

Tap **End Date and End Time** and adjust them accordingly to when the work ended for the additional Laborer.

1 Tap on the **Type** field to select the **Labor Type**.

The screenshot shows a mobile application interface titled "Enter Time". At the top, there is a blue header with a back arrow, the title "Enter Time", and a "DONE" button. Below the header, the following information is displayed:

- Labor: 001985 William Santiago
- Start Date: 12/11/18
- Start Time: 2:00 PM
- End Date: 12/11/18
- End Time: 3:00 PM
- Type: [Dropdown menu]
- Hours: 1:00

A red rectangular box highlights the "Start Date", "Start Time", "End Date", and "End Time" fields. A second red rectangular box highlights the "Type" dropdown menu. A green circle with the number "1" and an arrow points to the "Type" dropdown menu.

Additional Labor - (Continued)

The **Type** field window selection appears, select the appropriate **Labor Type**.

For **all** Work Orders, the Labor record **Type** is required to match the primary laborer's type of labor performed, i.e., **INSPECTION**, or **UNSAFE CONDITION**.

1 Tap **INSPECTION**

The screenshot shows a mobile application interface for entering time. The title bar is blue with a back arrow, the text 'Enter Time', and a 'DONE' button. Below the title bar, there are several fields: 'Labor' with the value '001985' and 'William Santiago', 'Start Date' with the value '7/12/18', and 'Hours' with the value '0:38'. A dropdown menu is open, showing a list of labor types. A red box highlights the dropdown menu, and a green circle with the number '1' points to the 'INSPECTION' option. The status bar at the top shows 100% battery and 12:26 PM.

Labor Type	Description
INSPECTION	Inspection
RESNOTHOME	Resident Not Home
NOBLDGACCESS	No Building Access
NOADULT	No Adult
UNSAFECOND	Unsafe Condition
RESREFUSED	Resident Refused
NOFLRACCESS	No Floor Access
NORMACCESS	No Room Access

Additional Labor - (Continued)

The **Edit Labor Time** screen reappears, review the **Start Time** and **Date**, **End Date** and **Time**, and **Labor Type**.

1 Tap **DONE**

100% 3:43 PM

← Enter Time DONE

Labor
001985 William Santiago >

Start Date
12/11/18 >

Start Time
2:00 PM >

End Date
12/11/18 >

End Time
3:00 PM >

Type
INSPECTION ▾

Hours
1:00

Submit The Inspection Work Order

1

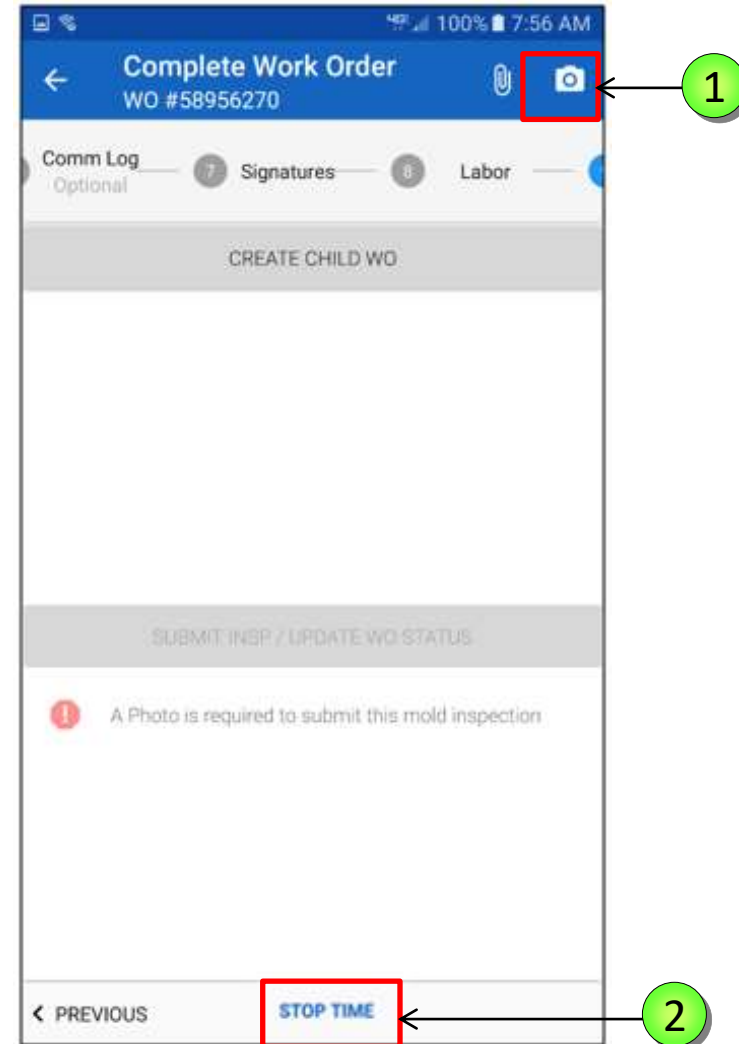
You must resolve any errors with the WO before continuing on. Errors will be preceded with an **Orange color Exclamation Mark**.

Tap on **Exclamation Mark** next to each error, read the screen and correct the errors.

NOTE: a photo is required for all Mold Inspection Work Order.

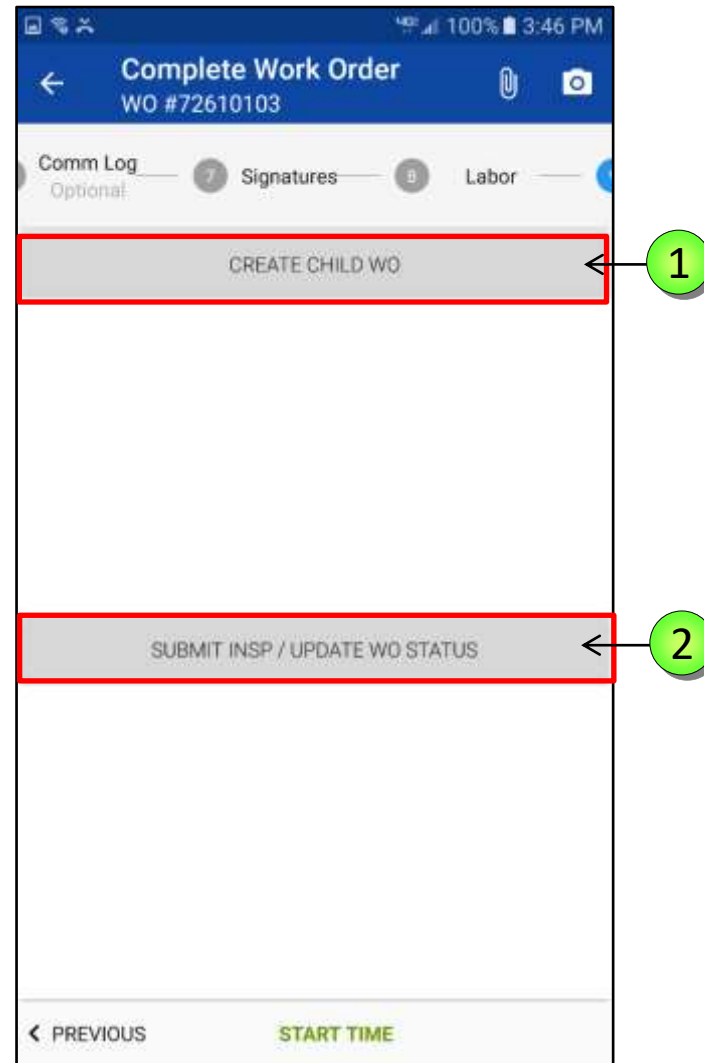
2

Tap Stop Timer



Submit The Inspection Work Order – (Continued)

- 1 If you want to a **Create Child WO** for an issue other than **MOLD**, tap on **CREATE CHILD WO** gray bar.
- 2 When all the errors are corrected, you can click the **SUBMIT INSP/ UPDATE WO STATUS** gray bar.



Practical Exercises

- Initial Inspection #1

Practical Exercises

- Initial Inspection #2

NYCHA MOLD TRAINING

EEA

**ENVIRONMENTAL
EDUCATION ASSOCIATES**

Working to make our communities healthy

Quality Assurance



Quality Assurance Inspections

- Maximo automatically generates a quality assurance inspection work order twenty-five (25) days after the last child work order is closed for all apartments where a mold, water damage, or moisture (i.e. a wet measurement) condition was identified during the inspection.
- The target start date is automatically populated as 30 days after the last child work order closed and the target end date is populated as 45 days after the last child work order closed.
- Once the quality assurance inspection work order is generated, property management staff contacts the resident and schedules the quality assurance inspection to take place between 30-45 days after the last child work order is closed. See Section VIII.A.3 for the process to schedule appointments.

Quality Assurance Inspections – Note!

- For quality assurance purposes, whenever possible the inspector conducting the quality assurance inspection should be different than the inspector who performed the initial inspection.
- Quality assurance inspections are performed using the handheld device. If a handheld device is not operating during the quality assurance inspection, the inspector must record the results on a paper quality assurance inspection work order and enter the results into Maximo immediately following the quality assurance inspection.

Quality Assurance Inspections

Prior to visiting the apartment on the day of the quality assurance inspection appointment, the inspector:

- 1) Checks the mold inspection tool kit, to ensure that the following instruments are in working order: anemometer, hygrometer, and moisture meter. Brings all the tools on the quality assurance inspection in case a full new initial inspection is needed.
- 2) Assigns a caretaker and maintenance worker to accompany them on the quality assurance inspection or be on call in case there is follow up work or a full new initial inspection is required. The maintenance worker must bring a borescope and tools appropriate for making wall-breaks.
- 3) Must make a courtesy call to the resident via the handheld device on the way to the quality assurance inspection to remind them of the appointment. If the resident does not answer the call, the inspector must still go to the apartment at the scheduled time.

Quality Assurance Inspections

Inspecting for Mold, Water Damage, and Moisture

The Inspector:

- Visually inspects for mold any wall, floor, ceiling, or component identified in the initial inspection as having mold and records the results in the handheld device.
- Visually inspects for water damage any wall, floor, ceiling, or component identified in the initial inspection as having water damage and records the results in the handheld device.
- Uses the moisture meter to measure for subsurface moisture any, wall, floor, ceiling, or component that measured wet during the initial inspection and records the results in the handheld device.

Quality Assurance Inspections

If mold, water damage, or moisture (i.e. a wet measurement) is found during the quality assurance inspection:

- The inspector immediately stops the quality assurance inspection and completes and closes the quality assurance inspection work order.
- Maximo automatically generates a new parent mold work order.
- The inspector immediately conducts a full inspection following the steps in Section VIII.B.3-5.

Quality Assurance Inspections

Inspecting for Mold, Water Damage, and Moisture: (Cont.)

- If no mold, water damage, or moisture (i.e. a wet measurement) is found, the inspector continues with the quality assurance inspection.

Quality Assurance Inspections

If an air flow measurement was taken during the initial inspection:

- The inspector uses an anemometer to take an air flow measurement in cubic feet per minute (CFM) of the kitchen or bathroom exhaust vent.

Quality Assurance Inspection – Note!

The user must ensure the anemometer is properly calibrated by:

- Entering the correct size of the exhaust duct (i.e. the height and width in inches);
- Ensuring that the Free Air Percentage is set to 15%.

See Appendix C for instructions on how to use the anemometer. Users must follow the manufacturer's instructions when using inspection tools.

Quality Assurance Inspections

Confirms that all work (i.e. child work orders) to remediate mold and correct root causes and related conditions was satisfactorily completed.

The inspector:

- Reviews the work actuals of the child work orders using the handheld device.
- Visually inspects all completed work in the apartment related to the child work orders.

Quality Assurance Inspections

If all work was satisfactorily completed:

- The inspector completes the quality assurance inspection by taking photo(s) of the inspection area free of mold, water damage, and/or moisture and uploading the photo(s) into Maximo.

Quality Assurance Inspections

If any work was not satisfactorily completed:

The inspector:

- Immediately creates a child work order in Maximo.
- Takes and uploads a photograph of the unsatisfactory work into Maximo if the work is visible in the apartment.
- Closes the existing quality assurance inspection work order.
- Follows up with supervisor of the staff person(s) who performed the work to report the unsatisfactory work and ensure the work is completed.

Quality Assurance Inspections – Note!

See Section XII, Non-Compliance, for steps to address work that is not performed to standard.

Quality Assurance Inspections

Quality Assurance Inspection Complete – All Work Satisfactorily Completed

The inspector:

- Reviews the quality assurance inspection findings with the resident.
- Requests that the resident sign the quality assurance inspection work order on the handheld device confirming that mold and any related conditions are not present and that all work was completed satisfactorily.
- Indicates on the handheld device if the resident refuses to sign or is dissatisfied with the work.
- Provides the resident with the name and contact information of the ombudsperson.
- Closes the quality assurance inspection work order.

Quality Assurance Inspections

If additional work is needed, the inspector advises the resident of:

- The next steps to complete the work and the required timeframe for completion of all work.
- The requirement for a new quality assurance inspection once the work is completed.

Practical Exercise

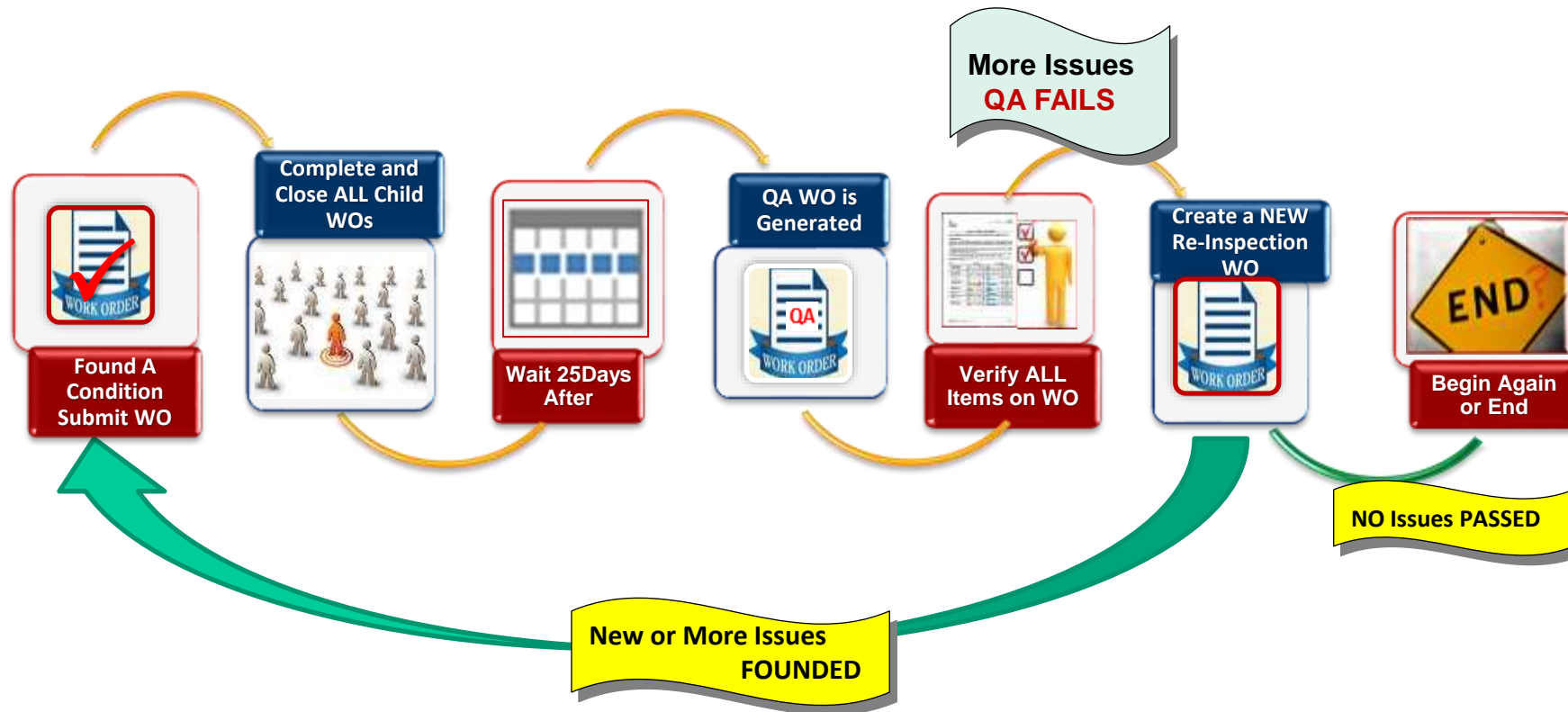
QA & Re-inspection

QA and Re-Inspection Workflow Process



QA and Re-Inspection Work Order Workflow

Mold was Found...

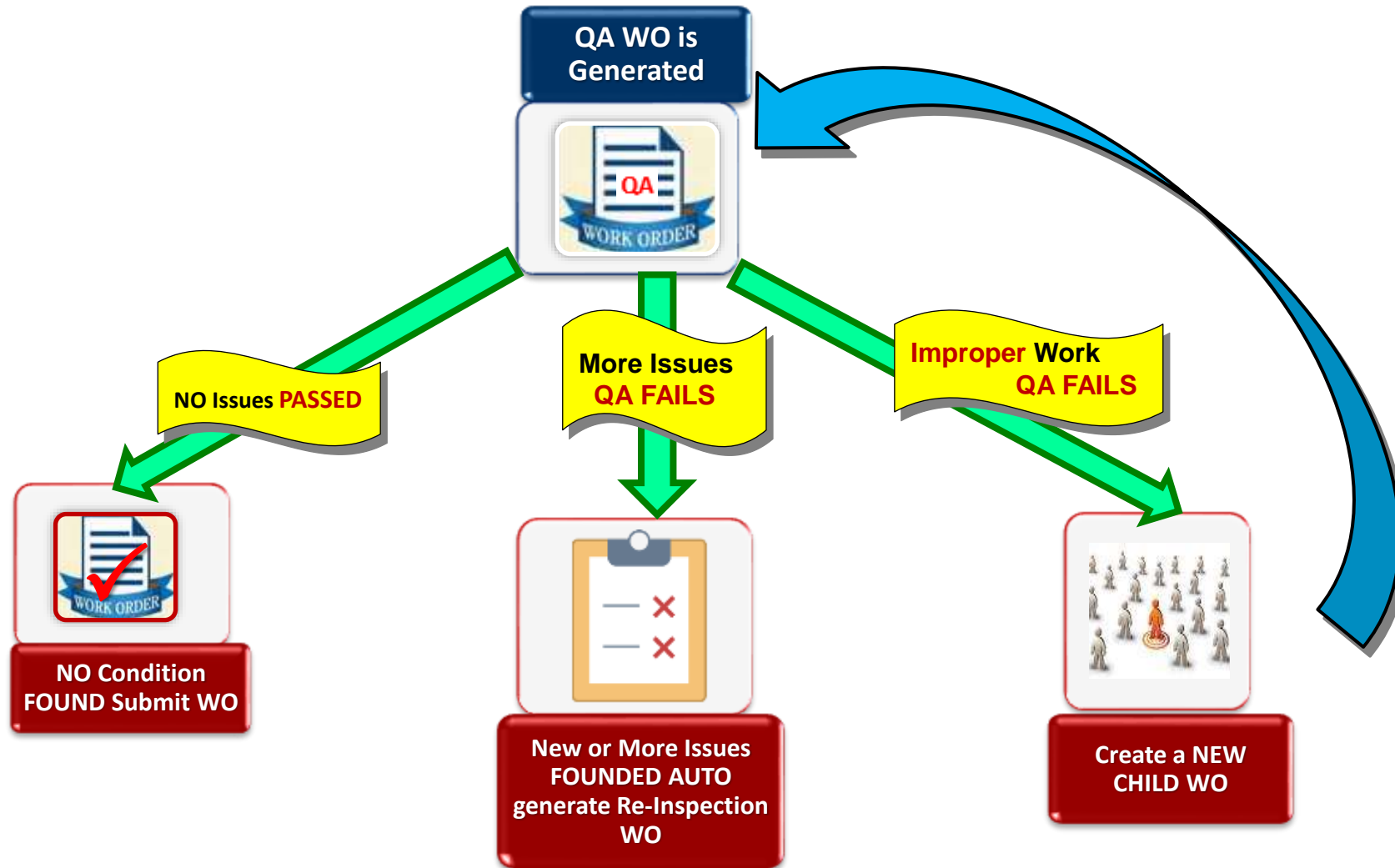


QA: MOLD/MILDEW WO Workflow

NO Mold was Found...



Different Paths for QA ...



Mold Work Orders Process - QA

1

The first **QA Work Order** appears in:

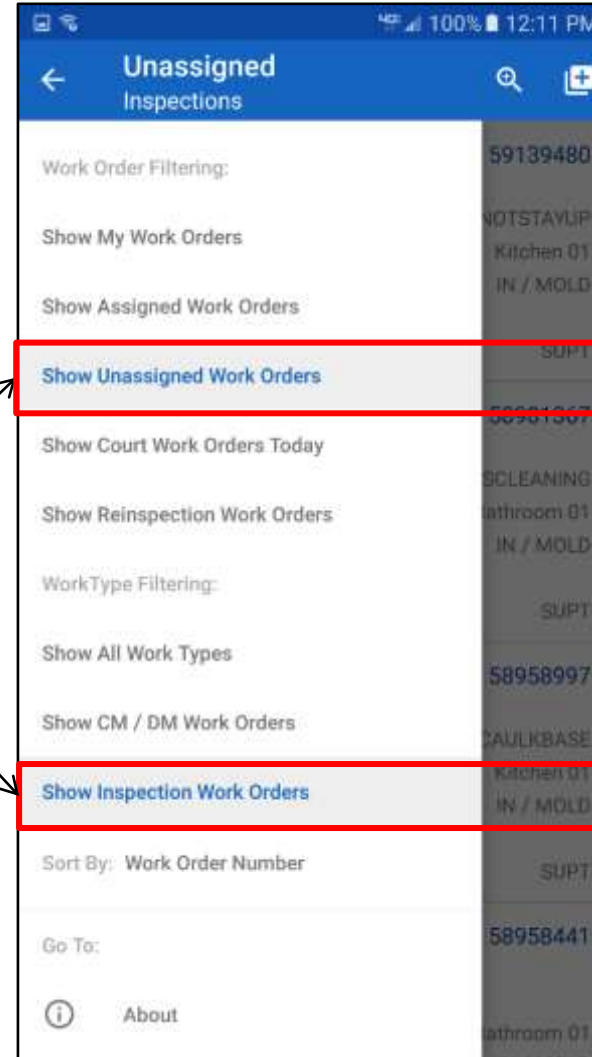
- **Show Unassigned Work Orders**
- **Show Inspection Work Orders**

NOTE: The **QA Work Order** is automatically generated in **Maximo 25-days**, and the new **Target Start Date** will be set to **30 days** after the last Child Work Order is closed (or **25-days** after the mold inspection gets closed if no children are created).

The **Target Finish Date** is set to **15 days** after the **Target Start Date**.

If either **Target Start Date** or **Target Finish Date** fall on a weekend or a holiday, then **next business day**.

1



View QA Work Order Details

The start of the QA Process assumes **Mold Growth, Water Damage** or the **Moisture Measurement** question was answered **YES** in the **Mold Inspection**. If any were **YES**, this means a condition was found, and therefore, a QA Inspection must be done.

If all were **NO**, this means no issue was found on the inspection, and no QA gets generated.

Remember the QA Work Orders are auto-generated **25 days** after the **last** Child Work Order is closed.

1 **Description – Mold QA Inspection**

1

WO# 59139480

DETAILS WORK LOGS COMM LOGS MATERIALS AT

Work Order 59139480 ASSIGN

Description
Mold QA Inspection

Location
008.03.007.F03.03A.KIT01 Kitchen 01

Related Work Orders
There are no related Work Orders

Parent Work Order
None

Assigned To
Nobody

Address
107-04 159TH STREET

START WORK TIME

View QA Work Order Details – (Continued)

The **Work Order Type** and **Job Plan** have changed in **Mold QA** as they appear on the screen.

1

Work Type = IN
Job Plan# = INSMOLDQA
Sub-Work Type = MOLD
Failure Class = MILDEWCONDITION
Problem Code = MILDEWQA

2

Tap **START WORK TIME**

1

Address
107-04 159TH STREET

Work Type	Job Plan#	Sub-Work Type
IN	INSMOLDQA	MOLD

Failure Class	Problem Code
MILDEWCONDITION	MILDEWQA

Craft	Responsible Scheduler
SUPT	MAXIMO

Priority	Status
3	APPR

Scheduled Start
Target Start
Jul 6, 2018 8:00 AM

Owner Group
DEV008

Actual Reported Date
Message Code

START WORK TIME

2

View and Select Labor

After reviewing the **WO Details** the user is now ready to begin the work. **START TIME** is displayed at the bottom of the screen.

1

Select **Inspection**

2

Tap **NEXT**

Complete Work Order
WO #59139480

1 Select Labor Type 2 Perform Inspection 3 Materials Optional

Please select type of labor:

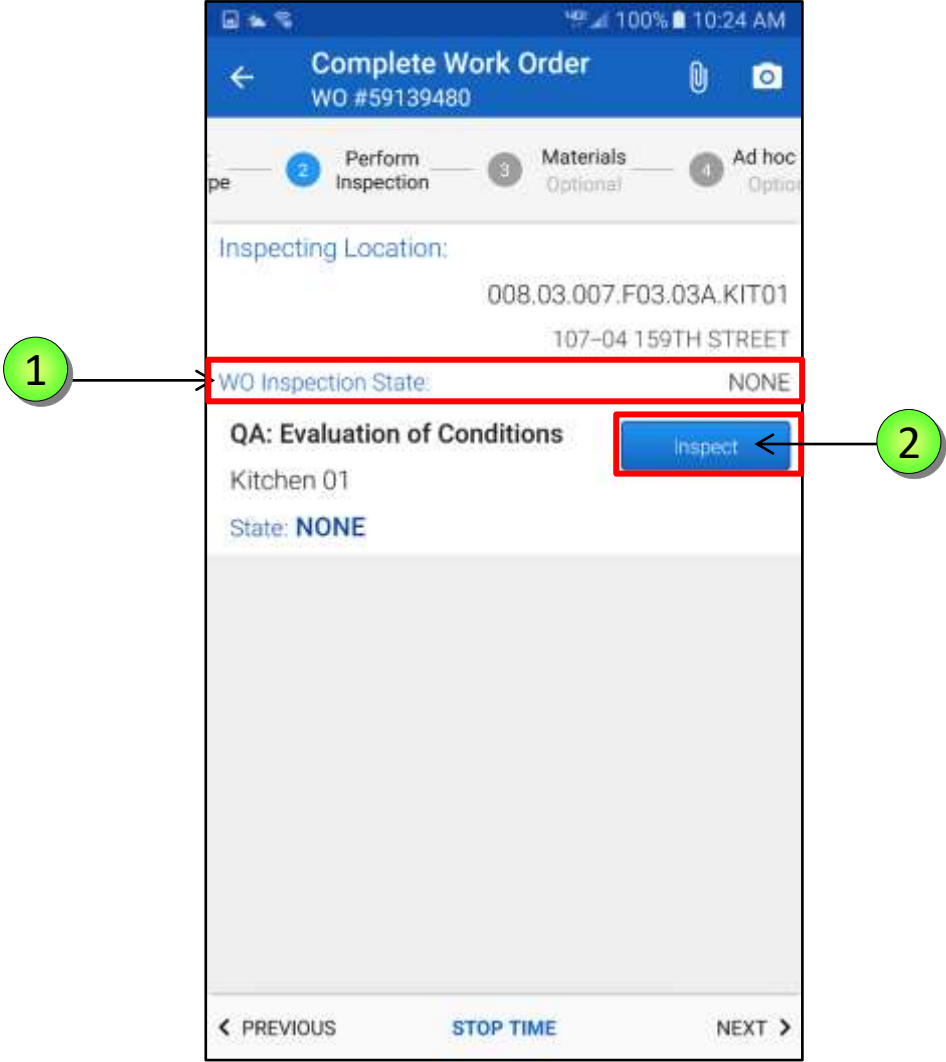
- Inspection (INSPECTION)
- Resident Not Home (RESNOTHOME)
- No Building Access (NOBLDGACCESS)
- No Adult (NOADULT)
- Unsafe Condition (UNSAFECOND)
- Resident Refused (RESREFUSED)
- No Floor Access (NOFLRACCESS)
- No Room Access (NORMACCESS)

PREVIOUS STOP TIME NEXT >

QA: Evaluation of Conditions

QA: Task 1: Evaluation of Conditions

- 1 **WO Inspection State is NONE**
- 2 **Tap INSPECT**



QA: Evaluation of Conditions – (Continued)

If the user answers **YES** to any of these questions, this triggers the process for **Re-inspection** as the **QA has failed**. The remaining questions on the QA do not have to be answered.

Maximo will generate a **Re-inspection Work Order** once user submits their results on the QA.

On the **QA Work Order**, the user shall be asked:

Mold Growth?

Water Damage?

Moisture Measurement \geq 599

The screenshot shows a mobile application interface for 'QA: Evaluation of Conditions' in 'Kitchen 01'. The screen displays three questions with corresponding answer buttons and 'View Details' links:

- Question: * Is there mold growth? Answer: (None)
- Question: * Is there Water Damage? Answer: No
- Question: * Is Moisture Measurement > or equal to 599? Answer: No

QA: Evaluation of Conditions – (Continued)

When a QA is generated, it brings over any of the **NO** answers from the **first 3 questions** from the initial inspection. So the user knows what the previous answers were.

So in this scenario, the question “**Is there Mold Growth?**” The answer was **YES**, and the other 2 answers were **NO**. That’s why the answer to the first question is blank. This way the user can quickly answer the question or address a new issue.

1 Tap **NONE** next to **Is there mold growth?**

1

QA: Evaluation of Conditions
Kitchen 01

1 * Is there mold growth? (None)

* Is there Water Damage? No
View Details >

* Is Moisture Measurement > or equal to 599? No
View Details >

QA: Evaluation of Conditions – (Continued)

1 Answer **NO** for “Is there Mold Growth” question.

If **NO Mold Growth, Water Damage or Moisture Measurement** was found on the QA Work Order, then the remaining questions on the QA **must be answered.**

2 **Maximo** checks if the location of the QA Work Order was a bathroom or kitchen, as this drives logic for **Exhaust Fan** question to show.

The screenshot shows a mobile application interface for "QA: Evaluation of Conditions" in "Kitchen 01". The screen displays a list of questions with corresponding buttons for "No" or "(None)". A red box highlights the first question, "Is there mold growth?", and its "No" button, with a circled "1" pointing to it. A second red box highlights the question "Is there an exhaust fan?" and its "(None)" button, with a circled "2" pointing to it. Other questions visible include "Is there Water Damage?" (No button), "Is Moisture Measurement > or equal to 599?" (No button), and "Are all child work orders from the original inspection completed properly?" (None button). The top of the screen shows a status bar with 100% battery and 12:50 PM.

QA: Evaluation of Conditions – (Continued)

1 Tap **NONE** next to the **Exhaust Fan** question.

QA: Evaluation of Conditions
Kitchen 01

* Is there mold growth? No

* Is there Water Damage? No
View Details >

* Is Moisture Measurement > or equal to 599? No
View Details >

* Is there an exhaust fan? (None)

Are all child work orders from the original inspection completed properly?
(None)

QA: Evaluation of Conditions – (Continued)

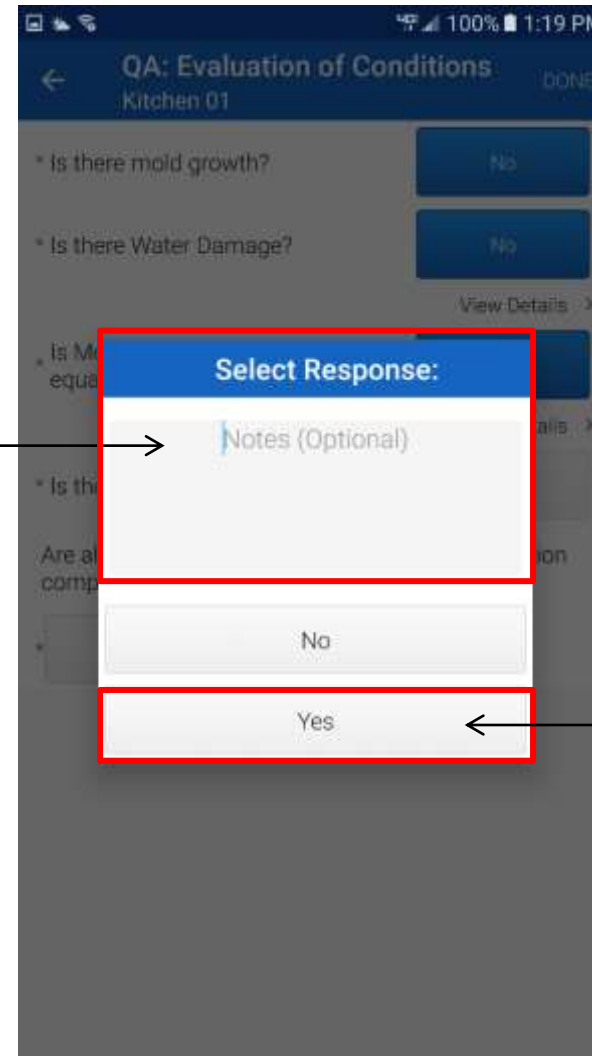
The **Select Response** Window display 3 options:

- **Notes** (optional)
- **No**
- **Yes**

1 In the **Notes** field, the user can input free text information.

2 Tap **YES**

NOTE: if the answer is **YES**, **Maximo** doesn't auto-generate a Work Order for the Roof fan.



QA: Evaluation of Conditions – (Continued)

The Supervisor shall enter the **CFMs (Cubic Feet Measurement)** at the exhaust vent in the appropriate field.

The CFM's measurement is a mandatory field.

- 1 Type **26** on the device keyboard.
- 2 Tap **DONE** on the device keyboard.
- 3 The **Notes** field is optional.

NOTE: If **CFM** is less than (**<25**), **Maximo** will not auto-generate a Work Order to check the roof fan.

- 4 Tap **DONE**

The screenshot shows a mobile application interface titled "Followup Info". At the top right, there is a "DONE" button highlighted with a red box and a callout "4". Below this, there is a text input field containing the number "26", with a callout "1" pointing to it. Underneath the input field is a "Notes" field, with a callout "3" pointing to it. At the bottom of the screen, a numeric keypad is visible, with the "Done" button highlighted by a red box and a callout "2".

QA: Evaluation of Conditions – (Continued)

1

If **NO** Mold Growth, Water Damage or Moisture Measurement was found on the QA Work Order, the user must answer the question verifying if **“All children Work Orders from the original inspection were completed properly.”**

If **YES**, the QA Work Order has passed and the process is complete.

If **NO**, the QA Work Order fails because the children Work Orders were not completed properly.

1

QA: Evaluation of Conditions
Kitchen 01

Is there mold growth? No View Details >

Is there Water Damage? No View Details >

Is Moisture Measurement > or equal to 599? No View Details >

Is there an exhaust fan? Yes View Details >

Are all child work orders from the original inspection completed properly?
(None)

QA: Evaluation of Conditions – (Continued)

1

All Children Work Orders from the original inspection were completed properly:

If the answer is **NO**, the user shall be mandated to create a Child Work Order off the **QA Work Order**.

This is to ensure the remaining underlying issue is fixed. Users can create multiple Children Work Orders.

The Child Work Order(s) are completed by the responsible party. The process returns to step 1 as this triggers a new **QA Work Order** to get generated.

1

QA: Evaluation of Conditions
Kitchen 01

Is there mold growth? No

Is there Water Damage? No
View Details >

Is Moisture Measurement > or equal to 599? No
View Details >

Is there an exhaust fan? Yes
View Details >

Are all child work orders from the original inspection completed properly?
(None)

QA: Evaluation of Conditions – (Continued)

1 The **Select Response** window display, select **NO**.

2 Tap **DONE**

The screenshot shows a mobile application interface titled "QA: Evaluation of Conditions" for "Kitchen 01". The interface displays a list of questions with corresponding response buttons. A red box highlights the "DONE" button in the top right corner, with a green circle containing the number "2" and an arrow pointing to it. Another red box highlights the question "Are all child work orders from the original inspection completed properly?" with a "No" button below it, with a green circle containing the number "1" and an arrow pointing to it. The status bar at the top shows 100% battery and 2:21 PM.

QA: Evaluation of Conditions
Kitchen 01

Is there mold growth? No

Is there Water Damage? No
View Details >

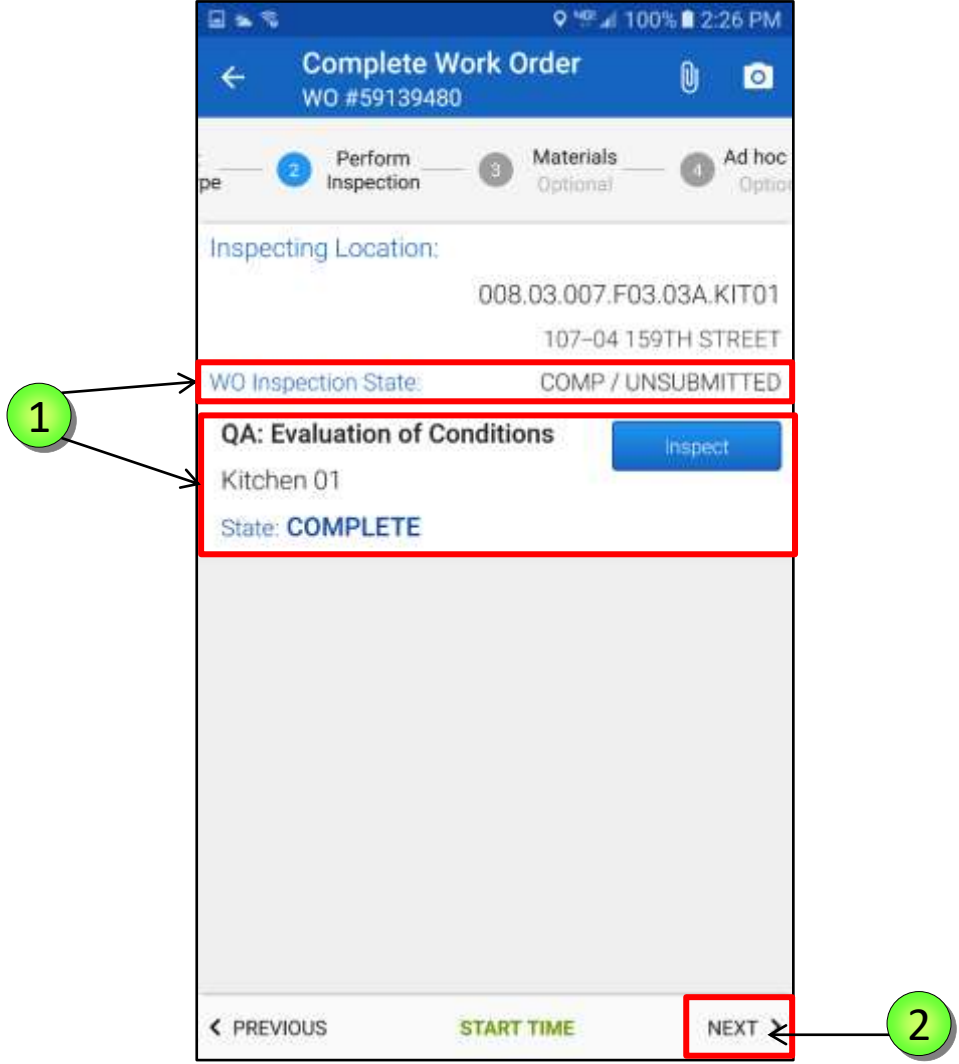
Is Moisture Measurement > or equal to 599? No
View Details >

Is there an exhaust fan? Yes
View Details >

Are all child work orders from the original inspection completed properly?
No

QA: Evaluation of Conditions – (Continued)

- 1 QA: Evaluation of Conditions status is now **COMPLETE**, and **WO Inspection State** is **COMP/UNSUBMITTED**.
- 2 Tap **NEXT**



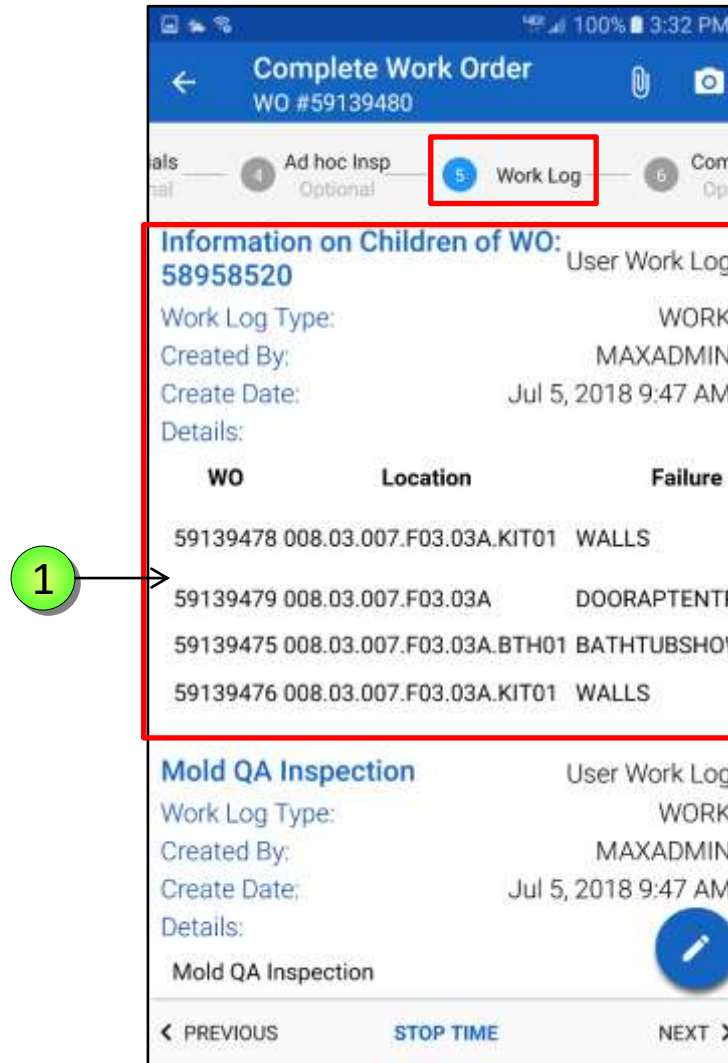
QA: Work Log

Work Log now contains all the different **Child Work Orders** that were created and completed for this Mold Inspection.

The Supervisor can check what was done, check the quality of work, and what was reported as an issue.

If the Supervisor finds that the reported issues were not resolved correctly that meets NYCHA standards then, then Super can create another Child Work to fix the problem.

In this case, the process starts again.




QA: Work Log – (Continued)

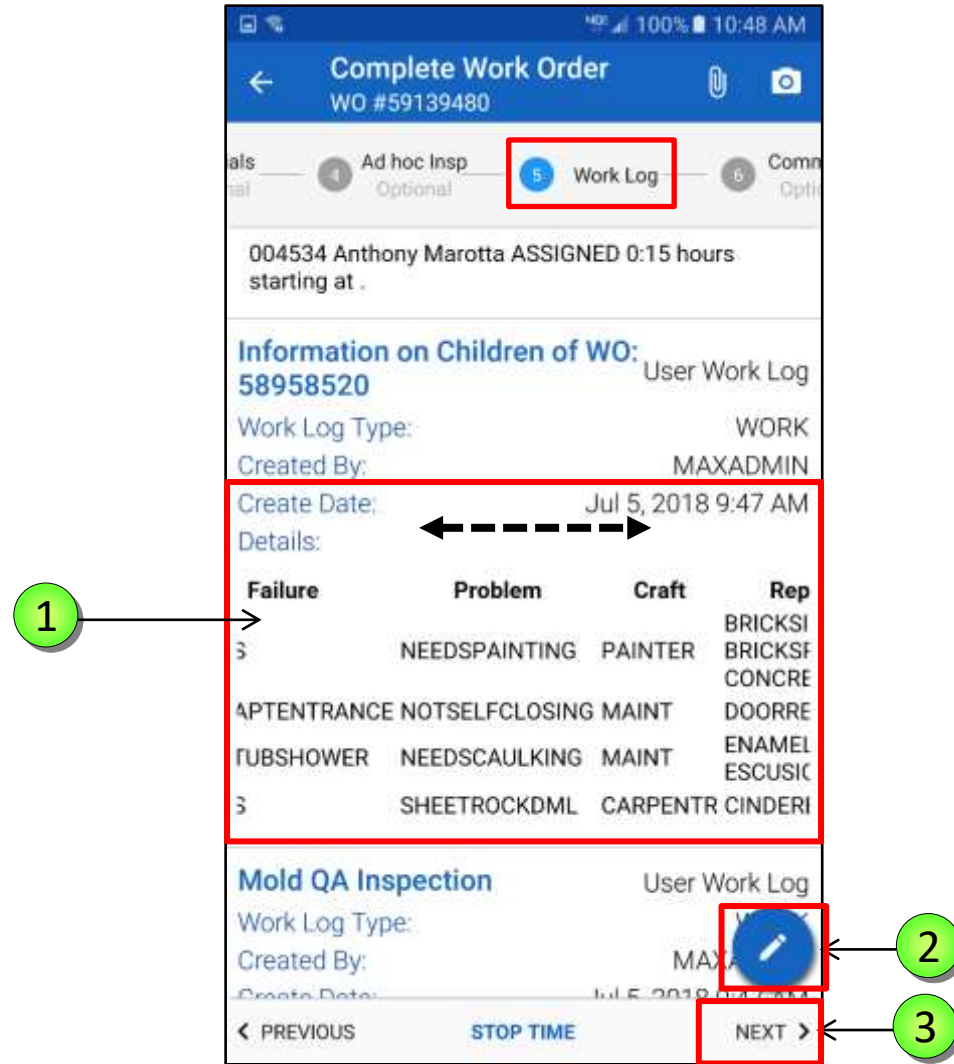
1 Swipe sideways ←--→ to the right and left to see a summary of each Child Work Order that was created and completed for this QA.

Each **Child Work Order Number** has the **Location, Failure Class, Problem Codes, Responsible Craft,** and the **Repairs and resolution.**

The user can view the details for each closed and completed Work Order in **Maximo** desktop.

2 Tap the **pencil**  icon to add more information of your findings.

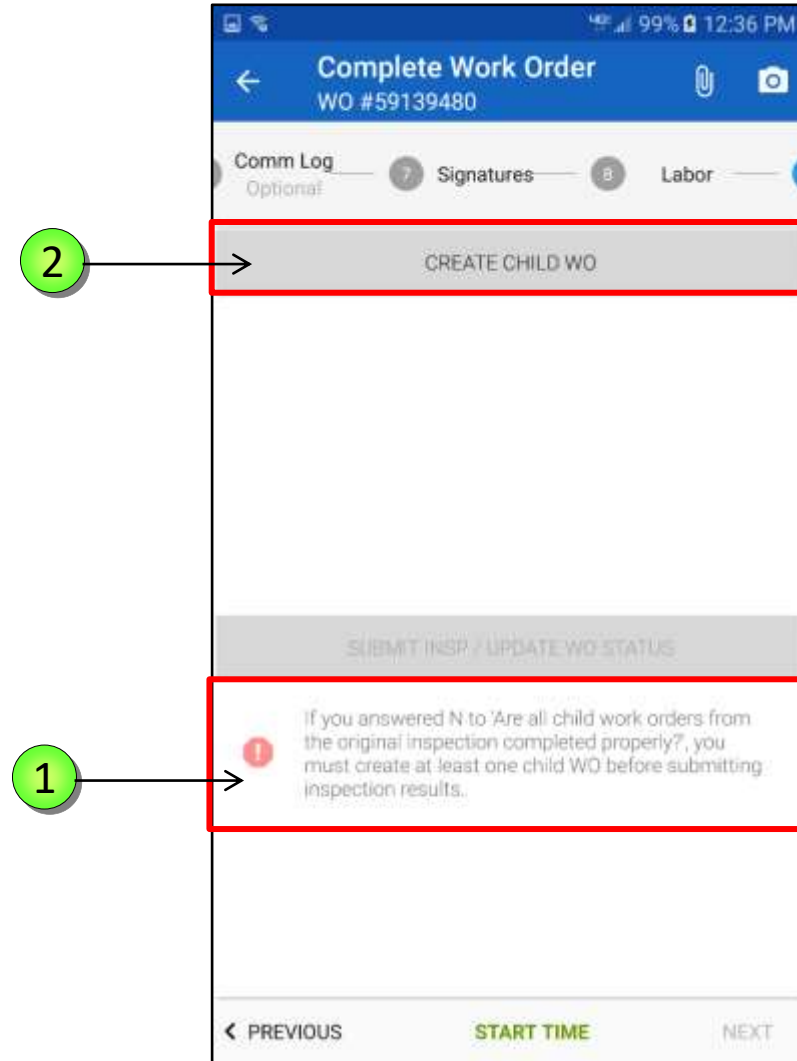
3 Tap **NEXT**



QA: Submitting The Work Order – (Continued)

Complete the process as before in the Mold Inspection for **Comm Log, Signatures, and Labor** screens.

- 1 Remember if you answered **NO** for the question **"Are all Child Work Order from the Original Inspection completed properly?"** You must create a Child Work Order before submitting the **QA Inspection** results.
- 2 In this case, tap **CREATE CHILD WO** gray bar and follow the instruction for creating a Child or Parent Work Order.



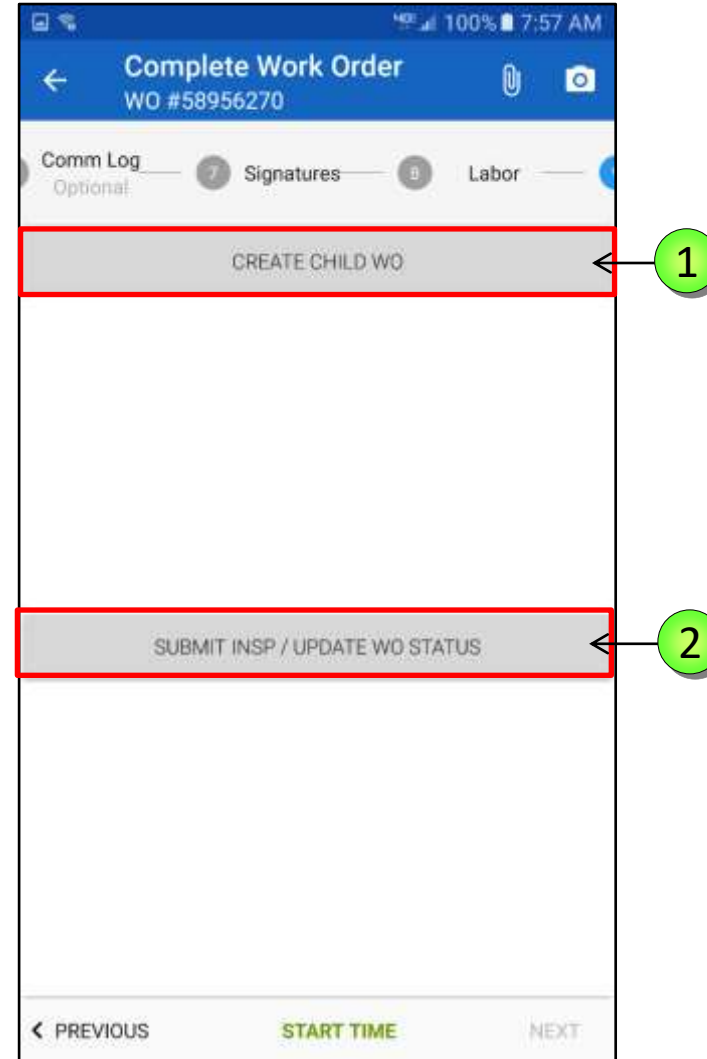
QA: Submit The Work Order

1

If you want to a **Create Child WO** for an issue other than mold, tap on **CREATE CHILD WO** gray bar.

2

When all the errors are corrected, you can click the **SUBMIT INSP/ UPDATE WO STATUS** gray bar.

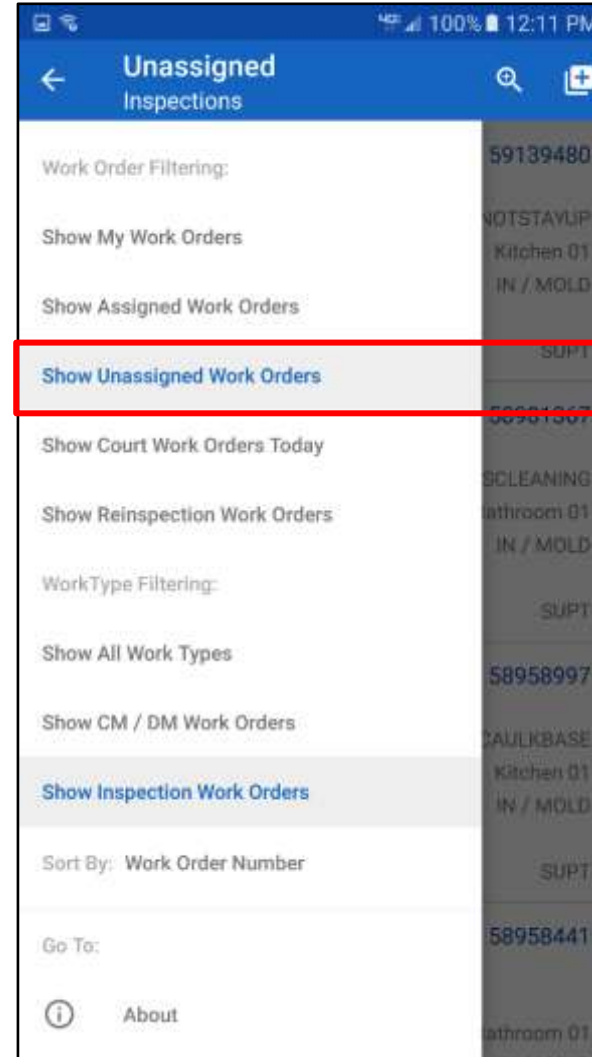


QA: Different Paths

There are **3 paths** for a QA Work Order:

- **FIRST** QA can pass. This will close the original inspection WO
- **SECOND** QA can fail immediately if mold growth, water damage or moisture measurement is answered **YES** (i.e., big issues still exist). This would immediately **AUTO-generate** a **REINSPECTION WO** (parent WO) upon submission.

When **Re-Inspection WO** and its children are done, it will generate another **QA**.



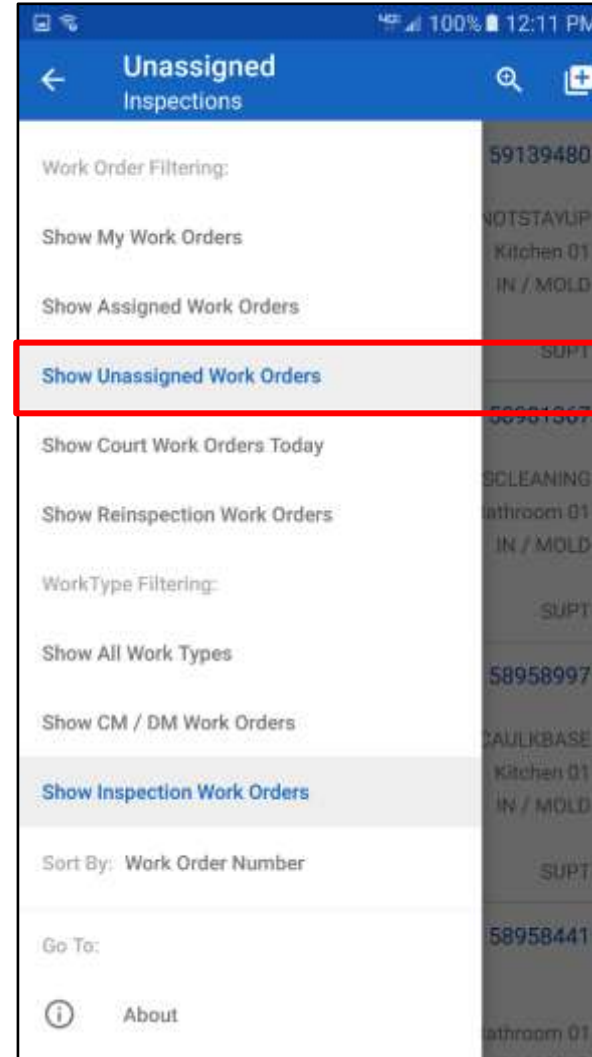
QA: Different Paths – (Continued)

There are **3 paths** for a QA Work Order:

- **THIRD** QA can fail because a child Work Order to fix the issues from the **first** inspection wasn't done properly.

So no mold/water damage/moisture was found (all **NO**), but child WO question indicates a failure. In this case they must **manually** create a child WO to fix the improperly done one.

No **Re-Inspection WO** gets generated here. Once the child they created gets done, then it will **generate** another QA.

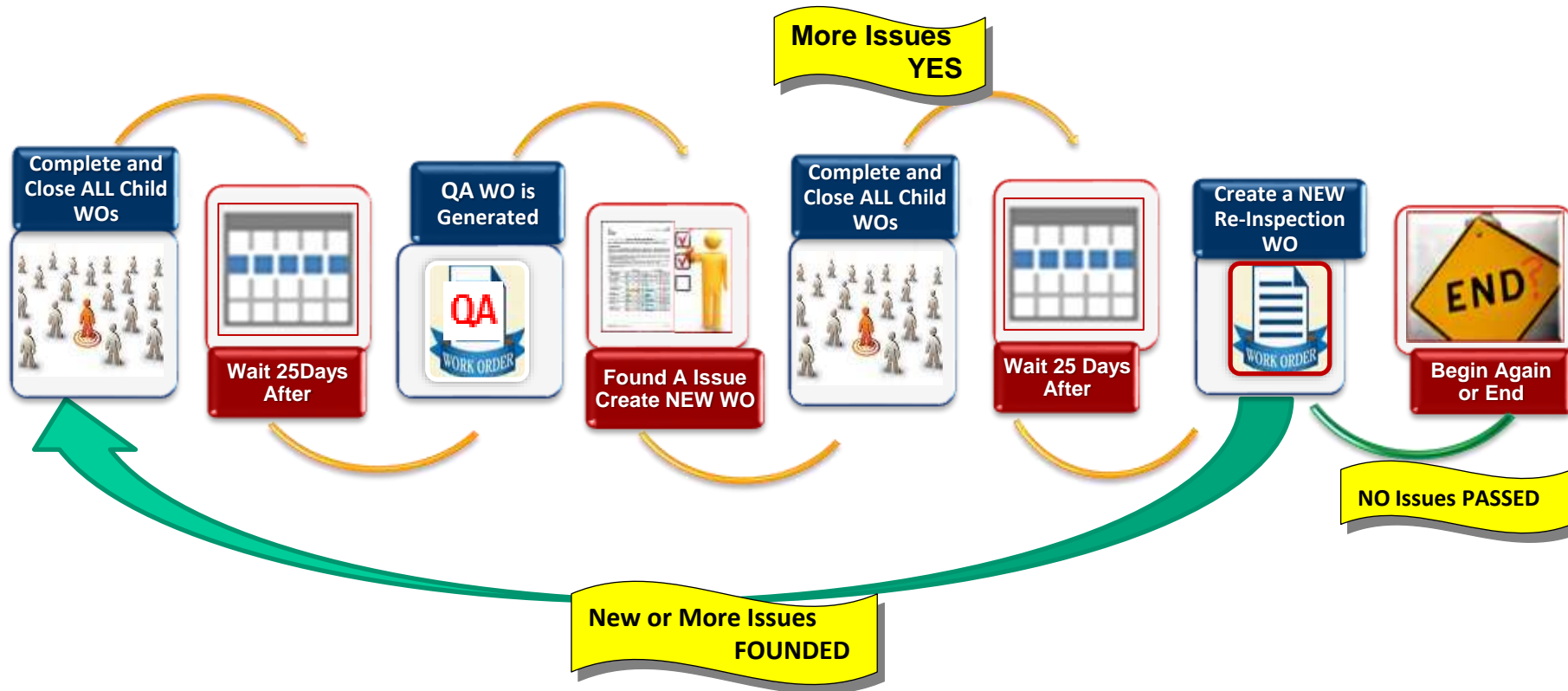


Re-Inspection



Re-Inspection Work Order Cycle Workflow

Mold was Found...

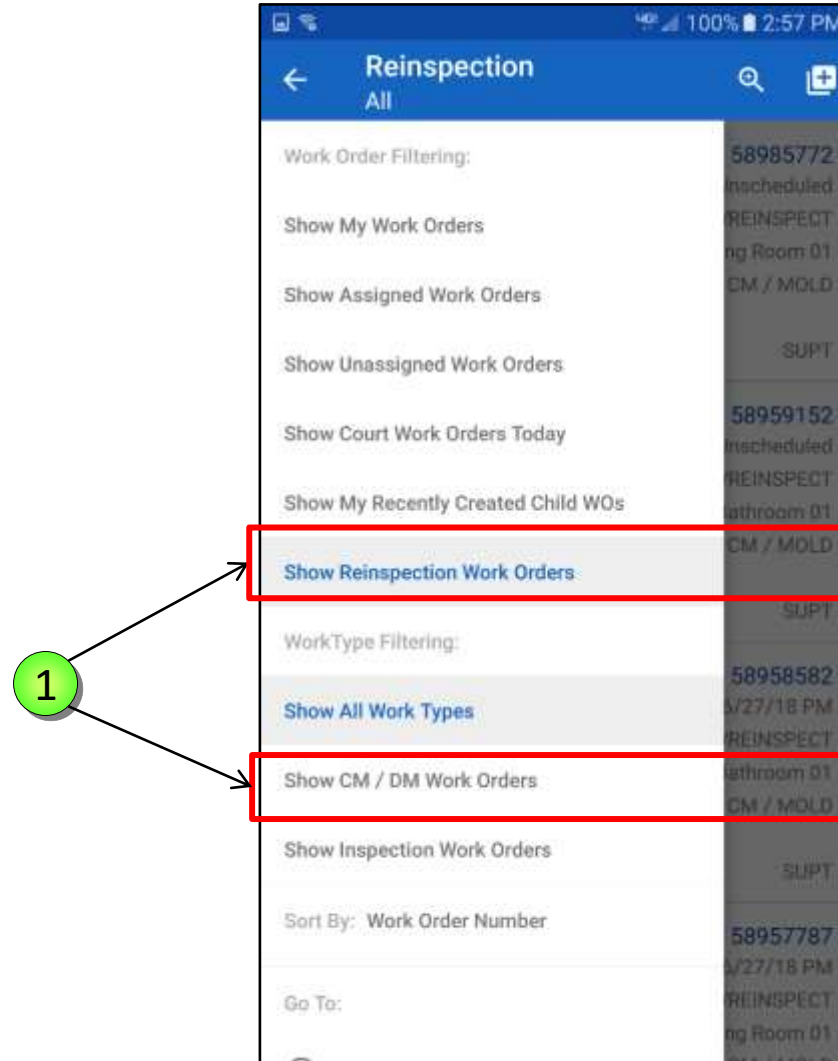


Re-Inspection Work Order

The Re-Inspection Work Order is **autogenerated** if you answer **YES** to one of the first 3 questions on the QA (**Evaluation of Conditions**).

It's a new parent WO that is auto-related to the QA (and the first original inspection).

1 The **Re-Inspection Work Order** appears in **Show Reinspection Work Orders** and **Show CM/DM Work Orders**.



Re-Inspection Work Order Details

The **Work Order Type** and **Job Plan** have changed in **Mold QA** as they appear on the screen.

Work Type = CM

Job Plan# = INSMOLDRE

Sub-Work Type = MOLD

Failure Class = MILDEWCONDITION

Problem Code = MILDEWREINSPECT

1 Tap **START WORK TIME**

1

WO# 58959152

DETAILS WORK LOGS COMM LOGS MATERIALS A1

Address
108-46 159TH STREET

Work Type	Job Plan#	Sub-Work Type
CM	INSMOLDRE	MOLD

Failure Class	Problem Code
MILDEWCONDITION	MILDEWREINSPECT

Craft
SUPT

Responsible Scheduler
MAXIMO

Priority
4

Status
APPR

Scheduled Start

Owner Group
DEV008

Actual Reported Date
Jun 28, 2018 10:40 AM

Message Code

START WORK TIME

Re-Inspection Work Order

After reviewing the **WO Details** the user is now ready to begin the work. **START TIME** is displayed at the bottom of the screen.

1 Select **Inspection**

2 Tap **NEXT**

Complete Work Order
WO #58959152

1 Select Labor Type 2 Perform Inspection 3 Materials Optional

Please select type of labor:

- Inspection (INSPECTION)
- Resident Not Home (RESNOTHOME)
- No Building Access (NOBLDGACCESS)
- No Adult (NOADULT)
- Unsafe Condition (UNSAFECOND)
- Resident Refused (RESREFUSED)
- No Floor Access (NOFLRACCESS)
- No Room Access (NORMACCESS)

PREVIOUS STOP TIME NEXT

Re-Inspection: Evaluation of Conditions

- 1 Re-Inspection: Evaluation of Conditions status is now **NONE**, and **WO Inspection State** is **NONE**.
- 2 Tap **INSPECT**

The screenshot shows a mobile application interface for a 'Complete Work Order' (WO #58959152). The interface includes a progress bar with steps: 'Perform Inspection' (2), 'Materials Optional' (3), and 'Ad hoc Optional' (4). The 'Inspecting Location' is '008.08.022.F01.01B.BTH01' and '108-46 159TH STREET'. The 'WO Inspection State' is 'NONE'. Below this, there is a section for 'Evaluation of Conditions' for 'Bathroom 01' with a state of 'NONE' and a blue 'Inspect' button. At the bottom, there are navigation buttons: '< PREVIOUS', 'STOP TIME', and 'NEXT >'. A red box highlights the 'WO Inspection State' field, the 'Evaluation of Conditions' section, and the 'NEXT >' button. A green circle with the number '1' has arrows pointing to the 'WO Inspection State' and 'Evaluation of Conditions' sections. A green circle with the number '2' has an arrow pointing to the 'NEXT >' button.

Re-Inspection: Evaluation of Conditions

The **Re-Inspection** will follow the same logic/rules as the original inspection. If an issue is found, another **QA** will be generated after the **Re-Inspection** and its children are completed.

A **Re-Inspection** that is generated based on results from a **QA Work Order** shall not be considered a reoccurrence, as it just means the original issue/incident was not properly resolved.

The screenshot shows a mobile application interface for 'Evaluation of Conditions' in 'Bathroom 01'. The status bar at the top indicates 100% battery and 3:27 PM. The app title is 'Evaluation of Conditions' with a back arrow on the left and 'DONE' on the right. Below the title, there are three questions, each with a '(None)' button to its right:

- * Is there mold growth? (None)
- * Is there Water Damage? (None)
- * Is Moisture Measurement > or equal to 599? (None)

Re-Inspection: Completing The Work Order

The **Re-Inspection** will follow the same logic/rules as the original inspection. If an issue is found, another **QA** will be generated after the **Re-Inspection** and its children are completed.

A **Re-Inspection** that is generated based on results from a **QA** Work Order **shall not be** considered a reoccurrence, as it just means the original issue/incident was not properly resolved.

The screenshot displays a mobile application interface for 'Complete Work Order' (WO #58959152). The interface is divided into four main sections: 'Perform Inspection', 'Materials Optional', 'Ad hoc Optional', and 'Evaluation of Conditions'. The 'Perform Inspection' section is currently active, showing the 'Inspecting Location' as '008.08.022.F01.01B.BTH01' and '108-46 159TH STREET'. The 'WO Inspection State' is 'COMP / UNSUBMITTED'. Below this, there are three evaluation sections: 'Evaluation of Conditions', 'General Evaluation', and 'Probable Causes and Remediation'. Each section shows 'Bathroom 01' and a state of 'COMPLETE'. There are blue 'Inspect' buttons next to each evaluation section. At the bottom, there are navigation options: '< PREVIOUS', 'STOP TIME', and 'NEXT >'. The top of the screen shows the time as 3:33 PM and 100% battery.

Re-Inspection: Completing The Work Order – (Continued)

If as a result of the **Re-Inspection** there was a new issue, then **Maximo auto-generates** new Child Work Orders.

The work has to be completed on **all** the new Child Work Orders.

Maximo will **auto-generate** a new **QA Work Order 5-days** after closing all the new Child Work Orders.

Refer to the information at the beginning of this **Reference Guide**.

Complete Work Order
WO #58959152

2 Perform Inspection 3 Materials Optional 4 Ad hoc Optional

Inspecting Location:
008.08.022.F01.01B.BTH01
108-46 159TH STREET

WO Inspection State: COMP / UNSUBMITTED

Evaluation of Conditions
Bathroom 01
State: COMPLETE

General Evaluation
Bathroom 01
State: COMPLETE

Probable Causes and Remediation
Bathroom 01
State: COMPLETE

< PREVIOUS STOP TIME NEXT >

NYCHA MOLD TRAINING

**Outputs, Reports,
and Record Keeping**

EEA

**ENVIRONMENTAL
EDUCATION ASSOCIATES**

Working to make our communities healthy

Outputs

- Mold in NYCHA apartments is remediated and the root causes are identified and corrected within the allowable timeframes.
- Mold recurrence is reduced

Performance Reporting

OMAR shall centrally assign staff to review reports to identify developments with:

- High parent mold work order completion time frames.
- High rates of unfounded mold work orders.
- High reoccurrence rates for mold work orders.

Performance Reporting

OMAR shall centrally assign staff to review reports to identify developments with:

- Visit developments and inspect randomly selected apartments with high rates of unfounded or reoccurring (as applicable) mold work orders.
- Report findings on the underlying issue, i.e. a building system and/or mold inspection and remediation process issue.
- Provide follow up recommendations to the regional asset manager.

For building system issues, the supervisory staff may, for example, recommend additional repairs.

For process issues, the regional asset manager follows up with the property manager and property maintenance supervisor to address the process issue which could include providing additional training, reviewing key accountabilities, or providing progressive discipline.

Performance Reporting

OMAR shall centrally assign staff trained in scheduling mold work orders to:

- Provide follow up recommendations to the Property Management Department skilled trades deputy director or regional asset manager; or the director of MRST.
- For process issues, recommendations could include providing additional training, reviewing key accountabilities, and/or providing progressive discipline

Reports

- Operations reports to be developed with the independent data analyst
- The IT Business Solutions Technology Department's Maximo Team retains electronically created and stored completed work orders for at least seven (7) years

Course Review



- Mold growth is always associated with excessive moisture problems.
- How do we identify excessive moisture and what are the **Root-Causes** of excessive moisture?
- How do we eliminate or reduce the **Root Causes**?
- How do we **remediate** mold contamination?

Knowledge Assessment

- See what you've learned!